# APPENDIX I-1
# PRELIMINARY HYDROLOGY STUDY & FLOOD ANALYSIS

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**PRELIMINARY**

# Hydrology Study & Flood Analysis

## Daggett Solar Power Facility

Unincorporated Community of Daggett, San Bernardino County, CA

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# A. Introduction

## 1.1 Purpose & Scope

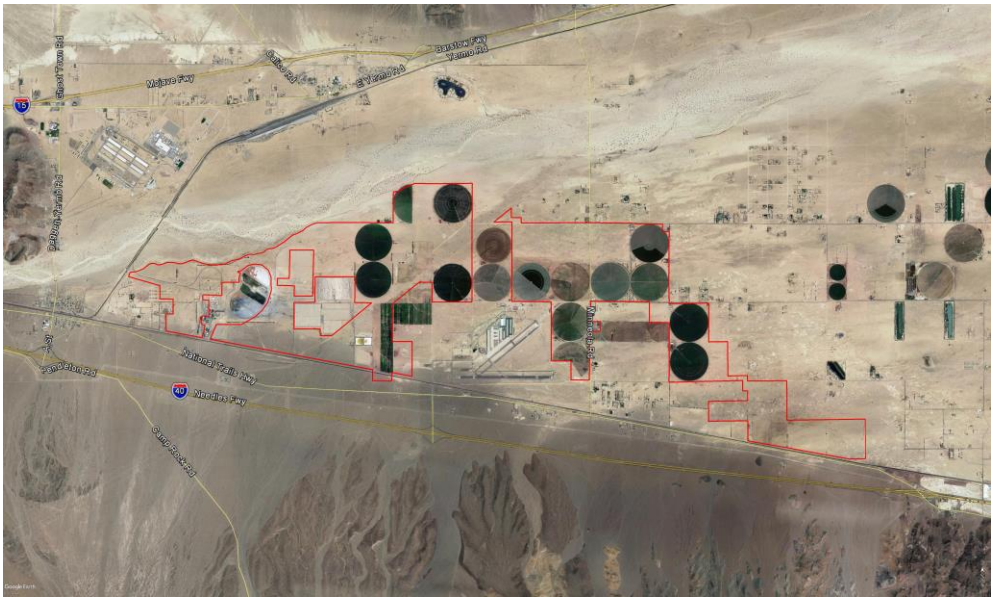
The following Preliminary Hydrology Study & Flood Analysis has been prepared by Joseph E. Bonadiman & Associates, Inc. for determination of hydrologic and flood impacts to a proposed 5,531-acre photovoltaic (PV) solar facility located in the unincorporated community of Daggett in San Bernardino County, CA.

**The scope of this study is as follows:**

- Identification of tributary (offsite) drainage areas impacting the project site, and calculation of peak flow rates and runoff volume for these areas.
- Identification of existing (pre-project) conditions on-site drainage areas, and calculation of peak flow rates and runoff volumes for these areas.
- Identification of developed (post-project) conditions on-site drainage areas, and calculation of peak flow rates and runoff volumes for these areas.
- Analysis of 100-year flood impacts to the project site.
- Summary of findings & conclusion.

## 1.2 Project Location & Watershed Description

The proposed project entails the construction of an approximately 5,531-acre photovoltaic solar facility in the unincorporated community of Daggett in San Bernardino County, CA. The project site is located approximately six miles east of the City of Barstow and 1.5 miles northwest of the unincorporated community of Newberry Springs. The project site is located approximately 0.75 miles north of the I-40 freeway, 0.1 to 0.5 miles north of National Trails Highway, and one mile east of Daggett-Yermo Road. The project site is bounded by the Union Pacific railroad to the west, Santa Fe Street and the Atchison, Topeka, and Santa Fe (A.T.S.F.) railroad to the south, and the Mojave River wash to the north.



The project site is effectively divided into a 2,899-acre eastern site and a 2,632 western site. The eastern site is bounded by rural residential properties to the southwest and the Mojave River wash to the north. An existing railroad spur and associated facilities are located within the northwestern portion of the eastern site; a large borrow pit is located within the existing railroad spur. Existing agricultural fields and facilities are located within the eastern portion of the eastern site. The decommissioned Coolwater Generating Station, a gas-fired electric generating station, and associated lined evaporation ponds are located within the eastern site but are considered "not a part" of the project. Existing Southern California Edison substations and training facilities located adjacent to the Coolwater Generating Station are within and considered part of the eastern project site. The majority of the decommissioned and demolished "Solar Two" (formerly "Solar One") concentrating PV solar generating station is located within the eastern site but is considered "not a part" of the project. The decommissioned and partially-demolished S.E.G.S. I & II PV solar generating stations are located within the eastern site but are considered "not a part" of the project.

**Photo: Looking North at Coolwater Generating Station from Santa Fe Street**

**Photo: Looking North at S.E.G.S. I & II Solar Generating Stations from Santa Fe Road**

The eastern and western sites are separated by existing agricultural fields and facilities located south of the Mojave River wash. North of the A.T.S.F. railroad and Santa Fe Street, the eastern and western sites are separated by the Barstow-Daggett Airport. The western site is comprised primarily of existing agricultural fields and facilities and undeveloped land. Existing rural residential properties are located to the north, south, and east of the western site.

**Photo: Looking North at Agricultural Fields from Santa Fe Road**

Refer to Exhibit "A" for an aerial orthophoto of the project site showing the existing facilities discussed in this section.

The study watershed is approximately 77.65 sq. mi. total. For the purposes of this study, the portion of the watershed south (upstream) of the A.T.S.F. railroad and associated culverts is herein referred to as "off-site", and the portion of the watershed north (downstream) of the A.T.S.F. railroad and associated culverts, which includes the 5,531-acre project site, is herein referred to as "on-site". Refer to Exhibit "B" for a U.S.G.S. quadrangle overlay of the study watershed.

## 1.3 References

The following documents have been made part of this study by reference:


1.) San Bernardino County Hydrology Manual, San Bernardino County Department of Public Works (August 1986).

2.) East Daggett Diversion to A.T. & S.F. Bridge (Hydraulic Calculations), San Bernardino County Flood Control District (August 18, 1967).

3.) Precipitation Atlas 14, Volume 1 Version 4.0, NOAA (2006).

4.) Soil Survey CA 698 - Mojave Desert Area, West Central Part, California, v. 9, NRCS (September 28, 2016).

5.) Soil Survey CA 671(San Bernardino County, California, Mojave River Area, v. 8), NRCS, (September 12, 2016).

6.) Flood Plain Information - Mojave River (Vicinity of Barstow), United States Army Corps of Engineers (October 1968).

7.) Flood Insurance Study (FIS) - San Bernardino County, CA & Incorporated Areas, FEMA (Revised September 2, 2016).

8.) FLO-2D Users' Manual Version 2004.10, FLO-2D (October 2004).

# B. Methodology & Sources of Data

## 1.1 Methodology - Hydrology Calculations

The requirements and recommendations found in the San Bernardino County Hydrology Manual (August 1986) provided by the San Bernardino County Department of Public Works was used as the basis for the methodology and calculations found in this study.

Off-site flows for areas tributary to the A.T.S.F. railroad culverts and to the east Daggett interceptor channel were calculated independently of the overall watershed using the unit hydrograph method for inclusion in the FLO-2D flood model for the project site.

Existing and developed conditions hydrology calculations for the study watershed were performed using the rational hydrology method for areas less than 640 acres (1 sq. mi.) in size to establish the time of concentration (TC) for these areas, which was subsequently used to calculate lag time for the unit hydrograph calculations for these areas. For drainage areas 640 acres or greater in size, unit hydrograph calculations were performed with lag times calculated using Snyder's lag (Army Corps of Engineers method).

For the tributary (off-site) drainage areas, the USGS quadrangle topographic data indicated braiding of primary watercourses (split flow of streams). As such, it was necessary to perform hydrograph routing for these areas to split, route (using the SCS convex method), and add hydrograph flows for these areas.

The 100-year, 1-hour storm event was used for all rational hydrology method calculations. The 100-year, 24-hour storm event was used for all unit hydrograph and hydrograph routing calculations. Note that for comparison of existing and developed conditions peak flows and runoff volumes, the 100-year, 24-hour unit hydrograph calculations were used.

The San Bernardino County Rational Method (RSBC) and San Bernardino County Unit Hydrograph Method (UNSBC) software applications provided by CivilDesign® Corporation were used for the rational method and unit hydrograph method calculations included in this report. The Hydrograph Routing & Basin Analysis (ROUTE) software application provided by CivilDesign® Corporation was used for the hydrograph routing calculations included in this report.

## 1.2 Methodology - Mojave River Wash Hydraulic Analysis (HEC-RAS)

One-dimensional hydraulic modeling for the Mojave River wash adjacent to the project site was performed using HEC-RAS. Channel reach lengths and cross sections were based on alignment, sample line, and TIN surface data generated in AutoCAD Civil 3D and exported to HEC-RAS.

## 1.3 Methodology - Flood Hazard Analysis (FLO-2D)

Two-dimensional flood modeling for the on-site study watershed north (downstream) of the A.T.S.F. railroad culverts was performed using FLO-2D, per the recommendations found in the FLO-2D User's Manual (v. 2004.10, October 2004). Offsite flood impacts were modeled using hydrographs for the 12 culvert discharge locations, the east Daggett channel discharge location, and the Mojave River wash. On-site precipitation was modeled using the San Bernardino County Hydrology Manual rainfall distribution graph. On-site losses were modeled using the SCS method.

## 1.4 Geographic Information Systems (G.I.S.) Data

Due to the size of the study watershed, available Geographic Information System (GIS) data was utilized, as follows:

- Major watershed and major watercourse shapefile data obtained from the California Spatial Information Library (CASIL) were used for identification of major watershed(s) applicable to the project site, and to identify the major receiving waters for project site discharge.

- A Digital Elevation Model (DEM) of the National Elevation Dataset (NED) provided by USGS was used to generate the 20' topographic contours used for the tributary off-site drainage areas shown in this study. Digital Raster Graphics (DRGs) of USGS Quadrangles provide by CASIL were also used to verify elevations, blue line streams, and other topographical features.

- Property line and street centerline shapefile data obtained from the County of San Bernardino was used for base mapping and exhibits preparation.

- San Bernardino County 2013 General Plan shapefile data obtained from the County of San Bernardino was used for determination of existing watershed land use/zoning classifications.

- Satellite imagery obtained from Google Earth (August 2014) and orthorectified aerial imagery provided by DMI (October 2016) was used for verification of watershed features, including location of drainage facilities, location of impervious surfaces/structures, and pervious cover.

- NOAA Atlas 14 precipitation ASCII grid data was used for area-averaged precipitation values.

- Soils shapefile data provided by the Natural Resources Conservation Service (NRCS) Web Soils Survey (WSS) was used to identify the hydrologic soils groups.

## 1.5 Field Investigations & Site Photos

Field investigations were conducted by Joseph E. Bonadiman & Associates, Inc. on August 2, 2016 and August 8, 2017 to verify the drainage characteristics of the site and study watershed. The photos included in this study were taken during these investigations to substantiate the findings included in this study.

## 1.6 Sources of Topography

For tributary (off-site) areas, 20' topographic contours generated from USGS elevation data in addition to applicable USGS quadrangles were used for all elevation values. For existing conditions on-site areas, topographic contours generated from an aerial survey provided by DMI (October 2016) were used. For the developed conditions project site, and for the purposes of this preliminary study, it has been assumed that the general topography would remain substantially unchanged from existing conditions. Grading will be limited to general smoothing of the existing topography.

## 1.7 Watershed Losses

Area-averaged SCS Curve Numbers for all drainage areas and subareas were determined as follows:

1.) **Hydrologic Soil Groups** – Hydrologic soil groups for the project watershed were identified using data obtained from NRCS Soil Survey 698 (v. 9, September 28, 2016) and Soil Survey 671 (v. 8, September 12, 2016). Refer to Exhibit "D.1" for a copy of the NRCS Web Soil Survey Map with the project/tributary watershed overlay, as well as a copy of supporting materials from Soil Surveys No. CA 698 and CA 671. Data for the southern portion of the study watershed is not available from NRCS; as such, the applicable San Bernardino County Hydrology Manual soils map (see Exhibit "D.2") was used to obtain hydrologic soils groups for this portion of the study watershed. Refer to Exhibit "D.3" for the study watershed soils map with composite data from both sources, which shows groups "A", "C", and "D" to be applicable to the watershed.

2.) **Land Use** – Land use designations for the project watershed, per the 2013 San Bernardino County General Plan, are shown on Exhibit "D.4".

3.) **Pervious Fraction** – Exhibit "D.5" is a copy of San Bernardino County Hydrology Manual Figure C-4, which indicates recommended impervious percentages for common land use types. Exhibit "D.6" shows pervious percentages for the existing conditions study watershed. For areas south of the A.T.S.F. railroad zoned industrial, commercial, or open space, the recommended pervious percentages from the Hydrology Manual were used, regardless of actual conditions, to account for future development. For areas zoned Rural Residential and located outside of the project boundary, the recommended pervious percentage from the Hydrology Manual was used, regardless of actual conditions, to account for future development. For all areas north of the A.T.S.F. railroad, excluding those zoned Rural Residential, actual pervious percentages (based on aerial and satellite imagery analysis) were used, as assigning pervious percentages to these areas based on the land use designations shown on Exhibit "D.4" would result in unrealistic and unlikely conditions, due to the unique development in the area (generating stations, airport, etc.).

For developed conditions, an assumed site-wide pervious percentage of 90% was used for the entire project site area; therefore, the pervious percentages shown for existing conditions on Exhibit "D.6" were adjusted to reflect 90% pervious for the entire project site area, as shown on Exhibit "D.7".

4.) **Pervious Cover** – Exhibit "D.8" shows pervious cover types (based on Figures C-2 and C-3 of the Hydrology Manual - see Exhibit "D.10") for the existing conditions study watershed. Per aerial and satellite imagery analysis of the watershed, it was determined that "open brush, poor cover" was appropriate for all areas, with the exception of areas north of the A.T.S.F. railroad shown to be predominantly agricultural (assigned "agricultural - legumes (alfalfa) - good cover") and barren (assigned "barren"). An insignificant amount of residential/commercial landscaping exists within the study watershed; as such, this cover designation was not used.

**Photo: Typical Agricultural Cover**

**Photo: Typical Open Brush, Poor Cover**

For developed conditions, an assumed site-wide pervious cover of "barren" was used for the entire project site area; therefore, the pervious cover types shown for existing conditions on Exhibit "D.8" were adjusted to reflect "barren" cover for the entire project site area, as shown on Exhibit "D.9".

5.) **SCS Curve Numbers** – Existing conditions SCS Curve Numbers (AMC II) were calculated by intersecting the hydrologic soils groups shown on Exhibit "D.3" with the existing conditions pervious cover types shown on Exhibit "D.8", and assigning the applicable SCS Curve Numbers derived from Figures C-2 and C-3 of the SBC Hydrology Manual (see Exhibit "D.10"). These values were then area-averaged for all study areas and subareas using the ArcGIS Spatial Analyst software. Refer to Exhibit "D.11" for the existing conditions SCS Curve Numbers for the study watershed.

Developed conditions SCS Curve Numbers (AMC II) were calculated by intersecting the hydrologic soils groups shown on Exhibit "D.3" with the developed conditions pervious cover types shown on Exhibit "D.9", and assigning the applicable SCS Curve Numbers derived from Figures C-2 and C-3 of the SBC Hydrology Manual (see Exhibit "D.10"). These values were then area-averaged for all study areas and subareas using the ArcGIS Spatial Analyst software. Refer to Exhibit "D.12" for the developed conditions SCS Curve Numbers for the study watershed.

Refer to the hydrology calculation input tables found in this study for the specific SCS Curve Numbers for AMC II and AMC III for each drainage area and subarea. Note that AMC III was used for all 100-year calculations.

## 1.8 Watershed Precipitation

Area-averaged precipitation values for all drainage areas in this report were determined using 100-year, 1-hour, 100-year, 6-hour, and 100-year, 24-hour NOAA precipitation ASCII grid data. The ASCII grid data for these storm events was clipped to each specific drainage area and analyzed to find the average (mean) value for each area using the ArcGIS Spatial Analyst software. Refer to the hydrology calculation input tables found in this study for the specific precipitation values used for each drainage area. Refer to Exhibits "C.1", "C.2", and "C.3" for the study watershed overlays of the 100-year, 1-hour, 100-year, 6-hour, and 100-year, 24-hour precipitation grids, respectively, used in this study.

# C. Offsite (Tributary) Hydrology Discussion, Calculations & Summary

## 1.1 Offsite (Tributary) Drainage Areas Discussion

As discussed in Section "A", the study watershed is approximately 77.65 sq. mi. total. For the purposes of this study, the portion of the watershed south (upstream) of the A.T.S.F. railroad and associated culverts, as well as the portion of watershed tributary to the east Daggett, channel, is herein referred to as "off-site", and the portion of the watershed north (downstream) of the A.T.S.F. railroad and associated culverts, which includes the 5,531-acre project site, is herein referred to as "on-site".

The off-site study watershed discussed in this section is approximately 64 sq. mi. (41,012 acres) total, and includes a.) The drainage areas tributary to railroad culverts and on-site areas (approx.. 58 sq. mi. / 37,229 acres) and b.) the 5.9 sq. mi. (3,783-acre) drainage area tributary to the existing east Daggett interceptor channel. It was necessary to analyze these off-site areas separately from the overall study watershed, to generate hydrographs at each of the 12 A.T.S.F. railroad culvert locations and the east Daggett channel discharge location for the FLO-2D flood model discussed in Section "G" of this study.

Watershed flows tributary to the on-site areas originate approximately 14 miles upstream (to the south) of the A.T.S.F. railroad in relatively steep foothills, and drain via natural braided streams and improved interceptor channels to the I-40 freeway. Drainage is conveyed under the freeway via 31 culverts, and subsequently under and over National Trails Highway via 9 culverts (in addition to other small crossings). Drainage then flows to 12 culverts located along the A.T.S.F. railroad prior to discharging to the on-site areas north of the railroad.

**Photo: Looking South at Tributary Watershed Foothills from Camp Rock Road**

**Photo: Looking East at Earthen Interceptor Channel South of the I-40 Freeway**

**Photo: Looking North at Culvert along I-40 Freeway towards Project Site**

**Photo: Looking Northwest at Culvert along National Trails Highway (Typical)**

**Photo: Looking North at Channelization Downstream of National Trails Highway towards Project Site**

**Photo: Looking North A.T.S.F. R.R. Culvert No. 1 from Santa Fe Street**

**Photo: Looking North A.T.S.F. R.R. Culvert No. 2 from Santa Fe Street**

**Photo: Looking North A.T.S.F. R.R. Culvert No. 3 from Santa Fe Street**

**Photo: Looking North A.T.S.F. R.R. Culvert No. 4 from Santa Fe Street**

**Photo: Looking North A.T.S.F. R.R. Culvert No. 5 from Santa Fe Street**

**Photo: Looking North A.T.S.F. R.R. Culvert No. 6 from Santa Fe Street**

**Photo: Looking North A.T.S.F. R.R. Culvert No. 7 from Santa Fe Street**

**Photo: Looking North A.T.S.F. R.R. Culvert No. 8 from Santa Fe Street**

**Photo: Looking North A.T.S.F. R.R. Culvert No. 9 from Santa Fe Street**

**Photo: Looking North A.T.S.F. R.R. Culvert No. 10 from Santa Fe Street**

**Photo: Looking North A.T.S.F. R.R. Culvert No. 11 from Santa Fe Street**

**Photo: Looking North A.T.S.F. R.R. Culvert No. 12 from Santa Fe Street**

Watershed flows tributary to the east Daggett interceptor channel originate approximately 10 miles upstream (to the south) of the A.T.S.F. railroad in relatively steep foothills, and drain via natural braided streams and improved interceptor channels to the I-40 freeway. Drainage is conveyed under the freeway via 4 culverts, and subsequently under National Trails Highway via 2 culverts. Drainage then flows through

culverts under the railroad and Santa Fe Street to the interceptor channel, which conveys flows in a northeasterly direction along the east side of the Union Pacific railroad before discharging under the existing on-site railroad spur via a series of 20 pipe culverts to the Mojave River wash.

**Photo: Looking South at Railroad Culvert to Daggett Interceptor Channel from Santa Fe Street**

**Photo: Looking North at Daggett Interceptor Channel from Santa Fe Street towards Mojave River Wash**

**Photo: Looking North from Project Site at Mojave River Wash**

Note that hydraulics calculations for the culverts located along the A.T.S.F. railroad discussed above are outside the scope of this study. Based on the hydrology calculations performed for this study, it is reasonably assumed that the majority of these culverts are not of adequate capacity to convey the calculated peak 100-year tributary flows under pressure conditions, and that overtopping of the railroad berms at the culvert locations will occur. For the purposes of this study, these flows have been continued through the culverts in question without modification, resulting in conservative calculations.

## 1.2 Offsite (Tributary) Unit Hydrograph Method Calculations

Input values for the offsite (tributary) 100-year, 24-hour unit hydrograph method calculations prepared for this study are tabulated as follows:

**Table 1** – Offsite (Tributary) Unit Hydrograph Method Input Values

| AREA | SIZE (AC) | LEN. (FT) | LCA (FT) | CHANGE (FT) | RAIN 100-1 (IN) | RAIN 100-6 (IN) | RAIN 100-24 (IN) | PERV. % | SCS (AMC II) | SCS (AMC III) |
|---|---|---|---|---|---|---|---|---|---|---|
| A | 1,527.33 | 29,891 | 13,688 | 2156.00 | 1.29 | 2.13 | 3.17 | 98.50 | 68.50 | 85.80 |
| B | 2,602.41 | 27,687 | 11,420 | 1996.00 | 1.28 | 2.07 | 3.03 | 97.90 | 69.02 | 86.20 |
| C | 1,687.33 | 28,332 | 13,559 | 1988.00 | 1.29 | 2.10 | 3.11 | 99.00 | 65.12 | 83.10 |
| D | 6,665.22 | 57,103 | 29,646 | 2548.00 | 1.38 | 2.38 | 3.76 | 99.00 | 73.06 | 89.40 |
| E | 3,444.14 | 24,414 | 13,905 | 1760.00 | 1.45 | 2.64 | 4.24 | 100.00 | 88.00 | 97.60 |
| F | 4,924.59 | 36,355 | 13,280 | 2138.00 | 1.36 | 2.10 | 3.14 | 98.70 | 77.60 | 92.60 |
| G | 279.11 | 12,326 | 8,294 | 1010.00 | 1.39 | 2.19 | 3.29 | 100.00 | 73.70 | 90.00 |
| H | 512.19 | 14,210 | 5,562 | 473.00 | 1.39 | 1.89 | 2.70 | 81.60 | 62.26 | 80.80 |
| I | 5,065.68 | 36,340 | 20,373 | 2873.00 | 1.41 | 2.15 | 3.19 | 98.80 | 78.64 | 93.20 |
| J | 603.09 | 16,135 | 10,608 | 2030.00 | 1.42 | 2.33 | 3.60 | 100.00 | 87.22 | 97.40 |
| K | 6,161.64 | 39,200 | 25,007 | 2675.00 | 1.44 | 2.39 | 3.74 | 99.30 | 81.24 | 94.70 |
| L | 1,834.31 | 20,676 | 10,935 | 2355.00 | 1.41 | 2.19 | 3.29 | 99.90 | 76.82 | 92.10 |
| M | 108.85 | 4,940 | 2,687 | 164.00 | 1.40 | 1.93 | 2.72 | 98.70 | 63.04 | 81.40 |
| N | 1,657.38 | 14,260 | 7,479 | 1690.00 | 1.40 | 2.08 | 3.00 | 98.90 | 73.88 | 90.10 |
| O | 155.66 | 4,860 | 2,228 | 170.00 | 1.39 | 1.95 | 2.71 | 90.00 | 64.20 | 82.40 |
| P | 3,782.66 | 35,115 | 20,362 | 2044.90 | 1.29 | 2.16 | 3.27 | 98.06 | 87.00 | 97.40 |

Output for the offsite (tributary) 100-year, 24-hour unit hydrograph method calculations are tabulated as follows:

**Table 2** – Offsite (Tributary) Unit Hydrograph Method Output Calculations

| AREA | LAG (HR.) | $Q_{100}$ (CFS) | $V_{100}$ (AF) |
|---|---|---|---|
| A | **0.75** | **1,600.72** | **266.36** |
| B | **0.68** | **1,829.92** | **267.68** |
| C | **0.74** | **1,742.41** | **264.76** |
| D | **1.42** | **4,307.31** | **1,537.16** |
| E | **0.70** | **5,599.01** | **1,141.36** |
| F | **0.83** | **4,856.39** | **1,019.08** |
| G | **0.43** | **509.77** | **58.16** |
| H | **0.47** | **871.36** | **74.50** |
| I | **0.93** | **4,662.63** | **1,089.72** |
| J | **0.49** | **1,201.05** | **169.20** |
| K | **1.06** | **6,025.95** | **1,645.82** |
| L | **0.55** | **2,734.35** | **401.45** |
| M | **0.24** | **288.10** | **14.80** |
| N | **0.41** | **2,917.50** | **310.20** |
| O | **0.22** | **438.36** | **22.60** |
| P | **0.83** | **3,931.61** | **948.52** |

Refer to Technical Appendix No. 1 for printouts of the offsite (tributary) 100-year, 24-hour unit hydrograph calculations. Refer to Exhibit "E" for the offsite study map.

## 1.3 Offsite (Tributary) Hydrograph Routing Calculations

The U.S.G.S. quadrangles for the offsite watershed indicate braided blue-line streams. Offsite area "E" is shown to split at its downstream watercourse location. The split flows of Area "E" then flow to confluence with flows from Areas "F" and "G", respectively. Area "G" is subsequently shown to split at its downstream watercourse location. The split flows of Area "G" then flow to confluence with flows from Areas "H" and "I", respectively.

Offsite area "J" is shown to split at its downstream watercourse location. The split flows of Area "J" then flow to confluence with flows from Areas "K" and "L", respectively.

Hydrograph routing was necessarily for modeling of these flow divisions and combinations. The SCS convex method of channel routing was used to route natural flows as discussed above, and tabulated below:

**Table 3** – Offsite (Tributary) Hydrograph Routing Calculations

| LOCATION | ROUTING ACTION | $Q_{100}$ (CFS) AT LOCATION | $V_{100}$ (AF) AT LOCATION |
|---|---|---|---|
| R1.0 | SPLIT AREA "E" HYDROGRAPH | 2,799.51 | 570.68 |
| R1.0 TO R1.1 | ROUTE SPLIT FLOW OF AREA "E" HYDROGRAPH TO CHANNEL TRANSITION | 2,449.18 | 570.68 |
| R1.1 TO R1.2 | ROUTE SPLIT FLOW OF AREA "E" HYDROGRAPH TO AREA "F" DISCHARGE POINT | 2,449.18 | 570.68 |
| R1.2 | COMBINE AREA "F" HYDROGRAPH AT AREA "F" DISCHARGE POINT | **6,592.17** | **1,589.76** |
| | | | |
| R2.0 | SPLIT AREA "E" HYDROGRAPH | 2,799.51 | 570.68 |
| R2.0 TO R2.1 | ROUTE SPLIT FLOW OF AREA "E" HYDROGRAPH TO AREA "G" DISCHARGE POINT | 2,462.08 | 570.68 |
| R2.1 | COMBINE AREA "G" HYDROGRAPH AT AREA "G" DISCHARGE POINT | 2,671.25 | 628.84 |
| R2.1 | SPLIT AREAS "EG" HYDROGRAPH | 1,335.62 | 314.42 |
| R2.1 TO R2.2 | ROUTE SPLIT FLOW OF AREAS "EG" HYDROGRAPH TO AREA "H" DISCHARGE POINT | 1,229.57 | 314.42 |
| R2.2 | COMBINE AREA "H" HYDROGRAPH AT AREA "H" DISCHARGE POINT | **1,655.64** | **388.92** |
| | | | |
| R2.0 | SPLIT AREA "E" HYDROGRAPH | 2,799.51 | 570.68 |
| R2.0 TO R2.1 | ROUTE SPLIT FLOW OF AREA "E" HYDROGRAPH TO AREA "G" DISCHARGE POINT | 2,462.08 | 570.68 |
| R2.1 | COMBINE AREA "G" HYDROGRAPH AT AREA "G" DISCHARGE POINT | 2,671.25 | 628.84 |
| R2.1 | SPLIT AREAS "EG" HYDROGRAPH | 1,335.62 | 314.42 |
| R2.1 TO R3.0 | ROUTE SPLIT FLOW OF AREAS "EG" HYDROGRAPH TO AREA "I" DISCHARGE POINT | 1,228.56 | 314.42 |
| R3.0 | COMBINE AREA "I" HYDROGRAPH AT AREA "I" DISCHARGE POINT | **5,807.39** | **1,404.14** |
| | | | |
| R4.0 | SPLIT AREA J" HYDROGRAPH | 600.52 | 84.60 |
| R4.0 TO R4.1 | ROUTE SPLIT FLOW OF AREA "J" HYDROGRAPH TO CHANNEL TRANSITION | 567.01 | 84.60 |
| R4.1 TO R4.2 | ROUTE SPLIT FLOW OF AREA "J" HYDROGRAPH TO AREA "K" DISCHARGE POINT | 567.01 | 84.60 |
| R4.2 | COMBINE AREA "K" HYDROGRAPH AT AREA "K" DISCHARGE POINT | **6,254.40** | **1,730.42** |
| | | | |
| R5.0 | SPLIT AREA J" HYDROGRAPH | 600.52 | 84.60 |
| R5.0 TO R5.1 | ROUTE SPLIT FLOW OF AREA "J" HYDROGRAPH TO CHANNEL TRANSITION | 573.33 | 84.60 |
| R5.1 TO R5.2 | ROUTE SPLIT FLOW OF AREA "J" HYDROGRAPH TO AREA "L" DISCHARGE POINT | 573.33 | 84.60 |
| R5.2 | COMBINE AREA "L" HYDROGRAPH AT AREA "L" DISCHARGE POINT | **3,106.12** | **486.05** |

Refer to Technical Appendix No. 2 for printouts of the offsite (tributary) 100-year, 24-hour hydrograph routing calculations. Refer to Exhibit "E" for the offsite study map illustrating these routed flows.

Based on the unit hydrograph and hydrograph routed discussed above, the 100-year, 24-hour flow rates and volumes tributary to each of the 12 A.T.S.F. railroad culverts, as well as the east Daggett channel, are summarized below:

**Table 4** – Offsite (Tributary) Hydrology Summary

| CULVERT NO. | OFFSITE AREA(S) | $Q_{100}$ (CFS) TO CULVERT | $V_{100}$ (AF) TO CULVERT |
|---|---|---|---|
| 1 | A | **1,600.72** | **266.36** |
| 2 | B | **1,829.92** | **267.68** |
| 3 | C | **1,742.41** | **264.76** |
| 4 | D | **4,307.31** | **1,537.16** |
| 5 | E & F (ROUTED) | **6,592.17** | **1,589.76** |
| 6 | E, G, & H (ROUTED) | **1,655.64** | **388.92** |
| 7 | E, G, & I (ROUTED) | **5,807.39** | **1,404.14** |
| 8 | J & K (ROUTED) | **6,254.40** | **1,730.42** |
| 9 | J & L (ROUTED) | **3,106.12** | **486.05** |
| 10 | M | **288.10** | **14.80** |
| 11 | N | **2,917.50** | **310.20** |
| 12 | O | **438.36** | **22.60** |
| DAGGETT CHANNEL | P | **3,931.07** | **948.24** |

**Note:** Review of the East Daggett Diversion to A.T. & S.F. Bridge hydraulics calculations summary prepared by the San Bernardino County Flood Control District (August 18, 1967) indicates an unbulked $Q_{100}$ of 3,900 c.f.s. tributary to the East Daggett Channel. This published $Q_{100}$ is comparable to the calculated $Q_{100}$ for offsite Area "P" of 3,931 cf.s. Refer to Attachment No. 1 for a copy of the published $Q_{100}$ for the channel.

# D. Existing Conditions Hydrology Calculations & Summary

## 1.1 Existing Conditions Hydrology Discussion

After discharge through the 12 A.T.S.F. railroad culverts discussed in Section "C", on-site flows continue northerly and northeasterly before discharging to the Mojave River wash to the north and adjacent rural residential and undeveloped properties to the east. Typically, on-site drainage is conveyed as natural overland flow along very gradual slopes and relatively unconcentrated, shallow channelization, with the exception of drainage improvements associated with the existing on-site railroad spur, Coolwater Generating Station, decommissioned/removed solar facilities, and the Barstow-Daggett airport. Existing on-site paved and dirt roads do not have any associated storm drain facilities.

On-site Areas 1 through 10A are located along the northwestern edge of the project site and discharge via natural flows to confluence with the Mojave River wash.

Drainage from on-site Area 10B is the area located within the existing railroad spur that contains a large borrow pit. It is assumed that 100-year flows are contained within the pit area; therefore no discharge has been calculated for Area 10B for existing conditions.

On-site Areas 11 through 14 are located along the northwestern edge of the project site and discharge via natural flows to confluence with the Mojave River wash.

Drainage for on-site Area 15 flows northerly/northeasterly through the Coolwater Generating Station and Edison facilities and northerly/northeasterly through primarily undeveloped areas before discharging via natural flows to confluence with the Mojave River wash.

Drainage from on-site Area 16 is the Coolwater Generating Station lined detention ponds. It is assumed that 100-year flows are contained within the ponds; therefore no discharge has been calculated for Area 16.

On-site Areas 17 through 29 are located along the northern edge of the project site and discharge primarily via natural flows directly to confluence the Mojave River wash or through adjacent rural residential properties along the northeastern portion of the project site.

On-site Areas 30 through 45 (excluding Area 48, discussed below) are located at the eastern portion and along the eastern edge of the project site. Discharge from these areas flows primarily easterly and northeasterly through undeveloped, agricultural, and rural residential areas before discharging to undeveloped and rural residential properties to the east.

Drainage from the offsite portion of Area 47 discharges through railroad culverts No. 1 and 2 and flows northeasterly before ponding against existing berms running north-south along the western edge of the Coolwater Generating Station and running east-west as the bermed railroad spur. These berms are assumed to generally be of adequate height (4 ft. to 6 ft.) to prevent flows from entering these facilities. Some ponding is anticipated to occur from these flows prior to discharge through three pipe culverts located at the railroad spur to confluence with the Mojave River wash.

Drainage from on-site Area 48 flows easterly and northeasterly through existing culverts and earthen detention ponds/channels running between the runways of the Barstow Daggett Airport and through primarily agricultural and undeveloped areas prior to discharging to adjacent undeveloped properties to the east of the project site.

Drainage from the offsite portion of Area 49 discharges through railroad culverts No. 3, 4 and 5 and flows easterly and northeasterly through undeveloped and agricultural land, the decommissioned and partially-demolished S.E.G.S. I & II PV solar generating stations, and the Barstow-Daggett Airport before discharging to adjacent undeveloped and rural residential properties to the east of the project site. Culverts and earthen detention ponds/channels located between the runways of the Barstow-Daggett Airport provide some protection of the airport from Area 49 flows.

Drainage from the offsite portion of Area 51 discharges through railroad culverts No. 6, 7, 8, 9 and 10 and flows easterly through primarily undeveloped and rural residential areas prior before discharging to adjacent undeveloped properties to the east of the project site.

Drainage from the offsite portion of Area 52 discharges through railroad culverts 11 and 12 and flows northeasterly through undeveloped areas before discharging to undeveloped properties to the east of the project site.

## 1.2 Exiting Conditions Rational Method Calculations

For existing conditions areas less than 640 acres (1 sq. mi.), the rational hydrology method was used to generate Time of Concentration (TC) values to generate lag times for use in the unit hydrograph calculations for these areas.

Input values and output calculations for the existing conditions 100-year, 1-hour rational method calculations prepared for this study are tabulated as follows:

**Table 5** – Existing Conditions Rational Method Input Values & Output Calculations

| AREA | SIZE (AC) | SUBAREA REACH | LEN. (FT) | U.S. ELEV. (FT) | D.S. ELEV. (FT.) | RAIN 100-1 (IN) | PERV. % | SCS (AMC II) | SCS (AMC III) | AREA TC (MIN.) | TOTAL $Q_{100}$ (CFS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.00 | 1.0 TO 1.1 | 357 | 1965.4 | 1956.1 | 1.26 | 100.00 | 62.00 | 80.60 | **18.89** | **2.22** |
| 2 | 1.55 | 2.0 TO 2.1 | 285 | 1965.1 | 1955.6 | 1.27 | 100.00 | 62.00 | 80.60 | **16.43** | **3.89** |
| 3 | 4.92 | 3.0 TO 3.1 | 600 | 1963.0 | 1955.0 | 1.27 | 100.00 | 62.00 | 80.60 | **26.58** | **8.35** |
| 4 | 8.95 | 4.0 TO 4.1 | 1,000 | 1971.3 | 1953.9 | 1.27 | 100.00 | 62.00 | 80.60 | **30.92** | **13.38** |
| 5 | 10.00 | 5.0 TO 5.1 | 931 | 1971.2 | 1954.8 | 1.27 | 100.00 | 62.00 | 80.60 | | |
| | 3.66 | 5.1 TO 5.2 | 146 | 1954.8 | 1950.6 | | 100.00 | 62.00 | 80.60 | **31.10** | **20.31** |
| 6 | 9.47 | 6.0 TO 6.1 | 1,000 | 1970.7 | 1962.8 | 1.27 | 100.00 | 62.00 | 80.60 | | |
| | 4.33 | 6.1 TO 6.2 | 474 | 1962.8 | 1948.8 | | 100.00 | 62.00 | 80.60 | **40.17** | **16.42** |
| 7 | 9.33 | 7.0 TO 7.1 | 1,000 | 1970.4 | 1966.6 | 1.27 | 100.00 | 62.00 | 80.60 | | |
| | 5.66 | 7.1 TO 7.2 | 716 | 1966.6 | 1949.6 | | 100.00 | 62.00 | 80.60 | **48.60** | **15.01** |
| 8 | 8.97 | 8.0 T0 8.1 | 1,000 | 1966.7 | 1950.3 | 1.27 | 100.00 | 62.00 | 80.60 | **31.28** | **13.27** |
| 9 | 10.00 | 9.0 TO 9.1 | 776 | 1967.2 | 1965.2 | 1.27 | 100.00 | 62.00 | 80.60 | | |
| | 6.11 | 9.1 TO 9.2 (CONF.) | 780 | 1965.2 | 1960.4 | | 100.00 | 62.00 | 80.60 | | |
| | 9.02 | 9.3 TO 9.2 (CONF.) | 1,000 | 1967.9 | 1960.4 | | 100.00 | 62.00 | 80.60 | | |
| | 4.84 | 9.2 TO 9.4 | 495 | 1960.4 | 1946.5 | | 100.00 | 62.00 | 80.60 | **39.79** | **30.32** |
| 10A | 6.25 | 10.0 TO 10.1 | 1,000 | 1967.3 | 1957.8 | 1.27 | 100.00 | 62.00 | 80.60 | | |
| | 7.32 | 10.1 TO 10.2 | 1,280 | 1957.8 | 1957.3 | | 100.00 | 62.00 | 80.60 | **83.79** | **8.42** |
| 10B | 43.92 | N/A - BORROW PIT AREA - SEE HYDROGRAPH CALCULATIONS | | | | | | | | | |
| 11 | 9.20 | 11.0 TO 11.1 | 841 | 1957.6 | 1947.6 | 1.28 | 100.00 | 62.00 | 80.60 | **31.13** | **13.67** |
| 12 | 0.87 | 12.0 TO 12.1 | 225 | 1955.3 | 1948.8 | 1.28 | 100.00 | 62.00 | 80.60 | **15.38** | **2.32** |
| 13 | 8.36 | 13.0 TO 13.1 | 1,000 | 1959.0 | 1955.6 | 1.28 | 100.00 | 62.00 | 80.60 | | |
| | 8.49 | 13.1 TO 13.2 | 808 | 1955.6 | 1951.6 | | 100.00 | 62.00 | 80.60 | **55.17** | **15.13** |
| 14 | 10.00 | 14.0 TO 14.1 | 1,000 | 1955.0 | 1951.8 | 1.29 | 100.00 | 62.00 | 80.60 | | |
| | 8.15 | 14.1 TO 14.2 | 627 | 1951.8 | 1947.4 | | 100.00 | 62.00 | 80.60 | **51.45** | **17.59** |
| 15 | 10.00 | 15.0 TO 15.1 | 588 | 1983.2 | 1970.0 | 1.27 | 71.75 | 62.00 | 80.60 | | |
| | 23.93 | 15.1 TO 15.2 | 891 | 1970.0 | 1964.6 | | 45.39 | 62.00 | 80.60 | | |
| | 64.34 | 15.2 TO 15.3 | 1,336 | 1964.6 | 1963.8 | | 51.23 | 62.00 | 80.60 | | |
| | 98.81 | 15.3 TO 15.4 | 6,809 | 1963.8 | 1949.3 | | 96.60 | 62.00 | 80.60 | **95.05** | **129.71** |
| 16 | 158.96 | N/A - LINED EVAPORATION PONDS - SEE HYDROGRAPH CALCULATIONS | | | | | | | | | |
| 17 | 10.00 | 17.0 TO 17.1 | 805 | 1951.2 | 1947.6 | 1.30 | 100.00 | 78.00 | 92.80 | | |
| | 138.48 | 17.1 TO 17.2 | 1,959 | 1947.6 | 1940.5 | | 99.34 | 73.74 | 89.99 | **44.88** | **187.78** |
| 18 | 10.00 | 18.0 TO 18.1 | 404 | 1944.9 | 1938.1 | 1.33 | 100.00 | 62.00 | 80.60 | | |
| | 21.10 | 18.1 TO 18.2 | 830 | 1938.1 | 1932.7 | | 100.00 | 62.00 | 80.60 | | |
| | 16.96 | 18.2 TO 18.3 | 590 | 1932.7 | 1926.1 | | 100.00 | 62.00 | 80.60 | **33.00** | **71.87** |
| 19 | 7.87 | 19.0 TO 19.1 | 756 | 1933.9 | 1929.6 | 1.35 | 100.00 | 62.00 | 80.60 | **34.57** | **11.52** |
| 20 | 10.00 | 20.0 TO 20.1 | 1,000 | 1932.9 | 1925.3 | 1.36 | 100.00 | 58.61 | 77.89 | | |
| | 14.41 | 20.1 TO 20.2 | 801 | 1925.3 | 1920.5 | | 100.00 | 58.22 | 77.58 | **48.93** | **25.49** |
| 21 | 9.89 | 21.0 TO 21.1 | 947 | 1926.4 | 1924.8 | 1.36 | 100.00 | 61.58 | 80.26 | **48.66** | **10.77** |
| 22 | 3.73 | 22.0 TO 22.1 | 392 | 1928.1 | 1924.0 | 1.36 | 100.00 | 62.00 | 80.60 | **23.53** | **7.58** |
| 23 | 10.00 | 23.0 TO 23.1 | 770 | 1926.0 | 1922.2 | 1.36 | 100.00 | 62.00 | 80.60 | | |
| | 20.75 | 23.1 TO 23.2 | 1,058 | 1922.2 | 1917.2 | | 100.00 | 61.57 | 80.26 | | |
| | 38.66 | 23.2 TO 23.3 | 2,495 | 1917.2 | 1910.2 | | 100.00 | 58.95 | 78.16 | **76.72** | **47.52** |
| 24 | 10.00 | 24.0 TO 24.1 | 807 | 1941.9 | 1938.4 | 1.35 | 100.00 | 62.00 | 80.60 | | |
| | 19.33 | 24.1 TO 24.2 | 1,074 | 1938.4 | 1936.3 | | 100.00 | 62.00 | 80.60 | | |
| | 44.74 | 24.2 TO 24.3 | 1,697 | 1936.3 | 1929.1 | | 100.00 | 61.06 | 79.85 | | |
| | 28.39 | 24.3 TO 24.4 (CONF.) | 1,554 | 1929.1 | 1921.9 | | 99.59 | 59.81 | 78.85 | | |
| | 6.50 | 24.5 TO 24.6 | 1,000 | 1940.0 | 1932.2 | | 100.00 | 60.62 | 79.50 | | |
| | 14.08 | 24.6 TO 24.7 | 755 | 1932.2 | 1928.3 | | 100.00 | 58.11 | 77.49 | | |
| | 28.46 | 24.7 TO 24.8 | 1,059 | 1928.3 | 1927.3 | | 99.39 | 59.72 | 78.78 | | |
| | 21.69 | 24.8 TO 24.4 (CONF.) | 1,788 | 1927.3 | 1921.9 | | 99.47 | 61.09 | 79.87 | | |
| | 119.87 | 24.4 TO 24.9 | 4,942 | 1921.9 | 1914.2 | | 100.00 | 59.21 | 78.37 | **131.60** | **105.13** |

**Table 5** – Existing Conditions Rational Method Input Values & Output Calculations (Continued)

| AREA | SIZE (AC) | SUBAREA REACH | LEN. (FT) | U.S. ELEV. (FT) | D.S. ELEV. (FT.) | RAIN 100-1 (IN) | PERV. % | SCS (AMC II) | SCS (AMC III) | AREA TC (MIN.) | TOTAL $Q_{100}$ (CFS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10.00 | 25.0 TO 25.1 | 879 | 1935.0 | 1925.3 | | 100.00 | 61.51 | 80.21 | | |
| | 20.69 | 25.1 TO 25.2 | 1,574 | 1925.3 | 1923.0 | | 100.00 | 62.00 | 80.60 | | |
| 25 | 38.80 | 25.2 TO 25.3 | 1,306 | 1923.0 | 1922.9 | 1.36 | 100.00 | 62.00 | 80.60 | | |
| | 84.70 | 25.3 TO 25.4 | 1,863 | 1922.9 | 1916.7 | | 100.00 | 61.41 | 80.13 | | |
| | 125.72 | 25.4 TO 25.5 | 3,934 | 1916.7 | 1906.4 | | 99.82 | 61.40 | 80.12 | **130.46** | **106.82** |
| | 4.79 | 26.0 TO 26.1 (CONF.) | 1,000 | 1912.6 | 1905.8 | | 100.00 | 62.00 | 80.60 | | |
| | 5.12 | 26.2 TO 26.1 (CONF.) | 694 | 1906.9 | 1905.8 | | 100.00 | 62.00 | 80.60 | | |
| | 3.66 | 26.1 TO 26.3 (CONF.) | 403 | 1905.8 | 1904.6 | | 100.00 | 62.00 | 80.60 | | |
| | 4.37 | 26.4 TO 26.3 (CONF.) | 792 | 1913.2 | 1904.6 | | 100.00 | 62.00 | 80.60 | | |
| | 4.14 | 26.3 TO 26.5 (CONF.) | 391 | 1904.6 | 1904.5 | | 100.00 | 62.00 | 80.60 | | |
| | 9.43 | 26.6 TO 26.7 | 1,000 | 1912.7 | 1908.0 | | 100.00 | 60.53 | 79.42 | | |
| | 1.91 | 26.7 TO 26.5 (CONF.) | 534 | 1908.0 | 1904.5 | | 100.00 | 62.00 | 80.60 | | |
| | 2.51 | 26.5 TO 26.8 (CONF.) | 369 | 1904.5 | 1904.1 | | 100.00 | 62.00 | 80.60 | | |
| | 10.00 | 26.9 TO 26.10 | 755 | 1911.0 | 1905.6 | | 100.00 | 61.95 | 80.56 | | |
| | 7.73 | 26.10 TO 26.8 (CONF.) | 690 | 1905.6 | 1904.1 | | 100.00 | 62.00 | 80.60 | | |
| 26 | 29.14 | 26.8 TO 26.11 | 1,377 | 1904.1 | 1902.5 | 1.39 | 100.00 | 62.00 | 80.60 | | |
| | 48.02 | 26.11 TO 26.12 | 2,640 | 1902.5 | 1897.1 | | 100.00 | 62.00 | 80.60 | | |
| | 28.21 | 26.12 TO 26.13 (CONF.) | 1,785 | 1897.1 | 1893.1 | | 100.00 | 62.00 | 80.60 | | |
| | 8.56 | 26.14 TO 26.15 | 707 | 1908.1 | 1905.8 | | 100.00 | 62.00 | 80.60 | | |
| | 18.12 | 26.15 TO 26.16 | 1,141 | 1905.8 | 1901.6 | | 100.00 | 62.00 | 80.60 | | |
| | 43.16 | 26.16 TO 26.17 | 1,868 | 1901.6 | 1896.1 | | 98.55 | 62.00 | 80.60 | | |
| | 14.75 | 26.17 TO 26.13 (CONF.) | 1,118 | 1896.1 | 1893.1 | | 99.33 | 62.00 | 80.60 | | |
| | 26.84 | 26.13 TO 26.18 (CONF.) | 2,434 | 1893.1 | 1890.7 | | 99.54 | 62.81 | 81.25 | | |
| | 7.68 | 26.19 TO 26.20 | 1,000 | 1900.3 | 1894.2 | | 100.00 | 62.00 | 80.60 | | |
| | 19.58 | 26.20 TO 26.21 | 1,041 | 1894.2 | 1890.8 | | 100.00 | 62.00 | 80.60 | | |
| | 25.53 | 26.21 TO 26.18 (CONF.) | 1,444 | 1890.8 | 1890.7 | | 98.65 | 62.79 | 81.23 | | |
| | 18.81 | 26.18 TO 26.22 | 1,942 | 1890.7 | 1887.2 | | 100.00 | 59.04 | 78.23 | **131.47** | **157.65** |
| 27 | 6.15 | 27.0 TO 27.1 | 424 | 1908.1 | 1906.0 | 1.38 | 100.00 | 62.00 | 80.60 | **28.20** | **10.97** |
| | 10.00 | 28.0 TO 28.1 | 752 | 1892.1 | 1890.1 | | 100.00 | 58.00 | 77.40 | | |
| | 7.48 | 28.1 TO 28.2 (CONF.) | 1,206 | 1890.1 | 1887.5 | | 100.00 | 58.00 | 77.40 | | |
| 28 | 10.00 | 28.3 TO 28.4 | 752 | 1890.9 | 1887.6 | 1.39 | 100.00 | 58.00 | 77.40 | | |
| | 8.61 | 28.4 TO 28.2 (CONF.) | 578 | 1887.6 | 1887.5 | | 100.00 | 58.00 | 77.40 | | |
| | 25.30 | 28.2 TO 28.5 | 1,132 | 1887.5 | 1884.4 | | 99.55 | 59.30 | 78.44 | **76.25** | **41.73** |
| 29 | 10.00 | 29.0 TO 29.1 | 776 | 1889.0 | 1887.5 | 1.39 | 100.00 | 58.00 | 77.40 | | |
| | 5.24 | 29.1 TO 29.2 | 413 | 1887.5 | 1886.4 | | 100.00 | 59.40 | 78.52 | **54.70** | **14.76** |
| | 7.29 | 30.0 TO 30.1 | 1,000 | 1902.9 | 1896.4 | | 85.82 | 73.93 | 90.14 | | |
| 30 | 14.30 | 30.1 TO 30.2 | 1,043 | 1896.4 | 1893.0 | 1.40 | 100.00 | 78.85 | 93.31 | | |
| | 30.30 | 30.2 TO 30.3 | 1,163 | 1893.0 | 1891.1 | | 99.24 | 77.80 | 92.68 | | |
| | 83.11 | 30.3 TO 30.4 | 2,235 | 1891.1 | 1886.0 | | 99.10 | 75.86 | 91.52 | **91.52** | **138.70** |
| | 5.24 | 31.0 TO 31.1 | 1,000 | 1924.3 | 1920.6 | | 67.03 | 62.00 | 80.60 | | |
| | 10.93 | 31.1 TO 31.2 | 991 | 1920.6 | 1917.4 | | 84.46 | 62.00 | 80.60 | | |
| | 20.87 | 31.2 TO 31.3 | 862 | 1917.4 | 1915.8 | | 96.69 | 62.00 | 80.60 | | |
| | 40.83 | 31.3 TO 31.4 | 1,062 | 1915.8 | 1914.7 | | 97.45 | 62.00 | 80.60 | | |
| | 76.88 | 31.4 TO 31.5 | 3,431 | 1914.7 | 1905.3 | | 95.97 | 63.18 | 81.54 | | |
| | 156.96 | 31.5 TO 31.6 | 5,186 | 1905.3 | 1892.3 | | 95.00 | 72.77 | 89.22 | | |
| 31 | 50.34 | 31.6 TO 31.7 (CONF.) | 2,516 | 1892.3 | 1886.8 | 1.40 | 95.00 | 69.92 | 86.94 | | |
| | 10.00 | 31.8 TO 31.9 | 548 | 1911.9 | 1909.9 | | 95.93 | 83.81 | 96.29 | | |
| | 21.33 | 31.9 TO 31.10 | 1,333 | 1909.9 | 1906.6 | | 100.00 | 79.18 | 93.51 | | |
| | 38.54 | 31.10 TO 31.11 | 1,835 | 1906.6 | 1902.7 | | 98.00 | 60.03 | 79.02 | | |
| | 95.54 | 31.11 TO 31.12 | 3,382 | 1902.7 | 1893.6 | | 90.00 | 62.02 | 80.62 | | |
| | 61.48 | 31.12 TO 31.7 (CONF.) | 2,737 | 1893.6 | 1886.8 | | 95.00 | 76.19 | 91.71 | | |
| | 45.93 | 31.7 TO 31.13 | 3,029 | 1886.8 | 1880.8 | | 100.00 | 81.39 | 94.83 | **122.15** | **302.22** |

**Table 5** – Existing Conditions Rational Method Input Values & Output Calculations (Continued)

| AREA | SIZE (AC) | SUBAREA REACH | LEN. (FT) | U.S. ELEV. (FT) | D.S. ELEV. (FT.) | RAIN 100-1 (IN) | PERV. % | SCS (AMC II) | SCS (AMC III) | AREA TC (MIN.) | TOTAL $Q_{100}$ (CFS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 | 9.24 | 32.0 TO 32.1 | 1,000 | 1891.9 | 1884.7 | 1.39 | 100.00 | 81.00 | 94.60 | | |
| | 15.12 | 32.1 TO 32.2 | 1,520 | 1884.7 | 1879.6 | | 100.00 | 81.39 | 94.83 | **43.29** | **36.04** |
| 33 | 5.80 | 33.0 TO 33.1 | 1,000 | 1892.3 | 1885.7 | 1.39 | 100.00 | 81.00 | 94.60 | | |
| | 11.97 | 33.1 TO 33.2 | 819 | 1885.7 | 1883.7 | | 100.00 | 81.00 | 94.60 | | |
| | 13.09 | 33.2 TO 33.3 | 871 | 1883.7 | 1881.4 | | 100.00 | 81.16 | 94.70 | **48.06** | **42.18** |
| 34 | 5.20 | 34.0 TO 34.1 | 1,000 | 1897.6 | 1894.2 | 1.40 | 90.00 | 81.58 | 94.95 | | |
| | 9.80 | 34.1 TO 34.2 | 570 | 1894.2 | 1893.3 | | 90.00 | 81.19 | 94.71 | | |
| | 18.50 | 34.2 TO 34.3 | 1,115 | 1893.3 | 1888.5 | | 90.00 | 81.05 | 94.63 | | |
| | 36.85 | 34.3 TO 34.4 | 1,198 | 1888.5 | 1885.5 | | 100.00 | 83.00 | 95.80 | | |
| | 36.88 | 34.4 TO 34.5 | 1,714 | 1885.5 | 1881.8 | | 100.00 | 81.63 | 94.98 | **73.07** | **108.88** |
| 35 | 6.26 | 35.0 TO 35.1 | 1,000 | 1886.9 | 1882.6 | 1.39 | 100.00 | 83.33 | 96.00 | | |
| | 2.06 | 35.1 TO 35.2 (CONF.) | 378 | 1882.6 | 1880.8 | | 100.00 | 84.00 | 96.40 | | |
| | 10.00 | 35.3 TO 35.4 | 1,000 | 1887.0 | 1881.7 | | 100.00 | 81.19 | 94.71 | | |
| | 4.74 | 35.4 TO 35.2 (CONF.) | 288 | 1881.7 | 1880.8 | | 100.00 | 83.13 | 95.88 | | |
| | 10.04 | 35.2 TO 35.5 | 686 | 1880.8 | 1879.8 | | 100.00 | 84.00 | 96.40 | **38.62** | **53.22** |
| 36 | 3.57 | 36.0 TO 36.1 | 628 | 1883.3 | 1876.4 | 1.39 | 100.00 | 84.00 | 96.40 | **17.53** | **10.34** |
| 37 | 9.10 | 37.0 TO 37.1 | 1,000 | 1883.0 | 1878.4 | 1.39 | 100.00 | 84.00 | 96.50 | | |
| | 1.32 | 37.1 TO 37.2 | 203 | 1878.4 | 1877.3 | | 100.00 | 84.00 | 96.40 | **27.57** | **21.80** |
| 38 | 7.69 | 38.0 TO 38.1 | 1,000 | 1882.0 | 1879.1 | 1.39 | 100.00 | 84.00 | 96.40 | | |
| | 4.61 | 38.1 TO 38.2 | 276 | 1879.1 | 1877.7 | | 100.00 | 84.00 | 96.40 | **31.03** | **23.63** |
| 39 | 2.71 | 39.0 TO 39.1 | 1,000 | 1903.0 | 1897.8 | 1.40 | 90.00 | 62.00 | 80.60 | | |
| | 5.97 | 39.1 TO 39.2 | 947 | 1897.8 | 1895.2 | | 90.00 | 66.10 | 83.88 | | |
| | 8.85 | 39.2 TO 39.3 | 1,225 | 1895.2 | 1893.0 | | 90.00 | 84.00 | 96.40 | | |
| | 17.12 | 39.3 TO 39.4 (CONF.) | 1,060 | 1893.0 | 1889.2 | | 90.00 | 84.00 | 96.40 | | |
| | 9.79 | 39.5 TO 39.6 | 1,000 | 1897.3 | 1893.3 | | 90.00 | 84.00 | 96.40 | | |
| | 22.23 | 39.6 TO 39.7 (CONF.) | 1,661 | 1893.3 | 1890.4 | | 90.00 | 84.00 | 96.40 | | |
| | 9.98 | 39.8 TO 39.9 | 1,000 | 1893.0 | 1891.0 | | 90.00 | 84.00 | 96.40 | | |
| | 4.90 | 39.9 TO 39.7 (CONF.) | 384 | 1891.0 | 1890.4 | | 90.00 | 84.00 | 96.40 | | |
| | 6.72 | 39.7 TO 39.4 (CONF.) | 638 | 1890.4 | 1889.2 | | 90.00 | 84.00 | 96.40 | | |
| | 5.67 | 39. 4 TO 39.10 (CONF.) | 551 | 1889.2 | 1887.8 | | 98.00 | 84.00 | 96.40 | | |
| | 9.31 | 39.11 TO 39.12 | 1,000 | 1892.8 | 1888.2 | | 90.00 | 83.86 | 96.40 | | |
| | 2.34 | 39.12 TO 39.10 (CONF.) | 425 | 1888.2 | 1887.8 | | 90.00 | 84.00 | 96.40 | | |
| | 16.22 | 39.10 TO 39.13 | 845 | 1887.8 | 1886.1 | | 98.00 | 83.23 | 95.94 | | |
| | 31.50 | 39.13 TO 39.14 | 1,834 | 1886.1 | 1882.0 | | 98.00 | 83.30 | 95.98 | | |
| | 31.91 | 39.14 TO 39.15 (CONF.) | 2,287 | 1882.0 | 1876.1 | | 98.00 | 84.00 | 96.40 | | |
| | 10.00 | 39.16 TO 39.17 | 680 | 1888.0 | 1886.7 | | 90.00 | 84.00 | 96.40 | | |
| | 38.56 | 39.17 TO 39.18 | 1,765 | 1886.7 | 1882.4 | | 90.00 | 83.33 | 96.00 | | |
| | 30.62 | 39.18 TO 39.15 (CONF.) | 2,853 | 1882.4 | 1876.1 | | 90.00 | 84.00 | 96.40 | | |
| | 13.59 | 39.15 TO 39.19 | 2,692 | 1876.1 | 1869.9 | | 100.00 | 84.00 | 96.40 | **86.75** | **228.30** |
| 40 | 3.40 | 40.0 TO 40.1 | 515 | 1881.4 | 1876.5 | 1.40 | 100.00 | 84.00 | 96.40 | **16.67** | **10.28** |
| 41 | 2.26 | 41.0 TO 41.1 | 340 | 1878.4 | 1876.3 | 1.39 | 100.00 | 84.00 | 96.40 | **15.39** | **7.18** |
| 42 | 6.94 | 42.0 TO 42.1 | 1,000 | 1886.7 | 1881.5 | 1.39 | 90.00 | 84.00 | 96.40 | | |
| | 20.24 | 42.1 TO 42.2 | 1,696 | 1881.5 | 1877.7 | | 95.00 | 84.00 | 96.40 | | |
| | 26.20 | 42.2 TO 42.3 | 1,288 | 1877.7 | 1875.7 | | 100.00 | 84.00 | 96.40 | | |
| | 11.90 | 42.3 TO 42.4 (CONF.) | 781 | 1875.7 | 1872.8 | | 100.00 | 84.00 | 96.40 | | |
| | 6.25 | 42.5 TO 42.6 | 1,000 | 1879.9 | 1876.4 | | 95.00 | 84.00 | 96.40 | | |
| | 11.38 | 42.6 TO 42.4 (CONF.) | 1,421 | 1876.4 | 1872.8 | | 100.00 | 84.00 | 96.40 | | |
| | 8.40 | 42.4 TO 42.7 (CONF.) | 1,035 | 1872.8 | 1870.5 | | 100.00 | 84.00 | 96.40 | | |
| | 5.57 | 42.8 TO 42.9 | 1,000 | 1879.9 | 1876.1 | | 90.00 | 84.00 | 96.40 | | |
| | 9.93 | 42.9 TO 42.10 | 859 | 1876.1 | 1874.3 | | 90.00 | 84.00 | 96.40 | | |
| | 12.83 | 42.10 TO 42.7 (CONF.) | 1,381 | 1874.3 | 1870.5 | | 100.00 | 84.00 | 96.40 | | |
| | 4.69 | 42.7 TO 42.11 | 353 | 1870.5 | 1869.2 | | 100.00 | 84.00 | 96.40 | **58.26** | **118.94** |
| 43 | 5.32 | 43.0 TO 43.1 | 1,000 | 1877.8 | 1872.0 | 1.39 | 100.00 | 84.00 | 96.40 | | |
| | 1.63 | 43.1 TO 43.2 | 245 | 1872.0 | 1871.0 | | 100.00 | 84.00 | 96.40 | **27.83** | **14.44** |
| 44 | 6.47 | 44.0 TO 44.1 | 850 | 1874.3 | 1871.2 | 1.39 | 100.00 | 84.00 | 96.40 | **24.67** | **14.66** |
| 45 | 3.49 | 45.0 TO 45.1 | 439 | 1876.3 | 1872.8 | 1.39 | 100.00 | 84.00 | 96.40 | **16.20** | **10.69** |

Refer to Technical Appendix No. 3 for printouts of the existing conditions 100-year, 1-hour rational method calculations. Refer to Exhibit "F" for the existing conditions study map.

## 1.3 Existing Conditions Unit Hydrograph Calculations

As discussed above, for existing conditions areas less than 640 acres (1 sq. mi.), the rational hydrology method was used to generate Time of Concentration (TC) values to generate lag times in the unit hydrograph calculations for these areas. For all other existing conditions areas (640 acres / 1 sq. mi. or greater), the Snyder (Army Corps of Engineers) lag equation was used to establish lag times for these areas. Input values for the existing conditions 100-year, 24-hour unit hydrograph calculations prepared for this study are tabulated as follows:

| AREA | SIZE (AC) | LEN. (FT) | LCA (FT) | ELEV. CHANGE (FT) | RAIN 100-1 (IN) | RAIN 100-6 (IN) | RAIN 100-24 (IN) | PERV. % | SCS (AMC II) | SCS (AMC III) | TC (MIN.) | TC (HR.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.00 | N/A | | | 1.26 | 1.84 | 2.50 | 100.00 | 62.00 | 80.60 | 18.89 | 0.31 |
| 2 | 1.55 | N/A | | | 1.27 | 1.84 | 2.49 | 100.00 | 62.00 | 80.60 | 16.43 | 0.27 |
| 3 | 4.92 | N/A | | | 1.27 | 1.84 | 2.48 | 100.00 | 62.00 | 80.60 | 26.58 | 0.44 |
| 4 | 8.95 | N/A | | | 1.27 | 1.84 | 2.48 | 100.00 | 62.00 | 80.60 | 30.92 | 0.52 |
| 5 | 13.66 | N/A | | | 1.27 | 1.84 | 2.46 | 100.00 | 62.00 | 80.60 | 31.10 | 0.52 |
| 6 | 13.80 | N/A | | | 1.27 | 1.84 | 2.45 | 100.00 | 62.00 | 80.60 | 40.17 | 0.67 |
| 7 | 14.99 | N/A | | | 1.27 | 1.84 | 2.44 | 100.00 | 62.00 | 80.60 | 48.60 | 0.81 |
| 8 | 8.97 | N/A | | | 1.27 | 1.84 | 2.42 | 100.00 | 62.00 | 80.60 | 31.28 | 0.52 |
| 9 | 29.97 | N/A | | | 1.27 | 1.84 | 2.42 | 100.00 | 62.00 | 80.60 | 39.79 | 0.66 |
| 10A | 13.57 | N/A | | | 1.27 | 1.84 | 2.40 | 100.00 | 62.00 | 80.60 | 83.79 | 1.40 |
| 10B | 43.92 | N/A | | | 1.27 | 1.84 | 2.40 | 0.00 | 98.00 | 99.60 | N/A | N/A |
| 11 | 9.20 | N/A | | | 1.28 | 1.84 | 2.38 | 100.00 | 62.00 | 80.60 | 31.13 | 0.52 |
| 12 | 0.87 | N/A | | | 1.28 | 1.84 | 2.37 | 100.00 | 62.00 | 80.60 | 15.38 | 0.26 |
| 13 | 16.85 | N/A | | | 1.28 | 1.84 | 2.39 | 100.00 | 62.00 | 80.60 | 55.17 | 0.92 |
| 14 | 18.15 | N/A | | | 1.29 | 1.84 | 2.39 | 100.00 | 62.00 | 80.60 | 51.45 | 0.86 |
| 15 | 197.08 | N/A | | | 1.27 | 1.83 | 2.43 | 74.30 | 62.00 | 80.60 | 95.05 | 1.58 |
| 16 | 158.96 | N/A | | | 1.27 | 1.83 | 2.44 | 0.00 | 98.00 | 99.60 | N/A | N/A |
| 17 | 148.48 | N/A | | | 1.30 | 1.83 | 2.43 | 99.30 | 74.00 | 90.20 | 44.88 | 0.75 |
| 18 | 48.06 | N/A | | | 1.33 | 1.84 | 2.48 | 100.00 | 62.00 | 80.60 | 33.00 | 0.55 |
| 19 | 7.87 | N/A | | | 1.35 | 1.84 | 2.48 | 100.00 | 62.00 | 80.60 | 34.57 | 0.58 |
| 20 | 24.41 | N/A | | | 1.36 | 1.84 | 2.48 | 100.00 | 58.40 | 77.70 | 48.93 | 0.82 |
| 21 | 9.89 | N/A | | | 1.36 | 1.84 | 2.47 | 100.00 | 61.60 | 80.30 | 48.66 | 0.81 |
| 22 | 3.73 | N/A | | | 1.36 | 1.84 | 2.47 | 100.00 | 62.00 | 80.60 | 23.53 | 0.39 |
| 23 | 69.41 | N/A | | | 1.36 | 1.84 | 2.48 | 100.00 | 60.20 | 79.20 | 76.72 | 1.28 |
| 24 | 293.06 | N/A | | | 1.35 | 1.84 | 2.49 | 99.90 | 60.00 | 79.00 | 131.60 | 2.19 |
| 25 | 279.91 | N/A | | | 1.36 | 1.83 | 2.51 | 99.90 | 61.50 | 80.20 | 130.46 | 2.17 |
| 26 | 342.06 | N/A | | | 1.39 | 1.82 | 2.52 | 99.70 | 61.90 | 80.50 | 131.47 | 2.19 |
| 27 | 6.15 | N/A | | | 1.38 | 1.82 | 2.51 | 100.00 | 62.00 | 80.60 | 28.20 | 0.47 |
| 28 | 61.39 | N/A | | | 1.39 | 1.81 | 2.53 | 99.80 | 58.50 | 77.80 | 76.25 | 1.27 |
| 29 | 15.24 | N/A | | | 1.39 | 1.81 | 2.54 | 100.00 | 58.50 | 77.80 | 54.70 | 0.91 |
| 30 | 135.00 | N/A | | | 1.40 | 1.82 | 2.57 | 98.50 | 76.50 | 91.90 | 67.00 | 1.12 |
| 31 | 634.87 | N/A | | | 1.40 | 1.83 | 2.60 | 94.90 | 69.00 | 86.20 | 122.15 | 2.04 |
| 32 | 24.36 | N/A | | | 1.39 | 1.83 | 2.60 | 100.00 | 81.20 | 94.70 | 43.29 | 0.72 |
| 33 | 30.86 | N/A | | | 1.39 | 1.83 | 2.60 | 100.00 | 81.10 | 94.70 | 48.06 | 0.80 |
| 34 | 107.23 | N/A | | | 1.40 | 1.84 | 2.61 | 96.90 | 82.00 | 95.20 | 73.07 | 1.22 |
| 35 | 33.10 | N/A | | | 1.39 | 1.84 | 2.62 | 100.00 | 82.90 | 95.70 | 38.62 | 0.64 |
| 36 | 3.57 | N/A | | | 1.39 | 1.84 | 2.62 | 100.00 | 84.00 | 96.40 | 17.53 | 0.29 |
| 37 | 10.42 | N/A | | | 1.39 | 1.85 | 2.63 | 100.00 | 84.00 | 96.40 | 27.57 | 0.46 |
| 38 | 12.30 | N/A | | | 1.39 | 1.85 | 2.64 | 100.00 | 84.00 | 96.40 | 31.03 | 0.52 |
| 39 | 277.99 | N/A | | | 1.40 | 1.86 | 2.65 | 92.90 | 83.20 | 95.90 | 86.75 | 1.45 |
| 40 | 3.40 | N/A | | | 1.40 | 1.86 | 2.65 | 100.00 | 84.00 | 96.40 | 16.67 | 0.28 |
| 41 | 2.26 | N/A | | | 1.39 | 1.86 | 2.65 | 100.00 | 84.00 | 96.40 | 15.39 | 0.26 |
| 42 | 124.33 | N/A | | | 1.39 | 1.87 | 2.67 | 97.10 | 84.00 | 96.40 | 58.26 | 0.97 |
| 43 | 6.95 | N/A | | | 1.39 | 1.87 | 2.67 | 100.00 | 84.00 | 96.40 | 27.83 | 0.46 |
| 44 | 6.47 | N/A | | | 1.39 | 1.87 | 2.68 | 100.00 | 84.00 | 96.40 | 24.67 | 0.41 |
| 45 | 3.49 | N/A | | | 1.39 | 1.87 | 2.68 | 100.00 | 84.00 | 96.40 | 16.20 | 0.27 |

**Table 6** – Existing Conditions Unit Hydrograph Input Values (Continued)

| AREA | SIZE (AC) | LEN. (FT) | LCA (FT) | ELEV. CHANGE (FT) | RAIN 100-1 (IN) | RAIN 100-6 (IN) | RAIN 100-24 (IN) | PERV. % | SCS (AMC II) | SCS (AMC III) | TC (MIN.) | TC (HR.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 46 | 3,782.66 | 35,115 | 20,362 | 2044.90 | 1.29 | 2.16 | 3.27 | 98.06 | 87.00 | 97.40 | N/A | N/A |
| 47 | 3,500.82 | 38,102 | 19,862 | 2190.20 | 1.29 | 2.07 | 3.03 | 97.95 | 68.25 | 85.60 | N/A | N/A |
| 48 | 764.55 | 20,795 | 10,119 | 58.10 | 1.40 | 1.85 | 2.62 | 89.36 | 70.70 | 87.60 | N/A | N/A |
| 49 | 17,446.64 | 81,047 | 39,563 | 2612.40 | 1.36 | 2.15 | 3.24 | 98.88 | 71.28 | 88.00 | N/A | N/A |
| 50 | 3,444.14 | 24,414 | 13,905 | 1760.00 | 1.45 | 2.64 | 4.24 | 100.00 | 88.00 | 97.60 | N/A | N/A |
| 51 | 15,350.45 | 45,387 | 22,710 | 2686.10 | 1.42 | 2.25 | 3.40 | 99.54 | 78.44 | 93.10 | N/A | N/A |
| 52 | 2,128.12 | 17,716 | 8,950 | 1680.00 | 1.39 | 2.04 | 2.93 | 98.78 | 73.11 | 89.50 | N/A | N/A |

Output for the existing conditions 100-year, 24-hour unit hydrograph calculations are tabulated as follows:

**Table 7** – Existing Conditions Unit Hydrograph Output Calculations

| AREA | LAG (HR.) | $Q_{100}$ (CFS) | $V_{100}$ (AF) |
|---|---|---|---|
| 1 | **0.25** | **2.27** | **0.12** |
| 2 | **0.22** | **3.91** | **0.18** |
| 3 | **0.35** | **9.16** | **0.57** |
| 4 | **0.42** | **14.09** | **1.03** |
| 5 | **0.42** | **21.50** | **1.56** |
| 6 | **0.54** | **18.27** | **1.57** |
| 7 | **0.65** | **17.15** | **1.70** |
| 8 | **0.42** | **14.12** | **1.01** |
| 9 | **0.53** | **39.52** | **3.37** |
| 10A | **1.12** | **10.55** | **1.51** |
| 10B | N/A | | **8.76** |
| 11 | **0.42** | **14.60** | **1.02** |
| 12 | **0.21** | **2.24** | **0.10** |
| 13 | **0.74** | **18.40** | **1.88** |
| 14 | **0.69** | **21.03** | **2.03** |
| 15 | **1.26** | **146.52** | **26.15** |
| 16 | N/A | | **32.25** |
| 17 | **0.60** | **211.40** | **22.34** |
| 18 | **0.44** | **79.26** | **5.66** |
| 19 | **0.46** | **12.94** | **0.93** |
| 20 | **0.66** | **29.32** | **2.69** |

**Table 7** – Existing Conditions Unit Hydrograph Output Calculations (Continued)

| AREA | LAG (HR.) | $Q_{100}$ (CFS) | $V_{100}$ (AF) |
|---|---|---|---|
| 21 | **0.65** | **12.19** | **1.16** |
| 22 | **0.31** | **7.85** | **0.44** |
| 23 | **1.02** | **60.22** | **7.94** |
| 24 | **1.75** | **163.10** | **33.20** |
| 25 | **1.74** | **161.32** | **33.17** |
| 26 | **1.75** | **200.00** | **41.48** |
| 27 | **22.16** | **11.77** | **0.75** |
| 28 | **1.02** | **54.11** | **7.00** |
| 29 | **0.73** | **18.02** | **1.74** |
| 30 | **0.90** | **153.30** | **22.98** |
| 31 | **1.63** | **427.00** | **94.32** |
| 32 | **0.58** | **40.15** | **4.53** |
| 33 | **0.64** | **45.87** | **5.73** |
| 34 | **0.98** | **123.15** | **20.37** |
| 35 | **0.51** | **58.05** | **6.38** |
| 36 | **0.23** | **10.53** | **0.70** |
| 37 | **0.37** | **23.25** | **2.06** |
| 38 | **0.42** | **24.50** | **2.44** |
| 39 | **1.16** | **278.92** | **54.79** |
| 40 | **0.22** | **10.31** | **0.68** |
| 41 | **0.21** | **7.00** | **0.45** |
| 42 | **0.78** | **163.96** | **24.95** |
| 43 | **0.37** | **15.52** | **1.39** |
| 44 | **0.33** | **15.50** | **1.30** |
| 45 | **0.22** | **10.68** | **0.70** |
| 46 | **0.83** | **3,931.07** | **948.24** |
| 47 | **0.99** | **2,754.99** | **563.85** |
| 48 | **1.09** | **732.31** | **120.74** |
| 49 | **1.92** | **7,103.32** | **3,092.46** |
| 50 | **0.70** | **5,599.01** | **1,141.36** |
| 51 | **1.11** | **10,831.85** | **3,424.11** |
| 52 | **0.50** | **3,269.02** | **379.87** |

Refer to Technical Appendix No. 4 for printouts of the existing conditions 100-year, 24-hour unit hydrograph calculations. Refer to Exhibit "F" for the existing conditions study map.

## 1.4 Existing Conditions Hydrograph Routing Calculations

The U.S.G.S. quadrangles for the offsite watershed indicate braided blue-line streams. Offsite area 50 is shown to split at its downstream watercourse location. The split flows of Area 50 then flow to confluence with flows from Areas 49 and 51, respectively.

Hydrograph routing was necessarily for modeling of these flow divisions and combinations. The SCS convex method of channel routing was used to route natural flows as discussed above, and tabulated below:

**Table 8** – Existing Conditions Hydrograph Routing Calculations

| LOCATION | ROUTING ACTION | $Q_{100}$ (CFS) AT LOCATION | $V_{100}$ (AF) AT LOCATION |
|---|---|---|---|
| R1.0 | SPLIT AREA 50 HYDROGRAPH | 2,799.51 | 570.68 |
| R1.0 TO R1.1 | ROUTE SPLIT FLOW OF AREA 50 HYDROGRAPH TO AREA 49 DISCHARGE POINT | 2,461.44 | 570.68 |
| R1.1 | COMBINE AREA 49 HYDROGRAPH AT AREA 49 DISCHARGE POINT | **8,140.15** | **3,663.71** |
| | | | |
| R2.0 | SPLIT AREA 50 HYDROGRAPH | 2,799.51 | 570.68 |
| R2.0 TO R2.1 | ROUTE SPLIT FLOW OF AREA 50 HYDROGRAPH TO AREA 51 DISCHARGE POINT | 2,460.42 | 570.68 |
| R2.1 | COMBINE AREA 51 HYDROGRAPH AT AREA 51 DISCHARGE POINT | **12,269.86** | **3,994.79** |

Refer to Technical Appendix No. 5 for printouts of existing conditions 100-year, 24-hour hydrograph routing calculations. Refer to Exhibit "E" for the existing conditions study map illustrating these routed flows.

# E. Developed Conditions Hydrology Calculations & Summary

## 1.1 Developed Conditions Hydrology Discussion

Due to the nature of the proposed project (PV Solar Generating Station), the overall hydrology for existing conditions will remain substantially unchanged for existing conditions (as grading will be limited to smoothing of existing topography), excepting the following:

- For the proposed 5,531 acre project site, the pervious percentage was assumed to be 90%, to account for any paved access roads, driveways, parking areas, and structures typical of this type of development. The area-averaged pervious percentage of all drainage areas/subareas within the project site limits were therefore adjusted accordingly for developed conditions.

- For the proposed 5,531 acre project site, the pervious cover was assumed to be "barren", to account for all clearing/grubbing activities and gravel areas typical of this type of development. The area-averaged pervious cover of all drainage areas/subareas within the project site limits were therefore adjusted accordingly for developed conditions.

- The existing borrow pit within the existing railroad spur is located inside the proposed project site. This pit will be filled and compacted if this area is developed as part of the project. Therefore, runoff currently contained within the borrow pit will be added to the developed conditions discharge.

## 1.2 Developed Conditions Rational Method Calculations

Input values and output calculations for the developed conditions 100-year, 1-hour rational method calculations prepared for this report are tabulated below:

**Table 9** – Developed Conditions Rational Method Input Values & Output Calculations

| AREA | SIZE (AC) | SUBAREA REACH | LEN. (FT) | U.S. ELEV. (FT) | D.S. ELEV. (FT.) | RAIN 100-1 (IN) | PERV. % | SCS (AMC II) | SCS (AMC III) | AREA TC (MIN.) | TOTAL $Q_{100}$ (CFS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.00 | 1.0 TO 1.1 | 357 | 1965.4 | 1956.1 | 1.26 | 90.00 | 78.00 | 92.80 | **10.81** | **3.65** |
| 2 | 1.55 | 2.0 TO 2.1 | 285 | 1965.1 | 1955.6 | 1.27 | 90.00 | 78.00 | 92.80 | **9.40** | **6.31** |
| 3 | 4.92 | 3.0 TO 3.1 | 600 | 1963.0 | 1955.0 | 1.27 | 90.00 | 78.00 | 92.80 | **15.21** | **14.14** |
| 4 | 8.95 | 4.0 TO 4.1 | 1,000 | 1971.3 | 1953.9 | 1.27 | 90.00 | 78.00 | 92.80 | **17.69** | **23.04** |
| 5 | 10.00 | 5.0 TO 5.1 | 931 | 1971.2 | 1954.8 | 1.27 | 90.00 | 78.00 | 92.80 | | |
| | 3.66 | 5.1 TO 5.2 | 146 | 1954.8 | 1950.6 | | 90.00 | 78.00 | 92.80 | **18.06** | **34.63** |
| 6 | 9.47 | 6.0 TO 6.1 | 1,000 | 1970.7 | 1962.8 | 1.27 | 90.00 | 78.00 | 92.80 | | |
| | 4.33 | 6.1 TO 6.2 | 474 | 1962.8 | 1948.8 | | 90.00 | 78.00 | 92.80 | **23.90** | **28.48** |
| 7 | 9.33 | 7.0 TO 7.1 | 1,000 | 1970.4 | 1966.6 | 1.27 | 90.00 | 78.00 | 92.80 | | |
| | 5.66 | 7.1 TO 7.2 | 716 | 1966.6 | 1949.6 | | 90.00 | 78.00 | 92.80 | **29.30** | **26.60** |
| 8 | 8.97 | 8.0 T0 8.1 | 1,000 | 1966.7 | 1950.3 | 1.27 | 90.00 | 78.00 | 92.80 | **17.90** | **22.89** |
| 9 | 10.00 | 9.0 TO 9.1 | 776 | 1967.2 | 1965.2 | 1.27 | 90.00 | 78.00 | 92.80 | | |
| | 6.11 | 9.1 TO 9.2 (CONF.) | 780 | 1965.2 | 1960.4 | | 90.00 | 78.00 | 92.80 | | |
| | 9.02 | 9.3 TO 9.2 (CONF.) | 1,000 | 1967.9 | 1960.4 | | 90.00 | 78.00 | 92.80 | | |
| | 4.84 | 9.2 TO 9.4 | 495 | 1960.4 | 1946.5 | | 90.00 | 78.00 | 92.80 | **23.55** | **50.90** |
| 10A | 6.25 | 10.0 TO 10.1 | 1,000 | 1967.3 | 1957.8 | 1.27 | 90.00 | 78.00 | 92.80 | | |
| | 7.32 | 10.1 TO 10.2 | 1,280 | 1957.8 | 1957.3 | | 90.00 | 78.00 | 92.80 | **59.31** | **14.72** |
| 10B | 43.92 | N/A - BORROW PIT AREA - SEE HYDROGRAPH CALCULATIONS | | | | | | | | | |
| 11 | 9.20 | 11.0 TO 11.1 | 841 | 1957.6 | 1947.6 | 1.28 | 90.00 | 78.00 | 92.80 | **17.81** | **23.56** |
| 12 | 0.87 | 12.0 TO 12.1 | 225 | 1955.3 | 1948.8 | 1.28 | 90.00 | 78.00 | 92.80 | **8.80** | **3.74** |
| 13 | 8.36 | 13.0 TO 13.1 | 1,000 | 1959.0 | 1955.6 | 1.28 | 90.00 | 78.00 | 92.80 | | |
| | 8.49 | 13.1 TO 13.2 | 808 | 1955.6 | 1951.6 | | 90.00 | 78.00 | 92.80 | **34.34** | **26.78** |
| 14 | 10.00 | 14.0 TO 14.1 | 1,000 | 1955.0 | 1951.8 | 1.29 | 90.00 | 78.00 | 92.80 | | |
| | 8.15 | 14.1 TO 14.2 | 627 | 1951.8 | 1947.4 | | 90.00 | 78.00 | 92.80 | **31.25** | **31.32** |
| 15 | 10.00 | 15.0 TO 15.1 | 588 | 1983.2 | 1970.0 | 1.27 | 83.79 | 76.19 | 91.71 | | |
| | 23.93 | 15.1 TO 15.2 | 891 | 1970.0 | 1964.6 | | 51.99 | 69.69 | 86.75 | | |
| | 64.34 | 15.2 TO 15.3 | 1,336 | 1964.6 | 1963.8 | | 62.82 | 68.48 | 85.78 | | |
| | 98.81 | 15.3 TO 15.4 | 6,809 | 1963.8 | 1949.3 | | 92.02 | 72.35 | 88.88 | **95.72** | **131.21** |
| 16 | | N/A - LINED EVAPORATION PONDS - SEE HYDROGRAPH CALCULATIONS | | | | | | | | | |
| 17 | 10.00 | 17.0 TO 17.1 | 805 | 1951.2 | 1947.6 | 1.30 | 94.49 | 78.00 | 92.80 | | |
| | 138.48 | 17.1 TO 17.2 | 1,959 | 1947.6 | 1940.5 | | 94.34 | 77.84 | 92.70 | **39.28** | **215.81** |
| 18 | 10.00 | 18.0 TO 18.1 | 404 | 1944.9 | 1938.1 | 1.33 | 90.00 | 78.00 | 92.80 | | |
| | 21.10 | 18.1 TO 18.2 | 830 | 1938.1 | 1932.7 | | 90.88 | 76.60 | 91.96 | | |
| | 16.96 | 18.2 TO 18.3 | 590 | 1932.7 | 1926.1 | | 96.70 | 67.28 | 84.82 | **21.91** | **108.39** |
| 19 | 7.87 | 19.0 TO 19.1 | 756 | 1933.9 | 1929.6 | 1.35 | 100.00 | 62.00 | 80.60 | **34.57** | **11.52** |
| 20 | 10.00 | 20.0 TO 20.1 | 1,000 | 1932.9 | 1925.3 | 1.36 | 90.69 | 76.90 | 92.14 | | |
| | 14.41 | 20.1 TO 20.2 | 801 | 1925.3 | 1920.5 | | 90.29 | 77.44 | 92.46 | **28.53** | **47.32** |
| 21 | 9.89 | 21.0 TO 21.1 | 947 | 1926.4 | 1924.8 | 1.36 | 90.00 | 78.00 | 92.80 | **27.60** | **19.73** |
| 22 | 3.73 | 22.0 TO 22.1 | 392 | 1928.1 | 1924.0 | 1.36 | 90.00 | 78.00 | 92.80 | **13.47** | **12.57** |
| 23 | 10.00 | 23.0 TO 23.1 | 770 | 1926.0 | 1922.2 | 1.36 | 90.00 | 78.00 | 92.80 | | |
| | 20.75 | 23.1 TO 23.2 | 1,058 | 1922.2 | 1917.2 | | 90.00 | 78.00 | 92.80 | | |
| | 38.66 | 23.2 TO 23.3 | 2,495 | 1917.2 | 1910.2 | | 90.00 | 78.00 | 92.80 | **53.62** | **84.04** |
| 24 | 10.00 | 24.0 TO 24.1 | 807 | 1941.9 | 1938.4 | 1.35 | 97.49 | 66.02 | 83.82 | | |
| | 19.33 | 24.1 TO 24.2 | 1,074 | 1938.4 | 1936.3 | | 99.02 | 63.57 | 81.86 | | |
| | 44.74 | 24.2 TO 24.3 | 1,697 | 1936.3 | 1929.1 | | 99.90 | 62.16 | 80.73 | | |
| | 28.39 | 24.3 TO 24.4 (CONF.) | 1,554 | 1929.1 | 1921.9 | | 92.56 | 73.58 | 89.86 | | |
| | 6.50 | 24.5 TO 24.6 | 1,000 | 1940.0 | 1932.2 | | 90.00 | 78.00 | 92.80 | | |
| | 14.08 | 24.6 TO 24.7 | 755 | 1932.2 | 1928.3 | | 90.00 | 78.00 | 92.80 | | |
| | 28.46 | 24.7 TO 24.8 | 1,059 | 1928.3 | 1927.3 | | 91.47 | 74.67 | 90.74 | | |
| | 21.69 | 24.8 TO 24.4 (CONF.) | 1,788 | 1927.3 | 1921.9 | | 90.51 | 77.19 | 92.31 | | |
| | 119.87 | 24.4 TO 24.9 | 4,942 | 1921.9 | 1914.2 | | 90.00 | 78.00 | 92.80 | **97.91** | **199.07** |

**Table 9** – Developed Conditions Rational Method Input Values & Output Calculations (Continued)

| AREA | SIZE (AC) | SUBAREA REACH | LEN. (FT) | U.S. ELEV. (FT) | D.S. ELEV. (FT.) | RAIN 100-1 (IN) | PERV. % | SCS (AMC II) | SCS (AMC III) | AREA TC (MIN.) | TOTAL $Q_{100}$ (CFS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10.00 | 25.0 TO 25.1 | 879 | 1935.0 | 1925.3 | | 90.00 | 78.00 | 92.80 | | |
| | 20.69 | 25.1 TO 25.2 | 1,574 | 1925.3 | 1923.0 | | 90.00 | 78.00 | 92.80 | | |
| 25 | 38.80 | 25.2 TO 25.3 | 1,306 | 1923.0 | 1922.9 | 1.36 | 90.00 | 78.00 | 92.80 | | |
| | 84.70 | 25.3 TO 25.4 | 1,863 | 1922.9 | 1916.7 | | 90.00 | 78.00 | 92.80 | | |
| | 125.72 | 25.4 TO 25.5 | 3,934 | 1916.7 | 1906.4 | | 94.31 | 70.79 | 87.63 | **97.34** | **201.55** |
| | 4.79 | 26.0 TO 26.1 (CONF.) | 1,000 | 1912.6 | 1905.8 | | 90.00 | 78.00 | 92.80 | | |
| | 5.12 | 26.2 TO 26.1 (CONF.) | 694 | 1906.9 | 1905.8 | | 90.00 | 78.00 | 92.80 | | |
| | 3.66 | 26.1 TO 26.3 (CONF.) | 403 | 1905.8 | 1904.6 | | 90.00 | 78.00 | 92.80 | | |
| | 4.37 | 26.4 TO 26.3 (CONF.) | 792 | 1913.2 | 1904.6 | | 90.00 | 78.00 | 92.80 | | |
| | 4.14 | 26.3 TO 26.5 (CONF.) | 391 | 1904.6 | 1904.5 | | 90.00 | 78.00 | 92.80 | | |
| | 9.43 | 26.6 TO 26.7 | 1,000 | 1912.7 | 1908.0 | | 95.21 | 68.20 | 85.56 | | |
| | 1.91 | 26.7 TO 26.5 (CONF.) | 534 | 1908.0 | 1904.5 | | 90.00 | 78.00 | 92.80 | | |
| | 2.51 | 26.5 TO 26.8 (CONF.) | 369 | 1904.5 | 1904.1 | | 90.00 | 78.00 | 92.80 | | |
| | 10.00 | 26.9 TO 26.10 | 755 | 1911.0 | 1905.6 | | 90.12 | 77.76 | 92.66 | | |
| | 7.73 | 26.10 TO 26.8 (CONF.) | 690 | 1905.6 | 1904.1 | | 90.00 | 78.00 | 92.80 | | |
| 26 | 29.14 | 26.8 TO 26.11 | 1,377 | 1904.1 | 1902.5 | 1.39 | 90.00 | 78.00 | 92.80 | | |
| | 48.02 | 26.11 TO 26.12 | 2,640 | 1902.5 | 1897.1 | | 90.00 | 78.00 | 92.80 | | |
| | 28.21 | 26.12 TO 26.13 (CONF. | 1,785 | 1897.1 | 1893.1 | | 90.00 | 78.00 | 92.80 | | |
| | 8.56 | 26.14 TO 26.15 | 707 | 1908.1 | 1905.8 | | 90.00 | 78.00 | 92.80 | | |
| | 18.12 | 26.15 TO 26.16 | 1,141 | 1905.8 | 1901.6 | | 90.00 | 78.00 | 92.80 | | |
| | 43.16 | 26.16 TO 26.17 | 1,868 | 1901.6 | 1896.1 | | 90.00 | 78.00 | 92.80 | | |
| | 14.75 | 26.17 TO 26.13 (CONF. | 1,118 | 1896.1 | 1893.1 | | 90.00 | 78.00 | 92.80 | | |
| | 26.84 | 26.13 TO 26.18 (CONF. | 2,434 | 1893.1 | 1890.7 | | 90.00 | 78.00 | 92.80 | | |
| | 7.68 | 26.19 TO 26.20 | 1,000 | 1900.3 | 1894.2 | | 90.00 | 78.00 | 92.80 | | |
| | 19.58 | 26.20 TO 26.21 | 1,041 | 1894.2 | 1890.8 | | 90.00 | 78.00 | 92.80 | | |
| | 25.53 | 26.21 TO 26.18 (CONF. | 1,444 | 1890.8 | 1890.7 | | 90.00 | 78.00 | 92.80 | | |
| | 18.81 | 26.18 TO 26.22 | 1,942 | 1890.7 | 1887.2 | | 91.27 | 75.97 | 91.58 | **98.37** | **261.95** |
| 27 | 6.15 | 27.0 TO 27.1 | 424 | 1908.1 | 1906.0 | 1.38 | 90.00 | 78.00 | 92.80 | **16.14** | **18.45** |
| | 10.00 | 28.0 TO 28.1 | 752 | 1892.1 | 1890.1 | | 90.00 | 78.00 | 92.80 | | |
| | 7.48 | 28.1 TO 28.2 (CONF.) | 1,206 | 1890.1 | 1887.5 | | 90.00 | 78.00 | 92.80 | | |
| 28 | 10.00 | 28.3 TO 28.4 | 752 | 1890.9 | 1887.6 | 1.39 | 90.00 | 78.00 | 92.80 | | |
| | 8.61 | 28.4 TO 28.2 (CONF.) | 578 | 1887.6 | 1887.5 | | 90.00 | 78.00 | 92.80 | | |
| | 25.30 | 28.2 TO 28.5 | 1,132 | 1887.5 | 1884.4 | | 91.11 | 75.80 | 91.48 | **49.41** | **79.27** |
| 29 | 10.00 | 29.0 TO 29.1 | 776 | 1889.0 | 1887.5 | 1.39 | 90.00 | 78.00 | 92.80 | | |
| | 5.24 | 29.1 TO 29.2 | 413 | 1887.5 | 1886.4 | | 90.00 | 78.00 | 92.80 | **30.52** | **28.88** |
| | 7.29 | 30.0 TO 30.1 | 1,000 | 1902.9 | 1896.4 | | 77.91 | 84.04 | 96.42 | | |
| 30 | 14.30 | 30.1 TO 30.2 | 1,043 | 1896.4 | 1893.0 | 1.40 | 90.00 | 89.51 | 97.90 | | |
| | 30.30 | 30.2 TO 30.3 | 1,163 | 1893.0 | 1891.1 | | 90.00 | 88.11 | 97.62 | | |
| | 83.11 | 30.3 TO 30.4 | 2,235 | 1891.1 | 1886.0 | | 90.21 | 87.52 | 97.50 | **64.58** | **156.24** |
| | 5.24 | 31.0 TO 31.1 | 1,000 | 1924.3 | 1920.6 | | 67.03 | 62.00 | 80.60 | | |
| | 10.93 | 31.1 TO 31.2 | 991 | 1920.6 | 1917.4 | | 84.46 | 62.00 | 80.60 | | |
| | 20.87 | 31.2 TO 31.3 | 862 | 1917.4 | 1915.8 | | 96.69 | 62.00 | 80.60 | | |
| | 40.83 | 31.3 TO 31.4 | 1,062 | 1915.8 | 1914.7 | | 97.45 | 62.00 | 80.60 | | |
| | 76.88 | 31.4 TO 31.5 | 3,431 | 1914.7 | 1905.3 | | 92.81 | 68.38 | 85.70 | | |
| | 156.96 | 31.5 TO 31.6 | 5,186 | 1905.3 | 1892.3 | | 89.32 | 80.26 | 94.16 | | |
| 31 | 50.34 | 31.6 TO 31.7 (CONF.) | 2,516 | 1892.3 | 1886.8 | 1.40 | 90.46 | 73.90 | 90.12 | | |
| | 10.00 | 31.8 TO 31.9 | 548 | 1911.9 | 1909.9 | | 93.90 | 84.94 | 96.96 | | |
| | 21.33 | 31.9 TO 31.10 | 1,333 | 1909.9 | 1906.6 | | 90.37 | 88.41 | 97.68 | | |
| | 38.54 | 31.10 TO 31.11 | 1,835 | 1906.6 | 1902.7 | | 89.87 | 75.74 | 91.44 | | |
| | 95.54 | 31.11 TO 31.12 | 3,382 | 1902.7 | 1893.6 | | 90.00 | 62.02 | 80.62 | | |
| | 61.48 | 31.12 TO 31.7 (CONF.) | 2,737 | 1893.6 | 1886.8 | | 90.00 | 78.28 | 92.97 | | |
| | 45.93 | 31.7 TO 31.13 | 3,029 | 1886.8 | 1880.8 | | 90.03 | 89.95 | 97.99 | **118.43** | **335.06** |
| 32 | 9.24 | 32.0 TO 32.1 | 1,000 | 1891.9 | 1884.7 | 1.39 | 90.00 | 91.00 | 98.20 | | |
| | 15.12 | 32.1 TO 32.2 | 1,520 | 1884.7 | 1879.6 | | 90.00 | 91.00 | 98.20 | **39.00** | **40.50** |
| | 5.80 | 33.0 TO 33.1 | 1,000 | 1892.3 | 1885.7 | | 90.00 | 91.00 | 98.20 | | |
| 33 | 11.97 | 33.1 TO 33.2 | 819 | 1885.7 | 1883.7 | 1.39 | 90.00 | 91.00 | 98.20 | | |
| | 13.09 | 33.2 TO 33.3 | 871 | 1883.7 | 1881.4 | | 90.00 | 91.00 | 98.20 | **43.51** | **47.45** |

**Table 9** – Developed Conditions Rational Method Input Values & Output Calculations (Continued)

| AREA | SIZE (AC) | SUBAREA REACH | LEN. (FT) | U.S. ELEV. (FT) | D.S. ELEV. (FT.) | RAIN 100-1 (IN) | PERV. % | SCS (AMC II) | SCS (AMC III) | AREA TC (MIN.) | TOTAL $Q_{100}$ (CFS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5.20 | 34.0 TO 34.1 | 1,000 | 1897.6 | 1894.2 | | 90.00 | 81.58 | 94.95 | | |
| | 9.80 | 34.1 TO 34.2 | 570 | 1894.2 | 1893.3 | | 90.00 | 81.19 | 94.71 | | |
| 34 | 18.50 | 34.2 TO 34.3 | 1,115 | 1893.3 | 1888.5 | 1.40 | 90.00 | 81.60 | 94.96 | | |
| | 36.85 | 34.3 TO 34.4 | 1,198 | 1888.5 | 1885.5 | | 90.00 | 91.00 | 98.20 | | |
| | 36.88 | 34.4 TO 34.5 | 1,714 | 1885.5 | 1881.8 | | 90.00 | 91.00 | 98.20 | **72.82** | **113.13** |
| | 6.26 | 35.0 TO 35.1 | 1,000 | 1886.9 | 1882.6 | | 90.00 | 91.00 | 98.20 | | |
| | 2.06 | 35.1 TO 35.2 (CONF.) | 378 | 1882.6 | 1880.8 | | 90.00 | 91.00 | 98.20 | | |
| 35 | 10.00 | 35.3 TO 35.4 | 1,000 | 1887.0 | 1881.7 | 1.39 | 90.00 | 91.00 | 98.20 | | |
| | 4.74 | 35.4 TO 35.2 (CONF.) | 288 | 1881.7 | 1880.8 | | 90.00 | 91.00 | 98.20 | | |
| | 10.04 | 35.2 TO 35.5 | 686 | 1880.8 | 1879.8 | | 90.00 | 91.00 | 98.20 | **34.59** | **58.58** |
| 36 | 3.57 | 36.0 TO 36.1 | 628 | 1883.3 | 1876.4 | 1.39 | 90.00 | 91.00 | 98.20 | **16.10** | **11.11** |
| 37 | 9.10 | 37.0 TO 37.1 | 1,000 | 1883.0 | 1878.4 | 1.39 | 90.00 | 91.00 | 98.20 | | |
| | 1.32 | 37.1 TO 37.2 | 203 | 1878.4 | 1877.3 | | 90.00 | 91.00 | 98.20 | **25.45** | **23.46** |
| 38 | 7.69 | 38.0 TO 38.1 | 1,000 | 1882.0 | 1879.1 | 1.39 | 90.00 | 91.00 | 98.20 | | |
| | 4.61 | 38.1 TO 38.2 | 276 | 1879.1 | 1877.7 | | 90.00 | 91.00 | 98.20 | **28.67** | **25.44** |
| | 2.71 | 39.0 TO 39.1 | 1,000 | 1903.0 | 1897.8 | | 90.00 | 62.00 | 80.60 | | |
| | 5.97 | 39.1 TO 39.2 | 947 | 1897.8 | 1895.2 | | 90.00 | 66.10 | 83.88 | | |
| | 8.85 | 39.2 TO 39.3 | 1,225 | 1895.2 | 1893.0 | | 90.00 | 84.00 | 96.40 | | |
| | 17.12 | 39.3 TO 39.4 (CONF.) | 1,060 | 1893.0 | 1889.2 | | 90.00 | 84.14 | 96.48 | | |
| | 9.79 | 39.5 TO 39.6 | 1,000 | 1897.3 | 1893.3 | | 90.00 | 84.00 | 96.40 | | |
| | 22.23 | 39.6 TO 39.7 (CONF.) | 1,661 | 1893.3 | 1890.4 | | 90.00 | 84.00 | 96.40 | | |
| | 9.98 | 39.8 TO 39.9 | 1,000 | 1893.0 | 1891.0 | | 90.00 | 84.00 | 96.40 | | |
| | 4.90 | 39.9 TO 39.7 (CONF.) | 384 | 1891.0 | 1890.4 | | 90.00 | 84.00 | 96.40 | | |
| | 6.72 | 39.7 TO 39.4 (CONF.) | 638 | 1890.4 | 1889.2 | | 90.00 | 84.00 | 96.40 | | |
| 39 | 5.67 | 39. 4 TO 39.10 (CONF.) | 551 | 1889.2 | 1887.8 | 1.40 | 90.00 | 87.25 | 97.45 | | |
| | 9.31 | 39.11 TO 39.12 | 1,000 | 1892.8 | 1888.2 | | 90.00 | 83.86 | 96.32 | | |
| | 2.34 | 39.12 TO 39.10 (CONF. | 425 | 1888.2 | 1887.8 | | 90.00 | 84.00 | 96.40 | | |
| | 16.22 | 39.10 TO 39.13 | 845 | 1887.8 | 1886.1 | | 90.00 | 89.13 | 97.83 | | |
| | 31.50 | 39.13 TO 39.14 | 1,834 | 1886.1 | 1882.0 | | 90.00 | 88.81 | 97.96 | | |
| | 31.91 | 39.14 TO 39.15 (CONF. | 2,287 | 1882.0 | 1876.1 | | 90.00 | 88.00 | 97.60 | | |
| | 10.00 | 39.16 TO 39.17 | 680 | 1888.0 | 1886.7 | | 90.00 | 84.00 | 96.40 | | |
| | 38.56 | 39.17 TO 39.18 | 1,765 | 1886.7 | 1882.4 | | 90.00 | 83.44 | 96.06 | | |
| | 30.62 | 39.18 TO 39.15 (CONF. | 2,853 | 1882.4 | 1876.1 | | 90.00 | 84.40 | 96.64 | | |
| | 13.59 | 39.15 TO 39.19 | 2,692 | 1876.1 | 1869.9 | | 90.00 | 90.45 | 98.09 | **86.66** | **230.90** |
| 40 | 3.40 | 40.0 TO 40.1 | 515 | 1881.4 | 1876.5 | 1.40 | 90.00 | 91.00 | 98.20 | **15.31** | **11.05** |
| 41 | 2.26 | 41.0 TO 41.1 | 340 | 1878.4 | 1876.3 | 1.39 | 90.00 | 91.00 | 98.20 | **14.14** | **7.71** |
| | 6.94 | 42.0 TO 42.1 | 1,000 | 1886.7 | 1881.5 | | 90.00 | 84.23 | 96.54 | | |
| | 20.24 | 42.1 TO 42.2 | 1,696 | 1881.5 | 1877.7 | | 90.00 | 86.06 | 97.21 | | |
| | 26.20 | 42.2 TO 42.3 | 1,288 | 1877.7 | 1875.7 | | 90.00 | 90.66 | 98.13 | | |
| | 11.90 | 42.3 TO 42.4 (CONF.) | 781 | 1875.7 | 1872.8 | | 90.00 | 91.00 | 98.20 | | |
| | 6.25 | 42.5 TO 42.6 | 1,000 | 1879.9 | 1876.4 | | 90.00 | 88.34 | 97.67 | | |
| 42 | 11.38 | 42.6 TO 42.4 (CONF.) | 1,421 | 1876.4 | 1872.8 | 1.39 | 90.00 | 91.00 | 98.20 | | |
| | 8.40 | 42.4 TO 42.7 (CONF.) | 1,035 | 1872.8 | 1870.5 | | 90.00 | 91.00 | 98.20 | | |
| | 5.57 | 42.8 TO 42.9 | 1,000 | 1879.9 | 1876.1 | | 90.00 | 90.04 | 98.01 | | |
| | 9.93 | 42.9 TO 42.10 | 859 | 1876.1 | 1874.3 | | 90.00 | 91.00 | 98.20 | | |
| | 12.83 | 42.10 TO 42.7 (CONF.) | 1,381 | 1874.3 | 1870.5 | | 90.00 | 91.00 | 98.20 | | |
| | 4.69 | 42.7 TO 42.11 | 353 | 1870.5 | 1869.2 | | 90.00 | 91.00 | 98.20 | **80.64** | **122.26** |
| 43 | 5.32 | 43.0 TO 43.1 | 1,000 | 1877.8 | 1872.0 | 1.39 | 90.00 | 91.00 | 98.20 | | |
| | 1.63 | 43.1 TO 43.2 | 245 | 1872.0 | 1871.0 | | 90.00 | 91.00 | 98.20 | **25.76** | **15.51** |
| 44 | 6.47 | 44.0 TO 44.1 | 850 | 1874.3 | 1871.2 | 1.39 | 90.00 | 91.00 | 98.20 | **22.66** | **15.82** |
| 45 | 3.49 | 45.0 TO 45.1 | 439 | 1876.3 | 1872.8 | 1.39 | 90.00 | 91.00 | 98.20 | **14.88** | **11.49** |

Refer to Technical Appendix No. 6 for printouts of the developed conditions rational method calculations.
Refer to Exhibit "G" for the developed conditions study map.

## 1.3 Developed Conditions Unit Hydrograph Calculations

Input values for the developed conditions 100-year, 24-hour unit hydrograph calculations prepared for this study are tabulated as follows:

**Table 10** – Developed Conditions Unit Hydrograph Input Values

| AREA | SIZE (AC) | LENGTH (FT) | LCA (FT) | ELEV. CHANGE (FT) | RAIN 100-1 (IN) | RAIN 100-6 (IN) | RAIN 100-24 (IN) | PERV. % | SCS (AMC II) | SCS (AMC III) | TC (MIN.) | TC (HR.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.00 | N/A | | | 1.26 | 1.84 | 2.50 | 90.00 | 78.00 | 92.80 | 10.81 | 0.18 |
| 2 | 1.55 | N/A | | | 1.27 | 1.84 | 2.49 | 90.00 | 78.00 | 92.80 | 9.40 | 0.16 |
| 3 | 4.92 | N/A | | | 1.27 | 1.84 | 2.48 | 90.00 | 78.00 | 92.80 | 15.21 | 0.25 |
| 4 | 8.95 | N/A | | | 1.27 | 1.84 | 2.48 | 90.00 | 78.00 | 92.80 | 17.69 | 0.29 |
| 5 | 13.66 | N/A | | | 1.27 | 1.84 | 2.46 | 90.00 | 78.00 | 92.80 | 18.06 | 0.30 |
| 6 | 13.80 | N/A | | | 1.27 | 1.84 | 2.45 | 90.00 | 78.00 | 92.80 | 23.90 | 0.40 |
| 7 | 14.99 | N/A | | | 1.27 | 1.84 | 2.44 | 90.00 | 78.00 | 92.80 | 29.30 | 0.49 |
| 8 | 8.97 | N/A | | | 1.27 | 1.84 | 2.42 | 90.00 | 78.00 | 92.80 | 17.90 | 0.30 |
| 9 | 29.97 | N/A | | | 1.27 | 1.84 | 2.42 | 90.00 | 78.00 | 92.80 | 23.55 | 0.39 |
| 10A | 13.57 | N/A | | | 1.27 | 1.84 | 2.40 | 90.00 | 78.00 | 92.80 | 59.31 | 0.99 |
| 10B | 43.92 | N/A | | | 1.27 | 1.84 | 2.40 | 0.00 | 98.00 | 99.60 | N/A | N/A |
| 11 | 9.20 | N/A | | | 1.28 | 1.84 | 2.38 | 90.00 | 78.00 | 92.80 | 17.81 | 0.30 |
| 12 | 0.87 | N/A | | | 1.28 | 1.84 | 2.37 | 90.00 | 78.00 | 92.80 | 8.80 | 0.15 |
| 13 | 16.85 | N/A | | | 1.28 | 1.84 | 2.39 | 90.00 | 78.00 | 92.80 | 34.34 | 0.57 |
| 14 | 18.15 | N/A | | | 1.29 | 1.84 | 2.39 | 90.00 | 78.00 | 92.80 | 31.25 | 0.52 |
| 15 | 197.08 | N/A | | | 1.27 | 1.83 | 2.43 | 77.20 | 71.00 | 87.80 | 95.72 | 1.60 |
| 16 | 158.96 | N/A | | | 1.27 | 1.83 | 2.44 | 0.00 | 98.00 | 99.60 | N/A | N/A |
| 17 | 148.48 | N/A | | | 1.30 | 1.83 | 2.43 | 94.30 | 77.90 | 92.70 | 39.28 | 0.65 |
| 18 | 48.06 | N/A | | | 1.33 | 1.84 | 2.48 | 92.80 | 73.60 | 89.90 | 21.91 | 0.37 |
| 19 | 7.87 | N/A | | | 1.35 | 1.84 | 2.48 | 100.00 | 62.00 | 80.60 | 34.57 | 0.58 |
| 20 | 24.41 | N/A | | | 1.36 | 1.84 | 2.48 | 90.50 | 77.20 | 92.30 | 28.53 | 0.48 |
| 21 | 9.89 | N/A | | | 1.36 | 1.84 | 2.47 | 90.00 | 78.00 | 92.80 | 27.60 | 0.46 |
| 22 | 3.73 | N/A | | | 1.36 | 1.84 | 2.47 | 90.00 | 78.00 | 92.80 | 13.47 | 0.22 |
| 23 | 69.41 | N/A | | | 1.36 | 1.84 | 2.48 | 90.00 | 78.00 | 82.80 | 53.62 | 0.89 |
| 24 | 293.06 | N/A | | | 1.35 | 1.84 | 2.49 | 92.80 | 73.40 | 89.70 | 97.91 | 1.63 |
| 25 | 279.91 | N/A | | | 1.36 | 1.83 | 2.51 | 91.90 | 74.80 | 90.80 | 97.34 | 1.62 |
| 26 | 342.06 | N/A | | | 1.39 | 1.82 | 2.52 | 90.20 | 77.60 | 92.60 | 98.37 | 1.64 |
| 27 | 6.15 | N/A | | | 1.38 | 1.82 | 2.51 | 90.00 | 78.00 | 92.80 | 16.14 | 0.27 |
| 28 | 61.39 | N/A | | | 1.39 | 1.81 | 2.53 | 90.50 | 77.10 | 92.30 | 49.41 | 0.82 |
| 29 | 15.24 | N/A | | | 1.39 | 1.81 | 2.54 | 90.00 | 78.00 | 92.80 | 30.52 | 0.51 |
| 30 | 135.00 | N/A | | | 1.40 | 1.82 | 2.57 | 89.50 | 87.70 | 97.50 | 64.58 | 1.08 |
| 31 | 634.87 | N/A | | | 1.40 | 1.83 | 2.60 | 90.70 | 73.90 | 90.10 | 118.43 | 1.97 |
| 32 | 24.36 | N/A | | | 1.39 | 1.83 | 2.60 | 90.00 | 91.00 | 98.20 | 39.00 | 0.65 |
| 33 | 30.86 | N/A | | | 1.39 | 1.83 | 2.60 | 90.00 | 91.00 | 98.20 | 43.51 | 0.73 |
| 34 | 107.23 | N/A | | | 1.40 | 1.84 | 2.61 | 90.00 | 88.00 | 97.60 | 72.82 | 1.21 |
| 35 | 33.10 | N/A | | | 1.39 | 1.84 | 2.62 | 90.00 | 91.00 | 98.20 | 34.59 | 0.58 |
| 36 | 3.57 | N/A | | | 1.39 | 1.84 | 2.62 | 90.00 | 91.00 | 98.20 | 16.10 | 0.27 |
| 37 | 10.42 | N/A | | | 1.39 | 1.85 | 2.63 | 90.00 | 91.00 | 98.20 | 25.45 | 0.42 |
| 38 | 12.30 | N/A | | | 1.39 | 1.85 | 2.64 | 90.00 | 91.00 | 98.20 | 28.67 | 0.48 |
| 39 | 277.99 | N/A | | | 1.40 | 1.86 | 2.65 | 90.00 | 85.10 | 97.00 | 86.66 | 1.44 |
| 40 | 3.40 | N/A | | | 1.40 | 1.86 | 2.65 | 90.00 | 91.00 | 98.20 | 15.31 | 0.26 |
| 41 | 2.26 | N/A | | | 1.39 | 1.86 | 2.65 | 90.00 | 91.00 | 98.20 | 14.14 | 0.24 |
| 42 | 124.33 | N/A | | | 1.39 | 1.87 | 2.67 | 90.00 | 89.60 | 97.90 | 55.82 | 0.93 |
| 43 | 6.95 | N/A | | | 1.39 | 1.87 | 2.67 | 90.00 | 91.00 | 98.20 | 25.76 | 0.43 |
| 44 | 6.47 | N/A | | | 1.39 | 1.87 | 2.68 | 90.00 | 91.00 | 98.20 | 22.66 | 0.38 |
| 45 | 3.49 | N/A | | | 1.39 | 1.87 | 2.68 | 90.00 | 91.00 | 98.20 | 14.88 | 0.25 |

**Table 10** – Developed Conditions Unit Hydrograph Input Values (Continued)

| AREA | SIZE (AC) | LENGTH (FT) | LCA (FT) | ELEV. CHANGE (FT) | RAIN 100-1 (IN) | RAIN 100-6 (IN) | RAIN 100-24 (IN) | PERV. % | SCS (AMC II) | SCS (AMC III) | TC (MIN.) | TC (HR.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 46 | 3,782.66 | 35,115 | 20,362 | 2044.90 | 1.29 | 2.16 | 3.27 | 98.08 | 87.00 | 97.40 | N/A | N/A |
| 47 | 3,500.82 | 38,102 | 19,862 | 2190.20 | 1.29 | 2.07 | 3.03 | 97.73 | 68.93 | 86.10 | N/A | N/A |
| 48 | 764.55 | 20,795 | 10,119 | 58.10 | 1.40 | 1.85 | 2.62 | 88.29 | 73.73 | 90.00 | N/A | N/A |
| 49 | 17,446.64 | 81,047 | 39,563 | 2612.40 | 1.36 | 2.15 | 3.24 | 97.56 | 73.74 | 90.00 | N/A | N/A |
| 50 | 3,444.14 | 24,414 | 13,905 | 1760.00 | 1.45 | 2.64 | 4.24 | 100.00 | 88.00 | 97.60 | N/A | N/A |
| 51 | 15,350.45 | 45,387 | 22,710 | 2686.10 | 1.42 | 2.25 | 3.40 | 98.68 | 78.58 | 93.10 | N/A | N/A |
| 52 | 2,128.12 | 17,716 | 8,950 | 1680.00 | 1.39 | 2.04 | 2.93 | 97.04 | 74.76 | 90.80 | N/A | N/A |

Output for the developed conditions 100-year, 24-hour unit hydrograph calculations are tabulated as follows:

**Table 11** – Developed Conditions Unit Hydrograph Output Calculations

| AREA | LAG (HR.) | $Q_{100}$ (CFS) | $V_{100}$ (AF) |
|---|---|---|---|
| 1 | **0.14** | **3.10** | **0.17** |
| 2 | **0.13** | **5.39** | **0.26** |
| 3 | **0.20** | **13.76** | **0.83** |
| 4 | **0.23** | **23.61** | **1.51** |
| 5 | **0.24** | **35.15** | **2.28** |
| 6 | **0.32** | **29.65** | **2.29** |
| 7 | **0.39** | **27.61** | **2.48** |
| 8 | **0.24** | **23.09** | **1.47** |
| 9 | **0.31** | **64.58** | **4.92** |
| 10A | **0.79** | **15.91** | **2.21** |
| 10B | N/A | | **8.76** |
| 11 | **0.24** | **23.87** | **1.49** |
| 12 | **0.12** | **3.19** | **0.14** |
| 13 | **0.46** | **29.59** | **2.73** |
| 14 | **0.42** | **32.65** | **2.95** |
| 15 | **1.28** | **155.79** | **29.75** |
| 16 | N/A | | **32.25** |
| 17 | **0.52** | **231.00** | **24.31** |
| 18 | **0.30** | **106.10** | **7.50** |
| 19 | **0.46** | **12.94** | **0.93** |
| 20 | **0.38** | **49.38** | **4.10** |

**Table 11** – Developed Conditions Unit Hydrograph Output Calculations (Continued)

| AREA | LAG (HR.) | $Q_{100}$ (CFS) | $V_{100}$ (AF) |
|---|---|---|---|
| 21 | **0.37** | **21.10** | **1.68** |
| 22 | **0.18** | **11.15** | **0.63** |
| 23 | **0.71** | **95.46** | **11.81** |
| 24 | **1.30** | **242.92** | **45.77** |
| 25 | **1.30** | **237.71** | **45.58** |
| 26 | **1.31** | **300.53** | **58.85** |
| 27 | **0.22** | **18.35** | **1.06** |
| 28 | **0.66** | **87.71** | **10.55** |
| 29 | **0.41** | **29.53** | **2.67** |
| 30 | **0.86** | **172.53** | **26.97** |
| 31 | **1.58** | **467.11** | **105.73** |
| 32 | **0.52** | **42.85** | **5.01** |
| 33 | **0.58** | **52.22** | **6.34** |
| 34 | **0.97** | **127.68** | **21.80** |
| 35 | **0.46** | **65.27** | **6.86** |
| 36 | **0.22** | **11.06** | **0.74** |
| 37 | **0.34** | **25.11** | **2.17** |
| 38 | **0.38** | **26.59** | **2.57** |
| 39 | **1.15** | **283.08** | **56.49** |
| 40 | **0.21** | **10.74** | **0.71** |
| 41 | **0.19** | **7.17** | **0.47** |
| 42 | **0.74** | **175.86** | **26.06** |
| 43 | **0.34** | **16.57** | **1.47** |
| 44 | **0.30** | **15.91** | **1.37** |
| 45 | **0.20** | **11.04** | **0.74** |
| 46 | **0.83** | **3,931.61** | **948.52** |
| 47 | **0.99** | **2,777.99** | **574.04** |
| 48 | **1.09** | **752.60** | **128.53** |
| 49 | **1.92** | **7,461.43** | **3,317.62** |
| 50 | **0.70** | **5,599.01** | **1,141.36** |
| 51 | **1.11** | **10,858.87** | **3,438.15** |
| 52 | **0.50** | **3,316.92** | **396.52** |

Refer to Technical Appendix No. 7 for printouts of the developed conditions 100-year, 24-hour unit hydrograph calculations. Refer to Exhibit "G" for the developed conditions study map.

## 1.4 Developed Conditions Hydrograph Routing Calculations

As with existing conditions, the U.S.G.S. quadrangles for the offsite watershed indicate braided blue-line streams. Offsite area 50 is shown to split at its downstream watercourse location. The split flows of Area 50 then flow to confluence with flows from Areas 49 and 51, respectively.

As with existing conditions, hydrograph routing was necessarily for modeling of these flow divisions and combinations. The SCS convex method of channel routing was used to route natural flows as discussed above, and tabulated below:

**Table 12** – Developed Conditions Hydrograph Routing Calculations

| LOCATION | ROUTING ACTION | $Q_{100}$ (CFS) AT LOCATION | $V_{100}$ (AF) AT LOCATION |
|---|---|---|---|
| R1.0 | SPLIT AREA 50 HYDROGRAPH | 2,799.51 | 570.68 |
| R1.0 TO R1.1 | ROUTE SPLIT FLOW OF AREA 50 HYDROGRAPH TO AREA 49 DISCHARGE POINT | 2,461.44 | 570.68 |
| R1.1 | COMBINE AREA 49 HYDROGRAPH AT AREA 49 DISCHARGE POINT | **8,498.27** | **3,888.92** |
| | | | |
| R2.0 | SPLIT AREA 50 HYDROGRAPH | 2,799.51 | 570.68 |
| R2.0 TO R2.1 | ROUTE SPLIT FLOW OF AREA 50 HYDROGRAPH TO AREA 51 DISCHARGE POINT | 2,460.42 | 570.68 |
| R2.1 | COMBINE AREA 51 HYDROGRAPH AT AREA 51 DISCHARGE POINT | **12,296.89** | **4,008.83** |

Refer to Technical Appendix No. 8 for printouts of developed conditions 100-year, 24-hour hydrograph routing calculations. Refer to Exhibit "G" for the developed conditions study map illustrating these routed flows.

# F. Existing vs. Developed Conditions Comparison & Proposed Mitigation

## 1.1 Existing vs. Developed Conditions Comparison

The existing and developed conditions 100-year, 24-hour hydrograph and (as appropriate) routing calculations discussed in Sections "D" and "E" are summarized as follows:

**Table 13** – Existing vs. Developed Conditions Comparison

| AREA | EXISTING $Q_{100}$ (CFS) | PROPOSED $Q_{100}$ (CFS) | $Q_{100}$ INCREASE (CFS) | EXISTING $V_{100}$ (AF) | PROPOSED $V_{100}$ (AF) | $V_{100}$ INCREASE (AF) |
|---|---|---|---|---|---|---|
| 1 | 2.27 | 3.10 | 0.83 | 0.12 | 0.17 | **0.05** |
| 2 | 3.91 | 5.39 | 1.48 | 0.18 | 0.26 | **0.08** |
| 3 | 9.16 | 13.76 | 4.60 | 0.57 | 0.83 | **0.26** |
| 4 | 14.09 | 23.61 | 9.52 | 1.03 | 1.51 | **0.48** |
| 5 | 21.50 | 35.15 | 13.65 | 1.56 | 2.28 | **0.72** |
| 6 | 18.27 | 29.65 | 11.38 | 1.57 | 2.29 | **0.72** |
| 7 | 17.15 | 27.61 | 10.46 | 1.70 | 2.48 | **0.78** |
| 8 | 14.12 | 23.09 | 8.97 | 1.01 | 1.47 | **0.46** |
| 9 | 39.52 | 64.58 | 25.06 | 3.37 | 4.92 | **1.55** |
| 10A | 10.55 | 15.91 | 5.36 | 1.51 | 2.21 | **0.70** |
| 10B | N/A (BORROW PIT - ASSUME REMOVAL) | | | 8.76 (CONTAINED) | 8.76 | **8.76** |
| 11 | 14.60 | 23.87 | 9.27 | 1.02 | 1.49 | **0.47** |
| 12 | 2.24 | 3.19 | 0.95 | 0.10 | 0.14 | **0.04** |
| 13 | 18.40 | 29.59 | 11.19 | 1.88 | 2.73 | **0.85** |
| 14 | 21.03 | 32.65 | 11.62 | 2.03 | 2.95 | **0.92** |
| 15 | 146.52 | 155.79 | 9.27 | 26.15 | 29.75 | **3.60** |
| 16 | N/A (LINED EVAPORATION PONDS TO REMAIN) | | | 32.25 (CONTAINED) | 32.25 (CONTAINED) | **0.00** |
| 17 | 211.40 | 231.00 | 19.60 | 22.34 | 24.31 | **1.97** |
| 18 | 79.26 | 106.10 | 26.84 | 5.66 | 7.50 | **1.84** |
| 19 | 12.94 | 12.94 | 0.00 | 0.93 | 0.93 | **0.00** |
| 20 | 29.32 | 49.38 | 20.06 | 2.69 | 4.10 | **1.41** |
| 21 | 12.19 | 21.10 | 8.91 | 1.16 | 1.68 | **0.52** |
| 22 | 7.85 | 11.15 | 3.30 | 0.44 | 0.63 | **0.19** |
| 23 | 60.22 | 95.46 | 35.24 | 7.94 | 11.81 | **3.87** |
| 24 | 163.10 | 242.92 | 79.82 | 33.20 | 45.77 | **12.57** |
| 25 | 161.32 | 237.71 | 76.39 | 33.17 | 45.58 | **12.41** |
| 26 | 200.00 | 300.53 | 100.53 | 41.48 | 58.85 | **17.37** |
| 27 | 11.77 | 18.35 | 6.58 | 0.75 | 1.06 | **0.31** |
| 28 | 54.11 | 87.71 | 33.60 | 7.00 | 10.55 | **3.55** |
| 29 | 18.02 | 29.53 | 11.51 | 1.74 | 2.67 | **0.93** |
| 30 | 153.30 | 172.53 | 19.23 | 22.98 | 26.97 | **3.99** |
| 31 | 427.00 | 467.11 | 40.11 | 94.32 | 105.73 | **11.41** |
| 32 | 40.15 | 42.85 | 2.70 | 4.53 | 5.01 | **0.48** |
| 33 | 45.87 | 52.22 | 6.35 | 5.73 | 6.34 | **0.61** |
| 34 | 123.15 | 127.68 | 4.53 | 20.37 | 21.80 | **1.43** |
| 35 | 58.05 | 65.27 | 7.22 | 6.38 | 6.86 | **0.48** |
| 36 | 10.53 | 11.06 | 0.53 | 0.70 | 0.74 | **0.04** |
| 37 | 23.25 | 25.11 | 1.86 | 2.06 | 2.17 | **0.11** |
| 38 | 24.50 | 26.59 | 2.09 | 2.44 | 2.57 | **0.13** |
| 39 | 278.92 | 283.08 | 4.16 | 54.79 | 56.49 | **1.70** |
| 40 | 10.31 | 10.74 | 0.43 | 0.68 | 0.71 | **0.03** |
| 41 | 7.00 | 7.17 | 0.17 | 0.45 | 0.47 | **0.02** |
| 42 | 163.96 | 175.86 | 11.90 | 24.95 | 26.06 | **1.11** |
| 43 | 15.52 | 16.57 | 1.05 | 1.39 | 1.47 | **0.08** |
| 44 | 15.50 | 15.91 | 0.41 | 1.30 | 1.37 | **0.07** |
| 45 | 10.68 | 11.04 | 0.36 | 0.70 | 0.74 | **0.04** |
| 46 | 3,931.07 | 3,931.61 | 0.54 | 948.24 | 948.52 | **0.28** |
| 47 | 2,754.99 | 2,777.99 | 23.00 | 563.85 | 574.04 | **10.19** |
| 48 | 732.31 | 752.60 | 20.29 | 120.74 | 128.53 | **7.79** |
| 49 & 50 (ROUTED) | 8,140.15 | 8,498.27 | 358.12 | 3,663.71 | 3,888.92 | **225.21** |
| 50 & 51 (ROUTED) | 12,269.86 | 12,296.89 | 27.03 | 3,994.79 | 4,008.83 | **14.04** |
| 52 | 3,269.02 | 3,316.92 | 47.90 | 379.87 | 396.52 | **16.65** |
| **TOTAL:** | **33,879.92** | **35,015.89** | **1,135.97** | **10,117.27** | **10,490.54** | **373.27** |

As tabulated on the previous page, the proposed project will result in an increase in total watershed 100-year, 24-hour flows of **1,135.97 c.f.s.**, **(a 3.4% increase)** and an increase in total watershed 100-year, 24-hour volume of **373.27 a.f. (a 3.7% increase).**

### 1.2 Proposed Mitigation

The 373.27 a.f. 100-year, 24-hour volume increase anticipated to be generated by the proposed project equates to a per-acre increase of **0.07 a.f. per-acre (3,049 cu. ft. per acre)** for the 5,531-acre project site.

This increase shall be captured in long, narrow, and shallow strip retention basins located along intermittent locations within the project site, rather than at the downstream limits of the project site. This will allow 100-year discharge (following retention of the calculated volume differential) from the basins to normalize within the project boundary prior to discharging to adjacent properties, to mimic existing drainage conditions to the absolute extent possible and prevent artificial concentration of flows at the project limits.

## G. Flood Hazard Analysis

### 1.1 Sources of Flood Hazards

Based on the hydrologic analysis of the study watershed and field investigation of the project site, the following potential flood hazards have been identified:

- **Mojave River Wash**: Exhibit "H.1" contains copies of the relevant FEMA Flood Insurance Rate Maps (FIRMs) for the project watershed. As indicated on these maps, no published flood information is available from FEMA. The United States Army Corps of Engineers (USACoE) publication titled "Flood Plain Information – Mojave River (Vicinity of Barstow)", dated October 1968, contains estimated unbulked 100-year peak flow, velocities, and channel water surface profile and flood inundation limits for the reach of the Mojave River wash with potential to impact the project. Relevant excerpts are included as Attachment No. 2. A $Q_{100}$ of **18,500 c.f.s.** is indicated for the wash in the vicinity of the project.

- **East Daggett Interceptor Channel**: As previously discussed and indicated in Attachment No. 1, the published unbulked $Q_{100}$ for the East Daggett Interceptor Channel is 3,900 c.f.s. The calculated $Q_{100}$ in this report for the drainage area tributary to the channel is **3,931.61 c.f.s.** Discharge of these flows from the channel through the 20 identified pipe culverts located under the existing on-site railroad spur at the northwestern portion of the project site flow naturally in a northeasterly direction to confluence with the Mojave River wash.

- **Tributary (Offsite) Flows:** The peak calculated $Q_{100}$ flows through the 12 A.T.S.F. railroad culverts discharging to the project site are substantial and were therefore identified as have the potential to cause flood hazard impacts to the project site.

- **On-Site Flows:** The on-site areas north and downstream of the A.T.S.F. railroad are typically very flat with high potential to pond. Therefore, these areas were identified as have flood hazard potential resulting from a localized 100-year event.

## 1.2 Mojave River Wash Hydraulic Analysis

A HEC-RAS hydraulic analysis was performed for an approximately 19,900 ft. (3.77 mile) reach of the Mojave River wash beginning upstream at the existing railroad bridge crossing to the west (upstream) and ending downstream at a location slightly past the northernmost portion of the project site. This reach was identified as having the highest potential to impact the project site due to close proximity of the southern bank of the wash to the northern project site boundary. Cross sections were generated at 128 locations along the study reach using the on-site aerial topography for the project. Note that it was necessary to include 20' USGS contours along the northernmost edge of the aerial topographic survey for the northern (left) bank of the Mojave River wash and "smooth" the transition between the aerial topography and USGS topography at each the affected cross sections. However, based on the HEC-RAS results, flow within the wash did not substantially incorporate this added topography. The published $Q_{100}$ of 18,500 for the Mojave River wash at the project location was combined with the published $Q_{100}$ of 3,900 c.f.s. for the East Daggett Interceptor Channel for a total $Q_{100}$ **22,400 c.f.s**. used in the HEC-RAS analysis.

Manning's "n" values were used in the hydraulic model to estimate frictional energy losses in the flow. The FEMA Flood Insurance Study (FIS) for San Bernardino County, CA & Incorporated Areas (revised September 2, 2016) indicated "n" values of 0.040-0.045 for the main channel and 0.040-0.050 for left and right overbanks of the Mojave River at Barstow. Aerial and satellite imagery indicated that the main channel and overbanks of the Mojave River at Barstow is very sandy with almost no vegetation. The main channel and overbank conditions of the Mojave River at Barstow is very similar to the main channel and overbank conditions of the Mojave River at the project location. Therefore, a main channel "n" value of 0.040 and overbank "n" values of 0.045 were used for the hydraulic analysis of the channel reach at the project location.

Refer to Attachment No. 3 for the HEC-RAS output summary table, water surface profile plot, and cross sections plots. Refer to Exhibit ""I" for the HEC-RAS study map indicated the calculated flow limits. As shown on the output summary table, the main channel depth of flow (after normalization of the hydraulic model) averages **4 to 5 ft.** These depths correlate with the 100-year water surface profiles estimated by the USACoE for the Mojave River channel for the reach in question (see Exhibit "H.2"). Attachment No. 3 also indicates that the 100-year average main channel velocities (after normalization of the hydraulic model) range from approximately **2.5 to 4 f.p.s.** As shown in Attachment No. 2, these calculated velocities correlate to the 100-year flow velocity of 4 f.p.s. estimated by the USACoE for the lower limit of their study. Note that the USACoE shows the 100-year velocity of the wash at the Daggett location to be higher (10 f.p.s.); however, this location is actually upstream of the existing railroad bridge, where significant narrowing of the channel occurs in comparison to the reach analyzed for this report.

Based on the HEC-RAS hydraulic analysis, and as shown on Exhibit "I", the 100-year flows of the Mojave River wash do not exceed the southern (right) overbank of the wash, and do not impact the project site.

## 1.3 FLO-2D Flood Analysis

A FLO-2D flood simulation was performed to determine potential flood hazards impacting the project site. A 12,873-acre (20.11 sq. mi.) grid model was generated from the existing aerial topographic survey of the areas north of the A.T.S.F. railroad and the Mojave River wash. Due to the size of the analyzed area, a 100-ft. grid size was selected. Note that the southeast portion of the project site was added after the aerial topographic survey was preformed and mapped; therefore, this portion of the project site was not included in the FLO-2D calculations. Also note that (as with the HEC-RAS hydraulic model) it was necessary to include 20' USGS contours along the northernmost edge of the aerial topographic survey for the northern (left) bank of the Mojave River wash; however, based on the FLO-2D results, flow within the wash did not substantially incorporate this added topography.

The 100-year, 24-hour hydrographs for each of the 12 railroad culvert locations discharging to the project site, as well as the 100-year, 24-hour hydrograph for the East Daggett Interceptor Channel, were placed at the appropriate locations on the study grid. A total simulation time of approximately 35 hours was used to match the total time of the longest hydrograph.

Generation of the hydrograph for the Mojave River wash was based on the 18,500 c.f.s. 100-year flow estimated by the USACoE. This flow was then distributed as a hydrograph based on Page 31 of the USACoE Mojave River flood study, which states that "the rise from streambed to extreme flood peak during a local storm (thunderstorm) would be approximately 2 to 3 hours and the floodwaters would remain on the floodplain for less than 1/2 day" (see Attachment No. 4 for excerpt). This description was based on the stage hydrograph illustrated as Figure 11 on Page 22 of the USACoE study, which was based on the stream gage data recorded for the January 1943 flood at River Mile 61.6 / Barstow (see Attachment No. 4). The Mojave River wash hydrograph used in the FLO-2D study was constructed by adjusting the time-discharge data of the recorded hydrograph for the 18,500 c.f.s. estimated flow (see constructed hydrograph plot included in Attachment No. 4). Note that to "spread" the flow over the width of the wash in the FLO-2D model, the 18,500 c.f.s. hydrograph was divided into four equal 4,625 c.f.s. hydrographs, to more accurately simulate flow within the wash.

Local 100-year thunderstorm precipitation over the FLO-2D model area was simulated using the FLO-2D precipitation function. Base on the 100-year, 24-hour NOAA data obtained for this study (see Exhibit "C.3"), the area-averaged precipitation for the FLO-2D model area was determined to be 2.53 in. This total rainfall was distributed based on the San Bernardino County rainfall distribution graph described in the SBC Hydrology Manual.

Losses for the FLO-2D model area were based on the SCS method in accordance with the SBC Hydrology Manual. The area-averaged SCS Curve Number (AMC III) for the FLO-2D model area was determined to be **83.45** (per the data illustrated on Exhibit "D.11"). Based on this SCS Curve Number, the initial rainfall abstraction (Ia) used in the FLO-2D model was determined to be **0.40** in., using the equation 0.2 * (1000/CN – 10).

The levee function of FLO-2D was used to simulate the bermed railroad spur and other protective berms constructed for existing facilities and the existing line evaporation ponds. For (primarily) overland desert floodplain flow with poor brush cover and minimal debris, a Manning's "n" of 0.045 was used for the entire

FLO-2D model area, with the exception of the main channel of the Mojave River wash, which was assigned an "n" value of 0.040 as discussed in Section G1.2 of this study.

The FLO-2D simulation summary is included as Attachment No. 5. Exhibit "J" shows the maximum calculated 100-year flood depths impacting the project site. Exhibit "K" shows the maximum calculated 100-year flood velocities impacting the project site.

Exhibit "J" and Exhibit "K" include overlays of the USACoE Mojave River wash flood limits (per the USACoE maps included as Exhibit "H.2") as well as the 100-year flow limits calculated in HEC-RAS for this study (per Exhibit "I").

As shown, all three flow limits for the Mojave River wash show that the 100-year flows are contained within the southern (right) bank of the wash, and therefore do not encroach into the project boundary. Variation between the USACoE, HEC-RAS, and FLO-2D flow extents can be attributed to differing topographic sources, dates of the studies performed, and methodology (approximate methods for the USACoE study vs. one-dimensional analysis for HEC-RAS vs. two-dimensional analysis for FLO-2D).

## H. Summary & Conclusion

Per the hydrology and hydraulics calculations performed for this preliminary study, the proposed 5,531-acre Daggett Solar Power Facility will result in a 100-year, 24-hour volume increase of 373.27 a.f. This volume differential shall be captured and retained in strip basins distributed in a manner that will mimic existing hydrology to the maximum possible extent. The proposed project will not substantially change existing conditions topography.

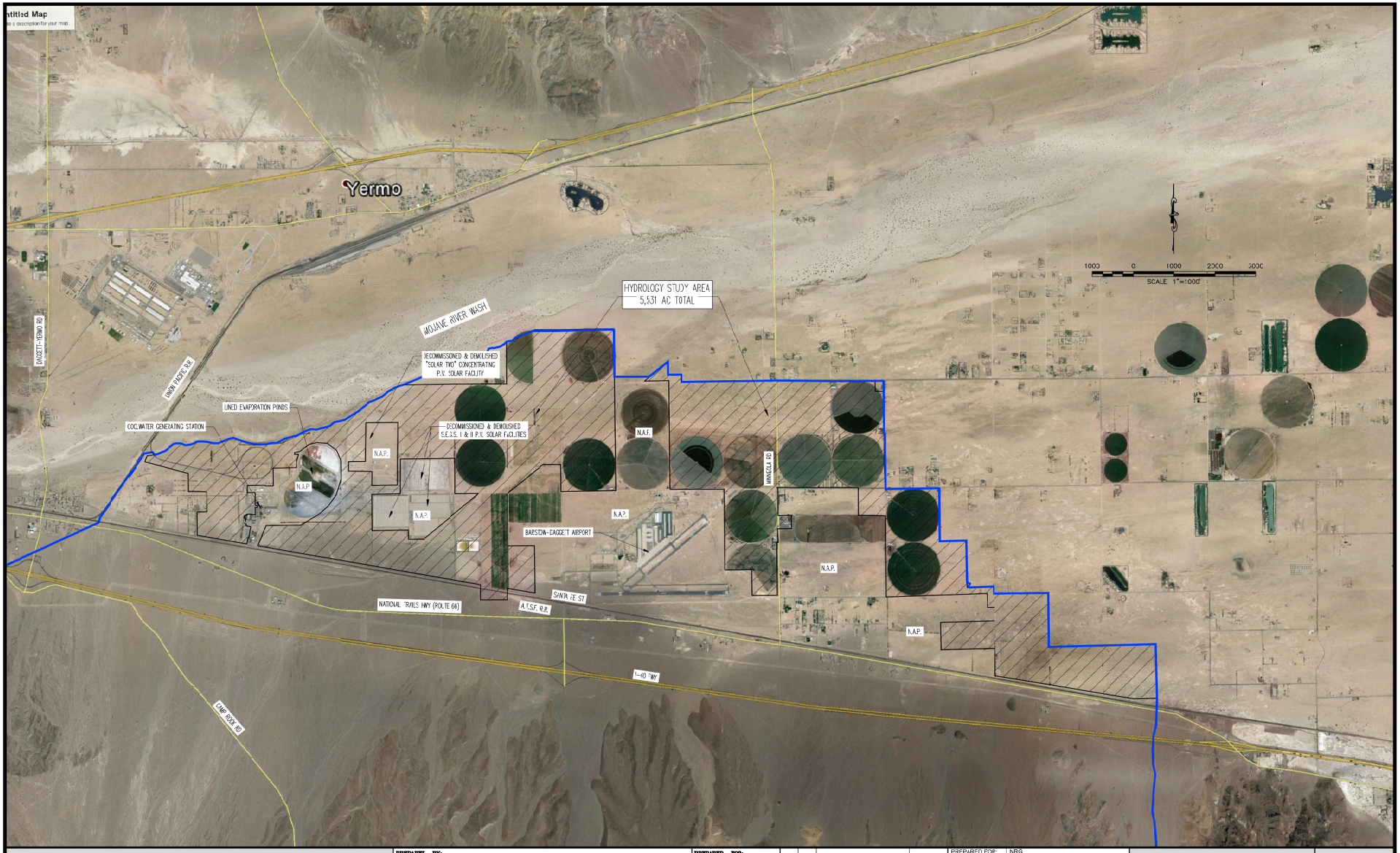
Regarding flood hazard mitigation, it is recommended that the proposed PV solar arrays be elevated one foot above the calculated 100-year max. flood depths shown on Exhibit "J", to account for freeboard. The array pilings should be of adequate design to account for scour associated with the 100-year flood velocities down on Exhibit "K".

**In conclusion, development of the proposed Daggett Solar Power Facility will include necessary mitigation measures to capture the increased runoff resulting from the project, while providing adequate design measures to protect the proposed PV solar arrays.**

**(END)**

# EXHIBIT “A”

Project Site – Aerial Orthophoto




# AERIAL PHOTO EXHIBIT
## DAGGETT SOLAR POWER FACILITY
IN THE TOWN OF DAGGETT, COUNTY OF SAN BERNARDINO, CA

PREPARED BY:
BONADIMAN
JOSEPH E. BONADIMAN & ASSOCIATES, INC.
ENGINEERS • SURVEYORS • PLANNERS
TEL: (909) 685-3806
FAX: (909) 381-1773
www.bonadiman.com

CIVILDESIGN

PREPARED FOR:
nrg

| BY | MARK | REVISION DESCRIPTION | DATE |
|---|---|---|---|

| | |
|---|---|
| PREPARED FOR: | NRG |
| JOB NO: | 154303 |
| PREPARED BY: | JDN |
| CHECKED BY: | JTS |

NOTE: JOSEPH E. BONADIMAN & ASSOCIATES, INC. DOES NOT WARRANTY THE ACCURACY OF THE G.I.S. DATA PRESENTED IN THIS EXHIBIT. THIS EXHIBIT MAY CONTAIN INFORMATION REPRODUCED TO THE COUNTY OF SAN BERNARDINO, CA.

AERIAL PHOTO EXHIBIT
DAGGETT SOLAR POWER FACILITY
IN THE TOWN OF DAGGETT, COUNTY OF SAN BERNARDINO ,CA

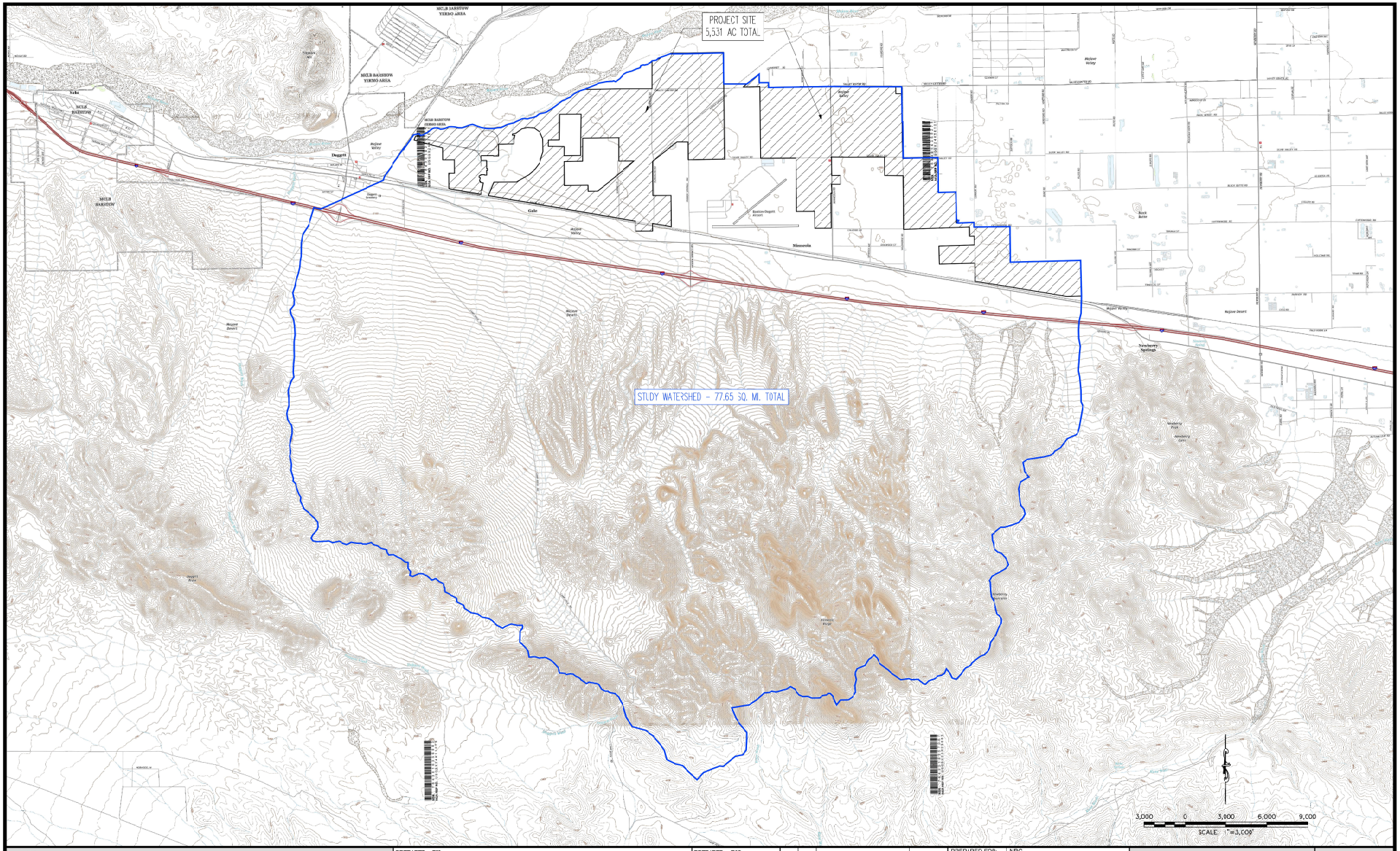
DISREGARD PRINTS BEARING EARLIER REVISION DATES! → 09-07-17

A

SHEET 1 OF 1

# EXHIBIT “B”

Project Watershed – USGS Quadrangle




# USGS QUADRANGLE EXHIBIT

DAGGETT SOLAR POWER FACILITY

IN THE TOWN OF DAGGETT, COUNTY OF SAN BERNARDINO, CA

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|---|---|---|---|
| | | | |

| | |
|---|---|
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| PREPARED BY: | JON |
| CHECKED BY: | JTS |

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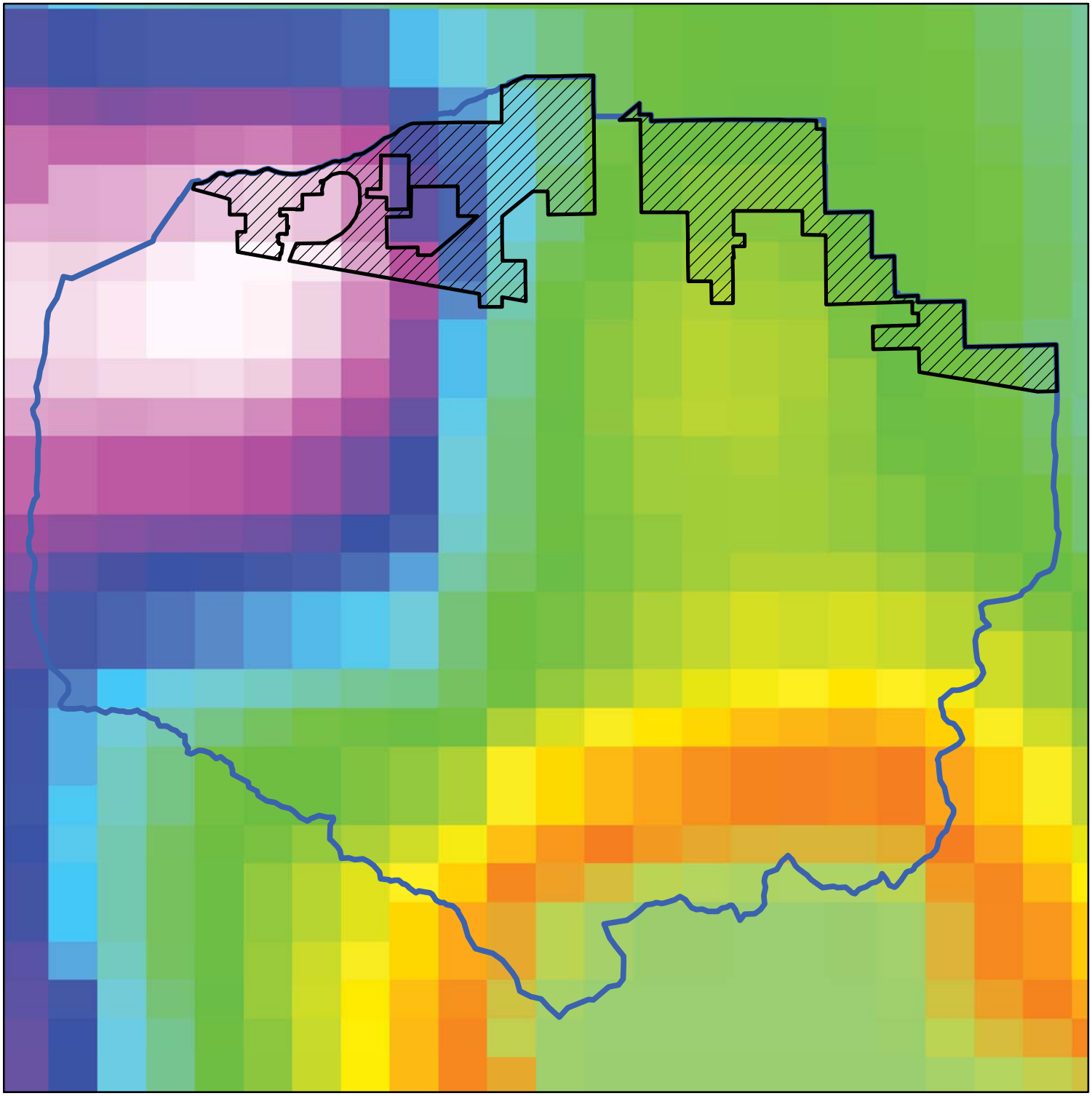
DISREGARD PRINTS BEARING EARLIER REVISION DATES! → 09-07-17

B

SHEET 1 OF 1

# EXHIBIT “C.1”

Watershed Precipitation
NOAA Atlas 14 100-Year, 1-Hour Grid



PROJECT SITE

STUDY WATERSHED

**PRECIPITATION (IN.)**

HIGH : 1.51"

LOW : 1.23"

# EXHIBIT C.1

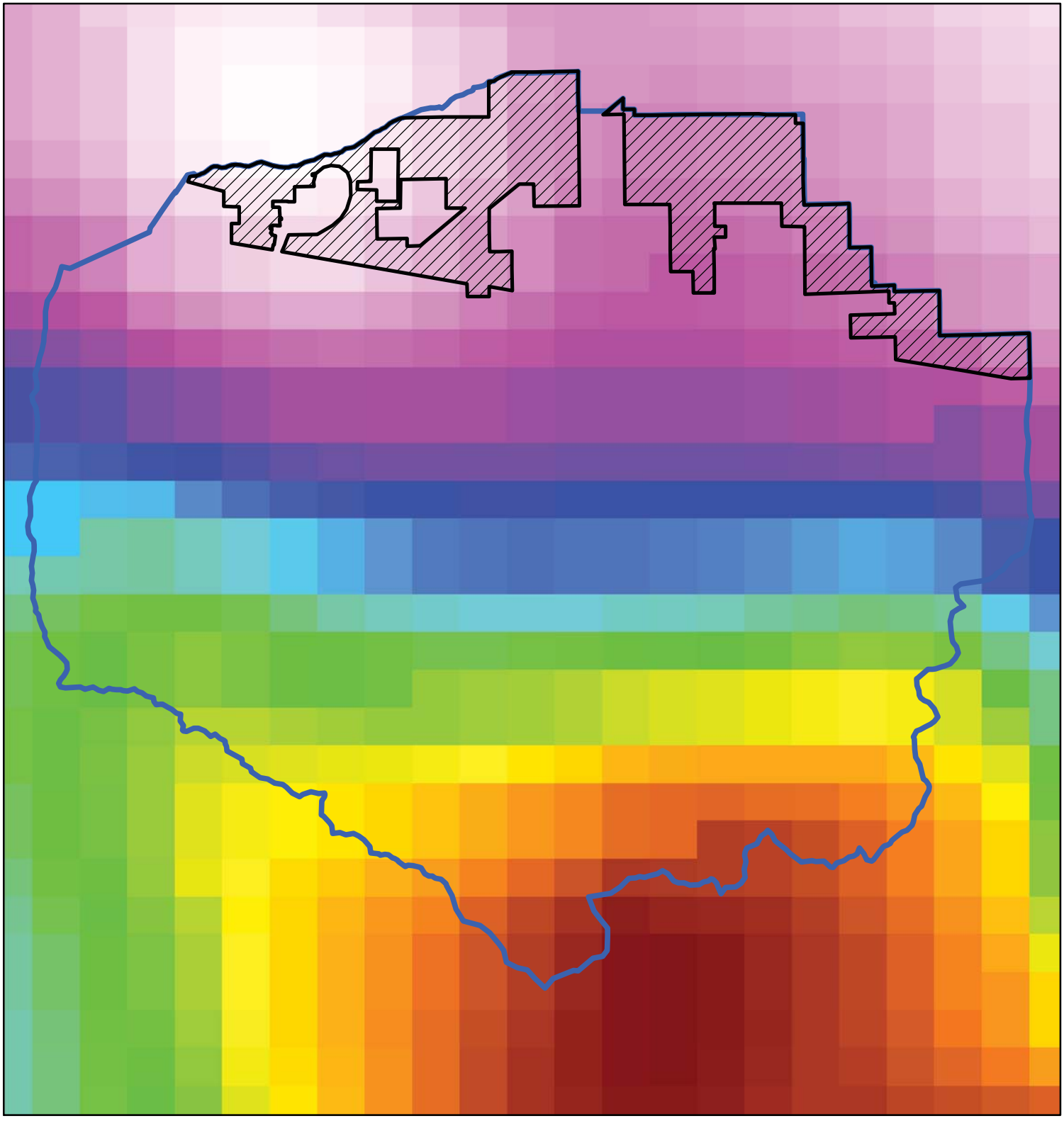
## 100-YEAR, 1-HOUR RAINFALL PER NOAA ATLAS 14 GRID DATA

N

0 4,500 9,000 18,000 Feet

# EXHIBIT “C.2”

Watershed Precipitation
NOAA Atlas 14 100-Year, 6-Hour Grid



PROJECT SITE

STUDY WATERSHED

**PRECIPITATION (IN):**

HIGH: 2.87"

LOW: 1.79"

# EXHIBIT C.2

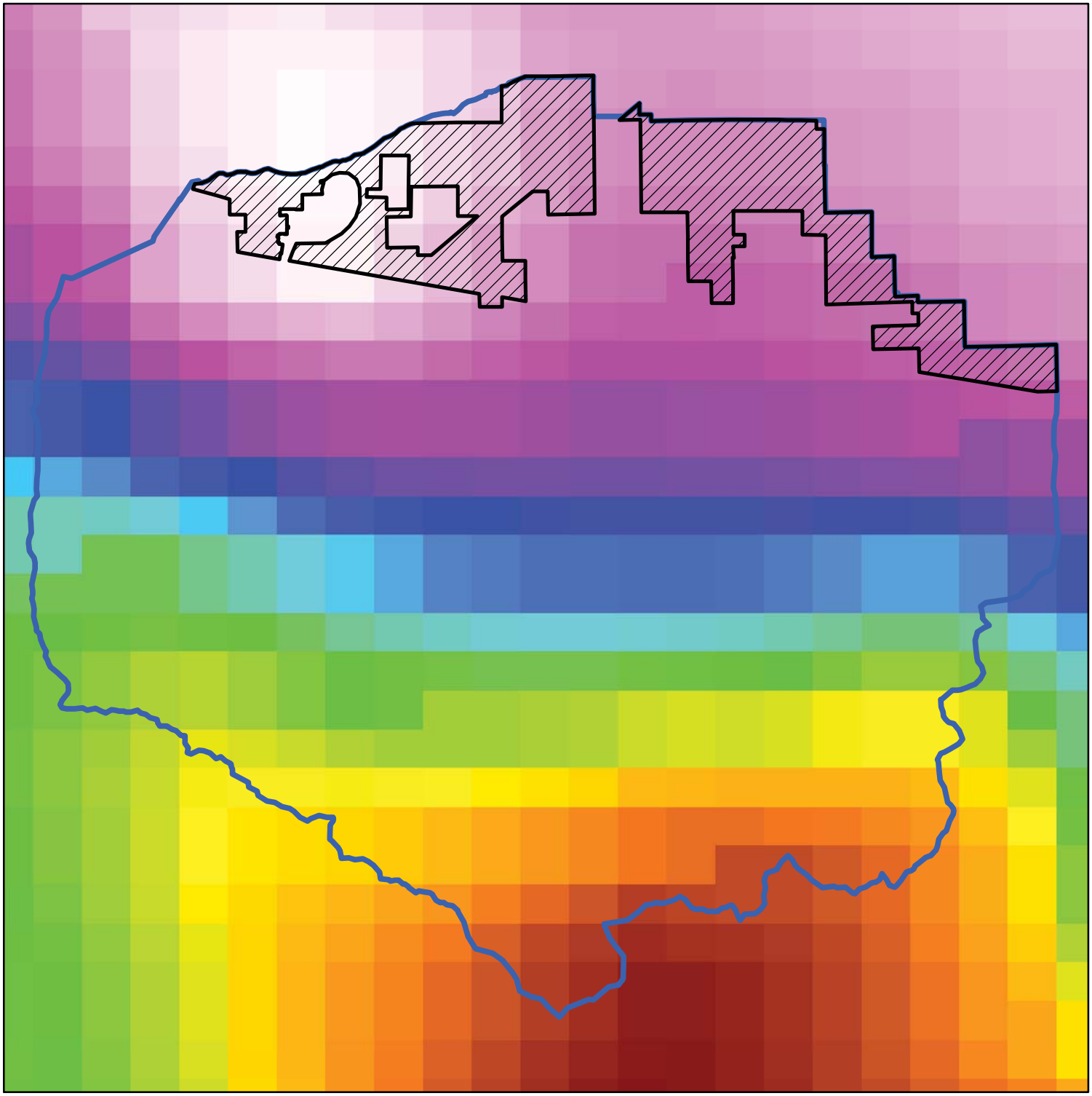
## 100-YEAR, 6-HOUR RAINFALL PER NOAA ATLAS 14 GRID DATA

N

0 4,500 9,000 18,000 Feet

# EXHIBIT “C.3”

Watershed Precipitation
NOAA Atlas 14 100-Year, 24-Hour Grid



PROJECT SITE

STUDY WATERSHED

**PRECIPITATION (IN.):**

HIGH : 4.86"

LOW: 2.36"

# EXHIBIT C.3

## 100-YEAR, 24-HOUR RAINFALL PER NOAA ATLAS 14 GRID DATA

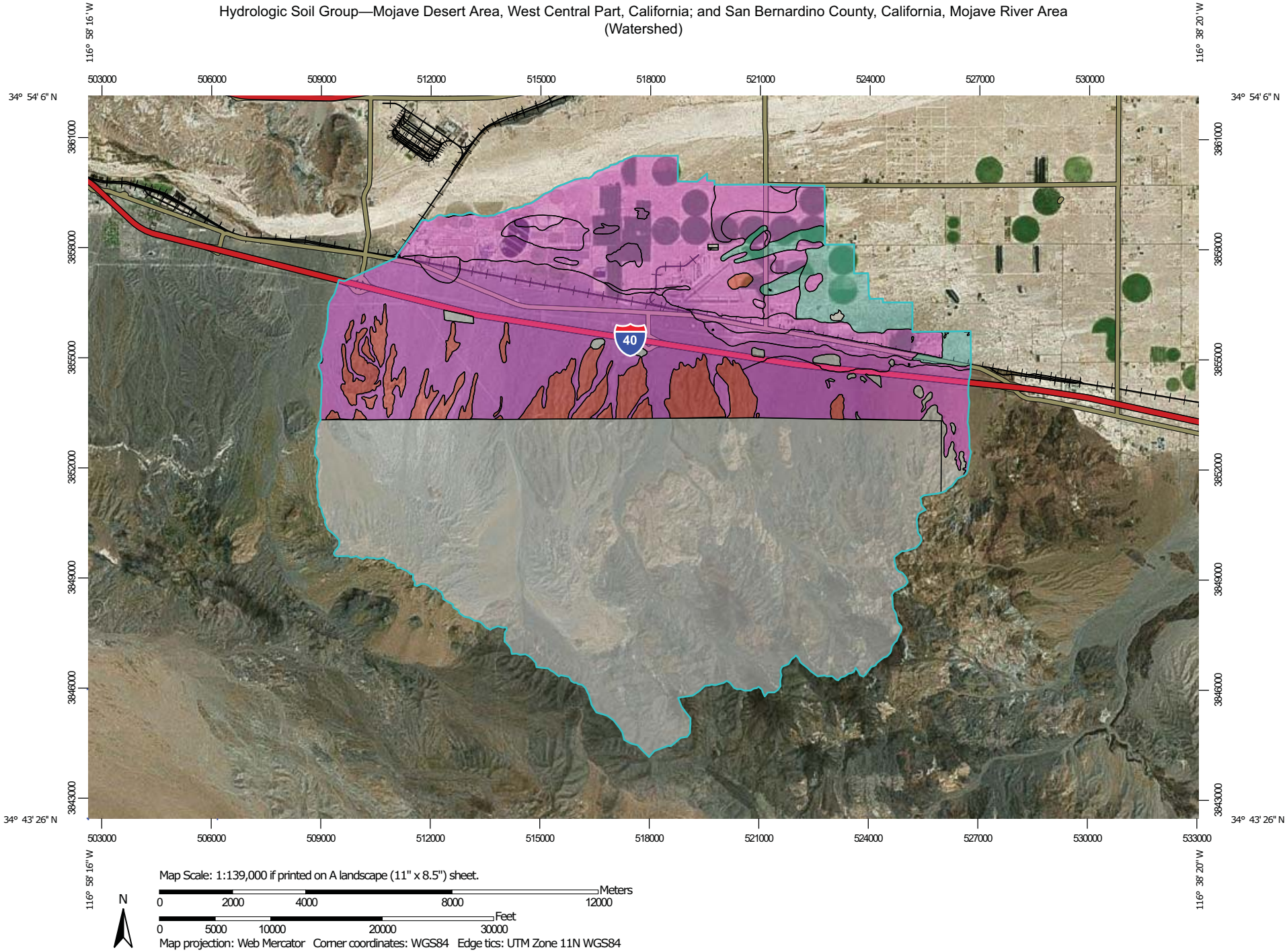
N

0 4,500 9,000 18,000 Feet

# EXHIBIT “D.1”

Watershed Hydrologic Soils Groups
NRCS Web Soils Survey

Hydrologic Soil Group—Mojave Desert Area, West Central Part, California; and San Bernardino County, California, Mojave River Area (Watershed)



## MAP LEGEND

**Area of Interest (AOI)**

- Area of Interest (AOI)

**Soils**

**Soil Rating Polygons**

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

**Soil Rating Lines**

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

**Soil Rating Points**

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

**Water Features**

- Streams and Canals

**Transportation**

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**

- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Mojave Desert Area, West Central Part, California
Survey Area Data: Version 9, Sep 28, 2016

Soil Survey Area: San Bernardino County, California, Mojave River Area
Survey Area Data: Version 8, Sep 12, 2016

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 13, 2016—Feb 2, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Hydrologic Soil Group

| Hydrologic Soil Group— Summary by Map Unit — Mojave Desert Area, West Central Part, California (CA698) | | | | |
|---|---|---|---|---|
| **Map unit symbol** | **Map unit name** | **Rating** | **Acres in AOI** | **Percent of AOI** |
| NOTCOM | No Digital Data Available | | 26,096.4 | 52.5% |
| **Subtotals for Soil Survey Area** | | | **26,096.4** | **52.5%** |
| **Totals for Area of Interest** | | | **49,706.3** | **100.0%** |

| Hydrologic Soil Group— Summary by Map Unit — San Bernardino County, California, Mojave River Area (CA671) | | | | |
|---|---|---|---|---|
| **Map unit symbol** | **Map unit name** | **Rating** | **Acres in AOI** | **Percent of AOI** |
| 100 | ARIZO GRAVELLY LOAMY SAND, 2 TO 9 PERCENT SLOPES | A | 2,236.1 | 4.5% |
| 112 | CAJON SAND, 0 TO 2 PERCENT SLOPES | A | 4,854.8 | 9.8% |
| 113 | CAJON SAND, 2 TO 9 PERCENT SLOPES | A | 1,202.3 | 2.4% |
| 115 | CAJON GRAVELLY SAND, 2 TO 15 PERCENT SLOPES | A | 8,375.8 | 16.9% |
| 117 | CAJON LOAMY SAND, LOAMY SUBSTRATUM, 0 TO 2 PERCENT SLOPES | A | 811.5 | 1.6% |
| 123 | DUNE LAND | | 16.9 | 0.0% |
| 127 | HALLORAN SANDY LOAM | C | 367.0 | 0.7% |
| 128 | HALLORAN-DUNELAND COMPLEX, 0 TO 15 PERCENT SLOPES* | C | 1,295.4 | 2.6% |
| 137 | KIMBERLINA LOAMY FINE SAND, COOL, 0 TO 2 PERCENT SLOPES | A | 1,241.2 | 2.5% |
| 138 | KIMBERLINA LOAMY FINE SAND, COOL, 2 TO 5 PERCENT SLOPES | A | 30.0 | 0.1% |
| 139 | KIMBERLINA GRAVELLY SANDY LOAM, COOL, 2 TO 5 PERCENT SLOPES | A | 89.3 | 0.2% |
| 151 | NEBONA-CUDDEBACK COMPLEX, 2 TO 9 PERCENT SLOPES* | D | 2,643.8 | 5.3% |
| 155 | PITS | | 168.3 | 0.3% |

| Hydrologic Soil Group— Summary by Map Unit — San Bernardino County, California, Mojave River Area (CA671) | | | | |
|---|---|---|---|---|
| **Map unit symbol** | **Map unit name** | **Rating** | **Acres in AOI** | **Percent of AOI** |
| 157 | RIVERWASH | | 7.6 | 0.0% |
| 158 | ROCK OUTCROP-LITHIC TORRIORTHENTS COMPLEX, 15 TO 50 PERCENT SLOPES* | | 250.8 | 0.5% |
| 177 | YERMO-KIMBERLINA, COOL, ASSOCIATION, SLOPING* | A | 3.7 | 0.0% |
| 178 | WATER | | 5.6 | 0.0% |
| 179 | MISCELLANEOUS WATER | | 9.9 | 0.0% |
| **Subtotals for Soil Survey Area** | | | **23,609.8** | **47.5%** |
| **Totals for Area of Interest** | | | **49,706.3** | **100.0%** |

## Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

## Rating Options

*Aggregation Method:* Dominant Condition

*Component Percent Cutoff: None Specified*

*Tie-break Rule:* Higher

# EXHIBIT “D.2”

Watershed Hydrologic Soils Groups
SBC Hydrology Manual

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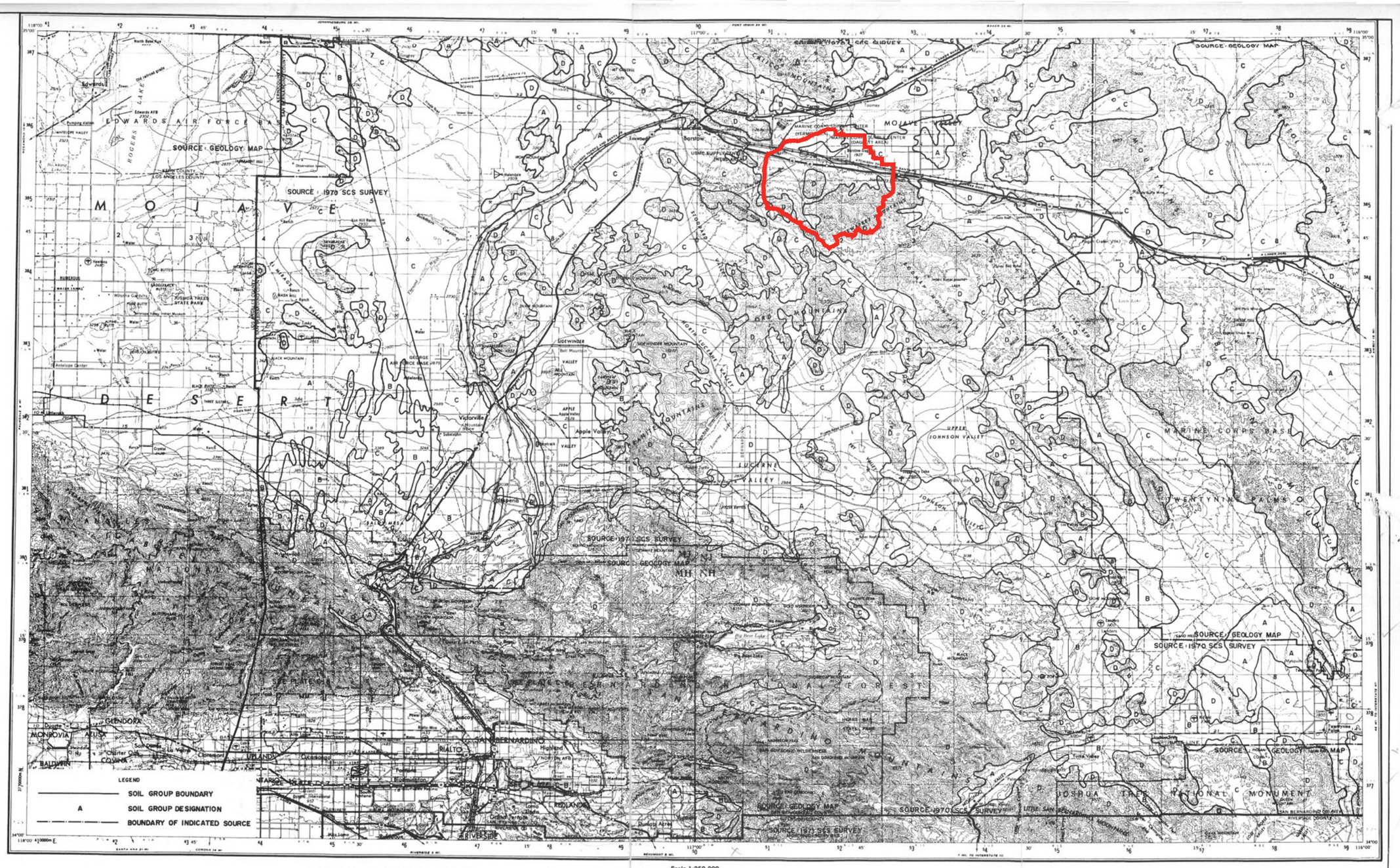
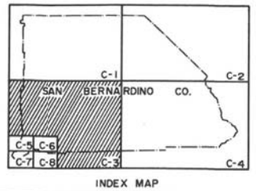



Soils Gp

# SAN BERNARDINO COUNTY
## HYDROLOGY MANUAL




INDEX MAP

Scale 1:250,000

5 0 5 10 15 20 Statute Miles
5 0 5 10 15 20 25 30 Kilometers
5 0 5 10 15 Nautical Miles

CONTOUR INTERVAL 200 FEET
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS
TRANSVERSE MERCATOR PROJECTION

BLACK NUMBERED LINES INDICATE THE 10,000 METER UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 11

1965 MAGNETIC DECLINATION FROM TRUE NORTH VARIES FROM 15½° (280 MILS) EASTERLY FOR THE CENTER OF THE WEST EDGE TO 15° (270 MILS) EASTERLY FOR THE CENTER OF THE EAST EDGE

BASE MAP REPRODUCED FROM U.S.G.S. "SAN BERNARDINO" TOPOGRAPHIC MAP

**SCALE REDUCED BY 1/2**

## HYDROLOGIC SOILS GROUP MAP FOR SOUTHCENTRAL AREA

C-8 FIGURE C-3

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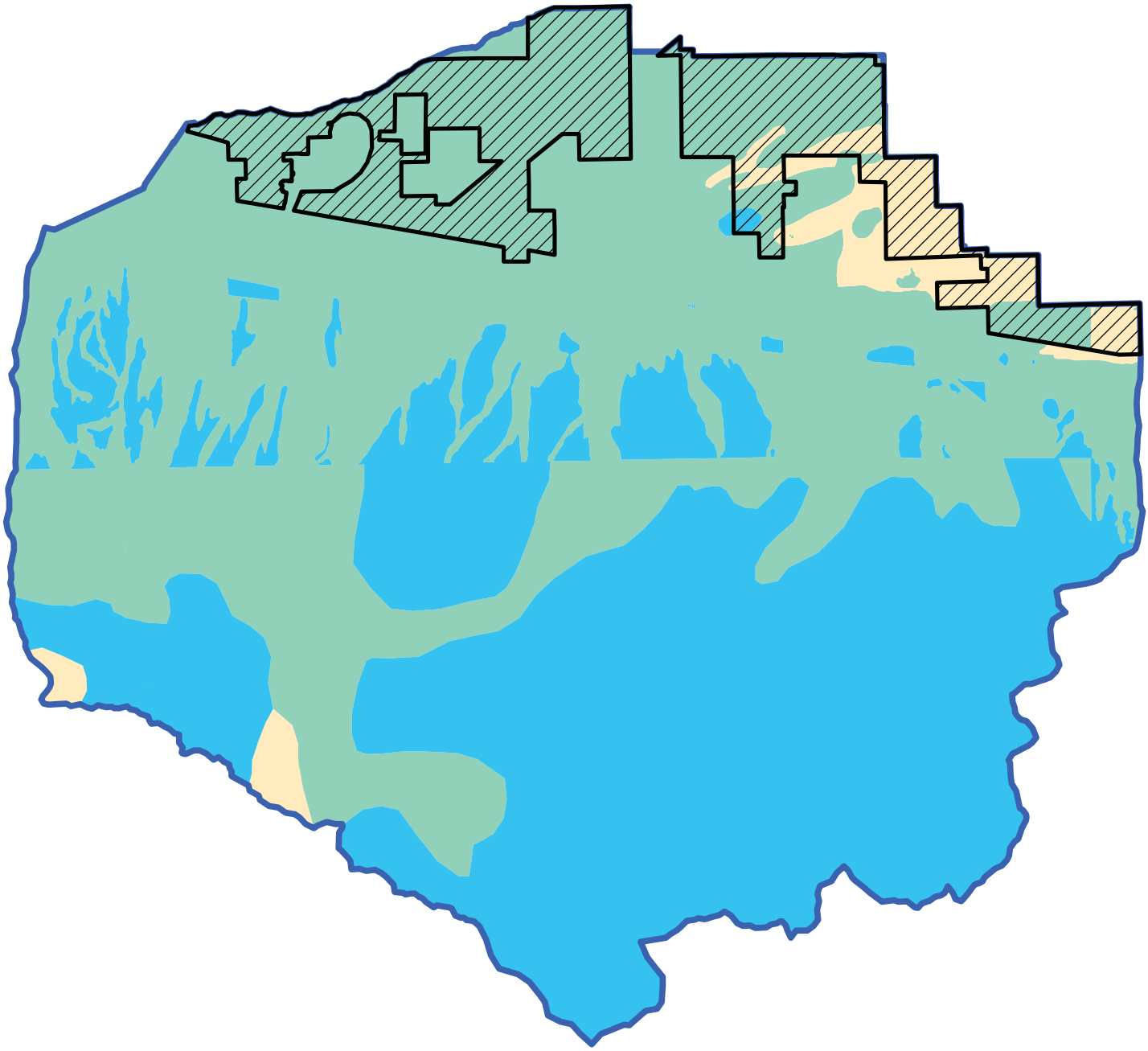
# EXHIBIT “D.3”

Watershed Hydrologic Soils Groups
Composite

# EXHIBIT D.3

## COMPOSITE SOILS GROUPS



PROJECT SITE

STUDY WATERSHED

**HYDROLOGIC SOILS GROUP:**

A

C

D

N

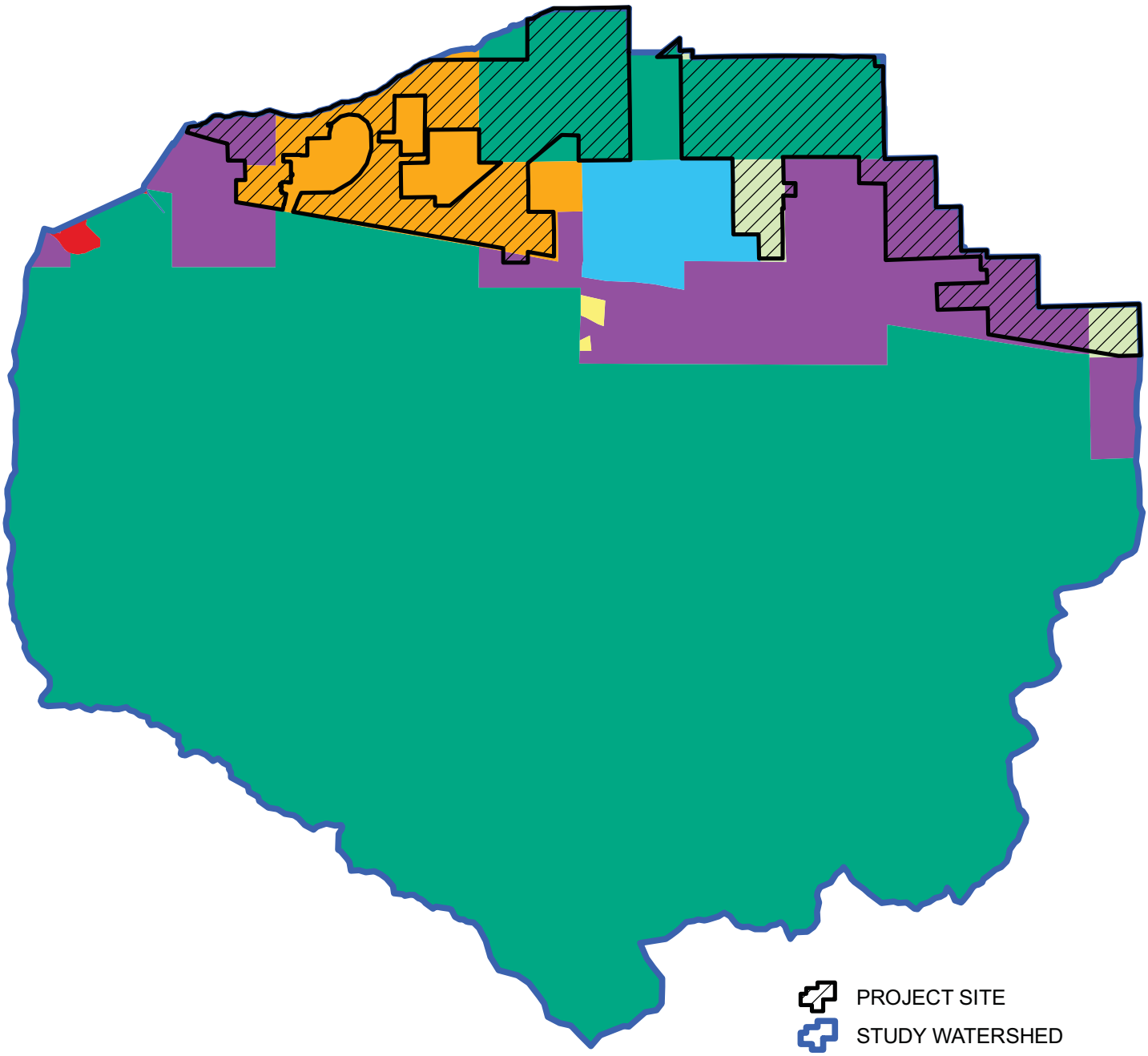
0 4,500 9,000 18,000 Feet

# EXHIBIT “D.4”

Watershed Land Use
SBC General Plan

# EXHIBIT D.4

## GENERAL PLAN LAND USE



PROJECT SITE

STUDY WATERSHED

**LAND USE:**

- AGRICULTURE
- GENERAL COMMERCIAL
- GENERAL INDUSTRIAL
- INSTITUTIONS/GOVERNMENT
- OPEN SPACE
- REGIONAL COMMERCIAL
- RESIDENTIAL
- UTILITIES

N

0 4,500 9,000 18,000 Feet

# EXHIBIT “D.5”

SBC Hydrology Manual - Figure C-4
Actual Impervious Cover

## ACTUAL IMPERVIOUS COVER

| Land Use (1) | Range-Percent | Recommended Value For Average Conditions-Percent (2) |
|---|---|---|
| Natural or Agriculture | 0 - 0 | 0 |
| Public Park | 10 - 25 | 15 |
| School | 30 - 50 | 40 |
| Single Family Residential: (3) | | |
| 2.5 acre lots | 5 - 15 | 10 |
| 1 acre lots | 10 - 25 | 20 |
| 2 dwellings/acre | 20 - 40 | 30 |
| 3-4 dwellings/acre | 30 - 50 | 40 |
| 5-7 dwellings/acre | 35 - 55 | 50 |
| 8-10 dwellings/acre | 50 - 70 | 60 |
| More than 10 dwellings/acre | 65 - 90 | 80 |
| Multiple Family Residential: | | |
| Condominiums | 45 - 70 | 65 |
| Apartments | 65 - 90 | 80 |
| Mobile Home Park | 60 - 85 | 75 |
| Commercial, Downtown Business or Industrial | 80 - 100 | 90 |

Notes:

1. Land use should be based on ultimate development of the watershed. Long range master plans for the County and incorporated cities should be reviewed to insure reasonable land use assumptions.

2. Recommended values are based on average conditions which may not apply to a particular study area. The percentage impervious may vary greatly even on comparable sized lots due to differences in dwelling size, improvements, etc. Landscape practices should also be considered as it is common in some areas to use ornamental gravels underlain by impervious plastic materials in place of lawns and shrubs. A field investigation of a study area shall always be made, and a review of aerial photos, where available, may assist in estimating the percentage of impervious cover in developed areas.

3. For typical equestrian subdivisions increase impervious area 5 percent over the values recommended in the table above.

**SAN BERNARDINO COUNTY**
HYDROLOGY MANUAL

ACTUAL IMPERVIOUS COVER FOR DEVELOPED AREAS



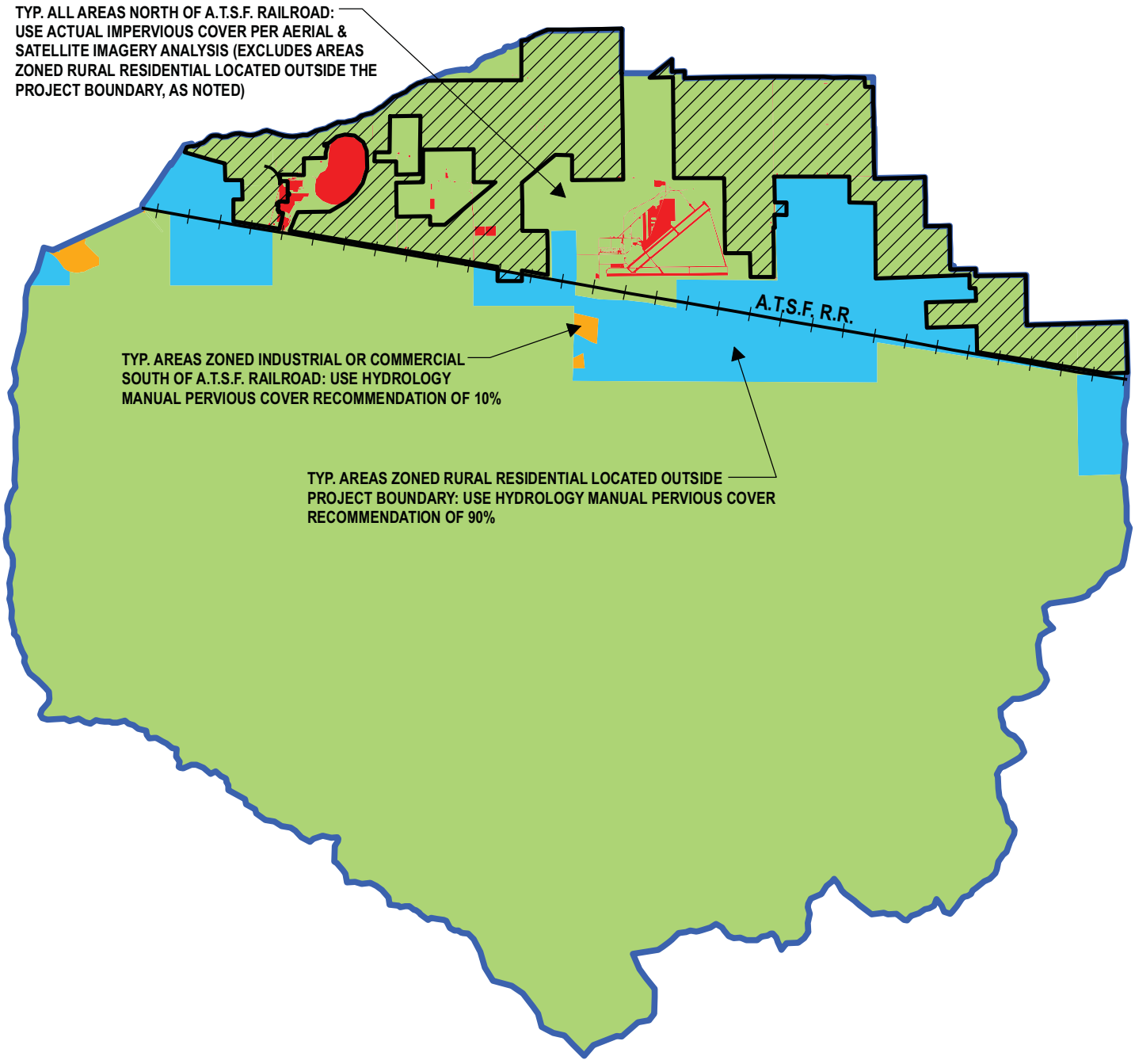
Figure C-4

# EXHIBIT “D.6”

Watershed Pervious %
Existing Conditions

# EXHIBIT D.6

## EXISTING CONDITIONS PERVIOUS %




PROJECT SITE

STUDY WATERSHED

**% PERVIOUS:**

0%

10%

90%

100%

N

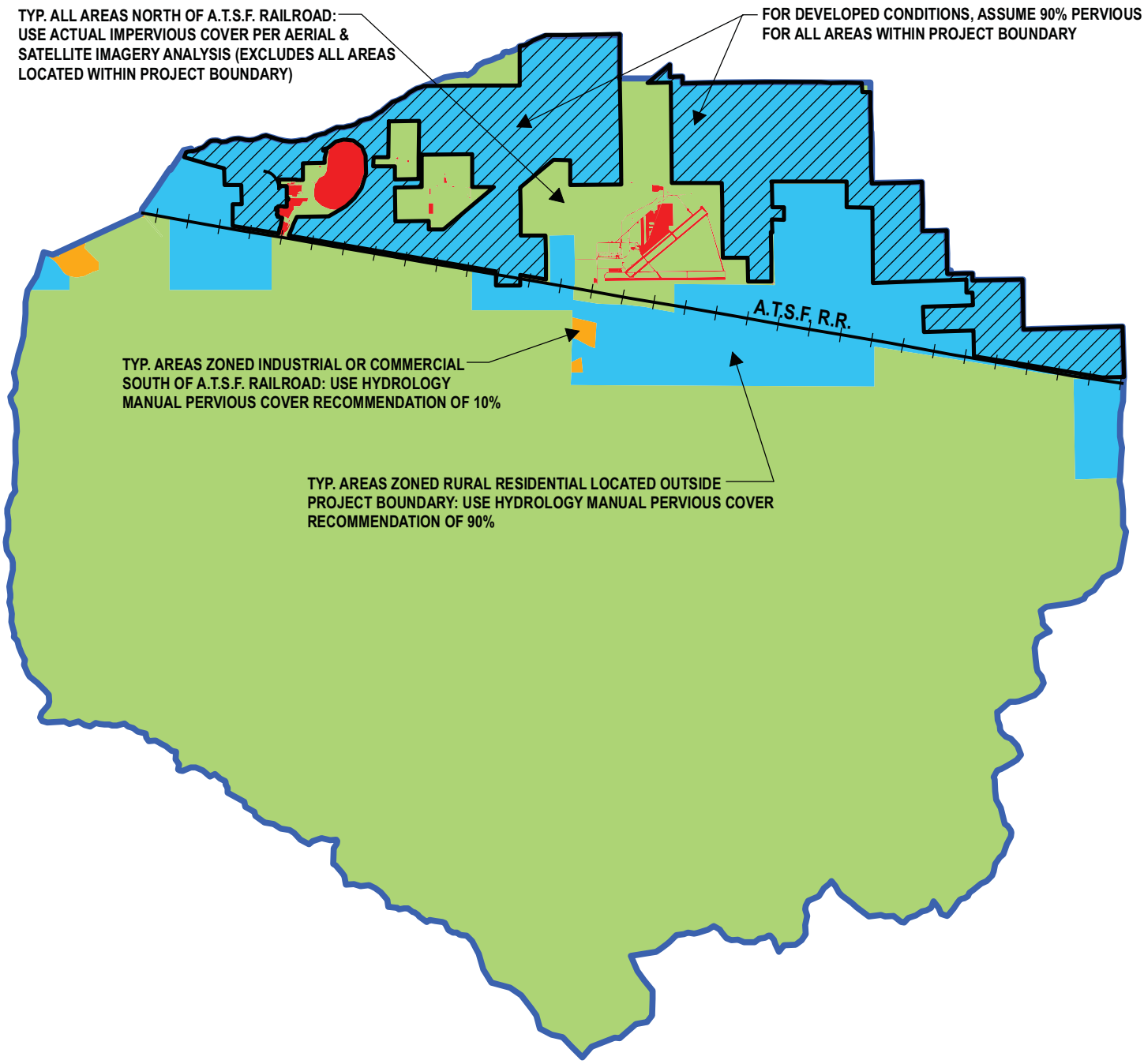
0 4,500 9,000 18,000 Feet

# EXHIBIT “D.7”

Watershed Pervious %
Developed Conditions

# EXHIBIT D.7

## DEVELOPED CONDITIONS PERVIOUS %




PROJECT SITE

STUDY WATERSHED

**% PERVIOUS:**

0%

10%

90%

100%

N

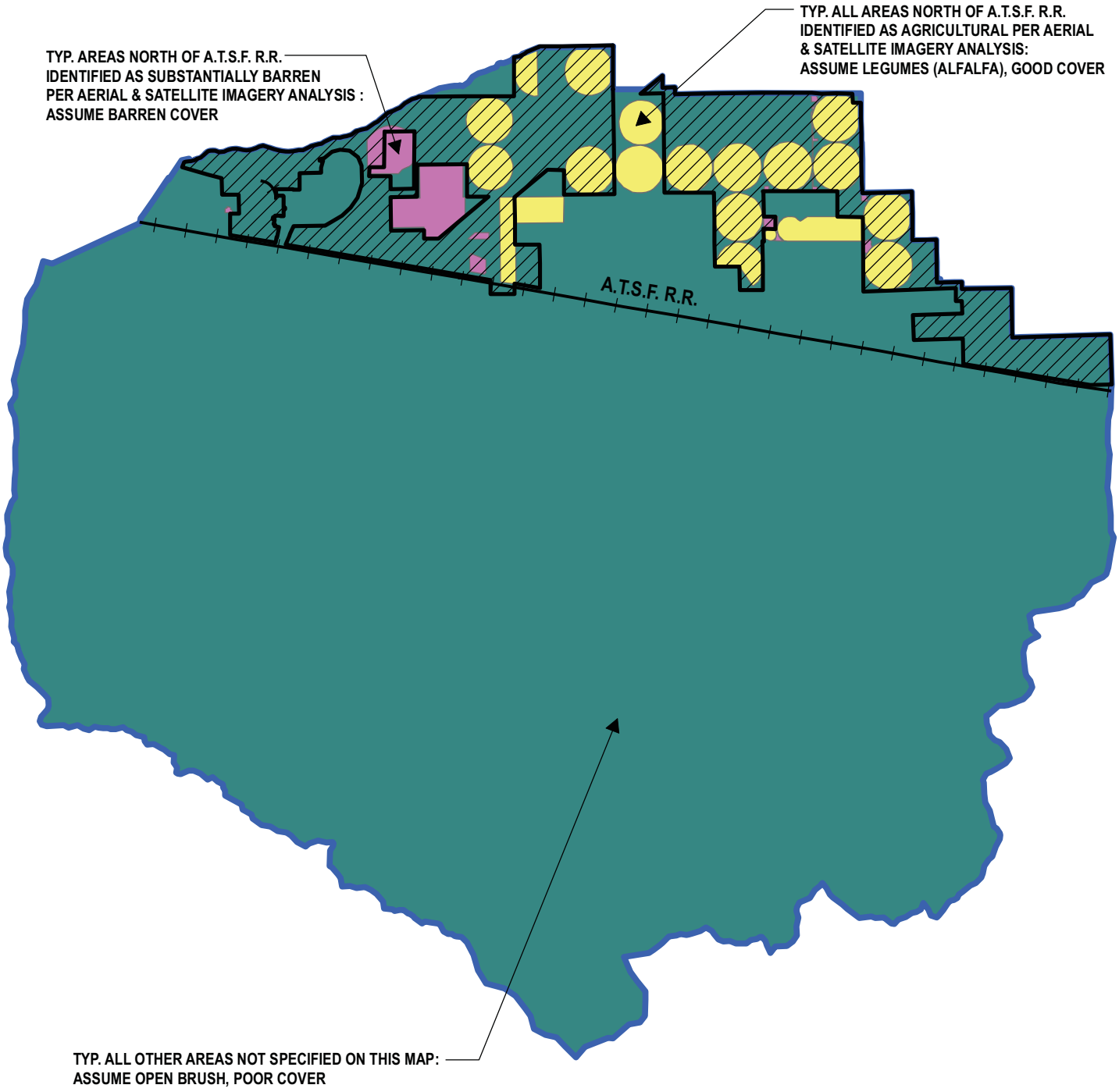
0 4,500 9,000 18,000 Feet

# EXHIBIT “D.8”

## Watershed Pervious Cover
## Existing Conditions

# EXHIBIT D.8

## EXISTING CONDITIONS PERVIOUS COVER




N

0 4,500 9,000 18,000 Feet

PROJECT SITE

STUDY WATERSHED

**PERVIOUS COVER:**

AG-LEGUMES-GOOD

BARREN

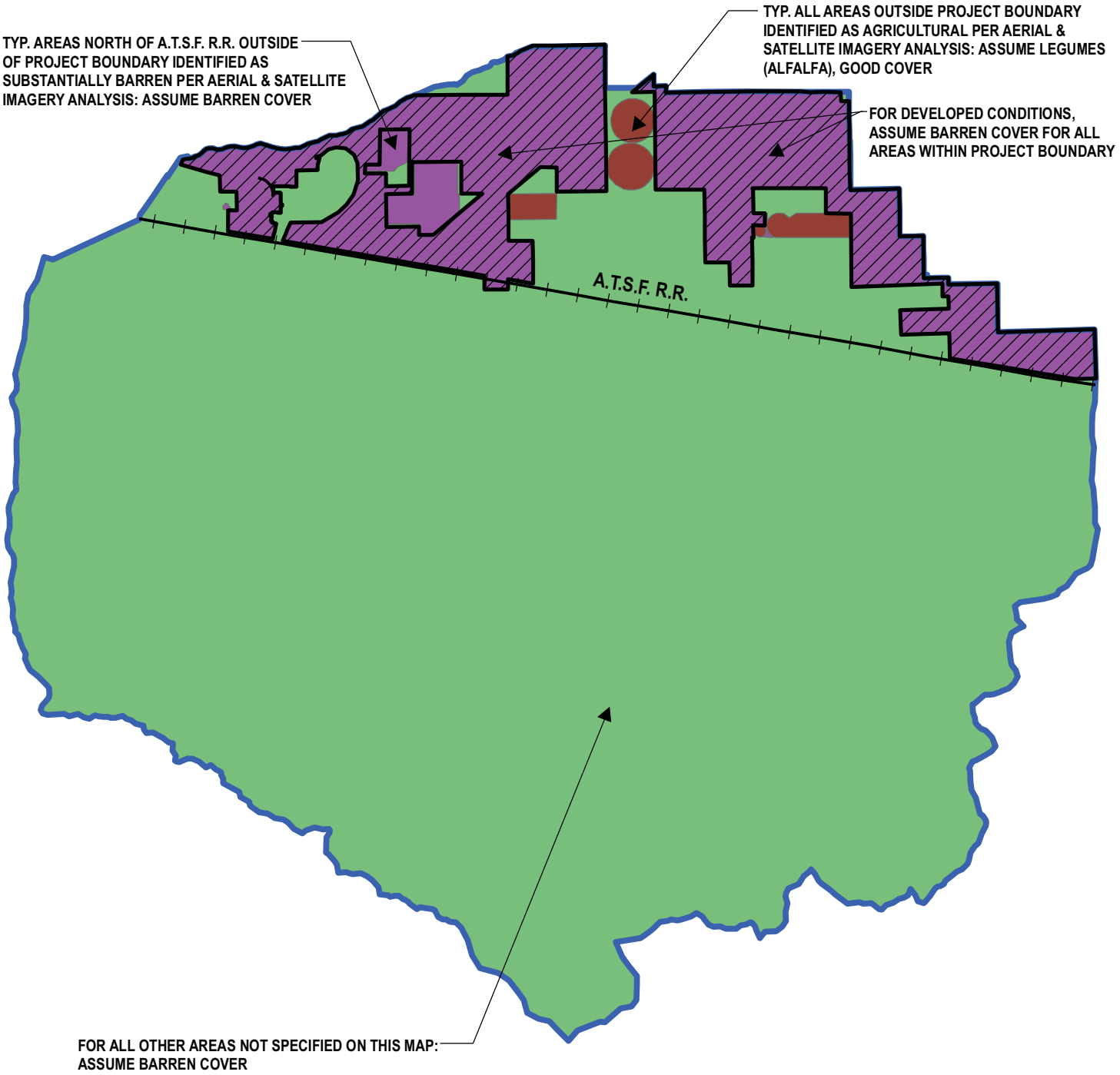
OPEN BRUSH - POOR

# EXHIBIT “D.9”

Watershed Pervious Cover
Developed Conditions

# EXHIBIT D.9

## DEVELOPED CONDITIONS PERVIOUS COVER




N

0 4,500 9,000 18,000 Feet

PROJECT SITE

STUDY WATERSHED

**PERVIOUS COVER:**

AG-LEGUMES-GOOD

BARREN

OPEN BRUSH - POOR

# EXHIBIT “D.10”

SBC Hydrology Manual - Figures C-2 & C-3
SCS Curve Numbers (AMC II)

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Residential Landscaping (Lawn, Shrubs, etc.) - The pervious portions of commercial establishments, single and multiple family dwellings, trailer parks and schools where the predominant land cover is lawn, shrubbery and trees.

Row Crops - Lettuce, tomatoes, beets, tulips or any field crop planted in rows far enough apart that most of the soil surface is exposed to rainfall impact throughout the growing season. At plowing, planting and harvest times it is equivalent to fallow.

Small Grain - Wheat, oats, barley, flax, etc. planted in rows close enough that the soil surface is not exposed except during planting and shortly thereafter.

Legumes - Alfalfa, sweetclover, timothy, etc. and combinations are either planted in close rows or broadcast.

Fallow - Fallow land is land plowed but not yet seeded or tilled.

Woodland - grass - Areas with an open cover of broadleaf or coniferous trees usually live oak and pines, with the intervening ground space occupied by annual grasses or weeds. The trees may occur singly or in small clumps. Canopy density, the amount of ground surface shaded at high noon, is from 20 to 50 percent.

Woodland - Areas on which coniferous or broadleaf trees predominate. The canopy density is at least 50 percent. Open areas may have a cover of annual or perennial grasses or of brush. Herbaceous plant cover under the trees is usually sparse because of leaf or needle litter accumulation.

Chaparral - Land on which the principal vegetation consists of evergreen shrubs with broad, hard, stiff leaves such as manzonita, ceanothus and scrub oak. The brush cover is usually dense or moderately dense. Diffusely branched evergreen shrubs with fine needle-like leaves, such as chamise and redchank, with dense high growth are also included in this soil cover.

Annual Grass - Land on which the principal vegetation consists of annual grasses and weeds such as annual bromes, wild barley, soft chess, ryegrass and filaree.

Irrigated Pasture - Irrigated land planted to perennial grasses and legumes for production of forage and which is cultivated only to establish or renew the stand of plants. Dry land pasture is considered as annual grass.

Meadow - Land areas with seasonally high water table, locally called cienegas. Principal vegetation consists of sod-forming grasses interspersed with other plants.

Orchard (Deciduous) - Land planted to such deciduous trees as apples, apricots, pears, walnuts, and almonds.

Orchard (Evergreen) - Land planted to evergreen trees which include citrus and avocados and coniferous plantings.

Turf - Golf courses, parks and similar lands where the predominant cover is irrigated mowed close-grown turf grass. Parks in which trees are dense may be classified as woodland.

**SAN BERNARDINO COUNTY**
**HYDROLOGY MANUAL**

**SCS COVER TYPE DESCRIPTIONS**



Figure C-2

POOR: Heavily grazed or regularly burned areas. Less than 50 percent of the ground surface is protected by plant cover or brush and tree canopy.

FAIR: Moderate cover with 50 percent to 75 percent of the ground surface protected by vegetation.

GOOD: Heavy or dense cover with more than 75 percent of the ground surface protected by vegetation.

In most cases, watershed existing conditions cover type and quality can be readily determined by a field review of a watershed. In ultimate planned open spaces, the soil cover condition shall be considered as "good." Figure C-3 provides the CN values for various types and quality of ground cover. Impervious areas shall be assigned a CN of 98. It is noted that for ultimately developed conditions, the CN for urban landscaping (turf) is provided in Figure C-3.

## C.4. WATERSHED DEVELOPMENT CONDITIONS

Ultimate development of the watershed should normally be assumed since watershed urbanization is reasonably likely within the expected life of most hydraulic facilities. Long range master plans for the County and incorporated cities should be reviewed to insure that reasonable land use assumptions are made for the ultimate development of the watershed. A field review shall also be made to confirm existing use and drainage patterns. Particular attention shall be paid to existing and proposed landscape practices, as it is common in some areas to use ornamental gravels underlain by impervious plastic materials in place of lawns and shrubs. Appropriate actual impervious percentages can then be selected from Figure C-4. It should be noted that the recommended values from these figures are for average conditions and, therefore, some adjustment for particular applications may be required.

Runoff Index Numbers of Hydrologic Soil-Cover Complexes For Pervious Areas-AMC II

| Cover Type (3) | Quality of Cover (2) | Soil Group A | B | C | D |
|---|---|---|---|---|---|
| NATURAL COVERS - | | | | | |
| Barren (Rockland, eroded and graded land) | | 78 | 86 | 91 | 93 |
| Chaparrel, Broadleaf (Manzonita, ceanothus and scrub oak) | Poor | 53 | 70 | 80 | 85 |
| | Fair | 40 | 63 | 75 | 81 |
| | Good | 31 | 57 | 71 | 78 |
| Chaparrel, Narrowleaf (Chamise and redshank) | Poor | 71 | 82 | 88 | 91 |
| | Fair | 55 | 72 | 81 | 86 |
| Grass, Annual or Perennial | Poor | 67 | 78 | 86 | 89 |
| | Fair | 50 | 69 | 79 | 84 |
| | Good | 38 | 61 | 74 | 80 |
| Meadows or Cienegas (Areas with seasonally high water table, principal vegetation is sod forming grass) | Poor | 63 | 77 | 85 | 88 |
| | Fair | 51 | 70 | 80 | 84 |
| | Good | 30 | 58 | 71 | 78 |
| Open Brush (Soft wood shrubs - buckwheat, sage, etc.) | Poor | 62 | 76 | 84 | 88 |
| | Fair | 46 | 66 | 77 | 83 |
| | Good | 41 | 63 | 75 | 81 |
| Woodland (Coniferous or broadleaf trees predominate. Canopy density is at least 50 percent.) | Poor | 45 | 66 | 77 | 83 |
| | Fair | 36 | 60 | 73 | 79 |
| | Good | 25 | 55 | 70 | 77 |
| Woodland, Grass (Coniferous or broadleaf trees with canopy density from 20 to 50 percent) | Poor | 57 | 73 | 82 | 86 |
| | Fair | 44 | 65 | 77 | 82 |
| | Good | 33 | 58 | 72 | 79 |
| URBAN COVERS - | | | | | |
| Residential or Commercial Landscaping (Lawn, shrubs, etc.) | Good | 32 | 56 | 69 | 75 |
| Turf (Irrigated and mowed grass) | Poor | 58 | 74 | 83 | 87 |
| | Fair | 44 | 65 | 77 | 82 |
| | Good | 33 | 58 | 72 | 79 |
| AGRICULTURAL COVERS - | | | | | |
| Fallow (Land plowed but not tilled or seeded) | | 77 | 86 | 91 | 94 |

SAN BERNARDINO COUNTY
HYDROLOGY MANUAL

CURVE NUMBERS FOR PERVIOUS AREAS



FIGURE C-3 (1 OF 2)

## Runoff Index Numbers of Hydrologic Soil-Cover Complexes For Pervious Areas-AMC II

| Cover Type (3) | Quality of Cover (2) | Soil Group A | B | C | D |
|---|---|---|---|---|---|
| AGRICULTURAL COVERS (Continued) | | | | | |
| Legumes, Close Seeded (Alfalfa, sweetclover, timothy, etc.) | Poor | 66 | 77 | 85 | 89 |
| | Good | 58 | 72 | 81 | 85 |
| Orchards, Evergreen (Citrus, avocados, etc.) | Poor | 57 | 73 | 82 | 86 |
| | Fair | 44 | 65 | 77 | 82 |
| | Good | 33 | 58 | 72 | 79 |
| Pasture, Dryland (Annual grasses) | Poor | 68 | 79 | 86 | 89 |
| | Fair | 49 | 69 | 79 | 84 |
| | Good | 39 | 61 | 74 | 80 |
| Pasture, Irrigated (Legumes and perennial grass) | Poor | 58 | 74 | 83 | 87 |
| | Fair | 44 | 65 | 77 | 82 |
| | Good | 33 | 58 | 72 | 79 |
| Row Crops (Field crops - tomatoes, sugar beets, etc.) | Poor | 72 | 81 | 88 | 91 |
| | Good | 67 | 78 | 85 | 89 |
| Small grain (Wheat, oats, barley, etc.) | Poor | 65 | 76 | 84 | 88 |
| | Good | 63 | 75 | 83 | 87 |

Notes:

1. All runoff index (RI) numbers are for Antecedent Moisture Condition (AMC) II.
2. Quality of cover definitions:

   Poor-Heavily grazed or regularly burned areas. Less than 50 percent of the ground surface is protected by plant cover or brush and tree canopy.

   Fair-Moderate cover with 50 percent to 75 percent of the ground surface protected.

   Good-Heavy or dense cover with more than 75 percent of the ground surface protected.
3. See Figure C-2 for definition of cover types.

**SAN BERNARDINO COUNTY**
HYDROLOGY MANUAL

NUMBERS
FOR
PERVIOUS AREAS



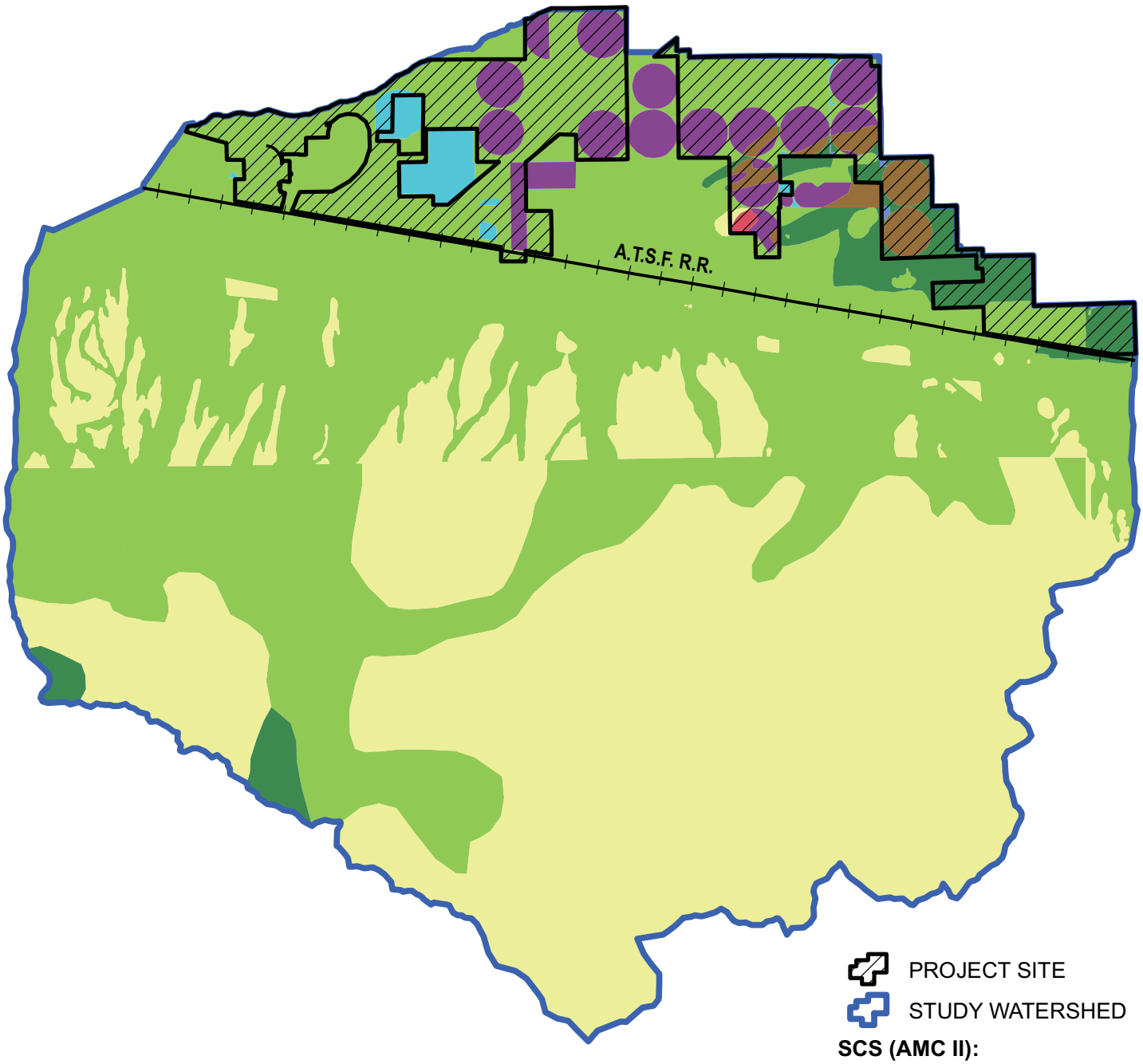
FIGURE C-3 (2 OF 2)

# EXHIBIT “D.11”

## Watershed SCS Curve Numbers (AMC II)
## Existing Conditions

# EXHIBIT D.11

## EXISTING CONDITIONS SCS VALUES




PROJECT SITE

STUDY WATERSHED

**SCS (AMC II):**

- 58
- 62
- 78
- 81
- 84
- 85
- 88
- 91

N

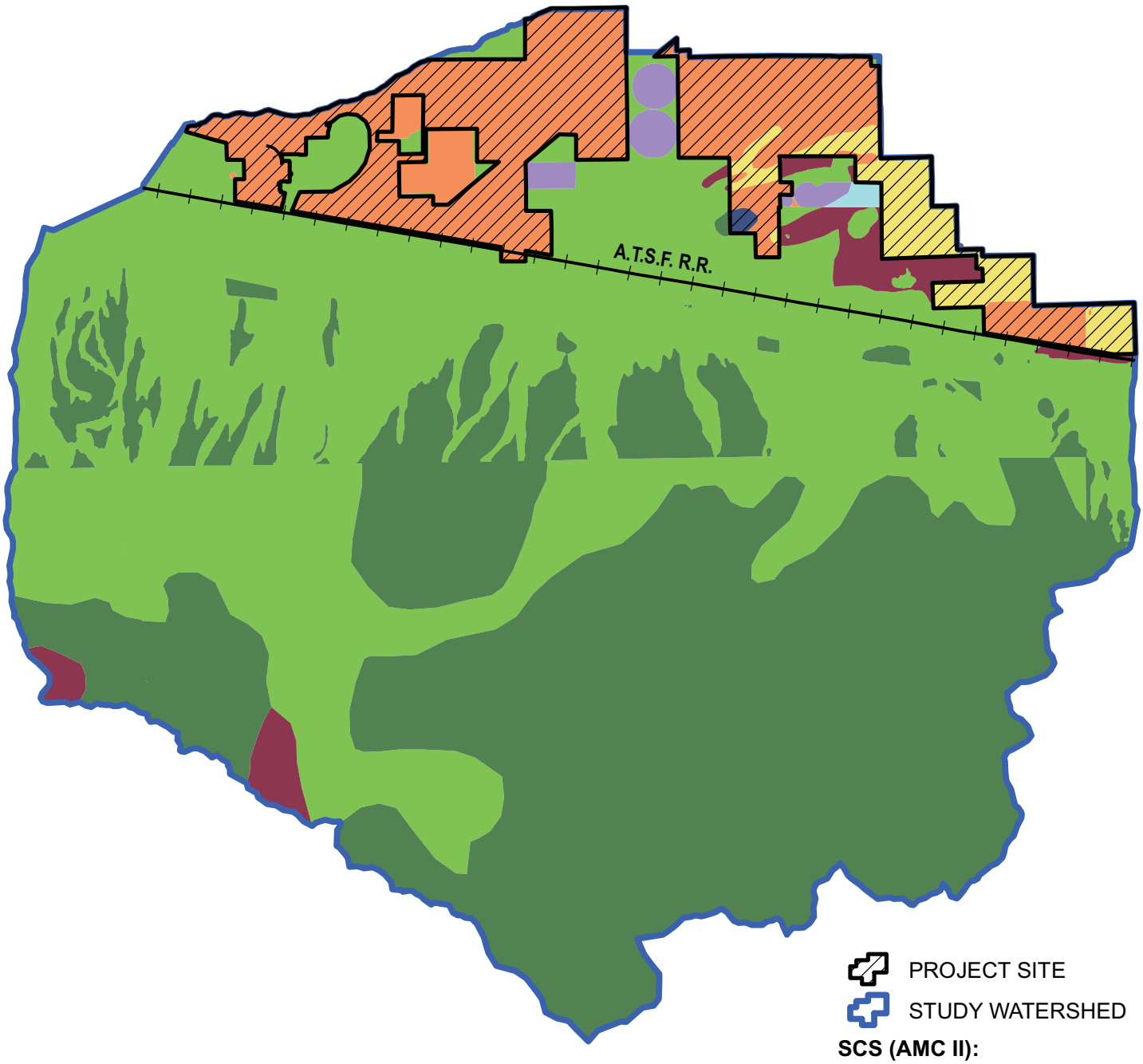
0 4,500 9,000 18,000 Feet

# EXHIBIT “D.12”

## Watershed SCS Curve Numbers (AMC II)
## Developed Conditions

# EXHIBIT D.12

## DEVELOPED CONDITIONS SCS VALUES




PROJECT SITE

STUDY WATERSHED

**SCS (AMC II):**

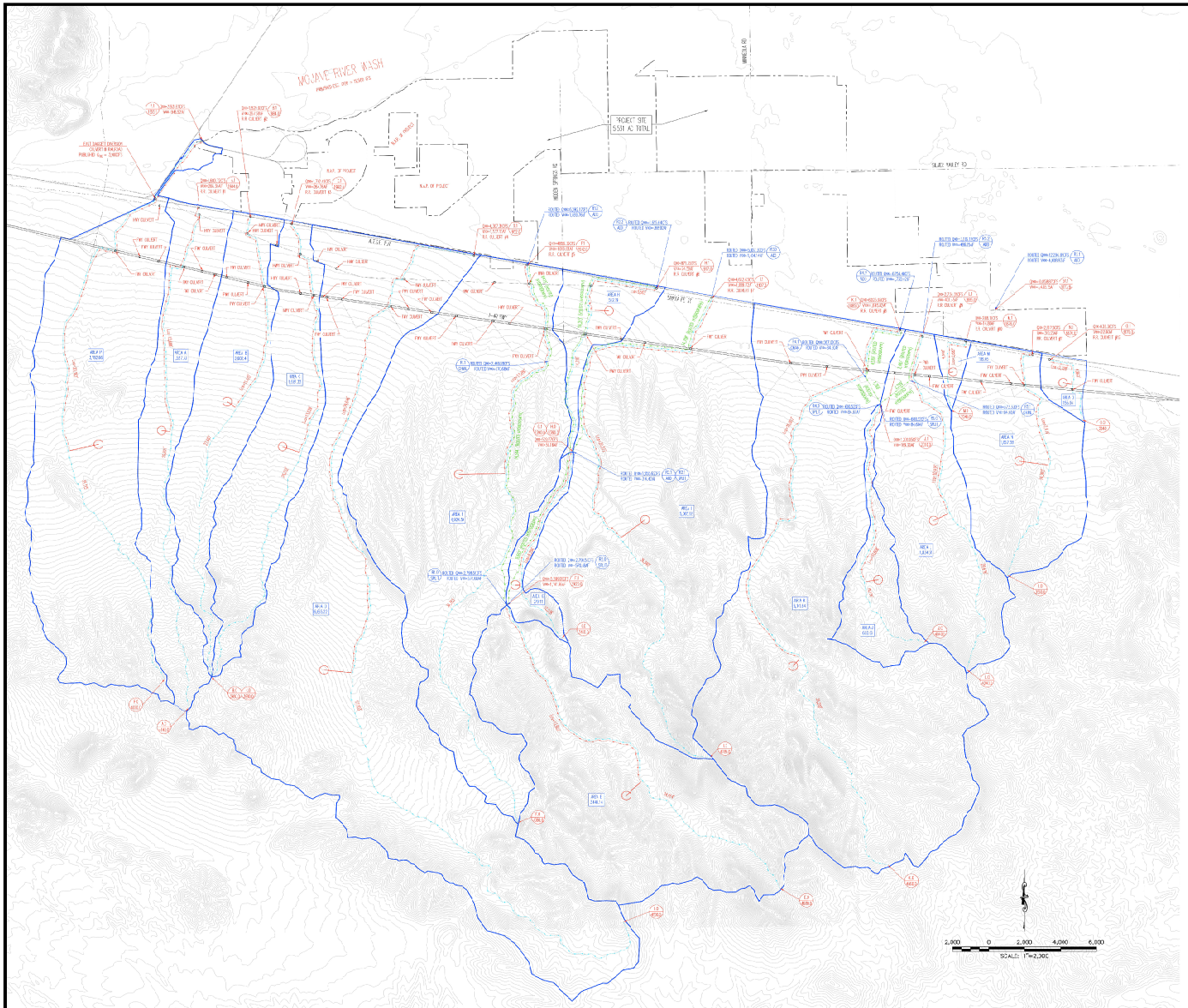
- 58
- 62
- 78
- 81
- 84
- 88
- 91
- 93

N

0 4,500 9,000 18,000 Feet

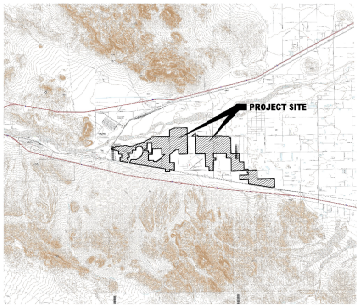
# EXHIBIT “E”

Offsite (Tributary)
Hydrology Study Map




## VICINITY MAP

N.T.S.




## MAP LEGEND:

PROJECT BOUNDARY
DRAINAGE AREA BOUNDARY
FLOWPATH / WATERCOURSE
HYDROGRAPH LOCATION/CONFLUENCE
ROUTED HYDROGRAPH FLOW
EXISTING EARTHEN DIVERSION CHANNELS
HYDROGRAPH CENTROID
DRAINAGE AREA ID & TOTAL ACREAGE
DRAINAGE AREA, SUBAREA ID & ELEVATION
DRAINAGE AREA UNIT HYDROGRAPH Q100 (CFS) & V100 (AF)
HYDROGRAPH ROUTING NODE & ACTION (SPLIT OR ADD HYDROGRAPHS)
HYDROGRAPH ROUTING TO (N) Q100 (CFS) & V100 (AF)
EXISTING 10' CONTOURS (FROM USGS)

## TRIBUTARY WATERSHED HYDROGRAPH ROUTING CALCULATIONS:

| LOCATION | ROUTING ACTION | $Q_{100}$ (CFS) AT LOCATION | $V_{100}$ (AF) AT LOCATION |
|---|---|---|---|
| R1.0 | SPLIT AREA "E" HYDROGRAPH | 2,799.11 | 170.68 |
| R1.0 TO R1.1 | ROUTE SPLIT FLOW OF AREA "E" HYDROGRAPH TO CHANNEL TRANSITION | 2,449.38 | 170.68 |
| R1.1 TO R1.2 | ROUTE SPLIT FLOW OF AREA "E" HYDROGRAPH TO AREA "F" DISCHARGE POINT | 2,449.38 | 170.68 |
| R1.2 | COMBINE AREA "E" HYDROGRAPH AT AREA "F" DISCHARGE POINT | **3,598.17** | **3,589.74** |
| | | | |
| R2.0 | SPLIT AREA "E" HYDROGRAPH | 2,799.11 | 170.68 |
| R2.0 TO R2.1 | ROUTE SPLIT FLOW OF AREA "E" HYDROGRAPH TO AREA "C" DISCHARGE POINT | 2,462.88 | 170.68 |
| R2.1 | COMBINE AREA "C" HYDROGRAPH AT AREA "G" DISCHARGE POINT | 2,671.25 | 328.84 |
| R2.1 | SPLIT AREAS "DC" HYDROGRAPH | 1,335.42 | 314.42 |
| R2.1 TO R2.2 | ROUTE SPLIT FLOW OF AREAS "DC" HYDROGRAPH TO AREA "F" DISCHARGE POINT | 1,229.17 | 314.42 |
| R2.2 | COMBINE AREA "G" HYDROGRAPH AT AREA "H" DISCHARGE POINT | **1,455.44** | **585.92** |
| | | | |
| R3.0 | SPLIT AREA "E" HYDROGRAPH | 2,799.11 | 170.68 |
| R3.0 TO R3.1 | ROUTE SPLIT FLOW OF AREA "E" HYDROGRAPH TO AREA "C" DISCHARGE POINT | 2,462.88 | 170.68 |
| R3.1 | COMBINE AREA "G" HYDROGRAPH AT AREA "G" DISCHARGE POINT | 2,671.25 | 328.84 |
| R3.1 | SPLIT AREAS "DC" HYDROGRAPH | 1,335.42 | 314.42 |
| R3.1 TO R3.0 | ROUTE SPLIT FLOW OF AREAS "DC" HYDROGRAPH TO AREA "F" DISCHARGE POINT | 1,229.16 | 314.42 |
| R3.0 | COMBINE AREA "I" HYDROGRAPH AT AREA "I" DISCHARGE POINT | **3,807.19** | **3,434.14** |
| | | | |
| R4.0 | SPLIT AREA "I" HYDROGRAPH | 600.51 | 84.60 |
| R4.0 TO R4.1 | ROUTE SPLIT FLOW OF AREA "J" HYDROGRAPH TO CHANNEL TRANSITION | 567.01 | 84.60 |
| R4.1 TO R4.2 | ROUTE SPLIT FLOW OF AREA "J" HYDROGRAPH TO AREA "K" DISCHARGE POINT | 567.01 | 84.60 |
| R4.2 | COMBINE AREA "K" HYDROGRAPH AT AREA "K" DISCHARGE POINT | **1,154.40** | **1,730.41** |
| | | | |
| R5.0 | SPLIT AREA "I" HYDROGRAPH | 600.51 | 84.60 |
| R5.0 TO R5.1 | ROUTE SPLIT FLOW OF AREA "J" HYDROGRAPH TO CHANNEL TRANSITION | 573.31 | 84.60 |
| R5.1 TO R5.2 | ROUTE SPLIT FLOW OF AREA "J" HYDROGRAPH TO AREA "L" DISCHARGE POINT | 573.31 | 84.60 |
| R5.2 | COMBINE AREA "L" HYDROGRAPH AT AREA "L" DISCHARGE POINT | **1,106.12** | **886.05** |

## TRIBUTARY WATERSHED UNIT HYDROGRAPH CALCULATIONS:

| AREA | SIZE (AC) | LENGTH (FT) | LCA (FT) | U.S. ELEV. (FT) | D.S. ELEV. (FT) | FLOW CHANCE (FT) | S-GRAPH | RAIN 100-1 (IN) | RAIN 100-6 (IN) | RAIN 100-24 (IN) | PERVIOUS % | SCS (AMC II) | SCS (AMC III) | LAG (HR) | $Q_{100}$ (CFS) | $V_{100}$ (AF) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 1,527.33 | 25,891 | 13,688 | 4100.00 | 2964.00 | 1136.00 | 10% FOOTHILL 90% DESERT | 1.29 | 2.11 | 3.27 | 98.30 | 68.91 | 85.80 | 0.75 | 1630.72 | 266.36 |
| B | 1,302.11 | 23,687 | 11,410 | 3920.00 | 2964.00 | 956.00 | 6%FOOTHILL 94%DESERT | 1.28 | 2.07 | 3.03 | 97.30 | 69.30 | 86.20 | 0.68 | 1359.93 | 207.16 |
| C | 1,487.33 | 26,382 | 13,559 | 3980.00 | 2962.00 | 1018.00 | 18% FOOTHILL 82% DESERT | 1.29 | 2.14 | 3.31 | 98.30 | 65.12 | 83.10 | 0.74 | 1732.01 | 264.76 |
| D | 1,345.12 | 53,133 | 29,666 | 4560.00 | 2962.00 | 1598.00 | 36% FOOTHILL 64% DESERT | 1.33 | 2.26 | 3.76 | 99.30 | 73.26 | 87.60 | 1.42 | 4337.31 | 1,551.16 |
| E | 1,648.14 | 24,464 | 13,095 | 4560.00 | 2020.00 | 1760.00 | 95% FOOTHILL 5%DESERT | 1.45 | 2.64 | 4.24 | 100.00 | 88.30 | 97.60 | 0.70 | 5539.01 | 1,341.30 |
| F | 1,324.59 | 36,355 | 13,280 | 4080.00 | 1942.00 | 2138.00 | 18% FOOTHILL 82% DESERT | 1.36 | 2.18 | 3.34 | 98.70 | 77.56 | 92.60 | 0.83 | 4836.39 | 1,051.08 |
| G | 271.31 | 12,336 | 8,244 | 3440.00 | 1910.00 | 1530.00 | 40% FOOTHILL 60% DESERT | 1.39 | 2.31 | 3.29 | 100.00 | 73.75 | 90.00 | 0.45 | 1176.77 | 53.16 |
| H | 511.39 | 14,261 | 5,562 | 2390.00 | 1917.00 | 473.00 | 100% DESERT | 1.39 | 1.89 | 2.70 | 81.50 | 62.26 | 80.80 | 0.47 | 171.16 | 73.10 |
| I | 1,065.68 | 36,382 | 26,373 | 4750.00 | 1967.00 | 2873.00 | 35% FOOTHILL 65% DESERT | 1.41 | 2.31 | 3.19 | 98.30 | 76.54 | 93.20 | 0.93 | 4652.63 | 1,085.72 |
| J | 600.51 | 16,185 | 10,638 | 4540.00 | 2010.00 | 2530.00 | 75% FOOTHILL 25% DESERT | 1.43 | 2.51 | 3.60 | 100.00 | 87.22 | 97.60 | 0.69 | 1231.01 | 169.20 |
| K | 1,161.64 | 35,230 | 25,027 | 4540.00 | 1865.00 | 2675.00 | 88% FOOTHILL 12% DESERT | 1.44 | 2.39 | 3.74 | 99.30 | 83.24 | 94.70 | 1.06 | 6025.95 | 1,691.82 |
| L | 1,834.11 | 26,690 | 16,985 | 4240.00 | 1885.00 | 2355.00 | 29% FOOTHILL 71% DESERT | 1.41 | 2.31 | 3.29 | 99.30 | 76.83 | 92.60 | 0.55 | 3734.35 | 488.35 |
| M | 104.85 | 4,940 | 2,687 | 2430.00 | 1876.00 | 554.00 | 100% DESERT | 1.40 | 1.96 | 2.77 | 58.70 | 63.34 | 81.40 | 0.24 | 188.10 | 13.80 |
| N | 1,557.38 | 14,256 | 7,479 | 3540.00 | 1870.00 | 1690.00 | 5%FOOTHILL 95%DESERT | 1.40 | 2.08 | 3.00 | 58.30 | 73.38 | 90.10 | 0.41 | 2917.90 | 310.20 |
| O | 357.46 | 4,860 | 2,228 | 2040.00 | 1870.00 | 170.00 | 100% DESERT | 1.39 | 1.95 | 2.71 | 58.30 | 64.20 | 82.60 | 0.22 | 138.36 | 29.40 |
| P | 1,780.65 | 35,115 | 26,352 | 4080.00 | 1955.10 | 2048.90 | 17% FOOTHILL 83% DESERT | 1.29 | 2.14 | 3.27 | 98.30 | 67.30 | 97.60 | 0.83 | 3931.07 | 948.24 |

TRIBUTARY WATERSHED STUDY MAP
DAGGETT SOLAR POWER FACILITY
IN THE TOWN OF DAGGETT, SAN BERNARDINO COUNTY, CA

PREPARED BY: BONADIMAN — JOSEPH E. BONADIMAN & ASSOCIATES, INC. — TEL. (909) 885-1845 — CIVIL ENGINEERING · LAND DEVELOPMENT · PLANNING

PREPARED FOR: nrg

| | |
|---|---|
| PREPARED FOR: | NRG SYSTEMS® |
| JOB NO: | 164309 |
| PREPARED BY: | JDN |
| CHECKED BY: | JFB |

TRIBUTARY WATERSHED STUDY MAP
DAGGETT SOLAR POWER FACILITY
IN THE TOWN OF DAGGETT, SAN BERNARDINO COUNTY, CA

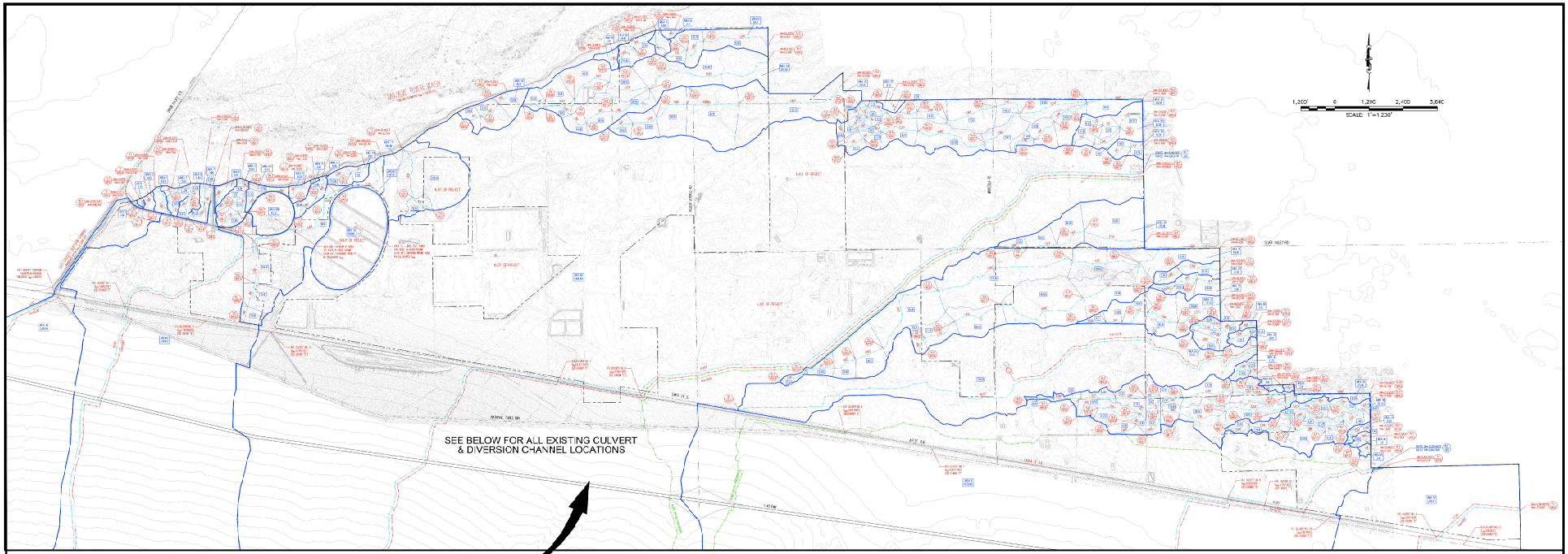
E

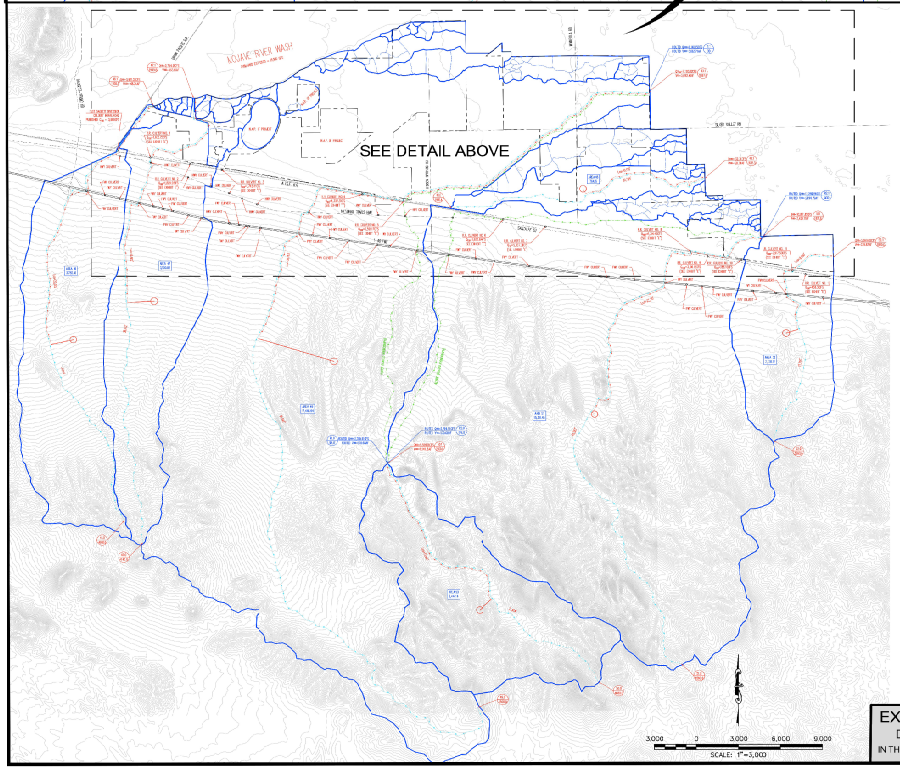
SHEET 1 OF 1

09-05-17

# EXHIBIT “F”

Existing Conditions
Hydrology Study Map




EXISTING CONDITIONS RATIONAL METHOD CALCULATIONS:

| AREA | SUB-AREA (ac) | LENGTH (ft) | SLOPE (%) | C | Tc (min) | I (in/hr) | Q (cfs) | NOTES |
|---|---|---|---|---|---|---|---|---|
| 1 | 1.20 | 320 | 2.5 | 0.45 | 6.2 | 3.85 | 2.08 | |
| 2 | 0.85 | 280 | 3.1 | 0.45 | 5.8 | 3.92 | 1.50 | |
| 3 | 2.10 | 410 | 1.8 | 0.50 | 8.1 | 3.61 | 3.79 | |
| 4 | 1.45 | 350 | 2.2 | 0.50 | 7.4 | 3.72 | 2.70 | |
| 5 | 0.95 | 260 | 3.5 | 0.45 | 5.5 | 3.98 | 1.70 | |
| 6 | 3.30 | 520 | 1.5 | 0.55 | 10.2 | 3.31 | 6.01 | |
| 7 | 1.75 | 390 | 2.0 | 0.50 | 7.9 | 3.66 | 3.20 | |
| 8 | 0.60 | 210 | 4.0 | 0.45 | 4.8 | 4.05 | 1.09 | |
| 9 | 2.40 | 450 | 1.2 | 0.55 | 11.0 | 3.12 | 4.12 | |
| 10 | 1.10 | 300 | 2.8 | 0.45 | 6.0 | 3.88 | 1.92 | |
| 11 | 0.75 | 240 | 3.0 | 0.45 | 5.2 | 4.01 | 1.35 | |
| 12 | 1.90 | 380 | 2.4 | 0.50 | 7.6 | 3.70 | 3.51 | |
| 13 | 0.50 | 180 | 4.5 | 0.45 | 4.5 | 4.10 | 0.92 | |
| 14 | 2.60 | 480 | 1.0 | 0.55 | 12.1 | 3.01 | 4.30 | |
| 15 | 1.35 | 340 | 2.6 | 0.50 | 7.2 | 3.75 | 2.53 | |
| 16 | 0.80 | 220 | 3.8 | 0.45 | 5.0 | 4.03 | 1.45 | |
| 17 | 3.00 | 500 | 1.3 | 0.55 | 11.5 | 3.06 | 5.05 | |
| 18 | 1.55 | 360 | 2.1 | 0.50 | 7.7 | 3.68 | 2.85 | |
| 19 | 0.70 | 230 | 3.6 | 0.45 | 5.1 | 4.02 | 1.27 | |
| 20 | 2.20 | 440 | 1.1 | 0.55 | 11.8 | 3.04 | 3.68 | |
| 21 | 1.00 | 290 | 2.9 | 0.45 | 6.1 | 3.87 | 1.74 | |
| 22 | 0.90 | 250 | 3.2 | 0.45 | 5.4 | 3.99 | 1.62 | |
| 23 | 1.65 | 370 | 2.3 | 0.50 | 7.8 | 3.69 | 3.05 | |
| 24 | 0.55 | 190 | 4.2 | 0.45 | 4.6 | 4.08 | 1.01 | |
| 25 | 2.80 | 490 | 1.0 | 0.55 | 12.4 | 3.00 | 4.62 | |
| 26 | 1.25 | 330 | 2.7 | 0.50 | 7.5 | 3.73 | 2.33 | |
| 27 | 0.85 | 270 | 3.4 | 0.45 | 5.6 | 3.96 | 1.51 | |
| 28 | 1.80 | 400 | 2.0 | 0.50 | 7.9 | 3.66 | 3.29 | |
| 29 | 0.65 | 200 | 4.0 | 0.45 | 4.7 | 4.07 | 1.19 | |
| 30 | 2.50 | 460 | 1.2 | 0.55 | 11.2 | 3.08 | 4.24 | |
| 31 | 1.40 | 350 | 2.5 | 0.50 | 7.6 | 3.70 | 2.59 | |
| 32 | 0.75 | 240 | 3.1 | 0.45 | 5.3 | 4.00 | 1.35 | |
| 33 | 1.70 | 380 | 2.2 | 0.50 | 7.8 | 3.69 | 3.14 | |
| 34 | 0.60 | 210 | 3.9 | 0.45 | 4.9 | 4.04 | 1.09 | |
| 35 | 2.30 | 450 | 1.1 | 0.55 | 11.6 | 3.05 | 4.31 | |
| 36 | 1.15 | 310 | 2.8 | 0.45 | 6.0 | 3.88 | 2.01 | |
| 37 | 0.80 | 260 | 3.3 | 0.45 | 5.5 | 3.98 | 1.43 | |
| 38 | 1.85 | 390 | 2.1 | 0.50 | 7.7 | 3.68 | 3.40 | |
| 39 | 0.55 | 190 | 4.3 | 0.45 | 4.6 | 4.08 | 1.01 | |
| 40 | 2.70 | 470 | 1.0 | 0.55 | 12.0 | 3.02 | 4.48 | |
| 41 | 1.30 | 340 | 2.6 | 0.50 | 7.5 | 3.73 | 2.43 | |
| 42 | 0.70 | 230 | 3.7 | 0.45 | 5.2 | 4.01 | 1.26 | |
| 43 | 1.95 | 400 | 2.0 | 0.50 | 7.9 | 3.66 | 3.57 | |
| 44 | 0.65 | 200 | 4.1 | 0.45 | 4.7 | 4.07 | 1.19 | |
| 45 | 2.60 | 480 | 1.0 | 0.55 | 12.2 | 3.01 | 4.30 | |
| 46 | 1.20 | 320 | 2.5 | 0.45 | 6.2 | 3.85 | 2.08 | |
| 47 | 0.85 | 280 | 3.1 | 0.45 | 5.8 | 3.92 | 1.50 | |
| 48 | 2.10 | 410 | 1.8 | 0.50 | 8.1 | 3.61 | 3.79 | |
| 49 | 1.45 | 350 | 2.2 | 0.50 | 7.4 | 3.72 | 2.70 | |
| 50 | 0.95 | 260 | 3.5 | 0.45 | 5.5 | 3.98 | 1.70 | |
| 51 | 3.30 | 520 | 1.5 | 0.55 | 10.2 | 3.31 | 6.01 | |
| 52 | 1.75 | 390 | 2.0 | 0.50 | 7.9 | 3.66 | 3.20 | |
| 53 | 0.60 | 210 | 4.0 | 0.45 | 4.8 | 4.05 | 1.09 | |
| 54 | 2.40 | 450 | 1.2 | 0.55 | 11.0 | 3.12 | 4.12 | |
| 55 | 1.10 | 300 | 2.8 | 0.45 | 6.0 | 3.88 | 1.92 | |
| 56 | 0.75 | 240 | 3.0 | 0.45 | 5.2 | 4.01 | 1.35 | |
| 57 | 1.90 | 380 | 2.4 | 0.50 | 7.6 | 3.70 | 3.51 | |
| 58 | 0.50 | 180 | 4.5 | 0.45 | 4.5 | 4.10 | 0.92 | |
| 59 | 2.60 | 480 | 1.0 | 0.55 | 12.1 | 3.01 | 4.30 | |
| 60 | 1.35 | 340 | 2.6 | 0.50 | 7.2 | 3.75 | 2.53 | |
| 61 | 0.80 | 220 | 3.8 | 0.45 | 5.0 | 4.03 | 1.45 | |
| 62 | 3.00 | 500 | 1.3 | 0.55 | 11.5 | 3.06 | 5.05 | |
| 63 | 1.55 | 360 | 2.1 | 0.50 | 7.7 | 3.68 | 2.85 | |
| 64 | 0.70 | 230 | 3.6 | 0.45 | 5.1 | 4.02 | 1.27 | |
| 65 | 2.20 | 440 | 1.1 | 0.55 | 11.8 | 3.04 | 3.68 | |
| 66 | 1.00 | 290 | 2.9 | 0.45 | 6.1 | 3.87 | 1.74 | |
| 67 | 0.90 | 250 | 3.2 | 0.45 | 5.4 | 3.99 | 1.62 | |
| 68 | 1.65 | 370 | 2.3 | 0.50 | 7.8 | 3.69 | 3.05 | |
| 69 | 0.55 | 190 | 4.2 | 0.45 | 4.6 | 4.08 | 1.01 | |
| 70 | 2.80 | 490 | 1.0 | 0.55 | 12.4 | 3.00 | 4.62 | |
| 71 | 1.25 | 330 | 2.7 | 0.50 | 7.5 | 3.73 | 2.33 | |
| 72 | 0.85 | 270 | 3.4 | 0.45 | 5.6 | 3.96 | 1.51 | |
| 73 | 1.80 | 400 | 2.0 | 0.50 | 7.9 | 3.66 | 3.29 | |
| 74 | 0.65 | 200 | 4.0 | 0.45 | 4.7 | 4.07 | 1.19 | |
| 75 | 2.50 | 460 | 1.2 | 0.55 | 11.2 | 3.08 | 4.24 | |
| 76 | 1.40 | 350 | 2.5 | 0.50 | 7.6 | 3.70 | 2.59 | |
| 77 | 0.75 | 240 | 3.1 | 0.45 | 5.3 | 4.00 | 1.35 | |
| 78 | 1.70 | 380 | 2.2 | 0.50 | 7.8 | 3.69 | 3.14 | |
| 79 | 0.60 | 210 | 3.9 | 0.45 | 4.9 | 4.04 | 1.09 | |
| 80 | 2.30 | 450 | 1.1 | 0.55 | 11.6 | 3.05 | 4.31 | |
| 81 | 1.15 | 310 | 2.8 | 0.45 | 6.0 | 3.88 | 2.01 | |
| 82 | 0.80 | 260 | 3.3 | 0.45 | 5.5 | 3.98 | 1.43 | |
| 83 | 1.85 | 390 | 2.1 | 0.50 | 7.7 | 3.68 | 3.40 | |
| 84 | 0.55 | 190 | 4.3 | 0.45 | 4.6 | 4.08 | 1.01 | |
| 85 | 2.70 | 470 | 1.0 | 0.55 | 12.0 | 3.02 | 4.48 | |
| 86 | 1.30 | 340 | 2.6 | 0.50 | 7.5 | 3.73 | 2.43 | |
| 87 | 0.70 | 230 | 3.7 | 0.45 | 5.2 | 4.01 | 1.26 | |
| 88 | 1.95 | 400 | 2.0 | 0.50 | 7.9 | 3.66 | 3.57 | |
| 89 | 0.65 | 200 | 4.1 | 0.45 | 4.7 | 4.07 | 1.19 | |
| 90 | 2.60 | 480 | 1.0 | 0.55 | 12.2 | 3.01 | 4.30 | |
| 91 | 1.20 | 320 | 2.5 | 0.45 | 6.2 | 3.85 | 2.08 | |
| 92 | 0.85 | 280 | 3.1 | 0.45 | 5.8 | 3.92 | 1.50 | |
| 93 | 2.10 | 410 | 1.8 | 0.50 | 8.1 | 3.61 | 3.79 | |
| 94 | 1.45 | 350 | 2.2 | 0.50 | 7.4 | 3.72 | 2.70 | |
| 95 | 0.95 | 260 | 3.5 | 0.45 | 5.5 | 3.98 | 1.70 | |
| 96 | 3.30 | 520 | 1.5 | 0.55 | 10.2 | 3.31 | 6.01 | |
| 97 | 1.75 | 390 | 2.0 | 0.50 | 7.9 | 3.66 | 3.20 | |
| 98 | 0.60 | 210 | 4.0 | 0.45 | 4.8 | 4.05 | 1.09 | |
| 99 | 2.40 | 450 | 1.2 | 0.55 | 11.0 | 3.12 | 4.12 | |
| 100 | 1.10 | 300 | 2.8 | 0.45 | 6.0 | 3.88 | 1.92 | |

EXISTING CONDITIONS UNIT HYDROGRAPH CALCULATIONS:

| AREA | SUB-AREA (ac) | LENGTH (ft) | SLOPE | S (ft/ft) | RAIN 100-10Yr | RAIN 100-6Hr | RAIN 100-24Hr | RETENTION | CN (AMC II) | Tc (MIN.) | T-LAG | Q (CFS) | $V_{100}$ (AF) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.20 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.22 | 0.21 |
| 2 | 0.85 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.16 | 0.15 |
| 3 | 2.10 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.39 | 0.37 |
| 4 | 1.45 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.27 | 0.26 |
| 5 | 0.95 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.18 | 0.17 |
| 6 | 3.30 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.62 | 0.59 |
| 7 | 1.75 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.33 | 0.31 |
| 8 | 0.60 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.11 | 0.11 |
| 9 | 2.40 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.45 | 0.42 |
| 10 | 1.10 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.21 | 0.19 |
| 11 | 0.75 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.14 | 0.13 |
| 12 | 1.90 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.36 | 0.34 |
| 13 | 0.50 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.09 | 0.09 |
| 14 | 2.60 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.49 | 0.46 |
| 15 | 1.35 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.25 | 0.24 |
| 16 | 0.80 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.15 | 0.14 |
| 17 | 3.00 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.56 | 0.53 |
| 18 | 1.55 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.29 | 0.28 |
| 19 | 0.70 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.13 | 0.12 |
| 20 | 2.20 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.41 | 0.39 |
| 21 | 1.00 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.19 | 0.18 |
| 22 | 0.90 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.17 | 0.16 |
| 23 | 1.65 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.31 | 0.29 |
| 24 | 0.55 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.10 | 0.10 |
| 25 | 2.80 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.52 | 0.49 |
| 26 | 1.25 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.23 | 0.22 |
| 27 | 0.85 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.16 | 0.15 |
| 28 | 1.80 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.34 | 0.32 |
| 29 | 0.65 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.12 | 0.11 |
| 30 | 2.50 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.47 | 0.44 |
| 31 | 1.40 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.26 | 0.25 |
| 32 | 0.75 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.14 | 0.13 |
| 33 | 1.70 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.32 | 0.30 |
| 34 | 0.60 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.11 | 0.11 |
| 35 | 2.30 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.43 | 0.41 |
| 36 | 1.15 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.22 | 0.20 |
| 37 | 0.80 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.15 | 0.14 |
| 38 | 1.85 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.35 | 0.33 |
| 39 | 0.55 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.10 | 0.10 |
| 40 | 2.70 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.50 | 0.48 |
| 41 | 1.30 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.24 | 0.23 |
| 42 | 0.70 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.13 | 0.12 |
| 43 | 1.95 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.36 | 0.35 |
| 44 | 0.65 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.12 | 0.11 |
| 45 | 2.60 | | | | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.49 | 0.46 |
| 46 | 1,210.96 | 35.76 | | 0.162 | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.23 | 0.22 |
| 47 | 1,210.96 | 35.76 | | 0.162 | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.23 | 0.22 |
| 48 | 84.11 | 35.76 | | 0.162 | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.02 | 0.02 |
| 49 | 1,294.84 | 35.80 | | 0.162 | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.24 | 0.23 |
| 50 | 1,294.84 | 35.80 | | 0.162 | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.24 | 0.23 |
| 51 | 1,464.74 | 44.49 | | 0.176 | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.29 | 0.28 |
| 52 | 1,210.96 | 45.87 | | 0.130 | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.23 | 0.22 |
| 53 | 1,210.96 | 45.87 | | 0.130 | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.23 | 0.22 |
| 54 | 84.11 | 45.87 | | 0.130 | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.02 | 0.02 |
| 55 | 1,294.84 | 45.87 | | 0.130 | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.24 | 0.23 |
| 56 | 1,294.84 | 45.87 | | 0.130 | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.24 | 0.23 |
| 57 | 1,464.74 | 44.49 | | 0.176 | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.29 | 0.28 |
| 58 | 1,210.96 | 45.87 | | 0.130 | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.23 | 0.22 |
| 59 | 1,210.96 | 45.87 | | 0.130 | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.23 | 0.22 |
| 60 | 84.11 | 45.87 | | 0.130 | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.02 | 0.02 |
| 61 | 1,294.84 | 45.87 | | 0.130 | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.24 | 0.23 |
| 62 | 1,294.84 | 45.87 | | 0.130 | 1.39 | 1.68 | 2.90 | 100.00 | 32.90 | 85.0 | 1.00 | 0.24 | 0.23 |

EXISTING CONDITIONS HYDROGRAPH ROUTING CALCULATIONS:

| LOCATION | ROUTING ACTION | $Q_{100}$ (CFS) AT LOCATION | $V_{100}$ (AF) AT LOCATION |
|---|---|---|---|
| R1.01 | SAP (7.62ac, 50 HYDROGRAPHS) | 2,799.15 | 139.66 |
| R2.01TO R2.11 | ROUTE SAP HYDROGRAPH AREA 50 HYDROGRAPH TO AREA 49 DISCHARGE POINT | 2,486.49 | 139.66 |
| R1.11 | CONVERGE AREA 49 WITH DISCHARGE FROM AREA 49 DISCHARGE POINT | 5,140.35 | 3553.71 |
| R1.01 | SAP (7.62ac, 50 HYDROGRAPHS) | 2,799.15 | 139.66 |
| R2.01TO R2.11 | ROUTE SAP HYDROGRAPH AREA 50 HYDROGRAPH TO AREA 49 DISCHARGE POINT | 2,603.42 | 139.63 |
| R2.11 | CONVERGE AREA 49 WITH DISCHARGE FROM AREA 50 DISCHARGE POINT | 12,269.06 | 3994.19 |

MAP LEGEND:

- PROJECT BOUNDARY
- DRAINAGE AREA BOUNDARY
- RATIONAL METHOD DRAINAGE SUBAREA BOUNDARY
- FLOWPATH / ANNUALOGUE
- HYDROGRAPH / LOCATION
- ROUTED HYDROGRAPH FLOW
- EXISTING EARTHEN DIVERSION CHANNEL
- HYDROGRAPH CONTROL
- DRAINAGE AREA ID. & TOTAL ACREAGE
- DRAINAGE SUBAREA ACREAGE
- DRAINAGE AREA / SUBAREA FLOW I.D. & LOCATION
- DRAINAGE AREA PEAK HYDROGRAPH Q100 (CFS) & VOLUME (AF)
- HYDROGRAPH ROUTING NODE & ACTION (SPLIT OR ADD HYDROGRAPHS)
- HYDROGRAPH ROUTING TOTAL FLOW (CFS) & VOLUME (AF)
- EXISTING 5' (UNDER 36") MINOR TOPOGRAPHIC CONTOURS (PER AERIAL SURVEY)
- EXISTING 25' CONTOURS (PER USGS)

VICINITY MAP

N.T.S.

# EXISTING CONDITIONS EXHIBIT

DAGGETT SOLAR POWER FACILITY

IN THE TOWN OF DAGGETT, SAN BERNARDINO COUNTY, CA

PREPARED BY: BONADIMAN — TEL: (909) 885-1845

PREPARED FOR: nrg

CIVILDESIGN

| | |
|---|---|
| PREPARED FOR: | NRG BARSTOW |
| JOB NO: | 144309 |
| PREPARED BY: | JDN |
| CHECKED BY: | JFS |

EXISTING CONDITIONS EXHIBIT
DAGGETT SOLAR POWER FACILITY
IN THE TOWN OF DAGGETT, SAN BERNARDINO COUNTY, CA

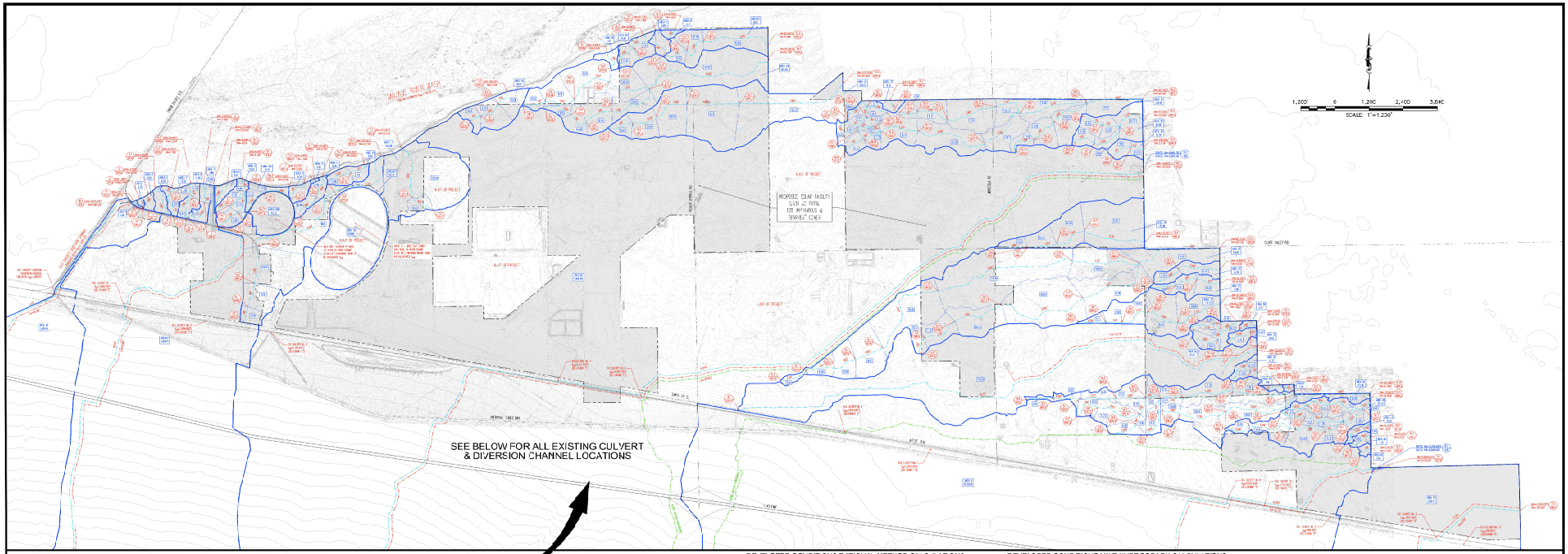
F

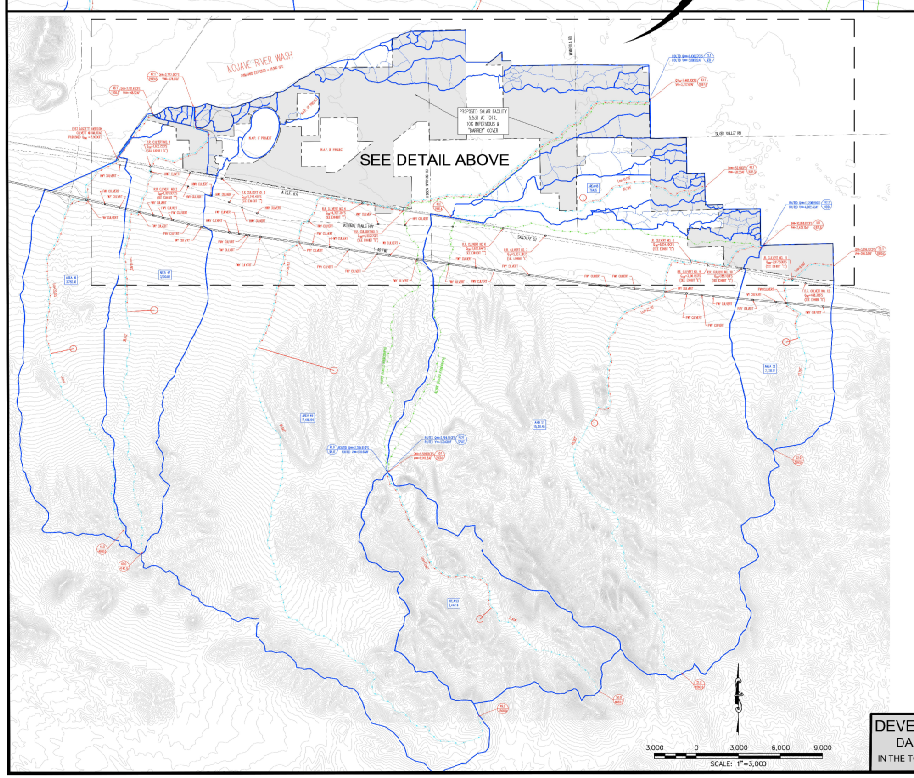
SUBMISSION / REVISION DATES: 09-05-17

SHEET 1 OF 1

# EXHIBIT “G”

Developed Conditions
Hydrology Study Map




## DEVELOPED CONDITIONS RATIONAL METHOD CALCULATIONS:

| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

## DEVELOPED CONDITIONS UNIT HYDROGRAPH CALCULATIONS:

| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

## DEVELOPED CONDITIONS HYDROGRAPH ROUTING CALCULATIONS:

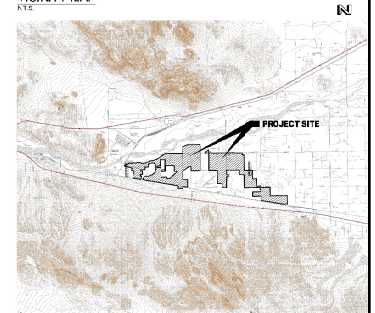
| LOCATION | ROUTING METHOD | $Q_{100}$ (CFS) AT LOCATION | $V_{100}$ (AF) AT LOCATION |
|---|---|---|---|
| R1.0 | SPLIT AREA HYDROGRAPH | 2,458.31 | 589.68 |
| R1.0 R1.1 | ROUTED FLOW FROM AREA 10 HYDROGRAPH TO AREA 11 DESIGN POINT | 2,458.44 | 589.68 |
| R1.1 | CONVERGE AREA HYDROGRAPHS AREA 10 (DISCHARGE POINT) | 8,498.17 | 588.68 |
| R2.0 | SPLIT AREA HYDROGRAPH | 2,709.15 | 589.68 |
| R2.0 R2.1 | ROUTED FLOW FROM AREA 20 HYDROGRAPH TO AREA 21 DESIGN POINT | 2,460.42 | 589.68 |
| R2.1 | CONVERGE AREA HYDROGRAPHS AREA 21 (DISCHARGE POINT) | 12,296.19 | 4,098.18 |

## MAP LEGEND:

- PROJECT BOUNDARY
- PROPOSED SOLAR FACILITY – ASSUME 100 MEGAWATTS & "FARMING" COVER
- DRAINAGE AREA BOUNDARY
- RATIONAL METHOD DRAINAGE SUBAREA BOUNDARY
- FLOW PATH / WATERWAY
- HYDROGRAPH AT WATERCOURSE
- ROUTED HYDROGRAPH FLOW
- EXISTING GARTNER DIVERSION CHANNEL
- HYDROGRAPH: CENTROID
- DRAINAGE AREA ID. & TOTAL ACREAGE
- DRAINAGE SUBAREA ACREAGE
- DRAINAGE AREA / SUBAREA NODE ID. & ELEVATION
- DRAINAGE AREA UNIT HYDROGRAPH QPEAK (CFS) & VOLUME (AF)
- HYDROGRAPH: ROUTING NODE & ACTION (INPUT OR ADD HYDROGRAPHS)
- HYDROGRAPH: ROUTING TOTAL QPEAK (CFS) & VOLUME (AF)
- EXISTING 5' MAJOR & 1' MINOR TOPOGRAPHIC CONTOURS (PER AERIAL SURVEY)
- EXISTING 20' CONTOURS (PER USGS 1:24,000)

## VICINITY MAP

N.T.S.




# DEVELOPED CONDITIONS EXHIBIT
## DAGGETT SOLAR POWER FACILITY
IN THE TOWN OF DAGGETT, SAN BERNARDINO COUNTY, CA

PREPARED BY: BONADIMAN & ASSOCIATES, INC. TEL (909) 825-1865 FAX (909) 825-1866 CIVIL ENGINEERS • LAND SURVEYORS • PLANNERS • LANDSCAPE ARCHITECTS

CIVILDESIGN

PREPARED FOR: nrg

| | |
|---|---|
| PREPARED FOR: | NRG ENERGY |
| JOB NO: | 1142609 |
| PREPARED BY: | JSN |
| CHECKED BY: | JCE |

THESE DRAWINGS, DESIGNS & SPECIFICATIONS ARE OWNED BY, AND THE PROPERTY OF BONADIMAN & ASSOCIATES, INC. THEY ARE NOT TO BE USED IN WHOLE OR IN PART, OR ALTERED IN ANY FORM, WITHOUT THE WRITTEN CONSENT OF BONADIMAN & ASSOCIATES, INC.

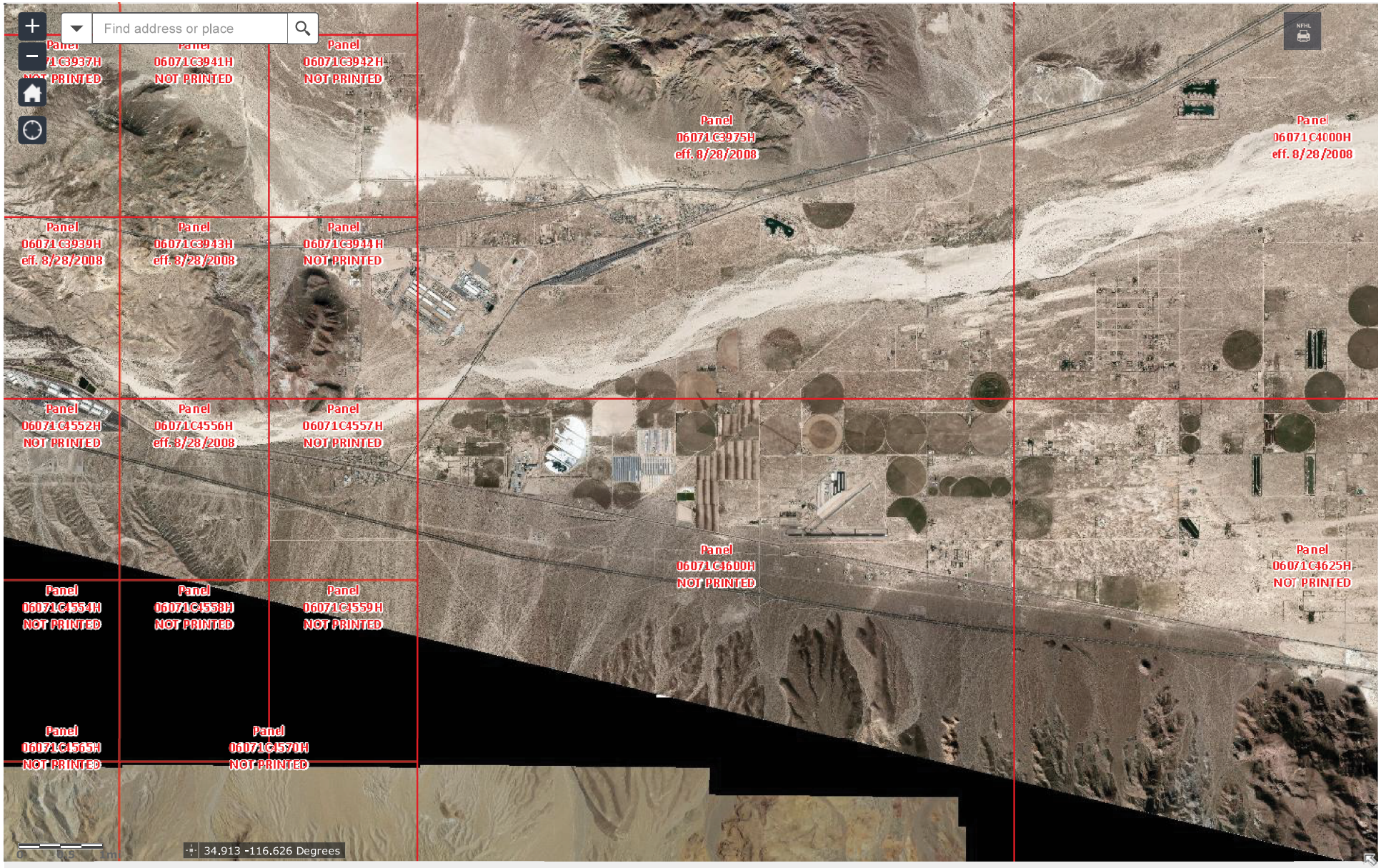
DEVELOPED CONDITIONS EXHIBIT
DAGGETT SOLAR POWER FACILITY
IN THE TOWN OF DAGGETT, SAN BERNARDINO COUNTY, CA

DIRECTORS PRINTS BEARING LAUREL BERGSON DATED 09-05-17

SHEET 1 OF 1

# EXHIBIT “H.1”

FEMA Flood Insurance Rate Maps (FIRMs)


Find address or place
Panel
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eff. 8/28/2008
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eff. 8/28/2008
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Panel
06071C4559H
NOT PRINTED
Panel
06071C4565H
NOT PRINTED
Panel
06071C4570H
NOT PRINTED
34.913 -116.626 Degrees

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

**Coastal Base Flood Elevations** shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11 North. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

**Base map** information shown on this FIRM was derived from digital orthophotography collected by the U.S. Department of Agriculture Farm Service Agency. This imagery was flown in 2005 and was produced with a 1-meter ground sample distance.

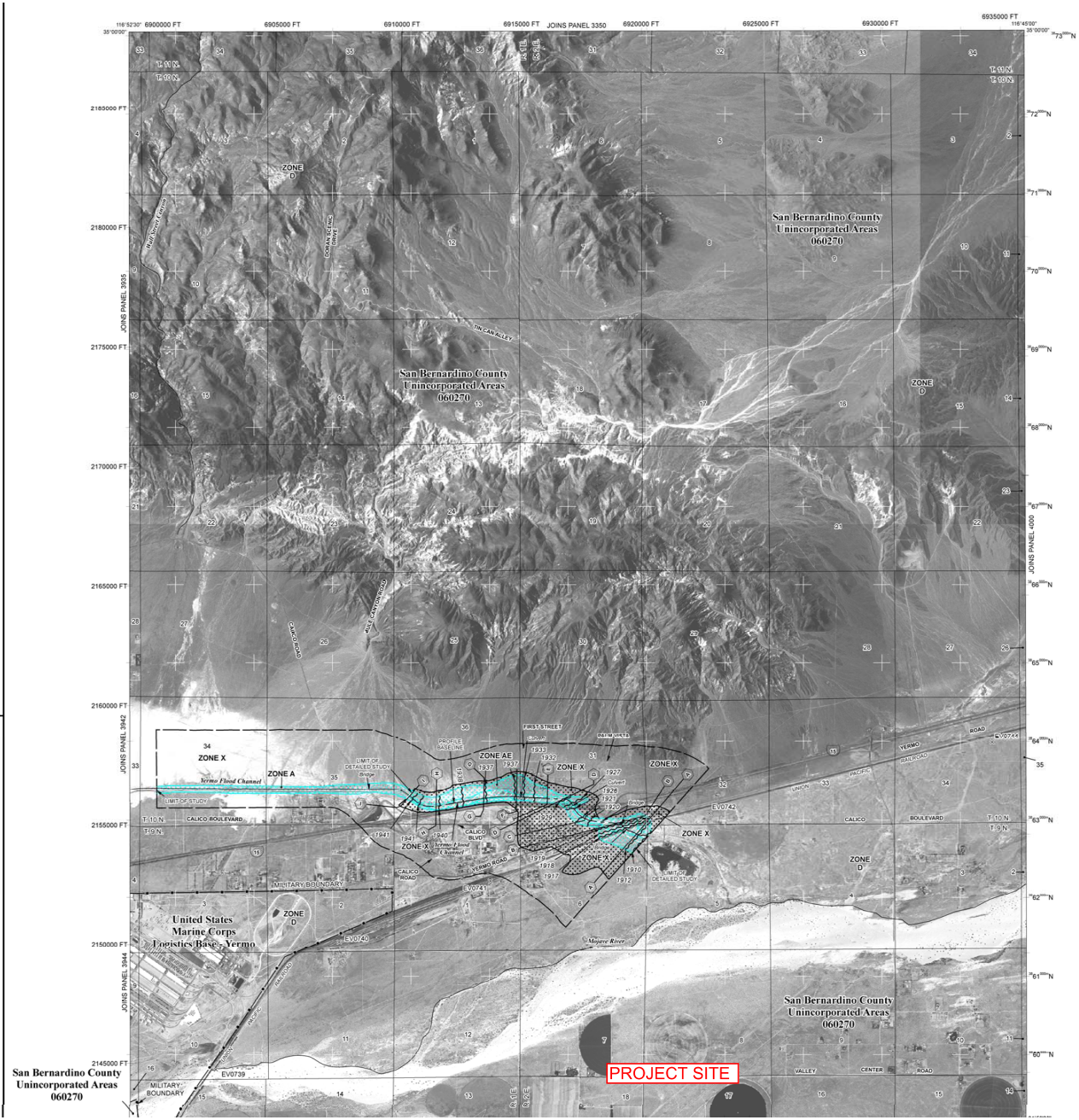
This map may reflect more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

**Corporate limits** shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://msc.fema.gov.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov.




SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

**ZONE A** No Base Flood Elevations determined.

**ZONE AE** Base Flood Elevations determined.

**ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

**ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

**ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

**ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

**ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

**ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

**ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

**ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.

**ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAS)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary

0.2% annual chance floodplain boundary

Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.

513 Base Flood Elevation line and value; elevation in feet*

(EL 987) Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

A—A Cross section line

D—D Transect line

87°07'45", 32°22'30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere

4376000 mN 1000-meter Universal Transverse Mercator grid values, zone 11N

600000 FT 5000-foot grid ticks: California State Plane coordinate system, zone V (FIPSZONE 0405), Lambert Conformal Conic projection

DX5510 × Bench mark (see explanation in Notes to Users section of this FIRM panel)

●M1.5 River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
March 18, 1996

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
August 28, 2008 - to update corporate limits, to change Base Flood Elevations and Special Flood Hazard Areas, to update map format, to add roads and road names, and to incorporate previously issued Letters of Map Revision.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 2000'
1000 0 2000 4000 FEET
600 0 600 1200 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 3975H

# FIRM
## FLOOD INSURANCE RATE MAP

## SAN BERNARDINO COUNTY, CALIFORNIA
## AND INCORPORATED AREAS
## PANEL 3975 OF 9400

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

| COMMUNITY | NUMBER | PANEL | SUFFIX |
|---|---|---|---|
| SAN BERNARDINO COUNTY | 060270 | 3975 | H |

Notice to User: The **Map Number** shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER**
**06071C3975H**

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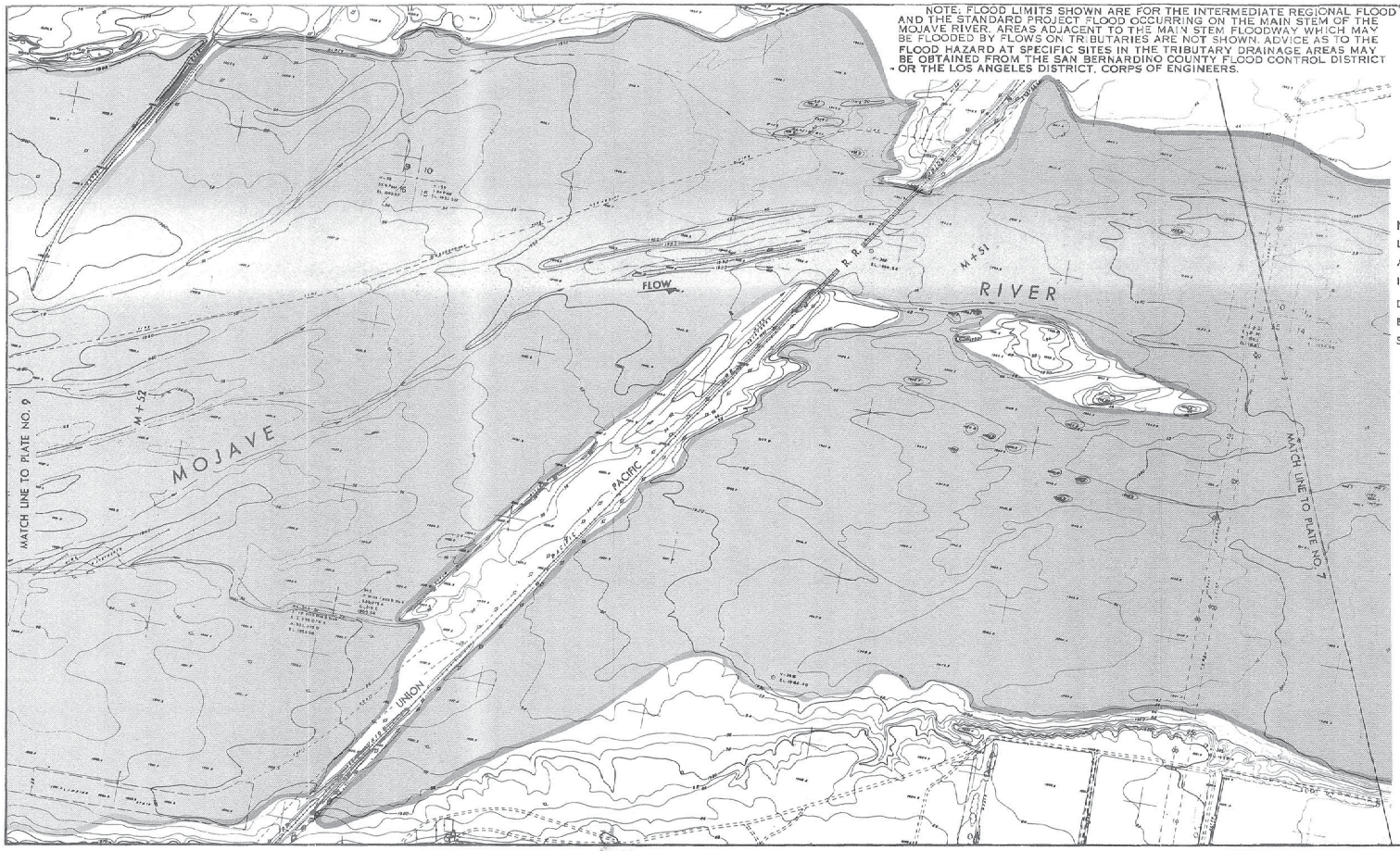
# EXHIBIT “H.2”

U.S. Army Corps of Engineers
Estimated Mojave River Wash Flood
Limits & Channel Profile




LEGEND:

OVERFLOW LIMITS

STANDARD PROJECT FLOOD

INTERMEDIATE REGIONAL FLOOD

M + 2.50 — MILES ABOVE MOUTH

2 — CROSS SECTION

1200 — GROUND ELEVATION IN FEET ABOVE MEAN SEA LEVEL

CONTOUR INTERVAL 2 FEET

NOTES:

LIMITS OF OVERFLOW INDICATED MAY VARY FROM ACTUAL LOCATIONS ON GROUND, AS EXPLAINED IN THE REPORT.

DATE OF TOPOGRAPHY FEBRUARY 1964

BASE TOPOGRAPHIC MAPS FURNISHED BY SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT

N

CORPS OF ENGINEERS, U. S. ARMY

LOS ANGELES DISTRICT, CALIFORNIA

# FLOODED AREAS

MOJAVE RIVER

VICINITY OF

BARSTOW, CALIFORNIA

SCALE 0 500 1000 FEET

OCTOBER 1968

PLATE 8

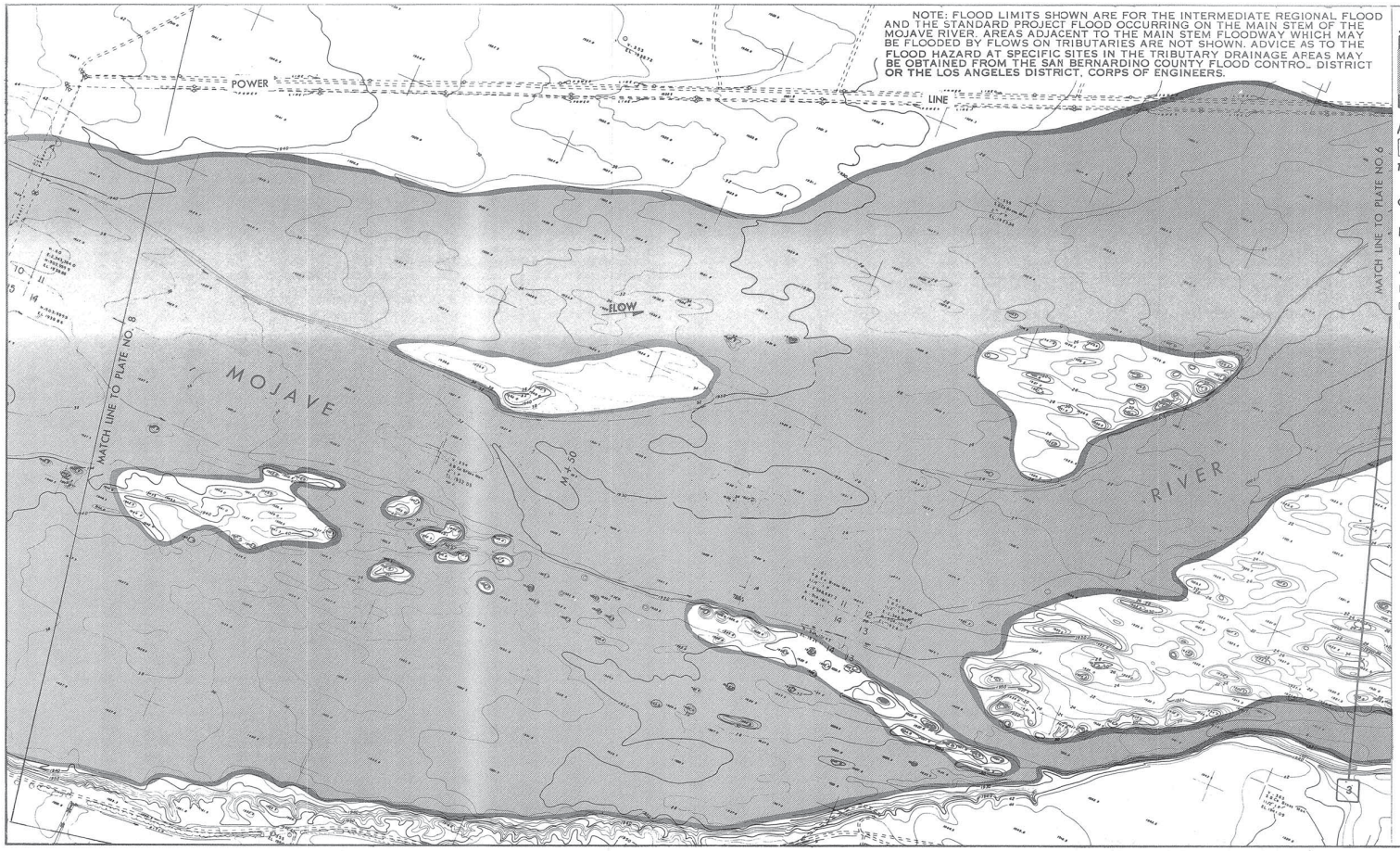

NOTE: FLOOD LIMITS SHOWN ARE FOR THE INTERMEDIATE REGIONAL FLOOD AND THE STANDARD PROJECT FLOOD OCCURRING ON THE MAIN STEM OF THE MOJAVE RIVER. AREAS ADJACENT TO THE MAIN STEM FLOODWAY WHICH MAY BE FLOODED BY FLOWS ON TRIBUTARIES ARE NOT SHOWN. ADVICE AS TO THE FLOOD HAZARD AT SPECIFIC SITES IN THE TRIBUTARY DRAINAGE AREAS MAY BE OBTAINED FROM THE SAN BERNARDINO COUNTY FLOOD CONTRO_ DISTRICT OR THE LOS ANGELES DISTRICT, CORPS OF ENGINEERS.
POWER
LINE
FLOW
MOJAVE
RIVER
M+30
MATCH LINE TO PLATE NO. 8
MATCH LINE TO PLATE NO. 6
LEGEND:
OVERFLOW LIMITS
INTERMEDIATE REGIONAL FLOOD
STANDARD PROJECT FLOOD
M + 2.50 --- MILES ABOVE MOUTH
2 CROSS SECTION
1200 ------ GROUND ELEVATION IN FEET ABOVE MEAN SEA LEVEL
CONTOUR INTERVAL 2 FEET
NOTES:
LIMITS OF OVERFLOW INDICATED MAY VARY FROM ACTUAL LOCATIONS ON GROUND, AS EXPLAINED IN THE REPORT.
DATE OF TOPOGRAPHY FEBRUARY 1964
BASE TOPOGRAPHIC MAPS FURNISHED BY SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT
N
CORPS OF ENGINEERS, U. S. ARMY
LOS ANGELES DISTRICT, CALIFORNIA
FLOODED AREAS
MOJAVE RIVER
VICINITY OF
BARSTOW, CALIFORNIA
SCALE 0 500 1000 FEET
OCTOBER 1968

PLATE 7

LEGEND:

OVERFLOW LIMITS

STANDARD PROJECT FLOOD

INTERMEDIATE REGIONAL FLOOD

M+ 2.50 --- MILES ABOVE MOUTH

2 CROSS SECTION

1200 GROUND ELEVATION IN FEET ABOVE MEAN SEA LEVEL

CONTOUR INTERVAL 2 FEET

NOTES:

LIMITS OF OVERFLOW INDICATED MAY VARY FROM ACTUAL LOCATIONS ON GROUND, AS EXPLAINED IN THE REPORT.

DATE OF TOPOGRAPHY FEBRUARY 1964

BASE TOPOGRAPHIC MAPS FURNISHED BY SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT

N

CORPS OF ENGINEERS, U. S. ARMY
LOS ANGELES DISTRICT, CALIFORNIA

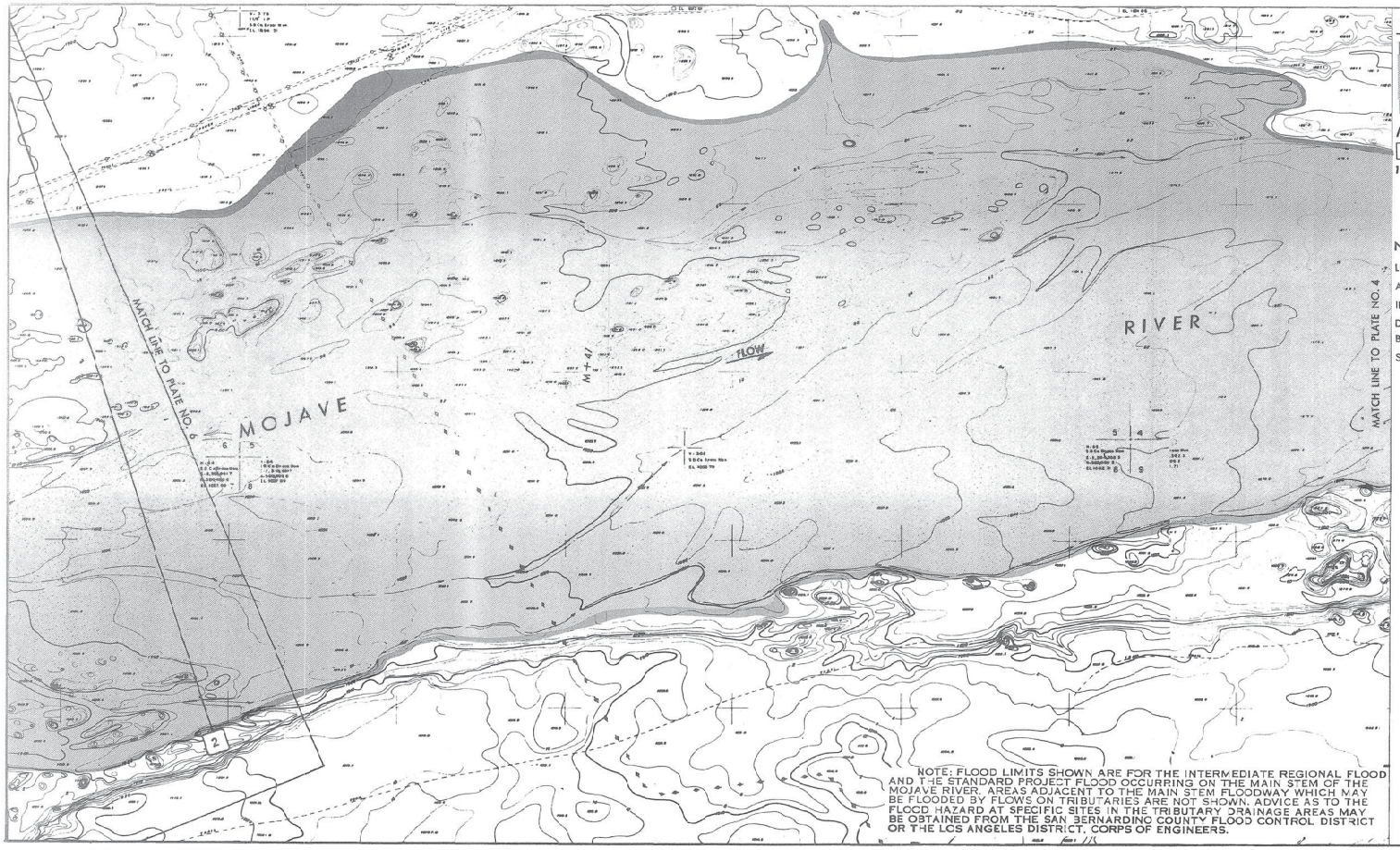
# FLOODED AREAS

MOJAVE RIVER
VICINITY OF
BARSTOW, CALIFORNIA

SCALE 0 500 1000 FEET

OCTOBER 1968

PLATE 6




NOTE: FLOOD LIMITS SHOWN ARE FOR THE INTERMEDIATE REGIONAL FLOOD AND THE STANDARD PROJECT FLOOD OCCURRING ON THE MAIN STEM OF THE MOJAVE RIVER. AREAS ADJACENT TO THE MAIN STEM FLOODWAY WHICH MAY BE FLOODED BY FLOWS ON TRIBUTARIES ARE NOT SHOWN. ADVICE AS TO THE FLOOD HAZARD AT SPECIFIC SITES IN THE TRIBUTARY DRAINAGE AREAS MAY BE OBTAINED FROM THE SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT OR THE LOS ANGELES DISTRICT, CORPS OF ENGINEERS.

LEGEND:

OVERFLOW LIMITS

INTERMEDIATE REGIONAL FLOOD — STANDARD PROJECT FLOOD

M + 2.50 — MILES ABOVE MOUTH

2 — CROSS SECTION

1200 — GROUND ELEVATION IN FEET ABOVE MEAN SEA LEVEL

CONTOUR INTERVAL 2 FEET

NOTES:

LIMITS OF OVERFLOW INDICATED MAY VARY FROM ACTUAL LOCATIONS ON GROUND, AS EXPLAINED IN THE REPORT.

DATE OF TOPOGRAPHY FEBRUARY 1964

BASE TOPOGRAPHIC MAPS FURNISHED BY SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT

N

CORPS OF ENGINEERS, U. S. ARMY
LOS ANGELES DISTRICT, CALIFORNIA

# FLOODED AREAS

MOJAVE RIVER
VICINITY OF
BARSTOW, CALIFORNIA

SCALE 0 500 1000 FEET

OCTOBER 1968

PLATE 5

LEGEND:

OVERFLOW LIMITS

STANDARD PROJECT FLOOD

INTERMEDIATE REGIONAL FLOOD

M+ 2.50--- MILES ABOVE MOUTH

2 CROSS SECTION

1200 ------ GROUND ELEVATION IN FEET ABOVE MEAN SEA LEVEL

CONTOUR INTERVAL 2 FEET

NOTES:

LIMITS OF OVERFLOW INDICATED MAY VARY FROM ACTUAL LOCATIONS ON GROUND, AS EXPLAINED IN THE REPORT.

DATE OF TOPOGRAPHY FEBRUARY 1964

BASE TOPOGRAPHIC MAPS FURNISHED BY SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT

N

NOTE: FLOOD LIMITS SHOWN ARE FOR THE INTERMEDIATE REGIONAL FLOOD AND THE STANDARD PROJECT FLOOD OCCURRING ON THE MAIN STEM OF THE MOJAVE RIVER. AREAS ADJACENT TO THE MAIN STEM FLOODWAY WHICH MAY BE FLOODED BY FLOWS ON TRIBUTARIES ARE NOT SHOWN. ADVICE AS TO THE FLOOD HAZARD AT SPECIFIC SITES IN THE TRIBUTARY DRAINAGE AREAS MAY BE OBTAINED FROM THE SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT OR THE LOS ANGELES DISTRICT, CORPS OF ENGINEERS.

CORPS OF ENGINEERS, U. S. ARMY
LOS ANGELES DISTRICT, CALIFORNIA

# FLOODED AREAS

MOJAVE RIVER
VICINITY OF
BARSTOW, CALIFORNIA

SCALE 0 500 1000 FEET

OCTOBER 1968

PLATE 4

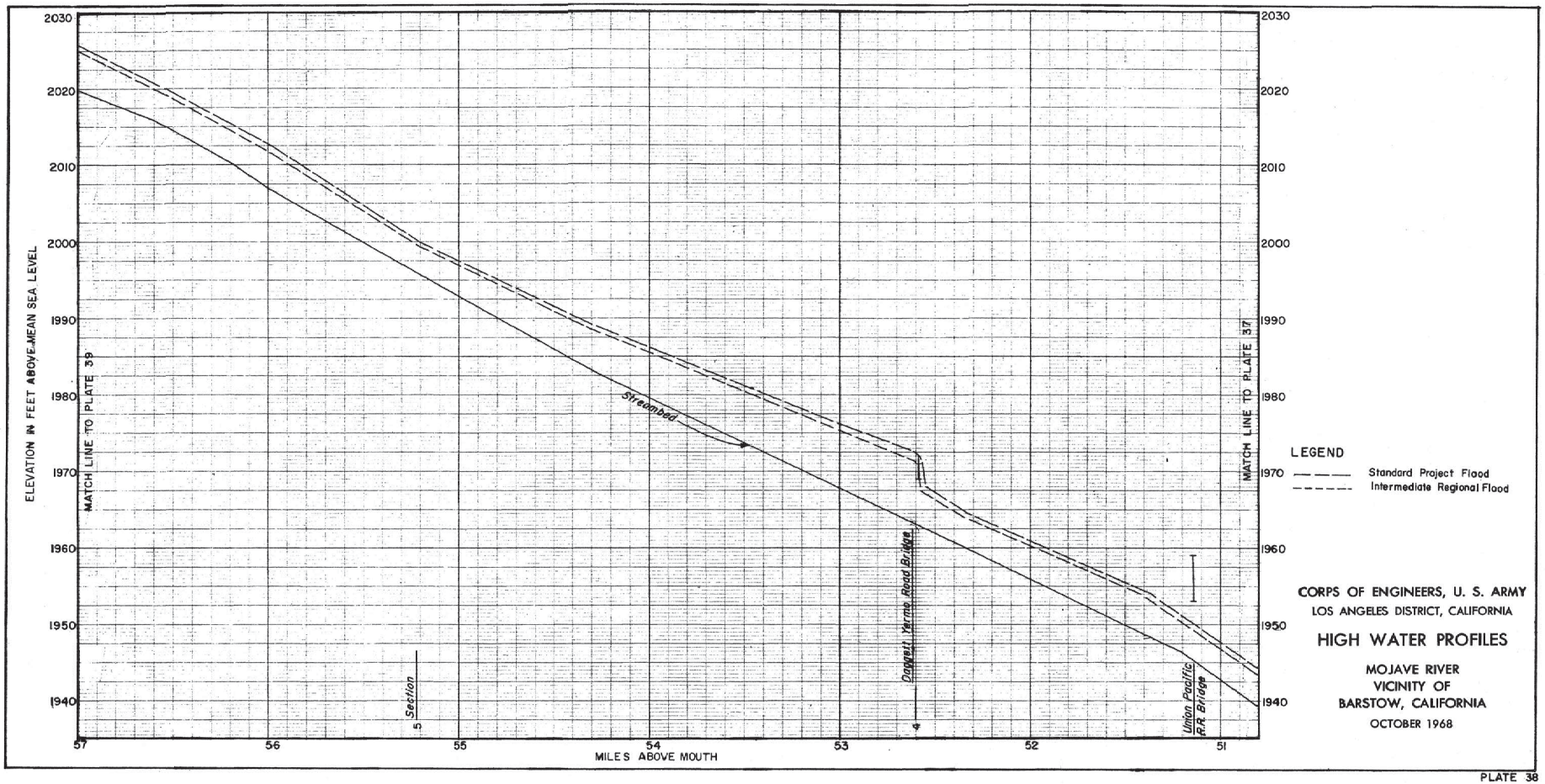

ELEVATION IN FEET ABOVE MEAN SEA LEVEL
2030
2020
2010
2000
1990
1980
1970
1960
1950
1940
MATCH LINE TO PLATE 39
MATCH LINE TO PLATE 37
Streambed
Daggett-Yermo Road Bridge
Union Pacific R.R. Bridge
Section 5
Section 4
57
56
55
54
53
52
51
MILES ABOVE MOUTH
LEGEND
Standard Project Flood
Intermediate Regional Flood
CORPS OF ENGINEERS, U. S. ARMY
LOS ANGELES DISTRICT, CALIFORNIA
HIGH WATER PROFILES
MOJAVE RIVER
VICINITY OF
BARSTOW, CALIFORNIA
OCTOBER 1968

PLATE 38

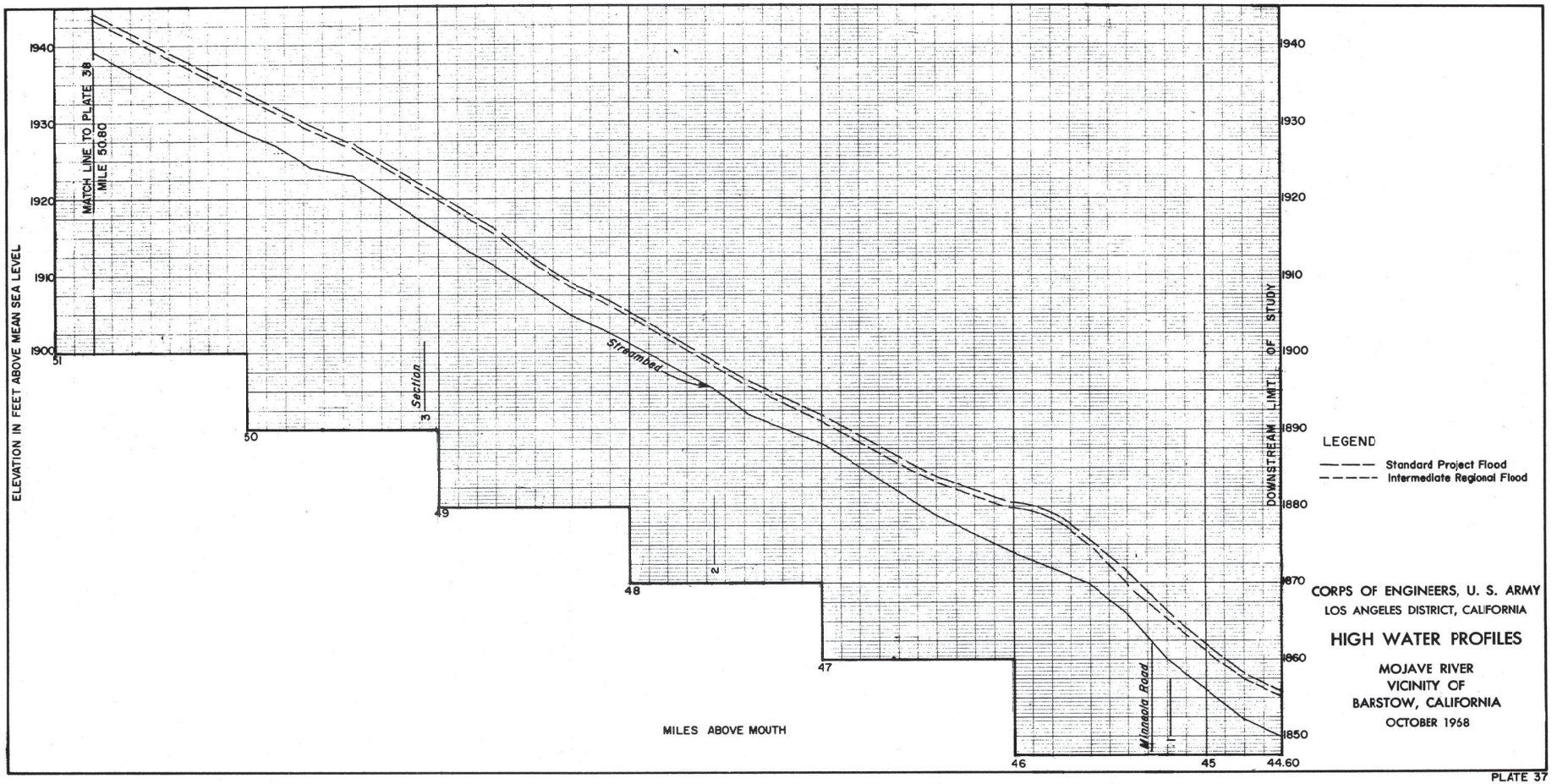

ELEVATION IN FEET ABOVE MEAN SEA LEVEL
1940
1930
1920
1910
1900
1890
1880
1870
1860
1850
MATCH LINE TO PLATE 38
MILE 50.80
51
50
49
48
47
46
45
44.60
Section
3
2
1
Streambed
Minneola Road
DOWNSTREAM LIMIT OF STUDY
MILES ABOVE MOUTH
LEGEND
Standard Project Flood
Intermediate Regional Flood
CORPS OF ENGINEERS, U. S. ARMY
LOS ANGELES DISTRICT, CALIFORNIA
HIGH WATER PROFILES
MOJAVE RIVER
VICINITY OF
BARSTOW, CALIFORNIA
OCTOBER 1968

PLATE 37

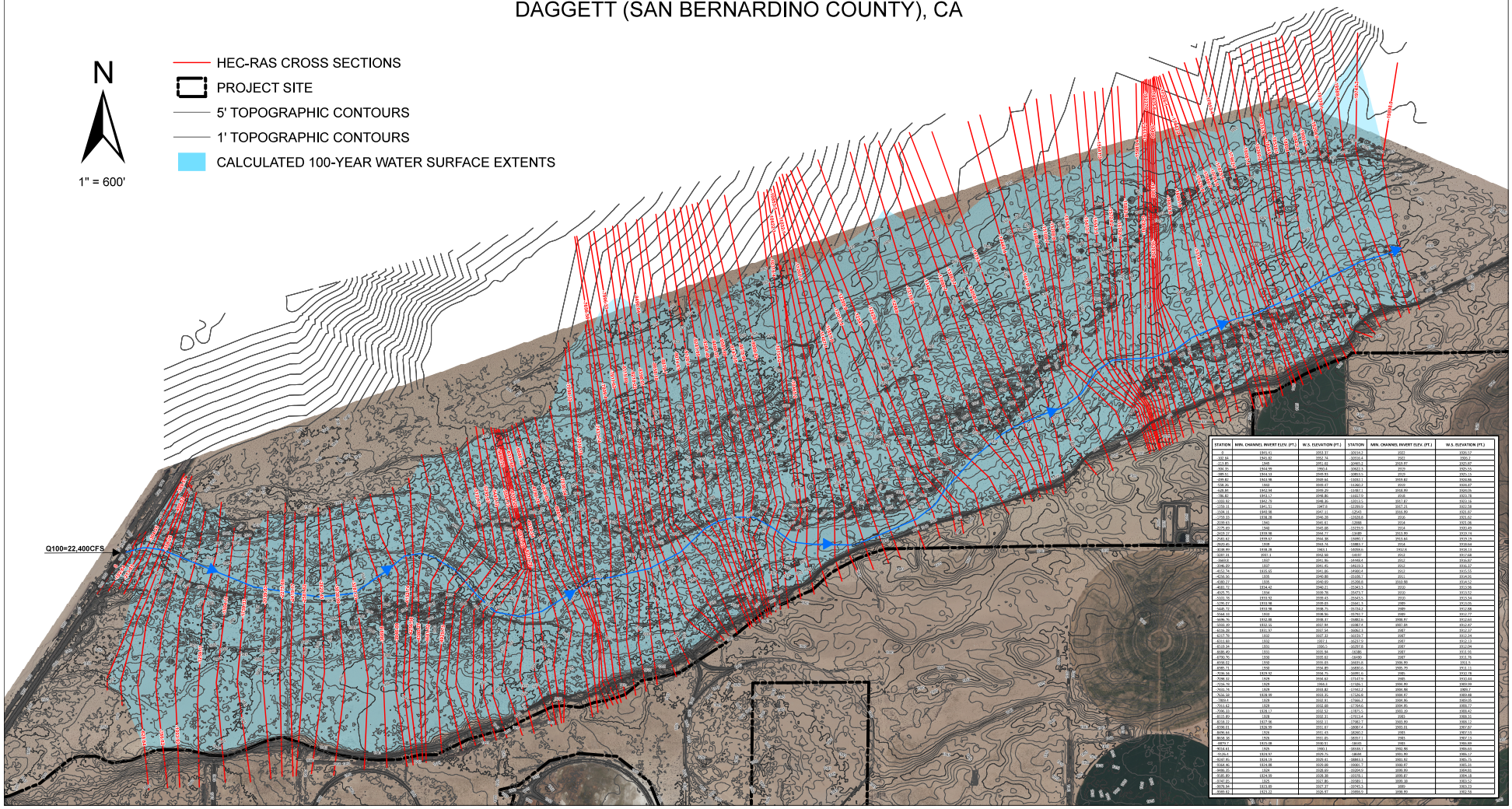
# EXHIBIT “I”

HEC-RAS Study Map
Mojave River Wash

# EXHIBIT "I"
# HEC-RAS STUDY MAP

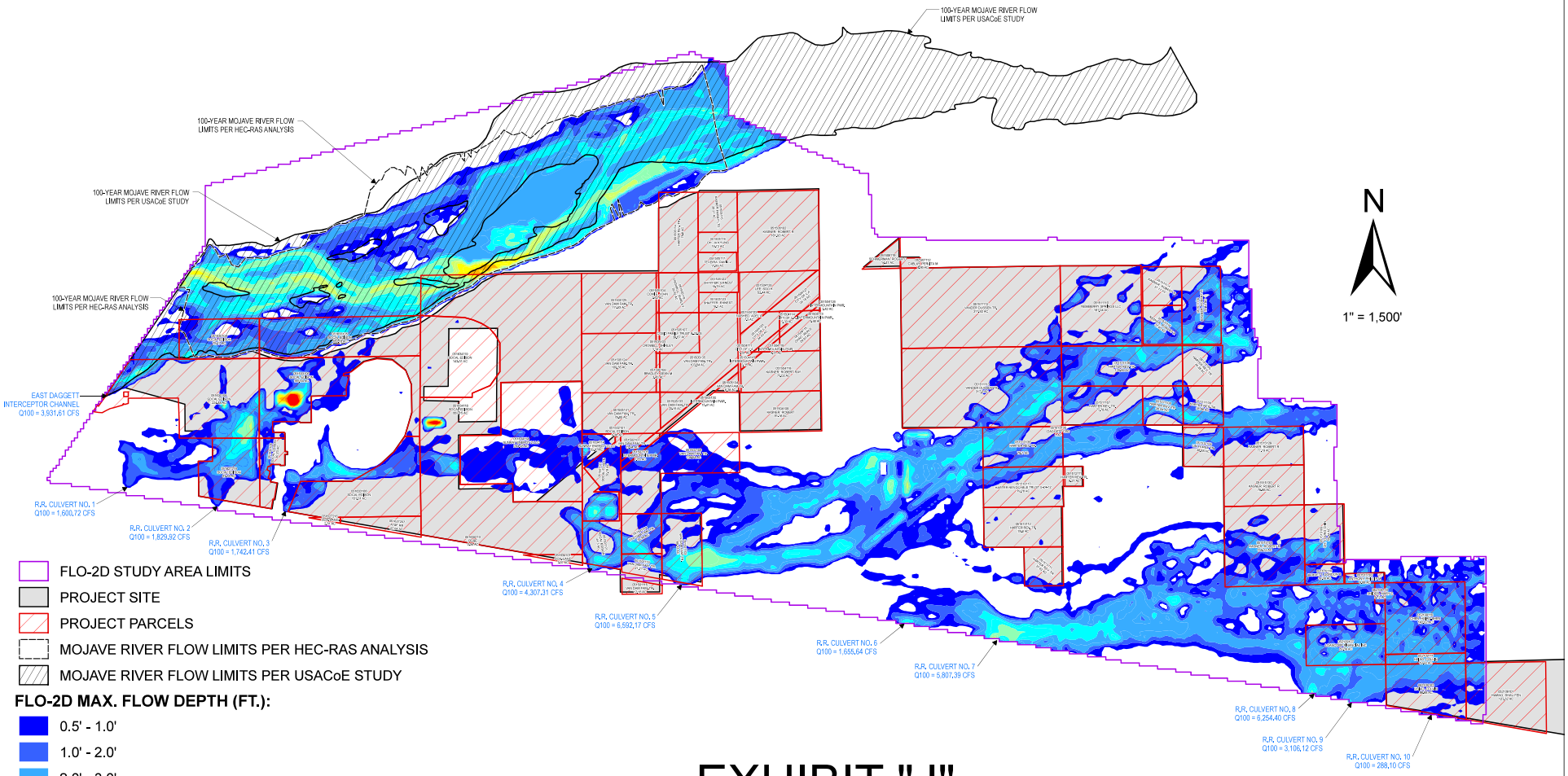
## MOJAVE RIVER WASH - VICINITY OF PROPOSED DAGGETT SOLAR POWER FACILITY

DAGGETT (SAN BERNARDINO COUNTY), CA



# EXHIBIT “J”

FLO-2D - Maximum Calculated 100-Year Flood Depths




FLO-2D STUDY AREA LIMITS
PROJECT SITE
PROJECT PARCELS
MOJAVE RIVER FLOW LIMITS PER HEC-RAS ANALYSIS
MOJAVE RIVER FLOW LIMITS PER USACoE STUDY

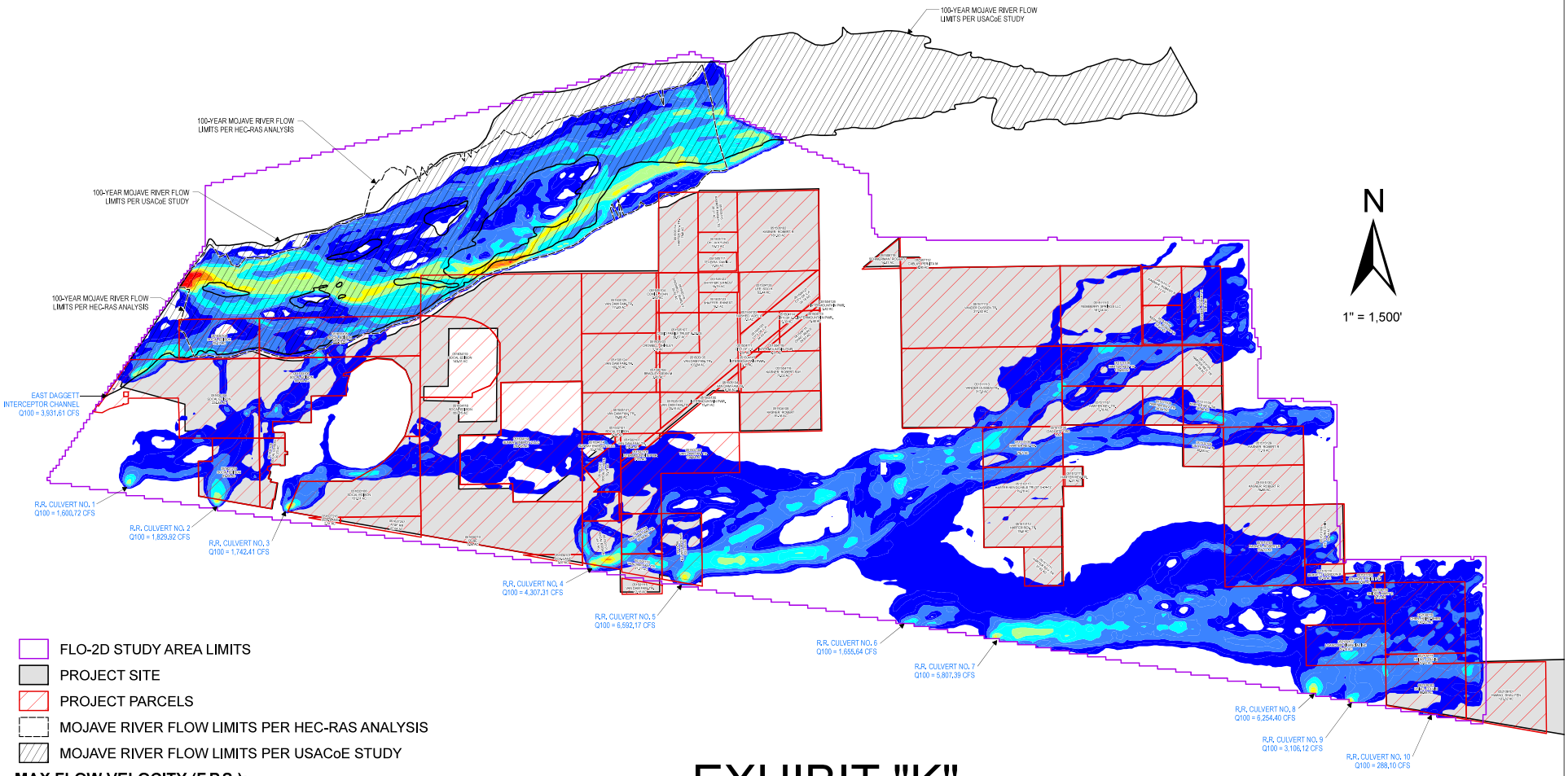
**FLO-2D MAX. FLOW DEPTH (FT.):**

- 0.5' - 1.0'
- 1.0' - 2.0'
- 2.0' - 3.0'
- 3.0' - 4.0'
- 4.0' - 5.0'
- 5.0' - 6.0'
- 6.0' - 7.0'
- 7.0' - 8.0'
- 8.0' - 9.0'
- > 9.0' (MAX 13.0')

# EXHIBIT "J"
# CALCULATED 100-YEAR FLOW DEPTHS
## VICINITY OF PROPOSED DAGGETT SOLAR POWER FACILITY
## DAGGETT (SAN BERNARDINO COUNTY), CA

# EXHIBIT “K”

## FLO-2D - Maximum Calculated 100-Year Flood Velocities




FLO-2D STUDY AREA LIMITS
PROJECT SITE
PROJECT PARCELS
MOJAVE RIVER FLOW LIMITS PER HEC-RAS ANALYSIS
MOJAVE RIVER FLOW LIMITS PER USACoE STUDY

**MAX FLOW VELOCITY (F.P.S.):**

- 0.5 - 1.0
- 1.0 - 2.0
- 2.0 - 3.0
- 3.0 - 4.0
- 4.0 - 5.0
- 5.0 - 6.0
- > 6.0 (MAX. 9.0)

# EXHIBIT "K"
# CALCULATED 100-YEAR FLOW VELOCITIES

## VICINITY OF PROPOSED DAGGETT SOLAR POWER FACILITY
## DAGGETT (SAN BERNARDINO COUNTY), CA

# ATTACHMENT NO. 1

East Daggett Diversion Channel
Published Design $Q_{100}$

August 18, 1967

EAST DAGGETT DIVERSION TO

A.T. & S.F. BRIDGE, SECTION 21

T9N, R1E SBB&M

ASSUMPTIONS USED IN STUDY

1. Backwater from ponding at the ~~entrance~~ entrances to the culverts beneath the freeway (California Route 40) is not an acceptable situation, as it causes inundation of road surface.

2. Damage to roadway embankment by impounded water is a situation that must be avoided.

3. Roadway embankment should not be overtopped by a storm of 100 year frequency.

4. Conditions of flow at entrance and exit are considered good with earth ditches approaching and leaving culvert.

5. Some silting and some debris are expected, but in figuring capacities of facilities under road and railroad embankments, these factors were neglected so as to arrive at a maximum or peak flow.

6. Approach conditions are assumed by using plan and profile sheet (stick file Number 80) and assuming construction was accomplished per this sheet without alternations. The easterly levee and ditch were assumed to have approximately the same flowline grade as the westerly ditch and levee. No information is available on the easterly levee and ditch Flowline grades are assumed as 0.024 ft/ft as they approach both the bridges beneath National Trails Highway (old 66) and the bridge beneath the A.T. & S.F. Railroad bridge.

7. Manning's "N" for earth channels is assumed to be 0.025 and for R.C. Box and R.C. Pipe it is assumed to be 0.012.

8. Magnitude of the 100 year storm is assumed to be 3900 cfs for the area that now drains ultimately to the bridge beneath the A.T. & S.F. tracks. Capacity of the existing drainage facilities beneath existing freeway (State Route 40) are computed to be approximately 3000 cfs.

# ATTACHMENT NO. 2

## Mojave River Wash
## Published Estimated $Q_{100}$ & $V_{100}$

# FACILITY MOJAVE RIVER

| LOCATION | MAP INDEX | Q (SPF) | Q (100) | Q(FCD) (100) | FACILITY CAPACITY | MAX EVENT Q(MAX) | EVENT DATE | REMARKS |
|---|---|---|---|---|---|---|---|---|
| AFTON CANYON | | 30,000 | 17,000 | | | | | FROM CORPS OF ENGR. REPORT "FLOOD PLAIN INFORMATION" DATED OCT. 1968. |
| HARVARD ROAD | | " | 17,000 | | | | | |
| YERMO–DAGGETT RD. CROSSING | | " | 18,500 | | | | | |
| I–15 FWY AT BARSTOW | | " | 18,500 | | | | | |
| OLD U.S.HWY 91 BARSTOW CROSSING | | " | 18,500 | | | | | |
| LENWOOD ROAD | | " | 19,000 | | | 25,000 | DEC 1989 | |
| HINKLEY ROAD | | 30,000 | 21,000 | | | | | |
| INDIAN TRAILS | | " | 23,000 | | | | | |
| HELENDALE | | " | 23,000 | | | | | |
| BRYMAN | | " | 24,500 | | | | | |
| ORO GRANDE | | " | 24,500 | | | | | |
| LOWER NARROWS | | " | 24,500 | | | | | |
| VICTOR CEMENT CO. R.R. | | " | 24,500 | | | | | |
| FREEWAY U.S. HIGHWAY 66 | | " | 24,500 | | | | | |
| UPPER NARROWS | | " | 25,000 | | | | | |
| BEAR VALLEY CUTOFF | | " | 25,000 | | | | | |
| ROCK SPRINGS ROAD | | " | 23,200 | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Table 4

INTERMEDIATE REGIONAL FLOOD

PEAK DISCHARGES

| Stream | Location | Mile above mouth | Drainage area sq. mi. | Discharge cfs |
|---|---|---|---|---|
| Mojave River | Lower limit of study | 44.6 | 1,354 | 17,000 |
| | Old U.S. 91 (business) at Barstow | 61.5 | 1,290 | 18,500 |
| | Lenwood | 67.0 | 1,233 | 19,500 |
| | Hodge | 74.6 | 1,009 | 21,000 |
| | Upper limit of study | 84.0 | 866 | 23,000 |

Determination of Standard Project Flood

Severe as the maximum known flood may have been on any given stream, it is a commonly accepted fact that, in practically all cases, sooner or later a larger flood can and probably will occur. For the purpose of determining the Standard Project Flood, a standard project storm was derived in accordance with the Corps of Engineers' criteria. Past floods were analyzed to determine loss rates. The loss rates were applied to the standard project storm precipitation to determine the Standard Project Flood. The Standard Project Flood is defined as the largest flood that can be expected from the most severe combination of meteorological and hydrological conditions considered reasonably characteristic of the geographical region involved.

The Standard Project Flood peak discharges at several points along the Mojave River are given in table 5. These peak discharges are based on the assumed occurrence of a local storm (thunderstorm) centered over the tributary area along the study reach of the Mojave River and with the Mojave River Reservoir in operation. The analysis indicates that the peak discharge of the Standard Project Flood produced by the local storm will be of the same magnitude for the entire study reach of the Mojave River.

Table 6

INTERMEDIATE REGIONAL FLOOD

VELOCITY

| Stream | Location | Mile above mouth | Velocity | |
|---|---|---|---|---|
| | | | Channel fps | Overbank fps |
| Mojave River | Lower limit of study | 44.6 | 4.0 | 2.0 |
| | Daggett | 52.7 | 10.0 | 5.5 |
| | Old U.S. 91 (business) at Barstow | 61.5 | 3.0 | 2.5 |
| | Barstow | 62.1 | 8.5 | 6.0 |
| | Lenwood | 67.0 | 9.0 | 2.0 |
| | Hodge | 74.6 | 3.0 | 1.5 |
| | Upper limit of study | 84.0 | 4.5 | -- |

# ATTACHMENT NO. 3

HEC-RAS Summary Calculations,
W.S. Profile Plot, & Cross Sections
- Mojave River Wash

HEC-RAS Plan: Plan 02 River: MOJAVE Reach: MOJAVE Profile: PF 1

| Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| MOJAVE | -0 | PF 1 | 22400.00 | 1945.41 | 1953.37 | | 1953.87 | 0.002825 | 5.68 | 3946.61 | 801.21 | 0.45 |
| MOJAVE | -102.64 | PF 1 | 22400.00 | 1945.82 | 1952.74 | | 1953.48 | 0.004773 | 6.87 | 3260.95 | 743.25 | 0.58 |
| MOJAVE | -213.85 | PF 1 | 22400.00 | 1945.00 | 1951.02 | 1951.02 | 1952.50 | 0.016420 | 9.79 | 2288.32 | 775.45 | 1.00 |
| MOJAVE | -304.35 | PF 1 | 22400.00 | 1944.99 | 1950.40 | | 1950.86 | 0.005875 | 5.48 | 4090.06 | 1530.32 | 0.59 |
| MOJAVE | -389.51 | PF 1 | 22400.00 | 1944.53 | 1949.93 | | 1950.36 | 0.005614 | 5.30 | 4227.06 | 1608.24 | 0.58 |
| MOJAVE | -499.82 | PF 1 | 22400.00 | 1943.98 | 1949.64 | | 1949.84 | 0.003159 | 3.59 | 6243.57 | 2770.46 | 0.42 |
| MOJAVE | -558.26 | PF 1 | 22400.00 | 1943.00 | 1949.47 | | 1949.65 | 0.003056 | 3.47 | 6461.94 | 2943.72 | 0.41 |
| MOJAVE | -628.84 | PF 1 | 22400.00 | 1942.94 | 1949.29 | | 1949.44 | 0.002814 | 3.10 | 7216.59 | 3649.36 | 0.39 |
| MOJAVE | -786.82 | PF 1 | 22400.00 | 1943.17 | 1948.86 | | 1949.00 | 0.002623 | 3.06 | 7312.05 | 3577.66 | 0.38 |
| MOJAVE | -1003.92 | PF 1 | 22400.00 | 1942.79 | 1948.36 | | 1948.50 | 0.002061 | 2.98 | 7510.75 | 3191.54 | 0.34 |
| MOJAVE | -1259.11 | PF 1 | 22400.00 | 1941.51 | 1947.80 | | 1947.95 | 0.002240 | 3.03 | 7394.54 | 3268.65 | 0.35 |
| MOJAVE | -1504.11 | PF 1 | 22400.00 | 1940.98 | 1947.11 | | 1947.29 | 0.003203 | 3.47 | 6446.84 | 3031.39 | 0.42 |
| MOJAVE | -1759.33 | PF 1 | 22400.00 | 1938.28 | 1946.28 | | 1946.47 | 0.003212 | 3.53 | 6339.38 | 2913.41 | 0.42 |
| MOJAVE | -2039.63 | PF 1 | 22400.00 | 1941.00 | 1945.61 | | 1945.75 | 0.002031 | 3.01 | 7432.19 | 3076.35 | 0.34 |
| MOJAVE | -2275.69 | PF 1 | 22400.00 | 1940.00 | 1945.08 | | 1945.24 | 0.002326 | 3.12 | 7170.82 | 3114.00 | 0.36 |
| MOJAVE | -2419.17 | PF 1 | 22400.00 | 1939.98 | 1944.77 | | 1944.91 | 0.002178 | 3.08 | 7280.31 | 3078.71 | 0.35 |
| MOJAVE | -2581.62 | PF 1 | 22400.00 | 1939.67 | 1944.38 | | 1944.55 | 0.002336 | 3.24 | 6917.60 | 2854.96 | 0.37 |
| MOJAVE | -2820.45 | PF 1 | 22400.00 | 1939.00 | 1943.74 | | 1943.92 | 0.002941 | 3.43 | 6537.58 | 2946.78 | 0.41 |
| MOJAVE | -3038.99 | PF 1 | 22400.00 | 1938.28 | 1943.10 | | 1943.27 | 0.003035 | 3.30 | 6796.61 | 3324.08 | 0.41 |
| MOJAVE | -3287.31 | PF 1 | 22400.00 | 1937.10 | 1942.58 | | 1942.70 | 0.001699 | 2.80 | 7991.79 | 3225.05 | 0.31 |
| MOJAVE | -3669.8 | PF 1 | 22400.00 | 1937.00 | 1941.96 | | 1942.07 | 0.001592 | 2.71 | 8271.12 | 3347.01 | 0.30 |
| MOJAVE | -3946.09 | PF 1 | 22400.00 | 1937.00 | 1941.45 | | 1941.58 | 0.001971 | 2.86 | 7843.23 | 3440.31 | 0.33 |
| MOJAVE | -4152.74 | PF 1 | 22400.00 | 1935.65 | 1941.06 | | 1941.19 | 0.001826 | 2.81 | 7972.38 | 3384.25 | 0.32 |
| MOJAVE | -4256.56 | PF 1 | 22400.00 | 1935.00 | 1940.88 | | 1941.00 | 0.001811 | 2.77 | 8080.18 | 3477.90 | 0.32 |
| MOJAVE | -4380.27 | PF 1 | 22400.00 | 1935.00 | 1940.69 | | 1940.79 | 0.001497 | 2.51 | 8936.80 | 3878.38 | 0.29 |
| MOJAVE | -4681.72 | PF 1 | 22400.00 | 1934.42 | 1940.21 | | 1940.31 | 0.001652 | 2.56 | 8757.79 | 3969.93 | 0.30 |
| MOJAVE | -4925.75 | PF 1 | 22400.00 | 1934.00 | 1939.78 | | 1939.89 | 0.001824 | 2.72 | 8235.03 | 3666.04 | 0.32 |
| MOJAVE | -5101.78 | PF 1 | 22400.00 | 1933.92 | 1939.43 | | 1939.55 | 0.002096 | 2.76 | 8121.41 | 3930.25 | 0.34 |
| MOJAVE | -5295.07 | PF 1 | 22400.00 | 1933.98 | 1939.03 | | 1939.15 | 0.002033 | 2.73 | 8195.64 | 3929.71 | 0.33 |
| MOJAVE | -5445.72 | PF 1 | 22400.00 | 1933.98 | 1938.75 | | 1938.86 | 0.001781 | 2.67 | 8391.48 | 3774.65 | 0.32 |
| MOJAVE | -5564.13 | PF 1 | 22400.00 | 1933.00 | 1938.56 | | 1938.66 | 0.001514 | 2.46 | 9095.63 | 4087.36 | 0.29 |
| MOJAVE | -5696.76 | PF 1 | 22400.00 | 1932.88 | 1938.37 | | 1938.46 | 0.001443 | 2.46 | 9106.38 | 3955.03 | 0.29 |
| MOJAVE | -5933.19 | PF 1 | 22400.00 | 1932.55 | 1937.94 | | 1938.06 | 0.002035 | 2.80 | 8008.33 | 3712.43 | 0.34 |
| MOJAVE | -6116.28 | PF 1 | 22400.00 | 1931.97 | 1937.54 | | 1937.67 | 0.002183 | 2.93 | 7641.11 | 3479.60 | 0.35 |
| MOJAVE | -6217.78 | PF 1 | 22400.00 | 1932.00 | 1937.32 | | 1937.46 | 0.002011 | 2.94 | 7610.86 | 3239.10 | 0.34 |
| MOJAVE | -6311.68 | PF 1 | 22400.00 | 1932.00 | 1937.10 | | 1937.25 | 0.002424 | 3.13 | 7166.47 | 3205.96 | 0.37 |
| MOJAVE | -6519.34 | PF 1 | 22400.00 | 1931.00 | 1936.50 | | 1936.68 | 0.003094 | 3.39 | 6599.88 | 3133.68 | 0.41 |
| MOJAVE | -6686.49 | PF 1 | 22400.00 | 1931.00 | 1935.94 | | 1936.14 | 0.003352 | 3.55 | 6310.33 | 2974.60 | 0.43 |
| MOJAVE | -6790.76 | PF 1 | 22400.00 | 1930.00 | 1935.62 | | 1935.80 | 0.003051 | 3.42 | 6548.52 | 3041.43 | 0.41 |
| MOJAVE | -6938.02 | PF 1 | 22400.00 | 1930.00 | 1935.03 | | 1935.25 | 0.004608 | 3.81 | 5875.30 | 3159.82 | 0.49 |
| MOJAVE | -6985.71 | PF 1 | 22400.00 | 1930.00 | 1934.89 | | 1935.07 | 0.002841 | 3.34 | 6704.88 | 3058.67 | 0.40 |
| MOJAVE | -7036.34 | PF 1 | 22400.00 | 1929.92 | 1934.75 | | 1934.92 | 0.002878 | 3.29 | 6800.23 | 3198.93 | 0.40 |
| MOJAVE | -7098.32 | PF 1 | 22400.00 | 1929.00 | 1934.62 | | 1934.74 | 0.002512 | 2.82 | 7931.20 | 4244.10 | 0.36 |
| MOJAVE | -7216.78 | PF 1 | 22400.00 | 1929.00 | 1934.30 | | 1934.42 | 0.002808 | 2.86 | 7845.75 | 4490.68 | 0.38 |
| MOJAVE | -7431.74 | PF 1 | 22400.00 | 1929.00 | 1933.82 | | 1933.92 | 0.001897 | 2.52 | 8871.51 | 4550.39 | 0.32 |
| MOJAVE | -7656.58 | PF 1 | 22400.00 | 1928.99 | 1933.35 | | 1933.46 | 0.002207 | 2.65 | 8455.44 | 4519.20 | 0.34 |
| MOJAVE | -7809.4 | PF 1 | 22400.00 | 1929.00 | 1932.91 | | 1933.06 | 0.003157 | 3.07 | 7291.83 | 4082.49 | 0.41 |
| MOJAVE | -7911.62 | PF 1 | 22400.00 | 1929.00 | 1932.68 | | 1932.79 | 0.002035 | 2.60 | 8614.93 | 4456.15 | 0.33 |
| MOJAVE | -7996.33 | PF 1 | 22400.00 | 1928.17 | 1932.52 | | 1932.62 | 0.001834 | 2.52 | 8900.71 | 4472.60 | 0.31 |
| MOJAVE | -8115.89 | PF 1 | 22400.00 | 1928.00 | 1932.31 | | 1932.40 | 0.001848 | 2.50 | 8942.61 | 4551.43 | 0.31 |
| MOJAVE | -8218.22 | PF 1 | 22400.00 | 1927.96 | 1932.11 | | 1932.21 | 0.001872 | 2.53 | 8849.92 | 4475.98 | 0.32 |
| MOJAVE | -8398.01 | PF 1 | 22400.00 | 1926.99 | 1931.67 | | 1931.80 | 0.002843 | 2.89 | 7749.19 | 4393.50 | 0.38 |
| MOJAVE | -8496.64 | PF 1 | 22400.00 | 1926.00 | 1931.43 | | 1931.54 | 0.002306 | 2.70 | 8284.33 | 4436.47 | 0.35 |
| MOJAVE | -8658.18 | PF 1 | 22400.00 | 1926.00 | 1931.05 | | 1931.17 | 0.002315 | 2.76 | 8123.49 | 4237.70 | 0.35 |
| MOJAVE | -8879.7 | PF 1 | 22400.00 | 1925.08 | 1930.51 | | 1930.63 | 0.002489 | 2.79 | 8033.15 | 4349.45 | 0.36 |
| MOJAVE | -9014.61 | PF 1 | 22400.00 | 1925.00 | 1930.10 | | 1930.25 | 0.003301 | 3.08 | 7266.36 | 4183.69 | 0.41 |
| MOJAVE | -9126.4 | PF 1 | 22400.00 | 1924.97 | 1929.75 | | 1929.90 | 0.002863 | 3.14 | 7136.71 | 3594.65 | 0.39 |
| MOJAVE | -9247.95 | PF 1 | 22400.00 | 1924.19 | 1929.41 | | 1929.56 | 0.002761 | 3.10 | 7234.07 | 3618.24 | 0.39 |
| MOJAVE | -9364.46 | PF 1 | 22400.00 | 1924.88 | 1929.08 | | 1929.23 | 0.002912 | 3.11 | 7193.86 | 3713.10 | 0.39 |
| MOJAVE | -9486.35 | PF 1 | 22400.00 | 1924.00 | 1928.69 | | 1928.85 | 0.003324 | 3.21 | 6972.96 | 3793.05 | 0.42 |
| MOJAVE | -9585.89 | PF 1 | 22400.00 | 1924.99 | 1928.38 | | 1928.52 | 0.003159 | 3.08 | 7280.23 | 4067.25 | 0.41 |
| MOJAVE | -9747.05 | PF 1 | 22400.00 | 1925.00 | 1927.86 | | 1928.01 | 0.003297 | 3.08 | 7278.59 | 4198.62 | 0.41 |
| MOJAVE | -9878.94 | PF 1 | 22400.00 | 1923.89 | 1927.37 | | 1927.53 | 0.003847 | 3.28 | 6831.31 | 4022.54 | 0.44 |
| MOJAVE | -9989.82 | PF 1 | 22400.00 | 1923.22 | 1926.97 | | 1927.12 | 0.003462 | 3.15 | 7110.27 | 4108.05 | 0.42 |
| MOJAVE | -10154.2 | PF 1 | 22400.00 | 1922.00 | 1926.57 | | 1926.68 | 0.002038 | 2.68 | 8361.87 | 4137.53 | 0.33 |
| MOJAVE | -10316.4 | PF 1 | 22400.00 | 1922.00 | 1926.20 | | 1926.32 | 0.002352 | 2.87 | 7804.38 | 3879.06 | 0.36 |
| MOJAVE | -10465.2 | PF 1 | 22400.00 | 1919.97 | 1925.87 | | 1925.99 | 0.002123 | 2.78 | 8063.71 | 3898.60 | 0.34 |
| MOJAVE | -10622.3 | PF 1 | 22400.00 | 1919.00 | 1925.55 | | 1925.67 | 0.001990 | 2.71 | 8259.22 | 3943.40 | 0.33 |
| MOJAVE | -10853.5 | PF 1 | 22400.00 | 1919.00 | 1925.15 | | 1925.25 | 0.001581 | 2.56 | 8763.90 | 3846.23 | 0.30 |
| MOJAVE | -11032.1 | PF 1 | 22400.00 | 1919.82 | 1924.86 | | 1924.97 | 0.001606 | 2.59 | 8648.21 | 3765.69 | 0.30 |
| MOJAVE | -11260.2 | PF 1 | 22400.00 | 1919.00 | 1924.47 | | 1924.58 | 0.001801 | 2.69 | 8329.12 | 3736.19 | 0.32 |
| MOJAVE | -11487.1 | PF 1 | 22400.00 | 1918.99 | 1924.05 | | 1924.16 | 0.001853 | 2.69 | 8320.73 | 3806.47 | 0.32 |
| MOJAVE | -11657.9 | PF 1 | 22400.00 | 1918.00 | 1923.78 | | 1923.87 | 0.001507 | 2.48 | 9047.15 | 4020.59 | 0.29 |
| MOJAVE | -12013.5 | PF 1 | 22400.00 | 1917.87 | 1923.16 | | 1923.27 | 0.001900 | 2.73 | 8214.63 | 3756.41 | 0.32 |
| MOJAVE | -12299.9 | PF 1 | 22400.00 | 1917.21 | 1922.58 | | 1922.70 | 0.002070 | 2.86 | 7835.33 | 3559.47 | 0.34 |
| MOJAVE | -12543.0 | PF 1 | 22400.00 | 1916.99 | 1921.87 | | 1922.05 | 0.003587 | 3.40 | 6596.89 | 3496.90 | 0.44 |
| MOJAVE | -12628.8 | PF 1 | 22400.00 | 1916.00 | 1921.62 | | 1921.77 | 0.002753 | 3.11 | 7207.34 | 3578.21 | 0.39 |
| MOJAVE | -12868.0 | PF 1 | 22400.00 | 1914.00 | 1921.06 | | 1921.18 | 0.002150 | 2.83 | 7903.91 | 3741.65 | 0.34 |
| MOJAVE | -13159.9 | PF 1 | 22400.00 | 1914.00 | 1920.49 | | 1920.60 | 0.001882 | 2.66 | 8428.11 | 3978.06 | 0.32 |

HEC-RAS Plan: Plan 02 River: MOJAVE Reach: MOJAVE Profile: PF 1 (Continued)

| Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| MOJAVE | -13489.0 | PF 1 | 22400.00 | 1913.99 | 1919.74 | | 1919.87 | 0.002562 | 2.98 | 7524.97 | 3776.08 | 0.37 |
| MOJAVE | -13690.7 | PF 1 | 22400.00 | 1913.64 | 1919.19 | | 1919.34 | 0.002745 | 3.08 | 7263.80 | 3640.34 | 0.38 |
| MOJAVE | -13883.7 | PF 1 | 22400.00 | 1914.00 | 1918.64 | | 1918.81 | 0.002775 | 3.22 | 6947.63 | 3283.99 | 0.39 |
| MOJAVE | -14058.6 | PF 1 | 22400.00 | 1912.80 | 1918.13 | | 1918.29 | 0.003134 | 3.26 | 6881.10 | 3511.83 | 0.41 |
| MOJAVE | -14197.0 | PF 1 | 22400.00 | 1912.00 | 1917.68 | | 1917.85 | 0.003237 | 3.26 | 6872.57 | 3587.26 | 0.41 |
| MOJAVE | -14448.4 | PF 1 | 22400.00 | 1912.00 | 1916.87 | | 1917.03 | 0.003276 | 3.27 | 6846.68 | 3585.25 | 0.42 |
| MOJAVE | -14619.3 | PF 1 | 22400.00 | 1912.00 | 1916.37 | | 1916.52 | 0.002707 | 3.08 | 7264.32 | 3602.42 | 0.38 |
| MOJAVE | -14900.4 | PF 1 | 22400.00 | 1912.00 | 1915.55 | | 1915.72 | 0.002984 | 3.30 | 6793.47 | 3278.58 | 0.40 |
| MOJAVE | -15108.7 | PF 1 | 22400.00 | 1911.00 | 1914.91 | | 1915.08 | 0.003096 | 3.33 | 6734.73 | 3297.35 | 0.41 |
| MOJAVE | -15208.8 | PF 1 | 22400.00 | 1910.98 | 1914.52 | | 1914.72 | 0.004307 | 3.57 | 6270.82 | 3533.97 | 0.47 |
| MOJAVE | -15343.3 | PF 1 | 22400.00 | 1910.00 | 1913.96 | | 1914.16 | 0.003985 | 3.59 | 6239.83 | 3292.15 | 0.46 |
| MOJAVE | -15473.7 | PF 1 | 22400.00 | 1910.00 | 1913.52 | | 1913.70 | 0.003110 | 3.34 | 6699.63 | 3262.64 | 0.41 |
| MOJAVE | -15543.5 | PF 1 | 22400.00 | 1910.00 | 1913.34 | | 1913.49 | 0.002623 | 3.18 | 7039.32 | 3248.75 | 0.38 |
| MOJAVE | -15641.3 | PF 1 | 22400.00 | 1909.00 | 1913.05 | | 1913.21 | 0.003089 | 3.27 | 6844.55 | 3426.54 | 0.41 |
| MOJAVE | -15724.2 | PF 1 | 22400.00 | 1909.00 | 1912.88 | | 1913.01 | 0.001830 | 2.83 | 7908.18 | 3321.24 | 0.32 |
| MOJAVE | -15792.7 | PF 1 | 22400.00 | 1909.00 | 1912.77 | | 1912.89 | 0.001625 | 2.74 | 8174.86 | 3300.36 | 0.31 |
| MOJAVE | -15882.6 | PF 1 | 22400.00 | 1908.97 | 1912.63 | | 1912.74 | 0.001535 | 2.71 | 8267.19 | 3253.48 | 0.30 |
| MOJAVE | -15987.4 | PF 1 | 22400.00 | 1907.04 | 1912.47 | | 1912.58 | 0.001545 | 2.73 | 8197.63 | 3198.61 | 0.30 |
| MOJAVE | -16062.3 | PF 1 | 22400.00 | 1907.00 | 1912.37 | | 1912.47 | 0.001314 | 2.61 | 8588.43 | 3182.36 | 0.28 |
| MOJAVE | -16159.7 | PF 1 | 22400.00 | 1907.00 | 1912.24 | | 1912.35 | 0.001282 | 2.62 | 8554.59 | 3095.16 | 0.28 |
| MOJAVE | -16237.9 | PF 1 | 22400.00 | 1907.00 | 1912.13 | | 1912.24 | 0.001456 | 2.67 | 8403.24 | 3255.97 | 0.29 |
| MOJAVE | -16297.8 | PF 1 | 22400.00 | 1907.00 | 1912.04 | | 1912.15 | 0.001512 | 2.64 | 8491.05 | 3437.48 | 0.30 |
| MOJAVE | -16386.0 | PF 1 | 22400.00 | 1907.00 | 1911.91 | | 1912.02 | 0.001412 | 2.65 | 8456.55 | 3233.60 | 0.29 |
| MOJAVE | -16490.0 | PF 1 | 22400.00 | 1907.00 | 1911.76 | | 1911.87 | 0.001552 | 2.65 | 8463.49 | 3477.10 | 0.30 |
| MOJAVE | -16635.8 | PF 1 | 22400.00 | 1906.99 | 1911.50 | | 1911.62 | 0.001849 | 2.81 | 7958.31 | 3397.40 | 0.32 |
| MOJAVE | -16830.6 | PF 1 | 22400.00 | 1905.79 | 1911.11 | | 1911.24 | 0.002039 | 2.94 | 7628.79 | 3290.20 | 0.34 |
| MOJAVE | -16991.6 | PF 1 | 22400.00 | 1905.00 | 1910.78 | | 1910.92 | 0.001934 | 2.96 | 7572.30 | 3105.72 | 0.33 |
| MOJAVE | -17147.9 | PF 1 | 22400.00 | 1905.00 | 1910.44 | | 1910.59 | 0.002300 | 3.11 | 7211.97 | 3131.00 | 0.36 |
| MOJAVE | -17326.1 | PF 1 | 22400.00 | 1904.99 | 1909.99 | | 1910.15 | 0.002618 | 3.26 | 6870.16 | 3055.21 | 0.38 |
| MOJAVE | -17442.2 | PF 1 | 22400.00 | 1904.98 | 1909.70 | | 1909.85 | 0.002529 | 3.09 | 7249.36 | 3403.46 | 0.37 |
| MOJAVE | -17526.8 | PF 1 | 22400.00 | 1904.97 | 1909.48 | | 1909.63 | 0.002554 | 3.16 | 7084.44 | 3236.38 | 0.38 |
| MOJAVE | -17666.2 | PF 1 | 22400.00 | 1904.96 | 1909.05 | | 1909.24 | 0.003160 | 3.42 | 6547.46 | 3120.05 | 0.42 |
| MOJAVE | -17764.6 | PF 1 | 22400.00 | 1904.95 | 1908.77 | | 1908.94 | 0.002806 | 3.31 | 6762.57 | 3092.35 | 0.39 |
| MOJAVE | -17875.5 | PF 1 | 22400.00 | 1903.19 | 1908.42 | | 1908.60 | 0.003293 | 3.41 | 6574.78 | 3252.07 | 0.42 |
| MOJAVE | -17913.4 | PF 1 | 22400.00 | 1903.00 | 1908.31 | | 1908.48 | 0.002889 | 3.34 | 6705.19 | 3095.52 | 0.40 |
| MOJAVE | -17982.7 | PF 1 | 22400.00 | 1903.99 | 1908.12 | | 1908.29 | 0.002727 | 3.28 | 6834.55 | 3109.22 | 0.39 |
| MOJAVE | -18087.4 | PF 1 | 22400.00 | 1903.01 | 1907.87 | | 1908.02 | 0.002301 | 3.08 | 7274.91 | 3202.25 | 0.36 |
| MOJAVE | -18260.2 | PF 1 | 22400.00 | 1903.00 | 1907.53 | | 1907.65 | 0.001890 | 2.84 | 7877.33 | 3371.19 | 0.33 |
| MOJAVE | -18357.1 | PF 1 | 22400.00 | 1903.00 | 1907.13 | | 1907.37 | 0.004515 | 3.95 | 5669.69 | 2846.14 | 0.49 |
| MOJAVE | -18445.0 | PF 1 | 22400.00 | 1903.00 | 1906.89 | | 1907.05 | 0.002633 | 3.17 | 7073.35 | 3297.04 | 0.38 |
| MOJAVE | -18538.7 | PF 1 | 22400.00 | 1902.98 | 1906.63 | | 1906.79 | 0.002924 | 3.23 | 6944.52 | 3411.68 | 0.40 |
| MOJAVE | -18694.0 | PF 1 | 22400.00 | 1901.99 | 1906.17 | | 1906.33 | 0.002928 | 3.27 | 6853.06 | 3303.93 | 0.40 |
| MOJAVE | -18843.3 | PF 1 | 22400.00 | 1901.92 | 1905.75 | | 1905.92 | 0.002637 | 3.24 | 6920.93 | 3129.75 | 0.38 |
| MOJAVE | -19001.7 | PF 1 | 22400.00 | 1900.97 | 1905.31 | | 1905.49 | 0.002776 | 3.32 | 6752.85 | 3059.01 | 0.39 |
| MOJAVE | -19204.9 | PF 1 | 22400.00 | 1899.99 | 1904.81 | | 1904.96 | 0.002348 | 3.16 | 7082.17 | 3039.80 | 0.37 |
| MOJAVE | -19378.1 | PF 1 | 22400.00 | 1899.87 | 1904.18 | | 1904.41 | 0.004448 | 3.85 | 5814.02 | 2995.99 | 0.49 |
| MOJAVE | -19589.1 | PF 1 | 22400.00 | 1899.18 | 1903.52 | | 1903.68 | 0.002609 | 3.18 | 7041.14 | 3241.06 | 0.38 |
| MOJAVE | -19745.3 | PF 1 | 22400.00 | 1899.00 | 1903.23 | | 1903.34 | 0.001708 | 2.69 | 8336.74 | 3598.63 | 0.31 |
| MOJAVE | -19898.9 | PF 1 | 22400.00 | 1898.99 | 1902.58 | 1901.75 | 1902.90 | 0.005002 | 4.56 | 4909.37 | 2143.97 | 0.53 |

HEC-RAS Version 4.1.0 Jan 2010
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```
X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X      X   X     X  X    X
X     X  X        X           X   X    X    X   X
XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
X     X  X        X           X  X     X    X        X
X     X  X        X    X      X   X    X    X        X
X     X  XXXXXX    XXXX       X    X   X    X   XXXXX
```

PROJECT DATA
Project Title: MOJAVE
Project File : MOJAVE.prj
Run Date and Time: 6/8/2018 10:10:47 AM

Project in English units

PLAN DATA

Plan Title: Plan 02
Plan File : i:\2016 Jobs\164309 NRG Solar Inc - Coolwater\Hydrology\Attachments\HEC-RAS\MOJAVE.p02

Geometry Title: MOJAVE
Geometry File : i:\2016 Jobs\164309 NRG Solar Inc - Coolwater\Hydrology\Attachments\HEC-RAS\MOJAVE.g01

Flow Title : MOJAVE
Flow File : i:\2016 Jobs\164309 NRG Solar Inc - Coolwater\Hydrology\Attachments\HEC-RAS\MOJAVE.f01

Plan Summary Information:
Number of: Cross Sections = 128 Multiple Openings = 0
Culverts = 0 Inline Structures = 0
Bridges = 0 Lateral Structures = 0

Computational Information
Water surface calculation tolerance = 0.01
Critical depth calculation tolerance = 0.01
Maximum number of iterations = 20
Maximum difference tolerance = 0.3
Flow tolerance factor = 0.001

Computation Options
Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Subcritical Flow

FLOW DATA

Flow Title: MOJAVE
Flow File : i:\2016 Jobs\164309 NRG Solar Inc - Coolwater\Hydrology\Attachments\HEC-RAS\MOJAVE.f01

Flow Data (cfs)

| River | Reach | RS | PF 1 |
|---|---|---|---|
| MOJAVE | MOJAVE | -0 | 22400 |

Boundary Conditions

| River | Reach | Profile | Upstream | Downstream |
|---|---|---|---|---|
| MOJAVE | MOJAVE | PF 1 | Normal S = 0.005 | Normal S = 0.005 |

GEOMETRY DATA

Geometry Title: MOJAVE
Geometry File : i:\2016 Jobs\164309 NRG Solar Inc - Coolwater\Hydrology\Attachments\HEC-RAS\MOJAVE.g01

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -0

INPUT
Description:
Station Elevation Data num= 128

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2568.63 | 1960 | 2569.21 | 1958 | 2570.26 | 1953.11 | 2571.09 | 1947.18 | 2571.46 | 1946 |
| 2576.91 | 1945.46 | 2578.07 | 1945.41 | 2581.82 | 1945.8 | 2585.15 | 1946 | 2689.1 | 1946 |
| 2692.7 | 1945.99 | 2725.37 | 1945.99 | 2727.87 | 1945.77 | 2747.99 | 1945.78 | 2753.05 | 1946 |
| 2756.74 | 1946.05 | 2764.77 | 1946.05 | 2772.75 | 1946.13 | 2778.44 | 1946.13 | 2781.68 | 1946.21 |
| 2782.77 | 1946.4 | 2786.64 | 1946 | 2797.3 | 1946.18 | 2802.17 | 1946.44 | 2807.73 | 1946.93 |
| 2815.61 | 1946.93 | 2821.96 | 1947 | 2826.44 | 1947.98 | 2832.09 | 1948.84 | 2832.24 | 1949.14 |
| 2833.17 | 1949 | 2840.33 | 1949.89 | 2846.49 | 1950.3 | 2854.02 | 1951 | 2856.3 | 1950.99 |
| 2861.89 | 1951.6 | 2869.74 | 1950.08 | 2870.85 | 1950 | 2879.86 | 1950.66 | 2882 | 1950.74 |
| 2885.24 | 1949.23 | 2889.52 | 1949.12 | 2897.18 | 1949 | 2901.05 | 1949.3 | 2905.3 | 1949.29 |
| 2913.57 | 1949.57 | 2922.05 | 1949.57 | 2927.57 | 1949.69 | 2934.69 | 1950.36 | 2936.6 | 1950.45 |
| 2937.75 | 1949.77 | 2943.55 | 1949 | 2953.96 | 1949 | 2959.14 | 1949.09 | 2972.29 | 1949.18 |
| 2985.51 | 1949.22 | 2988.1 | 1949.07 | 2998.72 | 1949.1 | 3011.18 | 1949.11 | 3012.81 | 1949.13 |
| 3015.17 | 1949 | 3041.06 | 1949 | 3046.56 | 1949.12 | 3058.48 | 1949.09 | 3059.16 | 1949.12 |
| 3082.11 | 1949 | 3110.01 | 1949.05 | 3124.6 | 1949.1 | 3132.25 | 1949 | 3145.14 | 1949.16 |
| 3146.28 | 1949.21 | 3157.15 | 1949.31 | 3160.09 | 1949.36 | 3165.21 | 1950.63 | 3170.81 | 1950.6 |
| 3173.75 | 1950.04 | 3201.09 | 1950 | 3207.83 | 1949.38 | 3212.8 | 1949.24 | 3226.24 | 1949.07 |
| 3228.77 | 1949 | 3233.14 | 1949.14 | 3262.81 | 1949.12 | 3278.99 | 1949.07 | 3287.97 | 1949.06 |
| 3293.12 | 1949 | 3299.19 | 1949.01 | 3303.61 | 1949.32 | 3310.08 | 1949.46 | 3311.7 | 1949.65 |
| 3312.12 | 1950.32 | 3316.78 | 1950.28 | 3322.16 | 1950 | 3338.9 | 1950.39 | 3340.58 | 1950.32 |
| 3343.07 | 1950.4 | 3349.89 | 1951 | 3351.76 | 1951 | 3356.75 | 1951.49 | 3359.9 | 1952 |
| 3367.73 | 1953 | 3374.02 | 1953.63 | 3375.65 | 1953.65 | 3376.51 | 1954.01 | 3386.04 | 1954.21 |
| 3391.69 | 1954.98 | 3392.39 | 1955 | 3396.19 | 1955.55 | 3397.97 | 1955.91 | 3399.68 | 1956 |
| 3404.96 | 1956.73 | 3406.08 | 1956.98 | 3408.33 | 1957.24 | 3416.15 | 1958 | 3419.29 | 1958.64 |
| 3420.96 | 1958.71 | 3422.84 | 1959 | 3423.98 | 1959.31 | 3425.12 | 1959.36 | 3427.72 | 1959.7 |
| 3430.83 | 1959.99 | 3443.89 | 1960.33 | 3452.58 | 1960.28 | 3457.28 | 1960.41 | 3460.54 | 1960.42 |
| 3469.15 | 1960.63 | 3475.49 | 1960.52 | 3480.26 | 1960.56 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2568.63 | .045 | 2568.63 | .04 | 3480.26 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2568.63 | 3480.26 | 102.64 | 102.64 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1953.87 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.50 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1953.37 | Reach Len. (ft) | 102.64 | 102.64 | 102.64 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 3946.61 | | |
| E.G. Slope (ft/ft) | 0.002825 | Area (sq ft) | | 3946.61 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 801.21 | Top Width (ft) | | 801.21 | | |
| Vel Total (ft/s) | 5.68 | Avg. Vel. (ft/s) | | 5.68 | | |
| Max Chl Dpth (ft) | 7.96 | Hydr. Depth (ft) | | 4.93 | | |
| Conv. Total (cfs) | 421453.9 | Conv. (cfs) | | 421453.9 | | |
| Length Wtd. (ft) | 102.64 | Wetted Per. (ft) | | 809.72 | | |
| Min Ch El (ft) | 1945.41 | Shear (lb/sq ft) | | 0.86 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 3480.26 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.37 | Cum Volume (acre-ft) | | 3416.44 | | |
| C & E Loss (ft) | 0.02 | Cum SA (acres) | | 1597.49 | | |

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -102.64

INPUT
Description:
Station Elevation Data num= 85

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2501.25 | 1958 | 2504.69 | 1958 | 2521.05 | 1957.36 | 2521.73 | 1957.36 | 2528.06 | 1957 |
| 2531.6 | 1956.66 | 2537.62 | 1956.28 | 2548.29 | 1955.58 | 2561.02 | 1954.01 | 2568 | 1953.19 |
| 2569.26 | 1952.85 | 2576.4 | 1952 | 2583.07 | 1951 | 2585.48 | 1950.54 | 2589.14 | 1949.96 |
| 2592.22 | 1949.54 | 2595.79 | 1949.13 | 2597.85 | 1948.81 | 2599.83 | 1948 | 2601.2 | 1947 |
| 2602.08 | 1946.2 | 2602.79 | 1946.23 | 2607.03 | 1947 | 2622.56 | 1947.01 | 2629.66 | 1947 |
| 2632.8 | 1946.78 | 2642.3 | 1946.21 | 2645.18 | 1946 | 2648.83 | 1945.93 | 2655.14 | 1945.86 |
| 2658.03 | 1946 | 2665.93 | 1946 | 2676.59 | 1946.03 | 2685.05 | 1946.01 | 2696.37 | 1946 |
| 2703.82 | 1946.48 | 2706.84 | 1946.7 | 2711.8 | 1947 | 2728.2 | 1947 | 2738.37 | 1946.36 |
| 2744.33 | 1946 | 2752.75 | 1945.95 | 2759.82 | 1945.82 | 2766.12 | 1945.83 | 2781.48 | 1945.9 |
| 2782.96 | 1945.97 | 2796.87 | 1945.98 | 2808.33 | 1946.02 | 2812.11 | 1946.02 | 2819.62 | 1946.38 |
| 2823.81 | 1946.53 | 2831.87 | 1946.99 | 2837.72 | 1947.01 | 2841.63 | 1947.19 | 2851.55 | 1947.14 |
| 2854.53 | 1947.24 | 2862.86 | 1947.95 | 2867.97 | 1947.94 | 2872.72 | 1947.98 | 2883.07 | 1948 |
| 2891.81 | 1948.13 | 2897.51 | 1948.38 | 2905.78 | 1949 | 3203.54 | 1949 | 3211.21 | 1949.22 |
| 3234.99 | 1950 | 3238.7 | 1950.09 | 3243.64 | 1950.25 | 3269.29 | 1951 | 3270.71 | 1951 |
| 3289.31 | 1951.58 | 3293.1 | 1951.69 | 3301.6 | 1952 | 3311.58 | 1952.62 | 3317.23 | 1953 |
| 3318.37 | 1953.11 | 3330.54 | 1954 | 3343.95 | 1954.64 | 3352.49 | 1955 | 3363.11 | 1956 |

3374.94 1957.51 3381.69 1958.35 3386.64 1959 3392.61 1959.19 3411.65 1960

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2501.25 | .045 | 2501.25 | .04 | 3411.65 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2501.25 | 3411.65 | 111.21 | 111.21 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1953.48 | Element | Left OB | Channel | Right OB |
| Vel Head (ft) | 0.73 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1952.74 | Reach Len. (ft) | 111.21 | 111.21 | 111.21 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 3260.95 | |
| E.G. Slope (ft/ft) | 0.004773 | Area (sq ft) | | 3260.95 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 743.25 | Top Width (ft) | | 743.25 | |
| Vel Total (ft/s) | 6.87 | Avg. Vel. (ft/s) | | 6.87 | |
| Max Chl Dpth (ft) | 6.92 | Hydr. Depth (ft) | | 4.39 | |
| Conv. Total (cfs) | 324241.0 | Conv. (cfs) | | 324241.0 | |
| Length Wtd. (ft) | 111.21 | Wetted Per. (ft) | | 744.66 | |
| Min Ch El (ft) | 1945.82 | Shear (lb/sq ft) | | 1.30 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 3411.65 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.90 | Cum Volume (acre-ft) | | 3407.95 | |
| C & E Loss (ft) | 0.08 | Cum SA (acres) | | 1595.67 | |

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -213.85

INPUT
Description:
Station Elevation Data num= 96

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2458.78 | 1953.87 | 2461.52 | 1954 | 2464.08 | 1953.96 | 2467.49 | 1953.75 | 2469.27 | 1953.58 |
| 2471.89 | 1953.4 | 2474.4 | 1953.18 | 2477.11 | 1952.9 | 2482.92 | 1952.24 | 2485.52 | 1952.09 |
| 2488.78 | 1952 | 2490.01 | 1951.92 | 2498.27 | 1951.02 | 2501.4 | 1950.75 | 2503.83 | 1950.62 |
| 2507.16 | 1950.56 | 2517.18 | 1950.56 | 2530.41 | 1949.83 | 2539.2 | 1949 | 2546.64 | 1948.33 |
| 2550.55 | 1948 | 2568.74 | 1946.5 | 2573.01 | 1946.17 | 2574.23 | 1946 | 2596.03 | 1946 |
| 2607.46 | 1945 | 2729.84 | 1945 | 2762.87 | 1946 | 2766.29 | 1946.03 | 2771.28 | 1946.15 |
| 2786.4 | 1946.47 | 2788.83 | 1946.49 | 2795.76 | 1946.49 | 2803.04 | 1946.77 | 2804.72 | 1946.88 |
| 2808.42 | 1947.01 | 2810.33 | 1947.16 | 2818.85 | 1947.69 | 2821.58 | 1947.82 | 2823.82 | 1948 |
| 2825.52 | 1948.27 | 2830.55 | 1949 | 2857.18 | 1949 | 2857.58 | 1948.99 | 2880.8 | 1948.89 |
| 2885.69 | 1948.84 | 2948.72 | 1948.95 | 2957.99 | 1948.92 | 2965.1 | 1948.91 | 2966.38 | 1948.89 |
| 2978.78 | 1948.89 | 2979.86 | 1948.86 | 2985.84 | 1948.92 | 2988.85 | 1948.88 | 2997.99 | 1948.46 |
| 3002.27 | 1948.35 | 3006.28 | 1948.19 | 3014.86 | 1948 | 3032.39 | 1948 | 3039.98 | 1948.67 |
| 3044.81 | 1949 | 3048.37 | 1949.3 | 3054.36 | 1949.75 | 3056.4 | 1949.88 | 3061.24 | 1950.04 |
| 3064.36 | 1950.03 | 3072.78 | 1950.1 | 3081.39 | 1950 | 3122 | 1950 | 3124.42 | 1949.92 |
| 3130.38 | 1949.79 | 3137.7 | 1949.61 | 3159.84 | 1949 | 3176.58 | 1949 | 3178.22 | 1949.13 |
| 3182.65 | 1949.33 | 3186.56 | 1949.39 | 3194.51 | 1949.6 | 3196.51 | 1949.69 | 3212.36 | 1950 |
| 3228.13 | 1949.98 | 3236.66 | 1949.98 | 3254.31 | 1950 | 3262.57 | 1950.47 | 3268.11 | 1950.77 |
| 3273.52 | 1951 | 3277.45 | 1951.26 | 3288.32 | 1951.87 | 3291.78 | 1952 | 3294.53 | 1952.01 |
| 3300.31 | 1952.46 | 3304.52 | 1952.7 | 3307.39 | 1953 | 3322.94 | 1954 | 3334 | 1954.59 |
| 3339.83 | 1954.86 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2458.78 | .045 | 2458.78 | .04 | 3339.83 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2458.78 | 3339.83 | 90.5 | 90.5 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1952.50 | Element | Left OB | Channel | Right OB |
| Vel Head (ft) | 1.49 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1951.02 | Reach Len. (ft) | 90.50 | 90.50 | 90.50 |
| Crit W.S. (ft) | 1951.02 | Flow Area (sq ft) | | 2288.32 | |
| E.G. Slope (ft/ft) | 0.016420 | Area (sq ft) | | 2288.32 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 775.45 | Top Width (ft) | | 775.45 | |
| Vel Total (ft/s) | 9.79 | Avg. Vel. (ft/s) | | 9.79 | |
| Max Chl Dpth (ft) | 6.02 | Hydr. Depth (ft) | | 2.95 | |
| Conv. Total (cfs) | 174807.7 | Conv. (cfs) | | 174807.7 | |
| Length Wtd. (ft) | 90.50 | Wetted Per. (ft) | | 775.99 | |
| Min Ch El (ft) | 1945.00 | Shear (lb/sq ft) | | 3.02 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 3339.83 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.83 | Cum Volume (acre-ft) | | 3400.87 | |

| | | | |
|---|---|---|---|
| C & E Loss (ft) | 0.31 | Cum SA (acres) | 1593.73 |

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth
for the water surface and continued on with the calculations.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the
need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated
water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program
defaulted to critical depth.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -304.35

INPUT
Description:
Station Elevation Data num= 228

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 1599.31 | 1955 | 1612.81 | 1954.67 | 1623.72 | 1954.43 | 1641.13 | 1954 | 1647.73 | 1953.65 |
| 1651.99 | 1953.48 | 1654.16 | 1953.42 | 1664.56 | 1953.4 | 1673.77 | 1953.29 | 1690.21 | 1953.05 |
| 1696 | 1952.9 | 1705.4 | 1952.42 | 1713.4 | 1952 | 1717.74 | 1951.6 | 1724.09 | 1951.09 |
| 1727.6 | 1950.84 | 1730.27 | 1950.69 | 1732.81 | 1950.62 | 1743.15 | 1950.55 | 1744.07 | 1950.52 |
| 1762.13 | 1948.88 | 1767.87 | 1948.38 | 1772.04 | 1948.1 | 1774.54 | 1948.08 | 1777.87 | 1948.15 |
| 1779.14 | 1948.12 | 1780.95 | 1948 | 1792.13 | 1947.3 | 1796.68 | 1947 | 1805.16 | 1947 |
| 1806.7 | 1946.89 | 1816.63 | 1946 | 1853.07 | 1946 | 1856.22 | 1946.28 | 1858.28 | 1946.33 |
| 1872.54 | 1947 | 1943.72 | 1947 | 1948.95 | 1946.99 | 1960.33 | 1946.99 | 1961.63 | 1947 |
| 1971.79 | 1947.17 | 1975.82 | 1947.16 | 2001.02 | 1947.48 | 2018.17 | 1947.42 | 2025.52 | 1947.39 |
| 2031.15 | 1947.38 | 2036.08 | 1947.35 | 2048.28 | 1947.34 | 2058.06 | 1947.31 | 2082.82 | 1947.26 |
| 2086.01 | 1947.25 | 2103.65 | 1947 | 2110.53 | 1947 | 2114.65 | 1947.05 | 2122.88 | 1947.09 |
| 2140.35 | 1947.11 | 2144.18 | 1947.1 | 2149.5 | 1947.17 | 2163.03 | 1947.53 | 2179.42 | 1948 |
| 2186.35 | 1948 | 2190.97 | 1948.2 | 2195.37 | 1948.33 | 2211.77 | 1949 | 2219.47 | 1949 |
| 2223.32 | 1949.04 | 2228.25 | 1949.26 | 2231.32 | 1949.36 | 2238.36 | 1949.5 | 2242.27 | 1949.64 |
| 2250.27 | 1949.83 | 2255.1 | 1950 | 2277.61 | 1950 | 2281.97 | 1949.93 | 2284.02 | 1949.96 |
| 2286.82 | 1949.95 | 2302.42 | 1949.62 | 2317.22 | 1949.26 | 2327.32 | 1949 | 2329.43 | 1949 |
| 2334.67 | 1948.81 | 2344.53 | 1948.71 | 2352.39 | 1948.64 | 2353.5 | 1948.67 | 2354.86 | 1948.64 |
| 2362.96 | 1948.69 | 2367.02 | 1948.82 | 2373.88 | 1949.08 | 2382.71 | 1949.45 | 2393.43 | 1949.91 |
| 2399.69 | 1950 | 2405.27 | 1950.32 | 2414.31 | 1951 | 2419.13 | 1951.16 | 2420.75 | 1951.19 |
| 2425.49 | 1951.06 | 2428.38 | 1951.04 | 2432.83 | 1951.08 | 2439.05 | 1951.04 | 2441.88 | 1951.08 |
| 2455.35 | 1950.46 | 2458.19 | 1950.13 | 2458.88 | 1950 | 2462.51 | 1949.62 | 2473.14 | 1948.55 |
| 2478.26 | 1948.18 | 2481.76 | 1948 | 2489.4 | 1948 | 2494.9 | 1947.99 | 2505.71 | 1947.99 |
| 2507.87 | 1948 | 2510.05 | 1948.61 | 2514.74 | 1950 | 2516.43 | 1950.48 | 2517.88 | 1951 |
| 2519.55 | 1951.52 | 2520.9 | 1952 | 2528.13 | 1953 | 2530.27 | 1953.23 | 2532.31 | 1953.26 |
| 2535.32 | 1953 | 2538.37 | 1952.58 | 2541.3 | 1952 | 2542.41 | 1951.4 | 2543.87 | 1950.47 |
| 2545.13 | 1949.48 | 2545.62 | 1949 | 2547.84 | 1947 | 2548.53 | 1946 | 2553.27 | 1946 |
| 2555.93 | 1946.02 | 2562.28 | 1946.1 | 2571.14 | 1946 | 2581.43 | 1945.54 | 2587.69 | 1945.23 |
| 2597.8 | 1945.72 | 2601.47 | 1946 | 2606.2 | 1946 | 2622.06 | 1945.81 | 2622.79 | 1945.79 |
| 2634.09 | 1945.64 | 2646.25 | 1945.43 | 2667.53 | 1945 | 2680.15 | 1945 | 2713.63 | 1944.99 |
| 2748.82 | 1944.99 | 2773.41 | 1945 | 2787.84 | 1945 | 2788.52 | 1945.01 | 2810.44 | 1945.74 |
| 2818.98 | 1946 | 2827.31 | 1946.03 | 2834.35 | 1946 | 2846.65 | 1946 | 2850.22 | 1946.22 |
| 2858.92 | 1946.86 | 2860.44 | 1947 | 2877.64 | 1947 | 2889.81 | 1947.55 | 2901.16 | 1948 |
| 2908.94 | 1948.53 | 2916.12 | 1949 | 2934.52 | 1949 | 2948.4 | 1948.47 | 2953.63 | 1948.3 |
| 2974.81 | 1948 | 2990.55 | 1948 | 2998.51 | 1947.99 | 3021.67 | 1947.99 | 3027.35 | 1948 |
| 3050.34 | 1948 | 3056.39 | 1948.61 | 3059.41 | 1948.8 | 3063.41 | 1949 | 3065.32 | 1949 |
| 3067.11 | 1948.85 | 3072.72 | 1948.92 | 3082.57 | 1948.8 | 3087.66 | 1948.85 | 3098.06 | 1948.92 |
| 3101.61 | 1949 | 3113.34 | 1949.41 | 3128.58 | 1950 | 3131.16 | 1950.16 | 3142.4 | 1950.89 |
| 3145.42 | 1951 | 3157.45 | 1951 | 3159.71 | 1950.99 | 3186.14 | 1950.01 | 3186.49 | 1950 |
| 3195.02 | 1949.52 | 3200.87 | 1949.21 | 3204.73 | 1949.06 | 3206.85 | 1949.02 | 3213.05 | 1949.03 |
| 3217.71 | 1949 | 3258.96 | 1949 | 3260.47 | 1949.01 | 3275.99 | 1949.01 | 3284.83 | 1949.02 |
| 3306.79 | 1949.63 | 3309.11 | 1949.68 | 3316.06 | 1949.72 | 3319.25 | 1949.61 | 3319.89 | 1949.65 |
| 3325.34 | 1949.64 | 3327.4 | 1949.67 | 3330.28 | 1949.62 | 3344.48 | 1949 | 3353.51 | 1948.96 |
| 3362.49 | 1948.97 | 3367.08 | 1949 | 3370.85 | 1949.13 | 3373.43 | 1949.13 | 3375.64 | 1949.06 |
| 3377.9 | 1949.11 | 3385.66 | 1949.73 | 3389.36 | 1950.07 | 3402.77 | 1951 | 3404.68 | 1951.27 |
| 3409.44 | 1952 | 3415.84 | 1952.41 | 3423.31 | 1953 | 3426.88 | 1953.04 | 3434.18 | 1953.02 |
| 3441.69 | 1953.04 | 3451.21 | 1953.41 | 3459.11 | 1953.67 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 1599.31 | .045 | 1599.31 | .04 | 3459.11 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 1599.31 | 3459.11 | 85.16 | 85.16 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1950.86 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.47 | Wt. n-Val. | | 0.040 | | |

| | | | | | |
|---|---|---|---|---|---|
| W.S. Elev (ft) | 1950.40 | Reach Len. (ft) | 85.16 | 85.16 | 85.16 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 4090.06 | |
| E.G. Slope (ft/ft) | 0.005875 | Area (sq ft) | | 4090.06 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 1530.32 | Top Width (ft) | | 1530.32 | |
| Vel Total (ft/s) | 5.48 | Avg. Vel. (ft/s) | | 5.48 | |
| Max Chl Dpth (ft) | 5.41 | Hydr. Depth (ft) | | 2.67 | |
| Conv. Total (cfs) | 292238.7 | Conv. (cfs) | | 292238.7 | |
| Length Wtd. (ft) | 85.16 | Wetted Per. (ft) | | 1533.27 | |
| Min Ch El (ft) | 1944.99 | Shear (lb/sq ft) | | 0.98 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 3459.11 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.49 | Cum Volume (acre-ft) | | 3394.24 | |
| C & E Loss (ft) | 0.01 | Cum SA (acres) | | 1591.34 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -389.51

INPUT
Description:
Station Elevation Data num= 191

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 1643.27 | 1953.97 | 1655.11 | 1953.68 | 1656.65 | 1953.68 | 1665.34 | 1953.43 | 1665.86 | 1953.42 |
| 1678.64 | 1953 | 1699.74 | 1952.18 | 1705.85 | 1952.01 | 1706.46 | 1952 | 1718.87 | 1951 |
| 1728.3 | 1950 | 1730.98 | 1949.73 | 1736.65 | 1949.13 | 1746.78 | 1948 | 1753.28 | 1947.44 |
| 1760.91 | 1947.01 | 1770.14 | 1947 | 1790.98 | 1947 | 1800.07 | 1946.71 | 1802.51 | 1946.73 |
| 1808.86 | 1946.71 | 1809.9 | 1946.7 | 1811.23 | 1946.64 | 1813.78 | 1946.48 | 1815.69 | 1946.44 |
| 1821.4 | 1946 | 1825.08 | 1946 | 1837.55 | 1946.76 | 1841.88 | 1947 | 1869.5 | 1947 |
| 1880.46 | 1946.69 | 1880.69 | 1946.7 | 1887.51 | 1946.6 | 1898.4 | 1946.95 | 1905.44 | 1946.93 |
| 1913.41 | 1946.94 | 1926.69 | 1947 | 1957.1 | 1947 | 1958.46 | 1946.99 | 1966.06 | 1946.99 |
| 1972.57 | 1947 | 2074.18 | 1947 | 2076.52 | 1946.94 | 2088.79 | 1946.85 | 2099.06 | 1946.79 |
| 2113.54 | 1946.96 | 2118.21 | 1946.96 | 2121.6 | 1946.98 | 2123.42 | 1946.97 | 2126.96 | 1947 |
| 2219.84 | 1947 | 2222.11 | 1947.15 | 2226.71 | 1947.25 | 2230.38 | 1947.31 | 2233.81 | 1947.26 |
| 2236.02 | 1947.24 | 2243.12 | 1947.25 | 2245.23 | 1947.27 | 2249.29 | 1947.33 | 2251.97 | 1947.36 |
| 2254.78 | 1947.37 | 2282.62 | 1947.99 | 2295.37 | 1947.99 | 2301.15 | 1948 | 2313.8 | 1948 |
| 2318.76 | 1948.2 | 2322 | 1948.3 | 2340.34 | 1949 | 2347 | 1949.06 | 2347.6 | 1949.06 |
| 2354.43 | 1949 | 2357.52 | 1948.91 | 2359.32 | 1948.88 | 2363.55 | 1948.85 | 2366.34 | 1948.77 |
| 2377.05 | 1948.73 | 2385.27 | 1948.36 | 2389.69 | 1948.17 | 2393.07 | 1948 | 2401.61 | 1947.88 |
| 2407.09 | 1947.82 | 2408.8 | 1947.79 | 2413.65 | 1947.68 | 2417.39 | 1947.61 | 2424.58 | 1947.53 |
| 2430.76 | 1947.51 | 2437.74 | 1947.47 | 2444.83 | 1947.4 | 2455.11 | 1947.67 | 2455.8 | 1947.65 |
| 2458.08 | 1947.76 | 2458.51 | 1947.74 | 2460.06 | 1947.79 | 2464.49 | 1947.89 | 2468.09 | 1947.95 |
| 2472.09 | 1947.96 | 2476.4 | 1947.89 | 2478.96 | 1947.8 | 2488.74 | 1947.54 | 2490.99 | 1947.46 |
| 2501.02 | 1947.27 | 2508.09 | 1947.03 | 2523.41 | 1946 | 2550.79 | 1946 | 2557.25 | 1946.46 |
| 2565.55 | 1947 | 2584.07 | 1947 | 2590.14 | 1946.87 | 2606.29 | 1946.54 | 2629.97 | 1946 |
| 2642.95 | 1945.55 | 2643.7 | 1945.52 | 2649.09 | 1945.35 | 2654.88 | 1945.16 | 2656.61 | 1945.11 |
| 2661.13 | 1945 | 2665.43 | 1945 | 2669.58 | 1944.85 | 2678.81 | 1944.65 | 2684.65 | 1944.53 |
| 2720.87 | 1944.65 | 2734 | 1944.7 | 2778.94 | 1944.86 | 2782.79 | 1944.88 | 2796.29 | 1945 |
| 2808.91 | 1946 | 2827.27 | 1946 | 2828.04 | 1946.01 | 2835.22 | 1946.01 | 2871.61 | 1946.6 |
| 2885.91 | 1946.83 | 2889.39 | 1946.87 | 2892.22 | 1946.89 | 2903.73 | 1947 | 2944.74 | 1947 |
| 2947.86 | 1947.53 | 2950.24 | 1948 | 2956.49 | 1948.31 | 2961.52 | 1948.5 | 2969.1 | 1948.83 |
| 2974.13 | 1948.96 | 2976.12 | 1948.98 | 2976.58 | 1948.96 | 2978.32 | 1949 | 2985.41 | 1949 |
| 2992.7 | 1948.99 | 2998.6 | 1948.99 | 3003.11 | 1948.92 | 3019.24 | 1948.69 | 3021.71 | 1948.7 |
| 3032.47 | 1948.77 | 3040.93 | 1948.85 | 3042.77 | 1948.86 | 3056.93 | 1949 | 3059.93 | 1949.01 |
| 3060.99 | 1949 | 3132.99 | 1949 | 3137.65 | 1949.92 | 3138.25 | 1950 | 3142.13 | 1950.45 |
| 3143.64 | 1950.59 | 3145.38 | 1950.68 | 3148.71 | 1950.64 | 3152.73 | 1950.44 | 3153.22 | 1950.4 |
| 3158.61 | 1950.05 | 3160.63 | 1949.89 | 3162.42 | 1949.73 | 3164.11 | 1949.54 | 3167.79 | 1949.09 |
| 3168.41 | 1949 | 3244.82 | 1949 | 3255.49 | 1949.05 | 3257.68 | 1949.05 | 3268.65 | 1949.08 |
| 3273.49 | 1949 | 3279.27 | 1949 | 3288.63 | 1948.67 | 3299.85 | 1948.29 | 3306.44 | 1948.11 |
| 3308.39 | 1948 | 3324.29 | 1947.82 | 3326.44 | 1947.8 | 3341.57 | 1947.98 | 3344.83 | 1948 |
| 3350.07 | 1948.67 | 3352.49 | 1949 | 3360.25 | 1950 | 3363.11 | 1950.45 | 3367.2 | 1951 |
| 3368.66 | 1951.71 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 1643.27 | .045 | 1643.27 | .04 | 3368.66 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 1643.27 | 3368.66 | 110.31 | 110.31 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1950.36 | Element | Left OB | Channel | Right OB |
| Vel Head (ft) | 0.44 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1949.93 | Reach Len. (ft) | 110.31 | 110.31 | 110.31 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 4227.06 | |
| E.G. Slope (ft/ft) | 0.005614 | Area (sq ft) | | 4227.06 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 1608.24 | Top Width (ft) | | 1608.24 | |
| Vel Total (ft/s) | 5.30 | Avg. Vel. (ft/s) | | 5.30 | |
| Max Chl Dpth (ft) | 5.40 | Hydr. Depth (ft) | | 2.63 | |
| Conv. Total (cfs) | 298959.4 | Conv. (cfs) | | 298959.4 | |
| Length Wtd. (ft) | 110.31 | Wetted Per. (ft) | | 1609.09 | |
| Min Ch El (ft) | 1944.53 | Shear (lb/sq ft) | | 0.92 | |

| | | | | |
|---|---|---|---|---|
| Alpha | 1.00 | Stream Power (lb/ft s) | 3368.66 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.46 | Cum Volume (acre-ft) | | 3386.11 | |
| C & E Loss (ft) | 0.07 | Cum SA (acres) | | 1588.27 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -499.82

INPUT
Description:
Station Elevation Data num= 309

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 1641.47 | 1954 | 1648.42 | 1953.8 | 1673.69 | 1953.02 | 1676.55 | 1953 | 1681.25 | 1952.77 |
| 1696.01 | 1952 | 1696.66 | 1951.98 | 1714.7 | 1951.64 | 1723.38 | 1951.47 | 1724.16 | 1951.47 |
| 1734.74 | 1951.28 | 1735.1 | 1951.28 | 1744.86 | 1951.03 | 1748.93 | 1951 | 1760.93 | 1950.38 |
| 1768.04 | 1950 | 1768.87 | 1949.94 | 1772.86 | 1949.78 | 1775.47 | 1949.69 | 1782.81 | 1949.58 |
| 1788.96 | 1949 | 1798.28 | 1948 | 1800.32 | 1947.56 | 1803.78 | 1947 | 1807.1 | 1946.06 |
| 1807.7 | 1945.93 | 1812.37 | 1945 | 1815.63 | 1945 | 1816.68 | 1945.02 | 1823.1 | 1945.24 |
| 1836.72 | 1946 | 1851.65 | 1946.01 | 1860.86 | 1946.01 | 1871.76 | 1946.02 | 1877.68 | 1946.02 |
| 1886.59 | 1946.03 | 1891.41 | 1946.03 | 1894.4 | 1946.02 | 1904.03 | 1946.02 | 1912.11 | 1946.56 |
| 1913.37 | 1946.56 | 1916.96 | 1946.76 | 1921.91 | 1947 | 1946.52 | 1947 | 1956.28 | 1946.71 |
| 1960.13 | 1946.63 | 1962.28 | 1946.61 | 1969.23 | 1946.68 | 1974.62 | 1946.93 | 1976.74 | 1946.92 |
| 1981.07 | 1947 | 2004.85 | 1947 | 2008.7 | 1946.98 | 2016.92 | 1947.01 | 2023.54 | 1946.99 |
| 2032.89 | 1947.05 | 2036.56 | 1947.1 | 2040.84 | 1947 | 2043.93 | 1947.01 | 2052.07 | 1947.01 |
| 2060.35 | 1947.02 | 2064.42 | 1947.01 | 2078.21 | 1947.01 | 2092.09 | 1947 | 2097.98 | 1946.97 |
| 2104.17 | 1947 | 2244.51 | 1947 | 2249.08 | 1947.01 | 2254.57 | 1947.01 | 2265.73 | 1947.04 |
| 2272.76 | 1947.03 | 2282.09 | 1947.03 | 2299.64 | 1947 | 2392.66 | 1947 | 2392.9 | 1946.99 |
| 2417.42 | 1946.99 | 2421.89 | 1947 | 2424.23 | 1947.06 | 2425.81 | 1947.12 | 2444.95 | 1947.98 |
| 2447.29 | 1947.98 | 2455.56 | 1947.86 | 2459.61 | 1947.87 | 2468.49 | 1947.53 | 2472.89 | 1947.45 |
| 2476.79 | 1947.4 | 2479.86 | 1947.38 | 2485.85 | 1947.02 | 2493.04 | 1947 | 2495.91 | 1946.81 |
| 2509.45 | 1946 | 2511.93 | 1945.79 | 2515.95 | 1945.4 | 2519.61 | 1945 | 2521.8 | 1944.7 |
| 2528.76 | 1944.52 | 2535.5 | 1944.68 | 2541.18 | 1945.18 | 2551.5 | 1946 | 2560.25 | 1946.3 |
| 2583.32 | 1947 | 2614.17 | 1947 | 2621.59 | 1946.79 | 2621.98 | 1946.79 | 2652.71 | 1946 |
| 2668.94 | 1946 | 2677.54 | 1945.28 | 2681.01 | 1945 | 2682.72 | 1944.83 | 2691.76 | 1944 |
| 2701.62 | 1943.99 | 2709.85 | 1943.99 | 2720.4 | 1943.98 | 2727.24 | 1943.99 | 2747.56 | 1943.99 |
| 2748.1 | 1944 | 2752.94 | 1944 | 2793.13 | 1944.67 | 2794.04 | 1944.68 | 2815.37 | 1945 |
| 2833.38 | 1945 | 2836.02 | 1945.41 | 2840.85 | 1946 | 2845.08 | 1946.57 | 2848.55 | 1947 |
| 2868.9 | 1947 | 2871.22 | 1946.87 | 2874.08 | 1946.66 | 2876.25 | 1946.53 | 2886.34 | 1946.4 |
| 2898.59 | 1946 | 2909.98 | 1946 | 2915.55 | 1946.25 | 2922.41 | 1946.55 | 2933.04 | 1947 |
| 2955.54 | 1947 | 2965.5 | 1947.79 | 2967.92 | 1948 | 2970.03 | 1948.22 | 2976.97 | 1949 |
| 2984.05 | 1949.77 | 2986.31 | 1949.84 | 2988.41 | 1949.82 | 2990.72 | 1949.67 | 2991.95 | 1949.63 |
| 2997.99 | 1949 | 3003.16 | 1948.18 | 3004.54 | 1948 | 3011.28 | 1947.49 | 3018 | 1947.03 |
| 3019.18 | 1947 | 3023.2 | 1947 | 3027.18 | 1947.17 | 3033.44 | 1947.46 | 3045.63 | 1948 |
| 3051.96 | 1948.69 | 3056.12 | 1949.1 | 3061.35 | 1949.36 | 3064.46 | 1949.46 | 3069.4 | 1949.37 |
| 3077.28 | 1949.16 | 3082.09 | 1949 | 3089.42 | 1948.99 | 3097.06 | 1948.54 | 3100.67 | 1948.34 |
| 3105.42 | 1948.38 | 3109.77 | 1948.39 | 3122.02 | 1948.28 | 3135.26 | 1948.15 | 3142.09 | 1948.04 |
| 3147.4 | 1948 | 3179.29 | 1947.98 | 3205.99 | 1947.94 | 3261.85 | 1947.91 | 3265.89 | 1948 |
| 3268.17 | 1948 | 3283.11 | 1947.73 | 3286.74 | 1947.68 | 3293.34 | 1947.66 | 3299.75 | 1947.66 |
| 3300.55 | 1947.64 | 3304.05 | 1947.63 | 3307.41 | 1947.59 | 3310.56 | 1947.53 | 3315.97 | 1947.45 |
| 3324.71 | 1947.48 | 3337.8 | 1947.68 | 3338.04 | 1947.67 | 3340.57 | 1948 | 3346.89 | 1948.75 |
| 3348.76 | 1949 | 3352.79 | 1949.27 | 3365.9 | 1950 | 3391.73 | 1950 | 3394.9 | 1949.75 |
| 3397.73 | 1949.57 | 3401.76 | 1949.35 | 3405.51 | 1949.11 | 3408.6 | 1949 | 3418.43 | 1948.78 |
| 3422.17 | 1948.71 | 3428.63 | 1948.5 | 3430.93 | 1948.4 | 3435.78 | 1948.25 | 3439.44 | 1948 |
| 3445.18 | 1947.79 | 3454.66 | 1947.49 | 3458.6 | 1947.37 | 3464.11 | 1947.22 | 3470.19 | 1947 |
| 3523.88 | 1946.1 | 3530.33 | 1946 | 3536.48 | 1946 | 3539.34 | 1946.04 | 3542.22 | 1946 |
| 3691.67 | 1946 | 3710.15 | 1946.29 | 3721.32 | 1946.49 | 3749.22 | 1947 | 3789.37 | 1947 |
| 3794.54 | 1946.85 | 3797.21 | 1946.74 | 3804.67 | 1946.51 | 3807.98 | 1946.38 | 3813.94 | 1946.22 |
| 3816.34 | 1946.14 | 3818.23 | 1946.13 | 3824.91 | 1946.07 | 3826.5 | 1946.03 | 3829.13 | 1946 |
| 3832.67 | 1946 | 3836.13 | 1946.27 | 3846.45 | 1947 | 3858.21 | 1947.53 | 3860.56 | 1947.58 |
| 3863.35 | 1947.68 | 3866.48 | 1947.77 | 3876.48 | 1947.91 | 3878.96 | 1947.97 | 3881.52 | 1947.98 |
| 3882.25 | 1948 | 3899.57 | 1948.33 | 3921.84 | 1948.83 | 3929.55 | 1949 | 3932.06 | 1949.07 |
| 3947.61 | 1949.42 | 3957.83 | 1949.6 | 3965.89 | 1949.71 | 3970.92 | 1949.55 | 3987.9 | 1949 |
| 4021.75 | 1949 | 4027.41 | 1948.99 | 4039.42 | 1948.99 | 4055.03 | 1948.85 | 4061.1 | 1949 |
| 4096.71 | 1949 | 4102.41 | 1948.99 | 4124.36 | 1948.99 | 4125.95 | 1949 | 4136.73 | 1949 |
| 4139.34 | 1948.99 | 4141.25 | 1948.95 | 4145.47 | 1949 | 4233.75 | 1949 | 4239.63 | 1948.99 |
| 4246.19 | 1948.99 | 4259.75 | 1948.97 | 4265.13 | 1948.98 | 4277.62 | 1948.97 | 4280.98 | 1948.98 |
| 4289 | 1948.98 | 4296.9 | 1948.99 | 4307.2 | 1948.99 | 4309.24 | 1949 | 4316.46 | 1949 |
| 4319.13 | 1948.99 | 4322.68 | 1949 | 4324.72 | 1949.05 | 4325.85 | 1949.05 | 4330.68 | 1949.39 |
| 4335.25 | 1949.61 | 4338.61 | 1949.76 | 4345.04 | 1950 | 4355.84 | 1950 | 4362.66 | 1949.8 |
| 4384.55 | 1949.43 | 4409.1 | 1949 | 4527.98 | 1949 | 4532.94 | 1948.89 | 4551.46 | 1948.42 |
| 4562.85 | 1948.19 | 4565.15 | 1948.23 | 4571.98 | 1948.52 | 4577.99 | 1948.7 | 4584.15 | 1948.99 |
| 4585.15 | 1949 | 4591.45 | 1949.35 | 4605.63 | 1950 | 4704.5 | 1950 | 4707.87 | 1949.91 |
| 4740.72 | 1949.29 | 4742.19 | 1949.28 | 4753.92 | 1949.43 | 4755.52 | 1949.44 | 4767.22 | 1949.72 |
| 4776.77 | 1950 | 4791.17 | 1951 | 4797.12 | 1951 | 4819.05 | 1951.2 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 1641.47 | .045 | 1641.47 | .04 | 4819.05 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 1641.47 | 4819.05 | 58.44 | 58.44 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1949.84 | Element | Left OB | Channel | Right OB |
| Vel Head (ft) | 0.20 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1949.64 | Reach Len. (ft) | 58.44 | 58.44 | 58.44 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6243.57 | |
| E.G. Slope (ft/ft) | 0.003159 | Area (sq ft) | | 6243.57 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 2770.46 | Top Width (ft) | | 2770.46 | |
| Vel Total (ft/s) | 3.59 | Avg. Vel. (ft/s) | | 3.59 | |
| Max Chl Dpth (ft) | 5.66 | Hydr. Depth (ft) | | 2.25 | |
| Conv. Total (cfs) | 398512.4 | Conv. (cfs) | | 398512.4 | |
| Length Wtd. (ft) | 58.44 | Wetted Per. (ft) | | 2772.18 | |
| Min Ch El (ft) | 1943.98 | Shear (lb/sq ft) | | 0.44 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4819.05 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.18 | Cum Volume (acre-ft) | | 3372.85 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1582.72 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -558.26

INPUT
Description:
Station Elevation Data num= 324

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 1762.13 | 1951 | 1770.74 | 1950.92 | 1772.74 | 1950.88 | 1774.18 | 1950.87 | 1776.05 | 1950.82 |
| 1791.21 | 1950.25 | 1792.2 | 1950.2 | 1797.44 | 1950 | 1801.77 | 1949.6 | 1807.7 | 1949 |
| 1809.21 | 1948.83 | 1815.17 | 1948 | 1816.29 | 1947.73 | 1820.31 | 1947 | 1825.64 | 1946 |
| 1831.06 | 1945 | 1832.82 | 1945.01 | 1840.37 | 1945.02 | 1841.02 | 1945.01 | 1844.84 | 1945.01 |
| 1847.56 | 1945 | 1848.87 | 1945.1 | 1850.03 | 1945.22 | 1851.82 | 1945.33 | 1852.24 | 1945.38 |
| 1859.11 | 1945.97 | 1861.23 | 1946 | 1871.82 | 1946.01 | 1877.51 | 1946 | 1882.92 | 1946 |
| 1886.99 | 1945.99 | 1895.47 | 1945.99 | 1905.68 | 1945.69 | 1915.2 | 1945.66 | 1919.61 | 1945.63 |
| 1922.66 | 1945.63 | 1935.53 | 1945.75 | 1935.58 | 1945.76 | 1940.03 | 1945.81 | 1945.68 | 1945.85 |
| 1947.12 | 1945.85 | 1949.92 | 1945.78 | 1950.58 | 1945.78 | 1953.68 | 1945.71 | 1960.78 | 1945.66 |
| 1967.64 | 1945.68 | 1971.16 | 1945.57 | 1976.13 | 1945.91 | 1977.12 | 1945.97 | 1983.01 | 1946.24 |
| 1985 | 1946.3 | 1988.55 | 1946.27 | 1992.56 | 1946.21 | 1994.82 | 1946.13 | 1997.99 | 1946 |
| 2007.81 | 1945.99 | 2018.08 | 1946 | 2032.28 | 1946 | 2036.56 | 1946.13 | 2054.43 | 1946.99 |
| 2055.8 | 1947 | 2219.1 | 1947 | 2224.86 | 1947.01 | 2251.64 | 1947.01 | 2254 | 1947 |
| 2368.74 | 1947 | 2369.74 | 1946.99 | 2377.03 | 1946.99 | 2384.34 | 1946.76 | 2384.43 | 1946.75 |
| 2395.88 | 1946.6 | 2396.36 | 1946.59 | 2401.69 | 1946.69 | 2406.17 | 1946.92 | 2408.32 | 1946.94 |
| 2410.46 | 1947 | 2413.85 | 1947.32 | 2419.97 | 1947.94 | 2426.67 | 1948.54 | 2428.61 | 1948.7 |
| 2433.19 | 1948.96 | 2435.15 | 1949 | 2435.98 | 1949.09 | 2436.87 | 1949.25 | 2439.92 | 1950 |
| 2443.99 | 1950.98 | 2444.83 | 1951.16 | 2449.08 | 1952 | 2455.05 | 1953 | 2461.27 | 1953 |
| 2466.91 | 1952.02 | 2470.72 | 1951.44 | 2475.64 | 1950.78 | 2481.61 | 1950 | 2484.69 | 1949.59 |
| 2484.97 | 1949.54 | 2493.83 | 1946 | 2496.31 | 1945 | 2499.26 | 1944.17 | 2500.83 | 1944 |
| 2505.38 | 1943.62 | 2508.17 | 1943.29 | 2509.33 | 1943.13 | 2510.55 | 1943 | 2512.88 | 1943 |
| 2514.65 | 1943.2 | 2521.39 | 1944 | 2529.94 | 1945 | 2534.91 | 1945.28 | 2546.97 | 1946 |
| 2548.87 | 1946.09 | 2551.15 | 1946.13 | 2564.92 | 1946.56 | 2577.19 | 1946.87 | 2580.11 | 1946.95 |
| 2585.81 | 1946.98 | 2587.76 | 1947 | 2591.56 | 1947 | 2601.1 | 1946.76 | 2603.76 | 1946.7 |
| 2619.91 | 1946.36 | 2625.41 | 1946.24 | 2633.17 | 1946 | 2634.1 | 1946 | 2661.36 | 1945.39 |
| 2673.22 | 1945.15 | 2679.34 | 1945 | 2682.75 | 1944.77 | 2695.15 | 1944 | 2701.2 | 1943.75 |
| 2702.47 | 1943.72 | 2708.55 | 1943.49 | 2721.59 | 1943.35 | 2729.1 | 1943.28 | 2729.18 | 1943.29 |
| 2734.38 | 1943.42 | 2735.41 | 1943.46 | 2748.48 | 1943.9 | 2751.65 | 1944 | 2755.02 | 1944.07 |
| 2763.09 | 1944.25 | 2782.59 | 1944.64 | 2797.28 | 1945 | 2801.14 | 1945.01 | 2801.84 | 1945 |
| 2807.13 | 1945 | 2811.95 | 1945.15 | 2820.56 | 1945.45 | 2830.53 | 1946 | 2835.69 | 1946 |
| 2855.37 | 1945 | 2871.47 | 1945 | 2881.49 | 1945.1 | 2883.11 | 1945.13 | 2909.23 | 1945.32 |
| 2929.09 | 1945.33 | 2932.34 | 1945.49 | 2940.98 | 1945.89 | 2942.15 | 1946 | 2945.28 | 1946.46 |
| 2946.65 | 1946.58 | 2951.57 | 1946.96 | 2953.26 | 1947.11 | 2955.11 | 1947.32 | 2962.75 | 1948 |
| 3055.85 | 1948 | 3057.39 | 1948.39 | 3063.6 | 1950 | 3070.73 | 1950 | 3071.87 | 1949.98 |
| 3073.3 | 1949.74 | 3074.37 | 1949.66 | 3076.66 | 1949.44 | 3079.82 | 1949 | 3084.48 | 1948.41 |
| 3087.79 | 1948 | 3137.92 | 1948 | 3138.33 | 1947.99 | 3147.2 | 1947.87 | 3176.41 | 1947.48 |
| 3178.35 | 1947.48 | 3180.58 | 1947.46 | 3209.07 | 1947.41 | 3233.18 | 1947.39 | 3260.06 | 1948 |
| 3270.94 | 1948 | 3298.1 | 1947.51 | 3301.93 | 1947.5 | 3306.42 | 1947.45 | 3312.06 | 1947.37 |
| 3313.92 | 1947.37 | 3326.61 | 1947.18 | 3337.11 | 1947.01 | 3338.25 | 1947.31 | 3339.8 | 1947.52 |
| 3340.3 | 1947.67 | 3341.15 | 1947.8 | 3342.4 | 1947.83 | 3342.73 | 1947.87 | 3352.19 | 1947.91 |
| 3354.14 | 1947.91 | 3356.24 | 1947.97 | 3370.08 | 1947.89 | 3380.56 | 1947.74 | 3385.48 | 1947.64 |
| 3397.25 | 1947.38 | 3401.54 | 1947.23 | 3405.67 | 1947.15 | 3410.16 | 1947 | 3490.6 | 1947 |
| 3501.18 | 1946.88 | 3512.45 | 1947 | 3565.11 | 1947 | 3565.21 | 1946.99 | 3579.65 | 1946.41 |
| 3582.66 | 1946.38 | 3586.8 | 1946.37 | 3592.07 | 1946.37 | 3595.62 | 1946.34 | 3611.21 | 1946.35 |
| 3626.87 | 1946.37 | 3628 | 1946.39 | 3642.86 | 1946.11 | 3648.01 | 1946.01 | 3658.7 | 1946.01 |
| 3680.82 | 1946.82 | 3684.03 | 1946.93 | 3691.43 | 1947 | 3694.18 | 1947 | 3700.81 | 1946.78 |
| 3721.81 | 1946.39 | 3726.14 | 1946.42 | 3742.62 | 1946.33 | 3744.96 | 1946.27 | 3747.15 | 1946.28 |
| 3749.67 | 1946.25 | 3754.49 | 1946.29 | 3761.31 | 1946.36 | 3762.08 | 1946.36 | 3765.66 | 1946.49 |
| 3772.17 | 1946.63 | 3780.48 | 1947 | 3798.94 | 1947.81 | 3803.12 | 1948 | 3809.56 | 1948.33 |
| 3814.06 | 1948.51 | 3816.7 | 1948.65 | 3824.69 | 1949 | 3856.59 | 1949 | 3879.09 | 1948.99 |
| 3903.45 | 1948.99 | 3934.69 | 1949 | 3940.93 | 1949 | 3955.45 | 1948.89 | 3956.92 | 1948.86 |
| 3958.18 | 1948.89 | 3959.92 | 1948.87 | 3962.08 | 1948.78 | 3964.75 | 1948.77 | 3973.98 | 1948.28 |
| 3975.27 | 1948.24 | 3979.25 | 1948 | 4111.4 | 1948 | 4118.87 | 1948.2 | 4120.97 | 1948.22 |
| 4140.14 | 1948.48 | 4159.47 | 1948.81 | 4171.54 | 1949 | 4205.24 | 1949 | 4205.31 | 1948.99 |
| 4210.43 | 1948.94 | 4219.09 | 1948.87 | 4222.85 | 1948.85 | 4230.79 | 1948.73 | 4236.02 | 1948.76 |
| 4241.59 | 1948.72 | 4250.06 | 1948.65 | 4258.55 | 1948.93 | 4265.41 | 1948.92 | 4270.65 | 1948.9 |
| 4296.75 | 1948.85 | 4302.78 | 1948.82 | 4308.9 | 1948.85 | 4343.77 | 1948.51 | 4350.24 | 1948.42 |
| 4365.74 | 1948.24 | 4384.54 | 1948 | 4405.43 | 1948 | 4416.08 | 1948.19 | 4420.06 | 1948.23 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4424.66 | 1948.3 | 4428 | 1948.36 | 4439.24 | 1948.61 | 4455.3 | 1948.93 | 4457.61 | 1949 |
| 4593.34 | 1949 | 4598.98 | 1948.99 | 4616.13 | 1948.99 | 4623.25 | 1949 | 4635.56 | 1949 |
| 4637.56 | 1948.99 | 4649.27 | 1948.81 | 4665.77 | 1948.55 | 4683.17 | 1948.27 | 4699.61 | 1948.01 |
| 4700.53 | 1948 | 4767.68 | 1948 | 4774.58 | 1948.23 | 4782.34 | 1948.47 | 4785.34 | 1948.58 |
| 4791.36 | 1948.77 | 4798.01 | 1949 | 4809.63 | 1949.49 | 4822.14 | 1950 | 4828.24 | 1950.05 |
| 4832.68 | 1950.16 | 4842.05 | 1950.28 | 4847.04 | 1950.27 | 4867.37 | 1950.16 | 4895.27 | 1950 |
| 4914.09 | 1950 | 4919.19 | 1950.11 | 4925.85 | 1950.22 | 4965.23 | 1950.99 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 1762.13 | .045 | 1762.13 | .04 | 4965.23 | .045 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 1762.13 | 4965.23 | 70.58 | 70.58 | 70.58 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | Left OB | Channel | Right OB |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1949.65 | Element | | | |
| Vel Head (ft) | 0.19 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1949.47 | Reach Len. (ft) | 70.58 | 70.58 | 70.58 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6461.94 | |
| E.G. Slope (ft/ft) | 0.003056 | Area (sq ft) | | 6461.94 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 2943.72 | Top Width (ft) | | 2943.72 | |
| Vel Total (ft/s) | 3.47 | Avg. Vel. (ft/s) | | 3.47 | |
| Max Chl Dpth (ft) | 6.47 | Hydr. Depth (ft) | | 2.20 | |
| Conv. Total (cfs) | 405211.0 | Conv. (cfs) | | 405211.0 | |
| Length Wtd. (ft) | 70.58 | Wetted Per. (ft) | | 2946.38 | |
| Min Ch El (ft) | 1943.00 | Shear (lb/sq ft) | | 0.42 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4965.23 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.21 | Cum Volume (acre-ft) | | 3364.33 | |
| C & E Loss (ft) | 0.01 | Cum SA (acres) | | 1578.89 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -628.84

INPUT
Description:
Station Elevation Data num= 407

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 1778.33 | 1951 | 1780.23 | 1950.99 | 1781.79 | 1950.95 | 1784.32 | 1950.91 | 1792.29 | 1950.71 |
| 1820.94 | 1950 | 1826.42 | 1950 | 1827.45 | 1949.87 | 1845.04 | 1948.69 | 1853.4 | 1947.9 |
| 1860.64 | 1947 | 1865.27 | 1946.15 | 1866.05 | 1946 | 1871.52 | 1945.02 | 1871.74 | 1945 |
| 1873.94 | 1945.04 | 1876.19 | 1945 | 1877.43 | 1945.26 | 1878.27 | 1945.35 | 1879.39 | 1945.42 |
| 1881.6 | 1945.44 | 1887.86 | 1945.59 | 1888.35 | 1945.61 | 1889.54 | 1945.72 | 1892.13 | 1945.82 |
| 1892.6 | 1945.87 | 1894.66 | 1946 | 1897.3 | 1946.03 | 1903.02 | 1946.08 | 1911.44 | 1946 |
| 1916.22 | 1945.86 | 1918.4 | 1945.79 | 1924.18 | 1945.55 | 1924.64 | 1945.54 | 1935.89 | 1945.42 |
| 1955.57 | 1945.2 | 1958.36 | 1945.15 | 1961.04 | 1945.09 | 1966.07 | 1945 | 2004 | 1945 |
| 2013.77 | 1945.76 | 2016.9 | 1946 | 2020.72 | 1946.06 | 2021.89 | 1946.07 | 2023.24 | 1946.14 |
| 2028.58 | 1946.3 | 2032.28 | 1946.24 | 2041.32 | 1946.28 | 2050.7 | 1946.33 | 2059.55 | 1946.43 |
| 2066.27 | 1946.49 | 2067.17 | 1946.51 | 2080.14 | 1947 | 2281.65 | 1947 | 2284.77 | 1947.01 |
| 2287.52 | 1947 | 2290.36 | 1947.14 | 2291.67 | 1947.13 | 2297.65 | 1947.11 | 2304.11 | 1947.06 |
| 2304.26 | 1947.05 | 2307.42 | 1947 | 2420.08 | 1947 | 2421.72 | 1946.87 | 2424.65 | 1946.77 |
| 2426.85 | 1946.73 | 2428.01 | 1946.73 | 2436.3 | 1946.89 | 2437.86 | 1946.91 | 2439.02 | 1946.9 |
| 2440.33 | 1946.98 | 2441.67 | 1946.97 | 2447.45 | 1946.53 | 2448.46 | 1946.47 | 2455.7 | 1946 |
| 2459.31 | 1945.64 | 2463.67 | 1945.22 | 2466.01 | 1945.01 | 2468.14 | 1944.83 | 2470.67 | 1944.63 |
| 2475.45 | 1944.28 | 2476.53 | 1944.21 | 2478.13 | 1944.08 | 2478.93 | 1944 | 2485.32 | 1943.78 |
| 2488.21 | 1943.71 | 2494.11 | 1943.62 | 2499.48 | 1943 | 2502.78 | 1942.95 | 2505.86 | 1942.98 |
| 2506.89 | 1942.94 | 2512.12 | 1943.73 | 2514.2 | 1944 | 2520.13 | 1944.81 | 2522.02 | 1945 |
| 2536.55 | 1946.28 | 2544.87 | 1947 | 2618.22 | 1947 | 2619.39 | 1946.99 | 2629.56 | 1946.99 |
| 2632.44 | 1946.9 | 2641.64 | 1946.63 | 2654.72 | 1946.25 | 2655.82 | 1946.23 | 2661.87 | 1946.01 |
| 2662.8 | 1946 | 2674.03 | 1946 | 2675.19 | 1945.98 | 2678.73 | 1945.86 | 2700.09 | 1945.02 |
| 2704.74 | 1945 | 2708.26 | 1944.86 | 2710.57 | 1944.75 | 2714.3 | 1944.56 | 2718.08 | 1944.35 |
| 2727.12 | 1944 | 2731.24 | 1943.9 | 2732.83 | 1943.85 | 2751.1 | 1943.82 | 2758.56 | 1943.81 |
| 2763.28 | 1943.86 | 2786.4 | 1943.98 | 2789.11 | 1944 | 2794.07 | 1944.15 | 2799.01 | 1944.29 |
| 2803.14 | 1944.42 | 2813.57 | 1944.7 | 2815.61 | 1944.74 | 2825.88 | 1944.99 | 2826.02 | 1945 |
| 2845.28 | 1945 | 2847.06 | 1944.99 | 2856.57 | 1944.99 | 2865.67 | 1945 | 2871.42 | 1945 |
| 2883.27 | 1944.51 | 2887.52 | 1944.34 | 2896.26 | 1944.34 | 2905.84 | 1944.35 | 2912.65 | 1944.44 |
| 2921.88 | 1944.55 | 2934.18 | 1944.79 | 2945.34 | 1945 | 2947.79 | 1945 | 2949.93 | 1945.01 |
| 2952.27 | 1945 | 2967.33 | 1945 | 2968.32 | 1945.28 | 2973 | 1946 | 2975.2 | 1946.37 |
| 2988.02 | 1947 | 2994.41 | 1947.34 | 2995.24 | 1947.39 | 3003.33 | 1947.84 | 3006.3 | 1948 |
| 3012.96 | 1948 | 3013.06 | 1947.99 | 3022.92 | 1947.69 | 3024.59 | 1947.67 | 3043.99 | 1947.41 |
| 3052.66 | 1947.3 | 3057.19 | 1947.33 | 3058.77 | 1947.33 | 3061.92 | 1947.35 | 3073.1 | 1947.48 |
| 3114.58 | 1947.83 | 3140.99 | 1948 | 3148.96 | 1948 | 3160.1 | 1947.43 | 3162.99 | 1947.38 |
| 3171.05 | 1947.21 | 3176.42 | 1947.09 | 3180.05 | 1947 | 3214.45 | 1947 | 3216.33 | 1947.34 |
| 3219.44 | 1948 | 3222.82 | 1949 | 3224.66 | 1949.58 | 3226.17 | 1950 | 3228.17 | 1950.59 |
| 3229.66 | 1951 | 3231.54 | 1951.54 | 3233.44 | 1952 | 3236.47 | 1952.77 | 3237.41 | 1953 |
| 3240.57 | 1953.89 | 3241.07 | 1954 | 3242.23 | 1954.04 | 3243.49 | 1954.01 | 3243.64 | 1954.04 |
| 3245.64 | 1953.82 | 3252.88 | 1953 | 3256.86 | 1952.61 | 3259.2 | 1952.29 | 3260.99 | 1952 |
| 3267.02 | 1951.04 | 3267.72 | 1950.92 | 3273.29 | 1950 | 3274.67 | 1949.74 | 3276.8 | 1949.45 |
| 3277.61 | 1949.31 | 3279.15 | 1949 | 3281.47 | 1948.98 | 3284.01 | 1949 | 3285.53 | 1949.11 |
| 3288.14 | 1949.26 | 3289.23 | 1949.31 | 3290.95 | 1949.32 | 3292.78 | 1949.29 | 3296.72 | 1949 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3298.04 | 1948.96 | 3301.21 | 1948.95 | 3313.42 | 1948.96 | 3314.7 | 1948.99 | 3320.76 | 1948.99 |
| 3323.81 | 1949 | 3348.93 | 1949 | 3349.62 | 1948.96 | 3364.73 | 1948 | 3368.8 | 1947.86 |
| 3369.08 | 1947.86 | 3372 | 1947.75 | 3402.59 | 1947 | 3619.1 | 1947 | 3619.53 | 1946.99 |
| 3649.01 | 1946.12 | 3653.58 | 1946 | 3665.93 | 1946 | 3667.18 | 1946.05 | 3688.09 | 1946.71 |
| 3692.01 | 1946.82 | 3694.52 | 1947 | 3728.22 | 1947 | 3731.37 | 1946.96 | 3735.64 | 1946.83 |
| 3746.62 | 1946.56 | 3746.86 | 1946.56 | 3754.3 | 1946.43 | 3765.85 | 1946.01 | 3766.75 | 1946.01 |
| 3772.32 | 1946.17 | 3787.55 | 1946.63 | 3787.75 | 1946.63 | 3800.5 | 1946.97 | 3801.45 | 1947 |
| 3861.39 | 1947 | 3864.42 | 1947.03 | 3865.49 | 1947 | 3872.16 | 1947 | 3876.02 | 1947.13 |
| 3877.04 | 1947.11 | 3878.44 | 1947.12 | 3929.59 | 1947.58 | 3945.72 | 1947.72 | 3949.28 | 1947.72 |
| 3951.96 | 1947.71 | 3984.85 | 1947.94 | 3993.58 | 1948 | 3995.73 | 1947.97 | 4025.94 | 1947.66 |
| 4028.4 | 1947.69 | 4035.27 | 1947.68 | 4042.39 | 1947.66 | 4045.01 | 1947.64 | 4051.3 | 1947.64 |
| 4097.67 | 1947.56 | 4133.42 | 1947.49 | 4134.81 | 1947.5 | 4154.15 | 1947.61 | 4184.51 | 1947.79 |
| 4184.78 | 1947.79 | 4219.12 | 1948 | 4232.67 | 1948 | 4260.31 | 1948.13 | 4289.04 | 1948.26 |
| 4294.24 | 1948.19 | 4294.8 | 1948.19 | 4306.9 | 1948.01 | 4310.75 | 1947.98 | 4311.58 | 1947.96 |
| 4319.62 | 1947.82 | 4353.17 | 1948 | 4428.46 | 1948 | 4436.1 | 1948.14 | 4445.49 | 1948.3 |
| 4459.34 | 1948.53 | 4485.29 | 1948.93 | 4487.62 | 1948.95 | 4490.71 | 1948.96 | 4496.97 | 1948.96 |
| 4500.59 | 1948.95 | 4512.79 | 1948.87 | 4520.79 | 1948.81 | 4524.11 | 1948.78 | 4526.02 | 1948.75 |
| 4546.66 | 1948.71 | 4571.42 | 1948.9 | 4572.6 | 1948.89 | 4575.47 | 1948.92 | 4576.48 | 1948.91 |
| 4579 | 1948.91 | 4580.79 | 1948.88 | 4611.92 | 1948.6 | 4614.6 | 1948.59 | 4623.35 | 1948.43 |
| 4635.66 | 1948.1 | 4638.38 | 1948.03 | 4642.05 | 1948 | 4645.69 | 1948 | 4657.34 | 1947.99 |
| 4662.73 | 1947.98 | 4685.57 | 1947.95 | 4730.07 | 1947.67 | 4777.06 | 1947.45 | 4778.06 | 1947.44 |
| 4781.12 | 1947.44 | 4784.19 | 1947.46 | 4784.61 | 1947.45 | 4792.54 | 1947.55 | 4804.76 | 1947.7 |
| 4808.35 | 1947.76 | 4810.17 | 1947.77 | 4823.54 | 1948 | 4824.77 | 1948.03 | 4828.88 | 1948.11 |
| 4832.4 | 1948.17 | 4834.7 | 1948.17 | 4837.83 | 1948.22 | 4840.74 | 1948.29 | 4848.69 | 1948.43 |
| 4858.67 | 1948.47 | 4871.2 | 1948.53 | 4901.17 | 1949 | 5262.99 | 1949 | 5297.31 | 1948.48 |
| 5309.39 | 1948.29 | 5326.25 | 1948.16 | 5345.83 | 1948 | 5492.2 | 1948 | 5493.77 | 1948.03 |
| 5496.06 | 1948.03 | 5499.98 | 1948.07 | 5525.91 | 1948.96 | 5526.91 | 1949 | 5528.56 | 1949.03 |
| 5556.47 | 1949.5 | 5566.4 | 1949.66 | 5568.8 | 1949.68 | 5586.18 | 1949.97 | 5588.2 | 1950 |
| 5591.79 | 1950.19 | 5605.12 | 1950.73 | 5608.21 | 1950.81 | 5609.98 | 1950.84 | 5616.11 | 1950.89 |
| 5621.12 | 1950.98 | 5621.89 | 1951 | 5627.63 | 1951.19 | 5633.41 | 1951.41 | 5647.78 | 1952 |
| 5650.45 | 1952.07 | 5655.53 | 1952.27 | 5657.17 | 1952.34 | 5673.23 | 1953 | 5678.3 | 1953.23 |
| 5696.42 | 1954 | 5719.38 | 1954.79 | 5724.69 | 1954.99 | 5725.79 | 1955 | 5730.87 | 1955.24 |
| 5744.26 | 1955.8 | 5748.47 | 1955.98 | 5750.53 | 1956.08 | 5769.89 | 1957 | 5774.91 | 1957.27 |
| 5782.79 | 1957.65 | 5789.57 | 1958 | 5794.28 | 1958.32 | 5804.75 | 1959 | 5813.39 | 1959.53 |
| 5820.94 | 1960 | 5837.55 | 1960.77 | 5841.15 | 1960.93 | 5843.05 | 1961 | 5846.72 | 1961.01 |
| 5855.55 | 1961.29 | 5856.99 | 1961.33 | 5880.2 | 1961.94 | 5882.72 | 1962.01 | 5884.12 | 1962.06 |
| 5887.09 | 1962.19 | 5906.26 | 1963 | 5918.05 | 1963.26 | 5948.85 | 1963.97 | 5953.16 | 1964 |
| 5961.91 | 1964.3 | 5966.07 | 1964.33 | 5972.3 | 1964.46 | 5989.52 | 1964.68 | 5996.84 | 1964.77 |
| 6012.15 | 1964.97 | 6019.47 | 1964.97 | 6027.13 | 1964.99 | 6034.24 | 1965 | 6064.08 | 1965 |
| 6069.27 | 1964.99 | 6082.71 | 1964.99 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 1778.33 | .045 | 1778.33 | .04 | 6082.71 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 1778.33 | 6082.71 | 157.98 | 157.98 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1949.44 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.15 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1949.29 | Reach Len. (ft) | 157.98 | 157.98 | 157.98 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7216.59 | | |
| E.G. Slope (ft/ft) | 0.002814 | Area (sq ft) | | 7216.59 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3649.36 | Top Width (ft) | | 3649.36 | | |
| Vel Total (ft/s) | 3.10 | Avg. Vel. (ft/s) | | 3.10 | | |
| Max Chl Dpth (ft) | 6.35 | Hydr. Depth (ft) | | 1.98 | | |
| Conv. Total (cfs) | 422229.6 | Conv. (cfs) | | 422229.6 | | |
| Length Wtd. (ft) | 157.98 | Wetted Per. (ft) | | 3650.99 | | |
| Min Ch El (ft) | 1942.94 | Shear (lb/sq ft) | | 0.35 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6082.71 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.43 | Cum Volume (acre-ft) | | 3353.25 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1573.55 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -786.82

INPUT
Description:
Station Elevation Data num= 386

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 1849.48 | 1949.87 | 1850.36 | 1949.91 | 1852.56 | 1949.9 | 1854.08 | 1949.91 | 1856.35 | 1949.87 |
| 1859.67 | 1949.76 | 1883.05 | 1949 | 1883.61 | 1949 | 1886.3 | 1948.9 | 1892.69 | 1948.68 |
| 1911.62 | 1948 | 1914.74 | 1947.87 | 1918.26 | 1947.74 | 1933.23 | 1947.23 | 1939.26 | 1947 |
| 1947.29 | 1946.27 | 1950.42 | 1946 | 1952.94 | 1945.97 | 1955.57 | 1946 | 1960.87 | 1946 |
| 1962.02 | 1946.01 | 1977.41 | 1946.01 | 1978.23 | 1946 | 1981.23 | 1946 | 1982.51 | 1945.99 |
| 1984.27 | 1946 | 1989.51 | 1946.14 | 2021.85 | 1946.99 | 2022.63 | 1946.98 | 2036.15 | 1946.39 |
| 2046.56 | 1946.33 | 2055.38 | 1946.36 | 2068.93 | 1946.41 | 2070.13 | 1946.44 | 2071.05 | 1946.44 |
| 2077.33 | 1946.56 | 2077.62 | 1946.57 | 2084.49 | 1946.7 | 2090.66 | 1947 | 2096.85 | 1947 |
| 2099.65 | 1946.92 | 2101.27 | 1946.89 | 2106.92 | 1946.88 | 2146.8 | 1946.11 | 2153.58 | 1946.53 |

2153.91 1946.65 2155.22 1946.81 2157.56 1947 2167.24 1947.04 2170.94 1947.06
2174.25 1947.06 2177.34 1947.07 2183.62 1947.36 2188.56 1947.63 2194.9 1947.99
2198.12 1947.99 2203.33 1947.71 2209.3 1948 2211.24 1948.08 2221.04 1948.31
2226.2 1948.04 2232.14 1948.03 2235.03 1948 2251.82 1947.32 2252.9 1947.3
2261.7 1947.06 2264.68 1947.01 2266.07 1947 2270.01 1947.01 2273.67 1947
2279.41 1947 2289.74 1947.01 2303.41 1947 2306.37 1946.98 2309.55 1947
2330.38 1947.01 2346.5 1947.01 2351.62 1947 2359.42 1947 2367.14 1946.61
2376.52 1946.21 2379.27 1946.11 2383.17 1946 2396.82 1945.51 2397.51 1945.48
2411.7 1945 2422.71 1945 2430.2 1944.86 2433.24 1944.83 2460.38 1944.99
2466.11 1944.99 2502.06 1945 2511.94 1945.51 2521.01 1946 2534.4 1947
2540.71 1947.86 2541.8 1948 2555.64 1948 2560.53 1947.56 2561.16 1947.47
2565.05 1947.1 2566.41 1947 2570.44 1947 2585.64 1946.59 2594.16 1946.39
2611.19 1946 2616.84 1945.81 2618.96 1945.73 2631.48 1945.31 2638.39 1945.13
2641.31 1945.02 2644.77 1945 2688.21 1945 2690.02 1945.07 2708.22 1945.02
2712.73 1945 2726.7 1945 2729.76 1944.9 2737.11 1944.64 2750.41 1944.12
2753.79 1944 2763.98 1943.75 2770.39 1943.6 2772.1 1943.58 2776.35 1943.47
2797.74 1943.22 2805.56 1943.17 2808.51 1943.21 2810.61 1943.22 2811.65 1943.24
2818.54 1943.29 2823.7 1943.34 2834.12 1943.48 2842.77 1943.58 2853.18 1943.64
2862.42 1943.72 2874.38 1943.83 2880.21 1943.89 2892.85 1944 2907.84 1944.36
2908.02 1944.35 2912.76 1944.48 2925.22 1944.53 2941.08 1944.6 2942.17 1944.62
2956.85 1944.81 2961.51 1944.88 2961.94 1944.88 2967.91 1945 3017.39 1945
3025.48 1946 3029.34 1946.64 3029.85 1946.7 3032.91 1947 3096.63 1947
3107.71 1947.45 3117.95 1947.86 3118.92 1947.88 3120.85 1947.86 3122.12 1947.89
3122.9 1947.88 3126.93 1947.94 3132.63 1948 3134.13 1948.06 3138.05 1948.17
3140.13 1948.19 3142.69 1948.13 3145.38 1948 3177.66 1948 3181.75 1947.85
3186.7 1947.81 3191.67 1947.68 3194.33 1947.64 3198.34 1947.55 3208.21 1947.3
3209.9 1947.27 3215.26 1947.35 3225.77 1947.53 3226.62 1947.57 3229.34 1947.64
3230.25 1947.65 3244.84 1947.99 3248.7 1948 3252.45 1948.29 3256.36 1948.57
3260.52 1948.9 3265.25 1949.3 3270.53 1949.5 3273.96 1949.55 3274.04 1949.54
3285.52 1949 3287.56 1948.92 3288.52 1948.92 3290.31 1948.86 3292.68 1948.84
3293.98 1948.8 3310.02 1948.65 3321.66 1948.58 3322.99 1948.58 3328.27 1948.48
3330.84 1948.45 3333.27 1948.47 3342.53 1948.34 3347.33 1948.36 3347.74 1948.35
3352.99 1948.34 3356.03 1948.23 3360.21 1948.07 3361.36 1948 3364.38 1947.75
3373.65 1947 3375.21 1947 3378.15 1947.21 3385.77 1947.74 3387.36 1947.83
3389.8 1948 3391.73 1948.02 3399.26 1948.05 3409.32 1948.14 3414.49 1948.15
3415.18 1948.14 3423.45 1948.32 3432.44 1948.15 3437.56 1948.02 3439.32 1948.02
3441.4 1948 3446.96 1947.77 3450.85 1947.63 3460.49 1947.54 3479.18 1947.28
3485.97 1947 3641.78 1947 3656.88 1946.67 3657.74 1946.66 3665.54 1946.45
3665.97 1946.47 3667.42 1946.45 3684.22 1946 3775.63 1946 3776.45 1945.99
3781.97 1945.99 3785.45 1945.98 3792.68 1945.99 3797.47 1945.99 3803.53 1946
3808.94 1946.15 3809.85 1946.16 3811.44 1946.21 3837.28 1946.85 3843.15 1947
4069.72 1947 4084.94 1947.18 4099.8 1947.34 4100.29 1947.35 4111.77 1947.46
4112.41 1947.47 4134.17 1947.41 4162.43 1947.31 4165.54 1947.22 4171.77 1947.06
4174.37 1947 4342.46 1947 4343.06 1946.99 4348.18 1946.99 4355.78 1946.98
4369.6 1946.98 4372.8 1946.99 4375.86 1946.99 4379.97 1947 4388.67 1947
4410.27 1947.01 4428.44 1947.01 4453.24 1947 4862.34 1947 4873.9 1947.18
4883.64 1947.34 4924.27 1948 4934.49 1948 4978.35 1948.01 5001.51 1948.01
5015.02 1948 5044.97 1948 5105.13 1947.61 5151.72 1947.3 5154.26 1947.29
5156.14 1947.27 5158.76 1947.26 5177.54 1947.16 5186.13 1947.12 5191.91 1947.14
5193.8 1947.11 5196.69 1947.16 5197.68 1947.15 5202.23 1947.2 5203.09 1947.22
5206.75 1947.25 5210.37 1947.32 5212.77 1947.34 5234.45 1947.68 5241.04 1947.78
5252.81 1947.76 5254.45 1947.74 5257.64 1947.75 5258.83 1947.73 5280.74 1947.54
5287.08 1947.5 5331.2 1947.6 5398.18 1947.76 5400.66 1947.77 5433.09 1948
5448.61 1948 5454.06 1948.1 5458.71 1948.18 5503.93 1949 5505.17 1949.02
5507.13 1949.03 5526.04 1949.7 5531.06 1949.86 5534.72 1950 5536.65 1950.03
5537.84 1950.08 5547.19 1950.44 5548.18 1950.47 5557.82 1951 5567.28 1951.55
5574.91 1952 5591.08 1953.02 5607.12 1954 5618.55 1954.55 5627.76 1955
5639.23 1955.81 5643.19 1956 5649.26 1956.51 5655.23 1956.74 5662.1 1957.04
5664.13 1957.15 5666.23 1957.34 5673.24 1957.99 5677.61 1958.33 5687.22 1959
5696.16 1959.75 5699.39 1960 5716.43 1961 5723.31 1961.38 5736.08 1962
5748.62 1962 5756.39 1962.01 5765.88 1962.41 5779.33 1962.37 5780.54 1962.38
5788.53 1962.51 5790.93 1962.58 5791.91 1962.59 5803.77 1963 5807.31 1963.1
5815.59 1963.32 5826.66 1963.7 5831.26 1963.81 5836.23 1964 5836.94 1964
5839.82 1964.09 5844.56 1964.18 5845.18 1964.2 5852.56 1964.31 5858.52 1964.41
5871.62 1964.56 5875.61 1964.61 5876.56 1964.64 5888.16 1964.78 5890.78 1964.83
5899.44 1964.91 5900.4 1964.93 5913.29 1964.94 5913.9 1964.96 5919.79 1964.97
5926.02 1965 5940.54 1965.14 5940.96 1965.14 5947.12 1965.22 5950.65 1965.28
5956.36 1965.36 5957.71 1965.39 5985.87 1965.81 5990.48 1965.86 5998.17 1965.99
5998.58 1965.99

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 1849.48 | .045 | 1849.48 | .04 | 5998.58 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 1849.48 | 5998.58 | 217.1 | 217.1 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1949.00 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.15 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1948.86 | Reach Len. (ft) | 217.10 | 217.10 | 217.10 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7312.05 | | |
| E.G. Slope (ft/ft) | 0.002623 | Area (sq ft) | | 7312.05 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3577.66 | Top Width (ft) | | 3577.66 | | |
| Vel Total (ft/s) | 3.06 | Avg. Vel. (ft/s) | | 3.06 | | |
| Max Chl Dpth (ft) | 5.69 | Hydr. Depth (ft) | | 2.04 | | |

| | | | | | |
|---|---|---|---|---|---|
| Conv. Total (cfs) | 437381.5 | Conv. (cfs) | | 437381.5 | |
| Length Wtd. (ft) | 217.10 | Wetted Per. (ft) | | 3578.57 | |
| Min Ch El (ft) | 1943.17 | Shear (lb/sq ft) | | 0.33 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5998.58 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.50 | Cum Volume (acre-ft) | | 3326.90 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1560.44 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -1003.92

INPUT
Description:
Station Elevation Data num= 373

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2101.85 | 1950 | 2107.25 | 1950 | 2113.22 | 1949.86 | 2115.26 | 1949.8 | 2115.93 | 1949.77 |
| 2116.84 | 1949.58 | 2118.01 | 1949.19 | 2131.14 | 1949.01 | 2132.15 | 1949 | 2133 | 1948.91 |
| 2136.03 | 1948 | 2137.22 | 1947.51 | 2138.62 | 1946.95 | 2139.52 | 1946 | 2157.12 | 1946 |
| 2160.08 | 1946.01 | 2162.35 | 1946.03 | 2162.79 | 1946 | 2202.88 | 1946 | 2211.43 | 1946.2 |
| 2212.22 | 1946.24 | 2213.82 | 1946.29 | 2218.61 | 1946.37 | 2222.55 | 1946.42 | 2223.63 | 1946.44 |
| 2231.88 | 1946.31 | 2233.37 | 1946.28 | 2234.53 | 1946.28 | 2239.27 | 1946.44 | 2241.12 | 1946.48 |
| 2242.18 | 1946.54 | 2254.47 | 1946.97 | 2255.58 | 1947 | 2257.47 | 1947 | 2257.88 | 1946.98 |
| 2266.8 | 1946.76 | 2272.51 | 1946.63 | 2274.11 | 1946.63 | 2275.4 | 1946.64 | 2283.89 | 1946.53 |
| 2291.42 | 1946.41 | 2299.36 | 1946.31 | 2300.32 | 1946.29 | 2303.16 | 1946.26 | 2304.95 | 1946.25 |
| 2306.82 | 1946.22 | 2318.91 | 1946 | 2324.61 | 1946 | 2332.35 | 1945.98 | 2334.7 | 1945.98 |
| 2340.86 | 1945.99 | 2345.51 | 1946 | 2346.17 | 1946.01 | 2348.47 | 1946.02 | 2350.03 | 1946.01 |
| 2351.57 | 1946.01 | 2352.48 | 1946 | 2361.57 | 1945.97 | 2390.86 | 1945.24 | 2392.83 | 1945.19 |
| 2396.19 | 1945.12 | 2398.09 | 1945.07 | 2401.41 | 1945 | 2419.24 | 1945 | 2420.74 | 1945.17 |
| 2435.43 | 1946 | 2437.08 | 1946.27 | 2437.64 | 1946.31 | 2438.56 | 1946.33 | 2446.62 | 1946 |
| 2449.4 | 1945.88 | 2450.46 | 1945.85 | 2452.13 | 1945.67 | 2453.03 | 1945.54 | 2456 | 1945 |
| 2461.43 | 1944 | 2466.35 | 1943.85 | 2471.38 | 1943.58 | 2477.84 | 1943.3 | 2478.65 | 1943.28 |
| 2481.74 | 1943 | 2483.45 | 1942.91 | 2484.69 | 1942.94 | 2490.58 | 1942.85 | 2493.42 | 1942.79 |
| 2495.04 | 1942.79 | 2502.2 | 1942.92 | 2504.52 | 1942.94 | 2507.27 | 1943 | 2516.89 | 1943.68 |
| 2520.07 | 1944 | 2527.41 | 1944.77 | 2530.68 | 1945.11 | 2532.4 | 1945.28 | 2534.54 | 1945.48 |
| 2536 | 1945.6 | 2542.19 | 1945.78 | 2544.41 | 1945.9 | 2545.1 | 1945.92 | 2549.19 | 1946 |
| 2569.69 | 1946 | 2584.15 | 1945.25 | 2586.4 | 1945.2 | 2588.7 | 1945.21 | 2591.48 | 1945.02 |
| 2592.08 | 1945 | 2598.88 | 1944.53 | 2604.13 | 1944 | 2630.78 | 1944 | 2634.98 | 1944.14 |
| 2660.39 | 1945 | 2801.84 | 1945 | 2802.07 | 1944.99 | 2823.9 | 1944.46 | 2843.91 | 1944 |
| 2849.17 | 1943.82 | 2869.79 | 1943.09 | 2873.24 | 1943 | 2961.83 | 1943 | 2982.82 | 1943.15 |
| 3018.56 | 1943.41 | 3042.06 | 1943.55 | 3091.11 | 1943.86 | 3091.98 | 1943.86 | 3107.5 | 1944 |
| 3115.11 | 1944 | 3120.49 | 1945.02 | 3125.42 | 1946 | 3129.96 | 1946.82 | 3130.93 | 1947 |
| 3134.62 | 1947.29 | 3136 | 1947.42 | 3142.7 | 1948 | 3143.5 | 1948.03 | 3146.81 | 1948.36 |
| 3149.59 | 1948.57 | 3150.06 | 1948.59 | 3152.88 | 1948.61 | 3153.92 | 1948.65 | 3155.18 | 1948.67 |
| 3155.94 | 1948.67 | 3157.06 | 1948.69 | 3158.39 | 1948.66 | 3162.74 | 1948.64 | 3165.92 | 1948.46 |
| 3166.72 | 1948.43 | 3170.74 | 1948.51 | 3171.75 | 1948.48 | 3172.31 | 1948.5 | 3173.93 | 1948.59 |
| 3174.87 | 1948.62 | 3175.28 | 1948.61 | 3177.3 | 1948.71 | 3178.43 | 1948.65 | 3178.73 | 1948.65 |
| 3180.95 | 1948.5 | 3183.25 | 1948.3 | 3185.26 | 1948 | 3218.89 | 1948 | 3230.82 | 1948.96 |
| 3231.38 | 1949 | 3243.76 | 1949.01 | 3253.64 | 1949.01 | 3253.78 | 1949 | 3263.17 | 1949 |
| 3264.76 | 1948.88 | 3274.64 | 1948 | 3277.27 | 1947.77 | 3286.53 | 1947 | 3390.6 | 1947 |
| 3396.37 | 1946.98 | 3405.14 | 1947 | 3433.13 | 1947 | 3434.89 | 1946.99 | 3436.14 | 1946.97 |
| 3446.23 | 1946.89 | 3448.41 | 1946.91 | 3459.3 | 1947 | 3543.19 | 1947 | 3544.67 | 1946.98 |
| 3576.81 | 1946.64 | 3597.87 | 1946.47 | 3600.39 | 1946.51 | 3601.44 | 1946.51 | 3604.3 | 1946.54 |
| 3605.1 | 1946.54 | 3611.76 | 1946.51 | 3616.1 | 1946.47 | 3621.28 | 1946.41 | 3625.31 | 1946.33 |
| 3626.95 | 1946.31 | 3628.24 | 1946.28 | 3629.66 | 1946.29 | 3646.71 | 1946.19 | 3670.52 | 1946 |
| 3779.71 | 1946 | 3786.37 | 1945.81 | 3787.42 | 1945.79 | 3796.02 | 1945.59 | 3801.19 | 1945.48 |
| 3808.86 | 1945.37 | 3811.47 | 1945.33 | 3814.16 | 1945.31 | 3816.79 | 1945.3 | 3819.27 | 1945.26 |
| 3822.51 | 1945.23 | 3827.41 | 1945.01 | 3830.4 | 1945.01 | 3837.13 | 1945.42 | 3841.69 | 1945.69 |
| 3842.19 | 1945.69 | 3853.18 | 1945.73 | 3862.05 | 1945.96 | 3865.58 | 1946 | 3868.8 | 1946.23 |
| 3869.72 | 1946.29 | 3870.67 | 1946.33 | 3871.63 | 1946.4 | 3872.84 | 1946.46 | 3873.27 | 1946.51 |
| 3873.69 | 1946.5 | 3874.06 | 1946.54 | 3874.43 | 1946.52 | 3874.74 | 1946.56 | 3881.23 | 1946.71 |
| 3884.71 | 1946.76 | 3885.39 | 1946.75 | 3889.72 | 1946.63 | 3901.8 | 1946.3 | 3904.86 | 1946.2 |
| 3909.29 | 1946.1 | 3911.83 | 1946 | 3948.66 | 1946 | 3949.42 | 1946.01 | 3954.56 | 1946.22 |
| 3984.86 | 1946.99 | 3985.02 | 1947 | 3991.07 | 1947 | 4001.12 | 1946.99 | 4007.73 | 1947 |
| 4028.39 | 1947 | 4032.1 | 1946.91 | 4034.89 | 1946.81 | 4038.02 | 1946.65 | 4048.39 | 1946 |
| 4078.5 | 1946 | 4080.26 | 1946.01 | 4084.6 | 1946.01 | 4085.43 | 1946.02 | 4089.16 | 1946.01 |
| 4094.72 | 1946 | 4117.62 | 1946 | 4117.91 | 1946.02 | 4126.09 | 1946.15 | 4128.81 | 1946.19 |
| 4131.31 | 1946.22 | 4138.17 | 1946.27 | 4165.02 | 1946.09 | 4179.95 | 1946 | 4197.65 | 1946 |
| 4202.13 | 1946.01 | 4205.86 | 1946.01 | 4208.05 | 1946.05 | 4228.17 | 1946.45 | 4231.17 | 1946.47 |
| 4235.52 | 1946.48 | 4246.47 | 1946.2 | 4253.85 | 1946 | 4377.53 | 1946 | 4392.57 | 1945.95 |
| 4400.7 | 1945.94 | 4403.25 | 1945.94 | 4406.71 | 1945.93 | 4412.13 | 1945.91 | 4413.7 | 1945.91 |
| 4435.13 | 1945.84 | 4453.7 | 1945.79 | 4454.38 | 1945.78 | 4515.89 | 1946 | 4696.67 | 1946 |
| 4701.16 | 1946.01 | 4702.99 | 1946.01 | 4707.08 | 1946.02 | 4711.39 | 1946.02 | 4736.95 | 1946.41 |
| 4739.14 | 1946.44 | 4748.77 | 1946.52 | 4753.46 | 1946.58 | 4762.99 | 1946.6 | 4771.6 | 1946.62 |
| 4773.96 | 1946.62 | 4780.07 | 1946.65 | 4787.05 | 1946.71 | 4787.13 | 1946.7 | 4796.2 | 1946.85 |
| 4804.24 | 1947 | 4898.3 | 1947 | 4930.36 | 1947.17 | 4980.47 | 1947.43 | 5015.04 | 1947.45 |
| 5068.62 | 1947.11 | 5069.59 | 1947.11 | 5088.53 | 1947.02 | 5093.48 | 1947 | 5352.34 | 1947 |
| 5358.34 | 1947.11 | 5368.71 | 1947.33 | 5382.13 | 1947.6 | 5387.83 | 1947.72 | 5400.26 | 1948 |
| 5407.4 | 1948.29 | 5410.48 | 1948.39 | 5417.31 | 1948.63 | 5427.25 | 1949 | 5446.37 | 1949.67 |
| 5453.26 | 1949.9 | 5456.87 | 1950 | 5481.46 | 1950.85 | 5485.3 | 1951 | 5511.67 | 1952 |
| 5511.75 | 1952 | 5531.29 | 1952.96 | 5532.98 | 1953.06 | 5548.04 | 1954 | 5561.79 | 1954.74 |
| 5566.97 | 1955 | 5575.08 | 1955.44 | 5583.4 | 1955.88 | 5585.46 | 1956 | 5589.52 | 1956.29 |
| 5599.25 | 1957 | 5605.69 | 1957.37 | 5616.59 | 1958 | 5629.69 | 1958.68 | 5635.82 | 1959 |
| 5643.89 | 1959.5 | 5652.78 | 1960 | 5670.49 | 1960.74 | 5675.4 | 1960.95 | 5676.37 | 1961 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5682.9 | 1961.22 | 5706.46 | 1962 | 5710.96 | 1962.28 | 5718.08 | 1962.68 | 5723.99 | 1963 |
| 5733.19 | 1963.54 | 5741.34 | 1964 | 5751.11 | 1964.45 | 5761.13 | 1964.9 | 5763.08 | 1965 |
| 5767.34 | 1965.12 | 5775.83 | 1965.33 | 5781.26 | 1965.45 | 5791.01 | 1965.73 | 5800.21 | 1966 |
| 5801.92 | 1966 | 5804.52 | 1966.01 | 5809.09 | 1966.01 | 5812.32 | 1966.02 | 5851.13 | 1966.02 |
| 5853.04 | 1966.03 | 5898.11 | 1966.68 | 5913.59 | 1966.89 | 5914.99 | 1966.9 | 5916.67 | 1966.9 |
| 5924.8 | 1966.97 | 5926.91 | 1966.98 | 5930.36 | 1966.98 | 5933.53 | 1966.95 | 5935.83 | 1967 |
| 5941.65 | 1967 | 5961.41 | 1966.7 | 5968.4 | 1966.6 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2101.85 | .045 | 2101.85 | .04 | 5968.4 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2101.85 | 5968.4 | 255.19 | 255.19 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1948.50 | Element | Left OB | Channel | Right OB |
| Vel Head (ft) | 0.14 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1948.36 | Reach Len. (ft) | 255.19 | 255.19 | 255.19 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7510.75 | |
| E.G. Slope (ft/ft) | 0.002061 | Area (sq ft) | | 7510.75 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 3191.54 | Top Width (ft) | | 3191.54 | |
| Vel Total (ft/s) | 2.98 | Avg. Vel. (ft/s) | | 2.98 | |
| Max Chl Dpth (ft) | 5.57 | Hydr. Depth (ft) | | 2.35 | |
| Conv. Total (cfs) | 493448.6 | Conv. (cfs) | | 493448.6 | |
| Length Wtd. (ft) | 255.19 | Wetted Per. (ft) | | 3193.36 | |
| Min Ch El (ft) | 1942.79 | Shear (lb/sq ft) | | 0.30 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5968.40 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.55 | Cum Volume (acre-ft) | | 3289.96 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1543.58 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -1259.11

INPUT
Description:
Station Elevation Data num= 373

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2003.75 | 1948 | 2008.27 | 1947.9 | 2028.33 | 1947.43 | 2032.38 | 1947.38 | 2041.23 | 1947.32 |
| 2041.87 | 1947.31 | 2044.56 | 1947.31 | 2047.18 | 1947.3 | 2047.4 | 1947.31 | 2052.36 | 1947.26 |
| 2058.01 | 1947.21 | 2059.6 | 1947.2 | 2075.61 | 1947.01 | 2081.57 | 1947.01 | 2086.07 | 1947 |
| 2099.33 | 1947 | 2103.63 | 1946.99 | 2108.15 | 1946.9 | 2125.47 | 1946.53 | 2131.77 | 1946.64 |
| 2132.54 | 1946.61 | 2134.67 | 1946.64 | 2136.74 | 1946.69 | 2139.4 | 1946.82 | 2142.58 | 1947 |
| 2156.95 | 1947 | 2163.49 | 1946.93 | 2163.59 | 1946.92 | 2173.13 | 1946.86 | 2175.14 | 1946.8 |
| 2176.38 | 1946.79 | 2178.5 | 1946.72 | 2181.25 | 1946.66 | 2194.83 | 1946.15 | 2195.84 | 1946.1 |
| 2198.68 | 1946 | 2204.93 | 1945.12 | 2205.67 | 1945 | 2206.83 | 1944.99 | 2210.85 | 1944.98 |
| 2215.3 | 1945 | 2216.62 | 1945 | 2237.98 | 1945.54 | 2247.17 | 1946 | 2295.92 | 1946 |
| 2315.33 | 1945.54 | 2324.25 | 1945.33 | 2333.39 | 1945.14 | 2339.93 | 1945 | 2379.56 | 1945 |
| 2393.67 | 1945.36 | 2394.04 | 1945.38 | 2396.09 | 1945.43 | 2404.62 | 1945.45 | 2413.4 | 1945.42 |
| 2415.14 | 1945.39 | 2420.47 | 1945.36 | 2423.28 | 1945.29 | 2434.41 | 1945 | 2436.88 | 1944.93 |
| 2443.87 | 1944 | 2445.1 | 1943.93 | 2460.09 | 1943 | 2468.66 | 1942.53 | 2478.82 | 1942 |
| 2481.73 | 1941.96 | 2483.19 | 1941.95 | 2488.94 | 1941.94 | 2498.31 | 1941.83 | 2500.86 | 1941.79 |
| 2505.15 | 1941.79 | 2509.94 | 1941.98 | 2512.88 | 1941.98 | 2518.53 | 1941.51 | 2521.22 | 1941.64 |
| 2524.48 | 1941.93 | 2526.67 | 1942.04 | 2542.23 | 1943 | 2542.64 | 1943.03 | 2553.59 | 1944 |
| 2562.7 | 1944.65 | 2567.83 | 1945 | 2572.66 | 1945 | 2577.95 | 1945.01 | 2611.21 | 1945.01 |
| 2622.55 | 1945 | 2625.09 | 1945 | 2626.13 | 1944.97 | 2637.11 | 1945 | 2828.37 | 1945 |
| 2829.18 | 1944.99 | 2882.06 | 1944.19 | 2886.84 | 1944 | 2890.72 | 1943.94 | 2891.63 | 1943.92 |
| 2920.59 | 1943.46 | 2932.3 | 1943.28 | 2935.63 | 1943.24 | 2939.69 | 1943.21 | 2943.65 | 1943.14 |
| 2944.94 | 1943.13 | 2954.23 | 1943.08 | 2965.77 | 1943 | 3129.79 | 1943 | 3147.62 | 1942.95 |
| 3155.06 | 1942.98 | 3163.57 | 1943 | 3177.82 | 1943 | 3178.24 | 1942.85 | 3178.75 | 1943 |
| 3181.17 | 1943.4 | 3184.14 | 1944 | 3189.76 | 1944.62 | 3192.17 | 1945 | 3195.69 | 1945.24 |
| 3207.02 | 1946 | 3229.34 | 1946.83 | 3233.51 | 1947 | 3291.72 | 1947 | 3299.13 | 1946.97 |
| 3302.24 | 1946.97 | 3313.9 | 1946.19 | 3315.63 | 1946 | 3316.15 | 1946 | 3320.8 | 1945.84 |
| 3336.5 | 1945.38 | 3345.76 | 1945.13 | 3350.45 | 1945 | 3424.49 | 1945 | 3428.89 | 1945.16 |
| 3433.97 | 1945.14 | 3436.04 | 1945.15 | 3438.1 | 1945.14 | 3440.57 | 1945.14 | 3442.64 | 1945.15 |
| 3445.87 | 1945.28 | 3462.72 | 1946 | 3471.45 | 1946 | 3472.6 | 1945.97 | 3479.96 | 1945.85 |
| 3489.93 | 1945.79 | 3500.51 | 1945.75 | 3510.23 | 1945.72 | 3511.28 | 1945.73 | 3532.24 | 1945.96 |
| 3535.25 | 1946 | 3580.56 | 1946 | 3580.74 | 1945.99 | 3600.02 | 1945.5 | 3607.22 | 1945.4 |
| 3610.95 | 1945.36 | 3618.75 | 1945.37 | 3626.59 | 1945.37 | 3629.36 | 1945.34 | 3632.45 | 1945.32 |
| 3639.33 | 1945.35 | 3647.93 | 1945.4 | 3658.53 | 1945.3 | 3673.56 | 1945.15 | 3681.33 | 1945 |
| 3688.34 | 1945.01 | 3696.52 | 1945 | 3702.36 | 1945 | 3708.33 | 1944.99 | 3710.42 | 1944.98 |
| 3719.28 | 1944.96 | 3721.03 | 1944.95 | 3722.87 | 1944.96 | 3736.05 | 1945 | 3749.47 | 1945 |
| 3769.55 | 1945.22 | 3777.95 | 1945.28 | 3800.74 | 1945.05 | 3802.5 | 1945.06 | 3810.38 | 1945.04 |
| 3822.5 | 1945.02 | 3827.27 | 1945.02 | 3828.65 | 1945.01 | 3838.95 | 1945.02 | 3839.05 | 1945.01 |
| 3842.61 | 1945.01 | 3847.05 | 1945 | 3861.62 | 1945 | 3862.81 | 1945.01 | 3863.98 | 1945 |
| 3914.95 | 1945 | 3925.5 | 1945.97 | 3925.86 | 1946 | 3954.39 | 1946 | 3958.69 | 1945.62 |
| 3970.64 | 1945 | 4014.84 | 1945 | 4024.59 | 1945.5 | 4033.94 | 1946 | 4059.09 | 1946 |
| 4083.3 | 1945.51 | 4090.67 | 1945.39 | 4099.26 | 1945.26 | 4101.16 | 1945.24 | 4105.23 | 1945.17 |
| 4107.62 | 1945.14 | 4111.78 | 1945 | 4117.18 | 1945 | 4137.01 | 1945.36 | 4142.48 | 1945.43 |
| 4157.62 | 1945.72 | 4170.27 | 1945.97 | 4171.59 | 1946 | 4196.62 | 1946 | 4205.84 | 1945.39 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4211.84 | 1945 | 4243.3 | 1945 | 4272.17 | 1944.99 | 4309.61 | 1945 | 4321.4 | 1945 |
| 4325.76 | 1945.01 | 4328.46 | 1945.01 | 4336.1 | 1945.15 | 4349.85 | 1945.39 | 4357.26 | 1945.47 |
| 4357.74 | 1945.48 | 4367.77 | 1945.59 | 4368.2 | 1945.59 | 4376.35 | 1945.7 | 4377.19 | 1945.72 |
| 4401.23 | 1946 | 4412.39 | 1946.49 | 4415.17 | 1946.48 | 4415.43 | 1946.49 | 4421.09 | 1946.44 |
| 4426.08 | 1946.59 | 4429.66 | 1946.58 | 4433.61 | 1946.58 | 4435.43 | 1946.63 | 4462.54 | 1946.93 |
| 4463.87 | 1946.93 | 4475.76 | 1946.99 | 4476.46 | 1947 | 4514.29 | 1947.47 | 4517.91 | 1947.53 |
| 4525.88 | 1947.63 | 4531 | 1947.7 | 4531.66 | 1947.7 | 4539.56 | 1947.8 | 4549.66 | 1948 |
| 4551.58 | 1948 | 4562.57 | 1948.16 | 4575.39 | 1948.34 | 4576.73 | 1948.35 | 4583.74 | 1948.43 |
| 4584.24 | 1948.43 | 4593.41 | 1948.53 | 4600.03 | 1948.59 | 4606.21 | 1948.62 | 4611.53 | 1948.65 |
| 4622.43 | 1948.63 | 4635.59 | 1948.57 | 4638.19 | 1948.56 | 4645.25 | 1948.51 | 4656.73 | 1948.4 |
| 4667.65 | 1948.31 | 4669.27 | 1948.3 | 4683.48 | 1948.16 | 4686.36 | 1948.14 | 4700.93 | 1948 |
| 4726.15 | 1947.76 | 4726.34 | 1947.75 | 4731.25 | 1947.71 | 4738.95 | 1947.63 | 4786.69 | 1947.21 |
| 4810.61 | 1947 | 5144.22 | 1947 | 5248.58 | 1946.05 | 5250.31 | 1946.03 | 5254.17 | 1946 |
| 5378.08 | 1946 | 5384.6 | 1946.06 | 5388.6 | 1946.06 | 5395.02 | 1946.11 | 5396.02 | 1946.11 |
| 5407.04 | 1946.36 | 5410.55 | 1946.36 | 5417 | 1946.45 | 5419.45 | 1946.44 | 5428.53 | 1946.64 |
| 5434.45 | 1946.78 | 5436.88 | 1946.82 | 5443.34 | 1947 | 5454.41 | 1947.43 | 5456.37 | 1947.52 |
| 5458.65 | 1947.61 | 5467.36 | 1948 | 5477.38 | 1948.64 | 5483.35 | 1949.01 | 5495.59 | 1950 |
| 5500.39 | 1950.47 | 5506.04 | 1951 | 5510.92 | 1951.48 | 5516.63 | 1952 | 5525.37 | 1952.68 |
| 5529.4 | 1953 | 5536.94 | 1953.52 | 5549.87 | 1954.44 | 5556.37 | 1954.85 | 5557.41 | 1954.92 |
| 5558.67 | 1955.06 | 5569.8 | 1956 | 5571.76 | 1956.18 | 5580.87 | 1957 | 5583.91 | 1957.3 |
| 5593.99 | 1958 | 5596.88 | 1958.21 | 5603.51 | 1958.79 | 5604.38 | 1958.86 | 5606.79 | 1959 |
| 5609.9 | 1959.2 | 5613.58 | 1959.46 | 5613.99 | 1959.5 | 5621.53 | 1960 | 5623.95 | 1960.12 |
| 5628.21 | 1960.32 | 5631.67 | 1960.44 | 5634.21 | 1960.55 | 5638.5 | 1960.95 | 5640.04 | 1960.95 |
| 5647.29 | 1961 | 5649.93 | 1961.09 | 5658.78 | 1961.43 | 5660.03 | 1961.49 | 5671.28 | 1961.92 |
| 5672.26 | 1962 | 5673.6 | 1962 | 5680.96 | 1962.17 | 5683.8 | 1962.15 | 5685.84 | 1962.11 |
| 5688.92 | 1962.12 | 5691.47 | 1962.19 | 5697.26 | 1962.33 | 5699.96 | 1962.38 | 5709.07 | 1962.84 |
| 5714.3 | 1962.85 | 5721.05 | 1962.97 | 5723.5 | 1962.97 | 5724.25 | 1963 | 5732.37 | 1963.29 |
| 5757.59 | 1963.98 | 5765.21 | 1963.96 | 5771.92 | 1963.99 | 5773.41 | 1964 | 5775.23 | 1964.05 |
| 5791.88 | 1964.39 | 5795.59 | 1964.47 | 5807.91 | 1964.84 | 5813.01 | 1964.99 | 5818.13 | 1964.99 |
| 5820.28 | 1965 | 5822.93 | 1965 | 5828.24 | 1965.15 | 5841.85 | 1965.41 | 5842.69 | 1965.44 |
| 5844.86 | 1965.49 | 5855.65 | 1965.77 | 5855.75 | 1965.78 | 5865.25 | 1966 | 5875.64 | 1966.23 |
| 5880.21 | 1966.29 | 5883.81 | 1966.31 | 5893.35 | 1966.17 | 5905.89 | 1966.12 | 5908.56 | 1966.03 |
| 5922.83 | 1966.02 | 5923.21 | 1966 | 5951.86 | 1966 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2003.75 | .045 | 2003.75 | .04 | 5951.86 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2003.75 | 5951.86 | 245 | 245 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1947.95 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.14 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1947.80 | Reach Len. (ft) | 245.00 | 245.00 | 245.00 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7394.54 | | |
| E.G. Slope (ft/ft) | 0.002240 | Area (sq ft) | | 7394.54 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3268.65 | Top Width (ft) | | 3268.65 | | |
| Vel Total (ft/s) | 3.03 | Avg. Vel. (ft/s) | | 3.03 | | |
| Max Chl Dpth (ft) | 6.29 | Hydr. Depth (ft) | | 2.26 | | |
| Conv. Total (cfs) | 473280.6 | Conv. (cfs) | | 473280.6 | | |
| Length Wtd. (ft) | 245.00 | Wetted Per. (ft) | | 3269.66 | | |
| Min Ch El (ft) | 1941.51 | Shear (lb/sq ft) | | 0.32 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5951.86 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.65 | Cum Volume (acre-ft) | | 3246.30 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1524.65 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -1504.11

INPUT
Description:
Station Elevation Data num= 352

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2400.92 | 1948.99 | 2406.85 | 1948.99 | 2409.43 | 1948.79 | 2409.97 | 1948.76 | 2414.25 | 1948.67 |
| 2414.78 | 1948.64 | 2425.24 | 1948.28 | 2427.86 | 1948.06 | 2428.69 | 1948 | 2433.15 | 1947 |
| 2435.69 | 1946.4 | 2441.31 | 1945 | 2444.85 | 1944 | 2447.82 | 1944 | 2450.62 | 1944.38 |
| 2451.29 | 1944.5 | 2452.62 | 1945 | 2461.5 | 1945.01 | 2475.87 | 1945.01 | 2479.58 | 1945 |
| 2483.74 | 1945.01 | 2493.27 | 1945.01 | 2499.98 | 1945 | 2501.78 | 1945 | 2505 | 1944.11 |
| 2505.48 | 1944 | 2508.35 | 1943 | 2511.42 | 1941.92 | 2513.99 | 1941 | 2530.67 | 1940.99 |
| 2540.79 | 1940.98 | 2567.63 | 1941 | 2584.56 | 1941.63 | 2587.05 | 1941.72 | 2595.07 | 1942 |
| 2598.03 | 1942.82 | 2598.74 | 1943 | 2602.39 | 1944 | 2603.69 | 1944.37 | 2604.33 | 1944.36 |
| 2605.13 | 1944.31 | 2615.21 | 1944.9 | 2616.11 | 1944.95 | 2623.3 | 1944.98 | 2627.96 | 1944.98 |
| 2635.78 | 1944.74 | 2637.03 | 1944.73 | 2637.67 | 1944.71 | 2639.57 | 1944.69 | 2642.16 | 1944.65 |
| 2645.37 | 1944.59 | 2650.58 | 1944.54 | 2654.15 | 1944.48 | 2668.26 | 1944.2 | 2670.07 | 1944.16 |
| 2672.64 | 1944.12 | 2678.61 | 1944 | 2680.3 | 1944 | 2682.89 | 1944.04 | 2704.87 | 1944.34 |
| 2717.05 | 1944.47 | 2719.04 | 1944.48 | 2740.63 | 1944.4 | 2769.73 | 1944.3 | 2784.89 | 1944 |
| 2863.94 | 1944 | 2873.4 | 1944.19 | 2875.33 | 1944.24 | 2879.73 | 1944.32 | 2883.46 | 1944.36 |
| 2894.1 | 1944.23 | 2894.8 | 1944.21 | 2900.54 | 1944.14 | 2906.66 | 1944 | 2906.98 | 1944 |
| 2908.58 | 1943.94 | 2929.04 | 1943 | 3155.87 | 1943 | 3159.35 | 1942.94 | 3161.46 | 1942.87 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3164.52 | 1942.78 | 3173.21 | 1942.54 | 3175.38 | 1942.47 | 3181.26 | 1942.3 | 3194.1 | 1942 |
| 3224.58 | 1942 | 3235.44 | 1941.67 | 3235.51 | 1941.66 | 3245.22 | 1941.63 | 3254.08 | 1941.61 |
| 3258.82 | 1941.52 | 3265.93 | 1942 | 3275.18 | 1942 | 3277.95 | 1943 | 3278.9 | 1943.33 |
| 3280.59 | 1944 | 3282 | 1944.49 | 3283.67 | 1945 | 3285.36 | 1945.17 | 3287.53 | 1945.37 |
| 3293.36 | 1945.92 | 3299.69 | 1946.45 | 3301.53 | 1946.61 | 3302.51 | 1946.71 | 3304.48 | 1946.93 |
| 3305.17 | 1947.02 | 3305.99 | 1947.02 | 3321.89 | 1947.18 | 3335.97 | 1947.04 | 3339.16 | 1947 |
| 3340.86 | 1946.9 | 3346.54 | 1946.5 | 3349.47 | 1946.3 | 3353.53 | 1946 | 3380 | 1946 |
| 3383.6 | 1946.04 | 3386.34 | 1946.05 | 3388.08 | 1946.03 | 3389.69 | 1946 | 3407.42 | 1945.57 |
| 3412.08 | 1945.44 | 3428.61 | 1945 | 3465.41 | 1945 | 3468.46 | 1945.81 | 3472.11 | 1946.73 |
| 3473.25 | 1947 | 3477.2 | 1947.99 | 3480.28 | 1948.74 | 3482.35 | 1949.25 | 3483.72 | 1949.56 |
| 3484.24 | 1949.64 | 3484.88 | 1949.69 | 3485.53 | 1949.69 | 3486.08 | 1949.62 | 3487.04 | 1949.57 |
| 3487.79 | 1949.42 | 3488.74 | 1949.33 | 3491.06 | 1949 | 3497.78 | 1948 | 3504.12 | 1947 |
| 3506.05 | 1946.71 | 3510.53 | 1946 | 3515.45 | 1945.99 | 3517.94 | 1945.99 | 3523.39 | 1945.67 |
| 3527.53 | 1945.45 | 3528.36 | 1945.46 | 3535.49 | 1945.75 | 3540.92 | 1945.99 | 3543.35 | 1945.99 |
| 3546.1 | 1946 | 3549.67 | 1946.13 | 3550.73 | 1946.18 | 3557.96 | 1946.35 | 3572.98 | 1946.76 |
| 3576.4 | 1946.85 | 3577.7 | 1946.86 | 3578.96 | 1946.85 | 3583.9 | 1946.92 | 3586.6 | 1946.83 |
| 3587.27 | 1946.83 | 3589.01 | 1946.76 | 3590.84 | 1946.67 | 3601.44 | 1946 | 3609.75 | 1945.67 |
| 3610.34 | 1945.64 | 3619.82 | 1945.27 | 3626.15 | 1945.02 | 3631.19 | 1944.89 | 3635.94 | 1944.79 |
| 3643.15 | 1944.61 | 3669.51 | 1944 | 3727.97 | 1944 | 3732.19 | 1944.1 | 3736.45 | 1944.18 |
| 3738.63 | 1944.21 | 3740.09 | 1944.24 | 3750.11 | 1944.25 | 3755.67 | 1944.25 | 3762.27 | 1944.34 |
| 3770.08 | 1944 | 3816.46 | 1944 | 3827.9 | 1943.99 | 3888.58 | 1943.99 | 3889.64 | 1944 |
| 3891.64 | 1944 | 3944.72 | 1943.99 | 4003.43 | 1943.99 | 4007.22 | 1943.85 | 4019 | 1943.42 |
| 4022.71 | 1943.49 | 4026.9 | 1943.55 | 4027.93 | 1943.57 | 4028.8 | 1943.57 | 4039.38 | 1944 |
| 4143.56 | 1944 | 4147.57 | 1944.25 | 4149.63 | 1944.36 | 4160.15 | 1945 | 4161.73 | 1945.12 |
| 4162.28 | 1945.15 | 4169.46 | 1945.63 | 4171.38 | 1945.68 | 4173.69 | 1945.83 | 4175.49 | 1945.9 |
| 4176.7 | 1945.91 | 4179.57 | 1945.91 | 4181.44 | 1945.9 | 4181.49 | 1945.89 | 4191.09 | 1945.88 |
| 4191.53 | 1945.86 | 4199.7 | 1945.9 | 4201.96 | 1945.87 | 4203.27 | 1945.84 | 4204 | 1945.81 |
| 4206.15 | 1945.64 | 4213.98 | 1945.01 | 4214.61 | 1945 | 4247.78 | 1945 | 4270.35 | 1945.8 |
| 4274.75 | 1945.98 | 4277.22 | 1946.05 | 4284.96 | 1946.24 | 4300.37 | 1946.57 | 4318.44 | 1947 |
| 4432.36 | 1947 | 4466.86 | 1947.01 | 4498.45 | 1947 | 4572.69 | 1947 | 4579.27 | 1947.04 |
| 4587.22 | 1947 | 4630.23 | 1947 | 4633.08 | 1946.99 | 4645.41 | 1946.99 | 4653.42 | 1946.79 |
| 4666.66 | 1946.47 | 4671.35 | 1946.47 | 4672.01 | 1946.48 | 4677.42 | 1946.43 | 4678.16 | 1946.43 |
| 4686.59 | 1946.47 | 4696.92 | 1946.53 | 4699.2 | 1946.55 | 4714.84 | 1946.74 | 4735.84 | 1947 |
| 4838.49 | 1947 | 4854.63 | 1946.81 | 4858.51 | 1946.81 | 4860.57 | 1946.8 | 4875.21 | 1946.66 |
| 4880.11 | 1946.58 | 4881.37 | 1946.57 | 4885.48 | 1946.51 | 4897.58 | 1946.47 | 4908.28 | 1946.45 |
| 4911.35 | 1946.38 | 4914.37 | 1946.29 | 4917.61 | 1946.25 | 4918.44 | 1946.23 | 4923.22 | 1946.23 |
| 4924.08 | 1946.22 | 4926.47 | 1946.17 | 4939.91 | 1946.08 | 4948.07 | 1946 | 5093.25 | 1946 |
| 5168.66 | 1945.39 | 5183.64 | 1945.43 | 5188.01 | 1945.48 | 5194.15 | 1945.56 | 5197.5 | 1945.56 |
| 5200.43 | 1945.57 | 5209.07 | 1945.59 | 5211.88 | 1945.59 | 5217.91 | 1945.58 | 5223.65 | 1945.56 |
| 5242.59 | 1945.54 | 5263.85 | 1945.51 | 5264.63 | 1945.5 | 5271.23 | 1945.48 | 5277.43 | 1945.47 |
| 5285.65 | 1945.37 | 5292.74 | 1945.24 | 5304.58 | 1945 | 5391.13 | 1945 | 5396.66 | 1944.99 |
| 5403.51 | 1944.99 | 5424.49 | 1944.96 | 5454.3 | 1944.96 | 5463.54 | 1944.98 | 5465.82 | 1944.98 |
| 5476.08 | 1945 | 5496.22 | 1946 | 5507.68 | 1947 | 5509.49 | 1947.16 | 5520.34 | 1948 |
| 5523.41 | 1948.33 | 5529.55 | 1949 | 5536.49 | 1949.77 | 5538.91 | 1950 | 5548.55 | 1950.97 |
| 5556.98 | 1952 | 5560.92 | 1952.42 | 5566.44 | 1953 | 5568.27 | 1953.23 | 5574.49 | 1954 |
| 5578.88 | 1954.62 | 5585.56 | 1955.58 | 5591.45 | 1956.43 | 5595.35 | 1957 | 5600.44 | 1958 |
| 5601.94 | 1958.31 | 5605.17 | 1959 | 5607.15 | 1959.44 | 5609.85 | 1960 | 5613.08 | 1960.7 |
| 5614.52 | 1961 | 5617.29 | 1961.59 | 5619.6 | 1962 | 5622.09 | 1962.02 | 5623.19 | 1962.01 |
| 5625.52 | 1962.19 | 5630.87 | 1963 | 5633.82 | 1963.53 | 5636.95 | 1964 | 5651.3 | 1964 |
| 5652.23 | 1964.01 | 5674.29 | 1964.55 | 5684.14 | 1964.79 | 5686.71 | 1964.87 | 5687.25 | 1964.88 |
| 5691.25 | 1965 | 5741.66 | 1965 | 5747.34 | 1965.12 | 5748.21 | 1965.12 | 5753.6 | 1965.16 |
| 5763.41 | 1965.22 | 5765.44 | 1965.23 | 5767.81 | 1965.25 | 5769.31 | 1965.27 | 5773.37 | 1965.31 |
| 5786.53 | 1965.41 | 5796.18 | 1965.49 | 5800.33 | 1965.52 | 5806.52 | 1965.58 | 5842.32 | 1965.87 |
| 5858.53 | 1966 | 5892.62 | 1966 | 5892.94 | 1966.01 | 5897.81 | 1966.01 | 5902.23 | 1966.02 |
| 5912.25 | 1966.02 | 5919.04 | 1966.01 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2400.92 | .045 | 2400.92 | .04 | 5919.04 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2400.92 | 5919.04 | 255.22 | 255.22 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1947.29 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.19 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1947.11 | Reach Len. (ft) | 255.22 | 255.22 | 255.22 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6446.84 | | |
| E.G. Slope (ft/ft) | 0.003203 | Area (sq ft) | | 6446.84 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3031.39 | Top Width (ft) | | 3031.39 | | |
| Vel Total (ft/s) | 3.47 | Avg. Vel. (ft/s) | | 3.47 | | |
| Max Chl Dpth (ft) | 6.13 | Hydr. Depth (ft) | | 2.13 | | |
| Conv. Total (cfs) | 395793.0 | Conv. (cfs) | | 395793.0 | | |
| Length Wtd. (ft) | 255.22 | Wetted Per. (ft) | | 3034.36 | | |
| Min Ch El (ft) | 1940.98 | Shear (lb/sq ft) | | 0.42 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5919.04 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.82 | Cum Volume (acre-ft) | | 3207.38 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1506.93 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE

REACH: MOJAVE RS: -1759.33

INPUT
Description:
Station Elevation Data num= 321

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2515.94 | 1949.37 | 2524.53 | 1949.63 | 2527.06 | 1949.68 | 2531.41 | 1949.37 | 2534.92 | 1948 |
| 2536.76 | 1947.32 | 2537.59 | 1947 | 2539.21 | 1946.32 | 2541.23 | 1945.53 | 2542.67 | 1945 |
| 2543.57 | 1944.65 | 2545.2 | 1944 | 2547.32 | 1943.18 | 2549.98 | 1942.17 | 2552.99 | 1941 |
| 2553.91 | 1940.7 | 2554.45 | 1940.55 | 2555.75 | 1940 | 2556.36 | 1939.76 | 2558.35 | 1939 |
| 2559.86 | 1938.36 | 2561.61 | 1938.3 | 2562.7 | 1938.28 | 2562.98 | 1938.29 | 2567.44 | 1938.54 |
| 2568.61 | 1938.6 | 2571.63 | 1938.79 | 2574.68 | 1939 | 2580.02 | 1939.52 | 2582.12 | 1939.73 |
| 2584.7 | 1940 | 2609.2 | 1940.81 | 2615.81 | 1941 | 2621.69 | 1941.37 | 2634.45 | 1942 |
| 2642.31 | 1942.56 | 2650.51 | 1943 | 2667.13 | 1943.24 | 2677.59 | 1943.39 | 2694.29 | 1943.62 |
| 2702.11 | 1943.71 | 2702.42 | 1943.72 | 2721.53 | 1944 | 2732.45 | 1944.27 | 2756.32 | 1944.85 |
| 2758.99 | 1944.91 | 2760.22 | 1944.93 | 2762.11 | 1945 | 2762.81 | 1945 | 2763.48 | 1944.98 |
| 2809.83 | 1944.21 | 2816.81 | 1944.13 | 2821.82 | 1944.01 | 2823.95 | 1944 | 2825.79 | 1944 |
| 2829.19 | 1943.94 | 2832.24 | 1943.91 | 2839.63 | 1943.85 | 2844.3 | 1943.8 | 2922.54 | 1943.01 |
| 2925.18 | 1943.01 | 2927.15 | 1943 | 2947.7 | 1942.37 | 2959.17 | 1942 | 2967.74 | 1942 |
| 2979.89 | 1942.31 | 2992.24 | 1942.51 | 3022.31 | 1943 | 3102.83 | 1943 | 3110.01 | 1942.99 |
| 3116.89 | 1942.89 | 3138.4 | 1942.87 | 3159.79 | 1942.88 | 3160.32 | 1942.89 | 3165.16 | 1942.85 |
| 3173.79 | 1942.8 | 3173.9 | 1942.79 | 3175.27 | 1942.79 | 3176.89 | 1942.77 | 3182.73 | 1942.72 |
| 3191.13 | 1942.64 | 3198.72 | 1942.55 | 3211.23 | 1942.41 | 3236.96 | 1942 | 3248.49 | 1942 |
| 3254.39 | 1941.78 | 3256.71 | 1941.68 | 3275.83 | 1941 | 3284.26 | 1941.01 | 3285.62 | 1941.01 |
| 3293.8 | 1941.02 | 3303.5 | 1941.01 | 3306.78 | 1941.01 | 3307.94 | 1941 | 3310.86 | 1941 |
| 3312.8 | 1941.03 | 3313.28 | 1941.03 | 3315.62 | 1941 | 3318.38 | 1941.01 | 3328.22 | 1941.03 |
| 3329.85 | 1941.04 | 3337.12 | 1941.02 | 3341.46 | 1941 | 3341.92 | 1941.06 | 3349.63 | 1942 |
| 3356.99 | 1943 | 3359.67 | 1943.35 | 3361.98 | 1943.63 | 3365.22 | 1944 | 3366.77 | 1944.03 |
| 3368.53 | 1944.05 | 3372.47 | 1944.07 | 3374.71 | 1944.13 | 3384.91 | 1944.3 | 3389.08 | 1944.34 |
| 3392.5 | 1944.36 | 3396.54 | 1944.4 | 3399.03 | 1944.45 | 3407.66 | 1944.61 | 3412.56 | 1944.69 |
| 3414.81 | 1944.71 | 3415.84 | 1944.7 | 3417.97 | 1944.72 | 3422 | 1944.72 | 3422.6 | 1944.73 |
| 3423.69 | 1944.72 | 3429.61 | 1944.6 | 3444.64 | 1944.28 | 3445.08 | 1944.28 | 3450 | 1944.1 |
| 3452.7 | 1944.01 | 3452.84 | 1944 | 3471.71 | 1944 | 3476.58 | 1944.01 | 3485.71 | 1944.24 |
| 3498.68 | 1944.55 | 3502 | 1944.61 | 3509.54 | 1944.54 | 3520.48 | 1944.43 | 3521.48 | 1944.34 |
| 3525.58 | 1944 | 3541.9 | 1944 | 3544.81 | 1943.99 | 3554.61 | 1943.99 | 3563.03 | 1944 |
| 3564.87 | 1944 | 3566.02 | 1943.98 | 3574.85 | 1943.81 | 3579.62 | 1943.83 | 3586.98 | 1943.81 |
| 3587.76 | 1943.8 | 3589.57 | 1943.82 | 3591.06 | 1943.81 | 3594.06 | 1943.83 | 3607.06 | 1943.71 |
| 3607.79 | 1943.7 | 3616 | 1943.61 | 3632.98 | 1943.73 | 3658.4 | 1943.92 | 3670.21 | 1944 |
| 3684.12 | 1944 | 3690.06 | 1943.96 | 3711.33 | 1943.87 | 3712.07 | 1943.87 | 3717.41 | 1943.89 |
| 3719.07 | 1943.88 | 3720.66 | 1943.86 | 3732.76 | 1943.74 | 3808.51 | 1943 | 4007.14 | 1943 |
| 4041.79 | 1943.45 | 4042.33 | 1943.45 | 4046.05 | 1943.51 | 4050.83 | 1943.58 | 4061.82 | 1943.78 |
| 4064.75 | 1943.83 | 4065.15 | 1943.83 | 4068.62 | 1943.89 | 4073.95 | 1943.89 | 4076.38 | 1944 |
| 4106.23 | 1945 | 4132.48 | 1945 | 4136.91 | 1944.99 | 4144.31 | 1944.98 | 4154.75 | 1944.99 |
| 4156.46 | 1944.99 | 4156.96 | 1945 | 4164.23 | 1945 | 4164.67 | 1945.01 | 4168.38 | 1945.01 |
| 4173.42 | 1945.02 | 4175 | 1945.02 | 4177.21 | 1945.03 | 4182.6 | 1945.04 | 4197.96 | 1945.25 |
| 4213.46 | 1945.34 | 4226.33 | 1945.38 | 4231.78 | 1945.41 | 4234.2 | 1945.42 | 4238.14 | 1945.45 |
| 4239.5 | 1945.45 | 4240.64 | 1945.46 | 4246.71 | 1945.47 | 4257.8 | 1945.56 | 4265.79 | 1945.6 |
| 4274.29 | 1945.6 | 4278 | 1945.59 | 4278.1 | 1945.6 | 4314.92 | 1946 | 4359.66 | 1946 |
| 4379.85 | 1945.73 | 4407.22 | 1945.36 | 4409.37 | 1945.36 | 4418.22 | 1945.39 | 4428.73 | 1945.43 |
| 4430.79 | 1945.43 | 4431.32 | 1945.44 | 4433.15 | 1945.44 | 4434.54 | 1945.45 | 4457.29 | 1945.47 |
| 4458.37 | 1945.47 | 4475.14 | 1945.57 | 4501.65 | 1945.74 | 4502.83 | 1945.75 | 4504.81 | 1945.78 |
| 4507.09 | 1945.79 | 4526.95 | 1945.97 | 4529.63 | 1946 | 4763.25 | 1946 | 4769.36 | 1945.98 |
| 4771.27 | 1945.98 | 4824.85 | 1945.3 | 4827.79 | 1945.26 | 4848.33 | 1945 | 5209.48 | 1945 |
| 5222.9 | 1944.68 | 5223.97 | 1944.67 | 5237.5 | 1944.52 | 5277.52 | 1944.01 | 5278.26 | 1944 |
| 5283.5 | 1944 | 5299.08 | 1943.85 | 5302.12 | 1943.83 | 5303.25 | 1943.81 | 5305.44 | 1943.79 |
| 5327.48 | 1943.58 | 5340.85 | 1943.48 | 5345.71 | 1943.47 | 5353.27 | 1943.45 | 5368.08 | 1943.61 |
| 5400.11 | 1944 | 5401.34 | 1944 | 5408.83 | 1944.22 | 5424.55 | 1944.78 | 5429.31 | 1944.94 |
| 5430.93 | 1945 | 5435.73 | 1945.27 | 5448.78 | 1946 | 5456.66 | 1946.56 | 5457.44 | 1946.62 |
| 5462.04 | 1947 | 5470.17 | 1947.74 | 5473.41 | 1948 | 5481.87 | 1948.82 | 5483.69 | 1949 |
| 5492.8 | 1949.86 | 5494.18 | 1950 | 5499.08 | 1950.26 | 5511.94 | 1950.99 | 5513.98 | 1951 |
| 5516.33 | 1951.49 | 5518.62 | 1952 | 5520.92 | 1952.66 | 5522.62 | 1953 | 5525.27 | 1954 |
| 5528.01 | 1955 | 5530.51 | 1956 | 5533.18 | 1957 | 5533.46 | 1957.1 | 5536.5 | 1958 |
| 5539.03 | 1958.77 | 5543.17 | 1960 | 5546.44 | 1960.81 | 5547.1 | 1961 | 5550.39 | 1961.22 |
| 5551.57 | 1961.28 | 5553.26 | 1961.34 | 5561.63 | 1961.81 | 5565.08 | 1961.87 | 5568.9 | 1961.93 |
| 5572.12 | 1961.96 | 5574.08 | 1962 | 5577.25 | 1962 | 5578.31 | 1961.99 | 5579.59 | 1961.99 |
| 5580.32 | 1962 | 5583.77 | 1962 | 5586.33 | 1962.01 | 5589.3 | 1962.03 | 5595.61 | 1962.14 |
| 5627.85 | 1962.7 | 5632.17 | 1962.76 | 5643.6 | 1963 | 5647.78 | 1963 | 5682.76 | 1963.27 |
| 5703.32 | 1963.43 | 5713.72 | 1963.49 | 5743.23 | 1963.59 | 5790.01 | 1963.77 | 5816.63 | 1963.9 |
| 5834.21 | 1963.98 | 5834.93 | 1963.99 | 5836.93 | 1963.99 | 5837.88 | 1964 | 5839.77 | 1964 |
| 5848.79 | 1964.07 | 5857.01 | 1964.09 | 5874.56 | 1964.17 | 5875.15 | 1964.17 | 5917.93 | 1964.29 |
| 5945.27 | 1964.33 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2515.94 | .045 | 2515.94 | .04 | 5945.27 | .045 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 2515.94 | 5945.27 | 280.3 | 280.3 | 280.3 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1946.47 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.19 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1946.28 | Reach Len. (ft) | 280.30 | 280.30 | 280.30 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6339.38 | | |
| E.G. Slope (ft/ft) | 0.003212 | Area (sq ft) | | 6339.38 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 2913.41 | Top Width (ft) | | 2913.41 | | |

| | | | | | |
|---|---|---|---|---|---|
| Vel Total (ft/s) | 3.53 | Avg. Vel. (ft/s) | 3.53 | | |
| Max Chl Dpth (ft) | 8.00 | Hydr. Depth (ft) | 2.18 | | |
| Conv. Total (cfs) | 395252.3 | Conv. (cfs) | 395252.3 | | |
| Length Wtd. (ft) | 280.30 | Wetted Per. (ft) | 2915.47 | | |
| Min Ch El (ft) | 1938.28 | Shear (lb/sq ft) | 0.44 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5945.27 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.71 | Cum Volume (acre-ft) | 3169.92 | | |
| C & E Loss (ft) | 0.02 | Cum SA (acres) | 1489.52 | | |

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -2039.63

INPUT
Description:
Station Elevation Data num= 419

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2228.43 | 1947 | 2240.8 | 1946.44 | 2245.77 | 1946.22 | 2250.2 | 1946 | 2259.52 | 1945.15 |
| 2261.01 | 1945 | 2261.6 | 1944.98 | 2293.38 | 1944 | 2295.89 | 1943.91 | 2319.91 | 1943 |
| 2326.99 | 1942.95 | 2335.27 | 1942.9 | 2343.79 | 1942.95 | 2348.37 | 1942.98 | 2351.98 | 1942.98 |
| 2353.03 | 1943 | 2467.07 | 1943 | 2485.09 | 1942.15 | 2486.62 | 1942.08 | 2487.24 | 1942.1 |
| 2487.82 | 1942.1 | 2489.44 | 1942.17 | 2490.88 | 1942.21 | 2491.11 | 1942.21 | 2496.01 | 1942.17 |
| 2496.66 | 1942.16 | 2506.35 | 1942.04 | 2506.98 | 1942 | 2508.93 | 1942 | 2510.04 | 1941.97 |
| 2511.12 | 1941.95 | 2516.46 | 1941.75 | 2518.89 | 1941.67 | 2520.4 | 1941.61 | 2522.27 | 1941.54 |
| 2526.97 | 1941.36 | 2530.36 | 1941.24 | 2531.89 | 1941.18 | 2535.7 | 1941.05 | 2537.33 | 1941 |
| 2597.11 | 1941 | 2602.99 | 1941.62 | 2604.71 | 1941.79 | 2606.66 | 1942 | 2607.79 | 1942.11 |
| 2609.29 | 1942.24 | 2609.65 | 1942.26 | 2612.65 | 1942.51 | 2613.53 | 1942.56 | 2617.09 | 1942.82 |
| 2617.66 | 1942.82 | 2618.77 | 1942.84 | 2619.84 | 1942.83 | 2620.55 | 1942.83 | 2621.82 | 1942.81 |
| 2626.22 | 1942.75 | 2629.66 | 1942.97 | 2630.81 | 1942.97 | 2634.44 | 1942.96 | 2640.31 | 1942.96 |
| 2649.17 | 1942.99 | 2650.47 | 1942.99 | 2651.6 | 1943 | 2658.82 | 1943 | 2689.95 | 1943.51 |
| 2691.01 | 1943.52 | 2730.63 | 1943.93 | 2730.81 | 1943.93 | 2736.04 | 1943.98 | 2736.92 | 1943.99 |
| 2740.44 | 1944.02 | 2743.8 | 1944.06 | 2745.46 | 1944.04 | 2747.6 | 1944 | 2752.77 | 1943.95 |
| 2753.55 | 1943.92 | 2755.7 | 1943.85 | 2774.11 | 1943.5 | 2774.57 | 1943.47 | 2776.96 | 1943.41 |
| 2777.38 | 1943.39 | 2780.24 | 1943.3 | 2782.95 | 1943.2 | 2786.8 | 1943.07 | 2787.82 | 1943.04 |
| 2788.94 | 1943 | 2843.44 | 1943 | 2853.29 | 1943.15 | 2872.63 | 1943.44 | 2876.21 | 1943.61 |
| 2876.67 | 1943.61 | 2880.14 | 1943.75 | 2885.33 | 1944 | 2894.4 | 1944.49 | 2895.65 | 1944.55 |
| 2897.58 | 1944.63 | 2906.19 | 1945 | 2911.65 | 1945.03 | 2912.49 | 1945.03 | 2918.52 | 1945 |
| 2919.41 | 1944.95 | 2933.8 | 1944 | 2949.13 | 1943.09 | 2950.57 | 1943 | 2953.98 | 1942.68 |
| 2960.9 | 1942 | 2966.79 | 1941.99 | 2974.22 | 1941.99 | 2989.71 | 1941.66 | 2990.38 | 1941.66 |
| 2990.42 | 1941.65 | 2991.23 | 1941.65 | 2997.57 | 1941.58 | 2998.1 | 1941.56 | 2998.67 | 1941.56 |
| 3005.97 | 1941.51 | 3011.53 | 1941.47 | 3012.07 | 1941.46 | 3013.78 | 1941.44 | 3018.82 | 1941.28 |
| 3019.47 | 1941.27 | 3022.06 | 1941.19 | 3023.64 | 1941.16 | 3024.56 | 1941.16 | 3026.31 | 1941.1 |
| 3027.11 | 1941.08 | 3027.73 | 1941.08 | 3028.69 | 1941.09 | 3031.39 | 1941.13 | 3034.92 | 1941.16 |
| 3040.29 | 1941.29 | 3050.65 | 1941.48 | 3051.22 | 1941.5 | 3052.13 | 1941.52 | 3065.72 | 1942 |
| 3071.4 | 1942.22 | 3072.74 | 1942.27 | 3074.93 | 1942.36 | 3077.37 | 1942.45 | 3078.47 | 1942.5 |
| 3086.27 | 1942.8 | 3092.5 | 1943 | 3124.61 | 1943 | 3126.39 | 1942.98 | 3127.75 | 1942.93 |
| 3132.09 | 1942.83 | 3153.94 | 1942.57 | 3165.53 | 1942.44 | 3166.48 | 1942.44 | 3176.21 | 1942.43 |
| 3186.44 | 1942.41 | 3187.27 | 1942.41 | 3204.91 | 1942.22 | 3225.44 | 1942 | 3230.4 | 1942 |
| 3233.28 | 1941.98 | 3275.32 | 1941.34 | 3290.53 | 1941.11 | 3295.23 | 1941.03 | 3297.26 | 1941 |
| 3371.24 | 1941 | 3381.14 | 1941.44 | 3383.5 | 1941.57 | 3384.43 | 1941.61 | 3391.97 | 1942 |
| 3396.09 | 1942 | 3396.67 | 1942.03 | 3398.19 | 1942.08 | 3422.36 | 1942.99 | 3426.23 | 1943 |
| 3431.9 | 1943.01 | 3440.65 | 1943.29 | 3450.28 | 1943.58 | 3455 | 1943.67 | 3459.57 | 1943.71 |
| 3461.81 | 1943.75 | 3465.26 | 1943.79 | 3466.55 | 1943.79 | 3478.3 | 1943.92 | 3483.69 | 1943.99 |
| 3484.48 | 1943.99 | 3488.89 | 1944 | 3491.18 | 1944 | 3492.35 | 1944.1 | 3499.34 | 1945 |
| 3502.73 | 1945.46 | 3503.42 | 1945.57 | 3505.36 | 1945.85 | 3506.44 | 1946 | 3507.69 | 1946.15 |
| 3514.4 | 1947 | 3527.44 | 1947 | 3531.73 | 1946.7 | 3536.92 | 1946.34 | 3540.58 | 1946.09 |
| 3542.37 | 1946 | 3554.38 | 1945.45 | 3554.78 | 1945.42 | 3555.87 | 1945.36 | 3559.48 | 1945.22 |
| 3563.29 | 1945.01 | 3563.41 | 1945 | 3577.8 | 1944.4 | 3579.17 | 1944.33 | 3588.12 | 1944 |
| 3589.28 | 1943.97 | 3590.17 | 1943.92 | 3593.7 | 1943.76 | 3596.12 | 1943.63 | 3605.72 | 1943 |
| 3637.81 | 1943 | 3639.29 | 1943.01 | 3647.2 | 1943.01 | 3655.26 | 1943 | 3674.88 | 1943 |
| 3686.92 | 1943.01 | 3696.97 | 1943 | 3868.06 | 1943 | 3881.65 | 1942.99 | 3887.71 | 1942.99 |
| 3917.59 | 1942.46 | 3918.01 | 1942.46 | 3919.65 | 1942.44 | 3919.95 | 1942.44 | 3928.36 | 1942.02 |
| 3930.17 | 1942.02 | 3952.26 | 1942.85 | 3952.3 | 1942.84 | 3954.77 | 1943 | 3976.42 | 1943 |
| 3977.84 | 1942.99 | 3980.69 | 1942.96 | 3981.09 | 1942.96 | 4000.4 | 1942.36 | 4006.39 | 1942.24 |
| 4006.93 | 1942.22 | 4011.68 | 1942.01 | 4011.78 | 1942 | 4048.03 | 1942 | 4048.55 | 1942.01 |
| 4053.18 | 1942.03 | 4053.78 | 1942.03 | 4054.34 | 1942.04 | 4068.95 | 1942.04 | 4074.95 | 1942.07 |
| 4080.76 | 1942.11 | 4084.62 | 1942.1 | 4107.59 | 1942.57 | 4108.74 | 1942.58 | 4113.06 | 1942.69 |
| 4113.29 | 1942.69 | 4121.03 | 1942.93 | 4121.17 | 1942.94 | 4122.99 | 1943 | 4125.14 | 1943.22 |
| 4132.82 | 1944 | 4146.95 | 1944.41 | 4153.1 | 1944.57 | 4154.46 | 1944.57 | 4155.07 | 1944.59 |
| 4155.86 | 1944.59 | 4156.34 | 1944.6 | 4159.14 | 1944.6 | 4181.89 | 1944.79 | 4206.09 | 1945 |
| 4223.38 | 1945 | 4237.86 | 1944.85 | 4252.22 | 1944.71 | 4253.49 | 1944.69 | 4254.38 | 1944.67 |
| 4255.14 | 1944.66 | 4260.7 | 1944.53 | 4262.93 | 1944.51 | 4264.48 | 1944.47 | 4268.04 | 1944.43 |
| 4275.93 | 1944.26 | 4280.42 | 1944.15 | 4282.18 | 1944.12 | 4285.69 | 1944 | 4287.54 | 1944 |
| 4315.3 | 1943.99 | 4329.81 | 1943.99 | 4349.08 | 1944 | 4364.74 | 1944 | 4376.41 | 1944.33 |
| 4377.6 | 1944.33 | 4394.96 | 1944.55 | 4430.78 | 1945 | 4438.39 | 1945 | 4445.33 | 1944.99 |
| 4469.26 | 1944.99 | 4473.66 | 1944.98 | 4503.63 | 1944.68 | 4503.89 | 1944.67 | 4507.74 | 1944.64 |
| 4509.64 | 1944.63 | 4517.82 | 1944.55 | 4529.97 | 1944.45 | 4542.27 | 1944.4 | 4550.02 | 1944.39 |
| 4566.73 | 1944.4 | 4567.51 | 1944.42 | 4567.82 | 1944.41 | 4568.25 | 1944.42 | 4569.98 | 1944.38 |
| 4570.63 | 1944.39 | 4578.91 | 1944.17 | 4579.15 | 1944.17 | 4585.2 | 1944 | 4731.56 | 1944 |
| 4739.82 | 1943.98 | 4740.84 | 1943.97 | 4742.68 | 1943.96 | 4745.84 | 1944 | 4838.25 | 1944 |
| 4884.33 | 1943.52 | 4884.92 | 1943.52 | 4895.84 | 1943.44 | 4910.94 | 1943.33 | 4911.85 | 1943.33 |
| 4912.05 | 1943.32 | 4921.06 | 1943.27 | 4927.56 | 1943.23 | 4929.33 | 1943.23 | 4932.53 | 1943.21 |
| 4935.86 | 1943.2 | 4938.59 | 1943.19 | 4950.05 | 1943.19 | 4952.8 | 1943.17 | 4955.06 | 1943.16 |
| 5003.47 | 1943.07 | 5046.9 | 1943.09 | 5074.13 | 1943 | 5326.72 | 1943 | 5330.43 | 1943.14 |
| 5339.35 | 1943.48 | 5353.58 | 1944 | 5359.81 | 1944.36 | 5370.42 | 1945 | 5376.28 | 1945.47 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5383.09 | 1946 | 5384.55 | 1946.11 | 5393.37 | 1947 | 5400.41 | 1947.78 | 5402.37 | 1948 |
| 5406.14 | 1948.42 | 5411.91 | 1949 | 5416.37 | 1949.46 | 5421.73 | 1950 | 5427.59 | 1950.66 |
| 5430.15 | 1950.97 | 5430.61 | 1951.02 | 5440.85 | 1952 | 5442.61 | 1952.16 | 5451.73 | 1953 |
| 5451.82 | 1953 | 5456.95 | 1953.27 | 5470.45 | 1954 | 5471.74 | 1954.08 | 5472.92 | 1954.16 |
| 5483.39 | 1955 | 5486.95 | 1955.36 | 5493 | 1956 | 5501.98 | 1956.99 | 5502.98 | 1957.06 |
| 5508.08 | 1957.45 | 5512.48 | 1957.77 | 5515.24 | 1958 | 5517.38 | 1958.13 | 5517.95 | 1958.16 |
| 5519.51 | 1958.28 | 5529.11 | 1959 | 5532.96 | 1959.32 | 5540.62 | 1960 | 5552.42 | 1960.75 |
| 5556.61 | 1961 | 5557.06 | 1961 | 5564.32 | 1961.03 | 5565.34 | 1961.03 | 5571.98 | 1961 |
| 5572.2 | 1961 | 5577.95 | 1961.96 | 5578.14 | 1962 | 5600.05 | 1962 | 5622.5 | 1962.27 |
| 5623.1 | 1962.27 | 5624.19 | 1962.29 | 5627.63 | 1962.31 | 5637.67 | 1962.4 | 5647.29 | 1962.5 |
| 5663.2 | 1962.67 | 5664.25 | 1962.68 | 5673.1 | 1962.78 | 5677.6 | 1962.84 | 5677.91 | 1962.84 |
| 5685.9 | 1962.91 | 5688.91 | 1962.94 | 5691.12 | 1962.93 | 5694.38 | 1962.91 | 5694.86 | 1962.91 |
| 5699.78 | 1962.88 | 5704.44 | 1962.86 | 5705.34 | 1962.85 | 5710.09 | 1962.82 | 5717.79 | 1962.76 |
| 5719.02 | 1962.74 | 5719.89 | 1962.74 | 5720.55 | 1962.73 | 5736.27 | 1962.57 | 5746.37 | 1962.47 |
| 5747.09 | 1962.46 | 5747.86 | 1962.46 | 5750.39 | 1962.44 | 5750.93 | 1962.43 | 5752.65 | 1962.42 |
| 5753.22 | 1962.41 | 5775.85 | 1962.2 | 5795.92 | 1962 | 5913.41 | 1962 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2228.43 | .045 | 2228.43 | .04 | 5913.41 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2228.43 | 5913.41 | 236.06 | 236.06 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | Left OB | Channel | Right OB |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1945.75 | Element | | | |
| Vel Head (ft) | 0.14 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1945.61 | Reach Len. (ft) | 236.06 | 236.06 | 236.06 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7432.19 | |
| E.G. Slope (ft/ft) | 0.002031 | Area (sq ft) | | 7432.19 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 3076.35 | Top Width (ft) | | 3076.35 | |
| Vel Total (ft/s) | 3.01 | Avg. Vel. (ft/s) | | 3.01 | |
| Max Chl Dpth (ft) | 4.61 | Hydr. Depth (ft) | | 2.42 | |
| Conv. Total (cfs) | 496999.9 | Conv. (cfs) | | 496999.9 | |
| Length Wtd. (ft) | 236.06 | Wetted Per. (ft) | | 3077.24 | |
| Min Ch El (ft) | 1941.00 | Shear (lb/sq ft) | | 0.31 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5913.41 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.51 | Cum Volume (acre-ft) | | 3125.61 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1470.25 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -2275.69

INPUT
Description:
Station Elevation Data num= 375

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2174.33 | 1946.02 | 2178.06 | 1946.01 | 2181.04 | 1946.01 | 2181.89 | 1946 | 2182.85 | 1945.93 |
| 2184.19 | 1945.93 | 2185.95 | 1945.91 | 2189.08 | 1945.84 | 2206.01 | 1945.43 | 2207.61 | 1945.41 |
| 2213.64 | 1945.28 | 2216.22 | 1945.27 | 2225.01 | 1945.19 | 2230.37 | 1945.16 | 2230.67 | 1945.17 |
| 2234.82 | 1945.17 | 2237.51 | 1945.19 | 2237.54 | 1945.18 | 2246.16 | 1945.08 | 2252.85 | 1945.11 |
| 2257.98 | 1945.1 | 2265.96 | 1945.09 | 2275 | 1945.11 | 2278.97 | 1945.1 | 2291.1 | 1945.08 |
| 2293.08 | 1945.08 | 2300.83 | 1945.05 | 2302.25 | 1945.05 | 2313.21 | 1945.02 | 2321.64 | 1945 |
| 2326.28 | 1944.88 | 2334.35 | 1944.71 | 2340.92 | 1944.47 | 2342.73 | 1944.39 | 2344.68 | 1944.33 |
| 2346.14 | 1944.27 | 2351.42 | 1944 | 2352.11 | 1944 | 2369.28 | 1943.26 | 2375.97 | 1943 |
| 2380.51 | 1942 | 2391.77 | 1941.88 | 2394.89 | 1941.84 | 2402.77 | 1941.93 | 2409.85 | 1942 |
| 2429.48 | 1942.01 | 2438.27 | 1942.01 | 2453.5 | 1942 | 2460.45 | 1941.33 | 2462.82 | 1941.12 |
| 2465.81 | 1940.91 | 2469.04 | 1940.75 | 2471.24 | 1940.65 | 2478.41 | 1940.36 | 2488.56 | 1940 |
| 2524.08 | 1940 | 2533.09 | 1940.51 | 2549.8 | 1941 | 2550.98 | 1941 | 2559.08 | 1941.58 |
| 2564.02 | 1941.8 | 2568.13 | 1941.97 | 2568.61 | 1942 | 2579.18 | 1942 | 2589.1 | 1941.78 |
| 2591.4 | 1941.7 | 2607.7 | 1941 | 2633.18 | 1941 | 2642.34 | 1941.4 | 2650.48 | 1941.68 |
| 2657.46 | 1942 | 2668.44 | 1942.64 | 2674.73 | 1943 | 2828.6 | 1943 | 2834.65 | 1943.03 |
| 2843.37 | 1943.03 | 2913.1 | 1943.73 | 2913.36 | 1943.73 | 2929.3 | 1943.87 | 2934.34 | 1943.91 |
| 2934.72 | 1943.92 | 2941.45 | 1943.95 | 2942.74 | 1944 | 2948.88 | 1944 | 2952.86 | 1943.92 |
| 2989.08 | 1943 | 3002.15 | 1943 | 3007.7 | 1942.68 | 3019.26 | 1942 | 3035.92 | 1941.44 |
| 3037.69 | 1941.41 | 3041.42 | 1941.29 | 3042.45 | 1941.28 | 3046.35 | 1941.18 | 3049.59 | 1941.17 |
| 3051.95 | 1941.13 | 3064.7 | 1941.14 | 3069.13 | 1941.1 | 3081.46 | 1941.41 | 3083.93 | 1941.53 |
| 3085.9 | 1941.55 | 3094.17 | 1942 | 3120.2 | 1942 | 3123.47 | 1942.04 | 3147.16 | 1942.31 |
| 3147.83 | 1942.32 | 3160.45 | 1942.43 | 3185.41 | 1942.52 | 3203.55 | 1942.58 | 3205.52 | 1942.58 |
| 3219.48 | 1942.51 | 3239.67 | 1942.4 | 3241.74 | 1942.39 | 3247.07 | 1942.34 | 3264.05 | 1942.15 |
| 3275.99 | 1942 | 3276.25 | 1942 | 3280.64 | 1941.74 | 3295.96 | 1941 | 3314.17 | 1941 |
| 3321.31 | 1940.99 | 3389.76 | 1940.99 | 3409.75 | 1941 | 3443.28 | 1941 | 3445.05 | 1941.01 |
| 3450.09 | 1941.01 | 3454.43 | 1941 | 3460.24 | 1941 | 3462.71 | 1941.07 | 3464.98 | 1941.1 |
| 3468.52 | 1941.22 | 3469.92 | 1941.26 | 3492.86 | 1942 | 3504.17 | 1942.63 | 3509.38 | 1943 |
| 3551.79 | 1943 | 3555.67 | 1942.97 | 3557.86 | 1943 | 3576.93 | 1943 | 3581.14 | 1943.21 |
| 3589.97 | 1943.01 | 3590.22 | 1943 | 3682.28 | 1943 | 3684.92 | 1943.03 | 3688.46 | 1943.08 |
| 3696.09 | 1943.2 | 3699.71 | 1943.27 | 3744.23 | 1943.92 | 3747.9 | 1943.97 | 3750.06 | 1944.01 |
| 3764.12 | 1944.32 | 3767.42 | 1944.37 | 3771.82 | 1944.41 | 3781.86 | 1944.41 | 3785.44 | 1944.42 |
| 3785.6 | 1944.41 | 3795.31 | 1944.18 | 3798.87 | 1944.06 | 3804.31 | 1944.01 | 3807.59 | 1944 |
| 3815.96 | 1943.87 | 3819.6 | 1943.81 | 3833.05 | 1943.64 | 3881.13 | 1943.01 | 3884.49 | 1943 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3893.14 | 1942.31 | 3898.11 | 1942 | 3898.59 | 1942 | 3904.36 | 1941.88 | 3921.04 | 1941.61 |
| 3929.07 | 1941.49 | 3937.19 | 1941.36 | 3938.22 | 1941.35 | 3943.09 | 1941.27 | 3955.17 | 1941.19 |
| 3966.7 | 1941.08 | 3971 | 1941.07 | 3972.99 | 1941.09 | 3975.08 | 1941.14 | 3981.62 | 1941.24 |
| 3984.36 | 1941.31 | 4010.75 | 1941.33 | 4019.67 | 1941 | 4073.96 | 1941 | 4078.99 | 1941.07 |
| 4112.92 | 1941.55 | 4131.22 | 1941.71 | 4159.9 | 1942 | 4163.24 | 1942 | 4165.75 | 1942.13 |
| 4174.18 | 1942.55 | 4181.09 | 1943 | 4191.88 | 1943.77 | 4196.21 | 1944 | 4200.02 | 1944.01 |
| 4211.19 | 1944.01 | 4216.88 | 1944.15 | 4217.73 | 1944.16 | 4226.49 | 1944.11 | 4236.34 | 1944.05 |
| 4240.06 | 1944 | 4251.23 | 1944 | 4282 | 1944.05 | 4292.24 | 1944.07 | 4301.72 | 1944.05 |
| 4318.26 | 1944.02 | 4320.17 | 1944.02 | 4331.69 | 1944 | 4339.7 | 1943.66 | 4340.36 | 1943.65 |
| 4347.46 | 1943.39 | 4357.62 | 1943 | 4396.78 | 1943 | 4410.44 | 1943.26 | 4410.87 | 1943.28 |
| 4413.83 | 1943.32 | 4415.53 | 1943.36 | 4423.79 | 1943.45 | 4430.46 | 1943.49 | 4433.92 | 1943.63 |
| 4434.61 | 1943.64 | 4437.92 | 1943.77 | 4441.59 | 1943.88 | 4444.48 | 1943.99 | 4445.33 | 1943.98 |
| 4446.43 | 1944 | 4453.28 | 1944.25 | 4457.37 | 1944.41 | 4466.99 | 1944.78 | 4473.15 | 1945 |
| 4534.35 | 1945 | 4543.62 | 1944.9 | 4552.42 | 1944.85 | 4553 | 1944.84 | 4555.72 | 1944.84 |
| 4558.3 | 1944.82 | 4564.42 | 1944.75 | 4582.07 | 1944.49 | 4586.62 | 1944.43 | 4596.2 | 1944.37 |
| 4604.99 | 1944.36 | 4606.02 | 1944.34 | 4611.96 | 1944.28 | 4613.26 | 1944.29 | 4619.88 | 1944.29 |
| 4626.96 | 1944.24 | 4627.73 | 1944.23 | 4638.88 | 1944 | 4641.34 | 1943.96 | 4642.86 | 1943.95 |
| 4656.44 | 1943.77 | 4666.08 | 1943.68 | 4672.02 | 1943.64 | 4675.03 | 1943.65 | 4680.1 | 1943.68 |
| 4682.6 | 1943.66 | 4690.82 | 1943.67 | 4699.1 | 1943.67 | 4701.92 | 1943.65 | 4709.54 | 1943.64 |
| 4718.84 | 1943.62 | 4747.2 | 1943.01 | 4748.21 | 1943.02 | 4803.24 | 1943.79 | 4807.44 | 1943.81 |
| 4825.95 | 1943.81 | 4835.05 | 1943.92 | 4840.09 | 1944 | 4903.88 | 1944 | 4914.81 | 1943.78 |
| 4928.22 | 1943.56 | 4938.55 | 1943.37 | 4942.21 | 1943.31 | 4943.99 | 1943.27 | 4948.66 | 1943.2 |
| 4958.46 | 1943 | 4964.83 | 1942.97 | 4992.27 | 1942.32 | 4999.39 | 1942.21 | 5003.56 | 1942.15 |
| 5003.92 | 1942.16 | 5006.15 | 1942.13 | 5009.75 | 1942.11 | 5012.96 | 1942.14 | 5016.34 | 1942.18 |
| 5017.11 | 1942.2 | 5022.49 | 1942.25 | 5063.23 | 1942.65 | 5074.71 | 1942.76 | 5075.14 | 1942.76 |
| 5084.96 | 1942.69 | 5091.51 | 1942.65 | 5099.5 | 1942.62 | 5129.49 | 1942.96 | 5136.56 | 1942.95 |
| 5140.98 | 1942.96 | 5145.68 | 1942.95 | 5150.21 | 1942.96 | 5159.7 | 1942.96 | 5175.92 | 1942.63 |
| 5179.34 | 1942.6 | 5180.69 | 1942.6 | 5191.91 | 1942.51 | 5200.29 | 1942.45 | 5220.35 | 1942.45 |
| 5240.39 | 1942.46 | 5248.65 | 1942.46 | 5249.78 | 1942.47 | 5270.67 | 1942.49 | 5290.79 | 1942.5 |
| 5291.96 | 1942.49 | 5296.75 | 1942.48 | 5318.23 | 1942.58 | 5354.85 | 1942.81 | 5362.72 | 1943 |
| 5369.73 | 1943.32 | 5384.36 | 1944 | 5390.85 | 1944.42 | 5399.91 | 1945 | 5410.9 | 1945.72 |
| 5419.73 | 1946.28 | 5429.79 | 1947 | 5440.19 | 1947.8 | 5445.81 | 1948.24 | 5450.43 | 1948.59 |
| 5455.54 | 1949 | 5458.3 | 1949.25 | 5466.42 | 1950 | 5466.47 | 1950 | 5477.64 | 1951 |
| 5487.62 | 1951.74 | 5490.65 | 1952 | 5495.76 | 1952.42 | 5502.71 | 1953 | 5503.39 | 1953.07 |
| 5516.98 | 1954.37 | 5523.48 | 1955 | 5527.58 | 1955.36 | 5528.23 | 1955.43 | 5534.82 | 1956 |
| 5544.83 | 1956.87 | 5547.51 | 1957.12 | 5549.42 | 1957.21 | 5563.55 | 1958 | 5564.04 | 1958 |
| 5565.76 | 1958.1 | 5580.88 | 1959 | 5586.13 | 1959.41 | 5588.19 | 1959.56 | 5591.12 | 1959.8 |
| 5593.82 | 1960 | 5611.06 | 1960.99 | 5633.55 | 1961.97 | 5634.37 | 1962 | 5696.5 | 1962 |
| 5698.32 | 1961.95 | 5701.75 | 1961.9 | 5718.01 | 1961.74 | 5729.64 | 1961.68 | 5742.24 | 1961.68 |
| 5755.36 | 1961.64 | 5761.96 | 1961.6 | 5769.65 | 1961.56 | 5773.09 | 1961.53 | 5774.13 | 1961.53 |
| 5776.86 | 1961.5 | 5795.95 | 1961.4 | 5808.72 | 1961.33 | 5809.71 | 1961.33 | 5835.52 | 1961.18 |
| 5865.99 | 1961 | 5912.91 | 1961 | 5919.23 | 1961.05 | 5933.05 | 1961.14 | 5938.74 | 1961.14 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2174.33 | .045 | 2174.33 | .04 | 5938.74 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2174.33 | 5938.74 | 143.48 | 143.48 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1945.24 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.15 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1945.08 | Reach Len. (ft) | 143.48 | 143.48 | 143.48 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7170.82 | | |
| E.G. Slope (ft/ft) | 0.002326 | Area (sq ft) | | 7170.82 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3114.00 | Top Width (ft) | | 3114.00 | | |
| Vel Total (ft/s) | 3.12 | Avg. Vel. (ft/s) | | 3.12 | | |
| Max Chl Dpth (ft) | 5.08 | Hydr. Depth (ft) | | 2.30 | | |
| Conv. Total (cfs) | 464438.2 | Conv. (cfs) | | 464438.2 | | |
| Length Wtd. (ft) | 143.48 | Wetted Per. (ft) | | 3114.82 | | |
| Min Ch El (ft) | 1940.00 | Shear (lb/sq ft) | | 0.33 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5938.74 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.32 | Cum Volume (acre-ft) | | 3086.04 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1453.47 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -2419.17

INPUT
Description:
Station Elevation Data num= 384

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2317 | 1945 | 2322.04 | 1944.99 | 2326.24 | 1944.99 | 2329.14 | 1945 | 2333.69 | 1945 |
| 2335.62 | 1944.96 | 2341.76 | 1944.77 | 2345.44 | 1944.73 | 2353.43 | 1944.51 | 2355.34 | 1944.48 |
| 2359.93 | 1944.38 | 2361.04 | 1944.34 | 2370.28 | 1944.1 | 2373.53 | 1944 | 2374.32 | 1943.97 |
| 2380.55 | 1943.71 | 2391.37 | 1943.25 | 2397.03 | 1943 | 2403.28 | 1942.54 | 2410.78 | 1942 |
| 2412.16 | 1941.84 | 2419.51 | 1941 | 2431.56 | 1940.38 | 2439.13 | 1940.02 | 2440.24 | 1940 |
| 2442.95 | 1940 | 2446.54 | 1939.99 | 2450.06 | 1939.99 | 2455.61 | 1939.98 | 2458.66 | 1939.98 |
| 2479.24 | 1940 | 2480.54 | 1940.01 | 2484.88 | 1940.22 | 2485.82 | 1940.22 | 2488.31 | 1940.32 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2495.9 | 1940.67 | 2500.26 | 1941 | 2524.62 | 1941 | 2527.55 | 1940.99 | 2535.87 | 1940.99 |
| 2536.24 | 1941 | 2541.57 | 1941 | 2549.4 | 1941.03 | 2550.82 | 1941.04 | 2556.27 | 1941.04 |
| 2558.89 | 1941.03 | 2560.04 | 1941.03 | 2564.76 | 1941.16 | 2565 | 1941.15 | 2569.54 | 1941.13 |
| 2569.65 | 1941.12 | 2572.15 | 1941.12 | 2576.86 | 1941 | 2579 | 1941 | 2579.08 | 1941.01 |
| 2599.63 | 1941.01 | 2600.24 | 1941 | 2645.4 | 1941 | 2647.68 | 1941.14 | 2647.93 | 1941.14 |
| 2654.58 | 1941.48 | 2664.26 | 1941.99 | 2684.61 | 1941.99 | 2687.65 | 1942 | 2708.38 | 1942 |
| 2766.59 | 1942.59 | 2797.61 | 1942.9 | 2807.67 | 1943 | 2859.53 | 1943 | 2867.32 | 1943.07 |
| 2867.71 | 1943.06 | 2869.08 | 1943.06 | 2870.36 | 1943.07 | 2882.84 | 1943.1 | 2895.22 | 1943.08 |
| 2895.62 | 1943.07 | 2897.33 | 1943.07 | 2902.18 | 1943 | 2941.57 | 1943 | 2954.16 | 1942.11 |
| 2957.86 | 1942 | 2958.7 | 1942 | 2959.31 | 1942.03 | 2962.76 | 1942.28 | 2965.4 | 1942.48 |
| 2966.87 | 1942.6 | 2972.44 | 1943 | 3011 | 1943 | 3012.38 | 1942.86 | 3026.42 | 1942 |
| 3028.42 | 1941.81 | 3033.78 | 1941.76 | 3039.31 | 1941.83 | 3041.25 | 1942 | 3046.04 | 1942.36 |
| 3055.78 | 1943 | 3076.18 | 1943 | 3085.55 | 1942.5 | 3090.35 | 1942 | 3099.16 | 1941.35 |
| 3100.47 | 1941.28 | 3106.9 | 1941 | 3134.03 | 1941 | 3138.37 | 1941.01 | 3139.94 | 1941.01 |
| 3143.97 | 1941.2 | 3146.17 | 1941.22 | 3149.23 | 1941.27 | 3153.59 | 1941.36 | 3158.03 | 1941.44 |
| 3165.67 | 1941.61 | 3166.69 | 1941.63 | 3181.11 | 1942 | 3265.33 | 1942 | 3269.96 | 1942.05 |
| 3272.27 | 1942.08 | 3280 | 1942.04 | 3281.32 | 1942.04 | 3288.96 | 1942.01 | 3290.52 | 1942 |
| 3308.31 | 1941 | 3310.79 | 1940.88 | 3328.52 | 1940 | 3368.55 | 1940 | 3375.59 | 1940.13 |
| 3378.03 | 1940.17 | 3410.59 | 1940.88 | 3416.06 | 1941 | 3517.09 | 1941 | 3540.59 | 1941.79 |
| 3544.69 | 1941.94 | 3546.44 | 1942 | 3547.05 | 1942.08 | 3554.33 | 1943 | 3675.99 | 1943 |
| 3689.2 | 1942.72 | 3695.43 | 1942.48 | 3698.61 | 1942.38 | 3700.23 | 1942.32 | 3701.02 | 1942.3 |
| 3703.47 | 1942.21 | 3704.87 | 1942.17 | 3708.25 | 1942.14 | 3708.76 | 1942.16 | 3712.6 | 1942.14 |
| 3716.65 | 1942.17 | 3718.48 | 1942.2 | 3748.74 | 1942.79 | 3749.43 | 1942.81 | 3759.1 | 1943 |
| 3837.02 | 1943 | 3844.92 | 1942.73 | 3849.09 | 1942.67 | 3856.07 | 1942.55 | 3856.84 | 1942.54 |
| 3860.5 | 1942.45 | 3863.19 | 1942.39 | 3863.69 | 1942.39 | 3883.24 | 1942 | 3964.56 | 1942 |
| 3997.43 | 1941.62 | 4001.91 | 1941.58 | 4002.17 | 1941.57 | 4004.42 | 1941.55 | 4035.25 | 1941 |
| 4110.33 | 1941 | 4115.76 | 1941.15 | 4121.18 | 1941.32 | 4140.04 | 1941.98 | 4142.16 | 1941.98 |
| 4143.52 | 1942 | 4146.21 | 1942.18 | 4147.93 | 1942.3 | 4158.97 | 1943 | 4252.35 | 1943 |
| 4253.22 | 1942.99 | 4254.86 | 1942.99 | 4264.96 | 1942.79 | 4276.85 | 1942.56 | 4279.39 | 1942.56 |
| 4282.44 | 1942.55 | 4284.07 | 1942.54 | 4285.31 | 1942.54 | 4295.51 | 1942.65 | 4313.44 | 1942.94 |
| 4315.44 | 1943 | 4381.94 | 1943 | 4382.72 | 1942.98 | 4385.18 | 1942.9 | 4385.34 | 1942.9 |
| 4387.64 | 1942.83 | 4415.59 | 1942 | 4420.33 | 1942 | 4435.83 | 1942.31 | 4438.1 | 1942.34 |
| 4441.25 | 1942.36 | 4442.48 | 1942.39 | 4449.66 | 1942.46 | 4454.84 | 1942.57 | 4463.36 | 1942.76 |
| 4472.34 | 1943 | 4476.82 | 1943.01 | 4487.04 | 1943.25 | 4497.79 | 1943.48 | 4499.83 | 1943.51 |
| 4500.98 | 1943.52 | 4506.33 | 1943.59 | 4506.73 | 1943.59 | 4514.22 | 1943.71 | 4532.86 | 1944 |
| 4591.53 | 1944 | 4605.66 | 1943.73 | 4606.55 | 1943.71 | 4623.1 | 1943.39 | 4623.91 | 1943.38 |
| 4628.21 | 1943.31 | 4644.68 | 1943 | 4771.16 | 1943 | 4771.95 | 1943.01 | 4774.5 | 1943.02 |
| 4778.34 | 1943.13 | 4789.39 | 1943.41 | 4789.75 | 1943.41 | 4797.93 | 1943.58 | 4807.23 | 1943.72 |
| 4816.56 | 1943.58 | 4818.33 | 1943.55 | 4818.69 | 1943.55 | 4822.15 | 1943.49 | 4822.64 | 1943.49 |
| 4828.89 | 1943.37 | 4829.82 | 1943.36 | 4843.12 | 1943.04 | 4847.93 | 1943 | 4877.51 | 1943 |
| 4878.86 | 1943.01 | 4885.64 | 1943.04 | 4897.15 | 1943.11 | 4909.85 | 1943.11 | 4917.11 | 1943.15 |
| 4919.34 | 1943.16 | 4921.33 | 1943.15 | 4927.53 | 1943.39 | 4938.05 | 1943.65 | 4949.82 | 1943.73 |
| 4968.25 | 1943.44 | 4970.49 | 1943.42 | 4974.71 | 1943.39 | 4986.39 | 1943.03 | 4987.93 | 1943.03 |
| 4988.21 | 1943.02 | 4996.11 | 1943.02 | 4996.6 | 1943.04 | 5007.06 | 1943.43 | 5007.21 | 1943.44 |
| 5027.94 | 1943.55 | 5036.75 | 1943.37 | 5074.17 | 1943.47 | 5075.53 | 1943.36 | 5078.63 | 1943.2 |
| 5080.36 | 1943.13 | 5082.33 | 1943.07 | 5083.7 | 1943.05 | 5085.05 | 1943.05 | 5086.48 | 1943.07 |
| 5087.56 | 1943.1 | 5089.59 | 1943.17 | 5093.43 | 1943.35 | 5110.29 | 1943.01 | 5136.77 | 1943.01 |
| 5142.73 | 1943 | 5160.54 | 1943 | 5167.16 | 1942.99 | 5174.72 | 1942.99 | 5186.35 | 1942.83 |
| 5202.76 | 1942.61 | 5203.39 | 1942.62 | 5215.15 | 1942.62 | 5215.87 | 1942.61 | 5224.68 | 1942.67 |
| 5235.31 | 1942.74 | 5236.01 | 1942.75 | 5238.54 | 1942.73 | 5241.53 | 1942.7 | 5242.26 | 1942.71 |
| 5243.24 | 1942.7 | 5253.24 | 1942.82 | 5254.04 | 1942.81 | 5257.87 | 1942.85 | 5262.45 | 1942.89 |
| 5265.31 | 1942.89 | 5267.26 | 1942.92 | 5268.38 | 1942.9 | 5269.74 | 1942.91 | 5269.86 | 1942.9 |
| 5271.62 | 1942.88 | 5274.54 | 1942.84 | 5277.2 | 1942.79 | 5299.01 | 1942.53 | 5310.3 | 1942.41 |
| 5311.56 | 1942.4 | 5312.97 | 1942.4 | 5315.18 | 1942.39 | 5319.24 | 1942.39 | 5321.29 | 1942.38 |
| 5323.42 | 1942.38 | 5325.52 | 1942.37 | 5340.03 | 1942.14 | 5347.76 | 1942.01 | 5348.22 | 1942 |
| 5359.54 | 1942 | 5366.93 | 1942.22 | 5367.13 | 1942.22 | 5379.64 | 1942.66 | 5389.36 | 1943 |
| 5394.08 | 1943.22 | 5409.91 | 1944 | 5415.46 | 1944.39 | 5424.37 | 1945 | 5437.72 | 1945.71 |
| 5442.97 | 1946 | 5448.97 | 1946.28 | 5464.59 | 1947 | 5467.09 | 1947.23 | 5476.67 | 1948 |
| 5483.85 | 1948.65 | 5487.3 | 1949 | 5491.13 | 1949.53 | 5494.3 | 1950 | 5497.02 | 1950.41 |
| 5500.96 | 1951 | 5502.94 | 1951.33 | 5506.5 | 1952 | 5507.5 | 1952.02 | 5512.96 | 1952.94 |
| 5513.42 | 1953.02 | 5520.31 | 1954 | 5527.54 | 1955 | 5533.04 | 1955.74 | 5535.28 | 1956 |
| 5544.11 | 1956.77 | 5546.99 | 1957 | 5551.39 | 1957.36 | 5552.74 | 1957.48 | 5554 | 1957.6 |
| 5555.26 | 1957.73 | 5557.24 | 1958 | 5560.56 | 1958.33 | 5561.32 | 1958.4 | 5568.12 | 1959 |
| 5574.99 | 1959.48 | 5582.47 | 1960 | 5585.74 | 1960.15 | 5594.94 | 1960.58 | 5603.83 | 1960.99 |
| 5604.35 | 1961 | 5606.46 | 1961 | 5634.28 | 1961.61 | 5641.71 | 1961.77 | 5643.43 | 1961.77 |
| 5648.45 | 1961.9 | 5649.85 | 1961.92 | 5652.86 | 1961.98 | 5654.61 | 1962 | 5660.42 | 1962 |
| 5660.83 | 1961.97 | 5664.43 | 1961.77 | 5671.21 | 1961.36 | 5671.96 | 1961.32 | 5677.5 | 1961 |
| 5677.95 | 1961 | 5682.66 | 1960.97 | 5685.62 | 1960.97 | 5688.64 | 1960.95 | 5692.4 | 1960.96 |
| 5695.07 | 1960.96 | 5705.36 | 1960.77 | 5726.49 | 1960.74 | 5748.06 | 1960.79 | 5748.44 | 1960.79 |
| 5751.78 | 1960.84 | 5789.84 | 1960.92 | 5825.53 | 1961 | 5970.86 | 1961 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2317 | .045 | 2317 | .04 | 5970.86 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2317 | 5970.86 | 162.45 | 162.45 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1944.91 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.15 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1944.77 | Reach Len. (ft) | 162.45 | 162.45 | 162.45 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7280.31 | | |
| E.G. Slope (ft/ft) | 0.002178 | Area (sq ft) | | 7280.31 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3078.71 | Top Width (ft) | | 3078.71 | | |
| Vel Total (ft/s) | 3.08 | Avg. Vel. (ft/s) | | 3.08 | | |

| | | | | | |
|---|---|---|---|---|---|
| Max Chl Dpth (ft) | 4.78 | Hydr. Depth (ft) | | 2.36 | |
| Conv. Total (cfs) | 479942.8 | Conv. (cfs) | | 479942.8 | |
| Length Wtd. (ft) | 162.45 | Wetted Per. (ft) | | 3079.59 | |
| Min Ch El (ft) | 1939.98 | Shear (lb/sq ft) | | 0.32 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5970.86 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.37 | Cum Volume (acre-ft) | | 3062.25 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1443.28 | |

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -2581.62

INPUT
Description:
Station Elevation Data num= 379

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2359.44 | 1946 | 2362.21 | 1945.94 | 2367.91 | 1945.7 | 2372.63 | 1945.53 | 2373.95 | 1945.47 |
| 2376.12 | 1945.39 | 2383.87 | 1945.09 | 2385.45 | 1945 | 2386.49 | 1944.97 | 2392.7 | 1944.51 |
| 2395.38 | 1944.3 | 2399.37 | 1944 | 2408.68 | 1943 | 2413.65 | 1942 | 2419.29 | 1940.85 |
| 2423.33 | 1940 | 2429.31 | 1939.96 | 2442.18 | 1939.87 | 2443.63 | 1939.87 | 2457.81 | 1939.67 |
| 2468.66 | 1939.92 | 2471.98 | 1940 | 2506.55 | 1940 | 2512.09 | 1940.01 | 2527.68 | 1940.01 |
| 2539.95 | 1940 | 2551.7 | 1940 | 2552.69 | 1940.01 | 2601.01 | 1940.97 | 2601.49 | 1941 |
| 2660.71 | 1941 | 2682.31 | 1941.25 | 2683.12 | 1941.25 | 2690.34 | 1941.29 | 2700.64 | 1941.36 |
| 2729.77 | 1942 | 2799.12 | 1942 | 2830.69 | 1942.43 | 2849.06 | 1942.67 | 2849.72 | 1942.68 |
| 2856.12 | 1942.68 | 2858.02 | 1942.69 | 2858.86 | 1942.68 | 2874.38 | 1942.68 | 2894.57 | 1942.26 |
| 2908.57 | 1942.26 | 2908.92 | 1942.27 | 2916.19 | 1942.27 | 2939.33 | 1942.14 | 2958.64 | 1942.01 |
| 2959.16 | 1942 | 2962.31 | 1942.01 | 2962.47 | 1942 | 3000.56 | 1942 | 3006.38 | 1942.01 |
| 3018.1 | 1942.01 | 3024.71 | 1942 | 3028.5 | 1942 | 3046.56 | 1941.99 | 3064.34 | 1942 |
| 3067.77 | 1942 | 3078.39 | 1942.59 | 3079.67 | 1942.63 | 3081.41 | 1942.71 | 3081.76 | 1942.7 |
| 3082.98 | 1942.73 | 3085.17 | 1942.7 | 3087.29 | 1942.58 | 3092.65 | 1942.25 | 3097.42 | 1941.81 |
| 3105.02 | 1941 | 3182.28 | 1941 | 3188.61 | 1941.04 | 3192.28 | 1941.04 | 3196.53 | 1941.03 |
| 3200.72 | 1941.01 | 3206.16 | 1941 | 3208.69 | 1941 | 3222.42 | 1940.98 | 3231.19 | 1940.96 |
| 3249.02 | 1940.96 | 3266.73 | 1940.97 | 3268.53 | 1940.94 | 3275.46 | 1940.88 | 3303.64 | 1940.61 |
| 3305.07 | 1940.63 | 3306.96 | 1940.63 | 3314.46 | 1941 | 3582.11 | 1941 | 3583.14 | 1941.09 |
| 3591.06 | 1942 | 3592.2 | 1942.01 | 3608.37 | 1942.25 | 3609.26 | 1942.26 | 3627.27 | 1942.52 |
| 3631.23 | 1942.58 | 3633.78 | 1942.61 | 3636.68 | 1942.66 | 3638.41 | 1942.67 | 3644.45 | 1942.78 |
| 3645 | 1942.78 | 3657.68 | 1943 | 3664.47 | 1943 | 3675.29 | 1942.72 | 3680.58 | 1942.66 |
| 3684.43 | 1942.61 | 3695.28 | 1942.5 | 3717.1 | 1942 | 3717.61 | 1942.01 | 3726.66 | 1942.7 |
| 3730.81 | 1942.72 | 3736.21 | 1942.64 | 3739.92 | 1942.58 | 3744.48 | 1942.4 | 3754.39 | 1942 |
| 3754.58 | 1942 | 3788.51 | 1941.15 | 3794.49 | 1941.01 | 3795.12 | 1941 | 3800.4 | 1941 |
| 3806.3 | 1941.09 | 3810.46 | 1941.16 | 3814.13 | 1941.34 | 3815.35 | 1941.37 | 3817.68 | 1941.45 |
| 3819.43 | 1941.52 | 3827.81 | 1942 | 3835.34 | 1942.06 | 3837.67 | 1942.05 | 3841.87 | 1942.05 |
| 3847.76 | 1942.04 | 3853.83 | 1942.18 | 3856.1 | 1942.16 | 3860.03 | 1942.16 | 3868.49 | 1942.14 |
| 3878.01 | 1942.05 | 3880.73 | 1942 | 3924.53 | 1942 | 4002.57 | 1941.21 | 4016.95 | 1941.01 |
| 4017.8 | 1941 | 4086.02 | 1941 | 4088.8 | 1941.2 | 4091.66 | 1941.32 | 4093.83 | 1941.4 |
| 4099.03 | 1941.57 | 4101.31 | 1941.66 | 4109.01 | 1942 | 4114.61 | 1942.45 | 4120.4 | 1943 |
| 4131.05 | 1944 | 4135.31 | 1944.24 | 4149.84 | 1945 | 4152.36 | 1945.01 | 4158.49 | 1945.02 |
| 4161.66 | 1945.02 | 4171.27 | 1945 | 4178.44 | 1945 | 4180.42 | 1945.01 | 4182.32 | 1945 |
| 4186.14 | 1945 | 4195.81 | 1944.98 | 4198.32 | 1944.99 | 4227.08 | 1944.99 | 4229.37 | 1944.97 |
| 4251.85 | 1944.84 | 4258.59 | 1944.88 | 4265.94 | 1944.92 | 4269.15 | 1944.92 | 4271.74 | 1944.91 |
| 4273.91 | 1944.88 | 4283.71 | 1944.81 | 4292.39 | 1944.78 | 4298.26 | 1944.75 | 4305.63 | 1944.46 |
| 4312.16 | 1944.12 | 4316.7 | 1944.12 | 4320.92 | 1944.13 | 4326.24 | 1944.11 | 4343.87 | 1944.06 |
| 4351.36 | 1944.06 | 4365.21 | 1944.01 | 4366.63 | 1944 | 4375.69 | 1943.67 | 4390.36 | 1943 |
| 4397.42 | 1942.5 | 4404.39 | 1942 | 4407.49 | 1942 | 4409.49 | 1941.99 | 4436.02 | 1941.99 |
| 4436.36 | 1941.98 | 4440.04 | 1941.76 | 4445.65 | 1941.45 | 4461.71 | 1941.47 | 4479.17 | 1941.52 |
| 4497.06 | 1941.63 | 4512.92 | 1941.75 | 4536.56 | 1941.94 | 4539.62 | 1941.95 | 4542.03 | 1941.95 |
| 4542.69 | 1941.97 | 4545.63 | 1942.01 | 4549.22 | 1942.03 | 4560.98 | 1942.23 | 4562.61 | 1942.24 |
| 4565.97 | 1942.28 | 4576.57 | 1942.37 | 4580.48 | 1942.39 | 4583.63 | 1942.4 | 4594.2 | 1942.51 |
| 4595.77 | 1942.51 | 4608.33 | 1942.47 | 4612.59 | 1942.48 | 4618.72 | 1942.51 | 4620.01 | 1942.51 |
| 4629.2 | 1942.6 | 4635.41 | 1942.67 | 4637.64 | 1942.67 | 4641.02 | 1942.7 | 4643.97 | 1942.71 |
| 4644.36 | 1942.72 | 4653.19 | 1942.7 | 4654.65 | 1942.71 | 4663 | 1942.69 | 4704.79 | 1942.79 |
| 4761.58 | 1942.93 | 4772.28 | 1942.97 | 4778.05 | 1942.94 | 4793.44 | 1942.96 | 4797.18 | 1942.92 |
| 4842.14 | 1942.54 | 4845.64 | 1942.53 | 4857.33 | 1942.49 | 4858.45 | 1942.48 | 4868.41 | 1942.44 |
| 4876.75 | 1942.41 | 4882.43 | 1942.42 | 4895.3 | 1942.63 | 4915.95 | 1943 | 5014.78 | 1943 |
| 5030.47 | 1942.91 | 5033.7 | 1942.89 | 5093.42 | 1942.78 | 5139.59 | 1942.69 | 5142.3 | 1942.7 |
| 5153.11 | 1942.75 | 5159.66 | 1942.7 | 5168.99 | 1942.64 | 5170.12 | 1942.64 | 5172.87 | 1942.61 |
| 5178.41 | 1942.52 | 5181.47 | 1942.52 | 5183.24 | 1942.5 | 5194.96 | 1942.52 | 5199.1 | 1942.51 |
| 5201.09 | 1942.49 | 5205.78 | 1942.47 | 5206.12 | 1942.46 | 5220.17 | 1942.28 | 5236.54 | 1942.02 |
| 5239.45 | 1942.02 | 5240.02 | 1942.01 | 5256.42 | 1942.01 | 5258.58 | 1942 | 5261.82 | 1942 |
| 5268.34 | 1942.11 | 5269.1 | 1942.13 | 5323.07 | 1943 | 5371.11 | 1943 | 5393.97 | 1943.61 |
| 5410.78 | 1944 | 5416.62 | 1944.3 | 5431.57 | 1945 | 5437.56 | 1945.23 | 5449.42 | 1945.68 |
| 5449.88 | 1945.69 | 5461.16 | 1946 | 5462.31 | 1946.02 | 5483.03 | 1946.48 | 5491.22 | 1946.69 |
| 5491.82 | 1946.7 | 5502.2 | 1947 | 5503.27 | 1947 | 5512.65 | 1947.48 | 5515.5 | 1947.65 |
| 5520.78 | 1948 | 5521.01 | 1948 | 5528 | 1949 | 5532.11 | 1949.47 | 5535.61 | 1949.78 |
| 5538.61 | 1949.99 | 5538.75 | 1949.99 | 5540.31 | 1949.42 | 5541.95 | 1950 | 5542.99 | 1950.35 |
| 5544.81 | 1951 | 5547.95 | 1952.16 | 5550.59 | 1953 | 5552.44 | 1953.64 | 5553.66 | 1954 |
| 5555.33 | 1954.52 | 5558.56 | 1955.42 | 5561.37 | 1956 | 5564.57 | 1956.69 | 5566.23 | 1957 |
| 5568.25 | 1957.33 | 5569.76 | 1957.6 | 5574.29 | 1958.31 | 5576.11 | 1958.58 | 5577.85 | 1958.82 |
| 5579.74 | 1959.04 | 5581.53 | 1959.15 | 5589.53 | 1959.47 | 5595.24 | 1959.72 | 5597.87 | 1959.82 |
| 5602.14 | 1960 | 5607.31 | 1960.23 | 5608.8 | 1960.28 | 5610.22 | 1960.41 | 5610.92 | 1960.4 |
| 5613.27 | 1960.66 | 5615.12 | 1960.61 | 5616.67 | 1960.62 | 5617.51 | 1960.59 | 5618.71 | 1960.5 |
| 5625.39 | 1960.33 | 5628.89 | 1960.16 | 5631.68 | 1960.13 | 5633.38 | 1960.13 | 5634.95 | 1960.15 |
| 5639.34 | 1960.53 | 5642 | 1960.71 | 5643.35 | 1960.84 | 5645.29 | 1961 | 5650.62 | 1961.22 |
| 5659.81 | 1961.57 | 5662.91 | 1961.73 | 5667.78 | 1962 | 5714.8 | 1962 | 5722.73 | 1961.64 |
| 5728.81 | 1961.34 | 5734.71 | 1961.01 | 5735.41 | 1961 | 5738.64 | 1960.69 | 5746.17 | 1960 |

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  5751.8 1959.84 5753.44 1959.78 5755.72 1959.81  5757.6 1959.78 5760.44 1959.91
 5761.16 1959.93  5761.3    1960 5774.35    1960 5777.44 1960.05 5783.71 1960.07
  5785.1 1960.09    5792 1960.16 5871.79    1961  5902.6    1961 5903.03 1961.01
 5909.92 1961.01  5912.9    1961 5922.71    1961 5923.64 1961.07 5925.58 1961.15
 5927.24  1961.2 5928.17 1961.19 5933.01 1961.04 5935.25 1961.01 5935.56 1961.02
 5949.59 1961.37 5951.48 1961.42 5952.84 1961.41 5958.88 1961.47 5961.18 1961.42
  5966.4 1961.37 5975.89 1961.32 5979.84 1961.26 5989.84 1961.17

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 2359.44    .045 2359.44     .04 5989.84    .045

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       2359.44 5989.84           238.83  238.83  238.83             .1       .3

CROSS SECTION OUTPUT  Profile #PF 1

  E.G. Elev (ft)           1944.55    Element                    Left OB    Channel   Right OB
  Vel Head (ft)               0.16    Wt. n-Val.                             0.040
  W.S. Elev (ft)           1944.38    Reach Len. (ft)            238.83     238.83     238.83
  Crit W.S. (ft)                      Flow Area (sq ft)                    6917.60
  E.G. Slope (ft/ft)       0.002336   Area (sq ft)                         6917.60
  Q Total (cfs)           22400.00    Flow (cfs)                          22400.00
  Top Width (ft)           2854.96    Top Width (ft)                       2854.96
  Vel Total (ft/s)            3.24    Avg. Vel. (ft/s)                        3.24
  Max Chl Dpth (ft)           4.71    Hydr. Depth (ft)                        2.42
  Conv. Total (cfs)       463482.7    Conv. (cfs)                         463482.7
  Length Wtd. (ft)          238.83    Wetted Per. (ft)                     2855.88
  Min Ch El (ft)           1939.67    Shear (lb/sq ft)                        0.35
  Alpha                       1.00    Stream Power (lb/ft s)   5989.84       0.00       0.00
  Frctn Loss (ft)             0.62    Cum Volume (acre-ft)                 3035.77
  C & E Loss (ft)             0.00    Cum SA (acres)                       1432.21


Warning: Divided flow computed for this cross-section.

CROSS SECTION


RIVER: MOJAVE
REACH: MOJAVE             RS: -2820.45

INPUT
Description:
Station Elevation Data    num=     355
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
 2312.94 1945.75 2313.87 1945.75 2317.83  1945.8 2322.15 1945.81 2323.67 1945.83
 2326.82 1945.83 2342.22 1945.76 2343.68 1945.75 2349.52  1945.6 2350.09  1945.6
 2354.61 1945.48 2361.69  1945.3 2375.26 1944.99 2380.42 1944.66 2389.18 1944.35
 2397.42 1944.03  2399.3    1944 2404.07    1943  2404.1    1943 2409.42    1942
 2410.61 1941.74 2412.73 1941.38 2414.71    1941 2416.47 1940.79 2418.16 1940.61
 2420.96 1940.35 2423.77 1940.07 2424.99    1940 2428.98  1939.9 2433.58 1939.74
 2437.58 1939.59 2441.35  1939.4 2441.54 1939.41 2444.92 1939.26 2445.33 1939.27
 2450.77 1939.18  2453.9 1939.15 2465.67 1939.23 2475.35 1939.24 2488.35 1939.24
 2493.21 1939.22 2498.42 1939.19 2500.46 1939.19 2507.14 1939.27 2526.03 1939.52
 2530.26 1939.62 2546.93    1940 2568.36 1940.48 2576.74 1940.64 2587.11 1940.83
 2590.97 1940.88 2592.79 1940.91  2595.2 1940.93 2599.85    1941 2632.47    1941
 2656.42 1941.56 2657.94  1941.6  2668.7    1942 2678.01    1942 2684.63 1941.97
 2693.36 1941.94  2697.7 1941.91 2708.36 1941.87  2742.8 1941.86 2751.78 1941.76
 2754.48 1941.66 2766.23 1941.46 2767.19 1941.49 2770.48 1941.54 2774.33 1941.59
 2775.22 1941.61 2782.51  1941.7 2798.33 1941.98 2800.41 1941.98 2807.95 1941.96
  2811.7 1941.96 2814.42 1941.97 2819.62 1941.98 2836.89 1941.98 2857.12 1941.99
 2857.92    1942 2862.89    1942 2865.21 1942.02  2876.3 1942.05 2886.94 1942.04
 2891.89 1942.03 2895.28 1942.04 2897.25 1942.06 2912.75 1942.73 2916.48 1942.83
 2917.32 1942.83 2920.23 1942.78 2934.97 1942.74 2938.69 1942.63 2940.45 1942.61
 2946.74 1942.48 2951.38 1942.53 2957.96 1942.67 2958.58 1942.69 2968.35 1942.94
 2970.42    1943 2986.21    1943 3003.18 1943.01 3012.06 1943.01 3031.25    1943
 3060.34 1942.41 3071.96 1942.19 3079.35    1942 3091.81 1941.14 3093.92    1941
 3114.78 1940.01 3114.93    1940 3141.41 1939.97 3145.32 1939.97 3150.58 1939.98
 3169.67 1939.99  3181.1 1939.74 3182.32 1939.74  3193.8 1939.67 3203.02 1939.66
 3212.65 1939.71 3215.35 1939.73 3219.98 1939.78  3220.2 1939.79 3232.26 1939.81
 3232.46 1939.82 3237.01 1939.82 3238.21 1939.84 3240.73 1939.82 3243.17 1939.81
 3254.42  1939.9 3255.67  1939.9 3272.07 1939.85 3287.16 1939.83 3295.57 1939.83
 3301.99 1939.74 3328.82 1939.29 3332.44 1939.22 3341.64 1939.01 3342.57    1939
 3353.71    1939  3362.4 1939.53 3370.61    1940 3383.48 1940.39 3387.41 1940.47
 3399.73 1940.77 3408.97    1941 3432.75    1941 3434.89 1940.99 3457.29 1940.61
 3462.34 1940.52 3476.15  1940.3 3476.42  1940.3 3490.46 1940.03 3492.26    1940
 3601.37    1940 3603.68  1940.3 3611.56    1941 3616.04 1941.71  3617.7    1942
 3620.08 1942.15 3621.61 1942.23 3628.95 1942.55 3630.26 1942.58 3631.45 1942.57
 3634.91 1942.49 3673.33 1942.74 3711.03    1943 3741.98    1943  3757.2 1942.32
 3757.85 1942.26 3761.68    1942 3781.28    1942 3786.67 1941.99 3794.26 1941.99
 3821.54 1941.28 3827.09 1941.08 3829.53    1941 4021.49    1941 4023.41 1941.03
 4025.05 1941.04 4026.84    1941 4051.95    1941 4056.25 1941.73 4060.86 1942.48
 4064.16    1943 4066.92 1943.42 4070.41 1943.89 4071.29    1944 4085.23 1944.85
 4088.39    1945 4092.93    1945 4101.37 1945.01 4132.27 1945.01 4144.25    1945
 4205.66    1945 4227.36 1944.01 4231.22 1943.99 4236.06 1943.98 4239.85 1943.92
  4266.8 1943.52 4283.31 1943.34  4288.3  1943.3 4296.11 1943.25 4300.41 1943.24
 4318.87 1943.25 4337.11 1943.25 4353.01    1943 4414.56    1943  4419.6 1942.86
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4426.24 | 1942.69 | 4428.95 | 1942.63 | 4448.7 | 1942.18 | 4462.23 | 1942.02 | 4463.11 | 1942 |
| 4464.58 | 1942 | 4476.33 | 1941.89 | 4487.79 | 1941.79 | 4492.75 | 1941.66 | 4493.73 | 1941.65 |
| 4497.95 | 1941.56 | 4506.67 | 1941.4 | 4511.73 | 1941.29 | 4525.88 | 1941.02 | 4528.69 | 1941 |
| 4576.54 | 1941 | 4593.06 | 1940.99 | 4632.06 | 1941 | 4699.34 | 1941 | 4703.14 | 1941.05 |
| 4729.92 | 1941.35 | 4744.11 | 1941.5 | 4753.76 | 1941.58 | 4761.3 | 1941.62 | 4768.59 | 1941.64 |
| 4776.46 | 1941.67 | 4778.15 | 1941.68 | 4804.56 | 1941.94 | 4811.13 | 1942 | 5000.08 | 1942 |
| 5005.25 | 1942.03 | 5014.2 | 1942.05 | 5037.89 | 1942.47 | 5051.96 | 1942.62 | 5054.45 | 1942.62 |
| 5063.62 | 1942.64 | 5069.01 | 1942.66 | 5074.85 | 1942.69 | 5075.37 | 1942.7 | 5080.12 | 1942.65 |
| 5088.35 | 1942.55 | 5093.92 | 1942.5 | 5095.64 | 1942.5 | 5097.64 | 1942.46 | 5128.28 | 1942.3 |
| 5156.73 | 1942.05 | 5162.09 | 1942 | 5303.61 | 1942 | 5322.92 | 1941.85 | 5325.11 | 1941.85 |
| 5327.39 | 1941.83 | 5356.17 | 1941.92 | 5377.93 | 1942 | 5396.87 | 1942 | 5413.71 | 1941.98 |
| 5437.24 | 1941.98 | 5447.44 | 1942 | 5460.2 | 1942.43 | 5461.72 | 1942.45 | 5467.5 | 1942.6 |
| 5472.98 | 1942.66 | 5479.63 | 1942.71 | 5493.59 | 1942.95 | 5494.12 | 1942.95 | 5496.52 | 1943 |
| 5502.88 | 1943.1 | 5515.68 | 1943.31 | 5519.96 | 1943.43 | 5530.39 | 1943.75 | 5538.63 | 1944 |
| 5550.28 | 1944.37 | 5554.97 | 1944.5 | 5563.01 | 1944.69 | 5574.8 | 1945 | 5580.17 | 1945.2 |
| 5586.02 | 1945.33 | 5594.95 | 1945.59 | 5596.19 | 1945.62 | 5601.66 | 1945.7 | 5604.06 | 1945.75 |
| 5606.94 | 1945.84 | 5610.11 | 1946 | 5621.19 | 1946.86 | 5622.64 | 1947 | 5626.63 | 1948 |
| 5630.86 | 1949 | 5631.05 | 1949 | 5633.07 | 1949.28 | 5634.42 | 1949.45 | 5638.5 | 1950 |
| 5644.21 | 1950.8 | 5645.78 | 1951 | 5650.71 | 1951.67 | 5654.64 | 1952.19 | 5655.95 | 1952.38 |
| 5657.11 | 1952.58 | 5658.95 | 1953 | 5659.64 | 1953.13 | 5664.45 | 1954 | 5669.76 | 1955 |
| 5672.26 | 1955.52 | 5674.33 | 1956 | 5681.56 | 1957.94 | 5681.89 | 1958 | 5684.22 | 1958.29 |
| 5685.67 | 1958.42 | 5693.49 | 1958.38 | 5696.51 | 1958.3 | 5703.77 | 1958.28 | 5707.62 | 1958.23 |
| 5711.55 | 1958.22 | 5720.56 | 1958.31 | 5724.26 | 1958.38 | 5732.03 | 1958.65 | 5735.13 | 1958.71 |
| 5735.62 | 1958.73 | 5739.4 | 1959 | 5740.13 | 1959 | 5781.79 | 1959.62 | 5795.04 | 1959.81 |
| 5806.52 | 1960 | 5810.93 | 1960.66 | 5812.71 | 1961 | 5819.63 | 1961.37 | 5825.58 | 1961.68 |
| 5831.59 | 1962 | 5840.16 | 1962 | 5845.12 | 1961.81 | 5845.3 | 1961.81 | 5851.86 | 1961.54 |
| 5853.43 | 1961.54 | 5858.97 | 1961.38 | 5865.54 | 1961.39 | 5872.21 | 1961.39 | 5872.68 | 1961.38 |
| 5882.76 | 1961.57 | 5903.23 | 1961.99 | 5904.34 | 1962 | 5907.11 | 1961.94 | 5909.29 | 1961.96 |
| 5914.04 | 1961.97 | 5914.9 | 1961.96 | 5919.92 | 1961.84 | 5944.42 | 1961 | 5986.52 | 1961 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2312.94 | .045 | 2312.94 | .04 | 5986.52 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2312.94 | 5986.52 | 218.54 | 218.54 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1943.92 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.18 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1943.74 | Reach Len. (ft) | 218.54 | 218.54 | 218.54 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6537.58 | | |
| E.G. Slope (ft/ft) | 0.002941 | Area (sq ft) | | 6537.58 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 2946.78 | Top Width (ft) | | 2946.78 | | |
| Vel Total (ft/s) | 3.43 | Avg. Vel. (ft/s) | | 3.43 | | |
| Max Chl Dpth (ft) | 4.74 | Hydr. Depth (ft) | | 2.22 | | |
| Conv. Total (cfs) | 413015.7 | Conv. (cfs) | | 413015.7 | | |
| Length Wtd. (ft) | 218.54 | Wetted Per. (ft) | | 2947.78 | | |
| Min Ch El (ft) | 1939.00 | Shear (lb/sq ft) | | 0.41 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5986.52 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.65 | Cum Volume (acre-ft) | | 2998.88 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1416.31 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -3038.99

INPUT
Description:
Station Elevation Data num= 368

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2312.44 | 1945 | 2315.75 | 1944.99 | 2320.22 | 1944.99 | 2327.58 | 1945 | 2329.53 | 1945 |
| 2331.34 | 1944.82 | 2332.45 | 1944.76 | 2336.42 | 1944 | 2339.1 | 1943.5 | 2341.16 | 1943 |
| 2344.1 | 1942.27 | 2349.65 | 1941 | 2350.55 | 1940.76 | 2353.07 | 1940 | 2359.3 | 1939.69 |
| 2374.05 | 1939 | 2378.8 | 1938.99 | 2382.29 | 1939 | 2394.31 | 1939 | 2398.67 | 1938.99 |
| 2403.84 | 1938.99 | 2412.32 | 1938.78 | 2431.24 | 1938.32 | 2434.74 | 1938.3 | 2439.22 | 1938.29 |
| 2439.39 | 1938.28 | 2440.88 | 1938.32 | 2441.88 | 1938.33 | 2450.05 | 1938.5 | 2473.11 | 1939 |
| 2474.32 | 1939 | 2497.48 | 1939.79 | 2503.72 | 1940 | 2530.08 | 1940.33 | 2547.05 | 1940.54 |
| 2549.6 | 1940.57 | 2562.31 | 1940.69 | 2566.17 | 1940.73 | 2569.06 | 1940.77 | 2592.7 | 1940.96 |
| 2595.28 | 1941 | 2597.68 | 1941 | 2612.27 | 1941.15 | 2620.6 | 1941.22 | 2622.44 | 1941.24 |
| 2624.34 | 1941.24 | 2631.07 | 1941.33 | 2633.81 | 1941.32 | 2641.96 | 1941.42 | 2651.99 | 1941.44 |
| 2663.59 | 1941.49 | 2674.57 | 1941.56 | 2685.44 | 1941.64 | 2708.44 | 1941.68 | 2727.87 | 1941.7 |
| 2734.46 | 1941.79 | 2734.55 | 1941.78 | 2749.99 | 1942 | 2776.19 | 1942 | 2792.67 | 1941.53 |
| 2795.51 | 1941.46 | 2801.94 | 1941.29 | 2808.26 | 1941.11 | 2812.97 | 1941 | 2818.61 | 1941 |
| 2823.08 | 1941.19 | 2824.06 | 1941.22 | 2828.42 | 1941.41 | 2848.37 | 1942 | 2857.92 | 1942.43 |
| 2859.05 | 1942.5 | 2860.17 | 1942.54 | 2864.36 | 1942.71 | 2866.61 | 1942.74 | 2868.32 | 1942.73 |
| 2868.84 | 1942.71 | 2877.89 | 1942.26 | 2879.46 | 1942.2 | 2884.46 | 1942.17 | 2888.84 | 1942.17 |
| 2918.44 | 1943 | 3045.81 | 1943 | 3047.1 | 1942.99 | 3050.03 | 1942.87 | 3064.03 | 1942.19 |
| 3068.01 | 1942 | 3068.17 | 1942 | 3075.31 | 1941.48 | 3077.73 | 1941.28 | 3087.86 | 1940.42 |
| 3090.85 | 1940.19 | 3093.2 | 1940 | 3093.5 | 1940 | 3094.98 | 1939.92 | 3106.16 | 1939 |
| 3108.75 | 1938.78 | 3110.74 | 1938.63 | 3112.11 | 1938.54 | 3114.67 | 1938.41 | 3115.3 | 1938.37 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3120.88 | 1938.32 | 3125.35 | 1938.29 | 3126.76 | 1938.34 | 3129.57 | 1938.41 | 3138.04 | 1938.67 |
| 3139.76 | 1938.71 | 3146.77 | 1938.77 | 3155.36 | 1938.86 | 3156.72 | 1938.89 | 3160.23 | 1938.93 |
| 3162.42 | 1938.94 | 3162.44 | 1938.95 | 3165.59 | 1939 | 3262.17 | 1939 | 3277.07 | 1939.59 |
| 3280.18 | 1939.7 | 3282.55 | 1939.76 | 3285.7 | 1939.86 | 3292.04 | 1940 | 3296.22 | 1940.14 |
| 3296.91 | 1940.18 | 3299.07 | 1940.26 | 3301.37 | 1940.38 | 3310.01 | 1940.77 | 3312.35 | 1940.9 |
| 3314.39 | 1941 | 3399.04 | 1941 | 3403.87 | 1940.99 | 3423.32 | 1940.5 | 3423.67 | 1940.49 |
| 3429.4 | 1940.4 | 3429.61 | 1940.39 | 3434.34 | 1940.33 | 3438.63 | 1940.28 | 3443.85 | 1940.3 |
| 3449.94 | 1940.33 | 3450.78 | 1940.33 | 3465.63 | 1940.25 | 3485.3 | 1940.12 | 3490.44 | 1940 |
| 3500.78 | 1940 | 3537.12 | 1939.65 | 3560.81 | 1939.43 | 3562.05 | 1939.42 | 3590.02 | 1939.11 |
| 3598.55 | 1939 | 3601.09 | 1939 | 3603.45 | 1939.32 | 3608.4 | 1940 | 3612.58 | 1940.62 |
| 3614.65 | 1941 | 3618.6 | 1941.66 | 3619.37 | 1941.8 | 3620.63 | 1942 | 3625.39 | 1942 |
| 3625.51 | 1942.01 | 3631.15 | 1942.01 | 3643.16 | 1942.02 | 3648.82 | 1942.02 | 3656.76 | 1942.01 |
| 3658.06 | 1942 | 3691.3 | 1942 | 3699.64 | 1941.88 | 3712.5 | 1941.81 | 3723.62 | 1941.76 |
| 3733.81 | 1941.74 | 3736.66 | 1941.74 | 3742.8 | 1941.7 | 3750.82 | 1941.66 | 3758.77 | 1941.55 |
| 3761.36 | 1941.53 | 3775.22 | 1941.35 | 3778.83 | 1941.3 | 3785.4 | 1941.22 | 3798.66 | 1941 |
| 3806.04 | 1941 | 3811.83 | 1940.83 | 3816.64 | 1940.68 | 3822.04 | 1940.46 | 3827.08 | 1940.28 |
| 3833.65 | 1940 | 3844.77 | 1940 | 3851.83 | 1939.99 | 3861.46 | 1939.99 | 3869.35 | 1940 |
| 3893 | 1940 | 3895.28 | 1940.14 | 3901.56 | 1940.54 | 3909.2 | 1941 | 3928.93 | 1941.02 |
| 3941.16 | 1941.02 | 3941.55 | 1941.03 | 3944.1 | 1941 | 3946.99 | 1941 | 3947.94 | 1941.36 |
| 3949.94 | 1942 | 3951.51 | 1942.22 | 3952.6 | 1942.36 | 3955.21 | 1942.56 | 3957.52 | 1942.68 |
| 3959.98 | 1942.79 | 3961.2 | 1942.82 | 3965.57 | 1942.89 | 3968.92 | 1942.87 | 3970.43 | 1942.82 |
| 3971.51 | 1942.74 | 3972.82 | 1942.55 | 3973.5 | 1942.47 | 3974.6 | 1942.3 | 3976.06 | 1942 |
| 3978.62 | 1941 | 4002.35 | 1941 | 4008.02 | 1941.54 | 4011.41 | 1941.9 | 4012.46 | 1942.06 |
| 4018.31 | 1943 | 4133.7 | 1943 | 4153.62 | 1943.01 | 4193.02 | 1943.01 | 4199.82 | 1943 |
| 4213.37 | 1943 | 4215.93 | 1942.95 | 4229.25 | 1942.74 | 4237.85 | 1942.61 | 4245.36 | 1942.52 |
| 4249.91 | 1942.49 | 4254.49 | 1942.5 | 4259.82 | 1942.57 | 4259.99 | 1942.56 | 4264.49 | 1942.65 |
| 4266.71 | 1942.71 | 4269.44 | 1942.67 | 4271.08 | 1942.66 | 4275.64 | 1942.77 | 4281.65 | 1943 |
| 4352.07 | 1943 | 4366.14 | 1942.3 | 4374.43 | 1942 | 4405.44 | 1942 | 4410.59 | 1941.54 |
| 4416.45 | 1941.05 | 4417.71 | 1941 | 4498.31 | 1941 | 4501.52 | 1940.95 | 4511.69 | 1940.83 |
| 4519.98 | 1940.73 | 4520.51 | 1940.72 | 4534.8 | 1940.5 | 4542.49 | 1940.39 | 4548.28 | 1940.34 |
| 4553.6 | 1940.29 | 4560.5 | 1940.2 | 4585.7 | 1940 | 4591.93 | 1939.98 | 4595.52 | 1939.98 |
| 4608.79 | 1939.96 | 4614.2 | 1939.96 | 4659.25 | 1939.95 | 4718.85 | 1939.93 | 4725.6 | 1939.92 |
| 4727.55 | 1939.93 | 4738.05 | 1939.94 | 4741.56 | 1939.95 | 4748.22 | 1939.95 | 4760.23 | 1939.97 |
| 4763.97 | 1939.98 | 4771.74 | 1939.98 | 4786.04 | 1940 | 4798.59 | 1940.2 | 4803.65 | 1940.29 |
| 4809.99 | 1940.38 | 4819.63 | 1940.52 | 4832.45 | 1940.73 | 4834.3 | 1940.75 | 4841.25 | 1940.85 |
| 4842.93 | 1940.88 | 4844.52 | 1940.89 | 4845.74 | 1940.91 | 4853.87 | 1941 | 4855.01 | 1940.99 |
| 4855.9 | 1941 | 5515.04 | 1941 | 5535.84 | 1940.99 | 5571.28 | 1941 | 5582.53 | 1941 |
| 5591.83 | 1941.21 | 5592.51 | 1941.22 | 5605.64 | 1941.35 | 5612.43 | 1941.48 | 5630.67 | 1941.95 |
| 5632.53 | 1942 | 5639.35 | 1942.34 | 5651.84 | 1943 | 5653.04 | 1943.02 | 5656.52 | 1943.04 |
| 5659.05 | 1943 | 5664.08 | 1943 | 5666.53 | 1943.32 | 5672.2 | 1944 | 5680.58 | 1945 |
| 5683.63 | 1945.37 | 5691.77 | 1946.32 | 5697.7 | 1947 | 5706.29 | 1948 | 5709.68 | 1948.46 |
| 5717.28 | 1949.55 | 5720.34 | 1950 | 5726.98 | 1950.96 | 5727.36 | 1951.02 | 5733.16 | 1952 |
| 5734.67 | 1952.31 | 5737.86 | 1953 | 5741.52 | 1953.75 | 5742.69 | 1954 | 5747.4 | 1954.96 |
| 5752.25 | 1956 | 5756.99 | 1957 | 5766.38 | 1958 | 5766.47 | 1958 | 5774.89 | 1958.88 |
| 5776.1 | 1959 | 5790.34 | 1959 | 5823.38 | 1959.63 | 5826.62 | 1959.7 | 5830.4 | 1959.79 |
| 5832.51 | 1959.83 | 5840.28 | 1960 | 5841.41 | 1960 | 5844.27 | 1960.26 | 5845.74 | 1960.42 |
| 5849.11 | 1961 | 5853.33 | 1961.76 | 5854.73 | 1962 | 5863.3 | 1962 | 5864.34 | 1961.9 |
| 5865.8 | 1961.74 | 5870.75 | 1961.22 | 5873.38 | 1960.89 | 5880.3 | 1960 | 5897.93 | 1959.46 |
| 5899.93 | 1959.44 | 5904.99 | 1959.3 | 5909.71 | 1959.28 | 5913.57 | 1959.19 | 5918.67 | 1959.19 |
| 5927.42 | 1959.24 | 5945.81 | 1959.4 | 5947.51 | 1959.47 | 5950.63 | 1959.48 | 5958.09 | 1959.78 |
| 5958.71 | 1959.79 | 5964.01 | 1960 | 5968.4 | 1960.18 | 5968.55 | 1960.18 | 5976.22 | 1960.45 |
| 5984.31 | 1960.67 | 5984.65 | 1960.66 | 5987.46 | 1960.67 | 5990.23 | 1960.67 | 5993.73 | 1960.62 |
| 5996.87 | 1960.62 | 5999.01 | 1960.58 | 6002.79 | 1960.57 | 6004.71 | 1960.53 | 6006.83 | 1960.51 |
| 6018.33 | 1960.49 | 6029.51 | 1960.5 | 6031.68 | 1960.48 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2312.44 | .045 | 2312.44 | .04 | 6031.68 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2312.44 | 6031.68 | 248.32 | 248.32 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1943.27 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.17 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1943.10 | Reach Len. (ft) | 248.32 | 248.32 | 248.32 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6796.61 | | |
| E.G. Slope (ft/ft) | 0.003035 | Area (sq ft) | | 6796.61 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3324.08 | Top Width (ft) | | 3324.08 | | |
| Vel Total (ft/s) | 3.30 | Avg. Vel. (ft/s) | | 3.30 | | |
| Max Chl Dpth (ft) | 4.82 | Hydr. Depth (ft) | | 2.04 | | |
| Conv. Total (cfs) | 406587.0 | Conv. (cfs) | | 406587.0 | | |
| Length Wtd. (ft) | 248.32 | Wetted Per. (ft) | | 3325.85 | | |
| Min Ch El (ft) | 1938.28 | Shear (lb/sq ft) | | 0.39 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6031.68 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.55 | Cum Volume (acre-ft) | | 2965.44 | | |
| C & E Loss (ft) | 0.01 | Cum SA (acres) | | 1400.58 | | |

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -3287.31

INPUT

Description:
Station Elevation Data num= 361

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2267.8 | 1944.99 | 2271.16 | 1944.99 | 2286.18 | 1944.29 | 2294.62 | 1944 | 2302.03 | 1943.1 |
| 2303.23 | 1942.95 | 2311.05 | 1942 | 2312.46 | 1941.77 | 2316.42 | 1941 | 2318.36 | 1940.57 |
| 2320.7 | 1940 | 2329.91 | 1939.25 | 2332.73 | 1939 | 2351.75 | 1938.41 | 2353.32 | 1938.37 |
| 2356.34 | 1938.31 | 2362.59 | 1938.16 | 2364.72 | 1938.12 | 2369.03 | 1938 | 2411.43 | 1938 |
| 2416.29 | 1938.24 | 2427.37 | 1938.54 | 2443.69 | 1938.99 | 2443.9 | 1939 | 2450.31 | 1939 |
| 2461.72 | 1939.53 | 2464.02 | 1939.62 | 2472.64 | 1940 | 2474.14 | 1940.01 | 2482.01 | 1940.25 |
| 2489.05 | 1940.44 | 2505.13 | 1941 | 2754.32 | 1941 | 2754.7 | 1941.01 | 2800.38 | 1941.6 |
| 2824.95 | 1941.77 | 2858.38 | 1942 | 2868.13 | 1942.03 | 2869.15 | 1942.03 | 2876.81 | 1942 |
| 2945.91 | 1942 | 2947.84 | 1942.01 | 2955.14 | 1942.07 | 2992.36 | 1942.97 | 2993.98 | 1943 |
| 3004.29 | 1943 | 3009.29 | 1942.82 | 3011.26 | 1942.74 | 3014.17 | 1942.38 | 3016.9 | 1942.02 |
| 3017.11 | 1942 | 3022.08 | 1940.87 | 3023.46 | 1940.69 | 3024 | 1940.64 | 3028.88 | 1940.26 |
| 3031.68 | 1939.98 | 3033.58 | 1939.73 | 3038.04 | 1939 | 3039.18 | 1938.78 | 3042.95 | 1938 |
| 3046.9 | 1937.17 | 3048.8 | 1937.11 | 3049.84 | 1937.1 | 3050.89 | 1937.15 | 3052.17 | 1937.19 |
| 3067.84 | 1938 | 3103.98 | 1938.48 | 3107.55 | 1938.53 | 3128.11 | 1938.8 | 3136.88 | 1938.92 |
| 3143.69 | 1939 | 3208.99 | 1939 | 3229.42 | 1939.17 | 3229.61 | 1939.17 | 3251.92 | 1939.39 |
| 3307.07 | 1939.98 | 3312.11 | 1939.98 | 3314.29 | 1939.99 | 3322.32 | 1939.99 | 3323.11 | 1940 |
| 3460.31 | 1940 | 3464.59 | 1939.99 | 3470.25 | 1939.92 | 3473.49 | 1939.9 | 3483.23 | 1939.8 |
| 3489.43 | 1939.71 | 3506.42 | 1939.46 | 3510.73 | 1939.4 | 3536.63 | 1939 | 3538.68 | 1939 |
| 3546.56 | 1938.99 | 3559.82 | 1938.98 | 3571.67 | 1938.98 | 3573.61 | 1938.97 | 3586.88 | 1938.98 |
| 3608.53 | 1939 | 3609.37 | 1939.11 | 3610.64 | 1939.19 | 3612.06 | 1939.3 | 3620.39 | 1940 |
| 3626.73 | 1940.56 | 3629.87 | 1940.58 | 3634.63 | 1940.59 | 3638.6 | 1940.77 | 3641.48 | 1940.76 |
| 3648.86 | 1940.72 | 3658.95 | 1940.67 | 3661.26 | 1940.63 | 3661.87 | 1940.61 | 3678.11 | 1940.24 |
| 3683.27 | 1940.12 | 3684.91 | 1940.09 | 3688.85 | 1940 | 3709.01 | 1940 | 3718.1 | 1940.53 |
| 3725.37 | 1941 | 3728.78 | 1941.1 | 3729.64 | 1941.12 | 3733.08 | 1941.04 | 3734.59 | 1941.18 |
| 3738.56 | 1942 | 3740.28 | 1942.35 | 3741.4 | 1942.56 | 3742.27 | 1942.62 | 3742.41 | 1942.65 |
| 3743.23 | 1942.61 | 3747.28 | 1942.19 | 3747.79 | 1942.18 | 3748.55 | 1942.13 | 3750.04 | 1942.11 |
| 3750.55 | 1942.09 | 3751.17 | 1942.03 | 3751.66 | 1941.94 | 3755.65 | 1941 | 3770.09 | 1940.78 |
| 3771.37 | 1940.74 | 3789.22 | 1940.15 | 3793.48 | 1940 | 3798.64 | 1939.99 | 3813.98 | 1939.89 |
| 3831.27 | 1939.84 | 3836.87 | 1939.98 | 3839.8 | 1939.97 | 3840.91 | 1939.98 | 3841.39 | 1940 |
| 3842.53 | 1940.53 | 3843.15 | 1940.77 | 3843.94 | 1941 | 3845.24 | 1941.35 | 3846.61 | 1941.68 |
| 3847.92 | 1941.95 | 3850.68 | 1942.41 | 3853.39 | 1942.73 | 3856.03 | 1942.91 | 3858.34 | 1942.93 |
| 3860.17 | 1942.84 | 3860.62 | 1942.8 | 3862.76 | 1942.54 | 3866.67 | 1941.94 | 3867.48 | 1941.79 |
| 3870.17 | 1941.27 | 3871.39 | 1941 | 3904.12 | 1941 | 3907.52 | 1940.9 | 3907.96 | 1940.9 |
| 3915.1 | 1941 | 3929.84 | 1941 | 3932.94 | 1940.99 | 3953.76 | 1941 | 3958.14 | 1941 |
| 3958.97 | 1941.03 | 3962.13 | 1941.11 | 3973.18 | 1941.49 | 3980.08 | 1941.68 | 3983.88 | 1941.8 |
| 3995.49 | 1941.93 | 3995.86 | 1941.93 | 3997.53 | 1941.99 | 4000.28 | 1942.01 | 4000.97 | 1942 |
| 4011.01 | 1942 | 4021.24 | 1942.01 | 4033.39 | 1942 | 4041.64 | 1942 | 4051.54 | 1941.43 |
| 4059.21 | 1941 | 4059.42 | 1941 | 4062.91 | 1941.22 | 4065.98 | 1941.28 | 4071.15 | 1941.42 |
| 4071.87 | 1941.43 | 4087.7 | 1942 | 4089.35 | 1942.14 | 4092.9 | 1942.28 | 4095.24 | 1942.31 |
| 4096.74 | 1942.35 | 4097.43 | 1942.38 | 4099.75 | 1942.45 | 4101.19 | 1942.48 | 4102.88 | 1942.55 |
| 4104.35 | 1942.56 | 4105.73 | 1942.63 | 4106.38 | 1942.62 | 4107.06 | 1942.66 | 4108.42 | 1942.64 |
| 4109.13 | 1942.68 | 4121.93 | 1942.97 | 4124.54 | 1942.97 | 4135.15 | 1942.98 | 4135.55 | 1942.99 |
| 4137.73 | 1942.99 | 4144.91 | 1943 | 4200.18 | 1943 | 4201.24 | 1943.05 | 4208.37 | 1943.41 |
| 4209.31 | 1943.43 | 4212.71 | 1943.58 | 4221.23 | 1943.61 | 4226.48 | 1943.71 | 4229.94 | 1943.76 |
| 4232.16 | 1943.68 | 4236.94 | 1943.49 | 4240.85 | 1943.51 | 4242.99 | 1943.39 | 4250.89 | 1943 |
| 4253.32 | 1942.97 | 4256.19 | 1942.97 | 4274.37 | 1942.19 | 4279.31 | 1942 | 4360.82 | 1942 |
| 4361.99 | 1942.05 | 4365.1 | 1942.12 | 4365.45 | 1942.12 | 4374.44 | 1942.25 | 4381.65 | 1942.18 |
| 4397.25 | 1942.58 | 4409.6 | 1942.96 | 4410.74 | 1943 | 4414.37 | 1943 | 4418.97 | 1942.59 |
| 4426.85 | 1942 | 4432.93 | 1941.42 | 4437.2 | 1941 | 4452.3 | 1940.39 | 4455.17 | 1940.28 |
| 4459.04 | 1940.12 | 4462.13 | 1940 | 4462.47 | 1940 | 4485.99 | 1939.7 | 4486.68 | 1939.7 |
| 4504.63 | 1939.49 | 4515.55 | 1939.38 | 4522.44 | 1939.32 | 4524.5 | 1939.31 | 4555.36 | 1939 |
| 4560.85 | 1939 | 4575.64 | 1939.01 | 4603.92 | 1939 | 4847.22 | 1939 | 4903.57 | 1939.61 |
| 4904.34 | 1939.61 | 4938.81 | 1940 | 4950.05 | 1940 | 5018.19 | 1940.16 | 5074.94 | 1940.29 |
| 5075.46 | 1940.29 | 5087.93 | 1940.24 | 5108.69 | 1940.14 | 5115.29 | 1940.11 | 5134.1 | 1940.01 |
| 5135.37 | 1940 | 5139.07 | 1940 | 5148.55 | 1939.96 | 5196.79 | 1939.78 | 5229.82 | 1939.66 |
| 5231.51 | 1939.65 | 5254.54 | 1939.58 | 5272.75 | 1939.52 | 5286.67 | 1939.48 | 5287.4 | 1939.47 |
| 5311.01 | 1939.4 | 5328.51 | 1939.35 | 5332.04 | 1939.35 | 5332.86 | 1939.34 | 5349.31 | 1939.34 |
| 5367.14 | 1939.35 | 5367.51 | 1939.36 | 5376.96 | 1939.36 | 5380.88 | 1939.37 | 5392.66 | 1939.37 |
| 5401.02 | 1939.38 | 5436.57 | 1939.44 | 5465.31 | 1939.49 | 5466.53 | 1939.5 | 5475.13 | 1939.5 |
| 5483.91 | 1939.51 | 5494.48 | 1939.49 | 5505.59 | 1939.48 | 5529.88 | 1939.52 | 5537.69 | 1939.53 |
| 5545.45 | 1939.53 | 5553.13 | 1939.54 | 5556.24 | 1939.54 | 5562.9 | 1939.55 | 5569.67 | 1939.55 |
| 5578.45 | 1939.56 | 5607.37 | 1939.62 | 5630.19 | 1939.66 | 5639.03 | 1939.67 | 5643.47 | 1939.67 |
| 5660.36 | 1939.71 | 5674 | 1939.75 | 5684.46 | 1939.8 | 5696.34 | 1939.85 | 5699.21 | 1939.87 |
| 5700.23 | 1939.87 | 5718.28 | 1939.99 | 5721.69 | 1939.99 | 5725.51 | 1940 | 5741.26 | 1940.9 |
| 5741.9 | 1940.93 | 5742.51 | 1940.92 | 5744.3 | 1940.81 | 5745.22 | 1940.72 | 5747.1 | 1940.48 |
| 5749.48 | 1940 | 5750.77 | 1939.99 | 5752.36 | 1940 | 5754.38 | 1940.51 | 5756.28 | 1941 |
| 5760.42 | 1942 | 5764.5 | 1943 | 5767.61 | 1943.81 | 5768.74 | 1943.99 | 5769.31 | 1944.01 |
| 5779.94 | 1945.63 | 5782.28 | 1946 | 5788.69 | 1947 | 5794.43 | 1948 | 5798.41 | 1948.88 |
| 5804.38 | 1950.17 | 5808.31 | 1951 | 5809.53 | 1951.27 | 5817.53 | 1953 | 5821.2 | 1953.68 |
| 5823 | 1954 | 5827.48 | 1954.83 | 5829.36 | 1955.17 | 5834.04 | 1956 | 5839.59 | 1957 |
| 5846.14 | 1957.73 | 5848.77 | 1958 | 5862.09 | 1958.93 | 5863.15 | 1959 | 5969.81 | 1959 |
| 5971.78 | 1958.71 | 5977.11 | 1958 | 5980.67 | 1958 | 5984.11 | 1959 | 5986.36 | 1959.66 |
| 5991.13 | 1960.99 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2267.8 | .045 | 2267.8 | .04 | 5991.13 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2267.8 | 5991.13 | 382.49 | 382.49 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1942.70 | Element | Left OB | Channel | Right OB |
| Vel Head (ft) | 0.12 | Wt. n-Val. | | 0.040 | |

| | | | | | |
|---|---|---|---|---|---|
| W.S. Elev (ft) | 1942.58 | Reach Len. (ft) | 382.49 | 382.49 | 382.49 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7991.79 | |
| E.G. Slope (ft/ft) | 0.001699 | Area (sq ft) | | 7991.79 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 3225.05 | Top Width (ft) | | 3225.05 | |
| Vel Total (ft/s) | 2.80 | Avg. Vel. (ft/s) | | 2.80 | |
| Max Chl Dpth (ft) | 5.48 | Hydr. Depth (ft) | | 2.48 | |
| Conv. Total (cfs) | 543377.3 | Conv. (cfs) | | 543377.3 | |
| Length Wtd. (ft) | 382.49 | Wetted Per. (ft) | | 3227.46 | |
| Min Ch El (ft) | 1937.10 | Shear (lb/sq ft) | | 0.26 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5991.13 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.63 | Cum Volume (acre-ft) | | 2923.28 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1381.91 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -3669.8

INPUT
Description:
Station Elevation Data num= 376

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2250.05 | 1943 | 2258.89 | 1942.91 | 2259.2 | 1942.91 | 2261.77 | 1942.81 | 2263.54 | 1942.76 |
| 2264.93 | 1942.71 | 2274.27 | 1942.43 | 2287.64 | 1942 | 2288.77 | 1942 | 2294.31 | 1941.32 |
| 2296.77 | 1941 | 2302.45 | 1940.33 | 2303.83 | 1940 | 2309.47 | 1940 | 2316.9 | 1939.07 |
| 2317.84 | 1938.94 | 2318.74 | 1938.84 | 2325.52 | 1938 | 2335.27 | 1937.51 | 2339.38 | 1937.39 |
| 2346.35 | 1937.17 | 2350.92 | 1937 | 2383.76 | 1937 | 2394.81 | 1937.58 | 2395.81 | 1937.63 |
| 2400.99 | 1938 | 2412.39 | 1938.88 | 2414.62 | 1939 | 2421.32 | 1939.24 | 2422.35 | 1939.28 |
| 2433.59 | 1939.58 | 2441.46 | 1939.84 | 2445.59 | 1939.93 | 2447.97 | 1940 | 2518.31 | 1940 |
| 2521.58 | 1939.84 | 2525.23 | 1939.7 | 2527.88 | 1939.61 | 2530.61 | 1939.54 | 2533.06 | 1939.49 |
| 2537.11 | 1939.44 | 2538.69 | 1939.44 | 2540.75 | 1939.42 | 2543.46 | 1939.45 | 2546.76 | 1939.51 |
| 2548.24 | 1939.51 | 2555.95 | 1939.82 | 2557.05 | 1939.85 | 2558.79 | 1940 | 2620 | 1940 |
| 2639.42 | 1940.15 | 2642.54 | 1940.17 | 2661.87 | 1940.12 | 2683.98 | 1940.05 | 2685.62 | 1940.08 |
| 2690.61 | 1940.08 | 2702.48 | 1940.29 | 2702.63 | 1940.29 | 2711.39 | 1940.5 | 2713.73 | 1940.56 |
| 2714.12 | 1940.56 | 2717.37 | 1940.64 | 2722.21 | 1940.75 | 2725.62 | 1940.82 | 2728.81 | 1940.88 |
| 2729.01 | 1940.89 | 2732.58 | 1940.95 | 2735.06 | 1941 | 2859.36 | 1941 | 2862.38 | 1941.06 |
| 2874.5 | 1941.26 | 2881.11 | 1941.3 | 2884.47 | 1941.31 | 2901.05 | 1941.45 | 2905.55 | 1941.51 |
| 2918.72 | 1941.61 | 2927.48 | 1941.67 | 2928.89 | 1941.7 | 2933.76 | 1941.76 | 2936.28 | 1941.78 |
| 2943.96 | 1941.73 | 2957.85 | 1941.6 | 2958.06 | 1941.6 | 2965.72 | 1941.33 | 2965.83 | 1941.33 |
| 2975 | 1941 | 2978.11 | 1940.67 | 2986.22 | 1939.83 | 2991.98 | 1939 | 2996.72 | 1938.3 |
| 2998.79 | 1938 | 3017.49 | 1937.25 | 3024.4 | 1937 | 3029.16 | 1937 | 3032.5 | 1937.11 |
| 3059.84 | 1937.97 | 3060.71 | 1938 | 3179.05 | 1938 | 3197.04 | 1938.16 | 3224.58 | 1938.22 |
| 3248.62 | 1938.27 | 3249.75 | 1938.3 | 3252.02 | 1938.3 | 3253.63 | 1938.32 | 3257.24 | 1938.33 |
| 3263.6 | 1938.34 | 3269.88 | 1938.41 | 3273.32 | 1938.42 | 3275.94 | 1938.42 | 3278.49 | 1938.43 |
| 3287 | 1938.37 | 3287.64 | 1938.37 | 3294.32 | 1938.33 | 3299.94 | 1938.35 | 3301.08 | 1938.34 |
| 3307.91 | 1938.24 | 3318.93 | 1938.21 | 3327.88 | 1938.16 | 3334.75 | 1938.08 | 3340.22 | 1938 |
| 3468.41 | 1938 | 3512.41 | 1938.61 | 3515.7 | 1938.66 | 3523.57 | 1938.75 | 3527.78 | 1938.79 |
| 3539.36 | 1939 | 3600.72 | 1939 | 3605.42 | 1939.65 | 3607.65 | 1940 | 3609.98 | 1940.03 |
| 3613.65 | 1940.05 | 3615.59 | 1940.05 | 3621.99 | 1940.16 | 3627.5 | 1940.21 | 3631.39 | 1940.23 |
| 3634.17 | 1940.2 | 3637.93 | 1940.14 | 3645.15 | 1940 | 3657.15 | 1939.91 | 3659.3 | 1939.89 |
| 3663.49 | 1939.84 | 3673.68 | 1939.71 | 3675.85 | 1939.7 | 3693.51 | 1939.63 | 3709.7 | 1939.63 |
| 3718.76 | 1939.73 | 3719.37 | 1939.73 | 3722.72 | 1939.64 | 3732.69 | 1939.04 | 3739.1 | 1939.04 |
| 3739.86 | 1939.03 | 3743.15 | 1939.04 | 3745.18 | 1939.01 | 3746.56 | 1939 | 3757.82 | 1939 |
| 3773.22 | 1940.83 | 3774.69 | 1941 | 3802.42 | 1941 | 3804.24 | 1941.11 | 3805.6 | 1941 |
| 3834.16 | 1941 | 3837.1 | 1940.99 | 3840.6 | 1940.99 | 3847.79 | 1940.62 | 3865.6 | 1940 |
| 3870.06 | 1939.67 | 3874.58 | 1939.35 | 3879.36 | 1939 | 3879.63 | 1939 | 3881 | 1938.73 |
| 3881.14 | 1938.72 | 3884.13 | 1939 | 3885.6 | 1939 | 3890.78 | 1938.75 | 3891.64 | 1938.69 |
| 3900.46 | 1938.3 | 3901.44 | 1938.24 | 3904.91 | 1938.1 | 3906.33 | 1938.05 | 3907.57 | 1938.06 |
| 3909.02 | 1938.18 | 3910.83 | 1938.28 | 3914.86 | 1939 | 3917.48 | 1939.54 | 3919.24 | 1940 |
| 3923.01 | 1940.83 | 3925.45 | 1941.36 | 3928.28 | 1942 | 3929.89 | 1942.31 | 3930.49 | 1942.4 |
| 3931.93 | 1942.47 | 3933.11 | 1942.5 | 3934.25 | 1942.47 | 3936.43 | 1942.36 | 3938.33 | 1942.3 |
| 3939.86 | 1942.21 | 3941.78 | 1942.22 | 3942.5 | 1942.24 | 3944.81 | 1942.34 | 3945.64 | 1942.32 |
| 3950.2 | 1942.5 | 3953.33 | 1942.53 | 3962.03 | 1942 | 3965.18 | 1941.66 | 3967.7 | 1941.38 |
| 3971.36 | 1941 | 3998.03 | 1941 | 4007.01 | 1941.65 | 4011.66 | 1942 | 4014.98 | 1942.32 |
| 4022.61 | 1943 | 4026.53 | 1943.09 | 4030.72 | 1943.2 | 4034.48 | 1943.16 | 4040.17 | 1943 |
| 4049.85 | 1942.18 | 4052.01 | 1942 | 4061.76 | 1941.34 | 4066.86 | 1941 | 4068.46 | 1940.91 |
| 4073.52 | 1940.71 | 4076.81 | 1940.59 | 4081.33 | 1940.61 | 4081.59 | 1940.59 | 4083.17 | 1940.56 |
| 4083.6 | 1940.54 | 4093.14 | 1940 | 4095.69 | 1939.87 | 4098.68 | 1939.67 | 4099.28 | 1939.64 |
| 4106.25 | 1939.18 | 4110.55 | 1939 | 4137.81 | 1939 | 4144.52 | 1939.12 | 4162.65 | 1939.59 |
| 4173.08 | 1939.84 | 4178.19 | 1940 | 4181.32 | 1940.25 | 4186.6 | 1940.72 | 4189.8 | 1941 |
| 4190.51 | 1941.07 | 4201.36 | 1942 | 4318.41 | 1942 | 4324.97 | 1941.65 | 4337.93 | 1941.66 |
| 4345.29 | 1941.66 | 4353.1 | 1941.65 | 4354.08 | 1941.64 | 4371.36 | 1941.67 | 4390.86 | 1941.73 |
| 4396.15 | 1941.79 | 4403.93 | 1941.91 | 4404.86 | 1941.91 | 4406.98 | 1941.88 | 4411.96 | 1941.79 |
| 4414.64 | 1941.65 | 4415.27 | 1941.64 | 4417.36 | 1941.56 | 4421.65 | 1941.41 | 4422.65 | 1941.38 |
| 4433.14 | 1941 | 4448.42 | 1940.64 | 4449.48 | 1940.62 | 4475.49 | 1940 | 4484.9 | 1939.67 |
| 4489.2 | 1939.53 | 4499.55 | 1939.17 | 4500.6 | 1939.15 | 4507.43 | 1939 | 4517.1 | 1939 |
| 4522.15 | 1938.89 | 4535.25 | 1938.78 | 4536.09 | 1938.78 | 4581.06 | 1938.83 | 4633.11 | 1938.9 |
| 4635.67 | 1938.91 | 4637.59 | 1938.89 | 4638.74 | 1938.91 | 4648.61 | 1939 | 4671.7 | 1939 |
| 4675.93 | 1938.97 | 4676.56 | 1938.97 | 4682.8 | 1938.93 | 4691.07 | 1938.83 | 4691.22 | 1938.84 |
| 4694.11 | 1938.8 | 4697.55 | 1938.8 | 4700.98 | 1938.79 | 4702.59 | 1938.77 | 4717.36 | 1938.73 |
| 4730.82 | 1938.7 | 4733.68 | 1938.71 | 4737.5 | 1938.65 | 4740.76 | 1938.61 | 4744.49 | 1938.65 |
| 4766.44 | 1938.75 | 4797.65 | 1938.92 | 4803.9 | 1939 | 4836.69 | 1939 | 4870.33 | 1939.6 |
| 4891.36 | 1939.98 | 4892.29 | 1940 | 5215.75 | 1940 | 5347.53 | 1939.42 | 5349.27 | 1939.41 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5378.55 | 1939.01 | 5379.37 | 1939 | 5433.02 | 1939 | 5451.9 | 1939.01 | 5459.02 | 1939.01 |
| 5470.7 | 1939 | 5482.87 | 1939.01 | 5493.05 | 1939.01 | 5493.22 | 1939 | 5641.58 | 1939 |
| 5657.19 | 1938.99 | 5662.18 | 1938.99 | 5663.6 | 1939 | 5707.13 | 1938.78 | 5711.92 | 1938.78 |
| 5716.55 | 1938.79 | 5734.76 | 1938.93 | 5744.1 | 1939 | 5778.73 | 1939 | 5783.33 | 1939.01 |
| 5789.01 | 1939 | 5795.27 | 1939 | 5801.63 | 1939.14 | 5810.11 | 1939.43 | 5820.5 | 1939.75 |
| 5823.71 | 1939.9 | 5825.46 | 1940 | 5826.04 | 1940.24 | 5826.35 | 1940.41 | 5828.04 | 1941 |
| 5830.65 | 1942.01 | 5832.35 | 1943 | 5834.63 | 1943.56 | 5836.7 | 1944 | 5839.64 | 1944.56 |
| 5844.89 | 1945.54 | 5847.5 | 1946 | 5850.17 | 1946.46 | 5853.04 | 1947 | 5856.27 | 1947.57 |
| 5858.5 | 1948 | 5860.71 | 1948.47 | 5865.57 | 1949.55 | 5867.64 | 1950 | 5869.97 | 1950.48 |
| 5874.4 | 1951.43 | 5879.23 | 1952.45 | 5881.8 | 1953 | 5885.42 | 1953.61 | 5887.94 | 1954 |
| 5891.59 | 1954.53 | 5894.71 | 1955 | 5896.45 | 1955.27 | 5901.42 | 1956 | 5906.47 | 1956.77 |
| 5908.02 | 1957 | 5909.65 | 1957.34 | 5911.44 | 1957.9 | 5911.83 | 1958 | 5915.16 | 1958.02 |
| 5923.85 | 1958.01 | 5925.02 | 1958.04 | 5928.11 | 1958.07 | 5929.55 | 1958.15 | 5941.52 | 1958.99 |
| 5943.01 | 1959 | 5974.91 | 1959 | 5979.62 | 1958.99 | 5985.35 | 1958.99 | 5989.98 | 1959 |
| 6022.95 | 1959 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2250.05 | .045 | 2250.05 | .04 | 6022.95 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2250.05 | 6022.95 | 276.29 | 276.29 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1942.07 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.11 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1941.96 | Reach Len. (ft) | 276.29 | 276.29 | 276.29 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8271.12 | | |
| E.G. Slope (ft/ft) | 0.001592 | Area (sq ft) | | 8271.12 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3347.01 | Top Width (ft) | | 3347.01 | | |
| Vel Total (ft/s) | 2.71 | Avg. Vel. (ft/s) | | 2.71 | | |
| Max Chl Dpth (ft) | 4.96 | Hydr. Depth (ft) | | 2.47 | | |
| Conv. Total (cfs) | 561375.5 | Conv. (cfs) | | 561375.5 | | |
| Length Wtd. (ft) | 276.29 | Wetted Per. (ft) | | 3349.14 | | |
| Min Ch El (ft) | 1937.00 | Shear (lb/sq ft) | | 0.25 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6022.95 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.49 | Cum Volume (acre-ft) | | 2851.88 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1353.06 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -3946.09

INPUT
Description:
Station Elevation Data num= 346

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2255.59 | 1942.5 | 2262.92 | 1942.75 | 2264.93 | 1942.75 | 2268.17 | 1942.61 | 2280.79 | 1942 |
| 2281.13 | 1942 | 2285.68 | 1941.06 | 2290.93 | 1940 | 2298.32 | 1938.54 | 2300.5 | 1938 |
| 2302.12 | 1937.96 | 2303.74 | 1938 | 2314.47 | 1938 | 2327.3 | 1937.94 | 2359.04 | 1937.55 |
| 2381.36 | 1937.53 | 2393.56 | 1937.7 | 2413 | 1938 | 2413.22 | 1938 | 2429.96 | 1938.83 |
| 2432.88 | 1939 | 2563.29 | 1939 | 2564.38 | 1939.02 | 2586.33 | 1939.33 | 2587.13 | 1939.32 |
| 2596.12 | 1939.29 | 2597.8 | 1939.29 | 2601.16 | 1939.32 | 2608.67 | 1939.31 | 2613.74 | 1939.34 |
| 2622.4 | 1939.42 | 2636.21 | 1939.56 | 2640.06 | 1939.61 | 2660.95 | 1939.81 | 2678.96 | 1940 |
| 2696.84 | 1940.1 | 2704.86 | 1940.16 | 2725.92 | 1940.3 | 2726.51 | 1940.3 | 2748.36 | 1940.45 |
| 2760.59 | 1940.52 | 2770 | 1940.57 | 2770.36 | 1940.58 | 2796.67 | 1940.58 | 2823.01 | 1940.56 |
| 2828.23 | 1940.64 | 2834.04 | 1940.75 | 2840.17 | 1940.84 | 2842.1 | 1940.83 | 2847.8 | 1940.77 |
| 2854.99 | 1940.68 | 2893.47 | 1940.81 | 2944.47 | 1941 | 2974.91 | 1941 | 2982.88 | 1940.79 |
| 2989.56 | 1940.62 | 3017.21 | 1940.01 | 3019.96 | 1940 | 3030.22 | 1939.84 | 3037.16 | 1939.72 |
| 3047.95 | 1939.54 | 3078.9 | 1939 | 3085.61 | 1938.74 | 3092.66 | 1938.48 | 3097.17 | 1938.34 |
| 3099.87 | 1938.29 | 3105.07 | 1938 | 3116.4 | 1937.18 | 3118.78 | 1937 | 3272.46 | 1937 |
| 3278.31 | 1937.08 | 3304.09 | 1937.4 | 3304.42 | 1937.41 | 3320.56 | 1937.51 | 3332.19 | 1937.57 |
| 3339.66 | 1937.68 | 3343.04 | 1937.71 | 3344.6 | 1937.71 | 3359.51 | 1937.8 | 3376.42 | 1937.91 |
| 3378.21 | 1937.93 | 3381.92 | 1938 | 3411.61 | 1938 | 3417.39 | 1938.03 | 3424 | 1938 |
| 3486.88 | 1938 | 3513.8 | 1938.3 | 3522.29 | 1938.31 | 3530.79 | 1938.3 | 3538.51 | 1938.41 |
| 3543.99 | 1938.54 | 3555.55 | 1938.87 | 3559.89 | 1939 | 3672.6 | 1939 | 3717.97 | 1939.93 |
| 3720.26 | 1939.98 | 3721.66 | 1939.98 | 3729.01 | 1939.7 | 3738.16 | 1939 | 3765.26 | 1938.3 |
| 3769.3 | 1938.21 | 3781.98 | 1938 | 3818.82 | 1938 | 3822.03 | 1938.02 | 3836.95 | 1938.49 |
| 3840.23 | 1938.59 | 3850.77 | 1939 | 3850.96 | 1939 | 3854.93 | 1939.59 | 3856.89 | 1939.84 |
| 3858.06 | 1939.89 | 3861.56 | 1939.8 | 3864.1 | 1939.89 | 3867.17 | 1940.03 | 3870.86 | 1940.28 |
| 3872.34 | 1940.3 | 3873.72 | 1940.29 | 3874.82 | 1940.24 | 3878.03 | 1940 | 3882.4 | 1939.99 |
| 3884.37 | 1940.01 | 3886.78 | 1940.16 | 3895.88 | 1940.52 | 3900.75 | 1940.62 | 3902.03 | 1940.67 |
| 3912.96 | 1941 | 3915.23 | 1941.17 | 3917.89 | 1941.26 | 3921.15 | 1941.46 | 3926.46 | 1941.77 |
| 3929.48 | 1942 | 3932.04 | 1942.06 | 3934.29 | 1942.06 | 3938.09 | 1942.08 | 3945.34 | 1942.04 |
| 3947.27 | 1942.11 | 3950.94 | 1942.14 | 3951.84 | 1942 | 3971.67 | 1942 | 3973.11 | 1942.08 |
| 3974.37 | 1942.11 | 3975.56 | 1942.08 | 3977.78 | 1942.2 | 3982.66 | 1942 | 3991.23 | 1941.55 |
| 3993.24 | 1941.44 | 3996.11 | 1941.32 | 3997.98 | 1941.26 | 4000.79 | 1941.13 | 4003.46 | 1941.08 |
| 4005.66 | 1941.08 | 4006.75 | 1941.11 | 4008.3 | 1941.1 | 4011.65 | 1941.21 | 4016.87 | 1941.43 |
| 4029.19 | 1941.98 | 4029.49 | 1942 | 4038.87 | 1942 | 4045.92 | 1942.67 | 4051.44 | 1943.08 |
| 4051.92 | 1943.02 | 4056.57 | 1943.07 | 4059.26 | 1943.08 | 4060.47 | 1943.06 | 4061.9 | 1943 |
| 4063.56 | 1942.76 | 4068.22 | 1942 | 4071.67 | 1941.51 | 4075.59 | 1941 | 4080.78 | 1940.76 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4087.66 | 1940.39 | 4095.47 | 1940 | 4112.95 | 1940 | 4119.04 | 1939.99 | 4125.14 | 1940 |
| 4166.78 | 1940 | 4169.3 | 1940.03 | 4175.17 | 1940.03 | 4185.13 | 1940 | 4199.1 | 1940 |
| 4206.83 | 1939.38 | 4208.85 | 1939.26 | 4212.03 | 1939 | 4228.6 | 1939 | 4242.52 | 1939.2 |
| 4243.75 | 1939.25 | 4247.89 | 1939.3 | 4251.88 | 1939.28 | 4256.42 | 1939 | 4257.53 | 1938.95 |
| 4261.17 | 1938.91 | 4264.93 | 1938.89 | 4266.57 | 1939 | 4274.04 | 1939.59 | 4275.87 | 1939.68 |
| 4282.32 | 1939.95 | 4284.31 | 1940 | 4286.17 | 1940.01 | 4287.18 | 1939.99 | 4289.31 | 1939.73 |
| 4290.8 | 1939.5 | 4293.43 | 1939 | 4294.3 | 1938.82 | 4296.78 | 1938.18 | 4297.54 | 1938 |
| 4302.17 | 1938 | 4306.63 | 1938.41 | 4312.83 | 1939 | 4314.95 | 1939.18 | 4322.24 | 1939.83 |
| 4324.26 | 1940 | 4325.92 | 1940.1 | 4342.85 | 1941 | 4348.05 | 1941.27 | 4349.63 | 1941.33 |
| 4350.64 | 1941.33 | 4355.72 | 1941.43 | 4356.98 | 1941.39 | 4366.78 | 1941.34 | 4380.8 | 1941.13 |
| 4385.39 | 1941.01 | 4386.38 | 1941 | 4497.65 | 1941 | 4501.22 | 1940.96 | 4523.6 | 1940.69 |
| 4524.82 | 1940.69 | 4531.82 | 1940.58 | 4548.7 | 1940.05 | 4554.06 | 1940.03 | 4555.92 | 1940 |
| 4564.54 | 1939.68 | 4583.18 | 1939 | 4604.79 | 1938.28 | 4613.08 | 1938 | 4778.6 | 1938 |
| 4786.52 | 1938.02 | 4787.34 | 1938.01 | 4794.21 | 1938.01 | 4797.27 | 1938 | 4803.19 | 1938 |
| 4809.61 | 1938.03 | 4812.16 | 1938.02 | 4818.73 | 1938.02 | 4822.86 | 1938.03 | 4827.72 | 1938.02 |
| 4835.12 | 1938.03 | 4836.68 | 1938.02 | 4844.11 | 1938.02 | 4845.86 | 1938.01 | 4852.48 | 1938.01 |
| 4853.73 | 1938 | 4857.95 | 1938 | 4861.59 | 1938.07 | 4904.03 | 1939 | 4923.61 | 1939.6 |
| 4933.36 | 1939.76 | 4947.02 | 1940 | 5043.4 | 1940 | 5046.51 | 1939.99 | 5128.39 | 1939.66 |
| 5179.37 | 1939.46 | 5181.42 | 1939.46 | 5206.4 | 1939.26 | 5238.57 | 1939 | 5488.03 | 1939 |
| 5504.73 | 1938.95 | 5521 | 1938.98 | 5524.57 | 1939 | 5529.26 | 1939.01 | 5532.64 | 1939 |
| 5533.79 | 1938.98 | 5545.79 | 1938.9 | 5548.32 | 1938.9 | 5553.34 | 1938.94 | 5558.72 | 1938.96 |
| 5561.8 | 1938.96 | 5565.6 | 1938.9 | 5577.71 | 1938.09 | 5579.86 | 1938 | 5580.41 | 1938 |
| 5583.15 | 1938.27 | 5585.55 | 1938.47 | 5591.19 | 1939 | 5597.27 | 1939.55 | 5601.18 | 1939.73 |
| 5602.95 | 1939.8 | 5607.51 | 1939.65 | 5612.36 | 1939.51 | 5614.84 | 1939.49 | 5621.68 | 1939.07 |
| 5623.71 | 1939.06 | 5633.67 | 1939.06 | 5636.84 | 1939.05 | 5642.15 | 1939.02 | 5643.93 | 1939 |
| 5660.92 | 1939 | 5663.4 | 1938.99 | 5669.23 | 1938.99 | 5694.34 | 1938.98 | 5695.24 | 1939 |
| 5771.86 | 1939 | 5793.91 | 1939.58 | 5811.4 | 1940 | 5835.75 | 1940.78 | 5842.77 | 1941 |
| 5860.2 | 1942 | 5866.74 | 1942.54 | 5871.89 | 1943 | 5874.29 | 1944.21 | 5875.9 | 1945 |
| 5878.16 | 1946.06 | 5882.58 | 1948.01 | 5885.63 | 1949 | 5889.88 | 1950.23 | 5892.85 | 1951 |
| 5894.95 | 1951.62 | 5896.35 | 1952 | 5899.66 | 1952.94 | 5903.84 | 1954.1 | 5907.17 | 1955 |
| 5923.01 | 1956 | 5923.34 | 1956 | 5927.99 | 1956.19 | 5946.54 | 1957 | 5955.61 | 1957.92 |
| 5956.61 | 1958 | 5962.15 | 1958 | 5972.21 | 1957.99 | 5976.95 | 1958 | 6004.57 | 1958 |
| 6007.68 | 1957.88 | 6009.02 | 1957.77 | 6012.78 | 1957.55 | 6019.3 | 1957 | 6026.44 | 1956.88 |
| 6026.84 | 1956.88 | 6033.83 | 1956.1 | 6034.43 | 1956.09 | 6035.79 | 1956 | 6041.21 | 1956 |
| 6051.55 | 1956.26 | 6058.94 | 1956.47 | 6065.23 | 1956.64 | 6067.17 | 1956.7 | 6077.89 | 1957 |
| 6086.81 | 1957 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2255.59 | .045 | 2255.59 | .04 | 6086.81 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2255.59 | 6086.81 | 206.65 | 206.65 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1941.58 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.13 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1941.45 | Reach Len. (ft) | 206.65 | 206.65 | 206.65 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7843.23 | | |
| E.G. Slope (ft/ft) | 0.001971 | Area (sq ft) | | 7843.23 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3440.31 | Top Width (ft) | | 3440.31 | | |
| Vel Total (ft/s) | 2.86 | Avg. Vel. (ft/s) | | 2.86 | | |
| Max Chl Dpth (ft) | 4.45 | Hydr. Depth (ft) | | 2.28 | | |
| Conv. Total (cfs) | 504556.4 | Conv. (cfs) | | 504556.4 | | |
| Length Wtd. (ft) | 206.65 | Wetted Per. (ft) | | 3441.72 | | |
| Min Ch El (ft) | 1937.00 | Shear (lb/sq ft) | | 0.28 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6086.81 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.39 | Cum Volume (acre-ft) | | 2800.78 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1331.53 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -4152.74

INPUT
Description:
Station Elevation Data num= 390

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2241.89 | 1942 | 2246.54 | 1941.98 | 2250.42 | 1941.91 | 2254.52 | 1941.92 | 2254.63 | 1941.91 |
| 2257.78 | 1941.89 | 2259.66 | 1941.78 | 2271.73 | 1941 | 2297.88 | 1941 | 2304.43 | 1940.78 |
| 2306.22 | 1940.74 | 2307.59 | 1940.69 | 2325.95 | 1940.16 | 2329.01 | 1940.07 | 2334.45 | 1940 |
| 2336.61 | 1939.76 | 2342.14 | 1939 | 2350.31 | 1938.45 | 2356.01 | 1938 | 2365.02 | 1937.25 |
| 2371.8 | 1937 | 2437.03 | 1937 | 2469.11 | 1937.44 | 2484.5 | 1937.62 | 2492.6 | 1937.71 |
| 2499.44 | 1937.79 | 2503.92 | 1937.82 | 2508.33 | 1937.83 | 2508.56 | 1937.84 | 2517.36 | 1938 |
| 2527.59 | 1938 | 2530.72 | 1938.11 | 2532.41 | 1938.18 | 2535.06 | 1938.24 | 2544.75 | 1938.58 |
| 2551.01 | 1938.72 | 2554.41 | 1938.77 | 2560.26 | 1938.83 | 2561.42 | 1938.83 | 2571.11 | 1938.99 |
| 2574.59 | 1938.99 | 2585.68 | 1939.01 | 2593.32 | 1939.01 | 2593.9 | 1939 | 2671.65 | 1939 |
| 2679.86 | 1938.99 | 2691.01 | 1938.95 | 2693.83 | 1938.96 | 2695.76 | 1938.95 | 2705.97 | 1938.99 |
| 2709.28 | 1939 | 2801.53 | 1939 | 2810.82 | 1939.18 | 2817.73 | 1939.31 | 2828.44 | 1939.03 |
| 2831.7 | 1939.03 | 2861.39 | 1939.02 | 2864.97 | 1939.02 | 2880.66 | 1939 | 2994.33 | 1939 |
| 2996.54 | 1939.11 | 2998.09 | 1939.09 | 3000.04 | 1939.1 | 3012.11 | 1939.21 | 3019.63 | 1939.14 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3022.96 | 1939.13 | 3024.38 | 1939.15 | 3025.63 | 1939.2 | 3051.02 | 1939.01 | 3087.6 | 1939.01 |
| 3109.23 | 1939 | 3114.96 | 1938.33 | 3117.66 | 1938 | 3126.69 | 1937.05 | 3127.24 | 1937 |
| 3129.72 | 1936.98 | 3134.67 | 1936.96 | 3156.75 | 1936.22 | 3158.08 | 1936.19 | 3162.73 | 1936 |
| 3165.13 | 1935.92 | 3174.96 | 1935.65 | 3195.22 | 1935.7 | 3202.6 | 1935.71 | 3218.64 | 1935.75 |
| 3218.83 | 1935.76 | 3230.45 | 1936 | 3231.29 | 1936 | 3245.33 | 1936.51 | 3252.11 | 1936.76 |
| 3263.17 | 1937 | 3271.28 | 1937.09 | 3276.69 | 1937.36 | 3283.52 | 1937.61 | 3284.24 | 1937.61 |
| 3302.58 | 1937.99 | 3319.01 | 1937.99 | 3320.5 | 1938 | 3347.32 | 1938 | 3366.5 | 1938.01 |
| 3376.33 | 1938.01 | 3392.55 | 1938 | 3455.71 | 1938 | 3458.52 | 1937.96 | 3493.93 | 1937.6 |
| 3511 | 1937.43 | 3520.08 | 1937.4 | 3531.2 | 1937.29 | 3531.8 | 1937.29 | 3543.72 | 1937.1 |
| 3547.77 | 1937.03 | 3553.12 | 1937 | 3555.38 | 1937 | 3560.05 | 1937.14 | 3591.12 | 1938 |
| 3595.89 | 1938.29 | 3596.45 | 1938.31 | 3602.67 | 1938.61 | 3605.26 | 1938.75 | 3610.23 | 1939 |
| 3691.26 | 1939 | 3699.25 | 1938.72 | 3703.57 | 1938.55 | 3714.05 | 1938 | 3718.25 | 1937.99 |
| 3722.34 | 1938 | 3723.58 | 1938.13 | 3734.86 | 1938.27 | 3743.18 | 1938.36 | 3743.53 | 1938.36 |
| 3749.07 | 1938.24 | 3763.7 | 1938.01 | 3764.53 | 1938 | 3774.93 | 1938 | 3784.4 | 1938.22 |
| 3784.72 | 1938.22 | 3793.54 | 1938.43 | 3799.62 | 1938.59 | 3816.63 | 1939 | 3856.01 | 1939 |
| 3863.1 | 1940 | 3867.16 | 1940.58 | 3867.74 | 1940.67 | 3873.07 | 1941.41 | 3874.98 | 1941.63 |
| 3890.7 | 1943 | 3902.08 | 1943.98 | 3902.28 | 1944 | 3917.16 | 1945 | 3933.1 | 1945 |
| 3937.55 | 1944.31 | 3939.62 | 1944 | 3941.41 | 1943.77 | 3944.51 | 1943.29 | 3947.89 | 1942.81 |
| 3951.73 | 1942.29 | 3952.76 | 1942.12 | 3954.54 | 1941.88 | 3955.23 | 1941.77 | 3960.2 | 1941.1 |
| 3964.65 | 1940.52 | 3965.74 | 1940.39 | 3966.83 | 1940.21 | 3968.03 | 1939.98 | 3978.59 | 1939 |
| 3979.06 | 1939 | 3980.06 | 1939.19 | 3983.26 | 1940 | 3984.73 | 1940.32 | 3985.24 | 1940.48 |
| 3987.2 | 1941 | 3989.86 | 1941.63 | 3991.02 | 1942 | 3995.03 | 1943 | 3996.88 | 1943.65 |
| 3997.75 | 1944 | 4001.85 | 1945.26 | 4003.41 | 1945.68 | 4004.21 | 1945.8 | 4004.87 | 1945.83 |
| 4006.15 | 1945.73 | 4006.43 | 1945.74 | 4007.31 | 1945.61 | 4011.24 | 1945.35 | 4011.82 | 1945.25 |
| 4015.29 | 1945 | 4016.23 | 1944.85 | 4022.97 | 1944 | 4028.38 | 1943.48 | 4029.32 | 1943.36 |
| 4031.42 | 1943 | 4037.05 | 1942.71 | 4038.72 | 1942.61 | 4042.99 | 1942.25 | 4045.36 | 1942 |
| 4050.17 | 1941.74 | 4063.26 | 1941 | 4078.42 | 1940.2 | 4080.25 | 1940.12 | 4081.49 | 1940.1 |
| 4083.55 | 1940 | 4098.73 | 1939.4 | 4100.4 | 1939.32 | 4108.42 | 1939 | 4116.68 | 1939 |
| 4139.96 | 1939.44 | 4142.04 | 1939.49 | 4150.39 | 1939.82 | 4154.79 | 1940 | 4159.48 | 1940.42 |
| 4169.27 | 1941 | 4174.02 | 1941.42 | 4175.47 | 1941.53 | 4178.86 | 1941.53 | 4184.85 | 1941.13 |
| 4185.91 | 1941 | 4188.16 | 1940.75 | 4195.43 | 1940 | 4207.9 | 1939.49 | 4221.42 | 1939.13 |
| 4224.78 | 1939.01 | 4226.79 | 1939 | 4230.21 | 1939 | 4233.35 | 1939.5 | 4236.36 | 1940 |
| 4238.29 | 1940.28 | 4243.51 | 1941 | 4251.76 | 1942 | 4256.97 | 1942 | 4265.52 | 1941.08 |
| 4266.92 | 1940.96 | 4276.95 | 1940.19 | 4279.58 | 1940 | 4288 | 1939.73 | 4297.08 | 1939.47 |
| 4308.72 | 1939 | 4312.18 | 1939 | 4313.9 | 1938.93 | 4324.34 | 1938.56 | 4325.83 | 1938.5 |
| 4329.13 | 1938.39 | 4335.36 | 1938.2 | 4341.1 | 1938 | 4353.48 | 1938 | 4354.93 | 1938.06 |
| 4361.38 | 1938.27 | 4363.97 | 1938.37 | 4364.83 | 1938.38 | 4366.45 | 1938.47 | 4370.49 | 1938.43 |
| 4371.09 | 1938.46 | 4373.31 | 1938.48 | 4377.92 | 1938.61 | 4386.08 | 1938.99 | 4393.8 | 1938.99 |
| 4396.5 | 1939 | 4399.93 | 1938.99 | 4401.6 | 1939 | 4406.09 | 1939 | 4413.14 | 1938.99 |
| 4414.86 | 1939 | 4427.96 | 1939 | 4429.55 | 1939.01 | 4433.97 | 1939.01 | 4436.52 | 1939 |
| 4467.1 | 1939 | 4474.26 | 1939.26 | 4495.07 | 1940 | 4497.57 | 1940 | 4532.19 | 1940.03 |
| 4538.65 | 1940.04 | 4541.34 | 1940.03 | 4551.52 | 1940.03 | 4561.66 | 1940.02 | 4565.94 | 1940.02 |
| 4571.42 | 1940.01 | 4579.87 | 1940.01 | 4581.98 | 1940 | 4585.64 | 1940 | 4605.11 | 1939.18 |
| 4610.66 | 1939 | 4614.06 | 1939 | 4625.98 | 1938.75 | 4636.14 | 1938.58 | 4654.27 | 1938.1 |
| 4657.74 | 1938.01 | 4666.27 | 1938.01 | 4673.1 | 1938 | 4697.12 | 1938 | 4727.42 | 1937.99 |
| 4765.78 | 1937.99 | 4783.71 | 1938 | 4856.65 | 1938 | 4857.45 | 1938.01 | 4906.77 | 1938.46 |
| 4925.13 | 1938.63 | 4927.48 | 1938.65 | 4948.1 | 1939 | 4970.92 | 1939 | 4978.24 | 1939.1 |
| 4979.92 | 1939.11 | 5001.42 | 1939.37 | 5055.99 | 1940 | 5085.67 | 1940 | 5092.56 | 1940.05 |
| 5102.98 | 1940.12 | 5127.37 | 1940.04 | 5133.03 | 1940.05 | 5148.66 | 1940.03 | 5151.28 | 1940.02 |
| 5164.41 | 1940 | 5179.14 | 1939.75 | 5186.85 | 1939.6 | 5190.12 | 1939.53 | 5207.06 | 1939.22 |
| 5210.97 | 1939.15 | 5214.23 | 1939.1 | 5217.71 | 1939.03 | 5219.66 | 1939 | 5345.31 | 1939 |
| 5346.2 | 1938.99 | 5355.68 | 1938.97 | 5404.89 | 1938.84 | 5409.24 | 1938.85 | 5480.58 | 1938.81 |
| 5563.98 | 1939 | 5567.84 | 1938.97 | 5586.58 | 1938.79 | 5592.47 | 1938.74 | 5611.63 | 1938.76 |
| 5626.09 | 1938.69 | 5651.48 | 1938.57 | 5654.17 | 1938.56 | 5693.99 | 1938.32 | 5715.89 | 1938.25 |
| 5722.47 | 1938.24 | 5728.86 | 1938.24 | 5739.37 | 1938.18 | 5744.5 | 1938.16 | 5755.07 | 1938.38 |
| 5757.5 | 1938.34 | 5759.8 | 1938.34 | 5771.66 | 1938.51 | 5805.9 | 1938.99 | 5808.86 | 1939 |
| 5817.02 | 1939.38 | 5822.44 | 1939.66 | 5822.57 | 1939.66 | 5829.24 | 1940 | 5836.21 | 1940.31 |
| 5840.57 | 1940.5 | 5855.08 | 1941 | 5865.71 | 1941.42 | 5875.61 | 1942 | 5876.43 | 1942.46 |
| 5877 | 1943 | 5879.18 | 1944 | 5883.48 | 1946 | 5884.64 | 1946.5 | 5885.73 | 1947 |
| 5886.91 | 1947.49 | 5891.48 | 1948.81 | 5893.04 | 1949.27 | 5897.79 | 1950.74 | 5898.51 | 1951 |
| 5901.57 | 1951.66 | 5902.54 | 1951.84 | 5903.67 | 1952 | 5910.36 | 1953 | 5914.35 | 1953.49 |
| 5918.21 | 1954 | 5921.93 | 1954.41 | 5922.47 | 1954.48 | 5925.98 | 1955 | 5929.28 | 1955.53 |
| 5932 | 1956 | 5934.47 | 1956.33 | 5940.24 | 1957 | 5981.22 | 1957.69 | 5984.04 | 1957.74 |
| 6000.44 | 1958 | 6024 | 1958 | 6041.26 | 1957 | 6044.52 | 1956.42 | 6046.99 | 1956 |
| 6052.31 | 1955.7 | 6055.19 | 1955.85 | 6057.87 | 1956 | 6066.16 | 1956.12 | 6095.96 | 1956.35 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2241.89 | .045 | 2241.89 | .04 | 6095.96 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2241.89 | 6095.96 | 103.82 | 103.82 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1941.19 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.12 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1941.06 | Reach Len. (ft) | 103.82 | 103.82 | 103.82 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7972.38 | | |
| E.G. Slope (ft/ft) | 0.001826 | Area (sq ft) | | 7972.38 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3384.25 | Top Width (ft) | | 3384.25 | | |
| Vel Total (ft/s) | 2.81 | Avg. Vel. (ft/s) | | 2.81 | | |
| Max Chl Dpth (ft) | 5.41 | Hydr. Depth (ft) | | 2.36 | | |
| Conv. Total (cfs) | 524174.8 | Conv. (cfs) | | 524174.8 | | |
| Length Wtd. (ft) | 103.82 | Wetted Per. (ft) | | 3385.77 | | |
| Min Ch El (ft) | 1935.65 | Shear (lb/sq ft) | | 0.27 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6095.96 | 0.00 | 0.00 | |

| | | | |
|---|---|---|---|
| Frctn Loss (ft) | 0.19 | Cum Volume (acre-ft) | 2763.26 |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | 1315.34 |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -4256.56

INPUT
Description:
Station Elevation Data num= 411

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2187.96 | 1941.75 | 2200.36 | 1941.84 | 2201.49 | 1941.83 | 2208.08 | 1941.67 | 2212.47 | 1941.59 |
| 2221.98 | 1941.34 | 2233.33 | 1941.01 | 2235.34 | 1941 | 2241.1 | 1940.75 | 2243.91 | 1940.62 |
| 2257.69 | 1940 | 2261.34 | 1939.95 | 2274.45 | 1939.89 | 2287.73 | 1939.85 | 2296.44 | 1939.89 |
| 2310.5 | 1939.95 | 2319.69 | 1939.98 | 2321.11 | 1940 | 2358.71 | 1940 | 2362.48 | 1939.77 |
| 2381.62 | 1939 | 2387.42 | 1938.4 | 2388.68 | 1938.26 | 2390.77 | 1938 | 2395.49 | 1937.93 |
| 2401.83 | 1938 | 2409.54 | 1938 | 2410.72 | 1937.96 | 2414.19 | 1937.81 | 2415.21 | 1937.75 |
| 2449.29 | 1937.08 | 2452.59 | 1937.01 | 2456.96 | 1937.01 | 2487.7 | 1937.45 | 2491.08 | 1937.55 |
| 2493.6 | 1937.61 | 2494.26 | 1937.61 | 2505.35 | 1937.88 | 2517.83 | 1938 | 2534.32 | 1938 |
| 2544.96 | 1937.56 | 2547.05 | 1937.47 | 2549.97 | 1937.32 | 2556.85 | 1937 | 2596.04 | 1937 |
| 2601.88 | 1937.26 | 2620.34 | 1938 | 2641.62 | 1938 | 2648.91 | 1938.18 | 2656.82 | 1938.19 |
| 2666.28 | 1938.26 | 2670.83 | 1938.19 | 2676.49 | 1938.09 | 2679.64 | 1938 | 2732.1 | 1938 |
| 2738.11 | 1938.15 | 2738.23 | 1938.16 | 2743.98 | 1938.27 | 2746.5 | 1938.34 | 2753.86 | 1938.53 |
| 2769.7 | 1938.99 | 2771.7 | 1939 | 2823.98 | 1939 | 2826.12 | 1938.99 | 2862.03 | 1938.99 |
| 2888.32 | 1938.98 | 2924.04 | 1938.99 | 2927.69 | 1939 | 2964.39 | 1939 | 2973.03 | 1938.99 |
| 2985.11 | 1938.99 | 2989.84 | 1939 | 3006.15 | 1939 | 3027.64 | 1938 | 3031.06 | 1938 |
| 3047.71 | 1938.42 | 3051.78 | 1938.54 | 3069.28 | 1939 | 3131.88 | 1939 | 3133.77 | 1938.96 |
| 3139.36 | 1938.67 | 3140.51 | 1938.63 | 3144.03 | 1938.54 | 3144.56 | 1938.51 | 3159.01 | 1938.04 |
| 3162.44 | 1938.02 | 3163.45 | 1938 | 3171.93 | 1937.61 | 3184.97 | 1937 | 3198.86 | 1936.32 |
| 3205.62 | 1936 | 3239.78 | 1935.08 | 3242.67 | 1935 | 3261.19 | 1935 | 3261.35 | 1935.01 |
| 3278.58 | 1935.64 | 3294.61 | 1936 | 3298.55 | 1936.14 | 3320.33 | 1937 | 3349.24 | 1938 |
| 3425.81 | 1938 | 3439.59 | 1937.73 | 3441.99 | 1937.71 | 3459.18 | 1938 | 3510.85 | 1938 |
| 3535.35 | 1937.44 | 3539.03 | 1937.35 | 3545.04 | 1937.28 | 3551.37 | 1937.2 | 3551.77 | 1937.19 |
| 3559.61 | 1937.09 | 3561.94 | 1937.07 | 3568.34 | 1937 | 3631.9 | 1937 | 3647.58 | 1937.7 |
| 3654.79 | 1938 | 3665.66 | 1938.55 | 3675.96 | 1939 | 3684.35 | 1939 | 3694.24 | 1938.82 |
| 3702.94 | 1938.71 | 3715.84 | 1938.63 | 3726.44 | 1938.58 | 3740.87 | 1938.38 | 3745.62 | 1938.3 |
| 3756.34 | 1938.05 | 3761.96 | 1937.99 | 3773.84 | 1937.94 | 3778 | 1937.94 | 3786.87 | 1937.97 |
| 3787.91 | 1937.98 | 3806.8 | 1937.98 | 3808.3 | 1937.99 | 3816.98 | 1937.99 | 3822.85 | 1938 |
| 3827.44 | 1938.13 | 3829.46 | 1938.22 | 3846.4 | 1939 | 3909.11 | 1939 | 3909.66 | 1939.06 |
| 3917.08 | 1939.94 | 3917.54 | 1940 | 3924.38 | 1940.81 | 3925.94 | 1941 | 3931.08 | 1941.69 |
| 3933.43 | 1941.94 | 3937.17 | 1942.21 | 3948.43 | 1943 | 3951.27 | 1943.05 | 3958.04 | 1943.11 |
| 3965.75 | 1943 | 3967.83 | 1942.87 | 3968.31 | 1942.86 | 3969.88 | 1942.75 | 3979.09 | 1942.01 |
| 3981.27 | 1941.99 | 3986.04 | 1942 | 3986.37 | 1942.03 | 3997.16 | 1942.59 | 3999.29 | 1942.69 |
| 4001.34 | 1942.77 | 4003.42 | 1942.83 | 4004.71 | 1942.89 | 4008.58 | 1942.9 | 4011.01 | 1942.88 |
| 4013.7 | 1942.83 | 4015.43 | 1942.83 | 4019.48 | 1942.85 | 4024.14 | 1943 | 4026.43 | 1943.17 |
| 4031.19 | 1943.44 | 4032.76 | 1943.5 | 4033.64 | 1943.5 | 4036.24 | 1943.55 | 4037.9 | 1943.48 |
| 4039.68 | 1943.47 | 4040.42 | 1943.41 | 4041.55 | 1943.38 | 4043.08 | 1943.28 | 4046.1 | 1943 |
| 4047.88 | 1942.99 | 4052.17 | 1942.99 | 4055.96 | 1942.54 | 4059.43 | 1942 | 4064 | 1941.3 |
| 4069.55 | 1940.52 | 4072.49 | 1940.19 | 4074.51 | 1940 | 4076.53 | 1939.85 | 4078.32 | 1939.76 |
| 4080.08 | 1939.73 | 4081.87 | 1939.8 | 4084.9 | 1940 | 4091.3 | 1940.46 | 4091.84 | 1940.47 |
| 4094.6 | 1940.33 | 4098.45 | 1940.05 | 4100.01 | 1939.87 | 4101.85 | 1939.87 | 4113.6 | 1939.4 |
| 4121.48 | 1939.07 | 4125.46 | 1939 | 4199.55 | 1939 | 4209.98 | 1939.01 | 4218.99 | 1939.01 |
| 4225.39 | 1939 | 4235.32 | 1939 | 4246.38 | 1939.62 | 4252.88 | 1940 | 4261.3 | 1940.47 |
| 4263.08 | 1940.53 | 4265.08 | 1940.57 | 4268.2 | 1940.59 | 4270.08 | 1940.51 | 4273.4 | 1940.32 |
| 4276.51 | 1940 | 4279.16 | 1939.67 | 4284.86 | 1939 | 4286.74 | 1939 | 4290.15 | 1939.35 |
| 4291.06 | 1939.42 | 4294.04 | 1939.52 | 4295.84 | 1939.5 | 4296.7 | 1939.53 | 4297.72 | 1939.53 |
| 4298.26 | 1939.56 | 4306.69 | 1939.57 | 4307.02 | 1939.6 | 4312.99 | 1939.98 | 4313.32 | 1939.99 |
| 4317.75 | 1939.99 | 4327.01 | 1939.44 | 4328.75 | 1939.4 | 4332.1 | 1939.13 | 4333.92 | 1939 |
| 4494.58 | 1939 | 4505.61 | 1939.01 | 4515.28 | 1939.01 | 4530.05 | 1939.31 | 4541.63 | 1939.38 |
| 4547.05 | 1939.43 | 4558.18 | 1939.54 | 4561.89 | 1939.57 | 4568.98 | 1939.67 | 4570.6 | 1939.68 |
| 4574.74 | 1939.68 | 4585.95 | 1939.74 | 4594.15 | 1939.77 | 4606.89 | 1939.77 | 4622.26 | 1939.7 |
| 4627.95 | 1939.65 | 4646.98 | 1939.37 | 4668.75 | 1939 | 4671.44 | 1938.92 | 4710.63 | 1938.01 |
| 4711.57 | 1938 | 4718.82 | 1938 | 4741.54 | 1937.75 | 4756.53 | 1937.59 | 4772.02 | 1937.47 |
| 4773.58 | 1937.47 | 4777.78 | 1937.44 | 4799.79 | 1937.58 | 4843.87 | 1937.89 | 4846.51 | 1937.92 |
| 4851.29 | 1937.99 | 4852.64 | 1938 | 4863.62 | 1938 | 4890 | 1938.3 | 4899.11 | 1938.39 |
| 4900.37 | 1938.41 | 4926.08 | 1938.61 | 4927.56 | 1938.63 | 4931.18 | 1938.65 | 4936.35 | 1938.69 |
| 4940.56 | 1938.71 | 4942.02 | 1938.73 | 4950.86 | 1938.75 | 4976.53 | 1938.98 | 4992.65 | 1938.98 |
| 4995.85 | 1938.99 | 5000.94 | 1938.98 | 5008.53 | 1939 | 5010.82 | 1939 | 5029.83 | 1939.34 |
| 5036.42 | 1939.48 | 5047.43 | 1939.69 | 5047.95 | 1939.71 | 5064.38 | 1940 | 5068.77 | 1940.06 |
| 5081.9 | 1940.23 | 5083.37 | 1940.24 | 5089.12 | 1940.31 | 5093.51 | 1940.34 | 5096.08 | 1940.37 |
| 5145.9 | 1940.68 | 5147.76 | 1940.69 | 5154.77 | 1940.76 | 5165.49 | 1940.86 | 5170.07 | 1940.89 |
| 5174.79 | 1940.93 | 5180.23 | 1940.96 | 5180.63 | 1940.97 | 5184.53 | 1940.95 | 5188.84 | 1940.89 |
| 5190.14 | 1940.88 | 5202.24 | 1940.66 | 5209.66 | 1940.54 | 5213.78 | 1940.48 | 5223.25 | 1940.29 |
| 5228.02 | 1940.21 | 5229.84 | 1940.17 | 5239.09 | 1940 | 5240.5 | 1940 | 5265.15 | 1939.37 |
| 5273.87 | 1939.18 | 5276.69 | 1939.14 | 5282.6 | 1939 | 5315.39 | 1939 | 5329.4 | 1938.91 |
| 5346.36 | 1938.82 | 5360.25 | 1938.74 | 5361.64 | 1938.74 | 5365.63 | 1938.71 | 5387.25 | 1938.58 |
| 5394.84 | 1938.54 | 5426.2 | 1938.45 | 5449.03 | 1938.39 | 5450.3 | 1938.39 | 5456.25 | 1938.42 |
| 5461.77 | 1938.44 | 5498.3 | 1938.42 | 5541.06 | 1938.51 | 5578.64 | 1938.55 | 5594.56 | 1938.41 |
| 5624.04 | 1938.16 | 5625.8 | 1938.12 | 5629.28 | 1938.06 | 5635.8 | 1938 | 5688.24 | 1938 |
| 5717.63 | 1938.04 | 5727.17 | 1938 | 5809.87 | 1938 | 5812.17 | 1938.03 | 5813.25 | 1938.07 |
| 5818.05 | 1938.16 | 5823.07 | 1938.34 | 5828.83 | 1938.5 | 5835.66 | 1938.74 | 5838 | 1938.83 |
| 5842.86 | 1939 | 5846.57 | 1939.02 | 5853.95 | 1939.32 | 5855.68 | 1939.38 | 5865.39 | 1939.8 |
| 5869.91 | 1940 | 5876.28 | 1940.54 | 5878.61 | 1940.72 | 5881.94 | 1941 | 5888.25 | 1941.47 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5896.94 | 1942 | 5899.28 | 1942.03 | 5901.99 | 1942.04 | 5904.62 | 1942 | 5905.54 | 1942 |
| 5906.77 | 1942.79 | 5908.92 | 1944 | 5910.46 | 1944.83 | 5911.2 | 1945.05 | 5915.25 | 1946 |
| 5916.34 | 1946.24 | 5918.2 | 1946.59 | 5929.51 | 1948.62 | 5931.67 | 1949 | 5936.98 | 1949.98 |
| 5945.45 | 1951.67 | 5949.06 | 1952.41 | 5950.24 | 1952.68 | 5952.83 | 1953.22 | 5957.88 | 1954 |
| 5961.99 | 1954.51 | 5966.02 | 1955 | 5975.68 | 1955.93 | 5976.66 | 1956.03 | 5978.56 | 1956.18 |
| 5987.77 | 1956.93 | 5989.57 | 1957 | 6002.57 | 1957.3 | 6005.29 | 1957.37 | 6005.83 | 1957.4 |
| 6015.38 | 1957.46 | 6027.99 | 1957.53 | 6032.85 | 1957.62 | 6036.14 | 1957.67 | 6038.62 | 1957.72 |
| 6049.23 | 1957.85 | 6055.74 | 1957.91 | 6056.88 | 1957.9 | 6058.87 | 1957.85 | 6060.32 | 1957.77 |
| 6061.88 | 1957.81 | 6064.35 | 1957.83 | 6068.21 | 1957.52 | 6069 | 1957.51 | 6071.22 | 1957.32 |
| 6075.46 | 1957 | 6088.25 | 1956.05 | 6088.82 | 1956 | 6092.89 | 1955 | 6105.64 | 1955 |
| 6115.53 | 1955.36 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2187.96 | .045 | 2187.96 | .04 | 6115.53 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2187.96 | 6115.53 | 123.71 | 123.71 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | Left OB | Channel | Right OB |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1941.00 | Element | | | |
| Vel Head (ft) | 0.12 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1940.88 | Reach Len. (ft) | 123.71 | 123.71 | 123.71 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8080.18 | |
| E.G. Slope (ft/ft) | 0.001811 | Area (sq ft) | | 8080.18 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 3477.90 | Top Width (ft) | | 3477.90 | |
| Vel Total (ft/s) | 2.77 | Avg. Vel. (ft/s) | | 2.77 | |
| Max Chl Dpth (ft) | 5.88 | Hydr. Depth (ft) | | 2.32 | |
| Conv. Total (cfs) | 526430.9 | Conv. (cfs) | | 526430.9 | |
| Length Wtd. (ft) | 123.71 | Wetted Per. (ft) | | 3478.91 | |
| Min Ch El (ft) | 1935.00 | Shear (lb/sq ft) | | 0.26 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6115.53 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.20 | Cum Volume (acre-ft) | | 2744.14 | |
| C & E Loss (ft) | 0.01 | Cum SA (acres) | | 1307.16 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -4380.27

INPUT
Description:
Station Elevation Data num= 428

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 1905.5 | 1941 | 1906.22 | 1940.99 | 1925.37 | 1940.17 | 1929.27 | 1940 | 1938.16 | 1939.54 |
| 1943.5 | 1939.28 | 1948.42 | 1939 | 1952.03 | 1938.77 | 1953.43 | 1938.72 | 1958.02 | 1938.51 |
| 1961.21 | 1938.38 | 1964.18 | 1938.24 | 1964.22 | 1938.25 | 1972.47 | 1938.37 | 2001.89 | 1938.88 |
| 2006.34 | 1939 | 2042.74 | 1939 | 2056.75 | 1939.84 | 2058.77 | 1940 | 2145.36 | 1940 |
| 2154.18 | 1939.8 | 2159.68 | 1939.7 | 2177.14 | 1939.49 | 2210.32 | 1939.03 | 2216.62 | 1939 |
| 2240.99 | 1938.17 | 2247.1 | 1938 | 2302.85 | 1938 | 2304.78 | 1938.51 | 2306.89 | 1939 |
| 2320.22 | 1939.81 | 2322.52 | 1940 | 2329.81 | 1940 | 2339.1 | 1940.01 | 2350.89 | 1940.01 |
| 2356.28 | 1940 | 2372.77 | 1940 | 2373.68 | 1939.99 | 2389.35 | 1939.94 | 2403.82 | 1939.92 |
| 2407.57 | 1939.92 | 2411.35 | 1939.93 | 2423.83 | 1939.98 | 2424.76 | 1939.96 | 2431.08 | 1940 |
| 2436.23 | 1939.99 | 2447.83 | 1939.94 | 2451.84 | 1939.9 | 2458.11 | 1939.76 | 2464.93 | 1939.63 |
| 2477.74 | 1939.25 | 2480.69 | 1939.18 | 2487.11 | 1939 | 2505.05 | 1938 | 2507.29 | 1937.84 |
| 2518.68 | 1937 | 2563.44 | 1937 | 2568.99 | 1937.15 | 2573.04 | 1937.22 | 2579.69 | 1937.38 |
| 2585.15 | 1937.48 | 2594.3 | 1937.64 | 2602.75 | 1937.82 | 2605.34 | 1937.87 | 2611.37 | 1938 |
| 2616.24 | 1938 | 2616.39 | 1937.99 | 2623.94 | 1937.84 | 2634.65 | 1937.65 | 2635.52 | 1937.64 |
| 2647.53 | 1937.55 | 2648.08 | 1937.54 | 2665.17 | 1937.29 | 2680.38 | 1937.01 | 2684.49 | 1937.01 |
| 2688.64 | 1937 | 2774.54 | 1937 | 2797.06 | 1937.63 | 2804.92 | 1937.86 | 2810.24 | 1938 |
| 2813.54 | 1938 | 2818.07 | 1937.96 | 2842.01 | 1937.73 | 2860.42 | 1937.57 | 2865.22 | 1937.52 |
| 2878.99 | 1937.51 | 2892.35 | 1937.51 | 2898.88 | 1937.59 | 2901.35 | 1937.61 | 2907.75 | 1937.7 |
| 2916.43 | 1937.83 | 2925.61 | 1938 | 3104.3 | 1938 | 3152.42 | 1938.46 | 3167.99 | 1938.57 |
| 3179.06 | 1938.29 | 3198.07 | 1938.58 | 3201.71 | 1938.32 | 3204.49 | 1938 | 3215.95 | 1937.47 |
| 3221.29 | 1937.25 | 3223.23 | 1937.15 | 3224.66 | 1937.1 | 3225.92 | 1937 | 3238.04 | 1936.43 |
| 3242.65 | 1936.26 | 3248.01 | 1936 | 3249.36 | 1936 | 3258.44 | 1935.74 | 3265.8 | 1935.56 |
| 3270.37 | 1935.46 | 3277.21 | 1935.33 | 3280.64 | 1935.27 | 3296.39 | 1935.11 | 3308.72 | 1935 |
| 3317.98 | 1935 | 3326.12 | 1935.11 | 3326.34 | 1935.12 | 3364.46 | 1935.36 | 3369.29 | 1935.46 |
| 3370.23 | 1935.47 | 3381.06 | 1935.73 | 3384.22 | 1935.75 | 3392.96 | 1936 | 3397.75 | 1936.21 |
| 3419.83 | 1937 | 3419.99 | 1937 | 3430.71 | 1937.38 | 3435.64 | 1937.55 | 3448.72 | 1937.59 |
| 3459.87 | 1937.62 | 3460.56 | 1937.61 | 3466.02 | 1937.62 | 3473.66 | 1937.65 | 3475.71 | 1937.63 |
| 3479.93 | 1937.63 | 3484.36 | 1937.62 | 3489.28 | 1937.57 | 3522.93 | 1937.01 | 3523.38 | 1937 |
| 3556.58 | 1937 | 3575.88 | 1937.27 | 3579.95 | 1937.29 | 3607.92 | 1937.99 | 3612.19 | 1937.99 |
| 3616.34 | 1937.94 | 3641.46 | 1937.65 | 3650.54 | 1937.55 | 3655.39 | 1937.54 | 3660.06 | 1937.52 |
| 3678.52 | 1937.21 | 3684.76 | 1937.08 | 3687.18 | 1937.08 | 3692.47 | 1937.06 | 3702.99 | 1937.05 |
| 3706.22 | 1937.04 | 3712.13 | 1937.17 | 3720.65 | 1937.52 | 3722.07 | 1937.61 | 3728.85 | 1937.86 |
| 3732.98 | 1938 | 3739.03 | 1938.53 | 3740.4 | 1938.66 | 3743.75 | 1938.88 | 3744.75 | 1938.91 |
| 3745.76 | 1938.9 | 3748.4 | 1938.77 | 3750.02 | 1938.65 | 3751.19 | 1938.54 | 3757.8 | 1938 |
| 3809.58 | 1938 | 3811.62 | 1937.94 | 3826.83 | 1937.52 | 3838.27 | 1937.23 | 3841.89 | 1937.15 |
| 3844.87 | 1937 | 3845.73 | 1937 | 3852.65 | 1937.91 | 3856.1 | 1938.34 | 3861.51 | 1939 |
| 3873.93 | 1939.5 | 3889.36 | 1939.59 | 3901.65 | 1939.55 | 3910.54 | 1939.23 | 3912.48 | 1939.21 |
| 3916.56 | 1939 | 3922.38 | 1938.96 | 3927.88 | 1938.93 | 3928.63 | 1938.92 | 3936.91 | 1938.89 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3947.96 | 1938.94 | 3958.38 | 1939 | 3961.47 | 1939.32 | 3968.22 | 1940 | 3974.12 | 1940.39 |
| 3978.47 | 1940.61 | 3985.99 | 1941 | 3992.21 | 1941.15 | 3993.18 | 1941.15 | 4000.61 | 1941 |
| 4004.37 | 1940.71 | 4005.96 | 1940.6 | 4013.17 | 1940.21 | 4017.97 | 1940 | 4019.29 | 1939.95 |
| 4023.57 | 1939.83 | 4030.95 | 1939.92 | 4031.12 | 1939.93 | 4037.78 | 1939.98 | 4038.88 | 1940 |
| 4044.55 | 1940.29 | 4049.78 | 1940.55 | 4058.37 | 1940.99 | 4059.98 | 1941 | 4060.37 | 1941.03 |
| 4069.62 | 1941.18 | 4077.24 | 1941.22 | 4079.99 | 1941 | 4085.91 | 1940.86 | 4088.15 | 1940.83 |
| 4089.28 | 1940.84 | 4096.25 | 1940.55 | 4099.37 | 1940.67 | 4101.23 | 1940.71 | 4108.59 | 1940 |
| 4109.53 | 1939.95 | 4111.58 | 1939.99 | 4115.42 | 1940 | 4116.7 | 1940.24 | 4117.92 | 1940.39 |
| 4129.83 | 1942 | 4132.91 | 1942.06 | 4135.06 | 1942 | 4139.68 | 1940.81 | 4142.76 | 1940 |
| 4144.34 | 1939.64 | 4149.19 | 1939 | 4157.37 | 1938.14 | 4158.48 | 1938 | 4166.05 | 1937.96 |
| 4167.26 | 1937.96 | 4173.3 | 1938 | 4176.34 | 1938.54 | 4176.85 | 1938.65 | 4180.41 | 1939.28 |
| 4181.28 | 1939.41 | 4184.14 | 1939.75 | 4186.91 | 1940 | 4194.89 | 1940.68 | 4197.28 | 1940.74 |
| 4200.02 | 1940.76 | 4203.4 | 1940.87 | 4206.01 | 1940.86 | 4207.32 | 1940.84 | 4209.75 | 1940.76 |
| 4219.74 | 1940.4 | 4230.54 | 1940 | 4249.3 | 1940 | 4252.42 | 1939.93 | 4270.68 | 1939.96 |
| 4273.14 | 1939.96 | 4274.35 | 1940 | 4277.94 | 1940.46 | 4282.39 | 1941 | 4282.98 | 1941.01 |
| 4286.57 | 1941.27 | 4289.2 | 1941.41 | 4292.77 | 1941.56 | 4293.65 | 1941.57 | 4296.75 | 1941.66 |
| 4299.83 | 1941.67 | 4302.81 | 1941.55 | 4311.42 | 1941.01 | 4311.93 | 1941 | 4317.83 | 1940 |
| 4318.84 | 1939.9 | 4320.9 | 1939.81 | 4322.65 | 1939.77 | 4326.71 | 1939.8 | 4330.39 | 1939.8 |
| 4332.98 | 1939.73 | 4335.2 | 1939.62 | 4336.26 | 1939.55 | 4341.92 | 1939 | 4345.9 | 1939 |
| 4349.47 | 1938.99 | 4356.75 | 1939 | 4361.38 | 1939 | 4367.45 | 1938.77 | 4369.97 | 1938.77 |
| 4372.58 | 1938.81 | 4376.05 | 1938.99 | 4376.64 | 1939 | 4383.84 | 1939.01 | 4389.6 | 1939 |
| 4416.44 | 1939 | 4420.46 | 1938.93 | 4435.82 | 1938.95 | 4441.85 | 1938.9 | 4444.75 | 1938.95 |
| 4450.24 | 1939 | 4489.79 | 1939 | 4495.2 | 1938.99 | 4496.49 | 1939 | 4540.13 | 1939 |
| 4551.35 | 1938.55 | 4551.96 | 1938.52 | 4555.37 | 1938.41 | 4558.53 | 1938.33 | 4561.87 | 1938.2 |
| 4565.72 | 1938 | 4568.76 | 1937.95 | 4573.33 | 1937.89 | 4579.15 | 1937.92 | 4583.88 | 1937.91 |
| 4589.88 | 1937.95 | 4592.1 | 1937.98 | 4595.68 | 1938 | 4602.07 | 1938.16 | 4603.29 | 1938.21 |
| 4609.2 | 1938.38 | 4611.08 | 1938.45 | 4613.64 | 1938.51 | 4621.13 | 1938.98 | 4629.94 | 1938.98 |
| 4637.83 | 1939 | 4664.2 | 1939.04 | 4665.81 | 1939.04 | 4676.46 | 1939.06 | 4700.75 | 1939.03 |
| 4716.56 | 1939.02 | 4725.2 | 1939 | 4731.49 | 1938.85 | 4734.28 | 1938.74 | 4752.64 | 1938 |
| 4759.71 | 1937.83 | 4795.15 | 1937.01 | 4798.07 | 1937 | 4834.6 | 1937 | 4845.89 | 1937.19 |
| 4854.22 | 1937.34 | 4904.1 | 1938 | 4958.6 | 1938 | 4967.33 | 1938.13 | 4967.69 | 1938.13 |
| 4973.2 | 1938.22 | 4975.05 | 1938.26 | 4981.47 | 1938.36 | 4985.14 | 1938.43 | 5007.98 | 1938.79 |
| 5019.87 | 1939 | 5024.09 | 1939 | 5026.98 | 1939.04 | 5031.17 | 1939.08 | 5036.34 | 1939.15 |
| 5047.4 | 1939.27 | 5108.11 | 1940 | 5113.1 | 1940 | 5123.44 | 1940.14 | 5135.6 | 1940.29 |
| 5160.29 | 1940.39 | 5179.79 | 1940.44 | 5220.49 | 1940.22 | 5259.58 | 1940 | 5281.23 | 1940 |
| 5288.41 | 1939.88 | 5289.52 | 1939.87 | 5293.15 | 1939.8 | 5294.87 | 1939.78 | 5305.19 | 1939.61 |
| 5307.26 | 1939.58 | 5344.48 | 1939 | 5361.49 | 1939 | 5397.14 | 1938.64 | 5405.51 | 1938.56 |
| 5415.13 | 1938.46 | 5419.3 | 1938.42 | 5426.58 | 1938.34 | 5427.32 | 1938.34 | 5432.6 | 1938.28 |
| 5453.78 | 1938.06 | 5454.35 | 1938.06 | 5463.69 | 1938 | 5875.54 | 1938 | 5894.54 | 1938.64 |
| 5905.42 | 1939 | 5915.07 | 1939.54 | 5922.75 | 1940 | 5930.58 | 1940.97 | 5930.86 | 1941 |
| 5932.92 | 1941.05 | 5935.53 | 1941 | 5939.53 | 1942 | 5942.08 | 1942.49 | 5945.9 | 1943 |
| 5951.78 | 1943.87 | 5959.07 | 1945 | 5963.56 | 1945.69 | 5967.67 | 1946.37 | 5971.38 | 1947 |
| 5975.36 | 1947.77 | 5981.05 | 1948.9 | 5986.42 | 1950 | 5991.34 | 1951 | 5996.44 | 1952 |
| 6002.93 | 1953 | 6003.55 | 1953.08 | 6009.69 | 1954 | 6015.74 | 1954.79 | 6017.69 | 1955.03 |
| 6032.38 | 1956.44 | 6039.32 | 1957 | 6067.91 | 1957.01 | 6071.2 | 1957.02 | 6080.26 | 1957.01 |
| 6092.58 | 1957 | 6100.45 | 1957 | 6101.66 | 1956.99 | 6111.87 | 1956.61 | 6118.26 | 1956.39 |
| 6124.15 | 1956.32 | 6124.65 | 1956.32 | 6130.73 | 1956.16 | 6136.19 | 1956 | 6137.89 | 1956 |
| 6144.05 | 1955.32 | 6147.44 | 1955 | 6159 | 1955 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 1905.5 | .045 | 1905.5 | .04 | 6159 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 1905.5 | 6159 | 301.45 | 301.45 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1940.79 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.10 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1940.69 | Reach Len. (ft) | 301.45 | 301.45 | 301.45 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8936.80 | | |
| E.G. Slope (ft/ft) | 0.001497 | Area (sq ft) | | 8936.80 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3878.38 | Top Width (ft) | | 3878.38 | | |
| Vel Total (ft/s) | 2.51 | Avg. Vel. (ft/s) | | 2.51 | | |
| Max Chl Dpth (ft) | 5.69 | Hydr. Depth (ft) | | 2.30 | | |
| Conv. Total (cfs) | 578991.7 | Conv. (cfs) | | 578991.7 | | |
| Length Wtd. (ft) | 301.45 | Wetted Per. (ft) | | 3880.16 | | |
| Min Ch El (ft) | 1935.00 | Shear (lb/sq ft) | | 0.22 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6159.00 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.47 | Cum Volume (acre-ft) | | 2719.97 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1296.72 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -4681.72

INPUT
Description:
Station Elevation Data num= 440

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 1873.53 | 1941.87 | 1874.51 | 1941.87 | 1886.1 | 1942 | 1890.94 | 1942 | 1894.8 | 1941.93 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1895.25 | 1941.93 | 1900.13 | 1941.83 | 1903.05 | 1941.79 | 1911.21 | 1941.65 | 1942.8 | 1941.09 |
| 1947.98 | 1941 | 1954.61 | 1940.74 | 1969.58 | 1940.17 | 1973.83 | 1940 | 1992.67 | 1939 |
| 1992.91 | 1939 | 1994.7 | 1938.88 | 2001.86 | 1938.62 | 2005.8 | 1938.45 | 2014.48 | 1938.12 |
| 2016.52 | 1938 | 2124.95 | 1938 | 2134.22 | 1937.7 | 2137.9 | 1937.51 | 2145.21 | 1937.24 |
| 2146.43 | 1937.18 | 2148.59 | 1937.15 | 2149.75 | 1937.15 | 2151.03 | 1937.19 | 2156.78 | 1937.45 |
| 2166.77 | 1937.52 | 2174.75 | 1937.8 | 2181.61 | 1938 | 2217.71 | 1938 | 2229.83 | 1937.97 |
| 2236.52 | 1937.99 | 2241.99 | 1938 | 2260.43 | 1938 | 2261.3 | 1937.92 | 2272.01 | 1937 |
| 2285.77 | 1937 | 2291.28 | 1937.19 | 2306.59 | 1937.68 | 2312.89 | 1937.89 | 2313.29 | 1937.91 |
| 2316.61 | 1938 | 2360.29 | 1938 | 2368.05 | 1938.4 | 2375.18 | 1938.8 | 2379.89 | 1938.85 |
| 2396.73 | 1939 | 2773.97 | 1939 | 2786.21 | 1939.01 | 2794.41 | 1939 | 2859.77 | 1939 |
| 2880.5 | 1938.74 | 2885.63 | 1938.66 | 2905.71 | 1938.26 | 2915.9 | 1938.04 | 2917.27 | 1938 |
| 2958.32 | 1938 | 2961.87 | 1937.99 | 2968.07 | 1938 | 2974.12 | 1938 | 2974.47 | 1937.99 |
| 2976.92 | 1937.99 | 2989.01 | 1937.71 | 2998.11 | 1937.53 | 3006.61 | 1937.58 | 3009.2 | 1937.59 |
| 3017.31 | 1937.45 | 3027.78 | 1937.08 | 3039.93 | 1937 | 3045.69 | 1936.76 | 3053.63 | 1936.39 |
| 3057.94 | 1936.2 | 3062.05 | 1936 | 3074.61 | 1935.28 | 3076.91 | 1935.15 | 3079.92 | 1935 |
| 3131.32 | 1935 | 3135.96 | 1935.17 | 3146.04 | 1935.58 | 3153.47 | 1935.9 | 3155.95 | 1936 |
| 3159.23 | 1936.2 | 3171.72 | 1937 | 3202 | 1937 | 3209.43 | 1936.76 | 3215.38 | 1936.58 |
| 3216.46 | 1936.56 | 3239.6 | 1936.84 | 3251.08 | 1936.99 | 3262.18 | 1936.99 | 3268.4 | 1937 |
| 3285.48 | 1937 | 3293.76 | 1937.21 | 3297.61 | 1937.34 | 3315.58 | 1937.98 | 3315.92 | 1938 |
| 3320.52 | 1938.01 | 3323.01 | 1938 | 3323.33 | 1938.01 | 3325.92 | 1938.01 | 3328.9 | 1938.14 |
| 3331.93 | 1938.24 | 3338.01 | 1938.42 | 3341.97 | 1938.5 | 3343.03 | 1938.49 | 3345.37 | 1938.51 |
| 3352.39 | 1938.51 | 3356.68 | 1938.48 | 3362.12 | 1938.47 | 3366.67 | 1938.44 | 3371.85 | 1938.4 |
| 3388.79 | 1938.02 | 3389.51 | 1938 | 3412.41 | 1938 | 3429.79 | 1937.99 | 3441.17 | 1938 |
| 3459.79 | 1938 | 3459.88 | 1937.99 | 3471.09 | 1937.57 | 3487.49 | 1937 | 3492.2 | 1936.67 |
| 3501.62 | 1936 | 3511.48 | 1935.47 | 3519.88 | 1935 | 3527 | 1934.68 | 3532.13 | 1934.54 |
| 3535.57 | 1934.46 | 3536.46 | 1934.46 | 3538.15 | 1934.42 | 3538.61 | 1934.43 | 3557.71 | 1934.62 |
| 3575.05 | 1934.91 | 3580.19 | 1934.99 | 3591.66 | 1934.99 | 3597.9 | 1935 | 3609 | 1935 |
| 3630.36 | 1934.99 | 3648.76 | 1935 | 3675.81 | 1935 | 3694.9 | 1935.49 | 3710.86 | 1936 |
| 3717.03 | 1936.15 | 3718.96 | 1936.18 | 3725.8 | 1936.26 | 3745.02 | 1936.6 | 3766.62 | 1937 |
| 3808.79 | 1937 | 3835.83 | 1937.01 | 3850.67 | 1937.01 | 3864.73 | 1937 | 3864.92 | 1937.01 |
| 3882.95 | 1937.23 | 3904.18 | 1937.4 | 3906.28 | 1937.42 | 3908.9 | 1937.42 | 3929.71 | 1937.25 |
| 3958.34 | 1937 | 3965.81 | 1937 | 3984.83 | 1936.29 | 3991.87 | 1936 | 4006.27 | 1935.98 |
| 4015.84 | 1935.98 | 4018.58 | 1935.99 | 4020.99 | 1935.99 | 4029.04 | 1936 | 4029.44 | 1936.02 |
| 4047.39 | 1937 | 4050.11 | 1937.79 | 4051.39 | 1938 | 4056.74 | 1938.06 | 4057.24 | 1938.06 |
| 4067.09 | 1938.33 | 4068.51 | 1938.35 | 4075.87 | 1938.31 | 4084.68 | 1938.23 | 4085.41 | 1938.2 |
| 4093.29 | 1938 | 4095.75 | 1937.98 | 4104.12 | 1937.84 | 4115.67 | 1937.62 | 4125.64 | 1937.69 |
| 4138.61 | 1937.8 | 4142.21 | 1937.95 | 4145.11 | 1938 | 4151.82 | 1938.66 | 4156.56 | 1939 |
| 4159.63 | 1939.51 | 4165.05 | 1940.4 | 4169.5 | 1941 | 4174.61 | 1941.57 | 4178.2 | 1942 |
| 4179.45 | 1942.24 | 4189.57 | 1943 | 4193.85 | 1944 | 4196.52 | 1944.48 | 4198.74 | 1944.8 |
| 4200.66 | 1945 | 4202 | 1945.06 | 4204.32 | 1945.09 | 4206.84 | 1945.07 | 4209.55 | 1945 |
| 4210.91 | 1944.94 | 4213.54 | 1944.79 | 4215.22 | 1944.65 | 4218.14 | 1944.34 | 4220.85 | 1944 |
| 4224.01 | 1943.67 | 4229.78 | 1943 | 4240.57 | 1942.52 | 4251.58 | 1942 | 4264.7 | 1941.34 |
| 4268.08 | 1941.2 | 4271 | 1941.17 | 4271.98 | 1941.15 | 4276.5 | 1941.1 | 4286.86 | 1940.5 |
| 4293.88 | 1940 | 4297.13 | 1939.83 | 4303.43 | 1939.64 | 4304.15 | 1939.6 | 4312.05 | 1939.3 |
| 4317.78 | 1939.06 | 4319.36 | 1939 | 4325.03 | 1938.98 | 4329.76 | 1939 | 4337.3 | 1939.37 |
| 4352.79 | 1940 | 4357.28 | 1940.25 | 4371.05 | 1941 | 4374.94 | 1941.03 | 4379.19 | 1941.04 |
| 4383.16 | 1941.02 | 4385.61 | 1941 | 4388.67 | 1941 | 4391.41 | 1940.99 | 4394.99 | 1940.76 |
| 4401.21 | 1940.55 | 4401.6 | 1940.56 | 4406.29 | 1940.28 | 4406.45 | 1940.28 | 4414.23 | 1939.71 |
| 4419.94 | 1939.36 | 4425.27 | 1939.01 | 4425.93 | 1939 | 4431.68 | 1939 | 4439.24 | 1939.01 |
| 4449.39 | 1939.18 | 4449.87 | 1939.21 | 4450.99 | 1939.13 | 4452.95 | 1939.14 | 4454.54 | 1939.22 |
| 4455.77 | 1939.22 | 4459.54 | 1939.43 | 4461.06 | 1939.46 | 4462.45 | 1939.47 | 4465.72 | 1939.44 |
| 4468.64 | 1939.36 | 4469.68 | 1939.34 | 4474.99 | 1939.16 | 4476.16 | 1939.03 | 4476.89 | 1939.03 |
| 4489.21 | 1938.14 | 4492.61 | 1937.85 | 4500.1 | 1937.18 | 4501.55 | 1937.16 | 4502.85 | 1937.16 |
| 4512.36 | 1938 | 4517.63 | 1938.52 | 4520.1 | 1938.75 | 4523 | 1939 | 4523.11 | 1939.04 |
| 4528.48 | 1939.15 | 4529.76 | 1939.16 | 4535.15 | 1939.07 | 4537.86 | 1939.05 | 4539.51 | 1939 |
| 4554.71 | 1938.5 | 4557.14 | 1938.28 | 4559.6 | 1938.09 | 4560.89 | 1938 | 4577.67 | 1937.49 |
| 4583.27 | 1937.33 | 4588.56 | 1937.2 | 4589.58 | 1937.19 | 4596.21 | 1937 | 4601.32 | 1937 |
| 4603.41 | 1937.11 | 4604.35 | 1937.11 | 4607.05 | 1937.2 | 4610.82 | 1937.29 | 4624.14 | 1937.78 |
| 4626.08 | 1937.84 | 4630.26 | 1938 | 4640.53 | 1938.63 | 4648.04 | 1939 | 4729.57 | 1939 |
| 4743.53 | 1938.63 | 4743.71 | 1938.63 | 4763.71 | 1938 | 4766.01 | 1938 | 4766.41 | 1938.02 |
| 4791.41 | 1938.96 | 4792.78 | 1939 | 4805.59 | 1939 | 4810.84 | 1939.01 | 4821.31 | 1939.01 |
| 4827.12 | 1939 | 4886.96 | 1939 | 4889.53 | 1938.99 | 4893.4 | 1938.91 | 4910.19 | 1938.67 |
| 4916.7 | 1938.57 | 4919.08 | 1938.54 | 4927.35 | 1938.47 | 4939.27 | 1938.26 | 4941.45 | 1938.23 |
| 4945.21 | 1938.16 | 4951.62 | 1938 | 4957.87 | 1937.76 | 4961.14 | 1937.76 | 4964.42 | 1937.75 |
| 4970.94 | 1937.63 | 4977.46 | 1937.49 | 4999.14 | 1937 | 5014.9 | 1937 | 5066.82 | 1937.67 |
| 5080.54 | 1937.84 | 5084.11 | 1937.88 | 5085.11 | 1937.88 | 5098.19 | 1938 | 5125 | 1938 |
| 5128.15 | 1938.01 | 5150.73 | 1938.02 | 5155.37 | 1938.02 | 5217.23 | 1938.68 | 5217.77 | 1938.68 |
| 5231.73 | 1938.79 | 5232.34 | 1938.8 | 5244.48 | 1938.85 | 5246.27 | 1938.87 | 5255.17 | 1938.95 |
| 5259.86 | 1939 | 5262.03 | 1939 | 5274.71 | 1939.14 | 5288.58 | 1939.29 | 5301.78 | 1939.41 |
| 5314.1 | 1939.53 | 5327.16 | 1939.59 | 5337.26 | 1939.62 | 5344.83 | 1939.72 | 5345.35 | 1939.72 |
| 5357.31 | 1939.89 | 5362.91 | 1939.94 | 5364.38 | 1939.94 | 5368.3 | 1939.96 | 5381.7 | 1939.97 |
| 5394.76 | 1939.96 | 5395.14 | 1939.97 | 5403.29 | 1939.97 | 5410.49 | 1939.96 | 5413.1 | 1939.96 |
| 5425.48 | 1939.95 | 5438.32 | 1939.92 | 5441.05 | 1939.91 | 5442.04 | 1939.89 | 5449.04 | 1939.86 |
| 5461.97 | 1939.79 | 5465.56 | 1939.75 | 5467.94 | 1939.74 | 5472.97 | 1939.68 | 5473.44 | 1939.68 |
| 5482.29 | 1939.59 | 5492.2 | 1939.46 | 5501.9 | 1939.32 | 5520.17 | 1939.09 | 5521.95 | 1939.06 |
| 5528.12 | 1939 | 5583.94 | 1939 | 5586.59 | 1938.97 | 5591.47 | 1938.93 | 5591.95 | 1938.92 |
| 5686.17 | 1938 | 6011.76 | 1938 | 6023.19 | 1938.17 | 6037.17 | 1938.34 | 6039.25 | 1938.34 |
| 6050.67 | 1938.45 | 6074.38 | 1938.71 | 6076.07 | 1938.73 | 6084.6 | 1938.79 | 6090.53 | 1938.81 |
| 6092.78 | 1938.86 | 6099.71 | 1939 | 6104.93 | 1939 | 6112.85 | 1939.93 | 6114.68 | 1940.1 |
| 6125.7 | 1940.87 | 6127.5 | 1941 | 6128.79 | 1941 | 6133.32 | 1941.66 | 6135.55 | 1942 |
| 6142.61 | 1942.92 | 6143.17 | 1943 | 6145.01 | 1943.19 | 6153.09 | 1944 | 6154.3 | 1944.17 |
| 6160.34 | 1945 | 6166.74 | 1945.9 | 6173.82 | 1947 | 6180.04 | 1947.98 | 6186.03 | 1949 |
| 6197.75 | 1951 | 6198.18 | 1951.07 | 6203.38 | 1952 | 6210.32 | 1953 | 6215.78 | 1953.79 |
| 6218.57 | 1954.1 | 6227.07 | 1955 | 6235.77 | 1955.5 | 6238.84 | 1955.68 | 6243.76 | 1956 |
| 6258.87 | 1956.66 | 6270.16 | 1956.99 | 6273.12 | 1957 | 6279.25 | 1957 | 6283.8 | 1956.98 |
| 6287.63 | 1957 | 6312.01 | 1957 | 6315.53 | 1956.79 | 6329.42 | 1956 | 6338.26 | 1955.3 |
| 6341.98 | 1955 | 6346.01 | 1954.99 | 6347.96 | 1955 | 6357.36 | 1955 | 6375.8 | 1955.19 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 1873.53 | .045 | 1873.53 | .04 | 6375.8 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 1873.53 | 6375.8 | 244.03 | 244.03 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | Left OB | Channel | Right OB |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1940.31 | Element | | | |
| Vel Head (ft) | 0.10 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1940.21 | Reach Len. (ft) | 244.03 | 244.03 | 244.03 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8757.79 | |
| E.G. Slope (ft/ft) | 0.001652 | Area (sq ft) | | 8757.79 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 3969.93 | Top Width (ft) | | 3969.93 | |
| Vel Total (ft/s) | 2.56 | Avg. Vel. (ft/s) | | 2.56 | |
| Max Chl Dpth (ft) | 5.79 | Hydr. Depth (ft) | | 2.21 | |
| Conv. Total (cfs) | 551198.6 | Conv. (cfs) | | 551198.6 | |
| Length Wtd. (ft) | 244.03 | Wetted Per. (ft) | | 3971.25 | |
| Min Ch El (ft) | 1934.42 | Shear (lb/sq ft) | | 0.23 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6375.80 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.42 | Cum Volume (acre-ft) | | 2658.74 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1269.56 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -4925.75

INPUT
Description:
Station Elevation Data num= 407

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 1924.08 | 1941 | 1945.82 | 1941 | 1966.44 | 1940 | 1967.17 | 1940 | 1996.44 | 1939.01 |
| 1997.54 | 1939 | 2001.79 | 1938.74 | 2012.89 | 1938 | 2022.23 | 1937.47 | 2029.69 | 1937.01 |
| 2030.52 | 1937 | 2161.58 | 1937 | 2174.85 | 1937.01 | 2199.75 | 1937.01 | 2200.89 | 1937 |
| 2313.75 | 1937 | 2323.56 | 1937.24 | 2324.32 | 1937.27 | 2332.16 | 1937.7 | 2334.54 | 1937.81 |
| 2337.63 | 1937.97 | 2338.41 | 1938 | 2342.69 | 1938 | 2349.26 | 1937.99 | 2353.15 | 1938 |
| 2364.86 | 1938.27 | 2395.14 | 1938.88 | 2397.9 | 1938.93 | 2398.82 | 1938.96 | 2402.89 | 1939 |
| 2408.97 | 1939 | 2413.06 | 1938.86 | 2428.59 | 1938 | 2546.62 | 1938 | 2604.37 | 1938.94 |
| 2608.1 | 1939 | 2671.1 | 1939 | 2682.42 | 1939.19 | 2683.84 | 1939.23 | 2696.91 | 1939.45 |
| 2707.36 | 1939.82 | 2708.77 | 1939.84 | 2710.93 | 1939.92 | 2713.8 | 1940 | 2717.68 | 1940.01 |
| 2724.95 | 1940.17 | 2725.2 | 1940.17 | 2742.56 | 1940.43 | 2742.75 | 1940.44 | 2753.38 | 1940.59 |
| 2759.69 | 1940.67 | 2766.43 | 1940.59 | 2779.51 | 1940.36 | 2780.73 | 1940.33 | 2796.51 | 1940.48 |
| 2798.79 | 1940.58 | 2810.87 | 1941 | 2817.38 | 1941 | 2821.28 | 1940.84 | 2844.19 | 1940 |
| 2855.54 | 1939.69 | 2892.38 | 1939 | 2900.7 | 1939 | 2908.15 | 1938.56 | 2917.28 | 1938 |
| 2923.55 | 1938 | 2926.16 | 1938.03 | 2928.24 | 1938 | 2936.6 | 1938.01 | 2941.32 | 1938.01 |
| 2941.95 | 1938 | 2977.55 | 1938 | 2987.31 | 1938.52 | 2990.01 | 1938.54 | 3001.76 | 1938.68 |
| 3022.33 | 1938.95 | 3025.27 | 1939 | 3028.08 | 1939.7 | 3033.89 | 1941.07 | 3037.87 | 1942 |
| 3042.53 | 1943 | 3047.35 | 1943 | 3052.07 | 1941.86 | 3055.96 | 1940.83 | 3060.33 | 1939.65 |
| 3062.77 | 1939 | 3066.43 | 1938 | 3069.69 | 1937.1 | 3070.09 | 1937 | 3093.32 | 1937 |
| 3119.98 | 1938 | 3146.35 | 1938 | 3181.43 | 1937.15 | 3187.08 | 1937 | 3191.79 | 1937 |
| 3204.74 | 1937.01 | 3216.57 | 1937.01 | 3220.95 | 1937.02 | 3226.6 | 1937.02 | 3230.03 | 1937.01 |
| 3236.87 | 1937.01 | 3240.71 | 1937 | 3244.28 | 1936.98 | 3248.3 | 1936.94 | 3249.42 | 1936.95 |
| 3254.68 | 1936.92 | 3258.14 | 1936.93 | 3276.38 | 1936.9 | 3279.32 | 1936.9 | 3286.97 | 1936.92 |
| 3305.01 | 1936.87 | 3312.14 | 1936.87 | 3315.87 | 1936.89 | 3319.1 | 1936.86 | 3321.22 | 1936.85 |
| 3323.26 | 1936.86 | 3327.88 | 1936.91 | 3331.65 | 1936.92 | 3332.42 | 1936.91 | 3335.09 | 1936.94 |
| 3339.82 | 1936.71 | 3342.65 | 1936.65 | 3344.76 | 1936.55 | 3348.65 | 1936.35 | 3351.49 | 1936.26 |
| 3355.64 | 1936 | 3361.89 | 1935.53 | 3369.54 | 1935 | 3372.26 | 1934.98 | 3380.72 | 1934.8 |
| 3382.96 | 1934.79 | 3407.1 | 1934.54 | 3411.37 | 1934.46 | 3414.31 | 1934.52 | 3437 | 1934.71 |
| 3442.04 | 1934.79 | 3445.75 | 1934.8 | 3451.55 | 1934.98 | 3453.77 | 1934.98 | 3461.61 | 1935 |
| 3470.07 | 1935.13 | 3473.49 | 1935.22 | 3497.66 | 1936 | 3498.86 | 1936 | 3507.22 | 1936.36 |
| 3512.31 | 1936.57 | 3525.05 | 1937 | 3566.17 | 1937 | 3596.82 | 1937.44 | 3617.44 | 1937.73 |
| 3620.19 | 1937.75 | 3627.1 | 1937.71 | 3636.49 | 1937.65 | 3640 | 1937.66 | 3640.72 | 1937.64 |
| 3644.22 | 1937.65 | 3647.94 | 1937.62 | 3655.13 | 1937.9 | 3657.05 | 1937.98 | 3662.52 | 1937.98 |
| 3672.15 | 1938 | 3675.23 | 1938.04 | 3679.25 | 1938.06 | 3682.74 | 1938 | 3691.98 | 1937.3 |
| 3695.54 | 1937 | 3696.66 | 1937 | 3720.61 | 1936.26 | 3727.25 | 1936 | 3732.63 | 1935.7 |
| 3744.93 | 1935 | 3790.14 | 1935 | 3804.08 | 1934.99 | 3810 | 1934.99 | 3810.6 | 1935 |
| 3852.64 | 1935 | 3902.43 | 1935.51 | 3926.73 | 1935.76 | 3935 | 1935.86 | 3945.52 | 1935.98 |
| 3947.77 | 1936.02 | 3953.79 | 1936.04 | 3978.34 | 1936.22 | 3987.72 | 1936.26 | 4024.56 | 1936.69 |
| 4055.85 | 1936.18 | 4062.99 | 1936 | 4063.31 | 1936 | 4079.21 | 1935.54 | 4093.52 | 1935 |
| 4103.51 | 1934.4 | 4110.27 | 1934 | 4126.41 | 1934 | 4134.1 | 1935 | 4138.67 | 1936 |
| 4142.81 | 1936.65 | 4145.33 | 1937 | 4148.76 | 1937.21 | 4161.91 | 1938 | 4165.14 | 1938.21 |
| 4177.01 | 1939 | 4181.15 | 1939.31 | 4190.77 | 1940 | 4192.62 | 1940.03 | 4194.34 | 1940.01 |
| 4199.54 | 1940 | 4200.76 | 1939.99 | 4209.49 | 1940.17 | 4209.98 | 1940.19 | 4213.05 | 1940.25 |
| 4223.2 | 1940.47 | 4225.98 | 1940.55 | 4236.27 | 1941 | 4250.79 | 1941 | 4251.51 | 1940.98 |
| 4261.19 | 1940.66 | 4276.74 | 1940 | 4282.74 | 1939.61 | 4286.16 | 1939.49 | 4292.28 | 1939.26 |
| 4300.92 | 1939 | 4307.54 | 1939 | 4311.99 | 1938.99 | 4317.17 | 1938.99 | 4321.3 | 1939 |
| 4331.59 | 1939 | 4341.89 | 1939.67 | 4344.66 | 1939.78 | 4357.62 | 1939.94 | 4360.8 | 1940 |
| 4362.53 | 1940.1 | 4367.13 | 1940.43 | 4374.34 | 1940.49 | 4380.4 | 1940.7 | 4382.34 | 1940.69 |
| 4387.91 | 1940.55 | 4397.91 | 1940.09 | 4401.26 | 1940.05 | 4404.01 | 1940.15 | 4406.33 | 1940.21 |
| 4408.26 | 1940.21 | 4414.01 | 1940.44 | 4418.72 | 1940.52 | 4422.46 | 1940.61 | 4429.26 | 1941 |
| 4436.47 | 1941.7 | 4439.61 | 1942 | 4444.02 | 1942 | 4446.01 | 1942.01 | 4450.31 | 1942.01 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4460.21 | 1942 | 4470.29 | 1941 | 4472.51 | 1940.8 | 4481.08 | 1940 | 4491.4 | 1939.49 |
| 4498.67 | 1939.12 | 4501.17 | 1939 | 4512.55 | 1938.41 | 4515.71 | 1938.26 | 4517.24 | 1938.2 |
| 4519.48 | 1938.16 | 4523.15 | 1938 | 4570.96 | 1938 | 4572.13 | 1938.03 | 4573.08 | 1938 |
| 4592.52 | 1938.69 | 4596.34 | 1938.82 | 4601.42 | 1938.88 | 4603.42 | 1938.83 | 4612.57 | 1939 |
| 4614.94 | 1939.08 | 4616.43 | 1939.01 | 4619.37 | 1939 | 4620.84 | 1938.9 | 4629.28 | 1938.37 |
| 4634.34 | 1938 | 4635.88 | 1937.91 | 4638.04 | 1937.83 | 4640.06 | 1937.73 | 4657.66 | 1937 |
| 4657.9 | 1937.01 | 4667.43 | 1937.63 | 4670.71 | 1937.84 | 4679.24 | 1938 | 4685.09 | 1938.02 |
| 4690.22 | 1938 | 4707.89 | 1937.99 | 4715.45 | 1937.98 | 4720.12 | 1937.98 | 4721.72 | 1937.99 |
| 4726.99 | 1937.99 | 4744.73 | 1938 | 4758.89 | 1938 | 4759.5 | 1938.01 | 4776.47 | 1938.09 |
| 4779.98 | 1938.07 | 4794.7 | 1938 | 4800.15 | 1938 | 4802.56 | 1938.1 | 4804.58 | 1938.17 |
| 4820 | 1938.45 | 4827.71 | 1938.58 | 4839.04 | 1938.58 | 4848.37 | 1938.6 | 4854.82 | 1938.6 |
| 4868.14 | 1938.71 | 4887.82 | 1938.88 | 4893.14 | 1939 | 5000.01 | 1939 | 5004.07 | 1938.71 |
| 5014.47 | 1938 | 5018.07 | 1937.92 | 5024.32 | 1937.74 | 5049.14 | 1937 | 5216.14 | 1937 |
| 5217.34 | 1937.02 | 5264.23 | 1937.27 | 5292.18 | 1937.42 | 5293.08 | 1937.41 | 5309 | 1937.43 |
| 5330.05 | 1937.55 | 5333.4 | 1937.56 | 5342.48 | 1937.62 | 5348.18 | 1937.65 | 5362.76 | 1937.75 |
| 5363.53 | 1937.75 | 5383.41 | 1937.95 | 5388.55 | 1938 | 5506.33 | 1938 | 5529.46 | 1938.29 |
| 5544.53 | 1938.47 | 5544.98 | 1938.47 | 5551.1 | 1938.56 | 5561.13 | 1938.69 | 5561.94 | 1938.69 |
| 5580.15 | 1939 | 5580.69 | 1939 | 5591.56 | 1938.86 | 5592.79 | 1938.85 | 5633.27 | 1938.86 |
| 5675.61 | 1938.89 | 5676.78 | 1938.9 | 5683.71 | 1938.84 | 5692.59 | 1938.71 | 5717.62 | 1938.23 |
| 5728.96 | 1938 | 5749.8 | 1938 | 5810.08 | 1937.14 | 5822.19 | 1937 | 5832.57 | 1937 |
| 5839.21 | 1937.04 | 5841.13 | 1937.06 | 5848.02 | 1937.1 | 5849.86 | 1937.12 | 5853.36 | 1937.14 |
| 5962.49 | 1938 | 5980 | 1938 | 5993.44 | 1938.55 | 5998.99 | 1938.74 | 6007.17 | 1939 |
| 6028.85 | 1939.36 | 6036.41 | 1939.5 | 6040.85 | 1939.59 | 6060.88 | 1939.94 | 6064.16 | 1940 |
| 6072.9 | 1940.29 | 6079.73 | 1940.48 | 6096.92 | 1941 | 6120.35 | 1941.75 | 6127.36 | 1941.98 |
| 6128.25 | 1942 | 6144.83 | 1942.7 | 6148.23 | 1942.85 | 6152.16 | 1943 | 6153.75 | 1943.01 |
| 6156.38 | 1943.09 | 6163.1 | 1943.18 | 6164.98 | 1943.25 | 6168.84 | 1943.35 | 6169.16 | 1943.37 |
| 6178.17 | 1943.67 | 6187.86 | 1944 | 6195.49 | 1944 | 6196.96 | 1944.13 | 6205.85 | 1945 |
| 6212.03 | 1945.89 | 6212.75 | 1946 | 6219.9 | 1947 | 6226.98 | 1948 | 6235.09 | 1949 |
| 6242.52 | 1949.9 | 6243.4 | 1950 | 6250.41 | 1950.85 | 6251.77 | 1951 | 6261.02 | 1951.82 |
| 6271.79 | 1952.75 | 6274.72 | 1953 | 6288.29 | 1954 | 6296.5 | 1954.58 | 6298.19 | 1954.68 |
| 6299.73 | 1954.75 | 6301.93 | 1954.82 | 6303.06 | 1954.84 | 6312.42 | 1954.92 | 6313.05 | 1954.92 |
| 6323.39 | 1955 | 6324.55 | 1955 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 1924.08 | .045 | 1924.08 | .04 | 6324.55 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 1924.08 | 6324.55 | 176.03 | 176.03 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1939.89 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.11 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1939.78 | Reach Len. (ft) | 176.03 | 176.03 | 176.03 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8235.03 | | |
| E.G. Slope (ft/ft) | 0.001824 | Area (sq ft) | | 8235.03 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3666.04 | Top Width (ft) | | 3666.04 | | |
| Vel Total (ft/s) | 2.72 | Avg. Vel. (ft/s) | | 2.72 | | |
| Max Chl Dpth (ft) | 5.77 | Hydr. Depth (ft) | | 2.25 | | |
| Conv. Total (cfs) | 524548.1 | Conv. (cfs) | | 524548.1 | | |
| Length Wtd. (ft) | 176.03 | Wetted Per. (ft) | | 3667.64 | | |
| Min Ch El (ft) | 1934.00 | Shear (lb/sq ft) | | 0.26 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6324.55 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.34 | Cum Volume (acre-ft) | | 2611.15 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1248.17 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -5101.78

INPUT
Description:
Station Elevation Data num= 435

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2017.33 | 1940.05 | 2029.92 | 1940.02 | 2034.56 | 1940 | 2043.55 | 1940 | 2059.88 | 1939.77 |
| 2064.75 | 1939.73 | 2071.21 | 1939.56 | 2074.68 | 1939.48 | 2091.81 | 1939 | 2100.34 | 1938.03 |
| 2100.65 | 1938 | 2105.76 | 1937 | 2107.93 | 1936.96 | 2145.82 | 1936.85 | 2182.01 | 1936.92 |
| 2183.44 | 1936.93 | 2188.87 | 1936.89 | 2202.99 | 1936.72 | 2213.97 | 1936.69 | 2217.26 | 1936.69 |
| 2240.48 | 1936.99 | 2240.9 | 1937 | 2337.82 | 1937 | 2340.86 | 1937.13 | 2355.9 | 1937.64 |
| 2357.73 | 1937.69 | 2361.34 | 1937.77 | 2365.5 | 1937.77 | 2367.96 | 1937.82 | 2373.9 | 1937.69 |
| 2401.72 | 1937.01 | 2402.07 | 1937 | 2464.2 | 1937 | 2467.22 | 1937.03 | 2480.4 | 1937.2 |
| 2483.24 | 1937.21 | 2487.3 | 1937.26 | 2492 | 1937.33 | 2494.09 | 1937.34 | 2502.58 | 1937.43 |
| 2538.41 | 1937.98 | 2544.67 | 1937.99 | 2575.02 | 1937.99 | 2588.86 | 1938 | 2603.51 | 1938 |
| 2616.72 | 1937.99 | 2630.27 | 1937.99 | 2644.41 | 1937.97 | 2649.57 | 1937.98 | 2654.25 | 1938 |
| 2719.35 | 1938 | 2758.69 | 1939 | 2853.5 | 1939 | 2872.53 | 1938.03 | 2873.59 | 1938 |
| 2876.15 | 1938 | 2881.85 | 1938.03 | 2931.92 | 1938.93 | 2933.91 | 1938.96 | 2935.46 | 1939 |
| 2939.15 | 1939 | 2948.81 | 1939.01 | 2960.58 | 1939 | 2995.69 | 1939 | 2998.97 | 1939.01 |
| 2999.83 | 1939.04 | 3005.94 | 1939.1 | 3007.98 | 1939.13 | 3010.7 | 1939.21 | 3024.26 | 1939.47 |
| 3031.27 | 1939.56 | 3032.85 | 1939.56 | 3042.36 | 1939 | 3045.14 | 1938.97 | 3046.53 | 1938.98 |
| 3048.85 | 1938.93 | 3051.15 | 1938.91 | 3053.51 | 1938.96 | 3067.92 | 1938.99 | 3068.73 | 1939 |
| 3077.98 | 1939 | 3086.22 | 1939.02 | 3088.42 | 1939.02 | 3091.69 | 1939 | 3093.37 | 1938.97 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3095.55 | 1938.96 | 3104.75 | 1938.57 | 3111.08 | 1938.26 | 3112.78 | 1938.2 | 3116.96 | 1938 |
| 3147.09 | 1938 | 3158.22 | 1938.46 | 3168.12 | 1939 | 3170.86 | 1939.19 | 3185.2 | 1940 |
| 3189.58 | 1940.26 | 3201.69 | 1941 | 3212.62 | 1941 | 3217.36 | 1941.01 | 3225.88 | 1941.01 |
| 3232.12 | 1941 | 3241.75 | 1940.13 | 3243.38 | 1940 | 3249.64 | 1939.54 | 3252.14 | 1939.37 |
| 3257 | 1939 | 3259.95 | 1938.73 | 3268.12 | 1938 | 3277.78 | 1937 | 3291.71 | 1937 |
| 3295.45 | 1937.01 | 3299.58 | 1937.03 | 3301.75 | 1937.03 | 3304.07 | 1937.05 | 3305.99 | 1937.05 |
| 3317.62 | 1937.01 | 3324.8 | 1937 | 3427.67 | 1937 | 3429.16 | 1936.99 | 3435.01 | 1937 |
| 3450.39 | 1937.4 | 3451.2 | 1937.41 | 3461.86 | 1937.69 | 3472.3 | 1937.74 | 3475.03 | 1937.73 |
| 3482.22 | 1937.75 | 3483.99 | 1937.77 | 3495.12 | 1937.94 | 3499.64 | 1937.99 | 3501.02 | 1937.99 |
| 3507.91 | 1937.79 | 3509.7 | 1937.72 | 3513.11 | 1937.62 | 3528.81 | 1937 | 3638.9 | 1937 |
| 3652.17 | 1937.01 | 3658.16 | 1937.02 | 3660.21 | 1937.03 | 3666.85 | 1937.03 | 3672.01 | 1937.18 |
| 3683 | 1937.13 | 3686.27 | 1937 | 3693.49 | 1936.51 | 3702.04 | 1936.01 | 3702.47 | 1936 |
| 3704.64 | 1935.84 | 3715.75 | 1935.14 | 3717.83 | 1935 | 3722.95 | 1935 | 3726.58 | 1934.99 |
| 3731.52 | 1934.99 | 3736.61 | 1934.98 | 3752.85 | 1935 | 3764.87 | 1935.38 | 3765.63 | 1935.38 |
| 3773.57 | 1935.5 | 3788.3 | 1935.71 | 3794.48 | 1935.81 | 3799.43 | 1935.91 | 3803.62 | 1935.96 |
| 3805.94 | 1936 | 3813.95 | 1936.01 | 3826.52 | 1936.12 | 3843.54 | 1936.25 | 3852.69 | 1936.3 |
| 3858.6 | 1936.35 | 3867.04 | 1936.39 | 3867.41 | 1936.4 | 3873.84 | 1936.42 | 3881.41 | 1936.46 |
| 3886.24 | 1936.51 | 3899.85 | 1936.64 | 3907.96 | 1936.71 | 3910.04 | 1936.72 | 3934.21 | 1936.77 |
| 3939.28 | 1937 | 3981.89 | 1937 | 4003.79 | 1936.62 | 4012.71 | 1936.48 | 4033.02 | 1936.14 |
| 4037.62 | 1936.06 | 4041.67 | 1936 | 4046.14 | 1935.85 | 4062.29 | 1935.34 | 4070.38 | 1935 |
| 4099.41 | 1934.89 | 4102.97 | 1934.89 | 4128.81 | 1934.9 | 4132.1 | 1935 | 4252.14 | 1935 |
| 4252.98 | 1935.01 | 4256.7 | 1935.01 | 4266.16 | 1935.11 | 4281.08 | 1935.22 | 4284.95 | 1935.23 |
| 4296.04 | 1935.25 | 4303.2 | 1935.32 | 4319.48 | 1935.56 | 4322.3 | 1935.58 | 4326.44 | 1935.59 |
| 4331 | 1935.61 | 4335.44 | 1935.47 | 4341.96 | 1935.25 | 4346.62 | 1935 | 4349.34 | 1934.98 |
| 4353.02 | 1934.92 | 4354 | 1934.88 | 4371.83 | 1934.19 | 4378.41 | 1934 | 4378.57 | 1933.96 |
| 4380 | 1933.92 | 4381.65 | 1933.93 | 4383.74 | 1934 | 4387.12 | 1934.73 | 4388.44 | 1935 |
| 4390.38 | 1935.5 | 4391.25 | 1936 | 4393.8 | 1936.24 | 4397.17 | 1937 | 4403.33 | 1937.77 |
| 4405.22 | 1938 | 4407.46 | 1938.18 | 4416.43 | 1939 | 4427.82 | 1939.86 | 4429.43 | 1940 |
| 4431.82 | 1940.03 | 4435.35 | 1940.1 | 4437.43 | 1940.12 | 4443.2 | 1940.1 | 4452.82 | 1940 |
| 4457.85 | 1939.83 | 4459.88 | 1939.81 | 4462.98 | 1939.75 | 4468.27 | 1939.56 | 4475.12 | 1939.36 |
| 4483.05 | 1939 | 4505.55 | 1939 | 4515.15 | 1939.45 | 4516.54 | 1939.49 | 4520.31 | 1939.67 |
| 4526.62 | 1940 | 4528.25 | 1940.02 | 4529.97 | 1940.02 | 4532.13 | 1940 | 4533.65 | 1939.89 |
| 4536.83 | 1939.74 | 4538.56 | 1939.68 | 4548.31 | 1939.65 | 4548.94 | 1939.63 | 4551.51 | 1939.62 |
| 4555.81 | 1939.63 | 4558.76 | 1939.67 | 4560.45 | 1939.76 | 4563.35 | 1940 | 4564.9 | 1940.08 |
| 4567.24 | 1940.08 | 4569.67 | 1940.05 | 4570.91 | 1940 | 4582.64 | 1939.58 | 4595.62 | 1939 |
| 4598.97 | 1938.99 | 4601.3 | 1939 | 4617.01 | 1939.11 | 4623.95 | 1939.06 | 4631.63 | 1939 |
| 4635.22 | 1939 | 4640.59 | 1940 | 4646.09 | 1940.93 | 4646.69 | 1941.01 | 4649.97 | 1941.37 |
| 4651.9 | 1941.57 | 4654.66 | 1941.75 | 4657.48 | 1941.89 | 4659.03 | 1941.93 | 4660.43 | 1941.92 |
| 4662.83 | 1941.83 | 4665.28 | 1941.69 | 4668.64 | 1941.48 | 4672.11 | 1941.22 | 4674.76 | 1941 |
| 4686.2 | 1940 | 4693.1 | 1939.42 | 4698.03 | 1939 | 4704.21 | 1938.56 | 4706.38 | 1938.4 |
| 4713.19 | 1938 | 4717.89 | 1937.87 | 4720.74 | 1937.76 | 4727.59 | 1937.62 | 4733.39 | 1937.43 |
| 4734.08 | 1937.4 | 4740.17 | 1937.23 | 4748.61 | 1937.11 | 4755.84 | 1937 | 4759.99 | 1937 |
| 4763.62 | 1937.3 | 4772.27 | 1938 | 4786.59 | 1939.17 | 4791.69 | 1939.27 | 4795.93 | 1939.31 |
| 4797.01 | 1939.35 | 4806.32 | 1939.35 | 4808.71 | 1939.33 | 4810.59 | 1939.29 | 4814.31 | 1939.12 |
| 4816.36 | 1939 | 4820.76 | 1938.68 | 4822.89 | 1938.56 | 4826.5 | 1938.29 | 4829.19 | 1938.01 |
| 4830.75 | 1937.77 | 4833.93 | 1937.19 | 4835.54 | 1937.01 | 4839.19 | 1937.22 | 4841.43 | 1937.3 |
| 4843.83 | 1937.37 | 4851.46 | 1937.63 | 4855.61 | 1937.74 | 4856.58 | 1937.75 | 4859.43 | 1937.83 |
| 4863.22 | 1937.82 | 4866.46 | 1937.79 | 4869.03 | 1937.75 | 4872.9 | 1937.67 | 4876.88 | 1937.6 |
| 4880.74 | 1937.52 | 4888.88 | 1937.16 | 4899.62 | 1937.04 | 4902.78 | 1937.02 | 4903.38 | 1937 |
| 4912.95 | 1937 | 4921.82 | 1937.73 | 4928.2 | 1938 | 4942.15 | 1938.62 | 4944.87 | 1938.76 |
| 4950.33 | 1939 | 4970.69 | 1939 | 4986.28 | 1938.89 | 4990.06 | 1938.76 | 4990.33 | 1938.74 |
| 4995.11 | 1938.61 | 4996.42 | 1938.59 | 5008.85 | 1938.06 | 5010.59 | 1938 | 5015.6 | 1938.01 |
| 5020.31 | 1938 | 5063.23 | 1938 | 5064.59 | 1938.12 | 5073.4 | 1939 | 5199.19 | 1939 |
| 5236.05 | 1938.2 | 5244.17 | 1938 | 5248.15 | 1937.89 | 5265.86 | 1937.43 | 5282.19 | 1937 |
| 5364.18 | 1937 | 5370.3 | 1936.74 | 5378.68 | 1936.73 | 5386.94 | 1936.73 | 5397.1 | 1937 |
| 5539.46 | 1937 | 5555.46 | 1936.86 | 5572.31 | 1936.92 | 5591.66 | 1936.98 | 5595.05 | 1937 |
| 5677.84 | 1937 | 5678.19 | 1937.01 | 5683.5 | 1937.04 | 5685.52 | 1937.04 | 5689 | 1937.13 |
| 5690.14 | 1937.13 | 5693.76 | 1937.17 | 5694.51 | 1937.19 | 5697.52 | 1937.19 | 5698.31 | 1937.21 |
| 5702.15 | 1937.22 | 5712.8 | 1937.28 | 5733.59 | 1937.43 | 5739.27 | 1937.48 | 5749.12 | 1937.59 |
| 5750.3 | 1937.59 | 5782.45 | 1937.84 | 5803.23 | 1938 | 5923.8 | 1938 | 5958.72 | 1937.3 |
| 5965.74 | 1937.17 | 5969.85 | 1937.15 | 5975.02 | 1937.1 | 5984.63 | 1937 | 6210.29 | 1937 |
| 6211.84 | 1937.05 | 6214.38 | 1937.11 | 6226.86 | 1937.45 | 6247.44 | 1938 | 6260.58 | 1938.71 |
| 6266.84 | 1939 | 6271.18 | 1939.27 | 6282.47 | 1940 | 6290.58 | 1940.89 | 6300.29 | 1942 |
| 6307.25 | 1942 | 6307.68 | 1941.96 | 6308.14 | 1942 | 6308.97 | 1942.17 | 6312.4 | 1943 |
| 6315.79 | 1943.5 | 6319.28 | 1944 | 6324.28 | 1944.68 | 6332.17 | 1945.82 | 6333.48 | 1946 |
| 6339.9 | 1947 | 6347.54 | 1948.16 | 6356.73 | 1949.61 | 6363.88 | 1950.61 | 6367.33 | 1951 |
| 6374.45 | 1951.68 | 6377.86 | 1952 | 6389.15 | 1952.91 | 6390.35 | 1953 | 6394.07 | 1953.25 |
| 6406.17 | 1954 | 6423.63 | 1954 | 6426.89 | 1953.93 | 6429.03 | 1954 | 6467.96 | 1954 |
| 6474.04 | 1953.87 | 6485.25 | 1953.76 | 6494.72 | 1953.73 | 6496.3 | 1953.75 | 6504.18 | 1953.91 |
| 6507.99 | 1954 | 6512.33 | 1954 | 6524.99 | 1954.86 | 6526.95 | 1955 | 6540.4 | 1955 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2017.33 | .045 | 2017.33 | .04 | 6540.4 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2017.33 | 6540.4 | 193.29 | 193.29 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1939.55 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.12 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1939.43 | Reach Len. (ft) | 193.29 | 193.29 | 193.29 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8121.41 | | |
| E.G. Slope (ft/ft) | 0.002096 | Area (sq ft) | | 8121.41 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3930.25 | Top Width (ft) | | 3930.25 | | |
| Vel Total (ft/s) | 2.76 | Avg. Vel. (ft/s) | | 2.76 | | |

| | | | | | |
|---|---|---|---|---|---|
| Max Chl Dpth (ft) | 5.51 | Hydr. Depth (ft) | | 2.07 | |
| Conv. Total (cfs) | 489304.5 | Conv. (cfs) | | 489304.5 | |
| Length Wtd. (ft) | 193.29 | Wetted Per. (ft) | | 3931.99 | |
| Min Ch El (ft) | 1933.92 | Shear (lb/sq ft) | | 0.27 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6540.40 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.40 | Cum Volume (acre-ft) | | 2578.10 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1232.82 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -5295.07

INPUT
Description:
Station Elevation Data num= 424

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 1885.07 | 1939.6 | 1919.36 | 1939.49 | 1988.03 | 1939.2 | 2014.68 | 1939 | 2017.01 | 1939 |
| 2019.59 | 1938.75 | 2021.94 | 1938.49 | 2026.81 | 1938 | 2034.09 | 1937.29 | 2036.91 | 1937 |
| 2045.44 | 1936 | 2047.56 | 1935.98 | 2057.59 | 1935.81 | 2137.82 | 1935.83 | 2139.71 | 1935.84 |
| 2156.82 | 1936 | 2181.02 | 1936.92 | 2182.94 | 1937 | 2210.53 | 1937 | 2231.3 | 1936.83 |
| 2254.61 | 1936.66 | 2256.05 | 1936.67 | 2292.99 | 1937 | 2621.29 | 1937 | 2628.56 | 1937.06 |
| 2633.3 | 1937.09 | 2636.78 | 1937.2 | 2650.78 | 1937.55 | 2655.08 | 1937.6 | 2664.6 | 1937.66 |
| 2671.52 | 1937.64 | 2673.77 | 1937.62 | 2678.44 | 1937.56 | 2683.85 | 1937.57 | 2690.25 | 1937.66 |
| 2694.7 | 1937.7 | 2697.25 | 1937.69 | 2698.25 | 1937.72 | 2703.68 | 1937.68 | 2705.46 | 1937.73 |
| 2716.13 | 1937.76 | 2717.51 | 1937.79 | 2729.73 | 1937.86 | 2742.33 | 1937.99 | 2743.78 | 1938 |
| 2758.64 | 1938.41 | 2760.62 | 1938.47 | 2777.15 | 1939 | 2823.47 | 1939 | 2843.45 | 1938.14 |
| 2849.29 | 1938 | 2863.62 | 1938 | 2869.78 | 1937.99 | 2899.13 | 1937.99 | 2909.74 | 1938 |
| 2917.81 | 1938 | 2928.93 | 1938.59 | 2931.4 | 1938.71 | 2933.96 | 1938.79 | 2937.16 | 1938.77 |
| 2939.79 | 1938.8 | 2944.41 | 1938.77 | 2946.01 | 1938.73 | 2946.85 | 1938.76 | 2948.26 | 1938.7 |
| 2948.82 | 1938.73 | 2953.41 | 1938.53 | 2958.63 | 1938.64 | 2962.36 | 1938.67 | 2965.25 | 1938.63 |
| 2975.17 | 1938.41 | 2984.23 | 1938.14 | 2988.6 | 1938 | 2992.8 | 1937.99 | 3007.72 | 1937.72 |
| 3009.16 | 1937.7 | 3020.53 | 1937.66 | 3030.88 | 1937.63 | 3042.95 | 1937.15 | 3047.11 | 1937 |
| 3067.81 | 1937 | 3077.91 | 1937.32 | 3088.13 | 1937.73 | 3094.5 | 1938 | 3109.02 | 1938.28 |
| 3114.51 | 1938.41 | 3140.08 | 1939 | 3149.37 | 1939.1 | 3156.74 | 1939.16 | 3164.7 | 1939.09 |
| 3172.8 | 1939.14 | 3174.7 | 1939.11 | 3175.96 | 1939.19 | 3176.76 | 1939.18 | 3177.5 | 1939.25 |
| 3178.57 | 1939.24 | 3181.09 | 1939.33 | 3181.78 | 1939.38 | 3188.71 | 1939.65 | 3195.51 | 1939.77 |
| 3198.28 | 1939.89 | 3199.69 | 1939.91 | 3201.02 | 1939.83 | 3205.29 | 1939.17 | 3211.67 | 1938 |
| 3215.69 | 1937 | 3223.81 | 1937 | 3225.59 | 1937.03 | 3233.7 | 1937.08 | 3241.08 | 1937.56 |
| 3244.12 | 1938 | 3246.02 | 1938.2 | 3246.97 | 1938.24 | 3250.55 | 1938.51 | 3254.22 | 1938.55 |
| 3257.06 | 1938.5 | 3258.01 | 1938.46 | 3261.67 | 1938.37 | 3266.6 | 1938.05 | 3269.71 | 1938 |
| 3271.6 | 1937.73 | 3280.37 | 1937 | 3357.05 | 1937 | 3366.48 | 1936.99 | 3372.45 | 1937 |
| 3387.87 | 1937 | 3403.22 | 1936.99 | 3441.18 | 1936.99 | 3447.88 | 1937 | 3656.76 | 1937 |
| 3666.91 | 1937.2 | 3703.61 | 1937.81 | 3706.45 | 1938 | 3722.56 | 1938 | 3731.34 | 1937.94 |
| 3751.43 | 1937.2 | 3754.81 | 1937.09 | 3759.5 | 1937 | 3772.59 | 1936.51 | 3785.45 | 1936.02 |
| 3787.91 | 1936 | 3792.4 | 1935.53 | 3798.3 | 1935 | 3806.98 | 1934.07 | 3808.18 | 1934 |
| 3849.62 | 1934 | 3860.07 | 1934.41 | 3869.67 | 1934.81 | 3874.39 | 1935 | 3877.97 | 1935.02 |
| 3909.69 | 1935.91 | 3913.01 | 1936 | 3920.16 | 1936.01 | 3938.91 | 1936.02 | 3950.18 | 1936.02 |
| 3963.69 | 1936.01 | 3972.54 | 1936.06 | 3987.34 | 1936.04 | 4002.9 | 1936.01 | 4006.11 | 1936.01 |
| 4019.98 | 1936.04 | 4031.65 | 1936.05 | 4037.12 | 1936.1 | 4106.15 | 1936.8 | 4107.51 | 1936.82 |
| 4120.67 | 1936.95 | 4123.57 | 1936.97 | 4125.11 | 1937 | 4133.2 | 1937 | 4147.8 | 1936.74 |
| 4150.71 | 1936.67 | 4157.84 | 1936.46 | 4172.6 | 1936 | 4176.66 | 1936 | 4180.65 | 1935.98 |
| 4198.43 | 1935.52 | 4212.3 | 1935.03 | 4214.37 | 1935.03 | 4220.54 | 1935 | 4225.26 | 1934.96 |
| 4238.18 | 1934.37 | 4243.44 | 1934.16 | 4245.06 | 1934.11 | 4246.79 | 1934.01 | 4255.35 | 1933.98 |
| 4265.47 | 1933.99 | 4274.6 | 1933.98 | 4285.06 | 1934 | 4286.83 | 1934.02 | 4293.38 | 1933.99 |
| 4307.42 | 1934.01 | 4309.71 | 1934.07 | 4325.2 | 1934.2 | 4328.7 | 1934.29 | 4334.44 | 1934.36 |
| 4339.71 | 1934.52 | 4344.55 | 1934.58 | 4350.17 | 1934.74 | 4352.61 | 1934.78 | 4354.07 | 1934.83 |
| 4366.51 | 1934.92 | 4367.01 | 1934.94 | 4375.17 | 1934.97 | 4377.59 | 1935 | 4398.81 | 1935 |
| 4409.63 | 1935.02 | 4417.32 | 1935.05 | 4422.69 | 1935.05 | 4423.98 | 1935.06 | 4433.6 | 1935.07 |
| 4439.14 | 1935.1 | 4450.54 | 1935.01 | 4451.98 | 1935.05 | 4456.51 | 1936 | 4462.26 | 1937.23 |
| 4465.78 | 1938 | 4474.72 | 1938.89 | 4475.45 | 1939 | 4482.17 | 1940.17 | 4483.21 | 1940.33 |
| 4486.04 | 1940.68 | 4487.2 | 1940.78 | 4488.8 | 1940.86 | 4489.69 | 1940.86 | 4498.9 | 1941 |
| 4503.16 | 1941.09 | 4504.22 | 1941.15 | 4506.23 | 1941.11 | 4511.11 | 1941.26 | 4520.08 | 1941.45 |
| 4528.92 | 1941.81 | 4530.45 | 1941.85 | 4534.06 | 1942 | 4539.96 | 1942.21 | 4542.19 | 1942.31 |
| 4552.41 | 1942.72 | 4556.27 | 1942.9 | 4559.33 | 1943 | 4568.4 | 1943.02 | 4581.8 | 1943.54 |
| 4583.87 | 1943.59 | 4594.23 | 1944 | 4596.58 | 1944 | 4602.61 | 1943 | 4618.82 | 1940.29 |
| 4620.36 | 1940 | 4627.12 | 1939.54 | 4632.7 | 1939.25 | 4640.47 | 1939 | 4646.37 | 1938.89 |
| 4653.37 | 1938.74 | 4668.75 | 1938.35 | 4681.11 | 1938 | 4694.68 | 1937 | 4722.95 | 1937 |
| 4746.28 | 1936 | 4750.38 | 1935.98 | 4764.74 | 1935.95 | 4776.11 | 1935.99 | 4777.1 | 1936 |
| 4786.53 | 1936.25 | 4801.8 | 1936.98 | 4804.22 | 1936.99 | 4810.9 | 1936.99 | 4814.77 | 1937 |
| 4836.25 | 1937 | 4843.98 | 1936.99 | 4847.66 | 1937 | 4854.12 | 1937 | 4855.53 | 1937.01 |
| 4857.99 | 1937.14 | 4862.26 | 1937.23 | 4870.59 | 1937.34 | 4871.91 | 1937.28 | 4874.93 | 1937.22 |
| 4876.47 | 1937.27 | 4886.62 | 1937.3 | 4895.01 | 1937.04 | 4895.46 | 1937.05 | 4899.37 | 1937 |
| 4901.08 | 1937 | 4908.72 | 1938 | 4909.61 | 1938.01 | 4913.17 | 1938.4 | 4917.15 | 1938.74 |
| 4919.85 | 1939 | 4923.9 | 1939 | 4929.66 | 1938.36 | 4932.4 | 1938.01 | 4932.8 | 1938 |
| 4935.24 | 1937.7 | 4940.51 | 1937.02 | 4941.14 | 1937 | 4958.1 | 1937 | 4958.2 | 1937.01 |
| 4974.26 | 1938.07 | 4987.81 | 1939 | 5004.33 | 1939 | 5013.97 | 1938.22 | 5016.85 | 1938 |
| 5089.45 | 1938 | 5119.5 | 1938.6 | 5120.26 | 1938.6 | 5155.83 | 1938.87 | 5172.29 | 1939 |
| 5225.75 | 1939 | 5226.47 | 1938.96 | 5246.05 | 1938 | 5247.51 | 1937.99 | 5289.87 | 1937.03 |
| 5291.32 | 1937 | 5335.23 | 1937 | 5335.6 | 1936.99 | 5346.98 | 1936.88 | 5369.13 | 1936.6 |
| 5374.85 | 1936.55 | 5387.92 | 1936.42 | 5394.38 | 1936.33 | 5404.34 | 1936.24 | 5418.51 | 1936 |
| 5432.73 | 1936 | 5435.64 | 1936.06 | 5438.75 | 1936.03 | 5441.7 | 1936.04 | 5451.13 | 1936.03 |
| 5456.8 | 1936 | 5483.92 | 1936 | 5502.05 | 1935.99 | 5523.15 | 1936 | 5530.86 | 1936 |
| 5539.89 | 1936.03 | 5553.5 | 1936.06 | 5568.44 | 1936.08 | 5578.44 | 1936.14 | 5587.42 | 1936.17 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5595.13 | 1936.26 | 5620.66 | 1936.57 | 5628.55 | 1936.57 | 5636.16 | 1936.77 | 5641.82 | 1936.78 |
| 5645.14 | 1936.8 | 5655.75 | 1936.92 | 5657.46 | 1936.92 | 5660.53 | 1936.96 | 5664.05 | 1936.98 |
| 5672.63 | 1936.88 | 5675.31 | 1936.86 | 5687.79 | 1936.88 | 5693.48 | 1936.9 | 5701.14 | 1936.9 |
| 5714.92 | 1936.97 | 5723.13 | 1937 | 5754.59 | 1937 | 5771.73 | 1937.01 | 5787.11 | 1937.07 |
| 5821.2 | 1937.16 | 5830.72 | 1937.13 | 5833.48 | 1937.14 | 5837.12 | 1937.12 | 5840.64 | 1937.12 |
| 5877.36 | 1937.03 | 5886.05 | 1937 | 6099.05 | 1937 | 6099.14 | 1937.01 | 6118.56 | 1937.5 |
| 6139.64 | 1937.96 | 6141.25 | 1938 | 6167.05 | 1939 | 6186.46 | 1939.9 | 6188.27 | 1940 |
| 6209.43 | 1940.83 | 6213.15 | 1941 | 6237.82 | 1941.64 | 6238.88 | 1941.66 | 6252.6 | 1941.98 |
| 6254.83 | 1942 | 6265.85 | 1943 | 6271.19 | 1943.43 | 6277.13 | 1944 | 6279.01 | 1944.25 |
| 6282.75 | 1944.79 | 6284.24 | 1944.99 | 6286.51 | 1945.2 | 6303.19 | 1946.58 | 6312.02 | 1946.99 |
| 6316.61 | 1947 | 6324.09 | 1946.76 | 6327.53 | 1947 | 6329.52 | 1947.49 | 6331.38 | 1948 |
| 6334.55 | 1948.9 | 6336.96 | 1949.39 | 6343.01 | 1950 | 6347.54 | 1950.42 | 6348.55 | 1950.56 |
| 6352.94 | 1951 | 6359.08 | 1951.29 | 6359.92 | 1951.35 | 6364.14 | 1951.38 | 6366.19 | 1951.37 |
| 6370.15 | 1951.28 | 6383.35 | 1951.06 | 6385.67 | 1951 | 6398.79 | 1950.26 | 6409.91 | 1949.49 |
| 6410.74 | 1949.47 | 6415.26 | 1949.44 | 6417.36 | 1949.33 | 6420.68 | 1949.34 | 6424.33 | 1949.23 |
| 6426.31 | 1949.27 | 6429.68 | 1949.25 | 6433.62 | 1949.31 | 6450.49 | 1950 | 6453.6 | 1950.18 |
| 6466.43 | 1951 | 6475.24 | 1952 | 6479.08 | 1952.51 | 6482.18 | 1953 | 6487.25 | 1953.54 |
| 6490.42 | 1953.86 | 6491.91 | 1953.98 | 6493.92 | 1954 | 6503.39 | 1954 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 1885.07 | .045 | 1885.07 | .04 | 6503.39 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 1885.07 | 6503.39 | 150.65 | 150.65 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1939.15 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.12 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1939.03 | Reach Len. (ft) | 150.65 | 150.65 | 150.65 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8195.64 | | |
| E.G. Slope (ft/ft) | 0.002033 | Area (sq ft) | | 8195.64 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3929.71 | Top Width (ft) | | 3929.71 | | |
| Vel Total (ft/s) | 2.73 | Avg. Vel. (ft/s) | | 2.73 | | |
| Max Chl Dpth (ft) | 5.05 | Hydr. Depth (ft) | | 2.09 | | |
| Conv. Total (cfs) | 496820.7 | Conv. (cfs) | | 496820.7 | | |
| Length Wtd. (ft) | 150.65 | Wetted Per. (ft) | | 3931.52 | | |
| Min Ch El (ft) | 1933.98 | Shear (lb/sq ft) | | 0.26 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6503.39 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.29 | Cum Volume (acre-ft) | | 2541.90 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1215.39 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -5445.72

INPUT
Description:
Station Elevation Data num= 423

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 1946.57 | 1939 | 1947.62 | 1939.01 | 1997.84 | 1939.01 | 2017.18 | 1939 | 2027.01 | 1938 |
| 2037.86 | 1937.03 | 2045.41 | 1936.19 | 2046.94 | 1936 | 2048.09 | 1935.78 | 2051.64 | 1935 |
| 2121.75 | 1935 | 2134.64 | 1935.12 | 2219.41 | 1935.79 | 2226.74 | 1935.99 | 2227.77 | 1936 |
| 2287.44 | 1936.67 | 2300.14 | 1936.79 | 2320.58 | 1937 | 2510.85 | 1937 | 2520.65 | 1937.92 |
| 2521.91 | 1938 | 2526.56 | 1938 | 2532.05 | 1937.63 | 2544.66 | 1937 | 2564.77 | 1937 |
| 2580.26 | 1937.11 | 2580.84 | 1937.12 | 2594.58 | 1937.17 | 2606.04 | 1937.19 | 2608.19 | 1937.2 |
| 2619.64 | 1937.49 | 2634.09 | 1937.92 | 2643.67 | 1937.94 | 2662.08 | 1937.61 | 2665.68 | 1937.56 |
| 2673.13 | 1937.41 | 2679.39 | 1937.33 | 2693.27 | 1937 | 2698.09 | 1936.99 | 2720.12 | 1936.4 |
| 2726.36 | 1936.31 | 2729.23 | 1936.39 | 2736.44 | 1936.77 | 2738.66 | 1937 | 2740.65 | 1937.1 |
| 2756.36 | 1938 | 2764.31 | 1938.34 | 2770.2 | 1938.62 | 2777.56 | 1938.99 | 2785.05 | 1938.99 |
| 2788.62 | 1939 | 2797.16 | 1939 | 2797.32 | 1938.99 | 2817.32 | 1938.35 | 2818.74 | 1938.32 |
| 2824.35 | 1938.15 | 2828.22 | 1938.02 | 2830.24 | 1938.04 | 2834.27 | 1938.14 | 2870.39 | 1939 |
| 2894.11 | 1939 | 2906.44 | 1938.97 | 2919.07 | 1939 | 2945.62 | 1939 | 2959.41 | 1938.99 |
| 2974.36 | 1939 | 2977.72 | 1938.87 | 2982.23 | 1938.55 | 2989.32 | 1938 | 3047.89 | 1938 |
| 3057.11 | 1937.99 | 3065.66 | 1937.99 | 3079.42 | 1938 | 3103.58 | 1938 | 3107 | 1938.15 |
| 3113.25 | 1938.59 | 3118.82 | 1939 | 3140.95 | 1939.01 | 3160.6 | 1939 | 3167.67 | 1938.63 |
| 3178.15 | 1938 | 3188.78 | 1937.46 | 3195.81 | 1937.01 | 3209.33 | 1936 | 3219.62 | 1935.54 |
| 3223.33 | 1935.34 | 3230.04 | 1935 | 3246.31 | 1934.99 | 3257.4 | 1934.99 | 3263.12 | 1935 |
| 3266.51 | 1936 | 3267.44 | 1936.3 | 3269.37 | 1936.8 | 3273.27 | 1937.65 | 3275.11 | 1938 |
| 3275.87 | 1938.19 | 3279.6 | 1939 | 3283.53 | 1939.78 | 3285.99 | 1940.13 | 3288.72 | 1940.31 |
| 3293.49 | 1940.41 | 3295.74 | 1940.41 | 3298.46 | 1940.32 | 3300.41 | 1940.21 | 3302.95 | 1940 |
| 3305.59 | 1939.69 | 3312.78 | 1938.89 | 3320.63 | 1938.15 | 3330.07 | 1937 | 3336.45 | 1936.52 |
| 3337.65 | 1936.52 | 3338.85 | 1936.44 | 3348.83 | 1936.23 | 3352.5 | 1936.16 | 3365.03 | 1936.22 |
| 3368.56 | 1936.27 | 3374.85 | 1936.39 | 3382.29 | 1936.38 | 3385.66 | 1936.45 | 3391.62 | 1936.6 |
| 3400.19 | 1936.76 | 3402.17 | 1936.82 | 3408.49 | 1936.88 | 3410.91 | 1936.94 | 3412.41 | 1936.94 |
| 3415.4 | 1937 | 3624.88 | 1937 | 3628.21 | 1937.1 | 3629.58 | 1937.12 | 3637.3 | 1937.32 |
| 3640.71 | 1937.35 | 3643.4 | 1937.4 | 3650.6 | 1937.49 | 3653.65 | 1937.51 | 3680.56 | 1937.8 |
| 3690.25 | 1937.93 | 3694.69 | 1937.92 | 3696.86 | 1937.87 | 3705.02 | 1937.72 | 3723.41 | 1937.33 |
| 3724.44 | 1937.3 | 3740.73 | 1937.01 | 3742 | 1937 | 3820.89 | 1937 | 3822.38 | 1936.93 |
| 3838.83 | 1936 | 3847.82 | 1935.82 | 3848.86 | 1935.79 | 3862.32 | 1935.51 | 3869.8 | 1935.45 |
| 3882.02 | 1935.28 | 3894.77 | 1935.04 | 3902.63 | 1935 | 3918.7 | 1934.54 | 3926.26 | 1934.24 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3931.18 | 1934 | 3958.4 | 1933.98 | 3985.61 | 1934 | 3999.35 | 1934.56 | 4000.36 | 1934.56 |
| 4003.72 | 1934.65 | 4014.4 | 1934.74 | 4024.79 | 1934.87 | 4032.51 | 1935 | 4114.93 | 1935 |
| 4153.58 | 1935.37 | 4156.28 | 1935.38 | 4167.49 | 1935.32 | 4181.3 | 1935.23 | 4199.92 | 1935.23 |
| 4200.12 | 1935.24 | 4211.5 | 1935.29 | 4221.92 | 1935.35 | 4249.48 | 1935.41 | 4272.62 | 1935.45 |
| 4277.12 | 1935.45 | 4284.1 | 1935.48 | 4314.1 | 1935.35 | 4364.99 | 1935.01 | 4368.91 | 1935 |
| 4380.54 | 1934.89 | 4381.63 | 1934.89 | 4411.76 | 1934.24 | 4424.75 | 1934 | 4491.84 | 1934 |
| 4500.75 | 1934.95 | 4501.37 | 1935 | 4506.07 | 1935 | 4506.24 | 1934.98 | 4518.48 | 1934 |
| 4522.91 | 1934 | 4528.13 | 1934.66 | 4530.48 | 1935 | 4559.23 | 1935 | 4568.69 | 1935.6 |
| 4572.47 | 1935.66 | 4575.79 | 1935.65 | 4578.24 | 1935 | 4579.63 | 1934.13 | 4580.4 | 1934 |
| 4585.45 | 1935 | 4588.44 | 1935.56 | 4591.78 | 1936 | 4599.59 | 1936.34 | 4602.48 | 1936.43 |
| 4609.62 | 1936.71 | 4614.28 | 1936.75 | 4616.88 | 1936.96 | 4619.01 | 1936.97 | 4629.76 | 1936.93 |
| 4638.56 | 1936.97 | 4650.88 | 1936.97 | 4651.76 | 1936.98 | 4660.03 | 1936.98 | 4672.05 | 1937 |
| 4673.66 | 1937.13 | 4686.95 | 1938 | 4694.78 | 1939 | 4701.85 | 1939.8 | 4703.02 | 1939.89 |
| 4704.93 | 1939.89 | 4707.52 | 1939.66 | 4721.08 | 1938 | 4731.81 | 1937.11 | 4732.72 | 1937 |
| 4739.71 | 1936.99 | 4744.78 | 1936.97 | 4756.9 | 1937 | 4764.56 | 1937.59 | 4770.24 | 1938 |
| 4776.75 | 1938.03 | 4780.73 | 1938.02 | 4785.3 | 1938.45 | 4785.6 | 1938.43 | 4788.03 | 1938.63 |
| 4791.26 | 1938.96 | 4801.87 | 1939.53 | 4802.27 | 1939.57 | 4805.59 | 1939.7 | 4807.59 | 1939.47 |
| 4809.89 | 1939.1 | 4811.73 | 1939 | 4815.95 | 1938.32 | 4818.63 | 1937.85 | 4823.96 | 1937 |
| 4825.88 | 1936.96 | 4832.46 | 1936.73 | 4839.79 | 1936.55 | 4843.99 | 1936.5 | 4851.36 | 1936.55 |
| 4861.21 | 1936.63 | 4873.7 | 1937 | 4876.84 | 1937.24 | 4878.33 | 1937.28 | 4880.61 | 1937.43 |
| 4882.78 | 1937.45 | 4888.1 | 1937.76 | 4890.21 | 1937.74 | 4913.69 | 1938 | 4932.48 | 1938 |
| 4937.06 | 1938.06 | 4942.01 | 1938.23 | 4948.69 | 1938.39 | 4957.42 | 1938.41 | 4967.53 | 1938.45 |
| 4978.12 | 1938.53 | 4988.46 | 1938.57 | 5003.95 | 1938.81 | 5011.92 | 1939 | 5030.68 | 1939.01 |
| 5042.92 | 1939 | 5056.39 | 1939 | 5067.92 | 1938.37 | 5070.59 | 1938.25 | 5074.31 | 1938 |
| 5084.8 | 1937.69 | 5089.79 | 1937.58 | 5105.04 | 1937.43 | 5114.28 | 1937.35 | 5126.02 | 1937.4 |
| 5143.31 | 1937.51 | 5144.57 | 1937.53 | 5161.37 | 1937.61 | 5173.71 | 1937.65 | 5175.65 | 1937.65 |
| 5179.92 | 1937.61 | 5185.54 | 1937.54 | 5187.15 | 1937.54 | 5198.81 | 1937.71 | 5204.46 | 1937.71 |
| 5220.47 | 1937.99 | 5230.38 | 1937.99 | 5236.91 | 1937.98 | 5250.18 | 1938 | 5255.58 | 1938 |
| 5263.31 | 1937.98 | 5269.1 | 1937.99 | 5270.16 | 1937.95 | 5286.62 | 1937.56 | 5289.23 | 1937.47 |
| 5301.34 | 1937 | 5353.91 | 1937 | 5386.69 | 1937.22 | 5386.96 | 1937.23 | 5407.3 | 1937.34 |
| 5414.09 | 1937.37 | 5439.05 | 1937.29 | 5472.66 | 1937.16 | 5478.45 | 1937.02 | 5481.09 | 1937 |
| 5494.31 | 1936.99 | 5527.42 | 1936.51 | 5529.27 | 1936.46 | 5551.58 | 1936 | 5552.58 | 1936 |
| 5561.5 | 1935.9 | 5578.33 | 1935.74 | 5592.57 | 1935.58 | 5602.96 | 1935.48 | 5610.05 | 1935.4 |
| 5650.99 | 1935.27 | 5675.63 | 1935.24 | 5685.5 | 1935.32 | 5711.95 | 1935.51 | 5713.04 | 1935.51 |
| 5730.87 | 1935.63 | 5731.61 | 1935.63 | 5764.08 | 1935.8 | 5789.6 | 1935.99 | 5799.1 | 1936 |
| 5814.9 | 1936.16 | 5828.26 | 1936.27 | 5834.84 | 1936.3 | 5853.4 | 1936.35 | 5866.5 | 1936.34 |
| 5871.78 | 1936.33 | 5874.85 | 1936.31 | 5885.52 | 1936.28 | 5892.97 | 1936.27 | 5900.16 | 1936.27 |
| 5914.54 | 1936.2 | 5916.1 | 1936.21 | 5933.93 | 1936 | 5980.68 | 1936 | 6007.67 | 1936.61 |
| 6013.12 | 1936.71 | 6030.46 | 1937 | 6040.31 | 1937.01 | 6047.85 | 1937 | 6068.76 | 1937 |
| 6078.59 | 1937.24 | 6109.76 | 1938.06 | 6122.96 | 1938.4 | 6128.56 | 1938.53 | 6136.41 | 1938.66 |
| 6139.55 | 1938.75 | 6143.23 | 1938.82 | 6155.88 | 1939.04 | 6171.08 | 1939.36 | 6175.33 | 1939.46 |
| 6189.1 | 1940 | 6197.71 | 1940.3 | 6216.5 | 1941 | 6222.15 | 1941.53 | 6227.88 | 1942 |
| 6231.89 | 1942.31 | 6240.1 | 1943 | 6243.69 | 1943.46 | 6246.92 | 1944 | 6251.6 | 1944.99 |
| 6255.52 | 1945.44 | 6258.14 | 1945.7 | 6260.53 | 1946 | 6267.58 | 1947 | 6268.51 | 1947.5 |
| 6269.85 | 1948 | 6273.54 | 1948.66 | 6281.33 | 1950 | 6292.01 | 1951.81 | 6293.08 | 1952 |
| 6296.4 | 1952.01 | 6297.6 | 1952.12 | 6306.38 | 1951.37 | 6308.33 | 1951.24 | 6311.38 | 1950.98 |
| 6315.07 | 1950.59 | 6318.97 | 1950 | 6321.8 | 1949.96 | 6324 | 1949.96 | 6325.09 | 1950 |
| 6332.04 | 1950.61 | 6335.05 | 1950.7 | 6337.85 | 1950.62 | 6344.06 | 1950.32 | 6345.69 | 1950.29 |
| 6349.22 | 1950.58 | 6350.47 | 1950.65 | 6353.86 | 1951 | 6358.58 | 1951.53 | 6369 | 1952.51 |
| 6372.72 | 1952.81 | 6373.51 | 1952.84 | 6374.75 | 1952.78 | 6376.44 | 1952.88 | 6381.63 | 1952.76 |
| 6396.01 | 1952.92 | 6401.58 | 1952.97 | 6403.06 | 1953 | 6439.3 | 1953 | 6448.29 | 1953.69 |
| 6450.78 | 1953.82 | 6452.34 | 1953.82 | 6453.95 | 1953.71 | 6455.21 | 1953 | 6455.81 | 1953 |
| 6460.5 | 1953.6 | 6464.29 | 1954 | 6469.48 | 1954.61 | 6473.01 | 1955 | 6481.76 | 1955 |
| 6490.66 | 1954.45 | 6499.6 | 1954 | 6503.4 | 1953.98 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 1946.57 | .045 | 1946.57 | .04 | 6503.4 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 1946.57 | 6503.4 | 118.41 | 118.41 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1938.86 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.11 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1938.75 | Reach Len. (ft) | 118.41 | 118.41 | 118.41 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8391.48 | | |
| E.G. Slope (ft/ft) | 0.001781 | Area (sq ft) | | 8391.48 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3774.65 | Top Width (ft) | | 3774.65 | | |
| Vel Total (ft/s) | 2.67 | Avg. Vel. (ft/s) | | 2.67 | | |
| Max Chl Dpth (ft) | 4.77 | Hydr. Depth (ft) | | 2.22 | | |
| Conv. Total (cfs) | 530744.4 | Conv. (cfs) | | 530744.4 | | |
| Length Wtd. (ft) | 118.41 | Wetted Per. (ft) | | 3777.21 | | |
| Min Ch El (ft) | 1933.98 | Shear (lb/sq ft) | | 0.25 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6503.40 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.19 | Cum Volume (acre-ft) | | 2513.21 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1202.06 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -5564.13

INPUT
Description:
Station Elevation Data num= 423

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 1961.37 | 1939 | 2008.09 | 1939 | 2032.14 | 1938 | 2040.17 | 1937.13 | 2050.25 | 1936 |
| 2053.77 | 1935.9 | 2077.73 | 1935.09 | 2080.26 | 1935 | 2098.9 | 1935 | 2102.58 | 1935.01 |
| 2178.15 | 1935.01 | 2183.96 | 1935 | 2204.83 | 1935.01 | 2218.93 | 1935.01 | 2219.1 | 1935.02 |
| 2230.17 | 1935.02 | 2255.68 | 1935.66 | 2266.54 | 1935.93 | 2271.43 | 1936.08 | 2282.56 | 1936.45 |
| 2282.86 | 1936.45 | 2288.59 | 1936.62 | 2293.57 | 1936.74 | 2306.49 | 1936.51 | 2334.21 | 1936 |
| 2342.29 | 1936 | 2356.84 | 1936.08 | 2359.13 | 1936.17 | 2381.34 | 1937 | 2567.37 | 1937 |
| 2587.45 | 1936.8 | 2618.27 | 1936.52 | 2618.78 | 1936.52 | 2636.32 | 1936.73 | 2658.49 | 1937 |
| 2718.68 | 1937 | 2725.92 | 1937.23 | 2734.73 | 1937.46 | 2743.78 | 1937.64 | 2750.94 | 1937.76 |
| 2761.57 | 1937.95 | 2763.74 | 1938 | 2769.72 | 1938.01 | 2786.92 | 1938.01 | 2793.71 | 1938 |
| 2798.87 | 1938.22 | 2800.64 | 1938.24 | 2806.51 | 1938.39 | 2810.6 | 1938.47 | 2823.33 | 1939 |
| 2888.53 | 1939 | 2914.08 | 1938.48 | 2916.84 | 1938.43 | 2937.21 | 1938 | 2951.04 | 1937.99 |
| 2955.89 | 1937.98 | 2967.87 | 1937.99 | 2971.27 | 1938 | 3010.54 | 1938 | 3014.47 | 1937.56 |
| 3018.61 | 1937 | 3023 | 1936.52 | 3025.38 | 1936.57 | 3028.52 | 1936.73 | 3031.84 | 1937 |
| 3040.16 | 1937.01 | 3046.03 | 1937 | 3052.33 | 1937 | 3055.11 | 1937.09 | 3058.22 | 1937.22 |
| 3060.55 | 1937.34 | 3070.17 | 1938 | 3072.58 | 1938.02 | 3074.98 | 1938.02 | 3080.65 | 1938.11 |
| 3096.26 | 1938.3 | 3111.39 | 1938.38 | 3122.53 | 1938.24 | 3140.04 | 1938 | 3163.01 | 1938 |
| 3167.33 | 1937.82 | 3170.76 | 1937.66 | 3185.84 | 1937 | 3239.3 | 1937 | 3245.15 | 1936.54 |
| 3246.28 | 1936.44 | 3251.84 | 1936 | 3265.23 | 1935.27 | 3265.66 | 1935.27 | 3270 | 1935.12 |
| 3273.81 | 1935.27 | 3276.71 | 1935.34 | 3280.26 | 1935.53 | 3283.9 | 1935.68 | 3288.77 | 1936 |
| 3297.23 | 1936.76 | 3300.01 | 1937 | 3307.05 | 1937.42 | 3310.98 | 1937.62 | 3314.22 | 1937.77 |
| 3320.54 | 1938 | 3325.2 | 1938.15 | 3328.54 | 1938.31 | 3333.79 | 1938.99 | 3347.38 | 1938.97 |
| 3353.64 | 1939 | 3354.61 | 1939.1 | 3356.35 | 1939.12 | 3358.31 | 1939.08 | 3363.12 | 1938 |
| 3368.06 | 1937.28 | 3370.57 | 1937 | 3373.83 | 1936.7 | 3377.95 | 1936.34 | 3379.3 | 1936.24 |
| 3381.35 | 1936 | 3385.36 | 1935.8 | 3404.17 | 1935 | 3411.31 | 1935 | 3426.53 | 1936 |
| 3435.41 | 1936.01 | 3438.35 | 1936 | 3479.46 | 1936 | 3480.32 | 1936.01 | 3492.19 | 1936.3 |
| 3503.91 | 1936.56 | 3504.41 | 1936.58 | 3509.45 | 1936.65 | 3514.35 | 1936.7 | 3526.1 | 1937 |
| 3548.24 | 1937 | 3561.06 | 1936 | 3561.57 | 1935.99 | 3576.44 | 1935.03 | 3578.17 | 1935 |
| 3587.41 | 1934.99 | 3592.76 | 1935 | 3602.05 | 1935.9 | 3603.89 | 1936.09 | 3611.49 | 1937 |
| 3623.47 | 1937.63 | 3630.17 | 1938 | 3756.54 | 1938 | 3773.01 | 1937.32 | 3778.96 | 1937.11 |
| 3782.53 | 1937 | 3788.38 | 1936.99 | 3806.71 | 1936.32 | 3813 | 1936.1 | 3819.06 | 1936 |
| 3820.44 | 1936 | 3840.29 | 1935.94 | 3843.26 | 1935.92 | 3850.11 | 1935.94 | 3853.83 | 1935.96 |
| 3863.18 | 1935.99 | 3879.96 | 1936.68 | 3884.31 | 1936.85 | 3886.79 | 1937 | 3899.08 | 1937 |
| 3907.46 | 1936.26 | 3910.52 | 1936 | 3911.13 | 1935.97 | 3928.42 | 1935.29 | 3932.39 | 1935.22 |
| 3934.1 | 1935.22 | 3938.94 | 1935.19 | 3942.26 | 1935.16 | 3948.51 | 1935 | 4049.24 | 1935 |
| 4060.14 | 1934.67 | 4067.48 | 1934.36 | 4075.77 | 1934 | 4076.76 | 1934 | 4090.42 | 1933.37 |
| 4093.36 | 1933.22 | 4098.37 | 1933 | 4120.32 | 1933 | 4127.92 | 1933.29 | 4139.6 | 1933.71 |
| 4146.04 | 1933.95 | 4147.85 | 1934 | 4187.76 | 1934 | 4227.15 | 1934.98 | 4227.72 | 1935 |
| 4250.61 | 1935 | 4250.79 | 1934.99 | 4296.45 | 1934.99 | 4299 | 1935 | 4525.97 | 1935 |
| 4528.59 | 1934.96 | 4531.73 | 1934.96 | 4545.06 | 1934.64 | 4545.9 | 1934.63 | 4557.9 | 1934.41 |
| 4565.51 | 1934.31 | 4569.15 | 1934.28 | 4576.36 | 1934.32 | 4585.88 | 1934.38 | 4595.85 | 1934.43 |
| 4599.16 | 1934.52 | 4605.52 | 1934.54 | 4615.92 | 1934.88 | 4619.23 | 1935 | 4623.59 | 1935 |
| 4627.22 | 1934.64 | 4633.53 | 1934 | 4633.63 | 1934 | 4645.33 | 1933.5 | 4650.9 | 1933.31 |
| 4658.74 | 1933.01 | 4659.96 | 1933 | 4683.46 | 1933 | 4688.57 | 1933.16 | 4701.18 | 1933.52 |
| 4713.86 | 1933.97 | 4721.88 | 1934 | 4733.1 | 1934 | 4738.62 | 1934.01 | 4745.4 | 1934.01 |
| 4754.95 | 1933.99 | 4758.38 | 1934 | 4758.94 | 1934.07 | 4767.32 | 1935 | 4776.85 | 1935.66 |
| 4779.01 | 1935.8 | 4783.6 | 1936 | 4787.42 | 1936.12 | 4795.27 | 1936.32 | 4797.32 | 1936.36 |
| 4800.02 | 1936.35 | 4803.11 | 1936.24 | 4806.7 | 1936 | 4810.97 | 1935.87 | 4817.4 | 1935.76 |
| 4819.04 | 1935.72 | 4826.69 | 1935.43 | 4828.01 | 1935.37 | 4833.46 | 1935.03 | 4837.18 | 1935 |
| 4840.38 | 1934.99 | 4846.8 | 1934.99 | 4850.36 | 1935 | 4854.23 | 1935.24 | 4860.66 | 1935.57 |
| 4866.57 | 1936 | 4869.37 | 1936.18 | 4873.3 | 1936.35 | 4875.7 | 1936.5 | 4881.61 | 1937 |
| 4883.27 | 1937.13 | 4892.98 | 1938 | 4895.86 | 1938.05 | 4900.95 | 1938.09 | 4903.02 | 1938.13 |
| 4905.76 | 1938.12 | 4909.23 | 1938.32 | 4920.21 | 1938.32 | 4921.78 | 1938.3 | 4933.17 | 1938.2 |
| 4933.88 | 1938.18 | 4939.72 | 1938.14 | 4941 | 1938.1 | 4945.07 | 1938.1 | 4950.9 | 1938.12 |
| 4954.01 | 1938 | 4960.37 | 1938 | 4968.55 | 1937.98 | 4972.56 | 1937.95 | 4976.45 | 1937.97 |
| 4978.85 | 1937.97 | 4980.25 | 1938 | 4990.9 | 1938.03 | 4993.85 | 1938.03 | 4998.67 | 1938.01 |
| 5005.87 | 1938 | 5011.27 | 1937.97 | 5019.57 | 1937.91 | 5028.32 | 1937.97 | 5034.33 | 1938 |
| 5041.87 | 1938.09 | 5069.49 | 1938.15 | 5093.57 | 1938.2 | 5103.96 | 1938.14 | 5110.54 | 1938.13 |
| 5142.73 | 1938.03 | 5153.41 | 1938 | 5188.47 | 1938 | 5190.94 | 1937.99 | 5199.12 | 1937.99 |
| 5203.26 | 1938 | 5219.05 | 1938 | 5222.72 | 1937.83 | 5239.12 | 1937.03 | 5239.55 | 1937 |
| 5242.36 | 1936.99 | 5247.06 | 1936.99 | 5248.45 | 1937 | 5262.75 | 1937 | 5264.89 | 1936.91 |
| 5273.72 | 1936.99 | 5278.17 | 1936.98 | 5287.43 | 1936.84 | 5294.35 | 1936.92 | 5298.37 | 1937 |
| 5305.34 | 1937.32 | 5311.85 | 1937.65 | 5316.38 | 1937.93 | 5318.15 | 1938 | 5328.35 | 1938.01 |
| 5339.92 | 1938.01 | 5351.66 | 1938 | 5360.29 | 1938 | 5366.02 | 1937.93 | 5378.63 | 1937.27 |
| 5382.19 | 1937.1 | 5385.51 | 1937 | 5593.99 | 1937 | 5604.97 | 1936.8 | 5612.58 | 1936.69 |
| 5660.78 | 1936.01 | 5662.34 | 1936 | 5676.41 | 1935.78 | 5679.44 | 1935.72 | 5683.02 | 1935.67 |
| 5686.28 | 1935.61 | 5721.12 | 1935.01 | 5722.09 | 1935 | 5821.27 | 1935 | 5841.15 | 1935.04 |
| 5868.04 | 1935.26 | 5870.65 | 1935.32 | 5874.11 | 1935.32 | 5879.85 | 1935.46 | 5881.15 | 1935.48 |
| 5887.8 | 1935.67 | 5898.4 | 1936 | 5900.52 | 1936.01 | 5910.77 | 1936.44 | 5912.62 | 1936.51 |
| 5914.21 | 1936.54 | 5919.69 | 1936.7 | 5926.66 | 1937 | 5938.18 | 1937.11 | 5944.32 | 1937.08 |
| 5949.16 | 1937.08 | 5952.41 | 1937.12 | 5955.49 | 1937.14 | 5960.89 | 1937.14 | 5964.64 | 1937.27 |
| 5973.9 | 1937.35 | 5981.33 | 1937.4 | 5986.88 | 1937.41 | 5992.14 | 1937.4 | 6003.34 | 1937.29 |
| 6019.83 | 1937.11 | 6027.75 | 1937 | 6064.87 | 1936.58 | 6065.35 | 1936.57 | 6088.8 | 1936.3 |
| 6096.14 | 1936.19 | 6099.44 | 1936.15 | 6104 | 1936.12 | 6108.48 | 1936.11 | 6125.81 | 1936.2 |
| 6140.85 | 1936.38 | 6191.25 | 1937 | 6195.3 | 1937 | 6204.72 | 1937.41 | 6208.66 | 1937.62 |
| 6216.01 | 1938 | 6224.01 | 1938.26 | 6241.3 | 1938.84 | 6246.17 | 1939 | 6247.29 | 1939.06 |
| 6267.62 | 1940 | 6280.71 | 1941 | 6287.35 | 1941.42 | 6295.75 | 1942 | 6300.83 | 1943.53 |
| 6305.66 | 1945 | 6309.29 | 1946.07 | 6312.79 | 1947 | 6315.44 | 1947.56 | 6317.96 | 1948 |
| 6324.62 | 1948.61 | 6329.27 | 1949 | 6330.17 | 1949.02 | 6334 | 1949.33 | 6337.16 | 1949.47 |
| 6340.57 | 1949.51 | 6342.39 | 1949.6 | 6344.76 | 1949.67 | 6347.11 | 1949.8 | 6359.02 | 1950 |
| 6361.37 | 1950.12 | 6362.44 | 1950.26 | 6364.52 | 1950.66 | 6366.79 | 1951 | 6371.09 | 1951.24 |
| 6379.83 | 1951.7 | 6388.41 | 1952.13 | 6392.13 | 1952.07 | 6396.77 | 1951.97 | 6404.23 | 1951.6 |
| 6416.92 | 1951 | 6419.53 | 1951.01 | 6437.65 | 1951.29 | 6448.12 | 1951.44 | 6455.01 | 1951.62 |
| 6455.58 | 1951.62 | 6459.73 | 1951.73 | 6461.56 | 1951.79 | 6466.76 | 1952 | 6468.29 | 1952.01 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6473.46 | 1952.01 | 6479.6 | 1952 | 6480.63 | 1952.02 | 6483.45 | 1952 | 6485.55 | 1952.09 |
| 6494.53 | 1953 | 6512.7 | 1954 | 6532.69 | 1954 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 1961.37 | .045 | 1961.37 | .04 | 6532.69 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 1961.37 | 6532.69 | 132.63 | 132.63 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1938.66 | Element | Left OB | Channel | Right OB |
| Vel Head (ft) | 0.09 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1938.56 | Reach Len. (ft) | 132.63 | 132.63 | 132.63 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 9095.63 | |
| E.G. Slope (ft/ft) | 0.001514 | Area (sq ft) | | 9095.63 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 4087.36 | Top Width (ft) | | 4087.36 | |
| Vel Total (ft/s) | 2.46 | Avg. Vel. (ft/s) | | 2.46 | |
| Max Chl Dpth (ft) | 5.56 | Hydr. Depth (ft) | | 2.23 | |
| Conv. Total (cfs) | 575757.6 | Conv. (cfs) | | 575757.6 | |
| Length Wtd. (ft) | 132.63 | Wetted Per. (ft) | | 4089.08 | |
| Min Ch El (ft) | 1933.00 | Shear (lb/sq ft) | | 0.21 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6532.69 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.20 | Cum Volume (acre-ft) | | 2489.44 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1191.38 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -5696.76

INPUT
Description:
Station Elevation Data num= 442

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2002.59 | 1939 | 2035.29 | 1939 | 2048.3 | 1938.35 | 2054.68 | 1938 | 2060.71 | 1937.2 |
| 2062.69 | 1937 | 2070.99 | 1935.52 | 2073.55 | 1935.13 | 2080.15 | 1935.04 | 2085.35 | 1935.08 |
| 2095.84 | 1935 | 2252.76 | 1935 | 2282.91 | 1936 | 2289.07 | 1936.13 | 2296.33 | 1936 |
| 2325.11 | 1936 | 2335.64 | 1936.08 | 2378.17 | 1936.34 | 2378.8 | 1936.34 | 2388.07 | 1936.68 |
| 2396.52 | 1937 | 2552.84 | 1937 | 2555.79 | 1936.98 | 2572.3 | 1936.69 | 2581.84 | 1936.59 |
| 2617.15 | 1936.25 | 2626.82 | 1936.16 | 2627.7 | 1936.16 | 2646.26 | 1936.39 | 2653.9 | 1936.4 |
| 2662.01 | 1936.4 | 2665.47 | 1936.46 | 2675.99 | 1936.71 | 2684.51 | 1936.96 | 2686.98 | 1936.96 |
| 2691.13 | 1937 | 2717.51 | 1937 | 2724.11 | 1936.96 | 2738.82 | 1936.95 | 2755.56 | 1936.95 |
| 2760.92 | 1937 | 2770.6 | 1937.14 | 2774.54 | 1937.22 | 2784.47 | 1937.36 | 2791.22 | 1937.4 |
| 2792.12 | 1937.43 | 2794.88 | 1937.46 | 2804.9 | 1937.7 | 2814.43 | 1938 | 2826.35 | 1938.48 |
| 2839.18 | 1938.88 | 2843.3 | 1939 | 2897.51 | 1939 | 2903.14 | 1938.92 | 2915.74 | 1938.66 |
| 2935.4 | 1938.28 | 2946.85 | 1938 | 2953.7 | 1938 | 2984.52 | 1937.37 | 2995.8 | 1937.23 |
| 2996.8 | 1937.16 | 2999.88 | 1937 | 3012.95 | 1936.99 | 3016.44 | 1936.98 | 3021.84 | 1936.98 |
| 3025.92 | 1936.99 | 3082.1 | 1936.99 | 3082.95 | 1937 | 3089.02 | 1936.99 | 3098.45 | 1937 |
| 3105.63 | 1937 | 3139.64 | 1937.93 | 3142.09 | 1938 | 3181.63 | 1938 | 3185.74 | 1937.88 |
| 3204.61 | 1937.24 | 3211.65 | 1937.01 | 3233.27 | 1937.01 | 3243.42 | 1937.37 | 3252.31 | 1937.21 |
| 3257.88 | 1937.04 | 3264.01 | 1937 | 3268.66 | 1936.28 | 3270.28 | 1936 | 3274.19 | 1935.39 |
| 3276.4 | 1935 | 3279.92 | 1935 | 3283.37 | 1935.32 | 3284.91 | 1935.39 | 3286.56 | 1935.4 |
| 3287.99 | 1935.45 | 3291.46 | 1935.48 | 3297.37 | 1936.08 | 3304.95 | 1937.36 | 3308.34 | 1938 |
| 3325.96 | 1938.91 | 3328.88 | 1939 | 3335.51 | 1939 | 3345.6 | 1940 | 3353.29 | 1940.86 |
| 3359.62 | 1941.61 | 3363.16 | 1941.74 | 3364.29 | 1941.72 | 3367.58 | 1941.4 | 3371.17 | 1941.03 |
| 3382.48 | 1941.02 | 3388.77 | 1941 | 3389.42 | 1940.82 | 3391.8 | 1940 | 3395.23 | 1939 |
| 3396.68 | 1938.61 | 3401.37 | 1937.24 | 3402.27 | 1937 | 3405.76 | 1936.46 | 3408.13 | 1936 |
| 3409.22 | 1935.93 | 3412.94 | 1935.77 | 3429.72 | 1935.02 | 3441.78 | 1935.01 | 3444.83 | 1935.23 |
| 3450.25 | 1935.3 | 3456.81 | 1935.31 | 3464.51 | 1935.34 | 3475.99 | 1935.46 | 3482.38 | 1935.52 |
| 3491.61 | 1935.59 | 3505.99 | 1935.56 | 3524.07 | 1935.49 | 3529.85 | 1935.32 | 3532.77 | 1935.33 |
| 3538.33 | 1935.4 | 3543.26 | 1935.23 | 3549.55 | 1935 | 3569.96 | 1934.98 | 3585.91 | 1934.43 |
| 3590 | 1934.47 | 3592.81 | 1934.54 | 3601.56 | 1935 | 3606.69 | 1935.19 | 3620.57 | 1936 |
| 3634.98 | 1936.68 | 3644.01 | 1937 | 3650.4 | 1937.05 | 3654.24 | 1937.07 | 3657.93 | 1937.05 |
| 3665.13 | 1937.08 | 3669.03 | 1937.06 | 3672.92 | 1937.13 | 3679.83 | 1937.28 | 3680.82 | 1937.32 |
| 3685.04 | 1937.37 | 3701.09 | 1937.64 | 3705.76 | 1937.64 | 3707.1 | 1937.62 | 3710.04 | 1937.63 |
| 3714.66 | 1937.62 | 3719.02 | 1937.57 | 3724.29 | 1937.53 | 3730.08 | 1937.55 | 3737.28 | 1937.46 |
| 3741.03 | 1937.46 | 3743.92 | 1937.49 | 3747.25 | 1937.57 | 3749.49 | 1937.54 | 3757.27 | 1937.72 |
| 3770.5 | 1938 | 3804.85 | 1938 | 3805.64 | 1937.96 | 3818.65 | 1937.17 | 3821.34 | 1937 |
| 3823.67 | 1936.96 | 3845.82 | 1936.53 | 3850.97 | 1936.36 | 3860.56 | 1936 | 3869.98 | 1935.53 |
| 3880.32 | 1935 | 3884.4 | 1935 | 3886.35 | 1935.58 | 3888.07 | 1936 | 3892.74 | 1936.81 |
| 3896.03 | 1937.31 | 3898.24 | 1937.55 | 3899.39 | 1937.59 | 3901.23 | 1937.53 | 3904.35 | 1937.29 |
| 3908.34 | 1936.9 | 3916.03 | 1936 | 3917.7 | 1935.58 | 3920.57 | 1936 | 3939.82 | 1936 |
| 3941.3 | 1936.1 | 3950.58 | 1936.26 | 3957.17 | 1936.36 | 3957.79 | 1936.35 | 3963.82 | 1936 |
| 3972.17 | 1935.69 | 3986.91 | 1935.06 | 3988.49 | 1935 | 3992.04 | 1934.97 | 4003.72 | 1934.7 |
| 4003.85 | 1934.69 | 4014.86 | 1934.44 | 4042.1 | 1934.35 | 4060.53 | 1934.46 | 4065.27 | 1934.48 |
| 4086.61 | 1934.41 | 4115.13 | 1934.31 | 4115.98 | 1934.29 | 4119.6 | 1934.31 | 4120.64 | 1934.29 |
| 4128.3 | 1934.03 | 4132.75 | 1934 | 4157.08 | 1933 | 4161.64 | 1933 | 4166.88 | 1933.13 |
| 4189.41 | 1933.84 | 4195.88 | 1934 | 4296.17 | 1934 | 4299.61 | 1934.03 | 4306.51 | 1934.01 |
| 4309.65 | 1934.02 | 4312.49 | 1934.07 | 4316.3 | 1934.22 | 4324.27 | 1934.48 | 4332.87 | 1934.81 |
| 4339.55 | 1935 | 4432.44 | 1935 | 4441.07 | 1934.98 | 4463.84 | 1934.73 | 4486.08 | 1934.52 |
| 4489.12 | 1934.52 | 4502.91 | 1934.35 | 4508.68 | 1934.29 | 4529.8 | 1934.38 | 4538.88 | 1934.57 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4546.85 | 1934.71 | 4552.56 | 1934.84 | 4557.93 | 1934.89 | 4559.63 | 1934.93 | 4571.52 | 1935 |
| 4619.15 | 1935 | 4643.17 | 1934.58 | 4651.23 | 1934.41 | 4664.09 | 1934.17 | 4669.94 | 1934 |
| 4678.62 | 1933.76 | 4690.97 | 1933.32 | 4695.07 | 1933.19 | 4700.41 | 1933 | 4705.65 | 1932.99 |
| 4737.05 | 1932.99 | 4744.35 | 1933 | 4749.79 | 1933 | 4760.85 | 1933.02 | 4770.14 | 1933 |
| 4775.72 | 1932.88 | 4778.65 | 1932.88 | 4780.94 | 1933 | 4783.2 | 1933.45 | 4785.64 | 1934 |
| 4790.1 | 1934.91 | 4791.38 | 1935.11 | 4796.99 | 1935.46 | 4804.78 | 1935.99 | 4806.17 | 1936 |
| 4809.11 | 1936.18 | 4817.55 | 1937 | 4820.11 | 1937.04 | 4825 | 1937.05 | 4832.43 | 1937.01 |
| 4843.72 | 1936.99 | 4853.7 | 1937 | 4865.04 | 1937.31 | 4866.93 | 1937.35 | 4874.67 | 1937.6 |
| 4885.14 | 1938 | 4887.04 | 1938.27 | 4902.23 | 1938.06 | 4907.23 | 1938.07 | 4919.21 | 1938.03 |
| 4933.47 | 1938 | 4949.81 | 1937.22 | 4953.49 | 1937 | 4957.35 | 1936.96 | 4962.09 | 1936.74 |
| 4965.04 | 1936.69 | 4969.36 | 1936.72 | 4974.25 | 1936.84 | 4976.5 | 1937 | 4981.64 | 1937.05 |
| 4988.22 | 1937 | 5008.41 | 1937 | 5011.04 | 1937.01 | 5038.73 | 1937.6 | 5048.31 | 1937.79 |
| 5051.34 | 1937.84 | 5056.31 | 1938 | 5132.02 | 1938 | 5137.9 | 1937.99 | 5144.51 | 1937.99 |
| 5150.27 | 1938 | 5186.69 | 1938 | 5204.72 | 1937 | 5210.51 | 1936.55 | 5212.53 | 1936.36 |
| 5216.99 | 1936 | 5258.79 | 1936 | 5268.58 | 1936.71 | 5272.09 | 1936.84 | 5275.4 | 1936.99 |
| 5283.42 | 1936.99 | 5288.51 | 1936.98 | 5295.51 | 1937 | 5302.48 | 1937 | 5314.85 | 1937.07 |
| 5321.22 | 1937.04 | 5327.57 | 1937 | 5340.49 | 1936.35 | 5352.1 | 1936 | 5414.42 | 1936 |
| 5416.56 | 1936.05 | 5424.02 | 1936.13 | 5425.48 | 1936.16 | 5433.69 | 1936.27 | 5456.11 | 1936.61 |
| 5464.42 | 1936.73 | 5482.63 | 1936.89 | 5494.05 | 1937 | 5496.65 | 1937 | 5501.06 | 1937.52 |
| 5505.71 | 1938 | 5513.68 | 1938.74 | 5516.28 | 1939 | 5522.36 | 1939 | 5527.61 | 1938.41 |
| 5531.03 | 1938 | 5534.41 | 1937.55 | 5538.16 | 1937 | 5543.3 | 1937 | 5565.78 | 1936.74 |
| 5583.57 | 1936.53 | 5591.85 | 1936.48 | 5602.49 | 1936.3 | 5608.51 | 1936.18 | 5611.84 | 1936.15 |
| 5618.7 | 1936.01 | 5620.87 | 1936 | 5667.9 | 1935.5 | 5681.06 | 1935.37 | 5702.63 | 1935.15 |
| 5716.95 | 1935 | 5846.52 | 1935 | 5859.1 | 1935.35 | 5860.84 | 1935.37 | 5864.96 | 1935.5 |
| 5877.32 | 1936 | 5893.87 | 1936 | 5900.08 | 1936.05 | 5904.06 | 1936.07 | 5916.18 | 1936.15 |
| 5919.67 | 1936.18 | 5928.92 | 1936.29 | 5934.83 | 1936.35 | 5946.7 | 1936.42 | 5952.47 | 1936.43 |
| 5962.38 | 1936.43 | 5962.62 | 1936.42 | 5970.03 | 1936.43 | 5989.18 | 1936.38 | 6013.9 | 1936.28 |
| 6034.9 | 1936.17 | 6037.84 | 1936.15 | 6054.96 | 1936 | 6069.17 | 1936 | 6073.6 | 1936.06 |
| 6080.29 | 1936.03 | 6083.08 | 1936.05 | 6096.89 | 1936.1 | 6110.04 | 1936.1 | 6116.51 | 1936.05 |
| 6118.6 | 1936.05 | 6120.78 | 1936.1 | 6124.52 | 1936.14 | 6134.23 | 1936.35 | 6147.52 | 1936.58 |
| 6157.39 | 1936.64 | 6171.78 | 1936.84 | 6179.38 | 1937 | 6198.79 | 1937.92 | 6201.83 | 1938 |
| 6202.84 | 1938.05 | 6219.03 | 1938.73 | 6231.46 | 1939.9 | 6234.18 | 1940.17 | 6240.28 | 1941 |
| 6242.28 | 1941.19 | 6252.13 | 1942 | 6260.18 | 1942.73 | 6263.34 | 1943 | 6269.12 | 1943.76 |
| 6270.64 | 1944 | 6273.28 | 1944.05 | 6275.79 | 1944.2 | 6276.32 | 1944.21 | 6277.89 | 1944.46 |
| 6280.17 | 1944.86 | 6280.84 | 1944.93 | 6286.57 | 1946.68 | 6290.98 | 1948 | 6292.46 | 1948.46 |
| 6300.59 | 1950.92 | 6300.79 | 1951 | 6302.87 | 1951 | 6310.15 | 1950.01 | 6310.68 | 1949.95 |
| 6314.38 | 1949.42 | 6317.45 | 1949 | 6318.47 | 1948.99 | 6319.45 | 1948.9 | 6324.46 | 1949 |
| 6332.3 | 1949.12 | 6340.73 | 1949.27 | 6342.25 | 1949.28 | 6345.78 | 1949.43 | 6350.86 | 1950 |
| 6358.38 | 1950.75 | 6360.72 | 1951 | 6363.56 | 1951.24 | 6374.37 | 1952 | 6380.5 | 1952.95 |
| 6386.39 | 1954 | 6392.78 | 1954.02 | 6397.05 | 1954 | 6401.93 | 1954 | 6412.86 | 1955 |
| 6429.09 | 1955 | 6442.99 | 1954.46 | 6446.95 | 1954.35 | 6453.13 | 1954.16 | 6461.42 | 1954 |
| 6477.7 | 1954 | 6482.41 | 1953.99 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2002.59 | .045 | 2002.59 | .04 | 6482.41 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2002.59 | 6482.41 | 236.43 | 236.43 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1938.46 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.09 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1938.37 | Reach Len. (ft) | 236.43 | 236.43 | 236.43 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 9106.38 | | |
| E.G. Slope (ft/ft) | 0.001443 | Area (sq ft) | | 9106.38 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3955.03 | Top Width (ft) | | 3955.03 | | |
| Vel Total (ft/s) | 2.46 | Avg. Vel. (ft/s) | | 2.46 | | |
| Max Chl Dpth (ft) | 5.49 | Hydr. Depth (ft) | | 2.30 | | |
| Conv. Total (cfs) | 589604.4 | Conv. (cfs) | | 589604.4 | | |
| Length Wtd. (ft) | 236.43 | Wetted Per. (ft) | | 3957.55 | | |
| Min Ch El (ft) | 1932.88 | Shear (lb/sq ft) | | 0.21 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6482.41 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.40 | Cum Volume (acre-ft) | | 2461.73 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1179.13 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -5933.19

INPUT
Description:
Station Elevation Data num= 435

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2058.53 | 1939 | 2062.04 | 1938.92 | 2074.07 | 1938.34 | 2075.29 | 1938.29 | 2081.25 | 1938 |
| 2081.79 | 1937.92 | 2089.8 | 1937 | 2095.86 | 1935.74 | 2099.99 | 1935 | 2101.99 | 1934.99 |
| 2105.64 | 1934.99 | 2109.27 | 1935 | 2116.42 | 1935.07 | 2121.96 | 1935 | 2274.5 | 1935 |
| 2313.96 | 1935.99 | 2314.32 | 1936 | 2335.57 | 1936 | 2338.49 | 1936.02 | 2374.11 | 1936.29 |
| 2406.77 | 1936.49 | 2407.45 | 1936.49 | 2420.98 | 1936.99 | 2421.58 | 1937 | 2539.27 | 1937 |
| 2550.66 | 1936.93 | 2558.67 | 1936.91 | 2571.45 | 1936.9 | 2580.48 | 1936.86 | 2586.99 | 1936.81 |
| 2594.56 | 1936.72 | 2595.84 | 1936.71 | 2599.39 | 1936.65 | 2621.15 | 1936.27 | 2629.64 | 1936.13 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2629.88 | 1936.12 | 2637.54 | 1936 | 2639.51 | 1935.92 | 2644.29 | 1935.75 | 2646.81 | 1935.67 |
| 2648.81 | 1935.62 | 2651.71 | 1935.59 | 2653.7 | 1935.62 | 2659.08 | 1935.72 | 2660.88 | 1935.74 |
| 2662.4 | 1935.72 | 2671.51 | 1935.93 | 2673.83 | 1935.91 | 2681.28 | 1936 | 2688 | 1936.38 |
| 2691.33 | 1936.58 | 2698.51 | 1937 | 2707.34 | 1937 | 2709.57 | 1936.96 | 2712.67 | 1936.92 |
| 2726.48 | 1936.72 | 2752.13 | 1936.59 | 2772.73 | 1936.58 | 2782.03 | 1936.67 | 2795.38 | 1937 |
| 2811.13 | 1937 | 2837.33 | 1938 | 2841.11 | 1938.1 | 2853.58 | 1938.42 | 2860.11 | 1938.47 |
| 2868.41 | 1938.55 | 2885.38 | 1938.7 | 2893.6 | 1938.77 | 2895.3 | 1938.79 | 2900.82 | 1938.79 |
| 2904.44 | 1938.75 | 2906.82 | 1938.77 | 2912.72 | 1938.72 | 2921.47 | 1938.64 | 2937.4 | 1938.48 |
| 2942.85 | 1938.4 | 2951.19 | 1938.32 | 2968.86 | 1938 | 2984.95 | 1937.99 | 2994.41 | 1937.99 |
| 3000.39 | 1938 | 3004.06 | 1938 | 3009.37 | 1938.01 | 3011.11 | 1938 | 3016.39 | 1937.72 |
| 3030.66 | 1937 | 3035.69 | 1937 | 3065.36 | 1936.99 | 3095.35 | 1937 | 3142.18 | 1937 |
| 3145.97 | 1937.1 | 3163.01 | 1937.45 | 3172.15 | 1937.61 | 3177.04 | 1937.7 | 3182.14 | 1937.82 |
| 3184.64 | 1937.87 | 3188.55 | 1938 | 3190.39 | 1937.9 | 3193.22 | 1937.84 | 3202.5 | 1937.73 |
| 3205.01 | 1937.66 | 3215.15 | 1937.51 | 3222.33 | 1937.37 | 3228.71 | 1937.21 | 3233.88 | 1937.07 |
| 3236.05 | 1937 | 3243.68 | 1937 | 3251.67 | 1937.37 | 3251.74 | 1937.38 | 3256.97 | 1937.63 |
| 3262.47 | 1938 | 3264.3 | 1938 | 3265.19 | 1938.07 | 3266.01 | 1938.01 | 3267.34 | 1937.99 |
| 3268.67 | 1937.87 | 3285.15 | 1937 | 3289.65 | 1936.97 | 3307.53 | 1937.02 | 3310.96 | 1937.02 |
| 3311.74 | 1937.03 | 3322.32 | 1937.45 | 3329.83 | 1937.73 | 3337.21 | 1938 | 3340.11 | 1938.39 |
| 3340.41 | 1938.39 | 3349.79 | 1938.74 | 3354.2 | 1939 | 3357.32 | 1939.24 | 3362.78 | 1939.57 |
| 3370.25 | 1940 | 3372.47 | 1940.29 | 3374.99 | 1940.58 | 3376.13 | 1940.75 | 3378.12 | 1941 |
| 3380.03 | 1941.21 | 3380.94 | 1941.34 | 3383.69 | 1941.65 | 3384.64 | 1941.77 | 3388.64 | 1942.22 |
| 3391.13 | 1942.47 | 3393.43 | 1942.64 | 3394.83 | 1942.6 | 3396.61 | 1942.41 | 3399.71 | 1942 |
| 3406.13 | 1941 | 3407.25 | 1940.81 | 3409.49 | 1940.37 | 3411.59 | 1940 | 3415.82 | 1939.36 |
| 3418.06 | 1939 | 3419.57 | 1938.8 | 3423.14 | 1938.2 | 3427.18 | 1937.44 | 3429.43 | 1937 |
| 3432.26 | 1936.86 | 3441.08 | 1936 | 3451.57 | 1935.3 | 3452.16 | 1935.29 | 3455.93 | 1935 |
| 3464.08 | 1934.42 | 3469.09 | 1934.17 | 3471.01 | 1934.14 | 3472.27 | 1934.16 | 3477.34 | 1934.38 |
| 3483.49 | 1934.66 | 3485.51 | 1934.78 | 3490.32 | 1935 | 3507.14 | 1935.01 | 3524.07 | 1935.03 |
| 3532.81 | 1935.03 | 3554.16 | 1935.01 | 3583 | 1935.01 | 3585.87 | 1935 | 3595.87 | 1935 |
| 3597.65 | 1934.99 | 3601.19 | 1934.99 | 3603.32 | 1935 | 3611.38 | 1935.01 | 3630.75 | 1935.57 |
| 3646.98 | 1935.84 | 3656.78 | 1936 | 3662.36 | 1936.19 | 3666.35 | 1936.3 | 3673.85 | 1936.43 |
| 3693.85 | 1936.8 | 3702.16 | 1937 | 3708.8 | 1937 | 3717.57 | 1936.88 | 3717.77 | 1936.89 |
| 3735.78 | 1936.94 | 3737.2 | 1936.95 | 3744.79 | 1936.97 | 3750.64 | 1937 | 3794.95 | 1937 |
| 3797.63 | 1937.06 | 3803.32 | 1937.23 | 3805.35 | 1937.3 | 3809.25 | 1937.4 | 3811.05 | 1937.47 |
| 3827.1 | 1937.97 | 3830.46 | 1937.97 | 3836.33 | 1937.57 | 3838.8 | 1937.48 | 3839.5 | 1937.47 |
| 3842.17 | 1937.34 | 3850.67 | 1937.05 | 3854.62 | 1937.05 | 3856.5 | 1937.04 | 3862.64 | 1937.04 |
| 3866.75 | 1937.02 | 3868.75 | 1937 | 3871.21 | 1936.85 | 3884.48 | 1936 | 3894.43 | 1935.61 |
| 3894.55 | 1935.61 | 3907.06 | 1935.33 | 3911.06 | 1935.42 | 3917.68 | 1935.63 | 3926.92 | 1935.88 |
| 3928.32 | 1935.93 | 3930.04 | 1935.96 | 3931.12 | 1936 | 3934.68 | 1935.99 | 3936.68 | 1936.01 |
| 3938.83 | 1936.01 | 3946.32 | 1936.26 | 3956.76 | 1936.6 | 3966.01 | 1936.82 | 3973.23 | 1937 |
| 3990.04 | 1937 | 3992.7 | 1936.84 | 4004.03 | 1936 | 4007.93 | 1935.79 | 4008.69 | 1935.74 |
| 4022.89 | 1935.05 | 4023.78 | 1935 | 4033.9 | 1934.68 | 4041.97 | 1934.44 | 4056.27 | 1934 |
| 4076.1 | 1934 | 4093.32 | 1934.22 | 4093.54 | 1934.23 | 4107.08 | 1934.37 | 4110.49 | 1934.42 |
| 4131.19 | 1934.4 | 4154.2 | 1934.36 | 4157.37 | 1934.29 | 4163.43 | 1934.2 | 4171.56 | 1934.01 |
| 4177.86 | 1934.01 | 4185.74 | 1934 | 4195.9 | 1934 | 4201.47 | 1933.79 | 4224.53 | 1933.18 |
| 4227.76 | 1933.11 | 4231.31 | 1933.13 | 4235.8 | 1933.18 | 4240.16 | 1933.19 | 4245.5 | 1933.28 |
| 4250.84 | 1933.32 | 4257.42 | 1933.38 | 4259.66 | 1933.42 | 4272.12 | 1933.54 | 4282.26 | 1933.66 |
| 4291.16 | 1933.78 | 4303.3 | 1933.99 | 4303.57 | 1934 | 4332.45 | 1934 | 4351.06 | 1934.3 |
| 4351.35 | 1934.3 | 4375.54 | 1934.57 | 4383.97 | 1934.65 | 4390.25 | 1934.7 | 4399.71 | 1934.99 |
| 4409.37 | 1934.99 | 4410.62 | 1934.98 | 4424.77 | 1934.98 | 4429.81 | 1934.97 | 4434.97 | 1934.98 |
| 4439.97 | 1934.98 | 4464.29 | 1934.7 | 4489.95 | 1934.43 | 4491.34 | 1934.42 | 4509.58 | 1934.49 |
| 4535.06 | 1934.59 | 4541.36 | 1934.59 | 4549.48 | 1934.5 | 4563.48 | 1934.34 | 4570.75 | 1934.39 |
| 4580.38 | 1934.36 | 4591.31 | 1934.31 | 4592.49 | 1934.3 | 4606.3 | 1934 | 4646.7 | 1934 |
| 4655.96 | 1933.65 | 4676.04 | 1933 | 4681.39 | 1932.89 | 4684.44 | 1932.84 | 4696.87 | 1932.66 |
| 4705.11 | 1932.56 | 4714.82 | 1932.55 | 4725.01 | 1932.58 | 4728.93 | 1932.64 | 4733.66 | 1932.7 |
| 4745.22 | 1932.93 | 4748.22 | 1933 | 4753.85 | 1933.02 | 4759.3 | 1933 | 4761.75 | 1933 |
| 4765.02 | 1934 | 4772.37 | 1936.04 | 4773.61 | 1936.11 | 4788.06 | 1937 | 4802.13 | 1937 |
| 4804.95 | 1936.82 | 4824.28 | 1936.34 | 4834.28 | 1936.42 | 4834.81 | 1936.44 | 4859.83 | 1937 |
| 4860.92 | 1937 | 4873.87 | 1936.76 | 4878.61 | 1936.66 | 4890.35 | 1936.42 | 4910.08 | 1936 |
| 4918.59 | 1935.72 | 4919.98 | 1935.67 | 4928.63 | 1935.39 | 4932.21 | 1935.29 | 4936.1 | 1935.16 |
| 4940.77 | 1935.03 | 4942.7 | 1935 | 4956.79 | 1935 | 4960.54 | 1935.09 | 4962.47 | 1935.15 |
| 4965.87 | 1935.2 | 4971.27 | 1935.29 | 4974.22 | 1935.36 | 4981.61 | 1935.45 | 4993.92 | 1935.61 |
| 5004.97 | 1935.83 | 5021.9 | 1935.98 | 5029.33 | 1936.03 | 5036.26 | 1936.05 | 5036.32 | 1936.06 |
| 5048.02 | 1936.05 | 5050.89 | 1936.01 | 5053.23 | 1936 | 5058 | 1935.85 | 5062.41 | 1935.75 |
| 5065.67 | 1935.66 | 5073.11 | 1935.41 | 5073.97 | 1935.42 | 5077.65 | 1935.31 | 5079.48 | 1935.32 |
| 5082.14 | 1935.4 | 5085.56 | 1935.31 | 5101.44 | 1935.5 | 5123.4 | 1935.39 | 5157.41 | 1935.23 |
| 5161.52 | 1935.2 | 5174.22 | 1935 | 5183.12 | 1935 | 5189.47 | 1935.2 | 5191.87 | 1935.22 |
| 5229.04 | 1935.99 | 5234.16 | 1935.99 | 5258.28 | 1936 | 5270.78 | 1936 | 5325.99 | 1937 |
| 5466.26 | 1937 | 5474.93 | 1937.01 | 5487.05 | 1937 | 5497.13 | 1937 | 5518.29 | 1936.66 |
| 5550.26 | 1936 | 5571.45 | 1935.67 | 5624.16 | 1935 | 5808.38 | 1935 | 5853.49 | 1935.67 |
| 5873.85 | 1935.81 | 5892.52 | 1935.95 | 5899.77 | 1936 | 5904.67 | 1936.1 | 5915.07 | 1936.39 |
| 5935.42 | 1937 | 6004.16 | 1937 | 6013.1 | 1937.03 | 6023.45 | 1937.08 | 6027.36 | 1937.07 |
| 6037.05 | 1937.07 | 6046.65 | 1937.09 | 6050.51 | 1937.09 | 6074.11 | 1937.93 | 6075.35 | 1938 |
| 6104.01 | 1938 | 6104.91 | 1938.31 | 6105.54 | 1939 | 6109.18 | 1940.98 | 6111.1 | 1942 |
| 6111.88 | 1942.45 | 6112.7 | 1943 | 6114.26 | 1943.8 | 6114.83 | 1944.16 | 6116.42 | 1945 |
| 6116.82 | 1945.26 | 6118.19 | 1946 | 6118.75 | 1946.35 | 6123.55 | 1949 | 6127.47 | 1951.09 |
| 6129.1 | 1952 | 6131.8 | 1952.55 | 6133.22 | 1953 | 6180.94 | 1953 | 6191.05 | 1953.94 |
| 6191.79 | 1954 | 6202.2 | 1954 | 6208.59 | 1953.76 | 6213.19 | 1953.6 | 6228.99 | 1953.93 |
| 6233.4 | 1954 | 6266.07 | 1954 | 6269.05 | 1954.03 | 6272.46 | 1954.08 | 6284.01 | 1954.19 |
| 6292.01 | 1954.13 | 6304.26 | 1954.11 | 6306.29 | 1954.1 | 6314.45 | 1954.01 | 6315.98 | 1954 |
| 6325.73 | 1953.89 | 6368.73 | 1953.39 | 6377.78 | 1953.29 | 6389.52 | 1953.17 | 6397.87 | 1953.1 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2058.53 | .045 | 2058.53 | .04 | 6397.87 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2058.53 | 6397.87 | 183.09 | 183.09 | 183.09 | .1 | .3 |

CROSS SECTION OUTPUT  Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1938.06 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.12 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1937.94 | Reach Len. (ft) | 183.09 | 183.09 | 183.09 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8008.33 | | |
| E.G. Slope (ft/ft) | 0.002035 | Area (sq ft) | | 8008.33 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3712.43 | Top Width (ft) | | 3712.43 | | |
| Vel Total (ft/s) | 2.80 | Avg. Vel. (ft/s) | | 2.80 | | |
| Max Chl Dpth (ft) | 5.39 | Hydr. Depth (ft) | | 2.16 | | |
| Conv. Total (cfs) | 496530.3 | Conv. (cfs) | | 496530.3 | | |
| Length Wtd. (ft) | 183.09 | Wetted Per. (ft) | | 3713.98 | | |
| Min Ch El (ft) | 1932.55 | Shear (lb/sq ft) | | 0.27 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6397.87 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.39 | Cum Volume (acre-ft) | | 2415.29 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1158.33 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE  RS: -6116.28

INPUT
Description:
Station Elevation Data  num=  438

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2058.64 | 1939 | 2064.3 | 1938.8 | 2079.68 | 1938.2 | 2084.19 | 1938.05 | 2085.22 | 1938 |
| 2095.26 | 1937.38 | 2098.47 | 1937.2 | 2101.85 | 1937 | 2102.82 | 1936.8 | 2106.56 | 1936 |
| 2109.53 | 1935.38 | 2111.8 | 1935 | 2118.05 | 1934.98 | 2122.98 | 1934.99 | 2124.44 | 1935 |
| 2127.29 | 1935.06 | 2130.94 | 1935 | 2169.83 | 1935 | 2184.83 | 1935.01 | 2200.75 | 1935 |
| 2202.66 | 1935 | 2210.7 | 1934.99 | 2217.48 | 1934.99 | 2227.82 | 1935 | 2235.88 | 1934.99 |
| 2250.42 | 1934.99 | 2278.96 | 1935 | 2290.73 | 1935 | 2303.28 | 1935.31 | 2305.11 | 1935.36 |
| 2329.49 | 1936 | 2331.65 | 1936 | 2393.41 | 1936.47 | 2417.79 | 1936.62 | 2418.51 | 1936.62 |
| 2428.63 | 1937 | 2531.99 | 1937 | 2557.73 | 1936.67 | 2558.76 | 1936.67 | 2561.81 | 1936.63 |
| 2565.83 | 1936.57 | 2566.64 | 1936.57 | 2571.56 | 1936.53 | 2575.08 | 1936.51 | 2579.51 | 1936.5 |
| 2586.65 | 1936.5 | 2592.9 | 1936.46 | 2607.53 | 1936.37 | 2632.97 | 1936.07 | 2636.75 | 1936 |
| 2650.61 | 1935.24 | 2654.19 | 1935.04 | 2655.06 | 1935 | 2656.42 | 1935.01 | 2669.2 | 1935.37 |
| 2677.1 | 1935.55 | 2680.58 | 1935.64 | 2685.5 | 1935.79 | 2691.55 | 1936 | 2696.91 | 1936.28 |
| 2697.89 | 1936.35 | 2714.85 | 1936.71 | 2720.02 | 1936.8 | 2723.71 | 1936.76 | 2729.61 | 1936.68 |
| 2732.52 | 1936.65 | 2734.1 | 1936.62 | 2743.05 | 1936.48 | 2743.33 | 1936.47 | 2751.64 | 1936.36 |
| 2764.33 | 1936.29 | 2774.43 | 1936.29 | 2778.46 | 1936.32 | 2779.02 | 1936.33 | 2789.65 | 1936.59 |
| 2806.14 | 1937 | 2820.39 | 1937 | 2830.94 | 1937.4 | 2832.42 | 1937.45 | 2847.77 | 1938 |
| 2857.96 | 1938 | 2879.24 | 1938.19 | 2901.62 | 1938.38 | 2907.6 | 1938.38 | 2913.77 | 1938.39 |
| 2915.21 | 1938.38 | 2921.24 | 1938.41 | 2924.37 | 1938.38 | 2943.49 | 1938.21 | 2964.28 | 1938.01 |
| 2964.78 | 1938 | 2985.64 | 1938 | 2991.32 | 1937.99 | 3001.49 | 1937.99 | 3014.86 | 1938 |
| 3023.59 | 1938.03 | 3032.36 | 1938 | 3045.12 | 1937 | 3060.66 | 1937 | 3066.87 | 1936.99 |
| 3068.24 | 1937 | 3171.49 | 1937 | 3174.29 | 1937.1 | 3200.77 | 1938 | 3204.59 | 1937.79 |
| 3214.09 | 1937.26 | 3223.95 | 1937 | 3259.94 | 1937 | 3263.02 | 1937.39 | 3268.4 | 1938 |
| 3272.76 | 1938.46 | 3273.76 | 1938.61 | 3275.26 | 1938.79 | 3277.13 | 1939 | 3283.26 | 1939 |
| 3283.48 | 1938.98 | 3291.74 | 1938 | 3297.68 | 1937.27 | 3299.92 | 1937 | 3303.96 | 1936.99 |
| 3307.98 | 1936.99 | 3314.98 | 1937 | 3320.45 | 1937.51 | 3323.88 | 1938 | 3326.31 | 1938.72 |
| 3327.15 | 1939 | 3329.53 | 1939.63 | 3331.7 | 1940.09 | 3332.48 | 1940.22 | 3335.75 | 1940.74 |
| 3339.24 | 1941.19 | 3339.66 | 1941.2 | 3340.68 | 1941.29 | 3340.85 | 1941.28 | 3341.7 | 1941.34 |
| 3342.5 | 1941.36 | 3343.81 | 1941.31 | 3345.59 | 1941.18 | 3347.25 | 1940.97 | 3353.61 | 1940 |
| 3356.91 | 1939.47 | 3362.33 | 1939.36 | 3363.07 | 1939.3 | 3367.63 | 1939.25 | 3368.79 | 1939.19 |
| 3369.97 | 1939.19 | 3372.03 | 1939.12 | 3372.76 | 1939.12 | 3377.56 | 1939.01 | 3379.78 | 1939.01 |
| 3381.73 | 1939.08 | 3390.18 | 1939.33 | 3391.94 | 1939.32 | 3394.36 | 1939.34 | 3399.73 | 1939.54 |
| 3405.73 | 1939.62 | 3407.21 | 1939.67 | 3408.41 | 1939.64 | 3410.25 | 1939.5 | 3411.51 | 1939.42 |
| 3414.25 | 1939 | 3417.79 | 1938.51 | 3421.8 | 1938 | 3428.22 | 1937.48 | 3437.11 | 1937 |
| 3442.5 | 1936.83 | 3447.39 | 1936.87 | 3453.1 | 1937 | 3456.89 | 1937.38 | 3457.75 | 1937.46 |
| 3458.82 | 1937.52 | 3459.98 | 1937.51 | 3461.37 | 1937.47 | 3462.29 | 1937.37 | 3462.69 | 1937.35 |
| 3465.23 | 1937 | 3474.42 | 1935.32 | 3476.62 | 1935 | 3480.88 | 1934.82 | 3489.71 | 1934.98 |
| 3492.57 | 1934.97 | 3502.98 | 1935 | 3508.12 | 1935 | 3514.7 | 1935.01 | 3530.75 | 1935.01 |
| 3537.71 | 1935 | 3542.29 | 1935.01 | 3552.82 | 1935.01 | 3564.93 | 1935.02 | 3581 | 1935.01 |
| 3587.83 | 1935 | 3615.46 | 1935 | 3660.3 | 1935.7 | 3668.96 | 1935.83 | 3680.38 | 1935.96 |
| 3681.74 | 1935.95 | 3683.86 | 1936 | 3688.91 | 1936.05 | 3694.65 | 1936.13 | 3706.92 | 1936.19 |
| 3712.05 | 1936.16 | 3714.91 | 1936.16 | 3715.96 | 1936.18 | 3717.9 | 1936.15 | 3719.32 | 1936.19 |
| 3723.26 | 1936.21 | 3728.21 | 1936.24 | 3730.93 | 1936.29 | 3740.8 | 1936.48 | 3748.13 | 1936.61 |
| 3752.63 | 1936.68 | 3753.72 | 1936.69 | 3780.58 | 1936.91 | 3791.31 | 1937 | 3807.46 | 1937 |
| 3824.55 | 1937.55 | 3829.87 | 1937.73 | 3838.33 | 1938 | 3847.57 | 1938 | 3858.3 | 1937.26 |
| 3862.23 | 1937 | 3863.52 | 1937 | 3865.6 | 1936.9 | 3867.52 | 1936.82 | 3870.51 | 1936.72 |
| 3888.28 | 1936 | 3916.33 | 1935 | 3928.22 | 1935 | 3938.81 | 1935.45 | 3941.13 | 1935.56 |
| 3942.33 | 1935.6 | 3952.2 | 1936 | 3952.79 | 1936 | 3954.37 | 1936.05 | 3958.76 | 1936.17 |
| 3977.23 | 1936.7 | 3982.13 | 1936.79 | 3995.41 | 1937 | 3999.95 | 1937 | 4005.68 | 1936.49 |
| 4007.12 | 1936.4 | 4007.71 | 1936.39 | 4014.33 | 1936.01 | 4015.36 | 1936.02 | 4017.6 | 1936.02 |
| 4021.51 | 1936.04 | 4026.03 | 1936 | 4027.65 | 1935.92 | 4038.24 | 1935.38 | 4045.03 | 1935 |
| 4047.25 | 1935 | 4049.15 | 1934.96 | 4059.39 | 1934.79 | 4071.15 | 1934.69 | 4073.84 | 1934.67 |
| 4075.32 | 1934.65 | 4098.31 | 1934 | 4113.93 | 1934.24 | 4139.72 | 1934.63 | 4141 | 1934.64 |
| 4150.1 | 1934.58 | 4163.03 | 1934.48 | 4163.06 | 1934.49 | 4169.65 | 1934.3 | 4180.1 | 1934.02 |
| 4181.09 | 1934 | 4187.16 | 1934 | 4189.96 | 1933.99 | 4212.62 | 1933.99 | 4218.15 | 1934 |
| 4223.95 | 1934 | 4225.79 | 1933.94 | 4227.43 | 1933.86 | 4234.73 | 1933.33 | 4236.88 | 1933.19 |
| 4239.32 | 1933 | 4245.34 | 1933 | 4265.31 | 1932.99 | 4303.01 | 1932.99 | 4307.37 | 1933 |
| 4326.95 | 1933 | 4329.9 | 1933.08 | 4333.02 | 1933.23 | 4348.17 | 1933.99 | 4348.51 | 1934 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4371.97 | 1934 | 4379.97 | 1934.44 | 4385.13 | 1934.52 | 4387.85 | 1934.61 | 4389.66 | 1934.66 |
| 4393.58 | 1934.81 | 4396.59 | 1934.88 | 4398.48 | 1934.94 | 4401.34 | 1934.98 | 4410.36 | 1934.97 |
| 4424.73 | 1934.94 | 4425.65 | 1934.93 | 4427.02 | 1934.88 | 4428.55 | 1934.84 | 4437.53 | 1934.49 |
| 4443.85 | 1934.22 | 4450.22 | 1934.05 | 4451.4 | 1934 | 4531.99 | 1934 | 4542.14 | 1933.99 |
| 4564.62 | 1933.99 | 4566.36 | 1934 | 4619.7 | 1934 | 4625.14 | 1933.75 | 4633.99 | 1933.49 |
| 4636.67 | 1933.4 | 4637.3 | 1933.37 | 4648.98 | 1933.07 | 4651.06 | 1933 | 4681.49 | 1933 |
| 4684.89 | 1932.88 | 4688.99 | 1932.7 | 4704.28 | 1932 | 4726.46 | 1931.98 | 4729.87 | 1931.98 |
| 4737.33 | 1931.97 | 4741.23 | 1931.98 | 4745.98 | 1931.98 | 4762.33 | 1931.99 | 4766.26 | 1932 |
| 4771.33 | 1932 | 4773.17 | 1932.29 | 4781.28 | 1933 | 4787.34 | 1933.61 | 4791.32 | 1934 |
| 4797.72 | 1934.62 | 4801.97 | 1935 | 5139.52 | 1935 | 5185.7 | 1935.71 | 5195.6 | 1935.86 |
| 5197.64 | 1935.88 | 5216.56 | 1935.97 | 5222.18 | 1936 | 5232.85 | 1936 | 5251.7 | 1936.01 |
| 5292.04 | 1936.01 | 5316.12 | 1936 | 5343.4 | 1936 | 5357.97 | 1935.99 | 5390.4 | 1936 |
| 5401.64 | 1936 | 5402.64 | 1936.01 | 5407.21 | 1936.01 | 5410.41 | 1936 | 5416.99 | 1935.99 |
| 5420.7 | 1935.99 | 5426.07 | 1936 | 5428.82 | 1936.02 | 5436.09 | 1936.03 | 5438.66 | 1936.03 |
| 5443.63 | 1935.99 | 5444.07 | 1935.98 | 5462.72 | 1935.73 | 5465.16 | 1935.69 | 5465.62 | 1935.69 |
| 5474.2 | 1935.51 | 5475.15 | 1935.51 | 5479.83 | 1935.41 | 5482.92 | 1935.37 | 5494.29 | 1935.43 |
| 5495.17 | 1935.41 | 5501.57 | 1935.35 | 5506.31 | 1935.31 | 5507 | 1935.31 | 5511.98 | 1935.22 |
| 5522.86 | 1935 | 5602.01 | 1935 | 5624.39 | 1934.99 | 5653.89 | 1935 | 5675.89 | 1935 |
| 5681.21 | 1934.99 | 5703.71 | 1934.99 | 5706.22 | 1935 | 5710.01 | 1935 | 5712.45 | 1934.98 |
| 5714.05 | 1935 | 5714.37 | 1935.02 | 5733.99 | 1935.09 | 5735.42 | 1935.09 | 5751.47 | 1935.04 |
| 5762.39 | 1935.02 | 5764.24 | 1935.02 | 5765.51 | 1935 | 5795.17 | 1935 | 5801.33 | 1935.01 |
| 5843.02 | 1935.01 | 5852.64 | 1935 | 5886.31 | 1935 | 5897.49 | 1934.99 | 5912.19 | 1934.99 |
| 5927.19 | 1935 | 5933.91 | 1935 | 5937.26 | 1935.01 | 5940.89 | 1935.01 | 5949.3 | 1935.39 |
| 5951.44 | 1935.47 | 5952.43 | 1935.52 | 5957.1 | 1935.71 | 5962.34 | 1936 | 5964.63 | 1937 |
| 5968.57 | 1938.73 | 5970.76 | 1940 | 5971.58 | 1940.49 | 5974.17 | 1942 | 5977.5 | 1944 |
| 5978.25 | 1944.48 | 5981.22 | 1946.14 | 5982.47 | 1946.78 | 5983.75 | 1947.39 | 5985.23 | 1948 |
| 5988.64 | 1949.42 | 5990.64 | 1950.28 | 5992.26 | 1951 | 5994.62 | 1951.14 | 6003.89 | 1951.82 |
| 6005.53 | 1951.92 | 6006.17 | 1952 | 6009.14 | 1952.04 | 6023.21 | 1952.27 | 6023.41 | 1952.27 |
| 6044.36 | 1952.6 | 6052.25 | 1952.73 | 6068.87 | 1952.98 | 6074.54 | 1952.97 | 6075.58 | 1953 |
| 6170.53 | 1953 | 6172.54 | 1953.43 | 6176.04 | 1954 | 6225.99 | 1954 | 6255.33 | 1953.25 |
| 6260.9 | 1953.11 | 6265.43 | 1953 | 6324.89 | 1953 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2058.64 | .045 | 2058.64 | .04 | 6324.89 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2058.64 | 6324.89 | 101.5 | 101.5 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1937.67 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.13 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1937.54 | Reach Len. (ft) | 101.50 | 101.50 | 101.50 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7641.11 | | |
| E.G. Slope (ft/ft) | 0.002183 | Area (sq ft) | | 7641.11 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3479.60 | Top Width (ft) | | 3479.60 | | |
| Vel Total (ft/s) | 2.93 | Avg. Vel. (ft/s) | | 2.93 | | |
| Max Chl Dpth (ft) | 5.57 | Hydr. Depth (ft) | | 2.20 | | |
| Conv. Total (cfs) | 479416.7 | Conv. (cfs) | | 479416.7 | | |
| Length Wtd. (ft) | 101.50 | Wetted Per. (ft) | | 3481.16 | | |
| Min Ch El (ft) | 1931.97 | Shear (lb/sq ft) | | 0.30 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6324.89 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.21 | Cum Volume (acre-ft) | | 2382.40 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1143.21 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -6217.78

INPUT
Description:
Station Elevation Data num= 447

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2078.96 | 1939 | 2080.87 | 1938.93 | 2086.12 | 1938.69 | 2094.62 | 1938.28 | 2098.65 | 1938.12 |
| 2100.73 | 1938 | 2111.56 | 1937.22 | 2114.16 | 1937 | 2117.13 | 1936.46 | 2119.51 | 1936 |
| 2122.41 | 1935.51 | 2125.57 | 1935 | 2132.22 | 1934.97 | 2133.68 | 1934.98 | 2138.95 | 1935 |
| 2140.45 | 1935.05 | 2141.1 | 1935 | 2166.14 | 1935 | 2167.08 | 1935.01 | 2181.18 | 1935.01 |
| 2191.54 | 1935.02 | 2200.2 | 1935.02 | 2215.41 | 1935.01 | 2217.49 | 1935.01 | 2221.35 | 1935 |
| 2236.19 | 1935 | 2238.83 | 1934.99 | 2248.18 | 1934.99 | 2265.37 | 1935 | 2283.15 | 1935 |
| 2283.7 | 1935.01 | 2289.47 | 1935.03 | 2292.69 | 1935.03 | 2294.24 | 1935.02 | 2333.4 | 1935.87 |
| 2337.29 | 1935.95 | 2341.52 | 1936 | 2343.45 | 1936.01 | 2346.29 | 1936.01 | 2355.62 | 1936.16 |
| 2367.18 | 1936.31 | 2411.66 | 1936.65 | 2428.02 | 1936.75 | 2428.77 | 1936.75 | 2435.57 | 1937 |
| 2528.95 | 1937 | 2580.62 | 1936.35 | 2587.4 | 1936.26 | 2596.12 | 1936.13 | 2597.86 | 1936.12 |
| 2601.06 | 1936.12 | 2602.37 | 1936.11 | 2613.47 | 1936.04 | 2621.45 | 1936.06 | 2625.34 | 1936.05 |
| 2626.33 | 1936.04 | 2638.22 | 1936 | 2644.24 | 1936 | 2648.97 | 1935.99 | 2658.57 | 1935.8 |
| 2670.64 | 1935.6 | 2674.13 | 1935.68 | 2684.43 | 1936 | 2686.68 | 1936 | 2690.54 | 1936.01 |
| 2693.5 | 1936.01 | 2712.48 | 1936.03 | 2714.69 | 1936.03 | 2716.95 | 1936.04 | 2718.91 | 1936.04 |
| 2725.96 | 1936.19 | 2740.45 | 1936.44 | 2750.23 | 1936.32 | 2766.63 | 1936.11 | 2774.28 | 1936.02 |
| 2776.05 | 1936.01 | 2782.05 | 1936.16 | 2782.96 | 1936.19 | 2786.45 | 1936.28 | 2813.1 | 1937 |
| 2815.35 | 1937 | 2816.37 | 1937.01 | 2826.37 | 1937.01 | 2856.09 | 1937.89 | 2856.27 | 1937.89 |
| 2859.33 | 1938 | 2905.58 | 1938 | 2909.04 | 1938.03 | 2910.17 | 1938.02 | 2916.21 | 1938.02 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2925.07 | 1938.04 | 2934.36 | 1938.08 | 2935.01 | 1938.08 | 2943.33 | 1938.01 | 2943.9 | 1938 |
| 3017.35 | 1938 | 3023.34 | 1938.02 | 3027.74 | 1938.04 | 3031.15 | 1938.05 | 3042.76 | 1938 |
| 3048.9 | 1937.55 | 3059.88 | 1937 | 3068.8 | 1937 | 3072.73 | 1937.03 | 3075.58 | 1937.08 |
| 3084.17 | 1937.18 | 3087.73 | 1937.18 | 3094.29 | 1937.26 | 3101.06 | 1937.32 | 3113.05 | 1937.27 |
| 3127.22 | 1937.2 | 3127.72 | 1937.19 | 3151.29 | 1937.01 | 3151.5 | 1937 | 3171.22 | 1937 |
| 3180.55 | 1937.36 | 3182.08 | 1937.41 | 3187.42 | 1937.56 | 3197.95 | 1937.75 | 3198.6 | 1937.77 |
| 3205.42 | 1937.86 | 3205.53 | 1937.87 | 3209.22 | 1937.91 | 3211.83 | 1938 | 3214.7 | 1937.84 |
| 3215.63 | 1937.85 | 3216.78 | 1937.76 | 3218.28 | 1937.68 | 3219.16 | 1937.61 | 3221.42 | 1937.47 |
| 3225.79 | 1937.18 | 3228.72 | 1937 | 3272.82 | 1937 | 3275.08 | 1937.31 | 3280.46 | 1938 |
| 3284.18 | 1938.47 | 3288.14 | 1939 | 3299.09 | 1939 | 3299.56 | 1938.99 | 3301.04 | 1938.89 |
| 3304.31 | 1938.77 | 3305.78 | 1938.68 | 3315.05 | 1938.22 | 3317.53 | 1938 | 3318.7 | 1938 |
| 3319.93 | 1938.24 | 3320.53 | 1938.33 | 3321.7 | 1938.66 | 3322.35 | 1938.82 | 3322.92 | 1939 |
| 3324.57 | 1939.4 | 3326.94 | 1940 | 3330.1 | 1940.78 | 3334.95 | 1941.96 | 3335.39 | 1942.05 |
| 3339.69 | 1943 | 3342.1 | 1943.56 | 3344.12 | 1944 | 3345.46 | 1944 | 3351.81 | 1943 |
| 3358.57 | 1942 | 3360.72 | 1941.69 | 3367.35 | 1940.67 | 3367.55 | 1940.65 | 3375.33 | 1940 |
| 3379.93 | 1939.86 | 3383.81 | 1939.76 | 3384.34 | 1939.73 | 3392.16 | 1939.5 | 3400.99 | 1939 |
| 3402.53 | 1938.95 | 3411.41 | 1938.32 | 3412.33 | 1938.24 | 3415.96 | 1938 | 3423.34 | 1938 |
| 3425.92 | 1937.99 | 3427.66 | 1937.99 | 3440.59 | 1937.6 | 3449 | 1937.37 | 3455.74 | 1938 |
| 3471.21 | 1938 | 3473.08 | 1937.77 | 3479.76 | 1937.21 | 3481.24 | 1937.07 | 3483.06 | 1936.88 |
| 3483.84 | 1936.78 | 3489.37 | 1936 | 3490.96 | 1935.66 | 3494.73 | 1935 | 3508.52 | 1934.98 |
| 3522.93 | 1935 | 3539.9 | 1935 | 3544.5 | 1934.99 | 3552.28 | 1935 | 3561.34 | 1935 |
| 3562.3 | 1935.01 | 3595.75 | 1935.01 | 3601.61 | 1934.99 | 3608.99 | 1935.01 | 3623.77 | 1935.01 |
| 3636.3 | 1935 | 3636.46 | 1935.01 | 3651.93 | 1935.25 | 3673.56 | 1935.58 | 3681.49 | 1935.67 |
| 3685.56 | 1935.65 | 3689.04 | 1935.62 | 3693.42 | 1935.56 | 3699.73 | 1935.71 | 3701.25 | 1935.71 |
| 3712.54 | 1935.99 | 3714.8 | 1935.99 | 3728.53 | 1936 | 3742.5 | 1936.25 | 3751.24 | 1936.38 |
| 3753.34 | 1936.4 | 3769.01 | 1936.53 | 3799.39 | 1936.78 | 3799.77 | 1936.79 | 3817.76 | 1937 |
| 3820.72 | 1937.1 | 3844.87 | 1938 | 3867.05 | 1938 | 3873.58 | 1937.26 | 3875.95 | 1937 |
| 3879.43 | 1936.82 | 3890.21 | 1936.27 | 3895.75 | 1936 | 3913.52 | 1935.45 | 3917.04 | 1935.37 |
| 3921.93 | 1935.25 | 3927.58 | 1935.13 | 3930.04 | 1935.06 | 3933.53 | 1935.01 | 3935.12 | 1935.02 |
| 3941.35 | 1935.24 | 3959.38 | 1936 | 3972.25 | 1936.3 | 3974.45 | 1936.33 | 3977.59 | 1936.4 |
| 3998.81 | 1936.99 | 3999.72 | 1936.99 | 4011.11 | 1936.87 | 4020.53 | 1936.7 | 4024.85 | 1936.61 |
| 4031.4 | 1936.46 | 4032.09 | 1936.45 | 4038.51 | 1936.15 | 4041 | 1936.12 | 4045.53 | 1936.05 |
| 4047.58 | 1936.04 | 4049.33 | 1936.01 | 4051.84 | 1935.86 | 4057.4 | 1935.58 | 4066.87 | 1935.06 |
| 4077.43 | 1935 | 4080.92 | 1934.99 | 4096.46 | 1934.72 | 4099.61 | 1934.68 | 4099.67 | 1934.67 |
| 4103.29 | 1934.62 | 4106.41 | 1934.57 | 4127.73 | 1934 | 4128.31 | 1934 | 4140.59 | 1934.17 |
| 4142.13 | 1934.18 | 4161.43 | 1934.01 | 4161.9 | 1934 | 4200 | 1934 | 4201 | 1933.99 |
| 4210.9 | 1933.99 | 4215.6 | 1933.73 | 4221.02 | 1933.66 | 4230.26 | 1933.56 | 4248.24 | 1933.34 |
| 4249.56 | 1933.32 | 4273.25 | 1933 | 4279.3 | 1933 | 4285.71 | 1932.99 | 4288.24 | 1932.99 |
| 4293.47 | 1932.98 | 4297.3 | 1932.98 | 4304.11 | 1932.97 | 4310.98 | 1932.97 | 4319.71 | 1932.95 |
| 4322.47 | 1932.96 | 4326.12 | 1932.96 | 4335.96 | 1932.97 | 4339.75 | 1932.97 | 4344.27 | 1932.98 |
| 4358.72 | 1933 | 4360.48 | 1933.06 | 4362.5 | 1933.05 | 4372.75 | 1933.16 | 4380.97 | 1933.24 |
| 4397.51 | 1933 | 4455.86 | 1933 | 4510 | 1933.99 | 4510.37 | 1934 | 4554.13 | 1934 |
| 4558.03 | 1933.93 | 4560.09 | 1933.88 | 4605.84 | 1933 | 4606.21 | 1933 | 4647.07 | 1932.61 |
| 4659.43 | 1932.53 | 4663.43 | 1932.51 | 4665 | 1932.49 | 4689.87 | 1932.32 | 4733.47 | 1932 |
| 4794.91 | 1932 | 4800.6 | 1933 | 4806.14 | 1934 | 4810.2 | 1934.81 | 4811.07 | 1935 |
| 5060.24 | 1935 | 5100.37 | 1934.19 | 5106.57 | 1934.07 | 5110.56 | 1934 | 5110.91 | 1934 |
| 5112.48 | 1934.05 | 5113.06 | 1934.05 | 5115.67 | 1934.12 | 5118.66 | 1934.18 | 5121.2 | 1934.25 |
| 5123.02 | 1934.29 | 5125.94 | 1934.37 | 5148.42 | 1935 | 5185.85 | 1935 | 5242.61 | 1935.09 |
| 5303.4 | 1935.18 | 5311.53 | 1935.18 | 5346.47 | 1935.09 | 5371.55 | 1935.01 | 5373.33 | 1935 |
| 5420.52 | 1935 | 5438.58 | 1935.65 | 5442.54 | 1935.78 | 5444.9 | 1935.68 | 5454.53 | 1935.12 |
| 5456.02 | 1935 | 5460.73 | 1934.99 | 5468.4 | 1934.68 | 5479.72 | 1934.23 | 5482.22 | 1934.15 |
| 5485.36 | 1934.07 | 5487.59 | 1934 | 5621.28 | 1934 | 5630.74 | 1934.44 | 5632.62 | 1934.54 |
| 5635.26 | 1934.66 | 5639.55 | 1934.87 | 5642.15 | 1934.99 | 5647.1 | 1934.99 | 5647.88 | 1935 |
| 5649.45 | 1934.98 | 5693.08 | 1934 | 5795.39 | 1934 | 5796.61 | 1933.97 | 5809.9 | 1933.61 |
| 5810.14 | 1933.61 | 5817.58 | 1933.49 | 5831.9 | 1933.25 | 5837.67 | 1933.15 | 5845.32 | 1933 |
| 5847.03 | 1933 | 5852.71 | 1935 | 5855.52 | 1936 | 5858.22 | 1937 | 5859.45 | 1937.4 |
| 5861 | 1938 | 5864.23 | 1939.1 | 5866.91 | 1940 | 5869.9 | 1941.02 | 5872.94 | 1942 |
| 5875.87 | 1943 | 5878.96 | 1944 | 5879.04 | 1944.02 | 5881.97 | 1945 | 5885.05 | 1946 |
| 5886.57 | 1946.48 | 5888.14 | 1947 | 5891.25 | 1948 | 5894.28 | 1949 | 5896.1 | 1949.56 |
| 5902.06 | 1951.5 | 5906.72 | 1953 | 5908.59 | 1953.79 | 5909.03 | 1953.9 | 5909.61 | 1954 |
| 5910.47 | 1954.03 | 5912.29 | 1954.02 | 5913.35 | 1954.08 | 5917.95 | 1954 | 5920.69 | 1953.98 |
| 5922.84 | 1953.99 | 5923.65 | 1954.03 | 5929.9 | 1954.96 | 5931.44 | 1954.96 | 5936.31 | 1954.98 |
| 5939.85 | 1954.98 | 5940.88 | 1954.95 | 5965.03 | 1954.15 | 5967.61 | 1954.07 | 5968.84 | 1954 |
| 5970.5 | 1954 | 5972.63 | 1953.91 | 5981.15 | 1953.67 | 5982.32 | 1953.63 | 6000.25 | 1953 |
| 6013.48 | 1952.65 | 6013.86 | 1952.65 | 6017.84 | 1952.6 | 6024.42 | 1952.57 | 6026.53 | 1952.57 |
| 6029.97 | 1952.54 | 6031.05 | 1952.55 | 6038.01 | 1952.51 | 6045.02 | 1952.57 | 6045.64 | 1952.56 |
| 6047.56 | 1952.56 | 6058.64 | 1952.57 | 6070.59 | 1952.6 | 6073.61 | 1952.63 | 6074.02 | 1952.64 |
| 6080.76 | 1952.64 | 6088.34 | 1952.63 | 6089.95 | 1952.62 | 6100.96 | 1952.69 | 6114.66 | 1952.77 |
| 6116.96 | 1952.83 | 6118.96 | 1952.87 | 6119.42 | 1952.87 | 6125.29 | 1953 | 6129.7 | 1953.11 |
| 6137.04 | 1953.26 | 6146.69 | 1953.59 | 6153.77 | 1953.78 | 6158.79 | 1954 | 6185.57 | 1955 |
| 6201.77 | 1955 | 6205.46 | 1954.71 | 6214.05 | 1954 | 6230.02 | 1953.09 | 6231.64 | 1953 |
| 6244.29 | 1953 | 6248.06 | 1952.97 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2078.96 | .045 | 2078.96 | .04 | 6248.06 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2078.96 | 6248.06 | 93.9 | 93.9 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | Left OB | Channel | Right OB |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1937.46 | Element | | | |
| Vel Head (ft) | 0.13 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1937.32 | Reach Len. (ft) | 93.90 | 93.90 | 93.90 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7610.86 | |
| E.G. Slope (ft/ft) | 0.002011 | Area (sq ft) | | 7610.86 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |

| | | | | | |
|---|---|---|---|---|---|
| Top Width (ft) | 3239.10 | Top Width (ft) | 3239.10 | | |
| Vel Total (ft/s) | 2.94 | Avg. Vel. (ft/s) | 2.94 | | |
| Max Chl Dpth (ft) | 5.32 | Hydr. Depth (ft) | 2.35 | | |
| Conv. Total (cfs) | 499510.9 | Conv. (cfs) | 499510.9 | | |
| Length Wtd. (ft) | 93.90 | Wetted Per. (ft) | 3240.93 | | |
| Min Ch El (ft) | 1932.00 | Shear (lb/sq ft) | 0.29 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6248.06 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.21 | Cum Volume (acre-ft) | 2364.63 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | 1135.38 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -6311.68

INPUT
Description:
Station Elevation Data num= 416

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2116.27 | 1939 | 2127.95 | 1938.31 | 2130.07 | 1938.21 | 2135.27 | 1938 | 2139.32 | 1937.72 |
| 2148.83 | 1937 | 2153.53 | 1936.37 | 2154.19 | 1936.25 | 2157.37 | 1935.57 | 2160.2 | 1935 |
| 2162.69 | 1934.98 | 2168.01 | 1934.95 | 2174.4 | 1934.99 | 2177.38 | 1934.99 | 2178.29 | 1935 |
| 2180.78 | 1935 | 2190.16 | 1935.01 | 2198.15 | 1935.01 | 2202.64 | 1935.02 | 2204.3 | 1935.01 |
| 2212.26 | 1935 | 2223.91 | 1935 | 2231.38 | 1934.8 | 2239.18 | 1934.6 | 2239.58 | 1934.6 |
| 2246.99 | 1934.47 | 2247.54 | 1934.47 | 2253.11 | 1934.41 | 2266.65 | 1934.48 | 2285.82 | 1934.59 |
| 2304.57 | 1935 | 2312.05 | 1935 | 2337.98 | 1935.32 | 2339.3 | 1935.34 | 2346.08 | 1935.4 |
| 2359.19 | 1935.54 | 2362.35 | 1935.58 | 2370.95 | 1935.7 | 2371.36 | 1935.71 | 2394.58 | 1935.86 |
| 2414.06 | 1936 | 2416.63 | 1936 | 2437.7 | 1936.54 | 2439.13 | 1936.59 | 2448.24 | 1936.81 |
| 2450.75 | 1936.88 | 2453.75 | 1936.99 | 2454.95 | 1937 | 2524.25 | 1937 | 2530.3 | 1936.92 |
| 2533.54 | 1936.9 | 2537.63 | 1936.86 | 2600.51 | 1936.01 | 2611.12 | 1936.02 | 2625.38 | 1936.02 |
| 2642.06 | 1936.01 | 2643.11 | 1936 | 2645.94 | 1936 | 2661.86 | 1935.97 | 2674.17 | 1935.95 |
| 2679.19 | 1935.95 | 2688.92 | 1935.96 | 2689.71 | 1935.97 | 2699.82 | 1935.97 | 2708.34 | 1935.99 |
| 2714.03 | 1935.96 | 2716.59 | 1935.99 | 2719.03 | 1936 | 2734.62 | 1936 | 2744.75 | 1936.01 |
| 2746.06 | 1936 | 2747.52 | 1936.01 | 2749.39 | 1936 | 2751.52 | 1936.01 | 2762.31 | 1936.01 |
| 2766.16 | 1936 | 2770.96 | 1936 | 2774.28 | 1935.85 | 2778.08 | 1935.69 | 2780.65 | 1935.57 |
| 2783.27 | 1935.47 | 2791.92 | 1935.11 | 2794.44 | 1935.05 | 2796.77 | 1935.07 | 2801.9 | 1935.14 |
| 2811.53 | 1935.31 | 2816.36 | 1935.39 | 2819.93 | 1935.46 | 2830.61 | 1935.65 | 2831.16 | 1935.67 |
| 2833.89 | 1935.71 | 2835.24 | 1935.75 | 2856.5 | 1936 | 2856.67 | 1936 | 2863.36 | 1936.17 |
| 2869.59 | 1936.28 | 2870.21 | 1936.27 | 2871.62 | 1936.31 | 2872.02 | 1936.3 | 2875.13 | 1936.34 |
| 2882.08 | 1936.56 | 2883.31 | 1936.61 | 2887.49 | 1936.75 | 2889.64 | 1936.83 | 2893.51 | 1936.93 |
| 2895.88 | 1936.98 | 2897.21 | 1936.99 | 2910.84 | 1936.89 | 2915.55 | 1936.89 | 2919.52 | 1936.91 |
| 2922.2 | 1936.9 | 2923.65 | 1936.86 | 2932.27 | 1936.99 | 2943.42 | 1936.99 | 2950.01 | 1937 |
| 2952.76 | 1937 | 2963.2 | 1937.51 | 2970.33 | 1937.83 | 2973.86 | 1938 | 3009.67 | 1938.74 |
| 3015.33 | 1938.86 | 3023.28 | 1939 | 3050.68 | 1939 | 3052.77 | 1938.88 | 3053.95 | 1938.84 |
| 3056.73 | 1938.7 | 3067.75 | 1938.21 | 3069.9 | 1938.14 | 3072.28 | 1938.1 | 3075.12 | 1938.09 |
| 3078.44 | 1938 | 3109.65 | 1938 | 3114.8 | 1937.86 | 3121.33 | 1938 | 3134.22 | 1938 |
| 3153.71 | 1937.99 | 3168.64 | 1937.99 | 3185.32 | 1938 | 3206.47 | 1938 | 3218.99 | 1938.72 |
| 3223.44 | 1939 | 3233.67 | 1939 | 3238.19 | 1938.82 | 3245.32 | 1938.63 | 3256.12 | 1938.33 |
| 3256.15 | 1938.32 | 3269.94 | 1938 | 3274.22 | 1937.79 | 3274.56 | 1937.79 | 3280.14 | 1937.51 |
| 3283.7 | 1937.57 | 3306.12 | 1937.31 | 3322.73 | 1937.01 | 3323.18 | 1937.01 | 3335.41 | 1937.56 |
| 3335.78 | 1937.54 | 3339.84 | 1938 | 3347.02 | 1939 | 3352.84 | 1939.79 | 3354.33 | 1940 |
| 3360.25 | 1940.78 | 3361.86 | 1941 | 3367.27 | 1941.7 | 3376.98 | 1942.94 | 3377.55 | 1943.03 |
| 3383.4 | 1944 | 3384.93 | 1944.02 | 3386.62 | 1944 | 3392.56 | 1943 | 3396.51 | 1942.41 |
| 3403.99 | 1941.31 | 3406.02 | 1941 | 3412.73 | 1939.93 | 3418.29 | 1939 | 3419.64 | 1938.78 |
| 3424.21 | 1938 | 3426.69 | 1937.59 | 3430.08 | 1937 | 3435.69 | 1936.01 | 3437.82 | 1935.98 |
| 3443.31 | 1935.73 | 3453.17 | 1935.46 | 3455.01 | 1935.42 | 3458.21 | 1935.31 | 3461.43 | 1935.23 |
| 3465.92 | 1935.54 | 3466.58 | 1935.54 | 3467.88 | 1935.62 | 3469.02 | 1935.72 | 3472.49 | 1936 |
| 3479.54 | 1936.21 | 3482.44 | 1936.46 | 3488.3 | 1936.99 | 3488.83 | 1936.98 | 3495.02 | 1936.71 |
| 3498.48 | 1936.69 | 3500.39 | 1936.67 | 3505.59 | 1936.57 | 3515.76 | 1936.57 | 3523.22 | 1936.33 |
| 3523.7 | 1936.32 | 3528.72 | 1936.02 | 3529.43 | 1935.99 | 3534.26 | 1935.85 | 3564.75 | 1935 |
| 3583.96 | 1935 | 3608.31 | 1934.93 | 3623.34 | 1934.96 | 3631.42 | 1934.98 | 3637.22 | 1934.97 |
| 3639.69 | 1935 | 3707.31 | 1935 | 3718.66 | 1935.3 | 3719.83 | 1935.31 | 3721.62 | 1935.3 |
| 3726.11 | 1935.41 | 3733.62 | 1935.51 | 3746.93 | 1935.73 | 3750.75 | 1935.81 | 3753.75 | 1935.88 |
| 3754.14 | 1935.88 | 3760.08 | 1936 | 3851.4 | 1936 | 3860.74 | 1936.36 | 3862.71 | 1936.42 |
| 3866.36 | 1936.51 | 3869.14 | 1936.56 | 3869.42 | 1936.55 | 3879.68 | 1936.49 | 3893.75 | 1936.39 |
| 3911.95 | 1936 | 3929.01 | 1935.98 | 3934.78 | 1935.98 | 3943.84 | 1935.99 | 3956.73 | 1936 |
| 3966.85 | 1936.8 | 3969.48 | 1937 | 3970.46 | 1937.01 | 3978.66 | 1937.47 | 3982.46 | 1937.58 |
| 3986.58 | 1937.37 | 3993.1 | 1937.01 | 3996.08 | 1937 | 4020.49 | 1937 | 4022.93 | 1936.99 |
| 4025.92 | 1937 | 4051.43 | 1937 | 4054.98 | 1936.91 | 4057.35 | 1936.92 | 4058.61 | 1936.91 |
| 4060.38 | 1936.83 | 4061.92 | 1936.79 | 4070.68 | 1936.43 | 4072.3 | 1936.37 | 4081.44 | 1936 |
| 4084.99 | 1936 | 4095.8 | 1935.68 | 4098.17 | 1935.6 | 4118.47 | 1935 | 4149.15 | 1934.2 |
| 4153.75 | 1934.11 | 4157.14 | 1934.03 | 4159.18 | 1934 | 4226.08 | 1934 | 4238.19 | 1933.73 |
| 4239.82 | 1933.7 | 4258.78 | 1933.27 | 4268.31 | 1933.07 | 4271.27 | 1933 | 4351.11 | 1933 |
| 4362.55 | 1932.73 | 4365.01 | 1932.68 | 4367.9 | 1932.66 | 4391.26 | 1932.37 | 4401.81 | 1932.3 |
| 4406.76 | 1932.3 | 4417.63 | 1932.42 | 4420.32 | 1932.43 | 4431.38 | 1932.63 | 4440.15 | 1932.72 |
| 4460.52 | 1932.99 | 4460.77 | 1933 | 4632.43 | 1933 | 4640.59 | 1932.93 | 4644.3 | 1932.92 |
| 4680.9 | 1932.98 | 4689.31 | 1933 | 4757.11 | 1933 | 4759.95 | 1932.88 | 4772.07 | 1932.39 |
| 4780.86 | 1932 | 4812.75 | 1932 | 4817.35 | 1932.39 | 4819.34 | 1932.55 | 4826.04 | 1933 |
| 4829.31 | 1932.25 | 4829.85 | 1932.34 | 4830.11 | 1933 | 4830.51 | 1933.34 | 4831.49 | 1933.64 |
| 4833.19 | 1934 | 4841.12 | 1934.59 | 4845.99 | 1935 | 5088.29 | 1935 | 5096.95 | 1934.99 |
| 5111.61 | 1934.98 | 5113.73 | 1934.99 | 5122.14 | 1934.99 | 5127.03 | 1935 | 5191.88 | 1935 |
| 5200.84 | 1934.56 | 5201.54 | 1934.55 | 5203.73 | 1934.41 | 5210.95 | 1934.42 | 5221.83 | 1934.31 |
| 5228.22 | 1934.25 | 5228.55 | 1934.26 | 5235.42 | 1934.27 | 5237.94 | 1934.29 | 5244.46 | 1934.4 |
| 5259.47 | 1934.77 | 5262.5 | 1934.83 | 5266.55 | 1934.96 | 5269.32 | 1935 | 5423.17 | 1935 |

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 5425.13 1934.97 5452.86 1934.62 5467.15 1934.43 5481.45 1934.29 5481.84 1934.29
 5504.24 1934.07 5510.78    1934 5796.17    1934 5808.53 1933.99 5814.59 1933.99
 5818.42    1934 5833.49    1934 5834.14 1934.27 5835.69    1935 5836.55 1935.35
 5837.92    1936 5838.92 1936.41 5840.24    1937 5841.47 1937.58 5842.68    1938
 5845.63    1939 5849.13 1940.17  5851.5    1941 5854.27 1941.92 5857.43    1943
 5860.15 1943.94 5863.27    1945 5866.21 1946.02 5869.64 1947.12 5876.03 1949.15
 5878.62    1950 5882.16 1951.14 5883.11 1951.42 5890.72    1954  5892.8 1954.61
 5893.76 1954.63 5898.48 1954.97 5900.94 1954.97 5908.15    1955 5926.42    1955
 5935.32 1954.97 5939.44 1954.97 5946.98  1954.9 5947.93 1954.91  5974.4 1954.18
 5977.61 1954.13 5982.36    1954 5997.37 1953.17 5999.74    1953 6002.02 1952.79
 6011.73    1952 6020.93 1951.61 6024.38 1951.53 6029.88 1951.38 6035.35 1951.21
 6038.18 1951.15 6040.48 1951.11  6041.7 1951.11 6048.99 1951.09  6050.5 1951.09
 6055.18 1951.02 6061.67 1951.05 6065.14 1951.04 6075.27    1951 6146.39    1951
 6155.55 1951.37 6159.99  1951.5 6162.28 1951.59  6163.5 1951.62 6173.66    1952
 6177.33 1952.14 6181.74 1952.26 6186.25 1952.32 6189.07 1952.37 6193.69 1952.51
 6196.94  1952.6 6199.78 1952.64  6209.8    1953 6213.35 1953.17 6217.31  1953.3
 6222.24 1953.43 6222.48 1953.42 6224.58 1953.45 6227.83 1953.39 6231.57  1953.3
 6234.83 1953.17 6239.97 1952.94 6240.48 1952.94 6243.78 1952.81 6245.86 1952.77
 6248.83 1952.65

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 2116.27    .045 2116.27     .04 6248.83    .045

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       2116.27 6248.83           207.66  207.66  207.66             .1       .3

CROSS SECTION OUTPUT  Profile #PF 1

  E.G. Elev (ft)           1937.25    Element                    Left OB    Channel   Right OB
  Vel Head (ft)               0.15    Wt. n-Val.                             0.040
  W.S. Elev (ft)           1937.10    Reach Len. (ft)            207.66     207.66     207.66
  Crit W.S. (ft)                      Flow Area (sq ft)                    7166.47
  E.G. Slope (ft/ft)       0.002424   Area (sq ft)                         7166.47
  Q Total (cfs)           22400.00    Flow (cfs)                          22400.00
  Top Width (ft)           3205.96    Top Width (ft)                       3205.96
  Vel Total (ft/s)            3.13    Avg. Vel. (ft/s)                        3.13
  Max Chl Dpth (ft)           5.10    Hydr. Depth (ft)                        2.24
  Conv. Total (cfs)       454928.2    Conv. (cfs)                         454928.2
  Length Wtd. (ft)          207.66    Wetted Per. (ft)                     3208.12
  Min Ch El (ft)           1932.00    Shear (lb/sq ft)                        0.34
  Alpha                       1.00    Stream Power (lb/ft s)   6248.83       0.00       0.00
  Frctn Loss (ft)             0.57    Cum Volume (acre-ft)                 2348.70
  C & E Loss (ft)             0.00    Cum SA (acres)                       1128.44


Warning: Divided flow computed for this cross-section.

CROSS SECTION


RIVER: MOJAVE
REACH: MOJAVE             RS: -6519.34

INPUT
Description:
Station Elevation Data    num=     413
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
 2141.94    1939 2144.14 1938.86 2156.07    1938 2163.38    1937 2168.28 1936.34
 2170.49 1936.03 2177.43    1935 2186.79 1934.95 2192.46 1934.93 2194.36 1934.94
 2202.91 1934.96 2212.11 1934.89 2214.13  1934.9 2215.98 1934.88 2218.89 1934.92
  2223.7 1934.97 2227.95 1934.99 2230.97 1934.94 2235.84  1934.8 2261.61 1934.01
 2267.48 1934.01 2275.11    1934 2282.61    1934 2292.44 1934.24 2294.97 1934.31
  2304.4 1934.55 2326.34    1935  2334.6    1935  2340.1 1935.09  2355.7 1935.25
 2419.15 1935.95 2423.59    1936 2487.26    1936 2497.78 1936.23  2500.2 1936.22
 2504.97 1936.26  2511.1 1936.29 2514.09 1936.29 2517.36 1936.27 2524.72 1936.19
 2528.57 1936.13 2529.98 1936.13 2534.66    1936 2542.53    1936 2543.08 1936.01
 2550.85 1936.04  2561.3 1936.02 2563.98 1936.01 2576.86 1936.04 2583.59 1936.08
 2589.17    1936 2598.71    1936 2619.24 1936.01 2628.99    1936 2644.19    1936
 2650.36 1935.94    2670 1935.77 2670.26 1935.76 2680.57 1935.67 2689.63 1935.58
 2703.17 1935.44  2720.6 1935.24 2732.66 1935.13 2737.88  1935.1 2742.59    1935
 2746.57    1935 2750.81 1935.06 2752.55 1935.11 2779.05    1936 2779.98    1936
 2793.43 1936.83 2794.71 1936.93 2796.16 1936.98 2798.06 1936.91 2798.42 1936.87
 2801.99 1936.75 2816.39 1935.99 2819.03 1935.97 2824.79 1935.79 2831.09  1935.7
 2842.15 1935.74 2844.51 1935.76 2853.81    1936 2859.72 1935.99 2873.07 1935.99
 2876.35    1936 2882.39    1936 2891.67 1935.99 2897.68 1935.99 2904.14    1936
 2954.83    1936 2957.56 1936.07 2960.37 1936.18 2966.51 1936.48 2972.11 1936.73
 2977.04    1937 2979.65 1937.18 2996.17    1938 2999.51 1938.02 3009.06 1938.05
 3020.56    1938 3025.03    1938 3028.09 1938.18  3042.5    1939 3055.96    1939
 3069.17 1938.99 3072.91    1939 3090.37    1939 3100.52 1938.31 3103.01 1938.12
 3104.81    1938 3116.74 1937.44 3126.47    1937 3146.23    1937 3159.87 1937.31
  3173.2 1937.62 3179.27 1937.72 3191.61 1937.98 3199.14    1938 3204.75    1938
 3205.63 1938.01 3209.07    1938 3215.88 1938.01 3233.35 1938.31 3248.15 1938.56
 3251.71 1938.53 3256.09 1938.48 3261.71  1938.4 3269.04 1938.23 3279.85    1938
 3284.84 1937.73  3285.6 1937.71 3291.41 1937.48 3299.34  1937.4 3302.12 1937.38
 3305.77 1937.32 3310.39 1937.21 3322.79 1937.07 3327.13 1937.01 3328.85    1937
 3334.89 1936.86 3336.79    1937 3338.15 1937.01 3338.58 1937.18  3345.2  1937.4
 3348.68 1937.53 3359.43    1938  3363.5 1938.28 3370.17    1939 3376.94 1939.72
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 3380.69    1940 3389.97 1940.02 3399.05    1940 3402.55 1939.95 3406.21 1939.76
 3411.86 1939.55 3414.57 1939.33 3415.81 1939.29 3419.37 1938.72 3426.72 1937.64
 3431.75 1936.86 3436.92    1936 3443.26    1935 3449.76    1934 3455.99    1933
 3462.71    1933 3469.79 1933.63 3473.55    1934 3476.69 1934.38 3481.26    1935
 3487.67    1936 3500.33    1937 3538.34    1937 3541.91 1936.94 3547.59 1936.59
  3558.3    1936 3563.65 1935.75  3578.6 1934.94 3584.99 1934.94 3599.93  1934.8
 3607.76 1934.77 3620.06 1934.88  3628.4  1934.9 3643.25    1935 3694.78    1935
 3697.37 1935.09 3700.44 1935.23 3704.13 1935.42  3706.5 1935.53 3715.51    1936
 3759.16    1936 3778.48 1936.67 3785.73 1936.81 3790.09 1936.87 3793.79  1936.9
 3799.16 1936.86 3801.06 1936.86 3802.19 1936.81 3804.63 1936.78 3818.17    1936
 3832.36 1935.99 3854.99 1935.98 3863.68 1935.98  3886.5    1936 3998.78    1936
  4000.2 1935.98 4001.52    1936  4004.2 1936.08 4007.96 1936.12 4010.75  1936.1
 4017.61    1936 4020.98 1935.99 4035.44 1935.92 4055.83 1935.97 4070.14 1935.97
 4089.39    1936 4096.69 1936.41 4101.43 1936.54 4104.53  1936.6 4108.16 1936.56
 4112.51 1936.49 4119.23 1936.26 4123.78 1936.04 4125.39    1936 4129.65 1935.74
 4131.98 1935.65 4134.21 1935.52 4142.17 1935.12 4147.85 1935.01 4153.64 1934.99
 4153.99    1935 4163.43 1934.83    4170 1934.67 4198.06    1934 4202.51 1933.99
 4239.69 1933.37    4250 1933.24 4252.49 1933.24 4255.98 1933.22  4265.8 1933.22
 4269.84 1933.26 4270.36 1933.25 4273.28 1933.28  4282.1    1933 4323.72 1933.01
 4392.27 1933.01 4400.53    1933 4402.91 1932.95 4406.85 1932.92 4414.09 1932.71
 4425.55 1932.49 4429.87  1932.4 4430.71 1932.37 4446.86    1932 4451.61    1932
 4463.36 1931.99  4501.9 1931.99  4509.8 1931.79 4518.42 1931.81 4526.06 1931.84
  4536.7 1931.93 4540.51 1931.99 4542.42    1932 4546.07 1932.09 4567.83 1932.65
 4576.15 1932.88 4579.76    1933 4580.91 1933.13 4595.07    1934 4608.59 1934.61
 4615.05 1934.79 4616.84 1934.72 4621.98  1934.4 4626.86    1934 4639.67 1933.08
 4640.71    1933 4661.85    1932 4668.73 1931.72 4675.55 1931.48 4688.52    1931
 4715.54    1931 4721.24 1931.02 4730.63 1931.04 4764.77 1931.07 4767.56 1931.05
 4781.75  1931.2 4800.67 1931.49 4830.72 1931.98 4834.43    1932 4841.55 1932.37
  4846.9 1932.62 4852.62 1932.92 4854.61    1933 4878.92    1933 4887.87 1933.14
 4908.09 1933.45 4912.11 1933.49 4918.05 1933.29 4924.91 1933.01 4934.13 1933.01
 4935.17    1933 4942.21 1933.87    4944 1934.08 4945.81 1934.15 4949.16 1934.35
 4954.36  1934.7 4959.99    1935  5017.9    1935 5024.25 1934.99 5029.41 1934.99
 5033.87    1935 5112.13    1935 5118.38 1934.87 5124.87 1934.76 5125.29 1934.76
  5131.6 1934.63 5134.71 1934.59 5136.55 1934.55 5157.44 1934.18 5176.47    1934
  5205.4    1934 5205.58 1934.01  5215.5 1934.01 5234.83 1934.38 5248.54 1934.61
  5250.4 1934.57 5253.86 1934.56 5265.56  1934.4 5285.75 1934.02 5286.97    1934
 5291.02    1934 5297.07 1933.95 5307.32 1933.71 5311.33 1933.66 5315.51 1933.62
 5328.04 1933.56 5331.39 1933.58 5335.18 1933.58 5361.03 1933.99 5365.23    1934
 5394.95    1934 5403.98 1934.22 5406.39 1934.23 5411.63  1934.3 5422.14 1934.12
 5425.17 1934.11 5429.62    1934 5493.26    1934 5497.09 1934.04 5509.21 1934.11
 5510.27 1934.12 5518.43 1934.08 5525.36 1934.21 5533.97    1934 5673.42    1934
 5694.72  1933.6 5696.43 1933.64 5698.71 1933.66 5705.68 1933.67 5706.16 1933.66
 5711.11 1933.66 5712.77 1933.64 5715.89 1933.63 5720.34 1933.58 5724.06 1933.55
 5726.61 1933.55 5741.99 1933.49 5754.47 1933.45 5769.29  1933.3 5795.54 1933.03
 5796.33    1933 5860.53    1933 5868.09 1933.04 5869.95 1933.04 5879.04    1933
 5879.42 1933.01 5884.34 1934.85 5890.65    1937 5893.92 1938.14 5896.43    1939
 5899.82 1940.09 5906.08 1942.33 5908.07    1943 5912.74 1944.48 5914.42    1945
 5921.43  1947.2 5924.12    1948 5925.46 1948.44 5930.49    1950 5934.33    1951
 5940.75 1952.09 5945.64    1953 5948.33 1953.47 5951.24    1954 5953.94 1954.58
 5955.57    1955 5996.88    1955 6014.21 1954.27 6020.04    1954 6032.08 1953.36
 6038.96    1953 6059.22    1952 6072.72 1951.37 6081.43 1951.01 6081.81    1951
 6210.12    1951 6216.33  1951.1 6220.33 1951.13 6230.62 1951.25 6238.61 1951.33
  6242.9 1951.34  6248.3 1951.34 6289.16 1951.65

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 2141.94    .045 2141.94     .04 6289.16    .045

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       2141.94 6289.16           167.15  167.15  167.15             .1       .3

CROSS SECTION OUTPUT  Profile #PF 1

  E.G. Elev (ft)           1936.68    Element                  Left OB    Channel   Right OB
  Vel Head (ft)               0.18    Wt. n-Val.                          0.040
  W.S. Elev (ft)           1936.50    Reach Len. (ft)          167.15     167.15     167.15
  Crit W.S. (ft)                      Flow Area (sq ft)                  6599.88
  E.G. Slope (ft/ft)       0.003094   Area (sq ft)                       6599.88
  Q Total (cfs)           22400.00    Flow (cfs)                        22400.00
  Top Width (ft)           3133.68    Top Width (ft)                     3133.68
  Vel Total (ft/s)            3.39    Avg. Vel. (ft/s)                      3.39
  Max Chl Dpth (ft)           5.50    Hydr. Depth (ft)                      2.11
  Conv. Total (cfs)       402676.2    Conv. (cfs)                       402676.2
  Length Wtd. (ft)          167.15    Wetted Per. (ft)                   3135.52
  Min Ch El (ft)           1931.00    Shear (lb/sq ft)                      0.41
  Alpha                       1.00    Stream Power (lb/ft s)   6289.16      0.00       0.00
  Frctn Loss (ft)             0.54    Cum Volume (acre-ft)               2315.89
  C & E Loss (ft)             0.00    Cum SA (acres)                     1113.33


Warning: Divided flow computed for this cross-section.

CROSS SECTION


RIVER: MOJAVE
REACH: MOJAVE            RS: -6686.49
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INPUT
Description:
Station Elevation Data num= 418

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2116.22 | 1939 | 2116.34 | 1938.99 | 2123.65 | 1938.71 | 2135.33 | 1938.51 | 2142.64 | 1938 |
| 2145.42 | 1937.75 | 2154.92 | 1937 | 2157.16 | 1936.72 | 2162.77 | 1936 | 2166.9 | 1935.45 |
| 2170.24 | 1935 | 2178.21 | 1934.76 | 2183.15 | 1934.6 | 2188.94 | 1934.43 | 2201.39 | 1934.05 |
| 2203.22 | 1934 | 2250.6 | 1934 | 2258.47 | 1934.16 | 2275.74 | 1934.45 | 2284.34 | 1934.56 |
| 2284.67 | 1934.56 | 2292.66 | 1934.68 | 2305 | 1934.87 | 2307.57 | 1934.92 | 2309.73 | 1934.97 |
| 2311.68 | 1935 | 2317.32 | 1935.04 | 2320.67 | 1935.04 | 2334.86 | 1935.39 | 2346.29 | 1935.57 |
| 2349.13 | 1935.6 | 2369.57 | 1935.95 | 2373.48 | 1936 | 2609.94 | 1936 | 2619.94 | 1935.57 |
| 2627.09 | 1935.27 | 2629.8 | 1935.28 | 2630.79 | 1935.27 | 2651.84 | 1935.24 | 2674.67 | 1935.21 |
| 2695.9 | 1935.02 | 2698.02 | 1935 | 2758.24 | 1935 | 2765.1 | 1935.69 | 2768.32 | 1936 |
| 2773.19 | 1936.33 | 2777.82 | 1936.6 | 2781.45 | 1936.82 | 2784.86 | 1937 | 2786.39 | 1937.09 |
| 2792.14 | 1937.35 | 2795.4 | 1937.49 | 2804.62 | 1937.35 | 2820.57 | 1937.11 | 2821.86 | 1937.03 |
| 2822.62 | 1937 | 2878.87 | 1937 | 2893.36 | 1936.37 | 2909.2 | 1935.9 | 2912.6 | 1935.79 |
| 2927.25 | 1935.29 | 2937.4 | 1935.19 | 2941.11 | 1935.34 | 2950.89 | 1935.76 | 2953.71 | 1935.86 |
| 2957.08 | 1936 | 2964.86 | 1936.18 | 2967.56 | 1936.23 | 2973.52 | 1936.36 | 2978.81 | 1936.48 |
| 2996.56 | 1936.86 | 2999.2 | 1936.92 | 3003.89 | 1937 | 3005.98 | 1937 | 3013.7 | 1937.01 |
| 3016.61 | 1937.01 | 3025.05 | 1937.22 | 3037.05 | 1937.5 | 3045.18 | 1937.62 | 3057.94 | 1937.86 |
| 3058.16 | 1937.86 | 3064.39 | 1938 | 3070.88 | 1938.34 | 3074.67 | 1938.52 | 3085.71 | 1939 |
| 3088.73 | 1939 | 3095.05 | 1938.44 | 3100.17 | 1938 | 3103.25 | 1937.88 | 3110.19 | 1937.63 |
| 3114.89 | 1937.47 | 3117.87 | 1937.38 | 3121.44 | 1937.3 | 3125.86 | 1937.19 | 3132.07 | 1937.09 |
| 3132.95 | 1937.07 | 3138.18 | 1937.02 | 3140.73 | 1937.05 | 3143.88 | 1937.15 | 3146.9 | 1937.21 |
| 3158.28 | 1937.56 | 3176.84 | 1937.93 | 3180.71 | 1938 | 3183.68 | 1938 | 3188.43 | 1937.84 |
| 3190.49 | 1937.78 | 3213.36 | 1937 | 3274.21 | 1937 | 3278.17 | 1936.69 | 3286.67 | 1936 |
| 3293.02 | 1935.41 | 3297.57 | 1935 | 3299.27 | 1934.87 | 3301.12 | 1934.8 | 3308.23 | 1934.39 |
| 3310.57 | 1934.26 | 3311.64 | 1934.25 | 3317.38 | 1934.01 | 3327.06 | 1934.01 | 3333.45 | 1934.24 |
| 3344.97 | 1934.61 | 3345.72 | 1934.61 | 3351.58 | 1934.91 | 3353.27 | 1935.01 | 3364.31 | 1936 |
| 3375.42 | 1936.51 | 3379.86 | 1936.68 | 3381.82 | 1936.76 | 3388.31 | 1937 | 3393.71 | 1937.03 |
| 3396.63 | 1937.03 | 3399.76 | 1937 | 3411.85 | 1936.22 | 3414.89 | 1936 | 3419.33 | 1935.81 |
| 3437.08 | 1935 | 3440.12 | 1935 | 3441.47 | 1934.99 | 3447.42 | 1934.99 | 3450.98 | 1935 |
| 3454.98 | 1935 | 3464.91 | 1935.66 | 3470.15 | 1936 | 3474.84 | 1936.26 | 3478.17 | 1936.42 |
| 3486.57 | 1936.96 | 3489.12 | 1936.97 | 3490.78 | 1937 | 3498.59 | 1937.57 | 3498.75 | 1937.57 |
| 3502.89 | 1937.44 | 3509.04 | 1937.06 | 3510.77 | 1937 | 3514.23 | 1936.75 | 3516.72 | 1936.55 |
| 3522.28 | 1936 | 3526.36 | 1935.68 | 3528.17 | 1935.57 | 3528.74 | 1935.52 | 3529.28 | 1935.51 |
| 3530.11 | 1935.43 | 3530.58 | 1935.43 | 3533.74 | 1935.21 | 3534.86 | 1935.15 | 3536.29 | 1935.13 |
| 3538.47 | 1935.13 | 3540.99 | 1935.14 | 3548.8 | 1935.22 | 3559.36 | 1935 | 3588.18 | 1935 |
| 3588.73 | 1934.97 | 3605.44 | 1934.02 | 3609.44 | 1934.01 | 3609.71 | 1934.02 | 3623.95 | 1934.46 |
| 3626.94 | 1934.49 | 3647.65 | 1934.8 | 3657.7 | 1934.94 | 3659.78 | 1935 | 3780.27 | 1935 |
| 3789.32 | 1935.42 | 3800.31 | 1935.92 | 3803.31 | 1936 | 3806.08 | 1936.14 | 3810.47 | 1936.11 |
| 3814.67 | 1936.01 | 3815.57 | 1936 | 3826.22 | 1935.78 | 3828.84 | 1935.79 | 3829.33 | 1935.8 |
| 3835.3 | 1935.78 | 3846 | 1935.67 | 3856.49 | 1935.58 | 3872.95 | 1935.46 | 3902.7 | 1935.24 |
| 3903.85 | 1935.23 | 3924.76 | 1935 | 3940.76 | 1934.95 | 3946.82 | 1934.97 | 3949.32 | 1934.97 |
| 3964.63 | 1935 | 4015.86 | 1935 | 4019.31 | 1935.01 | 4021.28 | 1935.01 | 4028.48 | 1935 |
| 4042.34 | 1935 | 4045.71 | 1934.98 | 4078.11 | 1934.42 | 4089.18 | 1934.29 | 4091.91 | 1934.24 |
| 4093.82 | 1934.22 | 4097.09 | 1934.24 | 4100.27 | 1934.23 | 4103.13 | 1934.25 | 4105.41 | 1934.25 |
| 4107.1 | 1934.26 | 4110.6 | 1934.3 | 4113.73 | 1934.36 | 4117.43 | 1934.45 | 4122.36 | 1934.54 |
| 4123.77 | 1934.56 | 4130.09 | 1934.63 | 4134.24 | 1934.72 | 4139.92 | 1934.82 | 4141.86 | 1934.85 |
| 4143.54 | 1934.85 | 4145.07 | 1934.87 | 4147.34 | 1934.85 | 4148.98 | 1934.85 | 4151.35 | 1934.76 |
| 4152.16 | 1934.76 | 4154.62 | 1934.72 | 4156.07 | 1934.68 | 4164.92 | 1934.39 | 4193.49 | 1934.03 |
| 4194.9 | 1934.01 | 4199 | 1934.01 | 4204.73 | 1934 | 4287.65 | 1934 | 4311.08 | 1933.44 |
| 4322.64 | 1933.17 | 4326.2 | 1933.06 | 4328.82 | 1933 | 4330.28 | 1932.99 | 4335.56 | 1932.99 |
| 4340.82 | 1932.98 | 4343.86 | 1932.97 | 4346.78 | 1932.98 | 4349.59 | 1933 | 4351.78 | 1933 |
| 4357.17 | 1933.01 | 4361.79 | 1933 | 4366.38 | 1933 | 4381.43 | 1932.96 | 4398.38 | 1932.98 |
| 4401.41 | 1932.97 | 4402.79 | 1932.98 | 4404.77 | 1932.98 | 4407.44 | 1933 | 4411.07 | 1933.15 |
| 4428.83 | 1934 | 4436.51 | 1934 | 4444.45 | 1933.21 | 4447.21 | 1933 | 4453.41 | 1932.7 |
| 4454.07 | 1932.65 | 4464.39 | 1932 | 4465.17 | 1931.96 | 4478.37 | 1931.41 | 4481.23 | 1931.31 |
| 4485.12 | 1931.16 | 4487.7 | 1931.01 | 4488.69 | 1931.01 | 4499.71 | 1931.07 | 4507.03 | 1931.05 |
| 4519.75 | 1931.05 | 4523.08 | 1931.04 | 4527.67 | 1931.04 | 4532.5 | 1931.06 | 4537.32 | 1931.04 |
| 4541.08 | 1931.03 | 4545.68 | 1931.03 | 4555.08 | 1931.14 | 4562.84 | 1931.14 | 4563.1 | 1931.15 |
| 4606.54 | 1931.07 | 4619.72 | 1931.05 | 4646.98 | 1931 | 4725.4 | 1931 | 4743.84 | 1931.65 |
| 4744.23 | 1931.66 | 4754.78 | 1932 | 4764.46 | 1932.15 | 4770.54 | 1932.23 | 4779.51 | 1932.39 |
| 4781.9 | 1932.43 | 4807.3 | 1932.99 | 4813.77 | 1933 | 4818.3 | 1933.09 | 4844.5 | 1933.34 |
| 4860.41 | 1933.45 | 4860.82 | 1933.45 | 4880.31 | 1933.1 | 4884.62 | 1933.02 | 4887.17 | 1933.01 |
| 4903.03 | 1933.01 | 4906.93 | 1933 | 4911.22 | 1933 | 4916.52 | 1932.68 | 4928.65 | 1932.96 |
| 4930.41 | 1932.96 | 4942.57 | 1932.99 | 4949.71 | 1933 | 4963.12 | 1933 | 4978.8 | 1933.02 |
| 4998.92 | 1933.02 | 5004.5 | 1933.01 | 5016.87 | 1933 | 5063.25 | 1933 | 5067.9 | 1933.2 |
| 5088.83 | 1934 | 5095.72 | 1934 | 5106.14 | 1934.16 | 5124.76 | 1934.27 | 5139.44 | 1934.34 |
| 5143.56 | 1934.34 | 5145.05 | 1934.35 | 5165.04 | 1934 | 5165.85 | 1934 | 5194.11 | 1934.5 |
| 5215.62 | 1934.87 | 5217.83 | 1934.92 | 5219.01 | 1934.92 | 5224.9 | 1935 | 5228.29 | 1935 |
| 5238.77 | 1934.89 | 5254.2 | 1934.74 | 5260.71 | 1934.6 | 5283.99 | 1934.07 | 5286.4 | 1934 |
| 5335.48 | 1934 | 5377.35 | 1933.75 | 5378.14 | 1933.75 | 5389.08 | 1933.55 | 5419.92 | 1933 |
| 5530.2 | 1933 | 5541.67 | 1933.1 | 5552.57 | 1933.05 | 5561.2 | 1933 | 5582.95 | 1933 |
| 5590.79 | 1933.23 | 5601.01 | 1933.54 | 5616.59 | 1934.03 | 5625.08 | 1934.28 | 5639.47 | 1934.03 |
| 5650.96 | 1934.03 | 5667 | 1934.02 | 5675.5 | 1934.02 | 5682.92 | 1934.01 | 5685.24 | 1934.01 |
| 5692.34 | 1934 | 5707.23 | 1933.81 | 5710.1 | 1933.78 | 5717.2 | 1933.69 | 5772.58 | 1933 |
| 5959.39 | 1933 | 5962.41 | 1933.01 | 5967.14 | 1933 | 5969.69 | 1934 | 5971.02 | 1934.47 |
| 5972.39 | 1935 | 5973.8 | 1935.53 | 5974.88 | 1936 | 5976.04 | 1936.56 | 5977.19 | 1937 |
| 5978.57 | 1937.6 | 5982.54 | 1939.37 | 5983.92 | 1940 | 5984.74 | 1940.36 | 5986.83 | 1941.31 |
| 5991.55 | 1943.39 | 5993.76 | 1944.38 | 5996.08 | 1945.43 | 5997.37 | 1946 | 5999.59 | 1947 |
| 6000.31 | 1947.34 | 6000.95 | 1947.48 | 6003.47 | 1947.86 | 6004.84 | 1948.1 | 6006.49 | 1948.45 |
| 6008.94 | 1949.04 | 6012.4 | 1950 | 6014.63 | 1950.5 | 6018.38 | 1951 | 6022.38 | 1951.49 |
| 6026.46 | 1952 | 6029.17 | 1952.32 | 6035.15 | 1953 | 6037.72 | 1953.16 | 6039.94 | 1953.27 |
| 6043.52 | 1953.35 | 6049.07 | 1953.55 | 6052.03 | 1953.65 | 6058.34 | 1953.72 | 6060.6 | 1953.73 |
| 6065.51 | 1953.67 | 6073.24 | 1953.57 | 6074.7 | 1953.54 | 6092.48 | 1953 | 6106.69 | 1952.42 |
| 6116.75 | 1952 | 6123.72 | 1952 | 6153.9 | 1951.41 | 6183.69 | 1951 | 6282.21 | 1951 |
| 6284.08 | 1951.01 | 6318.32 | 1951.27 | 6342.42 | 1951.46 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2116.22 | .045 | 2116.22 | .04 | 6342.42 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2116.22 | 6342.42 | 104.27 | 104.27 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1936.14 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.20 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1935.94 | Reach Len. (ft) | 104.27 | 104.27 | 104.27 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6310.33 | | |
| E.G. Slope (ft/ft) | 0.003352 | Area (sq ft) | | 6310.33 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 2974.60 | Top Width (ft) | | 2974.60 | | |
| Vel Total (ft/s) | 3.55 | Avg. Vel. (ft/s) | | 3.55 | | |
| Max Chl Dpth (ft) | 4.94 | Hydr. Depth (ft) | | 2.12 | | |
| Conv. Total (cfs) | 386909.9 | Conv. (cfs) | | 386909.9 | | |
| Length Wtd. (ft) | 104.27 | Wetted Per. (ft) | | 2975.90 | | |
| Min Ch El (ft) | 1931.00 | Shear (lb/sq ft) | | 0.44 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6342.42 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.33 | Cum Volume (acre-ft) | | 2291.12 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1101.61 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -6790.76

INPUT
Description:
Station Elevation Data num= 417

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2098.6 | 1938.39 | 2105.74 | 1938.42 | 2111.42 | 1938.37 | 2117.18 | 1938.28 | 2125.44 | 1938.1 |
| 2127.49 | 1938 | 2137.34 | 1937 | 2139.87 | 1936.71 | 2147.24 | 1935.85 | 2152.88 | 1935 |
| 2156.06 | 1934.28 | 2157.07 | 1934 | 2220.09 | 1934 | 2272.52 | 1935 | 2352.61 | 1935 |
| 2357.22 | 1935.15 | 2358.92 | 1935.17 | 2360.25 | 1935.22 | 2363.03 | 1935.24 | 2363.83 | 1935.27 |
| 2364.71 | 1935.27 | 2365.38 | 1935.3 | 2387.62 | 1935.73 | 2392.86 | 1935.83 | 2396.55 | 1935.83 |
| 2398.05 | 1935.84 | 2408.73 | 1935.86 | 2414.19 | 1935.88 | 2449.96 | 1935.8 | 2465.8 | 1936 |
| 2563.8 | 1936 | 2566.27 | 1935.94 | 2581.19 | 1935.63 | 2608.33 | 1935.07 | 2609.89 | 1935.04 |
| 2610.87 | 1935 | 2779.38 | 1935 | 2787.64 | 1935.28 | 2790.59 | 1935.35 | 2792.26 | 1935.4 |
| 2803.95 | 1935.65 | 2809.32 | 1935.75 | 2812.75 | 1935.8 | 2820.28 | 1936.01 | 2838.36 | 1936.6 |
| 2844.12 | 1936.84 | 2847.7 | 1937 | 2855.34 | 1937 | 2864.83 | 1936.99 | 2870.22 | 1936.84 |
| 2880.48 | 1936.68 | 2884.65 | 1936.6 | 2889.52 | 1936.47 | 2908.48 | 1936 | 2920.78 | 1935.54 |
| 2922.34 | 1935.55 | 2925.35 | 1935.46 | 2925.75 | 1935.47 | 2929.9 | 1935.44 | 2933.73 | 1935.44 |
| 2939.91 | 1935.58 | 2952.49 | 1935.89 | 2956.21 | 1936 | 2957.5 | 1936.02 | 2962.12 | 1936.32 |
| 2967.87 | 1936.55 | 2969.02 | 1936.62 | 2976.33 | 1936.92 | 2987 | 1937.5 | 2992.69 | 1937.31 |
| 2997.4 | 1937.06 | 3001.05 | 1937 | 3009.16 | 1936.54 | 3018.55 | 1936 | 3022.8 | 1935.7 |
| 3023.48 | 1935.69 | 3029.31 | 1935.37 | 3035.24 | 1935.35 | 3043.45 | 1935.51 | 3044.84 | 1935.52 |
| 3047.68 | 1935.65 | 3049.88 | 1935.7 | 3053.66 | 1935.99 | 3053.92 | 1935.99 | 3064.82 | 1936.77 |
| 3067.99 | 1937 | 3072.95 | 1937.38 | 3076.47 | 1937.67 | 3081.02 | 1938 | 3090.66 | 1938.1 |
| 3094.92 | 1938.11 | 3116.53 | 1938.26 | 3127.37 | 1938.22 | 3138.03 | 1938.22 | 3160.3 | 1938.07 |
| 3161.47 | 1938.06 | 3169.37 | 1938.25 | 3172.78 | 1938.22 | 3173.3 | 1938.23 | 3175.8 | 1938.2 |
| 3176.26 | 1938.21 | 3180.35 | 1938.18 | 3182.02 | 1938.18 | 3190.45 | 1938.01 | 3196.25 | 1938.01 |
| 3203.54 | 1938 | 3211.83 | 1938 | 3220.11 | 1937.99 | 3233.32 | 1937.99 | 3257.59 | 1937.31 |
| 3258.36 | 1937.3 | 3267.02 | 1937 | 3267.42 | 1936.98 | 3281.75 | 1936 | 3285.56 | 1935.78 |
| 3299.45 | 1935 | 3309.93 | 1934.32 | 3311.31 | 1934.26 | 3312.67 | 1934.18 | 3315.59 | 1934.06 |
| 3317.62 | 1934.1 | 3320.62 | 1934.27 | 3330.86 | 1934.89 | 3340.04 | 1935.35 | 3343.79 | 1935.42 |
| 3346.58 | 1935.46 | 3348.71 | 1935.47 | 3349.24 | 1935.46 | 3354.75 | 1935.54 | 3357.07 | 1935.48 |
| 3360.25 | 1935.37 | 3366.7 | 1935 | 3368.07 | 1934.99 | 3369.62 | 1935 | 3370.76 | 1935.05 |
| 3372.81 | 1935.11 | 3387.18 | 1935.55 | 3392.4 | 1935.68 | 3402.23 | 1936 | 3407.96 | 1936.31 |
| 3418.71 | 1936.9 | 3420.46 | 1937 | 3481.75 | 1937 | 3489.58 | 1936.76 | 3491.38 | 1936.69 |
| 3497.82 | 1936.49 | 3507.65 | 1936.18 | 3514.04 | 1936 | 3519.35 | 1935.9 | 3522.11 | 1935.86 |
| 3524.12 | 1935.82 | 3526.77 | 1935.75 | 3547.5 | 1935 | 3552.87 | 1935 | 3558.83 | 1935.01 |
| 3563.8 | 1935.01 | 3566.68 | 1935.02 | 3569.98 | 1935.01 | 3577.81 | 1935 | 3589.45 | 1934.11 |
| 3591.05 | 1934 | 3605.57 | 1933.45 | 3605.86 | 1933.45 | 3611.46 | 1933.31 | 3614.59 | 1933.25 |
| 3615.12 | 1933.25 | 3618.7 | 1933.38 | 3630.99 | 1933.85 | 3633.3 | 1934 | 3638.95 | 1934.01 |
| 3659.46 | 1934.93 | 3660.33 | 1935 | 3662.14 | 1935.07 | 3674.07 | 1935.56 | 3675.28 | 1935.58 |
| 3683.94 | 1935.66 | 3689.78 | 1935.72 | 3694.01 | 1935.67 | 3701.58 | 1935.57 | 3709.15 | 1935.52 |
| 3715.73 | 1935.46 | 3717.58 | 1935.46 | 3736.82 | 1935 | 3774.11 | 1935 | 3788.71 | 1934.78 |
| 3805.45 | 1934.62 | 3817.15 | 1934.58 | 3818.41 | 1934.58 | 3825.26 | 1934.39 | 3837.77 | 1934 |
| 3865.98 | 1934 | 3870.55 | 1934.32 | 3874.29 | 1934.62 | 3879.08 | 1934.97 | 3880.86 | 1935 |
| 3890.73 | 1935 | 3903.59 | 1934.71 | 3922.13 | 1934.22 | 3927.76 | 1934.08 | 3930.98 | 1933.99 |
| 3942.38 | 1933.95 | 3949.75 | 1933.97 | 3956.6 | 1934 | 3968.02 | 1934.01 | 3968.32 | 1934.02 |
| 3980.18 | 1934 | 3993.81 | 1934 | 3997.22 | 1934.19 | 3999.09 | 1934.32 | 4004.16 | 1934.16 |
| 4004.35 | 1934.16 | 4006.63 | 1934 | 4013.02 | 1934 | 4015.3 | 1933.97 | 4016.61 | 1933.98 |
| 4017.63 | 1933.94 | 4018.86 | 1934 | 4131.02 | 1934 | 4131.52 | 1933.99 | 4136.22 | 1933.99 |
| 4138.62 | 1933.98 | 4152.31 | 1933.97 | 4157.5 | 1933.96 | 4164.11 | 1933.97 | 4167.82 | 1933.97 |
| 4175.57 | 1933.99 | 4185.59 | 1934 | 4223.51 | 1934 | 4236.6 | 1933.75 | 4241.95 | 1933.64 |
| 4268.01 | 1933.14 | 4275.71 | 1933 | 4291.13 | 1933 | 4297.95 | 1933.21 | 4298.17 | 1933.21 |
| 4315.83 | 1933.06 | 4322.07 | 1933 | 4355.86 | 1933 | 4361.2 | 1933.01 | 4370.25 | 1933 |
| 4371.01 | 1932.99 | 4375.69 | 1932.97 | 4383.31 | 1933 | 4392.53 | 1933 | 4398.94 | 1932.84 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4405.18 | 1932.66 | 4428.49 | 1932 | 4443.58 | 1931.17 | 4443.61 | 1931.16 | 4447.08 | 1931 |
| 4452.86 | 1930.95 | 4472.82 | 1930.48 | 4491.8 | 1930.05 | 4493.48 | 1930 | 4511.99 | 1930 |
| 4534.5 | 1931 | 4639.15 | 1931 | 4643.14 | 1930.56 | 4643.82 | 1930.52 | 4644.97 | 1930.4 |
| 4646.44 | 1930.32 | 4648.53 | 1930.27 | 4651.1 | 1930.33 | 4652.53 | 1930.35 | 4654.01 | 1930.4 |
| 4655.2 | 1930.46 | 4662.37 | 1930.69 | 4664.32 | 1930.79 | 4667.48 | 1930.9 | 4669.75 | 1931 |
| 4687.95 | 1931 | 4688.67 | 1930.99 | 4692.7 | 1930.98 | 4697.99 | 1931 | 4713.29 | 1931.63 |
| 4727.5 | 1932 | 4748.07 | 1932 | 4771.68 | 1932.33 | 4783.74 | 1932.5 | 4793.23 | 1932.58 |
| 4800.92 | 1932.64 | 4817.23 | 1932.76 | 4831.23 | 1932.87 | 4835.88 | 1932.91 | 4838.9 | 1932.91 |
| 4848.59 | 1932.94 | 4861.28 | 1933 | 4866.67 | 1933.08 | 4872.67 | 1933.16 | 4873.13 | 1933.16 |
| 4890.43 | 1933 | 4949.97 | 1933 | 5038.83 | 1932.28 | 5042.63 | 1932.24 | 5052.6 | 1932.21 |
| 5060.2 | 1932.18 | 5061.44 | 1932.18 | 5074.5 | 1932.14 | 5076.94 | 1932.13 | 5092.08 | 1932.09 |
| 5105.06 | 1932.14 | 5106.13 | 1932.16 | 5111.84 | 1932.12 | 5112.83 | 1932.13 | 5116.55 | 1932.13 |
| 5118.59 | 1932.17 | 5123.38 | 1932.25 | 5124.32 | 1932.25 | 5130.03 | 1932.31 | 5137.73 | 1932.48 |
| 5147.62 | 1932.58 | 5151.49 | 1932.56 | 5156.17 | 1932.5 | 5160.6 | 1932.84 | 5161.46 | 1933 |
| 5173.32 | 1933.52 | 5176.85 | 1933.68 | 5184.21 | 1934 | 5332.93 | 1934 | 5337.5 | 1933.9 |
| 5354.11 | 1933.56 | 5354.98 | 1933.54 | 5375.26 | 1933.19 | 5384.16 | 1933 | 5415.72 | 1933 |
| 5421.98 | 1933.01 | 5431.12 | 1933 | 5548.23 | 1933 | 5548.54 | 1932.99 | 5562.86 | 1932.72 |
| 5565.89 | 1932.61 | 5579.11 | 1932 | 5590.98 | 1931.68 | 5601 | 1931.46 | 5613.88 | 1931.16 |
| 5623.16 | 1931 | 5645.54 | 1931 | 5651.38 | 1931.3 | 5661.37 | 1931.75 | 5663.96 | 1931.88 |
| 5668.52 | 1932.07 | 5671.08 | 1932.22 | 5678.5 | 1932.55 | 5686.86 | 1932.99 | 5687.17 | 1933 |
| 5699.16 | 1933.27 | 5717.97 | 1933.69 | 5735.08 | 1934 | 5746.07 | 1934 | 5760.15 | 1933.58 |
| 5763.17 | 1933.55 | 5763.89 | 1933.53 | 5773.92 | 1933.44 | 5774.86 | 1933.42 | 5789.56 | 1933.19 |
| 5793.9 | 1933.12 | 5802.47 | 1933 | 5945.23 | 1933 | 5955.87 | 1933.82 | 5958.75 | 1934 |
| 5970.13 | 1935 | 5976.15 | 1935.08 | 5979.41 | 1935.08 | 5984.52 | 1935.02 | 5986.2 | 1935.11 |
| 5987.5 | 1935.15 | 5990.58 | 1936 | 5994.27 | 1937 | 5995.02 | 1937.14 | 5998.21 | 1938 |
| 6001.94 | 1938.53 | 6005.15 | 1939 | 6011.92 | 1939.98 | 6013.25 | 1940.15 | 6016.86 | 1940.53 |
| 6018.64 | 1941 | 6020.07 | 1941.4 | 6022.09 | 1942 | 6028.18 | 1943.7 | 6029.96 | 1944.22 |
| 6032.37 | 1945 | 6033.79 | 1945.31 | 6036.47 | 1946 | 6041.37 | 1946.83 | 6042.58 | 1947 |
| 6052.72 | 1947.29 | 6053.62 | 1947.29 | 6056.18 | 1947.35 | 6058.8 | 1947.4 | 6067.52 | 1947.42 |
| 6077.99 | 1947.57 | 6080.89 | 1947.58 | 6085.7 | 1947.65 | 6093.98 | 1947.71 | 6099.68 | 1947.76 |
| 6111.06 | 1947.77 | 6115.99 | 1947.77 | 6121.01 | 1947.78 | 6131.94 | 1947.81 | 6143.99 | 1947.85 |
| 6166.73 | 1948 | 6175.61 | 1948 | 6185.51 | 1948.29 | 6189.63 | 1948.29 | 6194.34 | 1948.42 |
| 6208.62 | 1948.51 | 6209.55 | 1948.52 | 6218.22 | 1948.65 | 6220.61 | 1948.67 | 6223.73 | 1948.71 |
| 6231.11 | 1948.76 | 6231.78 | 1948.76 | 6248.68 | 1948.87 | 6262.9 | 1948.99 | 6265.91 | 1948.99 |
| 6266.27 | 1949 | 6316.88 | 1949 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2098.6 | .045 | 2098.6 | .04 | 6316.88 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2098.6 | 6316.88 | 147.26 | 147.26 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1935.80 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.18 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1935.62 | Reach Len. (ft) | 147.26 | 147.26 | 147.26 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6548.52 | | |
| E.G. Slope (ft/ft) | 0.003051 | Area (sq ft) | | 6548.52 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3041.43 | Top Width (ft) | | 3041.43 | | |
| Vel Total (ft/s) | 3.42 | Avg. Vel. (ft/s) | | 3.42 | | |
| Max Chl Dpth (ft) | 5.62 | Hydr. Depth (ft) | | 2.15 | | |
| Conv. Total (cfs) | 405533.9 | Conv. (cfs) | | 405533.9 | | |
| Length Wtd. (ft) | 147.26 | Wetted Per. (ft) | | 3042.43 | | |
| Min Ch El (ft) | 1930.00 | Shear (lb/sq ft) | | 0.41 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6316.88 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.55 | Cum Volume (acre-ft) | | 2275.73 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1094.41 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -6938.02

INPUT
Description:
Station Elevation Data num= 414

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2085.03 | 1937.99 | 2100.01 | 1937.42 | 2102.94 | 1937.32 | 2103.5 | 1937.31 | 2112.68 | 1937 |
| 2118.69 | 1936.61 | 2122.58 | 1936.29 | 2126.39 | 1936 | 2127.05 | 1935.94 | 2138.21 | 1935 |
| 2145.31 | 1934.21 | 2146.96 | 1934 | 2275.69 | 1934 | 2276.86 | 1933.92 | 2278.19 | 1934 |
| 2290.2 | 1933.98 | 2294.94 | 1933.97 | 2299.15 | 1934 | 2324.9 | 1934.31 | 2338.63 | 1934.47 |
| 2340.11 | 1934.48 | 2349.48 | 1934.57 | 2352.14 | 1934.62 | 2372.27 | 1934.77 | 2379.69 | 1934.79 |
| 2383.8 | 1934.79 | 2386.47 | 1934.77 | 2399.14 | 1934.99 | 2414.51 | 1934.99 | 2437.31 | 1935 |
| 2601.6 | 1935 | 2610.33 | 1934.99 | 2618.65 | 1934.99 | 2619.25 | 1934.98 | 2636.83 | 1934.98 |
| 2639.18 | 1934.99 | 2641.86 | 1934.99 | 2649.81 | 1935 | 2663.84 | 1935 | 2668.31 | 1934.91 |
| 2668.46 | 1934.9 | 2680 | 1934.78 | 2691.04 | 1934.86 | 2692.77 | 1934.93 | 2694.8 | 1934.95 |
| 2697.95 | 1934.88 | 2709.09 | 1934.77 | 2718.02 | 1934.7 | 2718.34 | 1934.71 | 2722.79 | 1934.71 |
| 2723.06 | 1934.72 | 2725.52 | 1934.72 | 2725.95 | 1934.73 | 2736.25 | 1934.69 | 2744.06 | 1934.77 |
| 2754.69 | 1934.94 | 2758.67 | 1935 | 2839.65 | 1935 | 2858.75 | 1935.71 | 2866.24 | 1936 |
| 2867.6 | 1936.02 | 2875.91 | 1936.35 | 2883.13 | 1936.61 | 2885.96 | 1936.67 | 2887.99 | 1936.75 |
| 2889.05 | 1936.77 | 2891.13 | 1936.85 | 2892.22 | 1936.88 | 2893.97 | 1936.88 | 2895.84 | 1936.94 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2899.75 | 1937 | 2902.88 | 1937 | 2903.52 | 1936.99 | 2906.97 | 1936.79 | 2909.55 | 1936.61 |
| 2912.2 | 1936.39 | 2917.9 | 1936 | 2932.1 | 1935.67 | 2934.13 | 1935.63 | 2943.26 | 1935.48 |
| 2949.2 | 1935.41 | 2951.8 | 1935.35 | 2955.05 | 1935.34 | 2955.63 | 1935.33 | 2960.3 | 1935.39 |
| 2967.71 | 1935.47 | 2969.7 | 1935.51 | 2970.86 | 1935.52 | 2976.43 | 1935.66 | 2978.58 | 1935.64 |
| 2985.66 | 1935.65 | 2995.58 | 1935.52 | 3004.02 | 1935.42 | 3006.89 | 1935.37 | 3014.59 | 1935.01 |
| 3021.83 | 1935.01 | 3022.99 | 1935 | 3029.98 | 1935 | 3030.19 | 1935.01 | 3064.92 | 1935.95 |
| 3067.55 | 1936 | 3068.77 | 1936.05 | 3079.99 | 1936.36 | 3080.8 | 1936.38 | 3089.49 | 1936.65 |
| 3095.67 | 1936.72 | 3102.4 | 1936.82 | 3110.8 | 1937 | 3127.31 | 1937.44 | 3128.29 | 1937.48 |
| 3131.04 | 1937.56 | 3134.34 | 1937.67 | 3143.1 | 1938 | 3150.8 | 1938 | 3158.4 | 1938.06 |
| 3161.39 | 1938.04 | 3168.93 | 1938.15 | 3179.58 | 1938.19 | 3190.63 | 1938.17 | 3206.63 | 1938 |
| 3228.51 | 1938 | 3237.99 | 1937.51 | 3246.38 | 1937.07 | 3248.1 | 1937 | 3251.82 | 1936.8 |
| 3257.62 | 1936.56 | 3259.31 | 1936.47 | 3261.15 | 1936.39 | 3263.45 | 1936.27 | 3265.94 | 1936.18 |
| 3270.27 | 1936.11 | 3271.69 | 1936.14 | 3276.66 | 1936.32 | 3281.91 | 1936.55 | 3289.74 | 1937 |
| 3293.54 | 1937.02 | 3299.01 | 1937.03 | 3302.72 | 1937 | 3306.29 | 1936.81 | 3306.69 | 1936.8 |
| 3322.94 | 1936.01 | 3329.39 | 1936.01 | 3334.84 | 1936 | 3339.61 | 1936 | 3341.86 | 1935.94 |
| 3343.84 | 1935.95 | 3347.75 | 1936 | 3363.58 | 1935.99 | 3377.9 | 1935.99 | 3396.23 | 1936 |
| 3406.72 | 1936 | 3409.2 | 1936.26 | 3415.91 | 1937 | 3457.96 | 1937 | 3462.39 | 1936.55 |
| 3463.87 | 1936.34 | 3466.97 | 1936 | 3469.29 | 1935.92 | 3471.62 | 1935.66 | 3474.99 | 1935.36 |
| 3476.2 | 1935.3 | 3478.61 | 1935.24 | 3490.62 | 1935.33 | 3491.69 | 1935.31 | 3498.67 | 1935.35 |
| 3501.69 | 1935.28 | 3506.45 | 1935.21 | 3510.71 | 1935.12 | 3511.76 | 1935.12 | 3518.38 | 1935 |
| 3527.8 | 1934.81 | 3529.34 | 1934.73 | 3532.03 | 1934.63 | 3533.79 | 1934.53 | 3541.98 | 1934.63 |
| 3551.75 | 1935 | 3577.38 | 1935 | 3602.73 | 1934.17 | 3607.1 | 1934.03 | 3608.26 | 1934 |
| 3620.18 | 1934 | 3639.63 | 1933.47 | 3648.24 | 1933.6 | 3650.58 | 1933.64 | 3654.45 | 1933.74 |
| 3664.81 | 1933.94 | 3665.55 | 1934 | 3666.75 | 1934.01 | 3673.12 | 1934.31 | 3682.45 | 1934.66 |
| 3689.36 | 1935 | 3801.33 | 1935 | 3806.69 | 1934.83 | 3839.61 | 1934.03 | 3841.46 | 1934.02 |
| 3848.95 | 1934.02 | 3858.98 | 1934 | 3862.57 | 1933.98 | 3863.85 | 1934 | 3878.86 | 1934 |
| 3883.4 | 1933.99 | 3891.43 | 1934 | 3897.96 | 1934 | 3901.95 | 1934.01 | 3904.54 | 1934.04 |
| 3911.21 | 1934 | 3914.09 | 1934 | 3924.89 | 1934.01 | 3949.33 | 1934.01 | 3957.38 | 1934 |
| 3966.04 | 1934 | 3969.64 | 1933.96 | 3978.15 | 1933.62 | 3984.67 | 1933.44 | 3987.46 | 1933.4 |
| 3993.08 | 1933.82 | 3995.13 | 1933.98 | 3997.75 | 1933.98 | 4004.06 | 1933.99 | 4004.23 | 1933.98 |
| 4032.23 | 1933.65 | 4035.69 | 1933.57 | 4041.35 | 1933.43 | 4044.24 | 1933.43 | 4045.56 | 1933.39 |
| 4046.21 | 1933.39 | 4048.6 | 1933.33 | 4062.38 | 1933 | 4148.4 | 1933 | 4154.56 | 1933.19 |
| 4157.56 | 1933.24 | 4159.62 | 1933.33 | 4160.91 | 1933.34 | 4163.1 | 1933.41 | 4174.45 | 1933.64 |
| 4179.53 | 1933.74 | 4181.27 | 1933.72 | 4182.7 | 1933.72 | 4187.28 | 1933.65 | 4189.15 | 1933.63 |
| 4197.17 | 1933.51 | 4201.87 | 1933.43 | 4203.2 | 1933.4 | 4211.42 | 1933.27 | 4212.09 | 1933.27 |
| 4220.87 | 1933 | 4369.22 | 1933 | 4371.43 | 1932.99 | 4383.61 | 1932.82 | 4386.53 | 1932.77 |
| 4404.44 | 1932.53 | 4420.63 | 1932.23 | 4420.79 | 1932.23 | 4431.95 | 1932 | 4443.49 | 1931.34 |
| 4448.93 | 1931 | 4454.57 | 1930.71 | 4456.25 | 1930.64 | 4462.59 | 1930.3 | 4469.65 | 1930.08 |
| 4471.66 | 1930.01 | 4472.42 | 1930 | 4546.38 | 1930 | 4554.35 | 1930.01 | 4575.96 | 1930.43 |
| 4577.59 | 1930.52 | 4590.68 | 1931 | 4683.12 | 1931 | 4734.17 | 1931.34 | 4752.82 | 1931.43 |
| 4806.9 | 1931.71 | 4822.74 | 1931.79 | 4859.06 | 1931.99 | 4864.22 | 1932 | 4867.26 | 1932.1 |
| 4868.38 | 1932.1 | 4875.79 | 1932.28 | 4880.49 | 1932.29 | 4885.91 | 1932.32 | 4895.81 | 1932.41 |
| 4909.73 | 1932.6 | 4916.11 | 1932.68 | 4919.01 | 1932.71 | 4931.14 | 1932.66 | 4948.56 | 1932.58 |
| 4951.6 | 1932.62 | 4953.79 | 1932.63 | 4955.01 | 1932.61 | 4960.71 | 1932.54 | 4968.02 | 1932.49 |
| 4975.79 | 1932.5 | 4984.53 | 1932.58 | 4996.77 | 1932.7 | 4997.78 | 1932.72 | 5009.05 | 1932.88 |
| 5017.66 | 1933 | 5039.89 | 1933 | 5042.41 | 1932.8 | 5043.11 | 1932.76 | 5045.28 | 1932.59 |
| 5048.68 | 1932.45 | 5050.64 | 1932.31 | 5055.67 | 1932.15 | 5056.72 | 1932.09 | 5060.87 | 1932 |
| 5076.54 | 1932 | 5083.1 | 1931.94 | 5094.47 | 1931.84 | 5097.75 | 1931.84 | 5100.94 | 1931.85 |
| 5106.06 | 1931.81 | 5107.61 | 1931.79 | 5117.54 | 1931.75 | 5136.85 | 1931.57 | 5151.14 | 1931.49 |
| 5172.22 | 1931.36 | 5196.44 | 1931.14 | 5215.99 | 1930.97 | 5222.12 | 1930.95 | 5223.82 | 1930.93 |
| 5231.41 | 1931 | 5233.11 | 1931.55 | 5234.28 | 1932 | 5237 | 1932.81 | 5237.55 | 1933 |
| 5239.61 | 1933.15 | 5250.22 | 1934 | 5277.76 | 1934 | 5292.11 | 1933.59 | 5301.7 | 1933.32 |
| 5310.75 | 1933.07 | 5313.39 | 1933 | 5315.3 | 1933 | 5317.1 | 1933.03 | 5339.34 | 1933.3 |
| 5352 | 1933.45 | 5355.79 | 1933.48 | 5359.99 | 1933.54 | 5374.17 | 1933.37 | 5404.21 | 1933 |
| 5458.14 | 1933 | 5463.39 | 1932.99 | 5472.09 | 1933 | 5474.47 | 1932.99 | 5491.53 | 1932.99 |
| 5495.46 | 1932.98 | 5523.35 | 1932.94 | 5524.71 | 1932.94 | 5556.3 | 1932.89 | 5559.14 | 1932.88 |
| 5562.13 | 1932.91 | 5563.44 | 1932.89 | 5564.34 | 1932.9 | 5566.08 | 1932.87 | 5567.26 | 1932.87 |
| 5570.62 | 1932.8 | 5575.83 | 1932.71 | 5585.51 | 1932.47 | 5593.78 | 1932.29 | 5604.28 | 1932 |
| 5795.28 | 1932 | 5805.11 | 1932.31 | 5806.01 | 1932.28 | 5811.73 | 1932.45 | 5816.54 | 1932.31 |
| 5820.55 | 1932.41 | 5833.05 | 1932.01 | 5834.35 | 1932.02 | 5896.88 | 1932.69 | 5914.41 | 1932.87 |
| 5924.98 | 1933 | 5933.82 | 1933.42 | 5939.87 | 1933.72 | 5943.07 | 1933.86 | 5945.5 | 1934 |
| 5952.36 | 1934.56 | 5957.58 | 1935 | 5961.27 | 1935.28 | 5963.74 | 1935.46 | 5972.48 | 1936 |
| 5985.9 | 1936.97 | 5986.23 | 1937 | 5995.14 | 1937.51 | 5995.84 | 1937.56 | 6001.28 | 1937.86 |
| 6003.45 | 1938 | 6009.06 | 1938 | 6015.2 | 1938.01 | 6024.5 | 1938 | 6026.49 | 1939 |
| 6030.77 | 1941 | 6032.98 | 1942 | 6034.38 | 1942.61 | 6037.86 | 1944.2 | 6040.28 | 1945.13 |
| 6048.8 | 1946 | 6053.2 | 1946.39 | 6055.54 | 1946.63 | 6059.34 | 1947 | 6060.19 | 1947.01 |
| 6064.1 | 1947.1 | 6088.96 | 1947.12 | 6114.81 | 1947.12 | 6118.2 | 1947 | 6120.71 | 1947 |
| 6143.25 | 1947.25 | 6149.8 | 1947.31 | 6164.6 | 1947.46 | 6206.65 | 1947.89 | 6217.72 | 1948 |
| 6220.43 | 1948.02 | 6242.3 | 1948.26 | 6262.45 | 1948.46 | 6302.16 | 1948.87 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2085.03 | .045 | 2085.03 | .04 | 6302.16 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2085.03 | 6302.16 | 47.69 | 47.69 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | Left OB | Channel | Right OB |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1935.25 | Element | | | |
| Vel Head (ft) | 0.23 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1935.03 | Reach Len. (ft) | 47.69 | 47.69 | 47.69 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 5875.30 | |
| E.G. Slope (ft/ft) | 0.004608 | Area (sq ft) | | 5875.30 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 3159.82 | Top Width (ft) | | 3159.82 | |
| Vel Total (ft/s) | 3.81 | Avg. Vel. (ft/s) | | 3.81 | |
| Max Chl Dpth (ft) | 5.03 | Hydr. Depth (ft) | | 1.86 | |

| | | | | | |
|---|---|---|---|---|---|
| Conv. Total (cfs) | 329965.4 | Conv. (cfs) | | 329965.4 | |
| Length Wtd. (ft) | 47.69 | Wetted Per. (ft) | | 3160.64 | |
| Min Ch El (ft) | 1930.00 | Shear (lb/sq ft) | | 0.53 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6302.16 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.17 | Cum Volume (acre-ft) | | 2254.73 | |
| C & E Loss (ft) | 0.02 | Cum SA (acres) | | 1083.92 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -6985.71

INPUT
Description:
Station Elevation Data num= 429

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2256.49 | 1937 | 2264.62 | 1936 | 2271.23 | 1934.98 | 2276.22 | 1934 | 2292.41 | 1934 |
| 2296.12 | 1933.92 | 2311.79 | 1933.66 | 2321.58 | 1933.52 | 2324.89 | 1933.46 | 2344.75 | 1933.23 |
| 2344.94 | 1933.22 | 2357.95 | 1933 | 2398.61 | 1933 | 2401.56 | 1933.01 | 2412.22 | 1933.01 |
| 2414.41 | 1933.02 | 2425.79 | 1933.05 | 2432.32 | 1933.06 | 2439.1 | 1933.08 | 2441.4 | 1933.07 |
| 2454.48 | 1933.07 | 2461.76 | 1933.05 | 2475.64 | 1933.27 | 2476.66 | 1933.27 | 2479.26 | 1933.31 |
| 2486.14 | 1933.66 | 2492.93 | 1934 | 2541.29 | 1934 | 2550.95 | 1934.05 | 2556.21 | 1934.11 |
| 2564.4 | 1934.24 | 2570.64 | 1934.37 | 2572.55 | 1934.4 | 2574.99 | 1934.46 | 2591.95 | 1934.78 |
| 2597.57 | 1934.88 | 2600.19 | 1934.99 | 2604.62 | 1935 | 2605.07 | 1934.96 | 2606.59 | 1935 |
| 2610.36 | 1935.2 | 2614.39 | 1935.23 | 2618.68 | 1935.15 | 2620.69 | 1935 | 2639.06 | 1934.34 |
| 2647.91 | 1934 | 2649.81 | 1934 | 2653.15 | 1934.12 | 2658.41 | 1934.15 | 2670.37 | 1934.31 |
| 2679.94 | 1934.4 | 2685.08 | 1934.43 | 2702.03 | 1934.4 | 2721.16 | 1934.36 | 2721.72 | 1934.35 |
| 2728.49 | 1934 | 2743.89 | 1934 | 2751.65 | 1934.12 | 2757.99 | 1934.21 | 2766.1 | 1934.34 |
| 2769.46 | 1934.4 | 2792.74 | 1935 | 2795.9 | 1934.99 | 2832.06 | 1934.27 | 2832.92 | 1934.26 |
| 2847.32 | 1934 | 2848.38 | 1933.99 | 2866.36 | 1933.22 | 2869.01 | 1933.13 | 2875.1 | 1933 |
| 2883.18 | 1933 | 2886.58 | 1933.12 | 2896.48 | 1933.5 | 2900.01 | 1933.64 | 2909.75 | 1934 |
| 2920.37 | 1934.26 | 2920.51 | 1934.27 | 2941.54 | 1934.63 | 2943.33 | 1934.64 | 2947.64 | 1934.71 |
| 2953.12 | 1934.81 | 2957.65 | 1934.93 | 2959.92 | 1935 | 2967.53 | 1935 | 2976.11 | 1935.01 |
| 2982.51 | 1935 | 3013.45 | 1935 | 3024.51 | 1934.99 | 3027.45 | 1935 | 3089.74 | 1935 |
| 3103.93 | 1934.98 | 3107.34 | 1934.98 | 3122.71 | 1934.96 | 3136.17 | 1934.97 | 3153.5 | 1934.99 |
| 3156.32 | 1935 | 3223.7 | 1935 | 3226.99 | 1935.01 | 3228.83 | 1935 | 3234.06 | 1935 |
| 3237.15 | 1935.13 | 3243.9 | 1935.44 | 3252.72 | 1936 | 3256.15 | 1936.09 | 3279.25 | 1936.19 |
| 3300.91 | 1936.14 | 3301.84 | 1936.14 | 3306.29 | 1936.04 | 3308.51 | 1936 | 3313.43 | 1936 |
| 3317.69 | 1936.07 | 3318.72 | 1936.07 | 3331.19 | 1936.27 | 3335.57 | 1936.29 | 3340.4 | 1936.36 |
| 3359.85 | 1936.24 | 3389.72 | 1936.02 | 3390.9 | 1936 | 3401.78 | 1935.59 | 3409.99 | 1935.29 |
| 3417.52 | 1935 | 3419.83 | 1934.98 | 3425.44 | 1934.96 | 3429.75 | 1934.96 | 3433.93 | 1934.98 |
| 3436.82 | 1934.91 | 3440.73 | 1934.89 | 3443.41 | 1934.85 | 3445.7 | 1934.8 | 3446.7 | 1934.81 |
| 3454.05 | 1934.64 | 3461.21 | 1934.59 | 3467.48 | 1934.56 | 3469.15 | 1934.57 | 3482.97 | 1934.85 |
| 3487.36 | 1934.96 | 3493.93 | 1934.98 | 3495.87 | 1934.98 | 3500.91 | 1935 | 3504.2 | 1935.37 |
| 3504.7 | 1935.44 | 3509.97 | 1936 | 3511.72 | 1936.04 | 3513.85 | 1936.15 | 3522.09 | 1936.26 |
| 3522.33 | 1936.27 | 3543.08 | 1936.9 | 3546.88 | 1936.93 | 3551.52 | 1936.93 | 3554.44 | 1936.96 |
| 3562.39 | 1937 | 3566.6 | 1937.11 | 3569.64 | 1937.23 | 3585.06 | 1937.96 | 3590.18 | 1937.96 |
| 3590.64 | 1938 | 3593.91 | 1938.07 | 3594.27 | 1938 | 3596.29 | 1937.73 | 3602.37 | 1937 |
| 3610.46 | 1936 | 3617.57 | 1935.16 | 3618.99 | 1935 | 3646.07 | 1935 | 3649.89 | 1935.01 |
| 3653.26 | 1935 | 3708.85 | 1935 | 3714.92 | 1934.99 | 3720.37 | 1935 | 3727.8 | 1935 |
| 3740.11 | 1934.47 | 3740.71 | 1934.45 | 3751.68 | 1934 | 3800.35 | 1934 | 3820.73 | 1933.98 |
| 3827.13 | 1933.98 | 3827.85 | 1933.99 | 3841.38 | 1933.99 | 3844.73 | 1934 | 3849.93 | 1934 |
| 3858.53 | 1934.01 | 3863.09 | 1934 | 3866.94 | 1934 | 3871.09 | 1933.99 | 3885.25 | 1933.93 |
| 3899.53 | 1933.96 | 3905.46 | 1933.99 | 3915.93 | 1934.01 | 3925.52 | 1934 | 3931.11 | 1933.95 |
| 3936.03 | 1933.92 | 3945.18 | 1933.89 | 3952.69 | 1933.84 | 3965.53 | 1933.04 | 3965.98 | 1933 |
| 4003.23 | 1933 | 4014.47 | 1933.36 | 4018.26 | 1933.44 | 4025.85 | 1933.5 | 4040.63 | 1933.89 |
| 4043.61 | 1933.99 | 4069.57 | 1933.99 | 4078.96 | 1933.98 | 4089.24 | 1933.99 | 4093.46 | 1933.66 |
| 4098.43 | 1933.56 | 4102.46 | 1933.46 | 4108.57 | 1933.29 | 4110.06 | 1933.27 | 4113.67 | 1933.17 |
| 4115.31 | 1933.14 | 4119.31 | 1933.19 | 4122.59 | 1933.22 | 4129.93 | 1933.34 | 4143.52 | 1933.29 |
| 4161.06 | 1933.14 | 4165.15 | 1933.1 | 4170.68 | 1933.03 | 4178.78 | 1933 | 4264.99 | 1933 |
| 4271.47 | 1932.64 | 4272.36 | 1932.65 | 4280.9 | 1932.64 | 4283.96 | 1932.7 | 4289.53 | 1932.68 |
| 4290.77 | 1932.71 | 4292.01 | 1932.71 | 4293.18 | 1932.68 | 4296.05 | 1932.78 | 4298.31 | 1932.73 |
| 4299.68 | 1932.77 | 4306.58 | 1932.61 | 4335.26 | 1932.98 | 4336.49 | 1933 | 4409.33 | 1933 |
| 4409.97 | 1933.01 | 4413.9 | 1933.25 | 4418.65 | 1933.53 | 4425.7 | 1933.8 | 4428.02 | 1933.73 |
| 4433.4 | 1933.54 | 4435.91 | 1933.36 | 4441.29 | 1933 | 4446.53 | 1933 | 4448.69 | 1933.01 |
| 4460.55 | 1933.01 | 4462.4 | 1933 | 4518.71 | 1933 | 4522.57 | 1932.97 | 4555.09 | 1932.23 |
| 4556.14 | 1932.2 | 4559.92 | 1932.14 | 4564.54 | 1932 | 4572.37 | 1931.59 | 4578.17 | 1931.33 |
| 4586.06 | 1931 | 4596.12 | 1930.67 | 4603.11 | 1930.43 | 4615.26 | 1930 | 4672.42 | 1930 |
| 4674.66 | 1930.01 | 4683.73 | 1930 | 4693.51 | 1930 | 4693.68 | 1930.01 | 4728.82 | 1930.56 |
| 4753.25 | 1930.95 | 4754.47 | 1931 | 4822.98 | 1931 | 4875.04 | 1931.28 | 4915.87 | 1931.49 |
| 4923.03 | 1931.52 | 4947.35 | 1931.66 | 4990.47 | 1931.92 | 4995.36 | 1931.94 | 4998.87 | 1931.94 |
| 5003.04 | 1932 | 5011.99 | 1932.11 | 5020.19 | 1932.2 | 5053.71 | 1932.09 | 5074.47 | 1932.01 |
| 5085.71 | 1932 | 5097.35 | 1932 | 5098.11 | 1932.01 | 5106.35 | 1932.01 | 5126.69 | 1932.27 |
| 5143.3 | 1932.44 | 5149.85 | 1932.38 | 5152.77 | 1932.41 | 5161.46 | 1932.36 | 5165.12 | 1932.39 |
| 5167.43 | 1932.38 | 5169.67 | 1932.35 | 5178.19 | 1932.1 | 5182.33 | 1932 | 5189.58 | 1932.01 |
| 5192.39 | 1932 | 5195.1 | 1931.83 | 5204.56 | 1931.33 | 5206.97 | 1931.21 | 5209.29 | 1931.17 |
| 5219.58 | 1931.4 | 5225.62 | 1931.51 | 5232.12 | 1931.43 | 5232.88 | 1931.43 | 5238.13 | 1931.37 |
| 5251.91 | 1931.35 | 5266.74 | 1931.31 | 5270.91 | 1931.27 | 5290.13 | 1931.15 | 5312.89 | 1931 |
| 5315.17 | 1931 | 5317.04 | 1930.98 | 5322.75 | 1930.96 | 5326.15 | 1930.96 | 5330.86 | 1930.98 |
| 5334.29 | 1930.98 | 5338.88 | 1930.81 | 5344.14 | 1930.68 | 5356.92 | 1930 | 5363.1 | 1930 |
| 5377.66 | 1930.86 | 5380.45 | 1930.98 | 5380.6 | 1931 | 5385.41 | 1931 | 5391.92 | 1931.65 |
| 5399.61 | 1932.38 | 5406.06 | 1933 | 5414.95 | 1933.11 | 5417.56 | 1933.13 | 5425.79 | 1933.04 |
| 5428.87 | 1933 | 5442.87 | 1933 | 5447.67 | 1933.02 | 5451.12 | 1933.1 | 5462.92 | 1933.3 |
| 5468.67 | 1933.47 | 5469.26 | 1933.51 | 5508.44 | 1933.37 | 5584.23 | 1933.05 | 5587.69 | 1933.03 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5590.83 | 1933 | 5591.13 | 1932.98 | 5608.9 | 1932 | 5613.01 | 1931.99 | 5628.38 | 1931.97 |
| 5633.65 | 1931.96 | 5641.01 | 1931.87 | 5680.48 | 1931.37 | 5683.49 | 1931.37 | 5684.94 | 1931.34 |
| 5690.75 | 1931.33 | 5692.93 | 1931.34 | 5698.32 | 1931.21 | 5705.62 | 1931 | 5722.34 | 1931 |
| 5724.7 | 1931.04 | 5753.2 | 1931.48 | 5765.66 | 1931.67 | 5783.88 | 1932 | 5964.16 | 1932 |
| 5969.59 | 1932.1 | 5992.27 | 1932.48 | 6001.72 | 1932.62 | 6003.97 | 1932.66 | 6011.55 | 1932.74 |
| 6012.5 | 1932.76 | 6034.78 | 1932.95 | 6040.99 | 1933 | 6049.5 | 1933.31 | 6056.14 | 1933.48 |
| 6062.95 | 1933.68 | 6065.38 | 1933.68 | 6067.48 | 1933.64 | 6075.01 | 1933.36 | 6078.69 | 1933.35 |
| 6083.71 | 1933.38 | 6086.9 | 1933.54 | 6089.98 | 1933.76 | 6093.11 | 1934 | 6094.42 | 1934.21 |
| 6099.06 | 1935 | 6102.81 | 1935.72 | 6104.55 | 1936 | 6110.82 | 1936.29 | 6118.97 | 1936.61 |
| 6129.34 | 1936.97 | 6136.64 | 1937 | 6143.09 | 1940.52 | 6143.94 | 1941 | 6146.12 | 1941.59 |
| 6147.3 | 1942 | 6149.79 | 1942.56 | 6156.68 | 1944 | 6157.89 | 1944.28 | 6161.18 | 1945 |
| 6165.81 | 1946 | 6167.1 | 1946.36 | 6169.71 | 1947 | 6171.86 | 1947.64 | 6175.78 | 1948.72 |
| 6180.74 | 1950 | 6186.73 | 1950.9 | 6187.82 | 1951 | 6204.45 | 1951 | 6210.42 | 1950.67 |
| 6214.65 | 1950.39 | 6216.88 | 1950.42 | 6220.36 | 1950.63 | 6220.82 | 1950.82 | 6221.33 | 1950.94 |
| 6222 | 1951 | 6223.15 | 1951 | 6224.11 | 1950.93 | 6228.78 | 1950.55 | 6235.22 | 1950 |
| 6242.99 | 1949.12 | 6244.45 | 1949 | 6260.21 | 1948 | 6266.56 | 1947.58 | 6267.34 | 1947.54 |
| 6272.76 | 1947.17 | 6273.99 | 1947.13 | 6277.42 | 1947.13 | 6281.85 | 1947.17 | 6285.33 | 1947.22 |
| 6290.15 | 1947.3 | 6331.79 | 1948 | 6387.29 | 1948.28 | 6414.97 | 1948.43 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2256.49 | .045 | 2256.49 | .04 | 6414.97 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2256.49 | 6414.97 | 50.63 | 50.63 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1935.07 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.17 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1934.89 | Reach Len. (ft) | 50.63 | 50.63 | 50.63 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6704.88 | | |
| E.G. Slope (ft/ft) | 0.002841 | Area (sq ft) | | 6704.88 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3058.67 | Top Width (ft) | | 3058.67 | | |
| Vel Total (ft/s) | 3.34 | Avg. Vel. (ft/s) | | 3.34 | | |
| Max Chl Dpth (ft) | 4.89 | Hydr. Depth (ft) | | 2.19 | | |
| Conv. Total (cfs) | 420232.9 | Conv. (cfs) | | 420232.9 | | |
| Length Wtd. (ft) | 50.63 | Wetted Per. (ft) | | 3059.46 | | |
| Min Ch El (ft) | 1930.00 | Shear (lb/sq ft) | | 0.39 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6414.97 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.14 | Cum Volume (acre-ft) | | 2247.84 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1080.52 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -7036.34

INPUT
Description:
Station Elevation Data num= 404

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 2166.87 | 1935.17 | 2168.78 | 1935.17 | 2187.75 | 1935 | 2218.96 | 1935 | 2221.36 | 1934.99 |
| 2232.6 | 1934.75 | 2249.56 | 1934.4 | 2250.7 | 1934.36 | 2252.94 | 1934.32 | 2256.21 | 1934.23 |
| 2262.73 | 1934 | 2301.78 | 1934 | 2303.47 | 1933.76 | 2309.27 | 1933 | 2332.23 | 1933 |
| 2342.83 | 1932.61 | 2353.68 | 1932.41 | 2359.44 | 1932.32 | 2377.55 | 1932.31 | 2396.69 | 1932.29 |
| 2416.21 | 1932.18 | 2421.95 | 1932.17 | 2432.69 | 1932.13 | 2433.99 | 1932.13 | 2439.7 | 1932.18 |
| 2454.62 | 1932.33 | 2472.02 | 1932.58 | 2472.43 | 1932.58 | 2481.89 | 1932.7 | 2487.06 | 1932.77 |
| 2502.75 | 1933 | 2681.58 | 1933 | 2682.52 | 1933.03 | 2697.36 | 1933.44 | 2706.73 | 1933.67 |
| 2708.67 | 1933.7 | 2709.89 | 1933.68 | 2718.39 | 1934 | 2721.05 | 1934.07 | 2730.92 | 1934.29 |
| 2735.99 | 1934.29 | 2738.1 | 1934.26 | 2752.24 | 1934.25 | 2755.5 | 1934.24 | 2760.25 | 1934.21 |
| 2771.72 | 1934.18 | 2782.23 | 1934.03 | 2784.74 | 1934 | 2789.33 | 1934 | 2793.31 | 1934.21 |
| 2800.41 | 1934.64 | 2801.25 | 1934.7 | 2806.6 | 1935 | 2809.93 | 1935 | 2814.82 | 1934.68 |
| 2823.35 | 1934.02 | 2824.26 | 1934 | 2831.5 | 1933.71 | 2838.24 | 1933.43 | 2849 | 1933 |
| 2863.28 | 1933 | 2872.4 | 1933.43 | 2882.25 | 1934 | 2891.24 | 1934.37 | 2905.92 | 1935 |
| 2916.77 | 1935.05 | 2923.33 | 1935.04 | 2928.05 | 1935.04 | 2931.79 | 1935.06 | 2938.4 | 1935.05 |
| 2945.94 | 1935.09 | 2956.54 | 1935.11 | 2964.36 | 1935.1 | 2978.38 | 1935.06 | 2986.43 | 1935.03 |
| 2992.56 | 1935.02 | 2995.29 | 1935 | 3059.79 | 1935 | 3081.09 | 1934.22 | 3087.02 | 1934 |
| 3087.92 | 1934 | 3102.86 | 1934.49 | 3117.5 | 1935 | 3133.84 | 1936 | 3146.29 | 1936.59 |
| 3155.34 | 1937 | 3159.24 | 1937 | 3164.52 | 1936.83 | 3172.21 | 1936.44 | 3179.75 | 1936 |
| 3185.63 | 1935.65 | 3185.77 | 1935.65 | 3197.11 | 1935.22 | 3198.3 | 1935.17 | 3206.53 | 1935.09 |
| 3210.14 | 1935 | 3218.49 | 1934.99 | 3228.1 | 1934.99 | 3238.18 | 1935 | 3241.04 | 1935.01 |
| 3243.05 | 1935 | 3247.4 | 1935 | 3257.16 | 1935.08 | 3268.27 | 1935.18 | 3274.47 | 1935.2 |
| 3284.19 | 1935.32 | 3284.92 | 1935.31 | 3292.62 | 1935.38 | 3301.57 | 1935.41 | 3310.42 | 1935.41 |
| 3317.38 | 1935.38 | 3331.63 | 1935.41 | 3348.62 | 1935.45 | 3351.61 | 1935.48 | 3360.85 | 1935.47 |
| 3371.8 | 1935.43 | 3376.68 | 1935.32 | 3384.15 | 1935.14 | 3388.94 | 1935 | 3397.32 | 1934.78 |
| 3407.98 | 1934.54 | 3420.46 | 1934 | 3430.26 | 1933.99 | 3445.74 | 1933.99 | 3449.12 | 1934 |
| 3456.04 | 1934 | 3464.58 | 1934.36 | 3478.58 | 1934.82 | 3481.53 | 1934.89 | 3484.56 | 1935 |
| 3485.67 | 1935.02 | 3490.83 | 1935.05 | 3492.63 | 1935.07 | 3502.74 | 1935.11 | 3505.05 | 1935.1 |
| 3508.76 | 1935.11 | 3516.52 | 1935.16 | 3519.22 | 1935.16 | 3521.39 | 1935.2 | 3528.8 | 1935.22 |
| 3529.76 | 1935.23 | 3536.57 | 1935.36 | 3540.79 | 1935.49 | 3551.02 | 1935.49 | 3568.91 | 1935.1 |
| 3571.48 | 1935 | 3582.76 | 1934.29 | 3587.14 | 1934 | 3598.75 | 1933.35 | 3604.53 | 1933 |
| 3612.42 | 1932.44 | 3619.61 | 1932 | 3641.46 | 1932 | 3646.08 | 1932.31 | 3654.88 | 1932.74 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3658.88 | 1932.96 | 3660.74 | 1933.08 | 3662.85 | 1933.31 | 3668.84 | 1933.99 | 3669.11 | 1934 |
| 3675.19 | 1934.45 | 3686.02 | 1935 | 3706.03 | 1935 | 3714.79 | 1934.18 | 3716.64 | 1934 |
| 3738.14 | 1934 | 3746.34 | 1934.02 | 3748.48 | 1934.02 | 3760.84 | 1934 | 3848.55 | 1934 |
| 3850.56 | 1934.05 | 3863.64 | 1934.19 | 3873.32 | 1934.3 | 3874.94 | 1934.31 | 3890.14 | 1934.49 |
| 3913.11 | 1934.99 | 3920 | 1934.99 | 3945.23 | 1934.33 | 3949.3 | 1934.25 | 3953.48 | 1934.18 |
| 3967.44 | 1934 | 3988.97 | 1934 | 3990.21 | 1934.02 | 3992.89 | 1934 | 4250.33 | 1934 |
| 4260.41 | 1933.7 | 4274.05 | 1933 | 4282.86 | 1932.45 | 4289.26 | 1932 | 4294.42 | 1931.56 |
| 4301.46 | 1931 | 4315.16 | 1931 | 4322.79 | 1931.25 | 4343.75 | 1931.97 | 4346.06 | 1932 |
| 4349.96 | 1932.15 | 4351.77 | 1932.17 | 4373.89 | 1932.86 | 4378.5 | 1933 | 4409.1 | 1933 |
| 4413.38 | 1933.29 | 4415.87 | 1933.47 | 4423.45 | 1934 | 4450.17 | 1934 | 4458.41 | 1933.65 |
| 4460.56 | 1933.57 | 4482.75 | 1933 | 4551.35 | 1933 | 4572.16 | 1932.22 | 4577.18 | 1932 |
| 4592.93 | 1931.04 | 4612.31 | 1930 | 4621.83 | 1929.99 | 4635.64 | 1929.99 | 4655.13 | 1930 |
| 4664.61 | 1930 | 4673.21 | 1929.96 | 4678.11 | 1929.95 | 4681.28 | 1929.93 | 4686.45 | 1929.93 |
| 4689.92 | 1929.92 | 4694.77 | 1929.94 | 4704.25 | 1929.97 | 4708.43 | 1930 | 4714.09 | 1930.02 |
| 4729.29 | 1930.17 | 4730.43 | 1930.19 | 4739.86 | 1930.28 | 4741.32 | 1930.3 | 4751.67 | 1930.38 |
| 4761.32 | 1930.41 | 4762.1 | 1930.43 | 4766.98 | 1930.41 | 4773.86 | 1930.36 | 4775.29 | 1930.37 |
| 4781.49 | 1930.3 | 4789.41 | 1930.2 | 4791.72 | 1930.15 | 4793.74 | 1930.15 | 4799.29 | 1930.04 |
| 4799.57 | 1930.05 | 4802.68 | 1930 | 4807.82 | 1930 | 4814.59 | 1930.17 | 4817.46 | 1930.27 |
| 4827.08 | 1930.58 | 4841.9 | 1931 | 4852.53 | 1931 | 4878.14 | 1931.14 | 4890.28 | 1931.19 |
| 4919.96 | 1931.37 | 4963.51 | 1931.52 | 4990.89 | 1931.6 | 4998.44 | 1931.7 | 5012.86 | 1931.93 |
| 5015.06 | 1931.97 | 5019.09 | 1932 | 5023.79 | 1932 | 5106.1 | 1932.03 | 5111.69 | 1932.03 |
| 5113.01 | 1932.02 | 5126.27 | 1932.02 | 5133.06 | 1932.01 | 5144.87 | 1932.01 | 5148.17 | 1932.04 |
| 5153.72 | 1932 | 5162.07 | 1931.95 | 5177.89 | 1931.9 | 5181.95 | 1931.89 | 5186.6 | 1931.85 |
| 5190.19 | 1931.77 | 5201.13 | 1931.54 | 5216.07 | 1931.39 | 5216.83 | 1931.36 | 5222.78 | 1931 |
| 5243.83 | 1931 | 5251.43 | 1931.14 | 5256.32 | 1931.1 | 5275.63 | 1931.06 | 5297.15 | 1931 |
| 5336.6 | 1931 | 5349.29 | 1930.87 | 5352.87 | 1930.89 | 5365.69 | 1930.48 | 5366.61 | 1930.46 |
| 5372.72 | 1930.38 | 5376.21 | 1930.47 | 5383.17 | 1930.77 | 5386.1 | 1931 | 5409.98 | 1931 |
| 5419.94 | 1932 | 5425.66 | 1932.58 | 5428.03 | 1932.71 | 5437.3 | 1933 | 5443.5 | 1933.01 |
| 5444.02 | 1933.02 | 5449.79 | 1933.02 | 5477.59 | 1933.95 | 5479.2 | 1934 | 5482.42 | 1934 |
| 5488.35 | 1933.95 | 5552.08 | 1933.43 | 5605.47 | 1933 | 5608.04 | 1933 | 5618.46 | 1932.49 |
| 5619.74 | 1932.44 | 5631.92 | 1932 | 5638.41 | 1931.99 | 5669.27 | 1931.57 | 5670.43 | 1931.55 |
| 5693.83 | 1931.28 | 5708.24 | 1931.11 | 5712 | 1931.08 | 5715.12 | 1931.08 | 5720.99 | 1931 |
| 5731.33 | 1931 | 5781.65 | 1931.67 | 5792.38 | 1931.81 | 5829.11 | 1932 | 5981.02 | 1932 |
| 6006.59 | 1932.66 | 6011.45 | 1932.77 | 6020.71 | 1932.99 | 6024.83 | 1933.02 | 6026.28 | 1933.02 |
| 6030.12 | 1933.26 | 6036.18 | 1933.62 | 6037.89 | 1933.71 | 6041.95 | 1934 | 6054.49 | 1934.98 |
| 6055.84 | 1935.06 | 6066.58 | 1935.61 | 6074.42 | 1936 | 6081.47 | 1936.63 | 6084.54 | 1937 |
| 6088.73 | 1937.47 | 6098.95 | 1938.46 | 6102.08 | 1938.72 | 6105.03 | 1939 | 6106.81 | 1939.15 |
| 6110.64 | 1939.42 | 6112.34 | 1939.51 | 6117.88 | 1939.6 | 6122.51 | 1939.5 | 6123.63 | 1939.6 |
| 6125.53 | 1939.85 | 6126.52 | 1940.29 | 6127.42 | 1941 | 6131.67 | 1942.68 | 6133.4 | 1943.47 |
| 6135.14 | 1944.42 | 6136.57 | 1945 | 6139.29 | 1945.41 | 6142.8 | 1945.25 | 6143.54 | 1945.2 |
| 6150.84 | 1945.35 | 6152.48 | 1945.25 | 6155.61 | 1944.78 | 6156.27 | 1944.71 | 6157.41 | 1944.74 |
| 6159.14 | 1945 | 6163.83 | 1945.96 | 6164.09 | 1946 | 6165.35 | 1946.01 | 6166.18 | 1945.92 |
| 6167.88 | 1945.66 | 6169.16 | 1945.57 | 6177.19 | 1945.24 | 6180.85 | 1945.06 | 6182.73 | 1945.02 |
| 6184.81 | 1945.16 | 6191.27 | 1945.66 | 6192.55 | 1946 | 6194.56 | 1946.65 | 6195.48 | 1947 |
| 6196.4 | 1947.28 | 6198.56 | 1948 | 6205.01 | 1950 | 6209.21 | 1950 | 6210.3 | 1949.78 |
| 6210.82 | 1949.81 | 6212.88 | 1949.7 | 6214.56 | 1949.66 | 6218.75 | 1949.83 | 6220.84 | 1949.99 |
| 6224.56 | 1950 | 6237.48 | 1950.14 | 6247.59 | 1950.07 | 6253.86 | 1950 | 6267.69 | 1949.4 |
| 6274.54 | 1949 | 6277.05 | 1948.99 | 6281.67 | 1948.68 | 6287.42 | 1948.47 | 6292.73 | 1948.31 |
| 6309.96 | 1948.01 | 6316.95 | 1948.02 | 6329.72 | 1948.02 | 6332.9 | 1948.03 | 6338.49 | 1948.03 |
| 6345.32 | 1948.04 | 6357.74 | 1948.04 | 6362.96 | 1948.05 | 6391.18 | 1948.06 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 2166.87 | .045 | 2166.87 | .04 | 6391.18 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 2166.87 | 6391.18 | 61.98 | 61.98 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1934.92 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.17 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1934.75 | Reach Len. (ft) | 61.98 | 61.98 | 61.98 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6800.23 | | |
| E.G. Slope (ft/ft) | 0.002878 | Area (sq ft) | | 6800.23 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3198.93 | Top Width (ft) | | 3198.93 | | |
| Vel Total (ft/s) | 3.29 | Avg. Vel. (ft/s) | | 3.29 | | |
| Max Chl Dpth (ft) | 4.83 | Hydr. Depth (ft) | | 2.13 | | |
| Conv. Total (cfs) | 417550.3 | Conv. (cfs) | | 417550.3 | | |
| Length Wtd. (ft) | 61.98 | Wetted Per. (ft) | | 3199.99 | | |
| Min Ch El (ft) | 1929.92 | Shear (lb/sq ft) | | 0.38 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6391.18 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.17 | Cum Volume (acre-ft) | | 2239.99 | | |
| C & E Loss (ft) | 0.01 | Cum SA (acres) | | 1076.88 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -7098.32

INPUT
Description:
Station Elevation Data num= 472

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 1465.2 | 1935 | 1477.66 | 1934.93 | 1481.12 | 1934.95 | 1485 | 1934.94 | 1493.64 | 1934.66 |
| 1495.21 | 1934.65 | 1502.46 | 1934.45 | 1517.79 | 1934 | 1520.27 | 1933.89 | 1525.68 | 1933.69 |
| 1537.74 | 1933.22 | 1544.49 | 1933 | 1550.4 | 1932.97 | 1561.47 | 1932.9 | 1581.13 | 1932.8 |
| 1588.44 | 1932.76 | 1645.32 | 1933 | 1772 | 1933 | 1777.66 | 1933.05 | 1778.68 | 1933.05 |
| 1810.74 | 1933.35 | 1826.01 | 1933.48 | 1848.91 | 1933.59 | 1884.36 | 1933.75 | 1902.95 | 1933.98 |
| 1911.51 | 1933.99 | 1915.29 | 1934 | 2006.23 | 1934 | 2036.2 | 1934.13 | 2039.2 | 1934.16 |
| 2050.96 | 1934.14 | 2062.3 | 1934.11 | 2064.1 | 1934.09 | 2075.63 | 1934 | 2134.92 | 1934 |
| 2136.3 | 1933.99 | 2175.82 | 1933 | 2176.66 | 1933 | 2260.82 | 1933.73 | 2273.97 | 1933.85 |
| 2274.53 | 1933.85 | 2293.47 | 1933.99 | 2298.54 | 1933.99 | 2303.63 | 1933.98 | 2311.22 | 1934 |
| 2382.18 | 1934 | 2383.32 | 1933.98 | 2386.64 | 1933.89 | 2405.45 | 1933 | 2411.42 | 1932.43 |
| 2415.74 | 1932 | 2425.11 | 1931.72 | 2439.55 | 1931.32 | 2440.74 | 1931.31 | 2445.17 | 1931.2 |
| 2447.67 | 1931.17 | 2461.39 | 1931.15 | 2473.65 | 1931.15 | 2477.72 | 1931.14 | 2482.27 | 1931.12 |
| 2485.29 | 1931.2 | 2490.63 | 1931.4 | 2506.45 | 1932 | 2508.29 | 1932.06 | 2517.31 | 1932.4 |
| 2536.6 | 1933 | 2599.3 | 1932.25 | 2599.7 | 1932.24 | 2608.77 | 1932.23 | 2619.03 | 1932.28 |
| 2619.97 | 1932.23 | 2624.55 | 1932.09 | 2627.86 | 1932.02 | 2629.61 | 1932.06 | 2634.29 | 1932.2 |
| 2637.46 | 1932.28 | 2641.32 | 1932.39 | 2641.94 | 1932.39 | 2677.01 | 1933 | 2703.66 | 1933 |
| 2707.69 | 1932.96 | 2710.05 | 1933 | 2765.08 | 1933 | 2775.25 | 1933.18 | 2789.81 | 1933.48 |
| 2797.5 | 1933.65 | 2799.77 | 1933.69 | 2814.52 | 1934 | 2817.6 | 1934.02 | 2821.05 | 1934.14 |
| 2827.34 | 1934.29 | 2828.73 | 1934.3 | 2841.75 | 1934.26 | 2859.21 | 1934.07 | 2862.62 | 1934 |
| 2873.23 | 1933.26 | 2876.35 | 1933 | 2886.09 | 1933 | 2888.75 | 1933.01 | 2895.98 | 1933.39 |
| 2900.33 | 1933.58 | 2900.9 | 1933.57 | 2914.25 | 1934 | 2930.16 | 1934 | 2937.71 | 1934.26 |
| 2941.62 | 1934.06 | 2944.12 | 1934.07 | 2947.96 | 1934.06 | 2950.18 | 1934 | 2954.36 | 1933.98 |
| 2960.44 | 1934 | 2984.7 | 1934 | 2992.37 | 1933.97 | 2993.6 | 1933.96 | 2999.66 | 1933.99 |
| 3007.41 | 1933.99 | 3016.45 | 1933.95 | 3025.13 | 1933.73 | 3028.47 | 1933.83 | 3029.95 | 1933.83 |
| 3034.31 | 1933.59 | 3035.53 | 1933.55 | 3038.57 | 1933.36 | 3044.84 | 1933 | 3054.97 | 1933 |
| 3061.42 | 1933.45 | 3069.92 | 1934 | 3131.72 | 1934 | 3142.56 | 1934.56 | 3145.47 | 1934.7 |
| 3151.32 | 1935 | 3163.82 | 1935 | 3166.05 | 1934.98 | 3180.06 | 1934.98 | 3186.71 | 1934.87 |
| 3193.59 | 1934.7 | 3206.35 | 1934.29 | 3207.62 | 1934.24 | 3215 | 1934 | 3221.67 | 1933.67 |
| 3225.21 | 1933.48 | 3227.32 | 1933.38 | 3238.86 | 1933 | 3282.37 | 1933 | 3295.09 | 1933.29 |
| 3299.28 | 1933.41 | 3314.56 | 1934 | 3322.98 | 1934.39 | 3324.79 | 1934.48 | 3330.75 | 1934.64 |
| 3332.15 | 1934.63 | 3336.69 | 1934.63 | 3341.94 | 1934.58 | 3348.1 | 1934.42 | 3350.93 | 1934.34 |
| 3353.69 | 1934.29 | 3362.19 | 1934 | 3371.57 | 1933.52 | 3376.93 | 1933.24 | 3378.82 | 1933.15 |
| 3381.71 | 1933.04 | 3386.3 | 1933.18 | 3387.45 | 1933.24 | 3399.52 | 1933.83 | 3402.9 | 1934 |
| 3404.48 | 1934.01 | 3411.55 | 1934.69 | 3424.45 | 1935.94 | 3427.44 | 1936.21 | 3429.9 | 1936.4 |
| 3435.1 | 1936.83 | 3437.45 | 1937 | 3450.34 | 1938 | 3459.34 | 1938 | 3461.41 | 1937.65 |
| 3465.74 | 1937 | 3469.51 | 1936.41 | 3472.28 | 1936 | 3474.65 | 1935.62 | 3479.36 | 1935 |
| 3483.02 | 1934.65 | 3490.22 | 1934 | 3499.44 | 1933.21 | 3503.07 | 1933 | 3509.11 | 1933 |
| 3516.55 | 1933.48 | 3526.65 | 1934 | 3533.81 | 1934.27 | 3534.41 | 1934.27 | 3542.04 | 1934.52 |
| 3550.33 | 1934.89 | 3552.87 | 1934.89 | 3561.96 | 1935 | 3598.61 | 1935 | 3604.25 | 1934.75 |
| 3605.37 | 1934.74 | 3609.58 | 1934.58 | 3614.92 | 1934.4 | 3622.83 | 1934.27 | 3627.44 | 1934.23 |
| 3637.21 | 1934.01 | 3637.35 | 1934 | 3677 | 1934.67 | 3688.7 | 1934.86 | 3691.42 | 1934.87 |
| 3700.65 | 1935 | 3724.08 | 1935 | 3732.69 | 1934.61 | 3735.64 | 1934.55 | 3752.2 | 1934.45 |
| 3763.86 | 1934.39 | 3767.64 | 1934.43 | 3774.65 | 1934.48 | 3781.14 | 1934.48 | 3787.62 | 1934.47 |
| 3795.11 | 1934.42 | 3808.94 | 1934.23 | 3814.63 | 1934.13 | 3823.55 | 1934 | 3828.09 | 1933.96 |
| 3835.14 | 1933.73 | 3841.33 | 1933.63 | 3846.25 | 1933.59 | 3849.96 | 1933.53 | 3855.11 | 1933.51 |
| 3859.97 | 1933.5 | 3863.31 | 1933.55 | 3868.81 | 1933.61 | 3875.78 | 1933.83 | 3879.94 | 1933.98 |
| 3882.3 | 1934 | 3909.56 | 1934 | 3915.34 | 1933.77 | 3923.62 | 1933.61 | 3954.89 | 1933 |
| 3959.04 | 1933 | 3961.45 | 1933.05 | 3978.88 | 1933.31 | 3986.86 | 1933.47 | 3996.45 | 1933.63 |
| 3999.57 | 1933.7 | 4006.72 | 1933.8 | 4027 | 1933.93 | 4028.36 | 1933.93 | 4033.53 | 1934 |
| 4062.41 | 1934 | 4071.74 | 1934.72 | 4075.2 | 1935 | 4078.39 | 1935.23 | 4089.89 | 1936 |
| 4135.72 | 1936 | 4140.85 | 1935.61 | 4141.74 | 1935.59 | 4156.3 | 1935.04 | 4159.77 | 1935.05 |
| 4168.57 | 1935.01 | 4169.23 | 1935 | 4172.11 | 1934.7 | 4179.1 | 1934 | 4183.76 | 1933.66 |
| 4188.32 | 1933.58 | 4191.28 | 1933.49 | 4193.53 | 1933.44 | 4200.25 | 1933.18 | 4202.81 | 1933.05 |
| 4204.73 | 1933.06 | 4206.31 | 1933.03 | 4211.18 | 1933 | 4229.43 | 1933 | 4234.96 | 1933.11 |
| 4235.87 | 1933.14 | 4251.58 | 1933.49 | 4272.88 | 1933.98 | 4275.61 | 1934 | 4304.31 | 1934 |
| 4315.57 | 1933.66 | 4330.6 | 1933 | 4334.07 | 1932.96 | 4341.76 | 1932.65 | 4352.65 | 1932.26 |
| 4357.72 | 1932.09 | 4359.84 | 1932 | 4406.03 | 1932 | 4422.82 | 1932.61 | 4435.01 | 1933 |
| 4558.48 | 1933 | 4562.68 | 1932.99 | 4592.93 | 1932.99 | 4593.24 | 1932.98 | 4600.17 | 1932.98 |
| 4614 | 1932.42 | 4614.82 | 1932.42 | 4620.84 | 1932 | 4626.71 | 1931.44 | 4631.17 | 1931 |
| 4645.71 | 1930.06 | 4646.69 | 1930 | 4648.78 | 1930 | 4653.14 | 1929.98 | 4665.46 | 1929.96 |
| 4669.79 | 1929.97 | 4675.46 | 1930 | 4684.76 | 1930 | 4686.19 | 1929.97 | 4694.88 | 1929.7 |
| 4711.87 | 1929.2 | 4715.65 | 1929 | 4716.46 | 1929 | 4737.73 | 1929.84 | 4741.92 | 1930 |
| 4763.96 | 1930 | 4767.74 | 1930.11 | 4772.94 | 1930.21 | 4784.51 | 1930.29 | 4794.59 | 1930.31 |
| 4795.01 | 1930.3 | 4803.42 | 1930.23 | 4806.62 | 1930.18 | 4814.55 | 1930.14 | 4816.39 | 1930.11 |
| 4826.5 | 1930.14 | 4831.33 | 1930.16 | 4836.68 | 1930.2 | 4850.87 | 1930.28 | 4862.68 | 1930.34 |
| 4877.08 | 1930.59 | 4880.21 | 1930.67 | 4884.84 | 1930.8 | 4891 | 1931 | 4981.25 | 1931 |
| 5008.13 | 1931.1 | 5011.77 | 1931.11 | 5014.23 | 1931.15 | 5019.91 | 1931.26 | 5026.82 | 1931.25 |
| 5034.07 | 1931.22 | 5036.86 | 1931.23 | 5037.77 | 1931.26 | 5040.03 | 1931.28 | 5043.7 | 1931.4 |
| 5046.24 | 1931.43 | 5059.08 | 1932 | 5083.66 | 1932.01 | 5122.85 | 1932.01 | 5129.38 | 1932 |
| 5151.02 | 1932 | 5157.06 | 1931.98 | 5166.67 | 1931.98 | 5171.6 | 1931.97 | 5176.13 | 1931.92 |
| 5226.55 | 1931.44 | 5229.08 | 1931.42 | 5234.41 | 1931.34 | 5242.3 | 1931.23 | 5247.46 | 1931.2 |
| 5251.13 | 1931.19 | 5255.57 | 1931.12 | 5258.19 | 1931.09 | 5262.96 | 1931 | 5415.08 | 1931 |
| 5421.41 | 1930.98 | 5426.62 | 1930.97 | 5433.66 | 1930.97 | 5438.72 | 1930.96 | 5446.62 | 1930.99 |
| 5451.67 | 1930.99 | 5457.33 | 1931 | 5468.36 | 1931 | 5469.86 | 1930.99 | 5475.02 | 1930.99 |
| 5478.16 | 1931 | 5487.54 | 1932 | 5503.3 | 1932.88 | 5505.6 | 1933 | 5510.04 | 1933 |
| 5522.16 | 1933.12 | 5535.65 | 1933.25 | 5537.17 | 1933.24 | 5541.03 | 1933.28 | 5541.95 | 1933.26 |
| 5543.41 | 1933.28 | 5589.94 | 1933.13 | 5611.15 | 1933.05 | 5629.18 | 1933 | 5650.29 | 1933 |
| 5658.72 | 1932.98 | 5662.97 | 1932.99 | 5671.08 | 1932.99 | 5680.06 | 1932.74 | 5682.86 | 1932.71 |
| 5690.77 | 1932.5 | 5692.2 | 1932.47 | 5703.17 | 1932.14 | 5707.96 | 1932 | 5722.49 | 1931.81 |
| 5722.95 | 1931.81 | 5734.08 | 1931.66 | 5735.18 | 1931.66 | 5785.18 | 1931.03 | 5787.18 | 1931 |
| 5792.69 | 1931 | 5804.62 | 1931.16 | 5831.24 | 1931.51 | 5831.43 | 1931.51 | 5930.81 | 1931.99 |
| 5931.75 | 1932 | 6050.97 | 1932 | 6063.47 | 1932.59 | 6065.52 | 1932.69 | 6072.62 | 1933 |
| 6081.54 | 1933.49 | 6091.41 | 1934 | 6093.73 | 1934.16 | 6105.4 | 1935 | 6112.1 | 1935.75 |
| 6122.43 | 1937 | 6132.98 | 1938 | 6141.02 | 1938.75 | 6142.46 | 1938.87 | 6143.41 | 1938.88 |
| 6144.71 | 1939 | 6147.13 | 1939 | 6149.96 | 1940.16 | 6153.5 | 1941.59 | 6157.06 | 1943 |
| 6158.85 | 1943.69 | 6161.84 | 1944.87 | 6165.19 | 1946.23 | 6166.98 | 1947 | 6169.08 | 1948 |
| 6171.23 | 1949 | 6173.42 | 1950 | 6179 | 1950.01 | 6183.2 | 1950 | 6188.23 | 1950.31 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6190.66 | 1950.45 | 6191.95 | 1950.54 | 6200.72 | 1951 | 6206.54 | 1951 | 6207.41 | 1950.89 |
| 6212.31 | 1950.57 | 6215.41 | 1950.41 | 6221.35 | 1950.31 | 6224.15 | 1950.28 | 6225.24 | 1950.23 |
| 6227.69 | 1950.03 | 6228.39 | 1949.99 | 6229.39 | 1950.02 | 6232.1 | 1951 | 6241.19 | 1951 |
| 6247.77 | 1950.48 | 6249.29 | 1950.49 | 6251.85 | 1950.45 | 6253.59 | 1950.46 | 6261.37 | 1951 |
| 6273.72 | 1951 | 6273.9 | 1950.99 | 6292.97 | 1950.25 | 6299.72 | 1950 | 6302.87 | 1949.7 |
| 6310.81 | 1949 | 6319.44 | 1948.99 | 6339.24 | 1948.64 | 6347.99 | 1948.54 | 6364.75 | 1948.31 |
| 6370.19 | 1948.23 | 6375.18 | 1948.17 | 6381.39 | 1948.11 | 6390.31 | 1948.03 | 6391.88 | 1948 |
| 6432.7 | 1948 | 6434.29 | 1948.01 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 1465.2 | .045 | 1465.2 | .04 | 6434.29 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 1465.2 | 6434.29 | 118.46 | 118.46 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1934.74 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.12 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1934.62 | Reach Len. (ft) | 118.46 | 118.46 | 118.46 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7931.20 | | |
| E.G. Slope (ft/ft) | 0.002512 | Area (sq ft) | | 7931.20 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 4244.10 | Top Width (ft) | | 4244.10 | | |
| Vel Total (ft/s) | 2.82 | Avg. Vel. (ft/s) | | 2.82 | | |
| Max Chl Dpth (ft) | 5.62 | Hydr. Depth (ft) | | 1.87 | | |
| Conv. Total (cfs) | 446920.9 | Conv. (cfs) | | 446920.9 | | |
| Length Wtd. (ft) | 118.46 | Wetted Per. (ft) | | 4245.25 | | |
| Min Ch El (ft) | 1929.00 | Shear (lb/sq ft) | | 0.29 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6434.29 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.31 | Cum Volume (acre-ft) | | 2229.51 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1071.59 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -7216.78

INPUT
Description:
Station Elevation Data num= 470

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 1374.68 | 1935 | 1386.61 | 1935 | 1386.93 | 1934.99 | 1393.74 | 1934.99 | 1429.24 | 1934.74 |
| 1457.95 | 1934.59 | 1460.48 | 1934.51 | 1464.94 | 1934.32 | 1465.88 | 1934.32 | 1471.75 | 1934.25 |
| 1477.64 | 1934.22 | 1482.56 | 1934.18 | 1490.09 | 1934 | 1497.05 | 1933.78 | 1506.38 | 1933.36 |
| 1509.49 | 1933.23 | 1514.35 | 1933 | 1524.31 | 1932.81 | 1527.97 | 1932.81 | 1531.53 | 1932.79 |
| 1540.36 | 1932.69 | 1551.56 | 1932.57 | 1558.81 | 1932.51 | 1566.09 | 1932.46 | 1572.11 | 1932.43 |
| 1582.19 | 1932.42 | 1590.79 | 1932.4 | 1595.41 | 1932.37 | 1600.39 | 1932.35 | 1606.71 | 1932.31 |
| 1664.55 | 1932.55 | 1670.97 | 1932.61 | 1690.25 | 1932.77 | 1716.72 | 1933 | 1745.48 | 1933 |
| 1818.64 | 1933.84 | 1829.66 | 1933.95 | 1835.63 | 1933.97 | 1840.53 | 1934 | 1943.07 | 1934 |
| 1956.6 | 1933.98 | 1963.78 | 1933.98 | 1969.24 | 1933.97 | 1981.33 | 1933.98 | 1983.57 | 1934 |
| 2012.81 | 1934 | 2015.08 | 1933.97 | 2030.17 | 1933.8 | 2030.74 | 1933.79 | 2049.72 | 1933.56 |
| 2067.97 | 1933.35 | 2073.03 | 1933.32 | 2082.28 | 1933.29 | 2087.8 | 1933.3 | 2097.48 | 1933.22 |
| 2131.09 | 1933.21 | 2165.88 | 1933.19 | 2173.88 | 1933.13 | 2178.99 | 1933 | 2194.93 | 1933 |
| 2212.42 | 1933.15 | 2222.64 | 1933.22 | 2248.11 | 1933.43 | 2250.78 | 1933.45 | 2296.52 | 1933.95 |
| 2301.25 | 1934 | 2350.67 | 1934 | 2366.3 | 1933.65 | 2376.4 | 1933.42 | 2382.57 | 1933.29 |
| 2392.49 | 1933.07 | 2395.17 | 1933.04 | 2397.87 | 1932.91 | 2408.05 | 1932.36 | 2413.74 | 1932 |
| 2417.98 | 1931.44 | 2421.17 | 1931 | 2431.16 | 1931 | 2488.56 | 1931.76 | 2493.44 | 1931.84 |
| 2504.57 | 1932 | 2505.44 | 1932.02 | 2514.07 | 1932.41 | 2527.93 | 1933 | 2549.89 | 1933 |
| 2561.13 | 1932.97 | 2565.58 | 1932.95 | 2568.9 | 1932.95 | 2578.3 | 1932.97 | 2587.85 | 1933 |
| 2591.25 | 1932.95 | 2595.66 | 1932.83 | 2603.32 | 1932.6 | 2622.28 | 1932.12 | 2625.11 | 1932.09 |
| 2629.52 | 1932 | 2642.25 | 1931.77 | 2644.48 | 1931.74 | 2657.37 | 1931.37 | 2661.72 | 1931.27 |
| 2665.07 | 1931.17 | 2667.42 | 1931.17 | 2669.87 | 1931.2 | 2674.12 | 1931.29 | 2678.42 | 1931.4 |
| 2683.01 | 1931.54 | 2688.67 | 1931.68 | 2691 | 1931.72 | 2692.53 | 1931.77 | 2697.11 | 1931.84 |
| 2699.88 | 1932 | 2708.07 | 1932.3 | 2713.09 | 1932.45 | 2715.77 | 1932.48 | 2740.18 | 1932.88 |
| 2747.16 | 1933 | 2788.1 | 1933 | 2793.61 | 1933.1 | 2796.98 | 1933.14 | 2807.33 | 1933.33 |
| 2816.83 | 1933.35 | 2825.33 | 1933.35 | 2828.94 | 1933.32 | 2832.62 | 1933.39 | 2838.84 | 1933.54 |
| 2844.21 | 1933.56 | 2851.16 | 1933.4 | 2856.29 | 1933.41 | 2863.11 | 1933.54 | 2873.57 | 1933.96 |
| 2876.59 | 1934 | 2880.37 | 1934.24 | 2883.6 | 1934.46 | 2885.22 | 1934.59 | 2891.23 | 1934.74 |
| 2894.29 | 1934.79 | 2899.17 | 1934.64 | 2901.54 | 1934.58 | 2905.95 | 1934.44 | 2922.56 | 1934 |
| 2928.01 | 1933.9 | 2937.02 | 1933.71 | 2939.17 | 1933.68 | 2942.82 | 1933.6 | 2948.14 | 1933.5 |
| 2962.72 | 1933.15 | 2968.45 | 1933 | 2970.32 | 1932.99 | 2976.46 | 1932.99 | 2977.95 | 1932.98 |
| 2986.12 | 1932.97 | 3001.05 | 1932.96 | 3005.3 | 1932.95 | 3012.93 | 1932.97 | 3024.04 | 1932.97 |
| 3033.52 | 1932.99 | 3040.51 | 1932.99 | 3043.35 | 1932.92 | 3046.89 | 1932.93 | 3053.22 | 1932.92 |
| 3057.63 | 1932.89 | 3060.9 | 1932.85 | 3069.3 | 1933 | 3076.74 | 1932.99 | 3087.59 | 1933 |
| 3093.29 | 1933 | 3096.09 | 1933.13 | 3114.32 | 1934 | 3115.6 | 1934.01 | 3124.84 | 1934.04 |
| 3131.08 | 1934.03 | 3137.73 | 1934.01 | 3143.91 | 1934 | 3159.88 | 1933.55 | 3162.33 | 1933.49 |
| 3164.1 | 1933.47 | 3167.32 | 1933.4 | 3177.47 | 1933.07 | 3183.92 | 1933.04 | 3188.94 | 1933 |
| 3238.11 | 1933 | 3241.03 | 1933.01 | 3272.76 | 1933.01 | 3274.04 | 1933 | 3291.92 | 1933 |
| 3292.63 | 1933.06 | 3295.36 | 1933.04 | 3296.38 | 1933.08 | 3309.69 | 1933.84 | 3312.32 | 1934 |
| 3332.06 | 1934 | 3346.55 | 1933.98 | 3361.32 | 1933.75 | 3362.36 | 1933.77 | 3365.96 | 1933.67 |
| 3376.76 | 1933 | 3450.58 | 1933 | 3457.1 | 1933.37 | 3466.8 | 1934 | 3469.68 | 1934.02 |
| 3471.63 | 1934 | 3477.98 | 1934 | 3478.44 | 1934.02 | 3483.45 | 1934.11 | 3498.49 | 1934.29 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3500 | 1934.33 | 3507.39 | 1934.38 | 3512.41 | 1934.53 | 3520.66 | 1934.7 | 3522.06 | 1934.75 |
| 3534.16 | 1935 | 3543.45 | 1935 | 3550.98 | 1934.54 | 3559.52 | 1934 | 3564.85 | 1933.73 |
| 3582.41 | 1933.02 | 3585.66 | 1933.01 | 3595.62 | 1933 | 3624.65 | 1933 | 3642.17 | 1934 |
| 3820.88 | 1934 | 3830.52 | 1933.83 | 3831.99 | 1933.83 | 3849.57 | 1933.68 | 3852.04 | 1933.63 |
| 3855.6 | 1933.53 | 3860.95 | 1933.29 | 3861.51 | 1933.3 | 3863.98 | 1933.22 | 3868.49 | 1933.21 |
| 3870.31 | 1933.25 | 3877.74 | 1933.36 | 3879.62 | 1933.42 | 3890.34 | 1933.01 | 3895.26 | 1933.02 |
| 3902.04 | 1933.02 | 3918.92 | 1933.01 | 3929.7 | 1933 | 3929.93 | 1933.01 | 3956.18 | 1933.57 |
| 3967.07 | 1933.8 | 3968.35 | 1933.8 | 3974.42 | 1933.93 | 3976.67 | 1933.99 | 3980.18 | 1933.99 |
| 3986.65 | 1933.78 | 3998.14 | 1933.65 | 4006.84 | 1933.39 | 4009.59 | 1933.34 | 4014.95 | 1933.14 |
| 4019.2 | 1933 | 4035.84 | 1933 | 4039.42 | 1933.21 | 4042.52 | 1933.36 | 4055.21 | 1934 |
| 4119.78 | 1934 | 4140.36 | 1933.82 | 4144.11 | 1933.68 | 4145.47 | 1933.67 | 4151.2 | 1933.45 |
| 4151.54 | 1933.45 | 4155.81 | 1933.29 | 4164.35 | 1933 | 4208.33 | 1933 | 4211.25 | 1933.01 |
| 4252.47 | 1933.01 | 4260.89 | 1933 | 4269.76 | 1933.23 | 4269.95 | 1933.25 | 4273.38 | 1933.14 |
| 4275.61 | 1933.15 | 4281.12 | 1933.25 | 4290.21 | 1933.07 | 4293.16 | 1933 | 4366.14 | 1933 |
| 4376.38 | 1932.73 | 4377.18 | 1932.7 | 4390.46 | 1932.33 | 4402.09 | 1932 | 4406.84 | 1932 |
| 4432.31 | 1931.79 | 4451.7 | 1931.64 | 4469.9 | 1931.81 | 4483.86 | 1931.98 | 4490.91 | 1932 |
| 4498.84 | 1932.2 | 4507.01 | 1932.39 | 4510.56 | 1932.38 | 4528.28 | 1932.35 | 4552.04 | 1932.17 |
| 4561.25 | 1932 | 4567 | 1931.84 | 4575.76 | 1931.65 | 4587.3 | 1931.33 | 4587.83 | 1931.31 |
| 4599.47 | 1931 | 4606.36 | 1930.55 | 4612.9 | 1930 | 4614.91 | 1929.97 | 4617.8 | 1929.87 |
| 4626.14 | 1929.63 | 4626.71 | 1929.63 | 4633.45 | 1929.51 | 4642.54 | 1929.41 | 4648.67 | 1929.35 |
| 4649.59 | 1929.35 | 4665.09 | 1929.46 | 4672.68 | 1929.56 | 4706.68 | 1929.99 | 4709.09 | 1930 |
| 4792.08 | 1930 | 4793.22 | 1930.02 | 4803.65 | 1930.13 | 4804.76 | 1930.15 | 4809.47 | 1930.08 |
| 4815.95 | 1930.14 | 4828.68 | 1930.2 | 4836.35 | 1930.2 | 4844.27 | 1930.18 | 4848.84 | 1930.21 |
| 4855.24 | 1930.11 | 4860.94 | 1930 | 4862.94 | 1930 | 4870.36 | 1929.38 | 4872.62 | 1929.2 |
| 4874.81 | 1929 | 4884.68 | 1929 | 4888.69 | 1929.3 | 4899.13 | 1930 | 4904.44 | 1930.35 |
| 4912.61 | 1931 | 4984.26 | 1931 | 4984.96 | 1930.97 | 5009.71 | 1930.9 | 5024.49 | 1930.97 |
| 5026.97 | 1930.97 | 5034.06 | 1931 | 5044.93 | 1931.66 | 5051.94 | 1932 | 5067.75 | 1932.52 |
| 5070.21 | 1932.58 | 5079.53 | 1932.85 | 5082.01 | 1932.9 | 5091.19 | 1932.92 | 5093.38 | 1932.88 |
| 5094.84 | 1932.88 | 5098.6 | 1932.82 | 5105.57 | 1932.69 | 5107.37 | 1932.67 | 5143.21 | 1932 |
| 5158.44 | 1931.85 | 5186.18 | 1931.61 | 5207.6 | 1931.45 | 5209.94 | 1931.44 | 5246.8 | 1931.09 |
| 5256.54 | 1931.04 | 5260.8 | 1931 | 5409.86 | 1931 | 5426.49 | 1930.98 | 5440.64 | 1931 |
| 5446.43 | 1931 | 5449.72 | 1930.99 | 5455.39 | 1930.99 | 5465 | 1930.97 | 5479.61 | 1930.99 |
| 5483.16 | 1931 | 5496.86 | 1931 | 5503.15 | 1930.38 | 5505.86 | 1930 | 5507.17 | 1930 |
| 5513.22 | 1931 | 5514.64 | 1931.17 | 5519.85 | 1932 | 5531.27 | 1932.4 | 5539.89 | 1932.69 |
| 5548.03 | 1933 | 5571.49 | 1933 | 5573.19 | 1933.03 | 5575.28 | 1933.03 | 5579.22 | 1933 |
| 5584.56 | 1933 | 5587.41 | 1932.99 | 5592.38 | 1933 | 5620.32 | 1933 | 5623.67 | 1932.96 |
| 5643.8 | 1932.79 | 5674.14 | 1932.48 | 5722.32 | 1932 | 5731.52 | 1931.9 | 5761.34 | 1931.56 |
| 5762.38 | 1931.55 | 5789.86 | 1931 | 5814.51 | 1931 | 5815.93 | 1931.01 | 5947.99 | 1931.67 |
| 5983.26 | 1931.84 | 6002.48 | 1932 | 6003.49 | 1932 | 6019.16 | 1933 | 6029.31 | 1933.56 |
| 6038.14 | 1934 | 6041.08 | 1934.14 | 6052.54 | 1934.66 | 6054.76 | 1934.78 | 6059.7 | 1935 |
| 6064.39 | 1935.33 | 6072.72 | 1936 | 6077.72 | 1936.38 | 6084.62 | 1937 | 6089.48 | 1937.52 |
| 6099.87 | 1938.75 | 6102.06 | 1939 | 6102.65 | 1939.04 | 6108.81 | 1939.21 | 6110.9 | 1939.17 |
| 6114.19 | 1939.08 | 6117.7 | 1939.04 | 6119.14 | 1939.53 | 6119.24 | 1939.5 | 6120.07 | 1940.06 |
| 6120.82 | 1940.33 | 6123.76 | 1941 | 6125.12 | 1941.2 | 6125.92 | 1941.26 | 6127.1 | 1941.24 |
| 6129.03 | 1941 | 6131.27 | 1940.68 | 6135.41 | 1940 | 6138.02 | 1940 | 6138.62 | 1941 |
| 6139.32 | 1941.41 | 6142.99 | 1942 | 6146.85 | 1942.85 | 6147.6 | 1943 | 6150.38 | 1943.27 |
| 6153.55 | 1944 | 6156.95 | 1944.47 | 6159.71 | 1944.93 | 6163.9 | 1945.45 | 6174.2 | 1946.87 |
| 6175.59 | 1947.05 | 6180.55 | 1947.74 | 6187.79 | 1948.84 | 6188.61 | 1948.91 | 6191.12 | 1949 |
| 6198.01 | 1949.61 | 6204.39 | 1949.96 | 6205.52 | 1949.98 | 6206.64 | 1949.89 | 6213.41 | 1949.28 |
| 6215.04 | 1949.26 | 6215.72 | 1949.29 | 6222.57 | 1949.48 | 6226.15 | 1949.73 | 6228.87 | 1950 |
| 6231.97 | 1950.14 | 6233.97 | 1950.26 | 6241.45 | 1950.96 | 6241.9 | 1950.97 | 6248.08 | 1950.97 |
| 6250.25 | 1950.98 | 6252.19 | 1950.88 | 6257.03 | 1950.54 | 6262.11 | 1950.26 | 6279.48 | 1949.39 |
| 6286.46 | 1949 | 6307.29 | 1948.44 | 6317.77 | 1948.19 | 6326.08 | 1948 | 6413.93 | 1948 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 1374.68 | .045 | 1374.68 | .04 | 6413.93 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 1374.68 | 6413.93 | 214.96 | 214.96 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1934.42 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.13 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1934.30 | Reach Len. (ft) | 214.96 | 214.96 | 214.96 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7845.75 | | |
| E.G. Slope (ft/ft) | 0.002808 | Area (sq ft) | | 7845.75 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 4490.68 | Top Width (ft) | | 4490.68 | | |
| Vel Total (ft/s) | 2.86 | Avg. Vel. (ft/s) | | 2.86 | | |
| Max Chl Dpth (ft) | 5.30 | Hydr. Depth (ft) | | 1.75 | | |
| Conv. Total (cfs) | 422712.5 | Conv. (cfs) | | 422712.5 | | |
| Length Wtd. (ft) | 214.96 | Wetted Per. (ft) | | 4491.81 | | |
| Min Ch El (ft) | 1929.00 | Shear (lb/sq ft) | | 0.31 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6413.93 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.49 | Cum Volume (acre-ft) | | 2208.06 | | |
| C & E Loss (ft) | 0.01 | Cum SA (acres) | | 1059.71 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -7431.74

INPUT
Description:
Station Elevation Data num= 385

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 1222.6 | 1934 | 1320.09 | 1933 | 1342.16 | 1933 | 1356.86 | 1932.75 | 1367.94 | 1932.57 |
| 1388.29 | 1932.27 | 1395.91 | 1932.17 | 1404.98 | 1932 | 1578.53 | 1932 | 1587.33 | 1931.36 |
| 1592.7 | 1931 | 1619.26 | 1931 | 1627.67 | 1931.26 | 1651.78 | 1932 | 1656.01 | 1932.04 |
| 1719.35 | 1932.61 | 1722.26 | 1932.63 | 1736.98 | 1932.77 | 1764.08 | 1933 | 1896.33 | 1933 |
| 1906.26 | 1932.77 | 1907.77 | 1932.77 | 1912.11 | 1932.74 | 1914.06 | 1932.74 | 1915.22 | 1932.72 |
| 1918.46 | 1932.72 | 1921.26 | 1932.67 | 1955.42 | 1932.28 | 1965.24 | 1932.19 | 1983.52 | 1932.22 |
| 2006.78 | 1932.24 | 2006.87 | 1932.25 | 2012.45 | 1932.29 | 2020.71 | 1932.36 | 2029 | 1932.37 |
| 2037.85 | 1932.48 | 2041.56 | 1932.49 | 2044.95 | 1932.52 | 2046.22 | 1932.52 | 2049.47 | 1932.55 |
| 2057.5 | 1932.6 | 2060.47 | 1932.63 | 2077.66 | 1932.74 | 2086.66 | 1932.81 | 2098.56 | 1932.87 |
| 2112.55 | 1932.95 | 2117.59 | 1933 | 2139.34 | 1933 | 2142.64 | 1932.99 | 2145.48 | 1933 |
| 2359.3 | 1933 | 2385.44 | 1932 | 2388.1 | 1931.71 | 2394.32 | 1931 | 2526.97 | 1931 |
| 2532.57 | 1930.99 | 2538.27 | 1930.99 | 2540.59 | 1931 | 2593.07 | 1931 | 2600.24 | 1930.97 |
| 2610.51 | 1930.92 | 2625.16 | 1931 | 2757.03 | 1931 | 2766.31 | 1931.09 | 2772.53 | 1931.14 |
| 2799.27 | 1931.39 | 2802.4 | 1931.43 | 2838.04 | 1931.84 | 2851.07 | 1932 | 2851.79 | 1932 |
| 2859.62 | 1932.45 | 2860.67 | 1932.44 | 2863.63 | 1932.61 | 2877.98 | 1932.73 | 2886.25 | 1932.78 |
| 2915.3 | 1932.69 | 2938.29 | 1932.61 | 2955.19 | 1932.67 | 2975.4 | 1932.76 | 2981.28 | 1932.79 |
| 2993.74 | 1933 | 3026.9 | 1933 | 3028.62 | 1933.02 | 3044.47 | 1933.71 | 3048.85 | 1933.89 |
| 3052.13 | 1934 | 3079.58 | 1934 | 3083.37 | 1933.99 | 3085.33 | 1933.97 | 3097.59 | 1933.87 |
| 3099.06 | 1933.82 | 3109.33 | 1933.94 | 3112.03 | 1933.96 | 3113.54 | 1933.9 | 3122.5 | 1933.28 |
| 3126.42 | 1933 | 3131 | 1932.83 | 3132.16 | 1932.8 | 3136.39 | 1932.64 | 3146.59 | 1932.37 |
| 3150.94 | 1932.27 | 3154.92 | 1932.23 | 3158.65 | 1932.21 | 3162.16 | 1932.21 | 3167.51 | 1932.27 |
| 3171.92 | 1932.34 | 3172.79 | 1932.34 | 3179.39 | 1932.48 | 3186.36 | 1932.42 | 3188.16 | 1932.44 |
| 3193.94 | 1932.42 | 3199.38 | 1932.41 | 3208.66 | 1932.56 | 3209.2 | 1932.56 | 3218.66 | 1932.67 |
| 3230.63 | 1932.73 | 3245.35 | 1932.82 | 3261.7 | 1933.01 | 3264.3 | 1933.01 | 3266.82 | 1932.99 |
| 3278.88 | 1932.74 | 3288.26 | 1932.61 | 3319.42 | 1932.61 | 3325.72 | 1932.67 | 3345.41 | 1932.98 |
| 3346.42 | 1933 | 3374.92 | 1933 | 3379.28 | 1933.31 | 3381.62 | 1933.52 | 3387.15 | 1934 |
| 3390.32 | 1934.02 | 3392.82 | 1934 | 3396.57 | 1933.89 | 3408.44 | 1933.5 | 3421.04 | 1933 |
| 3430.24 | 1933 | 3434.76 | 1933.24 | 3438.41 | 1933.41 | 3441.02 | 1933.46 | 3443.65 | 1933.43 |
| 3447.31 | 1933.34 | 3451.54 | 1933.11 | 3453.32 | 1932.99 | 3455.05 | 1932.84 | 3463.94 | 1932 |
| 3489.51 | 1931.44 | 3512.81 | 1931 | 3520.18 | 1931 | 3529.58 | 1931.2 | 3529.85 | 1931.2 |
| 3538.39 | 1931.39 | 3543.56 | 1931.38 | 3546.98 | 1931.43 | 3552.23 | 1931.54 | 3555.96 | 1931.63 |
| 3561.3 | 1931.77 | 3562.9 | 1931.8 | 3568.51 | 1932 | 3603.74 | 1932.69 | 3620.12 | 1933 |
| 3624.63 | 1933.01 | 3648.65 | 1933.03 | 3652.34 | 1933.02 | 3660.13 | 1933.02 | 3663.25 | 1933.01 |
| 3674.43 | 1933 | 3761.72 | 1933 | 3796.36 | 1932.6 | 3820.34 | 1932.36 | 3830.2 | 1932.44 |
| 3834.93 | 1932.49 | 3840.52 | 1932.56 | 3858.98 | 1932.78 | 3862.94 | 1932.84 | 3870.68 | 1933 |
| 3874.82 | 1933 | 3896.45 | 1934 | 3904.88 | 1934 | 3910.47 | 1934.01 | 3922.8 | 1934.01 |
| 3935.47 | 1934.38 | 3937.11 | 1934.41 | 3944.84 | 1934.46 | 3951.44 | 1934.6 | 3956.18 | 1934.62 |
| 3958.76 | 1934.68 | 3962.83 | 1934.74 | 3968.25 | 1935 | 3975.1 | 1935 | 3975.46 | 1934.98 |
| 3991.43 | 1934.47 | 3993.73 | 1934.44 | 3995.52 | 1934.37 | 3997.29 | 1934.34 | 4007.46 | 1934 |
| 4008.29 | 1933.99 | 4012.84 | 1933.98 | 4022.9 | 1933.98 | 4028.05 | 1933.99 | 4034.35 | 1934.02 |
| 4043.84 | 1934.05 | 4047.84 | 1934.04 | 4056.72 | 1934 | 4059.72 | 1933.81 | 4063.58 | 1933.54 |
| 4070.92 | 1933 | 4082.85 | 1932.01 | 4096.84 | 1931.3 | 4103.55 | 1931 | 4128.24 | 1931 |
| 4130.68 | 1931.15 | 4138.54 | 1931.5 | 4143.76 | 1931.76 | 4150.03 | 1932 | 4154.64 | 1932.11 |
| 4158.02 | 1932.21 | 4166.46 | 1932.48 | 4169.3 | 1932.58 | 4173.18 | 1932.7 | 4182.51 | 1933 |
| 4190.67 | 1933.01 | 4209.03 | 1933.01 | 4217.38 | 1933 | 4317.12 | 1933 | 4323.71 | 1933.46 |
| 4332.3 | 1934 | 4350.43 | 1934 | 4355.69 | 1933.92 | 4362.49 | 1933.78 | 4364.11 | 1933.74 |
| 4372.69 | 1933.62 | 4378.92 | 1933.54 | 4379.64 | 1933.54 | 4388.36 | 1933.2 | 4389.69 | 1933.19 |
| 4393.44 | 1933 | 4399.56 | 1932.48 | 4404.61 | 1932 | 4415.21 | 1931 | 4622.55 | 1931 |
| 4631.54 | 1930.47 | 4638.84 | 1930 | 4639.62 | 1930 | 4658.34 | 1929.71 | 4671.57 | 1929.5 |
| 4689.99 | 1929.33 | 4699.31 | 1929.25 | 4713.78 | 1929 | 4753.79 | 1929 | 4757.06 | 1929.06 |
| 4767.6 | 1929.22 | 4813.83 | 1929.96 | 4817.24 | 1929.95 | 4823.71 | 1929.98 | 4825.23 | 1930 |
| 4834.9 | 1930.01 | 4898.67 | 1930.78 | 4911.37 | 1930.93 | 4915.69 | 1931 | 4978.33 | 1931 |
| 4979.94 | 1930.96 | 5033.79 | 1930 | 5040.52 | 1930 | 5043.04 | 1930.06 | 5050.15 | 1930.25 |
| 5062.67 | 1930.73 | 5070.06 | 1931 | 5088.06 | 1931 | 5095.77 | 1931.01 | 5110.96 | 1931.01 |
| 5117.22 | 1931.08 | 5147.1 | 1931.48 | 5152.4 | 1931.49 | 5159.1 | 1931.49 | 5166.68 | 1931.52 |
| 5192.91 | 1932 | 5198.3 | 1932 | 5198.41 | 1931.99 | 5208.33 | 1931.58 | 5216.69 | 1931.24 |
| 5229.26 | 1931 | 5323.01 | 1931 | 5349.21 | 1930.13 | 5352.68 | 1930 | 5354.06 | 1930 |
| 5386.41 | 1930.79 | 5395.13 | 1931 | 5566 | 1931 | 5571.36 | 1930.89 | 5579.28 | 1931 |
| 5587.9 | 1931 | 5597.6 | 1931.43 | 5610.07 | 1932 | 5610.87 | 1932.02 | 5621.77 | 1932.08 |
| 5623.72 | 1932.1 | 5642.84 | 1932.23 | 5670.98 | 1932.43 | 5671.94 | 1932.44 | 5700.53 | 1932.65 |
| 5731.44 | 1932.84 | 5740.96 | 1932.89 | 5743.55 | 1932.91 | 5753.56 | 1932.86 | 5760.03 | 1932.74 |
| 5763.96 | 1932.65 | 5777.2 | 1932.29 | 5778.79 | 1932.26 | 5788.32 | 1932 | 5798.74 | 1931.7 |
| 5803.03 | 1931.6 | 5816.07 | 1931.25 | 5825 | 1931 | 6013.16 | 1931 | 6015 | 1931.05 |
| 6019.43 | 1931.23 | 6025.15 | 1931.5 | 6034.78 | 1932 | 6039.37 | 1932.36 | 6040.28 | 1932.41 |
| 6051.97 | 1933 | 6055.7 | 1933.18 | 6071.49 | 1934 | 6081.63 | 1934.71 | 6091.38 | 1935.58 |
| 6096 | 1936 | 6102.7 | 1936.65 | 6106.79 | 1937 | 6107.48 | 1937.01 | 6115.49 | 1937.68 |
| 6116.37 | 1937.73 | 6118.77 | 1938 | 6119.41 | 1938.01 | 6122.02 | 1938.17 | 6130.79 | 1939 |
| 6131.21 | 1939.08 | 6132.16 | 1939.41 | 6133.77 | 1939.89 | 6139.42 | 1941.5 | 6140.69 | 1941.84 |
| 6142.39 | 1942.49 | 6145 | 1943 | 6148.53 | 1943.67 | 6150.42 | 1944.4 | 6151.78 | 1944.65 |
| 6152.56 | 1944.71 | 6153.89 | 1944.76 | 6154.98 | 1944.71 | 6155.28 | 1944.66 | 6159.86 | 1944.61 |
| 6160.76 | 1944.55 | 6162.32 | 1944.38 | 6163.49 | 1944.22 | 6164.28 | 1944.17 | 6165.94 | 1944.24 |
| 6168.16 | 1944.54 | 6170.28 | 1944.89 | 6172.78 | 1945 | 6173.18 | 1945.04 | 6181.7 | 1946.02 |
| 6189.17 | 1947 | 6196.96 | 1948 | 6201.3 | 1948.6 | 6204.38 | 1949 | 6207.44 | 1949.27 |
| 6211.6 | 1949.65 | 6216.36 | 1950 | 6223.59 | 1950.55 | 6229.16 | 1951 | 6230.93 | 1951.02 |
| 6234.35 | 1951.15 | 6239.21 | 1951.26 | 6243.12 | 1951.26 | 6251.63 | 1951.37 | 6257.87 | 1951.33 |
| 6265.44 | 1951.23 | 6271.9 | 1951 | 6280.61 | 1950.34 | 6285.01 | 1950 | 6302.55 | 1949.32 |
| 6306.76 | 1949.15 | 6309.72 | 1949.04 | 6311.69 | 1948.94 | 6328.68 | 1948 | 6407.87 | 1948 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 1222.6 | .045 | 1222.6 | .04 | 6407.87 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 1222.6 | 6407.87 | 224.84 | 224.84 | .1 | .3 |

CROSS SECTION OUTPUT  Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1933.92 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.10 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1933.82 | Reach Len. (ft) | 224.84 | 224.84 | 224.84 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8871.51 | | |
| E.G. Slope (ft/ft) | 0.001897 | Area (sq ft) | | 8871.51 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 4550.39 | Top Width (ft) | | 4550.39 | | |
| Vel Total (ft/s) | 2.52 | Avg. Vel. (ft/s) | | 2.52 | | |
| Max Chl Dpth (ft) | 4.82 | Hydr. Depth (ft) | | 1.95 | | |
| Conv. Total (cfs) | 514246.4 | Conv. (cfs) | | 514246.4 | | |
| Length Wtd. (ft) | 224.84 | Wetted Per. (ft) | | 4551.34 | | |
| Min Ch El (ft) | 1929.00 | Shear (lb/sq ft) | | 0.23 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6407.87 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.46 | Cum Volume (acre-ft) | | 2166.81 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1037.40 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE  RS: -7656.58

INPUT
Description:
Station Elevation Data  num=  415

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1939.43 | 1311.34 | 1933 | 1324.3 | 1933 | 1328.43 | 1932.93 | 1348.31 | 1932.61 |
| 1359.73 | 1932.46 | 1376.37 | 1932.09 | 1379.81 | 1932 | 1399.08 | 1931.84 | 1399.48 | 1931.84 |
| 1445.17 | 1931.67 | 1481.17 | 1931.66 | 1492.8 | 1931.75 | 1501.47 | 1931.76 | 1506.8 | 1931.78 |
| 1524.72 | 1931.82 | 1540.84 | 1931.75 | 1544.27 | 1931.68 | 1547.38 | 1931.6 | 1553.84 | 1931.41 |
| 1556.04 | 1931.39 | 1558.76 | 1931.33 | 1561.39 | 1931.3 | 1564.54 | 1931.23 | 1568.01 | 1931.19 |
| 1572.54 | 1931.11 | 1577.62 | 1931 | 1600.85 | 1931 | 1618.35 | 1931.32 | 1654.21 | 1931.99 |
| 1655.47 | 1932 | 1716.02 | 1932.6 | 1723.78 | 1932.68 | 1756.59 | 1933 | 1847.72 | 1933 |
| 1859.09 | 1932.75 | 1885.07 | 1932.23 | 1887.84 | 1932.18 | 1890.84 | 1932.15 | 1897.35 | 1932 |
| 1931.69 | 1931.38 | 1932.9 | 1931.35 | 1944.88 | 1931.13 | 1950.43 | 1931 | 1981.14 | 1931 |
| 1992.01 | 1931.35 | 2011.07 | 1932 | 2033.7 | 1932.3 | 2100.83 | 1932.95 | 2105.22 | 1932.99 |
| 2119.88 | 1932.99 | 2132.39 | 1932.98 | 2138.54 | 1932.97 | 2147.21 | 1932.99 | 2154.91 | 1932.99 |
| 2163.38 | 1932.98 | 2171.73 | 1932.99 | 2192.86 | 1932.99 | 2209.21 | 1932.82 | 2238.06 | 1932.74 |
| 2265.88 | 1932.79 | 2266.68 | 1932.8 | 2273.7 | 1932.72 | 2276.67 | 1932.7 | 2282.96 | 1932.7 |
| 2286.68 | 1932.67 | 2294.09 | 1932.59 | 2312.98 | 1932.59 | 2318.62 | 1932.48 | 2318.76 | 1932.49 |
| 2337.98 | 1932.14 | 2343.76 | 1932 | 2344.74 | 1931.93 | 2355.84 | 1931 | 2483.34 | 1931 |
| 2486.92 | 1930.91 | 2510.77 | 1930.88 | 2518.1 | 1930.84 | 2537.58 | 1930.94 | 2553.05 | 1930.99 |
| 2553.57 | 1931 | 2718.18 | 1931 | 2718.42 | 1931.01 | 2744.87 | 1931.7 | 2748.77 | 1931.77 |
| 2757.54 | 1932.04 | 2770.64 | 1932.45 | 2776.24 | 1932.6 | 2779.23 | 1932.66 | 2795.01 | 1932.76 |
| 2796.28 | 1932.78 | 2801.31 | 1932.78 | 2807.34 | 1932.67 | 2816.14 | 1932.63 | 2817.64 | 1932.6 |
| 2822.53 | 1932.42 | 2826.65 | 1932.39 | 2834.2 | 1932 | 2838.1 | 1931.83 | 2840.79 | 1931.76 |
| 2845.47 | 1931.7 | 2846.68 | 1931.67 | 2864.51 | 1931.89 | 2868.1 | 1931.95 | 2876.99 | 1931.98 |
| 2888.86 | 1932 | 2891.17 | 1932.05 | 2901.44 | 1932.08 | 2909.9 | 1932.26 | 2921.33 | 1932.57 |
| 2934.72 | 1932.54 | 2938.53 | 1932.39 | 2945.51 | 1932.09 | 2947.18 | 1932 | 2988.92 | 1932 |
| 2996.94 | 1932.22 | 2998.56 | 1932.24 | 3001.58 | 1932.32 | 3021.17 | 1932.73 | 3033.31 | 1932.99 |
| 3039.47 | 1933 | 3052.01 | 1933 | 3058.87 | 1932.6 | 3060.61 | 1932.54 | 3068.09 | 1932.21 |
| 3071.89 | 1932 | 3079.84 | 1931.67 | 3093.47 | 1931.17 | 3099.43 | 1931 | 3107.21 | 1931 |
| 3110.96 | 1931.05 | 3118.19 | 1931.17 | 3127.05 | 1931.01 | 3130.32 | 1931.02 | 3141.1 | 1931.02 |
| 3161.64 | 1931 | 3180.75 | 1930.95 | 3187.51 | 1930.95 | 3193.75 | 1930.67 | 3201.06 | 1930.59 |
| 3206.29 | 1930.62 | 3215.31 | 1930.78 | 3219.73 | 1930.97 | 3222 | 1930.98 | 3224.31 | 1931.03 |
| 3228.87 | 1931.21 | 3252.42 | 1932 | 3256.61 | 1932 | 3275.92 | 1931.53 | 3277.85 | 1931.51 |
| 3293.8 | 1931 | 3311.48 | 1931 | 3318.87 | 1931.49 | 3326.14 | 1932 | 3333.23 | 1932.32 |
| 3348.68 | 1933 | 3354.09 | 1933.03 | 3358.67 | 1933 | 3373.1 | 1932 | 3378.67 | 1931.6 |
| 3384.43 | 1931.02 | 3389.79 | 1931 | 3395.72 | 1930.6 | 3403.36 | 1930 | 3408.76 | 1930 |
| 3413.8 | 1930.32 | 3421.91 | 1931 | 3429.38 | 1932 | 3433.51 | 1932.06 | 3435.62 | 1932.06 |
| 3437.8 | 1932 | 3447.48 | 1931.89 | 3450.19 | 1931.81 | 3459.48 | 1931.73 | 3461.49 | 1931.66 |
| 3464.41 | 1931.61 | 3479.46 | 1931.11 | 3482.17 | 1931 | 3487.55 | 1931.01 | 3496.69 | 1931.01 |
| 3503.19 | 1931 | 3535.41 | 1931 | 3540.05 | 1931.06 | 3542.68 | 1931.11 | 3548.26 | 1931.19 |
| 3585.92 | 1931.97 | 3589.18 | 1932 | 3592.98 | 1932.01 | 3600.12 | 1932.01 | 3603.54 | 1932.02 |
| 3614.29 | 1932.16 | 3633.24 | 1932.33 | 3634.83 | 1932.33 | 3641.19 | 1932.11 | 3645.03 | 1932.1 |
| 3646.69 | 1932.11 | 3668.25 | 1932.37 | 3693.51 | 1932.4 | 3700 | 1932.41 | 3702.34 | 1932.4 |
| 3710.92 | 1932.43 | 3752.97 | 1932.67 | 3810.47 | 1933 | 3866.29 | 1933 | 3877.03 | 1933.6 |
| 3880.83 | 1933.67 | 3885.07 | 1933.83 | 3892.06 | 1934 | 3971.62 | 1934 | 3987.54 | 1933.99 |
| 4007.54 | 1933.99 | 4007.86 | 1934 | 4013.68 | 1934 | 4028.04 | 1934.77 | 4031.51 | 1935 |
| 4033.05 | 1935.14 | 4046.86 | 1936 | 4048.34 | 1936.15 | 4056.21 | 1937 | 4058.91 | 1937.28 |
| 4069.77 | 1938.49 | 4074.33 | 1938.99 | 4075.99 | 1939.14 | 4078.61 | 1939.33 | 4080.83 | 1939.45 |
| 4085.2 | 1939.61 | 4087.78 | 1939.63 | 4089.13 | 1939.6 | 4091.54 | 1939.45 | 4096.38 | 1939 |
| 4104.26 | 1938.28 | 4111.95 | 1937.72 | 4113.72 | 1937.56 | 4118.05 | 1936.9 | 4122.88 | 1936 |
| 4125.3 | 1935.56 | 4128.6 | 1935 | 4131.81 | 1934.43 | 4134.09 | 1933.98 | 4135.61 | 1933.61 |
| 4137.74 | 1933 | 4160.42 | 1932.49 | 4167.37 | 1932.4 | 4172.77 | 1932.29 | 4181.74 | 1932.01 |
| 4188.19 | 1932 | 4213.26 | 1932.95 | 4214 | 1933 | 4264.3 | 1933 | 4279.83 | 1932.33 |
| 4289.97 | 1932.38 | 4304.24 | 1932.47 | 4304.98 | 1932.48 | 4317.7 | 1932.77 | 4323.13 | 1932.99 |
| 4327.6 | 1933 | 4338.99 | 1934 | 4346.42 | 1934 | 4352.42 | 1933.81 | 4373.65 | 1933 |
| 4378.75 | 1932.69 | 4384.75 | 1932.31 | 4389.97 | 1932 | 4404.77 | 1931.16 | 4408.5 | 1930.9 |
| 4409.66 | 1930.87 | 4414.24 | 1930.62 | 4419.66 | 1930.54 | 4431.2 | 1930.19 | 4442.31 | 1930.52 |
| 4443.15 | 1930.6 | 4444.93 | 1930.56 | 4449.95 | 1931 | 4537.71 | 1931 | 4541.53 | 1930.92 |
| 4547.79 | 1930.86 | 4567.4 | 1930.73 | 4581.65 | 1930.63 | 4587.35 | 1930.64 | 4595.44 | 1930.54 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4603.12 | 1930.27 | 4610.74 | 1930.01 | 4611.9 | 1930 | 4619.77 | 1930 | 4624.18 | 1929.82 |
| 4644.81 | 1929 | 4738.12 | 1929 | 4757.78 | 1928.99 | 4796.69 | 1929 | 4842.26 | 1929 |
| 4853.88 | 1929.28 | 4866.51 | 1929.69 | 4876.49 | 1930 | 5112.4 | 1930 | 5124.15 | 1930.01 |
| 5138.9 | 1930.03 | 5148.49 | 1930.03 | 5163.3 | 1930.01 | 5169.26 | 1930.01 | 5172.16 | 1930.08 |
| 5174.53 | 1930.08 | 5181.99 | 1930.16 | 5256.26 | 1931 | 5353.32 | 1931 | 5364.39 | 1930.8 |
| 5375.9 | 1930.64 | 5383.6 | 1930.54 | 5399.96 | 1930.26 | 5414.84 | 1930 | 5416.62 | 1930 |
| 5428.19 | 1930.24 | 5439 | 1930.4 | 5446.45 | 1930.49 | 5454.26 | 1930.63 | 5456.75 | 1930.63 |
| 5461.79 | 1930.71 | 5469.43 | 1930.79 | 5475.8 | 1931 | 5482.23 | 1930.99 | 5491.89 | 1930.99 |
| 5492.93 | 1931 | 5529.94 | 1931 | 5533.98 | 1930.88 | 5550.65 | 1930.93 | 5552.74 | 1930.94 |
| 5556.23 | 1930.92 | 5562.19 | 1930.91 | 5570.17 | 1930.93 | 5577.85 | 1930.96 | 5583.39 | 1930.97 |
| 5590.03 | 1930.92 | 5590.84 | 1931 | 5609.26 | 1932 | 5640.22 | 1932 | 5647.69 | 1932.09 |
| 5670.1 | 1932.32 | 5670.35 | 1932.32 | 5693.77 | 1932.01 | 5755.96 | 1932.01 | 5797.3 | 1932 |
| 5799.83 | 1931.92 | 5829.25 | 1931.02 | 5829.83 | 1931.01 | 5835.73 | 1931.01 | 5841.15 | 1931 |
| 5857.09 | 1930.48 | 5867.58 | 1930.13 | 5872.23 | 1930.02 | 5877.89 | 1930.02 | 5879.16 | 1930.05 |
| 5909.44 | 1931 | 6013.71 | 1931 | 6028.33 | 1931.67 | 6034.51 | 1932 | 6048.2 | 1932.91 |
| 6049.65 | 1933 | 6062.48 | 1933.85 | 6064.52 | 1934 | 6065.84 | 1934.03 | 6085.1 | 1935 |
| 6086.15 | 1935.53 | 6087.64 | 1936 | 6091.33 | 1937.63 | 6092.21 | 1938 | 6094 | 1938.84 |
| 6096.71 | 1940 | 6097.32 | 1940.29 | 6099.02 | 1941 | 6105.14 | 1943.5 | 6108.69 | 1945.02 |
| 6110.91 | 1946 | 6112.13 | 1946.03 | 6112.83 | 1946 | 6119.25 | 1944.33 | 6120.74 | 1944.01 |
| 6122.46 | 1943.88 | 6123.16 | 1943.89 | 6125.52 | 1944.05 | 6126.96 | 1944.08 | 6128.36 | 1943.97 |
| 6132 | 1943.56 | 6133.94 | 1943.46 | 6136.19 | 1943.52 | 6140.3 | 1944.01 | 6142.9 | 1945 |
| 6144.95 | 1945.61 | 6146.83 | 1946 | 6156.45 | 1946.57 | 6157.51 | 1946.67 | 6159.77 | 1947 |
| 6168.52 | 1948 | 6173.08 | 1948.51 | 6177.85 | 1949 | 6181.64 | 1949.59 | 6184.05 | 1950 |
| 6186.34 | 1950.02 | 6190.31 | 1950.14 | 6194.87 | 1950.25 | 6196.57 | 1950.34 | 6197.06 | 1950.33 |
| 6203.67 | 1950.63 | 6206.5 | 1950.71 | 6207.39 | 1950.71 | 6212.3 | 1950.64 | 6220.9 | 1950.5 |
| 6221.92 | 1950.49 | 6234.71 | 1950.2 | 6242.18 | 1950 | 6258.53 | 1949.51 | 6262.36 | 1949.38 |
| 6269.19 | 1949.13 | 6272.28 | 1949 | 6281.12 | 1948.75 | 6307.32 | 1948 | 6379.74 | 1948 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 6379.74 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 6379.74 | 152.82 | 152.82 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1933.46 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.11 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1933.35 | Reach Len. (ft) | 152.82 | 152.82 | 152.82 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8455.44 | | |
| E.G. Slope (ft/ft) | 0.002207 | Area (sq ft) | | 8455.44 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 4519.20 | Top Width (ft) | | 4519.20 | | |
| Vel Total (ft/s) | 2.65 | Avg. Vel. (ft/s) | | 2.65 | | |
| Max Chl Dpth (ft) | 4.36 | Hydr. Depth (ft) | | 1.87 | | |
| Conv. Total (cfs) | 476854.4 | Conv. (cfs) | | 476854.4 | | |
| Length Wtd. (ft) | 152.82 | Wetted Per. (ft) | | 4520.27 | | |
| Min Ch El (ft) | 1928.99 | Shear (lb/sq ft) | | 0.26 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6379.74 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.40 | Cum Volume (acre-ft) | | 2122.09 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 1014.00 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -7809.4

INPUT
Description:
Station Elevation Data num= 420

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1939.36 | 1327.94 | 1932.39 | 1333.85 | 1932.29 | 1336.98 | 1932.26 | 1350.57 | 1932 |
| 1365.66 | 1931.33 | 1370.64 | 1931.19 | 1372.81 | 1931.21 | 1379.95 | 1931.38 | 1382.12 | 1931.44 |
| 1402.08 | 1931.39 | 1425.47 | 1931.34 | 1432.34 | 1931.26 | 1442.25 | 1931.16 | 1447 | 1931.13 |
| 1454.21 | 1931.1 | 1459.75 | 1931.1 | 1461.62 | 1931.12 | 1474.55 | 1931.11 | 1474.69 | 1931.12 |
| 1487.19 | 1931.11 | 1487.3 | 1931.12 | 1497.33 | 1931.11 | 1502.61 | 1931.13 | 1528.95 | 1931.01 |
| 1529.88 | 1931 | 1588.87 | 1931 | 1591.08 | 1931.01 | 1618.1 | 1931.38 | 1664.81 | 1932 |
| 1665.4 | 1932 | 1707.72 | 1932.44 | 1713.1 | 1932.48 | 1725.76 | 1932.59 | 1768.03 | 1932.9 |
| 1781.04 | 1933 | 1843.03 | 1933 | 1858.38 | 1932.44 | 1860.35 | 1932.36 | 1870.83 | 1932 |
| 1886.61 | 1931.78 | 1889.77 | 1931.73 | 1906.12 | 1931.54 | 1941.46 | 1931 | 1943.07 | 1931.01 |
| 1985.61 | 1931.55 | 1997.8 | 1931.66 | 2004.95 | 1931.71 | 2023.62 | 1931.85 | 2041.59 | 1932 |
| 2042.01 | 1932 | 2076.48 | 1932.51 | 2105.34 | 1932.99 | 2120.73 | 1932.99 | 2130.59 | 1932.98 |
| 2151.13 | 1932.98 | 2176.46 | 1932.99 | 2176.56 | 1933 | 2185.64 | 1933 | 2204.89 | 1932.76 |
| 2268.49 | 1932 | 2268.62 | 1932 | 2294.54 | 1931.51 | 2298.25 | 1931.41 | 2315.1 | 1931 |
| 2444.14 | 1931 | 2457.93 | 1930.99 | 2463.76 | 1931 | 2470.18 | 1930.98 | 2476.53 | 1930.99 |
| 2477 | 1931 | 2488.53 | 1931 | 2505.2 | 1930.99 | 2522.69 | 1930.99 | 2524.82 | 1931 |
| 2606.55 | 1931 | 2610.87 | 1930.99 | 2639.1 | 1930.99 | 2649.78 | 1931 | 2669.19 | 1931 |
| 2669.26 | 1930.99 | 2676.1 | 1930.99 | 2678.08 | 1931 | 2743.69 | 1931 | 2749.48 | 1931.03 |
| 2761.09 | 1931.27 | 2763.92 | 1931.34 | 2765.2 | 1931.35 | 2777.12 | 1931.72 | 2783.59 | 1931.95 |
| 2789.64 | 1932 | 2805.12 | 1932.93 | 2806.84 | 1933 | 2831.08 | 1933 | 2844.23 | 1932.79 |
| 2849.38 | 1932.72 | 2854.54 | 1932.63 | 2858.69 | 1932.58 | 2870.46 | 1932.42 | 2879.38 | 1932.27 |
| 2885.56 | 1932.18 | 2890.92 | 1932 | 2900.3 | 1932 | 2903.38 | 1931.94 | 2907.02 | 1931.93 |
| 2911 | 1931.81 | 2914.02 | 1931.81 | 2921.54 | 1931.63 | 2932.75 | 1931.65 | 2942.41 | 1931.84 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2950.23 | 1932 | 3024.6 | 1932 | 3026.15 | 1932.01 | 3029.32 | 1932.11 | 3035.58 | 1932 |
| 3040.09 | 1931.99 | 3046.76 | 1931.99 | 3047.95 | 1932 | 3050.81 | 1932.55 | 3053.45 | 1933 |
| 3058.65 | 1933.92 | 3059.34 | 1934.06 | 3064.75 | 1935 | 3081.46 | 1935 | 3084.38 | 1934.73 |
| 3092.53 | 1934 | 3096.7 | 1933.61 | 3103.55 | 1933 | 3115.36 | 1932.14 | 3116.82 | 1932 |
| 3124.86 | 1931.87 | 3133.21 | 1931.72 | 3178.15 | 1931.52 | 3184.63 | 1931.45 | 3190.96 | 1931.64 |
| 3199.04 | 1931.97 | 3204.02 | 1932.46 | 3213.9 | 1933.4 | 3220.47 | 1934 | 3234.94 | 1934 |
| 3236.79 | 1933.99 | 3241.8 | 1933.68 | 3248.05 | 1933.37 | 3253.82 | 1933 | 3259.83 | 1932.52 |
| 3265.86 | 1932 | 3269.76 | 1931.78 | 3275.93 | 1931.53 | 3286.3 | 1931.04 | 3290.17 | 1931 |
| 3334.09 | 1931 | 3339.96 | 1931.3 | 3346.97 | 1931.52 | 3351.17 | 1931.58 | 3352.5 | 1931.57 |
| 3360.97 | 1931.33 | 3366.14 | 1931.22 | 3370.99 | 1931 | 3431.85 | 1931 | 3440.05 | 1930.99 |
| 3448.36 | 1930.99 | 3455.43 | 1931 | 3474.74 | 1931 | 3478.29 | 1931.12 | 3493.08 | 1931.56 |
| 3497.98 | 1931.71 | 3505.63 | 1932 | 3520.07 | 1932.87 | 3522.28 | 1932.96 | 3524.43 | 1932.95 |
| 3530.63 | 1932.82 | 3533.69 | 1932.73 | 3538.45 | 1932.51 | 3547.42 | 1932 | 3552.5 | 1932 |
| 3576.84 | 1931.7 | 3578.35 | 1931.69 | 3591.91 | 1931.64 | 3606.52 | 1931.74 | 3618.27 | 1931.87 |
| 3624.44 | 1931.92 | 3626.91 | 1931.92 | 3633.79 | 1931.96 | 3641.53 | 1931.93 | 3644.69 | 1931.85 |
| 3680.82 | 1931 | 3691.38 | 1931 | 3692.74 | 1931.04 | 3710.44 | 1931.24 | 3715.5 | 1931.31 |
| 3724.51 | 1931.46 | 3750.93 | 1932 | 3762.86 | 1932 | 3769.26 | 1932.05 | 3875.18 | 1933 |
| 3893.53 | 1933 | 3900.8 | 1933.01 | 3910.31 | 1933.42 | 3912.71 | 1933.49 | 3920.71 | 1933.36 |
| 3921.91 | 1933.36 | 3929.32 | 1933.23 | 3933.16 | 1933.27 | 3935.18 | 1933.25 | 3940.49 | 1933.28 |
| 3944.47 | 1933.25 | 3954.08 | 1933.03 | 3954.56 | 1933 | 3960.1 | 1933 | 3965.67 | 1933.14 |
| 3974.54 | 1933.41 | 3974.88 | 1933.41 | 3990.09 | 1933.99 | 3995.26 | 1933.82 | 4010.96 | 1933.27 |
| 4017.76 | 1933 | 4070.16 | 1933 | 4074.62 | 1933.36 | 4077.68 | 1933.62 | 4081.84 | 1934 |
| 4086.43 | 1934.04 | 4090.67 | 1934 | 4091.24 | 1933.96 | 4102.21 | 1933 | 4116.08 | 1933 |
| 4121.03 | 1933.89 | 4122.16 | 1934.04 | 4125.82 | 1935 | 4129.31 | 1936 | 4133.61 | 1937 |
| 4137.3 | 1937.72 | 4137.94 | 1937.78 | 4144.86 | 1938.3 | 4145.92 | 1938.41 | 4149.66 | 1939 |
| 4156.22 | 1940.49 | 4158.82 | 1941 | 4163.83 | 1941 | 4168.36 | 1939 | 4172.6 | 1937 |
| 4178.78 | 1934 | 4183.01 | 1931.88 | 4185.05 | 1931 | 4187.59 | 1930.02 | 4187.72 | 1930 |
| 4192.36 | 1930 | 4210.19 | 1930.99 | 4212.39 | 1931.08 | 4233.57 | 1931.98 | 4248.48 | 1932 |
| 4263.65 | 1932.41 | 4274.65 | 1932.9 | 4279.07 | 1933 | 4284.23 | 1933.41 | 4291.18 | 1933.66 |
| 4291.98 | 1933.71 | 4298.55 | 1934 | 4343.09 | 1934 | 4346.81 | 1933.6 | 4350.19 | 1933.22 |
| 4352.4 | 1933 | 4355.18 | 1932.67 | 4360.47 | 1932 | 4366.62 | 1931.63 | 4378.32 | 1931 |
| 4393.11 | 1931 | 4422.58 | 1930.02 | 4423.29 | 1930 | 4447.56 | 1930 | 4459.06 | 1931 |
| 4462.15 | 1931.03 | 4470.95 | 1931.14 | 4483.17 | 1931.11 | 4490.27 | 1931.13 | 4493.71 | 1931.11 |
| 4497.33 | 1931.05 | 4503.13 | 1931.04 | 4507.5 | 1931 | 4511.3 | 1930.86 | 4540.59 | 1930 |
| 4549.61 | 1929.96 | 4554.38 | 1929.98 | 4564.6 | 1929.99 | 4571.93 | 1930.01 | 4576.42 | 1929.98 |
| 4638.24 | 1929.01 | 4647.59 | 1929 | 4787.06 | 1929 | 4798.81 | 1929.01 | 4804.9 | 1929.05 |
| 4808.07 | 1929.11 | 4815.53 | 1929.21 | 4817.31 | 1929.25 | 4831.55 | 1929.5 | 4840.27 | 1929.66 |
| 4857.91 | 1930 | 4980.99 | 1930 | 4985.02 | 1929.85 | 5008.33 | 1929.01 | 5008.74 | 1929 |
| 5046.71 | 1929 | 5067.31 | 1929.36 | 5076.32 | 1929.51 | 5084.12 | 1929.63 | 5102.14 | 1929.95 |
| 5104.71 | 1930 | 5112.05 | 1930.31 | 5123.19 | 1930.8 | 5127.63 | 1930.97 | 5128.76 | 1930.99 |
| 5135.27 | 1930.98 | 5146.29 | 1931 | 5189.84 | 1931 | 5191.73 | 1930.95 | 5210.12 | 1930.93 |
| 5212.87 | 1931 | 5405.23 | 1931 | 5413.62 | 1930.12 | 5423.82 | 1929 | 5438.48 | 1929 |
| 5442.5 | 1929.47 | 5447.89 | 1930 | 5456.94 | 1930.01 | 5466.23 | 1930 | 5480.9 | 1930 |
| 5487.61 | 1930.03 | 5507.68 | 1930.11 | 5534.49 | 1930.04 | 5535.84 | 1930 | 5545.19 | 1929.97 |
| 5552.59 | 1929.98 | 5557.07 | 1930 | 5573.51 | 1931 | 5576.07 | 1931.25 | 5583.11 | 1932 |
| 5594.58 | 1932.98 | 5594.88 | 1933 | 5621.57 | 1933 | 5634.5 | 1932.46 | 5639.28 | 1932.3 |
| 5640.8 | 1932.23 | 5648.8 | 1932 | 5669.18 | 1932 | 5730.57 | 1931.63 | 5760.13 | 1931.45 |
| 5766.65 | 1931.45 | 5773.04 | 1931.43 | 5792.13 | 1931.19 | 5806.88 | 1931 | 5814.89 | 1931 |
| 5828.61 | 1930.47 | 5841.43 | 1930.23 | 5852.18 | 1930 | 5982.34 | 1930 | 5999.15 | 1930.66 |
| 6008.23 | 1931 | 6025.13 | 1932 | 6040.19 | 1933 | 6043.2 | 1933.24 | 6048.9 | 1933.63 |
| 6053.88 | 1934 | 6059.1 | 1934.68 | 6061.98 | 1935 | 6066.05 | 1935.54 | 6067 | 1935.7 |
| 6068.02 | 1935.81 | 6069.02 | 1935.99 | 6072.05 | 1936.31 | 6072.94 | 1936.46 | 6075.49 | 1936.74 |
| 6078.26 | 1937.02 | 6080.04 | 1937.3 | 6080.98 | 1937.61 | 6082.2 | 1938.19 | 6084.88 | 1939 |
| 6088.47 | 1940 | 6094.6 | 1941.68 | 6099.82 | 1943.13 | 6102.86 | 1944 | 6106.95 | 1945 |
| 6121.5 | 1946 | 6125.85 | 1946.38 | 6131.51 | 1946.91 | 6132.6 | 1947 | 6140.34 | 1947.11 |
| 6143.63 | 1947.24 | 6152.07 | 1947.79 | 6155.5 | 1948 | 6158.93 | 1948 | 6160.9 | 1947.45 |
| 6162.79 | 1947 | 6165.28 | 1946.46 | 6167.14 | 1946 | 6168.86 | 1945.53 | 6169.23 | 1945.49 |
| 6171.51 | 1945.89 | 6172.73 | 1946 | 6177.53 | 1947 | 6181.2 | 1947.43 | 6186.22 | 1948 |
| 6189.69 | 1948.27 | 6199.49 | 1949 | 6211.08 | 1949.01 | 6211.43 | 1949.02 | 6220 | 1949.03 |
| 6229.86 | 1949.01 | 6238.78 | 1949 | 6273.63 | 1949 | 6283.1 | 1949.28 | 6287.87 | 1949.31 |
| 6292.39 | 1949.31 | 6296.72 | 1949.37 | 6303.79 | 1949.32 | 6305.89 | 1949.35 | 6317.62 | 1949.44 |
| 6328.69 | 1949.27 | 6331.84 | 1949.19 | 6333.61 | 1949.17 | 6338.21 | 1949.17 | 6351.28 | 1949.38 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 6351.28 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 6351.28 | 102.22 | 102.22 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1933.06 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.15 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1932.91 | Reach Len. (ft) | 102.22 | 102.22 | 102.22 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7291.83 | | |
| E.G. Slope (ft/ft) | 0.003157 | Area (sq ft) | | 7291.83 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 4082.49 | Top Width (ft) | | 4082.49 | | |
| Vel Total (ft/s) | 3.07 | Avg. Vel. (ft/s) | | 3.07 | | |
| Max Chl Dpth (ft) | 3.91 | Hydr. Depth (ft) | | 1.79 | | |
| Conv. Total (cfs) | 398643.2 | Conv. (cfs) | | 398643.2 | | |
| Length Wtd. (ft) | 102.22 | Wetted Per. (ft) | | 4084.29 | | |
| Min Ch El (ft) | 1929.00 | Shear (lb/sq ft) | | 0.35 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6351.28 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.26 | Cum Volume (acre-ft) | | 2094.47 | | |
| C & E Loss (ft) | 0.01 | Cum SA (acres) | | 998.91 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -7911.62

INPUT
Description:
Station Elevation Data num= 415

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1938.98 | 1293.68 | 1931 | 1299.75 | 1931 | 1321.9 | 1930.59 | 1353.42 | 1930.03 |
| 1354.85 | 1930 | 1373.93 | 1930 | 1380.2 | 1930.11 | 1427.85 | 1930.99 | 1428.51 | 1931 |
| 1463.78 | 1931 | 1465.81 | 1930.99 | 1472.85 | 1930.99 | 1499.96 | 1930.84 | 1510.5 | 1930.99 |
| 1528.59 | 1930.99 | 1530.91 | 1931 | 1541.03 | 1931 | 1546.84 | 1930.99 | 1556.8 | 1930.99 |
| 1589.14 | 1931 | 1598.47 | 1931.09 | 1636.97 | 1931.47 | 1653.87 | 1931.62 | 1668.44 | 1931.79 |
| 1687.06 | 1932 | 1687.77 | 1932 | 1707.72 | 1932.75 | 1711.35 | 1932.86 | 1719.13 | 1933 |
| 1727.25 | 1933 | 1820.59 | 1932.21 | 1827.39 | 1932 | 1831.53 | 1932 | 1834.56 | 1931.89 |
| 1838.66 | 1931.8 | 1861.23 | 1931.15 | 1867.04 | 1931 | 1972.9 | 1931 | 2013.51 | 1931.4 |
| 2081.83 | 1931.64 | 2113.75 | 1931.75 | 2130.51 | 1931.75 | 2137.71 | 1931.76 | 2148.52 | 1931.76 |
| 2159.73 | 1931.77 | 2176.11 | 1931.72 | 2207.68 | 1931.57 | 2219.27 | 1931.47 | 2236.43 | 1931.31 |
| 2267.68 | 1931 | 2271.25 | 1930.96 | 2273.72 | 1930.97 | 2276.54 | 1930.95 | 2285.96 | 1930.96 |
| 2287.87 | 1930.97 | 2290.07 | 1930.8 | 2298.54 | 1930.82 | 2300.03 | 1930.73 | 2304.17 | 1930 |
| 2316.09 | 1930 | 2335.62 | 1930.75 | 2340.45 | 1930.9 | 2345.62 | 1931 | 2352.16 | 1931 |
| 2360.12 | 1930.98 | 2371.41 | 1930.99 | 2374.72 | 1931 | 2432 | 1931 | 2465.35 | 1930 |
| 2527.87 | 1930 | 2538.96 | 1930.51 | 2549.48 | 1931 | 2557.43 | 1931 | 2560.64 | 1930.79 |
| 2574.91 | 1930.26 | 2577.78 | 1930.16 | 2584.86 | 1930.16 | 2595.25 | 1930 | 2604.25 | 1930 |
| 2635.17 | 1930.01 | 2673.18 | 1930.19 | 2675.31 | 1930.18 | 2680.2 | 1930.22 | 2689.89 | 1930.39 |
| 2696.69 | 1930.46 | 2697.86 | 1930.49 | 2705.61 | 1930.55 | 2723.38 | 1930.63 | 2737.65 | 1930.69 |
| 2739.89 | 1930.67 | 2749.09 | 1930.79 | 2756.75 | 1931 | 2811.35 | 1931 | 2815.6 | 1930.81 |
| 2828.39 | 1930 | 2835.86 | 1930 | 2842.78 | 1930.22 | 2848.09 | 1930.36 | 2855.19 | 1930.57 |
| 2868.58 | 1931 | 2960.53 | 1931 | 2966.15 | 1931.13 | 2978.96 | 1931.38 | 3001.64 | 1931.96 |
| 3021.44 | 1931.95 | 3039.32 | 1931.92 | 3042.31 | 1931.93 | 3058.26 | 1931.96 | 3079.66 | 1931.99 |
| 3081.69 | 1932 | 3086.22 | 1932.26 | 3101.87 | 1933 | 3150.12 | 1933 | 3158.47 | 1932.7 |
| 3178.68 | 1932 | 3186.63 | 1931.69 | 3187.85 | 1931.68 | 3194.21 | 1931.45 | 3198.73 | 1931.43 |
| 3210.04 | 1931.34 | 3217.61 | 1931.29 | 3227.42 | 1931.24 | 3236.81 | 1931.2 | 3248.47 | 1931.17 |
| 3263.49 | 1931 | 3370.12 | 1931 | 3397.03 | 1930.19 | 3403.94 | 1930 | 3445.41 | 1930 |
| 3452.74 | 1930.33 | 3462.24 | 1930.67 | 3468.21 | 1931 | 3560.75 | 1931 | 3568.88 | 1931.01 |
| 3575.57 | 1931.01 | 3579.41 | 1931 | 3584.78 | 1931.01 | 3653.36 | 1931.01 | 3660.63 | 1931 |
| 3682.87 | 1931.01 | 3690.79 | 1931.43 | 3692.56 | 1931.43 | 3694.78 | 1931.5 | 3700.9 | 1932 |
| 3725.39 | 1932 | 3727.89 | 1931.94 | 3758.8 | 1931 | 3774.78 | 1931 | 3781.56 | 1931.01 |
| 3789.19 | 1931 | 3800.44 | 1931 | 3802.84 | 1931.04 | 3808.08 | 1931.16 | 3817.63 | 1931.53 |
| 3829.28 | 1932 | 3832.02 | 1932.23 | 3836.53 | 1932.64 | 3840.92 | 1933 | 3911.54 | 1933 |
| 3922.81 | 1933.08 | 3929.38 | 1933.1 | 3932.42 | 1933.12 | 3945.02 | 1933 | 3947.19 | 1933 |
| 3978.73 | 1934 | 3979.15 | 1934 | 3992.47 | 1934.67 | 3999.38 | 1935 | 4011.84 | 1935.7 |
| 4017.26 | 1936.03 | 4025.89 | 1936.24 | 4031.67 | 1936.35 | 4041.8 | 1936.21 | 4049.31 | 1936 |
| 4057.18 | 1935.35 | 4060.85 | 1935 | 4062.64 | 1934.78 | 4069.46 | 1934 | 4074.74 | 1933.59 |
| 4076.26 | 1933.46 | 4082.28 | 1933 | 4115.65 | 1933 | 4127.23 | 1933.75 | 4134.24 | 1934.25 |
| 4145.3 | 1935 | 4150.88 | 1935 | 4160.21 | 1934 | 4163.3 | 1933.65 | 4169.62 | 1933 |
| 4176.47 | 1932.31 | 4179.86 | 1932 | 4181.74 | 1931.87 | 4199.03 | 1931 | 4200.05 | 1931 |
| 4214.51 | 1931.8 | 4217.94 | 1932 | 4219.05 | 1932.01 | 4238.36 | 1932.65 | 4243.97 | 1932.84 |
| 4250.36 | 1933 | 4254.36 | 1933 | 4273.57 | 1932.98 | 4279.26 | 1932.98 | 4296.29 | 1933 |
| 4312.55 | 1933 | 4316.65 | 1932.85 | 4319.64 | 1933 | 4322.7 | 1933.07 | 4324.28 | 1933.07 |
| 4328.77 | 1933 | 4335.44 | 1932.18 | 4337.68 | 1931.92 | 4345.89 | 1931 | 4349.9 | 1930.57 |
| 4350.35 | 1930.56 | 4354.78 | 1930.68 | 4356.6 | 1930.83 | 4364.29 | 1931 | 4366.74 | 1931.66 |
| 4368.36 | 1932 | 4371.45 | 1932.58 | 4375.06 | 1933.19 | 4377.45 | 1933.35 | 4379.18 | 1933.42 |
| 4381.48 | 1933.28 | 4385.29 | 1933 | 4391.24 | 1932.5 | 4391.99 | 1932.42 | 4397.23 | 1932 |
| 4401.96 | 1931.68 | 4404.67 | 1931.48 | 4410.46 | 1931 | 4415.8 | 1930.62 | 4419.83 | 1930.35 |
| 4424.68 | 1930 | 4446.89 | 1930 | 4447.22 | 1929.99 | 4458.92 | 1929.9 | 4463.52 | 1930 |
| 4469.28 | 1930.01 | 4475.86 | 1930.01 | 4480.33 | 1930.02 | 4484.56 | 1930.01 | 4499.43 | 1930.77 |
| 4502.3 | 1930.91 | 4507.17 | 1930.99 | 4510.99 | 1930.98 | 4512.72 | 1930.93 | 4540.51 | 1930.02 |
| 4543.05 | 1930.01 | 4550.18 | 1930.01 | 4557.39 | 1930 | 4565.21 | 1929.86 | 4610.05 | 1929.01 |
| 4612.48 | 1929 | 4876.96 | 1929 | 4889.18 | 1929.22 | 4920.08 | 1930 | 4955.4 | 1930 |
| 4967.7 | 1929.75 | 4968.36 | 1929.76 | 4975.53 | 1929.76 | 4982.26 | 1929.75 | 4986.11 | 1929.73 |
| 4991.9 | 1929.72 | 4994.31 | 1929.7 | 5015.34 | 1929.57 | 5031.53 | 1929.42 | 5044.39 | 1929.28 |
| 5058.65 | 1929.11 | 5066.5 | 1929.01 | 5068.09 | 1929 | 5110.37 | 1929 | 5110.95 | 1929.01 |
| 5151.61 | 1929.88 | 5157.43 | 1930 | 5163.21 | 1930.22 | 5174.46 | 1930.63 | 5176.25 | 1930.67 |
| 5181.62 | 1930.85 | 5189.36 | 1930.88 | 5191.65 | 1930.82 | 5199.29 | 1930.49 | 5204.27 | 1930.33 |
| 5209.67 | 1930 | 5221.01 | 1929.98 | 5231.3 | 1930 | 5234.92 | 1930 | 5236.43 | 1930.02 |
| 5238.93 | 1930 | 5243.9 | 1929.99 | 5248.32 | 1930 | 5258.08 | 1930.51 | 5272.68 | 1931 |
| 5294.87 | 1931.05 | 5304.67 | 1931.03 | 5307.35 | 1931.01 | 5313.51 | 1931.01 | 5321.85 | 1931.1 |
| 5328.31 | 1931.04 | 5330.58 | 1931 | 5344.34 | 1930.99 | 5348.03 | 1930.98 | 5358.93 | 1930.98 |
| 5361.54 | 1930.97 | 5379.61 | 1930.5 | 5386.88 | 1930.3 | 5395.07 | 1930 | 5396.81 | 1929.98 |
| 5441.39 | 1929 | 5500.1 | 1929 | 5505.28 | 1929.07 | 5506.57 | 1929 | 5517.87 | 1929 |
| 5521.19 | 1929.11 | 5528.47 | 1929.18 | 5557.48 | 1930 | 5559.49 | 1930.07 | 5573.44 | 1930.46 |
| 5588.83 | 1930.68 | 5594.01 | 1930.78 | 5601.36 | 1930.98 | 5601.6 | 1931 | 5658.17 | 1931.65 |
| 5677.48 | 1931.88 | 5684.38 | 1931.94 | 5688.77 | 1931.92 | 5689.88 | 1931.93 | 5694.83 | 1931.87 |
| 5729.18 | 1931.49 | 5753.93 | 1931.19 | 5754.39 | 1931.18 | 5769.14 | 1931 | 5826.54 | 1931 |
| 5832.96 | 1930.93 | 5836.31 | 1930.87 | 5839.05 | 1930.77 | 5845.3 | 1930.61 | 5853.05 | 1930.36 |
| 5857.22 | 1930.21 | 5861.88 | 1930 | 5875.15 | 1929.81 | 5881.19 | 1929.73 | 5906.9 | 1929.61 |
| 5925.71 | 1929.54 | 5938.03 | 1929.76 | 5950.47 | 1930 | 5970.23 | 1930 | 5973.82 | 1930.16 |
| 5993.31 | 1931 | 5995.11 | 1931.07 | 6001.08 | 1931.25 | 6005.79 | 1931.37 | 6014.71 | 1931.56 |
| 6027.01 | 1932.1 | 6030.2 | 1932.21 | 6033.98 | 1932.32 | 6040.83 | 1932.48 | 6049.97 | 1933 |
| 6055.79 | 1933.34 | 6058.33 | 1933.51 | 6064.12 | 1934 | 6067.58 | 1934.05 | 6071.04 | 1934 |
| 6072.63 | 1934 | 6075.73 | 1935 | 6081.78 | 1936.6 | 6088.11 | 1938.23 | 6091.01 | 1939 |
| 6093.98 | 1939.09 | 6096.41 | 1939.4 | 6098.77 | 1939.55 | 6100.87 | 1939.43 | 6101.92 | 1939.41 |

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 6102.57 1939.46 6106.66    1940 6109.15 1940.37 6115.04    1941  6116.5 1941.09
 6122.52    1941 6127.36 1940.83 6128.43 1940.99 6129.78    1941 6129.92 1941.11
 6132.84    1942 6135.62 1942.61 6137.75 1943.18 6140.61 1944.03 6141.96  1944.5
 6144.07    1945 6149.75 1945.52 6153.17 1945.77 6163.16 1946.33 6169.51 1946.47
 6173.73 1946.62 6177.61 1946.68 6180.42 1946.69 6188.42 1946.77 6190.06 1946.74
 6194.18 1946.43 6196.04 1946.26 6198.35 1946.15 6202.65 1946.16 6205.51 1946.15
 6212.48    1946 6220.03 1945.99 6221.05    1946 6225.06 1946.29 6234.33    1947
 6236.81 1947.24  6245.1    1948 6274.95    1949 6276.86    1949 6291.83 1949.39

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .045       0     .04 6291.83    .045

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
             0 6291.83            84.71   84.71   84.71             .1       .3

CROSS SECTION OUTPUT  Profile #PF 1

  E.G. Elev (ft)           1932.79    Element                  Left OB    Channel   Right OB
  Vel Head (ft)               0.10    Wt. n-Val.                          0.040
  W.S. Elev (ft)           1932.68    Reach Len. (ft)           84.71      84.71      84.71
  Crit W.S. (ft)                      Flow Area (sq ft)                  8614.93
  E.G. Slope (ft/ft)      0.002035    Area (sq ft)                       8614.93
  Q Total (cfs)           22400.00    Flow (cfs)                        22400.00
  Top Width (ft)           4456.15    Top Width (ft)                     4456.15
  Vel Total (ft/s)            2.60    Avg. Vel. (ft/s)                      2.60
  Max Chl Dpth (ft)           3.68    Hydr. Depth (ft)                      1.93
  Conv. Total (cfs)       496554.6    Conv. (cfs)                       496554.6
  Length Wtd. (ft)           84.71    Wetted Per. (ft)                   4457.40
  Min Ch El (ft)           1929.00    Shear (lb/sq ft)                      0.25
  Alpha                       1.00    Stream Power (lb/ft s)   6291.83      0.00       0.00
  Frctn Loss (ft)             0.16    Cum Volume (acre-ft)               2075.81
  C & E Loss (ft)             0.00    Cum SA (acres)                      988.89


Warning: Divided flow computed for this cross-section.

CROSS SECTION


RIVER: MOJAVE
REACH: MOJAVE             RS: -7996.33

INPUT
Description:
Station Elevation Data    num=     416
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0 1938.81 1297.11 1930.61 1315.77 1930.37 1318.09 1930.33 1325.61 1930.24
  1330.8  1930.2 1334.99    1930 1400.67    1930  1405.8 1929.96 1411.32    1930
 1421.87 1930.04 1423.49 1930.04 1428.34 1930.11 1446.73 1930.28  1447.7 1930.28
 1466.08 1930.12 1479.04    1930 1491.12    1930 1495.79 1929.98 1502.01 1929.98
 1505.68 1929.99 1521.84 1929.99  1526.3    1930 1546.25 1930.19 1546.73  1930.2
 1567.48 1930.81 1573.19    1931    1609    1931  1645.6 1931.32 1666.99 1931.54
 1710.97 1932.01 1727.95  1932.3 1729.08 1932.31 1737.59 1932.45 1746.43 1932.56
 1748.48 1932.56 1762.06 1932.61 1775.14  1932.6 1778.96 1932.55 1783.96 1932.47
 1785.01 1932.47 1799.43 1932.22 1804.27 1932.13 1809.61    1932 1824.12 1931.71
 1829.67 1931.62  1831.7  1931.6 1853.89 1931.24 1867.39 1931.01 1873.88    1931
 1923.59    1931 1935.51  1930.6 1940.05 1930.72  1944.2 1930.95 1945.87    1931
 1949.27 1931.02 1974.03  1931.2 1984.72 1931.29 2012.92    1931 2013.34 1931.01
 2051.64 1931.14 2122.84 1931.38 2137.36 1931.38 2141.06 1931.39 2153.27 1931.39
  2161.4  1931.4 2203.84 1931.27 2259.04 1931.01 2261.94    1931 2271.07    1931
 2272.77 1930.87 2284.73    1930 2320.92    1930 2335.75 1930.73 2341.39    1931
 2375.97    1931 2379.62 1930.75 2380.78 1930.73 2385.26 1930.45 2390.19 1930.26
 2404.89 1930.21 2419.73 1930.52 2443.82    1931 2446.02    1931 2451.47 1930.52
 2452.14 1930.48 2458.23    1930 2536.32    1930 2550.88 1930.44 2568.45 1930.98
 2572.92    1931 2591.92 1930.26 2592.34 1930.26 2622.32 1930.01  2624.5    1930
 2640.54    1930 2646.02 1930.19 2646.65 1930.15 2648.99 1930.16 2649.75 1930.19
 2654.42 1930.01 2662.37 1930.03 2677.08    1930 2681.92 1930.01 2723.96  1930.6
 2737.86 1930.79 2746.18 1930.77 2755.85 1930.76  2764.7 1930.99 2765.14 1930.99
 2789.05 1930.19 2792.83 1930.11 2796.09 1930.07 2798.44    1930 2803.09    1930
 2814.63  1930.2 2822.77 1930.35 2827.69 1930.41 2855.95 1930.82 2861.45 1930.88
 2871.43 1930.91 2875.47    1931 2938.92    1931 2942.55 1931.13 2952.52 1931.64
 2958.48 1931.92 2968.78 1932.59 2974.91    1933 3017.33    1933  3032.9  1932.4
 3044.37    1932 3051.06 1931.85 3052.01 1931.81 3062.92 1931.53 3074.37    1931
 3083.52    1931 3086.57 1931.14 3091.36 1931.38 3104.62 1931.96  3106.7    1932
 3121.33 1932.74 3125.05 1932.85 3128.55 1932.93 3129.69 1932.94 3133.44 1932.75
 3138.55 1932.45 3147.54    1932 3154.81 1931.77 3162.43 1931.61 3183.56 1931.03
 3186.83    1931 3188.88 1930.94 3193.36 1930.92  3213.5 1930.17 3218.37 1930.01
 3219.56    1930 3240.12    1930 3248.24 1930.39 3265.66    1931 3270.98 1931.01
 3273.21 1931.06  3298.9 1931.59 3311.79 1931.63 3319.15 1931.44  3335.7    1931
 3337.96    1931 3347.82 1930.25 3351.56    1930 3430.04    1930 3432.14 1930.11
 3446.48    1931 3689.76    1931 3709.14 1931.53 3725.36    1932 3753.34    1932
 3777.18 1931.98 3783.32 1931.98 3808.09    1932 3829.39 1932.96 3830.12    1933
 3841.98 1933.01 3852.44    1933 3859.46 1932.98 3863.61 1932.96 3872.82    1933
 3873.69 1933.01 3881.16 1933.25 3891.48 1933.54 3904.38    1934 3913.34 1934.29
 3923.31 1934.56 3928.28 1934.66 3934.43 1934.72 3939.81  1934.7 3940.49 1934.73
 3942.79 1934.73 3950.03 1934.36 3951.61  1934.3 3957.35    1934 3970.39 1933.95
 3986.04 1934.05 4003.77 1934.79 4007.62    1935 4024.79    1935 4044.56    1934
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4058.13 | 1933.1 | 4061.08 | 1933 | 4114.69 | 1933 | 4130.94 | 1932.8 | 4132.89 | 1932.8 |
| 4137.39 | 1932.88 | 4139.12 | 1932.87 | 4140.92 | 1932.9 | 4144.52 | 1932.77 | 4150.64 | 1932.59 |
| 4156.33 | 1932.35 | 4165.43 | 1932.17 | 4167.48 | 1932.14 | 4171.19 | 1932 | 4179.32 | 1931.44 |
| 4186.53 | 1931 | 4190.6 | 1931 | 4193.19 | 1931.11 | 4198.19 | 1931.27 | 4202.72 | 1931.38 |
| 4211.95 | 1931.5 | 4222.79 | 1931.86 | 4224.77 | 1931.94 | 4228.74 | 1932 | 4232.12 | 1932.45 |
| 4234.45 | 1933 | 4238.19 | 1933.74 | 4239.63 | 1934 | 4242.37 | 1934.43 | 4243.87 | 1934.6 |
| 4245.59 | 1934.7 | 4246.99 | 1934.67 | 4251.51 | 1934.37 | 4255.84 | 1934 | 4259.82 | 1933.58 |
| 4265.72 | 1933 | 4307.42 | 1933 | 4310.06 | 1932.98 | 4325.54 | 1932.65 | 4327.23 | 1932.6 |
| 4338.37 | 1932.38 | 4351.98 | 1931.8 | 4360.65 | 1931.55 | 4365.49 | 1931.45 | 4374.17 | 1931.21 |
| 4381.48 | 1931 | 4385.35 | 1931 | 4387.98 | 1931.13 | 4390.5 | 1931 | 4403.15 | 1930.7 |
| 4403.84 | 1930.67 | 4411.38 | 1930.55 | 4420.75 | 1930.26 | 4425.25 | 1930 | 4428.47 | 1930 |
| 4433.87 | 1929.7 | 4447.55 | 1929 | 4474.9 | 1929 | 4476.32 | 1929.03 | 4523.58 | 1929.94 |
| 4525.54 | 1930 | 4526.58 | 1930 | 4545.02 | 1929.6 | 4559.85 | 1929.36 | 4566.8 | 1929.28 |
| 4573.32 | 1929.19 | 4574.96 | 1929.18 | 4583.69 | 1929 | 4590.9 | 1929 | 4608.51 | 1928.84 |
| 4676.68 | 1928.29 | 4692.98 | 1928.17 | 4698.53 | 1928.17 | 4701.58 | 1928.18 | 4711.65 | 1928.19 |
| 4721.58 | 1928.32 | 4768.64 | 1928.99 | 4787.27 | 1928.99 | 4787.44 | 1929 | 4828.27 | 1929 |
| 4873.97 | 1929.94 | 4878.34 | 1930.01 | 4884.37 | 1930.05 | 4891.37 | 1930 | 4897.88 | 1929.44 |
| 4902.65 | 1929 | 4912.81 | 1929 | 4916.17 | 1929.41 | 4921.17 | 1930 | 4923.98 | 1930.32 |
| 4929.74 | 1931 | 4940.47 | 1931 | 4945.96 | 1930.36 | 4948.62 | 1930 | 4956.67 | 1929.1 |
| 4957.9 | 1929 | 5012.18 | 1929 | 5021.42 | 1929.01 | 5030.17 | 1929 | 5034.24 | 1929.01 |
| 5046.81 | 1929.01 | 5053.81 | 1929.02 | 5054.77 | 1929.01 | 5065.98 | 1929.19 | 5076.54 | 1929.53 |
| 5083.72 | 1929.73 | 5091.82 | 1929.99 | 5093.97 | 1929.99 | 5095.49 | 1930.05 | 5098.45 | 1930.23 |
| 5111.24 | 1930.72 | 5115.17 | 1930.76 | 5117.4 | 1930.74 | 5123.64 | 1930.53 | 5126.64 | 1930.46 |
| 5129.19 | 1930.34 | 5132.64 | 1930.22 | 5142.02 | 1930 | 5151.46 | 1930 | 5187.14 | 1929.24 |
| 5199.5 | 1929 | 5214.73 | 1929 | 5220.58 | 1929.11 | 5227.89 | 1929.29 | 5231.81 | 1929.41 |
| 5247.41 | 1929.99 | 5257.54 | 1930 | 5269.78 | 1930 | 5285.15 | 1930.02 | 5287.59 | 1930.01 |
| 5305.57 | 1930 | 5324.26 | 1930 | 5329.03 | 1930.24 | 5330.15 | 1930.31 | 5347.19 | 1931 |
| 5395.01 | 1931 | 5417.56 | 1930.24 | 5425.44 | 1930 | 5435.12 | 1929.52 | 5440.77 | 1929.27 |
| 5446.54 | 1929 | 5483.47 | 1929 | 5488.78 | 1929.15 | 5489.97 | 1929.15 | 5492.73 | 1929.23 |
| 5523.13 | 1929.71 | 5541.08 | 1930 | 5579.63 | 1930 | 5583.27 | 1930.1 | 5609.39 | 1930.96 |
| 5610.49 | 1931 | 5751.55 | 1931 | 5773.5 | 1930.74 | 5781.04 | 1930.66 | 5786.76 | 1930.58 |
| 5797.33 | 1930.41 | 5818.47 | 1930 | 5838.16 | 1929.96 | 5847.13 | 1929.95 | 5856.75 | 1929.95 |
| 5899.71 | 1929.58 | 5903.44 | 1929.58 | 5914.46 | 1929.43 | 5930.57 | 1929.1 | 5935.13 | 1929 |
| 5971.23 | 1929 | 5976.89 | 1929.2 | 5992.71 | 1930 | 6004.15 | 1931 | 6014.03 | 1932.04 |
| 6020.77 | 1933 | 6026.06 | 1933.79 | 6027.59 | 1934 | 6033.3 | 1934.35 | 6043.55 | 1935.33 |
| 6043.59 | 1936 | 6045.27 | 1936.71 | 6046.24 | 1937 | 6047.38 | 1937.21 | 6059.26 | 1939.69 |
| 6060.7 | 1940 | 6065.58 | 1941 | 6068.67 | 1941.23 | 6074.07 | 1941.53 | 6081.92 | 1942 |
| 6087.6 | 1943 | 6092.97 | 1944.03 | 6100.41 | 1945 | 6102.95 | 1945.21 | 6110.76 | 1946 |
| 6117.65 | 1946.01 | 6137.63 | 1946.01 | 6145.85 | 1946.18 | 6149.73 | 1946.15 | 6150.28 | 1946.16 |
| 6163.11 | 1946.01 | 6164.99 | 1945.98 | 6168.83 | 1945.97 | 6171.64 | 1945.94 | 6175.67 | 1946 |
| 6182.73 | 1946.33 | 6185.74 | 1946.44 | 6194.44 | 1946.61 | 6213.4 | 1947 | 6214.35 | 1947.05 |
| 6224.48 | 1948 | 6225.64 | 1948.04 | 6228.65 | 1948.24 | 6232.4 | 1948.44 | 6237.51 | 1948.86 |
| 6239.16 | 1948.87 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 6239.16 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 6239.16 | 119.56 | 119.56 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1932.62 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.10 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1932.52 | Reach Len. (ft) | 119.56 | 119.56 | 119.56 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8900.71 | | |
| E.G. Slope (ft/ft) | 0.001834 | Area (sq ft) | | 8900.71 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 4472.60 | Top Width (ft) | | 4472.60 | | |
| Vel Total (ft/s) | 2.52 | Avg. Vel. (ft/s) | | 2.52 | | |
| Max Chl Dpth (ft) | 4.35 | Hydr. Depth (ft) | | 1.99 | | |
| Conv. Total (cfs) | 523015.9 | Conv. (cfs) | | 523015.9 | | |
| Length Wtd. (ft) | 119.56 | Wetted Per. (ft) | | 4473.96 | | |
| Min Ch El (ft) | 1928.17 | Shear (lb/sq ft) | | 0.23 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6239.16 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.22 | Cum Volume (acre-ft) | | 2058.78 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 980.21 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -8115.89

INPUT
Description:
Station Elevation Data num= 405

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1938.43 | 1289.44 | 1930 | 1555.63 | 1930 | 1569.99 | 1930.33 | 1575.67 | 1930.44 |
| 1584.46 | 1930.62 | 1602.47 | 1931 | 1610.45 | 1931 | 1613.16 | 1931.01 | 1644.57 | 1931.21 |
| 1686.53 | 1931.48 | 1689.96 | 1931.49 | 1692.32 | 1931.51 | 1733.55 | 1931.52 | 1773.97 | 1931.52 |
| 1776.2 | 1931.5 | 1790.67 | 1931.35 | 1819.4 | 1931 | 1825.77 | 1930.99 | 1837.03 | 1931.01 |
| 1850.08 | 1931.01 | 1853.19 | 1931 | 1861.03 | 1930.73 | 1870.81 | 1930.43 | 1874.69 | 1930.39 |
| 1879.27 | 1930.38 | 1881.6 | 1930.42 | 1900.54 | 1930.53 | 1903.55 | 1930.59 | 1909.09 | 1930.68 |

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 1922.1 1930.97 1923.74    1931 1996.25    1931 2045.07 1931.55 2048.65  1931.6
2051.22 1931.65 2063.98  1931.8 2065.32 1931.81 2072.72  1931.7 2074.16 1931.63
2076.67 1931.62 2077.56 1931.65 2106.91 1931.01 2107.29    1931 2261.87    1931
2264.62  1930.9 2282.16    1930 2288.15    1930 2297.89 1929.99 2308.69    1930
2328.23    1930 2343.74 1930.41 2350.41 1930.58 2358.43 1930.66 2363.58 1930.75
2365.88 1930.77 2375.55 1930.83 2381.14 1930.87 2383.43 1930.86 2390.89 1930.78
2397.16 1930.67 2398.64 1930.66 2407.07 1930.55 2408.08 1930.53 2431.48 1930.21
2432.48  1930.2 2445.09 1930.01 2447.65    1930 2583.26    1930 2621.99 1930.73
2629.09 1930.86 2638.98    1931 2647.82    1931  2649.3 1930.98 2650.17    1931
2659.04 1930.97 2660.47 1930.98 2666.77 1930.96 2670.29 1930.96 2678.61 1930.63
2681.28 1930.58 2707.32    1930 2708.38    1930 2732.12 1930.55 2746.03 1930.83
2753.82    1931 2757.46 1930.99 2759.17 1930.97 2764.19 1930.94 2777.67 1930.93
2778.36 1930.91 2781.96 1930.94 2785.91    1931 2789.98    1931 2801.35 1930.57
2806.43  1930.4 2808.59 1930.41 2810.29 1930.39 2813.12 1930.39 2828.93 1930.37
2830.63 1930.32 2844.39    1930 2866.44    1930 2871.54 1930.01 2877.23 1930.01
2883.13 1930.13 2887.79 1930.19 2892.83 1930.27 2911.75    1931 2950.86    1931
2975.49 1931.63 2982.61  1931.8 2995.17 1931.86 3007.66 1931.98 3011.43    1932
 3023.1 1932.42 3031.95 1932.61 3035.41 1932.73 3039.35 1932.83 3045.41 1932.96
3050.28    1933 3063.02    1933 3065.23 1932.91 3086.76    1932 3106.93    1931
3112.31    1931 3124.59 1931.72 3129.45    1932 3136.02 1932.02 3138.48 1932.02
3145.21    1932  3150.5 1931.88 3156.54 1931.73 3161.07 1931.65 3162.55 1931.67
 3173.9 1931.31 3182.87 1931.01 3189.74 1931.01 3200.84    1931  3203.4 1930.91
 3222.9  1930.3 3230.08    1930 3241.49    1930 3251.19 1930.53 3251.95 1930.58
3256.93 1930.85 3260.13    1931 3308.29    1931 3314.95 1931.26 3333.16 1931.83
3335.99 1931.88 3340.43 1931.73 3343.64 1931.61 3353.67    1931 3364.86 1930.54
3370.52 1930.35 3382.67    1930 3421.05    1930 3441.99 1929.99 3448.34 1929.99
3453.45    1930 3487.28    1930 3495.73  1930.2 3505.53 1930.37 3510.87 1930.48
3534.03    1931 3614.88    1931 3617.61 1930.99 3628.52 1930.98 3642.62 1930.98
 3651.3    1931 3653.43    1931 3654.16 1931.03 3662.35 1931.11 3718.78 1931.36
3753.21 1931.46 3756.44 1931.42 3762.33 1931.46 3768.88 1931.37 3775.85 1931.25
3778.79 1931.19 3785.64    1931 3797.87    1931 3802.19 1931.09 3812.89 1931.21
3829.21 1931.78 3834.46    1932 3835.07    1932 3839.82  1932.2 3855.56 1932.93
3858.53 1932.94 3863.76 1932.94 3868.52 1932.98 3873.45    1933 3877.23 1933.28
3878.27 1933.37 3886.72    1934 3905.95    1934 3919.99 1933.97 3925.77    1934
3928.46 1934.07 3934.85  1934.1 3950.25 1934.75  3950.7 1934.76 3953.98    1935
3972.57    1935 3978.46 1934.63 3979.99 1934.52 3985.61    1934 3987.84 1933.76
3988.14 1933.75 3991.83 1933.34 4000.46 1933.34 4004.69 1933.28 4007.82 1933.25
4008.98 1933.26 4015.06 1933.27 4022.67 1933.37 4025.59 1933.43 4028.56 1933.46
4039.99 1933.99 4043.81 1933.98 4048.91 1933.98 4053.28 1933.99 4067.52 1933.99
 4074.3    1934 4083.08 1933.06 4083.91 1933.04  4085.1 1933.07 4092.12 1933.38
4093.43 1933.38 4095.04 1933.42 4097.56 1933.33 4100.61 1933.14 4102.46    1933
4104.81 1932.78 4107.22 1932.53 4113.87    1932 4115.22 1931.98 4118.63 1931.89
4120.73 1931.88 4137.54 1931.61 4147.34 1931.47 4162.41 1931.35 4164.72 1931.34
4177.46 1931.08  4180.7 1931.01 4190.78    1931 4202.01    1931 4208.18 1931.54
4223.81    1933 4234.62 1933.71 4235.43 1933.77 4238.53 1933.92 4247.58  1934.4
4259.33    1935  4284.6    1935 4287.82 1934.76  4293.3 1934.37 4298.08    1934
4301.51 1933.79 4317.62    1933 4367.29    1933 4376.16 1932.81 4381.96 1932.47
4387.59 1932.29 4389.45  1932.3 4392.07 1932.28 4396.09 1932.21 4401.12  1932.1
4402.64 1932.05 4405.53    1932 4413.46  1931.8  4426.4 1931.33 4434.22    1931
 4440.4  1930.6 4448.71    1930  4458.1 1929.29 4464.64 1929.01 4470.24    1929
4480.03 1928.99  4486.8    1929 4511.79    1929  4518.2 1929.01 4533.24 1929.01
 4540.3    1929 4555.93    1929 4570.14 1928.97 4581.05 1928.94 4584.34 1928.94
4636.22 1928.66 4637.25 1928.66 4650.07 1928.59 4658.38 1928.56 4658.73 1928.55
4684.68 1928.36 4734.05    1928 4734.33    1928 4747.37 1928.28 4775.13 1928.89
4779.15    1929 4810.08    1929 4836.09 1929.02 4851.73 1929.01 4879.92 1929.01
4896.31 1929.02 4901.68 1929.02 4902.81 1929.03 4918.56 1929.02 4919.24 1929.01
4936.58 1929.01 4947.68    1929 4966.48    1929 4994.34  1929.7 5006.56    1930
5010.35    1930 5011.87 1929.95 5041.99    1929 5295.14    1929 5296.04 1929.02
5300.36 1929.06 5322.58 1929.33 5378.72    1930 5378.98    1930 5407.75    1931
5413.47    1931 5418.18 1930.84    5421 1930.79 5424.54 1930.68 5428.61 1930.53
5433.95 1930.43 5437.72 1930.33 5443.69 1930.14 5447.68    1930 5459.46 1929.64
5476.89    1929 5521.04    1929 5523.79 1929.01 5532.63 1929.01 5577.03 1929.47
   5584 1929.55 5612.36 1929.81 5631.81    1930 5636.36    1930 5637.02  1930.1
 5643.9    1931 5675.04    1931 5697.71 1930.23 5699.44 1930.18  5707.3    1930
5722.78    1930 5724.54 1930.06 5761.87 1930.99 5768.13 1930.99 5777.38 1930.71
5790.92 1930.31 5791.62  1930.3 5803.96 1930.01 5809.28 1930.01  5812.3    1930
5818.64    1930  5840.6 1929.52 5864.27    1929 5895.04    1929 5895.89 1929.01
 5905.7 1929.01 5911.33 1929.03 5917.09 1929.04 5922.53 1929.03 5932.67 1929.02
5934.56 1929.01 5939.66 1929.05 5943.93    1929 5950.35    1929 5952.36 1929.15
   5954  1929.3 5960.52 1929.97 5961.51    1930 5965.94 1930.44 5969.77 1930.76
5973.29    1931 5975.09 1931.17 5984.13    1932 5985.81  1932.2    5991 1932.76
5992.71    1933 5993.88 1933.19 5998.35    1934 6003.81 1934.97 6004.13 1935.04
6006.67    1936 6015.09    1937 6019.57 1937.56 6026.59    1939 6031.66    1940
6037.15    1941 6040.23 1941.46 6050.39  1942.8 6059.69    1944 6064.48 1944.66
6066.81    1945 6067.06    1945 6075.04 1945.98  6083.9    1947 6134.62    1947

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .045       0     .04 6134.62    .045

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            0 6134.62           102.33  102.33  102.33             .1       .3

CROSS SECTION OUTPUT  Profile #PF 1

  E.G. Elev (ft)           1932.40    Element                  Left OB    Channel   Right OB
  Vel Head (ft)               0.10    Wt. n-Val.                           0.040
  W.S. Elev (ft)           1932.31    Reach Len. (ft)          102.33     102.33     102.33
```

| | | | | | |
|---|---|---|---|---|---|
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8942.61 | |
| E.G. Slope (ft/ft) | 0.001848 | Area (sq ft) | | 8942.61 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 4551.43 | Top Width (ft) | | 4551.43 | |
| Vel Total (ft/s) | 2.50 | Avg. Vel. (ft/s) | | 2.50 | |
| Max Chl Dpth (ft) | 4.30 | Hydr. Depth (ft) | | 1.96 | |
| Conv. Total (cfs) | 521055.3 | Conv. (cfs) | | 521055.3 | |
| Length Wtd. (ft) | 102.33 | Wetted Per. (ft) | | 4552.37 | |
| Min Ch El (ft) | 1928.00 | Shear (lb/sq ft) | | 0.23 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6134.62 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.19 | Cum Volume (acre-ft) | | 2034.29 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 967.82 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -8218.22

INPUT
Description:
Station Elevation Data num= 413

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1938.14 | 1295.92 | 1930 | 1370.7 | 1930 | 1406.44 | 1929.99 | 1426.47 | 1930 |
| 1521.18 | 1930 | 1533.87 | 1929.98 | 1544.92 | 1929.99 | 1547.47 | 1930 | 1552.11 | 1930 |
| 1566.45 | 1930.24 | 1570.29 | 1930.32 | 1574.44 | 1930.39 | 1576.73 | 1930.44 | 1598.76 | 1931 |
| 2218.68 | 1931 | 2225.94 | 1930.98 | 2231.52 | 1930.88 | 2234.75 | 1930.81 | 2237.95 | 1930.71 |
| 2238.85 | 1930.7 | 2256.91 | 1930 | 2257.91 | 1929.81 | 2260.98 | 1929.66 | 2272.73 | 1929.01 |
| 2274.49 | 1929 | 2318.48 | 1929.96 | 2320.76 | 1930 | 2431.79 | 1930 | 2441.06 | 1929.67 |
| 2448.81 | 1929.37 | 2455.26 | 1929.17 | 2456.09 | 1929.18 | 2457.86 | 1929.13 | 2460.21 | 1929.15 |
| 2461.09 | 1929.13 | 2463.7 | 1929.16 | 2471.48 | 1929.16 | 2472.76 | 1929.17 | 2484.53 | 1929.31 |
| 2501.41 | 1929.18 | 2523.62 | 1929 | 2536.93 | 1929 | 2542.68 | 1929.21 | 2551.12 | 1929.53 |
| 2562.22 | 1929.94 | 2564.27 | 1930 | 2734.53 | 1930 | 2741.1 | 1929.64 | 2748.13 | 1929.73 |
| 2753.85 | 1929.97 | 2757.06 | 1929.97 | 2762.31 | 1929.95 | 2769.71 | 1929.96 | 2776.77 | 1930 |
| 2839.52 | 1930 | 2843.4 | 1930.75 | 2845.19 | 1931 | 2851.93 | 1932 | 2870.65 | 1932 |
| 2875.65 | 1931.66 | 2878.57 | 1931.41 | 2883.45 | 1931.11 | 2884.86 | 1931 | 3022.93 | 1931 |
| 3061.87 | 1931.91 | 3065.58 | 1932 | 3079.52 | 1933 | 3111.16 | 1933 | 3119.88 | 1932.27 |
| 3123.41 | 1932 | 3137.76 | 1931 | 3139.46 | 1930.94 | 3146.99 | 1930.74 | 3148.71 | 1930.72 |
| 3154.22 | 1930.59 | 3172.09 | 1930 | 3196.43 | 1930 | 3201.36 | 1930.07 | 3215.51 | 1930.69 |
| 3220.26 | 1930.87 | 3223.26 | 1931 | 3256.24 | 1931 | 3266.09 | 1930.98 | 3273.15 | 1930.99 |
| 3279.52 | 1930.99 | 3288.87 | 1930.71 | 3289.5 | 1930.71 | 3293.78 | 1930.55 | 3305.57 | 1930 |
| 3317.16 | 1929.54 | 3327.92 | 1929.21 | 3331.01 | 1929.15 | 3340.43 | 1929.14 | 3346.83 | 1929.12 |
| 3350.86 | 1929.12 | 3353.26 | 1929.15 | 3359.56 | 1929.26 | 3376.15 | 1929.62 | 3380.95 | 1929.72 |
| 3386.92 | 1929.8 | 3393.13 | 1929.82 | 3402.52 | 1929.83 | 3412.7 | 1929.89 | 3420.63 | 1929.91 |
| 3425.12 | 1929.9 | 3426.54 | 1929.91 | 3432.24 | 1929.89 | 3453.18 | 1930 | 3464.76 | 1930 |
| 3465.18 | 1929.99 | 3484.35 | 1929.75 | 3499.7 | 1930 | 3513.57 | 1930.35 | 3524.88 | 1930.58 |
| 3525.17 | 1930.59 | 3534.45 | 1930.67 | 3540.92 | 1930.72 | 3545.85 | 1930.63 | 3554.77 | 1930.73 |
| 3561.41 | 1930.77 | 3566.96 | 1930.78 | 3570.56 | 1930.76 | 3573.54 | 1930.68 | 3576.32 | 1930.68 |
| 3585.04 | 1930.49 | 3604.46 | 1930.01 | 3604.75 | 1930 | 3651.87 | 1930 | 3659.91 | 1930.1 |
| 3666.06 | 1930 | 3669.63 | 1930 | 3673.12 | 1930.12 | 3676.64 | 1930.27 | 3679.16 | 1930.39 |
| 3694.1 | 1931 | 3698.2 | 1931.09 | 3703.77 | 1931.19 | 3727.22 | 1931.17 | 3751.93 | 1931.14 |
| 3758.66 | 1931 | 3763.73 | 1931 | 3766.14 | 1930.99 | 3775.58 | 1930.99 | 3779.67 | 1931 |
| 3789.67 | 1930.99 | 3796.24 | 1931 | 3796.38 | 1931.01 | 3818.91 | 1931.52 | 3836.85 | 1931.8 |
| 3841.23 | 1931.89 | 3850.27 | 1931.99 | 3856.77 | 1931.98 | 3865.17 | 1932 | 3872.05 | 1932.45 |
| 3875.35 | 1932.59 | 3882.72 | 1933 | 3885.5 | 1933.23 | 3887.29 | 1933.35 | 3888.02 | 1933.35 |
| 3894.68 | 1933.56 | 3896.07 | 1933.54 | 3898.66 | 1933.54 | 3904.45 | 1933.76 | 3905.62 | 1933.78 |
| 3914.43 | 1934 | 3916.47 | 1934.17 | 3921.28 | 1934.33 | 3924.59 | 1934.43 | 3936.08 | 1934 |
| 3937.14 | 1934 | 3941.99 | 1934.1 | 3943.68 | 1934.1 | 3950.14 | 1934 | 3950.45 | 1933.98 |
| 3957.05 | 1933.25 | 3959.52 | 1933 | 3965.62 | 1932.48 | 3971.57 | 1932 | 3978.58 | 1931.68 |
| 3985.7 | 1931.37 | 3987.96 | 1931.31 | 3994 | 1931 | 3996.68 | 1931.06 | 3998.06 | 1931.11 |
| 4009.25 | 1931.62 | 4015.36 | 1932 | 4017.01 | 1932.01 | 4025.75 | 1932.01 | 4033.52 | 1932 |
| 4037.54 | 1931.9 | 4046.62 | 1931.66 | 4048.95 | 1931.68 | 4055.18 | 1931.43 | 4062.72 | 1931.06 |
| 4063.67 | 1931 | 4074.3 | 1931 | 4080.41 | 1931.18 | 4085.54 | 1931.3 | 4087.37 | 1931.36 |
| 4096.37 | 1931.39 | 4098.5 | 1931.61 | 4101.51 | 1932 | 4103.91 | 1932.36 | 4108.01 | 1933 |
| 4109.47 | 1933.29 | 4113.59 | 1934.01 | 4117.32 | 1935 | 4118.83 | 1935.49 | 4120.29 | 1936 |
| 4148.32 | 1936 | 4152.66 | 1934.88 | 4156.72 | 1934 | 4162.28 | 1932.75 | 4165.49 | 1932 |
| 4170.73 | 1930.76 | 4182.21 | 1930.74 | 4193.85 | 1930.76 | 4199.69 | 1931 | 4201.15 | 1931 |
| 4203.22 | 1931.16 | 4206.08 | 1931.44 | 4213.71 | 1932 | 4223.47 | 1932.64 | 4224.14 | 1932.66 |
| 4236.13 | 1932.92 | 4238.09 | 1933 | 4239.09 | 1933 | 4240.52 | 1933.06 | 4244.47 | 1933.27 |
| 4246.71 | 1933.41 | 4254.02 | 1934 | 4269.15 | 1934.05 | 4284.28 | 1934 | 4300.99 | 1933 |
| 4318.29 | 1933 | 4320.02 | 1933.01 | 4337.1 | 1933.01 | 4346.84 | 1933 | 4360.97 | 1933 |
| 4367.13 | 1934 | 4369.92 | 1934.39 | 4372.89 | 1934.76 | 4374.97 | 1935 | 4400.73 | 1935 |
| 4407.27 | 1934.67 | 4411.8 | 1934.43 | 4416.05 | 1934.25 | 4417.15 | 1934.19 | 4423.24 | 1934 |
| 4431.73 | 1933.62 | 4439.3 | 1933 | 4443.08 | 1932.32 | 4449.89 | 1931 | 4453.4 | 1930.29 |
| 4454.76 | 1930 | 4459.72 | 1929 | 4460.21 | 1929 | 4467.13 | 1928.63 | 4470.83 | 1928.5 |
| 4471.78 | 1928.51 | 4474.69 | 1928.48 | 4476.38 | 1928.48 | 4486.68 | 1928.56 | 4505.81 | 1928.9 |
| 4510.19 | 1929 | 4555.21 | 1929 | 4609.06 | 1928.56 | 4644.6 | 1928.28 | 4665.84 | 1928.13 |
| 4683.18 | 1928 | 4710.47 | 1927.96 | 4727.08 | 1927.99 | 4731.75 | 1927.99 | 4739.65 | 1928 |
| 4742.82 | 1928.13 | 4744.4 | 1928.17 | 4755.6 | 1928.6 | 4765.41 | 1928.91 | 4777.14 | 1928.94 |
| 4782.23 | 1928.93 | 4784.27 | 1928.91 | 4789.66 | 1929 | 4799.06 | 1929.26 | 4801.08 | 1929.28 |
| 4820.03 | 1929.72 | 4833.54 | 1929.4 | 4836.32 | 1929.43 | 4838.27 | 1929.34 | 4840.58 | 1929.35 |
| 4848.63 | 1929 | 4894.17 | 1929 | 4904.64 | 1929.41 | 4914.97 | 1930 | 4937.91 | 1930 |
| 4948.86 | 1929.86 | 4955.31 | 1929.72 | 4958.23 | 1929.68 | 4985.8 | 1929.21 | 4997.13 | 1929.01 |
| 5020.42 | 1929.01 | 5034.65 | 1929 | 5042.16 | 1929 | 5048.52 | 1928.98 | 5054.08 | 1928.98 |
| 5092.03 | 1928.16 | 5096.18 | 1928.09 | 5104.48 | 1928.12 | 5107.74 | 1928.1 | 5121.85 | 1928.11 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5127.03 | 1928.12 | 5132.75 | 1928.12 | 5149.65 | 1928.29 | 5160.82 | 1928.43 | 5167.42 | 1928.5 |
| 5168.25 | 1928.52 | 5176.14 | 1928.63 | 5185.91 | 1928.73 | 5197.6 | 1929 | 5399.01 | 1929 |
| 5407.19 | 1928.99 | 5417.59 | 1928.99 | 5424.2 | 1929 | 5446.74 | 1929 | 5446.8 | 1928.99 |
| 5455.05 | 1928.99 | 5457.56 | 1928.98 | 5471.65 | 1929 | 5475.45 | 1928.99 | 5492.46 | 1928.98 |
| 5499.03 | 1928.98 | 5512.48 | 1928.96 | 5519.02 | 1928.97 | 5523.08 | 1928.96 | 5540.36 | 1928.99 |
| 5550.54 | 1929 | 5569.19 | 1929 | 5574.2 | 1929.85 | 5575.69 | 1930.09 | 5585.74 | 1931 |
| 5593.19 | 1931.56 | 5598.11 | 1932 | 5606.14 | 1932.51 | 5607.65 | 1932.58 | 5619.74 | 1933 |
| 5632.95 | 1933 | 5641.87 | 1932.75 | 5660.42 | 1932 | 5664.11 | 1931.81 | 5665.41 | 1931.76 |
| 5673.73 | 1931.33 | 5675.28 | 1931.28 | 5678.89 | 1931.13 | 5682.59 | 1931.06 | 5689.45 | 1931.02 |
| 5695.05 | 1931 | 5710.28 | 1931 | 5710.99 | 1930.98 | 5713.58 | 1930.97 | 5716.58 | 1930.9 |
| 5729.47 | 1930.66 | 5731.39 | 1930.62 | 5740.18 | 1930.5 | 5745.72 | 1930.4 | 5750.45 | 1930.33 |
| 5764.22 | 1930.01 | 5765.26 | 1930 | 5775.95 | 1930 | 5802.12 | 1929.53 | 5802.66 | 1929.53 |
| 5817.66 | 1929.37 | 5849.24 | 1929.02 | 5850.06 | 1929 | 5886.07 | 1929 | 5897.96 | 1930 |
| 5923.46 | 1930.99 | 5942.55 | 1932 | 5948.37 | 1933.3 | 5952.27 | 1934 | 5953.45 | 1934.26 |
| 5954.69 | 1934.42 | 5955.92 | 1934.54 | 5957.36 | 1934.52 | 5961.13 | 1934.36 | 5967.84 | 1934.01 |
| 5969.28 | 1933.98 | 5972 | 1933.86 | 5975.08 | 1934 | 5977.61 | 1935 | 5978.72 | 1935.39 |
| 5981.44 | 1936.23 | 5983.2 | 1936.83 | 5984.89 | 1937 | 5987.62 | 1937.47 | 5992.2 | 1938.52 |
| 5994.16 | 1938.9 | 5995.2 | 1939.05 | 5996.15 | 1939.13 | 5997.38 | 1939.17 | 6001.7 | 1939.11 |
| 6002.99 | 1939.26 | 6004.27 | 1939.56 | 6005.82 | 1939.96 | 6006.97 | 1940 | 6007.82 | 1940.27 |
| 6017.78 | 1943 | 6021.41 | 1943.63 | 6023.62 | 1943.99 | 6026.25 | 1944.17 | 6034.83 | 1945 |
| 6045.65 | 1946 | 6056.2 | 1946.22 | 6066.06 | 1946.39 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 6066.06 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 0 | 6066.06 | 179.79 | 179.79 | 179.79 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1932.21 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.10 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1932.11 | Reach Len. (ft) | 179.79 | 179.79 | 179.79 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8849.92 | | |
| E.G. Slope (ft/ft) | 0.001872 | Area (sq ft) | | 8849.92 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 4475.98 | Top Width (ft) | | 4475.98 | | |
| Vel Total (ft/s) | 2.53 | Avg. Vel. (ft/s) | | 2.53 | | |
| Max Chl Dpth (ft) | 4.15 | Hydr. Depth (ft) | | 1.98 | | |
| Conv. Total (cfs) | 517771.7 | Conv. (cfs) | | 517771.7 | | |
| Length Wtd. (ft) | 179.79 | Wetted Per. (ft) | | 4477.58 | | |
| Min Ch El (ft) | 1927.96 | Shear (lb/sq ft) | | 0.23 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 6066.06 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.41 | Cum Volume (acre-ft) | | 2013.39 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 957.22 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -8398.01

INPUT
Description:
Station Elevation Data num= 421

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1937.94 | 1292.12 | 1930.19 | 1292.42 | 1930.16 | 1303.3 | 1930 | 1503.09 | 1930 |
| 1519.77 | 1929.87 | 1525.27 | 1929.91 | 1538.98 | 1929.95 | 1544.78 | 1930 | 1559.95 | 1930.31 |
| 1561.87 | 1930.36 | 1589.43 | 1930.87 | 1596.14 | 1931 | 1859.36 | 1931 | 1872.12 | 1930.98 |
| 1910.82 | 1930.95 | 1920.04 | 1930.99 | 1920.82 | 1931 | 2175 | 1931 | 2185.79 | 1930.97 |
| 2190.12 | 1930.84 | 2203.71 | 1930.46 | 2206.25 | 1930.42 | 2216.62 | 1930.18 | 2221.97 | 1930.03 |
| 2223.75 | 1930.03 | 2224.78 | 1930 | 2241.78 | 1929.13 | 2245.01 | 1929 | 2265.04 | 1929 |
| 2280.27 | 1929.3 | 2281.28 | 1929.31 | 2297.22 | 1929.54 | 2305.27 | 1929.65 | 2305.58 | 1929.66 |
| 2314.17 | 1929.72 | 2339.1 | 1929.96 | 2341.69 | 1929.96 | 2349.71 | 1930 | 2430.07 | 1930 |
| 2470.35 | 1929 | 2510.72 | 1929 | 2516.17 | 1929.12 | 2527.6 | 1929.33 | 2552.75 | 1929.59 |
| 2563.85 | 1929.71 | 2565.22 | 1929.7 | 2587.11 | 1929.76 | 2613.57 | 1929.85 | 2617.97 | 1929.87 |
| 2632.66 | 1930 | 2766.12 | 1930 | 2766.34 | 1930.01 | 2782.14 | 1930.34 | 2796.51 | 1930.48 |
| 2804.76 | 1930.33 | 2814.27 | 1930.04 | 2824.31 | 1930 | 2831.8 | 1929.7 | 2837.27 | 1929.53 |
| 2840.68 | 1929.44 | 2844.5 | 1929.37 | 2856.39 | 1929.3 | 2861.1 | 1929.42 | 2872.79 | 1929.73 |
| 2873.16 | 1929.73 | 2877.4 | 1930 | 2879.27 | 1930.02 | 2902.01 | 1930.67 | 2909.41 | 1930.85 |
| 2913.5 | 1931 | 2914.8 | 1931 | 2918.62 | 1931.24 | 2920.33 | 1931.3 | 2933.67 | 1931.71 |
| 2937.96 | 1931.77 | 2941.62 | 1931.71 | 2944.74 | 1931.63 | 2947.95 | 1931.27 | 2949.78 | 1931.04 |
| 2961.69 | 1931.03 | 2971.53 | 1931 | 2973.66 | 1931 | 3003.73 | 1930.97 | 3020.28 | 1930.98 |
| 3025.26 | 1930.98 | 3033.7 | 1930.69 | 3042.46 | 1930.82 | 3053.75 | 1930.97 | 3057.46 | 1931 |
| 3061.46 | 1931 | 3064.2 | 1930.98 | 3066.13 | 1931 | 3078.82 | 1932 | 3081.64 | 1932.25 |
| 3084.88 | 1932.56 | 3092.17 | 1932.67 | 3096.92 | 1932.71 | 3103.1 | 1932.4 | 3109.12 | 1932.17 |
| 3112.93 | 1932 | 3123.51 | 1931.31 | 3130.22 | 1931 | 3133.26 | 1930.82 | 3141.2 | 1930.77 |
| 3149.93 | 1930.9 | 3151.8 | 1931 | 3159.41 | 1931.01 | 3160.94 | 1931 | 3178.09 | 1931 |
| 3180.04 | 1930.98 | 3198.85 | 1931 | 3224.61 | 1931 | 3231.83 | 1930.93 | 3235.88 | 1930.81 |
| 3244 | 1930.65 | 3245.04 | 1930.6 | 3249.65 | 1930.47 | 3265.94 | 1930 | 3269.23 | 1929.92 |
| 3291.15 | 1929.87 | 3314.5 | 1929.99 | 3315.23 | 1930 | 3337.69 | 1930 | 3359.95 | 1929.96 |
| 3363.27 | 1929.95 | 3388.62 | 1930 | 3432.05 | 1930 | 3432.98 | 1929.95 | 3446.6 | 1929.71 |
| 3457.2 | 1929.48 | 3475.79 | 1929.85 | 3480.4 | 1930.04 | 3488.01 | 1930.39 | 3491.31 | 1930.52 |
| 3494.39 | 1930.6 | 3495.82 | 1930.6 | 3505.66 | 1930.25 | 3510.96 | 1930 | 3528.16 | 1930 |

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 3535.06 1930.01 3547.85 1930.01 3559.89 1930.02 3567.12 1930.01 3599.87 1930.01
 3601.05    1930 3635.33    1930 3660.61  1930.2 3666.19 1930.27 3667.79  1930.3
 3682.99 1930.49 3687.39 1930.54 3706.91 1930.73 3716.56 1930.77 3719.74 1930.69
 3721.68 1930.74 3722.92 1930.74 3727.26 1930.64 3743.04 1930.04 3743.91    1930
 3751.08 1929.99 3758.59 1930.01 3761.33  1930.1 3762.82 1930.13 3792.84    1931
 3826.16    1931 3831.34 1930.99 3862.22 1930.99 3876.04    1931 3880.13 1931.29
  3890.4    1932 3893.76 1932.13 3894.85  1932.2  3903.1 1932.59 3906.48 1932.84
 3908.86    1933 3911.81 1933.12 3920.19 1933.41 3924.09 1933.51 3928.39 1933.53
 3930.87  1933.5 3939.55 1933.35  3945.4 1933.24 3948.68 1933.14 3952.64    1933
 3961.33 1932.36 3973.02 1931.43 3974.35 1931.39 3986.75 1931.34 3989.22 1931.39
 4004.11 1931.93 4011.01 1932.12 4016.05 1932.23  4025.8 1932.18 4037.13  1932.1
 4040.74    1932 4044.95  1931.9 4046.58 1931.89  4048.9 1931.84 4056.85  1931.7
 4062.75 1931.62 4071.45 1931.61 4074.51  1931.6 4078.78 1931.56 4086.31 1931.52
  4093.4 1931.44 4099.29 1931.51 4102.19  1931.4 4107.45  1931.1 4109.45    1931
 4114.98 1930.79 4125.07  1930.5 4126.96 1930.44 4134.56 1930.14  4138.6    1930
 4145.83    1930 4151.77 1930.15 4153.58  1930.1 4161.84 1930.26 4178.63 1930.61
 4189.55    1931 4195.45 1931.59 4199.12    1932 4206.79 1932.01 4213.36    1932
 4222.42 1932.15 4225.06 1932.17 4231.36 1932.19 4242.92 1932.29 4256.56  1932.4
 4264.62 1932.41 4272.53 1932.38 4282.24 1932.28 4290.16 1932.11 4293.97    1932
  4305.7    1931 4313.84    1931 4317.69 1931.64 4320.37    1932 4322.76 1932.22
 4323.97 1932.28 4326.29 1932.34 4327.16 1932.34 4336.13 1932.42 4338.75 1932.41
 4341.59 1932.34 4341.99 1932.36 4351.88 1932.07 4355.76    1932 4359.74    1932
 4362.64 1932.09 4365.15 1932.15 4373.61 1932.44 4386.23 1932.96 4387.23 1932.97
 4397.76 1932.23 4400.67    1932 4406.37 1931.48 4411.95    1931 4416.65 1930.54
 4422.68    1930 4432.08 1929.36 4436.85    1929  4447.2 1928.23 4457.98    1928
 4480.35    1928 4493.08 1927.77 4502.64  1927.9 4528.72 1927.83 4553.18 1927.89
 4573.43 1927.93  4602.5 1927.78 4605.32 1927.76 4613.95 1927.77 4619.85 1927.72
 4625.52 1927.66 4632.79 1927.66 4641.36 1927.67  4644.8 1927.62 4649.85 1927.52
 4655.83 1927.37 4662.24 1927.28 4677.12    1927    4690 1926.99 4698.64    1927
 4704.43    1927 4706.53 1927.19 4715.79    1928 4721.14 1928.56 4723.92  1928.8
 4726.47    1929 4736.88  1929.6 4744.12    1930 4766.97    1930 4791.56    1929
 4929.52    1929 4930.44 1929.01 4936.42    1929 4958.73    1929 4963.42 1929.14
 4972.87 1929.24 4985.66 1929.31 4986.74 1929.35  4992.9 1929.39 4996.36 1929.44
 5003.23 1929.57 5013.74 1929.46  5030.8 1929.21 5037.57    1929 5041.36 1928.96
 5075.47 1928.56 5085.31 1928.45 5091.87 1928.37  5121.1    1928 5143.47 1927.34
 5156.06    1927 5198.83    1927 5205.96 1927.19 5206.47 1927.19 5237.49 1927.99
 5248.13 1927.99 5250.54 1927.98 5261.95 1927.98 5287.85 1927.96 5291.57 1927.96
 5308.76 1927.92 5313.42 1927.93 5319.04 1927.93 5334.08 1927.96 5341.89 1927.96
 5349.51 1927.97 5361.42    1928  5368.9 1928.15 5384.42 1928.01 5392.24 1928.01
 5411.88    1928 5440.25    1927 5454.75    1927 5459.06 1927.29  5459.4  1927.3
 5462.88 1927.55 5469.38    1928 5471.48    1928 5478.57    1929 5487.86    1930
 5494.84 1930.83 5496.15    1931 5499.88 1931.52 5503.62    1932 5508.82 1932.41
 5511.77 1932.63 5516.79 1932.95 5518.08 1932.94  5519.2 1932.87 5523.99 1932.48
 5530.24    1932 5535.37 1931.83 5544.34 1931.61 5546.43 1931.59 5555.69 1931.39
 5567.41 1931.13 5571.35 1931.01    5580 1930.86 5587.72 1930.71 5609.75 1930.31
 5611.21 1930.28 5621.68 1930.03  5623.6 1930.01 5629.95 1930.36    5644    1931
 5678.15    1931  5685.1 1930.51 5691.65    1930 5699.12 1929.98 5713.59 1929.63
 5716.93 1929.57 5728.65    1929 5737.95    1929 5738.69 1929.03 5744.31 1929.12
  5745.4 1929.12 5755.71 1929.71 5761.31    1930 5769.98    1930 5787.62    1929
 5807.91    1929 5810.07 1929.23  5811.8 1929.39 5818.73    1930 5824.43 1930.47
 5835.52    1931 5836.63 1931.01 5841.52 1931.01 5846.98 1931.02 5852.74 1931.01
 5859.33 1931.01 5860.04    1931 5867.64    1931 5870.47 1931.92 5874.18 1933.26
 5876.43 1934.06    5881 1935.66 5881.88    1936 5883.29 1936.49 5890.15 1938.94
 5892.65    1940 5895.56    1941 5901.18    1943 5902.69 1943.59 5904.95 1944.43
 5906.58 1944.66 5910.64 1945.04 5916.35    1946 5916.89 1946.06 5917.69 1946.02
 5922.39 1946.13 5926.98 1946.03 5927.66    1946 5983.83    1946 5994.66 1945.97
 5998.65 1945.93

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .045       0     .04 5998.65    .045

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
             0 5998.65             98.63   98.63   98.63             .1       .3

CROSS SECTION OUTPUT  Profile #PF 1

  E.G. Elev (ft)           1931.80    Element                  Left OB    Channel   Right OB
  Vel Head (ft)               0.13    Wt. n-Val.                          0.040
  W.S. Elev (ft)           1931.67    Reach Len. (ft)           98.63      98.63      98.63
  Crit W.S. (ft)                      Flow Area (sq ft)                  7749.19
  E.G. Slope (ft/ft)       0.002843   Area (sq ft)                       7749.19
  Q Total (cfs)           22400.00    Flow (cfs)                        22400.00
  Top Width (ft)           4393.50    Top Width (ft)                     4393.50
  Vel Total (ft/s)            2.89    Avg. Vel. (ft/s)                      2.89
  Max Chl Dpth (ft)           4.68    Hydr. Depth (ft)                      1.76
  Conv. Total (cfs)       420136.9    Conv. (cfs)                       420136.9
  Length Wtd. (ft)           98.63    Wetted Per. (ft)                   4394.99
  Min Ch El (ft)           1926.99    Shear (lb/sq ft)                      0.31
  Alpha                       1.00    Stream Power (lb/ft s)   5998.65      0.00       0.00
  Frctn Loss (ft)             0.25    Cum Volume (acre-ft)               1979.14
  C & E Loss (ft)             0.00    Cum SA (acres)                      938.92


Warning: Divided flow computed for this cross-section.

CROSS SECTION
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RIVER: MOJAVE
REACH: MOJAVE RS: -8496.64

INPUT
Description:
Station Elevation Data num= 427

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1937.61 | 1358.8 | 1929.87 | 1363.54 | 1929.91 | 1366.54 | 1929.92 | 1375.36 | 1930 |
| 1499.98 | 1930 | 1500.22 | 1929.66 | 1501.03 | 1929 | 1519.87 | 1929 | 1521.33 | 1929.19 |
| 1523.28 | 1930 | 1525.09 | 1930.02 | 1545.72 | 1930.52 | 1549.93 | 1930.61 | 1554.75 | 1930.69 |
| 1555.64 | 1930.72 | 1570.77 | 1930.97 | 1572.86 | 1931 | 1757.68 | 1931 | 1759.86 | 1930.98 |
| 1773.34 | 1930.82 | 1780.4 | 1930.75 | 1785.64 | 1930.71 | 1792.44 | 1930.64 | 1798.17 | 1930.56 |
| 1802.61 | 1930.59 | 1828.1 | 1930.42 | 1835.27 | 1930.44 | 1845.08 | 1930.45 | 1880.86 | 1930.41 |
| 1929.74 | 1930.68 | 1979.89 | 1930.98 | 1982.78 | 1931 | 2082.66 | 1931 | 2083.14 | 1930.99 |
| 2128.27 | 1930.6 | 2136.28 | 1930.74 | 2138.51 | 1930.75 | 2151.88 | 1931 | 2163.05 | 1931 |
| 2174.29 | 1930.8 | 2186.97 | 1930.56 | 2212.54 | 1930 | 2226.63 | 1929.34 | 2233.78 | 1929 |
| 2341.26 | 1929 | 2348.33 | 1929.15 | 2354.15 | 1929.32 | 2371.19 | 1929.63 | 2377.64 | 1929.74 |
| 2383.6 | 1929.74 | 2390.12 | 1929.71 | 2403.69 | 1929.54 | 2413.58 | 1929.38 | 2416.51 | 1929.34 |
| 2424.73 | 1929.26 | 2440.29 | 1929 | 2478.77 | 1929 | 2485.36 | 1928.99 | 2496.27 | 1928.99 |
| 2510.13 | 1929 | 2610.53 | 1929 | 2617.54 | 1929.09 | 2628.93 | 1929.29 | 2637.44 | 1929.25 |
| 2649.46 | 1929.34 | 2657.41 | 1929.28 | 2661.12 | 1929.27 | 2665.56 | 1929.39 | 2678.37 | 1929.77 |
| 2683.03 | 1930 | 2814.29 | 1930 | 2833.1 | 1930.78 | 2838.94 | 1930.85 | 2843.26 | 1930.74 |
| 2854.06 | 1930.41 | 2861.55 | 1930.17 | 2868.71 | 1930 | 2875.11 | 1930 | 2877.44 | 1929.99 |
| 2889.98 | 1929.98 | 2898.34 | 1930 | 2927.65 | 1930 | 2931.24 | 1929.93 | 2940.94 | 1930 |
| 2971.13 | 1930 | 2974.44 | 1930.09 | 3001.81 | 1930.74 | 3006.64 | 1930.84 | 3009.41 | 1930.87 |
| 3015.72 | 1930.87 | 3021.78 | 1931 | 3023.03 | 1930.99 | 3037.33 | 1930.35 | 3041.36 | 1930.19 |
| 3045.04 | 1930.22 | 3056.41 | 1930.36 | 3065.16 | 1930.4 | 3070.59 | 1930.41 | 3078.01 | 1930.58 |
| 3088.57 | 1930.95 | 3093.51 | 1930.96 | 3093.87 | 1931 | 3104.83 | 1931.55 | 3105.75 | 1931.57 |
| 3110.87 | 1931.77 | 3113.38 | 1931.79 | 3119.6 | 1931.77 | 3128.65 | 1931.87 | 3142 | 1931.84 |
| 3150.73 | 1931.64 | 3161.97 | 1931.18 | 3165.32 | 1931.03 | 3168.77 | 1931.03 | 3175.9 | 1931 |
| 3179.04 | 1930.89 | 3196.77 | 1930.5 | 3201.59 | 1930.37 | 3219.26 | 1930 | 3233.06 | 1929.35 |
| 3233.89 | 1929.28 | 3238.21 | 1929 | 3382.35 | 1929 | 3386.76 | 1929.02 | 3391.44 | 1929.12 |
| 3401.83 | 1929.29 | 3402.76 | 1929.29 | 3426.42 | 1929 | 3445.67 | 1929 | 3462.51 | 1929.44 |
| 3468.75 | 1929.59 | 3483.19 | 1929.92 | 3488.48 | 1930 | 3507.45 | 1930 | 3509.53 | 1930.03 |
| 3513.85 | 1930 | 3534.43 | 1930 | 3549.09 | 1930.01 | 3554.46 | 1930 | 3614.18 | 1930 |
| 3615.4 | 1930.03 | 3632.99 | 1930.23 | 3661.11 | 1930.51 | 3662.57 | 1930.54 | 3673.17 | 1930.63 |
| 3680.46 | 1930.68 | 3685.13 | 1930.75 | 3688.49 | 1930.7 | 3692.27 | 1930.75 | 3694.92 | 1930.74 |
| 3697.85 | 1930.68 | 3703.1 | 1930.45 | 3704.22 | 1930.42 | 3710.29 | 1930 | 3717.81 | 1929.75 |
| 3743.21 | 1929.41 | 3752.97 | 1929.29 | 3758.95 | 1929.36 | 3764.71 | 1929.46 | 3775.23 | 1929.66 |
| 3786.74 | 1929.94 | 3788.94 | 1930 | 3795.95 | 1930.25 | 3800.4 | 1930.4 | 3810.79 | 1930.78 |
| 3812.39 | 1930.83 | 3819.14 | 1931 | 3825.55 | 1931 | 3830.97 | 1930.91 | 3857.89 | 1930.41 |
| 3864.44 | 1930.31 | 3879.8 | 1930 | 3897.08 | 1930 | 3910.65 | 1929.99 | 3923.25 | 1930 |
| 3947.72 | 1930 | 3956.7 | 1930.39 | 3973.16 | 1930.78 | 3979.41 | 1931 | 3983.66 | 1931.38 |
| 3993.48 | 1932 | 4000.61 | 1932.4 | 4003.09 | 1932.42 | 4004.42 | 1932.47 | 4008.92 | 1932.49 |
| 4019.16 | 1932.34 | 4038.66 | 1932.03 | 4038.9 | 1932.03 | 4047.1 | 1931 | 4049.94 | 1930.77 |
| 4051.72 | 1930.67 | 4059.18 | 1930.7 | 4070.11 | 1930.48 | 4081.88 | 1930.28 | 4082.71 | 1930.26 |
| 4097.74 | 1930 | 4102.67 | 1930 | 4118.61 | 1930.76 | 4124.42 | 1931 | 4128.71 | 1931 |
| 4148.75 | 1930.68 | 4152.5 | 1930.61 | 4157.11 | 1930.54 | 4175.32 | 1930.4 | 4187.24 | 1930.17 |
| 4188.97 | 1930 | 4213.38 | 1930 | 4216.87 | 1930.33 | 4225.07 | 1931 | 4227.47 | 1931.21 |
| 4235.88 | 1932 | 4239.52 | 1932.24 | 4242.66 | 1932.32 | 4245.02 | 1932.35 | 4247 | 1932.32 |
| 4254.81 | 1932 | 4258.27 | 1931.9 | 4265.51 | 1931.77 | 4268.24 | 1931.74 | 4277.36 | 1931.6 |
| 4283.25 | 1931.63 | 4292.48 | 1932 | 4304.61 | 1932.89 | 4306.02 | 1933 | 4321 | 1933 |
| 4322.45 | 1932.74 | 4331.5 | 1931 | 4336.01 | 1930 | 4346.06 | 1930 | 4350.8 | 1930.52 |
| 4364.46 | 1932 | 4370.64 | 1932.57 | 4375.16 | 1933 | 4375.38 | 1933 | 4380.27 | 1933.4 |
| 4389.12 | 1934 | 4394.51 | 1934 | 4399.97 | 1932.97 | 4408.27 | 1931.66 | 4411.37 | 1931.12 |
| 4414.4 | 1930.56 | 4417.74 | 1929.92 | 4421.19 | 1929.22 | 4424.6 | 1928.43 | 4426.08 | 1928 |
| 4433.12 | 1927.69 | 4446.14 | 1927.01 | 4451.99 | 1927.01 | 4460.56 | 1927.17 | 4467.48 | 1927.29 |
| 4468.71 | 1927.29 | 4497.73 | 1927.9 | 4512.3 | 1927.94 | 4595.88 | 1927.34 | 4630.13 | 1927.09 |
| 4639.03 | 1927.05 | 4648.44 | 1926.98 | 4649.49 | 1926.98 | 4658.45 | 1926.72 | 4685.71 | 1926 |
| 4686.89 | 1926 | 4698.43 | 1926.71 | 4702.32 | 1926.76 | 4705.5 | 1926.83 | 4709.58 | 1926.98 |
| 4718.04 | 1927.48 | 4725.23 | 1928 | 4732.36 | 1928.32 | 4742.15 | 1928.73 | 4748.2 | 1929 |
| 4748.98 | 1929 | 4755.31 | 1928.83 | 4761.2 | 1928.69 | 4789.49 | 1928.6 | 4802.65 | 1928.5 |
| 4814.6 | 1928.43 | 4829.91 | 1928.52 | 4854.32 | 1928.68 | 4855.27 | 1928.7 | 4858.71 | 1928.66 |
| 4859.92 | 1928.68 | 4864.47 | 1928.64 | 4869.16 | 1928.64 | 4871.95 | 1928.57 | 4896.5 | 1928.53 |
| 4917.71 | 1928.51 | 4930.87 | 1928.64 | 4938.74 | 1928.71 | 4950.4 | 1929 | 4994.8 | 1929 |
| 4996.97 | 1929.02 | 5009.21 | 1929.33 | 5020.13 | 1929.57 | 5029.56 | 1929.73 | 5033.02 | 1929.81 |
| 5036.68 | 1929.86 | 5038.53 | 1929.85 | 5041.27 | 1929.79 | 5052.87 | 1929.26 | 5058.1 | 1929 |
| 5058.85 | 1929 | 5069.57 | 1928.79 | 5110.64 | 1928.01 | 5115.01 | 1927.99 | 5157.71 | 1927.56 |
| 5178.69 | 1927.38 | 5179.16 | 1927.38 | 5213.64 | 1927.03 | 5220.04 | 1927.04 | 5226.08 | 1927.06 |
| 5237.04 | 1927.06 | 5245.56 | 1927.04 | 5245.71 | 1927.03 | 5267.55 | 1927.03 | 5272.26 | 1927 |
| 5299.1 | 1926.52 | 5306.64 | 1926.41 | 5310.75 | 1926.34 | 5324.26 | 1926.19 | 5331.25 | 1926.2 |
| 5334.33 | 1926.18 | 5337.85 | 1926.19 | 5342.43 | 1926.27 | 5354.74 | 1926.52 | 5355.3 | 1926.52 |
| 5358.71 | 1926.64 | 5363.08 | 1926.69 | 5366.6 | 1926.69 | 5370.59 | 1927 | 5374.36 | 1927.25 |
| 5388.12 | 1928 | 5396.42 | 1928.59 | 5401.56 | 1928.92 | 5403.08 | 1929 | 5414.52 | 1929 |
| 5422.35 | 1930 | 5423.85 | 1930.17 | 5424.66 | 1930.32 | 5429.15 | 1931 | 5446.85 | 1931 |
| 5456.98 | 1931.13 | 5458.2 | 1931.11 | 5459.79 | 1931 | 5465.06 | 1930.87 | 5466.1 | 1930.88 |
| 5477.64 | 1930.08 | 5479.64 | 1930 | 5485.63 | 1929.99 | 5488.49 | 1929.87 | 5492.05 | 1929.77 |
| 5493.7 | 1929.76 | 5496.64 | 1929.66 | 5505.96 | 1929.46 | 5513.67 | 1929.25 | 5521.44 | 1929.14 |
| 5523.18 | 1929.15 | 5543.03 | 1929.08 | 5558.22 | 1929.01 | 5558.89 | 1929 | 5567.71 | 1929 |
| 5568.94 | 1929.04 | 5590.77 | 1929.82 | 5593.88 | 1929.88 | 5597.72 | 1929.86 | 5601.61 | 1929.78 |
| 5605.13 | 1929.67 | 5608.25 | 1929.55 | 5615.15 | 1929 | 5621.91 | 1928.93 | 5629.04 | 1929 |
| 5632.97 | 1929.3 | 5633.34 | 1929.29 | 5646.32 | 1929.51 | 5653.25 | 1929.62 | 5665.26 | 1929.58 |
| 5675.55 | 1929.57 | 5683.88 | 1929.71 | 5686.86 | 1929.68 | 5690.9 | 1929.6 | 5693.38 | 1929.71 |
| 5696.1 | 1929.54 | 5697.16 | 1929.59 | 5698.04 | 1929.53 | 5702.42 | 1929.44 | 5705.81 | 1929.39 |
| 5708.18 | 1929.3 | 5711.05 | 1929.13 | 5712.46 | 1929.09 | 5717.79 | 1928.25 | 5726.47 | 1927 |
| 5737.49 | 1927 | 5743.1 | 1927.38 | 5744.15 | 1927.44 | 5752.04 | 1928 | 5761.56 | 1928.44 |
| 5765.76 | 1928.62 | 5771.58 | 1929 | 5776.17 | 1929.7 | 5780.04 | 1930 | 5781.11 | 1930.57 |

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 5782.86 1931.06 5788.22    1932 5794.11 1932.87 5799.08 1933.63  5807.9    1935
 5814.37 1936.02    5820 1937.06 5825.24    1938 5832.13 1939.25 5838.64 1940.38
 5842.97    1941 5847.41 1941.42 5853.95    1942 5857.95 1942.43 5862.96    1943
 5871.89    1944 5873.63 1944.09 5886.33 1944.68 5890.77 1944.82  5892.8 1944.91
 5896.98 1944.93  5902.2  1944.9 5904.09 1944.87 5911.55 1944.85 5919.56  1944.9
 5924.53    1945 5930.78    1945

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .045       0     .04 5930.78    .045

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
             0 5930.78           161.54  161.54  161.54             .1       .3

CROSS SECTION OUTPUT  Profile #PF 1

  E.G. Elev (ft)           1931.54    Element                    Left OB    Channel   Right OB
  Vel Head (ft)               0.11    Wt. n-Val.                             0.040
  W.S. Elev (ft)           1931.43    Reach Len. (ft)            161.54     161.54     161.54
  Crit W.S. (ft)                      Flow Area (sq ft)                    8284.33
  E.G. Slope (ft/ft)       0.002306   Area (sq ft)                         8284.33
  Q Total (cfs)           22400.00    Flow (cfs)                          22400.00
  Top Width (ft)           4436.47    Top Width (ft)                       4436.47
  Vel Total (ft/s)            2.70    Avg. Vel. (ft/s)                        2.70
  Max Chl Dpth (ft)           5.43    Hydr. Depth (ft)                        1.87
  Conv. Total (cfs)       466475.7    Conv. (cfs)                         466475.7
  Length Wtd. (ft)          161.54    Wetted Per. (ft)                     4439.18
  Min Ch El (ft)           1926.00    Shear (lb/sq ft)                        0.27
  Alpha                       1.00    Stream Power (lb/ft s)   5930.78       0.00       0.00
  Frctn Loss (ft)             0.37    Cum Volume (acre-ft)                 1960.98
  C & E Loss (ft)             0.00    Cum SA (acres)                        928.92


Warning: Divided flow computed for this cross-section.

CROSS SECTION


RIVER: MOJAVE
REACH: MOJAVE             RS: -8658.18

INPUT
Description:
Station Elevation Data    num=     412
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0 1937.12  1318.2 1931.38 1323.17 1931.28 1337.91 1930.93 1338.16 1930.92
 1360.56 1930.39 1360.69 1930.39 1363.11 1929.89 1370.59 1929.94 1378.12    1930
 1487.91    1930 1489.05 1929.73  1490.8    1929 1510.44    1929 1514.18 1929.62
  1517.4    1930 1520.69    1930 1556.04 1930.37 1577.18 1930.57  1586.5 1930.67
 1615.07    1931 1718.73    1931 1719.31 1930.98 1757.05 1930.43 1763.76 1930.35
 1776.93 1930.17 1783.09 1930.09 1791.43    1930 1968.02    1930 1988.14 1930.05
 2007.03 1930.09 2009.54  1930.1 2019.06 1930.05 2025.07    1930 2040.07    1930
 2046.75 1930.01 2061.67 1930.01 2064.09 1930.02 2084.71 1930.02  2115.7 1930.01
 2125.48    1930 2145.11 1929.99 2159.56 1929.99 2198.91 1929.52 2199.77 1929.52
 2205.79 1929.39 2208.04 1929.36    2211  1929.3 2221.48    1929 2370.65    1929
 2372.71 1928.99 2380.69 1928.99  2393.8 1928.51 2407.86    1928  2421.6 1927.56
 2421.82 1927.56 2438.02 1927.19 2448.68 1927.37 2449.84 1927.43 2453.86 1927.58
 2465.91    1928 2475.96 1928.23  2481.4 1928.37 2495.66 1928.69 2511.78    1929
  2539.9    1929 2574.05 1928.96 2599.06 1928.98 2611.16    1929 2621.51    1929
 2653.71 1929.45  2667.7 1929.64 2669.58 1929.64 2678.28 1929.51 2697.41 1929.21
  2699.5 1929.18 2708.91    1929 2728.52    1929    2735 1929.01  2742.1 1929.01
 2752.28  1929.5 2752.56  1929.5 2756.76 1929.81 2758.39  1929.9 2759.43    1930
 2763.65 1930.13 2768.19 1930.25 2771.57 1930.35 2782.36 1930.63 2783.76 1930.65
 2790.44 1930.59 2800.62 1930.47 2802.67 1930.33 2805.34  1930.2 2807.72 1930.04
 2808.85 1930.04 2810.15    1930 2813.78 1929.82 2817.97 1929.57 2818.71  1929.5
 2830.76    1929 2843.57    1929  2849.2 1929.31 2851.04 1929.32 2854.75 1929.39
 2862.75 1929.68 2867.45    1930 2869.07 1930.09 2871.51    1930 2913.41    1930
 2924.49 1929.83 2930.13 1929.76 2934.21 1929.72 2944.94 1929.65 2945.98 1929.65
 2965.21 1929.41 2971.74 1929.37 2988.14    1929 3005.52    1929 3019.71 1929.52
 3026.99 1929.79 3032.92    1930  3034.5 1930.02 3053.62 1930.55 3066.78    1931
 3086.03 1931.99 3086.27    1932 3114.83    1932 3122.17 1931.64 3135.02    1931
 3141.91 1930.99 3143.65 1930.98 3149.83 1930.98 3163.25 1930.72 3168.84 1930.62
 3180.84 1930.39    3197    1930  3197.9    1930 3249.87 1929.01 3252.23    1929
 3258.09    1929 3261.51 1928.99 3302.65 1928.99 3306.16    1929 3389.06    1929
 3389.35 1929.01 3409.27    1930 3443.72    1930 3462.71 1929.34 3467.98 1929.19
  3474.3    1929 3512.26    1929 3516.22 1929.05 3519.75    1929 3527.53    1929
  3533.3 1929.01 3547.57 1929.27 3563.06 1929.53 3565.93 1929.54 3571.55  1929.5
 3580.98 1929.66 3599.75    1930 3631.37    1930  3645.3 1930.77 3649.52 1930.87
 3650.53 1930.87 3655.87  1930.7 3659.21 1930.57 3660.55  1930.5 3668.08 1930.42
 3671.44  1930.3 3673.87 1930.26 3680.74 1930.04 3686.79    1930 3730.94    1930
 3750.64 1929.15 3752.65    1929 3765.96    1929  3774.1  1929.3 3794.07    1930
 3798.48 1930.13 3805.89 1930.36 3822.22 1930.84 3825.14 1930.91 3829.18 1930.95
 3833.23  1930.8 3847.51 1930.23 3851.08 1930.08 3853.52    1930 3855.85 1929.96
 3866.94 1929.84 3869.15 1929.85 3878.42  1929.7 3886.57 1929.61 3892.76 1929.47
 3900.19 1929.29 3901.49 1929.29  3904.7  1929.2 3907.17 1929.23 3917.86 1929.24
 3929.43 1929.27 3937.52 1929.37 3960.42 1929.57 3961.21 1929.57 3974.89 1929.79
 3985.64    1930 3986.62 1930.01 3997.87 1930.73 4002.16    1931 4006.31 1931.38
  4011.4 1931.42 4016.98 1931.07 4019.82    1931 4037.55    1931 4047.43 1930.99
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4060.29 | 1930.21 | 4067.31 | 1929.84 | 4071.11 | 1929.65 | 4077.86 | 1929.38 | 4086 | 1929.56 |
| 4103.84 | 1930 | 4107.83 | 1930 | 4116.73 | 1930.3 | 4118.2 | 1930.36 | 4129.61 | 1931 |
| 4135.53 | 1931 | 4147.52 | 1930.74 | 4182.11 | 1930 | 4227.18 | 1930 | 4233 | 1930.14 |
| 4262.85 | 1930.99 | 4263.06 | 1931 | 4268.04 | 1931 | 4273.89 | 1931.3 | 4279.31 | 1931.57 |
| 4283.67 | 1931.75 | 4290.39 | 1932 | 4297.38 | 1932.59 | 4299.84 | 1933 | 4307.07 | 1933.89 |
| 4308.16 | 1934 | 4311.34 | 1934 | 4314.06 | 1933.79 | 4317.82 | 1933.47 | 4318.39 | 1933.4 |
| 4323.31 | 1932.9 | 4326.25 | 1932.54 | 4331.23 | 1931.96 | 4334.07 | 1931.55 | 4338.24 | 1931 |
| 4344.62 | 1930.81 | 4365.47 | 1930.27 | 4373.87 | 1930 | 4377.39 | 1930 | 4385.75 | 1930.53 |
| 4393.82 | 1930.96 | 4405.06 | 1931.44 | 4409.97 | 1931.08 | 4412.39 | 1931.06 | 4415.75 | 1931 |
| 4421.19 | 1930.19 | 4422.81 | 1930 | 4424.18 | 1929.72 | 4427.49 | 1929 | 4432.1 | 1928.05 |
| 4436.75 | 1927 | 4469.2 | 1927 | 4490.07 | 1927.01 | 4498.62 | 1927 | 4782.69 | 1927 |
| 4787.67 | 1927.4 | 4788.63 | 1927.46 | 4799.81 | 1928 | 4877.26 | 1928 | 4881.37 | 1927.8 |
| 4889.62 | 1927.45 | 4899.58 | 1927 | 4933.67 | 1927 | 4947.45 | 1927.22 | 4981.02 | 1927.35 |
| 5005.41 | 1927.43 | 5008.6 | 1927.41 | 5016.6 | 1927.49 | 5028.74 | 1927.62 | 5038.73 | 1927.82 |
| 5043.49 | 1927.93 | 5045.35 | 1928 | 5049.78 | 1928.21 | 5067.2 | 1929 | 5178.33 | 1929 |
| 5181.59 | 1928.99 | 5205.1 | 1928.17 | 5206.32 | 1928.15 | 5210.33 | 1928 | 5217.88 | 1927.73 |
| 5239.53 | 1927 | 5248.75 | 1926.81 | 5252.05 | 1926.76 | 5254.29 | 1926.71 | 5273.98 | 1926.38 |
| 5296.86 | 1926 | 5370.92 | 1926 | 5378.68 | 1926.26 | 5391.39 | 1926.66 | 5400.3 | 1926.98 |
| 5401.77 | 1927.01 | 5409.36 | 1927.37 | 5414.75 | 1927.61 | 5419.97 | 1927.76 | 5424.02 | 1927.86 |
| 5428.78 | 1928 | 5442.52 | 1928.27 | 5450.23 | 1928.58 | 5456.71 | 1928.75 | 5459.38 | 1928.72 |
| 5460.97 | 1929 | 5466.05 | 1930 | 5469.95 | 1930.73 | 5473.34 | 1931 | 5480.04 | 1931.71 |
| 5483.76 | 1932 | 5495.73 | 1932.03 | 5497.51 | 1932.03 | 5507.08 | 1932 | 5508.87 | 1931.85 |
| 5510.43 | 1931.79 | 5512.91 | 1931.64 | 5515.2 | 1931.53 | 5518.59 | 1931.42 | 5527.52 | 1931 |
| 5531.62 | 1930.75 | 5535.58 | 1930.52 | 5538.26 | 1930.35 | 5543.27 | 1929.99 | 5554.88 | 1929 |
| 5559.84 | 1929 | 5564.48 | 1928.7 | 5566.52 | 1928.72 | 5572.52 | 1928.72 | 5574.57 | 1929 |
| 5577.42 | 1929.34 | 5578.66 | 1929.45 | 5581.38 | 1929.6 | 5583.11 | 1929.64 | 5594.39 | 1930 |
| 5597.1 | 1930 | 5605.15 | 1930.02 | 5611.57 | 1930 | 5621.62 | 1929 | 5631.32 | 1928.1 |
| 5632.34 | 1928 | 5633.22 | 1927.96 | 5647.64 | 1927.38 | 5649.48 | 1927.35 | 5671.84 | 1927.17 |
| 5673.5 | 1927.15 | 5675.83 | 1927.09 | 5683.72 | 1927 | 5687.78 | 1927 | 5690.61 | 1927.09 |
| 5714.75 | 1928 | 5728.72 | 1929.06 | 5729.8 | 1929.15 | 5737.46 | 1929.73 | 5739.9 | 1929.84 |
| 5741.06 | 1929.84 | 5742.58 | 1929.79 | 5754.12 | 1929 | 5760.41 | 1928.99 | 5763.85 | 1929 |
| 5779.48 | 1930 | 5783.9 | 1930.39 | 5790.38 | 1931 | 5795.14 | 1931.44 | 5801.34 | 1931.68 |
| 5802.92 | 1931.77 | 5805.9 | 1931.91 | 5809.27 | 1932.05 | 5821.78 | 1932.51 | 5823.46 | 1932.56 |
| 5825.75 | 1932.6 | 5828.5 | 1932.87 | 5831.71 | 1932.87 | 5839.79 | 1933 | 5840.92 | 1933.1 |
| 5846.18 | 1933.97 | 5850.04 | 1934 | 5853.26 | 1934.31 | 5858.25 | 1935 | 5860.46 | 1935.41 |
| 5861.61 | 1935.65 | 5863.02 | 1935.9 | 5868.87 | 1936.59 | 5872.45 | 1936.98 | 5873.8 | 1937.22 |
| 5880.5 | 1938.81 | 5886.63 | 1940 | 5891.35 | 1940.41 | 5892.73 | 1940.59 | 5896.35 | 1941.22 |
| 5901.54 | 1942 | 5907.24 | 1942.36 | 5908.67 | 1942.44 | 5915.98 | 1943 | 5918.87 | 1943.01 |
| 5924.04 | 1943.01 | 5931.88 | 1943.1 | 5937.26 | 1943.17 | 5958.05 | 1943.31 | 5973 | 1943.4 |
| 5976.06 | 1943.46 | 5978.89 | 1943.48 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5978.89 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5978.89 | 221.52 | 221.52 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | Left OB | Channel | Right OB |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1931.17 | Element | | | |
| Vel Head (ft) | 0.12 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1931.05 | Reach Len. (ft) | 221.52 | 221.52 | 221.52 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8123.49 | |
| E.G. Slope (ft/ft) | 0.002315 | Area (sq ft) | | 8123.49 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 4237.70 | Top Width (ft) | | 4237.70 | |
| Vel Total (ft/s) | 2.76 | Avg. Vel. (ft/s) | | 2.76 | |
| Max Chl Dpth (ft) | 5.05 | Hydr. Depth (ft) | | 1.92 | |
| Conv. Total (cfs) | 465522.1 | Conv. (cfs) | | 465522.1 | |
| Length Wtd. (ft) | 221.52 | Wetted Per. (ft) | | 4239.84 | |
| Min Ch El (ft) | 1926.00 | Shear (lb/sq ft) | | 0.28 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5978.89 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.53 | Cum Volume (acre-ft) | | 1930.56 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 912.83 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -8879.7

INPUT
Description:
Station Elevation Data num= 430

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1936.9 | 1257.65 | 1929 | 1283.56 | 1929 | 1285.89 | 1929.03 | 1371.89 | 1930 |
| 1470.72 | 1930 | 1472.15 | 1929.38 | 1473.16 | 1929 | 1491.94 | 1929 | 1492.98 | 1929.77 |
| 1493.38 | 1930 | 1612.08 | 1930 | 1637.7 | 1930.26 | 1638.94 | 1930.28 | 1650.67 | 1930.28 |
| 1658.8 | 1930.23 | 1668.68 | 1930.13 | 1672.95 | 1930.07 | 1679.78 | 1930.01 | 1688.02 | 1930 |
| 1821.79 | 1930 | 1824.54 | 1929.97 | 1878.4 | 1929.71 | 1909.93 | 1929.57 | 1924.06 | 1929.63 |
| 1949.46 | 1929.54 | 1964.03 | 1929.55 | 1978.77 | 1929.58 | 1988.21 | 1929.53 | 2005.29 | 1929.62 |
| 2011.8 | 1929.66 | 2031.46 | 1929.92 | 2037.02 | 1930 | 2165.85 | 1930 | 2167.68 | 1929.93 |
| 2189.63 | 1929 | 2204.48 | 1928.43 | 2216.49 | 1928 | 2218.23 | 1928 | 2218.64 | 1927.96 |
| 2227.47 | 1927.76 | 2232.78 | 1927.55 | 2235.81 | 1927.52 | 2240.96 | 1927.68 | 2249.71 | 1927.66 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2259.25 | 1927.71 | 2270.6 | 1927.79 | 2273.89 | 1927.84 | 2294.98 | 1928 | 2304.64 | 1928 |
| 2310.84 | 1928.02 | 2318.9 | 1928.02 | 2331.84 | 1928 | 2334.55 | 1928.01 | 2342.59 | 1928.01 |
| 2350.53 | 1928 | 2380.59 | 1927.65 | 2384.01 | 1927.58 | 2395.26 | 1927.43 | 2396.7 | 1927.39 |
| 2400.93 | 1927.34 | 2402.37 | 1927.3 | 2408.09 | 1927.25 | 2410.09 | 1927.16 | 2412.28 | 1927.11 |
| 2415.81 | 1927 | 2427.18 | 1927 | 2429.73 | 1927.03 | 2432.72 | 1927.04 | 2439.67 | 1927.11 |
| 2445.5 | 1927.21 | 2463.58 | 1927.57 | 2465.7 | 1927.6 | 2471.99 | 1927.72 | 2486.16 | 1928 |
| 2491 | 1928.26 | 2495.38 | 1928.43 | 2498.08 | 1928.52 | 2503.95 | 1928.64 | 2512.58 | 1928.67 |
| 2520.82 | 1928.62 | 2526.1 | 1928.62 | 2533.58 | 1928.52 | 2541.07 | 1928.5 | 2544.79 | 1928.4 |
| 2547.11 | 1928.37 | 2549.13 | 1928.37 | 2552.93 | 1928.42 | 2569.73 | 1928.55 | 2589.23 | 1928.94 |
| 2600.46 | 1928.98 | 2600.87 | 1929 | 2717.87 | 1929 | 2725.82 | 1928.98 | 2732.93 | 1928.98 |
| 2739.94 | 1929 | 2753.34 | 1929 | 2758.65 | 1929.05 | 2762.37 | 1929 | 2763.66 | 1929.01 |
| 2779.14 | 1929.01 | 2785.88 | 1929 | 2792.41 | 1929 | 2802.36 | 1928.98 | 2809.96 | 1929 |
| 2844.79 | 1929 | 2850.96 | 1928.99 | 2857.14 | 1928.99 | 2857.23 | 1929 | 2883.62 | 1929 |
| 2905.16 | 1929.28 | 2905.87 | 1929.3 | 2915.15 | 1929.43 | 2925.84 | 1929.55 | 2932.89 | 1929.62 |
| 2947.09 | 1930 | 2948.82 | 1930.01 | 2965.16 | 1930.53 | 2978.17 | 1931 | 2981.03 | 1931 |
| 2983.41 | 1930.95 | 2985.25 | 1930.94 | 2988.32 | 1930.88 | 3014.62 | 1930.26 | 3024.18 | 1930.05 |
| 3026.13 | 1930 | 3038.46 | 1929.48 | 3042.82 | 1929.31 | 3049.9 | 1929.09 | 3053.63 | 1929 |
| 3058.59 | 1929 | 3068.67 | 1929.21 | 3073.63 | 1929.34 | 3084.79 | 1929.32 | 3096.92 | 1929.28 |
| 3100.1 | 1929.26 | 3103.26 | 1929.26 | 3105.32 | 1929.23 | 3117.04 | 1929.19 | 3124.32 | 1929.01 |
| 3131.32 | 1929.01 | 3136.41 | 1929 | 3206.76 | 1929 | 3207.62 | 1929.26 | 3209.56 | 1930 |
| 3213.42 | 1931.15 | 3216.42 | 1932 | 3218.25 | 1932.48 | 3220.66 | 1933 | 3221.69 | 1933.17 |
| 3224.58 | 1933.56 | 3228.45 | 1934 | 3230.95 | 1934.07 | 3233.44 | 1933.99 | 3235.2 | 1933.64 |
| 3237.99 | 1933 | 3243.59 | 1931.77 | 3246.84 | 1931 | 3250.94 | 1929.9 | 3253.9 | 1929 |
| 3255.46 | 1928.49 | 3256.74 | 1928 | 3261.44 | 1927.87 | 3262.32 | 1927.87 | 3269.6 | 1927.6 |
| 3270.13 | 1927.59 | 3280.61 | 1927.9 | 3282.82 | 1928 | 3285.3 | 1928.22 | 3293.05 | 1929 |
| 3300.07 | 1929.62 | 3300.5 | 1929.68 | 3304.09 | 1930 | 3315.52 | 1930.1 | 3319.81 | 1930.08 |
| 3323.93 | 1930.31 | 3326.87 | 1930.26 | 3332.6 | 1930.2 | 3340.01 | 1930 | 3388.97 | 1930 |
| 3397.07 | 1930.18 | 3405.28 | 1930.35 | 3410.33 | 1930.45 | 3420.48 | 1930.63 | 3420.9 | 1930.63 |
| 3431.34 | 1930.78 | 3434.48 | 1930.8 | 3437.91 | 1930.8 | 3474.86 | 1930.38 | 3475.21 | 1930.38 |
| 3489.76 | 1930.12 | 3495.68 | 1930.01 | 3496.91 | 1930 | 3510.81 | 1929.59 | 3521.71 | 1929.31 |
| 3526.16 | 1929.22 | 3529.29 | 1929.17 | 3534.56 | 1929.05 | 3542.33 | 1929.06 | 3552.87 | 1929.11 |
| 3569.18 | 1929 | 3622.02 | 1929 | 3627.94 | 1929.83 | 3635.19 | 1930.76 | 3637.25 | 1931 |
| 3641.1 | 1931.53 | 3643.44 | 1932 | 3647.07 | 1932.64 | 3654.96 | 1934 | 3660.87 | 1935 |
| 3661.71 | 1935 | 3667.37 | 1933.6 | 3677.68 | 1931 | 3681.81 | 1929.94 | 3685.13 | 1929 |
| 3780.66 | 1929 | 3797.75 | 1929.62 | 3799.14 | 1929.7 | 3806.58 | 1930 | 3869.26 | 1930 |
| 3873.03 | 1929.71 | 3880.12 | 1929.1 | 3881.48 | 1929 | 3889.14 | 1929 | 3898.93 | 1928.99 |
| 3929.59 | 1928.95 | 3939.63 | 1928.96 | 3952.66 | 1928.95 | 3970.97 | 1928.97 | 4000.3 | 1928.98 |
| 4054.79 | 1928.98 | 4075.17 | 1929 | 4115.21 | 1929 | 4123.67 | 1929.42 | 4133.3 | 1929.93 |
| 4135.77 | 1929.96 | 4136.62 | 1930 | 4154.74 | 1930.68 | 4163.11 | 1931 | 4228.13 | 1931 |
| 4233.13 | 1931.2 | 4246.99 | 1931.85 | 4250.09 | 1932 | 4270.81 | 1932.01 | 4288.8 | 1932 |
| 4298.98 | 1931.97 | 4308.88 | 1932 | 4319.2 | 1932.55 | 4328.13 | 1933 | 4335.75 | 1933 |
| 4340.47 | 1932.61 | 4345.08 | 1932.34 | 4351.3 | 1932.12 | 4351.92 | 1932 | 4355.89 | 1931 |
| 4359.76 | 1930.1 | 4364.29 | 1929 | 4368.17 | 1928 | 4369 | 1927.83 | 4371.36 | 1927.67 |
| 4373.02 | 1927.53 | 4376.32 | 1927.3 | 4379.37 | 1927.03 | 4381.41 | 1926.83 | 4382.26 | 1926.78 |
| 4387.57 | 1926.33 | 4388.15 | 1926.33 | 4390.76 | 1926.16 | 4392.75 | 1926.15 | 4395.19 | 1926.24 |
| 4399.08 | 1926.35 | 4419.39 | 1926.3 | 4444.98 | 1926.18 | 4455.67 | 1926 | 4501.43 | 1926 |
| 4514.05 | 1926.1 | 4522.32 | 1926.04 | 4529.95 | 1926.15 | 4531.99 | 1926.23 | 4545.2 | 1927 |
| 4712.31 | 1927 | 4715.64 | 1926.91 | 4734.97 | 1926.47 | 4742.53 | 1926.35 | 4751.55 | 1926 |
| 4764.78 | 1926 | 4771.52 | 1926.21 | 4782.6 | 1926.53 | 4786.4 | 1926.65 | 4792.42 | 1926.8 |
| 4798.52 | 1927 | 4819.34 | 1927.03 | 4830.01 | 1927.03 | 4847.06 | 1927.01 | 4847.46 | 1927 |
| 5016.47 | 1927 | 5081.63 | 1927.9 | 5086.84 | 1927.97 | 5093.16 | 1928 | 5114.18 | 1928 |
| 5130.7 | 1928.41 | 5138.57 | 1928.57 | 5143.27 | 1928.64 | 5153.04 | 1928.49 | 5157.55 | 1928.26 |
| 5161.46 | 1928.09 | 5165.03 | 1927.96 | 5183.42 | 1927 | 5190.41 | 1926.89 | 5214.58 | 1926.49 |
| 5246.53 | 1926 | 5247.04 | 1926 | 5254.72 | 1925.71 | 5263.84 | 1925.34 | 5265.98 | 1925.27 |
| 5269.67 | 1925.1 | 5272.43 | 1925.08 | 5276.61 | 1925.08 | 5278.82 | 1925.18 | 5281.06 | 1925.22 |
| 5282.92 | 1925.28 | 5292.43 | 1925.75 | 5298.21 | 1926 | 5300.78 | 1926 | 5312.78 | 1925.92 |
| 5317 | 1925.91 | 5320.72 | 1925.93 | 5325.95 | 1926 | 5328.43 | 1926.02 | 5334.2 | 1926.03 |
| 5337.65 | 1926.11 | 5351.26 | 1927 | 5367.03 | 1927.48 | 5379.24 | 1927.33 | 5392.51 | 1927.04 |
| 5400.96 | 1927.02 | 5413.24 | 1927.02 | 5425.61 | 1926.98 | 5430.63 | 1926.92 | 5436.56 | 1926.97 |
| 5439.48 | 1927.08 | 5459.51 | 1928 | 5466.81 | 1929 | 5468.15 | 1929.21 | 5470.2 | 1929.42 |
| 5473.35 | 1929.6 | 5474.81 | 1929.59 | 5478.3 | 1929.69 | 5480.79 | 1929.74 | 5483.14 | 1929.74 |
| 5486.12 | 1929.98 | 5490.85 | 1929.98 | 5491.13 | 1929.95 | 5501.3 | 1929.21 | 5504.61 | 1929 |
| 5521.53 | 1928.97 | 5528.64 | 1928.98 | 5535.44 | 1928.98 | 5546.06 | 1929 | 5547.6 | 1929.02 |
| 5550.06 | 1929.16 | 5555.06 | 1929.34 | 5559.5 | 1929.46 | 5565.89 | 1929.99 | 5567.66 | 1929.99 |
| 5584.28 | 1929.23 | 5587.75 | 1929 | 5594.94 | 1929 | 5597.91 | 1928.99 | 5606.15 | 1929 |
| 5615.92 | 1929.81 | 5618.4 | 1930 | 5628.62 | 1930 | 5629.12 | 1929.88 | 5635.37 | 1929 |
| 5641.86 | 1928 | 5645.35 | 1927.39 | 5646.98 | 1927 | 5650.94 | 1926.45 | 5652.5 | 1926.49 |
| 5656.42 | 1926.46 | 5661.39 | 1926.6 | 5662.74 | 1926.66 | 5673.14 | 1926.98 | 5675.19 | 1927.06 |
| 5690.26 | 1928 | 5695.51 | 1928.29 | 5708.74 | 1929 | 5717.35 | 1929.36 | 5730.49 | 1929.86 |
| 5734.51 | 1930 | 5745.65 | 1930.49 | 5756.29 | 1931 | 5757.31 | 1931 | 5758.42 | 1931.42 |
| 5758.91 | 1932 | 5760.03 | 1932.89 | 5760.37 | 1933 | 5764 | 1933.55 | 5765.2 | 1933.71 |
| 5770.75 | 1934.54 | 5780.16 | 1936 | 5784.28 | 1937 | 5785.17 | 1937.3 | 5786.85 | 1937.94 |
| 5789.37 | 1938.77 | 5795.74 | 1940.65 | 5797.43 | 1941 | 5799.48 | 1941.32 | 5803.27 | 1942 |
| 5808.05 | 1942.55 | 5809.11 | 1942.71 | 5811.54 | 1943 | 5815.77 | 1943.34 | 5822.87 | 1944 |
| 5829.21 | 1944.46 | 5836.23 | 1945 | 5846.14 | 1945 | 5849.62 | 1944.9 | 5855.73 | 1944.6 |
| 5866.59 | 1944.01 | 5867.05 | 1944 | 5889.39 | 1944 | 5891.67 | 1943.97 | 5912.34 | 1943.74 |
| 5922.73 | 1943.72 | 5929.7 | 1943.72 | 5940.43 | 1943.71 | 5942.54 | 1943.7 | 5950.72 | 1943.72 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5950.72 | .045 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 0 | 5950.72 | 134.91 | 134.91 | 134.91 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| E.G. Elev (ft) | 1930.63 | Element | Left OB | Channel | Right OB |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Vel Head (ft) | 0.12 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1930.51 | Reach Len. (ft) | 134.91 | 134.91 | 134.91 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8033.15 | |
| E.G. Slope (ft/ft) | 0.002489 | Area (sq ft) | | 8033.15 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 4349.45 | Top Width (ft) | | 4349.45 | |
| Vel Total (ft/s) | 2.79 | Avg. Vel. (ft/s) | | 2.79 | |
| Max Chl Dpth (ft) | 5.43 | Hydr. Depth (ft) | | 1.85 | |
| Conv. Total (cfs) | 449002.9 | Conv. (cfs) | | 449002.9 | |
| Length Wtd. (ft) | 134.91 | Wetted Per. (ft) | | 4352.54 | |
| Min Ch El (ft) | 1925.08 | Shear (lb/sq ft) | | 0.29 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5950.72 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.38 | Cum Volume (acre-ft) | | 1889.48 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 891.00 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -9014.61

INPUT
Description:
Station Elevation Data num= 481

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1936.37 | 2.45 | 1936.36 | 156.94 | 1935.59 | 171.22 | 1935.53 | 171.5 | 1935.52 |
| 188.08 | 1935.45 | 193.08 | 1935.42 | 321.85 | 1934.81 | 327.69 | 1934.79 | 356.92 | 1934.7 |
| 366.49 | 1934.68 | 388.15 | 1934.58 | 447.65 | 1934.3 | 462.26 | 1934.24 | 508.82 | 1934.02 |
| 517.09 | 1933.99 | 533.09 | 1933.91 | 575.34 | 1933.72 | 600.87 | 1933.6 | 639.04 | 1933.43 |
| 669 | 1933.27 | 706.91 | 1933.07 | 718.91 | 1933.01 | 721.83 | 1933 | 731.64 | 1932.95 |
| 732.35 | 1932.94 | 771.32 | 1932.74 | 777.75 | 1932.7 | 780.53 | 1932.69 | 804.29 | 1932.56 |
| 810.99 | 1932.53 | 813.51 | 1932.51 | 848.75 | 1932.33 | 851.16 | 1932.31 | 856.4 | 1932.29 |
| 862.16 | 1932.26 | 872.27 | 1932.2 | 877.63 | 1932.18 | 882.44 | 1932.15 | 887.53 | 1932.13 |
| 889.72 | 1932.11 | 893.03 | 1932.1 | 921.39 | 1931.95 | 928.8 | 1931.95 | 947.65 | 1931.91 |
| 948.93 | 1931.91 | 976.85 | 1931.85 | 980.5 | 1931.85 | 980.94 | 1931.84 | 985.94 | 1931.84 |
| 986.03 | 1931.83 | 990.76 | 1931.83 | 991.28 | 1931.82 | 996.18 | 1931.82 | 996.78 | 1931.81 |
| 1002.3 | 1931.8 | 1006.19 | 1931.8 | 1016.97 | 1931.77 | 1020.98 | 1931.77 | 1028.37 | 1931.75 |
| 1031.84 | 1931.75 | 1047.99 | 1931.71 | 1072.01 | 1931.67 | 1231.33 | 1930.14 | 1231.77 | 1930.17 |
| 1232.54 | 1929.42 | 1233.06 | 1929 | 1237.89 | 1929.07 | 1245.95 | 1929.16 | 1316.04 | 1929.99 |
| 1316.56 | 1930 | 1450.29 | 1930 | 1455.69 | 1929.99 | 1459.83 | 1929.99 | 1463.87 | 1930 |
| 1469.38 | 1930 | 1472.37 | 1929.99 | 1474.03 | 1930 | 1574.53 | 1930 | 1590.59 | 1929.88 |
| 1609.92 | 1929.75 | 1669.28 | 1929.93 | 1690.66 | 1929.99 | 1691.68 | 1930 | 1738.82 | 1930 |
| 1753.11 | 1929.99 | 1764.44 | 1929.99 | 1766.44 | 1930 | 1783.38 | 1930 | 1783.82 | 1929.99 |
| 1801.25 | 1929.99 | 1828.73 | 1929.98 | 1852.7 | 1929.99 | 1856.85 | 1929.99 | 1864.71 | 1930 |
| 1893.02 | 1930 | 1893.85 | 1929.99 | 1902.82 | 1929.99 | 1906.32 | 1929.98 | 1910.8 | 1929.99 |
| 1918.27 | 1929.99 | 1947.36 | 1929.43 | 1958.25 | 1929.23 | 1959.25 | 1929.23 | 1966.53 | 1929.19 |
| 1980.08 | 1929.06 | 1982.81 | 1929 | 2121.51 | 1929 | 2128.4 | 1929.03 | 2129.89 | 1929.03 |
| 2143.94 | 1929.07 | 2157.58 | 1929.07 | 2183.7 | 1929 | 2191.53 | 1928.55 | 2203.92 | 1928 |
| 2214.5 | 1927 | 2322.93 | 1927 | 2323.53 | 1927.01 | 2352.53 | 1927.13 | 2352.92 | 1927.13 |
| 2363.43 | 1927 | 2402.42 | 1927 | 2409.58 | 1927.07 | 2450.75 | 1927.87 | 2453.74 | 1928 |
| 2455.21 | 1928.01 | 2457.55 | 1928.1 | 2462.67 | 1928.28 | 2473.15 | 1928.39 | 2475.32 | 1928.45 |
| 2477.99 | 1928.49 | 2479.58 | 1928.53 | 2482.31 | 1928.68 | 2485.49 | 1928.71 | 2488.65 | 1928.71 |
| 2495.32 | 1928.64 | 2500.88 | 1928.59 | 2510.74 | 1928.56 | 2518.77 | 1928.55 | 2521.91 | 1928.53 |
| 2526.04 | 1928.49 | 2532.42 | 1928.33 | 2533.76 | 1928.31 | 2543.88 | 1928 | 2551.58 | 1927.74 |
| 2557.55 | 1927.63 | 2569.65 | 1927 | 2584.73 | 1927 | 2602.59 | 1927.7 | 2608.97 | 1928 |
| 2618.96 | 1928.25 | 2637.3 | 1928.68 | 2640.54 | 1928.75 | 2653.89 | 1928.98 | 2658.51 | 1928.98 |
| 2665.73 | 1929 | 2671.83 | 1929.14 | 2684.35 | 1929.35 | 2692.39 | 1929.45 | 2697.71 | 1929.46 |
| 2698.59 | 1929.47 | 2704.68 | 1929.43 | 2712.89 | 1929.37 | 2723.02 | 1929.17 | 2728.65 | 1929.1 |
| 2740.46 | 1929.04 | 2747.95 | 1929.06 | 2765.56 | 1929 | 2805.05 | 1929 | 2806.53 | 1928.97 |
| 2816.93 | 1928.7 | 2829.1 | 1928.69 | 2842.36 | 1928.77 | 2843.33 | 1928.78 | 2844.54 | 1928.75 |
| 2845.75 | 1928.77 | 2850.71 | 1928.66 | 2855.9 | 1928.5 | 2859.79 | 1928.4 | 2869.13 | 1928.3 |
| 2872.64 | 1928.21 | 2879.3 | 1928.14 | 2885.1 | 1928 | 2938.54 | 1928 | 2950.18 | 1928.39 |
| 2966.26 | 1928.75 | 2969.77 | 1928.86 | 2976.25 | 1928.9 | 2982.92 | 1928.93 | 2989.99 | 1928.68 |
| 2996.09 | 1928.62 | 3010.64 | 1928.55 | 3022.87 | 1928.52 | 3023.94 | 1928.54 | 3026.8 | 1928.56 |
| 3028.96 | 1928.55 | 3042.18 | 1928.93 | 3044.76 | 1928.94 | 3057.94 | 1928.94 | 3063.37 | 1928.95 |
| 3065.62 | 1928.86 | 3083.91 | 1928.17 | 3086.86 | 1928.13 | 3101.17 | 1928.07 | 3103.85 | 1928.01 |
| 3108.33 | 1928 | 3117.97 | 1927.67 | 3136.56 | 1927 | 3182.92 | 1927 | 3188.74 | 1927.32 |
| 3198.21 | 1927.86 | 3201.12 | 1928 | 3207.38 | 1928.26 | 3216.96 | 1928.65 | 3226.91 | 1929 |
| 3255.18 | 1929 | 3256.5 | 1929.01 | 3276.51 | 1929.01 | 3281.04 | 1929 | 3327.5 | 1929 |
| 3340.04 | 1929.65 | 3347.23 | 1930 | 3353.73 | 1930.54 | 3357.46 | 1930.82 | 3358.59 | 1930.88 |
| 3359.79 | 1930.98 | 3361.81 | 1930.97 | 3362.86 | 1930.99 | 3369.72 | 1930.93 | 3376.43 | 1930.77 |
| 3378.83 | 1930.69 | 3393.05 | 1930.48 | 3399.71 | 1930.13 | 3400.72 | 1930.12 | 3402.39 | 1930 |
| 3467.1 | 1930 | 3474.81 | 1930.11 | 3484.95 | 1930.24 | 3486.96 | 1930.22 | 3495.03 | 1930.24 |
| 3504.02 | 1930.2 | 3515.27 | 1930.05 | 3517.02 | 1930 | 3536.9 | 1929.65 | 3538.56 | 1929.63 |
| 3547.77 | 1929.44 | 3569.82 | 1929 | 3613.34 | 1929 | 3616.77 | 1929.79 | 3622.95 | 1931.29 |
| 3628.44 | 1932.64 | 3633.82 | 1934 | 3634.72 | 1934.28 | 3636.09 | 1934.64 | 3637.59 | 1934.97 |
| 3638.23 | 1934.94 | 3639.7 | 1934.67 | 3641 | 1934.37 | 3642.31 | 1934 | 3645.94 | 1933.19 |
| 3646.68 | 1933 | 3650.25 | 1932.21 | 3651.12 | 1932 | 3654.37 | 1931.28 | 3659.84 | 1930 |
| 3660.91 | 1929.78 | 3662.74 | 1929.47 | 3668.37 | 1929 | 3672.79 | 1929 | 3675.14 | 1929.1 |
| 3686.22 | 1929.53 | 3690.01 | 1929.57 | 3694.29 | 1929.5 | 3699.37 | 1929.24 | 3702.94 | 1929.03 |
| 3704.71 | 1929 | 3891.11 | 1929 | 3892.64 | 1929.02 | 3903.07 | 1929.44 | 3909.11 | 1929.65 |
| 3914.5 | 1929.65 | 3918.48 | 1929.79 | 3920.18 | 1929.84 | 3923.67 | 1929.81 | 3932.11 | 1929.62 |
| 3948.92 | 1929 | 4002.86 | 1929 | 4010.6 | 1929.1 | 4011.63 | 1929.08 | 4017.65 | 1929 |
| 4024.73 | 1929.01 | 4025.1 | 1929 | 4099.37 | 1929 | 4110.88 | 1929.8 | 4112.99 | 1929.92 |
| 4114.82 | 1930 | 4127.39 | 1930.39 | 4128.78 | 1930.45 | 4131.79 | 1930.55 | 4140.35 | 1930.79 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4141.69 | 1930.84 | 4148.25 | 1931 | 4158.02 | 1931 | 4171.74 | 1930.01 | 4174.26 | 1929.91 |
| 4195.56 | 1929 | 4205.93 | 1929 | 4210.68 | 1929.12 | 4224.26 | 1929.29 | 4280.19 | 1930 |
| 4308.84 | 1930 | 4313.56 | 1929.65 | 4316.74 | 1929.45 | 4319.41 | 1929.2 | 4321.14 | 1929.02 |
| 4321.95 | 1929 | 4323.08 | 1928.85 | 4328.95 | 1928 | 4331.34 | 1927.68 | 4338.56 | 1926.78 |
| 4344.52 | 1926 | 4358.61 | 1925.99 | 4396.37 | 1925.99 | 4413.38 | 1926 | 4417.06 | 1926.15 |
| 4423.05 | 1926.41 | 4437.03 | 1926.98 | 4437.38 | 1927 | 4596.9 | 1927 | 4602.32 | 1926.96 |
| 4606.01 | 1927 | 4611.76 | 1927 | 4614.54 | 1926.99 | 4616.52 | 1927 | 4692.22 | 1927 |
| 4693.94 | 1926.92 | 4710.11 | 1926 | 4764.8 | 1926 | 4770.74 | 1926.32 | 4772.52 | 1926.32 |
| 4779.93 | 1926.44 | 4788.6 | 1926.62 | 4805.45 | 1927 | 4870.67 | 1927 | 4870.94 | 1926.97 |
| 4874.71 | 1926.89 | 4875.85 | 1926.85 | 4894.4 | 1926.35 | 4896.03 | 1926.31 | 4900.27 | 1926.23 |
| 4903.41 | 1926.15 | 4906.52 | 1926.12 | 4909.55 | 1926.12 | 4910.84 | 1926.14 | 4917.43 | 1926.3 |
| 4929.4 | 1926.53 | 4931.84 | 1926.59 | 4949.48 | 1926.99 | 4962.33 | 1927.11 | 4970.55 | 1927.15 |
| 4978.49 | 1927.2 | 4994.54 | 1927.31 | 5030.95 | 1927.55 | 5048.23 | 1927.67 | 5054.74 | 1927.72 |
| 5058.64 | 1927.74 | 5084.89 | 1927.92 | 5096.3 | 1928 | 5110.75 | 1928 | 5117.18 | 1927.74 |
| 5119.14 | 1927.65 | 5128.34 | 1927.19 | 5132.27 | 1927 | 5157.64 | 1926.54 | 5167.12 | 1926.38 |
| 5174.62 | 1926.14 | 5179.23 | 1926 | 5194.39 | 1925.37 | 5200.16 | 1925.14 | 5204.29 | 1925 |
| 5269.55 | 1925 | 5272.25 | 1925.13 | 5278.67 | 1925.57 | 5281.18 | 1925.73 | 5284.65 | 1926 |
| 5291.62 | 1926.45 | 5300.22 | 1927 | 5303.79 | 1927.01 | 5330.85 | 1927.13 | 5341.2 | 1927.09 |
| 5344.76 | 1927.07 | 5346.85 | 1927.07 | 5349.64 | 1927.05 | 5360.31 | 1927 | 5371.78 | 1926.97 |
| 5376.47 | 1926.97 | 5381.91 | 1926.98 | 5400.61 | 1926.99 | 5404.29 | 1927 | 5406.55 | 1926.33 |
| 5408.19 | 1926.41 | 5411.57 | 1927 | 5417.49 | 1928 | 5423.13 | 1929.04 | 5428.02 | 1930 |
| 5432.68 | 1930.86 | 5434.28 | 1931 | 5461.24 | 1931 | 5463.61 | 1930.93 | 5465.67 | 1930.84 |
| 5475.09 | 1930.27 | 5478 | 1930 | 5479.26 | 1929.86 | 5483.22 | 1929.38 | 5484.91 | 1929.25 |
| 5486.09 | 1929.29 | 5487.96 | 1929.39 | 5489.58 | 1929.61 | 5491.83 | 1930 | 5493.31 | 1930.07 |
| 5496.21 | 1930.15 | 5498.23 | 1930.12 | 5500.47 | 1930.25 | 5502.65 | 1930.27 | 5509.27 | 1930.13 |
| 5513.97 | 1930.01 | 5518.12 | 1930 | 5534.46 | 1929 | 5538.65 | 1928.75 | 5546.36 | 1928.59 |
| 5551.46 | 1928.5 | 5560.34 | 1928.02 | 5560.83 | 1928 | 5567.1 | 1927.56 | 5570.17 | 1927.43 |
| 5579.27 | 1927 | 5619.14 | 1927 | 5626.09 | 1927.35 | 5640.94 | 1928 | 5645 | 1928.55 |
| 5650.12 | 1929 | 5654.03 | 1929.32 | 5662.56 | 1930 | 5678.84 | 1931 | 5687.08 | 1931.36 |
| 5693.86 | 1931.62 | 5702.56 | 1932 | 5706.68 | 1932 | 5711.49 | 1933 | 5714.21 | 1933.59 |
| 5716.17 | 1934 | 5720.7 | 1934.92 | 5722.41 | 1935.28 | 5725.44 | 1936 | 5728.8 | 1936.5 |
| 5731.95 | 1937 | 5733.58 | 1937.4 | 5735.83 | 1938 | 5738.4 | 1938.82 | 5739.23 | 1939.05 |
| 5740.72 | 1939.4 | 5743.63 | 1940 | 5747.37 | 1940.86 | 5747.88 | 1941 | 5749.89 | 1941.02 |
| 5751.27 | 1941.01 | 5753.73 | 1941.42 | 5754.44 | 1941.5 | 5760.43 | 1942.45 | 5763.5 | 1942.69 |
| 5765.96 | 1942.9 | 5776.64 | 1943.57 | 5777.73 | 1943.59 | 5784.57 | 1943.68 | 5785.34 | 1943.72 |
| 5798.11 | 1943.86 | 5799.35 | 1943.91 | 5805.44 | 1943.99 | 5806.81 | 1943.97 | 5808.69 | 1944 |
| 5885.73 | 1944 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5885.73 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5885.73 | 111.79 | 111.79 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1930.25 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.15 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1930.10 | Reach Len. (ft) | 111.79 | 111.79 | 111.79 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7266.36 | | |
| E.G. Slope (ft/ft) | 0.003301 | Area (sq ft) | | 7266.36 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 4183.69 | Top Width (ft) | | 4183.69 | | |
| Vel Total (ft/s) | 3.08 | Avg. Vel. (ft/s) | | 3.08 | | |
| Max Chl Dpth (ft) | 5.10 | Hydr. Depth (ft) | | 1.74 | | |
| Conv. Total (cfs) | 389881.2 | Conv. (cfs) | | 389881.2 | | |
| Length Wtd. (ft) | 111.79 | Wetted Per. (ft) | | 4185.97 | | |
| Min Ch El (ft) | 1925.00 | Shear (lb/sq ft) | | 0.36 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5885.73 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.34 | Cum Volume (acre-ft) | | 1865.79 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 877.79 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -9126.4

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1935.96 | 33.97 | 1935.81 | 50.34 | 1935.74 | 73.21 | 1935.65 | 125.44 | 1935.4 |
| 297.72 | 1934.55 | 303.27 | 1934.53 | 313.92 | 1934.47 | 315.81 | 1934.47 | 452.21 | 1933.81 |
| 478.58 | 1933.73 | 494.17 | 1933.69 | 505.63 | 1933.65 | 531.56 | 1933.53 | 573.62 | 1933.34 |
| 583.51 | 1933.3 | 585.88 | 1933.28 | 600.78 | 1933.22 | 638.56 | 1933.04 | 642.23 | 1933.03 |
| 655.69 | 1932.96 | 663.96 | 1932.93 | 666.93 | 1932.91 | 700.66 | 1932.76 | 730.2 | 1932.62 |
| 770.8 | 1932.43 | 794.49 | 1932.3 | 837.06 | 1932.08 | 851.64 | 1932.01 | 890.73 | 1931.8 |
| 893.87 | 1931.79 | 926.03 | 1931.61 | 931.06 | 1931.59 | 955.68 | 1931.45 | 970.66 | 1931.38 |
| 993.92 | 1931.26 | 1023.37 | 1931.1 | 1031.59 | 1931.1 | 1052.48 | 1931.06 | 1053.9 | 1931.05 |
| 1094.43 | 1930.97 | 1124.89 | 1930.92 | 1145.76 | 1930.87 | 1150.02 | 1930.87 | 1170.07 | 1930.83 |
| 1176.16 | 1930.81 | 1190.41 | 1930.79 | 1221.21 | 1930.73 | 1226.98 | 1930.26 | 1228.44 | 1929.59 |
| 1236.33 | 1929.68 | 1238.8 | 1929.67 | 1271.94 | 1929.88 | 1288.32 | 1929.99 | 1306.92 | 1929.99 |
| 1310.73 | 1930 | 1426.16 | 1930 | 1433.96 | 1929.64 | 1447.98 | 1929.62 | 1462.86 | 1929.68 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1469.09 | 1930 | 1528.12 | 1930 | 1554.4 | 1929.99 | 1567.63 | 1930 | 1621.87 | 1930 |
| 1625.28 | 1929.95 | 1693.53 | 1929 | 1735.76 | 1929 | 1797.32 | 1929.95 | 1802.49 | 1930 |
| 1814.59 | 1930 | 1815.14 | 1929.99 | 1847.85 | 1929.65 | 1864.17 | 1929.49 | 1871.68 | 1929.49 |
| 1880.1 | 1929.53 | 1886.44 | 1929.52 | 1893.71 | 1929.62 | 1897.97 | 1929.61 | 1900.46 | 1929.64 |
| 1914.22 | 1930 | 1963.7 | 1930 | 1970.66 | 1929.78 | 1974.15 | 1929.75 | 1987.38 | 1929.45 |
| 1996.03 | 1929.4 | 2007.63 | 1929.23 | 2016.07 | 1929 | 2040.73 | 1929 | 2044.68 | 1928.85 |
| 2047.7 | 1928.76 | 2054.18 | 1928.54 | 2063.07 | 1928.31 | 2068.69 | 1928.24 | 2086.04 | 1928 |
| 2094.24 | 1927.97 | 2104.05 | 1927.82 | 2120.63 | 1927.68 | 2125.23 | 1927.68 | 2134.77 | 1927.62 |
| 2158.5 | 1927.27 | 2159.49 | 1927.24 | 2171.91 | 1927 | 2185.29 | 1926 | 2185.67 | 1926 |
| 2194.89 | 1926.54 | 2201.72 | 1926.52 | 2228.24 | 1926.99 | 2237.56 | 1926.99 | 2240.46 | 1927 |
| 2398.17 | 1927 | 2400.19 | 1927.06 | 2430.5 | 1927.89 | 2437.15 | 1928 | 2482.15 | 1928 |
| 2494.6 | 1927.84 | 2506.51 | 1927.73 | 2514.09 | 1927.62 | 2516.49 | 1927.57 | 2535.56 | 1927.53 |
| 2557.17 | 1927.64 | 2562.53 | 1927.65 | 2564.05 | 1927.69 | 2568.26 | 1927.69 | 2577.39 | 1927.9 |
| 2581.02 | 1928 | 2617.89 | 1928 | 2632.51 | 1927.45 | 2642.27 | 1927.43 | 2652.91 | 1927.5 |
| 2668.85 | 1928 | 2684.12 | 1928.73 | 2687.27 | 1928.84 | 2690.09 | 1928.82 | 2700.8 | 1929 |
| 2763.93 | 1929 | 2766.21 | 1929.04 | 2768 | 1929.03 | 2780.53 | 1929.1 | 2791.09 | 1929.11 |
| 2803.01 | 1929.08 | 2804.14 | 1929.07 | 2816.25 | 1929.06 | 2831.06 | 1929 | 2959.22 | 1929 |
| 2968.21 | 1928.99 | 2980.32 | 1928.99 | 2982.24 | 1929 | 2993.59 | 1929 | 2996.22 | 1929.03 |
| 3009.18 | 1929.64 | 3016.15 | 1929.88 | 3018.1 | 1929.87 | 3020.98 | 1929.77 | 3024.51 | 1929.78 |
| 3024.99 | 1929.74 | 3028.76 | 1929.73 | 3030.05 | 1929.7 | 3039.96 | 1929.64 | 3042.34 | 1929.66 |
| 3044.29 | 1929.6 | 3050.25 | 1929.22 | 3053.41 | 1929 | 3073.64 | 1929 | 3089.47 | 1929.04 |
| 3100.39 | 1929.02 | 3102.61 | 1929 | 3106.49 | 1928.83 | 3119.79 | 1928 | 3123.76 | 1927.67 |
| 3138.75 | 1926.33 | 3142.25 | 1926 | 3148.06 | 1926 | 3148.91 | 1926.1 | 3157.49 | 1927 |
| 3162.65 | 1927.58 | 3166.72 | 1928 | 3178.46 | 1928.66 | 3186.58 | 1929 | 3193.59 | 1929.02 |
| 3198.88 | 1929.02 | 3207.78 | 1929 | 3222.69 | 1929 | 3226.05 | 1929.09 | 3231.66 | 1929.06 |
| 3257.77 | 1929.75 | 3265.68 | 1930 | 3277.59 | 1930 | 3289.61 | 1929.7 | 3295.52 | 1929.53 |
| 3312.66 | 1929.29 | 3318.07 | 1929.46 | 3324.77 | 1929.9 | 3325.47 | 1929.91 | 3332.12 | 1930.8 |
| 3341.48 | 1932 | 3355.41 | 1932.81 | 3358.94 | 1933 | 3368.89 | 1933.05 | 3375.75 | 1933 |
| 3383.23 | 1932.39 | 3388.45 | 1932 | 3389.69 | 1931.84 | 3394.34 | 1931 | 3397.37 | 1930.5 |
| 3408.64 | 1929.38 | 3411.73 | 1929.55 | 3416.82 | 1929.96 | 3419.88 | 1930 | 3422.65 | 1930.22 |
| 3430.33 | 1930.61 | 3435.73 | 1930.44 | 3443.32 | 1930.05 | 3446.08 | 1930 | 3448.89 | 1929.98 |
| 3454.35 | 1929.97 | 3458.91 | 1929.99 | 3472.68 | 1930 | 3486.81 | 1930.31 | 3494.9 | 1930.51 |
| 3505.39 | 1930.73 | 3514.21 | 1930.89 | 3518.1 | 1931 | 3528.21 | 1931 | 3538.92 | 1930.74 |
| 3552.61 | 1930.44 | 3566.62 | 1930.05 | 3571.91 | 1930 | 3581.3 | 1929.51 | 3588.71 | 1929 |
| 3597.51 | 1928.34 | 3609.77 | 1927.47 | 3613.85 | 1927.19 | 3616.92 | 1927 | 3628.6 | 1927 |
| 3632.05 | 1927.38 | 3641.61 | 1928.32 | 3648.71 | 1929 | 3651.7 | 1929.44 | 3653.49 | 1929.64 |
| 3654.68 | 1929.7 | 3657.42 | 1929.67 | 3658.97 | 1929.71 | 3661.32 | 1929.7 | 3664.47 | 1929.61 |
| 3670.39 | 1929.53 | 3673.65 | 1929.39 | 3675.44 | 1929.38 | 3677.23 | 1929.04 | 3685.31 | 1929.03 |
| 3692.35 | 1929 | 3707.66 | 1929 | 3711.03 | 1929.02 | 3720.66 | 1929.03 | 3722.66 | 1929.05 |
| 3733.44 | 1929.09 | 3739.66 | 1929.07 | 3743.68 | 1929.07 | 3757.3 | 1929 | 3762.76 | 1928.79 |
| 3774.58 | 1928.4 | 3783.03 | 1928 | 3787.71 | 1927.68 | 3798.04 | 1927 | 3828.69 | 1927 |
| 3835.64 | 1927.13 | 3837.6 | 1927.19 | 3851.89 | 1927.45 | 3859.66 | 1927.57 | 3863.92 | 1927.79 |
| 3868.72 | 1928 | 3889.3 | 1928 | 3912.79 | 1927.44 | 3917.6 | 1927.31 | 3926.61 | 1927.17 |
| 3930.82 | 1927.12 | 3935.99 | 1927.2 | 3939.35 | 1927.23 | 3944.53 | 1927.37 | 3966.41 | 1927.98 |
| 3967.77 | 1928.04 | 3980.1 | 1928.7 | 3982.32 | 1928.75 | 3993.31 | 1928.96 | 3997.65 | 1929.05 |
| 4001.28 | 1929.15 | 4003.29 | 1929.24 | 4013.38 | 1929.49 | 4018.58 | 1929.61 | 4036.32 | 1929.22 |
| 4036.38 | 1929.21 | 4048.76 | 1928.65 | 4062.38 | 1928 | 4073.57 | 1927.55 | 4085.65 | 1927.49 |
| 4095.92 | 1927.47 | 4102.48 | 1927.7 | 4107.46 | 1928 | 4129.04 | 1929 | 4137.46 | 1929.02 |
| 4150.33 | 1929.06 | 4153.58 | 1929.06 | 4172.3 | 1929 | 4210.71 | 1928.99 | 4262.31 | 1928.99 |
| 4277.94 | 1928.47 | 4278.25 | 1928.47 | 4285.9 | 1928 | 4297.24 | 1927.07 | 4299.7 | 1926.89 |
| 4310.44 | 1926 | 4325.15 | 1925.27 | 4330.16 | 1925 | 4332.78 | 1925 | 4338.55 | 1925.27 |
| 4359.05 | 1926 | 4372.72 | 1926.04 | 4384.42 | 1926.08 | 4390.44 | 1926.11 | 4393.02 | 1926.11 |
| 4398.97 | 1926.14 | 4407.92 | 1926.12 | 4424.75 | 1926.21 | 4429.74 | 1926.26 | 4437.37 | 1926.37 |
| 4438.97 | 1926.24 | 4441.28 | 1926 | 4443.45 | 1926 | 4450.99 | 1926.46 | 4453.69 | 1926.66 |
| 4459.43 | 1927 | 4522.09 | 1927 | 4555.96 | 1926.23 | 4566.29 | 1926 | 4586.66 | 1926 |
| 4598.51 | 1927 | 4691.68 | 1927 | 4695.13 | 1926.86 | 4708.43 | 1926.22 | 4712.68 | 1926 |
| 4729.44 | 1926 | 4745.36 | 1925.99 | 4754.07 | 1925.99 | 4763.86 | 1926 | 4790.89 | 1926 |
| 4800.83 | 1926.38 | 4806.71 | 1926.43 | 4814.79 | 1926.52 | 4824.37 | 1926.68 | 4829.22 | 1926.77 |
| 4845.2 | 1927 | 4870.34 | 1927 | 4873.87 | 1926.97 | 4879.71 | 1926.88 | 4914.5 | 1926.64 |
| 4940.58 | 1926.66 | 4944.4 | 1926.81 | 4948.73 | 1927 | 4966.77 | 1927 | 5002.46 | 1927.01 |
| 5029.46 | 1927.01 | 5031.86 | 1927 | 5049.42 | 1927.01 | 5055.23 | 1927.02 | 5056.44 | 1927 |
| 5080.61 | 1927 | 5082.23 | 1927.04 | 5084.16 | 1927 | 5094.82 | 1926 | 5101.8 | 1925.41 |
| 5106.34 | 1925 | 5118.05 | 1924.98 | 5123.86 | 1924.99 | 5131.78 | 1924.99 | 5135.4 | 1925 |
| 5137.54 | 1924.98 | 5150.58 | 1924.97 | 5155.3 | 1924.99 | 5170.5 | 1924.99 | 5176.39 | 1925 |
| 5193.5 | 1925.01 | 5209.5 | 1925 | 5222.12 | 1925 | 5227.11 | 1925.3 | 5236.96 | 1925.96 |
| 5259.98 | 1926.65 | 5269.02 | 1926.91 | 5273.43 | 1927 | 5279.69 | 1927.01 | 5288.82 | 1927.01 |
| 5292.87 | 1927 | 5303.18 | 1927 | 5318.71 | 1927.01 | 5320.14 | 1927 | 5345.36 | 1926.99 |
| 5374.15 | 1926.99 | 5386.53 | 1927 | 5404.16 | 1927 | 5404.39 | 1927.12 | 5407.26 | 1928 |
| 5408.88 | 1928.18 | 5415.39 | 1928.57 | 5422.25 | 1929 | 5424.42 | 1929.2 | 5428.86 | 1929.66 |
| 5429.82 | 1929.69 | 5430.85 | 1929.8 | 5441.05 | 1929.94 | 5442.36 | 1930 | 5474.94 | 1930 |
| 5478.98 | 1929.79 | 5498.03 | 1929 | 5502.44 | 1928.99 | 5521.66 | 1928.09 | 5530.16 | 1927.63 |
| 5541.98 | 1927 | 5552.54 | 1926.32 | 5557.85 | 1926 | 5576.3 | 1926 | 5586.02 | 1926.45 |
| 5591.42 | 1926.61 | 5602.8 | 1926.98 | 5608.85 | 1927 | 5615.53 | 1927.14 | 5619.52 | 1927.04 |
| 5619.93 | 1927.09 | 5624.33 | 1927.97 | 5626.76 | 1928 | 5630.88 | 1928.48 | 5634.83 | 1929 |
| 5641.14 | 1930 | 5642.07 | 1930.07 | 5656.75 | 1930.96 | 5664.18 | 1931.34 | 5677.36 | 1932 |
| 5677.68 | 1932 | 5680.35 | 1933.28 | 5682.27 | 1934 | 5683.86 | 1934.52 | 5688.74 | 1936 |
| 5691.62 | 1937.08 | 5693.71 | 1937.29 | 5695.42 | 1937.33 | 5699.03 | 1936.82 | 5700.38 | 1936.77 |
| 5703.82 | 1938.27 | 5708.6 | 1940.18 | 5709.11 | 1940.41 | 5709.97 | 1940.63 | 5710.37 | 1940.91 |
| 5712.73 | 1941.97 | 5713.52 | 1942.09 | 5713.94 | 1941.97 | 5714.68 | 1941.49 | 5715.42 | 1941.27 |
| 5717.78 | 1941.18 | 5719.21 | 1940.95 | 5719.63 | 1940.76 | 5721.01 | 1939.58 | 5724.72 | 1938 |
| 5725.84 | 1937.28 | 5726.85 | 1936.82 | 5728.81 | 1937 | 5729.42 | 1937 | 5732.6 | 1937.3 |
| 5735.38 | 1937.82 | 5742.43 | 1938 | 5745.12 | 1938.42 | 5746.14 | 1939.04 | 5746.82 | 1939.34 |
| 5747.83 | 1939.63 | 5749.92 | 1939.97 | 5751.84 | 1939.99 | 5754.56 | 1939.73 | 5756.19 | 1939.67 |
| 5757.79 | 1939.78 | 5761.44 | 1940.23 | 5764.42 | 1940.52 | 5768.36 | 1940.77 | 5774.89 | 1940.97 |
| 5777.04 | 1941.14 | 5780.64 | 1941.96 | 5785.75 | 1942 | 5786.81 | 1942.07 | 5798.07 | 1943 |
| 5812.88 | 1943 | 5819.6 | 1943.96 | 5821.63 | 1944.22 | 5828.6 | 1945 | 5839.33 | 1945 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5839.33 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5839.33 | 121.55 | 121.55 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1929.90 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.15 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1929.75 | Reach Len. (ft) | 121.55 | 121.55 | 121.55 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7136.71 | | |
| E.G. Slope (ft/ft) | 0.002863 | Area (sq ft) | | 7136.71 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3594.65 | Top Width (ft) | | 3594.65 | | |
| Vel Total (ft/s) | 3.14 | Avg. Vel. (ft/s) | | 3.14 | | |
| Max Chl Dpth (ft) | 4.78 | Hydr. Depth (ft) | | 1.99 | | |
| Conv. Total (cfs) | 418631.3 | Conv. (cfs) | | 418631.3 | | |
| Length Wtd. (ft) | 121.55 | Wetted Per. (ft) | | 3596.67 | | |
| Min Ch El (ft) | 1924.97 | Shear (lb/sq ft) | | 0.35 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5839.33 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.34 | Cum Volume (acre-ft) | | 1847.30 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 867.81 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -9247.95

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1935.5 | 18.07 | 1935.43 | 46.74 | 1935.31 | 49.08 | 1935.31 | 54.32 | 1935.28 |
| 56.28 | 1935.28 | 63.38 | 1935.25 | 84.44 | 1935.17 | 87.94 | 1935.15 | 104.87 | 1935.09 |
| 126.03 | 1935 | 179.01 | 1934.75 | 190.72 | 1934.7 | 199.86 | 1934.67 | 225.41 | 1934.56 |
| 229.01 | 1934.54 | 274.51 | 1934.33 | 323.01 | 1934.09 | 437.18 | 1933.52 | 445.54 | 1933.47 |
| 457.88 | 1933.42 | 459.07 | 1933.41 | 476.44 | 1933.33 | 476.55 | 1933.32 | 482.77 | 1933.3 |
| 491.56 | 1933.25 | 582.65 | 1932.81 | 590.89 | 1932.79 | 613.72 | 1932.72 | 632.12 | 1932.66 |
| 645.64 | 1932.62 | 676.27 | 1932.48 | 713.31 | 1932.3 | 720.95 | 1932.27 | 741.15 | 1932.17 |
| 790.05 | 1931.95 | 799.65 | 1931.9 | 803.09 | 1931.89 | 828.25 | 1931.77 | 883.77 | 1931.51 |
| 896.01 | 1931.45 | 923.12 | 1931.3 | 960.57 | 1931.11 | 966.71 | 1931.07 | 972.01 | 1931.05 |
| 974.48 | 1931.03 | 983.35 | 1930.99 | 1000.76 | 1930.9 | 1001.35 | 1930.89 | 1040.77 | 1930.68 |
| 1052.51 | 1930.62 | 1066.05 | 1930.54 | 1075.08 | 1930.5 | 1075.61 | 1930.49 | 1082.81 | 1930.46 |
| 1089.13 | 1930.42 | 1095.78 | 1930.39 | 1102.01 | 1930.35 | 1114.55 | 1930.29 | 1117.29 | 1930.27 |
| 1129 | 1930.21 | 1138.13 | 1930.21 | 1144.28 | 1930.2 | 1150.34 | 1930.18 | 1162.93 | 1930.16 |
| 1174.16 | 1930.13 | 1203.08 | 1930.08 | 1209.99 | 1930.06 | 1214.93 | 1929.31 | 1216.52 | 1929 |
| 1339.41 | 1929 | 1360.35 | 1929.42 | 1366.77 | 1929.53 | 1386.63 | 1929.99 | 1386.83 | 1930 |
| 1410.66 | 1930 | 1411.46 | 1929.99 | 1418.64 | 1929.99 | 1423.77 | 1929.98 | 1441.71 | 1930 |
| 1455.47 | 1930 | 1467.12 | 1929.96 | 1474.56 | 1929.97 | 1480.63 | 1930 | 1494.57 | 1930 |
| 1501.37 | 1929.97 | 1507.59 | 1929.92 | 1510.73 | 1929.94 | 1536.34 | 1929.45 | 1539.38 | 1929.4 |
| 1556.34 | 1929.01 | 1558.77 | 1929 | 1761.06 | 1929 | 1770.11 | 1929.02 | 1787.22 | 1929 |
| 1807.93 | 1929 | 1826.88 | 1929.02 | 1866.25 | 1929.02 | 1880.6 | 1929.2 | 1888.81 | 1929.21 |
| 1896.57 | 1929.23 | 1917.44 | 1929.27 | 1931.52 | 1929.29 | 1943.55 | 1929.33 | 1956.07 | 1929.38 |
| 1968.03 | 1929.41 | 2029.22 | 1929.83 | 2032.81 | 1929.86 | 2049.26 | 1929.88 | 2052.11 | 1929.84 |
| 2078.22 | 1929.44 | 2090.87 | 1929.22 | 2104.01 | 1929 | 2111.26 | 1928.61 | 2122.04 | 1928 |
| 2126.18 | 1927.56 | 2130.18 | 1927 | 2136.87 | 1926 | 2210.54 | 1926 | 2211.83 | 1926.01 |
| 2230.91 | 1926.32 | 2271.66 | 1927 | 2360.54 | 1927 | 2361.08 | 1926.99 | 2372.14 | 1926.98 |
| 2393.2 | 1926.98 | 2410.91 | 1926.99 | 2423.75 | 1926.99 | 2436.19 | 1927 | 2500.03 | 1927 |
| 2528.03 | 1927.28 | 2532.37 | 1927.32 | 2595.11 | 1928 | 2611.68 | 1928 | 2614.21 | 1927.95 |
| 2629.89 | 1927.66 | 2639.26 | 1927.66 | 2641.5 | 1927.61 | 2649.94 | 1927.6 | 2651.44 | 1927.57 |
| 2658.84 | 1927.56 | 2661.17 | 1927.52 | 2666.81 | 1927.38 | 2671.2 | 1927.29 | 2674.5 | 1927.25 |
| 2680.35 | 1927.15 | 2683.68 | 1927.13 | 2687.64 | 1927.13 | 2691.24 | 1927.26 | 2710.78 | 1927.99 |
| 2715.83 | 1928 | 2720.12 | 1927.89 | 2726.12 | 1927.94 | 2730.67 | 1927.94 | 2732.93 | 1927.92 |
| 2745.51 | 1927.74 | 2748.44 | 1927.72 | 2756.18 | 1927.61 | 2760.47 | 1927.59 | 2762.02 | 1927.57 |
| 2782.35 | 1927.99 | 2785.4 | 1928 | 2799.38 | 1928 | 2808.54 | 1928.21 | 2810.47 | 1928.19 |
| 2818.19 | 1928.36 | 2833.88 | 1928.41 | 2835.55 | 1928.46 | 2858.46 | 1928.99 | 2862.5 | 1928.99 |
| 2906.6 | 1928.15 | 2912.48 | 1928.08 | 2920.87 | 1928 | 2924.8 | 1927.91 | 2932.81 | 1927.66 |
| 2948.32 | 1927.19 | 2953.73 | 1927 | 2962.06 | 1926.93 | 2965.84 | 1926.96 | 2969.07 | 1926.97 |
| 2971.87 | 1927 | 2977.37 | 1928 | 2978.77 | 1928.24 | 2981.17 | 1928.56 | 2982.14 | 1928.66 |
| 2983.73 | 1928.7 | 2984.75 | 1928.65 | 2986.53 | 1928.45 | 2988.03 | 1928.31 | 2990.13 | 1928 |
| 2996.09 | 1927 | 2998.39 | 1926.98 | 3009.27 | 1926.26 | 3011.58 | 1926.19 | 3014.44 | 1926.25 |
| 3019.81 | 1926.41 | 3032.29 | 1927 | 3088.71 | 1927 | 3094.17 | 1927.29 | 3098.22 | 1927.54 |
| 3113.34 | 1928.42 | 3123.44 | 1929 | 3125.94 | 1929.11 | 3141.32 | 1930 | 3149.64 | 1930.68 |
| 3153.09 | 1931 | 3158.24 | 1931.32 | 3168.96 | 1932 | 3181.08 | 1932.05 | 3189.51 | 1932.07 |
| 3210.48 | 1932 | 3218.21 | 1931.6 | 3230.51 | 1931 | 3240.27 | 1930.62 | 3257.6 | 1930 |
| 3268.51 | 1930 | 3282.19 | 1930.88 | 3284.92 | 1931 | 3286.67 | 1931.14 | 3288.56 | 1931.23 |
| 3295.74 | 1931.41 | 3299.68 | 1931.56 | 3301.96 | 1931.67 | 3306.09 | 1931.91 | 3307.24 | 1932 |
| 3313.05 | 1932.04 | 3320.5 | 1932 | 3327.37 | 1931.62 | 3343.2 | 1931 | 3343.31 | 1931 |
| 3354.25 | 1930.52 | 3365.81 | 1930 | 3379.24 | 1929.98 | 3398.62 | 1929.98 | 3409.62 | 1929.99 |
| 3410.8 | 1930 | 3412.74 | 1929.96 | 3414.41 | 1929.98 | 3420.92 | 1929.85 | 3431.61 | 1929.57 |
| 3441.59 | 1929.46 | 3445.95 | 1929.36 | 3449.64 | 1929.31 | 3454.72 | 1929.22 | 3457.15 | 1929.2 |
| 3463.17 | 1929.08 | 3465.64 | 1929.08 | 3476.56 | 1929.89 | 3477.65 | 1929.93 | 3483.15 | 1929.96 |
| 3489.57 | 1929.97 | 3493.02 | 1929.87 | 3498.88 | 1929.82 | 3515.03 | 1929.65 | 3530.4 | 1929.44 |

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 3541.39 1929.27 3542.43 1929.26  3548.4 1929.34 3560.25 1929.51 3561.67 1929.51
 3566.09 1929.59 3566.29 1929.58 3571.64  1929.6 3571.78 1929.59 3579.19 1929.48
    3595 1929.13 3600.36    1929 3621.88 1928.32 3628.79    1928 3652.46 1927.43
 3656.57 1927.34 3660.07 1927.25 3670.81    1927 3693.16    1927 3694.17 1927.24
 3702.27    1928  3704.2 1928.42 3710.46 1929.42 3714.04    1930 3716.34 1930.29
 3718.63 1930.28 3721.23 1930.19 3723.39    1930 3732.14 1929.08 3732.91 1929.02
 3736.09 1928.94 3742.86 1928.83 3744.94 1928.78 3756.41    1928 3770.73 1927.57
  3772.4 1927.56 3795.87 1927.08 3808.81 1927.09 3815.07 1927.09 3819.99 1927.25
 3835.65  1927.7 3838.23 1927.77 3839.63 1927.83 3844.04 1927.89 3848.54    1928
  3860.5    1928 3862.83 1928.03 3876.24 1928.06    3878  1928.1 3897.11 1928.64
 3898.71 1928.66 3904.23 1928.81 3909.41    1929 3931.99    1929 3937.46 1928.94
 3943.76 1928.88 3988.59 1928.58 4011.04 1928.44 4014.02 1928.41 4023.77 1928.75
 4030.17 1928.99  4032.1 1928.98 4053.42 1928.74 4057.52 1928.57 4063.18 1928.32
 4069.49    1928 4075.31 1927.84 4079.67 1927.76 4089.08 1927.53 4103.87 1927.31
  4110.5 1927.17  4119.3    1927 4128.61    1927 4145.48 1927.67 4151.37 1927.67
 4153.62 1927.68 4164.66 1927.79 4168.78 1927.82 4177.18    1928 4195.62    1928
 4197.18  1927.8 4206.91 1927.65 4209.38 1927.63 4218.57  1927.5 4223.04 1927.45
 4228.32 1927.36 4229.57 1927.35 4235.23 1927.26 4236.91 1927.26 4249.17 1927.09
 4254.63 1927.01 4259.44    1927 4265.12 1926.72 4281.36 1926.11 4284.42    1926
 4298.57 1925.99 4305.01 1925.99 4313.39    1926 4432.12    1926 4441.82 1926.27
 4454.11  1926.6 4461.96 1926.72 4475.05 1926.86 4487.13 1926.97  4488.4    1927
 4649.71    1927 4665.71 1926.09 4668.57 1926.07 4672.23    1926 4703.51    1926
 4717.86 1925.44 4727.25 1925.09 4729.45 1925.04 4741.25 1925.04 4753.14 1925.03
 4755.46 1925.02 4757.57 1925.08 4761.46 1925.24 4779.19    1926 4811.55    1926
 4827.69 1926.18 4831.36 1926.19 4863.61 1926.16 4898.62 1926.12 4906.74    1926
 4972.73    1926 4981.91  1926.1 4986.18 1926.06 4988.25    1926 4994.38 1925.99
 4996.19    1926 5000.33 1926.11 5012.83 1926.42 5023.48  1926.6 5026.08 1926.68
 5029.42 1926.73 5033.98 1926.99 5034.94    1927 5044.45 1927.01 5052.34 1927.01
 5066.45    1927 5072.08 1926.28 5083.94    1925 5096.44  1924.6 5105.57 1924.38
 5109.97 1924.29 5116.78 1924.22 5121.29 1924.19 5123.84 1924.19 5128.27 1924.21
 5134.36 1924.26  5143.5 1924.44 5170.12    1925 5175.69    1925 5178.41  1925.1
 5204.53    1926 5205.03    1926  5276.9 1926.94 5279.83 1926.96 5282.55    1927
 5412.86    1927 5415.91  1927.6 5417.86    1928 5423.09    1929 5427.67 1929.62
 5429.81    1930  5442.2    1930 5449.79 1930.41 5451.19 1930.51 5454.78 1930.73
 5459.74 1930.97 5461.65    1931 5465.41    1931 5473.01 1930.91  5474.5 1930.87
 5476.55 1930.77 5484.08 1930.37 5487.44 1930.18 5490.65 1930.07 5491.23 1929.99
 5494.13 1929.68 5501.13    1929 5509.37 1928.22 5512.72 1927.92 5516.68 1927.66
 5526.33    1927 5530.75 1926.66 5537.03    1926 5579.65    1926 5586.46 1925.99
  5592.2 1925.99 5593.87    1926  5599.9    1927 5606.78    1928 5611.18 1928.66
 5613.57    1929 5615.89 1929.22 5623.09    1930 5636.97 1930.87 5638.13    1931
  5639.4 1931.35  5639.9 1931.56 5642.96    1933 5643.91 1933.42 5645.67    1934
 5649.84    1935 5651.36 1935.41 5656.48 1936.67 5665.33 1938.82    5670    1940
 5673.54 1940.94 5677.28    1942 5681.06  1942.7 5682.76    1943 5689.79    1944
 5697.02    1945 5700.86 1945.05 5702.71 1945.09 5704.87 1945.08 5710.27 1945.08
  5714.8 1945.12 5716.56 1945.12 5720.48 1945.19 5729.86 1945.01 5734.19  1944.7
 5742.81    1944 5744.16 1943.88 5745.61 1943.81 5749.48 1943.54 5760.88    1943
 5785.67    1943 5788.15 1943.15 5802.98    1944 5817.96    1945 5823.55 1945.31

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .045       0     .04 5823.55    .045

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
             0 5823.55           116.51  116.51  116.51             .1       .3

CROSS SECTION OUTPUT  Profile #PF 1

  E.G. Elev (ft)           1929.56    Element                   Left OB    Channel   Right OB
  Vel Head (ft)               0.15    Wt. n-Val.                            0.040
  W.S. Elev (ft)           1929.41    Reach Len. (ft)           116.51     116.51     116.51
  Crit W.S. (ft)                      Flow Area (sq ft)                   7234.07
  E.G. Slope (ft/ft)      0.002761    Area (sq ft)                        7234.07
  Q Total (cfs)           22400.00    Flow (cfs)                         22400.00
  Top Width (ft)           3618.24    Top Width (ft)                      3618.24
  Vel Total (ft/s)            3.10    Avg. Vel. (ft/s)                       3.10
  Max Chl Dpth (ft)           5.22    Hydr. Depth (ft)                       2.00
  Conv. Total (cfs)       426335.1    Conv. (cfs)                        426335.1
  Length Wtd. (ft)          116.51    Wetted Per. (ft)                    3620.20
  Min Ch El (ft)           1924.19    Shear (lb/sq ft)                       0.34
  Alpha                       1.00    Stream Power (lb/ft s)   5823.55       0.00       0.00
  Frctn Loss (ft)             0.33    Cum Volume (acre-ft)                1827.25
  C & E Loss (ft)             0.00    Cum SA (acres)                       857.74


Warning: Divided flow computed for this cross-section.

CROSS SECTION


RIVER: MOJAVE
REACH: MOJAVE             RS: -9364.46

INPUT
Description:
Station Elevation Data    num=     490
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0 1935.11    5.48  1935.1   49.16 1934.95   57.29 1934.92   67.01 1934.87
   94.43 1934.76  102.86 1934.72  115.11 1934.67  126.77 1934.63  129.63 1934.61
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 151.85 | 1934.53 | 156.99 | 1934.5 | 159.19 | 1934.5 | 164.6 | 1934.47 | 168.81 | 1934.46 |
| 184.66 | 1934.39 | 186.26 | 1934.39 | 197.98 | 1934.34 | 218.12 | 1934.26 | 232.49 | 1934.2 |
| 248.27 | 1934.13 | 292.24 | 1933.92 | 303.05 | 1933.88 | 347.02 | 1933.69 | 391.52 | 1933.48 |
| 448.39 | 1933.19 | 547.16 | 1932.69 | 554.86 | 1932.66 | 572.26 | 1932.57 | 592.19 | 1932.47 |
| 609.56 | 1932.39 | 685.9 | 1932.02 | 686.49 | 1932.01 | 695.19 | 1931.99 | 720.97 | 1931.9 |
| 741.75 | 1931.84 | 757.04 | 1931.79 | 821.8 | 1931.49 | 821.96 | 1931.48 | 853.27 | 1931.34 |
| 877.16 | 1931.22 | 889.82 | 1931.17 | 890.35 | 1931.16 | 897.4 | 1931.13 | 911.99 | 1931.06 |
| 930.16 | 1930.98 | 982.67 | 1930.73 | 996.22 | 1930.66 | 1026.27 | 1930.5 | 1038.48 | 1930.43 |
| 1055.54 | 1930.34 | 1056.47 | 1930.34 | 1077.57 | 1930.22 | 1083.13 | 1930.2 | 1091.3 | 1930.15 |
| 1094.05 | 1930.14 | 1104.14 | 1930.08 | 1137.31 | 1929.9 | 1143.96 | 1929.87 | 1150.2 | 1929.83 |
| 1164.47 | 1929.76 | 1179.8 | 1929.67 | 1187.06 | 1929.64 | 1200.6 | 1929.56 | 1209.88 | 1929.51 |
| 1292.81 | 1929 | 1368.17 | 1929 | 1376.82 | 1929.14 | 1380.96 | 1929.15 | 1387.48 | 1929.18 |
| 1426.81 | 1929.07 | 1449.26 | 1929 | 1498.87 | 1929 | 1513.36 | 1928.9 | 1521.04 | 1928.88 |
| 1535.27 | 1928.79 | 1545.57 | 1928.72 | 1552.45 | 1928.72 | 1553.44 | 1928.71 | 1561.8 | 1928.69 |
| 1567.21 | 1928.67 | 1576.81 | 1928.61 | 1587.76 | 1928.56 | 1620.02 | 1928.55 | 1652.38 | 1928.57 |
| 1655.62 | 1928.53 | 1659.6 | 1928.5 | 1669.62 | 1928.41 | 1679.04 | 1928.37 | 1687.68 | 1928.31 |
| 1693.79 | 1928.31 | 1698.56 | 1928.32 | 1714.73 | 1928.21 | 1722.89 | 1928.16 | 1735.14 | 1928.18 |
| 1745.2 | 1928.19 | 1768.22 | 1928.19 | 1774.35 | 1928.22 | 1782.48 | 1928.25 | 1795.65 | 1928.26 |
| 1805.99 | 1928.24 | 1820.1 | 1928.2 | 1823.05 | 1928.21 | 1839.73 | 1928.3 | 1847.99 | 1928.31 |
| 1882.37 | 1928.27 | 1895.24 | 1928.3 | 1925.73 | 1928.63 | 1932.43 | 1928.78 | 1943.76 | 1929 |
| 2061.39 | 1929 | 2063.08 | 1928.99 | 2068.71 | 1928.99 | 2074.84 | 1929 | 2075.66 | 1928.95 |
| 2077.74 | 1928.89 | 2079.66 | 1928.79 | 2091.86 | 1928 | 2093.16 | 1927.89 | 2094.37 | 1927.83 |
| 2103.89 | 1927 | 2106.79 | 1926.31 | 2108.9 | 1926 | 2211.1 | 1926 | 2220.62 | 1926.21 |
| 2223.18 | 1926.25 | 2238.75 | 1926.53 | 2247.28 | 1926.67 | 2256.51 | 1926.78 | 2261.63 | 1926.82 |
| 2265.92 | 1926.84 | 2276.48 | 1926.79 | 2277.14 | 1926.78 | 2302.55 | 1926.89 | 2304.56 | 1926.91 |
| 2309.18 | 1926.86 | 2314.77 | 1926.77 | 2323.15 | 1926.62 | 2353.23 | 1926 | 2427.94 | 1926 |
| 2430.92 | 1926.1 | 2433.05 | 1926.14 | 2435.71 | 1926.24 | 2451 | 1926.97 | 2461.43 | 1927 |
| 2549.34 | 1927 | 2574.77 | 1927.22 | 2582.6 | 1927.26 | 2601.78 | 1927.26 | 2621.51 | 1927.25 |
| 2631.61 | 1927.32 | 2640.4 | 1927.37 | 2654.94 | 1927.38 | 2669.59 | 1927.38 | 2677.74 | 1927.22 |
| 2685.34 | 1927.02 | 2689.29 | 1927 | 2734.19 | 1927 | 2751.59 | 1927.38 | 2785.34 | 1928 |
| 2787.48 | 1928.01 | 2799.86 | 1928.18 | 2808 | 1928.28 | 2819.59 | 1928.51 | 2847.81 | 1928.75 |
| 2868.93 | 1928.97 | 2879.08 | 1929 | 2894.87 | 1929.02 | 2900.49 | 1929.02 | 2911.67 | 1929 |
| 2928.83 | 1928.4 | 2938.33 | 1928 | 2943.84 | 1927.63 | 2944.63 | 1927.59 | 2959.04 | 1927 |
| 2964.76 | 1926.83 | 2989.97 | 1926 | 2994.06 | 1925.98 | 2997.21 | 1926 | 3016.74 | 1926.59 |
| 3029.92 | 1927 | 3033.53 | 1927.26 | 3043.43 | 1928 | 3054.89 | 1929.38 | 3057.84 | 1929.71 |
| 3063.38 | 1930.27 | 3070.45 | 1931 | 3077.43 | 1931.47 | 3083.36 | 1932 | 3120.82 | 1932 |
| 3121.99 | 1931.96 | 3127.41 | 1931.72 | 3135.94 | 1931.28 | 3138.49 | 1931.24 | 3144.29 | 1931.09 |
| 3147.35 | 1931.13 | 3151.33 | 1931.13 | 3154.15 | 1931.26 | 3158.89 | 1931.33 | 3161.32 | 1931.41 |
| 3164.77 | 1931.59 | 3167.02 | 1931.69 | 3173.01 | 1932 | 3181.28 | 1932.29 | 3186.05 | 1932.42 |
| 3190.93 | 1932.5 | 3204.47 | 1932.68 | 3227.66 | 1933 | 3296.89 | 1933 | 3309.73 | 1932 |
| 3318.77 | 1931 | 3321.97 | 1930.8 | 3324.38 | 1930.68 | 3332.36 | 1930.22 | 3338.61 | 1930 |
| 3356.76 | 1930 | 3368.22 | 1929.98 | 3369.55 | 1929.97 | 3379.42 | 1929.99 | 3386.13 | 1929.99 |
| 3388.26 | 1930 | 3402.82 | 1930.01 | 3433.77 | 1930.01 | 3434.46 | 1930 | 3453.98 | 1930 |
| 3459.87 | 1929.71 | 3464.67 | 1929.52 | 3466.74 | 1929.46 | 3473.22 | 1929.32 | 3474.85 | 1929.39 |
| 3477.52 | 1929.24 | 3481.17 | 1929.33 | 3495.12 | 1929.03 | 3509.65 | 1929.04 | 3533.65 | 1929.39 |
| 3539.78 | 1929.21 | 3543.4 | 1929.13 | 3545.56 | 1929.1 | 3547.91 | 1929.01 | 3554.66 | 1929.01 |
| 3562.26 | 1929 | 3573.06 | 1928.5 | 3588.27 | 1928 | 3598.41 | 1927.63 | 3599.58 | 1927.62 |
| 3601.17 | 1927.56 | 3614.48 | 1927.28 | 3626.49 | 1927.01 | 3634.21 | 1927 | 3646.4 | 1926 |
| 3656.7 | 1926 | 3658.64 | 1926.69 | 3661.18 | 1927.4 | 3663.16 | 1928 | 3666.91 | 1929 |
| 3670.77 | 1930 | 3674.79 | 1931 | 3682.32 | 1931 | 3685.24 | 1930.57 | 3692.53 | 1929.53 |
| 3695.78 | 1929 | 3697.01 | 1928.83 | 3702.68 | 1928 | 3703.68 | 1927.88 | 3712.4 | 1927 |
| 3714.24 | 1926.96 | 3728.6 | 1926.01 | 3750.34 | 1926.01 | 3769.26 | 1926 | 3833.58 | 1926 |
| 3839.85 | 1926.21 | 3846.21 | 1926.41 | 3863 | 1927 | 3891.93 | 1927 | 3899.23 | 1927.19 |
| 3912.44 | 1927.32 | 3918.27 | 1927.28 | 3938.94 | 1927.26 | 3940.21 | 1927.27 | 3944.63 | 1927.23 |
| 3947.67 | 1927.23 | 3956.59 | 1927.34 | 3961.4 | 1927.42 | 3968.22 | 1927.55 | 3991.65 | 1927.96 |
| 3993.73 | 1928 | 4003.94 | 1928.45 | 4013.72 | 1929 | 4022.05 | 1929.5 | 4027.18 | 1929.67 |
| 4029.93 | 1929.73 | 4031.49 | 1929.73 | 4034.12 | 1929.65 | 4036.21 | 1929.54 | 4039.94 | 1929.3 |
| 4043.88 | 1929 | 4048.65 | 1928.58 | 4055.48 | 1928 | 4120.79 | 1928 | 4140.18 | 1928.47 |
| 4148.28 | 1928.66 | 4150.15 | 1928.69 | 4154.37 | 1928.7 | 4158.12 | 1928.65 | 4169.98 | 1928.35 |
| 4178.58 | 1928 | 4187.24 | 1927.98 | 4188.21 | 1927.99 | 4193.55 | 1927.99 | 4211.07 | 1928.04 |
| 4216.95 | 1928.05 | 4222.74 | 1928.07 | 4242.81 | 1928 | 4243.35 | 1927.98 | 4259.26 | 1927 |
| 4263.09 | 1926.68 | 4270.73 | 1926 | 4284.22 | 1925.53 | 4292.08 | 1925.25 | 4294.79 | 1925.19 |
| 4301.51 | 1925 | 4309.11 | 1925.01 | 4318.45 | 1925.01 | 4324.79 | 1925.02 | 4338.25 | 1925.02 |
| 4354.13 | 1925 | 4383.81 | 1925 | 4415.17 | 1925.7 | 4418.05 | 1925.76 | 4428.23 | 1926 |
| 4467.14 | 1926 | 4485.59 | 1927 | 4573.14 | 1927 | 4579.74 | 1926.97 | 4612.47 | 1926.76 |
| 4622 | 1926.67 | 4644.97 | 1926.43 | 4651.18 | 1926.13 | 4654.42 | 1926 | 4701.02 | 1926 |
| 4714.5 | 1926.82 | 4716.38 | 1926.81 | 4718.65 | 1926.84 | 4720.24 | 1926.83 | 4729.72 | 1926.44 |
| 4739.03 | 1926 | 4758.07 | 1926 | 4758.88 | 1925.99 | 4768.12 | 1925.99 | 4769.55 | 1925.98 |
| 4785.55 | 1925.69 | 4801.91 | 1925.41 | 4805.38 | 1925.38 | 4812.44 | 1925.44 | 4822.65 | 1925.55 |
| 4825.48 | 1925.51 | 4827 | 1925.51 | 4832.95 | 1925.66 | 4840.46 | 1926 | 4924.96 | 1926 |
| 4937.03 | 1925.77 | 4940.71 | 1925.75 | 4957.62 | 1925.43 | 4964.86 | 1925.3 | 4967.25 | 1925.27 |
| 4970.69 | 1925.2 | 4977.08 | 1925.27 | 4998.8 | 1925.68 | 5009.16 | 1926 | 5013.76 | 1926.28 |
| 5024.42 | 1927 | 5045.68 | 1927 | 5055.3 | 1926.37 | 5062.33 | 1926 | 5075.95 | 1925.18 |
| 5078.55 | 1925 | 5104.73 | 1924.9 | 5109.05 | 1924.88 | 5135.69 | 1924.99 | 5139.79 | 1925 |
| 5144.6 | 1925.38 | 5148.84 | 1925.68 | 5152.66 | 1925.92 | 5153.56 | 1926 | 5169.4 | 1926 |
| 5175.88 | 1925.93 | 5181.58 | 1925.94 | 5188.03 | 1925.97 | 5188.43 | 1926 | 5222.37 | 1926 |
| 5228.7 | 1926.08 | 5252.07 | 1926.39 | 5264.63 | 1926.55 | 5274.99 | 1926.45 | 5290.87 | 1926.31 |
| 5292.88 | 1926.19 | 5294.37 | 1926.25 | 5301.02 | 1926.64 | 5305.72 | 1926.99 | 5306.13 | 1927 |
| 5397.82 | 1927 | 5403.02 | 1926.8 | 5404.71 | 1926.79 | 5410.24 | 1926.63 | 5413.65 | 1926.52 |
| 5421.38 | 1926.32 | 5428.56 | 1926 | 5435.25 | 1926 | 5440.42 | 1926.9 | 5446.41 | 1928 |
| 5448.63 | 1928.52 | 5449.7 | 1928.73 | 5451.66 | 1929 | 5454.21 | 1929.18 | 5462.03 | 1929.77 |
| 5465.91 | 1930.09 | 5470.75 | 1930.53 | 5473.7 | 1930.82 | 5475.59 | 1930.95 | 5476.31 | 1930.96 |
| 5477.76 | 1930.9 | 5479.93 | 1930.72 | 5487.52 | 1930 | 5490.49 | 1929.73 | 5497.12 | 1929 |
| 5498.44 | 1928.91 | 5501.03 | 1928.79 | 5511.65 | 1928.22 | 5515.35 | 1928.05 | 5521.43 | 1927.67 |
| 5532.8 | 1927 | 5536.47 | 1926.91 | 5545.29 | 1926.36 | 5552.46 | 1926 | 5552.91 | 1926 |
| 5559.74 | 1925.68 | 5568.93 | 1925.46 | 5572.24 | 1925.33 | 5578.08 | 1925.17 | 5582.56 | 1925 |
| 5596.98 | 1925 | 5601.87 | 1926 | 5606.11 | 1926.88 | 5606.8 | 1927 | 5608.16 | 1927.03 |
| 5610.63 | 1926.95 | 5612.01 | 1926.93 | 5613.93 | 1927 | 5616.13 | 1928 | 5618.34 | 1928.94 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5620.45 | 1930 | 5622.73 | 1930.77 | 5625.41 | 1931.57 | 5628.65 | 1932.5 | 5633.35 | 1933.83 |
| 5634.15 | 1934.04 | 5638.39 | 1935 | 5642.39 | 1936 | 5653.46 | 1938.63 | 5657.8 | 1939.41 |
| 5660.97 | 1940 | 5671.46 | 1942 | 5678.28 | 1943.29 | 5682.08 | 1944 | 5686.83 | 1944.96 |
| 5687.56 | 1945.04 | 5701.48 | 1946 | 5708.87 | 1946.09 | 5711.56 | 1946.11 | 5717.26 | 1946.04 |
| 5722.48 | 1946.01 | 5723.96 | 1945.99 | 5726.53 | 1945.84 | 5730.22 | 1945.65 | 5734.6 | 1945.41 |
| 5741.49 | 1945 | 5744.14 | 1944.73 | 5752.07 | 1944.29 | 5753.66 | 1944.27 | 5759.78 | 1944.39 |
| 5765.33 | 1944.22 | 5766.75 | 1944.23 | 5770.71 | 1944.37 | 5771.86 | 1944.37 | 5774.78 | 1944.25 |
| 5782.39 | 1944.41 | 5788.79 | 1944.44 | 5798.44 | 1944.62 | 5801.24 | 1944.68 | 5809.81 | 1945 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5809.81 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5809.81 | 121.89 | 121.89 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1929.23 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.15 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1929.08 | Reach Len. (ft) | 121.89 | 121.89 | 121.89 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7193.86 | | |
| E.G. Slope (ft/ft) | 0.002912 | Area (sq ft) | | 7193.86 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3713.10 | Top Width (ft) | | 3713.10 | | |
| Vel Total (ft/s) | 3.11 | Avg. Vel. (ft/s) | | 3.11 | | |
| Max Chl Dpth (ft) | 4.20 | Hydr. Depth (ft) | | 1.94 | | |
| Conv. Total (cfs) | 415119.6 | Conv. (cfs) | | 415119.6 | | |
| Length Wtd. (ft) | 121.89 | Wetted Per. (ft) | | 3715.76 | | |
| Min Ch El (ft) | 1924.88 | Shear (lb/sq ft) | | 0.35 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5809.81 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.38 | Cum Volume (acre-ft) | | 1807.96 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 847.94 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -9486.35

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1934.78 | 83.58 | 1934.43 | 85.88 | 1934.43 | 92.2 | 1934.4 | 133.12 | 1934.26 |
| 137.1 | 1934.25 | 142.1 | 1934.22 | 144.28 | 1934.22 | 153.72 | 1934.17 | 157.8 | 1934.16 |
| 167.67 | 1934.11 | 171.25 | 1934.1 | 178.82 | 1934.06 | 183.17 | 1934.05 | 186.19 | 1934.03 |
| 190.44 | 1934.02 | 209.31 | 1933.94 | 217.85 | 1933.9 | 244.28 | 1933.8 | 256.51 | 1933.75 |
| 259.09 | 1933.73 | 289.98 | 1933.61 | 305.45 | 1933.54 | 328.88 | 1933.45 | 345.61 | 1933.38 |
| 348.76 | 1933.37 | 364.01 | 1933.29 | 403.1 | 1933.1 | 407.29 | 1933.09 | 415.6 | 1933.05 |
| 431.55 | 1932.99 | 450.67 | 1932.91 | 466.52 | 1932.84 | 471.46 | 1932.81 | 506.39 | 1932.64 |
| 571.91 | 1932.31 | 655.05 | 1931.89 | 663.77 | 1931.84 | 683.46 | 1931.75 | 706.04 | 1931.63 |
| 709.9 | 1931.62 | 787.13 | 1931.23 | 787.79 | 1931.23 | 826.31 | 1931.11 | 866.64 | 1930.97 |
| 905.43 | 1930.79 | 923.92 | 1930.7 | 928.85 | 1930.68 | 938.42 | 1930.63 | 941.88 | 1930.62 |
| 946.33 | 1930.59 | 958.83 | 1930.54 | 963.74 | 1930.51 | 984.41 | 1930.41 | 994.22 | 1930.37 |
| 1003.06 | 1930.32 | 1019.24 | 1930.25 | 1030.34 | 1930.19 | 1072.16 | 1930 | 1094.75 | 1929.88 |
| 1127.82 | 1929.7 | 1132.41 | 1929.68 | 1151.09 | 1929.58 | 1151.55 | 1929.57 | 1161.2 | 1929.52 |
| 1164.26 | 1929.51 | 1170.58 | 1929.47 | 1172.04 | 1929.47 | 1177.94 | 1929.43 | 1181.3 | 1929.42 |
| 1193.27 | 1929.35 | 1237.49 | 1928.29 | 1242.26 | 1928.31 | 1291.17 | 1928.65 | 1339.61 | 1928.99 |
| 1342.04 | 1929 | 1356.49 | 1928.99 | 1375.25 | 1928.99 | 1383.79 | 1928.77 | 1389.18 | 1928.77 |
| 1392.84 | 1928.76 | 1403.51 | 1928.65 | 1412.93 | 1928.57 | 1420.65 | 1928.52 | 1428.56 | 1928.38 |
| 1430.8 | 1928.33 | 1442.17 | 1928.19 | 1453.37 | 1928 | 1455.95 | 1927.98 | 1458.57 | 1927.98 |
| 1509.69 | 1927.86 | 1550.77 | 1927.79 | 1561.51 | 1927.78 | 1592.26 | 1927.78 | 1600.77 | 1927.77 |
| 1607.98 | 1927.76 | 1620.42 | 1927.76 | 1621.57 | 1927.75 | 1640.79 | 1927.7 | 1669.33 | 1927.63 |
| 1684.16 | 1927.59 | 1689.54 | 1927.58 | 1699.64 | 1927.55 | 1704.15 | 1927.53 | 1711.79 | 1927.51 |
| 1715.31 | 1927.49 | 1751.48 | 1927.24 | 1784.9 | 1927 | 1807.32 | 1927 | 1911.22 | 1927.89 |
| 1923.62 | 1928 | 1955.9 | 1928.38 | 2009.24 | 1929 | 2035.24 | 1929 | 2035.84 | 1928.99 |
| 2043.55 | 1928.61 | 2054.86 | 1928 | 2056.84 | 1927.82 | 2057.96 | 1927.61 | 2069.27 | 1926 |
| 2228.19 | 1926 | 2242.37 | 1926.46 | 2244.04 | 1926.51 | 2252.37 | 1926.66 | 2257.72 | 1926.74 |
| 2259.51 | 1926.8 | 2260.99 | 1926.8 | 2264.85 | 1926.63 | 2278.48 | 1926 | 2443.95 | 1926 |
| 2444.29 | 1926.01 | 2468.9 | 1926.29 | 2490.62 | 1926.46 | 2502.2 | 1926.54 | 2506.6 | 1926.6 |
| 2508.3 | 1926.6 | 2522.04 | 1926.82 | 2523.72 | 1926.83 | 2534.51 | 1927 | 2593.49 | 1927 |
| 2599.36 | 1927.37 | 2614.88 | 1928 | 2617.53 | 1928.01 | 2639.03 | 1928.01 | 2652.66 | 1928.03 |
| 2662.17 | 1928.06 | 2669.72 | 1928.04 | 2674.14 | 1928.05 | 2679.99 | 1928.08 | 2685.16 | 1928.09 |
| 2703.95 | 1928.65 | 2712.1 | 1928.86 | 2716.89 | 1928.94 | 2721.25 | 1928.94 | 2723.6 | 1928.91 |
| 2725.63 | 1928.85 | 2731.54 | 1928.72 | 2738.95 | 1928.52 | 2753.75 | 1928 | 2755.26 | 1927.92 |
| 2762.9 | 1927.46 | 2768.53 | 1927.11 | 2775.44 | 1927 | 2804.12 | 1927 | 2807.36 | 1927.1 |
| 2831.76 | 1927.97 | 2833.54 | 1928 | 2842.89 | 1928.23 | 2867.81 | 1928.3 | 2888.96 | 1928.35 |
| 2896.61 | 1928.13 | 2900.42 | 1928.01 | 2901.47 | 1928 | 2912.67 | 1927.18 | 2916.01 | 1927 |
| 2923.04 | 1926.38 | 2928.74 | 1926 | 2933.18 | 1925.61 | 2940.44 | 1925 | 2948.63 | 1925 |
| 2949.12 | 1925.08 | 2953.3 | 1926 | 2955.24 | 1926.45 | 2957.78 | 1927 | 2962.27 | 1928 |
| 2966.23 | 1928.84 | 2969.89 | 1929.37 | 2974.41 | 1929.9 | 2975.61 | 1930 | 2995.64 | 1930 |
| 3014.37 | 1929 | 3021.94 | 1928.63 | 3024.4 | 1928.54 | 3030.72 | 1928.35 | 3035.57 | 1928.16 |
| 3043 | 1928 | 3067.23 | 1928 | 3080.64 | 1928.16 | 3088.05 | 1928.19 | 3090.11 | 1928.21 |
| 3094.66 | 1928.31 | 3095.62 | 1928.32 | 3099.5 | 1928.45 | 3113.41 | 1929 | 3116.35 | 1929.15 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3125.87 | 1929.46 | 3126.04 | 1929.45 | 3131.46 | 1929.59 | 3143.17 | 1929.98 | 3143.46 | 1930 |
| 3161.99 | 1930 | 3165.6 | 1929.62 | 3172.02 | 1929.12 | 3173.32 | 1929 | 3175.14 | 1929 |
| 3183.75 | 1928.6 | 3191.67 | 1928.41 | 3200.48 | 1928.32 | 3205.47 | 1928.31 | 3208.43 | 1928.34 |
| 3213.14 | 1928.52 | 3215.29 | 1928.54 | 3218.46 | 1928.61 | 3225.07 | 1928.93 | 3226.69 | 1929 |
| 3238.95 | 1929.93 | 3244.92 | 1930.26 | 3257.44 | 1931 | 3263.88 | 1931.71 | 3270.52 | 1932 |
| 3283.72 | 1932 | 3294.36 | 1931.28 | 3300.7 | 1930.84 | 3313.01 | 1930 | 3313.93 | 1929.93 |
| 3330.27 | 1928.76 | 3333.33 | 1928.75 | 3341.18 | 1928.48 | 3352.25 | 1928.04 | 3354.21 | 1928 |
| 3360.32 | 1928 | 3365.18 | 1928.16 | 3365.63 | 1928.16 | 3371.06 | 1928.3 | 3374.11 | 1928.35 |
| 3380.27 | 1928.41 | 3392.29 | 1928.44 | 3394.97 | 1928.42 | 3401.89 | 1928.48 | 3412.42 | 1928.64 |
| 3415.76 | 1928.64 | 3427.54 | 1929 | 3430.69 | 1929.09 | 3453.26 | 1929.71 | 3457.49 | 1929.79 |
| 3462.66 | 1929.86 | 3471.06 | 1930 | 3475.84 | 1930.01 | 3484.55 | 1930.01 | 3486.6 | 1930 |
| 3492.44 | 1929.44 | 3497.19 | 1929 | 3498.4 | 1928.98 | 3506.07 | 1928.68 | 3513.43 | 1928.44 |
| 3515.84 | 1928.33 | 3520.14 | 1928.11 | 3522.01 | 1928 | 3524.3 | 1927.81 | 3533.44 | 1927 |
| 3546.22 | 1927 | 3551.45 | 1927.11 | 3559.98 | 1927.25 | 3566.29 | 1927.34 | 3569.59 | 1927.35 |
| 3576.56 | 1927.6 | 3580.64 | 1927.66 | 3584.02 | 1927.78 | 3587.55 | 1928 | 3597.75 | 1929.12 |
| 3600.73 | 1929.42 | 3603.47 | 1929.63 | 3605.77 | 1929.68 | 3607.61 | 1929.67 | 3618.69 | 1929.28 |
| 3620.83 | 1929.03 | 3622.71 | 1929 | 3625.33 | 1928.64 | 3627.64 | 1928.27 | 3629.42 | 1927.86 |
| 3630.04 | 1927.64 | 3632.87 | 1927 | 3635.66 | 1926.21 | 3636.59 | 1926.04 | 3637.45 | 1926.01 |
| 3639.26 | 1926.21 | 3641.29 | 1926.47 | 3644.8 | 1927 | 3723.64 | 1927 | 3726.16 | 1926.99 |
| 3741.1 | 1926.99 | 3757.26 | 1926.98 | 3785.26 | 1927 | 4007.06 | 1927 | 4012.58 | 1927.59 |
| 4016.53 | 1928 | 4024.53 | 1928 | 4040.72 | 1927.84 | 4047.23 | 1927.77 | 4052.77 | 1927.7 |
| 4062.7 | 1927.63 | 4079.25 | 1927.99 | 4079.96 | 1928 | 4193.29 | 1928 | 4194.13 | 1927.95 |
| 4195.33 | 1927.94 | 4199.56 | 1927.79 | 4209.74 | 1927.37 | 4213.64 | 1927.25 | 4216.07 | 1927.19 |
| 4217.66 | 1927.13 | 4220.7 | 1927.11 | 4223.36 | 1927.02 | 4228.86 | 1927.03 | 4234.68 | 1927.05 |
| 4240.54 | 1927.03 | 4242.48 | 1927 | 4251.64 | 1926.66 | 4260.09 | 1926.38 | 4263.15 | 1926.3 |
| 4266.75 | 1926.18 | 4272.71 | 1926 | 4279.62 | 1926 | 4283.43 | 1925.91 | 4284.56 | 1925.9 |
| 4291.56 | 1926 | 4401.96 | 1926 | 4441.81 | 1925.27 | 4454.09 | 1925.01 | 4454.79 | 1925 |
| 4488.78 | 1925 | 4502.09 | 1925.35 | 4510.45 | 1925.46 | 4514.72 | 1925.49 | 4519.76 | 1925.57 |
| 4527.51 | 1925.6 | 4532.93 | 1925.65 | 4540.83 | 1925.8 | 4550.92 | 1926 | 4575.87 | 1926 |
| 4576.07 | 1926.01 | 4651.93 | 1926.01 | 4654.28 | 1926.04 | 4684.28 | 1926.12 | 4696.31 | 1926.18 |
| 4698.94 | 1926.12 | 4706.4 | 1926 | 4713.31 | 1925.99 | 4729.13 | 1925.99 | 4776.16 | 1925.35 |
| 4779.92 | 1925.32 | 4783.53 | 1925.27 | 4795.43 | 1925.15 | 4800.46 | 1925.12 | 4811.33 | 1925 |
| 4821.86 | 1924.99 | 4852.51 | 1924.05 | 4854.4 | 1924 | 4855.75 | 1924 | 4916.31 | 1924.99 |
| 4916.69 | 1925 | 4965.65 | 1925 | 4972.62 | 1925.82 | 4974.44 | 1926 | 4984.92 | 1926.48 |
| 4988.99 | 1926.56 | 4992.5 | 1926.69 | 4994.21 | 1926.7 | 5004.33 | 1927 | 5035.78 | 1927 |
| 5038.12 | 1926.71 | 5038.73 | 1926.66 | 5044.45 | 1926 | 5047.14 | 1925.68 | 5053.21 | 1925 |
| 5058.91 | 1924.99 | 5071.12 | 1924.99 | 5100.83 | 1924.97 | 5119.57 | 1924.99 | 5133.5 | 1924.99 |
| 5138.62 | 1925.3 | 5148.61 | 1926 | 5152.06 | 1926.23 | 5161.96 | 1927 | 5174.06 | 1927 |
| 5183.45 | 1926.57 | 5186.02 | 1926.48 | 5187.81 | 1926.39 | 5202.1 | 1926.01 | 5202.12 | 1926 |
| 5223.59 | 1926 | 5228.98 | 1925.99 | 5237.64 | 1925.99 | 5243 | 1926 | 5290.04 | 1926 |
| 5332.31 | 1926.47 | 5350.59 | 1926.67 | 5360.25 | 1926.81 | 5369.4 | 1927 | 5435.07 | 1927 |
| 5437.29 | 1926.99 | 5455.14 | 1926.95 | 5472.85 | 1927 | 5473.13 | 1927.03 | 5478.17 | 1928 |
| 5483.58 | 1928.34 | 5490.43 | 1928.7 | 5493.92 | 1928.9 | 5496.47 | 1929 | 5504.28 | 1929 |
| 5507.08 | 1928.87 | 5518.57 | 1928 | 5519.29 | 1927.95 | 5521.19 | 1927.89 | 5536.28 | 1927 |
| 5541.65 | 1926.25 | 5543.53 | 1926 | 5551.55 | 1925 | 5568.52 | 1925 | 5570.96 | 1925.26 |
| 5573.08 | 1925.52 | 5577.34 | 1926 | 5583.77 | 1926.76 | 5586.03 | 1927 | 5587.04 | 1927.63 |
| 5587.58 | 1927.88 | 5590.5 | 1929.05 | 5594.23 | 1930.29 | 5596.19 | 1931 | 5602.89 | 1931.87 |
| 5605.13 | 1932.15 | 5611.19 | 1933 | 5613.07 | 1933.14 | 5615.4 | 1933.4 | 5620.52 | 1933.84 |
| 5622.97 | 1933.39 | 5624.69 | 1933.1 | 5625.98 | 1933 | 5628.73 | 1932.98 | 5629.7 | 1933 |
| 5630.6 | 1933.3 | 5632.36 | 1934 | 5633.62 | 1934.74 | 5634.14 | 1935 | 5635.37 | 1935.38 |
| 5636.59 | 1935.61 | 5638.21 | 1935.68 | 5641.37 | 1935.63 | 5644.62 | 1935.93 | 5652.92 | 1936.15 |
| 5656.02 | 1936.32 | 5657.39 | 1936.51 | 5658.35 | 1936.92 | 5659.56 | 1937 | 5661.76 | 1937.58 |
| 5662.99 | 1938 | 5664.9 | 1938.55 | 5667.93 | 1938.76 | 5669.56 | 1938.98 | 5670.87 | 1939.24 |
| 5674.34 | 1940.14 | 5676.96 | 1941 | 5680.17 | 1941.44 | 5683.11 | 1942 | 5686.23 | 1942.63 |
| 5688.19 | 1943 | 5702.14 | 1943.77 | 5706.02 | 1944 | 5710.27 | 1944.4 | 5710.68 | 1944.47 |
| 5726.84 | 1945 | 5728.18 | 1945.04 | 5730.36 | 1945.19 | 5733.26 | 1945.36 | 5740.07 | 1946 |
| 5749.36 | 1945.98 | 5752.48 | 1945.98 | 5757.8 | 1946 | 5783.9 | 1946 | 5786.59 | 1945.97 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5786.59 | .045 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 0 | 5786.59 | 99.54 | 99.54 | 99.54 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1928.85 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.16 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1928.69 | Reach Len. (ft) | 99.54 | 99.54 | 99.54 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6972.96 | | |
| E.G. Slope (ft/ft) | 0.003324 | Area (sq ft) | | 6972.96 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3793.05 | Top Width (ft) | | 3793.05 | | |
| Vel Total (ft/s) | 3.21 | Avg. Vel. (ft/s) | | 3.21 | | |
| Max Chl Dpth (ft) | 4.69 | Hydr. Depth (ft) | | 1.84 | | |
| Conv. Total (cfs) | 388541.7 | Conv. (cfs) | | 388541.7 | | |
| Length Wtd. (ft) | 99.54 | Wetted Per. (ft) | | 3795.67 | | |
| Min Ch El (ft) | 1924.00 | Shear (lb/sq ft) | | 0.38 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5786.59 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.32 | Cum Volume (acre-ft) | | 1788.14 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 837.44 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -9585.89

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1934.46 | 167.45 | 1933.76 | 177.25 | 1933.72 | 215.31 | 1933.59 | 227.94 | 1933.54 |
| 243.27 | 1933.47 | 248.27 | 1933.44 | 254.46 | 1933.42 | 267.1 | 1933.36 | 280.29 | 1933.31 |
| 285.62 | 1933.28 | 301.72 | 1933.22 | 311.44 | 1933.18 | 314.22 | 1933.16 | 320.83 | 1933.14 |
| 335.5 | 1933.08 | 352.8 | 1933 | 357.31 | 1932.99 | 366.95 | 1932.95 | 367.26 | 1932.94 |
| 393.49 | 1932.84 | 405.62 | 1932.78 | 411.13 | 1932.76 | 456.96 | 1932.57 | 460.56 | 1932.55 |
| 477.99 | 1932.47 | 511.98 | 1932.31 | 532.36 | 1932.22 | 566.04 | 1932.08 | 584.07 | 1931.99 |
| 589.68 | 1931.97 | 619.09 | 1931.83 | 693.28 | 1931.44 | 770.06 | 1931.05 | 788.9 | 1930.96 |
| 792.02 | 1930.94 | 817.22 | 1930.81 | 820.49 | 1930.8 | 839.22 | 1930.7 | 885.45 | 1930.47 |
| 896.89 | 1930.44 | 928.66 | 1930.33 | 954.32 | 1930.25 | 973.2 | 1930.18 | 1016.08 | 1929.98 |
| 1027.14 | 1929.92 | 1032.56 | 1929.9 | 1050.97 | 1929.81 | 1051.8 | 1929.8 | 1068.12 | 1929.73 |
| 1070.96 | 1929.71 | 1078.4 | 1929.68 | 1080.81 | 1929.66 | 1086.89 | 1929.64 | 1093.27 | 1929.6 |
| 1105.41 | 1929.55 | 1118.47 | 1929.48 | 1127.17 | 1929.44 | 1172.85 | 1929.22 | 1184.93 | 1929.16 |
| 1187.5 | 1928.44 | 1200.82 | 1928.12 | 1201.54 | 1928.09 | 1208.18 | 1928 | 1212.66 | 1928 |
| 1225.59 | 1928.03 | 1239.91 | 1928.07 | 1249.99 | 1928.09 | 1260.64 | 1928.12 | 1267.5 | 1928.11 |
| 1288.61 | 1928.1 | 1300.45 | 1928.09 | 1326.54 | 1928.03 | 1340.51 | 1928.06 | 1343.63 | 1928 |
| 1350.16 | 1927.99 | 1356.32 | 1927.94 | 1357.86 | 1927.91 | 1368.83 | 1927.62 | 1380.95 | 1927.33 |
| 1384.84 | 1927.23 | 1387.91 | 1927.18 | 1390.33 | 1927.12 | 1394.25 | 1927.09 | 1419.26 | 1927.32 |
| 1420.24 | 1927.32 | 1427.06 | 1927.26 | 1431.51 | 1927.28 | 1443.66 | 1927.32 | 1449.57 | 1927.29 |
| 1456.81 | 1927.31 | 1462.57 | 1927.26 | 1514.77 | 1927.28 | 1565.79 | 1927.29 | 1580.97 | 1927.25 |
| 1593.05 | 1927.23 | 1599.93 | 1927.23 | 1600.79 | 1927.22 | 1607.41 | 1927.22 | 1632.89 | 1927.2 |
| 1634.73 | 1927.19 | 1641.03 | 1927.19 | 1704.39 | 1927.03 | 1714.43 | 1927 | 1836.86 | 1927 |
| 1907.43 | 1927.71 | 1935.55 | 1928 | 1964.09 | 1928.01 | 1974.34 | 1928.02 | 1981.98 | 1928.01 |
| 2000.64 | 1928.01 | 2014.68 | 1928 | 2016.9 | 1927.77 | 2023.84 | 1927 | 2030.03 | 1926 |
| 2037.49 | 1925.99 | 2051.09 | 1925.41 | 2052.31 | 1925.37 | 2056.69 | 1925.29 | 2066.34 | 1925.18 |
| 2073.61 | 1925.07 | 2078.82 | 1925 | 2114.44 | 1925 | 2123.83 | 1925.36 | 2124.39 | 1925.36 |
| 2139.56 | 1925.67 | 2141.22 | 1925.72 | 2152.05 | 1926 | 2184.23 | 1926 | 2186.96 | 1925.97 |
| 2192.03 | 1925.89 | 2225.73 | 1925.82 | 2254.72 | 1925.77 | 2277.07 | 1926 | 2426.72 | 1926 |
| 2433.22 | 1926.08 | 2434.06 | 1926.08 | 2446.61 | 1926.39 | 2449.38 | 1926.44 | 2453.54 | 1926.48 |
| 2454.28 | 1926.51 | 2461.65 | 1926.54 | 2463.28 | 1926.59 | 2477.21 | 1926.71 | 2484.82 | 1926.78 |
| 2487.23 | 1926.77 | 2496.87 | 1926.56 | 2522.49 | 1926.01 | 2523.74 | 1926 | 2545.64 | 1926 |
| 2575.68 | 1926.9 | 2580.31 | 1926.89 | 2582.31 | 1926.87 | 2585.4 | 1926.99 | 2594.64 | 1926.98 |
| 2608.2 | 1926.98 | 2632.38 | 1927 | 2651.59 | 1927 | 2656.29 | 1926.99 | 2666.14 | 1926.99 |
| 2670.54 | 1926.98 | 2671.91 | 1926.99 | 2688.68 | 1926.99 | 2695.38 | 1927 | 2701.55 | 1927 |
| 2709.8 | 1927.01 | 2722.43 | 1927.01 | 2731.42 | 1927.31 | 2740.58 | 1927.45 | 2746.87 | 1927.52 |
| 2751.77 | 1927.56 | 2753.47 | 1927.59 | 2769.22 | 1927.98 | 2777.12 | 1928.25 | 2779.08 | 1928.18 |
| 2786.92 | 1928.32 | 2801.02 | 1928.37 | 2832.93 | 1928.72 | 2848.32 | 1929 | 2871.94 | 1929 |
| 2878.02 | 1928.63 | 2880.95 | 1928.44 | 2888.12 | 1928 | 2890.3 | 1927.83 | 2898.13 | 1927 |
| 2901.99 | 1926.57 | 2907.31 | 1926 | 2916.01 | 1925.39 | 2920.17 | 1925 | 2932.33 | 1925 |
| 2937.32 | 1925.87 | 2949 | 1928 | 2950.9 | 1928.45 | 2953.7 | 1929 | 2969.1 | 1929 |
| 2976.43 | 1928.99 | 2984.87 | 1929 | 3007.54 | 1929 | 3014.21 | 1929.36 | 3024.75 | 1930 |
| 3059.15 | 1930 | 3069.52 | 1929 | 3080.05 | 1928 | 3082.78 | 1927.82 | 3096.39 | 1927 |
| 3100.78 | 1926.77 | 3121.87 | 1926.81 | 3146.16 | 1926.89 | 3150.84 | 1927 | 3163.49 | 1927.01 |
| 3184.34 | 1927.01 | 3202.47 | 1927.37 | 3203.18 | 1927.37 | 3205.44 | 1927.46 | 3209.01 | 1927.46 |
| 3221.69 | 1928.05 | 3230.3 | 1928.42 | 3231.76 | 1928.46 | 3235.44 | 1928.61 | 3236.2 | 1928.66 |
| 3244.01 | 1929 | 3268.33 | 1928.34 | 3279.41 | 1928 | 3293.59 | 1927.99 | 3312.47 | 1927.99 |
| 3330.42 | 1927.07 | 3332.14 | 1927 | 3339.24 | 1926.99 | 3343.67 | 1927 | 3358.1 | 1927 |
| 3358.34 | 1926.98 | 3378.04 | 1926.8 | 3394.18 | 1926.79 | 3395.32 | 1926.81 | 3400.6 | 1926.83 |
| 3404.87 | 1926.79 | 3407.99 | 1926.8 | 3412.46 | 1926.78 | 3416.7 | 1926.65 | 3420.18 | 1926.6 |
| 3432.26 | 1926.17 | 3437.32 | 1926 | 3444.33 | 1926 | 3454.11 | 1926.4 | 3456 | 1926.46 |
| 3462.03 | 1926.71 | 3468.19 | 1927 | 3475.54 | 1927.41 | 3476.42 | 1927.45 | 3480.68 | 1927.57 |
| 3485.33 | 1927.59 | 3486.47 | 1927.61 | 3490.16 | 1927.6 | 3491.87 | 1927.53 | 3493.32 | 1927.43 |
| 3494.24 | 1927.41 | 3501.13 | 1927 | 3511.27 | 1926.78 | 3511.77 | 1926.78 | 3518.85 | 1926.64 |
| 3520.39 | 1926.65 | 3527.45 | 1926.54 | 3528.8 | 1926.55 | 3534.43 | 1926.49 | 3552.01 | 1926.43 |
| 3570.06 | 1926.35 | 3571.56 | 1926.33 | 3578.12 | 1926.37 | 3588.43 | 1926.52 | 3592.94 | 1926.38 |
| 3594.79 | 1926.29 | 3598.52 | 1926 | 3611.21 | 1926 | 3617.21 | 1925.99 | 3627.16 | 1926 |
| 3633.72 | 1926 | 3635.99 | 1926.08 | 3648.51 | 1926.17 | 3662.05 | 1926.25 | 3668.96 | 1926.1 |
| 3676.02 | 1926 | 3683.49 | 1925.87 | 3684.07 | 1925.85 | 3695.69 | 1925.65 | 3697.08 | 1925.61 |
| 3704.12 | 1925.47 | 3716.63 | 1925.7 | 3725.3 | 1925.93 | 3737.24 | 1926 | 3775.16 | 1926 |
| 3776.67 | 1926.11 | 3790.07 | 1927 | 3806.17 | 1927.66 | 3821.47 | 1928 | 3827.36 | 1928.01 |
| 3834.98 | 1928.01 | 3839.23 | 1928.2 | 3847.83 | 1928.56 | 3857.94 | 1928.49 | 3868.61 | 1928.28 |
| 3871.41 | 1928.2 | 3873.49 | 1928.17 | 3878.08 | 1928 | 3891.15 | 1928.01 | 3896.41 | 1928 |
| 3896.78 | 1928.02 | 3902.12 | 1928.49 | 3905.11 | 1928.74 | 3910.7 | 1928.73 | 3912.71 | 1928.71 |
| 3923.54 | 1928.52 | 3934.23 | 1928.2 | 3940.5 | 1928 | 3945.28 | 1927.88 | 3954.63 | 1927.62 |
| 3973.53 | 1927.69 | 4003.03 | 1927.98 | 4005.17 | 1927.95 | 4020.44 | 1927.42 | 4033.85 | 1927 |
| 4073.74 | 1927 | 4094.89 | 1927.7 | 4098.11 | 1927.74 | 4110.16 | 1927.99 | 4112.36 | 1928 |
| 4114.46 | 1928.15 | 4124.77 | 1929 | 4148.78 | 1929 | 4163.64 | 1928.19 | 4166.28 | 1928.05 |
| 4171.69 | 1927.81 | 4180.08 | 1927.46 | 4181.27 | 1927.49 | 4188.28 | 1927.26 | 4195.07 | 1927 |
| 4201.56 | 1927 | 4206.79 | 1926.99 | 4222.12 | 1926.98 | 4222.47 | 1926.99 | 4241.19 | 1926.99 |
| 4264.9 | 1926.01 | 4265.23 | 1926 | 4277.52 | 1926 | 4282.36 | 1925.99 | 4288.3 | 1925.99 |
| 4298.24 | 1926 | 4322.13 | 1926 | 4332.2 | 1925.99 | 4341.42 | 1926 | 4344.92 | 1925.81 |
| 4345.62 | 1925.8 | 4350.65 | 1925.54 | 4359.71 | 1925.03 | 4365.09 | 1925.04 | 4377.75 | 1925 |
| 4398.99 | 1925 | 4401.73 | 1925.03 | 4404.83 | 1925.09 | 4417.7 | 1925.42 | 4422.03 | 1925.55 |
| 4424.77 | 1925.61 | 4430.41 | 1925.69 | 4435.62 | 1925.82 | 4442.24 | 1926 | 4474.99 | 1926 |
| 4476.78 | 1925.98 | 4487.78 | 1925.89 | 4492.14 | 1925.82 | 4502.51 | 1925.61 | 4526.22 | 1925 |
| 4610.53 | 1925 | 4640.3 | 1926 | 4660.83 | 1926.61 | 4665.18 | 1926.71 | 4676.2 | 1926.88 |
| 4681.49 | 1927 | 4688.29 | 1927 | 4691.59 | 1926.93 | 4731.02 | 1926.06 | 4734.16 | 1926 |
| 4804.49 | 1926 | 4817.39 | 1925.84 | 4844.09 | 1925.53 | 4844.94 | 1925.5 | 4855.2 | 1925.41 |
| 4860.42 | 1925.34 | 4868.99 | 1925.17 | 4874.67 | 1925 | 5003.31 | 1925 | 5014 | 1925.53 |
| 5023.22 | 1926 | 5025.1 | 1926.03 | 5032 | 1926 | 5039 | 1925.86 | 5040.47 | 1925.78 |
| 5044.95 | 1925.64 | 5058.76 | 1925 | 5077.98 | 1925 | 5092.46 | 1924.99 | 5116.37 | 1924.99 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5117.1 | 1925 | 5136.45 | 1925 | 5137.44 | 1925.07 | 5151.51 | 1926 | 5156.12 | 1926.45 |
| 5162.05 | 1927 | 5181.89 | 1927 | 5184.54 | 1926.97 | 5189.21 | 1926.87 | 5195.33 | 1927 |
| 5215.38 | 1927 | 5237.71 | 1926.35 | 5248.27 | 1926.08 | 5250.63 | 1926 | 5253.21 | 1926 |
| 5256 | 1926.03 | 5265.12 | 1926.06 | 5271.29 | 1926.31 | 5275.88 | 1926.31 | 5281.43 | 1926.29 |
| 5290.51 | 1926 | 5360.22 | 1926 | 5363.3 | 1926.07 | 5382.66 | 1926.4 | 5391.74 | 1926.56 |
| 5392.18 | 1926.56 | 5406.69 | 1926.73 | 5429.06 | 1927 | 5469.47 | 1927 | 5472.82 | 1926.86 |
| 5494.14 | 1926 | 5499.05 | 1925.94 | 5504.2 | 1926 | 5507.82 | 1927 | 5510.97 | 1927.19 |
| 5517.42 | 1927.1 | 5524.9 | 1927.16 | 5541.76 | 1927.01 | 5542.39 | 1927 | 5549.89 | 1926.07 |
| 5554.36 | 1925.46 | 5557.85 | 1925 | 5571.68 | 1925 | 5575.36 | 1925.31 | 5584.82 | 1926 |
| 5586.32 | 1926 | 5588.79 | 1927 | 5589.3 | 1927.18 | 5591 | 1928 | 5595.68 | 1930 |
| 5596.85 | 1930.13 | 5602.98 | 1931 | 5604.37 | 1931.17 | 5613.59 | 1932.22 | 5619.73 | 1933 |
| 5627.1 | 1933.64 | 5631.45 | 1934 | 5637.8 | 1935 | 5639.62 | 1936 | 5642.16 | 1937 |
| 5644.96 | 1937.83 | 5650.61 | 1939.62 | 5656.04 | 1941.36 | 5658.14 | 1942 | 5661.86 | 1943 |
| 5669.16 | 1943.09 | 5672.08 | 1943.08 | 5678.45 | 1943.32 | 5679.36 | 1943.32 | 5682.42 | 1943.24 |
| 5686.47 | 1943.1 | 5687.85 | 1943 | 5688.63 | 1942.81 | 5689.19 | 1942.75 | 5689.95 | 1942.79 |
| 5691.3 | 1943 | 5694.49 | 1943.19 | 5698.34 | 1943.28 | 5705.26 | 1943.61 | 5708.8 | 1943.72 |
| 5711.82 | 1943.84 | 5714.55 | 1944 | 5731.14 | 1944.64 | 5733.48 | 1944.74 | 5740.41 | 1945 |
| 5743.25 | 1945.16 | 5746.34 | 1945.26 | 5762.2 | 1945.85 | 5765.7 | 1946 | 5778.64 | 1946 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5778.64 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5778.64 | 161.16 | 161.16 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1928.52 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.15 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1928.38 | Reach Len. (ft) | 161.16 | 161.16 | 161.16 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7280.23 | | |
| E.G. Slope (ft/ft) | 0.003159 | Area (sq ft) | | 7280.23 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 4067.25 | Top Width (ft) | | 4067.25 | | |
| Vel Total (ft/s) | 3.08 | Avg. Vel. (ft/s) | | 3.08 | | |
| Max Chl Dpth (ft) | 3.39 | Hydr. Depth (ft) | | 1.79 | | |
| Conv. Total (cfs) | 398554.0 | Conv. (cfs) | | 398554.0 | | |
| Length Wtd. (ft) | 161.16 | Wetted Per. (ft) | | 4069.45 | | |
| Min Ch El (ft) | 1924.99 | Shear (lb/sq ft) | | 0.35 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5778.64 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.52 | Cum Volume (acre-ft) | | 1771.85 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 828.45 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -9747.05

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1934.17 | 246.92 | 1933.12 | 251.78 | 1933.1 | 257.97 | 1933.08 | 293.53 | 1932.95 |
| 298.59 | 1932.93 | 301.37 | 1932.91 | 305.46 | 1932.9 | 307.73 | 1932.88 | 309.6 | 1932.88 |
| 319.77 | 1932.83 | 324.97 | 1932.81 | 330.61 | 1932.78 | 351.82 | 1932.69 | 360.91 | 1932.65 |
| 361.25 | 1932.64 | 372.71 | 1932.6 | 390.88 | 1932.52 | 398.76 | 1932.48 | 405.71 | 1932.46 |
| 408.15 | 1932.44 | 412.48 | 1932.43 | 435.83 | 1932.33 | 443.69 | 1932.29 | 445.62 | 1932.29 |
| 448.4 | 1932.27 | 452.71 | 1932.26 | 464.69 | 1932.2 | 471.01 | 1932.18 | 497.22 | 1932.07 |
| 510.87 | 1932.01 | 514.85 | 1931.99 | 545.26 | 1931.86 | 567.02 | 1931.77 | 576.3 | 1931.72 |
| 583.44 | 1931.69 | 590.99 | 1931.65 | 626.33 | 1931.48 | 627.71 | 1931.48 | 636.15 | 1931.44 |
| 637.55 | 1931.44 | 640.62 | 1931.42 | 652.4 | 1931.37 | 654.08 | 1931.37 | 656.73 | 1931.35 |
| 681.43 | 1931.25 | 708.35 | 1931.12 | 732.23 | 1931 | 816.38 | 1930.56 | 867 | 1930.3 |
| 877.87 | 1930.24 | 889.36 | 1930.19 | 896.5 | 1930.15 | 930.68 | 1929.98 | 931.52 | 1929.97 |
| 939.81 | 1929.93 | 942.73 | 1929.92 | 943.06 | 1929.91 | 985.81 | 1929.7 | 986.62 | 1929.69 |
| 998.19 | 1929.66 | 998.48 | 1929.65 | 1033.68 | 1929.53 | 1062.14 | 1929.44 | 1083.11 | 1929.36 |
| 1130.77 | 1929.13 | 1133.9 | 1929.11 | 1139.9 | 1929.09 | 1151.55 | 1929.03 | 1160.27 | 1928.99 |
| 1161.19 | 1928.98 | 1176.43 | 1928.91 | 1178.9 | 1928.88 | 1197.62 | 1928.63 | 1243.37 | 1927.67 |
| 1259.54 | 1927.78 | 1264.36 | 1927.79 | 1269.26 | 1927.79 | 1294.24 | 1927.94 | 1304.54 | 1928 |
| 1316.55 | 1928 | 1319.18 | 1927.95 | 1343.82 | 1927.52 | 1355.96 | 1927.2 | 1362.17 | 1927 |
| 1739.57 | 1927 | 1746.9 | 1926.87 | 1757.79 | 1926.7 | 1769.65 | 1926.55 | 1797.19 | 1926.73 |
| 1836.85 | 1927 | 1847.79 | 1927 | 1870.41 | 1927.52 | 1877.51 | 1927.67 | 1881.86 | 1927.77 |
| 1882.17 | 1927.77 | 1892.56 | 1928 | 1905.7 | 1928.04 | 1919.58 | 1928.1 | 1924.44 | 1928.09 |
| 1943.51 | 1928 | 1949.06 | 1927.59 | 1956.83 | 1927 | 1963.89 | 1926.41 | 1967.9 | 1926 |
| 1993.41 | 1925.38 | 1994.57 | 1925.35 | 2007.37 | 1925.1 | 2013.33 | 1925 | 2196.33 | 1925 |
| 2209.95 | 1925.16 | 2231.33 | 1925.42 | 2238.26 | 1925.5 | 2264.58 | 1925.72 | 2274.73 | 1925.81 |
| 2278.17 | 1925.87 | 2286.34 | 1926 | 2337.78 | 1926 | 2347.44 | 1925.99 | 2354.88 | 1926 |
| 2462.78 | 1926 | 2478.83 | 1926.01 | 2489.17 | 1926.02 | 2506.53 | 1926.02 | 2509.88 | 1926.03 |
| 2520.38 | 1926.02 | 2524.72 | 1926.03 | 2535.18 | 1926.01 | 2538.31 | 1926.01 | 2539.39 | 1926 |
| 2556.39 | 1926 | 2565.96 | 1926.36 | 2571.17 | 1926.5 | 2572.13 | 1926.51 | 2576.49 | 1926.63 |
| 2583.95 | 1926.87 | 2586.87 | 1927 | 2645.86 | 1927 | 2656.7 | 1926.97 | 2657.51 | 1926.98 |
| 2661.22 | 1926.98 | 2663.43 | 1926.99 | 2669.95 | 1926.85 | 2675.71 | 1926.77 | 2678.57 | 1926.68 |
| 2690.38 | 1926.47 | 2693.06 | 1926.4 | 2698.33 | 1926.29 | 2699.11 | 1926.29 | 2703.41 | 1926.24 |
| 2708.44 | 1926.17 | 2714.11 | 1926 | 2759.2 | 1926 | 2768.04 | 1926.16 | 2777.13 | 1926.35 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2784.97 | 1926.55 | 2804.1 | 1927 | 2807.44 | 1927.01 | 2828.63 | 1927.04 | 2835.44 | 1927.03 |
| 2853.02 | 1927 | 2865.21 | 1926.37 | 2872.85 | 1926 | 2887.07 | 1925.35 | 2894.28 | 1925 |
| 2920.79 | 1925 | 2926.15 | 1925.54 | 2927.68 | 1925.65 | 2929.2 | 1925.73 | 2931.99 | 1925.84 |
| 2934.3 | 1926 | 2941.11 | 1926 | 2948.1 | 1925.99 | 2952.45 | 1925.99 | 2955.61 | 1926 |
| 2957.06 | 1926.03 | 2962.82 | 1926.17 | 2966 | 1926.19 | 2970.64 | 1926.25 | 2972.49 | 1926.29 |
| 2980.98 | 1926.42 | 2986.52 | 1926.51 | 2988.23 | 1926.52 | 2994.43 | 1926.61 | 3008.72 | 1926.81 |
| 3020.72 | 1927 | 3025.75 | 1927 | 3030.49 | 1927.07 | 3033.13 | 1927.19 | 3039.34 | 1927.33 |
| 3042 | 1927.3 | 3044.19 | 1927.25 | 3052.2 | 1927 | 3057.94 | 1927 | 3067.58 | 1927.02 |
| 3070.22 | 1927.02 | 3070.91 | 1927.01 | 3081.69 | 1927.01 | 3088.63 | 1927 | 3095.52 | 1926.91 |
| 3105.12 | 1926.62 | 3106.31 | 1926.58 | 3118.62 | 1926.22 | 3120.95 | 1926.14 | 3122.33 | 1926.11 |
| 3126.02 | 1926 | 3138.8 | 1925.53 | 3139.23 | 1925.52 | 3144.85 | 1925.56 | 3152.15 | 1925.92 |
| 3154.77 | 1926 | 3156.83 | 1926.16 | 3167.44 | 1927 | 3172.76 | 1927.63 | 3174.74 | 1928 |
| 3179.02 | 1928.77 | 3180.58 | 1929 | 3190.07 | 1930.32 | 3194.76 | 1931 | 3199.51 | 1931 |
| 3203.76 | 1930.71 | 3212.41 | 1930.13 | 3216.97 | 1929.81 | 3228.33 | 1929 | 3232.99 | 1928.67 |
| 3242.28 | 1928 | 3253.78 | 1927.48 | 3267.98 | 1927.12 | 3272.61 | 1927.01 | 3273.49 | 1927.01 |
| 3276.64 | 1927.2 | 3287.65 | 1928 | 3293.64 | 1928 | 3298.65 | 1928.01 | 3307.62 | 1928.08 |
| 3317.88 | 1928.05 | 3327.49 | 1928.04 | 3328.33 | 1928 | 3331.16 | 1927.81 | 3342.89 | 1927 |
| 3347 | 1926.71 | 3352.44 | 1926.51 | 3362.08 | 1926.01 | 3362.86 | 1926 | 3364.53 | 1925.88 |
| 3367.79 | 1925.82 | 3384.89 | 1925.32 | 3391.14 | 1925.22 | 3398.58 | 1925.13 | 3401.23 | 1925.11 |
| 3404.29 | 1925.07 | 3406.61 | 1925.09 | 3412.05 | 1925.17 | 3415.53 | 1925.27 | 3419.49 | 1925.37 |
| 3421.82 | 1925.44 | 3431.26 | 1925.68 | 3433.76 | 1925.75 | 3444.66 | 1926 | 3466 | 1926 |
| 3468.09 | 1925.94 | 3474.84 | 1925.76 | 3488.43 | 1925.39 | 3490.79 | 1925.33 | 3492.07 | 1925.31 |
| 3496.9 | 1925.19 | 3506.67 | 1925.08 | 3507.14 | 1925.07 | 3520.86 | 1925.01 | 3521.56 | 1925 |
| 3580.51 | 1925 | 3583.03 | 1925.05 | 3588.34 | 1925.2 | 3607.85 | 1926 | 3622.17 | 1927 |
| 3641.79 | 1927 | 3644.54 | 1926.77 | 3650.34 | 1926.3 | 3653.8 | 1926 | 3670.12 | 1926 |
| 3670.34 | 1925.99 | 3684.07 | 1925.64 | 3687.62 | 1925.63 | 3688.58 | 1925.65 | 3703.4 | 1925.73 |
| 3723.59 | 1925.88 | 3727.44 | 1926 | 3794.12 | 1926 | 3799.66 | 1926.01 | 3806.63 | 1926.01 |
| 3812 | 1926 | 3820.28 | 1926.01 | 3831.05 | 1926.01 | 3832.36 | 1926 | 3850.71 | 1926 |
| 3858.81 | 1926.38 | 3859.5 | 1926.38 | 3880.08 | 1927 | 3893.97 | 1927 | 3924.39 | 1926.42 |
| 3934.61 | 1926.23 | 3960.06 | 1926.57 | 3963.78 | 1926.66 | 3973.25 | 1926.9 | 3976.17 | 1926.98 |
| 3977.9 | 1927 | 4107.73 | 1927 | 4108.48 | 1927.01 | 4142.92 | 1927.01 | 4153.53 | 1927 |
| 4230.45 | 1927 | 4243.56 | 1926.99 | 4246.21 | 1926.99 | 4247.75 | 1927 | 4257.39 | 1927 |
| 4262.81 | 1927.01 | 4265.46 | 1927.01 | 4276.8 | 1927.02 | 4282.3 | 1927.02 | 4289.81 | 1927.03 |
| 4294.55 | 1927.03 | 4297.83 | 1927.04 | 4306.61 | 1927.03 | 4315.57 | 1927.35 | 4316.82 | 1927.35 |
| 4320.57 | 1927.4 | 4324.46 | 1927.4 | 4327.89 | 1927.39 | 4334.53 | 1927.23 | 4335.4 | 1927.2 |
| 4338.28 | 1927.25 | 4341.41 | 1927 | 4344.91 | 1927 | 4350.76 | 1926.49 | 4356.46 | 1926 |
| 4360.75 | 1926 | 4367.78 | 1925.99 | 4372.37 | 1926 | 4382.26 | 1926 | 4385.4 | 1926.02 |
| 4386.42 | 1926.01 | 4388.5 | 1926.03 | 4390.87 | 1926 | 4392.65 | 1925.86 | 4404.11 | 1925 |
| 4448.12 | 1925 | 4452.09 | 1925.01 | 4461.28 | 1925 | 4464.97 | 1925.02 | 4465.22 | 1925 |
| 4714.59 | 1925 | 4723.68 | 1925.41 | 4725.16 | 1925.43 | 4731.9 | 1925.29 | 4742.94 | 1925 |
| 4755.44 | 1925 | 4756.93 | 1925.08 | 4763.42 | 1925.49 | 4767.79 | 1925.66 | 4768.46 | 1925.7 |
| 4774.72 | 1925.99 | 4775.07 | 1926 | 4823.7 | 1926 | 4829.98 | 1926.22 | 4836.06 | 1926.42 |
| 4842.39 | 1926.28 | 4844.4 | 1926.25 | 4846.24 | 1926.24 | 4846.47 | 1926.22 | 4857.28 | 1926.24 |
| 4861.42 | 1926.01 | 4871.36 | 1926.01 | 4878.56 | 1926 | 4892.01 | 1926 | 4940.53 | 1925.5 |
| 4941.62 | 1925.48 | 4953.13 | 1925.17 | 4959.23 | 1925 | 5200.6 | 1925 | 5214.52 | 1925.42 |
| 5220.95 | 1925.62 | 5224.05 | 1925.65 | 5241.66 | 1926 | 5244.22 | 1925.99 | 5246.68 | 1926 |
| 5251.38 | 1926 | 5273.8 | 1926.79 | 5279.89 | 1927 | 5282.35 | 1927 | 5287.74 | 1926.89 |
| 5291.77 | 1926.82 | 5294.88 | 1926.8 | 5299.04 | 1926.74 | 5306.94 | 1926.58 | 5311.98 | 1926.51 |
| 5319.69 | 1926.36 | 5330.48 | 1926 | 5357.17 | 1926 | 5361.86 | 1926.11 | 5366.9 | 1926.04 |
| 5371.02 | 1926.05 | 5373.81 | 1926.04 | 5375.58 | 1926.05 | 5378.37 | 1926.04 | 5381 | 1926 |
| 5383.97 | 1926 | 5384.58 | 1925.99 | 5392.48 | 1925.99 | 5407.56 | 1925.98 | 5420.55 | 1925.97 |
| 5428.48 | 1925.97 | 5432.26 | 1925.98 | 5467.1 | 1925.98 | 5472.46 | 1926 | 5558.31 | 1926 |
| 5568.17 | 1926.02 | 5576.16 | 1926 | 5578.61 | 1926 | 5589.1 | 1925.78 | 5590.05 | 1925.8 |
| 5593.39 | 1925.55 | 5595.85 | 1926 | 5598.02 | 1926.56 | 5598.58 | 1926.55 | 5602.02 | 1926.61 |
| 5605.35 | 1926.56 | 5609.06 | 1926.41 | 5618.02 | 1926 | 5630.87 | 1925 | 5644.66 | 1925 |
| 5647.89 | 1925.83 | 5648.5 | 1926 | 5650.99 | 1927 | 5651.21 | 1927.19 | 5652.61 | 1928 |
| 5653.42 | 1928.54 | 5654.17 | 1929 | 5656.28 | 1929.34 | 5658.35 | 1930 | 5665.75 | 1930.68 |
| 5669.31 | 1931 | 5679.52 | 1931.87 | 5681.21 | 1932 | 5687.06 | 1932.48 | 5689.91 | 1932.69 |
| 5693.9 | 1933 | 5697.4 | 1933.35 | 5698.72 | 1933.47 | 5701.41 | 1933.67 | 5705.37 | 1934 |
| 5707.48 | 1934.76 | 5709.07 | 1935.31 | 5710.94 | 1936 | 5712.78 | 1936.64 | 5713.6 | 1937 |
| 5716.03 | 1937.86 | 5718.75 | 1939 | 5720.48 | 1939.47 | 5721.86 | 1940 | 5725.26 | 1941 |
| 5727.83 | 1941.72 | 5729.89 | 1942.12 | 5732.95 | 1943 | 5736.33 | 1943.72 | 5738.19 | 1944 |
| 5743.86 | 1944.5 | 5750.48 | 1945 | 5758.33 | 1945 | 5766.86 | 1944.87 | 5773.5 | 1944.97 |
| 5778.12 | 1944.97 | 5778.6 | 1944.96 | 5781.47 | 1944.96 | 5783.55 | 1944.97 | 5790.42 | 1944.99 |
| 5792.2 | 1945 | 5797.64 | 1945 | 5803.8 | 1945.01 | 5810.55 | 1945 | 5815.32 | 1945 |
| 5816.61 | 1945.13 | 5817.12 | 1945.16 | 5823.23 | 1945.33 | 5827.39 | 1945.43 | 5828.65 | 1945.45 |
| 5829.04 | 1945.43 | 5835.14 | 1945.6 | 5848.7 | 1946 | 5852.03 | 1946 | 5869.09 | 1946.01 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5869.09 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5869.09 | 131.89 | 131.89 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1928.01 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.15 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1927.86 | Reach Len. (ft) | 131.89 | 131.89 | 131.89 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7278.59 | | |
| E.G. Slope (ft/ft) | 0.003297 | Area (sq ft) | | 7278.59 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 4198.62 | Top Width (ft) | | 4198.62 | | |
| Vel Total (ft/s) | 3.08 | Avg. Vel. (ft/s) | | 3.08 | | |
| Max Chl Dpth (ft) | 2.86 | Hydr. Depth (ft) | | 1.73 | | |
| Conv. Total (cfs) | 390089.1 | Conv. (cfs) | | 390089.1 | | |
| Length Wtd. (ft) | 131.89 | Wetted Per. (ft) | | 4200.26 | | |

| | | | | | |
|---|---|---|---|---|---|
| Min Ch El (ft) | 1925.00 | Shear (lb/sq ft) | | 0.36 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5869.09 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.47 | Cum Volume (acre-ft) | | 1744.92 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 813.16 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -9878.94

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1933.61 | 3.31 | 1933.6 | 11.81 | 1933.56 | 23.16 | 1933.52 | 24.23 | 1933.51 |
| 35.05 | 1933.47 | 37.92 | 1933.45 | 58.03 | 1933.37 | 68.58 | 1933.32 | 72.75 | 1933.31 |
| 85.59 | 1933.25 | 86.97 | 1933.25 | 94.72 | 1933.21 | 97.69 | 1933.2 | 390.25 | 1931.96 |
| 392.74 | 1931.96 | 395.86 | 1931.94 | 403 | 1931.92 | 432.3 | 1931.81 | 438.11 | 1931.79 |
| 441.3 | 1931.77 | 446.69 | 1931.75 | 462.42 | 1931.68 | 474.86 | 1931.62 | 488.1 | 1931.57 |
| 505.82 | 1931.49 | 515.61 | 1931.44 | 543.95 | 1931.33 | 558.15 | 1931.27 | 560.93 | 1931.25 |
| 567.9 | 1931.23 | 568.67 | 1931.22 | 606.59 | 1931.06 | 610.07 | 1931.05 | 635.62 | 1930.94 |
| 662.82 | 1930.83 | 665.57 | 1930.81 | 681.16 | 1930.75 | 720.41 | 1930.58 | 749.89 | 1930.46 |
| 772.55 | 1930.35 | 791.93 | 1930.25 | 799.05 | 1930.22 | 800.61 | 1930.22 | 810.15 | 1930.18 |
| 815.22 | 1930.15 | 833.44 | 1930.08 | 861.38 | 1929.96 | 884.57 | 1929.85 | 891.79 | 1929.81 |
| 905.72 | 1929.75 | 1000.15 | 1929.26 | 1035.6 | 1929.08 | 1038.54 | 1929.06 | 1056.2 | 1928.97 |
| 1062.77 | 1928.94 | 1093.95 | 1928.78 | 1097.39 | 1928.77 | 1105.42 | 1928.72 | 1121.18 | 1928.65 |
| 1128.63 | 1928.61 | 1141.58 | 1928.57 | 1169.66 | 1928.47 | 1195.23 | 1928.3 | 1215.08 | 1928.17 |
| 1224.51 | 1928.09 | 1229.37 | 1927.84 | 1273.27 | 1927.15 | 1277.54 | 1927 | 1285.41 | 1927 |
| 1298.94 | 1927.01 | 1310.5 | 1927 | 1321.51 | 1926.68 | 1330.01 | 1926.44 | 1338.91 | 1926.23 |
| 1346.33 | 1926.01 | 1346.43 | 1926 | 1402.75 | 1926 | 1406.72 | 1926.04 | 1413.68 | 1926.08 |
| 1421.2 | 1926.14 | 1430.45 | 1926.23 | 1474.82 | 1926.67 | 1506.39 | 1927 | 1615.9 | 1927 |
| 1649.68 | 1926.86 | 1694.85 | 1926.68 | 1696.01 | 1926.69 | 1698.33 | 1926.65 | 1708.75 | 1926.57 |
| 1715.54 | 1926.5 | 1721.29 | 1926.42 | 1733.73 | 1926.29 | 1749.25 | 1926 | 1804.6 | 1926 |
| 1813.32 | 1926.36 | 1818.38 | 1926.53 | 1820.58 | 1926.62 | 1822.02 | 1926.66 | 1832.13 | 1926.98 |
| 1835.31 | 1927 | 1846.97 | 1927 | 1847.26 | 1927.01 | 1863.15 | 1927.01 | 1880.62 | 1927 |
| 1894.62 | 1927 | 1908.14 | 1926.53 | 1923.14 | 1926 | 1938.75 | 1925.5 | 1940.1 | 1925.47 |
| 1945.14 | 1925.31 | 1947.03 | 1925.31 | 1947.95 | 1925.28 | 1949.69 | 1925.29 | 1953.93 | 1925.36 |
| 1973.07 | 1925.08 | 1978.43 | 1925.1 | 1992.08 | 1925.03 | 1994.87 | 1925.03 | 1998.79 | 1925 |
| 2028.02 | 1925 | 2035.44 | 1924.66 | 2040.66 | 1924.45 | 2043.5 | 1924.36 | 2046.13 | 1924.3 |
| 2048.28 | 1924.27 | 2050.62 | 1924.29 | 2088.53 | 1925 | 2097.5 | 1924.99 | 2119.56 | 1925 |
| 2293.91 | 1925 | 2295.32 | 1925.04 | 2314.73 | 1925.45 | 2318.59 | 1925.46 | 2339.43 | 1925.57 |
| 2345.15 | 1925.54 | 2359.12 | 1925.25 | 2370.44 | 1925.01 | 2385.83 | 1925.01 | 2386.35 | 1925.02 |
| 2399.78 | 1925 | 2432.15 | 1925 | 2466.33 | 1925.27 | 2487.65 | 1925.42 | 2495.2 | 1925.5 |
| 2496.48 | 1925.52 | 2499.08 | 1925.52 | 2532.27 | 1925.98 | 2533.12 | 1926 | 2594.54 | 1926 |
| 2596.84 | 1926.01 | 2613.58 | 1926.42 | 2619.55 | 1926.28 | 2628.77 | 1926.05 | 2630.17 | 1926 |
| 2650.83 | 1925.97 | 2656.74 | 1925.97 | 2660.98 | 1925.96 | 2678.26 | 1925.99 | 2682.6 | 1925.99 |
| 2686.41 | 1926 | 2704.65 | 1926.68 | 2713.08 | 1926.98 | 2713.88 | 1927 | 2742.97 | 1927 |
| 2745.16 | 1926.82 | 2753.33 | 1926 | 2877.28 | 1926 | 2885.53 | 1926.43 | 2889.45 | 1926.67 |
| 2894.96 | 1926.81 | 2903.38 | 1926 | 2903.95 | 1925.92 | 2912.12 | 1925 | 2932.45 | 1925 |
| 2943.18 | 1925.57 | 2946.67 | 1925.75 | 2951.21 | 1926 | 2971.27 | 1926.95 | 2972.63 | 1927.03 |
| 2982.96 | 1928 | 2985.31 | 1928.2 | 2993.84 | 1929 | 3020.68 | 1929 | 3032.13 | 1928.06 |
| 3033.02 | 1927.97 | 3044.78 | 1927.17 | 3047.34 | 1927 | 3055.36 | 1926.99 | 3062.43 | 1927 |
| 3064.35 | 1927.03 | 3065.04 | 1927.01 | 3076.01 | 1927.04 | 3085.77 | 1927.04 | 3095.66 | 1927.02 |
| 3097.81 | 1927 | 3110.31 | 1927 | 3114.56 | 1926.99 | 3123.08 | 1927 | 3129.07 | 1927 |
| 3133.55 | 1927.5 | 3137.65 | 1928 | 3140.76 | 1928.44 | 3144.37 | 1929 | 3146.2 | 1929.32 |
| 3147.41 | 1929.49 | 3148.29 | 1929.58 | 3149.7 | 1929.66 | 3151.67 | 1929.9 | 3153.18 | 1929.98 |
| 3155.26 | 1929.96 | 3163.05 | 1930 | 3207.83 | 1930 | 3222.56 | 1929.41 | 3233.38 | 1929 |
| 3233.84 | 1929 | 3240.9 | 1928.69 | 3249.36 | 1928.45 | 3250.24 | 1928.42 | 3263.8 | 1928.08 |
| 3267.11 | 1928 | 3271.67 | 1927.91 | 3278.12 | 1927.8 | 3278.88 | 1927.76 | 3287.04 | 1927.47 |
| 3294.61 | 1927.22 | 3301.1 | 1927 | 3302.37 | 1926.97 | 3306.35 | 1926.79 | 3320.77 | 1926 |
| 3324.59 | 1925.78 | 3337.42 | 1925 | 3363.52 | 1925 | 3370.14 | 1925.01 | 3375.95 | 1925.01 |
| 3379.86 | 1925 | 3388.06 | 1925.49 | 3393.58 | 1925.84 | 3396.5 | 1926 | 3448.92 | 1926 |
| 3475.83 | 1925.04 | 3479.41 | 1925 | 3482.04 | 1925 | 3485.6 | 1924.83 | 3498.6 | 1924.42 |
| 3499.24 | 1924.38 | 3503.32 | 1924.2 | 3506.34 | 1924.08 | 3508.77 | 1924 | 3547.32 | 1924 |
| 3558.03 | 1924.24 | 3566.28 | 1924.4 | 3574.4 | 1924.5 | 3578.91 | 1924.61 | 3589.5 | 1924.99 |
| 3594.54 | 1924.99 | 3598.55 | 1925 | 3614.92 | 1925 | 3620.88 | 1925.32 | 3641.79 | 1925.99 |
| 3643.08 | 1926 | 3659.8 | 1925.42 | 3660.3 | 1925.42 | 3668.13 | 1925.17 | 3669.8 | 1925.13 |
| 3673.61 | 1925 | 3720.71 | 1925 | 3731.32 | 1925.28 | 3742.71 | 1925.44 | 3771.44 | 1925.82 |
| 3776.18 | 1925.89 | 3780.12 | 1925.97 | 3781 | 1926 | 3784.61 | 1926 | 3799.15 | 1926.4 |
| 3817.02 | 1927 | 3819.46 | 1927.13 | 3834.11 | 1927.94 | 3835.12 | 1928 | 3853.76 | 1928 |
| 3855.65 | 1927.92 | 3857.78 | 1927.86 | 3861.09 | 1927.74 | 3867.5 | 1927.56 | 3883.88 | 1927.02 |
| 3884.87 | 1927 | 3926.62 | 1927 | 3928.65 | 1926.97 | 3945.62 | 1926.63 | 3960.69 | 1926.53 |
| 3971.72 | 1926.46 | 3975.44 | 1926.34 | 3977.18 | 1926.31 | 3979.28 | 1926.34 | 3980.06 | 1926.32 |
| 3984.41 | 1926.37 | 3989.74 | 1926.31 | 3997.65 | 1926.1 | 4000.75 | 1926 | 4044.07 | 1926 |
| 4047.23 | 1926.1 | 4048.65 | 1926.18 | 4049.07 | 1926.16 | 4053.2 | 1926.43 | 4058.54 | 1926.32 |
| 4063.77 | 1926.45 | 4138.16 | 1926.67 | 4139.84 | 1926.67 | 4149.92 | 1926.79 | 4159.65 | 1927 |
| 4226.19 | 1927 | 4235.59 | 1927.01 | 4340.8 | 1927.01 | 4353.7 | 1927.21 | 4374.55 | 1927.49 |
| 4375.51 | 1927.5 | 4390.83 | 1927.24 | 4404.73 | 1927 | 4426.87 | 1927 | 4438.96 | 1926.72 |
| 4465.88 | 1926.02 | 4469.04 | 1926 | 4471.38 | 1925.85 | 4474.29 | 1925.64 | 4483.51 | 1925 |
| 4508.83 | 1924.48 | 4533.35 | 1924 | 4540.97 | 1923.99 | 4544.87 | 1924 | 4548.56 | 1923.99 |
| 4557.39 | 1923.98 | 4577.84 | 1923.95 | 4589.39 | 1923.96 | 4610 | 1923.91 | 4618.34 | 1923.9 |
| 4622.37 | 1923.9 | 4625.63 | 1923.89 | 4652.56 | 1923.96 | 4660.26 | 1923.95 | 4667.55 | 1923.96 |
| 4680.21 | 1923.97 | 4692.02 | 1923.97 | 4700.42 | 1923.99 | 4704.84 | 1923.99 | 4711.85 | 1924 |
| 4716.05 | 1924.06 | 4720.16 | 1924.15 | 4724.2 | 1924.29 | 4745.13 | 1925 | 4758.15 | 1925 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4763.56 | 1924.86 | 4770.53 | 1924.7 | 4788.27 | 1924 | 4820.96 | 1924 | 4822.29 | 1924.04 |
| 4835.12 | 1924.34 | 4839.81 | 1924.49 | 4844.91 | 1924.61 | 4847.29 | 1924.65 | 4850.47 | 1924.68 |
| 4851.45 | 1924.72 | 4853.7 | 1924.73 | 4856.93 | 1924.81 | 4859.71 | 1924.81 | 4862.03 | 1924.79 |
| 4864.43 | 1924.83 | 4867.96 | 1924.79 | 4868.99 | 1924.8 | 4872.72 | 1924.75 | 4881.94 | 1924.66 |
| 4889.47 | 1924.62 | 4894.45 | 1924.67 | 4898.84 | 1924.67 | 4909.56 | 1924.73 | 4914.46 | 1924.71 |
| 4925.79 | 1924.65 | 4940.09 | 1924.64 | 4957.29 | 1924.57 | 4962.63 | 1924.52 | 4974.5 | 1924.37 |
| 4997.07 | 1924.09 | 5002.59 | 1924 | 5017.64 | 1923.99 | 5029.44 | 1923.99 | 5030.03 | 1923.98 |
| 5044.2 | 1923.98 | 5054.7 | 1923.97 | 5070.41 | 1923.97 | 5080.83 | 1923.98 | 5109.92 | 1924 |
| 5122.08 | 1924 | 5124.02 | 1924.02 | 5126.36 | 1924.08 | 5129.63 | 1924.22 | 5147.26 | 1924.99 |
| 5149.63 | 1925 | 5151.31 | 1925.06 | 5155.7 | 1925.26 | 5171.16 | 1925.99 | 5185.71 | 1925.99 |
| 5191.2 | 1926 | 5205.71 | 1925.43 | 5211.87 | 1925.2 | 5217.77 | 1925 | 5324.17 | 1925 |
| 5369.57 | 1925.14 | 5376.93 | 1925.13 | 5383.43 | 1925.14 | 5424.27 | 1925.15 | 5470.29 | 1925.03 |
| 5474.24 | 1925 | 5497.24 | 1925 | 5510.12 | 1926.11 | 5520.23 | 1927 | 5524.16 | 1927 |
| 5526.15 | 1926.96 | 5527.45 | 1926.87 | 5535.73 | 1926.39 | 5539.95 | 1926.21 | 5549.07 | 1925.46 |
| 5553.46 | 1925 | 5559.32 | 1925 | 5560.85 | 1925.8 | 5562.02 | 1926.46 | 5562.95 | 1926.77 |
| 5564.02 | 1927 | 5565.29 | 1927.15 | 5566.31 | 1927.23 | 5569.42 | 1927.41 | 5575.26 | 1928 |
| 5578.36 | 1928.07 | 5581.38 | 1928.36 | 5582.33 | 1928.56 | 5584.63 | 1929 | 5588.32 | 1929 |
| 5589.19 | 1928.9 | 5596.06 | 1928 | 5600.43 | 1927.4 | 5603.06 | 1927 | 5604.01 | 1927 |
| 5607.91 | 1927.95 | 5613.34 | 1929 | 5619.77 | 1929.93 | 5621.46 | 1930.19 | 5627.34 | 1931.19 |
| 5632 | 1932 | 5637.93 | 1933 | 5640.78 | 1933.21 | 5645.29 | 1933.49 | 5649.31 | 1934 |
| 5651.64 | 1934.74 | 5652.36 | 1935 | 5654.85 | 1935.77 | 5656.2 | 1936.13 | 5663.06 | 1937.74 |
| 5668.53 | 1939.36 | 5670.88 | 1940 | 5673.23 | 1940.71 | 5674.75 | 1941 | 5677.43 | 1941.15 |
| 5680.51 | 1941.28 | 5687.55 | 1941.45 | 5689.63 | 1941.53 | 5699.26 | 1942 | 5700.58 | 1942.06 |
| 5703.23 | 1942.23 | 5704.91 | 1942.3 | 5707.74 | 1942.5 | 5708.56 | 1942.54 | 5714.95 | 1943 |
| 5723.02 | 1943.35 | 5728.99 | 1943.49 | 5735.23 | 1943.71 | 5737.22 | 1943.76 | 5742.28 | 1944 |
| 5748.22 | 1944.39 | 5758.04 | 1944.87 | 5760.46 | 1945 | 5770.41 | 1945 | 5773.98 | 1944.99 |
| 5775.82 | 1945 | 5779.47 | 1945.26 | 5782.88 | 1945.48 | 5786.67 | 1945.7 | 5788.92 | 1945.79 |
| 5789.9 | 1945.86 | 5796.2 | 1946 | 5797.28 | 1946 | 5803.3 | 1946.04 | 5814.26 | 1946.08 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5814.26 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5814.26 | 110.88 | 110.88 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | Left OB | Channel | Right OB |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1927.53 | Element | | | |
| Vel Head (ft) | 0.17 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1927.37 | Reach Len. (ft) | 110.88 | 110.88 | 110.88 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6831.31 | |
| E.G. Slope (ft/ft) | 0.003847 | Area (sq ft) | | 6831.31 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 4022.54 | Top Width (ft) | | 4022.54 | |
| Vel Total (ft/s) | 3.28 | Avg. Vel. (ft/s) | | 3.28 | |
| Max Chl Dpth (ft) | 3.48 | Hydr. Depth (ft) | | 1.70 | |
| Conv. Total (cfs) | 361131.0 | Conv. (cfs) | | 361131.0 | |
| Length Wtd. (ft) | 110.88 | Wetted Per. (ft) | | 4024.07 | |
| Min Ch El (ft) | 1923.89 | Shear (lb/sq ft) | | 0.41 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5814.26 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.40 | Cum Volume (acre-ft) | | 1723.56 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 800.72 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -9989.82

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1932.74 | 299.39 | 1931.45 | 303.46 | 1931.44 | 308.54 | 1931.41 | 315.43 | 1931.39 |
| 319.12 | 1931.37 | 322.54 | 1931.36 | 326.16 | 1931.34 | 327.55 | 1931.34 | 330.99 | 1931.32 |
| 335.14 | 1931.31 | 340.93 | 1931.28 | 344.89 | 1931.27 | 345.15 | 1931.26 | 364.03 | 1931.19 |
| 370.98 | 1931.16 | 379.27 | 1931.12 | 384.03 | 1931.11 | 387.46 | 1931.09 | 394.84 | 1931.06 |
| 406.28 | 1931.01 | 408.05 | 1931.01 | 413.19 | 1930.99 | 421.76 | 1930.95 | 616.23 | 1930.15 |
| 620.29 | 1930.14 | 631.39 | 1930.1 | 650.9 | 1930.04 | 657.77 | 1930.01 | 667.9 | 1929.96 |
| 675.75 | 1929.93 | 686.47 | 1929.88 | 715.7 | 1929.76 | 716.75 | 1929.75 | 729.8 | 1929.69 |
| 741.16 | 1929.65 | 742.53 | 1929.64 | 749.86 | 1929.61 | 757.97 | 1929.58 | 782.43 | 1929.48 |
| 793.02 | 1929.43 | 794.85 | 1929.43 | 805.71 | 1929.38 | 811.44 | 1929.36 | 833.69 | 1929.27 |
| 841.82 | 1929.24 | 842.74 | 1929.23 | 850.29 | 1929.2 | 853.67 | 1929.19 | 859.56 | 1929.16 |
| 866.75 | 1929.14 | 866.91 | 1929.13 | 869.18 | 1929.13 | 872.92 | 1929.11 | 881.34 | 1929.08 |
| 881.81 | 1929.07 | 889.76 | 1929.04 | 921.49 | 1928.91 | 924.7 | 1928.9 | 939.83 | 1928.84 |
| 942.85 | 1928.83 | 948.15 | 1928.8 | 988.5 | 1928.64 | 1017.3 | 1928.52 | 1021.37 | 1928.5 |
| 1022.71 | 1928.5 | 1029.56 | 1928.46 | 1039 | 1928.42 | 1048.96 | 1928.37 | 1059.66 | 1928.33 |
| 1059.8 | 1928.32 | 1064.11 | 1928.31 | 1075.09 | 1928.26 | 1076.92 | 1928.26 | 1082.39 | 1928.23 |
| 1084.22 | 1928.23 | 1100.74 | 1928.16 | 1101.85 | 1928.15 | 1133.92 | 1928.02 | 1159.09 | 1927.9 |
| 1159.18 | 1927.86 | 1160.54 | 1927.8 | 1166.67 | 1927.39 | 1181.81 | 1926.34 | 1190.58 | 1926.14 |
| 1190.74 | 1926.13 | 1196.24 | 1926 | 1292.8 | 1926 | 1310.08 | 1926.02 | 1319.52 | 1926.01 |
| 1326.44 | 1926 | 1347.52 | 1926 | 1347.92 | 1925.99 | 1362.86 | 1925.71 | 1364.61 | 1925.71 |
| 1388.46 | 1925.42 | 1390.57 | 1925.42 | 1400.33 | 1925.38 | 1405.64 | 1925.37 | 1406.9 | 1925.38 |
| 1462.92 | 1926 | 1522.76 | 1926 | 1581.64 | 1926.43 | 1613.95 | 1926.66 | 1616.19 | 1926.66 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1618.68 | 1926.68 | 1620.41 | 1926.68 | 1627.19 | 1926.71 | 1629.63 | 1926.71 | 1642.57 | 1926.67 |
| 1659.69 | 1926.61 | 1663 | 1926.6 | 1663.64 | 1926.59 | 1673.42 | 1926.53 | 1675 | 1926.51 |
| 1679.23 | 1926.48 | 1690.05 | 1926.34 | 1691.57 | 1926.33 | 1710.31 | 1926.1 | 1710.5 | 1926.09 |
| 1718.11 | 1926 | 1719.68 | 1926 | 1736.84 | 1925.91 | 1749.87 | 1925.85 | 1755.17 | 1925.82 |
| 1762.13 | 1925.77 | 1762.78 | 1925.77 | 1770.09 | 1925.71 | 1782.83 | 1925.61 | 1784.93 | 1925.6 |
| 1809.32 | 1925.4 | 1817.48 | 1925.33 | 1856.85 | 1925 | 2008.58 | 1925 | 2012.35 | 1924.93 |
| 2036.84 | 1924.43 | 2048.81 | 1924.28 | 2060.86 | 1924.11 | 2069.3 | 1924 | 2086.42 | 1924 |
| 2088.87 | 1924.04 | 2090.43 | 1924.08 | 2094.28 | 1924.2 | 2117.98 | 1924.98 | 2118.43 | 1925 |
| 2561.88 | 1925 | 2572.4 | 1925.66 | 2579.7 | 1925.99 | 2580.35 | 1926 | 2583.96 | 1926.01 |
| 2584.76 | 1926.05 | 2599.39 | 1926.69 | 2600.71 | 1926.73 | 2605.47 | 1926.82 | 2607.9 | 1926.85 |
| 2609.61 | 1926.85 | 2611.69 | 1926.76 | 2620.43 | 1926.36 | 2626.83 | 1926 | 2629.76 | 1926 |
| 2635.64 | 1925.99 | 2650.56 | 1925.99 | 2669.45 | 1925.98 | 2674.3 | 1925.98 | 2692.49 | 1925.69 |
| 2693.87 | 1925.7 | 2700.21 | 1925.67 | 2708.9 | 1925.59 | 2715.86 | 1925.67 | 2718.18 | 1925.6 |
| 2720.19 | 1925.52 | 2728.44 | 1925 | 2778.04 | 1925 | 2784.41 | 1925.46 | 2784.78 | 1925.48 |
| 2790.17 | 1925.55 | 2795.42 | 1925.7 | 2804.82 | 1925.99 | 2805.05 | 1926 | 2832.32 | 1926 |
| 2833.87 | 1925.89 | 2847.36 | 1925 | 2852.86 | 1924.61 | 2856.58 | 1924.4 | 2859.33 | 1924.27 |
| 2863.98 | 1924.15 | 2869.03 | 1924 | 2870.86 | 1923.98 | 2874.49 | 1923.92 | 2874.74 | 1923.93 |
| 2879.05 | 1923.98 | 2880.68 | 1923.99 | 2884.01 | 1923.98 | 2886.83 | 1923.98 | 2887.62 | 1923.97 |
| 2890.02 | 1923.97 | 2891.82 | 1923.89 | 2900.51 | 1923.57 | 2901.16 | 1923.6 | 2913.16 | 1924 |
| 2915.13 | 1924.08 | 2921.35 | 1924.47 | 2922.9 | 1924.56 | 2927.27 | 1924.84 | 2929.86 | 1925 |
| 2951.08 | 1925.99 | 2951.39 | 1926 | 2981.11 | 1926 | 2999.53 | 1925.55 | 3007.53 | 1925.42 |
| 3012.77 | 1925.36 | 3013.5 | 1925.34 | 3015.82 | 1925.33 | 3018.1 | 1925.29 | 3019.38 | 1925.28 |
| 3031.63 | 1925.1 | 3037.72 | 1925 | 3043.74 | 1925 | 3056.04 | 1925.52 | 3063.35 | 1925.91 |
| 3065.19 | 1926 | 3069.56 | 1926.03 | 3071.42 | 1926.02 | 3075.59 | 1926.14 | 3076.48 | 1926.15 |
| 3079.41 | 1926.14 | 3090.47 | 1926.11 | 3102.58 | 1926.06 | 3104.96 | 1926 | 3127.7 | 1926 |
| 3133.5 | 1926.54 | 3135.45 | 1926.74 | 3138.99 | 1927 | 3141.88 | 1927.02 | 3146.98 | 1927.45 |
| 3148 | 1927.51 | 3153.87 | 1928 | 3162.34 | 1928.69 | 3166.03 | 1929 | 3180.26 | 1929.59 |
| 3189.53 | 1930 | 3192.27 | 1930.01 | 3197.57 | 1930.02 | 3211.12 | 1930.02 | 3226.4 | 1930 |
| 3227.69 | 1930 | 3231.05 | 1929.7 | 3231.72 | 1929.63 | 3234.64 | 1929 | 3237.43 | 1928.3 |
| 3238.82 | 1928 | 3242.71 | 1927 | 3244.49 | 1926.69 | 3246.36 | 1926.54 | 3247.63 | 1926.47 |
| 3250.39 | 1926.47 | 3258.05 | 1926.4 | 3263.57 | 1926.23 | 3267.37 | 1926.03 | 3269.12 | 1926.02 |
| 3270 | 1926 | 3271.69 | 1925.88 | 3272.85 | 1925.89 | 3275.99 | 1925.72 | 3293.23 | 1925.02 |
| 3294.08 | 1925.01 | 3295.74 | 1925.02 | 3296.64 | 1925 | 3340.29 | 1925 | 3343.7 | 1925.11 |
| 3350.9 | 1925.31 | 3361.29 | 1925.18 | 3366.13 | 1925.15 | 3372.33 | 1925.02 | 3380.1 | 1925.01 |
| 3390.22 | 1925.01 | 3398.59 | 1925.04 | 3400 | 1925 | 3411.38 | 1924.34 | 3416.32 | 1924 |
| 3528.11 | 1924 | 3533.13 | 1924.06 | 3540.43 | 1924.34 | 3554.81 | 1924.88 | 3557.85 | 1925 |
| 3637.54 | 1925 | 3654.42 | 1925.5 | 3668.46 | 1925.9 | 3671.8 | 1926 | 3672.26 | 1926 |
| 3674.88 | 1926.08 | 3684.2 | 1926.26 | 3686.56 | 1926.31 | 3702.89 | 1926.33 | 3718.69 | 1926.33 |
| 3720.15 | 1926.32 | 3736.66 | 1926 | 3741.04 | 1925.91 | 3744.65 | 1926 | 3767.22 | 1925.99 |
| 3779.56 | 1925.93 | 3812.42 | 1925.78 | 3818.14 | 1926 | 3830.82 | 1926 | 3838.23 | 1926.01 |
| 3851.09 | 1926.01 | 3871.89 | 1926 | 3897.46 | 1926 | 3907.41 | 1925.95 | 3929.19 | 1925.85 |
| 3934.46 | 1925.88 | 3938.2 | 1925.88 | 3942.15 | 1925.86 | 3944.87 | 1925.8 | 3989.05 | 1925.89 |
| 4021.92 | 1925.99 | 4038.65 | 1926 | 4054.79 | 1926 | 4061.78 | 1926.01 | 4077.72 | 1926.01 |
| 4132.85 | 1926.37 | 4140.01 | 1926.41 | 4141.16 | 1926.42 | 4165.68 | 1926.47 | 4186.43 | 1926.51 |
| 4192.98 | 1926.58 | 4199.25 | 1926.56 | 4202.94 | 1926.61 | 4205.51 | 1926.6 | 4212.71 | 1926.68 |
| 4215.09 | 1926.7 | 4216.44 | 1926.7 | 4219.4 | 1926.72 | 4222.35 | 1926.75 | 4225.98 | 1926.76 |
| 4237.83 | 1926.83 | 4243.97 | 1926.85 | 4258.33 | 1926.91 | 4273.44 | 1927 | 4439.94 | 1927 |
| 4447.91 | 1926.86 | 4452.7 | 1926.79 | 4502.64 | 1926 | 4518.25 | 1925.54 | 4520.32 | 1925.49 |
| 4538.38 | 1925 | 4547.7 | 1924.76 | 4549.76 | 1924.7 | 4575.49 | 1924 | 4576.51 | 1924 |
| 4592.59 | 1923.83 | 4608.63 | 1923.68 | 4612.44 | 1923.66 | 4615.31 | 1923.63 | 4616.27 | 1923.63 |
| 4631.02 | 1923.49 | 4640.75 | 1923.41 | 4642.47 | 1923.41 | 4666.21 | 1923.3 | 4681.46 | 1923.26 |
| 4692.97 | 1923.26 | 4703.97 | 1923.24 | 4713.2 | 1923.24 | 4722.2 | 1923.22 | 4734.11 | 1923.25 |
| 4752.03 | 1923.34 | 4753.33 | 1923.34 | 4775.52 | 1923.63 | 4779.13 | 1923.68 | 4793.91 | 1923.93 |
| 4795.62 | 1923.93 | 4798.19 | 1924 | 4914.3 | 1924 | 4924.43 | 1923.99 | 4928.65 | 1923.99 |
| 4934.7 | 1924 | 4958.16 | 1924 | 4964.74 | 1923.9 | 4967.23 | 1923.9 | 4968.05 | 1923.89 |
| 4972.65 | 1923.88 | 4976.56 | 1923.86 | 4979.32 | 1923.84 | 4991.58 | 1923.72 | 4999.04 | 1923.64 |
| 5002.04 | 1923.64 | 5003.04 | 1923.66 | 5007.62 | 1923.56 | 5062.32 | 1923.79 | 5086.16 | 1923.94 |
| 5102.02 | 1923.96 | 5114.46 | 1923.97 | 5122.98 | 1923.98 | 5142.12 | 1923.99 | 5142.6 | 1924 |
| 5153.31 | 1924.49 | 5163.8 | 1925 | 5173.41 | 1925.32 | 5182.25 | 1925.63 | 5193.39 | 1926 |
| 5253.94 | 1926 | 5262.42 | 1925.61 | 5271.95 | 1925.18 | 5276.15 | 1925 | 5384.97 | 1925 |
| 5386.45 | 1924.99 | 5411.71 | 1924.97 | 5416.13 | 1924.97 | 5417.33 | 1924.98 | 5428.4 | 1924.98 |
| 5437.09 | 1924.99 | 5456.82 | 1924.99 | 5467.42 | 1925.02 | 5472.01 | 1925.02 | 5473.48 | 1925.03 |
| 5482.77 | 1925 | 5489.03 | 1924.99 | 5492.32 | 1924.99 | 5499.08 | 1924.98 | 5506.22 | 1924.98 |
| 5515.6 | 1924.99 | 5516.52 | 1925 | 5525.1 | 1925 | 5526.87 | 1925.01 | 5530.29 | 1925.01 |
| 5539.48 | 1925.07 | 5541.72 | 1925 | 5551.51 | 1925 | 5553.17 | 1925.49 | 5555.09 | 1926 |
| 5556.41 | 1926.4 | 5557.9 | 1926.79 | 5560.23 | 1927.46 | 5562.48 | 1928.16 | 5563.58 | 1928.55 |
| 5564.68 | 1929 | 5566.69 | 1929.75 | 5567.45 | 1929.86 | 5569.31 | 1929.84 | 5580.42 | 1929.77 |
| 5580.94 | 1929.78 | 5586.05 | 1929.8 | 5588.42 | 1929.97 | 5590.54 | 1929.98 | 5590.98 | 1930 |
| 5593.39 | 1930 | 5593.57 | 1929.94 | 5598.21 | 1929 | 5600.32 | 1928.5 | 5602.27 | 1928 |
| 5605.18 | 1927.79 | 5608.11 | 1928 | 5609.25 | 1928.22 | 5613.97 | 1929 | 5617.62 | 1929.59 |
| 5620.74 | 1930.14 | 5630.32 | 1931.86 | 5636.27 | 1932.89 | 5636.88 | 1933 | 5639.74 | 1933.45 |
| 5643.16 | 1934 | 5649.84 | 1935 | 5651.42 | 1935.47 | 5659.83 | 1938 | 5661.69 | 1938.55 |
| 5663.09 | 1939 | 5666.38 | 1940 | 5671.79 | 1940.93 | 5673.2 | 1941.15 | 5675.48 | 1941.42 |
| 5678.61 | 1941.81 | 5680.36 | 1942 | 5689.15 | 1942.98 | 5689.48 | 1943.01 | 5705.96 | 1944 |
| 5724.67 | 1944.73 | 5726.89 | 1944.79 | 5728.41 | 1944.82 | 5734.21 | 1945 | 5744.86 | 1945 |
| 5749.45 | 1945.21 | 5758.82 | 1945.42 | 5764.36 | 1945.53 | 5770.05 | 1946 | 5775.02 | 1946.19 |
| 5776.65 | 1946.27 | 5785.8 | 1946.65 | 5790.5 | 1946.78 | 5797.03 | 1947 | 5805.21 | 1947 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5805.21 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5805.21 | 164.39 | 164.39 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| E.G. Elev (ft) | 1927.12 | Element | Left OB | Channel | Right OB |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Vel Head (ft) | 0.15 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1926.97 | Reach Len. (ft) | 164.39 | 164.39 | 164.39 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7110.27 | |
| E.G. Slope (ft/ft) | 0.003462 | Area (sq ft) | | 7110.27 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 4108.05 | Top Width (ft) | | 4108.05 | |
| Vel Total (ft/s) | 3.15 | Avg. Vel. (ft/s) | | 3.15 | |
| Max Chl Dpth (ft) | 3.75 | Hydr. Depth (ft) | | 1.73 | |
| Conv. Total (cfs) | 380705.3 | Conv. (cfs) | | 380705.3 | |
| Length Wtd. (ft) | 164.39 | Wetted Per. (ft) | | 4108.98 | |
| Min Ch El (ft) | 1923.22 | Shear (lb/sq ft) | | 0.37 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5805.21 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.43 | Cum Volume (acre-ft) | | 1705.82 | |
| C & E Loss (ft) | 0.01 | Cum SA (acres) | | 790.37 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -10154.2

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1930.82 | 10.83 | 1930.78 | 15.97 | 1930.77 | 158.51 | 1930.3 | 177.09 | 1930.22 |
| 214.06 | 1930.05 | 237.3 | 1929.95 | 260.38 | 1929.84 | 282.08 | 1929.75 | 300.6 | 1929.66 |
| 351.08 | 1929.42 | 362.3 | 1929.37 | 373.72 | 1929.31 | 397.54 | 1929.21 | 410.89 | 1929.14 |
| 414.25 | 1929.13 | 442.79 | 1928.99 | 484.13 | 1928.8 | 504.21 | 1928.72 | 517.37 | 1928.66 |
| 529.09 | 1928.62 | 547.92 | 1928.54 | 571.35 | 1928.45 | 578.18 | 1928.42 | 601.62 | 1928.33 |
| 621.41 | 1928.25 | 632.34 | 1928.2 | 739.64 | 1927.77 | 751.85 | 1927.72 | 755.88 | 1927.71 |
| 773.6 | 1927.64 | 775.32 | 1927.64 | 789.35 | 1927.58 | 795.64 | 1927.56 | 825.55 | 1927.44 |
| 845.7 | 1927.37 | 851.61 | 1927.34 | 866.25 | 1927.29 | 901.67 | 1927.15 | 951.2 | 1926.97 |
| 965.49 | 1926.93 | 978.71 | 1926.87 | 992.55 | 1926.82 | 996.33 | 1926.8 | 1009.62 | 1926.75 |
| 1027.76 | 1926.67 | 1047.04 | 1926.6 | 1063.15 | 1926.53 | 1068.88 | 1926.51 | 1070.43 | 1925.14 |
| 1070.94 | 1925 | 1072.22 | 1925 | 1074.22 | 1925.24 | 1075.04 | 1925.17 | 1078.68 | 1925.04 |
| 1085.51 | 1925.1 | 1095.22 | 1925.22 | 1146.95 | 1925.41 | 1178.74 | 1925.52 | 1200.26 | 1925.26 |
| 1216.72 | 1925.08 | 1222.86 | 1925 | 1245.37 | 1925 | 1255.77 | 1925.27 | 1262.98 | 1925.45 |
| 1284.23 | 1925.45 | 1306.76 | 1925.41 | 1314.74 | 1925.29 | 1330.63 | 1925 | 1338.28 | 1924.79 |
| 1367.67 | 1924 | 1381.51 | 1923.98 | 1392.52 | 1923.97 | 1403.09 | 1923.95 | 1407.58 | 1923.96 |
| 1437.55 | 1924 | 1449.45 | 1924.46 | 1465.77 | 1925 | 1553.54 | 1925 | 1570.73 | 1924.55 |
| 1587.71 | 1924.18 | 1593.25 | 1924 | 1614.92 | 1924 | 1658.03 | 1923.93 | 1714.82 | 1923.84 |
| 1732.66 | 1923.87 | 1735.77 | 1923.86 | 1766.32 | 1924 | 1889.61 | 1924 | 1902.62 | 1924.12 |
| 1923.21 | 1924.34 | 1924.21 | 1924.36 | 1965.07 | 1924.69 | 1978.13 | 1924.79 | 1981.3 | 1924.79 |
| 1999.54 | 1924.83 | 2019.81 | 1924.88 | 2024.98 | 1924.88 | 2032.23 | 1924.9 | 2044.22 | 1924.86 |
| 2046.81 | 1924.83 | 2056.4 | 1924.84 | 2062.47 | 1924.75 | 2067.36 | 1924.73 | 2070.8 | 1924.68 |
| 2084.58 | 1924.43 | 2100.24 | 1924.14 | 2108.32 | 1924 | 2128.87 | 1923.02 | 2132.38 | 1923 |
| 2143.22 | 1923.1 | 2153.85 | 1923.17 | 2157.3 | 1923.18 | 2161.85 | 1923.12 | 2169.1 | 1923.21 |
| 2209.02 | 1923.68 | 2213.01 | 1923.74 | 2228.04 | 1924 | 2238.37 | 1924.02 | 2243.62 | 1924.02 |
| 2262.99 | 1924.07 | 2281.63 | 1924.34 | 2303.1 | 1924.56 | 2306.19 | 1924.55 | 2314.58 | 1924.55 |
| 2326.94 | 1924.53 | 2329.03 | 1924.51 | 2336.04 | 1924.5 | 2365.29 | 1924.6 | 2411.14 | 1924.78 |
| 2417.14 | 1924.8 | 2420.55 | 1924.85 | 2423.26 | 1924.85 | 2428.51 | 1924.91 | 2434.06 | 1925 |
| 2515.95 | 1925 | 2522.19 | 1925.07 | 2527.99 | 1925.26 | 2544.82 | 1925.78 | 2548.23 | 1925.81 |
| 2551.38 | 1925.9 | 2553.43 | 1925.9 | 2555.46 | 1925.94 | 2558 | 1925.94 | 2560.99 | 1925.88 |
| 2563.85 | 1925.78 | 2565.84 | 1925.67 | 2573.2 | 1925.52 | 2574.61 | 1925.44 | 2588.58 | 1925.22 |
| 2592.54 | 1925.18 | 2599.62 | 1925.4 | 2607.56 | 1925.29 | 2608.48 | 1925.29 | 2613.12 | 1925.19 |
| 2615.9 | 1925.09 | 2617.58 | 1925 | 2621.75 | 1924.84 | 2628.09 | 1924.62 | 2636.89 | 1924.28 |
| 2644.35 | 1924.03 | 2646.17 | 1924 | 2661.48 | 1923.22 | 2663.69 | 1923 | 2735.66 | 1923 |
| 2743.38 | 1923.3 | 2762.61 | 1924 | 2782.87 | 1925 | 2795.27 | 1925.01 | 2804 | 1925.01 |
| 2818.2 | 1925 | 2820.58 | 1925.03 | 2826.08 | 1925 | 2848.68 | 1925 | 2851.7 | 1925.14 |
| 2869.65 | 1926 | 2873.57 | 1925.98 | 2878 | 1925.77 | 2881.99 | 1925.64 | 2900.33 | 1925.02 |
| 2902.51 | 1925 | 2912.77 | 1923.72 | 2915.11 | 1923.4 | 2918.31 | 1923 | 2923.43 | 1923 |
| 2932.86 | 1924.39 | 2936.52 | 1925 | 2938.7 | 1925.34 | 2942.71 | 1926 | 2951.91 | 1926.94 |
| 2962.41 | 1928 | 2964.14 | 1928.51 | 2965.97 | 1929 | 2969.34 | 1930 | 2970.26 | 1930 |
| 2972.46 | 1929.74 | 2978.34 | 1929 | 2980.6 | 1928.67 | 2980.9 | 1928.67 | 2985.02 | 1928.95 |
| 2990.67 | 1928.89 | 2999.69 | 1928.87 | 3002.51 | 1928.89 | 3007.4 | 1928.59 | 3008.81 | 1928.57 |
| 3015.77 | 1928.7 | 3018.87 | 1929 | 3029.79 | 1929 | 3032.5 | 1928.08 | 3035.51 | 1927 |
| 3038.67 | 1925.78 | 3039.63 | 1925.37 | 3043.29 | 1923.67 | 3049.5 | 1923.01 | 3059.04 | 1923 |
| 3067.57 | 1923 | 3084.03 | 1922.99 | 3091.73 | 1922.99 | 3106.13 | 1923 | 3114.67 | 1923 |
| 3123 | 1923.28 | 3130.46 | 1923.5 | 3145.9 | 1924 | 3146.1 | 1924 | 3147.51 | 1924.86 |
| 3148.82 | 1925.55 | 3150.06 | 1926 | 3150.97 | 1926 | 3153.61 | 1925 | 3154.87 | 1924.49 |
| 3161.25 | 1922 | 3188.43 | 1922 | 3243.54 | 1922.95 | 3246.68 | 1923 | 3255.13 | 1923 |
| 3258.9 | 1923.01 | 3272.35 | 1923.01 | 3293.84 | 1923.24 | 3311.88 | 1923.32 | 3320.6 | 1923.43 |
| 3352.72 | 1923.89 | 3360.08 | 1923.99 | 3366.03 | 1924.01 | 3370.83 | 1924.01 | 3398.76 | 1924.43 |
| 3403.14 | 1924.53 | 3406.37 | 1924.58 | 3418.15 | 1924.83 | 3423.33 | 1924.93 | 3428.18 | 1925 |
| 3442.75 | 1925 | 3452.25 | 1925.01 | 3456.29 | 1925.1 | 3484.79 | 1925.77 | 3497.06 | 1926 |
| 3507.49 | 1926.01 | 3521.75 | 1926.01 | 3534.34 | 1926 | 3537.45 | 1926.06 | 3550.78 | 1925.92 |
| 3551.68 | 1925.93 | 3569.85 | 1925.83 | 3572.74 | 1925.84 | 3589.44 | 1926 | 3593.87 | 1926 |
| 3612.49 | 1925.78 | 3636.86 | 1925.5 | 3638.42 | 1925.51 | 3643.92 | 1925.65 | 3654.03 | 1925.94 |
| 3655.76 | 1926 | 3657.97 | 1926.13 | 3669.19 | 1926.75 | 3672.3 | 1926.93 | 3674 | 1927 |
| 3678.08 | 1927 | 3698.81 | 1926.59 | 3701.83 | 1926.56 | 3705.47 | 1926.41 | 3710.05 | 1926 |
| 3719.55 | 1925.22 | 3721.79 | 1925 | 3722.69 | 1924.99 | 3736.81 | 1924.94 | 3746.95 | 1924.93 |
| 3755.02 | 1924.9 | 3762.48 | 1924.9 | 3765.16 | 1924.89 | 3770.81 | 1924.92 | 3777.26 | 1924.93 |
| 3790.7 | 1925 | 3907.54 | 1925 | 3926.42 | 1925.48 | 3937.23 | 1925.76 | 3945.91 | 1925.95 |
| 3949.08 | 1926 | 4004.84 | 1926 | 4017.37 | 1925.29 | 4022.77 | 1925 | 4101.34 | 1925 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4111.65 | 1925.17 | 4117.41 | 1925.31 | 4170.27 | 1925.95 | 4173.85 | 1925.99 | 4183.04 | 1925.98 |
| 4258.89 | 1925.26 | 4277.6 | 1925.09 | 4283.83 | 1925.24 | 4284.82 | 1925.22 | 4286.36 | 1925.3 |
| 4296.73 | 1926 | 4304.56 | 1926.58 | 4310.06 | 1927 | 4315.62 | 1927.73 | 4323.86 | 1929 |
| 4330 | 1930 | 4333.86 | 1930.07 | 4340.69 | 1930 | 4343.25 | 1929.95 | 4346.66 | 1929.95 |
| 4350.82 | 1930 | 4354.57 | 1930.09 | 4356.01 | 1930.03 | 4357.04 | 1930.04 | 4358.96 | 1929.97 |
| 4364.2 | 1929 | 4371.34 | 1927.8 | 4372.72 | 1927.59 | 4377.29 | 1926.72 | 4380.49 | 1926 |
| 4383.23 | 1925.95 | 4389.77 | 1926 | 4391.96 | 1926.17 | 4394.87 | 1926.43 | 4400.79 | 1927 |
| 4409.91 | 1927.55 | 4416.54 | 1928 | 4424.53 | 1928.27 | 4433.43 | 1928.6 | 4440.78 | 1928.83 |
| 4444.85 | 1929 | 4464.41 | 1929 | 4469.61 | 1929.01 | 4481.78 | 1929.01 | 4495.94 | 1929 |
| 4505.02 | 1928.29 | 4509 | 1928 | 4522.89 | 1927.24 | 4526.51 | 1927 | 4535.56 | 1926.43 |
| 4542.94 | 1926 | 4544.91 | 1926 | 4557.27 | 1925.95 | 4571.68 | 1926 | 4583.53 | 1929 |
| 4584.29 | 1929.22 | 4585.89 | 1930 | 4586.22 | 1930.02 | 4588.13 | 1930.42 | 4589.25 | 1930.61 |
| 4591.6 | 1930.69 | 4594.32 | 1930.67 | 4597.11 | 1930.58 | 4598.94 | 1930.42 | 4601 | 1930.14 |
| 4602.12 | 1929.93 | 4606.61 | 1929 | 4610.66 | 1928.25 | 4612.22 | 1928 | 4613.64 | 1927.91 |
| 4615.37 | 1928.03 | 4616.68 | 1927.99 | 4617.48 | 1927.84 | 4620.92 | 1927 | 4623.84 | 1926.18 |
| 4624.68 | 1926 | 4636.01 | 1925.98 | 4638.14 | 1925.96 | 4642.07 | 1925.63 | 4643.37 | 1925.63 |
| 4647.98 | 1925.56 | 4652.28 | 1925.54 | 4658.94 | 1925.39 | 4663.17 | 1925.24 | 4665.43 | 1925.18 |
| 4670.11 | 1925 | 4675.43 | 1924.85 | 4676.53 | 1924.87 | 4683.87 | 1924.8 | 4685.4 | 1924.83 |
| 4686.95 | 1924.73 | 4689.3 | 1925 | 4692.15 | 1925.52 | 4693.56 | 1925.69 | 4694.85 | 1925.71 |
| 4696.02 | 1925.63 | 4697.14 | 1925.44 | 4699.18 | 1925 | 4702.26 | 1924 | 4704.7 | 1923.82 |
| 4709.19 | 1923.69 | 4714.15 | 1923.45 | 4715.65 | 1923.42 | 4729.94 | 1923 | 4892.41 | 1923 |
| 4914.9 | 1923.59 | 4933.17 | 1924 | 4995.09 | 1924 | 5008.18 | 1923.6 | 5028.75 | 1923 |
| 5154.5 | 1923 | 5163.75 | 1924 | 5174.99 | 1924.83 | 5180.3 | 1925 | 5209.4 | 1925 |
| 5215.7 | 1925.12 | 5228.03 | 1925.32 | 5239.03 | 1925.24 | 5255.08 | 1925.01 | 5255.44 | 1925 |
| 5333.1 | 1925 | 5350.02 | 1924.99 | 5362.26 | 1924.99 | 5362.73 | 1925 | 5385.47 | 1924.98 |
| 5394.26 | 1925 | 5410.39 | 1925 | 5421.46 | 1924.99 | 5423.04 | 1924.98 | 5431.91 | 1924.98 |
| 5463.99 | 1924.94 | 5482.92 | 1924.9 | 5488.89 | 1924.88 | 5507.73 | 1924.91 | 5523.7 | 1924.96 |
| 5539.12 | 1925 | 5554.61 | 1925.61 | 5567.03 | 1926 | 5570.12 | 1926 | 5577.1 | 1927 |
| 5581.02 | 1927.32 | 5585.24 | 1928 | 5590.15 | 1929 | 5593.01 | 1929.6 | 5594.46 | 1929.82 |
| 5603.02 | 1930.59 | 5606.55 | 1931 | 5615.91 | 1931.62 | 5626.1 | 1932.32 | 5630.94 | 1933 |
| 5634.42 | 1934 | 5636.95 | 1934.79 | 5642.24 | 1936.12 | 5646.51 | 1937 | 5651.08 | 1938 |
| 5651.91 | 1938.2 | 5656.81 | 1939.26 | 5658.96 | 1939.67 | 5661.44 | 1940.19 | 5663.41 | 1940.52 |
| 5664.02 | 1940.55 | 5664.65 | 1940.43 | 5665.79 | 1940.68 | 5668.32 | 1940.55 | 5675.15 | 1940.01 |
| 5675.44 | 1940 | 5686.53 | 1939.03 | 5688.4 | 1939 | 5691.24 | 1939.36 | 5693.96 | 1939.76 |
| 5695.39 | 1940 | 5699.1 | 1941 | 5700.31 | 1941.01 | 5702.15 | 1941.13 | 5716.18 | 1942 |
| 5719.15 | 1942.24 | 5720.15 | 1942.26 | 5723.45 | 1942.4 | 5735.14 | 1943 | 5735.5 | 1943 |
| 5743.17 | 1944 | 5753.94 | 1945 | 5757.14 | 1945.09 | 5782.94 | 1945.84 | 5787.45 | 1945.96 |
| 5790.92 | 1946.01 | 5806.87 | 1946.02 | 5811.21 | 1946.07 | 5822.9 | 1946.12 | 5836.67 | 1946.11 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5836.67 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5836.67 | 162.2 | 162.2 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1926.68 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.11 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1926.57 | Reach Len. (ft) | 162.20 | 162.20 | 162.20 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8361.87 | | |
| E.G. Slope (ft/ft) | 0.002038 | Area (sq ft) | | 8361.87 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 4137.53 | Top Width (ft) | | 4137.53 | | |
| Vel Total (ft/s) | 2.68 | Avg. Vel. (ft/s) | | 2.68 | | |
| Max Chl Dpth (ft) | 4.57 | Hydr. Depth (ft) | | 2.02 | | |
| Conv. Total (cfs) | 496201.9 | Conv. (cfs) | | 496201.9 | | |
| Length Wtd. (ft) | 162.20 | Wetted Per. (ft) | | 4141.65 | | |
| Min Ch El (ft) | 1922.00 | Shear (lb/sq ft) | | 0.26 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5836.67 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.35 | Cum Volume (acre-ft) | | 1676.62 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 774.81 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -10316.4

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1930.34 | 4.6 | 1930.33 | 7.88 | 1930.31 | 19.18 | 1930.28 | 20.45 | 1930.27 |
| 44.51 | 1930.2 | 55.47 | 1930.16 | 59.74 | 1930.15 | 67.22 | 1930.12 | 78.94 | 1930.08 |
| 84.43 | 1930.07 | 236.47 | 1929.57 | 258.29 | 1929.47 | 295.64 | 1929.31 | 317.84 | 1929.21 |
| 321.57 | 1929.19 | 331.76 | 1929.15 | 357.76 | 1929.03 | 368.04 | 1928.98 | 387.73 | 1928.89 |
| 429.69 | 1928.69 | 441.57 | 1928.64 | 453.66 | 1928.58 | 464.27 | 1928.54 | 469.39 | 1928.51 |
| 493 | 1928.41 | 496.55 | 1928.39 | 526.74 | 1928.25 | 559.83 | 1928.09 | 571.08 | 1928.05 |
| 572.15 | 1928.04 | 580.98 | 1928.01 | 594.84 | 1927.95 | 627.01 | 1927.82 | 646.02 | 1927.75 |
| 651.69 | 1927.72 | 658.87 | 1927.7 | 683.55 | 1927.6 | 701.43 | 1927.53 | 709.94 | 1927.49 |
| 715.87 | 1927.47 | 793.18 | 1927.16 | 805.91 | 1927.11 | 810.11 | 1927.1 | 828.59 | 1927.03 |
| 837.06 | 1926.99 | 856.66 | 1926.92 | 882.74 | 1926.82 | 892.31 | 1926.79 | 903.73 | 1926.74 |
| 918.27 | 1926.69 | 925.13 | 1926.66 | 948.78 | 1926.57 | 950.3 | 1926.57 | 962.03 | 1926.52 |

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 982.31 1926.45  984.02 1926.44  999.01  1926.4 1000.18 1926.39 1009.01 1926.36
1024.94 1926.29  1032.1 1926.27 1033.09 1926.26 1039.12    1925 1274.65    1925
1283.37 1925.01 1288.93    1925 1314.85    1925 1337.36 1924.11 1340.41    1924
1342.33 1923.95 1354.85    1923 1371.77    1923 1376.74 1923.03  1396.5 1923.37
1404.08 1923.52 1432.72    1924 1437.71 1924.09 1450.14 1924.27 1467.16 1924.37
1478.41 1924.39 1485.99 1924.39 1497.16 1924.31 1501.37  1924.3 1510.98 1924.22
1513.52 1924.22 1522.21  1924.1 1530.55    1924 1536.54 1923.96 1541.74 1923.91
1554.46 1923.81 1569.75 1923.76 1573.38 1923.74 1596.21 1923.57 1606.22 1923.51
 1609.7  1923.5 1670.91 1923.41 1672.37 1923.41 1706.75 1923.46 1735.98  1923.5
1747.13 1923.48 1748.02 1923.47 1780.39 1923.63 1842.94 1923.92 1849.44    1924
1908.59    1924 1913.89 1924.05 1953.96 1924.37 1963.09 1924.36 1971.49 1924.38
1980.85 1924.41 1984.77 1924.41 1995.45 1924.39 2001.27 1924.39 2005.26  1924.4
2026.99 1924.32 2058.18 1924.14 2066.21 1924.05 2071.72    1924 2076.92 1923.88
2090.39 1923.56 2115.39 1923.01 2115.57    1923 2161.72    1923 2163.92 1923.01
2182.32 1923.01 2184.38 1923.02 2189.17 1923.18 2198.48 1923.48  2209.6 1923.72
2213.04 1923.78 2218.77 1923.85 2222.17 1923.94 2224.96 1923.94 2236.28 1923.99
2240.92 1923.98 2242.86 1923.92 2249.58  1923.8 2260.58 1923.83 2260.87  1923.8
2263.96  1923.8 2264.46 1923.77 2271.93 1923.63 2274.88 1923.61 2275.41 1923.59
2282.53 1923.41 2291.26 1923.27 2293.24 1923.23 2301.41  1923.1 2306.59 1923.12
2311.25    1923 2360.77    1923 2367.88  1923.5  2372.7 1923.48 2376.56  1923.5
2383.37  1923.6 2394.11 1923.79 2397.24 1923.86 2402.14 1923.93 2405.47 1923.96
2405.99 1923.98 2411.29    1924 2416.47    1924 2421.84 1924.05 2430.41 1924.09
2433.59 1924.12 2441.14 1924.23  2453.5 1924.21  2463.2 1924.29 2475.16 1924.38
2493.02 1924.45 2503.97 1924.48 2520.26 1924.48 2528.05 1924.45 2537.13  1924.4
2543.97 1924.33 2551.91 1924.26 2557.87 1924.19 2560.38 1924.18 2573.09    1924
2599.18 1923.33  2601.9 1923.27 2609.36    1923 2669.29    1923 2675.09 1923.34
2687.76    1924 2723.78    1924 2729.72 1923.99 2738.46    1924 2749.09    1925
 2762.9 1925.81 2766.29    1926  2780.5 1926.01  2788.6    1926 2793.69    1926
2806.28 1925.98 2816.04 1925.98 2821.29 1925.99 2837.51    1926 2856.91 1926.38
2866.92 1926.55 2872.43 1926.44 2875.78 1926.36 2882.21 1926.38 2886.76 1926.25
 2892.7 1926.13 2894.92 1926.12 2895.93 1926.09 2899.89 1926.08 2900.92 1926.09
2903.88 1926.23 2907.41 1926.26 2908.84  1926.4 2910.88 1926.47 2912.58 1926.67
2917.79 1927.22 2924.08    1928 2925.27 1928.46 2927.57 1929.42 2929.09    1930
2931.63    1931 2933.51 1931.11 2935.17 1931.48 2937.94 1930.56 2942.55  1929.1
2945.25 1928.18 2948.14    1927  2949.3 1926.95 2952.94 1927.03 2954.98 1927.16
2958.06    1927 2958.65 1927.02 2962.52  1927.7 2964.33    1928 2965.26    1928
2967.42  1927.6 2969.96    1927 2977.83 1926.11 2978.96 1925.95 2989.39 1924.69
2992.56 1924.29 2994.73    1924 2997.67 1923.53 2999.56    1923 3002.71    1922
3018.77    1922 3026.28 1922.06 3030.19 1922.04 3033.16 1922.04  3049.2    1922
3053.91 1922.12 3088.22 1922.74 3088.48 1922.75 3099.48 1922.87 3119.76 1922.77
3126.75 1922.77  3128.1 1922.78 3131.91 1922.77 3135.24 1922.55 3136.36 1922.55
3144.91  1922.6 3147.66 1922.61 3152.74 1922.67 3169.65 1922.78 3174.29 1922.83
3178.33 1922.84 3184.17 1922.83 3196.74    1923 3239.79    1923 3247.52  1923.1
3255.88  1923.2 3260.93 1923.27 3283.41 1923.55 3321.36    1924 3330.83 1924.16
3331.53 1924.16 3343.68 1924.37 3385.98 1924.99 3386.76    1925 3439.56    1925
3449.01 1925.63 3454.75    1926 3472.71 1926.61 3477.07 1926.73 3486.94 1926.78
3494.09 1926.81 3509.61 1926.62  3529.5  1926.3 3529.67  1926.3  3549.3    1926
3558.97 1925.72  3567.7  1925.5 3568.11  1925.5  3583.9 1925.27 3596.53 1925.03
3600.19 1925.03 3602.72    1925  3605.8 1924.8 3623.16    1924 3674.76    1924
3678.67 1924.23 3679.26 1924.23 3683.72 1924.51  3686.9 1924.48 3687.66 1924.51
3693.41 1924.67 3695.52 1924.65 3710.64 1924.73 3731.58 1924.91 3738.95    1925
3896.38    1925 3906.13 1925.23  3919.7 1925.53 3922.82 1925.56  3934.2 1925.64
3941.03 1925.77 3946.29 1925.85 3949.14 1925.88 3952.52 1925.81 3968.82 1925.44
3969.89  1925.4 3976.45 1925.24 3983.02 1925.03 3985.92    1925 4080.99    1925
4105.92  1925.4 4141.68    1926 4190.52 1925.57 4233.04 1925.37 4254.42 1925.28
4257.25 1925.29    4262 1925.37 4272.45 1925.63 4274.93 1925.71 4276.71 1925.73
4277.61 1925.77    4285    1926 4293.99 1926.51 4299.54    1927 4307.14 1927.81
4308.73    1928 4315.36 1928.13 4319.84 1928.07 4322.79    1928 4330.04 1927.29
4332.84    1927 4340.75 1926.32 4345.08    1926 4357.61 1925.31 4362.07    1925
4371.66    1925 4377.26 1925.68 4380.96    1926 4384.95 1926.37  4390.8    1927
4393.03 1927.03 4399.19    1927 4408.74 1926.68 4413.48 1926.62 4414.22 1926.59
4421.68 1926.61  4423.4 1926.63 4426.77 1926.73 4435.01 1927.09 4441.17 1927.31
4444.67 1927.74 4446.31 1927.96 4448.93 1927.96  4460.4    1928 4468.82 1928.35
4483.08 1928.97 4486.91    1929 4498.39 1929.13 4501.74 1929.16 4512.18 1929.04
4514.35    1929  4520.3 1928.56 4524.93    1928 4532.45 1927.03 4532.77    1927
4541.91 1926.99 4549.14 1926.97 4556.91 1926.98 4562.88  1926.8 4563.58 1926.83
4565.74 1926.74 4571.25    1927  4572.4 1927.19 4574.68 1927.66    4576    1928
4576.54 1928.05 4582.19    1929 4587.38    1930 4591.43    1931 4594.07 1931.64
4595.31    1932 4598.16    1933 4602.33 1933.02 4605.75    1933 4610.19 1931.99
4612.34 1931.33 4613.68    1931 4615.44 1930.51 4619.84  1929.4 4623.55 1928.51
4625.88    1928 4630.03    1928 4631.84 1928.85 4633.22 1929.38 4634.25 1929.71
4638.07 1930.69 4639.19    1931 4642.68 1931.88 4643.43 1931.83 4646.75 1931.35
4648.87 1930.96 4651.28    1930 4653.58 1929.16 4656.29 1928.13 4658.49 1927.45
4659.76    1927 4661.35 1926.48 4668.68    1924 4671.24 1923.67 4671.58 1923.68
4673.38 1923.48 4673.71  1923.5 4679.85 1923.18 4682.98  1923.2 4687.96  1923.1
4691.43 1923.06 4695.29    1923 4971.04    1923 5003.49 1922.99 5024.46    1923
5085.12    1923 5086.32    1924 5087.64    1925 5089.91 1925.37 5091.41 1925.44
5092.68 1925.46 5095.16    1925 5156.67    1925 5161.52  1925.8 5162.59    1926
5168.98 1926.59 5173.14 1926.99  5173.5 1927.01 5174.79 1927.23 5176.82 1927.37
5178.71 1927.47 5179.55 1927.45 5183.28 1927.66 5183.88 1927.74 5185.22 1927.76
5186.51 1928.01 5187.96 1928.22 5188.87 1928.26  5189.9 1928.21 5191.33 1927.93
5192.15 1927.59 5193.13    1927 5194.33    1926 5195.22 1925.73 5199.11    1925
5303.21    1925  5353.5 1924.45 5397.61    1924 5442.93    1924 5443.21 1924.03
5458.65 1925.38 5465.69    1926 5469.73 1926.79 5474.36 1927.78  5474.8    1928
5478.71 1930.34 5481.57    1932 5483.06    1933 5485.19 1934.19 5486.58    1935
 5487.5 1935.48 5491.24 1937.58 5492.81 1938.41 5496.89  1940.5  5500.6 1942.34
5501.89    1943 5535.09    1943 5541.21 1943.05 5589.16 1943.46 5648.94 1943.99
```

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5648.94 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5648.94 | 148.82 | 148.82 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | Left OB | Channel | Right OB |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1926.32 | Element | | | |
| Vel Head (ft) | 0.13 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1926.20 | Reach Len. (ft) | 148.82 | 148.82 | 148.82 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7804.38 | |
| E.G. Slope (ft/ft) | 0.002352 | Area (sq ft) | | 7804.38 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 3879.06 | Top Width (ft) | | 3879.06 | |
| Vel Total (ft/s) | 2.87 | Avg. Vel. (ft/s) | | 2.87 | |
| Max Chl Dpth (ft) | 4.20 | Hydr. Depth (ft) | | 2.01 | |
| Conv. Total (cfs) | 461834.1 | Conv. (cfs) | | 461834.1 | |
| Length Wtd. (ft) | 148.82 | Wetted Per. (ft) | | 3881.68 | |
| Min Ch El (ft) | 1922.00 | Shear (lb/sq ft) | | 0.30 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5648.94 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.33 | Cum Volume (acre-ft) | | 1646.52 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 759.89 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -10465.2

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1926 | 273.79 | 1925 | 276.97 | 1924.98 | 279.42 | 1924.94 | 295.45 | 1924.7 |
| 297.51 | 1924.66 | 302.61 | 1924.54 | 313.39 | 1924.29 | 320.16 | 1924.18 | 325.41 | 1924 |
| 329.1 | 1923.96 | 389.05 | 1923.64 | 419.86 | 1923.49 | 433.79 | 1923.49 | 453.04 | 1923.38 |
| 482.51 | 1923.22 | 486.37 | 1923.2 | 488.06 | 1923.18 | 490.47 | 1923.18 | 491.26 | 1923.17 |
| 494.18 | 1923.17 | 495.14 | 1923.16 | 497.22 | 1923.16 | 498.2 | 1923.15 | 501.27 | 1923.15 |
| 503.65 | 1923.14 | 531.43 | 1923 | 741.07 | 1923 | 752.11 | 1922.98 | 766.72 | 1922.96 |
| 769.43 | 1922.96 | 795.84 | 1922.94 | 800.09 | 1922.94 | 812.09 | 1922.92 | 817.71 | 1922.92 |
| 823.37 | 1922.93 | 840.98 | 1922.94 | 858.44 | 1922.97 | 859.58 | 1922.98 | 864.18 | 1922.98 |
| 877.81 | 1922.97 | 884.23 | 1922.97 | 885.02 | 1922.96 | 893.1 | 1922.99 | 901.49 | 1922.98 |
| 929.33 | 1922.98 | 944.19 | 1923 | 973.75 | 1923.21 | 995.48 | 1923.27 | 1000.46 | 1923.21 |
| 1001.29 | 1923.21 | 1006.65 | 1923.17 | 1008.91 | 1923.17 | 1013.08 | 1923 | 1023.04 | 1923.01 |
| 1025.05 | 1923 | 1034.17 | 1923 | 1037.71 | 1922.77 | 1041.64 | 1922.66 | 1044.25 | 1922.57 |
| 1048.98 | 1922.39 | 1052.47 | 1922.25 | 1057.91 | 1922 | 1103.6 | 1922 | 1106.28 | 1921.27 |
| 1110.98 | 1920 | 1113.86 | 1919.97 | 1116.87 | 1920 | 1117.43 | 1920.14 | 1120.27 | 1921 |
| 1120.99 | 1921.23 | 1123.48 | 1922 | 1144.97 | 1922.92 | 1146.65 | 1923 | 1159.09 | 1923.02 |
| 1162.79 | 1923.03 | 1170.01 | 1923.02 | 1179.05 | 1923 | 1192.69 | 1922.98 | 1204.5 | 1922.96 |
| 1206.28 | 1922.96 | 1209.71 | 1922.95 | 1211.69 | 1922.95 | 1224.19 | 1922.97 | 1226.29 | 1922.98 |
| 1235.27 | 1922.99 | 1238.27 | 1922.99 | 1247.65 | 1923 | 1367.67 | 1923 | 1374.68 | 1923.06 |
| 1425.61 | 1923.47 | 1429.73 | 1923.48 | 1436.94 | 1923.46 | 1439.79 | 1923.46 | 1441.99 | 1923.45 |
| 1451.41 | 1923.35 | 1465.37 | 1923.19 | 1467.36 | 1923.17 | 1470.28 | 1923.12 | 1471.39 | 1923.12 |
| 1479.31 | 1923 | 1501.4 | 1923 | 1501.71 | 1923.01 | 1516.25 | 1923.24 | 1517.75 | 1923.27 |
| 1543.04 | 1923.97 | 1544.46 | 1924.02 | 1550.97 | 1924.44 | 1559.59 | 1925 | 1570.51 | 1925 |
| 1574.59 | 1924.8 | 1576.75 | 1924.67 | 1586.9 | 1924 | 1587.22 | 1924 | 1588.07 | 1923.92 |
| 1589.21 | 1923.79 | 1589.62 | 1923.76 | 1596.65 | 1923.39 | 1603.12 | 1923.03 | 1603.71 | 1923 |
| 1614.15 | 1923 | 1616.63 | 1923.1 | 1620.04 | 1923.25 | 1622.99 | 1923.41 | 1635.58 | 1924 |
| 1636.03 | 1924.04 | 1639.36 | 1924.28 | 1640.22 | 1924.31 | 1641.99 | 1924.4 | 1648.1 | 1924.57 |
| 1649.84 | 1924.58 | 1650.48 | 1924.56 | 1654.32 | 1924.62 | 1659.95 | 1924.37 | 1661.55 | 1924.27 |
| 1666.79 | 1924 | 1709.76 | 1924 | 1712.48 | 1924.02 | 1716.69 | 1924.25 | 1717.23 | 1924.29 |
| 1718.67 | 1924.35 | 1719.91 | 1924.43 | 1721.95 | 1924.54 | 1729.41 | 1925 | 1736.23 | 1925.46 |
| 1737.38 | 1925.53 | 1746.36 | 1926 | 1748.7 | 1926.04 | 1750.19 | 1926.05 | 1761.95 | 1926.84 |
| 1763.86 | 1927 | 1766.81 | 1927 | 1768.76 | 1926.87 | 1781.19 | 1926 | 1785.45 | 1925.65 |
| 1785.93 | 1925.63 | 1788.8 | 1925.44 | 1789.66 | 1925.44 | 1791.44 | 1925.37 | 1792.78 | 1925.33 |
| 1795.91 | 1925.34 | 1798.03 | 1925.37 | 1804.58 | 1925.57 | 1809.18 | 1925.65 | 1810.72 | 1925.65 |
| 1811.54 | 1925.68 | 1814.51 | 1925.59 | 1815.57 | 1925.61 | 1818.08 | 1925.57 | 1818.61 | 1925.54 |
| 1819.68 | 1925.52 | 1820.78 | 1925.44 | 1832.8 | 1925 | 1837.39 | 1924.79 | 1840.29 | 1924.67 |
| 1847.33 | 1924.45 | 1853.4 | 1924.27 | 1858.18 | 1924.15 | 1859.16 | 1924.13 | 1865.68 | 1924.02 |
| 1872.15 | 1923.86 | 1872.91 | 1923.85 | 1885.25 | 1923.89 | 1885.59 | 1923.87 | 1890.92 | 1923.88 |
| 1893.17 | 1923.84 | 1897.19 | 1923.72 | 1898.46 | 1923.65 | 1900.35 | 1923.59 | 1901.67 | 1923.53 |
| 1902.26 | 1923.49 | 1905.31 | 1923.32 | 1909.89 | 1923 | 1915.36 | 1922.61 | 1917.13 | 1922.58 |
| 1919.1 | 1922.57 | 1924.82 | 1922.58 | 1930.31 | 1922.28 | 1933.39 | 1922.07 | 1937.78 | 1922 |
| 1950.71 | 1921.99 | 1956.2 | 1921.98 | 1960.02 | 1921.99 | 1971.3 | 1922 | 1997.84 | 1922.57 |
| 2013.12 | 1922.79 | 2016.12 | 1922.82 | 2020.48 | 1922.85 | 2025.27 | 1922.9 | 2033.16 | 1923 |
| 2114.8 | 1923 | 2214.59 | 1924 | 2268.38 | 1924 | 2298.1 | 1924.6 | 2309.79 | 1924.83 |
| 2314.22 | 1924.83 | 2321.01 | 1924.99 | 2338.74 | 1924.99 | 2346.51 | 1925 | 2369.44 | 1925 |
| 2379.17 | 1924.99 | 2392.76 | 1924.99 | 2403.9 | 1925 | 2405.35 | 1925.08 | 2421.29 | 1926 |
| 2440.49 | 1926.93 | 2442.12 | 1927 | 2451.76 | 1927 | 2456.69 | 1926.93 | 2464.02 | 1926.74 |
| 2473.54 | 1926.54 | 2477.43 | 1926.43 | 2483.81 | 1926.24 | 2491.5 | 1926 | 2492.91 | 1926 |
| 2503.91 | 1925.4 | 2511.21 | 1925.01 | 2511.58 | 1925 | 2521.28 | 1924.98 | 2532.84 | 1924.5 |
| 2533.6 | 1924.49 | 2547.04 | 1924.45 | 2559.28 | 1924.44 | 2561.7 | 1924.43 | 2568.74 | 1924.41 |
| 2569.83 | 1924.39 | 2575.12 | 1924.4 | 2580.62 | 1924.43 | 2588.93 | 1924.45 | 2593.83 | 1924.48 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2596.36 | 1924.46 | 2603.19 | 1924.29 | 2616.58 | 1924 | 2625.85 | 1924 | 2633.43 | 1924.02 |
| 2644.31 | 1924.04 | 2644.99 | 1924.02 | 2646.97 | 1924.02 | 2654.41 | 1924.08 | 2664.81 | 1924.2 |
| 2732.71 | 1925 | 2734.4 | 1925 | 2745.36 | 1924.78 | 2747.33 | 1924.78 | 2748.49 | 1924.77 |
| 2780.9 | 1924.93 | 2792.54 | 1925 | 3033.04 | 1925 | 3037.82 | 1925.12 | 3038.04 | 1925.11 |
| 3039.22 | 1925.14 | 3039.54 | 1925.13 | 3041.14 | 1925.15 | 3044.19 | 1925.12 | 3046.87 | 1925.11 |
| 3046.92 | 1925.12 | 3050.77 | 1925.12 | 3056.48 | 1925.27 | 3061.32 | 1925.39 | 3064.9 | 1925.47 |
| 3091.32 | 1925.91 | 3108.94 | 1925.91 | 3112.77 | 1925.9 | 3116.33 | 1925.91 | 3151.82 | 1925.69 |
| 3159.79 | 1925.57 | 3193.31 | 1925.24 | 3198.13 | 1925.21 | 3214.31 | 1925.08 | 3216.29 | 1925.06 |
| 3218.3 | 1925.09 | 3224.29 | 1925.19 | 3224.64 | 1925.17 | 3227.06 | 1925.43 | 3231.92 | 1925.9 |
| 3232.84 | 1926 | 3235.76 | 1926.45 | 3239.86 | 1927 | 3242.33 | 1928 | 3245.01 | 1929.1 |
| 3247.23 | 1930 | 3249.28 | 1930.81 | 3250.13 | 1931.16 | 3251.37 | 1931.6 | 3252.5 | 1931.93 |
| 3252.81 | 1932 | 3253.31 | 1932 | 3263.31 | 1931 | 3265.38 | 1930.67 | 3267.12 | 1930.94 |
| 3267.29 | 1930.93 | 3268.64 | 1931 | 3271.54 | 1931.59 | 3272.66 | 1931.64 | 3273.57 | 1931.65 |
| 3274.38 | 1931.62 | 3275.26 | 1931.56 | 3276.39 | 1931.43 | 3278.04 | 1931.15 | 3278.82 | 1931 |
| 3282.94 | 1929.97 | 3285.67 | 1929.25 | 3290.57 | 1928 | 3293.42 | 1927.28 | 3294.49 | 1927 |
| 3295.97 | 1926.55 | 3297.91 | 1926 | 3302.01 | 1925.57 | 3307.89 | 1925 | 3310.64 | 1925 |
| 3317.3 | 1924.99 | 3324.45 | 1924.99 | 3332.98 | 1925 | 3337.46 | 1925.18 | 3340.19 | 1925.26 |
| 3348.64 | 1925.5 | 3348.73 | 1925.49 | 3358.31 | 1925.38 | 3375.43 | 1925 | 3402.91 | 1925 |
| 3402.96 | 1925.01 | 3411.53 | 1926.37 | 3414.82 | 1926.93 | 3417.41 | 1927.36 | 3421.02 | 1928 |
| 3422.48 | 1928.2 | 3434.11 | 1929 | 3437.87 | 1929.2 | 3439.49 | 1929.28 | 3443.23 | 1929.48 |
| 3444.87 | 1929.53 | 3449.6 | 1929.69 | 3452.53 | 1929.71 | 3453.53 | 1929.71 | 3455.24 | 1929.69 |
| 3462.87 | 1929.38 | 3466.61 | 1929.28 | 3467.19 | 1929.25 | 3472.14 | 1929.11 | 3477.93 | 1929.01 |
| 3478.26 | 1929 | 3491.15 | 1928.83 | 3492.74 | 1928.8 | 3493.86 | 1928.75 | 3495.93 | 1928.6 |
| 3498.37 | 1928.51 | 3499.8 | 1928.39 | 3502.51 | 1928.24 | 3508.94 | 1927.51 | 3513.48 | 1927 |
| 3519.1 | 1926.36 | 3520.61 | 1926.17 | 3521.83 | 1926 | 3524.79 | 1926 | 3540.33 | 1925.99 |
| 3542.1 | 1925.99 | 3559.28 | 1926 | 3561.08 | 1926.1 | 3571.08 | 1926.28 | 3578.82 | 1926.32 |
| 3583.02 | 1926 | 3591.44 | 1925.52 | 3600.43 | 1925 | 3609.18 | 1924.42 | 3615.64 | 1924 |
| 3619.32 | 1923.87 | 3622.68 | 1923.76 | 3624.03 | 1923.71 | 3643.67 | 1923 | 3645.64 | 1923 |
| 3688.11 | 1922.82 | 3723.89 | 1922.68 | 3724.39 | 1922.67 | 3752.87 | 1922.56 | 3813.29 | 1922.31 |
| 3826 | 1922.25 | 3827.48 | 1922.24 | 3842.3 | 1922.18 | 3851.33 | 1922.15 | 3857.57 | 1922.12 |
| 3864.83 | 1922.08 | 3880.73 | 1922.01 | 3882.34 | 1922 | 4025.67 | 1922 | 4036.57 | 1922.45 |
| 4040.08 | 1922.55 | 4040.34 | 1922.55 | 4046.35 | 1922.68 | 4057.47 | 1922.57 | 4071.43 | 1922.95 |
| 4071.94 | 1923 | 4075.37 | 1923 | 4078.78 | 1923.14 | 4081.99 | 1923.26 | 4084.49 | 1923.18 |
| 4086 | 1923.15 | 4088.08 | 1923.18 | 4088.17 | 1923.17 | 4091.03 | 1923.16 | 4093.7 | 1923.16 |
| 4093.91 | 1923.17 | 4097.07 | 1923.2 | 4110.07 | 1923.47 | 4134.11 | 1923.99 | 4141.92 | 1923.99 |
| 4156.45 | 1924 | 4165.24 | 1924.45 | 4175.42 | 1925 | 4209.19 | 1925 | 4211.49 | 1924.92 |
| 4213.3 | 1924.87 | 4216.65 | 1924.76 | 4227.66 | 1924.42 | 4230.76 | 1924.35 | 4233.85 | 1924.25 |
| 4235.38 | 1924.23 | 4238.93 | 1924.12 | 4240 | 1924.1 | 4241.4 | 1924.09 | 4247.82 | 1924 |
| 4267.21 | 1924 | 4275.84 | 1923.99 | 4287.17 | 1924 | 4306.49 | 1924 | 4308.22 | 1924.17 |
| 4319.77 | 1925 | 4323.25 | 1925.36 | 4323.72 | 1925.42 | 4329.11 | 1926 | 4333.43 | 1926.58 |
| 4336.25 | 1927 | 4342.79 | 1928 | 4348.12 | 1929 | 4348.78 | 1929.29 | 4350.69 | 1930.16 |
| 4352.37 | 1931 | 4356.44 | 1932.84 | 4358.58 | 1934 | 4361.6 | 1935.61 | 4362.36 | 1936 |
| 4364.26 | 1937 | 4367.98 | 1939 | 4368.67 | 1939.38 | 4373.57 | 1942 | 4374.26 | 1942.34 |
| 4375.5 | 1943 | 4376.81 | 1943.73 | 4377.48 | 1944 | 4379.23 | 1944.91 | 4379.44 | 1945 |
| 4381.71 | 1945.02 | 4384.09 | 1945 | 4389.06 | 1944.53 | 4389.73 | 1944.45 | 4394.03 | 1944 |
| 4399.57 | 1944 | 4403.93 | 1943.81 | 4405.06 | 1943.84 | 4405.86 | 1943.81 | 4407.87 | 1943.82 |
| 4414.78 | 1943.6 | 4421.02 | 1943.46 | 4422.65 | 1943.48 | 4435.57 | 1943.45 | 4452.67 | 1943.31 |
| 4456.79 | 1943.26 | 4468.92 | 1943.1 | 4477.23 | 1943 | 4538.33 | 1943 | 4553.88 | 1943.13 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4553.88 | .045 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | |
|---|---|---|---|---|---|---|
| 0 | 4553.88 | 157.11 | 157.11 | 157.11 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1925.99 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.12 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1925.87 | Reach Len. (ft) | 157.11 | 157.11 | 157.11 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8063.71 | | |
| E.G. Slope (ft/ft) | 0.002123 | Area (sq ft) | | 8063.71 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3898.60 | Top Width (ft) | | 3898.60 | | |
| Vel Total (ft/s) | 2.78 | Avg. Vel. (ft/s) | | 2.78 | | |
| Max Chl Dpth (ft) | 5.90 | Hydr. Depth (ft) | | 2.07 | | |
| Conv. Total (cfs) | 486158.3 | Conv. (cfs) | | 486158.3 | | |
| Length Wtd. (ft) | 157.11 | Wetted Per. (ft) | | 3900.07 | | |
| Min Ch El (ft) | 1919.97 | Shear (lb/sq ft) | | 0.27 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4553.88 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.32 | Cum Volume (acre-ft) | | 1619.42 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 746.60 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -10622.3

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1930.2 | 24.83 | 1930.11 | 46.82 | 1930.04 | 53.6 | 1930.01 | 55.87 | 1930.01 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 87.91 | 1929.89 | 94.44 | 1929.87 | 142.02 | 1929.71 | 154.93 | 1929.66 | 173.86 | 1929.6 |
| 342.24 | 1929.01 | 349.9 | 1928.98 | 364.32 | 1928.91 | 382.41 | 1928.83 | 408.34 | 1928.71 |
| 433.22 | 1928.59 | 437.4 | 1928.58 | 448.84 | 1928.52 | 463.66 | 1928.45 | 478.19 | 1928.39 |
| 489.63 | 1928.33 | 511.83 | 1928.22 | 548.81 | 1928.04 | 575.68 | 1927.92 | 593.33 | 1927.83 |
| 623.87 | 1927.69 | 657.89 | 1927.53 | 684.83 | 1927.39 | 694.07 | 1927.36 | 701.17 | 1927.33 |
| 706.38 | 1927.31 | 719.19 | 1927.25 | 727.64 | 1927.22 | 737.95 | 1927.17 | 760.24 | 1927.08 |
| 781.64 | 1926.99 | 788.02 | 1926.96 | 795 | 1926.94 | 796.12 | 1926.93 | 823.97 | 1926.82 |
| 844.18 | 1926.73 | 847.85 | 1926.72 | 850.91 | 1926.7 | 860.52 | 1926.66 | 907.76 | 1926.47 |
| 914.01 | 1926.44 | 926.42 | 1926.39 | 943.25 | 1926.33 | 950.91 | 1926.29 | 962.54 | 1926.25 |
| 976.35 | 1926.19 | 977.85 | 1926.19 | 1006.71 | 1926.07 | 1029.98 | 1925.98 | 1044.43 | 1925.92 |
| 1053.23 | 1925.6 | 1063.55 | 1925 | 1338.26 | 1925 | 1340.61 | 1924.99 | 1348.07 | 1924.88 |
| 1357.07 | 1924.67 | 1373.86 | 1924.37 | 1380.04 | 1924.16 | 1384.06 | 1924.01 | 1384.96 | 1924 |
| 1448.3 | 1923.64 | 1479.06 | 1923.48 | 1486.67 | 1923.48 | 1493.23 | 1923.47 | 1513.32 | 1923.36 |
| 1546.81 | 1923.16 | 1548.49 | 1923.14 | 1552.43 | 1923.13 | 1557.85 | 1923.1 | 1560.06 | 1923.1 |
| 1579.65 | 1923 | 1761.63 | 1923 | 1765.36 | 1922.99 | 1771.79 | 1922.99 | 1779.44 | 1922.92 |
| 1783.33 | 1922.91 | 1805.22 | 1922.8 | 1817.59 | 1922.78 | 1829.22 | 1922.75 | 1843.52 | 1922.72 |
| 1857.57 | 1922.71 | 1866.51 | 1922.69 | 1887.83 | 1922.69 | 1900.2 | 1922.71 | 1903.11 | 1922.72 |
| 1906.82 | 1922.75 | 1919.2 | 1922.78 | 1928.85 | 1922.81 | 1929.03 | 1922.8 | 1933.57 | 1922.79 |
| 1939.09 | 1922.76 | 1949.94 | 1922.75 | 1951.17 | 1922.74 | 1958.21 | 1922.73 | 1982.76 | 1922.78 |
| 2014.86 | 1922.95 | 2018.04 | 1923 | 2028.94 | 1923.03 | 2037.31 | 1923.02 | 2046.89 | 1923.02 |
| 2052.37 | 1923 | 2094.49 | 1923 | 2094.98 | 1922.91 | 2100.43 | 1922 | 2149.41 | 1922 |
| 2152.88 | 1921 | 2156.29 | 1920 | 2158.32 | 1919.37 | 2159.58 | 1919 | 2160.8 | 1919 |
| 2162.56 | 1919.51 | 2167.22 | 1920.82 | 2171.25 | 1922 | 2176.1 | 1922.12 | 2180.98 | 1922.25 |
| 2202.81 | 1922.96 | 2207.07 | 1922.97 | 2214.54 | 1922.97 | 2220.32 | 1922.83 | 2222.15 | 1922.85 |
| 2223.6 | 1922.84 | 2249.26 | 1922.95 | 2270.25 | 1922.91 | 2284.34 | 1922.94 | 2287.28 | 1922.95 |
| 2307.4 | 1923 | 2463.87 | 1923 | 2481 | 1922.97 | 2486.78 | 1922.97 | 2498.45 | 1922.96 |
| 2500.02 | 1922.97 | 2510.94 | 1922.97 | 2517.45 | 1922.99 | 2523.43 | 1923 | 2587.73 | 1923 |
| 2599.53 | 1923.34 | 2600.57 | 1923.39 | 2605.26 | 1923.46 | 2608.19 | 1923.46 | 2615.1 | 1923 |
| 2617.87 | 1922.78 | 2624.89 | 1922.2 | 2627.44 | 1922 | 2630.7 | 1921.77 | 2632.55 | 1921.71 |
| 2634.18 | 1921.68 | 2637.58 | 1921.71 | 2640.68 | 1921.7 | 2641.65 | 1921.67 | 2644.93 | 1921.69 |
| 2645.86 | 1921.63 | 2653.63 | 1921.5 | 2662.5 | 1921.57 | 2666.1 | 1921.71 | 2670.89 | 1922 |
| 2677.15 | 1922.68 | 2677.59 | 1922.72 | 2682.73 | 1923.03 | 2684.89 | 1923.1 | 2688.63 | 1923.13 |
| 2696.62 | 1923.13 | 2706.77 | 1923.27 | 2708.59 | 1923.24 | 2709.7 | 1923.2 | 2712.35 | 1923 |
| 2715.23 | 1922.85 | 2730.45 | 1922 | 2732 | 1921.91 | 2734.45 | 1921.92 | 2738.49 | 1921.98 |
| 2739.36 | 1921.97 | 2749.35 | 1921.72 | 2749.85 | 1921.74 | 2757.49 | 1921.74 | 2765.84 | 1921.81 |
| 2767.31 | 1921.85 | 2779.45 | 1921.94 | 2781.26 | 1921.96 | 2783.48 | 1921.96 | 2784.75 | 1921.99 |
| 2796.75 | 1921.95 | 2805.62 | 1921.94 | 2809.07 | 1922 | 2855.73 | 1922 | 2864.33 | 1921.79 |
| 2874.91 | 1921.67 | 2896.2 | 1921.03 | 2896.35 | 1921 | 2906.37 | 1921 | 2909.56 | 1921.27 |
| 2912.17 | 1921.33 | 2914.92 | 1921.27 | 2918.83 | 1921.28 | 2922.38 | 1921.4 | 2928.23 | 1922 |
| 2931.98 | 1922.37 | 2932.69 | 1922.42 | 2936.62 | 1922.57 | 2938.54 | 1922.71 | 2943.89 | 1922.85 |
| 2946.77 | 1922.89 | 2947.9 | 1922.96 | 2951.77 | 1923 | 2974.54 | 1922.95 | 2977.5 | 1922.96 |
| 2989.87 | 1922.98 | 2992.2 | 1922.99 | 3001.01 | 1923 | 3002.25 | 1923.01 | 3012.35 | 1923.01 |
| 3017.71 | 1923.02 | 3024.07 | 1923.02 | 3046.98 | 1923.04 | 3058.23 | 1923.04 | 3061.21 | 1923.05 |
| 3068.92 | 1923.05 | 3103.33 | 1923.61 | 3106.22 | 1923.64 | 3117.75 | 1923.73 | 3137.69 | 1923.91 |
| 3147 | 1924 | 3147.9 | 1924 | 3154.03 | 1924.05 | 3166.15 | 1924.26 | 3180.37 | 1924.41 |
| 3180.68 | 1924.42 | 3189.23 | 1924.25 | 3193.71 | 1924.18 | 3196.33 | 1924.2 | 3207.3 | 1924.11 |
| 3211.87 | 1924.08 | 3214.68 | 1924 | 3229.33 | 1924 | 3233.17 | 1923.99 | 3247.87 | 1923.99 |
| 3258.65 | 1924 | 3297.16 | 1924 | 3302.95 | 1923.66 | 3305.82 | 1923.61 | 3309.83 | 1923.46 |
| 3312.48 | 1923.39 | 3319.6 | 1923.12 | 3321.07 | 1923.09 | 3323.16 | 1923 | 3375.78 | 1923 |
| 3379.64 | 1923.14 | 3390.51 | 1923.29 | 3399.62 | 1923.28 | 3403.1 | 1923.07 | 3404.72 | 1923 |
| 3407.11 | 1923 | 3407.93 | 1923.02 | 3415.81 | 1923.33 | 3418.94 | 1923.27 | 3421.63 | 1923.09 |
| 3423.29 | 1923 | 3427.48 | 1922.81 | 3429.03 | 1922.76 | 3430.9 | 1922.82 | 3433.16 | 1922.92 |
| 3433.95 | 1923 | 3443.46 | 1923.62 | 3444.91 | 1923.71 | 3450.17 | 1924 | 3462.3 | 1924.54 |
| 3467.73 | 1925 | 3470.65 | 1925.61 | 3473.33 | 1926 | 3475.47 | 1926.35 | 3477.04 | 1926.52 |
| 3478.51 | 1926.62 | 3480.01 | 1926.68 | 3482.35 | 1926.66 | 3483.87 | 1926.57 | 3485.27 | 1926.45 |
| 3487.22 | 1926.25 | 3489.02 | 1926.04 | 3490.33 | 1925.86 | 3498.53 | 1925.01 | 3502.07 | 1925 |
| 3505.32 | 1924.94 | 3518.46 | 1924.98 | 3522.22 | 1925 | 3562.96 | 1924.99 | 3601.73 | 1925 |
| 3779.38 | 1925 | 3790.7 | 1924.64 | 3808.7 | 1924 | 3814.57 | 1924 | 3834.16 | 1923.99 |
| 3846.62 | 1923.99 | 3861.35 | 1924 | 3870.06 | 1924.09 | 3876.78 | 1924.15 | 3877.03 | 1924.16 |
| 3908.3 | 1924.45 | 3922.46 | 1924.57 | 3924.48 | 1924.6 | 3927.79 | 1924.62 | 3938.81 | 1924.79 |
| 3952.17 | 1925 | 3957.9 | 1925 | 3959.02 | 1925.05 | 3962.31 | 1925.13 | 3977.32 | 1925.51 |
| 3983.53 | 1925.66 | 3992.33 | 1925.82 | 3995.91 | 1925.89 | 3999.03 | 1925.92 | 4001.21 | 1925.92 |
| 4006.7 | 1925.81 | 4010.38 | 1925.72 | 4015.88 | 1925.57 | 4018.14 | 1925.56 | 4020.07 | 1925.51 |
| 4029.28 | 1925.18 | 4034.93 | 1925 | 4061.88 | 1925 | 4096.4 | 1925.58 | 4098.69 | 1925.57 |
| 4102.83 | 1925.51 | 4108.57 | 1925.4 | 4112.15 | 1925.43 | 4118.66 | 1925.22 | 4122.7 | 1925.1 |
| 4124.08 | 1925.11 | 4126.76 | 1925.02 | 4133.27 | 1925.06 | 4137.12 | 1925 | 4147.04 | 1924.93 |
| 4148.92 | 1924.93 | 4158.5 | 1924.85 | 4170.63 | 1924.76 | 4171.55 | 1924.76 | 4181.51 | 1925 |
| 4222.57 | 1925 | 4246.02 | 1926 | 4253.85 | 1926.06 | 4254.38 | 1926.07 | 4260.02 | 1926.02 |
| 4264.43 | 1925.99 | 4281.02 | 1925.39 | 4286.53 | 1925.2 | 4286.74 | 1925.2 | 4291.45 | 1925 |
| 4293.99 | 1924.99 | 4303.25 | 1924.84 | 4313.73 | 1924.75 | 4355.45 | 1924.37 | 4360.41 | 1924.33 |
| 4363.89 | 1924.29 | 4370.56 | 1924.23 | 4388.73 | 1924.06 | 4390.12 | 1924.04 | 4393.33 | 1924.06 |
| 4395.12 | 1924 | 4398.37 | 1923.99 | 4400.6 | 1924 | 4402.96 | 1923.99 | 4422.55 | 1923.99 |
| 4428.07 | 1923.98 | 4439.44 | 1924.01 | 4442.59 | 1924.26 | 4446.32 | 1924.54 | 4451.32 | 1924.81 |
| 4455.56 | 1925 | 4458.73 | 1926 | 4461.5 | 1926.89 | 4463.14 | 1927.4 | 4464.15 | 1927.64 |
| 4465.61 | 1927.9 | 4467.5 | 1928.11 | 4473.81 | 1928.26 | 4477.1 | 1928.35 | 4480.02 | 1928.56 |
| 4480.8 | 1928.57 | 4494.38 | 1928.27 | 4495.25 | 1928.22 | 4497.74 | 1928 | 4502.9 | 1927.59 |
| 4503.07 | 1927.59 | 4505.52 | 1927 | 4511.61 | 1926.91 | 4512.52 | 1926.93 | 4514.72 | 1926.9 |
| 4518.06 | 1926.91 | 4521.48 | 1926.9 | 4523.89 | 1926.88 | 4548.81 | 1926.95 | 4562.04 | 1927 |
| 4577.64 | 1927 | 4578.48 | 1927.78 | 4579.66 | 1928.82 | 4580.63 | 1929.57 | 4581.28 | 1930 |
| 4582.14 | 1930.37 | 4582.62 | 1930.39 | 4583.21 | 1930.32 | 4584.04 | 1930.13 | 4584.68 | 1929.92 |
| 4587.1 | 1929 | 4588.94 | 1928.25 | 4590.05 | 1927.93 | 4597.02 | 1926 | 4620.99 | 1925.53 |
| 4627.58 | 1925.07 | 4628.63 | 1925.07 | 4640.36 | 1925 | 4652.77 | 1924.06 | 4654.07 | 1924 |
| 4654.88 | 1924 | 4679.83 | 1923.55 | 4692.49 | 1923.32 | 4707.95 | 1923 | 4718.61 | 1922.82 |
| 4725.81 | 1922.78 | 4752.21 | 1922.44 | 4761.95 | 1922.41 | 4764.99 | 1922.37 | 4767.57 | 1922.35 |
| 4772.97 | 1922.29 | 4776.92 | 1922.28 | 4780.34 | 1922.25 | 4782.38 | 1922.25 | 4849.22 | 1922 |
| 5038.56 | 1922 | 5048.59 | 1921.99 | 5108.59 | 1921.99 | 5109.06 | 1922 | 5133.18 | 1922 |
| 5137.45 | 1922.27 | 5149.15 | 1923 | 5170.02 | 1923.01 | 5183.19 | 1923 | 5250.64 | 1923 |
| 5253.83 | 1923.6 | 5256.5 | 1924 | 5265.4 | 1925 | 5271.89 | 1926 | 5274.78 | 1927.02 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5280.53 | 1929 | 5282.48 | 1930 | 5285.89 | 1932 | 5286.75 | 1932.53 | 5288.73 | 1933.66 |
| 5289.52 | 1934.14 | 5290.73 | 1935 | 5291.88 | 1935.93 | 5293.57 | 1937.2 | 5294.68 | 1938 |
| 5295.6 | 1938.72 | 5297.7 | 1940.32 | 5301.25 | 1943 | 5302.39 | 1943.9 | 5303.82 | 1944.99 |
| 5305.2 | 1946 | 5306.21 | 1946.79 | 5306.56 | 1947 | 5319.63 | 1947.01 | 5329.45 | 1947 |
| 5375.31 | 1947 | 5384.23 | 1946.83 | 5391.56 | 1946.79 | 5391.72 | 1946.78 | 5399.78 | 1946.72 |
| 5405.77 | 1946.64 | 5417.89 | 1946.49 | 5423.76 | 1946.45 | 5424.08 | 1946.44 | 5430.62 | 1946.42 |
| 5431.68 | 1946.4 | 5436.3 | 1946.38 | 5444.48 | 1946.36 | 5451.09 | 1946.3 | 5465.92 | 1946.07 |
| 5472.19 | 1946 | 5483.36 | 1945.89 | 5489.28 | 1945.82 | 5497.42 | 1945.71 | 5505.2 | 1945.61 |
| 5514.12 | 1945.47 | 5517.7 | 1945.42 | 5531.95 | 1945.25 | 5537.74 | 1945.17 | 5543.13 | 1945.11 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5543.13 | .045 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | |
|---|---|---|---|---|---|---|
| 0 | 5543.13 | 231.16 | 231.16 | 231.16 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1925.67 | Element | Left OB | Channel | Right OB |
| Vel Head (ft) | 0.11 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1925.55 | Reach Len. (ft) | 231.16 | 231.16 | 231.16 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8259.22 | |
| E.G. Slope (ft/ft) | 0.001990 | Area (sq ft) | | 8259.22 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 3943.40 | Top Width (ft) | | 3943.40 | |
| Vel Total (ft/s) | 2.71 | Avg. Vel. (ft/s) | | 2.71 | |
| Max Chl Dpth (ft) | 6.55 | Hydr. Depth (ft) | | 2.09 | |
| Conv. Total (cfs) | 502082.6 | Conv. (cfs) | | 502082.6 | |
| Length Wtd. (ft) | 231.16 | Wetted Per. (ft) | | 3945.37 | |
| Min Ch El (ft) | 1919.00 | Shear (lb/sq ft) | | 0.26 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5543.13 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.41 | Cum Volume (acre-ft) | | 1589.98 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 732.46 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -10853.5

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1929.9 | 14.68 | 1929.85 | 90.2 | 1929.57 | 114.38 | 1929.48 | 116.11 | 1929.48 |
| 127.38 | 1929.44 | 145.3 | 1929.37 | 148.91 | 1929.36 | 159.65 | 1929.32 | 166.86 | 1929.29 |
| 171.21 | 1929.28 | 176.99 | 1929.25 | 206.15 | 1929.15 | 206.91 | 1929.14 | 209.6 | 1929.14 |
| 224.66 | 1929.08 | 233.77 | 1929.05 | 248.06 | 1928.99 | 253.17 | 1928.98 | 254.77 | 1928.97 |
| 448.2 | 1928.26 | 451.34 | 1928.24 | 467.54 | 1928.17 | 470.08 | 1928.15 | 487.89 | 1928.07 |
| 517.11 | 1927.93 | 545.19 | 1927.8 | 549.91 | 1927.78 | 562.85 | 1927.72 | 579.69 | 1927.64 |
| 595.93 | 1927.56 | 609.05 | 1927.5 | 634.24 | 1927.37 | 663.19 | 1927.23 | 678.18 | 1927.15 |
| 693.48 | 1927.08 | 706.92 | 1927.02 | 713.41 | 1926.98 | 725.45 | 1926.93 | 743.42 | 1926.84 |
| 746.43 | 1926.82 | 747.94 | 1926.82 | 786.49 | 1926.63 | 804.28 | 1926.54 | 814.67 | 1926.49 |
| 816.09 | 1926.49 | 828.54 | 1926.43 | 842.98 | 1926.37 | 848.97 | 1926.35 | 852.5 | 1926.33 |
| 889.3 | 1926.17 | 920.72 | 1926.04 | 928.62 | 1926 | 929.9 | 1926 | 961.45 | 1925.86 |
| 984.4 | 1925.76 | 988.17 | 1925.74 | 990.34 | 1925.74 | 995.34 | 1925.71 | 1002.96 | 1925.68 |
| 1016.46 | 1925.62 | 1027.5 | 1925.58 | 1030.41 | 1925.36 | 1032.71 | 1925.2 | 1035.8 | 1925 |
| 1312.97 | 1925 | 1317.01 | 1924.87 | 1322.45 | 1924.67 | 1328.39 | 1924.48 | 1329.85 | 1924.42 |
| 1337.55 | 1924.23 | 1339.82 | 1924.14 | 1340.98 | 1924.13 | 1345 | 1924.02 | 1349.03 | 1924.01 |
| 1351.92 | 1923.97 | 1356.37 | 1923.89 | 1359.38 | 1923.83 | 1365.8 | 1923.71 | 1377.35 | 1923.46 |
| 1379.02 | 1923.42 | 1385.9 | 1923.31 | 1400.98 | 1923.11 | 1407.26 | 1923.04 | 1408.53 | 1923.02 |
| 1411.84 | 1923 | 1456.21 | 1923 | 1456.62 | 1922.99 | 1465.62 | 1922.88 | 1467.33 | 1922.87 |
| 1488.7 | 1922.78 | 1504.62 | 1922.72 | 1505.74 | 1922.71 | 1514.9 | 1922.7 | 1540.3 | 1922.64 |
| 1542.92 | 1922.64 | 1548.29 | 1922.63 | 1560.2 | 1922.58 | 1570.37 | 1922.54 | 1573.74 | 1922.53 |
| 1580.93 | 1922.52 | 1588.62 | 1922.5 | 1596.54 | 1922.47 | 1605.5 | 1922.45 | 1613.24 | 1922.43 |
| 1626.18 | 1922.43 | 1632.12 | 1922.42 | 1642.49 | 1922.42 | 1683.69 | 1922.41 | 1729.38 | 1922.35 |
| 1740.36 | 1922.29 | 1740.76 | 1922.28 | 1744.38 | 1922.28 | 1747.82 | 1922.27 | 1756.32 | 1922.27 |
| 1765.42 | 1922.2 | 1776.55 | 1922.1 | 1777.04 | 1922.1 | 1787.52 | 1922 | 1800.28 | 1921.99 |
| 1818.2 | 1921.99 | 1823.25 | 1921.98 | 1832.49 | 1921.98 | 1855.4 | 1921.99 | 1874.03 | 1922 |
| 2183.51 | 1922 | 2186.37 | 1921.48 | 2192.82 | 1920 | 2195.08 | 1919.46 | 2197.05 | 1919 |
| 2199.32 | 1919 | 2204.94 | 1920.13 | 2208.77 | 1921 | 2212.96 | 1922 | 2218.58 | 1922.18 |
| 2226.18 | 1922.4 | 2233.66 | 1922.62 | 2246.96 | 1923 | 2273.27 | 1923 | 2276.14 | 1922.97 |
| 2276.34 | 1922.96 | 2291.58 | 1922.83 | 2294.23 | 1922.71 | 2304.48 | 1922.57 | 2304.99 | 1922.54 |
| 2306.55 | 1922.53 | 2312.9 | 1922.41 | 2314.79 | 1922.42 | 2317.66 | 1922.45 | 2320.02 | 1922.44 |
| 2322.1 | 1922.46 | 2325.29 | 1922.51 | 2329.42 | 1922.44 | 2335.12 | 1922.32 | 2336.11 | 1922.28 |
| 2341.11 | 1922.03 | 2341.59 | 1922 | 2345.44 | 1921.6 | 2351.57 | 1921.01 | 2352.49 | 1921.03 |
| 2353.34 | 1921.09 | 2361.25 | 1921.7 | 2365.02 | 1922 | 2375.77 | 1922.94 | 2376.63 | 1923 |
| 2377.83 | 1923 | 2382.74 | 1922.77 | 2394.48 | 1922.18 | 2398.6 | 1922 | 2402.11 | 1921.9 |
| 2407 | 1921.78 | 2415.75 | 1921.68 | 2421.77 | 1921.54 | 2428.05 | 1921.43 | 2431.79 | 1921.35 |
| 2434.12 | 1921.28 | 2441.4 | 1921 | 2726.76 | 1921 | 2731.36 | 1921.06 | 2740.77 | 1921.17 |
| 2741.39 | 1921.17 | 2745.74 | 1921.26 | 2759.12 | 1921.53 | 2762 | 1921.58 | 2765.87 | 1921.67 |
| 2767.21 | 1921.69 | 2774.14 | 1921.83 | 2776.62 | 1921.86 | 2782.61 | 1922 | 2811.34 | 1922 |
| 2858.44 | 1922.4 | 2880.15 | 1922.54 | 2892.97 | 1922.62 | 2916.36 | 1922.83 | 2934.84 | 1923 |
| 2939.91 | 1923 | 2945.81 | 1924 | 2947.23 | 1924.1 | 2949.09 | 1924.14 | 2950.42 | 1924 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2953.28 | 1923.13 | 2953.68 | 1923 | 3007.31 | 1923 | 3016.84 | 1922.99 | 3019.3 | 1923 |
| 3057.5 | 1923 | 3059.66 | 1923.12 | 3076.64 | 1924 | 3076.9 | 1924.02 | 3086.98 | 1925 |
| 3091.12 | 1926 | 3092.62 | 1926.42 | 3093.11 | 1926.53 | 3095 | 1926.8 | 3095.84 | 1926.79 |
| 3096.84 | 1926.6 | 3098.72 | 1926 | 3102.46 | 1925 | 3106.29 | 1924.46 | 3110.84 | 1924 |
| 3154.63 | 1924 | 3172.6 | 1924.86 | 3175.77 | 1925 | 3212.12 | 1925 | 3217.98 | 1924.87 |
| 3219.91 | 1924.84 | 3220.37 | 1924.82 | 3223.27 | 1924.77 | 3224.64 | 1924.7 | 3227.82 | 1924.52 |
| 3234.65 | 1924 | 3238.84 | 1923.72 | 3243.16 | 1923.53 | 3245.54 | 1923.39 | 3253.53 | 1923 |
| 3331.74 | 1923 | 3333.98 | 1923.01 | 3347.9 | 1923.42 | 3349.48 | 1923.47 | 3368.68 | 1924 |
| 3369.28 | 1924 | 3385.63 | 1924.38 | 3399.52 | 1924.71 | 3413.54 | 1924.97 | 3415.38 | 1925 |
| 3424.91 | 1925 | 3431.69 | 1924.62 | 3435.61 | 1924.39 | 3440.79 | 1924.12 | 3442.9 | 1924 |
| 3444.66 | 1924 | 3461 | 1923.65 | 3469.52 | 1923.48 | 3473.89 | 1923.52 | 3496 | 1923.54 |
| 3515.59 | 1923.56 | 3517.12 | 1923.55 | 3543.93 | 1923.57 | 3572.27 | 1923.59 | 3573.99 | 1923.58 |
| 3574.57 | 1923.59 | 3579.92 | 1923.57 | 3581.67 | 1923.58 | 3585.44 | 1923.57 | 3591.81 | 1923.6 |
| 3592.83 | 1923.6 | 3600.82 | 1923.63 | 3620.61 | 1923.9 | 3627.27 | 1924 | 3667.7 | 1924 |
| 3667.88 | 1923.99 | 3696 | 1923.3 | 3700.44 | 1923.27 | 3701.33 | 1923.25 | 3715.37 | 1923.1 |
| 3717.29 | 1923.09 | 3724.59 | 1923 | 3804.34 | 1923 | 3888.1 | 1923.9 | 3892.67 | 1923.95 |
| 3895.1 | 1923.96 | 3900.74 | 1924 | 3902.5 | 1924 | 3903.92 | 1924.11 | 3904.87 | 1924.13 |
| 3911 | 1924.03 | 3911.51 | 1924 | 3912.7 | 1924 | 3914.42 | 1924.46 | 3915.51 | 1924.99 |
| 3916.81 | 1925 | 3918.11 | 1926 | 3919.34 | 1926.87 | 3919.81 | 1927.13 | 3920.17 | 1927.28 |
| 3921.26 | 1927.59 | 3922.31 | 1928 | 3923.52 | 1928.42 | 3925.07 | 1929 | 3928.54 | 1929 |
| 3931.11 | 1928.2 | 3931.87 | 1927.88 | 3933.09 | 1927.5 | 3934.94 | 1927 | 3938.12 | 1926.02 |
| 3942.41 | 1924.81 | 3943.01 | 1924.56 | 3943.9 | 1924 | 3944.17 | 1923.87 | 3947.04 | 1923 |
| 3952.33 | 1923 | 3955.29 | 1923.28 | 3957.41 | 1923.45 | 3959.38 | 1923.55 | 3962.8 | 1923.77 |
| 3965.87 | 1924 | 3977.63 | 1924.47 | 3987.96 | 1924.87 | 3991.5 | 1925 | 3994.19 | 1925.15 |
| 4002.48 | 1925.58 | 4004.7 | 1925.66 | 4007.2 | 1925.79 | 4008.39 | 1925.81 | 4014.46 | 1925.99 |
| 4016.47 | 1926 | 4037.6 | 1926 | 4038.58 | 1925.91 | 4048.34 | 1925.05 | 4048.94 | 1925 |
| 4057.3 | 1924.54 | 4064.24 | 1924 | 4069.93 | 1923.65 | 4077.96 | 1923.18 | 4080.77 | 1923 |
| 4118.27 | 1923 | 4120.42 | 1923.07 | 4149.2 | 1923.73 | 4154.12 | 1923.84 | 4155.19 | 1923.84 |
| 4165.55 | 1923.98 | 4166.68 | 1924 | 4180.17 | 1924 | 4195.38 | 1924.01 | 4215.88 | 1924.01 |
| 4223.8 | 1924 | 4278.06 | 1924 | 4279.06 | 1924.01 | 4293.3 | 1924.08 | 4303.17 | 1924.03 |
| 4308.44 | 1924 | 4328.83 | 1924 | 4335.42 | 1923.99 | 4338.98 | 1923.99 | 4342.89 | 1924 |
| 4349.98 | 1924 | 4367.21 | 1924.91 | 4369.72 | 1925 | 4370.41 | 1925.27 | 4371.32 | 1925.46 |
| 4371.99 | 1925.45 | 4373.02 | 1925.21 | 4373.65 | 1925 | 4377.37 | 1924.77 | 4378.23 | 1924.71 |
| 4379.91 | 1924.62 | 4386.01 | 1924.32 | 4390.43 | 1924.45 | 4391.48 | 1924.43 | 4392.04 | 1924.47 |
| 4393.42 | 1924.48 | 4394.76 | 1924.52 | 4401.94 | 1925 | 4407.78 | 1925.09 | 4409.98 | 1925.13 |
| 4421.88 | 1925.33 | 4432.75 | 1925.52 | 4450.17 | 1925.85 | 4457.14 | 1926 | 4461.38 | 1926.23 |
| 4474.65 | 1927 | 4483.32 | 1927.63 | 4484.46 | 1927.72 | 4488.27 | 1928 | 4493.37 | 1928.01 |
| 4497.9 | 1928.01 | 4511.5 | 1928.19 | 4526.61 | 1928.35 | 4529.13 | 1928.22 | 4532.8 | 1928 |
| 4534.9 | 1927.85 | 4537.89 | 1927.77 | 4549.13 | 1927.34 | 4561.67 | 1927.1 | 4562.54 | 1927.07 |
| 4567.54 | 1927 | 4570.13 | 1926.99 | 4571.46 | 1927 | 4593.47 | 1927 | 4596.13 | 1927.02 |
| 4599.01 | 1927 | 4603.06 | 1926.2 | 4604.14 | 1926 | 4605.74 | 1925.74 | 4611.25 | 1925 |
| 4612.11 | 1924.89 | 4613.52 | 1924.67 | 4614.12 | 1924.56 | 4618.14 | 1924 | 4619.36 | 1923.89 |
| 4620.51 | 1923.76 | 4625.46 | 1923 | 4685.43 | 1923 | 4711.73 | 1922.24 | 4720.18 | 1922 |
| 4739.54 | 1921.61 | 4740.29 | 1921.6 | 4747.44 | 1921.46 | 4754.89 | 1921.3 | 4760.1 | 1921.2 |
| 4761.97 | 1921.17 | 4765.61 | 1921.14 | 4784.33 | 1921.2 | 4833.1 | 1921.37 | 4838.54 | 1921.39 |
| 4840.04 | 1921.4 | 4852.32 | 1921.46 | 4858.61 | 1921.5 | 4860.02 | 1921.5 | 4865.5 | 1921.54 |
| 4872.95 | 1921.58 | 4874.4 | 1921.58 | 4945.72 | 1922 | 5051.88 | 1922 | 5067.23 | 1921.53 |
| 5089.56 | 1921.04 | 5091.2 | 1921 | 5128.86 | 1921 | 5129.72 | 1921.01 | 5132.51 | 1921.07 |
| 5135.85 | 1921.27 | 5139 | 1921.42 | 5144.85 | 1921.77 | 5146.83 | 1921.86 | 5147.2 | 1921.89 |
| 5149.19 | 1921.96 | 5155.25 | 1922.2 | 5157.14 | 1922.33 | 5157.56 | 1922.39 | 5161.77 | 1922.58 |
| 5162.81 | 1922.69 | 5164.19 | 1922.78 | 5166.82 | 1923 | 5169.87 | 1924 | 5171.43 | 1924.52 |
| 5172.82 | 1925 | 5175.64 | 1925.89 | 5179.45 | 1927 | 5182.51 | 1927.95 | 5186.49 | 1929 |
| 5187.66 | 1929.53 | 5188.78 | 1930 | 5189.77 | 1930.73 | 5192.08 | 1932.41 | 5195.77 | 1934.57 |
| 5198.2 | 1936 | 5201.69 | 1938.04 | 5203.14 | 1939 | 5205.05 | 1940.11 | 5205.68 | 1940.44 |
| 5206.55 | 1941 | 5210.14 | 1943.19 | 5213.06 | 1945 | 5213.64 | 1945.33 | 5214.73 | 1946 |
| 5215.4 | 1946.38 | 5216.41 | 1947 | 5272.05 | 1947.93 | 5275.91 | 1948 | 5331.14 | 1948 |
| 5403.17 | 1947.34 | 5421.89 | 1947.17 | 5426.46 | 1947.14 | 5450.27 | 1947 | 5453.31 | 1946.98 |
| 5471.32 | 1946.88 | 5473.87 | 1946.87 | 5489.86 | 1946.77 | 5490.65 | 1946.77 | 5496.59 | 1946.73 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5496.59 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5496.59 | 178.64 | 178.64 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1925.25 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.10 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1925.15 | Reach Len. (ft) | 178.64 | 178.64 | 178.64 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8763.90 | | |
| E.G. Slope (ft/ft) | 0.001581 | Area (sq ft) | | 8763.90 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3846.23 | Top Width (ft) | | 3846.23 | | |
| Vel Total (ft/s) | 2.56 | Avg. Vel. (ft/s) | | 2.56 | | |
| Max Chl Dpth (ft) | 6.15 | Hydr. Depth (ft) | | 2.28 | | |
| Conv. Total (cfs) | 563441.6 | Conv. (cfs) | | 563441.6 | | |
| Length Wtd. (ft) | 178.64 | Wetted Per. (ft) | | 3849.23 | | |
| Min Ch El (ft) | 1919.00 | Shear (lb/sq ft) | | 0.22 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5496.59 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.28 | Cum Volume (acre-ft) | | 1544.81 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 711.79 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -11032.1

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1929.81 | 94.68 | 1929.47 | 174.82 | 1929.17 | 200.52 | 1929.07 | 205.36 | 1929.06 |
| 208.46 | 1929.04 | 233.42 | 1928.95 | 237.27 | 1928.94 | 242.93 | 1928.91 | 247.92 | 1928.9 |
| 250.98 | 1928.88 | 256.38 | 1928.86 | 261.02 | 1928.85 | 267.18 | 1928.82 | 298.27 | 1928.71 |
| 299.45 | 1928.7 | 318.03 | 1928.63 | 327.76 | 1928.6 | 350.19 | 1928.51 | 551.73 | 1927.76 |
| 560.99 | 1927.71 | 578.42 | 1927.63 | 581.17 | 1927.62 | 600.35 | 1927.53 | 631.84 | 1927.38 |
| 662.14 | 1927.23 | 667.25 | 1927.21 | 699.33 | 1927.05 | 716.98 | 1926.97 | 731.17 | 1926.9 |
| 758.43 | 1926.76 | 797 | 1926.57 | 827.98 | 1926.42 | 834.98 | 1926.38 | 847.98 | 1926.32 |
| 867.38 | 1926.22 | 872.26 | 1926.2 | 913.92 | 1925.99 | 935.72 | 1925.89 | 938.81 | 1925.87 |
| 944.33 | 1925.85 | 966.19 | 1925.75 | 972.64 | 1925.73 | 988.97 | 1925.65 | 1016.11 | 1925.54 |
| 1042.21 | 1925.42 | 1050.01 | 1925.39 | 1053.21 | 1925.37 | 1056.1 | 1925.29 | 1065.94 | 1924.99 |
| 1073.43 | 1924.54 | 1086.22 | 1924.51 | 1100.01 | 1924.47 | 1119.35 | 1924.55 | 1145.95 | 1924.65 |
| 1147.53 | 1924.64 | 1148.82 | 1924.66 | 1153.53 | 1924.64 | 1155.27 | 1924.66 | 1160.27 | 1924.61 |
| 1164.89 | 1924.51 | 1167.88 | 1924.51 | 1170.86 | 1924.48 | 1173.41 | 1924.44 | 1179.65 | 1924.44 |
| 1180.52 | 1924.41 | 1187.58 | 1924.39 | 1187.98 | 1924.38 | 1193.81 | 1924.34 | 1194.32 | 1924.33 |
| 1206.35 | 1924.26 | 1214.44 | 1924.22 | 1218.25 | 1924.3 | 1225.53 | 1924.43 | 1230.43 | 1924.51 |
| 1240.23 | 1924.69 | 1241.33 | 1924.7 | 1244.28 | 1924.76 | 1246.97 | 1924.77 | 1256.9 | 1924.84 |
| 1261.95 | 1924.88 | 1267.91 | 1924.82 | 1273.45 | 1924.8 | 1280.66 | 1924.7 | 1292.51 | 1924.62 |
| 1303.76 | 1924.44 | 1305.53 | 1924.43 | 1313.14 | 1924.3 | 1317.78 | 1924.25 | 1322.65 | 1924.21 |
| 1332.03 | 1924 | 1347.45 | 1923.69 | 1350.33 | 1923.65 | 1364.16 | 1923.4 | 1370.53 | 1923.3 |
| 1375.51 | 1923.24 | 1384.24 | 1923.17 | 1385.57 | 1923.15 | 1397.53 | 1923 | 1407.2 | 1923 |
| 1415.9 | 1922.99 | 1430.64 | 1922.98 | 1440.67 | 1922.98 | 1459.45 | 1922.97 | 1503.14 | 1922.97 |
| 1510.06 | 1922.98 | 1512.65 | 1922.95 | 1545.17 | 1922.52 | 1579.02 | 1922.08 | 1581.67 | 1922.06 |
| 1586.49 | 1922.05 | 1590.28 | 1922.03 | 1604.22 | 1922.01 | 1609.41 | 1922.01 | 1612.73 | 1922 |
| 1654.64 | 1922 | 1695.73 | 1922.02 | 1719.81 | 1922.03 | 1731.24 | 1922.03 | 1745.37 | 1922.02 |
| 1751.99 | 1922.02 | 1753.42 | 1922.01 | 1767.81 | 1922.01 | 1785.83 | 1922 | 1819.4 | 1921.8 |
| 1835.04 | 1921.71 | 1885.94 | 1921.6 | 1925.66 | 1921.55 | 1929.36 | 1921.56 | 1938.61 | 1921.56 |
| 1943.92 | 1921.55 | 1949.2 | 1921.53 | 1956.49 | 1921.52 | 1994.81 | 1921.68 | 2067.06 | 1921.98 |
| 2068.69 | 1922 | 2201.26 | 1922 | 2204.1 | 1921.59 | 2208.95 | 1921 | 2215.22 | 1920.46 |
| 2220.2 | 1920 | 2227.69 | 1919.97 | 2229.58 | 1919.82 | 2233.85 | 1919.98 | 2239.76 | 1920 |
| 2247.44 | 1920.96 | 2248.24 | 1921.07 | 2254.19 | 1922 | 2264.7 | 1922.76 | 2268.27 | 1923 |
| 2274.96 | 1923.01 | 2287.2 | 1923.01 | 2289.84 | 1923.02 | 2293.75 | 1923 | 2302 | 1922.16 |
| 2304.72 | 1922.06 | 2310.62 | 1922 | 2317.53 | 1921.81 | 2317.77 | 1921.83 | 2319.64 | 1921.79 |
| 2323.63 | 1921.84 | 2325.2 | 1921.9 | 2327.81 | 1921.91 | 2334 | 1921.78 | 2344.12 | 1921.53 |
| 2351.38 | 1921.37 | 2359.87 | 1921 | 2363.19 | 1920.88 | 2366.06 | 1920.83 | 2378.28 | 1920.49 |
| 2384.65 | 1920.41 | 2387.6 | 1920.34 | 2392.18 | 1920.27 | 2394.48 | 1920.26 | 2396.81 | 1920.23 |
| 2398.35 | 1920.23 | 2400.34 | 1920.18 | 2402.32 | 1920.15 | 2405.85 | 1920.15 | 2414.55 | 1920.24 |
| 2420.95 | 1920.3 | 2424.39 | 1920.3 | 2500.75 | 1921 | 2550.29 | 1921 | 2555.78 | 1921.01 |
| 2560.15 | 1921 | 2565.57 | 1921.01 | 2588.29 | 1921.01 | 2646.03 | 1921.84 | 2653.31 | 1922 |
| 2654.92 | 1922.26 | 2655.51 | 1922.31 | 2660.95 | 1923 | 2662.61 | 1923 | 2666.81 | 1922.29 |
| 2668.27 | 1922 | 2682.96 | 1922 | 2688.63 | 1922.46 | 2694.9 | 1923 | 2697.4 | 1924 |
| 2698.76 | 1924.61 | 2699.8 | 1925 | 2701.4 | 1925.64 | 2705.8 | 1927.27 | 2706.42 | 1927.49 |
| 2710.91 | 1929 | 2711.78 | 1929 | 2712.81 | 1928.69 | 2718.23 | 1927 | 2720.1 | 1926.44 |
| 2724.14 | 1925.15 | 2725.86 | 1924.64 | 2730.05 | 1923.53 | 2732.01 | 1923 | 2735.79 | 1922 |
| 2762.71 | 1921.49 | 2772.36 | 1921.31 | 2782.58 | 1921.13 | 2794.66 | 1921 | 2819.55 | 1921 |
| 2822.06 | 1921.03 | 2824.91 | 1921.09 | 2828.5 | 1921.21 | 2832.84 | 1921.33 | 2839.11 | 1921.54 |
| 2853.5 | 1922 | 2854.13 | 1922 | 2861.41 | 1922.06 | 2866.85 | 1922.11 | 2872.15 | 1922.14 |
| 2878.52 | 1922.2 | 2892.84 | 1922.3 | 2942.3 | 1922.67 | 2963.2 | 1922.83 | 2986.94 | 1923 |
| 2997.94 | 1923 | 2999.31 | 1923.23 | 3000.22 | 1923.33 | 3002.22 | 1923.37 | 3008.42 | 1923 |
| 3074.26 | 1923 | 3104.95 | 1923.11 | 3116.56 | 1923.07 | 3122.13 | 1923.06 | 3138.41 | 1923.01 |
| 3141.36 | 1923.01 | 3142.81 | 1922.99 | 3146.64 | 1922.97 | 3149.63 | 1922.97 | 3155.43 | 1923.02 |
| 3157.39 | 1923 | 3162.29 | 1923 | 3179.74 | 1922.98 | 3185.02 | 1922.98 | 3201.56 | 1923 |
| 3226.82 | 1923 | 3253.29 | 1923.72 | 3259.18 | 1923.84 | 3264.27 | 1924 | 3266.76 | 1924.01 |
| 3274.02 | 1924.02 | 3284.61 | 1924.04 | 3290.63 | 1924.06 | 3299.55 | 1924.08 | 3308.73 | 1924.08 |
| 3336.93 | 1924.92 | 3338.51 | 1925 | 3410.86 | 1925 | 3418.67 | 1924.51 | 3425.4 | 1924 |
| 3427.77 | 1924 | 3447.24 | 1923.67 | 3492.98 | 1923 | 3573.15 | 1923 | 3621.95 | 1922.99 |
| 3659.55 | 1922.99 | 3661.56 | 1923 | 3751.26 | 1923 | 3761.06 | 1922.99 | 3767.34 | 1922.99 |
| 3769.11 | 1923 | 3829.97 | 1923 | 3835.37 | 1923.01 | 3860.13 | 1923.01 | 3865.33 | 1923 |
| 3919.23 | 1923 | 3927.95 | 1923.51 | 3935.87 | 1924 | 3941.57 | 1924.28 | 3955.35 | 1925 |
| 3996.39 | 1925 | 4007.76 | 1924.43 | 4009.85 | 1924.39 | 4012.37 | 1924.29 | 4026.23 | 1924.15 |
| 4031 | 1924.07 | 4032.68 | 1924.05 | 4040.86 | 1924.03 | 4045.88 | 1924.05 | 4049.6 | 1924.02 |
| 4059.44 | 1924.04 | 4064.57 | 1924.03 | 4066.17 | 1924.04 | 4072.19 | 1924 | 4081.89 | 1923.96 |
| 4085.44 | 1923.96 | 4103.63 | 1923.92 | 4116.65 | 1923.93 | 4130.74 | 1923.92 | 4149.64 | 1923.97 |
| 4165.53 | 1923.98 | 4169.04 | 1924 | 4169.25 | 1924.03 | 4174.37 | 1925 | 4177.37 | 1925.84 |
| 4178.32 | 1926.08 | 4179.35 | 1926.01 | 4180.71 | 1926 | 4183.4 | 1925 | 4185.05 | 1924.54 |
| 4186.81 | 1924 | 4190 | 1923 | 4293.83 | 1923 | 4299.63 | 1923.1 | 4301.71 | 1923.12 |
| 4308.1 | 1923.22 | 4309.21 | 1923.23 | 4330.6 | 1923.54 | 4347.88 | 1923.8 | 4361.49 | 1924 |
| 4371.88 | 1924.05 | 4383.37 | 1924.08 | 4383.7 | 1924.09 | 4390.77 | 1924.06 | 4404.45 | 1924.01 |
| 4405.65 | 1924 | 4411.04 | 1923.63 | 4420.61 | 1923 | 4442.32 | 1923 | 4458.44 | 1923.54 |
| 4463.31 | 1923.63 | 4470.27 | 1923.84 | 4476.27 | 1923.99 | 4476.77 | 1923.99 | 4479.65 | 1923.85 |
| 4486.04 | 1923.41 | 4492.11 | 1923 | 4509.95 | 1923 | 4515.31 | 1923.61 | 4519.02 | 1924 |
| 4522.74 | 1924.9 | 4528.22 | 1926.19 | 4528.83 | 1926.38 | 4530.16 | 1926.73 | 4535.48 | 1928 |
| 4538.57 | 1929 | 4541.95 | 1930.04 | 4547.64 | 1932 | 4551.13 | 1933.22 | 4551.78 | 1933.22 |
| 4553.51 | 1933.49 | 4560.06 | 1933.54 | 4568.26 | 1933.62 | 4572.46 | 1933.65 | 4574.05 | 1933.6 |
| 4576.8 | 1933.4 | 4577.4 | 1933.34 | 4579.16 | 1933 | 4582.1 | 1932.38 | 4584.51 | 1932 |
| 4591.38 | 1931.53 | 4593.9 | 1931.37 | 4597.21 | 1931 | 4599.17 | 1930.33 | 4599.91 | 1930 |
| 4605.01 | 1927.62 | 4608.31 | 1926.23 | 4608.82 | 1926 | 4611.6 | 1925.74 | 4612.21 | 1925.55 |
| 4613.53 | 1925.49 | 4618.49 | 1925.89 | 4619.01 | 1926 | 4619.36 | 1925.99 | 4626.25 | 1925.23 |
| 4629.52 | 1925.27 | 4634.43 | 1925.43 | 4642.49 | 1925.52 | 4643.37 | 1925.52 | 4646.91 | 1925.75 |
| 4648.91 | 1925.98 | 4649.36 | 1926 | 4650.01 | 1926.4 | 4651.21 | 1927 | 4651.92 | 1927.39 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4653.76 | 1928.23 | 4654.66 | 1928.45 | 4657.08 | 1928 | 4661.57 | 1927.5 | 4665.14 | 1927.14 |
| 4666.81 | 1926.92 | 4668.05 | 1926.64 | 4669.42 | 1926.29 | 4671.31 | 1925.77 | 4673.94 | 1925 |
| 4677.6 | 1924 | 4680.66 | 1923.85 | 4684.24 | 1923.65 | 4694.05 | 1923 | 4707.43 | 1922.83 |
| 4768.98 | 1922.01 | 4770.63 | 1922 | 4772.56 | 1921.94 | 4799.15 | 1921 | 4932.31 | 1921 |
| 4937.91 | 1921.06 | 4949.16 | 1921.15 | 4951.19 | 1921.15 | 4994.11 | 1921.08 | 4998.85 | 1921.06 |
| 5014.4 | 1921.04 | 5017.59 | 1921.03 | 5025.4 | 1921.03 | 5046.61 | 1921 | 5053.45 | 1921 |
| 5073.14 | 1920.99 | 5084.97 | 1920.99 | 5111.69 | 1921 | 5116.43 | 1921 | 5121.2 | 1921.33 |
| 5130.7 | 1922 | 5138.53 | 1922.74 | 5141.38 | 1923 | 5147.01 | 1924 | 5150.21 | 1924.96 |
| 5153.86 | 1926 | 5157.54 | 1927 | 5159.07 | 1927.38 | 5164.27 | 1928.71 | 5165.71 | 1929.13 |
| 5168.78 | 1930 | 5170.43 | 1930.8 | 5170.99 | 1931 | 5174.33 | 1934 | 5176.6 | 1936 |
| 5177.94 | 1937.26 | 5178.84 | 1938 | 5182.14 | 1941 | 5182.87 | 1941.43 | 5184.72 | 1942.42 |
| 5186.98 | 1943.55 | 5190.1 | 1945.18 | 5191.24 | 1946 | 5192.32 | 1946 | 5200.87 | 1945.83 |
| 5209.9 | 1945.83 | 5213.17 | 1945.84 | 5214.04 | 1945.82 | 5229 | 1945.57 | 5229.61 | 1945.57 |
| 5240.09 | 1945.63 | 5253.27 | 1945.71 | 5255.48 | 1945.76 | 5261.98 | 1945.83 | 5276.69 | 1945.92 |
| 5277.84 | 1945.92 | 5292.12 | 1945.99 | 5294.95 | 1945.98 | 5303.23 | 1945.9 | 5316.49 | 1945.78 |
| 5321.76 | 1945.74 | 5327.35 | 1945.73 | 5336.74 | 1945.69 | 5339.82 | 1945.67 | 5343.73 | 1945.67 |
| 5348.69 | 1945.66 | 5358.34 | 1945.65 | 5363.92 | 1945.67 | 5370.68 | 1945.67 | 5377.54 | 1945.64 |
| 5382.85 | 1945.64 | 5387.27 | 1945.63 | 5395.99 | 1945.58 | 5402.3 | 1945.56 | 5409.39 | 1945.49 |
| 5414.27 | 1945.46 | 5419.89 | 1945.41 | 5442.4 | 1945.33 | 5452.03 | 1945.3 | 5457.71 | 1945.3 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5457.71 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5457.71 | 228.13 | 228.13 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1924.97 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.10 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1924.86 | Reach Len. (ft) | 228.13 | 228.13 | 228.13 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8648.21 | | |
| E.G. Slope (ft/ft) | 0.001606 | Area (sq ft) | | 8648.21 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3765.69 | Top Width (ft) | | 3765.69 | | |
| Vel Total (ft/s) | 2.59 | Avg. Vel. (ft/s) | | 2.59 | | |
| Max Chl Dpth (ft) | 5.04 | Hydr. Depth (ft) | | 2.30 | | |
| Conv. Total (cfs) | 558959.8 | Conv. (cfs) | | 558959.8 | | |
| Length Wtd. (ft) | 228.13 | Wetted Per. (ft) | | 3768.32 | | |
| Min Ch El (ft) | 1919.82 | Shear (lb/sq ft) | | 0.23 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5457.71 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.39 | Cum Volume (acre-ft) | | 1509.11 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 696.18 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -11260.2

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1929.71 | 208.73 | 1928.94 | 329.38 | 1928.47 | 332.77 | 1928.45 | 339.21 | 1928.43 |
| 360.08 | 1928.35 | 364.3 | 1928.33 | 370.5 | 1928.31 | 373.59 | 1928.29 | 375.97 | 1928.29 |
| 379.32 | 1928.27 | 385.24 | 1928.25 | 389.36 | 1928.23 | 395.27 | 1928.21 | 397.08 | 1928.2 |
| 431.21 | 1928.07 | 432.5 | 1928.07 | 435.26 | 1928.05 | 452.92 | 1927.99 | 459.8 | 1927.96 |
| 463.63 | 1927.94 | 480.43 | 1927.88 | 488.32 | 1927.85 | 711.48 | 1926.98 | 721.79 | 1926.93 |
| 741.22 | 1926.84 | 744.28 | 1926.82 | 765.67 | 1926.72 | 800.85 | 1926.55 | 834.75 | 1926.38 |
| 840.46 | 1926.35 | 856.11 | 1926.28 | 876.51 | 1926.18 | 912.16 | 1926 | 942.83 | 1925.84 |
| 972.71 | 1925.69 | 1007.34 | 1925.52 | 1015.17 | 1925.48 | 1029.71 | 1925.41 | 1051.44 | 1925.3 |
| 1056.92 | 1925.27 | 1091.12 | 1925.1 | 1097.01 | 1924.56 | 1097.42 | 1924.55 | 1099.19 | 1924.4 |
| 1103.66 | 1924.42 | 1104.76 | 1924.36 | 1109.35 | 1924.38 | 1110.04 | 1924.35 | 1113.32 | 1924.36 |
| 1118.39 | 1924.19 | 1145.93 | 1923.97 | 1154.55 | 1923.96 | 1162.87 | 1923.97 | 1169.75 | 1923.97 |
| 1187.53 | 1923.96 | 1194.81 | 1923.96 | 1203.07 | 1923.95 | 1205.02 | 1923.96 | 1212.22 | 1923.96 |
| 1216.57 | 1923.97 | 1225.31 | 1923.98 | 1232.2 | 1923.98 | 1253.44 | 1924 | 1289.2 | 1924 |
| 1297.37 | 1924.01 | 1304.38 | 1924 | 1350.38 | 1924 | 1350.95 | 1923.99 | 1355.74 | 1923.86 |
| 1375.1 | 1923.31 | 1381.43 | 1923.18 | 1387.71 | 1923 | 1401.35 | 1922.71 | 1402.15 | 1922.7 |
| 1412.72 | 1922.49 | 1413.16 | 1922.49 | 1418.64 | 1922.37 | 1420.36 | 1922.39 | 1421.95 | 1922.35 |
| 1426.6 | 1922.27 | 1431.22 | 1922.31 | 1433.74 | 1922.28 | 1438.21 | 1922.24 | 1460.44 | 1922.36 |
| 1553.04 | 1922.98 | 1554.8 | 1923 | 1611.58 | 1923 | 1649.35 | 1922 | 1738.39 | 1922 |
| 1752.97 | 1922.01 | 1757.79 | 1922 | 1786.27 | 1922 | 1801.27 | 1921.85 | 1803.94 | 1921.83 |
| 1809.38 | 1921.76 | 1832.25 | 1921.51 | 1836.34 | 1921.47 | 1845.01 | 1921.36 | 1858.19 | 1921.26 |
| 1876.78 | 1921.1 | 1878.98 | 1921.07 | 1881.95 | 1921.05 | 1885.02 | 1921.02 | 1887.19 | 1921.02 |
| 1893.62 | 1921 | 1910.64 | 1921.01 | 1938.15 | 1921.01 | 1949.88 | 1921 | 1968.7 | 1921 |
| 1971.51 | 1920.99 | 1976.93 | 1920.99 | 1997.81 | 1920.98 | 2014.05 | 1920.99 | 2026.26 | 1921 |
| 2035.32 | 1921 | 2067.5 | 1921.5 | 2069.48 | 1921.52 | 2072.72 | 1921.57 | 2106.53 | 1921.97 |
| 2108.92 | 1922 | 2126.21 | 1922 | 2144.87 | 1921.67 | 2145.49 | 1921.65 | 2152.9 | 1921.52 |
| 2155.62 | 1921.48 | 2158.82 | 1921.42 | 2165.27 | 1921.32 | 2169.34 | 1921.27 | 2173.03 | 1921.25 |
| 2175.92 | 1921.25 | 2191.03 | 1921.21 | 2208.07 | 1921.16 | 2220.76 | 1921 | 2221.04 | 1920.98 |
| 2236.81 | 1920 | 2244.14 | 1919.51 | 2245.5 | 1919.39 | 2248.8 | 1919.16 | 2250.48 | 1919 |
| 2328.93 | 1919 | 2334.18 | 1919.01 | 2359.22 | 1919.47 | 2359.5 | 1919.48 | 2373.85 | 1919.8 |
| 2375.41 | 1919.83 | 2381.91 | 1919.99 | 2384.1 | 1920 | 2392.69 | 1920.06 | 2406.48 | 1920.15 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2421.09 | 1920.23 | 2423.4 | 1920.25 | 2427.98 | 1920.27 | 2443.82 | 1920.37 | 2451.51 | 1920.42 |
| 2460.85 | 1920.47 | 2471.38 | 1920.54 | 2477.98 | 1920.57 | 2483.63 | 1920.6 | 2484.09 | 1920.61 |
| 2489.43 | 1920.63 | 2500.51 | 1920.68 | 2513.7 | 1920.75 | 2518.59 | 1920.78 | 2532.47 | 1920.95 |
| 2536.37 | 1921 | 2581.89 | 1921 | 2601.61 | 1921.18 | 2609.87 | 1921.26 | 2630.1 | 1921.43 |
| 2657.17 | 1921.64 | 2662.27 | 1921.7 | 2670.87 | 1921.78 | 2676.22 | 1921.84 | 2678.37 | 1921.85 |
| 2680.9 | 1921.88 | 2686.21 | 1921.91 | 2694.06 | 1921.96 | 2701.1 | 1921.98 | 2701.48 | 1922 |
| 2713.7 | 1922 | 2722.64 | 1922.01 | 2738.88 | 1922.01 | 2740.41 | 1922.02 | 2744.77 | 1922.02 |
| 2763.51 | 1922.04 | 2773.84 | 1922.03 | 2795.97 | 1922.05 | 2808.61 | 1922.03 | 2811.1 | 1922.03 |
| 2827.05 | 1922.25 | 2835.12 | 1922.14 | 2836.78 | 1922.13 | 2841.78 | 1922.25 | 2843.77 | 1922.27 |
| 2848.79 | 1922.36 | 2855.1 | 1922.49 | 2862.08 | 1922.61 | 2866.5 | 1922.68 | 2876.05 | 1922.51 |
| 2903.67 | 1922 | 2953.07 | 1922 | 2955.2 | 1922.01 | 2968.39 | 1922.09 | 2991.37 | 1922.22 |
| 2994.73 | 1922.23 | 2998.5 | 1922.27 | 3018.41 | 1922.37 | 3063.34 | 1922.6 | 3123.9 | 1923 |
| 3124.43 | 1923 | 3127.83 | 1923.24 | 3128.22 | 1923.26 | 3133.24 | 1923.44 | 3136.85 | 1923.53 |
| 3140.72 | 1923.57 | 3142.26 | 1923.53 | 3150.13 | 1923.56 | 3160.01 | 1923.41 | 3163.17 | 1923.3 |
| 3165.3 | 1923.26 | 3171.69 | 1923 | 3183.12 | 1922 | 3231.27 | 1922 | 3239.55 | 1922.26 |
| 3250.45 | 1922.57 | 3264.08 | 1923 | 3276.27 | 1923.38 | 3281.52 | 1923.54 | 3295.33 | 1924 |
| 3316.02 | 1924 | 3322.1 | 1924.01 | 3329.26 | 1924 | 3357.72 | 1924 | 3363.03 | 1924.14 |
| 3364.41 | 1924.15 | 3368.2 | 1924.25 | 3376.6 | 1924.49 | 3383.09 | 1924.7 | 3383.65 | 1924.71 |
| 3396.52 | 1925 | 3407.75 | 1925 | 3412.6 | 1924.89 | 3417.77 | 1924.71 | 3430.68 | 1924.32 |
| 3437.65 | 1923.9 | 3448.88 | 1923.28 | 3459.45 | 1923 | 3508.57 | 1923 | 3515.26 | 1922.95 |
| 3539.44 | 1922.21 | 3544.31 | 1922.07 | 3546.58 | 1922 | 3558.13 | 1921.98 | 3561.36 | 1921.98 |
| 3562.06 | 1921.97 | 3569.48 | 1921.99 | 3576.17 | 1922 | 3577.01 | 1922.65 | 3578.2 | 1923.6 |
| 3579.02 | 1924 | 3581.1 | 1924.83 | 3588.28 | 1927.42 | 3594.31 | 1929.54 | 3595.57 | 1930 |
| 3598.24 | 1931 | 3599.53 | 1931.43 | 3600.19 | 1931.56 | 3602.93 | 1932 | 3607.63 | 1932.84 |
| 3608.58 | 1933 | 3618.93 | 1933 | 3621.72 | 1932.54 | 3623.18 | 1932.32 | 3624.71 | 1932 |
| 3628.76 | 1931.73 | 3629.95 | 1931.66 | 3640.18 | 1931 | 3640.92 | 1931 | 3641.65 | 1931.06 |
| 3643.27 | 1931.1 | 3647.11 | 1931.16 | 3650.82 | 1931.13 | 3652.36 | 1931 | 3654.18 | 1930.44 |
| 3655.45 | 1930 | 3657.4 | 1929.44 | 3659.45 | 1928.71 | 3661.22 | 1928 | 3665.65 | 1926.32 |
| 3666.44 | 1926 | 3668.32 | 1925.29 | 3672.41 | 1923.67 | 3673.91 | 1923 | 3691.69 | 1923 |
| 3698.77 | 1923.01 | 3703.93 | 1923.01 | 3714.8 | 1923 | 3721.24 | 1922.99 | 3743.99 | 1922.98 |
| 3776.56 | 1922.96 | 3811.93 | 1922.98 | 3814.47 | 1922.98 | 3814.99 | 1922.99 | 3829.58 | 1922.99 |
| 3837.53 | 1923 | 3885.96 | 1923 | 3902.4 | 1922.76 | 3921.54 | 1922.78 | 3940 | 1922.97 |
| 3946.68 | 1923 | 3950.36 | 1923.16 | 3960.92 | 1923.61 | 3969.51 | 1923.77 | 3973.08 | 1923.86 |
| 3981.64 | 1923.97 | 3985.98 | 1924.01 | 3987.82 | 1924.01 | 3990.8 | 1923.95 | 3998.82 | 1923.7 |
| 4002.2 | 1923.65 | 4004.76 | 1923.57 | 4010.42 | 1923.61 | 4012.42 | 1923.49 | 4014.31 | 1923.35 |
| 4015.95 | 1923.29 | 4021.45 | 1923 | 4078.36 | 1923 | 4093.83 | 1923.78 | 4098.12 | 1924 |
| 4147.06 | 1924 | 4160.94 | 1923.71 | 4166.16 | 1923.53 | 4170 | 1923.38 | 4179.32 | 1923 |
| 4316.24 | 1923 | 4317.51 | 1923.57 | 4318.86 | 1924.09 | 4319.54 | 1924.21 | 4320.43 | 1924.25 |
| 4321.2 | 1924.13 | 4325.81 | 1923 | 4373.39 | 1923 | 4376.14 | 1923.01 | 4380.18 | 1923.01 |
| 4381.51 | 1923 | 4383.42 | 1923.01 | 4393.72 | 1923.02 | 4396.02 | 1923.01 | 4399.58 | 1923.01 |
| 4401.35 | 1923 | 4406.3 | 1923 | 4435.47 | 1922.99 | 4461.94 | 1923 | 4465.12 | 1922.93 |
| 4468.01 | 1922.95 | 4470.42 | 1922.95 | 4476.89 | 1923 | 4529.98 | 1923 | 4530.5 | 1923.16 |
| 4531.8 | 1923.61 | 4533.03 | 1924 | 4534.86 | 1924.52 | 4537 | 1925.01 | 4539.84 | 1925.52 |
| 4542.7 | 1926 | 4543.58 | 1926.16 | 4544.41 | 1926.15 | 4545.23 | 1926.11 | 4545.81 | 1926 |
| 4548.66 | 1925.3 | 4549.55 | 1925.16 | 4550.31 | 1925 | 4554.58 | 1924 | 4559.65 | 1923.98 |
| 4562.89 | 1923.99 | 4563.13 | 1924 | 4570.98 | 1924.61 | 4580.38 | 1925 | 4584.07 | 1926 |
| 4585.81 | 1926.45 | 4586.09 | 1926.48 | 4587.78 | 1926.46 | 4588.91 | 1926.41 | 4590.34 | 1926.19 |
| 4591.46 | 1926 | 4598.52 | 1925.99 | 4602.7 | 1925.99 | 4608.66 | 1926 | 4609.04 | 1926.15 |
| 4610.75 | 1927 | 4614.5 | 1928.35 | 4616.42 | 1929 | 4619.57 | 1929 | 4620.38 | 1928.81 |
| 4620.86 | 1928.73 | 4624.33 | 1928 | 4626.51 | 1927.97 | 4628.93 | 1927.99 | 4629.5 | 1927.98 |
| 4631.36 | 1927.99 | 4634 | 1927.98 | 4638.06 | 1927.68 | 4639.24 | 1927.64 | 4650.06 | 1927 |
| 4652.31 | 1926.99 | 4654.91 | 1926.99 | 4659.29 | 1926.8 | 4660.98 | 1926.79 | 4669.85 | 1926.39 |
| 4674.18 | 1926.17 | 4677.7 | 1926 | 4678.16 | 1925.99 | 4680.51 | 1925.88 | 4683 | 1925.82 |
| 4691.32 | 1925.42 | 4691.99 | 1925.42 | 4696.14 | 1925.56 | 4705.27 | 1925.92 | 4706.01 | 1926 |
| 4707.89 | 1926.02 | 4710.61 | 1926 | 4712.78 | 1925.91 | 4723.84 | 1925 | 4724.48 | 1924.94 |
| 4735.02 | 1924 | 4737.64 | 1923.79 | 4739.35 | 1923.68 | 4742.12 | 1923.52 | 4750.48 | 1923 |
| 4764.19 | 1923 | 4766.9 | 1922.99 | 4769.83 | 1923 | 4785.2 | 1923 | 4786.17 | 1922.99 |
| 4789.75 | 1922.77 | 4793.56 | 1922.52 | 4801.02 | 1922 | 4810.19 | 1921.59 | 4821.92 | 1921 |
| 4921.71 | 1921 | 5017.25 | 1920.23 | 5028.51 | 1920.17 | 5037.23 | 1920.12 | 5055.84 | 1920 |
| 5067.23 | 1920 | 5083.19 | 1919.99 | 5083.71 | 1919.98 | 5094.25 | 1919.97 | 5099.68 | 1919.98 |
| 5108.77 | 1919.99 | 5110.19 | 1920 | 5112.78 | 1920 | 5114.41 | 1920.13 | 5125.66 | 1921 |
| 5132.07 | 1921.47 | 5138.43 | 1922 | 5148.12 | 1923 | 5151.69 | 1923.96 | 5155.49 | 1925 |
| 5159.84 | 1926.11 | 5163.25 | 1927.07 | 5167.39 | 1928.54 | 5168.66 | 1929 | 5171.6 | 1930 |
| 5173.33 | 1930.67 | 5173.63 | 1931 | 5175.05 | 1932.91 | 5175.2 | 1933.08 | 5177.54 | 1936 |
| 5179.1 | 1937.9 | 5180.11 | 1939.18 | 5181.59 | 1941 | 5185.63 | 1946 | 5186.39 | 1947 |
| 5189.69 | 1947 | 5209.84 | 1946 | 5227.79 | 1945.37 | 5236.96 | 1945 | 5238.22 | 1944.97 |
| 5252.44 | 1944.3 | 5258.57 | 1944 | 5260.83 | 1943.87 | 5268.63 | 1943.64 | 5290.22 | 1943.01 |
| 5296.28 | 1943 | 5331.69 | 1942.06 | 5335.05 | 1941.96 | 5364.75 | 1941 | 5500.99 | 1941 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5500.99 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5500.99 | 226.83 | 226.83 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1924.58 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.11 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1924.47 | Reach Len. (ft) | 226.83 | 226.83 | 226.83 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8329.12 | | |
| E.G. Slope (ft/ft) | 0.001801 | Area (sq ft) | | 8329.12 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3736.19 | Top Width (ft) | | 3736.19 | | |
| Vel Total (ft/s) | 2.69 | Avg. Vel. (ft/s) | | 2.69 | | |
| Max Chl Dpth (ft) | 5.47 | Hydr. Depth (ft) | | 2.23 | | |
| Conv. Total (cfs) | 527776.1 | Conv. (cfs) | | 527776.1 | | |

| | | | | | |
|---|---|---|---|---|---|
| Length Wtd. (ft) | 226.83 | Wetted Per. (ft) | | 3738.75 | |
| Min Ch El (ft) | 1919.00 | Shear (lb/sq ft) | | 0.25 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5500.99 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.41 | Cum Volume (acre-ft) | | 1464.65 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 676.54 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -11487.1

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1929.64 | 337.78 | 1928.35 | 432.05 | 1927.97 | 462.43 | 1927.85 | 468.15 | 1927.83 |
| 476.91 | 1927.79 | 478.8 | 1927.79 | 501.41 | 1927.7 | 512.71 | 1927.65 | 518.63 | 1927.63 |
| 522.27 | 1927.61 | 528.69 | 1927.59 | 536.24 | 1927.56 | 539.58 | 1927.54 | 541.54 | 1927.54 |
| 578.59 | 1927.39 | 582.99 | 1927.37 | 595.57 | 1927.32 | 602.19 | 1927.29 | 609.68 | 1927.26 |
| 613.84 | 1927.25 | 632.12 | 1927.17 | 638.65 | 1927.15 | 640.71 | 1927.14 | 884.56 | 1926.17 |
| 891.74 | 1926.14 | 895.87 | 1926.11 | 917.19 | 1926.01 | 920.55 | 1925.99 | 944.05 | 1925.88 |
| 982.73 | 1925.69 | 1020.04 | 1925.5 | 1043.23 | 1925.39 | 1043.58 | 1925.39 | 1066.08 | 1925.28 |
| 1087.83 | 1925.17 | 1088.02 | 1925.17 | 1138.19 | 1924.91 | 1142.98 | 1924.75 | 1163.81 | 1924.58 |
| 1172.23 | 1924.48 | 1252.53 | 1923.97 | 1286.94 | 1923.97 | 1290.81 | 1923.99 | 1294.62 | 1923.99 |
| 1294.74 | 1924 | 1361.28 | 1924 | 1362 | 1923.99 | 1374.66 | 1923.7 | 1392.46 | 1923.26 |
| 1393.44 | 1923.23 | 1402.6 | 1923 | 1418.48 | 1922.52 | 1431.06 | 1922.18 | 1437.03 | 1922 |
| 1507.47 | 1922 | 1532.41 | 1922.23 | 1545.15 | 1922.35 | 1546.06 | 1922.35 | 1608.46 | 1922.65 |
| 1636.2 | 1922.71 | 1640.8 | 1922.69 | 1642.35 | 1922.69 | 1647.37 | 1922.66 | 1653.7 | 1922.66 |
| 1658.53 | 1922.62 | 1667.64 | 1922.54 | 1682.71 | 1922.37 | 1694.33 | 1922.22 | 1697.07 | 1922.21 |
| 1710.89 | 1922 | 1724.35 | 1922 | 1854.73 | 1921.24 | 1856.04 | 1921.24 | 1867.65 | 1921.12 |
| 1878.11 | 1921 | 1881.62 | 1921 | 1888.3 | 1920.96 | 1912.73 | 1920.82 | 1914.38 | 1920.82 |
| 1965.05 | 1920.64 | 1998.73 | 1920.54 | 2002.15 | 1920.54 | 2027.73 | 1920.65 | 2069.95 | 1920.89 |
| 2075.65 | 1920.96 | 2080.33 | 1921 | 2093.67 | 1921.03 | 2100.09 | 1921.05 | 2109.11 | 1921.07 |
| 2112.11 | 1921.07 | 2162.91 | 1921.51 | 2164.12 | 1921.51 | 2169.5 | 1921.67 | 2172.09 | 1921.65 |
| 2175.24 | 1921.6 | 2175.45 | 1921.61 | 2177.53 | 1921.54 | 2178.34 | 1921.49 | 2181.09 | 1921.29 |
| 2182.23 | 1921.55 | 2183.18 | 1921.32 | 2183.33 | 1921.35 | 2183.78 | 1921.24 | 2183.95 | 1921.29 |
| 2184.31 | 1921.19 | 2184.5 | 1921.24 | 2185.01 | 1921.12 | 2185.33 | 1921.13 | 2185.91 | 1921.36 |
| 2187.73 | 1922 | 2188.56 | 1922.17 | 2189.3 | 1922.26 | 2189.81 | 1922.29 | 2190.48 | 1922.27 |
| 2192.67 | 1922.09 | 2193.38 | 1922.06 | 2196.11 | 1922.11 | 2197.24 | 1922.1 | 2199.56 | 1921.98 |
| 2206.51 | 1921.29 | 2207.38 | 1921.16 | 2208.16 | 1921 | 2208.9 | 1920.8 | 2210.47 | 1920.33 |
| 2212.57 | 1920 | 2221.97 | 1919.74 | 2222.83 | 1919.74 | 2224.71 | 1919.77 | 2227.93 | 1919.69 |
| 2231.92 | 1919.58 | 2244.76 | 1919 | 2266.63 | 1919 | 2274.71 | 1918.99 | 2281.66 | 1918.99 |
| 2286.35 | 1919 | 2318.04 | 1919 | 2340.85 | 1919.38 | 2353.18 | 1919.58 | 2354.88 | 1919.6 |
| 2369.87 | 1920 | 2372.87 | 1920 | 2377.7 | 1920.01 | 2421.14 | 1920.01 | 2429.41 | 1920.02 |
| 2439.65 | 1920.01 | 2444.71 | 1920.01 | 2461.53 | 1920.19 | 2461.71 | 1920.19 | 2469.58 | 1920.31 |
| 2470.99 | 1920.32 | 2481.7 | 1920.48 | 2485.48 | 1920.53 | 2516.94 | 1921 | 2648.11 | 1921 |
| 2650.48 | 1921.01 | 2663.79 | 1921.23 | 2666.45 | 1921.28 | 2671.84 | 1921.35 | 2672.67 | 1921.37 |
| 2677.22 | 1921.4 | 2677.87 | 1921.42 | 2714.39 | 1922 | 2881.07 | 1922 | 2890.42 | 1922.16 |
| 2900.39 | 1922.32 | 2920.35 | 1922.42 | 2925.66 | 1922.55 | 2942.89 | 1922.49 | 2949.15 | 1922.35 |
| 2960.9 | 1922.03 | 2961.92 | 1922 | 2985.46 | 1922 | 2989.83 | 1921.99 | 3007.63 | 1921.99 |
| 3028.24 | 1921.61 | 3030.62 | 1921.61 | 3031.6 | 1921.62 | 3054.29 | 1921.66 | 3057.66 | 1921.68 |
| 3094.05 | 1922 | 3241.21 | 1922 | 3242.16 | 1922.01 | 3245.14 | 1922.07 | 3246.36 | 1922.07 |
| 3251.84 | 1922.16 | 3252.32 | 1922.16 | 3253.09 | 1922.21 | 3262.63 | 1922.7 | 3267.65 | 1923 |
| 3272.44 | 1923.61 | 3280.45 | 1924.48 | 3283.34 | 1924.78 | 3285.31 | 1924.84 | 3286.33 | 1924.81 |
| 3289.83 | 1924.74 | 3291.41 | 1924.65 | 3293.61 | 1924.61 | 3301.24 | 1924.26 | 3306.99 | 1924.06 |
| 3308.25 | 1924.08 | 3310.48 | 1924.04 | 3311.89 | 1924 | 3317.98 | 1923.74 | 3324.98 | 1923.47 |
| 3328.55 | 1923.34 | 3329.29 | 1923.32 | 3334.37 | 1923.14 | 3335.28 | 1923.13 | 3340.31 | 1923 |
| 3420.07 | 1923 | 3421.4 | 1923.01 | 3425.26 | 1923.06 | 3425.94 | 1923.06 | 3428.35 | 1923.09 |
| 3455.82 | 1923.03 | 3469.24 | 1923 | 3563.74 | 1923 | 3578.69 | 1923.26 | 3586.65 | 1923.39 |
| 3587.71 | 1923.41 | 3601.77 | 1923.64 | 3602.93 | 1923.65 | 3607.8 | 1923.73 | 3622.18 | 1923.75 |
| 3638.95 | 1923.68 | 3639.66 | 1923.68 | 3647.15 | 1923.51 | 3649.46 | 1923.5 | 3659.99 | 1923.24 |
| 3661.69 | 1923.23 | 3665.43 | 1923.12 | 3668.07 | 1923.09 | 3670.36 | 1923.04 | 3671.46 | 1923 |
| 3730.77 | 1923 | 3754.38 | 1922.55 | 3755.78 | 1922.53 | 3762.29 | 1922.46 | 3788.53 | 1922 |
| 3796.74 | 1922 | 3803.7 | 1921.77 | 3813.58 | 1921.46 | 3817.97 | 1921.34 | 3820.87 | 1921.29 |
| 3829.36 | 1921.41 | 3855.39 | 1921.99 | 3857.03 | 1922 | 3857.77 | 1921.98 | 3859.45 | 1921.99 |
| 3869.13 | 1921.99 | 3871.54 | 1922 | 3887.27 | 1922.16 | 3889.37 | 1922.26 | 3897.13 | 1922.34 |
| 3898.34 | 1922.45 | 3899.88 | 1922.39 | 3902.27 | 1922.15 | 3902.56 | 1922.28 | 3903.26 | 1922.47 |
| 3905.67 | 1923 | 3906.98 | 1923.24 | 3910.48 | 1923.86 | 3911.12 | 1923.98 | 3913.41 | 1924.32 |
| 3914 | 1924.38 | 3915.15 | 1924.4 | 3916.55 | 1924.26 | 3918.42 | 1924 | 3923.54 | 1923.2 |
| 3924.98 | 1923 | 3927.99 | 1922.38 | 3928.29 | 1922.39 | 3929.67 | 1922.51 | 3931.95 | 1922.73 |
| 3932.22 | 1922.72 | 3938.86 | 1922.64 | 3944.49 | 1922.59 | 3946.85 | 1922.67 | 3959.63 | 1922.65 |
| 3976.04 | 1922.58 | 3976.28 | 1922.57 | 3994.53 | 1922.16 | 3996.22 | 1922.13 | 4001.49 | 1922 |
| 4006.25 | 1921.86 | 4029.89 | 1921.2 | 4037.36 | 1921 | 4045.31 | 1921 | 4045.99 | 1921.12 |
| 4050.78 | 1922 | 4053.64 | 1922.53 | 4056.25 | 1923 | 4061.81 | 1923.88 | 4062.26 | 1923.94 |
| 4072.38 | 1925 | 4079.14 | 1925 | 4079.69 | 1924.67 | 4080.58 | 1924 | 4081.05 | 1923.71 |
| 4082.05 | 1923 | 4083.5 | 1922 | 4113.62 | 1922 | 4117.89 | 1922.01 | 4122.19 | 1922 |
| 4151.24 | 1922 | 4162.59 | 1921.98 | 4165.08 | 1921.98 | 4173.78 | 1921.97 | 4227.9 | 1921.35 |
| 4245.93 | 1921.16 | 4246.17 | 1921.16 | 4260.95 | 1921.02 | 4263.36 | 1921 | 4270.78 | 1921 |
| 4274.34 | 1921.15 | 4277.63 | 1921.22 | 4287 | 1921.43 | 4311.44 | 1922 | 4319.3 | 1922.59 |
| 4321.32 | 1922.64 | 4325.73 | 1922.73 | 4327.23 | 1922.8 | 4328.19 | 1922.83 | 4329.53 | 1922.85 |
| 4331.94 | 1922.83 | 4333.8 | 1922.87 | 4336.23 | 1922.83 | 4353.74 | 1922.99 | 4382 | 1922.99 |
| 4395.98 | 1923 | 4411.57 | 1923 | 4419.43 | 1923.19 | 4430.94 | 1923.28 | 4440.28 | 1923.34 |
| 4441.77 | 1923.33 | 4442.67 | 1923.34 | 4449.11 | 1923.27 | 4457.59 | 1923.12 | 4461.06 | 1923 |
| 4484.9 | 1923 | 4491.94 | 1923.08 | 4495.12 | 1923.06 | 4498.76 | 1923.28 | 4501.62 | 1923.34 |

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 4503.05 1923.39 4505.66 1923.45 4507.82 1923.55  4513.7 1923.64 4516.97 1923.77
 4520.06 1923.79 4521.28 1923.79 4525.21 1923.81  4531.1 1923.69  4532.4 1923.68
 4533.42 1923.65 4545.79    1923  4563.2    1923 4565.47 1923.02 4568.73 1923.03
 4578.21 1923.33 4578.69 1923.35 4582.77 1923.44 4592.22 1923.47 4600.84 1923.49
 4602.61 1923.53 4607.71 1923.01 4608.03    1923 4610.02 1922.87 4611.87 1922.78
 4612.31 1922.72 4614.22 1922.69 4614.78 1922.64 4616.69 1922.43 4618.46 1922.39
 4621.08    1922  4621.7 1921.98    4623 1921.99 4628.06 1921.17  4628.7 1921.12
 4630.73 1921.09 4632.09 1921.11 4634.77 1921.17 4639.43 1921.34 4642.85 1921.45
 4659.41    1922 4660.48 1922.43 4662.03    1923 4664.52    1924 4666.51 1924.84
 4669.78    1926  4671.8    1926  4674.7  1925.7 4681.39    1925 4684.18  1924.8
    4686  1924.7 4686.08 1924.71 4688.87 1924.66 4691.42 1924.65  4694.4 1924.71
 4697.95 1924.93 4701.74 1924.91 4703.12 1924.93 4704.93 1924.94 4708.52 1924.98
 4708.98    1925 4711.05    1925 4712.16 1925.01 4715.81 1925.01 4719.41    1925
 4741.92    1925 4745.88 1924.83 4749.21 1924.72 4757.26  1924.4 4760.01  1924.3
 4764.19 1924.25 4764.39 1924.26 4771.51 1923.71 4779.89 1923.13  4781.6    1923
 4783.12 1922.91 4788.61 1922.56 4796.95    1922 4798.04    1922 4803.04 1921.81
 4808.29 1921.63 4818.75 1921.54 4835.92 1921.39 4837.82 1921.36 4856.35    1921
 4921.46    1921 4932.37 1921.01 4950.69 1921.01 4981.04    1921 4996.86 1920.79
 5009.23 1920.69 5020.82 1920.58 5079.16 1920.01 5083.34 1920.01 5086.38    1920
 5098.24    1920 5101.33 1919.95 5115.35 1919.92 5118.29 1919.91 5135.57 1919.82
 5156.76 1919.91 5170.61 1919.96 5171.83 1919.98 5174.51 1919.98    5176    1920
 5181.07 1920.17 5192.72    1921 5193.41 1921.14 5198.49    1922 5201.94 1922.53
 5204.66    1923 5206.05    1924 5209.28 1926.34 5210.22    1927 5211.44    1928
 5212.14    1930 5213.22    1933 5214.02 1935.13 5214.65 1936.17 5215.42 1937.38
 5216.03 1938.46 5216.31    1939 5216.93    1940 5217.45    1941 5219.81    1945
 5224.09 1945.05 5225.35 1945.03 5228.29    1945 5246.89 1944.06 5248.16    1944
 5249.41 1943.98 5250.72 1943.98 5279.95    1943 5284.96    1943 5304.59 1942.73
 5328.79 1942.41 5346.88 1942.21 5366.88    1942 5384.67 1941.71 5403.11 1941.36
 5414.87 1941.16 5422.38    1941 5460.82 1940.07 5463.93    1940 5526.06    1940

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .045       0     .04 5526.06    .045

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
             0 5526.06           170.89  170.89  170.89             .1       .3

CROSS SECTION OUTPUT  Profile #PF 1

  E.G. Elev (ft)           1924.16    Element                  Left OB    Channel   Right OB
  Vel Head (ft)               0.11    Wt. n-Val.                           0.040
  W.S. Elev (ft)           1924.05    Reach Len. (ft)          170.89     170.89     170.89
  Crit W.S. (ft)                      Flow Area (sq ft)                  8320.73
  E.G. Slope (ft/ft)      0.001853    Area (sq ft)                       8320.73
  Q Total (cfs)           22400.00    Flow (cfs)                        22400.00
  Top Width (ft)           3806.47    Top Width (ft)                     3806.47
  Vel Total (ft/s)            2.69    Avg. Vel. (ft/s)                      2.69
  Max Chl Dpth (ft)           5.06    Hydr. Depth (ft)                      2.19
  Conv. Total (cfs)       520319.2    Conv. (cfs)                       520319.2
  Length Wtd. (ft)          170.89    Wetted Per. (ft)                   3809.79
  Min Ch El (ft)           1918.99    Shear (lb/sq ft)                      0.25
  Alpha                       1.00    Stream Power (lb/ft s)   5526.06      0.00       0.00
  Frctn Loss (ft)             0.28    Cum Volume (acre-ft)               1421.30
  C & E Loss (ft)             0.01    Cum SA (acres)                      656.90


Warning: Divided flow computed for this cross-section.

CROSS SECTION


RIVER: MOJAVE
REACH: MOJAVE             RS: -11657.9

INPUT
Description:
Station Elevation Data    num=     490
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0 1929.53    13.3 1929.45  443.03 1927.76  545.26 1927.34  578.28 1927.21
  580.65  1927.2   588.5 1927.16  591.92 1927.15  596.09 1927.13  633.02 1926.98
  636.66 1926.97  637.99 1926.96  639.48 1926.96  643.44 1926.94  655.31 1926.89
  656.45 1926.89  664.45 1926.85  704.92 1926.69  706.45 1926.68  709.73 1926.67
  723.48 1926.61  730.72 1926.58   738.9 1926.55  743.46 1926.53  763.46 1926.45
  772.88 1926.41  1041.3 1925.31 1049.24 1925.27 1053.81 1925.25 1077.42 1925.13
 1081.14 1925.12 1107.19 1924.99 1150.11 1924.77 1162.07 1924.71 1163.98  1923.3
 1165.62    1923 1169.77    1923 1178.76 1923.06  1203.6 1923.22 1226.39 1923.36
 1240.01 1923.44 1249.02 1923.49  1255.1 1923.52 1261.91 1923.56 1264.26 1923.57
 1264.74 1923.58 1292.88 1923.64 1316.82 1923.64 1321.74 1923.59 1328.24 1923.53
 1329.78 1923.52 1339.01 1923.41  1349.4 1923.42 1360.98 1923.48 1361.69 1923.49
 1363.71 1923.49 1375.14  1923.3 1375.34  1923.3 1387.54 1923.05  1390.2    1923
  1394.5 1922.87 1395.91 1922.82 1418.18    1922 1533.04    1922 1535.08 1922.01
 1586.73 1922.06 1618.84  1922.1 1656.02 1922.06  1682.6 1922.04 1704.13 1922.08
  1717.7    1922 1717.94    1922 1750.13 1921.75 1757.11 1921.69 1763.12 1921.62
 1764.06 1921.62 1769.47 1921.56 1777.94 1921.48 1784.32 1921.43 1786.03 1921.41
 1796.27 1921.33 1802.13 1921.26 1815.95 1921.17 1817.59 1921.15 1830.21 1921.08
 1830.53 1921.07 1846.15    1921 1847.94    1921 1850.45 1920.99 1862.31 1920.95
 1868.58 1920.92  1870.4 1920.92 1870.59 1920.91 1889.94 1920.82 1894.83 1920.79
 1902.12 1920.73 1904.09 1920.72 1923.32 1920.61  1930.4 1920.58 1936.14 1920.53
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|---|---|---|---|---|---|---|---|---|---|
| 1937.12 | 1920.53 | 1944.86 | 1920.47 | 1953 | 1920.41 | 1957.84 | 1920.37 | 1959.12 | 1920.37 |
| 1962.58 | 1920.34 | 1963.75 | 1920.34 | 1969.44 | 1920.29 | 1973.79 | 1920.26 | 1974.09 | 1920.25 |
| 1976.46 | 1920.25 | 1989.19 | 1920.2 | 2003.45 | 1920.15 | 2007.51 | 1920.13 | 2008.52 | 1920.12 |
| 2023.88 | 1920.07 | 2041.37 | 1920 | 2079.24 | 1920 | 2084.04 | 1919.99 | 2089.04 | 1919.99 |
| 2091.39 | 1920 | 2098.75 | 1920 | 2107.1 | 1919.9 | 2109.21 | 1919.89 | 2115.62 | 1919.92 |
| 2117.64 | 1919.91 | 2119.49 | 1919.81 | 2120.49 | 1919.79 | 2122.55 | 1919.71 | 2126.53 | 1919.48 |
| 2135.99 | 1919 | 2139.25 | 1918.97 | 2143.71 | 1918.89 | 2175.05 | 1918.39 | 2181.94 | 1918.15 |
| 2186.46 | 1918 | 2228.94 | 1918 | 2229.87 | 1918.01 | 2243.29 | 1918.52 | 2248.59 | 1918.7 |
| 2249.26 | 1918.71 | 2252.48 | 1918.8 | 2253.24 | 1918.83 | 2259.21 | 1919 | 2267.68 | 1919.37 |
| 2272.48 | 1919.55 | 2276.47 | 1919.66 | 2277.34 | 1919.69 | 2278.74 | 1919.72 | 2280.83 | 1919.74 |
| 2284.06 | 1919.75 | 2285.66 | 1919.74 | 2294.85 | 1919.61 | 2296.13 | 1919.64 | 2297.91 | 1919.63 |
| 2301.86 | 1919.65 | 2304.51 | 1919.7 | 2307.62 | 1919.73 | 2310.57 | 1919.72 | 2318.83 | 1919.67 |
| 2319.73 | 1919.69 | 2327.73 | 1919.69 | 2335.99 | 1919.71 | 2355.24 | 1919.94 | 2359.9 | 1920 |
| 2360.26 | 1920.01 | 2380.9 | 1920.38 | 2383.61 | 1920.42 | 2386.03 | 1920.45 | 2394.39 | 1920.54 |
| 2400.06 | 1920.62 | 2402.26 | 1920.64 | 2407.49 | 1920.67 | 2412.94 | 1920.72 | 2413.35 | 1920.71 |
| 2416.77 | 1920.75 | 2417.2 | 1920.74 | 2419.14 | 1920.75 | 2420.94 | 1920.71 | 2422.96 | 1920.74 |
| 2430.09 | 1920.59 | 2434.22 | 1920.63 | 2462.32 | 1920.51 | 2482.33 | 1920.45 | 2489.61 | 1920.49 |
| 2494.43 | 1920.5 | 2498.95 | 1920.52 | 2508.46 | 1920.58 | 2521 | 1920.68 | 2521.22 | 1920.68 |
| 2536.14 | 1920.83 | 2536.27 | 1920.83 | 2550.59 | 1921 | 2552.72 | 1921 | 2618.93 | 1921.38 |
| 2621.42 | 1921.4 | 2656.77 | 1921.6 | 2659.62 | 1921.61 | 2726.83 | 1922 | 2738.69 | 1922 |
| 2742.9 | 1921.95 | 2747.13 | 1921.96 | 2756.38 | 1922 | 2845.78 | 1922 | 2889.87 | 1921.84 |
| 2927.29 | 1921.73 | 2929.49 | 1921.78 | 2933.2 | 1921.82 | 2938.5 | 1921.89 | 2939.84 | 1921.89 |
| 2948.97 | 1921.99 | 2953.72 | 1922.01 | 2957.63 | 1922.01 | 2958.71 | 1922 | 2961.62 | 1921.93 |
| 2964.05 | 1921.86 | 2997.88 | 1921 | 3104.26 | 1921 | 3120.32 | 1921.13 | 3132.19 | 1921.09 |
| 3141.07 | 1921.05 | 3145.07 | 1921.04 | 3147.14 | 1921.04 | 3158.96 | 1921 | 3257.44 | 1921 |
| 3266.83 | 1921.19 | 3269.53 | 1921.26 | 3270.25 | 1921.29 | 3278.78 | 1921.48 | 3282.77 | 1921.6 |
| 3292.86 | 1921.87 | 3293.23 | 1921.89 | 3296.66 | 1922 | 3298.63 | 1922 | 3308.16 | 1922.07 |
| 3310.15 | 1922.08 | 3313.47 | 1922.11 | 3325.04 | 1922.27 | 3351.2 | 1922.79 | 3373.4 | 1923 |
| 3379.15 | 1922.99 | 3398.17 | 1922.99 | 3416.89 | 1922.36 | 3418.6 | 1922.34 | 3422.05 | 1922.32 |
| 3424.99 | 1922.29 | 3431.5 | 1922.23 | 3440.41 | 1922.15 | 3449.01 | 1922.07 | 3450.55 | 1922.05 |
| 3451.59 | 1922.05 | 3454.07 | 1922.03 | 3457.07 | 1922.03 | 3457.11 | 1922.04 | 3459.44 | 1922.04 |
| 3461.69 | 1922.05 | 3463.6 | 1922.07 | 3464.52 | 1922.07 | 3466.5 | 1922.09 | 3475.76 | 1922.27 |
| 3512.31 | 1922.99 | 3560.23 | 1922.99 | 3565.53 | 1923 | 3582.71 | 1923 | 3589.78 | 1923.17 |
| 3596.19 | 1923.19 | 3609.8 | 1923.38 | 3618.36 | 1923.49 | 3624.04 | 1923.55 | 3628.67 | 1923.59 |
| 3657.3 | 1923.61 | 3688.26 | 1923.55 | 3695.82 | 1923.48 | 3703.84 | 1923.4 | 3715.84 | 1923.27 |
| 3720.8 | 1923.23 | 3723.94 | 1923.21 | 3727.89 | 1923.19 | 3729.53 | 1923.17 | 3745.18 | 1923 |
| 3777.2 | 1923 | 3784.09 | 1922.88 | 3800.9 | 1922.63 | 3833.95 | 1922.17 | 3835.35 | 1922.16 |
| 3837.13 | 1922.11 | 3839.33 | 1922.16 | 3841.55 | 1922 | 3844.33 | 1922 | 3884.52 | 1921.39 |
| 3894.27 | 1921.24 | 3900.57 | 1921.14 | 3904.07 | 1921.09 | 3907.81 | 1921 | 3928.88 | 1921 |
| 3937.68 | 1921.05 | 3939.22 | 1921.07 | 3940.73 | 1921.08 | 3943.58 | 1921.12 | 3945.91 | 1921.14 |
| 3960.63 | 1921.35 | 3971.95 | 1921.46 | 3997.53 | 1921.78 | 4001.38 | 1921.83 | 4012.52 | 1922 |
| 4115.9 | 1922 | 4153.87 | 1921.7 | 4179.44 | 1921.51 | 4208.48 | 1921.34 | 4223.08 | 1921.26 |
| 4223.65 | 1921.25 | 4227.93 | 1921.24 | 4229.01 | 1921.23 | 4246.29 | 1921.01 | 4246.79 | 1921 |
| 4386.45 | 1921 | 4395.37 | 1921.11 | 4411.04 | 1921.29 | 4411.41 | 1921.29 | 4419.43 | 1921.39 |
| 4430.5 | 1921.51 | 4438.03 | 1921.59 | 4445.98 | 1921.73 | 4459.34 | 1921.99 | 4459.92 | 1922 |
| 4475.57 | 1922.39 | 4482.94 | 1922.57 | 4491.8 | 1922.77 | 4493.79 | 1922.82 | 4498.87 | 1922.99 |
| 4499.84 | 1923 | 4502.95 | 1923 | 4509.44 | 1923.25 | 4522.71 | 1923.47 | 4530.94 | 1923.44 |
| 4531.2 | 1923.43 | 4537.16 | 1923.48 | 4537.87 | 1923.47 | 4541.63 | 1923.55 | 4546.95 | 1923.55 |
| 4548.88 | 1923.54 | 4550.84 | 1923.49 | 4554.25 | 1923.34 | 4557.56 | 1923.18 | 4561.04 | 1923 |
| 4604.71 | 1922.13 | 4605.4 | 1922.11 | 4609.93 | 1922.02 | 4611.26 | 1922 | 4623.73 | 1922 |
| 4639.69 | 1921.65 | 4641.57 | 1921.61 | 4651 | 1921.02 | 4651.84 | 1921.04 | 4667.13 | 1921.6 |
| 4667.25 | 1921.6 | 4671.28 | 1921.82 | 4674.4 | 1922 | 4678.33 | 1922 | 4685.36 | 1922.32 |
| 4686.38 | 1922.36 | 4700.03 | 1923 | 4724.67 | 1923 | 4729.82 | 1922.99 | 4738.09 | 1922.99 |
| 4744.36 | 1923 | 4762.04 | 1923 | 4763.99 | 1923.1 | 4768.76 | 1923.31 | 4771.29 | 1923.43 |
| 4776.92 | 1923.69 | 4783.55 | 1924 | 4786.24 | 1924.22 | 4790.53 | 1924.55 | 4791.2 | 1924.61 |
| 4792.66 | 1924.68 | 4795.14 | 1924.89 | 4798.37 | 1925 | 4798.54 | 1925 | 4801.7 | 1926 |
| 4802.58 | 1926.3 | 4804.79 | 1927 | 4806.67 | 1927.66 | 4810.3 | 1928.83 | 4811.23 | 1929.07 |
| 4811.81 | 1929.18 | 4812.51 | 1929.24 | 4813.24 | 1929.28 | 4813.97 | 1929.28 | 4814.55 | 1929.26 |
| 4815.28 | 1929.2 | 4815.91 | 1929.12 | 4816.68 | 1928.98 | 4817.37 | 1928.79 | 4818.13 | 1928.52 |
| 4819.26 | 1928 | 4821.73 | 1927 | 4823.44 | 1926.3 | 4826.65 | 1925 | 4831.39 | 1924.16 |
| 4832.37 | 1924 | 4844.58 | 1923.11 | 4846.04 | 1923 | 4846.62 | 1922.93 | 4854.95 | 1922 |
| 4863.77 | 1921 | 4875.31 | 1920.62 | 4901.1 | 1920 | 4931.54 | 1920 | 4934.55 | 1920.12 |
| 4957.6 | 1921 | 5024.8 | 1921 | 5027.58 | 1920.95 | 5028.73 | 1920.94 | 5032.24 | 1920.87 |
| 5050.65 | 1920.47 | 5057.33 | 1920.33 | 5061.81 | 1920.23 | 5063.51 | 1920.2 | 5070.24 | 1920.05 |
| 5072.61 | 1920 | 5073.5 | 1920 | 5122.65 | 1919.33 | 5125.14 | 1919.3 | 5148.01 | 1919 |
| 5190.05 | 1919 | 5193.52 | 1919.19 | 5209.15 | 1920 | 5213.92 | 1920.42 | 5221.52 | 1921 |
| 5226.28 | 1921.49 | 5231.71 | 1922 | 5236.62 | 1922.61 | 5239.55 | 1923 | 5241.21 | 1924.21 |
| 5242.52 | 1925 | 5244.36 | 1926 | 5246.16 | 1927 | 5246.93 | 1928 | 5247.29 | 1929 |
| 5248.34 | 1932 | 5248.51 | 1932.5 | 5249.86 | 1936.34 | 5250.25 | 1937.4 | 5250.67 | 1938 |
| 5250.84 | 1938.67 | 5251.18 | 1939.26 | 5251.58 | 1940 | 5252.25 | 1941 | 5253.41 | 1943 |
| 5254.01 | 1943.03 | 5258.69 | 1943.21 | 5260.1 | 1943.17 | 5264.15 | 1943 | 5270.67 | 1942.61 |
| 5273.06 | 1942.48 | 5276.68 | 1942.27 | 5278.41 | 1942.18 | 5280.54 | 1942.09 | 5282.04 | 1942.04 |
| 5283.4 | 1942.02 | 5285.86 | 1942.02 | 5287.18 | 1942.03 | 5289.4 | 1942.06 | 5291.53 | 1942.07 |
| 5292.64 | 1942.09 | 5298.83 | 1942.22 | 5301.24 | 1942.25 | 5310.23 | 1942.35 | 5318.8 | 1942.32 |
| 5324.17 | 1942.17 | 5329.44 | 1942 | 5349.03 | 1941.75 | 5352.64 | 1941.72 | 5356.84 | 1941.67 |
| 5360.47 | 1941.62 | 5363.64 | 1941.57 | 5379.88 | 1941.29 | 5381.27 | 1941.26 | 5395.99 | 1941 |
| 5407.5 | 1940.87 | 5414.38 | 1940.82 | 5438.79 | 1940.57 | 5440.02 | 1940.56 | 5460.06 | 1940.43 |
| 5481.69 | 1940.24 | 5490.27 | 1940.17 | 5505.88 | 1940.01 | 5520.36 | 1940 | 5547.29 | 1940 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5547.29 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5547.29 | 355.58 | 355.58 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1923.87 | Element | Left OB | Channel | Right OB |
| Vel Head (ft) | 0.10 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1923.78 | Reach Len. (ft) | 355.58 | 355.58 | 355.58 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 9047.15 | |
| E.G. Slope (ft/ft) | 0.001507 | Area (sq ft) | | 9047.15 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 4020.59 | Top Width (ft) | | 4020.59 | |
| Vel Total (ft/s) | 2.48 | Avg. Vel. (ft/s) | | 2.48 | |
| Max Chl Dpth (ft) | 5.78 | Hydr. Depth (ft) | | 2.25 | |
| Conv. Total (cfs) | 577003.4 | Conv. (cfs) | | 577003.4 | |
| Length Wtd. (ft) | 355.58 | Wetted Per. (ft) | | 4021.75 | |
| Min Ch El (ft) | 1918.00 | Shear (lb/sq ft) | | 0.21 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5547.29 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.60 | Cum Volume (acre-ft) | | 1387.23 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 641.55 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -12013.5

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1929.26 | 53.92 | 1928.95 | 546.76 | 1926.86 | 667.57 | 1926.33 | 706.9 | 1926.16 |
| 709.73 | 1926.15 | 719.1 | 1926.11 | 719.94 | 1926.1 | 723.2 | 1926.09 | 728.18 | 1926.07 |
| 757.66 | 1925.94 | 763.63 | 1925.91 | 776.81 | 1925.85 | 778.4 | 1925.85 | 781.41 | 1925.83 |
| 782.69 | 1925.83 | 793.38 | 1925.78 | 799.24 | 1925.76 | 800.61 | 1925.75 | 810.25 | 1925.71 |
| 859.13 | 1925.49 | 860.99 | 1925.49 | 864.95 | 1925.47 | 881.63 | 1925.4 | 890.42 | 1925.36 |
| 900.36 | 1925.31 | 905.9 | 1925.29 | 930.26 | 1925.18 | 938.99 | 1925.14 | 941.1 | 1925.14 |
| 941.74 | 1925.13 | 1142.36 | 1924.26 | 1154.49 | 1923.53 | 1154.77 | 1923.51 | 1156.91 | 1923.4 |
| 1159.94 | 1923.25 | 1161.33 | 1923 | 1186.43 | 1923 | 1189.81 | 1923.01 | 1195.64 | 1923.01 |
| 1215.22 | 1923.02 | 1237.99 | 1923.02 | 1247.97 | 1923.01 | 1253.3 | 1923.01 | 1263.41 | 1923 |
| 1265.66 | 1923 | 1268.83 | 1923.01 | 1273 | 1923.01 | 1276.55 | 1923 | 1283.74 | 1923 |
| 1289.35 | 1923.01 | 1292.62 | 1923 | 1297.33 | 1923 | 1301 | 1922.87 | 1308.69 | 1922.61 |
| 1309.58 | 1922.57 | 1329.01 | 1922 | 1583.46 | 1922 | 1595.53 | 1922.01 | 1602.73 | 1922.01 |
| 1613.56 | 1922 | 1620.7 | 1922 | 1623.21 | 1921.98 | 1630.38 | 1921.8 | 1640.45 | 1921.58 |
| 1647.93 | 1921.37 | 1658.73 | 1921.02 | 1659.68 | 1921 | 1807.2 | 1921 | 1881.93 | 1920.03 |
| 1884.06 | 1920 | 1894.22 | 1919.98 | 1933.93 | 1919.65 | 1966.41 | 1919.41 | 1966.95 | 1919.41 |
| 1978.67 | 1919.26 | 1979.46 | 1919.26 | 1985.23 | 1919.18 | 1985.62 | 1919.17 | 1987.71 | 1919.17 |
| 1989.82 | 1919.16 | 2000.33 | 1919 | 2004.91 | 1918.49 | 2006.47 | 1918.29 | 2007.87 | 1918.16 |
| 2008.78 | 1918.12 | 2009.66 | 1918.03 | 2011.21 | 1918.04 | 2012.58 | 1918.02 | 2016.66 | 1918.06 |
| 2020.46 | 1918.02 | 2021.49 | 1917.99 | 2029.89 | 1917.95 | 2036.92 | 1917.95 | 2056.15 | 1917.9 |
| 2056.66 | 1917.9 | 2065.5 | 1917.87 | 2069.54 | 1917.88 | 2080.35 | 1917.89 | 2097.97 | 1917.94 |
| 2102.13 | 1917.95 | 2103.81 | 1917.95 | 2109.18 | 1917.97 | 2109.93 | 1917.97 | 2120.98 | 1918 |
| 2122.13 | 1918.04 | 2133.16 | 1918.5 | 2143.2 | 1918.92 | 2144.79 | 1919 | 2145.15 | 1919 |
| 2147.4 | 1919.12 | 2150.09 | 1919.25 | 2151.27 | 1919.32 | 2164.74 | 1920 | 2198.4 | 1920 |
| 2208.27 | 1919.91 | 2215.08 | 1919.86 | 2224.65 | 1919.8 | 2224.95 | 1919.8 | 2256.44 | 1919.96 |
| 2264.72 | 1919.95 | 2295.77 | 1919.95 | 2311.39 | 1919.94 | 2315.73 | 1919.95 | 2319.43 | 1919.95 |
| 2329.51 | 1919.96 | 2332.34 | 1919.96 | 2344.67 | 1919.97 | 2384.87 | 1920 | 2397.53 | 1920 |
| 2399.46 | 1920.03 | 2421.45 | 1920.29 | 2421.92 | 1920.29 | 2516.56 | 1920.96 | 2524.42 | 1920.97 |
| 2526.86 | 1920.97 | 2538.26 | 1921 | 2551.95 | 1921.11 | 2552.12 | 1921.11 | 2601.58 | 1921.39 |
| 2627.65 | 1921.53 | 2629.98 | 1921.54 | 2650.96 | 1921.42 | 2686.39 | 1921.22 | 2689.65 | 1921.16 |
| 2700.34 | 1921 | 2702.83 | 1920.98 | 2714.08 | 1920.75 | 2725.34 | 1920.59 | 2726.24 | 1920.59 |
| 2734.87 | 1920.38 | 2736.47 | 1920.35 | 2753.5 | 1919.92 | 2753.9 | 1919.92 | 2761.21 | 1919.75 |
| 2763.08 | 1919.75 | 2791.86 | 1919.85 | 2796.18 | 1919.9 | 2808.58 | 1919.94 | 2810.34 | 1919.95 |
| 2813.48 | 1919.95 | 2814.04 | 1919.96 | 2819.12 | 1919.97 | 2820.69 | 1919.98 | 2823.97 | 1919.99 |
| 2833.78 | 1919.99 | 2835.11 | 1920.01 | 2841.84 | 1920.16 | 2853.97 | 1920.45 | 2854.25 | 1920.45 |
| 2858.26 | 1920.54 | 2861.17 | 1920.6 | 2862.19 | 1920.6 | 2886.63 | 1920.95 | 2890.34 | 1920.94 |
| 2892.82 | 1920.94 | 2894.56 | 1920.95 | 2898.54 | 1920.95 | 2902.3 | 1920.96 | 2910.2 | 1920.96 |
| 2910.63 | 1920.97 | 2918.96 | 1920.97 | 2920.6 | 1920.98 | 2947.47 | 1920.98 | 2960.68 | 1920.99 |
| 2965.26 | 1920.99 | 2968.32 | 1921 | 3266.4 | 1921 | 3275.34 | 1921.42 | 3275.67 | 1921.43 |
| 3289.83 | 1922 | 3296.59 | 1922.21 | 3324.68 | 1923 | 3328.77 | 1924.73 | 3331.24 | 1925.77 |
| 3331.87 | 1926 | 3334.61 | 1926.97 | 3336.8 | 1927.65 | 3337.32 | 1927.79 | 3339.01 | 1928.27 |
| 3339.88 | 1928.48 | 3341.96 | 1929 | 3342.77 | 1929 | 3343.92 | 1928.74 | 3345.2 | 1928.43 |
| 3347.64 | 1927.8 | 3350.34 | 1927 | 3353.72 | 1926.09 | 3354.54 | 1925.88 | 3359.6 | 1925 |
| 3363.84 | 1924.23 | 3365.15 | 1924 | 3367.05 | 1923.74 | 3371.49 | 1923 | 3636.3 | 1923 |
| 3657.59 | 1923.65 | 3659.38 | 1923.71 | 3664.71 | 1923.85 | 3666.07 | 1923.89 | 3668.65 | 1923.94 |
| 3672.8 | 1924 | 3676.18 | 1924.01 | 3676.89 | 1924.02 | 3679.6 | 1924.02 | 3699.74 | 1924.73 |
| 3701.23 | 1924.77 | 3703.81 | 1924.86 | 3707.4 | 1925 | 3743.86 | 1925 | 3749.37 | 1924.65 |
| 3758.77 | 1924 | 3760.71 | 1923.91 | 3767.61 | 1923.53 | 3768.25 | 1923.5 | 3773.34 | 1923.2 |
| 3773.83 | 1923.18 | 3777.09 | 1923 | 3818.86 | 1922.98 | 3834.91 | 1922.98 | 3835.24 | 1922.99 |
| 3849.12 | 1922.99 | 3854.08 | 1922.67 | 3854.76 | 1922.66 | 3856.15 | 1922.58 | 3856.79 | 1922.56 |
| 3858.91 | 1922.41 | 3863.91 | 1922 | 3865.47 | 1921.98 | 3873.72 | 1921.64 | 3882.01 | 1921.3 |
| 3887.29 | 1921.07 | 3888.82 | 1921 | 3897.49 | 1921.02 | 3899.9 | 1921.03 | 3903.69 | 1921.04 |
| 3912.99 | 1921.02 | 3919.57 | 1921 | 3919.99 | 1921.04 | 3923.42 | 1921.07 | 3924.15 | 1921.07 |
| 3928.97 | 1921.04 | 3933.25 | 1921 | 3951.21 | 1921 | 3952.89 | 1921.89 | 3954.95 | 1922.9 |
| 3957.21 | 1924 | 3957.4 | 1924.1 | 3959.52 | 1925.12 | 3961.45 | 1926.03 | 3965.45 | 1928 |
| 3965.97 | 1928.29 | 3966.16 | 1928.35 | 3967.17 | 1928.39 | 3968.16 | 1928.4 | 3969.29 | 1928 |
| 3972.38 | 1926.93 | 3973.18 | 1926.58 | 3973.65 | 1926.34 | 3977.53 | 1925 | 3980.4 | 1924 |
| 3982.64 | 1923.19 | 3983.99 | 1922.79 | 3991.09 | 1921 | 4042.4 | 1921 | 4045.9 | 1921.01 |
| 4047.8 | 1921.01 | 4093.66 | 1921.03 | 4101.95 | 1921.04 | 4113.16 | 1921.03 | 4127.34 | 1921.02 |
| 4139.78 | 1921.02 | 4162.28 | 1921 | 4170.08 | 1920.98 | 4174.91 | 1920.98 | 4179.65 | 1920.97 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4186.54 | 1920.97 | 4190.85 | 1920.98 | 4194.57 | 1920.98 | 4206.25 | 1921 | 4211.26 | 1921 |
| 4224.95 | 1921.01 | 4234.31 | 1921 | 4239.06 | 1921 | 4243.59 | 1920.83 | 4243.62 | 1920.82 |
| 4246.23 | 1920.74 | 4251.05 | 1920.64 | 4261.9 | 1920.42 | 4263.81 | 1920.37 | 4272.15 | 1920.17 |
| 4280.38 | 1920 | 4317.96 | 1920 | 4318.87 | 1920.05 | 4332.17 | 1920.73 | 4337.86 | 1921 |
| 4343.83 | 1921.4 | 4344.27 | 1921.4 | 4345.93 | 1921.36 | 4352.01 | 1921.6 | 4352.55 | 1921.59 |
| 4362.99 | 1921.59 | 4366.16 | 1921.67 | 4390.42 | 1921.99 | 4393.73 | 1921.99 | 4407.61 | 1921.69 |
| 4425.51 | 1921.32 | 4426.02 | 1921.32 | 4428.5 | 1921.37 | 4429.92 | 1921.38 | 4434.55 | 1921.4 |
| 4435.43 | 1921.4 | 4441.3 | 1921.35 | 4442.99 | 1921.33 | 4444.93 | 1921.28 | 4445.23 | 1921.28 |
| 4454.03 | 1921 | 4458.69 | 1920.86 | 4458.93 | 1920.86 | 4467.4 | 1920.58 | 4473.34 | 1920.39 |
| 4482.95 | 1920.01 | 4483.66 | 1920 | 4498.19 | 1919.5 | 4512.35 | 1919 | 4564.62 | 1919 |
| 4570 | 1919.13 | 4574.97 | 1919.23 | 4578.3 | 1919.3 | 4585.29 | 1919.51 | 4599.68 | 1919.99 |
| 4600.99 | 1920 | 4614.02 | 1921 | 4618.93 | 1921.42 | 4622.75 | 1921.63 | 4624.93 | 1921.76 |
| 4628.33 | 1922 | 4640.36 | 1922.96 | 4641.01 | 1923.01 | 4648.58 | 1923.31 | 4652.66 | 1923.39 |
| 4655.93 | 1923.44 | 4666.41 | 1923.24 | 4669.6 | 1923.21 | 4672.94 | 1923.13 | 4676.8 | 1923 |
| 4685.31 | 1923 | 4694.09 | 1922.99 | 4720.96 | 1922.99 | 4729.21 | 1923 | 4734.55 | 1923.73 |
| 4736 | 1923.91 | 4738.73 | 1924.23 | 4741.45 | 1924.52 | 4744.78 | 1924.88 | 4745.99 | 1925 |
| 4758.19 | 1925 | 4759.98 | 1924.76 | 4762.3 | 1924.48 | 4763.11 | 1924.4 | 4764.49 | 1924.23 |
| 4765.67 | 1924.11 | 4766.51 | 1924 | 4770.93 | 1923.51 | 4774.76 | 1923.11 | 4779.48 | 1922.68 |
| 4786.73 | 1922 | 4793.78 | 1921.61 | 4795.84 | 1921.46 | 4798.92 | 1921.27 | 4802.02 | 1921.05 |
| 4802.84 | 1921 | 4807.63 | 1921 | 4810.41 | 1921.27 | 4812.52 | 1921.42 | 4813.95 | 1921.55 |
| 4819.14 | 1922 | 4829.31 | 1923 | 4842.5 | 1923 | 4844.14 | 1922.79 | 4844.35 | 1922.78 |
| 4848.21 | 1922.52 | 4854.68 | 1922 | 4860.78 | 1921.04 | 4861.18 | 1920.96 | 4866.15 | 1920 |
| 4869.56 | 1920 | 4873.06 | 1919.86 | 4878.56 | 1919.63 | 4878.67 | 1919.63 | 4884.7 | 1919.46 |
| 4885.15 | 1919.47 | 4886.17 | 1919.44 | 4902.91 | 1919.33 | 4913.05 | 1919.27 | 4916.69 | 1919.29 |
| 4927.49 | 1919.37 | 4936.13 | 1919.43 | 4942.33 | 1919.46 | 4943.32 | 1919.46 | 4967.89 | 1919.5 |
| 4989.35 | 1919.53 | 4991.25 | 1919.52 | 4994.83 | 1919.51 | 5002.78 | 1919.47 | 5014.08 | 1919.36 |
| 5031.3 | 1919.19 | 5031.39 | 1919.19 | 5046.38 | 1919 | 5164.06 | 1919 | 5173.83 | 1920 |
| 5175.71 | 1920.26 | 5181.4 | 1921 | 5183.9 | 1921.42 | 5187.41 | 1922 | 5190.73 | 1922.61 |
| 5194.16 | 1923.25 | 5198.02 | 1924 | 5201.51 | 1924.67 | 5203.11 | 1925 | 5204.2 | 1926.21 |
| 5205.3 | 1927.38 | 5205.98 | 1928 | 5206.75 | 1928.58 | 5207.02 | 1928.65 | 5208.7 | 1929 |
| 5209.96 | 1929.27 | 5212.04 | 1930 | 5216.18 | 1931 | 5218.17 | 1931.71 | 5219.48 | 1932.19 |
| 5221.46 | 1933 | 5223.53 | 1934 | 5225.32 | 1935 | 5225.67 | 1935.18 | 5227.14 | 1936 |
| 5227.67 | 1936.26 | 5228.97 | 1937 | 5229.71 | 1937.38 | 5230.83 | 1938 | 5231.16 | 1938.92 |
| 5231.21 | 1939 | 5246.33 | 1939 | 5249.13 | 1938.99 | 5257.26 | 1938.58 | 5265.37 | 1938.25 |
| 5266.88 | 1938.15 | 5268.94 | 1938 | 5271.61 | 1937.98 | 5272.1 | 1937.99 | 5278.67 | 1937.97 |
| 5284.5 | 1937.98 | 5285.32 | 1937.97 | 5290.99 | 1937.95 | 5293.45 | 1937.96 | 5315.25 | 1937.62 |
| 5316.84 | 1937.6 | 5318.28 | 1937.59 | 5319.38 | 1937.57 | 5321.15 | 1937.51 | 5323.44 | 1937.44 |
| 5324.49 | 1937.42 | 5336.86 | 1937 | 5399.47 | 1937 | 5406.21 | 1936.85 | 5437.68 | 1936 |
| 5461.96 | 1935.58 | 5470.95 | 1935.45 | 5477.3 | 1935.36 | 5496.79 | 1935 | 5504.55 | 1934.99 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5504.55 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5504.55 | 286.4 | 286.4 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1923.27 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.12 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1923.16 | Reach Len. (ft) | 286.40 | 286.40 | 286.40 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8214.63 | | |
| E.G. Slope (ft/ft) | 0.001900 | Area (sq ft) | | 8214.63 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3756.41 | Top Width (ft) | | 3756.41 | | |
| Vel Total (ft/s) | 2.73 | Avg. Vel. (ft/s) | | 2.73 | | |
| Max Chl Dpth (ft) | 5.29 | Hydr. Depth (ft) | | 2.19 | | |
| Conv. Total (cfs) | 513931.3 | Conv. (cfs) | | 513931.3 | | |
| Length Wtd. (ft) | 286.40 | Wetted Per. (ft) | | 3758.50 | | |
| Min Ch El (ft) | 1917.87 | Shear (lb/sq ft) | | 0.26 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5504.55 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.57 | Cum Volume (acre-ft) | | 1316.78 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 609.80 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -12299.9

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1929.15 | 48.38 | 1928.94 | 108.14 | 1928.58 | 163.34 | 1928.25 | 709.25 | 1925.88 |
| 844.97 | 1925.27 | 889.32 | 1925.07 | 892.51 | 1925.06 | 897.71 | 1925.03 | 907.72 | 1924.99 |
| 913.35 | 1924.96 | 953.43 | 1924.78 | 963.39 | 1924.74 | 968.35 | 1924.71 | 970.16 | 1924.71 |
| 973.56 | 1924.69 | 975.01 | 1924.69 | 977.58 | 1924.67 | 987.12 | 1924.63 | 995.32 | 1924.59 |
| 1003.33 | 1924.56 | 1006.25 | 1924.54 | 1061.75 | 1924.3 | 1087.33 | 1924.18 | 1097.33 | 1924.14 |
| 1108.66 | 1924.09 | 1142.73 | 1923.93 | 1155.09 | 1923.88 | 1155.83 | 1923.87 | 1171.1 | 1923.81 |
| 1173 | 1923.69 | 1174.94 | 1923.6 | 1177.54 | 1923.45 | 1180.47 | 1923.42 | 1183.21 | 1923.34 |
| 1185.55 | 1923.32 | 1186.5 | 1923.28 | 1189.31 | 1923.26 | 1190.94 | 1923.21 | 1199.28 | 1923.15 |
| 1204.12 | 1923.12 | 1206.86 | 1923.06 | 1208.69 | 1922.85 | 1214.22 | 1922.83 | 1216.14 | 1922.8 |
| 1217.67 | 1922.81 | 1223.58 | 1922.74 | 1231.14 | 1922.76 | 1233.12 | 1922.73 | 1237 | 1922.73 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1241.96 | 1922.66 | 1247.22 | 1922.62 | 1254.9 | 1922.5 | 1257.44 | 1922.47 | 1265.14 | 1922.35 |
| 1267.39 | 1922.31 | 1283.44 | 1922 | 1285.03 | 1921.99 | 1288.45 | 1921.99 | 1290.6 | 1922 |
| 1300.56 | 1922 | 1305.03 | 1921.85 | 1310.56 | 1921.93 | 1318.49 | 1921.88 | 1338.48 | 1921.75 |
| 1353.81 | 1921.67 | 1447.99 | 1921.68 | 1545.52 | 1921.7 | 1551.35 | 1921.71 | 1578.04 | 1921.61 |
| 1637.38 | 1921.36 | 1638 | 1921.34 | 1641.92 | 1921.28 | 1645.05 | 1921.24 | 1646.24 | 1921.24 |
| 1656.23 | 1921.11 | 1664.22 | 1921 | 1847.66 | 1921 | 1856.66 | 1920.87 | 1859.72 | 1920.82 |
| 1871.04 | 1920.68 | 1919.75 | 1920.01 | 1920.71 | 1920 | 1926.67 | 1920 | 1939.78 | 1919.8 |
| 1994.52 | 1919 | 1994.72 | 1919 | 2015.67 | 1918.39 | 2018.69 | 1918.3 | 2029.23 | 1918 |
| 2040.33 | 1917.65 | 2042.78 | 1917.59 | 2044.66 | 1917.52 | 2045.3 | 1917.52 | 2048.64 | 1917.37 |
| 2049.71 | 1917.36 | 2053.61 | 1917.23 | 2070.55 | 1917.21 | 2073.41 | 1917.22 | 2077.23 | 1917.34 |
| 2090.47 | 1917.77 | 2092.62 | 1917.8 | 2092.96 | 1917.82 | 2095.21 | 1917.86 | 2096.95 | 1917.92 |
| 2098.57 | 1918 | 2104.93 | 1918.01 | 2106.4 | 1918.11 | 2112.36 | 1918.46 | 2123.01 | 1919 |
| 2258.42 | 1919 | 2295.5 | 1919.27 | 2336.55 | 1919.56 | 2337.17 | 1919.56 | 2348.99 | 1919.65 |
| 2351.04 | 1919.67 | 2355.59 | 1919.69 | 2375.64 | 1919.87 | 2390.57 | 1920 | 2401.41 | 1920 |
| 2497.85 | 1920.31 | 2552.61 | 1920.48 | 2554.31 | 1920.47 | 2557.18 | 1920.47 | 2572.06 | 1920.44 |
| 2589.34 | 1920.39 | 2597.58 | 1920.35 | 2607.51 | 1920.37 | 2614.23 | 1920.33 | 2622.05 | 1920.27 |
| 2623.53 | 1920.27 | 2634.5 | 1920.32 | 2638.3 | 1920.36 | 2641.57 | 1920.38 | 2645.95 | 1920.35 |
| 2650.85 | 1920.31 | 2663.36 | 1920 | 2669.1 | 1919.99 | 2674.28 | 1919.99 | 2684.27 | 1919.78 |
| 2703.15 | 1919.39 | 2707.02 | 1919.35 | 2712.14 | 1919.17 | 2716.57 | 1919 | 2768.85 | 1919 |
| 2774.01 | 1919.23 | 2782.07 | 1919.6 | 2786.66 | 1919.79 | 2790.25 | 1919.95 | 2791.68 | 1920 |
| 2794.19 | 1920.01 | 2811.96 | 1920.01 | 2813.21 | 1920.02 | 2820.2 | 1920.02 | 2839.97 | 1920.03 |
| 2847.77 | 1920.03 | 2849.89 | 1920.04 | 2854.96 | 1920.04 | 2859.63 | 1920.05 | 2865.79 | 1920.05 |
| 2901.49 | 1920.45 | 2907.74 | 1920.48 | 2918.21 | 1920.54 | 2919.82 | 1920.54 | 2961.02 | 1920.99 |
| 3012.17 | 1920.99 | 3048.14 | 1920.58 | 3072.53 | 1920.31 | 3083.25 | 1920.29 | 3086.55 | 1920.28 |
| 3090.04 | 1920.28 | 3104.32 | 1920.26 | 3121.75 | 1920.23 | 3140.22 | 1920.21 | 3142.45 | 1920.22 |
| 3152.35 | 1920.2 | 3200.34 | 1920.07 | 3208.11 | 1920.03 | 3214.95 | 1920 | 3215.82 | 1919.99 |
| 3220.53 | 1919.8 | 3232.23 | 1919.51 | 3233.52 | 1919.44 | 3236.39 | 1919.37 | 3237.58 | 1919.39 |
| 3238.05 | 1919.37 | 3239.01 | 1919.42 | 3241.1 | 1919.41 | 3243.83 | 1919.47 | 3249.09 | 1919.43 |
| 3252.53 | 1919.52 | 3254.02 | 1919.51 | 3260.96 | 1919.72 | 3269.77 | 1920 | 3275.55 | 1920 |
| 3278.61 | 1920.14 | 3281.07 | 1920.24 | 3294.64 | 1920.78 | 3299.62 | 1921 | 3306.02 | 1921 |
| 3312.38 | 1921.25 | 3314.28 | 1921.35 | 3315.82 | 1921.38 | 3318.05 | 1921.48 | 3319.5 | 1921.52 |
| 3331.5 | 1921.99 | 3334.74 | 1922 | 3351.61 | 1922 | 3388.64 | 1922.44 | 3389.86 | 1922.46 |
| 3398.09 | 1922.36 | 3410.14 | 1922.2 | 3412.07 | 1922.33 | 3414.41 | 1922.41 | 3421.76 | 1922.57 |
| 3424.18 | 1922.59 | 3426.27 | 1922.63 | 3428.43 | 1922.6 | 3431.24 | 1922.5 | 3435.31 | 1922.4 |
| 3442.6 | 1922.06 | 3444.4 | 1922 | 3465.93 | 1922 | 3467.3 | 1921.99 | 3481.89 | 1921.99 |
| 3491.96 | 1921.98 | 3503.84 | 1921.99 | 3510.87 | 1921.99 | 3519.59 | 1921.98 | 3526.5 | 1921.99 |
| 3554.43 | 1921.99 | 3555.2 | 1922 | 3568.59 | 1922 | 3575.79 | 1922.02 | 3592.55 | 1922.09 |
| 3596.84 | 1922.14 | 3600.15 | 1922.25 | 3608.06 | 1922.4 | 3608.55 | 1922.39 | 3610.61 | 1922.43 |
| 3611.09 | 1922.42 | 3630.86 | 1922.62 | 3665.76 | 1923 | 3676.96 | 1923 | 3679.87 | 1923.13 |
| 3683.21 | 1923.29 | 3684.05 | 1923.32 | 3694 | 1923.81 | 3697.21 | 1923.88 | 3698.39 | 1923.92 |
| 3699.1 | 1923.92 | 3708.82 | 1924 | 3727.36 | 1924 | 3728.71 | 1923.92 | 3730.76 | 1923.77 |
| 3734.84 | 1923.57 | 3736.92 | 1923.43 | 3738.18 | 1923.37 | 3744 | 1923 | 3812.82 | 1923 |
| 3817.47 | 1923.27 | 3819.49 | 1923.38 | 3820.7 | 1923.46 | 3824.43 | 1923.64 | 3827.97 | 1923.86 |
| 3829.56 | 1923.92 | 3832.63 | 1924 | 3835.65 | 1924.02 | 3837.4 | 1924.01 | 3838.46 | 1924.04 |
| 3840.7 | 1924.07 | 3844.16 | 1924 | 3845.79 | 1924.01 | 3853.56 | 1924.02 | 3859.23 | 1924.01 |
| 3867.77 | 1924.01 | 3871.54 | 1923.99 | 3872.69 | 1923.91 | 3876.99 | 1923.67 | 3881.96 | 1923.35 |
| 3892.54 | 1922.58 | 3895.07 | 1922.38 | 3899.72 | 1922 | 3902.07 | 1921.78 | 3911.22 | 1921 |
| 3930.35 | 1920.5 | 3945.46 | 1920 | 3957.25 | 1919.96 | 3971.7 | 1919.93 | 3982.75 | 1919.96 |
| 3995.32 | 1920 | 4006.92 | 1920.61 | 4014.19 | 1921 | 4137.81 | 1921 | 4155.38 | 1920.81 |
| 4181.71 | 1920.77 | 4205.81 | 1920.74 | 4209.48 | 1920.68 | 4211.69 | 1920.66 | 4218.13 | 1920.56 |
| 4218.8 | 1920.56 | 4229.44 | 1920.44 | 4233.59 | 1920.4 | 4236.46 | 1920.34 | 4240.47 | 1920.27 |
| 4240.98 | 1920.28 | 4245.69 | 1920.23 | 4249.98 | 1920.21 | 4250.97 | 1920.22 | 4257.33 | 1920.2 |
| 4261.35 | 1920.2 | 4286.67 | 1920.27 | 4308.42 | 1920.31 | 4326.27 | 1920.24 | 4350.63 | 1920.15 |
| 4373.77 | 1920.59 | 4373.94 | 1920.58 | 4377.25 | 1920.75 | 4377.77 | 1920.75 | 4379.55 | 1920.83 |
| 4380.47 | 1920.84 | 4383.38 | 1921 | 4385.54 | 1922 | 4388.49 | 1923 | 4393.71 | 1924.64 |
| 4395.01 | 1925 | 4398.49 | 1926 | 4398.9 | 1926 | 4403.94 | 1925 | 4405.48 | 1924.7 |
| 4407.05 | 1924.29 | 4409.06 | 1923.69 | 4411.7 | 1923 | 4414.53 | 1922.42 | 4416.74 | 1922 |
| 4422.25 | 1921 | 4484.38 | 1921 | 4504.45 | 1921.01 | 4522.58 | 1921 | 4525.29 | 1920.9 |
| 4529.95 | 1920.74 | 4540.26 | 1920.58 | 4542.79 | 1920.46 | 4546.88 | 1920.38 | 4550.32 | 1920.32 |
| 4557.75 | 1920 | 4572.25 | 1920 | 4572.38 | 1919.99 | 4579.6 | 1919.8 | 4590.83 | 1919.51 |
| 4593.61 | 1919.49 | 4595.65 | 1919.46 | 4604.83 | 1919.4 | 4610.72 | 1919.32 | 4620.92 | 1919.27 |
| 4624.88 | 1919.22 | 4625.63 | 1919.22 | 4629.73 | 1919.33 | 4643.33 | 1919.73 | 4643.5 | 1919.73 |
| 4663.97 | 1921 | 4665.4 | 1921.16 | 4672.36 | 1922 | 4674.47 | 1922.24 | 4676.93 | 1922.54 |
| 4680.99 | 1923 | 4682.71 | 1923.01 | 4686.67 | 1923.14 | 4692.06 | 1923.29 | 4706.64 | 1923.66 |
| 4713 | 1923.85 | 4718.35 | 1924 | 4718.67 | 1924.2 | 4720.92 | 1925 | 4722.05 | 1925.75 |
| 4722.5 | 1926 | 4723.45 | 1926.66 | 4724.04 | 1927 | 4724.88 | 1927.33 | 4725.47 | 1927.46 |
| 4726.13 | 1927.51 | 4728 | 1927.47 | 4730.8 | 1927.27 | 4733.56 | 1927 | 4737.18 | 1926.66 |
| 4742.37 | 1926.07 | 4742.71 | 1926.02 | 4743.58 | 1926.05 | 4744.46 | 1926 | 4746.67 | 1925.05 |
| 4747.85 | 1924.5 | 4751.29 | 1923 | 4754.17 | 1923 | 4764.32 | 1922.73 | 4773.46 | 1922.5 |
| 4774.09 | 1922.48 | 4781.45 | 1922.09 | 4787.67 | 1922.05 | 4791.69 | 1922.02 | 4794.63 | 1922.01 |
| 4795.86 | 1921.99 | 4800.05 | 1921.78 | 4803.06 | 1921.62 | 4812.87 | 1921.04 | 4815.9 | 1921 |
| 4826.99 | 1921 | 4834.64 | 1921.98 | 4838.21 | 1923 | 4839.21 | 1923.31 | 4840.94 | 1924 |
| 4844.42 | 1925 | 4848.17 | 1926 | 4851.5 | 1926.93 | 4851.88 | 1927 | 4852.54 | 1927 |
| 4852.89 | 1926.82 | 4853.54 | 1926 | 4854.58 | 1924.76 | 4855.56 | 1924 | 4857.82 | 1923 |
| 4859.1 | 1922.52 | 4860.61 | 1922 | 4861.31 | 1921.72 | 4863.4 | 1921 | 4864.33 | 1920.76 |
| 4868.13 | 1920 | 4877.7 | 1919.18 | 4878.93 | 1919 | 4963.69 | 1919 | 4995.31 | 1918.61 |
| 4995.81 | 1918.6 | 5003.04 | 1918.58 | 5009.86 | 1918.57 | 5013.96 | 1918.58 | 5018.32 | 1918.48 |
| 5024.63 | 1918.32 | 5025.08 | 1918.32 | 5034.17 | 1918 | 5106.3 | 1918 | 5112.02 | 1918.06 |
| 5159.29 | 1918.61 | 5186.13 | 1918.91 | 5189.67 | 1918.94 | 5195 | 1919 | 5196.69 | 1919 |
| 5207.45 | 1919.57 | 5210.91 | 1920 | 5214.24 | 1920.69 | 5220.48 | 1921.87 | 5221.78 | 1922.13 |
| 5226.91 | 1923 | 5231.14 | 1923.93 | 5231.53 | 1924 | 5234.63 | 1926 | 5236.26 | 1926.89 |
| 5238.42 | 1928 | 5242.9 | 1930.36 | 5244.09 | 1931 | 5245.26 | 1931.6 | 5245.92 | 1932 |
| 5247.31 | 1932.64 | 5247.97 | 1933 | 5250.28 | 1934.2 | 5251.75 | 1935 | 5253.7 | 1936.02 |
| 5255.37 | 1937 | 5256.29 | 1937.51 | 5257.1 | 1938 | 5259.33 | 1938.56 | 5259.98 | 1939 |
| 5276.08 | 1939 | 5329.8 | 1938 | 5330.02 | 1938 | 5335.25 | 1937.85 | 5339.09 | 1937.78 |
| 5355.01 | 1937.37 | 5375.47 | 1937.07 | 5377.06 | 1937.04 | 5385.77 | 1936.94 | 5389.66 | 1936.92 |
| 5390.9 | 1936.89 | 5394.09 | 1936.79 | 5398.9 | 1936.7 | 5399.31 | 1936.68 | 5403.56 | 1936.57 |
| 5421.19 | 1936 | 5425.4 | 1935.87 | 5446.75 | 1935 | 5450.93 | 1934.99 | 5463.03 | 1934.81 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5463.03 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5463.03 | 243.05 | 243.05 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1922.70 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.13 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1922.58 | Reach Len. (ft) | 243.05 | 243.05 | 243.05 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7835.33 | | |
| E.G. Slope (ft/ft) | 0.002070 | Area (sq ft) | | 7835.33 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3559.47 | Top Width (ft) | | 3559.47 | | |
| Vel Total (ft/s) | 2.86 | Avg. Vel. (ft/s) | | 2.86 | | |
| Max Chl Dpth (ft) | 5.37 | Hydr. Depth (ft) | | 2.20 | | |
| Conv. Total (cfs) | 492362.8 | Conv. (cfs) | | 492362.8 | | |
| Length Wtd. (ft) | 243.05 | Wetted Per. (ft) | | 3561.37 | | |
| Min Ch El (ft) | 1917.21 | Shear (lb/sq ft) | | 0.28 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5463.03 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.65 | Cum Volume (acre-ft) | | 1264.02 | | |
| C & E Loss (ft) | 0.01 | Cum SA (acres) | | 585.75 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -12543.0

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1928.88 | 18.59 | 1928.78 | 73.19 | 1928.47 | 124.13 | 1928.19 | 194.24 | 1927.88 |
| 247.25 | 1927.56 | 296.17 | 1927.27 | 892.4 | 1924.66 | 1041.04 | 1923.99 | 1089.64 | 1923.77 |
| 1093.13 | 1923.76 | 1098.83 | 1923.73 | 1104.74 | 1923.71 | 1105.77 | 1923.7 | 1109.81 | 1923.68 |
| 1115.97 | 1923.66 | 1152.52 | 1923.49 | 1159.93 | 1923.46 | 1170.85 | 1923.41 | 1176.29 | 1923.38 |
| 1178.27 | 1923.38 | 1183.59 | 1923.35 | 1188.42 | 1923.33 | 1193.61 | 1922.78 | 1197.67 | 1922 |
| 1199.86 | 1922.11 | 1200.08 | 1922.09 | 1204.1 | 1921.97 | 1226.23 | 1921.83 | 1231.39 | 1921.77 |
| 1241.69 | 1921.69 | 1251.07 | 1921.57 | 1259.89 | 1921.44 | 1276.46 | 1921.19 | 1282.48 | 1921.12 |
| 1289.3 | 1921 | 1327.52 | 1921 | 1337.26 | 1921.01 | 1351.39 | 1921.02 | 1353.83 | 1921.02 |
| 1355.69 | 1921.03 | 1376.15 | 1921.3 | 1378.72 | 1921.28 | 1385.22 | 1921.24 | 1390.19 | 1921.22 |
| 1420.64 | 1921.22 | 1451.99 | 1921.23 | 1466.99 | 1921.25 | 1527.12 | 1921.02 | 1540.9 | 1921.02 |
| 1572.69 | 1921.01 | 1610.6 | 1921.01 | 1659.9 | 1921 | 1664.61 | 1921 | 1671.34 | 1920.95 |
| 1749.59 | 1920.71 | 1795.88 | 1920.56 | 1798.22 | 1920.56 | 1805.04 | 1920.57 | 1808.98 | 1920.57 |
| 1844.37 | 1920.44 | 1926.18 | 1920.01 | 1926.75 | 1920 | 1970.87 | 1919.28 | 1990.11 | 1919 |
| 1994.15 | 1919 | 2001.3 | 1918.79 | 2017.77 | 1918 | 2029.22 | 1917.54 | 2050.6 | 1917.06 |
| 2053.09 | 1917.01 | 2056.99 | 1917.01 | 2064.65 | 1917 | 2081.51 | 1917 | 2085 | 1916.99 |
| 2087.05 | 1916.99 | 2094.08 | 1917 | 2100.22 | 1917.34 | 2110.1 | 1917.87 | 2112.56 | 1918 |
| 2115.12 | 1918.03 | 2123.54 | 1918.37 | 2126.37 | 1918.49 | 2128.06 | 1918.53 | 2132.94 | 1918.83 |
| 2133.61 | 1918.83 | 2134.69 | 1918.87 | 2135.8 | 1918.88 | 2141.58 | 1919 | 2297.15 | 1919 |
| 2325.37 | 1919.73 | 2330.91 | 1919.87 | 2336.55 | 1920 | 2536.32 | 1920 | 2536.99 | 1919.98 |
| 2545.79 | 1919.75 | 2551.59 | 1919.65 | 2560.29 | 1919.42 | 2560.95 | 1919.4 | 2565.39 | 1919.3 |
| 2569.38 | 1919.2 | 2571.41 | 1919.16 | 2585.74 | 1919.06 | 2586.69 | 1919.05 | 2593.14 | 1919.02 |
| 2595.61 | 1919 | 2609.82 | 1918.84 | 2612 | 1918.83 | 2614.41 | 1918.8 | 2618.16 | 1918.74 |
| 2627.26 | 1918.62 | 2633.99 | 1918.46 | 2637.15 | 1918.4 | 2643.62 | 1918.23 | 2646.04 | 1918.19 |
| 2648.01 | 1918.17 | 2653.58 | 1918.17 | 2657.15 | 1918.21 | 2662.14 | 1918.25 | 2699.51 | 1918.93 |
| 2710.13 | 1918.95 | 2716.67 | 1918.96 | 2725.11 | 1918.96 | 2727.65 | 1918.97 | 2734.57 | 1918.97 |
| 2743.26 | 1919 | 2754.58 | 1919.14 | 2768.69 | 1919.31 | 2782.75 | 1919.43 | 2814.62 | 1919.71 |
| 2815.14 | 1919.71 | 2819.71 | 1919.75 | 2824.93 | 1919.8 | 2828.81 | 1919.83 | 2843.56 | 1919.96 |
| 2847.49 | 1919.97 | 2848.65 | 1919.98 | 2864.17 | 1919.98 | 2866.07 | 1919.97 | 2893.29 | 1919.95 |
| 2900.73 | 1920 | 2980.23 | 1920 | 2982.77 | 1919.99 | 3041.08 | 1919.99 | 3093.29 | 1919.54 |
| 3101.85 | 1919.52 | 3111.17 | 1919.43 | 3117.76 | 1919.37 | 3118.73 | 1919.37 | 3128.66 | 1919.28 |
| 3141.96 | 1919.15 | 3146.93 | 1919.12 | 3149.84 | 1919.09 | 3155 | 1919.05 | 3157.34 | 1919.04 |
| 3162.78 | 1919 | 3178.92 | 1919 | 3183.34 | 1919.16 | 3185.48 | 1919.23 | 3190.36 | 1919.43 |
| 3203.42 | 1920 | 3211.9 | 1920.48 | 3220.33 | 1920.56 | 3229.08 | 1920.47 | 3229.54 | 1920.46 |
| 3232.88 | 1920.23 | 3236.56 | 1920 | 3237.74 | 1919.98 | 3241.34 | 1919.8 | 3248.69 | 1919.45 |
| 3255.02 | 1919.24 | 3262.27 | 1919.03 | 3266.13 | 1919.04 | 3271.1 | 1919 | 3279.21 | 1919 |
| 3280.65 | 1919.33 | 3285.8 | 1920.53 | 3287.76 | 1921 | 3290.12 | 1921.99 | 3291.99 | 1922 |
| 3293.95 | 1922.47 | 3299.06 | 1923.71 | 3300.23 | 1924 | 3303.69 | 1924.82 | 3304.36 | 1924.8 |
| 3308.34 | 1924 | 3313.17 | 1923 | 3314.56 | 1922.68 | 3317.87 | 1922 | 3319.73 | 1921.58 |
| 3322.58 | 1921 | 3334.14 | 1921 | 3343.38 | 1921.57 | 3346.98 | 1921.67 | 3347.85 | 1921.7 |
| 3358.49 | 1921.72 | 3368.91 | 1921.72 | 3371.68 | 1921.68 | 3385.22 | 1921.55 | 3394.33 | 1921.46 |
| 3407.88 | 1921.32 | 3408.21 | 1921.31 | 3429.75 | 1921.08 | 3433.9 | 1921.04 | 3435.73 | 1921.06 |
| 3439.81 | 1921.09 | 3447.86 | 1921.33 | 3449.19 | 1921.38 | 3451.39 | 1921.43 | 3470.84 | 1922 |
| 3481.7 | 1922 | 3486.07 | 1921.98 | 3491.7 | 1921.97 | 3494.23 | 1921.96 | 3501.83 | 1921.97 |
| 3515.85 | 1921.86 | 3518.37 | 1921.83 | 3525.8 | 1921.8 | 3529.12 | 1921.78 | 3538.74 | 1921.7 |
| 3540.37 | 1921.69 | 3547.65 | 1921.67 | 3552.56 | 1921.64 | 3580.26 | 1921.83 | 3591.19 | 1921.94 |
| 3605.33 | 1921.97 | 3610.19 | 1921.99 | 3612.42 | 1921.99 | 3616.05 | 1922 | 3621.91 | 1922.26 |
| 3639.51 | 1923 | 3653.27 | 1923.03 | 3656.11 | 1923.03 | 3657.91 | 1923.04 | 3663.23 | 1923.05 |
| 3667.69 | 1923.05 | 3672.13 | 1923.04 | 3678.45 | 1923.03 | 3680.06 | 1923.02 | 3684.36 | 1923.02 |
| 3685.64 | 1923.01 | 3690.41 | 1923.01 | 3691.99 | 1923 | 3693.74 | 1923.01 | 3696.13 | 1923 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3698.93 | 1923 | 3700.27 | 1923.01 | 3702.93 | 1923.01 | 3704.5 | 1923.02 | 3705.82 | 1923.04 |
| 3708.85 | 1923.06 | 3717.28 | 1923.14 | 3722.97 | 1923.2 | 3729.25 | 1923.14 | 3740.88 | 1923.05 |
| 3744.16 | 1923.03 | 3751.37 | 1923 | 3763.69 | 1922.84 | 3768.25 | 1922.77 | 3770.05 | 1922.73 |
| 3774.56 | 1922.65 | 3777.13 | 1922.58 | 3777.71 | 1922.58 | 3784.97 | 1922.38 | 3796.78 | 1922.01 |
| 3798.26 | 1922 | 3804.73 | 1922 | 3811.07 | 1921.99 | 3817.05 | 1921.99 | 3823.3 | 1922 |
| 3838.56 | 1922 | 3841.63 | 1922.29 | 3849.22 | 1923 | 3850.82 | 1923.17 | 3857.72 | 1923.8 |
| 3860.04 | 1924 | 3863.42 | 1924.02 | 3873.75 | 1924.05 | 3877.36 | 1924.12 | 3892.46 | 1924.36 |
| 3899.23 | 1924.15 | 3912.38 | 1923.73 | 3919.58 | 1923.48 | 3922.48 | 1923.36 | 3927.14 | 1923.16 |
| 3930.48 | 1923 | 3940.17 | 1922.47 | 3948.63 | 1922 | 3950.57 | 1921.83 | 3960.37 | 1921 |
| 3969.59 | 1920.46 | 3974.84 | 1920.01 | 3976.58 | 1920 | 3986.75 | 1919.97 | 3995.59 | 1919.94 |
| 4000.33 | 1919.93 | 4007.13 | 1919.95 | 4022.58 | 1920 | 4028.05 | 1920.24 | 4046.77 | 1921 |
| 4084.68 | 1921 | 4085.78 | 1921.41 | 4086.78 | 1922 | 4087.91 | 1922.42 | 4088.8 | 1922.63 |
| 4090.02 | 1922.78 | 4090.95 | 1922.83 | 4092.48 | 1922.87 | 4094.52 | 1922.85 | 4095.48 | 1922.81 |
| 4095.92 | 1922.77 | 4097.66 | 1922.56 | 4103.5 | 1922 | 4107.17 | 1921.62 | 4108.81 | 1921.35 |
| 4109.97 | 1921.11 | 4110.39 | 1921 | 4149.78 | 1921 | 4168.85 | 1920.55 | 4173.63 | 1920.48 |
| 4178.4 | 1920.36 | 4181.22 | 1920.3 | 4190.21 | 1920.29 | 4198.54 | 1920.29 | 4200.67 | 1920.32 |
| 4202.23 | 1920.33 | 4204.5 | 1920.36 | 4212.51 | 1920.49 | 4213.91 | 1920.52 | 4228.14 | 1920.88 |
| 4230.07 | 1920.92 | 4232.9 | 1921 | 4289.73 | 1921 | 4293.38 | 1920.99 | 4296.94 | 1921 |
| 4403.43 | 1921 | 4405.29 | 1921.09 | 4413.37 | 1921.47 | 4416.68 | 1921.63 | 4417 | 1921.64 |
| 4426.23 | 1922 | 4433.7 | 1922.38 | 4435.19 | 1922.47 | 4443.64 | 1923 | 4464.49 | 1923 |
| 4466.99 | 1922.75 | 4469.58 | 1922.42 | 4470.39 | 1922.29 | 4472.98 | 1922 | 4478.35 | 1921.43 |
| 4482.23 | 1921 | 4486.48 | 1920.55 | 4490.94 | 1920 | 4501.69 | 1919.77 | 4511.01 | 1919.54 |
| 4514.57 | 1919.46 | 4519.98 | 1919.32 | 4532.95 | 1919 | 4555.79 | 1919 | 4568.23 | 1919.92 |
| 4570.03 | 1920.05 | 4583.56 | 1921 | 4664.87 | 1921 | 4670 | 1920.89 | 4671.45 | 1920.9 |
| 4674.33 | 1920.85 | 4679.07 | 1920.99 | 4694.25 | 1920.98 | 4712.54 | 1921 | 4755.15 | 1921 |
| 4761.3 | 1922 | 4766.25 | 1922.8 | 4767.83 | 1923.05 | 4770.83 | 1923.49 | 4775.15 | 1924.03 |
| 4783.29 | 1925 | 4784.66 | 1925.17 | 4786.93 | 1925.29 | 4792.1 | 1925.7 | 4801.18 | 1926 |
| 4803.92 | 1926.08 | 4805.49 | 1926.14 | 4807.45 | 1926.16 | 4808.5 | 1926.15 | 4813.77 | 1926.02 |
| 4820.39 | 1925.71 | 4821.5 | 1925.63 | 4823.41 | 1925.4 | 4825.94 | 1925 | 4828.04 | 1924.6 |
| 4830.97 | 1924 | 4832.4 | 1923.73 | 4835.64 | 1923 | 4838.93 | 1922.38 | 4840.98 | 1922 |
| 4843.29 | 1921.56 | 4846.34 | 1921 | 4856.27 | 1920.31 | 4862.14 | 1920 | 4874.75 | 1919.62 |
| 4890.5 | 1919.18 | 4896.23 | 1919.01 | 4897.08 | 1919 | 4942.73 | 1918.14 | 4949.38 | 1918 |
| 4952.34 | 1917.98 | 4957.02 | 1917.91 | 4976.4 | 1917.61 | 4987.83 | 1917.45 | 4988.09 | 1917.45 |
| 4995.04 | 1917.37 | 4999.91 | 1917.32 | 5000.72 | 1917.32 | 5005.37 | 1917.27 | 5008.81 | 1917.25 |
| 5021.98 | 1917.31 | 5045.04 | 1917.44 | 5048.12 | 1917.44 | 5051.47 | 1917.5 | 5055.92 | 1917.59 |
| 5061.07 | 1917.7 | 5068.75 | 1917.88 | 5070.1 | 1917.88 | 5073.79 | 1918 | 5077.49 | 1918.1 |
| 5078.17 | 1918.1 | 5088.52 | 1918.33 | 5091.33 | 1918.34 | 5129.89 | 1918.84 | 5134.4 | 1918.86 |
| 5139.98 | 1918.9 | 5149.33 | 1919 | 5287.79 | 1919 | 5294.71 | 1919.75 | 5297.05 | 1920.01 |
| 5300.23 | 1920.39 | 5305.41 | 1921 | 5305.47 | 1921 | 5308.52 | 1921.5 | 5311.26 | 1922 |
| 5315.89 | 1923 | 5319.69 | 1924 | 5320.68 | 1924.37 | 5322.42 | 1925 | 5325.48 | 1926.18 |
| 5329.38 | 1927.64 | 5329.73 | 1927.74 | 5330.84 | 1928 | 5332.1 | 1928.55 | 5333.56 | 1929 |
| 5334.98 | 1931.03 | 5335.59 | 1932 | 5337.52 | 1935 | 5338.17 | 1936 | 5338.54 | 1936.54 |
| 5339.74 | 1938.37 | 5340.17 | 1939 | 5341.42 | 1939.6 | 5341.68 | 1939.59 | 5346.24 | 1939.5 |
| 5350.98 | 1939.61 | 5354.41 | 1939.8 | 5355.19 | 1939.82 | 5357.36 | 1939.99 | 5358.27 | 1939.99 |
| 5362.65 | 1939.92 | 5365.78 | 1939.88 | 5371.89 | 1939.77 | 5404.43 | 1939.27 | 5421.92 | 1939 |
| 5426.92 | 1938.98 | 5427.85 | 1938.98 | 5434.05 | 1938.96 | 5435.57 | 1938.95 | 5454.31 | 1938.88 |
| 5461.06 | 1938.85 | 5482.33 | 1938.91 | 5497.7 | 1938.79 | 5506.49 | 1938.96 | 5508.97 | 1939 |
| 5512.36 | 1939.08 | 5513.22 | 1939.09 | 5526.64 | 1939.33 | 5528.63 | 1939.34 | 5535.36 | 1939.44 |
| 5536.73 | 1939.45 | 5544.08 | 1939.48 | 5548.7 | 1939.43 | 5554.61 | 1939.33 | 5556.81 | 1939.28 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5556.81 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5556.81 | 85.86 | 85.86 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1922.05 | Element | | Left OB | Channel | Right OB |
| Vel Head (ft) | 0.18 | Wt. n-Val. | | | 0.040 | |
| W.S. Elev (ft) | 1921.87 | Reach Len. (ft) | | 85.86 | 85.86 | 85.86 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | | 6596.89 | |
| E.G. Slope (ft/ft) | 0.003587 | Area (sq ft) | | | 6596.89 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | | 22400.00 | |
| Top Width (ft) | 3496.90 | Top Width (ft) | | | 3496.90 | |
| Vel Total (ft/s) | 3.40 | Avg. Vel. (ft/s) | | | 3.40 | |
| Max Chl Dpth (ft) | 4.88 | Hydr. Depth (ft) | | | 1.89 | |
| Conv. Total (cfs) | 374024.0 | Conv. (cfs) | | | 374024.0 | |
| Length Wtd. (ft) | 85.86 | Wetted Per. (ft) | | | 3498.66 | |
| Min Ch El (ft) | 1916.99 | Shear (lb/sq ft) | | | 0.42 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | | 5556.81 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.27 | Cum Volume (acre-ft) | | | 1223.75 | |
| C & E Loss (ft) | 0.01 | Cum SA (acres) | | | 566.07 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -12628.8

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1927.5 | 241.8 | 1926.53 | 324.87 | 1926.08 | 397.19 | 1925.69 | 430.71 | 1925.51 |
| 462.15 | 1925.34 | 544.58 | 1924.99 | 576.46 | 1924.8 | 606.06 | 1924.63 | 1182.36 | 1922.22 |
| 1183.52 | 1922.22 | 1184.17 | 1922.21 | 1186.2 | 1922.21 | 1187.66 | 1922.16 | 1190.05 | 1922.09 |
| 1191.4 | 1922.08 | 1200.64 | 1921 | 1202.06 | 1921 | 1202.49 | 1920.99 | 1238 | 1920.99 |
| 1242.29 | 1920.98 | 1254.25 | 1920.55 | 1257.95 | 1920.52 | 1272.48 | 1920.27 | 1273.51 | 1920.26 |
| 1279.24 | 1920.14 | 1286.2 | 1920 | 1301.06 | 1920 | 1312.89 | 1920.63 | 1320.75 | 1921 |
| 1323.52 | 1921.04 | 1323.84 | 1921.05 | 1345.72 | 1921.36 | 1355.66 | 1921.5 | 1356.06 | 1921.51 |
| 1358.82 | 1921.55 | 1385.41 | 1921.98 | 1386.4 | 1922 | 1502.4 | 1922 | 1572.92 | 1921.22 |
| 1592.04 | 1921 | 1595.76 | 1920.9 | 1635.8 | 1920 | 1636.23 | 1919.99 | 1648.2 | 1919.74 |
| 1651.67 | 1919.67 | 1651.83 | 1919.67 | 1685.99 | 1919.99 | 1709.45 | 1919.99 | 1712.76 | 1920 |
| 1813.37 | 1920 | 1814.3 | 1920.01 | 1866.69 | 1920.01 | 1883.88 | 1920 | 1914.54 | 1920 |
| 1924.27 | 1919.71 | 1926.19 | 1919.64 | 1931.84 | 1919.46 | 1936.43 | 1919.31 | 1946.48 | 1919 |
| 1949.5 | 1918.97 | 1980.85 | 1918.61 | 2030.55 | 1918 | 2040.81 | 1917 | 2050.86 | 1916.61 |
| 2065.75 | 1916.24 | 2070.54 | 1916.1 | 2071.97 | 1916.07 | 2073.45 | 1916.05 | 2075.16 | 1916.02 |
| 2076.88 | 1916.01 | 2077.28 | 1916 | 2087.02 | 1916 | 2087.54 | 1916.01 | 2090.1 | 1916.08 |
| 2098.39 | 1916.32 | 2101.36 | 1916.46 | 2109.62 | 1916.89 | 2111.46 | 1917 | 2114.47 | 1917.08 |
| 2115.28 | 1917.11 | 2119.32 | 1917.22 | 2131.83 | 1917.55 | 2133.16 | 1917.59 | 2135.35 | 1917.64 |
| 2136.4 | 1917.68 | 2150.74 | 1918 | 2153.75 | 1918 | 2167.8 | 1918.16 | 2172.23 | 1918.2 |
| 2173.44 | 1918.22 | 2175.12 | 1918.23 | 2176.63 | 1918.25 | 2181.55 | 1918.3 | 2189.84 | 1918.39 |
| 2217.1 | 1918.66 | 2227.88 | 1918.75 | 2228.13 | 1918.75 | 2242.45 | 1918.89 | 2242.59 | 1918.89 |
| 2254.41 | 1919 | 2256.74 | 1919 | 2258.12 | 1919.03 | 2258.58 | 1919.03 | 2293.02 | 1919.12 |
| 2322.19 | 1919.18 | 2331.55 | 1919.12 | 2342.21 | 1919.06 | 2342.89 | 1919.06 | 2350.22 | 1919 |
| 2355.87 | 1918.99 | 2361.07 | 1918.99 | 2363.18 | 1918.98 | 2364.5 | 1918.98 | 2370.16 | 1919 |
| 2403.41 | 1919 | 2406.03 | 1918.93 | 2409.43 | 1918.76 | 2414.96 | 1918.61 | 2418.01 | 1918.54 |
| 2418.6 | 1918.54 | 2419.7 | 1918.5 | 2420.29 | 1918.47 | 2420.8 | 1918.47 | 2421.69 | 1918.45 |
| 2429.21 | 1918 | 2434.91 | 1917.83 | 2442.55 | 1917.6 | 2446.4 | 1917.53 | 2449.57 | 1917.49 |
| 2464.65 | 1917.98 | 2479.25 | 1917.98 | 2505.98 | 1918 | 2518.5 | 1918 | 2536.79 | 1918.41 |
| 2546.2 | 1918.62 | 2555.97 | 1918.65 | 2558.94 | 1918.65 | 2561.97 | 1918.68 | 2562.75 | 1918.68 |
| 2597.48 | 1918.97 | 2600.17 | 1918.99 | 2600.34 | 1919 | 2628.68 | 1919 | 2639.09 | 1919.01 |
| 2725.18 | 1919.01 | 2725.85 | 1919 | 2727.31 | 1919 | 2727.87 | 1919.01 | 2755.65 | 1919.07 |
| 2780.15 | 1919.1 | 2785.4 | 1919.1 | 2794.82 | 1919.11 | 2803.22 | 1919.11 | 2848.49 | 1919.07 |
| 2850.61 | 1919.07 | 2857.67 | 1919.06 | 2862.14 | 1919.05 | 2865.92 | 1919.05 | 2869.93 | 1919.04 |
| 2882.47 | 1919.03 | 2885.93 | 1919.03 | 2892.84 | 1919.02 | 2895.65 | 1919.02 | 2909.65 | 1919 |
| 2966.91 | 1919 | 2976.31 | 1918.8 | 2977.89 | 1918.8 | 2988 | 1918.72 | 2997.18 | 1918.93 |
| 3000.48 | 1919 | 3044.06 | 1919 | 3046.25 | 1920 | 3047.4 | 1920.54 | 3048.32 | 1920.84 |
| 3048.76 | 1920.97 | 3049.85 | 1921.18 | 3051.18 | 1921.3 | 3052.19 | 1921.35 | 3055.63 | 1921.57 |
| 3058.33 | 1921.89 | 3059.42 | 1921.99 | 3060.4 | 1922.04 | 3061.31 | 1922.06 | 3062.06 | 1922.03 |
| 3062.99 | 1921.98 | 3065.86 | 1921.71 | 3067.46 | 1921.52 | 3071.42 | 1921 | 3071.76 | 1920.96 |
| 3073.48 | 1920.69 | 3074.26 | 1920.55 | 3074.94 | 1920.44 | 3076.59 | 1920.07 | 3078.46 | 1919.6 |
| 3080.7 | 1919 | 3160.78 | 1919 | 3161.57 | 1919.01 | 3165.2 | 1919.02 | 3166.17 | 1919.02 |
| 3168.43 | 1919.03 | 3172.36 | 1919.02 | 3174.18 | 1919.02 | 3178.25 | 1919.04 | 3191.49 | 1919.04 |
| 3198.87 | 1919.01 | 3200.99 | 1919 | 3202.78 | 1919 | 3204.69 | 1919.07 | 3228.37 | 1920 |
| 3237.13 | 1920.46 | 3241.57 | 1920.58 | 3251.34 | 1920.99 | 3258.02 | 1921 | 3263.71 | 1921.11 |
| 3265.92 | 1921.13 | 3268.25 | 1921.14 | 3271.93 | 1921.19 | 3273.84 | 1921.21 | 3285.19 | 1921.21 |
| 3285.76 | 1921.2 | 3288.64 | 1921.21 | 3290.35 | 1921.19 | 3291.56 | 1921.19 | 3292.49 | 1921.2 |
| 3304.88 | 1921.08 | 3312.38 | 1921.01 | 3313.64 | 1921 | 3327.92 | 1921 | 3352.7 | 1921.03 |
| 3358.25 | 1921.04 | 3359.66 | 1921.03 | 3388.27 | 1921.06 | 3393.56 | 1921 | 3438.62 | 1921 |
| 3445.56 | 1921.17 | 3448.54 | 1921.22 | 3449.47 | 1921.23 | 3457.3 | 1921.42 | 3457.9 | 1921.42 |
| 3469.62 | 1921.51 | 3478.68 | 1921.55 | 3479.07 | 1921.56 | 3481.3 | 1921.51 | 3481.69 | 1921.51 |
| 3488.97 | 1921.29 | 3494.15 | 1921.06 | 3497.74 | 1921.06 | 3500.9 | 1921 | 3511.77 | 1921 |
| 3533.48 | 1920.99 | 3542.02 | 1920.99 | 3556.69 | 1921 | 3565.35 | 1921 | 3575.24 | 1921.64 |
| 3583.22 | 1921.82 | 3584.44 | 1921.87 | 3592.81 | 1922 | 3597.01 | 1922.01 | 3601.8 | 1922.06 |
| 3603.23 | 1922.09 | 3606.86 | 1922.13 | 3608.18 | 1922.15 | 3614.46 | 1922.28 | 3616.3 | 1922.32 |
| 3618.1 | 1922.35 | 3625.65 | 1922.5 | 3629.96 | 1922.59 | 3637.34 | 1922.68 | 3643.87 | 1922.84 |
| 3646.26 | 1922.91 | 3648.79 | 1923 | 3653.11 | 1923 | 3656.78 | 1923.01 | 3658.64 | 1923.01 |
| 3674.95 | 1923.03 | 3692.23 | 1923.02 | 3709.24 | 1923.02 | 3711.15 | 1923.01 | 3714.98 | 1923.02 |
| 3719.21 | 1923.01 | 3745.87 | 1923.01 | 3750.79 | 1923 | 3774.06 | 1923 | 3775.1 | 1922.95 |
| 3792.56 | 1922 | 3803.89 | 1921.41 | 3808.3 | 1921.19 | 3811.92 | 1921 | 3861.8 | 1921 |
| 3867.07 | 1921.3 | 3881.84 | 1921.91 | 3882.71 | 1921.95 | 3884.03 | 1922 | 3896.28 | 1922.49 |
| 3897.39 | 1922.53 | 3900.45 | 1922.68 | 3901.29 | 1922.71 | 3904.45 | 1922.86 | 3906.29 | 1922.93 |
| 3907.93 | 1923 | 3963.34 | 1923 | 3966.96 | 1922.81 | 3983.97 | 1922 | 3985.31 | 1921.91 |
| 3987.14 | 1921.81 | 3992.74 | 1921.42 | 3993.92 | 1921.33 | 3998.49 | 1921 | 4000.59 | 1920.99 |
| 4022.55 | 1920.93 | 4025.79 | 1920.94 | 4029.75 | 1920.94 | 4046.46 | 1920.99 | 4048.17 | 1920.99 |
| 4049.42 | 1921 | 4139.28 | 1921 | 4148.73 | 1920.59 | 4153.05 | 1920.4 | 4153.35 | 1920.39 |
| 4159.24 | 1920 | 4175.65 | 1919.53 | 4184.24 | 1919.29 | 4188.65 | 1919.17 | 4193.09 | 1919.08 |
| 4194.63 | 1919.06 | 4195.56 | 1919.03 | 4198.38 | 1919.01 | 4204.71 | 1919 | 4213.19 | 1919 |
| 4214.31 | 1919.03 | 4215 | 1919.06 | 4216.23 | 1919.13 | 4238.89 | 1920 | 4244.13 | 1920.36 |
| 4244.64 | 1920.39 | 4245.86 | 1920.43 | 4247.3 | 1920.52 | 4247.65 | 1920.55 | 4262.94 | 1920.97 |
| 4263.35 | 1920.99 | 4264.05 | 1921 | 4420.16 | 1921 | 4459.54 | 1920.13 | 4460.65 | 1920.12 |
| 4462.58 | 1920.12 | 4463.05 | 1920.1 | 4463.92 | 1920.11 | 4464.69 | 1920.09 | 4467.58 | 1920 |
| 4476.93 | 1920 | 4477.17 | 1919.99 | 4494.36 | 1919.61 | 4495.12 | 1919.59 | 4497.14 | 1919.56 |
| 4498.63 | 1919.52 | 4506.24 | 1919.43 | 4522.94 | 1919.16 | 4532.79 | 1919.21 | 4532.81 | 1919.2 |
| 4537.08 | 1919.27 | 4540.39 | 1919.31 | 4540.62 | 1919.32 | 4542.25 | 1919.34 | 4543.41 | 1919.36 |
| 4545.37 | 1919.38 | 4546.6 | 1919.4 | 4566.36 | 1919.86 | 4568.9 | 1919.93 | 4570.03 | 1919.93 |
| 4572.74 | 1919.95 | 4576.89 | 1919.96 | 4581.59 | 1919.99 | 4584.51 | 1919.99 | 4586.62 | 1920.04 |
| 4594.77 | 1920.26 | 4595.36 | 1920.27 | 4620.76 | 1920.99 | 4625.55 | 1920.99 | 4628.35 | 1921 |
| 4675.8 | 1921 | 4683.27 | 1920.36 | 4689.01 | 1920 | 4690.72 | 1919.97 | 4690.96 | 1919.96 |
| 4694.09 | 1919.96 | 4698.15 | 1919.92 | 4699.62 | 1919.92 | 4714.59 | 1919.59 | 4716.04 | 1919.58 |
| 4729.34 | 1919.6 | 4744.08 | 1919.64 | 4746.5 | 1919.63 | 4755.55 | 1919.88 | 4756.04 | 1919.88 |
| 4760.17 | 1920 | 4769.02 | 1920.64 | 4770.57 | 1920.74 | 4774.34 | 1921 | 4776.11 | 1921.02 |
| 4779.95 | 1921.05 | 4781.56 | 1921.06 | 4782.52 | 1921.06 | 4787.94 | 1921 | 4789.94 | 1920.83 |
| 4799.28 | 1920 | 4815.9 | 1919.22 | 4817.15 | 1919.16 | 4818.76 | 1919.1 | 4821.02 | 1919 |
| 4822.28 | 1919 | 4825.19 | 1918.91 | 4826.58 | 1918.88 | 4827.39 | 1918.85 | 4833.44 | 1918.68 |
| 4836.1 | 1918.58 | 4837.21 | 1918.53 | 4841.68 | 1918.36 | 4843.99 | 1918.28 | 4845.96 | 1918.22 |
| 4857.76 | 1918 | 4863.11 | 1917.92 | 4865.49 | 1917.87 | 4865.65 | 1917.86 | 4881.11 | 1917.6 |
| 4885.58 | 1917.52 | 4887.48 | 1917.48 | 4900.22 | 1917.31 | 4901.24 | 1917.29 | 4908.49 | 1917.18 |
| 4918.54 | 1917.02 | 4919.48 | 1917 | 4968.81 | 1917 | 4982.77 | 1917.61 | 4985.26 | 1917.72 |
| 4986.59 | 1917.79 | 4990.3 | 1918 | 5003.76 | 1918.74 | 5008.42 | 1919 | 5274.47 | 1919 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5276.48 | 1919.01 | 5278.19 | 1919.01 | 5279.44 | 1919.15 | 5282.54 | 1919.45 | 5282.61 | 1919.45 |
| 5286.76 | 1920 | 5291.1 | 1920.63 | 5293.58 | 1921 | 5297.16 | 1921.56 | 5299.99 | 1922 |
| 5305.14 | 1923.01 | 5308.47 | 1924 | 5311.57 | 1924.86 | 5315.73 | 1926 | 5316.74 | 1926.28 |
| 5323.06 | 1928 | 5323.89 | 1928.22 | 5326.27 | 1929 | 5329.3 | 1930 | 5331.33 | 1930.76 |
| 5332.04 | 1931 | 5334.46 | 1933 | 5335.93 | 1934.22 | 5338.06 | 1936 | 5338.97 | 1936.75 |
| 5339.34 | 1937.11 | 5340.29 | 1938 | 5341.34 | 1939 | 5345.37 | 1939.55 | 5345.73 | 1939.61 |
| 5348.37 | 1940 | 5355.79 | 1940.88 | 5357.28 | 1941 | 5362 | 1941 | 5378.64 | 1940.32 |
| 5386.71 | 1940 | 5413.39 | 1939.12 | 5416.75 | 1939 | 5418.94 | 1938.99 | 5443.5 | 1938.99 |
| 5458.91 | 1939 | 5461.35 | 1939.05 | 5507.74 | 1939.29 | 5536.7 | 1939.4 | 5541.31 | 1939.43 |
| 5549.52 | 1939.27 | 5550.17 | 1939.27 | 5563.04 | 1939.02 | 5563.36 | 1939.02 | 5565.55 | 1938.98 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5565.55 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5565.55 | 239.2 | 239.2 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1921.77 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.15 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1921.62 | Reach Len. (ft) | 239.20 | 239.20 | 239.20 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7207.34 | | |
| E.G. Slope (ft/ft) | 0.002753 | Area (sq ft) | | 7207.34 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3578.21 | Top Width (ft) | | 3578.21 | | |
| Vel Total (ft/s) | 3.11 | Avg. Vel. (ft/s) | | 3.11 | | |
| Max Chl Dpth (ft) | 5.62 | Hydr. Depth (ft) | | 2.01 | | |
| Conv. Total (cfs) | 426889.4 | Conv. (cfs) | | 426889.4 | | |
| Length Wtd. (ft) | 239.20 | Wetted Per. (ft) | | 3579.86 | | |
| Min Ch El (ft) | 1916.00 | Shear (lb/sq ft) | | 0.35 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5565.55 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.58 | Cum Volume (acre-ft) | | 1210.15 | | |
| C & E Loss (ft) | 0.01 | Cum SA (acres) | | 559.09 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -12868.0

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1924.7 | 228.25 | 1923.95 | 821.38 | 1921.77 | 842.32 | 1921.66 | 860.81 | 1921.57 |
| 869.47 | 1921.52 | 877.65 | 1921.48 | 975.23 | 1921.1 | 981.84 | 1921.06 | 988 | 1921.03 |
| 1116.3 | 1920.52 | 1117.26 | 1920.52 | 1131 | 1920.47 | 1134.31 | 1920.45 | 1136.49 | 1920.45 |
| 1143.74 | 1920.42 | 1147.4 | 1920.45 | 1156.64 | 1920.54 | 1201.16 | 1920.99 | 1201.62 | 1921 |
| 1211.56 | 1921 | 1223.48 | 1920.05 | 1224.07 | 1920 | 1274.28 | 1920 | 1277.84 | 1920.07 |
| 1288.23 | 1920.18 | 1296.81 | 1920.23 | 1298.27 | 1920.25 | 1312.77 | 1920.27 | 1316.41 | 1920.31 |
| 1323.61 | 1920.25 | 1327.39 | 1920.29 | 1336.33 | 1920.21 | 1339.39 | 1920.24 | 1350.11 | 1920.1 |
| 1350.79 | 1920.11 | 1358.08 | 1920 | 1367.09 | 1920 | 1376.35 | 1919.99 | 1445.85 | 1919.99 |
| 1452.45 | 1919.76 | 1455.46 | 1919.73 | 1459.65 | 1919.67 | 1476.79 | 1919.36 | 1496.01 | 1919.01 |
| 1498.55 | 1919 | 1503.83 | 1919 | 1507.15 | 1918.97 | 1514.53 | 1918.89 | 1520.84 | 1918.83 |
| 1521.38 | 1918.82 | 1554.71 | 1918.5 | 1564.6 | 1918.43 | 1577.69 | 1918.36 | 1585.33 | 1918.34 |
| 1605.61 | 1918.4 | 1633.6 | 1918.47 | 1634.58 | 1918.47 | 1640.5 | 1918.51 | 1647.11 | 1918.57 |
| 1655.19 | 1918.63 | 1657.94 | 1918.64 | 1669.09 | 1918.73 | 1688.83 | 1918.9 | 1690.97 | 1918.91 |
| 1699.51 | 1919 | 1948.64 | 1919 | 1979.79 | 1918.05 | 1981.58 | 1918 | 1987.25 | 1916 |
| 1990.71 | 1915 | 1992.9 | 1914.38 | 1994.17 | 1914 | 1995.34 | 1914.04 | 2002.78 | 1914.58 |
| 2002.95 | 1914.58 | 2005.97 | 1914.81 | 2019.67 | 1914.9 | 2024.67 | 1914.96 | 2031.84 | 1915 |
| 2036.54 | 1915.21 | 2041 | 1915.44 | 2052.94 | 1916 | 2056.78 | 1916.19 | 2067.67 | 1917 |
| 2087.63 | 1918 | 2089.18 | 1918.01 | 2111.03 | 1918.11 | 2122.89 | 1918.13 | 2142.97 | 1918.17 |
| 2166.32 | 1918.09 | 2175.55 | 1918.07 | 2180.85 | 1918.05 | 2195.91 | 1918.03 | 2198.79 | 1918 |
| 2205.33 | 1917.83 | 2213.78 | 1917.67 | 2226.01 | 1917.37 | 2234.76 | 1917.18 | 2237.75 | 1917.13 |
| 2243.98 | 1917.07 | 2254.07 | 1917 | 2262.14 | 1917 | 2273.34 | 1917.13 | 2281.58 | 1917.22 |
| 2285.68 | 1917.29 | 2294.04 | 1917.46 | 2294.5 | 1917.46 | 2298.83 | 1917.53 | 2309.25 | 1917.72 |
| 2319.77 | 1917.85 | 2326.61 | 1917.93 | 2327.99 | 1917.95 | 2330.78 | 1917.97 | 2333.6 | 1918 |
| 2410.01 | 1918 | 2429.07 | 1918.11 | 2451.89 | 1918.09 | 2468.62 | 1918.05 | 2485.37 | 1918 |
| 2486.22 | 1917.99 | 2490.57 | 1917.99 | 2504.1 | 1917.98 | 2508.52 | 1917.98 | 2513.92 | 1917.97 |
| 2523.54 | 1917.97 | 2529.44 | 1917.96 | 2536.39 | 1917.96 | 2543.55 | 1917.95 | 2555.78 | 1917.97 |
| 2564.21 | 1917.99 | 2570.48 | 1917.99 | 2571.63 | 1918 | 2577.47 | 1918 | 2591.25 | 1918.13 |
| 2593.21 | 1918.16 | 2601.65 | 1918.36 | 2627 | 1918.99 | 2634.66 | 1918.99 | 2638.81 | 1919 |
| 2649.48 | 1918.78 | 2650.96 | 1918.77 | 2661.63 | 1918.68 | 2670.2 | 1918.62 | 2670.76 | 1918.62 |
| 2677.73 | 1918.58 | 2684.29 | 1918.56 | 2687.14 | 1918.52 | 2695.72 | 1918.49 | 2696.7 | 1918.48 |
| 2699.89 | 1918.47 | 2700 | 1918.46 | 2721.41 | 1918.29 | 2731.26 | 1918.21 | 2761.68 | 1918.15 |
| 2796.33 | 1918 | 2799.92 | 1918 | 2803.27 | 1917.89 | 2818.35 | 1917.5 | 2818.85 | 1917.49 |
| 2827.97 | 1917.38 | 2833.87 | 1917.25 | 2834.98 | 1917.24 | 2848.72 | 1917.01 | 2849.48 | 1917 |
| 2892.03 | 1917 | 2893.99 | 1917.02 | 2898.17 | 1917.05 | 2913.21 | 1917.18 | 3012.07 | 1918 |
| 3068.26 | 1918 | 3068.95 | 1918.36 | 3069.79 | 1919 | 3071.21 | 1919.8 | 3073.43 | 1921.03 |
| 3075.24 | 1922 | 3077.06 | 1923 | 3077.96 | 1923.53 | 3078.87 | 1924 | 3080.86 | 1925.2 |
| 3081.22 | 1925.36 | 3083.02 | 1926.31 | 3083.38 | 1926.47 | 3084.93 | 1927 | 3088.48 | 1927 |
| 3090.61 | 1926.57 | 3092.86 | 1926.06 | 3093.48 | 1925.96 | 3095.77 | 1925.68 | 3096.2 | 1925.59 |
| 3097.15 | 1925.45 | 3098.29 | 1925.24 | 3099.72 | 1924.95 | 3101.59 | 1924.53 | 3103.37 | 1924.11 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3107.55 | 1923 | 3111.24 | 1922 | 3113.86 | 1921.32 | 3115.03 | 1921 | 3116.93 | 1920.56 |
| 3118.97 | 1920 | 3120.89 | 1919.37 | 3121.66 | 1919.49 | 3122.27 | 1919.34 | 3122.61 | 1919.39 |
| 3122.78 | 1919.34 | 3141.25 | 1919.43 | 3175.15 | 1919.91 | 3181.62 | 1919.98 | 3188.78 | 1920 |
| 3198.5 | 1920.71 | 3202.83 | 1921 | 3208.97 | 1921.49 | 3215.27 | 1922 | 3218.95 | 1922.18 |
| 3222.59 | 1922.32 | 3224.92 | 1922.38 | 3228.65 | 1922.49 | 3231.74 | 1922.57 | 3236.05 | 1922.67 |
| 3239.12 | 1922.73 | 3242.01 | 1922.69 | 3247.59 | 1922.44 | 3253.6 | 1922 | 3267.99 | 1921.02 |
| 3268.67 | 1920.98 | 3283.84 | 1920 | 3284.55 | 1919.99 | 3309.69 | 1919.94 | 3323.63 | 1919.92 |
| 3335.96 | 1919.9 | 3367.79 | 1919.96 | 3369.14 | 1919.96 | 3387.72 | 1920 | 3389.32 | 1920.02 |
| 3403.87 | 1920.23 | 3415.55 | 1920.37 | 3423.69 | 1920.46 | 3428.9 | 1920.51 | 3450.41 | 1920.98 |
| 3451.49 | 1921 | 3477.32 | 1921 | 3482.79 | 1920.92 | 3499.1 | 1920.62 | 3507.55 | 1920.37 |
| 3519.74 | 1920 | 3524.34 | 1920 | 3526.71 | 1919.95 | 3532.2 | 1919.86 | 3537.35 | 1919.76 |
| 3540.81 | 1919.71 | 3569.1 | 1919.21 | 3574.24 | 1919.13 | 3577.83 | 1919.1 | 3582.49 | 1919.09 |
| 3584.15 | 1919.07 | 3586.52 | 1919.07 | 3589.68 | 1919.16 | 3591.16 | 1919.15 | 3592.16 | 1919.16 |
| 3593.42 | 1919.2 | 3609.1 | 1920 | 3615.94 | 1920.68 | 3621.35 | 1921.21 | 3622.49 | 1921.31 |
| 3627.67 | 1921.79 | 3630.07 | 1922 | 3637.79 | 1922.01 | 3640.45 | 1922.01 | 3647.22 | 1922.09 |
| 3649.06 | 1922 | 3658.22 | 1921.5 | 3660.43 | 1921.46 | 3671.79 | 1921.13 | 3674.46 | 1921.12 |
| 3679.38 | 1921.08 | 3684.31 | 1921 | 3743.54 | 1921 | 3744.92 | 1921.08 | 3758.74 | 1922 |
| 3768.53 | 1922 | 3774.15 | 1921.73 | 3778.52 | 1921.57 | 3781.38 | 1921.48 | 3784 | 1921.36 |
| 3787.72 | 1921.32 | 3789.29 | 1921.28 | 3792.95 | 1921 | 3817.68 | 1921 | 3818.43 | 1921.06 |
| 3831.01 | 1922 | 3836.77 | 1922.35 | 3838.13 | 1922.36 | 3839.29 | 1922.42 | 3847.81 | 1922.51 |
| 3858.78 | 1922.7 | 3863.78 | 1922.78 | 3864.22 | 1922.77 | 3869.35 | 1922.8 | 3870.6 | 1922.77 |
| 3872.49 | 1922.64 | 3880.19 | 1922.07 | 3880.94 | 1922 | 3888.05 | 1921.21 | 3890.05 | 1921 |
| 3897.64 | 1920.45 | 3905.16 | 1920 | 3931.99 | 1919.94 | 3935.65 | 1919.94 | 3965 | 1919.98 |
| 3970.72 | 1919.99 | 3970.89 | 1920 | 3977.6 | 1920.54 | 3981.56 | 1921 | 3988.46 | 1921.77 |
| 3990.73 | 1922 | 3994.8 | 1922.14 | 4013 | 1922.27 | 4013.37 | 1922.26 | 4014.8 | 1922.29 |
| 4016.74 | 1922.35 | 4018.3 | 1922.34 | 4022.48 | 1922.24 | 4027.42 | 1922.02 | 4028.3 | 1922 |
| 4029.72 | 1921.92 | 4033.2 | 1921.68 | 4041.89 | 1921.1 | 4043.34 | 1921 | 4046.61 | 1921 |
| 4053.92 | 1920.99 | 4058.68 | 1921 | 4066.08 | 1921 | 4074.46 | 1921.34 | 4083.82 | 1921.54 |
| 4084.24 | 1921.53 | 4091.97 | 1921.47 | 4102.38 | 1921.37 | 4105.46 | 1921.33 | 4116.26 | 1921.05 |
| 4120.32 | 1921 | 4122.42 | 1920.91 | 4128.57 | 1920.59 | 4130.48 | 1920.5 | 4132.85 | 1920.41 |
| 4133.47 | 1920.37 | 4138.23 | 1920.18 | 4138.46 | 1920.18 | 4144.33 | 1920 | 4147.92 | 1920 |
| 4155.32 | 1919.99 | 4170.68 | 1919.99 | 4171.11 | 1919.98 | 4179.56 | 1919.98 | 4181.71 | 1919.97 |
| 4210.98 | 1919.51 | 4211.37 | 1919.5 | 4225.75 | 1919.33 | 4229.62 | 1919.29 | 4232.49 | 1919.25 |
| 4254.67 | 1919 | 4267.8 | 1919 | 4277.14 | 1919.02 | 4290.22 | 1919.02 | 4307.35 | 1919.04 |
| 4308.88 | 1919.07 | 4310.32 | 1919.07 | 4313.07 | 1919.11 | 4315.77 | 1919.18 | 4319.53 | 1919.23 |
| 4333.94 | 1919.67 | 4338.9 | 1919.78 | 4342.59 | 1919.87 | 4345.17 | 1920 | 4350.41 | 1920.35 |
| 4360.4 | 1921 | 4364.39 | 1921.03 | 4376.56 | 1921.4 | 4384.91 | 1921.56 | 4385.98 | 1921.56 |
| 4389.64 | 1921.8 | 4392.38 | 1922 | 4393.18 | 1922 | 4399.06 | 1922.18 | 4405.92 | 1922.5 |
| 4420.32 | 1923 | 4494.94 | 1923 | 4501.97 | 1922.37 | 4503.29 | 1922.24 | 4505.91 | 1922 |
| 4517.06 | 1921 | 4524.48 | 1920.34 | 4529.03 | 1920 | 4535.28 | 1919.9 | 4537.75 | 1919.93 |
| 4541.2 | 1919.96 | 4543.4 | 1920 | 4546.44 | 1920.77 | 4551.25 | 1922 | 4553.54 | 1922.6 |
| 4555.12 | 1923 | 4557.26 | 1923.56 | 4558.05 | 1923.75 | 4559.21 | 1924 | 4562.85 | 1924.62 |
| 4565.02 | 1925 | 4568.66 | 1925.45 | 4569.84 | 1925.56 | 4573.55 | 1926 | 4575.65 | 1926.04 |
| 4577.75 | 1926 | 4579.4 | 1925.37 | 4580.21 | 1925 | 4582.8 | 1924 | 4584.66 | 1923.31 |
| 4588.79 | 1921.69 | 4590.77 | 1921 | 4593.35 | 1920 | 4596.05 | 1919 | 4598.86 | 1918.98 |
| 4604.54 | 1918.98 | 4608.72 | 1918.69 | 4609.48 | 1918.67 | 4619.74 | 1918 | 4622.29 | 1917.88 |
| 4625.9 | 1917.78 | 4634.86 | 1917.48 | 4635.99 | 1917.43 | 4651.31 | 1917 | 4701.16 | 1917 |
| 4734.13 | 1917.3 | 4758.66 | 1917.51 | 4766.37 | 1917.57 | 4781.15 | 1917.7 | 4808.55 | 1918 |
| 4816.73 | 1918 | 4826.56 | 1918.07 | 4943.14 | 1919 | 5290.89 | 1919 | 5292.8 | 1919.12 |
| 5295.35 | 1919.33 | 5299.3 | 1919.64 | 5303.51 | 1920 | 5310.92 | 1921 | 5311.42 | 1921.18 |
| 5312.99 | 1922 | 5313.46 | 1922.81 | 5313.64 | 1923 | 5314.05 | 1923.6 | 5314.25 | 1924 |
| 5314.63 | 1924.37 | 5315.17 | 1925 | 5315.81 | 1926 | 5315.96 | 1926.38 | 5316.5 | 1927.58 |
| 5317.16 | 1928.97 | 5317.71 | 1930 | 5319.21 | 1933 | 5320.73 | 1936 | 5321.26 | 1937 |
| 5325.96 | 1937.01 | 5332.85 | 1937.02 | 5340.46 | 1937.01 | 5344.5 | 1937 | 5356.82 | 1937 |
| 5363.15 | 1937.09 | 5370.51 | 1937.19 | 5373.08 | 1937.21 | 5374.84 | 1937.26 | 5378.27 | 1937.22 |
| 5381.05 | 1937.21 | 5385.98 | 1937.3 | 5409.49 | 1937.37 | 5428.9 | 1937.42 | 5431.9 | 1937.4 |
| 5443.49 | 1937.26 | 5444.7 | 1937.24 | 5448.23 | 1937.22 | 5449.99 | 1937.2 | 5455.66 | 1937.16 |
| 5456.85 | 1937.16 | 5470.47 | 1937.09 | 5478.91 | 1937.06 | 5479.94 | 1937.05 | 5491.53 | 1937 |
| 5502.47 | 1937 | 5508.91 | 1936.9 | 5523.7 | 1936.81 | 5526.54 | 1936.79 | 5536.31 | 1936.66 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5536.31 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5536.31 | 291.82 | 291.82 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1921.18 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.12 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1921.06 | Reach Len. (ft) | 291.82 | 291.82 | 291.82 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7903.91 | | |
| E.G. Slope (ft/ft) | 0.002150 | Area (sq ft) | | 7903.91 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3741.65 | Top Width (ft) | | 3741.65 | | |
| Vel Total (ft/s) | 2.83 | Avg. Vel. (ft/s) | | 2.83 | | |
| Max Chl Dpth (ft) | 7.06 | Hydr. Depth (ft) | | 2.11 | | |
| Conv. Total (cfs) | 483124.7 | Conv. (cfs) | | 483124.7 | | |
| Length Wtd. (ft) | 291.82 | Wetted Per. (ft) | | 3744.72 | | |
| Min Ch El (ft) | 1914.00 | Shear (lb/sq ft) | | 0.28 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5536.31 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.59 | Cum Volume (acre-ft) | | 1168.66 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 539.00 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -13159.9

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1923.53 | 512.19 | 1921.8 | 987.57 | 1920.03 | 1016.07 | 1920.02 | 1037.42 | 1920 |
| 1039.67 | 1920 | 1058.2 | 1919.97 | 1061.16 | 1919.97 | 1112.86 | 1919.85 | 1125.44 | 1919.82 |
| 1127.87 | 1919.82 | 1171.67 | 1919.77 | 1187.45 | 1919.76 | 1190.87 | 1919.73 | 1199.91 | 1919.8 |
| 1207.76 | 1919.81 | 1215.66 | 1919.81 | 1217.25 | 1919.79 | 1219.16 | 1919.77 | 1229.38 | 1919.79 |
| 1232.99 | 1919.79 | 1233.18 | 1919.8 | 1244.24 | 1919.72 | 1247.63 | 1919.72 | 1252.17 | 1919.69 |
| 1275.54 | 1919.69 | 1299.52 | 1919.71 | 1301.83 | 1919.71 | 1302.54 | 1919.7 | 1315.68 | 1919.8 |
| 1322.3 | 1919.85 | 1336.78 | 1919.82 | 1350.42 | 1919.8 | 1353.17 | 1919.8 | 1401.18 | 1919.98 |
| 1427.75 | 1919.98 | 1512.25 | 1919.26 | 1539.29 | 1919.03 | 1540.63 | 1919 | 1541.11 | 1919 |
| 1548.87 | 1918.9 | 1580.43 | 1918.53 | 1606.51 | 1918.26 | 1613.45 | 1918.18 | 1616.24 | 1918.15 |
| 1616.86 | 1918.14 | 1631.56 | 1918 | 1746.09 | 1918 | 1768.52 | 1918.01 | 1774.9 | 1918.01 |
| 1795.04 | 1918 | 1883.76 | 1918 | 1894.55 | 1918.25 | 1897.17 | 1918.26 | 1902.74 | 1918.36 |
| 1907.07 | 1918.42 | 1907.49 | 1918.43 | 1909.11 | 1918.43 | 1915.37 | 1918.53 | 1915.83 | 1918.52 |
| 1918.22 | 1918.56 | 1920.73 | 1918.59 | 1943.7 | 1918.52 | 1982.29 | 1918.32 | 1983.01 | 1918.31 |
| 1983.85 | 1918.31 | 1998.42 | 1918.13 | 1999.78 | 1918.12 | 2009.66 | 1918 | 2014.94 | 1916.5 |
| 2016.67 | 1916 | 2020.11 | 1915.14 | 2021.11 | 1914.88 | 2024.6 | 1914 | 2035.3 | 1914 |
| 2044.7 | 1914.39 | 2045.88 | 1914.41 | 2064.36 | 1914.86 | 2069.41 | 1914.99 | 2073.05 | 1914.99 |
| 2074.16 | 1915 | 2076.83 | 1915 | 2080.57 | 1915.29 | 2086.82 | 1915.77 | 2088.04 | 1915.86 |
| 2089.77 | 1916 | 2090.68 | 1916.03 | 2099.64 | 1916.37 | 2114.14 | 1916.79 | 2115.08 | 1916.82 |
| 2121.47 | 1917 | 2191.29 | 1917 | 2194.2 | 1916.96 | 2194.7 | 1916.95 | 2203.98 | 1916.78 |
| 2204.26 | 1916.77 | 2207.09 | 1916.71 | 2207.94 | 1916.69 | 2209.02 | 1916.68 | 2209.3 | 1916.69 |
| 2209.85 | 1916.67 | 2210.4 | 1916.68 | 2211.55 | 1916.63 | 2212.26 | 1916.65 | 2215.03 | 1916.52 |
| 2246.49 | 1916.68 | 2306.49 | 1917 | 2537.14 | 1917 | 2569.37 | 1917.01 | 2576.24 | 1917.01 |
| 2632.44 | 1917.24 | 2633.76 | 1917.22 | 2634.52 | 1917.22 | 2637.1 | 1917.23 | 2638.46 | 1917.22 |
| 2643.13 | 1917.19 | 2644.9 | 1917.2 | 2645.72 | 1917.2 | 2656.48 | 1917.1 | 2664.72 | 1917.01 |
| 2666.5 | 1917 | 2934.21 | 1917 | 2935.78 | 1917.1 | 2936.02 | 1917.11 | 2949.59 | 1918 |
| 2954.04 | 1918.3 | 2954.66 | 1918.29 | 2959.11 | 1918.52 | 2960.63 | 1918.49 | 2965.61 | 1918.61 |
| 2968.94 | 1918.66 | 2974.4 | 1918.64 | 2981.3 | 1918.56 | 3002 | 1918.58 | 3005.87 | 1918.66 |
| 3010.89 | 1918.75 | 3011.11 | 1918.75 | 3017.15 | 1918.96 | 3019.1 | 1919 | 3053.93 | 1919 |
| 3061.81 | 1919.17 | 3063.19 | 1919.21 | 3069.07 | 1919.4 | 3069.72 | 1919.42 | 3076.33 | 1919.64 |
| 3076.81 | 1919.66 | 3078.1 | 1919.7 | 3080.99 | 1919.8 | 3082.75 | 1919.83 | 3085.68 | 1919.93 |
| 3086.42 | 1919.96 | 3087.64 | 1919.95 | 3088.84 | 1919.95 | 3090.56 | 1919.94 | 3093.57 | 1919.91 |
| 3104.2 | 1919.56 | 3104.94 | 1919.54 | 3112.99 | 1919.38 | 3113.77 | 1919.34 | 3115.4 | 1919.27 |
| 3118.81 | 1919.12 | 3120.95 | 1919.07 | 3121.83 | 1919 | 3449.21 | 1919 | 3453.16 | 1919.02 |
| 3454 | 1919.03 | 3459.62 | 1919.01 | 3463.74 | 1919.01 | 3483.57 | 1919.03 | 3515.88 | 1919.03 |
| 3528.44 | 1919.04 | 3566.67 | 1919.02 | 3589.88 | 1919 | 3602.05 | 1919 | 3609.05 | 1918.99 |
| 3612.03 | 1918.99 | 3629.69 | 1919 | 3637.69 | 1919 | 3649.43 | 1919.54 | 3652.42 | 1919.67 |
| 3654.12 | 1919.76 | 3655.28 | 1919.8 | 3656.47 | 1919.85 | 3656.96 | 1919.86 | 3657.4 | 1919.88 |
| 3658.15 | 1919.9 | 3659.62 | 1919.9 | 3659.73 | 1919.91 | 3660.75 | 1919.95 | 3661.12 | 1919.97 |
| 3662.41 | 1919.96 | 3664.36 | 1919.99 | 3665.52 | 1920 | 3704.98 | 1920 | 3708.15 | 1920.01 |
| 3710.47 | 1920.01 | 3711.3 | 1920 | 3717.29 | 1920 | 3719.15 | 1920.01 | 3719.89 | 1920 |
| 3720.98 | 1920 | 3734.13 | 1920.06 | 3739.47 | 1920.04 | 3744.61 | 1920 | 3747.68 | 1920 |
| 3748.84 | 1920.07 | 3752.21 | 1920.26 | 3755.43 | 1920.45 | 3757.98 | 1920.61 | 3764.32 | 1921 |
| 3780.8 | 1921.95 | 3781.78 | 1922 | 3787.09 | 1922.22 | 3791.23 | 1922.38 | 3792.67 | 1922.44 |
| 3793.89 | 1922.48 | 3810.37 | 1923 | 3812.76 | 1923.01 | 3813.65 | 1923.02 | 3844.38 | 1923.78 |
| 3849.4 | 1923.85 | 3852.98 | 1924 | 3863.35 | 1924.86 | 3864.71 | 1925 | 3888.11 | 1925 |
| 3891.84 | 1924.62 | 3897.47 | 1924 | 3901.93 | 1923.51 | 3906.45 | 1923 | 3911.55 | 1922.44 |
| 3915.24 | 1922 | 3918.86 | 1921.58 | 3926.18 | 1921 | 3928.18 | 1921 | 3930.69 | 1920.99 |
| 3932.28 | 1921 | 3957.55 | 1921.71 | 3959.62 | 1921.76 | 3961.9 | 1921.82 | 3964.3 | 1921.89 |
| 3965.94 | 1921.93 | 3968.09 | 1921.96 | 3968.58 | 1921.95 | 3968.96 | 1921.96 | 3970.07 | 1921.94 |
| 3972.38 | 1921.91 | 3977.61 | 1921.86 | 3978.14 | 1921.84 | 3983.11 | 1921.69 | 4002.12 | 1921.03 |
| 4003.38 | 1921.02 | 4004.85 | 1921 | 4016.82 | 1920.11 | 4018.25 | 1920 | 4019.18 | 1919.96 |
| 4036.51 | 1919 | 4082.35 | 1919 | 4084.28 | 1919.11 | 4084.54 | 1919.12 | 4085.19 | 1919.11 |
| 4088.42 | 1919.17 | 4109.07 | 1919.72 | 4117.47 | 1920 | 4120.89 | 1920 | 4130.95 | 1920.01 |
| 4136.57 | 1920.01 | 4140.61 | 1920 | 4151.04 | 1920 | 4153.17 | 1919.92 | 4155.93 | 1919.8 |
| 4169.8 | 1919.22 | 4174.32 | 1919 | 4190.03 | 1919 | 4192.21 | 1919.17 | 4192.75 | 1919.22 |
| 4193.85 | 1919.31 | 4197.04 | 1919.59 | 4199.37 | 1919.78 | 4201.9 | 1920 | 4202.17 | 1920 |
| 4223.75 | 1920.62 | 4236.72 | 1921 | 4237.37 | 1921 | 4238.07 | 1921.01 | 4240.99 | 1921.15 |
| 4247.01 | 1921.41 | 4255.39 | 1921.6 | 4256.15 | 1921.63 | 4258.37 | 1921.67 | 4259.24 | 1921.7 |
| 4259.51 | 1921.7 | 4260.15 | 1921.73 | 4271.68 | 1921.85 | 4273.66 | 1921.9 | 4279.82 | 1921.95 |
| 4282.4 | 1922 | 4282.96 | 1922 | 4283.78 | 1922.03 | 4308.04 | 1922.95 | 4308.94 | 1922.98 |
| 4310.04 | 1922.99 | 4310.73 | 1922.99 | 4311.25 | 1923 | 4311.83 | 1922.99 | 4312.79 | 1922.92 |
| 4314.5 | 1922.81 | 4324.09 | 1922 | 4326.09 | 1921.82 | 4334.5 | 1921 | 4336.74 | 1920.89 |
| 4337.52 | 1920.86 | 4338.25 | 1920.84 | 4346.8 | 1920.81 | 4354.71 | 1920.97 | 4356.69 | 1920.99 |
| 4357.3 | 1921.02 | 4358.07 | 1921.01 | 4363.99 | 1921.09 | 4365.99 | 1921.08 | 4370.8 | 1921 |
| 4419.05 | 1921 | 4421.68 | 1921.2 | 4425.53 | 1921.47 | 4426.46 | 1921.56 | 4429.15 | 1921.86 |
| 4429.37 | 1921.88 | 4430.41 | 1922 | 4430.55 | 1922 | 4431 | 1922.04 | 4432.09 | 1922.12 |
| 4434.51 | 1922.24 | 4436.02 | 1922.29 | 4443.59 | 1922.6 | 4445.87 | 1922.62 | 4446.67 | 1922.62 |
| 4447.4 | 1922.61 | 4447.43 | 1922.62 | 4448.38 | 1922.59 | 4449.52 | 1922.66 | 4450.33 | 1922.7 |
| 4454.29 | 1922.64 | 4462.58 | 1922.38 | 4463.99 | 1922.33 | 4470.14 | 1922 | 4481.26 | 1921.2 |
| 4484.28 | 1921 | 4489.1 | 1920.66 | 4490.69 | 1920.57 | 4492.19 | 1920.49 | 4496.56 | 1920.2 |
| 4501.77 | 1920 | 4512.6 | 1919.56 | 4522.1 | 1919 | 4524.83 | 1918.86 | 4540.59 | 1918 |
| 4541.2 | 1917.92 | 4548.75 | 1917 | 4556.83 | 1916.04 | 4557.21 | 1916 | 4609.53 | 1916 |
| 4610.94 | 1916.01 | 4611.6 | 1916.02 | 4612.94 | 1916.02 | 4616.93 | 1916.05 | 4634.68 | 1916.19 |
| 4639.96 | 1916.22 | 4648.21 | 1916.28 | 4654.4 | 1916.36 | 4655.66 | 1916.37 | 4666.85 | 1916.52 |
| 4667.23 | 1916.52 | 4692.41 | 1916.87 | 4692.56 | 1916.87 | 4695.67 | 1916.92 | 4699.11 | 1916.97 |
| 4699.35 | 1916.97 | 4701.47 | 1917 | 4702.46 | 1917 | 4704.25 | 1917.01 | 4739.01 | 1917.26 |
| 4747.06 | 1917.33 | 4755 | 1917.39 | 4778.28 | 1917.58 | 4781.07 | 1917.6 | 4783.05 | 1917.62 |
| 4793.31 | 1917.7 | 4797.94 | 1917.73 | 4799.46 | 1917.75 | 4802.89 | 1917.77 | 4804.39 | 1917.79 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4813.75 | 1917.87 | 4817.97 | 1917.9 | 4823.29 | 1917.94 | 4825.77 | 1917.96 | 4826.98 | 1917.96 |
| 4834.61 | 1918 | 4841.58 | 1918 | 4862.55 | 1918.13 | 4862.75 | 1918.13 | 4869.15 | 1918.17 |
| 4870.99 | 1918.18 | 4881.97 | 1918.28 | 4916.02 | 1918.57 | 4918.65 | 1918.59 | 4920.41 | 1918.61 |
| 4922.15 | 1918.62 | 4924.58 | 1918.65 | 4939.8 | 1918.77 | 4947.36 | 1918.82 | 4950.08 | 1918.84 |
| 4951.35 | 1918.86 | 4953.28 | 1918.87 | 4955.26 | 1918.89 | 4968.74 | 1919 | 5191.78 | 1919 |
| 5196.36 | 1918.91 | 5212.33 | 1918.58 | 5214.56 | 1918.53 | 5221.12 | 1918.37 | 5221.68 | 1918.35 |
| 5224.12 | 1918.28 | 5233.42 | 1918 | 5255.44 | 1917.54 | 5262.26 | 1917.41 | 5264.14 | 1917.37 |
| 5279.95 | 1917.02 | 5281.51 | 1917.02 | 5281.57 | 1917.01 | 5288.84 | 1917.01 | 5290.62 | 1917 |
| 5304.17 | 1917 | 5314.23 | 1917.37 | 5327.95 | 1917.64 | 5335.5 | 1917.8 | 5344.52 | 1918 |
| 5344.66 | 1918 | 5347.31 | 1918.17 | 5356.89 | 1918.82 | 5359.03 | 1919 | 5369.8 | 1919.82 |
| 5372.09 | 1920 | 5372.2 | 1921.01 | 5372.51 | 1922 | 5372.83 | 1923 | 5373.13 | 1923.96 |
| 5373.47 | 1925 | 5373.79 | 1926 | 5374.13 | 1927 | 5374.39 | 1927.82 | 5374.71 | 1928.75 |
| 5375.4 | 1930 | 5375.59 | 1930.33 | 5376.01 | 1931 | 5376.34 | 1931.58 | 5376.54 | 1932 |
| 5376.94 | 1932.71 | 5377.09 | 1933 | 5377.66 | 1934 | 5378.32 | 1935.14 | 5378.56 | 1936 |
| 5378.9 | 1937 | 5379.2 | 1938 | 5379.49 | 1939 | 5396.89 | 1939 | 5401.6 | 1938.99 |
| 5403.32 | 1938.98 | 5404.77 | 1938.99 | 5409.68 | 1939 | 5418.79 | 1939.47 | 5431.74 | 1940 |
| 5435.92 | 1940.01 | 5446.76 | 1940.01 | 5455.85 | 1940.02 | 5485 | 1940.02 | 5496.52 | 1940.03 |
| 5510.81 | 1940.01 | 5511.94 | 1940.01 | 5518.02 | 1940.07 | 5518.93 | 1940.08 | 5519.84 | 1940.08 |
| 5526.58 | 1940.04 | 5528.35 | 1940.07 | 5530.45 | 1940.05 | 5531.11 | 1940.07 | 5532.03 | 1940.06 |
| 5532.1 | 1940.07 | 5533.32 | 1940.07 | 5546.07 | 1940.12 | 5546.4 | 1940.13 | 5552.76 | 1940.16 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5552.76 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5552.76 | 329.18 | 329.18 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1920.60 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.11 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1920.49 | Reach Len. (ft) | 329.18 | 329.18 | 329.18 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8428.11 | | |
| E.G. Slope (ft/ft) | 0.001882 | Area (sq ft) | | 8428.11 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3978.06 | Top Width (ft) | | 3978.06 | | |
| Vel Total (ft/s) | 2.66 | Avg. Vel. (ft/s) | | 2.66 | | |
| Max Chl Dpth (ft) | 6.49 | Hydr. Depth (ft) | | 2.12 | | |
| Conv. Total (cfs) | 516320.0 | Conv. (cfs) | | 516320.0 | | |
| Length Wtd. (ft) | 329.18 | Wetted Per. (ft) | | 3979.69 | | |
| Min Ch El (ft) | 1914.00 | Shear (lb/sq ft) | | 0.25 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5552.76 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.72 | Cum Volume (acre-ft) | | 1113.95 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 513.14 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -13489.0

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1922.49 | 5.13 | 1922.46 | 53.19 | 1922.23 | 62.6 | 1922.17 | 87.35 | 1922 |
| 108.58 | 1921.86 | 602.29 | 1920.09 | 633.9 | 1920.09 | 647.44 | 1920.08 | 654.48 | 1920.08 |
| 682.15 | 1920.07 | 731.09 | 1920.04 | 740.61 | 1920.04 | 770.69 | 1920.02 | 777.44 | 1920.01 |
| 791.26 | 1920.01 | 794.07 | 1920 | 799.02 | 1920 | 897.37 | 1919.91 | 917.48 | 1919.89 |
| 929.16 | 1919.88 | 945.77 | 1919.86 | 965.23 | 1919.84 | 1119.41 | 1919.7 | 1123.15 | 1919.69 |
| 1132.46 | 1919.68 | 1161 | 1919.66 | 1163.55 | 1919.33 | 1164.64 | 1919.01 | 1175.17 | 1919 |
| 1190.57 | 1919 | 1192.28 | 1918.99 | 1198.8 | 1918.99 | 1200.65 | 1918.98 | 1206.24 | 1918.98 |
| 1225.96 | 1918.96 | 1229.23 | 1918.96 | 1235.63 | 1918.95 | 1277.51 | 1918.94 | 1311.32 | 1918.94 |
| 1330.5 | 1918.96 | 1334.33 | 1918.96 | 1342.3 | 1918.97 | 1347.32 | 1918.97 | 1350.68 | 1918.98 |
| 1364.67 | 1918.98 | 1376.44 | 1919 | 1390.96 | 1919 | 1440.43 | 1919.01 | 1493.99 | 1919.01 |
| 1506.6 | 1919 | 1558.37 | 1919 | 1558.61 | 1918.99 | 1566.47 | 1918.8 | 1570.06 | 1918.7 |
| 1583.93 | 1918.32 | 1594.86 | 1918 | 1594.94 | 1918 | 1606.73 | 1917.61 | 1625.25 | 1917 |
| 1783.95 | 1917 | 1796.35 | 1917.12 | 1796.74 | 1917.13 | 1822.42 | 1917.34 | 1823.22 | 1917.35 |
| 1839.29 | 1917.48 | 1847.35 | 1917.54 | 1868.6 | 1917.66 | 1876.88 | 1917.71 | 1886.43 | 1917.78 |
| 1907.32 | 1917.88 | 1924.82 | 1917.86 | 1928.04 | 1917.9 | 1928.92 | 1917.9 | 1931.8 | 1917.83 |
| 1933.67 | 1917.83 | 1936.86 | 1917.74 | 1948.17 | 1917.65 | 1951.99 | 1917.69 | 1956.61 | 1917.79 |
| 1959.09 | 1917.42 | 1959.77 | 1917.41 | 1961.83 | 1917 | 1964.91 | 1916.4 | 1965.6 | 1916.28 |
| 1968.31 | 1915.76 | 1969.47 | 1915.47 | 1970.67 | 1915 | 1972.93 | 1914.68 | 1974.85 | 1914 |
| 1984.54 | 1913.99 | 1996.12 | 1913.99 | 1998.28 | 1914 | 2003.55 | 1914 | 2022.03 | 1914.8 |
| 2031.45 | 1915.18 | 2033.53 | 1915.25 | 2040.5 | 1915.51 | 2043.9 | 1915.64 | 2048.4 | 1915.78 |
| 2054.86 | 1915.99 | 2055.83 | 1916 | 2059.21 | 1916 | 2087.55 | 1916.35 | 2094.25 | 1916.43 |
| 2139.32 | 1917 | 2211.45 | 1917 | 2218.34 | 1916.99 | 2220.89 | 1916.99 | 2229.45 | 1917 |
| 2255.79 | 1917 | 2260.14 | 1916.99 | 2266.03 | 1916.92 | 2267.93 | 1916.88 | 2275.15 | 1916.76 |
| 2278.51 | 1916.69 | 2283.13 | 1916.62 | 2284.59 | 1916.59 | 2298.36 | 1916.36 | 2321 | 1916 |
| 2333.76 | 1916 | 2335.35 | 1915.99 | 2348.17 | 1915.99 | 2397.52 | 1915.97 | 2411.91 | 1915.98 |
| 2413.83 | 1915.98 | 2427.34 | 1915.97 | 2431.36 | 1915.97 | 2443.16 | 1915.95 | 2467.42 | 1915.95 |
| 2470.09 | 1915.96 | 2475.66 | 1915.96 | 2485.42 | 1915.97 | 2492.79 | 1915.97 | 2505.6 | 1916 |
| 2509.55 | 1916.12 | 2522.25 | 1916.54 | 2532.85 | 1917 | 2548.38 | 1917 | 2552.14 | 1916.92 |
| 2557.02 | 1916.77 | 2558.24 | 1916.72 | 2564.52 | 1916.55 | 2572.63 | 1916.34 | 2576.82 | 1916.29 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2578.68 | 1916.23 | 2580.64 | 1916.19 | 2583.17 | 1916.16 | 2589.9 | 1916.14 | 2592.06 | 1916.11 |
| 2594.58 | 1916.06 | 2596.48 | 1916 | 2621.14 | 1916 | 2628.64 | 1915.99 | 2647.97 | 1915.99 |
| 2648.28 | 1916 | 2669.67 | 1916 | 2673.65 | 1916.05 | 2673.94 | 1916.06 | 2680.6 | 1916.15 |
| 2688.91 | 1916.27 | 2691.42 | 1916.31 | 2713.89 | 1916.61 | 2716.22 | 1916.65 | 2721.3 | 1916.72 |
| 2721.73 | 1916.73 | 2727.79 | 1916.8 | 2728.09 | 1916.8 | 2742.34 | 1917 | 2746.62 | 1917 |
| 2752.82 | 1917.09 | 2754.36 | 1917.12 | 2775.97 | 1917.38 | 2777.15 | 1917.4 | 2797.57 | 1918 |
| 2811.46 | 1918.87 | 2814.93 | 1919 | 2818.55 | 1919.17 | 2825.71 | 1919.64 | 2827.29 | 1919.73 |
| 2831.64 | 1920 | 2834.29 | 1920.12 | 2834.76 | 1920.13 | 2844.23 | 1920.46 | 2848.39 | 1920.45 |
| 2850.19 | 1920.52 | 2856.95 | 1920.5 | 2864 | 1920.59 | 2865.92 | 1920.58 | 2877.88 | 1920.54 |
| 2893.34 | 1920.46 | 2893.78 | 1920.46 | 2906.16 | 1920.2 | 2914.85 | 1920.01 | 2916.39 | 1920 |
| 2935.12 | 1919.34 | 2939.57 | 1919.17 | 2944.44 | 1919 | 2953.94 | 1918.99 | 2966.93 | 1918.98 |
| 2978.96 | 1918.9 | 2989.17 | 1918.83 | 3022.89 | 1918.8 | 3029.16 | 1918.77 | 3038.17 | 1918.71 |
| 3042.17 | 1918.57 | 3046.1 | 1918.46 | 3048.91 | 1918.39 | 3055.42 | 1918.21 | 3067.45 | 1918 |
| 3178.95 | 1918 | 3182.38 | 1918.01 | 3185.99 | 1918.01 | 3196.41 | 1918.03 | 3203.92 | 1918.02 |
| 3216.43 | 1918.01 | 3219.12 | 1918 | 3271.83 | 1918 | 3277.26 | 1918.19 | 3280.06 | 1918.28 |
| 3280.41 | 1918.28 | 3283.67 | 1918.34 | 3289.01 | 1918.47 | 3298.66 | 1918.76 | 3300.79 | 1918.8 |
| 3301.41 | 1918.8 | 3302.74 | 1918.84 | 3304.56 | 1918.84 | 3306.25 | 1918.9 | 3307.74 | 1918.89 |
| 3313.09 | 1919 | 3332.29 | 1919 | 3340.71 | 1918.99 | 3346.87 | 1918.99 | 3347.08 | 1919 |
| 3420.1 | 1919 | 3422.57 | 1918.96 | 3434.99 | 1918.78 | 3465.03 | 1918.8 | 3467.6 | 1918.8 |
| 3467.99 | 1918.81 | 3469.89 | 1918.81 | 3473.01 | 1918.82 | 3489.91 | 1918.72 | 3499.71 | 1918.63 |
| 3505.29 | 1918.59 | 3508.68 | 1918.55 | 3512.75 | 1918.51 | 3522.68 | 1918.46 | 3531.33 | 1918.43 |
| 3540.83 | 1918.25 | 3547.52 | 1918.11 | 3553.07 | 1918 | 3556.45 | 1918 | 3572.34 | 1917.99 |
| 3577.58 | 1917.98 | 3583.04 | 1917.99 | 3590.5 | 1917.99 | 3601.78 | 1918 | 3610.73 | 1918.34 |
| 3622.19 | 1918.84 | 3623.42 | 1918.89 | 3625.58 | 1919 | 3628.28 | 1919 | 3639.67 | 1919.01 |
| 3653.06 | 1919 | 3658 | 1919 | 3658.55 | 1918.99 | 3661.32 | 1918.99 | 3662.16 | 1919 |
| 3665.64 | 1919 | 3676.27 | 1919.59 | 3683.13 | 1920 | 3684.53 | 1920.01 | 3698.15 | 1920.5 |
| 3711.57 | 1921 | 3718.36 | 1921 | 3723.06 | 1920.84 | 3727.26 | 1920.69 | 3729.26 | 1920.61 |
| 3740.31 | 1920.11 | 3742.57 | 1920 | 3743.08 | 1919.95 | 3748.8 | 1919.33 | 3753.79 | 1919 |
| 3761.43 | 1918.29 | 3761.99 | 1918.23 | 3764.59 | 1918 | 3809.69 | 1918 | 3818.27 | 1918.37 |
| 3822.24 | 1918.48 | 3825.2 | 1918.55 | 3833.37 | 1918.63 | 3841.12 | 1918.73 | 3849.86 | 1918.92 |
| 3851.86 | 1919 | 3859.03 | 1919.01 | 3862.56 | 1919.01 | 3878.86 | 1919.39 | 3879.99 | 1919.4 |
| 3883.5 | 1919.38 | 3887.47 | 1919.32 | 3887.73 | 1919.33 | 3889.73 | 1919.31 | 3891.51 | 1919.32 |
| 3893.29 | 1919.35 | 3894.84 | 1919.35 | 3902.04 | 1919.61 | 3905.29 | 1919.73 | 3913.6 | 1919.94 |
| 3914.21 | 1919.97 | 3915.78 | 1920 | 3927.28 | 1920.36 | 3937.27 | 1921 | 3948.91 | 1921.77 |
| 3950.84 | 1921.85 | 3953.55 | 1921.94 | 3956.35 | 1922 | 3965.73 | 1922.16 | 3966.11 | 1922.16 |
| 3976.78 | 1922.34 | 3980.52 | 1922.3 | 3983.68 | 1922.2 | 3992.53 | 1922 | 3993.51 | 1921.99 |
| 4006.67 | 1921.78 | 4008.05 | 1921.74 | 4011.71 | 1921.6 | 4013.66 | 1921.54 | 4019.27 | 1921.32 |
| 4026.2 | 1921.01 | 4027.98 | 1921 | 4033.17 | 1920.72 | 4041.21 | 1920.3 | 4042.39 | 1920.23 |
| 4046.7 | 1920 | 4053.09 | 1919.86 | 4054.27 | 1919.84 | 4064.75 | 1919.63 | 4085.08 | 1919.2 |
| 4095.85 | 1919 | 4136.12 | 1919 | 4141.17 | 1919.38 | 4149.54 | 1920 | 4149.75 | 1920 |
| 4159.36 | 1920.27 | 4165.23 | 1920.42 | 4172.21 | 1920.53 | 4189.74 | 1920.77 | 4193.75 | 1920.84 |
| 4201.09 | 1920.95 | 4207.46 | 1920.99 | 4211.16 | 1920.99 | 4212.06 | 1921 | 4226.27 | 1921 |
| 4229.15 | 1920.98 | 4233.97 | 1920.92 | 4234.92 | 1920.88 | 4237.56 | 1920.81 | 4239.3 | 1920.74 |
| 4240.51 | 1920.68 | 4249.14 | 1920.51 | 4255.06 | 1920.51 | 4256.2 | 1920.49 | 4257.16 | 1920.53 |
| 4262.37 | 1920.47 | 4263.07 | 1920.48 | 4264.73 | 1920.44 | 4271.18 | 1920.34 | 4272.08 | 1920.3 |
| 4274.43 | 1920.25 | 4276.97 | 1920.18 | 4278.38 | 1920.13 | 4289.62 | 1919.62 | 4302.37 | 1919 |
| 4312.78 | 1918.86 | 4320.39 | 1918.75 | 4335.53 | 1918.41 | 4349.75 | 1918.06 | 4351.95 | 1918.06 |
| 4354.1 | 1918.04 | 4360.42 | 1918 | 4383.32 | 1917.05 | 4387.18 | 1916.91 | 4388.56 | 1916.87 |
| 4415.1 | 1916 | 4415.55 | 1916 | 4435.64 | 1915.64 | 4442.06 | 1915.53 | 4445.81 | 1915.46 |
| 4449.46 | 1915.4 | 4471 | 1915.03 | 4472.61 | 1915 | 4485.58 | 1915 | 4566.91 | 1915.92 |
| 4572.17 | 1915.98 | 4573.52 | 1916 | 4575.75 | 1916.01 | 4590.38 | 1916.42 | 4611.54 | 1917 |
| 4612.7 | 1917 | 4637.45 | 1917.22 | 4664.37 | 1917.44 | 4667.13 | 1917.46 | 4691.64 | 1917.7 |
| 4704.53 | 1917.82 | 4720.09 | 1917.99 | 4721.53 | 1918 | 4730.99 | 1918.01 | 4737.57 | 1918.01 |
| 4749.13 | 1918.02 | 4761.25 | 1918.02 | 4763.91 | 1918.01 | 4768.42 | 1918.01 | 4777.39 | 1918 |
| 4873.58 | 1918 | 4886.19 | 1918.11 | 4889.94 | 1918.13 | 4921.56 | 1918.38 | 4939.32 | 1918.51 |
| 4941.41 | 1918.53 | 5002.63 | 1919 | 5030.97 | 1919 | 5034.02 | 1919.09 | 5037.54 | 1919.2 |
| 5060.53 | 1919.15 | 5087.82 | 1919.05 | 5089.9 | 1919 | 5093.41 | 1918.83 | 5112.83 | 1918 |
| 5117.4 | 1918 | 5154.58 | 1917.51 | 5173.49 | 1917.27 | 5189.56 | 1917 | 5195.06 | 1917 |
| 5196.27 | 1916.99 | 5200 | 1917 | 5209.26 | 1917 | 5213.03 | 1916.98 | 5216.83 | 1917 |
| 5234.86 | 1917 | 5256.99 | 1916.99 | 5259.89 | 1916.99 | 5283.35 | 1917 | 5287.59 | 1917.38 |
| 5289.7 | 1917.59 | 5294.3 | 1918 | 5299.72 | 1918.52 | 5302.82 | 1918.79 | 5305.54 | 1919 |
| 5309.62 | 1919.41 | 5315.56 | 1920 | 5319.6 | 1921 | 5321.15 | 1922 | 5322.73 | 1923 |
| 5323.12 | 1923.23 | 5324.32 | 1924 | 5325.96 | 1925 | 5327.64 | 1926 | 5329.61 | 1927.2 |
| 5329.94 | 1927.37 | 5331.62 | 1928 | 5332.85 | 1928.5 | 5333.67 | 1929 | 5335.6 | 1931 |
| 5336.13 | 1931.52 | 5337.1 | 1932.55 | 5338.12 | 1933.57 | 5339.51 | 1935 | 5340.5 | 1935.94 |
| 5341.48 | 1937 | 5341.84 | 1937.35 | 5342.47 | 1938.08 | 5342.7 | 1938.4 | 5343.05 | 1939 |
| 5343.68 | 1940 | 5344.65 | 1940.12 | 5345.39 | 1940.16 | 5348.81 | 1940.46 | 5357.75 | 1940.64 |
| 5359.46 | 1940.62 | 5359.79 | 1940.6 | 5361.89 | 1940.61 | 5363.72 | 1940.53 | 5374.68 | 1940.03 |
| 5382.72 | 1940.03 | 5408.79 | 1940.31 | 5409.42 | 1940.32 | 5431.13 | 1940.5 | 5436.8 | 1940.55 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5436.8 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5436.8 | 201.71 | 201.71 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | Left OB | Channel | Right OB |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1919.87 | Element | | | |
| Vel Head (ft) | 0.14 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1919.74 | Reach Len. (ft) | 201.71 | 201.71 | 201.71 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7524.97 | |
| E.G. Slope (ft/ft) | 0.002562 | Area (sq ft) | | 7524.97 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 3776.08 | Top Width (ft) | | 3776.08 | |
| Vel Total (ft/s) | 2.98 | Avg. Vel. (ft/s) | | 2.98 | |
| Max Chl Dpth (ft) | 5.75 | Hydr. Depth (ft) | | 1.99 | |

| | | | | | |
|---|---|---|---|---|---|
| Conv. Total (cfs) | 442578.2 | Conv. (cfs) | | 442578.2 | |
| Length Wtd. (ft) | 201.71 | Wetted Per. (ft) | | 3777.28 | |
| Min Ch El (ft) | 1913.99 | Shear (lb/sq ft) | | 0.32 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5436.80 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.53 | Cum Volume (acre-ft) | | 1053.68 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 483.84 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -13690.7

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1920.98 | 99.46 | 1920.42 | 101.27 | 1920.41 | 143.49 | 1920.21 | 144.38 | 1920.2 |
| 146.73 | 1920.19 | 148.73 | 1920.17 | 194.36 | 1920.01 | 239.29 | 1920.01 | 288.17 | 1920.02 |
| 326.46 | 1920.01 | 360.62 | 1920 | 373.37 | 1920 | 424.26 | 1919.95 | 471.82 | 1919.95 |
| 492.12 | 1919.94 | 498.76 | 1919.94 | 860.12 | 1919.62 | 865.17 | 1919.62 | 873.05 | 1919.61 |
| 878.62 | 1919.6 | 882.99 | 1919.6 | 893.93 | 1919.59 | 899.74 | 1919.59 | 900.34 | 1919.58 |
| 910.17 | 1919.58 | 925.08 | 1919.56 | 945.11 | 1919.55 | 945.96 | 1919.54 | 953.34 | 1919.54 |
| 960.72 | 1919.53 | 1036.25 | 1919.46 | 1047.84 | 1919.45 | 1049.82 | 1919.22 | 1095.21 | 1918 |
| 1118.75 | 1918 | 1136.6 | 1918.2 | 1211.52 | 1919 | 1418.43 | 1919 | 1419.55 | 1918.99 |
| 1431.41 | 1918.83 | 1438.15 | 1918.66 | 1439.98 | 1918.63 | 1443 | 1918.57 | 1465.48 | 1918 |
| 1490.2 | 1917.34 | 1505.48 | 1917 | 1554.29 | 1917 | 1565.61 | 1916.99 | 1575.92 | 1916.99 |
| 1592.46 | 1917 | 1822.61 | 1917 | 1824.84 | 1916.59 | 1829.52 | 1915.57 | 1832.55 | 1915 |
| 1835.55 | 1914.44 | 1837.88 | 1914 | 1842.28 | 1913.85 | 1867.88 | 1913.71 | 1887.13 | 1913.64 |
| 1895.13 | 1913.77 | 1907.32 | 1914 | 1907.46 | 1914 | 1910.08 | 1914.08 | 1912.3 | 1914.14 |
| 1936.92 | 1914.87 | 1942.13 | 1915.02 | 1955.61 | 1915.31 | 1962.8 | 1915.47 | 1966.93 | 1915.56 |
| 1988.15 | 1916 | 2007.86 | 1916.01 | 2014.69 | 1916.01 | 2024.28 | 1916 | 2039.47 | 1916 |
| 2054.41 | 1915.21 | 2058.1 | 1915.03 | 2058.62 | 1915 | 2118.98 | 1915 | 2120.47 | 1915.01 |
| 2126.83 | 1915.01 | 2193.46 | 1915.58 | 2205.75 | 1915.66 | 2207.16 | 1915.68 | 2209.1 | 1915.7 |
| 2232.25 | 1915.99 | 2238.21 | 1916.01 | 2238.71 | 1916.02 | 2240.55 | 1916.02 | 2241.55 | 1916.03 |
| 2267.43 | 1916.1 | 2281.8 | 1916.18 | 2327.52 | 1916.19 | 2333.19 | 1916.08 | 2336.8 | 1916 |
| 2338.3 | 1916 | 2341.17 | 1915.94 | 2355.69 | 1915.87 | 2368.51 | 1915.83 | 2371.84 | 1915.83 |
| 2372.93 | 1915.85 | 2374.02 | 1915.85 | 2375.68 | 1915.84 | 2396.31 | 1915.96 | 2402.47 | 1915.99 |
| 2446.27 | 1915.99 | 2454.89 | 1916 | 2458.19 | 1916 | 2462.16 | 1916.11 | 2462.7 | 1916.13 |
| 2483.5 | 1917 | 2547.58 | 1917 | 2554.61 | 1916.99 | 2566.6 | 1917 | 2740.16 | 1917 |
| 2747.6 | 1917.25 | 2752.49 | 1917.43 | 2755.49 | 1917.55 | 2758.21 | 1917.64 | 2759.81 | 1917.7 |
| 2767.01 | 1918 | 2784.82 | 1918.06 | 2788.76 | 1918.05 | 2802 | 1918 | 2834.12 | 1917.99 |
| 2865.27 | 1917.99 | 2875.52 | 1918 | 2890.13 | 1918.01 | 2912.38 | 1918.01 | 2915.36 | 1918 |
| 2925.35 | 1918 | 2927.19 | 1917.99 | 2933.36 | 1917.78 | 2937.87 | 1917.65 | 2956.74 | 1917 |
| 2966.73 | 1917 | 2976.38 | 1917.11 | 2987.1 | 1917.21 | 2987.73 | 1917.22 | 2991.42 | 1917.23 |
| 2991.79 | 1917.24 | 2996.09 | 1917.25 | 3001.41 | 1917.28 | 3040.47 | 1918 | 3101.9 | 1918 |
| 3114.35 | 1917.71 | 3127.66 | 1917.62 | 3137.17 | 1917.57 | 3137.69 | 1917.56 | 3138.85 | 1917.56 |
| 3140.6 | 1917.55 | 3165.06 | 1917.55 | 3190.38 | 1917.57 | 3197.06 | 1917.67 | 3200.03 | 1917.73 |
| 3200.72 | 1917.72 | 3206.78 | 1917.88 | 3210.29 | 1917.99 | 3211.57 | 1917.99 | 3215.71 | 1918.06 |
| 3272.84 | 1919 | 3294.53 | 1919 | 3295.8 | 1918.95 | 3299.19 | 1918.83 | 3302.5 | 1918.7 |
| 3320.19 | 1918 | 3326.68 | 1917.7 | 3331.09 | 1917.5 | 3333.36 | 1917.39 | 3337 | 1917.23 |
| 3338 | 1917.18 | 3342.36 | 1917 | 3370.4 | 1917 | 3371.81 | 1917.01 | 3380.32 | 1917.15 |
| 3383.58 | 1917.19 | 3391.72 | 1917.26 | 3392.52 | 1917.26 | 3394.21 | 1917.29 | 3394.75 | 1917.29 |
| 3396.03 | 1917.31 | 3458.18 | 1917.97 | 3459.14 | 1917.99 | 3470.84 | 1917.99 | 3476.19 | 1918 |
| 3478 | 1918 | 3484.65 | 1918.36 | 3494.95 | 1919 | 3495.63 | 1919.01 | 3510.04 | 1919.4 |
| 3521.6 | 1919.7 | 3534.16 | 1920 | 3544.09 | 1920 | 3545.14 | 1920.02 | 3546.51 | 1920.07 |
| 3547.94 | 1920.14 | 3549.59 | 1920.21 | 3552.91 | 1920.4 | 3560.36 | 1920.79 | 3564.25 | 1921 |
| 3573.59 | 1921 | 3574.51 | 1920.89 | 3582.27 | 1920 | 3586.18 | 1919.54 | 3590.84 | 1919 |
| 3593.42 | 1918.8 | 3596.01 | 1918.59 | 3597.95 | 1918.44 | 3598.76 | 1918.37 | 3599.57 | 1918.32 |
| 3601.14 | 1918.24 | 3604.24 | 1918.1 | 3605.29 | 1918.02 | 3606.51 | 1918 | 3609.48 | 1917.99 |
| 3611.46 | 1917.99 | 3612.59 | 1917.89 | 3624.54 | 1917.71 | 3626.83 | 1917.7 | 3627.87 | 1917.67 |
| 3629.16 | 1917.62 | 3635.27 | 1917.22 | 3636.24 | 1917.18 | 3638.87 | 1917 | 3652.29 | 1917 |
| 3654.55 | 1917.27 | 3661.08 | 1918 | 3664.76 | 1918.43 | 3669.8 | 1919 | 3671.93 | 1919.25 |
| 3675.82 | 1919.73 | 3677.85 | 1920 | 3680.93 | 1920.3 | 3687.73 | 1921 | 3692.36 | 1921.38 |
| 3698.84 | 1922 | 3715.91 | 1922.99 | 3716.36 | 1923.02 | 3727.1 | 1923.64 | 3728.69 | 1923.69 |
| 3732.2 | 1923.87 | 3732.99 | 1923.89 | 3734.09 | 1923.9 | 3735.28 | 1923.89 | 3736.98 | 1923.89 |
| 3737.87 | 1923.87 | 3739.03 | 1923.86 | 3741.45 | 1923.82 | 3745.49 | 1923.71 | 3748.09 | 1923.65 |
| 3749.16 | 1923.63 | 3750.81 | 1923.57 | 3751.4 | 1923.56 | 3758.4 | 1923.24 | 3763.13 | 1923.01 |
| 3764.99 | 1923.01 | 3769.14 | 1923 | 3775.07 | 1922.72 | 3776.57 | 1922.7 | 3788.73 | 1922.17 |
| 3788.95 | 1922.15 | 3792.53 | 1922 | 3806.7 | 1921.35 | 3807.77 | 1921.29 | 3813.33 | 1921.04 |
| 3814.85 | 1921 | 3828.73 | 1920.35 | 3830.34 | 1920.25 | 3834.64 | 1920 | 3835.63 | 1919.99 |
| 3837.17 | 1920 | 3859.12 | 1921 | 3873.02 | 1921.41 | 3873.25 | 1921.42 | 3876.43 | 1921.48 |
| 3878.14 | 1921.49 | 3886.76 | 1921.98 | 3889.56 | 1921.98 | 3896.3 | 1921.99 | 3908.71 | 1921.99 |
| 3909.98 | 1922 | 3910.06 | 1921.99 | 3915.36 | 1921.82 | 3916.55 | 1921.81 | 3925.89 | 1921.89 |
| 3926.43 | 1921.88 | 3938.59 | 1921.95 | 3939.34 | 1921.94 | 3940.1 | 1921.89 | 3942.1 | 1921.86 |
| 3943.12 | 1921.8 | 3943.75 | 1921.75 | 3950.21 | 1921 | 3956.9 | 1920.48 | 3958.83 | 1920.31 |
| 3962.64 | 1920 | 3971.31 | 1919.31 | 3976.16 | 1918.93 | 3979.06 | 1918.72 | 3986.83 | 1918.13 |
| 3988.73 | 1918 | 4000.64 | 1918 | 4005.23 | 1918.26 | 4011.09 | 1918.58 | 4015.94 | 1918.87 |
| 4018.55 | 1919 | 4023.62 | 1919.24 | 4026.28 | 1919.2 | 4044.12 | 1919.02 | 4045.78 | 1919.02 |
| 4055.17 | 1919.01 | 4067.75 | 1919 | 4093.21 | 1919 | 4095.24 | 1919.15 | 4099.76 | 1919.51 |
| 4100.64 | 1919.59 | 4106.28 | 1920 | 4111.61 | 1920.46 | 4117.77 | 1921 | 4118.59 | 1921.05 |
| 4127.54 | 1921.86 | 4128.6 | 1921.95 | 4129.44 | 1922 | 4130.37 | 1922.19 | 4132.03 | 1922.5 |
| 4134.59 | 1923 | 4135.11 | 1923.11 | 4135.93 | 1923.34 | 4137.58 | 1924 | 4139.6 | 1924.82 |
| 4140.08 | 1925 | 4141.55 | 1925.59 | 4142.74 | 1926 | 4142.91 | 1926.01 | 4143.99 | 1926.21 |
| 4144.93 | 1926.35 | 4145.95 | 1926.33 | 4147.59 | 1926.26 | 4149.18 | 1926.12 | 4149.92 | 1926.01 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4150.86 | 1925.78 | 4152.33 | 1925.33 | 4153.63 | 1924.83 | 4155.57 | 1924 | 4157.25 | 1923.39 |
| 4158.2 | 1923 | 4160.96 | 1922.02 | 4163.66 | 1921 | 4166.37 | 1920 | 4169.11 | 1919 |
| 4169.58 | 1918.86 | 4169.98 | 1918.68 | 4171.84 | 1918 | 4172.47 | 1917.91 | 4177.33 | 1917 |
| 4177.48 | 1916.99 | 4191.13 | 1916.29 | 4192.69 | 1916.23 | 4194.53 | 1916.15 | 4198.56 | 1916 |
| 4200.08 | 1915.98 | 4201.85 | 1915.89 | 4204.52 | 1915.78 | 4222.15 | 1915.01 | 4222.25 | 1915 |
| 4321.79 | 1915 | 4324.32 | 1915.01 | 4346.45 | 1915.01 | 4350.49 | 1915.02 | 4357.92 | 1915.01 |
| 4361.1 | 1915 | 4418.84 | 1915 | 4429.26 | 1915.3 | 4437.65 | 1915.53 | 4442.94 | 1915.68 |
| 4443.43 | 1915.69 | 4454.41 | 1916 | 4471.16 | 1916.32 | 4477.32 | 1916.43 | 4482.4 | 1916.51 |
| 4502.38 | 1916.86 | 4505.49 | 1916.92 | 4510.27 | 1917 | 4524.18 | 1917.28 | 4528.86 | 1917.37 |
| 4531.01 | 1917.4 | 4536.63 | 1917.5 | 4536.86 | 1917.51 | 4544.64 | 1917.66 | 4557.86 | 1917.82 |
| 4559.06 | 1917.83 | 4560.04 | 1917.85 | 4562.21 | 1917.88 | 4574.44 | 1918 | 4623.2 | 1918 |
| 4623.58 | 1918.01 | 4629.7 | 1918.01 | 4636 | 1918 | 4764.9 | 1918 | 4791.48 | 1918.38 |
| 4806.79 | 1918.59 | 4807.92 | 1918.59 | 4833.97 | 1918.68 | 4851.72 | 1918.72 | 4853.93 | 1918.72 |
| 4854.25 | 1918.71 | 4855.75 | 1918.71 | 4875.22 | 1918.73 | 4895.86 | 1918.75 | 4897.02 | 1918.76 |
| 4900.34 | 1918.75 | 4901.39 | 1918.74 | 4903.56 | 1918.74 | 4907.85 | 1918.72 | 4910.96 | 1918.7 |
| 4914.71 | 1918.67 | 4918.23 | 1918.62 | 4922.82 | 1918.57 | 4928.58 | 1918.57 | 4934.52 | 1918.58 |
| 4935.72 | 1918.58 | 4937.13 | 1918.57 | 4943.89 | 1918.43 | 4944.57 | 1918.43 | 4957.85 | 1918.16 |
| 4959.12 | 1918.14 | 4965.93 | 1918.01 | 4966.99 | 1918.01 | 4968.15 | 1917.98 | 4968.54 | 1917.98 |
| 4972.67 | 1917.87 | 4975.83 | 1917.82 | 4986.29 | 1917.56 | 4995.69 | 1917.4 | 5006.63 | 1917.19 |
| 5010.78 | 1917.1 | 5012.26 | 1917.08 | 5016.21 | 1917 | 5018.43 | 1917 | 5024.41 | 1916.94 |
| 5026.01 | 1916.92 | 5028.77 | 1916.9 | 5030.57 | 1916.87 | 5078.88 | 1916.93 | 5108.97 | 1916.99 |
| 5134.1 | 1917 | 5140.95 | 1917.52 | 5147.09 | 1918 | 5154.51 | 1918.88 | 5155.47 | 1919 |
| 5156.88 | 1919.19 | 5162.96 | 1920 | 5165.44 | 1921 | 5167.04 | 1921.68 | 5168.87 | 1922.53 |
| 5170.32 | 1923.21 | 5172.1 | 1924 | 5172.58 | 1924.22 | 5174.74 | 1925 | 5175.29 | 1925.35 |
| 5175.99 | 1926 | 5177 | 1927.34 | 5177.85 | 1928.42 | 5179.67 | 1930.81 | 5179.8 | 1931 |
| 5180.19 | 1931.9 | 5180.31 | 1932 | 5180.58 | 1932.09 | 5181.49 | 1932.34 | 5184.07 | 1933 |
| 5184.77 | 1933.14 | 5188.07 | 1934 | 5189.19 | 1934.28 | 5191.97 | 1935 | 5194.06 | 1935.36 |
| 5196.62 | 1936 | 5199.12 | 1936.37 | 5206.55 | 1937 | 5208.13 | 1937.14 | 5211.52 | 1937.41 |
| 5216.07 | 1937.84 | 5217.65 | 1938 | 5221.57 | 1938.42 | 5226.15 | 1938.94 | 5226.71 | 1939 |
| 5228.63 | 1939.08 | 5229.97 | 1939.13 | 5253.94 | 1940 | 5283.64 | 1940 | 5289.55 | 1940.04 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5289.55 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5289.55 | 192.98 | 192.98 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1919.34 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.15 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1919.19 | Reach Len. (ft) | 192.98 | 192.98 | 192.98 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7263.80 | | |
| E.G. Slope (ft/ft) | 0.002745 | Area (sq ft) | | 7263.80 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3640.34 | Top Width (ft) | | 3640.34 | | |
| Vel Total (ft/s) | 3.08 | Avg. Vel. (ft/s) | | 3.08 | | |
| Max Chl Dpth (ft) | 5.55 | Hydr. Depth (ft) | | 2.00 | | |
| Conv. Total (cfs) | 427567.5 | Conv. (cfs) | | 427567.5 | | |
| Length Wtd. (ft) | 192.98 | Wetted Per. (ft) | | 3641.70 | | |
| Min Ch El (ft) | 1913.64 | Shear (lb/sq ft) | | 0.34 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5289.55 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.53 | Cum Volume (acre-ft) | | 1019.43 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 466.67 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -13883.7

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1920.69 | 20.96 | 1920.57 | 118.96 | 1920.01 | 120.56 | 1920 | 124.36 | 1920 |
| 179.83 | 1919.97 | 186.22 | 1919.96 | 200.18 | 1919.97 | 209.72 | 1919.96 | 215.71 | 1919.96 |
| 254.6 | 1919.97 | 282.43 | 1919.97 | 311.43 | 1919.96 | 321.37 | 1919.96 | 334.32 | 1919.94 |
| 371.77 | 1919.91 | 409.46 | 1919.91 | 414.54 | 1919.9 | 429.63 | 1919.89 | 440.61 | 1919.9 |
| 711.56 | 1919.64 | 720.93 | 1919.64 | 724.96 | 1919.63 | 728.12 | 1919.63 | 736.02 | 1919.62 |
| 740.64 | 1919.62 | 745.5 | 1919.61 | 747.72 | 1919.61 | 758.43 | 1919.6 | 772.17 | 1919.59 |
| 773.38 | 1919.59 | 778.63 | 1919.58 | 783.92 | 1919.58 | 837.4 | 1919.53 | 903.06 | 1919.47 |
| 911.11 | 1919.46 | 918.45 | 1919.45 | 931.59 | 1919.44 | 937.45 | 1919.44 | 952.82 | 1919.42 |
| 956.32 | 1919.42 | 973.28 | 1919.4 | 976.23 | 1919.4 | 1008.09 | 1919.37 | 1008.8 | 1919.37 |
| 1029.42 | 1919.35 | 1052.73 | 1919.33 | 1054.32 | 1918.27 | 1055.08 | 1918 | 1117.07 | 1918 |
| 1149.56 | 1918.55 | 1181.68 | 1919 | 1283.69 | 1919 | 1288.82 | 1918.99 | 1294.7 | 1918.99 |
| 1296.39 | 1918.98 | 1306.37 | 1918.98 | 1375.05 | 1918.58 | 1377.89 | 1918.57 | 1384.66 | 1918.52 |
| 1392.98 | 1918.47 | 1393.25 | 1918.46 | 1403.8 | 1918.39 | 1417.56 | 1918.3 | 1431.88 | 1918.2 |
| 1451.27 | 1918.05 | 1451.83 | 1918.05 | 1456.45 | 1918.02 | 1458.72 | 1918 | 1459.35 | 1918 |
| 1475.47 | 1917.57 | 1497.76 | 1917 | 1578.23 | 1916.98 | 1580.49 | 1916.98 | 1618.86 | 1916.99 |
| 1629.88 | 1916.99 | 1666.72 | 1917 | 1807.36 | 1917 | 1810.6 | 1916.79 | 1820.72 | 1916 |
| 1823.77 | 1915 | 1824.44 | 1914.77 | 1826.8 | 1914 | 1894.38 | 1914 | 1899.03 | 1914.01 |
| 1906.42 | 1914.01 | 1907.82 | 1914.02 | 1913.24 | 1914.01 | 1917.35 | 1914.01 | 1925.99 | 1914.15 |
| 1926.18 | 1914.16 | 1934.9 | 1914.13 | 1935.6 | 1914.14 | 1942.4 | 1914.12 | 1948.38 | 1914 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1991.62 | 1914 | 1999.72 | 1914.72 | 2000.18 | 1914.75 | 2001.21 | 1914.79 | 2001.97 | 1914.81 |
| 2003.97 | 1914.85 | 2005.32 | 1914.93 | 2009.66 | 1914.94 | 2009.68 | 1914.95 | 2010.82 | 1914.98 |
| 2011.21 | 1915 | 2275.91 | 1915 | 2289.4 | 1915.01 | 2317.35 | 1915.01 | 2339.02 | 1915 |
| 2380.33 | 1915 | 2381.18 | 1915.04 | 2382.52 | 1915.09 | 2383.17 | 1915.13 | 2388.9 | 1915.38 |
| 2400.39 | 1916 | 2406.26 | 1916.32 | 2406.75 | 1916.35 | 2408.04 | 1916.4 | 2409.42 | 1916.47 |
| 2422.57 | 1916.92 | 2424.53 | 1917 | 2425.2 | 1917.02 | 2430.51 | 1917.01 | 2434.51 | 1917.02 |
| 2441.21 | 1917.02 | 2450.14 | 1917 | 2460.42 | 1916.46 | 2468.31 | 1916 | 2469.23 | 1915.99 |
| 2470 | 1915.99 | 2474.15 | 1915.97 | 2475.38 | 1915.96 | 2519.04 | 1915.13 | 2525.49 | 1915.01 |
| 2525.95 | 1915 | 2577.99 | 1915 | 2582.88 | 1915.37 | 2591.24 | 1916 | 2595.42 | 1916.25 |
| 2595.64 | 1916.25 | 2605.79 | 1916.65 | 2614.31 | 1916.99 | 2620.83 | 1916.99 | 2622.51 | 1917 |
| 2668.14 | 1917 | 2683.98 | 1916.92 | 2686.46 | 1916.84 | 2687.12 | 1916.83 | 2689.94 | 1916.73 |
| 2690.84 | 1916.71 | 2691.78 | 1916.68 | 2695.19 | 1916.58 | 2699.79 | 1916.46 | 2700.25 | 1916.44 |
| 2704.32 | 1916.32 | 2717.62 | 1916 | 2740.4 | 1916 | 2742.4 | 1916.08 | 2742.62 | 1916.08 |
| 2744.49 | 1916.14 | 2760.5 | 1916.73 | 2768.77 | 1916.89 | 2769.79 | 1916.92 | 2773.08 | 1916.96 |
| 2773.11 | 1916.97 | 2777.75 | 1917 | 2916.7 | 1917 | 2926.55 | 1917.2 | 2926.75 | 1917.21 |
| 2927.48 | 1917.21 | 2938.21 | 1917.43 | 2957.96 | 1917.55 | 2970.56 | 1917.61 | 2976.04 | 1917.51 |
| 2977.2 | 1917.51 | 2981.09 | 1917.41 | 2988.27 | 1917.19 | 2990.28 | 1917.13 | 2990.41 | 1917.13 |
| 2994.59 | 1917 | 3228.64 | 1917 | 3236.89 | 1917.22 | 3250.31 | 1917.73 | 3252.92 | 1917.82 |
| 3257.37 | 1918 | 3257.61 | 1918 | 3296.85 | 1918.97 | 3297.7 | 1919 | 3346.52 | 1919 |
| 3349.56 | 1918.8 | 3363.83 | 1918 | 3366.33 | 1917.83 | 3375.93 | 1917.17 | 3376.81 | 1917.1 |
| 3377.03 | 1917.09 | 3378.36 | 1917 | 3422.72 | 1917 | 3432.61 | 1917.6 | 3434.72 | 1917.71 |
| 3439.65 | 1918 | 3442.81 | 1918.19 | 3449.61 | 1918.59 | 3454.54 | 1918.89 | 3456.58 | 1919 |
| 3463.79 | 1919 | 3475.26 | 1919.01 | 3484.15 | 1919 | 3492.75 | 1919 | 3502.76 | 1918.38 |
| 3508.52 | 1918 | 3524.16 | 1918 | 3534.18 | 1918.32 | 3536.64 | 1918.35 | 3538.91 | 1918.41 |
| 3543.85 | 1918.5 | 3547.23 | 1918.53 | 3555.54 | 1918.68 | 3571.04 | 1918.99 | 3571.45 | 1919 |
| 3572.13 | 1919.05 | 3577.66 | 1919.44 | 3580.04 | 1919.59 | 3582.4 | 1919.69 | 3583.82 | 1919.8 |
| 3584.12 | 1919.81 | 3585.63 | 1919.91 | 3587.3 | 1920 | 3589.23 | 1920.09 | 3593.61 | 1920.28 |
| 3595.41 | 1920.34 | 3597.52 | 1920.39 | 3601.34 | 1920.44 | 3608.17 | 1920.57 | 3611.98 | 1920.69 |
| 3616.58 | 1920.73 | 3618.25 | 1920.73 | 3618.93 | 1920.7 | 3619.64 | 1920.7 | 3620.36 | 1920.67 |
| 3621.01 | 1920.67 | 3621.7 | 1920.63 | 3623.03 | 1920.54 | 3623.97 | 1920.51 | 3624.26 | 1920.49 |
| 3628.78 | 1920 | 3633.9 | 1919.27 | 3635.84 | 1919 | 3636.87 | 1918.85 | 3642.86 | 1918.02 |
| 3652.85 | 1917 | 3689.66 | 1917 | 3691.52 | 1917.09 | 3691.99 | 1917.13 | 3692.94 | 1917.19 |
| 3703.53 | 1917.98 | 3715.03 | 1918.43 | 3718.27 | 1918.55 | 3729.44 | 1919 | 3743.02 | 1919.89 |
| 3744.82 | 1920 | 3745.26 | 1920.01 | 3747.51 | 1920.01 | 3771.7 | 1920.47 | 3792.25 | 1920.75 |
| 3798.71 | 1920.84 | 3798.98 | 1920.83 | 3803.67 | 1921 | 3817.77 | 1921 | 3826.34 | 1920.49 |
| 3832.07 | 1920.27 | 3834.94 | 1920.18 | 3836.89 | 1920.09 | 3841.72 | 1920 | 3849.34 | 1919.82 |
| 3849.52 | 1919.82 | 3853.5 | 1919.91 | 3855.27 | 1919.97 | 3856.46 | 1919.98 | 3857.55 | 1920 |
| 3860.68 | 1920.3 | 3868.02 | 1921 | 3880.12 | 1921.98 | 3880.52 | 1922.01 | 3892.71 | 1923 |
| 3900.32 | 1923.97 | 3900.72 | 1924.03 | 3907.94 | 1925 | 3921.98 | 1925 | 3928.63 | 1924.52 |
| 3933.04 | 1924.18 | 3934.89 | 1924.04 | 3935.31 | 1924 | 3944.3 | 1923.27 | 3946.66 | 1923 |
| 3949.51 | 1922.78 | 3951.96 | 1922.67 | 3959.82 | 1922.28 | 3964.07 | 1922.05 | 3965.86 | 1922 |
| 3968.6 | 1921.95 | 3970.96 | 1921.94 | 3973.47 | 1922 | 3977.24 | 1922 | 3983.03 | 1922.01 |
| 3985.73 | 1922.11 | 3988.65 | 1922.26 | 3994.95 | 1922.42 | 4004 | 1922.19 | 4004.05 | 1922.19 |
| 4007.5 | 1922.03 | 4010.44 | 1922 | 4016.52 | 1921.75 | 4018.23 | 1921.69 | 4024.69 | 1921.41 |
| 4025.93 | 1921.38 | 4027.33 | 1921.31 | 4034.07 | 1921.04 | 4036.24 | 1921.04 | 4041.73 | 1921 |
| 4045.47 | 1920.89 | 4046.09 | 1920.88 | 4048.18 | 1920.8 | 4048.61 | 1920.77 | 4054.78 | 1920.61 |
| 4056.09 | 1920.55 | 4064.37 | 1920.01 | 4064.4 | 1920.01 | 4065.49 | 1920.27 | 4067 | 1920.28 |
| 4068.74 | 1920.31 | 4077.11 | 1920.02 | 4077.6 | 1920 | 4079.37 | 1919.99 | 4080.97 | 1920 |
| 4082.53 | 1920 | 4082.58 | 1919.99 | 4085.16 | 1919.93 | 4098.83 | 1919.44 | 4109.58 | 1919.06 |
| 4110.99 | 1919 | 4112.49 | 1918.86 | 4123.35 | 1918 | 4129.27 | 1917.15 | 4130.25 | 1917 |
| 4131.76 | 1916.79 | 4134.55 | 1916.43 | 4136.87 | 1916.14 | 4138.78 | 1915.89 | 4139.66 | 1915.87 |
| 4147.03 | 1915.63 | 4151.51 | 1915.53 | 4162.26 | 1915.14 | 4163.54 | 1915.11 | 4166.65 | 1915 |
| 4197.88 | 1915 | 4213.76 | 1914.99 | 4228.91 | 1915 | 4258.06 | 1915 | 4299.11 | 1915.47 |
| 4299.53 | 1915.48 | 4301.3 | 1915.49 | 4304.11 | 1915.52 | 4328.35 | 1915.65 | 4344.85 | 1915.67 |
| 4345.25 | 1915.68 | 4345.89 | 1915.67 | 4348.38 | 1915.67 | 4348.55 | 1915.68 | 4351.87 | 1915.65 |
| 4355.69 | 1915.63 | 4356.09 | 1915.63 | 4361.82 | 1915.56 | 4362.62 | 1915.56 | 4371.71 | 1915.42 |
| 4372.89 | 1915.41 | 4380.78 | 1915.29 | 4381.09 | 1915.29 | 4382.87 | 1915.26 | 4383.24 | 1915.26 |
| 4384.44 | 1915.24 | 4384.82 | 1915.24 | 4386.18 | 1915.22 | 4394.89 | 1915 | 4396.47 | 1915 |
| 4396.64 | 1915.01 | 4407.82 | 1915.25 | 4409.03 | 1915.26 | 4412.06 | 1915.34 | 4416.06 | 1915.38 |
| 4433.07 | 1915.8 | 4437.69 | 1915.89 | 4441.07 | 1916 | 4465.37 | 1916.86 | 4470.43 | 1917 |
| 4547.8 | 1917 | 4558.01 | 1917.11 | 4559.44 | 1917.11 | 4560.58 | 1917.12 | 4561.75 | 1917.12 |
| 4563.49 | 1917.13 | 4569.04 | 1917.17 | 4569.44 | 1917.17 | 4584.26 | 1917.3 | 4585.23 | 1917.3 |
| 4585.98 | 1917.31 | 4588.18 | 1917.31 | 4633.65 | 1917.43 | 4668.7 | 1917.47 | 4670.1 | 1917.46 |
| 4677.16 | 1917.45 | 4683.18 | 1917.45 | 4683.64 | 1917.44 | 4690.71 | 1917.43 | 4709.58 | 1917.53 |
| 4741.89 | 1917.74 | 4745.27 | 1917.79 | 4755.26 | 1917.96 | 4756.39 | 1917.99 | 4758 | 1918 |
| 4758.92 | 1918 | 4780.58 | 1918.01 | 4812.44 | 1918.01 | 4850.86 | 1918 | 4879.45 | 1918 |
| 4888.81 | 1917.86 | 4890.29 | 1917.84 | 4918.19 | 1917.53 | 4923.83 | 1917.47 | 4938.69 | 1917.22 |
| 4941.02 | 1917.19 | 4951.05 | 1917 | 4964.24 | 1916.67 | 4995.21 | 1916 | 5005.56 | 1915.9 |
| 5005.81 | 1915.9 | 5041.06 | 1915.66 | 5063.53 | 1915.57 | 5063.97 | 1915.57 | 5071.43 | 1915.65 |
| 5081.22 | 1915.75 | 5081.65 | 1915.75 | 5088.9 | 1915.99 | 5094.77 | 1916 | 5112.05 | 1916.47 |
| 5115.31 | 1916.56 | 5131.83 | 1916.99 | 5133.06 | 1917 | 5136.84 | 1917.73 | 5138.07 | 1918 |
| 5139.21 | 1918.21 | 5143.41 | 1919 | 5144.64 | 1919.44 | 5147.14 | 1920 | 5147.27 | 1921 |
| 5147.42 | 1922 | 5147.53 | 1922.89 | 5147.66 | 1923.8 | 5147.73 | 1924 | 5148.08 | 1924.87 |
| 5148.79 | 1926 | 5149.45 | 1927 | 5150.08 | 1928 | 5150.32 | 1928.41 | 5150.54 | 1928.54 |
| 5151.6 | 1928.88 | 5153.17 | 1929.4 | 5153.79 | 1929.62 | 5154.81 | 1930 | 5155.3 | 1930.19 |
| 5156.57 | 1930.7 | 5158.29 | 1931.43 | 5159.62 | 1932 | 5160.41 | 1932.32 | 5167.32 | 1935 |
| 5168.11 | 1935.31 | 5169.91 | 1936 | 5171.66 | 1936.68 | 5174.33 | 1937.71 | 5175.07 | 1938 |
| 5177.13 | 1938.79 | 5177.66 | 1939 | 5199.72 | 1939.69 | 5208.36 | 1939.94 | 5210.32 | 1940 |
| 5222.55 | 1940 | 5223.49 | 1940.11 | 5224.19 | 1940.2 | 5231.42 | 1941 | 5261.83 | 1941 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5261.83 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5261.83 | 174.9 | 174.9 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1918.81 | Element | Left OB | Channel | Right OB |
| Vel Head (ft) | 0.16 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1918.64 | Reach Len. (ft) | 174.90 | 174.90 | 174.90 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6947.63 | |
| E.G. Slope (ft/ft) | 0.002775 | Area (sq ft) | | 6947.63 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 3283.99 | Top Width (ft) | | 3283.99 | |
| Vel Total (ft/s) | 3.22 | Avg. Vel. (ft/s) | | 3.22 | |
| Max Chl Dpth (ft) | 4.64 | Hydr. Depth (ft) | | 2.12 | |
| Conv. Total (cfs) | 425204.0 | Conv. (cfs) | | 425204.0 | |
| Length Wtd. (ft) | 174.90 | Wetted Per. (ft) | | 3285.48 | |
| Min Ch El (ft) | 1914.00 | Shear (lb/sq ft) | | 0.37 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5261.83 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.52 | Cum Volume (acre-ft) | | 987.95 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 451.33 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -14058.6

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1920.45 | 59.21 | 1920 | 61.41 | 1920 | 66.03 | 1919.99 | 68.58 | 1919.98 |
| 76.82 | 1919.98 | 114.52 | 1919.97 | 197.69 | 1919.88 | 220.22 | 1919.88 | 237.51 | 1919.86 |
| 241.07 | 1919.86 | 258.75 | 1919.87 | 272.66 | 1919.87 | 313.88 | 1919.82 | 322.97 | 1919.81 |
| 347.38 | 1919.81 | 357.71 | 1919.8 | 383.44 | 1919.8 | 501.22 | 1919.69 | 507.64 | 1919.69 |
| 508.4 | 1919.68 | 516.89 | 1919.68 | 521.54 | 1919.67 | 528.01 | 1919.67 | 530.28 | 1919.66 |
| 532.58 | 1919.66 | 555.73 | 1919.64 | 584.12 | 1919.61 | 590.77 | 1919.61 | 596.45 | 1919.6 |
| 598.98 | 1919.6 | 605.62 | 1919.59 | 615.58 | 1919.59 | 615.73 | 1919.58 | 629.47 | 1919.57 |
| 638.67 | 1919.56 | 650.82 | 1919.55 | 864 | 1919.47 | 903.38 | 1919.46 | 927.01 | 1919.45 |
| 943.82 | 1919.44 | 948.61 | 1919.44 | 1021.34 | 1919.41 | 1033.23 | 1919.41 | 1046.23 | 1919.4 |
| 1052.93 | 1919.4 | 1109.11 | 1919.38 | 1112.33 | 1919.38 | 1122.99 | 1919.37 | 1133.87 | 1919.37 |
| 1136.25 | 1919.1 | 1138.59 | 1919 | 1140.48 | 1919 | 1142.43 | 1918.94 | 1155 | 1918.54 |
| 1157.01 | 1918.48 | 1170.03 | 1918 | 1187.25 | 1918 | 1192.61 | 1918.06 | 1259.96 | 1918.92 |
| 1267.89 | 1918.93 | 1279.03 | 1918.67 | 1285.97 | 1918.49 | 1337.89 | 1918.11 | 1353.28 | 1918.01 |
| 1354.06 | 1918 | 1397.98 | 1918 | 1399.47 | 1917.99 | 1456.88 | 1917.59 | 1458.04 | 1917.59 |
| 1463.05 | 1917.57 | 1468.69 | 1917.54 | 1475.42 | 1917.5 | 1483.35 | 1917.46 | 1500.04 | 1917.4 |
| 1513.58 | 1917.37 | 1519.49 | 1917.32 | 1526.52 | 1917.25 | 1527.44 | 1917.25 | 1532.38 | 1917.19 |
| 1538.21 | 1917.13 | 1547.17 | 1917.01 | 1549.67 | 1917 | 1566.34 | 1916.9 | 1687 | 1916.77 |
| 1791.92 | 1916.78 | 1797.14 | 1916.83 | 1800.72 | 1916.83 | 1804.04 | 1916.82 | 1805.78 | 1916.84 |
| 1811.69 | 1916.84 | 1817.52 | 1916.82 | 1825.22 | 1916.79 | 1826.28 | 1916.79 | 1829.55 | 1916.75 |
| 1833.33 | 1916.69 | 1842.42 | 1916.69 | 1847.32 | 1916.59 | 1854.94 | 1916.63 | 1855.26 | 1916.62 |
| 1858.79 | 1916.63 | 1862.4 | 1916.54 | 1864.7 | 1916.55 | 1872.23 | 1916.2 | 1873 | 1916.19 |
| 1876.39 | 1916 | 1881.25 | 1915 | 1883.34 | 1914.62 | 1886.66 | 1914 | 1888.98 | 1913.55 |
| 1891.98 | 1913 | 1896.27 | 1912.93 | 1910.02 | 1912.8 | 1916.64 | 1912.83 | 1924.06 | 1912.8 |
| 1934.81 | 1912.89 | 1945.14 | 1913 | 1948.42 | 1913.11 | 1962.47 | 1913.49 | 1977.45 | 1914 |
| 1985.14 | 1914.21 | 1987.26 | 1914.26 | 1996.37 | 1914.49 | 2001.2 | 1914.61 | 2013.07 | 1914.91 |
| 2016.27 | 1915 | 2111.7 | 1915 | 2118.48 | 1914.85 | 2119.19 | 1914.86 | 2128.3 | 1914.69 |
| 2129.71 | 1914.71 | 2135.93 | 1914.63 | 2136.7 | 1914.63 | 2142.65 | 1914.58 | 2147.77 | 1914.55 |
| 2177.83 | 1914.99 | 2178.45 | 1915 | 2307.82 | 1915 | 2310.85 | 1914.94 | 2321.69 | 1914.7 |
| 2325.67 | 1914.61 | 2360.56 | 1914.41 | 2413.39 | 1914.96 | 2417.57 | 1915 | 2420.92 | 1915.07 |
| 2428.99 | 1915.22 | 2429.22 | 1915.22 | 2435.02 | 1915.31 | 2452.22 | 1915.6 | 2455.68 | 1915.67 |
| 2473.45 | 1915.99 | 2474.45 | 1916 | 2488.84 | 1916.05 | 2499.2 | 1916.08 | 2509.68 | 1916.04 |
| 2512.36 | 1916.04 | 2513.63 | 1916.03 | 2522.04 | 1916 | 2523.11 | 1916 | 2524.63 | 1915.95 |
| 2531.71 | 1915.74 | 2536.25 | 1915.61 | 2544.82 | 1915.4 | 2550.89 | 1915.24 | 2558.39 | 1915 |
| 2558.84 | 1915 | 2577.02 | 1914.72 | 2592.69 | 1914.49 | 2593.62 | 1914.48 | 2604.25 | 1914.3 |
| 2621.77 | 1914 | 2641.11 | 1914 | 2652.34 | 1913.99 | 2658.36 | 1914 | 2666.58 | 1914 |
| 2671.7 | 1914.2 | 2677.85 | 1914.47 | 2688.76 | 1915 | 2694.22 | 1915 | 2696.12 | 1915.02 |
| 2723.85 | 1915.25 | 2747.56 | 1915.33 | 2751.87 | 1915.3 | 2761.83 | 1915.15 | 2768.11 | 1915.02 |
| 2770.28 | 1915 | 2809.96 | 1915 | 2817.33 | 1915.36 | 2830.72 | 1916 | 2833.84 | 1916.01 |
| 2839.63 | 1916.18 | 2841.42 | 1916.19 | 2849.02 | 1916.22 | 2859.79 | 1916.27 | 2867.93 | 1916.35 |
| 2880.96 | 1916.47 | 2930.07 | 1916.94 | 2936 | 1917 | 2968.54 | 1917 | 2968.8 | 1916.99 |
| 3020.7 | 1916 | 3063.17 | 1916 | 3072.71 | 1916.09 | 3086.1 | 1916.21 | 3093.07 | 1916.26 |
| 3105.95 | 1916.4 | 3108.09 | 1916.41 | 3109.67 | 1916.44 | 3111.08 | 1916.44 | 3124.84 | 1916.64 |
| 3126.39 | 1916.66 | 3149.97 | 1917 | 3151.37 | 1917.01 | 3160.18 | 1917.04 | 3161.63 | 1917.04 |
| 3177.54 | 1917.13 | 3178.87 | 1917.14 | 3180.97 | 1917.14 | 3183.02 | 1917.15 | 3185.11 | 1917.18 |
| 3218.83 | 1917.07 | 3237.69 | 1917 | 3241.26 | 1917 | 3247.22 | 1917.05 | 3254.86 | 1917.1 |
| 3258.05 | 1917 | 3273.54 | 1916.98 | 3280.43 | 1916.98 | 3289.74 | 1916.97 | 3297.26 | 1916.97 |
| 3322.07 | 1917 | 3325.01 | 1917.09 | 3334.47 | 1917.36 | 3339.67 | 1917.5 | 3348.41 | 1917.69 |
| 3350.11 | 1917.75 | 3358.12 | 1918 | 3401.59 | 1918 | 3406.22 | 1917.81 | 3423.56 | 1917.37 |
| 3429.85 | 1917.29 | 3434.78 | 1917.42 | 3441.32 | 1917.44 | 3442.5 | 1917.44 | 3449.65 | 1917.49 |
| 3456.48 | 1917.49 | 3460.98 | 1917.48 | 3468.28 | 1917.47 | 3468.72 | 1917.48 | 3472.81 | 1917.46 |
| 3474.64 | 1917.48 | 3483.3 | 1917.5 | 3491.45 | 1917.51 | 3495.14 | 1917.46 | 3500.2 | 1917.41 |
| 3506.48 | 1917.33 | 3513.4 | 1917.23 | 3521.34 | 1917.01 | 3526.05 | 1917 | 3532.51 | 1917 |
| 3536.96 | 1917.25 | 3538.68 | 1917.34 | 3548.27 | 1918 | 3552.09 | 1918.26 | 3553.92 | 1918.41 |
| 3560.91 | 1919 | 3564.02 | 1919.33 | 3569.98 | 1920 | 3580.41 | 1920 | 3580.6 | 1920.01 |
| 3590.61 | 1920.41 | 3599.42 | 1920.76 | 3599.68 | 1920.75 | 3602.65 | 1921 | 3611.17 | 1921 |
| 3611.82 | 1920.96 | 3613.32 | 1920.73 | 3615.12 | 1920.43 | 3617.49 | 1920 | 3623.31 | 1918.91 |
| 3628.02 | 1918 | 3629.35 | 1917.75 | 3633.03 | 1917 | 3637.48 | 1916 | 3646.9 | 1916 |
| 3653.4 | 1916.01 | 3657.48 | 1916.02 | 3662.28 | 1916 | 3665.62 | 1916 | 3666.47 | 1916.06 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3668.64 | 1916.19 | 3670.19 | 1916.3 | 3683.17 | 1917 | 3684.01 | 1917.05 | 3689.35 | 1917.39 |
| 3694.6 | 1917.72 | 3698.47 | 1918 | 3698.95 | 1918 | 3700.25 | 1918.12 | 3709.5 | 1918.53 |
| 3713.2 | 1918.65 | 3713.51 | 1918.65 | 3715.7 | 1918.58 | 3719.53 | 1918.39 | 3719.72 | 1918.39 |
| 3723.77 | 1918 | 3734.53 | 1917.07 | 3737.39 | 1916.83 | 3741.96 | 1916.46 | 3743.76 | 1916.33 |
| 3744.72 | 1916.24 | 3746.27 | 1916.15 | 3747.62 | 1916 | 3755.45 | 1915.53 | 3759.38 | 1915.28 |
| 3760.11 | 1915.24 | 3762.34 | 1915.09 | 3764.06 | 1915 | 3765.76 | 1915 | 3767.29 | 1915.07 |
| 3779.11 | 1916 | 3783.71 | 1916.72 | 3785.57 | 1917 | 3792.11 | 1918 | 3794.72 | 1918.35 |
| 3799.41 | 1919 | 3808.67 | 1919.79 | 3811.33 | 1920 | 3813.53 | 1920.21 | 3821.47 | 1921 |
| 3823.35 | 1921.09 | 3831.29 | 1921.18 | 3841.94 | 1921.11 | 3849.64 | 1921.13 | 3851.41 | 1921.11 |
| 3853.04 | 1921.11 | 3855.93 | 1921.08 | 3859.15 | 1921 | 3868.99 | 1920.73 | 3880.05 | 1920.42 |
| 3889.63 | 1920 | 3890.71 | 1919.95 | 3900.4 | 1919.48 | 3903.51 | 1919.27 | 3905.03 | 1919.19 |
| 3905.54 | 1919.18 | 3907.26 | 1919.08 | 3908.02 | 1919.12 | 3910.93 | 1919.37 | 3912.75 | 1919.52 |
| 3917.84 | 1920 | 3933.1 | 1920.87 | 3934.52 | 1920.91 | 3935.33 | 1920.92 | 3939.58 | 1920.74 |
| 3945.58 | 1920.44 | 3947.42 | 1920.33 | 3950.64 | 1920.15 | 3953.09 | 1920 | 3955.08 | 1919.89 |
| 3972.6 | 1919 | 3987.59 | 1919 | 3989.32 | 1919.13 | 3990.48 | 1919.24 | 3996.33 | 1920 |
| 4001.32 | 1920.61 | 4004.34 | 1921 | 4007.74 | 1921.42 | 4008.29 | 1921.48 | 4011.59 | 1921.89 |
| 4012.54 | 1922 | 4016.36 | 1922.02 | 4018.11 | 1922.02 | 4022.08 | 1922 | 4022.26 | 1921.99 |
| 4029.84 | 1921.74 | 4030.91 | 1921.69 | 4039.07 | 1921.44 | 4041.99 | 1921.36 | 4043.28 | 1921.29 |
| 4047.69 | 1921 | 4048.61 | 1920.97 | 4050.68 | 1920.93 | 4056.57 | 1920.72 | 4057.99 | 1920.72 |
| 4058.6 | 1920.56 | 4060.27 | 1920.39 | 4060.98 | 1920.37 | 4066.28 | 1920.32 | 4069.62 | 1920.07 |
| 4071.06 | 1920 | 4074.09 | 1919.58 | 4077.24 | 1919.33 | 4080.96 | 1919 | 4085.79 | 1918.54 |
| 4091.26 | 1918 | 4092.41 | 1917.87 | 4094.39 | 1917.62 | 4100.68 | 1917 | 4108.87 | 1916.26 |
| 4111.54 | 1916 | 4118.48 | 1915.58 | 4132.6 | 1915 | 4178.84 | 1915 | 4180.88 | 1915.1 |
| 4198.35 | 1916 | 4225.94 | 1916 | 4256.77 | 1915 | 4257.45 | 1914.98 | 4277.36 | 1914.26 |
| 4279.93 | 1914.18 | 4282.28 | 1914.1 | 4284.64 | 1914.04 | 4285.34 | 1914.04 | 4290.37 | 1914 |
| 4322.28 | 1914 | 4325.03 | 1914.09 | 4346.52 | 1915 | 4355.58 | 1915.35 | 4363.92 | 1915.52 |
| 4369.06 | 1915.6 | 4371.13 | 1915.6 | 4376.49 | 1915.58 | 4382.6 | 1915.54 | 4384.52 | 1915.52 |
| 4395.99 | 1915.29 | 4397.13 | 1915.26 | 4410.45 | 1915 | 4502.61 | 1915 | 4519.35 | 1915.69 |
| 4526.47 | 1916 | 4570.94 | 1916.82 | 4580.19 | 1917 | 4788.25 | 1917 | 4800.74 | 1917.19 |
| 4804.79 | 1917.26 | 4824.92 | 1917.69 | 4829.12 | 1917.77 | 4831.61 | 1917.81 | 4832.3 | 1917.83 |
| 4834.61 | 1917.87 | 4840.19 | 1918 | 4997.18 | 1918 | 5011.53 | 1917.66 | 5018.54 | 1917.5 |
| 5040.53 | 1916.99 | 5075 | 1916 | 5103.66 | 1915.66 | 5103.86 | 1915.66 | 5163.85 | 1915 |
| 5166.13 | 1915 | 5166.29 | 1915.01 | 5176.8 | 1915.53 | 5176.92 | 1915.54 | 5188.39 | 1916 |
| 5194.87 | 1916.48 | 5201.56 | 1917 | 5207.04 | 1917.49 | 5212.2 | 1918 | 5219.34 | 1919 |
| 5224.84 | 1920 | 5229.49 | 1921.49 | 5231.26 | 1922 | 5233.15 | 1922.61 | 5234.68 | 1923 |
| 5238.85 | 1924.2 | 5241.53 | 1925 | 5242.65 | 1925.32 | 5244.96 | 1926 | 5248.41 | 1927 |
| 5250.37 | 1927.75 | 5251.6 | 1928.25 | 5253.6 | 1929 | 5256.04 | 1929.93 | 5258.77 | 1931 |
| 5261.29 | 1932 | 5263.92 | 1933 | 5266.4 | 1933.89 | 5269.37 | 1935 | 5272.23 | 1936 |
| 5273.98 | 1936.38 | 5276.74 | 1937 | 5277.15 | 1937.06 | 5282.91 | 1938 | 5285.1 | 1938.14 |
| 5285.32 | 1938.14 | 5295.77 | 1938.3 | 5298.26 | 1938.36 | 5314.6 | 1938.68 | 5314.74 | 1938.68 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5314.74 | .045 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 0 | 5314.74 | 138.34 | 138.34 | 138.34 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1918.29 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.16 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1918.13 | Reach Len. (ft) | 138.34 | 138.34 | 138.34 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6881.10 | | |
| E.G. Slope (ft/ft) | 0.003134 | Area (sq ft) | | 6881.10 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3511.83 | Top Width (ft) | | 3511.83 | | |
| Vel Total (ft/s) | 3.26 | Avg. Vel. (ft/s) | | 3.26 | | |
| Max Chl Dpth (ft) | 5.32 | Hydr. Depth (ft) | | 1.96 | | |
| Conv. Total (cfs) | 400142.3 | Conv. (cfs) | | 400142.3 | | |
| Length Wtd. (ft) | 138.34 | Wetted Per. (ft) | | 3513.38 | | |
| Min Ch El (ft) | 1912.80 | Shear (lb/sq ft) | | 0.38 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5314.74 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.44 | Cum Volume (acre-ft) | | 960.19 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 437.69 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -14197.0

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1919.9 | 9.31 | 1919.88 | 30.04 | 1919.86 | 37.54 | 1919.86 | 56.68 | 1919.82 |
| 66.94 | 1919.81 | 74.97 | 1919.8 | 363.39 | 1919.69 | 387.65 | 1919.68 | 402.24 | 1919.67 |
| 415.63 | 1919.67 | 460.89 | 1919.65 | 476.45 | 1919.65 | 480.65 | 1919.64 | 515.95 | 1919.63 |
| 524.7 | 1919.63 | 532.76 | 1919.62 | 556.24 | 1919.62 | 559.33 | 1919.61 | 566.83 | 1919.61 |
| 860.65 | 1919.5 | 887.96 | 1919.49 | 896.35 | 1919.48 | 906.43 | 1919.48 | 913.98 | 1919.47 |
| 919.55 | 1919.45 | 934.4 | 1919.39 | 935.46 | 1919.38 | 941.29 | 1919.36 | 954.54 | 1919.31 |
| 955.9 | 1919.3 | 965.78 | 1919.26 | 967.57 | 1919.25 | 991.67 | 1919.15 | 993.47 | 1919.15 |
| 1009.05 | 1919.08 | 1020.87 | 1919.03 | 1040.26 | 1918.96 | 1040.93 | 1918.92 | 1047.21 | 1918.63 |
| 1057.93 | 1918.16 | 1059.18 | 1918.11 | 1061.66 | 1918 | 1131.79 | 1918 | 1137.02 | 1918.01 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1143.79 | 1918 | 1157.62 | 1917.9 | 1174.96 | 1917.81 | 1175.37 | 1917.8 | 1195.12 | 1917.68 |
| 1195.79 | 1917.67 | 1212.08 | 1917.56 | 1217.38 | 1917.53 | 1230.6 | 1917.44 | 1232.55 | 1917.43 |
| 1234.37 | 1917.41 | 1238.9 | 1917.39 | 1247.23 | 1917.32 | 1256.26 | 1917.28 | 1277.85 | 1917.15 |
| 1281.63 | 1917.12 | 1295.12 | 1917 | 1304.88 | 1917 | 1326.19 | 1916.87 | 1348.86 | 1916.74 |
| 1365.63 | 1916.64 | 1377.65 | 1916.56 | 1404.82 | 1916.44 | 1423.42 | 1916.38 | 1433.96 | 1916.24 |
| 1448.77 | 1916 | 1450.85 | 1915.99 | 1463.23 | 1915.97 | 1465.2 | 1915.97 | 1565.93 | 1915.76 |
| 1568.26 | 1915.76 | 1576.96 | 1915.78 | 1673.39 | 1915.91 | 1677.31 | 1915.94 | 1678.9 | 1915.94 |
| 1679.78 | 1915.95 | 1681.26 | 1915.95 | 1682.35 | 1915.96 | 1683.63 | 1915.96 | 1692.15 | 1916.01 |
| 1697.54 | 1916.03 | 1720.39 | 1916.11 | 1746.2 | 1916.01 | 1749.03 | 1916.02 | 1750.02 | 1916 |
| 1759.81 | 1915.26 | 1762.42 | 1915 | 1766.3 | 1914.37 | 1768.65 | 1914 | 1773.63 | 1913.21 |
| 1774.88 | 1913 | 1781.58 | 1913 | 1787.09 | 1912.74 | 1787.36 | 1912.74 | 1789 | 1912.64 |
| 1790.57 | 1912.58 | 1796.25 | 1912.25 | 1797.39 | 1912.21 | 1798.6 | 1912.13 | 1800.16 | 1912 |
| 1829.9 | 1912 | 1833.59 | 1912.17 | 1835.42 | 1912.21 | 1838.09 | 1912.29 | 1838.58 | 1912.3 |
| 1849.78 | 1912.68 | 1850.58 | 1912.7 | 1863.44 | 1913 | 1864.07 | 1913 | 1883.57 | 1913.22 |
| 1888.09 | 1913.28 | 1890.98 | 1913.31 | 1921.21 | 1913.66 | 1923.88 | 1913.7 | 1930 | 1913.78 |
| 1933.36 | 1913.83 | 1946.01 | 1914 | 1948.88 | 1914 | 1961.43 | 1914.28 | 1964.37 | 1914.33 |
| 1978.92 | 1914.61 | 1979.65 | 1914.61 | 1985.35 | 1914.73 | 1987.46 | 1914.73 | 1987.57 | 1914.74 |
| 1989.59 | 1914.74 | 2004.03 | 1914.84 | 2010.65 | 1914.88 | 2015.03 | 1914.88 | 2015.15 | 1914.87 |
| 2016.88 | 1914.87 | 2035.34 | 1915 | 2245.09 | 1915 | 2249.91 | 1914.98 | 2253.45 | 1914.97 |
| 2262.82 | 1915 | 2433.11 | 1915 | 2456.34 | 1914.44 | 2460.51 | 1914.35 | 2467.03 | 1914.16 |
| 2472.77 | 1914 | 2475.39 | 1913.97 | 2477.05 | 1913.96 | 2479.39 | 1913.96 | 2496.81 | 1913.62 |
| 2516.52 | 1913.27 | 2524.96 | 1913 | 2541.21 | 1913 | 2545.01 | 1913.29 | 2547.12 | 1913.46 |
| 2547.95 | 1913.52 | 2549.1 | 1913.62 | 2552.71 | 1914 | 2558.61 | 1914.61 | 2562.26 | 1915 |
| 2676.55 | 1915 | 2680.96 | 1915.23 | 2695.99 | 1916 | 2700.31 | 1916.01 | 2701.95 | 1916.01 |
| 2732.11 | 1916.37 | 2750.42 | 1916.48 | 2753.51 | 1916.47 | 2756.56 | 1916.47 | 2769.66 | 1916.22 |
| 2776.48 | 1916.05 | 2779.96 | 1916.05 | 2780.21 | 1916.04 | 2784.47 | 1916.04 | 2785.67 | 1916.03 |
| 2789.48 | 1916.01 | 2790.21 | 1916 | 2846.42 | 1916 | 2863.83 | 1916.36 | 2889.83 | 1916.86 |
| 2895.88 | 1916.98 | 2897.94 | 1917 | 3026.43 | 1917 | 3038.69 | 1917.01 | 3049.79 | 1917 |
| 3061.36 | 1917 | 3063.9 | 1916.89 | 3064.33 | 1916.88 | 3075.73 | 1916.43 | 3085.87 | 1916.28 |
| 3087.49 | 1916.25 | 3090.44 | 1916.18 | 3096.29 | 1916.07 | 3099.42 | 1916.02 | 3101.57 | 1916.02 |
| 3113.64 | 1916.1 | 3114.3 | 1916.1 | 3121.23 | 1916.14 | 3127.56 | 1916.18 | 3133.93 | 1916.18 |
| 3139.97 | 1916.17 | 3143.57 | 1916.18 | 3147.9 | 1916.2 | 3147.98 | 1916.21 | 3151.08 | 1916.21 |
| 3152.45 | 1916.22 | 3153.89 | 1916.24 | 3158.07 | 1916.33 | 3158.42 | 1916.33 | 3166.37 | 1916.5 |
| 3166.96 | 1916.52 | 3169.52 | 1916.58 | 3172.66 | 1916.63 | 3178.46 | 1916.78 | 3195.21 | 1917 |
| 3332.9 | 1917 | 3339.16 | 1917.42 | 3340.07 | 1917.45 | 3342.37 | 1917.48 | 3351.17 | 1917.58 |
| 3357.15 | 1917.66 | 3362.67 | 1917.71 | 3366.48 | 1917.76 | 3374.76 | 1917.79 | 3377.35 | 1917.82 |
| 3379.76 | 1917.81 | 3383.64 | 1917.81 | 3387.15 | 1917.7 | 3388.17 | 1917.7 | 3390.31 | 1917.66 |
| 3401.59 | 1917.26 | 3402.94 | 1917.21 | 3404.24 | 1917.15 | 3408.43 | 1917 | 3425.24 | 1917 |
| 3441.24 | 1917.9 | 3443.86 | 1918.02 | 3445.02 | 1918.14 | 3448.68 | 1918.47 | 3449.13 | 1918.5 |
| 3454.59 | 1919 | 3459 | 1919.45 | 3464.67 | 1920 | 3470.05 | 1920.21 | 3473.25 | 1920.31 |
| 3481.8 | 1920.55 | 3492.17 | 1920.55 | 3505.11 | 1920.44 | 3511.57 | 1920.24 | 3518.32 | 1920.01 |
| 3519.1 | 1920 | 3533.42 | 1919.1 | 3534.09 | 1919.05 | 3535.55 | 1918.96 | 3547.9 | 1918 |
| 3552.52 | 1917.72 | 3559.66 | 1917.45 | 3564.68 | 1917.21 | 3568.46 | 1917.14 | 3571.73 | 1917 |
| 3576.69 | 1916.94 | 3579.29 | 1916.88 | 3588.15 | 1916.82 | 3594.5 | 1916.97 | 3602.31 | 1916.99 |
| 3605.14 | 1917 | 3607.57 | 1917.2 | 3613.77 | 1917.72 | 3614.27 | 1917.77 | 3617.02 | 1918 |
| 3646.59 | 1918 | 3653.6 | 1917.56 | 3660.65 | 1917 | 3663.87 | 1916.55 | 3669.08 | 1916 |
| 3678.26 | 1915 | 3687.89 | 1915 | 3694.94 | 1915.91 | 3696.38 | 1916.09 | 3703.53 | 1917 |
| 3707.97 | 1917.11 | 3711.93 | 1917.2 | 3717.28 | 1917.34 | 3739.88 | 1917.99 | 3740.13 | 1918 |
| 3749.94 | 1918.69 | 3754.48 | 1919 | 3773.92 | 1920 | 3774.26 | 1920 | 3776.06 | 1920.25 |
| 3777.32 | 1920.37 | 3778.79 | 1920.52 | 3779.85 | 1920.61 | 3782.06 | 1920.86 | 3783.66 | 1920.98 |
| 3785.04 | 1920.84 | 3786.35 | 1920.67 | 3789.87 | 1920.19 | 3791.15 | 1920 | 3791.22 | 1920 |
| 3791.98 | 1919.82 | 3792.56 | 1919.74 | 3795.04 | 1919.28 | 3795.66 | 1919.18 | 3796.87 | 1919.08 |
| 3797.97 | 1919 | 3800.18 | 1918.98 | 3801.94 | 1919.01 | 3803.83 | 1919.13 | 3808.9 | 1919.48 |
| 3809.36 | 1919.49 | 3811.4 | 1919.64 | 3811.83 | 1919.63 | 3817.67 | 1919.71 | 3822.42 | 1919.7 |
| 3823.22 | 1919.68 | 3829.6 | 1919.58 | 3834.59 | 1919.53 | 3836.35 | 1919.47 | 3843 | 1919.49 |
| 3843.51 | 1919.47 | 3845.17 | 1919.47 | 3851.51 | 1919.48 | 3853.41 | 1919.5 | 3854.69 | 1919.49 |
| 3861.18 | 1919.58 | 3861.33 | 1919.57 | 3863.93 | 1919.51 | 3867.55 | 1919.4 | 3867.87 | 1919.4 |
| 3874.11 | 1919 | 3881.54 | 1918.26 | 3884.68 | 1918 | 3889.62 | 1917.38 | 3892.67 | 1917 |
| 3894.22 | 1916.78 | 3898.88 | 1916 | 3903.51 | 1915.43 | 3904.51 | 1915.37 | 3911.83 | 1915 |
| 3996.36 | 1915 | 3998.28 | 1915.02 | 4066.61 | 1915.24 | 4110.4 | 1915.37 | 4111.3 | 1915.36 |
| 4111.81 | 1915.37 | 4114.02 | 1915.34 | 4123.72 | 1915.2 | 4135.75 | 1915 | 4136.21 | 1915 |
| 4141.5 | 1914.76 | 4143.55 | 1914.68 | 4153.92 | 1914.22 | 4154.1 | 1914.22 | 4159.91 | 1914.03 |
| 4162.18 | 1914.04 | 4163.05 | 1914.05 | 4168.34 | 1914.07 | 4169.73 | 1914.08 | 4181.24 | 1914.02 |
| 4182.88 | 1914.03 | 4184.39 | 1914.02 | 4185.77 | 1914.02 | 4188.33 | 1914.01 | 4194.5 | 1914.02 |
| 4197.3 | 1914.02 | 4201.12 | 1914.03 | 4205.15 | 1914.03 | 4215.47 | 1914.16 | 4239.83 | 1914.44 |
| 4241.5 | 1914.45 | 4245.17 | 1914.45 | 4278.58 | 1914.51 | 4306.6 | 1914.54 | 4314.98 | 1914.54 |
| 4343.2 | 1914.71 | 4388.5 | 1915 | 4395.54 | 1915 | 4407.28 | 1915.41 | 4427.98 | 1916 |
| 4431.83 | 1916.2 | 4434.85 | 1916.35 | 4438.3 | 1916.53 | 4442.27 | 1916.7 | 4443.74 | 1916.74 |
| 4444.21 | 1916.77 | 4445.8 | 1916.8 | 4446.16 | 1916.82 | 4453.95 | 1916.98 | 4456.5 | 1917 |
| 4698.98 | 1917 | 4700.88 | 1917.01 | 4709.68 | 1917.17 | 4716.72 | 1917.26 | 4722.41 | 1917.33 |
| 4725.17 | 1917.36 | 4727.92 | 1917.38 | 4761.57 | 1917.47 | 4786.85 | 1917.53 | 4803.23 | 1917.55 |
| 4820.39 | 1917.56 | 4823.52 | 1917.55 | 4836.3 | 1917.39 | 4862.75 | 1917.06 | 4864.45 | 1917.02 |
| 4866.43 | 1916.99 | 4866.96 | 1916.99 | 4873.88 | 1916.83 | 4888.65 | 1916.55 | 4888.93 | 1916.54 |
| 4900.77 | 1916.36 | 4907.16 | 1916.29 | 4913.1 | 1916.19 | 4921.12 | 1916.04 | 4921.44 | 1916.04 |
| 4923.35 | 1916 | 4940.79 | 1915.79 | 4952.58 | 1915.69 | 4957.19 | 1915.64 | 4968.91 | 1915.6 |
| 4983.95 | 1915.53 | 4993.98 | 1915.46 | 5001.72 | 1915.41 | 5006.06 | 1915.39 | 5006.85 | 1915.38 |
| 5049.96 | 1915.04 | 5054.37 | 1915 | 5056.82 | 1915 | 5057.22 | 1915.01 | 5080.19 | 1915.62 |
| 5081.01 | 1915.59 | 5082.59 | 1915.6 | 5083.39 | 1915.58 | 5084.16 | 1915.6 | 5084.92 | 1915.58 |
| 5086.03 | 1915.59 | 5090.49 | 1915.69 | 5097.6 | 1915.94 | 5099.16 | 1916.05 | 5111.78 | 1917 |
| 5115.38 | 1917.2 | 5119.24 | 1917.43 | 5121.45 | 1917.55 | 5122.91 | 1917.65 | 5129.49 | 1917.99 |
| 5129.62 | 1918 | 5132.81 | 1918.66 | 5134.1 | 1919 | 5134.94 | 1919.25 | 5135.85 | 1919.58 |
| 5137.19 | 1920 | 5138.02 | 1920.29 | 5140.16 | 1921 | 5142.52 | 1921.8 | 5143.65 | 1922.16 |
| 5145.42 | 1923 | 5146.6 | 1923.59 | 5147.51 | 1924 | 5149.06 | 1924.73 | 5150.01 | 1925.14 |
| 5151.88 | 1926 | 5152.44 | 1926.25 | 5154.21 | 1927 | 5156.15 | 1927.81 | 5159.47 | 1929 |
| 5159.98 | 1929.14 | 5162.44 | 1930 | 5163.81 | 1930.39 | 5165.54 | 1931 | 5168.56 | 1931.75 |
| 5169.53 | 1932 | 5171.15 | 1932.32 | 5174.53 | 1933 | 5176.16 | 1933.39 | 5177.24 | 1933.7 |
| 5178.03 | 1934 | 5181.84 | 1935.57 | 5182.93 | 1936 | 5185.26 | 1936.89 | 5185.75 | 1937 |
| 5213.44 | 1937 | 5221.13 | 1936.97 | 5224.6 | 1936.98 | 5229.4 | 1937 | 5241.15 | 1937.45 |

5242.07 1937.5 5248.2 1937.77 5253.82 1938 5262.79 1938.29 5264.79 1938.38

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5264.79 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5264.79 | 251.45 | 251.45 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1917.85 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.16 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1917.68 | Reach Len. (ft) | 251.45 | 251.45 | 251.45 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6872.57 | | |
| E.G. Slope (ft/ft) | 0.003237 | Area (sq ft) | | 6872.57 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3587.26 | Top Width (ft) | | 3587.26 | | |
| Vel Total (ft/s) | 3.26 | Avg. Vel. (ft/s) | | 3.26 | | |
| Max Chl Dpth (ft) | 5.68 | Hydr. Depth (ft) | | 1.92 | | |
| Conv. Total (cfs) | 393730.3 | Conv. (cfs) | | 393730.3 | | |
| Length Wtd. (ft) | 251.45 | Wetted Per. (ft) | | 3588.41 | | |
| Min Ch El (ft) | 1912.00 | Shear (lb/sq ft) | | 0.39 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5264.79 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.82 | Cum Volume (acre-ft) | | 938.35 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 426.41 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -14448.4

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1919.63 | 2.04 | 1919.63 | 14.66 | 1919.61 | 17.69 | 1919.6 | 169.75 | 1919.41 |
| 172.54 | 1919.4 | 179.03 | 1919.39 | 184.25 | 1919.39 | 199.31 | 1919.37 | 212.78 | 1919.35 |
| 247.36 | 1919.31 | 301.61 | 1919.23 | 356.79 | 1919.16 | 359.73 | 1919.16 | 383.53 | 1919.13 |
| 392 | 1919.11 | 408.37 | 1919.09 | 414.39 | 1919.09 | 415.48 | 1919.08 | 422.01 | 1919.08 |
| 422.58 | 1919.07 | 428.09 | 1919.07 | 432.04 | 1919.06 | 437.1 | 1919.06 | 438.54 | 1919.05 |
| 444.93 | 1919.05 | 505.08 | 1918.97 | 510.68 | 1918.96 | 539.17 | 1918.92 | 550.71 | 1918.91 |
| 561.06 | 1918.89 | 573.93 | 1918.88 | 595.35 | 1918.85 | 598.35 | 1918.84 | 601.52 | 1918.84 |
| 605.2 | 1918.83 | 650.89 | 1918.77 | 686.59 | 1918.73 | 735.78 | 1918.66 | 779.66 | 1918.6 |
| 780.55 | 1918.6 | 818.35 | 1918.55 | 841.96 | 1918.52 | 875.68 | 1918.48 | 908.29 | 1918.44 |
| 908.69 | 1918.43 | 971.04 | 1918.35 | 991.91 | 1918.33 | 1011.69 | 1918.3 | 1015.91 | 1916.3 |
| 1017.97 | 1915 | 1023.2 | 1915.01 | 1024.82 | 1915 | 1032.52 | 1915 | 1068.34 | 1916 |
| 1098.1 | 1916.01 | 1150.46 | 1916.01 | 1175.1 | 1916 | 1227.13 | 1916 | 1262.11 | 1916.01 |
| 1279.58 | 1916.01 | 1321.59 | 1916 | 1334.53 | 1915.69 | 1340.73 | 1915.55 | 1342.97 | 1915.51 |
| 1353.04 | 1915.29 | 1355.56 | 1915.25 | 1362.04 | 1915.17 | 1366.23 | 1915.1 | 1371.15 | 1915.03 |
| 1372.52 | 1915 | 1409.22 | 1915 | 1462.06 | 1914.56 | 1464.53 | 1914.55 | 1480.08 | 1914.46 |
| 1482.72 | 1914.45 | 1494.68 | 1914.38 | 1495.85 | 1914.38 | 1504.79 | 1914.32 | 1509.85 | 1914.3 |
| 1515.73 | 1914.27 | 1520.39 | 1914.24 | 1523.78 | 1914.23 | 1526.49 | 1914.21 | 1544.58 | 1914.29 |
| 1584.58 | 1914.47 | 1585.46 | 1914.49 | 1589.67 | 1914.55 | 1596.52 | 1914.54 | 1603.56 | 1914.54 |
| 1604.52 | 1914.56 | 1610.11 | 1914.53 | 1611.2 | 1914.55 | 1613.65 | 1914.56 | 1617.72 | 1914.6 |
| 1621.23 | 1914.65 | 1631.95 | 1914.87 | 1640.91 | 1915 | 1644.69 | 1915 | 1647.95 | 1915.01 |
| 1651.73 | 1915 | 1654.92 | 1915.03 | 1656.83 | 1915.02 | 1658.03 | 1915.03 | 1661.65 | 1915.02 |
| 1668.57 | 1915.04 | 1673.78 | 1915.03 | 1676 | 1915 | 1682.54 | 1914.65 | 1683.09 | 1914.63 |
| 1688.14 | 1914.37 | 1695.16 | 1914 | 1703.76 | 1913.16 | 1706.73 | 1912.8 | 1712.94 | 1912 |
| 1749.67 | 1912 | 1761.48 | 1912.33 | 1780.93 | 1912.71 | 1791.54 | 1912.94 | 1792.87 | 1912.94 |
| 1798.91 | 1913 | 1913.8 | 1913 | 1915.15 | 1913.02 | 1927.22 | 1913.03 | 1934.24 | 1913.05 |
| 1952.47 | 1913 | 1986.59 | 1913 | 1992.51 | 1913.13 | 1994.27 | 1913.16 | 1999.42 | 1913.27 |
| 2034.37 | 1914 | 2057.91 | 1914 | 2060.13 | 1913.99 | 2063.39 | 1913.94 | 2066.39 | 1913.87 |
| 2071.15 | 1913.74 | 2075.29 | 1913.71 | 2076.49 | 1913.67 | 2095.42 | 1913.63 | 2112.25 | 1913.6 |
| 2114.99 | 1913.58 | 2119.06 | 1913.79 | 2119.37 | 1913.79 | 2122.87 | 1914 | 2133.19 | 1914.13 |
| 2144.62 | 1914.28 | 2152.82 | 1914.38 | 2154.44 | 1914.39 | 2166.27 | 1914.55 | 2166.87 | 1914.55 |
| 2174.3 | 1914.63 | 2179.54 | 1914.68 | 2208.47 | 1914.78 | 2209.63 | 1914.78 | 2218.02 | 1914.73 |
| 2219.94 | 1914.71 | 2222.68 | 1914.71 | 2228.12 | 1914.68 | 2231.61 | 1914.65 | 2234.81 | 1914.64 |
| 2282.57 | 1914.35 | 2337.58 | 1914 | 2378.15 | 1914 | 2386.6 | 1913.84 | 2395.41 | 1913.65 |
| 2406.83 | 1913.41 | 2428.33 | 1913.07 | 2430.4 | 1913.03 | 2434.93 | 1913.02 | 2440.15 | 1913 |
| 2546.29 | 1913 | 2564.59 | 1914 | 2569.79 | 1914.16 | 2584.46 | 1914.57 | 2592.03 | 1914.77 |
| 2599.9 | 1915 | 2612.86 | 1915.64 | 2616.87 | 1915.86 | 2619.7 | 1916 | 2742.45 | 1916 |
| 2752.61 | 1916.37 | 2764.75 | 1916.82 | 2770.06 | 1917.02 | 2841.75 | 1917 | 2846.49 | 1916.99 |
| 2849.82 | 1916.97 | 2861.87 | 1916.61 | 2869.45 | 1916.45 | 2878.63 | 1916.25 | 2882.2 | 1916.16 |
| 2886.96 | 1916 | 2906.6 | 1916 | 2914.05 | 1916.01 | 2924.35 | 1916.03 | 2929.61 | 1916.14 |
| 2931.68 | 1916.15 | 2957.91 | 1916.38 | 2958.18 | 1916.38 | 2965.42 | 1916.25 | 2967.29 | 1916.28 |
| 2972.61 | 1916.24 | 2973.23 | 1916.25 | 2983.39 | 1916.14 | 2983.73 | 1916.13 | 2990 | 1916.04 |
| 2995.83 | 1916 | 2999.22 | 1915.96 | 3001.38 | 1915.91 | 3007.39 | 1915.63 | 3008.87 | 1915.57 |
| 3021.08 | 1915 | 3050.95 | 1915 | 3054.27 | 1915.12 | 3060.66 | 1915.33 | 3065.78 | 1915.46 |
| 3065.93 | 1915.47 | 3073.2 | 1915.71 | 3074.15 | 1915.75 | 3081.5 | 1916 | 3099.59 | 1916.27 |
| 3100.76 | 1916.29 | 3143.19 | 1916.98 | 3150.82 | 1916.98 | 3159.44 | 1917 | 3188.96 | 1917 |
| 3189.89 | 1916.97 | 3214.54 | 1916.51 | 3224.42 | 1916.39 | 3225.42 | 1916.36 | 3226.92 | 1916.41 |
| 3230.36 | 1916.47 | 3230.93 | 1916.5 | 3238.24 | 1916.51 | 3239.12 | 1916.53 | 3251.36 | 1916.85 |
| 3255.03 | 1916.96 | 3258.24 | 1917 | 3265.69 | 1917.21 | 3288.75 | 1917.42 | 3303.88 | 1917.48 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3304.69 | 1917.48 | 3315.04 | 1917.34 | 3315.59 | 1917.34 | 3325.94 | 1917.16 | 3334.59 | 1917 |
| 3335.37 | 1917 | 3345.86 | 1916.49 | 3355 | 1916 | 3361.2 | 1915.99 | 3364.3 | 1916 |
| 3372.6 | 1916.37 | 3373.34 | 1916.39 | 3379.84 | 1916.67 | 3383.8 | 1916.66 | 3388.09 | 1916.61 |
| 3391.82 | 1916.49 | 3396.69 | 1916.35 | 3399.56 | 1916.24 | 3403.93 | 1916.16 | 3404.39 | 1916.14 |
| 3408.5 | 1916.09 | 3409.61 | 1916.06 | 3412.71 | 1916.06 | 3415.86 | 1916.15 | 3424.73 | 1916.3 |
| 3426.6 | 1916.38 | 3435.37 | 1916.58 | 3442.46 | 1916.96 | 3443.3 | 1917 | 3458.77 | 1917.4 |
| 3464.68 | 1917.54 | 3470.02 | 1917.57 | 3474.97 | 1917.58 | 3475.34 | 1917.56 | 3477.63 | 1917.66 |
| 3478.54 | 1917.52 | 3481.07 | 1917.06 | 3484.14 | 1916.3 | 3485.6 | 1916 | 3488.49 | 1915.68 |
| 3491.78 | 1915.36 | 3495.9 | 1915 | 3505.26 | 1914.97 | 3518.72 | 1914.95 | 3520.8 | 1914.94 |
| 3524.75 | 1914.95 | 3532.97 | 1914.59 | 3533.11 | 1914.59 | 3537.72 | 1915 | 3538.52 | 1915.5 |
| 3539.44 | 1916 | 3540.06 | 1916.4 | 3540.68 | 1916.62 | 3541.53 | 1917 | 3542.12 | 1917.47 |
| 3542.61 | 1917.55 | 3544.16 | 1918.19 | 3546.04 | 1919 | 3548.39 | 1920.03 | 3548.98 | 1920.17 |
| 3549.77 | 1920.29 | 3550.6 | 1920.32 | 3551.39 | 1920.3 | 3555.71 | 1919.84 | 3557.59 | 1919.72 |
| 3558.99 | 1919.5 | 3561.3 | 1919 | 3566.68 | 1918.99 | 3572.81 | 1918.22 | 3575.01 | 1918 |
| 3584.55 | 1917.42 | 3588.8 | 1917 | 3595.41 | 1916.99 | 3600.62 | 1917 | 3605.42 | 1917 |
| 3607.92 | 1916.87 | 3611.09 | 1916.77 | 3620.13 | 1916.39 | 3628.55 | 1916.17 | 3632.9 | 1916.04 |
| 3636.6 | 1915.9 | 3637.14 | 1915.87 | 3641.39 | 1915.7 | 3642.97 | 1915.61 | 3649.24 | 1915.31 |
| 3655.31 | 1915 | 3680.16 | 1915 | 3680.68 | 1915.01 | 3685.78 | 1915.38 | 3695.22 | 1916 |
| 3696.45 | 1916.07 | 3699.12 | 1916.49 | 3703.41 | 1917 | 3706.08 | 1917.9 | 3711.7 | 1920 |
| 3714.4 | 1921 | 3715.87 | 1921 | 3721.39 | 1920 | 3721.98 | 1919.98 | 3723.39 | 1919.58 |
| 3725.81 | 1919.11 | 3727.48 | 1918.61 | 3729.94 | 1918.2 | 3731.39 | 1918 | 3736.26 | 1917.39 |
| 3739.07 | 1917 | 3740.4 | 1916.85 | 3746.61 | 1916 | 3747.77 | 1915.93 | 3757.84 | 1915 |
| 3760.85 | 1914.99 | 3780.67 | 1914.99 | 3795.32 | 1914.98 | 3801.26 | 1914.99 | 3810.66 | 1914.99 |
| 3813.58 | 1915 | 4072.19 | 1915 | 4084.02 | 1914.76 | 4108.46 | 1914.24 | 4117.1 | 1914.06 |
| 4119.29 | 1914.02 | 4129.19 | 1913.73 | 4151.9 | 1913.1 | 4155.35 | 1913 | 4184.8 | 1913 |
| 4188.61 | 1913.11 | 4195.68 | 1913.3 | 4201.43 | 1913.45 | 4217.97 | 1914 | 4218.21 | 1914.02 |
| 4223.57 | 1914.03 | 4239.9 | 1914.36 | 4251.74 | 1914.5 | 4260.31 | 1914.5 | 4265.39 | 1914.52 |
| 4270.23 | 1914.52 | 4285.34 | 1914.74 | 4301.82 | 1915 | 4315.89 | 1915 | 4320.57 | 1914.96 |
| 4324.51 | 1914.99 | 4324.69 | 1914.98 | 4330.41 | 1915 | 4356.25 | 1915 | 4357.66 | 1914.99 |
| 4360.17 | 1915 | 4370.84 | 1914.99 | 4380.33 | 1914.99 | 4380.82 | 1915 | 4390.75 | 1915 |
| 4399.63 | 1915.26 | 4409.15 | 1915.52 | 4420.22 | 1915.7 | 4434.73 | 1915.98 | 4437.08 | 1915.98 |
| 4438.93 | 1916 | 4585.71 | 1916 | 4672.39 | 1916.5 | 4728.48 | 1916.83 | 4734.3 | 1916.86 |
| 4738.04 | 1916.89 | 4743.34 | 1916.92 | 4744.69 | 1916.92 | 4756.94 | 1917 | 4811.52 | 1917 |
| 4824.42 | 1916.48 | 4826.5 | 1916.39 | 4837.71 | 1916 | 4844.58 | 1915.75 | 4856.76 | 1915.37 |
| 4862.44 | 1915.18 | 4871.15 | 1915 | 4878.04 | 1914.97 | 4885.87 | 1914.93 | 4887.58 | 1914.93 |
| 4895.2 | 1914.88 | 4907.15 | 1914.97 | 4910.52 | 1914.98 | 4911.15 | 1915 | 5012.75 | 1915 |
| 5014.15 | 1915.05 | 5017.29 | 1915.13 | 5048.64 | 1916 | 5059.7 | 1917 | 5061.15 | 1917.23 |
| 5062.26 | 1917.29 | 5063.43 | 1917.41 | 5067.81 | 1918 | 5071.21 | 1918.35 | 5077.65 | 1919 |
| 5084.94 | 1919.78 | 5087.05 | 1920 | 5091.19 | 1920.57 | 5093.35 | 1920.81 | 5098.8 | 1921.34 |
| 5105.05 | 1922 | 5111.03 | 1922.6 | 5114.05 | 1923 | 5118.92 | 1923.71 | 5120.71 | 1924 |
| 5123.58 | 1924.37 | 5127.79 | 1925 | 5130.37 | 1925.65 | 5131.56 | 1926 | 5132.47 | 1926.32 |
| 5134.74 | 1926.83 | 5135.24 | 1926.98 | 5135.7 | 1927 | 5139.86 | 1927.97 | 5140.42 | 1928 |
| 5141.63 | 1928.26 | 5145.59 | 1929.14 | 5146.99 | 1929.53 | 5149.23 | 1929.97 | 5149.87 | 1930.04 |
| 5152.46 | 1930.51 | 5154.87 | 1930.99 | 5156.88 | 1931.33 | 5160.7 | 1932.02 | 5167.47 | 1933 |
| 5173.26 | 1933 | 5198.36 | 1933.85 | 5201.6 | 1934 | 5203.27 | 1934.03 | 5208.68 | 1934.04 |
| 5213.17 | 1934.08 | 5214.6 | 1934.15 | 5216.72 | 1934.14 | 5218.16 | 1934.32 | 5219.06 | 1934.36 |
| 5219.63 | 1934.44 | 5220.52 | 1934.51 | 5223.03 | 1934.81 | 5223.96 | 1934.89 | 5225.32 | 1934.91 |
| 5228.5 | 1934.88 | 5229.17 | 1934.94 | 5240.58 | 1934.86 | 5242.57 | 1934.97 | 5244.01 | 1934.98 |
| 5253.94 | 1934.97 | 5257.66 | 1934.98 | 5260.34 | 1935 | 5261.59 | 1935.27 | 5264 | 1935.25 |
| 5268.01 | 1935.56 | 5268.57 | 1935.62 | 5275.53 | 1935.58 | 5285.62 | 1935.99 | 5288.82 | 1935.99 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5288.82 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5288.82 | 170.92 | 170.92 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1917.03 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.17 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1916.87 | Reach Len. (ft) | 170.92 | 170.92 | 170.92 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6846.68 | | |
| E.G. Slope (ft/ft) | 0.003276 | Area (sq ft) | | 6846.68 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3585.25 | Top Width (ft) | | 3585.25 | | |
| Vel Total (ft/s) | 3.27 | Avg. Vel. (ft/s) | | 3.27 | | |
| Max Chl Dpth (ft) | 4.87 | Hydr. Depth (ft) | | 1.91 | | |
| Conv. Total (cfs) | 391346.8 | Conv. (cfs) | | 391346.8 | | |
| Length Wtd. (ft) | 170.92 | Wetted Per. (ft) | | 3587.24 | | |
| Min Ch El (ft) | 1912.00 | Shear (lb/sq ft) | | 0.39 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5288.82 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.51 | Cum Volume (acre-ft) | | 898.75 | | |
| C & E Loss (ft) | 0.01 | Cum SA (acres) | | 405.71 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -14619.3

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1919.6 | 17.19 | 1919.58 | 31.18 | 1919.56 | 63.41 | 1919.52 | 67.36 | 1919.51 |
| 79.66 | 1919.5 | 93.8 | 1919.48 | 132.93 | 1919.43 | 182.49 | 1919.36 | 235.19 | 1919.29 |
| 269.5 | 1919.25 | 323.81 | 1919.18 | 391.93 | 1919.09 | 470.63 | 1918.98 | 500.8 | 1918.94 |
| 524.36 | 1918.91 | 665.47 | 1918.73 | 712.87 | 1918.66 | 923.22 | 1918.39 | 1044.68 | 1918.23 |
| 1046.5 | 1915.25 | 1046.67 | 1914.69 | 1056.58 | 1914.9 | 1065.09 | 1915 | 1092.83 | 1915.02 |
| 1103.24 | 1915.02 | 1115.94 | 1915.03 | 1129.41 | 1915.04 | 1161.62 | 1915.04 | 1172.3 | 1915.03 |
| 1206.87 | 1915.14 | 1218.79 | 1915.08 | 1221.65 | 1915.09 | 1225.47 | 1915.1 | 1227.18 | 1915.09 |
| 1239.3 | 1915 | 1250.64 | 1914.92 | 1257.47 | 1914.9 | 1258.99 | 1914.89 | 1271.05 | 1914.85 |
| 1273.41 | 1914.84 | 1285.51 | 1914.77 | 1291.89 | 1914.74 | 1293.08 | 1914.74 | 1294.53 | 1914.75 |
| 1302.2 | 1914.69 | 1302.44 | 1914.69 | 1309.06 | 1914.64 | 1365.41 | 1914.83 | 1413.5 | 1915 |
| 1493.59 | 1915 | 1508.58 | 1914.79 | 1518.44 | 1914.66 | 1538.06 | 1914.39 | 1546.06 | 1914.29 |
| 1557 | 1914.16 | 1557.41 | 1914.16 | 1570.19 | 1914 | 1625.33 | 1914 | 1639.98 | 1914.37 |
| 1642.61 | 1914.39 | 1660.72 | 1914.42 | 1677.46 | 1914.44 | 1681.73 | 1914.47 | 1686.44 | 1914.24 |
| 1691.01 | 1914 | 1692.93 | 1914 | 1698.79 | 1913.42 | 1703.13 | 1913 | 1707.01 | 1912.53 |
| 1710.27 | 1912 | 1731.24 | 1912 | 1738.01 | 1912.03 | 1739.12 | 1912.03 | 1741.8 | 1912.06 |
| 1742.16 | 1912.06 | 1751.76 | 1912.28 | 1768.29 | 1912.27 | 1785.17 | 1912.28 | 1855.88 | 1913 |
| 1995.09 | 1913 | 2007.94 | 1913.01 | 2018.69 | 1913.01 | 2107.61 | 1913.82 | 2123.95 | 1913.91 |
| 2129.12 | 1913.94 | 2130.73 | 1913.98 | 2132.25 | 1914 | 2176.89 | 1914 | 2196.2 | 1914.01 |
| 2207.39 | 1914 | 2236.32 | 1914 | 2241.59 | 1913.95 | 2260.67 | 1913.79 | 2261.74 | 1913.79 |
| 2288.08 | 1913.56 | 2328.02 | 1913 | 2485.96 | 1913 | 2488.48 | 1912.99 | 2500.71 | 1912.99 |
| 2528.46 | 1913 | 2573.1 | 1913 | 2573.88 | 1913.09 | 2581.26 | 1914 | 2587.85 | 1914.74 |
| 2590.23 | 1915 | 2702.01 | 1915 | 2715.98 | 1915.01 | 2751.2 | 1915.03 | 2753.8 | 1915 |
| 2790.09 | 1915 | 2792.9 | 1915.02 | 2793.33 | 1915.02 | 2794.88 | 1915.05 | 2805.27 | 1915.23 |
| 2819.22 | 1915.36 | 2824.44 | 1915.43 | 2836.94 | 1915.55 | 2845.08 | 1915.63 | 2856.12 | 1915.78 |
| 2858.81 | 1915.79 | 2872.36 | 1916 | 2874.01 | 1916.04 | 2874.24 | 1916.04 | 2890.22 | 1916.38 |
| 2890.59 | 1916.38 | 2894.42 | 1916.46 | 2894.71 | 1916.46 | 2900.9 | 1916.55 | 2901.57 | 1916.55 |
| 2904.43 | 1916.58 | 2906 | 1916.57 | 2921.5 | 1916.71 | 2947.32 | 1916.95 | 2947.4 | 1916.96 |
| 2948.4 | 1916.97 | 2949.92 | 1917 | 2991.52 | 1917 | 2995.26 | 1916.97 | 3017.56 | 1916.77 |
| 3021.58 | 1916.69 | 3021.68 | 1916.68 | 3026.76 | 1916.57 | 3026.99 | 1916.57 | 3050.64 | 1916 |
| 3050.68 | 1916 | 3074.11 | 1915 | 3123.3 | 1915 | 3125.03 | 1915.04 | 3140.94 | 1915.42 |
| 3142.85 | 1915.47 | 3159.15 | 1915.84 | 3165.27 | 1915.97 | 3166.33 | 1916 | 3168.93 | 1916.01 |
| 3170.53 | 1916.01 | 3171.85 | 1916.02 | 3172.84 | 1916.01 | 3175.5 | 1916.01 | 3177.44 | 1916 |
| 3193.59 | 1916 | 3211.12 | 1915.66 | 3224.16 | 1915.47 | 3242.04 | 1915.37 | 3253.86 | 1915.31 |
| 3258.66 | 1915.33 | 3261.89 | 1915.35 | 3263.46 | 1915.35 | 3264.71 | 1915.36 | 3291.39 | 1915.24 |
| 3332.06 | 1915 | 3382.28 | 1915 | 3384.16 | 1915.01 | 3397.01 | 1915.01 | 3397.69 | 1915.02 |
| 3404.26 | 1915.02 | 3416.24 | 1915.01 | 3435.62 | 1915 | 3441.14 | 1914.58 | 3448.99 | 1914 |
| 3452.44 | 1914 | 3454.96 | 1915 | 3455.3 | 1915.12 | 3457.2 | 1915.75 | 3459.33 | 1916.48 |
| 3463.84 | 1918 | 3466.17 | 1918.79 | 3466.82 | 1919 | 3469.77 | 1920 | 3476.88 | 1920 |
| 3478.83 | 1919.71 | 3480.07 | 1919.55 | 3482.28 | 1919.29 | 3484.36 | 1919 | 3485.03 | 1918.91 |
| 3491.27 | 1918 | 3492.79 | 1917.77 | 3497.91 | 1917 | 3501.58 | 1916.96 | 3502.84 | 1916.95 |
| 3505.49 | 1916.98 | 3508.6 | 1917 | 3512.99 | 1917.36 | 3513.36 | 1917.4 | 3514.03 | 1917.45 |
| 3515.15 | 1917.55 | 3519.17 | 1917.84 | 3520.97 | 1918 | 3521.3 | 1918 | 3521.67 | 1918.03 |
| 3524.01 | 1918.16 | 3534.82 | 1919 | 3537.51 | 1919.84 | 3538.08 | 1920 | 3538.55 | 1920.12 |
| 3541.81 | 1921 | 3544.54 | 1921.72 | 3545.58 | 1922 | 3547.02 | 1922.35 | 3550.38 | 1923 |
| 3553.34 | 1923 | 3555.12 | 1922.73 | 3557.76 | 1922.52 | 3559.86 | 1922.32 | 3560.51 | 1922.25 |
| 3563.02 | 1922 | 3566.6 | 1921.74 | 3569.31 | 1921.94 | 3570.29 | 1922 | 3572.47 | 1922.4 |
| 3575.85 | 1923 | 3581.45 | 1924 | 3583.88 | 1924.02 | 3585.63 | 1924.04 | 3588.22 | 1924.01 |
| 3589.2 | 1924.01 | 3590.05 | 1924 | 3590.94 | 1923.97 | 3592.02 | 1923.97 | 3593 | 1923.94 |
| 3596.49 | 1923.89 | 3601.19 | 1923.12 | 3601.65 | 1923 | 3603.72 | 1922.4 | 3604.78 | 1922.1 |
| 3605.16 | 1922 | 3608.8 | 1921 | 3609.7 | 1920.68 | 3611.06 | 1920.36 | 3612.41 | 1920 |
| 3612.55 | 1919.98 | 3616.08 | 1919 | 3619.69 | 1918.32 | 3621.42 | 1918 | 3625.88 | 1917.17 |
| 3629.07 | 1916.58 | 3630 | 1916.42 | 3631.74 | 1916.18 | 3632.48 | 1916.07 | 3632.81 | 1916 |
| 3633.92 | 1915.91 | 3635.01 | 1915.83 | 3645.52 | 1915 | 3649.51 | 1914.87 | 3668.13 | 1914.09 |
| 3672.86 | 1914.03 | 3673.75 | 1914.03 | 3675.54 | 1914 | 3764.31 | 1914 | 3785.5 | 1914.4 |
| 3786.12 | 1914.41 | 3818.52 | 1914.72 | 3829.57 | 1914.8 | 3832.13 | 1914.8 | 3832.95 | 1914.79 |
| 3839.49 | 1914.77 | 3845.75 | 1914.76 | 3853.1 | 1914.73 | 3858.35 | 1914.69 | 3863.76 | 1914.65 |
| 3872.63 | 1914.63 | 3877.62 | 1914.57 | 3879.63 | 1914.56 | 3881.79 | 1914.54 | 3890.45 | 1914.48 |
| 3892.88 | 1914.47 | 3895.25 | 1914.47 | 3895.67 | 1914.46 | 3896.89 | 1914.46 | 3905.53 | 1914.42 |
| 3906.34 | 1914.41 | 3910.33 | 1914.4 | 3911.4 | 1914.39 | 3925.81 | 1914.46 | 3947.37 | 1914.58 |
| 3948.62 | 1914.61 | 3954.14 | 1914.61 | 3955.52 | 1914.64 | 3958.62 | 1914.64 | 3961.1 | 1914.69 |
| 3962.92 | 1914.72 | 3964.64 | 1914.73 | 3965 | 1914.74 | 3965.79 | 1914.74 | 3966.86 | 1914.76 |
| 3967.93 | 1914.77 | 3970.12 | 1914.78 | 3973.71 | 1914.78 | 3974.19 | 1914.77 | 3978.5 | 1914.73 |
| 3985.86 | 1914.61 | 3986.74 | 1914.6 | 4006.27 | 1914.15 | 4006.98 | 1914.13 | 4012.51 | 1914 |
| 4024.05 | 1913.91 | 4029.62 | 1913.87 | 4065.22 | 1913.58 | 4075.79 | 1913.51 | 4117.29 | 1913.28 |
| 4133.46 | 1913.2 | 4133.61 | 1913.2 | 4139.82 | 1913.12 | 4149.76 | 1913 | 4172.37 | 1913 |
| 4178.9 | 1912.99 | 4187.81 | 1912.99 | 4189.7 | 1913 | 4273.9 | 1913 | 4297.69 | 1913.29 |
| 4299.77 | 1913.29 | 4310.88 | 1913.43 | 4344.15 | 1913.87 | 4346.65 | 1913.88 | 4348.7 | 1913.88 |
| 4350.98 | 1914 | 4355.15 | 1914 | 4356.08 | 1914.01 | 4356.86 | 1914.01 | 4357.1 | 1914.02 |
| 4358.04 | 1914.02 | 4360.09 | 1914.15 | 4363.82 | 1914.34 | 4365.08 | 1914.38 | 4367.85 | 1914.42 |
| 4369.48 | 1914.46 | 4372.47 | 1914.55 | 4382.93 | 1915 | 4393.7 | 1915 | 4398.85 | 1914.85 |
| 4398.95 | 1914.86 | 4403.32 | 1914.95 | 4410.89 | 1914.91 | 4417.04 | 1914.88 | 4421.71 | 1914.87 |
| 4425.91 | 1914.9 | 4437.76 | 1915 | 4452.49 | 1915 | 4476.38 | 1915.01 | 4485.31 | 1915.01 |
| 4504.9 | 1915 | 4548.2 | 1915 | 4563.51 | 1915.22 | 4564.21 | 1915.22 | 4566 | 1915.25 |
| 4569.33 | 1915.28 | 4629.82 | 1916 | 4645.71 | 1916 | 4645.88 | 1915.99 | 4659.05 | 1915.62 |
| 4667.81 | 1915.6 | 4668.44 | 1915.57 | 4672 | 1915.56 | 4673.22 | 1915.52 | 4673.56 | 1915.52 |
| 4677.64 | 1915.41 | 4678.61 | 1915.4 | 4679.51 | 1915.38 | 4685.01 | 1915.35 | 4688.84 | 1915.22 |
| 4690.5 | 1915.17 | 4691.94 | 1915.14 | 4693 | 1915.13 | 4694.8 | 1915.1 | 4695.91 | 1915.1 |
| 4704.08 | 1915.03 | 4704.11 | 1915.04 | 4705.71 | 1915.04 | 4707.83 | 1915.06 | 4709.26 | 1915.1 |
| 4710.21 | 1915.12 | 4710.34 | 1915.13 | 4712.55 | 1915.2 | 4715.05 | 1915.29 | 4718.39 | 1915.43 |
| 4725.12 | 1915.49 | 4725.84 | 1915.52 | 4727.33 | 1915.55 | 4727.85 | 1915.57 | 4732.89 | 1915.53 |
| 4733.46 | 1915.54 | 4740.3 | 1915.57 | 4748.32 | 1915.57 | 4756.5 | 1915.36 | 4757.09 | 1915.35 |
| 4758.55 | 1915.31 | 4760.24 | 1915.25 | 4760.53 | 1915.25 | 4767.19 | 1915 | 4934.8 | 1915 |
| 4940.75 | 1914.8 | 4949.5 | 1915 | 4954.9 | 1915 | 4955.02 | 1915.01 | 4957.64 | 1915.33 |
| 4959.46 | 1915.43 | 4960.82 | 1915.5 | 4960.94 | 1915.5 | 4961.42 | 1915.56 | 4963.7 | 1916 |
| 4967.15 | 1917 | 4969.91 | 1917.87 | 4970.48 | 1918.08 | 4972.85 | 1919 | 4974.18 | 1919.49 |
| 4975.6 | 1920 | 4976.68 | 1920.56 | 4977.72 | 1921 | 4977.8 | 1921.11 | 4978.31 | 1922 |
| 4978.45 | 1922.23 | 4979.02 | 1923.27 | 4979.41 | 1924 | 4980.85 | 1926.63 | 4981.42 | 1927.7 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4981.59 | 1928 | 4981.98 | 1928.73 | 4982.54 | 1929.75 | 4983.24 | 1931 | 4985.25 | 1931.21 |
| 4990.95 | 1932 | 4996.87 | 1932.36 | 4999.05 | 1932.51 | 4999.71 | 1932.55 | 5001.27 | 1932.63 |
| 5003.84 | 1932.75 | 5004.65 | 1932.78 | 5009.93 | 1932.96 | 5010.79 | 1933 | 5011.39 | 1933.02 |
| 5016.81 | 1933.27 | 5030.76 | 1934 | 5035.13 | 1934.14 | 5036.51 | 1934.18 | 5045.54 | 1934.34 |
| 5052.39 | 1934.37 | 5058.16 | 1934.88 | 5058.22 | 1934.88 | 5059.5 | 1935 | 5071.76 | 1935.85 |
| 5074.8 | 1936 | 5086.28 | 1936.3 | 5086.46 | 1936.3 | 5092.08 | 1936.42 | 5106.07 | 1936.75 |
| 5106.71 | 1936.77 | 5108.03 | 1936.8 | 5112.11 | 1936.9 | 5115.9 | 1937 | 5119.5 | 1937 |
| 5128.86 | 1936.98 | 5133.93 | 1936.98 | 5144.04 | 1936.96 | 5146.56 | 1936.96 | 5151.51 | 1936.95 |
| 5159.74 | 1936.95 | 5165.06 | 1936.96 | 5173.48 | 1936.96 | 5179.99 | 1936.95 | 5201.68 | 1936.62 |
| 5208.92 | 1936.42 | 5210.14 | 1936.41 | 5211.46 | 1936.38 | 5214.4 | 1936.33 | 5227.71 | 1936 |
| 5234.33 | 1935.81 | 5235.44 | 1935.78 | 5237.07 | 1935.73 | 5238.24 | 1935.69 | 5247.57 | 1935.43 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5247.57 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5247.57 | 281.06 | 281.06 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1916.52 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.15 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1916.37 | Reach Len. (ft) | 281.06 | 281.06 | 281.06 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7264.32 | | |
| E.G. Slope (ft/ft) | 0.002707 | Area (sq ft) | | 7264.32 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3602.42 | Top Width (ft) | | 3602.42 | | |
| Vel Total (ft/s) | 3.08 | Avg. Vel. (ft/s) | | 3.08 | | |
| Max Chl Dpth (ft) | 4.37 | Hydr. Depth (ft) | | 2.02 | | |
| Conv. Total (cfs) | 430551.3 | Conv. (cfs) | | 430551.3 | | |
| Length Wtd. (ft) | 281.06 | Wetted Per. (ft) | | 3604.57 | | |
| Min Ch El (ft) | 1912.00 | Shear (lb/sq ft) | | 0.34 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5247.57 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.80 | Cum Volume (acre-ft) | | 871.07 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 391.61 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -14900.4

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1919.12 | 54.32 | 1919.03 | 56.73 | 1919.03 | 101.11 | 1918.99 | 104.76 | 1918.99 |
| 108.71 | 1918.98 | 112.86 | 1918.98 | 122.99 | 1918.97 | 127.97 | 1918.97 | 373.04 | 1918.78 |
| 377.12 | 1918.77 | 388.68 | 1918.76 | 395.65 | 1918.76 | 414.25 | 1918.74 | 418.91 | 1918.74 |
| 432.94 | 1918.73 | 438.24 | 1918.73 | 464.65 | 1918.71 | 473.27 | 1918.7 | 487.69 | 1918.69 |
| 498.02 | 1918.68 | 504.23 | 1918.68 | 513.53 | 1918.67 | 515.26 | 1918.67 | 518.34 | 1918.66 |
| 525.97 | 1918.66 | 534.82 | 1918.65 | 536.48 | 1918.64 | 547.52 | 1918.63 | 580.99 | 1918.59 |
| 582.88 | 1918.59 | 593.55 | 1918.58 | 600.55 | 1918.58 | 609.45 | 1918.57 | 615.39 | 1918.56 |
| 632.79 | 1918.54 | 638.81 | 1918.54 | 642.38 | 1918.53 | 645.81 | 1918.53 | 678.3 | 1918.5 |
| 721.07 | 1918.46 | 743.57 | 1918.43 | 776.17 | 1918.4 | 781.22 | 1918.4 | 868.85 | 1918.28 |
| 874.03 | 1918.28 | 894.95 | 1918.25 | 899.76 | 1918.25 | 901.62 | 1918.24 | 906.12 | 1918.24 |
| 938.57 | 1918.2 | 942.25 | 1918.19 | 946.31 | 1918.19 | 975.59 | 1918.15 | 983.45 | 1918.14 |
| 992.59 | 1918.13 | 1015.95 | 1918.1 | 1017.23 | 1918.1 | 1019.3 | 1918.09 | 1022.87 | 1918.09 |
| 1027.34 | 1916.09 | 1028.33 | 1915.76 | 1028.9 | 1915.51 | 1030.35 | 1915.11 | 1030.95 | 1914.87 |
| 1034.72 | 1914 | 1075.06 | 1914 | 1116.53 | 1913.51 | 1133.06 | 1913.32 | 1135.02 | 1913.32 |
| 1135.35 | 1913.31 | 1142.43 | 1913.31 | 1154.55 | 1913.29 | 1162.82 | 1913.28 | 1165.54 | 1913.28 |
| 1170.85 | 1913.31 | 1174.37 | 1913.32 | 1175 | 1913.33 | 1176.69 | 1913.33 | 1190.38 | 1913.25 |
| 1198.59 | 1913.2 | 1218.19 | 1913.26 | 1253.56 | 1913.36 | 1254.22 | 1913.36 | 1257.42 | 1913.38 |
| 1326.02 | 1913.49 | 1378.28 | 1913.53 | 1385.83 | 1913.45 | 1394.53 | 1913.35 | 1400.73 | 1913.24 |
| 1408.78 | 1913.09 | 1413.18 | 1913 | 1432.92 | 1912.99 | 1444.8 | 1912.99 | 1478.4 | 1912.98 |
| 1497.21 | 1912.98 | 1509.68 | 1912.99 | 1545.27 | 1912.99 | 1549 | 1913 | 1563.08 | 1912.98 |
| 1565.81 | 1912.98 | 1567.6 | 1913 | 1624.75 | 1913 | 1629.86 | 1912.91 | 1630.75 | 1912.9 |
| 1633.71 | 1912.9 | 1634.72 | 1912.89 | 1647.32 | 1912.89 | 1648.7 | 1912.87 | 1651.54 | 1912.86 |
| 1653.91 | 1912.82 | 1661.15 | 1912.81 | 1671.88 | 1912.8 | 1675.44 | 1912.69 | 1675.93 | 1912.69 |
| 1676.79 | 1912.66 | 1677.88 | 1912.64 | 1700 | 1912 | 1883.46 | 1912 | 1918.04 | 1912.67 |
| 1930.89 | 1913 | 1986.94 | 1913 | 2020.9 | 1912.99 | 2070 | 1912.99 | 2070.1 | 1913 |
| 2093.35 | 1913 | 2107.39 | 1912.92 | 2153.61 | 1913 | 2405.9 | 1913 | 2409.13 | 1912.99 |
| 2410.63 | 1912.99 | 2426.73 | 1912.61 | 2439.03 | 1912.35 | 2454.54 | 1912 | 2546.35 | 1912 |
| 2553.82 | 1912.34 | 2567.72 | 1913 | 2573.39 | 1913.53 | 2578.46 | 1914 | 2593.44 | 1914.98 |
| 2593.7 | 1915 | 2623.45 | 1915 | 2626.79 | 1914.91 | 2629.92 | 1914.89 | 2639.23 | 1914.72 |
| 2648.39 | 1914.62 | 2663.14 | 1914.39 | 2680.26 | 1914.32 | 2692.54 | 1914.28 | 2696.46 | 1914.18 |
| 2702.46 | 1914 | 2702.97 | 1914 | 2704.99 | 1913.95 | 2708.31 | 1913.89 | 2721.43 | 1913.86 |
| 2728.51 | 1913.85 | 2728.61 | 1913.86 | 2730.86 | 1913.84 | 2744.49 | 1913.85 | 2759.13 | 1914 |
| 2759.9 | 1914.01 | 2784.93 | 1914.58 | 2786.96 | 1914.62 | 2792.46 | 1914.74 | 2811.35 | 1915 |
| 2830.13 | 1915 | 2844.11 | 1915.13 | 2846.7 | 1915.14 | 2846.93 | 1915.15 | 2849.74 | 1915.16 |
| 2862.13 | 1915.26 | 2888.34 | 1915.47 | 2889.89 | 1915.49 | 2900.5 | 1915.57 | 2907.57 | 1915.63 |
| 2911.4 | 1915.67 | 2913.26 | 1915.68 | 2922.61 | 1915.76 | 2928.2 | 1915.81 | 2936.72 | 1915.78 |
| 2949.48 | 1915.72 | 2950.18 | 1915.73 | 2951.06 | 1915.7 | 2954.02 | 1915.75 | 2955.51 | 1915.7 |
| 2962.75 | 1915.8 | 2962.97 | 1915.79 | 2967.23 | 1915.83 | 2968.92 | 1915.83 | 2969.84 | 1915.84 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2970.2 | 1915.83 | 2972.64 | 1915.82 | 2978.95 | 1915.68 | 2987.72 | 1915.54 | 2993.58 | 1915.45 |
| 2994.94 | 1915.45 | 2995.07 | 1915.44 | 2997.25 | 1915.43 | 2999.35 | 1915.41 | 3000 | 1915.41 |
| 3001.16 | 1915.46 | 3018.26 | 1915.83 | 3018.6 | 1915.83 | 3030.29 | 1915.91 | 3032.03 | 1915.91 |
| 3032.86 | 1915.92 | 3039.5 | 1915.88 | 3044.47 | 1915.82 | 3046.01 | 1915.85 | 3049.02 | 1915.85 |
| 3054.45 | 1915.77 | 3055.36 | 1915.76 | 3056.54 | 1915.72 | 3061.03 | 1915.64 | 3063.85 | 1915.58 |
| 3071.68 | 1915.4 | 3072.38 | 1915.38 | 3082.85 | 1915.05 | 3087.59 | 1915 | 3112.84 | 1915 |
| 3155.39 | 1915.91 | 3159.11 | 1916 | 3230.24 | 1916 | 3284.72 | 1915.5 | 3316.5 | 1915.21 |
| 3318.77 | 1915.19 | 3319.62 | 1915.19 | 3331.63 | 1915 | 3354.41 | 1915 | 3356.26 | 1915.55 |
| 3358.11 | 1916 | 3359.38 | 1916.3 | 3360.28 | 1916.49 | 3361.6 | 1916.74 | 3362.48 | 1916.88 |
| 3364.11 | 1917.1 | 3365.02 | 1917.19 | 3366.34 | 1917.24 | 3367.79 | 1917.24 | 3368.77 | 1917.19 |
| 3374.99 | 1916.81 | 3375.88 | 1916.75 | 3377.86 | 1916.7 | 3380.35 | 1916.59 | 3385.14 | 1916.58 |
| 3388.13 | 1916.57 | 3389.13 | 1916.55 | 3389.89 | 1916.48 | 3390.38 | 1916.39 | 3391.5 | 1916.12 |
| 3392.29 | 1915.96 | 3394.24 | 1915.73 | 3395.52 | 1915.64 | 3396.29 | 1915.65 | 3396.98 | 1915.69 |
| 3398.78 | 1915.98 | 3398.97 | 1916 | 3399.97 | 1916 | 3401.19 | 1915.81 | 3402.44 | 1915.58 |
| 3403.79 | 1915.43 | 3404.62 | 1915.39 | 3405.01 | 1915.35 | 3407.19 | 1915 | 3412.97 | 1914.09 |
| 3413.6 | 1914 | 3423.36 | 1913.94 | 3424.33 | 1913.93 | 3426.15 | 1913.93 | 3430.27 | 1913.95 |
| 3435.81 | 1914 | 3439.76 | 1914.29 | 3448.73 | 1915 | 3458.6 | 1915.94 | 3459.27 | 1916 |
| 3460.05 | 1916.1 | 3467.91 | 1917 | 3469.4 | 1917.56 | 3470.62 | 1918 | 3472.68 | 1918.65 |
| 3474.1 | 1919 | 3474.81 | 1919.14 | 3476.15 | 1919.3 | 3477.12 | 1919.37 | 3477.22 | 1919.4 |
| 3477.7 | 1919.36 | 3477.85 | 1919.38 | 3480.04 | 1919.09 | 3481.83 | 1918.94 | 3482.67 | 1918.89 |
| 3483.22 | 1918.8 | 3484 | 1918.61 | 3486.11 | 1918 | 3488.41 | 1917.85 | 3488.53 | 1917.86 |
| 3490.68 | 1917.81 | 3495.95 | 1917.65 | 3511.51 | 1917.02 | 3512.65 | 1917 | 3517.9 | 1916.54 |
| 3523.63 | 1916 | 3528.87 | 1915.68 | 3533.04 | 1915.36 | 3536.75 | 1915.07 | 3539.9 | 1914.86 |
| 3543.89 | 1914.62 | 3552.39 | 1914 | 3585.6 | 1914 | 3585.74 | 1914.02 | 3593.34 | 1915 |
| 3596.68 | 1915.41 | 3597.69 | 1915.51 | 3603.35 | 1916 | 3620.72 | 1916 | 3622.24 | 1915.71 |
| 3623.61 | 1915.43 | 3624.96 | 1915 | 3631.3 | 1914.36 | 3633.29 | 1914.24 | 3634.37 | 1914.19 |
| 3639.29 | 1914 | 3650.13 | 1913.48 | 3656.49 | 1913.1 | 3657.31 | 1913.06 | 3658.03 | 1913 |
| 3729.03 | 1913 | 3731.03 | 1913.06 | 3735.63 | 1913.19 | 3737.2 | 1913.22 | 3748.78 | 1913.51 |
| 3749.98 | 1913.53 | 3754.05 | 1913.61 | 3755.8 | 1913.63 | 3756.26 | 1913.65 | 3757.38 | 1913.67 |
| 3757.52 | 1913.66 | 3760.71 | 1913.78 | 3760.95 | 1913.77 | 3761.82 | 1913.8 | 3763.69 | 1913.84 |
| 3764.95 | 1913.86 | 3771.4 | 1913.88 | 3777.64 | 1913.89 | 3779.07 | 1913.88 | 3795.01 | 1913.8 |
| 3808.36 | 1913.74 | 3809.86 | 1913.73 | 3811.94 | 1913.73 | 3812.7 | 1913.72 | 3827.47 | 1913.67 |
| 3849.09 | 1913.59 | 3861.08 | 1913.54 | 3864.92 | 1913.51 | 3876.76 | 1913.46 | 3891.84 | 1913.38 |
| 3917.08 | 1913.26 | 3930.42 | 1913.2 | 3931.16 | 1913.2 | 3949.76 | 1913.09 | 3963.82 | 1913 |
| 3965.02 | 1913 | 3981.24 | 1912.87 | 3987.04 | 1912.83 | 3992.29 | 1912.79 | 3993.28 | 1912.78 |
| 4040.15 | 1912.54 | 4065.23 | 1912.42 | 4068.9 | 1912.42 | 4072.68 | 1912.43 | 4076.16 | 1912.4 |
| 4080.09 | 1912.36 | 4080.67 | 1912.36 | 4088.57 | 1912.28 | 4088.81 | 1912.28 | 4100.3 | 1912.18 |
| 4109.65 | 1912.07 | 4116.29 | 1912 | 4156.47 | 1912 | 4182.72 | 1912.86 | 4187.49 | 1913 |
| 4194.68 | 1913.24 | 4218.58 | 1914 | 4256.26 | 1914 | 4261.18 | 1913.99 | 4273.35 | 1913.85 |
| 4292.29 | 1913.64 | 4320.45 | 1913.68 | 4356.5 | 1913.83 | 4357.86 | 1913.84 | 4366.74 | 1913.99 |
| 4370.72 | 1914 | 4371.69 | 1914.06 | 4382.57 | 1914.58 | 4391.21 | 1915 | 4392.66 | 1915 |
| 4551.74 | 1915.99 | 4553.63 | 1916 | 4594.52 | 1916 | 4596.66 | 1915.93 | 4601.73 | 1915.75 |
| 4616.67 | 1915.24 | 4618.63 | 1915.16 | 4621.03 | 1915.07 | 4622.46 | 1915 | 4634.66 | 1914.6 |
| 4638.39 | 1914.52 | 4638.93 | 1914.52 | 4642.43 | 1914.46 | 4645.27 | 1914.42 | 4646.58 | 1914.42 |
| 4647.79 | 1914.4 | 4649.08 | 1914.41 | 4649.55 | 1914.4 | 4650.66 | 1914.41 | 4664.25 | 1914.3 |
| 4684.64 | 1914.11 | 4690.18 | 1914 | 4704.84 | 1914 | 4707.32 | 1913.99 | 4742.87 | 1913.9 |
| 4772.51 | 1913.82 | 4772.98 | 1913.82 | 4775.85 | 1913.77 | 4782.13 | 1913.65 | 4782.62 | 1913.65 |
| 4786.33 | 1913.57 | 4800.65 | 1913.32 | 4807.6 | 1913.22 | 4816.33 | 1913.02 | 4818.35 | 1913 |
| 4825.98 | 1913 | 4855.02 | 1913.9 | 4857.73 | 1914 | 4861.31 | 1914.34 | 4866.24 | 1914.84 |
| 4868.13 | 1915 | 4869.27 | 1915.16 | 4874.97 | 1916 | 4882.98 | 1916.85 | 4884.35 | 1917 |
| 4887.58 | 1917.29 | 4895.39 | 1918 | 4901.42 | 1918.54 | 4905.71 | 1918.94 | 4906.52 | 1919.03 |
| 4913.45 | 1920 | 4916.96 | 1920.44 | 4925.77 | 1921 | 4928.35 | 1921.26 | 4934.74 | 1922 |
| 4935.4 | 1922 | 4940.44 | 1923 | 4946.36 | 1924 | 4952.2 | 1925 | 4955.04 | 1925.74 |
| 4955.85 | 1926 | 4958.74 | 1927 | 4965.57 | 1927.9 | 4965.96 | 1928 | 4967.84 | 1928.23 |
| 4976.14 | 1929.31 | 4981.49 | 1930 | 4987.63 | 1930.52 | 4991.62 | 1931 | 5001.94 | 1931.27 |
| 5010.74 | 1931.48 | 5024.37 | 1931.84 | 5030.35 | 1932 | 5037.39 | 1932.87 | 5038.56 | 1933 |
| 5039.53 | 1933.02 | 5042.42 | 1933.02 | 5048.2 | 1933.01 | 5048.97 | 1933.04 | 5050.94 | 1933.04 |
| 5052.2 | 1933.05 | 5053.87 | 1933.1 | 5063.5 | 1933.24 | 5070.79 | 1933.32 | 5075.02 | 1933.23 |
| 5077.37 | 1933.22 | 5085.9 | 1933.02 | 5087.4 | 1933 | 5148.98 | 1933 | 5159.92 | 1933.01 |
| 5176.99 | 1933.01 | 5182.11 | 1933.02 | 5214.97 | 1933.07 | 5219.42 | 1933 | 5245.24 | 1933 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5245.24 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5245.24 | 208.31 | 208.31 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1915.72 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.17 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1915.55 | Reach Len. (ft) | 208.31 | 208.31 | 208.31 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6793.47 | | |
| E.G. Slope (ft/ft) | 0.002984 | Area (sq ft) | | 6793.47 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3278.58 | Top Width (ft) | | 3278.58 | | |
| Vel Total (ft/s) | 3.30 | Avg. Vel. (ft/s) | | 3.30 | | |
| Max Chl Dpth (ft) | 3.55 | Hydr. Depth (ft) | | 2.07 | | |
| Conv. Total (cfs) | 410073.2 | Conv. (cfs) | | 410073.2 | | |
| Length Wtd. (ft) | 208.31 | Wetted Per. (ft) | | 3279.75 | | |
| Min Ch El (ft) | 1912.00 | Shear (lb/sq ft) | | 0.39 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5245.24 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.63 | Cum Volume (acre-ft) | | 825.72 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 369.41 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -15108.7

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1919.03 | 16.65 | 1919.01 | 20.65 | 1919.01 | 22.1 | 1919 | 28.74 | 1919 |
| 34.94 | 1918.99 | 39.4 | 1918.99 | 43.41 | 1918.98 | 47.08 | 1918.98 | 51 | 1918.97 |
| 59.11 | 1918.97 | 62.22 | 1918.96 | 66.24 | 1918.96 | 74.06 | 1918.95 | 81.97 | 1918.95 |
| 86.31 | 1918.94 | 94.83 | 1918.94 | 98.81 | 1918.93 | 103.34 | 1918.93 | 108.53 | 1918.92 |
| 115.46 | 1918.92 | 126.64 | 1918.91 | 141.68 | 1918.89 | 154.72 | 1918.88 | 160.77 | 1918.88 |
| 166.63 | 1918.87 | 175.21 | 1918.86 | 187.93 | 1918.84 | 197.19 | 1918.83 | 198.5 | 1918.82 |
| 201.96 | 1918.82 | 216.03 | 1918.79 | 250.07 | 1918.74 | 252.6 | 1918.73 | 277.34 | 1918.69 |
| 477.76 | 1918.36 | 481.9 | 1918.35 | 557.66 | 1918.3 | 563.83 | 1918.3 | 570.52 | 1918.29 |
| 577.53 | 1918.29 | 594.59 | 1918.27 | 602.95 | 1918.27 | 706.99 | 1918.19 | 712.61 | 1918.19 |
| 729.26 | 1918.18 | 734.56 | 1918.17 | 738.05 | 1918.17 | 763.48 | 1918.15 | 769.84 | 1918.15 |
| 788.96 | 1918.14 | 796.16 | 1918.13 | 831.96 | 1918.11 | 843.6 | 1918.1 | 863.03 | 1918.09 |
| 878.16 | 1918.08 | 879.54 | 1918.07 | 885.26 | 1918.07 | 897.71 | 1918.06 | 905.93 | 1918.06 |
| 908.48 | 1918.05 | 914.35 | 1918.05 | 925.74 | 1918.03 | 928.37 | 1918.03 | 943.08 | 1918.01 |
| 949.77 | 1918.01 | 964.71 | 1918 | 972.76 | 1917.99 | 984.31 | 1917.98 | 992.01 | 1917.97 |
| 1008.61 | 1917.96 | 1018.28 | 1913.93 | 1020.79 | 1913 | 1039.59 | 1913 | 1059.49 | 1913.02 |
| 1063.51 | 1913.02 | 1071.65 | 1913.03 | 1077.38 | 1913.03 | 1079.39 | 1913.04 | 1085.51 | 1913.04 |
| 1090.54 | 1913.05 | 1101.6 | 1913.05 | 1109.02 | 1913.04 | 1115.74 | 1913.04 | 1118.62 | 1913.03 |
| 1126.36 | 1913.03 | 1127.54 | 1913.02 | 1141.25 | 1913.02 | 1143.02 | 1913.03 | 1176.96 | 1913.24 |
| 1188.63 | 1913.26 | 1191.43 | 1913.27 | 1202.61 | 1913.35 | 1203.39 | 1913.36 | 1244.51 | 1913.1 |
| 1251.72 | 1913.04 | 1256.21 | 1913.01 | 1308.54 | 1913.01 | 1329.74 | 1913 | 1380.01 | 1913 |
| 1398.67 | 1912.99 | 1441.34 | 1912.99 | 1481.92 | 1912.47 | 1504.49 | 1912.19 | 1509.14 | 1912.16 |
| 1513.89 | 1912.16 | 1527.82 | 1912.13 | 1538.47 | 1912.12 | 1540.46 | 1912.12 | 1549.83 | 1912.21 |
| 1618.5 | 1912.9 | 1625.93 | 1913 | 1629.17 | 1913.01 | 1638.91 | 1913.01 | 1640.27 | 1913 |
| 1645.5 | 1913 | 1652.29 | 1912.85 | 1668.07 | 1912.51 | 1668.88 | 1912.5 | 1684.37 | 1912 |
| 1691.84 | 1912 | 1719.9 | 1912.87 | 1723.88 | 1913 | 1763.59 | 1913 | 1766.36 | 1912.84 |
| 1774.46 | 1912.14 | 1776.19 | 1912 | 1839 | 1912 | 1843.95 | 1912.45 | 1849.64 | 1913 |
| 1894.27 | 1913 | 1897.61 | 1912.83 | 1897.85 | 1912.81 | 1902.17 | 1912.54 | 1909.53 | 1912.1 |
| 1911.35 | 1912 | 1924.88 | 1911.99 | 1946.94 | 1911.56 | 1958.88 | 1911.35 | 1965.77 | 1911.36 |
| 1968.88 | 1911.37 | 1970.19 | 1911.38 | 1978.67 | 1911.49 | 1995.01 | 1911.72 | 1999.76 | 1911.83 |
| 2003.45 | 1911.89 | 2009.05 | 1912 | 2011.14 | 1912.58 | 2012.7 | 1913 | 2015.51 | 1913.72 |
| 2016.45 | 1913.91 | 2016.79 | 1914 | 2018.18 | 1914.63 | 2018.6 | 1914.62 | 2019.38 | 1914.73 |
| 2020.2 | 1914.7 | 2023.07 | 1914.3 | 2024.99 | 1914 | 2031.5 | 1913.06 | 2031.95 | 1913 |
| 2038.26 | 1912.05 | 2038.39 | 1912 | 2069.22 | 1912 | 2074.65 | 1912.15 | 2074.67 | 1912.14 |
| 2105.25 | 1912.32 | 2126.95 | 1912.39 | 2127.49 | 1912.39 | 2147.05 | 1912.28 | 2158.4 | 1912.23 |
| 2197.03 | 1912.3 | 2198.27 | 1912.3 | 2211.28 | 1912.32 | 2215.71 | 1912.32 | 2219.99 | 1912.33 |
| 2224.91 | 1912.35 | 2234.99 | 1912.37 | 2251.44 | 1912.53 | 2295.98 | 1913 | 2401.12 | 1913 |
| 2402.15 | 1912.98 | 2410.17 | 1912.79 | 2421.75 | 1912.53 | 2423.68 | 1912.49 | 2440.63 | 1912.12 |
| 2446.56 | 1912 | 2544.15 | 1912 | 2545.13 | 1912.06 | 2558.9 | 1913 | 2574.47 | 1913.78 |
| 2582.83 | 1914.23 | 2584.32 | 1914.3 | 2586.32 | 1914.38 | 2594.56 | 1914.48 | 2601.91 | 1914.45 |
| 2603.75 | 1914.41 | 2612.63 | 1914.24 | 2612.91 | 1914.24 | 2623.59 | 1914 | 2626.35 | 1914 |
| 2650.45 | 1913.99 | 2652.29 | 1913.99 | 2661.07 | 1914 | 2688.5 | 1914 | 2695.37 | 1914.01 |
| 2729.37 | 1914.01 | 2736.12 | 1914.02 | 2745.8 | 1914.02 | 2764.93 | 1914.53 | 2771.81 | 1914.63 |
| 2772.18 | 1914.64 | 2787.72 | 1914.85 | 2792.04 | 1914.91 | 2794.76 | 1914.93 | 2797.7 | 1914.9 |
| 2799.43 | 1914.84 | 2800.75 | 1914.81 | 2802.87 | 1914.74 | 2805.24 | 1914.68 | 2807.22 | 1914.62 |
| 2814.61 | 1914.37 | 2817.97 | 1914.28 | 2821.93 | 1914.24 | 2837.22 | 1914.01 | 2837.53 | 1914 |
| 2856.62 | 1914 | 2859.69 | 1914.08 | 2875.73 | 1914.52 | 2879.97 | 1914.71 | 2884.91 | 1915 |
| 2902.53 | 1915 | 2905.74 | 1915.01 | 2914.12 | 1915.01 | 2939.26 | 1915 | 2991.63 | 1915 |
| 2991.72 | 1915.01 | 2997.16 | 1915.2 | 3008.89 | 1915.6 | 3014.28 | 1915.7 | 3015.57 | 1915.72 |
| 3019.53 | 1915.76 | 3022.32 | 1915.78 | 3030.38 | 1915.99 | 3030.52 | 1916 | 3047.04 | 1916 |
| 3050.73 | 1915.99 | 3054.41 | 1915.99 | 3066.73 | 1915.34 | 3070.38 | 1915.22 | 3072.45 | 1915.16 |
| 3076.76 | 1915 | 3097.04 | 1915.9 | 3098.2 | 1915.95 | 3099.75 | 1915.98 | 3106.06 | 1916 |
| 3113.17 | 1916.04 | 3115.81 | 1916.01 | 3120.16 | 1916.01 | 3120.72 | 1916 | 3125.23 | 1916 |
| 3154.13 | 1915.48 | 3163.87 | 1915.31 | 3177.08 | 1915.4 | 3177.87 | 1915.4 | 3184.51 | 1915.44 |
| 3190.37 | 1915.47 | 3197.93 | 1915.49 | 3201.89 | 1915.49 | 3206.22 | 1915.5 | 3211.62 | 1915.47 |
| 3216.55 | 1915.45 | 3222.9 | 1915.45 | 3247.43 | 1915.43 | 3273.7 | 1915.41 | 3275.31 | 1915.4 |
| 3298.68 | 1915.22 | 3325.92 | 1915 | 3330.43 | 1915 | 3337.4 | 1914.99 | 3345.2 | 1914.99 |
| 3350.03 | 1915 | 3351.36 | 1915.65 | 3352.12 | 1916 | 3352.6 | 1916.25 | 3354.79 | 1917.3 |
| 3356.18 | 1918 | 3356.93 | 1918.36 | 3358.19 | 1919 | 3360.49 | 1919.44 | 3362.6 | 1919.79 |
| 3363.58 | 1920.03 | 3366.15 | 1921 | 3367.97 | 1921.62 | 3368.96 | 1922 | 3371.45 | 1922.49 |
| 3372.22 | 1922.59 | 3376.08 | 1923 | 3387.17 | 1923 | 3390.42 | 1922 | 3392.51 | 1921.44 |
| 3393.88 | 1921 | 3395.08 | 1920.63 | 3396.78 | 1920 | 3399.35 | 1919 | 3400.11 | 1918.66 |
| 3400.77 | 1918.42 | 3404.52 | 1917.02 | 3405.01 | 1917.01 | 3408.62 | 1917.08 | 3409.3 | 1917.05 |
| 3410.02 | 1917.1 | 3415.29 | 1917.24 | 3416.04 | 1917.27 | 3419.05 | 1917.48 | 3420.97 | 1917.59 |
| 3422.4 | 1917.63 | 3422.89 | 1917.61 | 3427.06 | 1917 | 3432.53 | 1916 | 3435.11 | 1915.54 |
| 3436.84 | 1915.15 | 3437.75 | 1914.92 | 3441.15 | 1914 | 3444.89 | 1913.21 | 3445.82 | 1913 |
| 3468.44 | 1913 | 3469.79 | 1913.28 | 3473.69 | 1913.28 | 3476.19 | 1913.51 | 3481.85 | 1914 |
| 3482.22 | 1914.01 | 3484.01 | 1914.13 | 3486.04 | 1914.24 | 3488.43 | 1914.25 | 3491.81 | 1914.23 |
| 3502.65 | 1914.2 | 3503.76 | 1914.19 | 3505.83 | 1914.15 | 3510.19 | 1914 | 3514.37 | 1913.89 |
| 3515.71 | 1913.91 | 3517.77 | 1913.88 | 3520.82 | 1913.85 | 3528.85 | 1913.82 | 3529.87 | 1913.83 |
| 3536.27 | 1913.82 | 3536.98 | 1913.84 | 3539.73 | 1913.82 | 3539.84 | 1913.83 | 3549.03 | 1913.68 |
| 3591.64 | 1913 | 3850.38 | 1913 | 3853.78 | 1912.99 | 3857.05 | 1912.99 | 3867.27 | 1912.92 |
| 3903.16 | 1912.66 | 3903.95 | 1912.66 | 3912.64 | 1912.6 | 3924.78 | 1912.52 | 3935.58 | 1912.43 |
| 3936.28 | 1912.43 | 3949.01 | 1912.3 | 3969.3 | 1912.08 | 3969.88 | 1912.08 | 3976.77 | 1912 |
| 4008.02 | 1911.33 | 4018.51 | 1911.15 | 4027.6 | 1911 | 4073.63 | 1911 | 4078.62 | 1911.29 |
| 4090.35 | 1912 | 4098.69 | 1912.49 | 4100.53 | 1912.55 | 4111.94 | 1912.99 | 4114.79 | 1912.99 |
| 4117.35 | 1913 | 4219.41 | 1913 | 4228.35 | 1912.81 | 4241.36 | 1912.66 | 4250.16 | 1912.55 |
| 4272.77 | 1912.01 | 4274.76 | 1911.99 | 4303.52 | 1911.86 | 4309.2 | 1911.88 | 4333.79 | 1912 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4341.04 | 1912.57 | 4342.63 | 1912.69 | 4347.28 | 1913 | 4404.94 | 1913 | 4419.02 | 1913.44 |
| 4427.03 | 1913.66 | 4427.96 | 1913.68 | 4440.13 | 1914 | 4507.77 | 1914 | 4533.4 | 1913.99 |
| 4541.69 | 1913.99 | 4567.99 | 1914 | 4574.14 | 1914 | 4574.38 | 1913.99 | 4577.74 | 1913.93 |
| 4586.27 | 1913.7 | 4591.76 | 1913.54 | 4604.59 | 1913.15 | 4607.63 | 1913.06 | 4610.23 | 1912.97 |
| 4614.95 | 1912.82 | 4617.96 | 1912.74 | 4624.31 | 1912.47 | 4630.19 | 1912.5 | 4639.94 | 1912.46 |
| 4651.69 | 1912.39 | 4659.99 | 1912.32 | 4667.99 | 1912.22 | 4672.17 | 1912.17 | 4675.08 | 1912.14 |
| 4678.3 | 1912.12 | 4679.2 | 1912.12 | 4681.05 | 1912.1 | 4684.15 | 1912.09 | 4698.18 | 1912.07 |
| 4711.51 | 1912.02 | 4715.47 | 1912 | 4780.99 | 1912 | 4793.81 | 1912.13 | 4795.61 | 1912.16 |
| 4799.69 | 1912.25 | 4808.78 | 1912.51 | 4809.44 | 1912.52 | 4825.68 | 1913 | 4830.02 | 1913.35 |
| 4837.45 | 1914 | 4840.64 | 1914.3 | 4841.7 | 1914.41 | 4844.39 | 1914.65 | 4845.6 | 1914.73 |
| 4852.11 | 1915 | 4928.79 | 1915 | 4934.77 | 1914.53 | 4940.83 | 1914 | 4944.22 | 1913.93 |
| 4947.5 | 1914 | 4950.48 | 1914.65 | 4952.18 | 1915 | 4954.18 | 1915.32 | 4961.35 | 1916 |
| 4965.7 | 1916.42 | 4971.85 | 1917 | 4975.95 | 1917.41 | 4977.05 | 1917.53 | 4981.21 | 1918 |
| 4985.18 | 1918.38 | 4991.43 | 1919 | 5001.1 | 1920 | 5005.05 | 1920.8 | 5006.24 | 1921 |
| 5009.11 | 1922 | 5011.89 | 1923 | 5014.58 | 1924 | 5017.23 | 1925 | 5020.69 | 1926.23 |
| 5025.77 | 1928 | 5030.26 | 1929 | 5033.94 | 1929.74 | 5035.49 | 1930 | 5037.85 | 1930.31 |
| 5046.04 | 1931 | 5048.13 | 1931.11 | 5050.61 | 1931.25 | 5058.8 | 1931.56 | 5069.91 | 1931.99 |
| 5071.68 | 1931.99 | 5073.93 | 1932 | 5086.55 | 1933 | 5107.63 | 1933.89 | 5109.75 | 1934 |
| 5111.56 | 1934.07 | 5137.4 | 1935 | 5140.99 | 1935 | 5158.34 | 1935.01 | 5165.2 | 1935.01 |
| 5177.29 | 1935.02 | 5180.62 | 1935.02 | 5203.55 | 1935.01 | 5208.74 | 1935 | 5216.13 | 1935 |
| 5247.72 | 1934.1 | 5251.39 | 1934 | 5257.8 | 1933.84 | 5295.98 | 1933 | 5310.04 | 1932.67 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5310.04 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5310.04 | 100.05 | 100.05 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1915.08 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.17 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1914.91 | Reach Len. (ft) | 100.05 | 100.05 | 100.05 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6734.73 | | |
| E.G. Slope (ft/ft) | 0.003096 | Area (sq ft) | | 6734.73 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3297.35 | Top Width (ft) | | 3297.35 | | |
| Vel Total (ft/s) | 3.33 | Avg. Vel. (ft/s) | | 3.33 | | |
| Max Chl Dpth (ft) | 3.91 | Hydr. Depth (ft) | | 2.04 | | |
| Conv. Total (cfs) | 402581.0 | Conv. (cfs) | | 402581.0 | | |
| Length Wtd. (ft) | 100.05 | Wetted Per. (ft) | | 3299.31 | | |
| Min Ch El (ft) | 1911.00 | Shear (lb/sq ft) | | 0.39 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5310.04 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.36 | Cum Volume (acre-ft) | | 793.37 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 353.69 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -15208.8

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1918.79 | 10.82 | 1918.78 | 17.19 | 1918.77 | 22.09 | 1918.77 | 24.83 | 1918.76 |
| 68.75 | 1918.72 | 95.24 | 1918.7 | 98.68 | 1918.69 | 105.94 | 1918.69 | 111.1 | 1918.68 |
| 116.87 | 1918.68 | 122.89 | 1918.67 | 125.61 | 1918.67 | 136.73 | 1918.66 | 142.02 | 1918.65 |
| 149.66 | 1918.65 | 149.81 | 1918.64 | 155.71 | 1918.64 | 163.12 | 1918.63 | 168.65 | 1918.63 |
| 171.75 | 1918.62 | 176.73 | 1918.62 | 183.42 | 1918.61 | 186.64 | 1918.61 | 195.61 | 1918.6 |
| 199.3 | 1918.6 | 204.31 | 1918.59 | 209.83 | 1918.59 | 213.98 | 1918.58 | 216.33 | 1918.58 |
| 225.93 | 1918.57 | 231.31 | 1918.57 | 261.63 | 1918.54 | 279.26 | 1918.52 | 286.18 | 1918.51 |
| 295.39 | 1918.51 | 296.26 | 1918.5 | 344.95 | 1918.46 | 348 | 1918.46 | 348.58 | 1918.45 |
| 358.34 | 1918.45 | 359.61 | 1918.44 | 362.67 | 1918.44 | 371.73 | 1918.43 | 378.23 | 1918.43 |
| 384.08 | 1918.42 | 389.44 | 1918.42 | 403.58 | 1918.4 | 411.91 | 1918.4 | 417.28 | 1918.39 |
| 428.62 | 1918.38 | 437.2 | 1918.38 | 437.5 | 1918.37 | 449.02 | 1918.37 | 455.58 | 1918.36 |
| 458.62 | 1918.36 | 464.36 | 1918.35 | 470.87 | 1918.35 | 478.35 | 1918.34 | 480.86 | 1918.34 |
| 488.3 | 1918.33 | 504.31 | 1918.32 | 525.8 | 1918.3 | 544.39 | 1918.28 | 552.99 | 1918.28 |
| 561.31 | 1918.27 | 573.48 | 1918.26 | 582.67 | 1918.24 | 591.46 | 1918.23 | 604.1 | 1918.21 |
| 606.38 | 1918.2 | 611.24 | 1918.2 | 631.03 | 1918.16 | 678.63 | 1918.08 | 682.17 | 1918.08 |
| 716.52 | 1918.02 | 795.44 | 1917.89 | 800.59 | 1917.89 | 894.24 | 1917.82 | 901.84 | 1917.82 |
| 910.05 | 1917.81 | 918.64 | 1917.81 | 939.54 | 1917.79 | 949.75 | 1917.79 | 967.73 | 1917.78 |
| 974.28 | 1917.77 | 992.79 | 1917.76 | 999.85 | 1917.76 | 1003.91 | 1917.75 | 1023.39 | 1917.74 |
| 1023.48 | 1914.62 | 1026.62 | 1913 | 1131.58 | 1913 | 1184.81 | 1913.36 | 1233.5 | 1913.68 |
| 1233.87 | 1913.68 | 1256.59 | 1913.58 | 1301.43 | 1913.37 | 1307.39 | 1913.28 | 1318.55 | 1913.12 |
| 1327.76 | 1913 | 1592.75 | 1913 | 1593.64 | 1913.01 | 1596.01 | 1913.01 | 1624.47 | 1913.49 |
| 1626.73 | 1913.52 | 1658.59 | 1913.99 | 1660.11 | 1914 | 1672.22 | 1914.57 | 1674.52 | 1914.63 |
| 1676.21 | 1914.66 | 1678.44 | 1914.67 | 1680.99 | 1914.66 | 1682.41 | 1914.62 | 1684.35 | 1914.54 |
| 1688.24 | 1914.21 | 1689 | 1914.19 | 1690.51 | 1914 | 1697.48 | 1912.99 | 1708.99 | 1912 |
| 1710.9 | 1912 | 1729.5 | 1912.66 | 1731.2 | 1912.71 | 1742.05 | 1913 | 1800.23 | 1913 |
| 1800.32 | 1912.99 | 1825.42 | 1912.41 | 1834.21 | 1912.2 | 1839.45 | 1912 | 1855.53 | 1911.59 |
| 1865.36 | 1911.36 | 1883.55 | 1911 | 1891.44 | 1911 | 1904.89 | 1911.34 | 1910.87 | 1911.52 |
| 1924.45 | 1912 | 1930.03 | 1912.41 | 1931.13 | 1912.48 | 1938.22 | 1912.89 | 1940.22 | 1913 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1956.1 | 1913 | 1959.66 | 1912.96 | 1960.61 | 1912.92 | 1966.22 | 1912.8 | 1974.46 | 1912.39 |
| 1975.45 | 1912.35 | 1983.19 | 1912 | 1983.39 | 1912 | 1991.8 | 1911.84 | 1998.74 | 1911.72 |
| 1999.57 | 1911.71 | 2009.7 | 1911.55 | 2016.06 | 1911.52 | 2023.31 | 1911.49 | 2049.26 | 1911.01 |
| 2050.35 | 1911.01 | 2089.14 | 1911.83 | 2089.99 | 1911.85 | 2093.7 | 1912 | 2099.48 | 1912.37 |
| 2103.66 | 1912.57 | 2108.9 | 1912.77 | 2115.83 | 1913 | 2141.4 | 1913 | 2169.45 | 1912 |
| 2193.56 | 1912 | 2205.04 | 1911.99 | 2247.3 | 1911.99 | 2262.04 | 1911.98 | 2270.84 | 1911.98 |
| 2291.96 | 1912 | 2294.23 | 1912 | 2295.51 | 1912.04 | 2302.61 | 1912.2 | 2313.58 | 1912.37 |
| 2319.28 | 1912.35 | 2321.59 | 1912.33 | 2327.07 | 1912.34 | 2357.92 | 1912.91 | 2362.69 | 1913 |
| 2466.82 | 1913 | 2480.77 | 1912.23 | 2485.16 | 1912 | 2493.27 | 1911.74 | 2529.24 | 1911.49 |
| 2547.31 | 1911.37 | 2549.9 | 1911.39 | 2557.58 | 1911.44 | 2582.99 | 1911.64 | 2604.07 | 1911.82 |
| 2622.54 | 1911.99 | 2624.34 | 1912 | 2648.99 | 1912.46 | 2651.38 | 1912.5 | 2656.7 | 1912.6 |
| 2675.36 | 1913 | 2685.32 | 1913 | 2686.45 | 1913.03 | 2694.18 | 1913.1 | 2700.92 | 1913.15 |
| 2702.12 | 1913.15 | 2713.35 | 1913.18 | 2714.63 | 1913.17 | 2720.05 | 1913.21 | 2722.81 | 1913.2 |
| 2725.45 | 1913.22 | 2727.77 | 1913.21 | 2729.57 | 1913.23 | 2732.64 | 1913.19 | 2739 | 1913.2 |
| 2745.71 | 1913.23 | 2787.7 | 1913.52 | 2806.96 | 1913.65 | 2811.44 | 1913.67 | 2823.39 | 1913.69 |
| 2829.09 | 1913.71 | 2833.5 | 1913.73 | 2837.39 | 1913.73 | 2838.43 | 1913.74 | 2840.94 | 1913.74 |
| 2841.14 | 1913.73 | 2870.13 | 1913.73 | 2902.29 | 1913.72 | 2933.15 | 1913.7 | 2938.06 | 1913.62 |
| 2947.84 | 1913.41 | 2948.04 | 1913.4 | 2950.89 | 1913.45 | 2952.95 | 1913.45 | 2954.07 | 1913.42 |
| 2955.78 | 1913.4 | 2961.17 | 1913.4 | 2964.55 | 1913.35 | 2967.05 | 1913.35 | 2970.26 | 1913.33 |
| 2977.96 | 1913.24 | 2988.37 | 1913.1 | 2990.22 | 1913.07 | 2993.49 | 1913 | 2995.35 | 1913 |
| 2996.18 | 1913.03 | 3006.21 | 1913.31 | 3023.28 | 1913.81 | 3024.92 | 1913.86 | 3031.43 | 1914 |
| 3041.76 | 1914.34 | 3056.75 | 1914.91 | 3059.18 | 1915 | 3065.87 | 1915.35 | 3067.73 | 1915.47 |
| 3070.42 | 1915.63 | 3076.25 | 1916 | 3092.13 | 1916.83 | 3093.7 | 1916.91 | 3095.77 | 1917 |
| 3121.88 | 1917 | 3125.57 | 1916.83 | 3128.86 | 1916.75 | 3132.12 | 1916.63 | 3136.99 | 1916.44 |
| 3145.22 | 1916.13 | 3148.15 | 1916 | 3157.21 | 1915.43 | 3164.13 | 1915 | 3174.26 | 1915 |
| 3203.03 | 1914.99 | 3252.62 | 1914.99 | 3264.47 | 1915 | 3337.32 | 1915 | 3341.18 | 1914.95 |
| 3347.49 | 1914.85 | 3397.08 | 1914 | 3419.3 | 1914 | 3421.01 | 1913.91 | 3428.02 | 1913.59 |
| 3431.42 | 1913.44 | 3437.28 | 1913.36 | 3442.59 | 1913.22 | 3444.29 | 1913.18 | 3446.99 | 1913.16 |
| 3448.03 | 1913.12 | 3449.7 | 1913.14 | 3456.01 | 1913.04 | 3457.79 | 1913.05 | 3464.19 | 1913 |
| 3736.42 | 1913 | 3751.81 | 1912.97 | 3799.85 | 1912.88 | 3804.27 | 1912.91 | 3804.56 | 1912.9 |
| 3807.82 | 1912.92 | 3823.53 | 1912.92 | 3833.57 | 1912.91 | 3843.64 | 1912.91 | 3858.18 | 1912.98 |
| 3869.85 | 1912.96 | 3896.01 | 1912.93 | 3900.26 | 1912.94 | 3942.18 | 1913 | 3942.7 | 1913 |
| 3948.22 | 1912 | 3958.04 | 1911.96 | 3969.67 | 1911.76 | 3999.16 | 1911.26 | 4009.1 | 1911 |
| 4054.14 | 1911 | 4057.94 | 1911.11 | 4080.56 | 1911.72 | 4090.59 | 1912 | 4093.28 | 1912 |
| 4094.51 | 1912.01 | 4097.73 | 1912.01 | 4110.85 | 1912.05 | 4112.99 | 1912.05 | 4119.6 | 1912.12 |
| 4147.73 | 1912.3 | 4152.98 | 1912.34 | 4155.21 | 1912.34 | 4157.86 | 1912.36 | 4159.37 | 1912.36 |
| 4165.17 | 1912.41 | 4165.94 | 1912.41 | 4170.79 | 1912.45 | 4181.25 | 1912.55 | 4185.67 | 1912.59 |
| 4191.65 | 1912.65 | 4196.18 | 1912.7 | 4199.81 | 1912.73 | 4201.51 | 1912.73 | 4205.03 | 1912.77 |
| 4213.26 | 1912.8 | 4219.79 | 1912.81 | 4222.78 | 1912.81 | 4223.42 | 1912.8 | 4225.87 | 1912.8 |
| 4231.91 | 1912.7 | 4260.66 | 1912.03 | 4261.63 | 1912 | 4262.94 | 1911.99 | 4268.2 | 1911.99 |
| 4276.25 | 1911.98 | 4298.46 | 1911.94 | 4302.14 | 1911.93 | 4306.11 | 1911.93 | 4307.16 | 1911.94 |
| 4312.36 | 1911.95 | 4315.99 | 1911.95 | 4317.81 | 1911.96 | 4328.18 | 1911.98 | 4331.4 | 1911.98 |
| 4334.06 | 1911.99 | 4340.25 | 1911.95 | 4342.67 | 1912 | 4343.17 | 1912 | 4352.53 | 1912.28 |
| 4352.8 | 1912.28 | 4356.08 | 1912.39 | 4364.1 | 1912.68 | 4364.82 | 1912.72 | 4369.37 | 1912.91 |
| 4371.73 | 1913 | 4469.93 | 1913 | 4476.52 | 1912.97 | 4479.04 | 1912.98 | 4481.52 | 1913 |
| 4514.32 | 1913 | 4521.57 | 1912.99 | 4525.44 | 1912.99 | 4547.59 | 1912.98 | 4575.65 | 1913 |
| 4588.24 | 1913 | 4591.54 | 1912.24 | 4592.87 | 1912 | 4594.87 | 1911 | 4604.15 | 1911 |
| 4610.25 | 1910.99 | 4640.32 | 1910.98 | 4651.48 | 1910.98 | 4663.96 | 1910.99 | 4688.35 | 1911 |
| 4695.27 | 1911 | 4705.59 | 1911.56 | 4708.48 | 1911.75 | 4713.13 | 1912 | 4714.44 | 1912.02 |
| 4721.35 | 1912.44 | 4722.92 | 1912.52 | 4730.52 | 1913 | 4732.46 | 1913.11 | 4748.96 | 1914 |
| 4753.8 | 1914.32 | 4757.61 | 1914.42 | 4764.8 | 1914.78 | 4772.18 | 1915 | 4777.35 | 1915.28 |
| 4777.61 | 1915.28 | 4781.16 | 1915.4 | 4784.25 | 1915.45 | 4789.02 | 1915.49 | 4790.4 | 1915.49 |
| 4791.1 | 1915.51 | 4795.32 | 1915.45 | 4797.78 | 1915.46 | 4799.57 | 1915.49 | 4805.44 | 1915.57 |
| 4809.58 | 1915.67 | 4811.96 | 1915.63 | 4815.34 | 1915.52 | 4816.09 | 1915.55 | 4818.6 | 1915.33 |
| 4819.18 | 1915.32 | 4823.27 | 1915 | 4828.29 | 1914.92 | 4832.63 | 1914.84 | 4855.76 | 1914.43 |
| 4860.76 | 1914.35 | 4864.27 | 1914.3 | 4868.3 | 1914.22 | 4877.67 | 1914 | 4896.75 | 1913.96 |
| 4909.52 | 1913.95 | 4920.68 | 1913.97 | 4939.35 | 1914 | 4953.4 | 1914.39 | 4959.08 | 1914.56 |
| 4974 | 1915 | 5017.17 | 1915 | 5032.56 | 1914.28 | 5038.59 | 1914 | 5044.17 | 1913.99 |
| 5048.21 | 1914 | 5055.16 | 1915 | 5057.87 | 1915.4 | 5061.7 | 1916 | 5068.23 | 1917 |
| 5072.53 | 1918 | 5074.04 | 1919 | 5075.52 | 1920 | 5076.96 | 1921 | 5078.44 | 1922 |
| 5079.53 | 1922.76 | 5081.38 | 1924 | 5083.74 | 1925.63 | 5085.91 | 1927 | 5087.68 | 1928.14 |
| 5088.06 | 1928.21 | 5089.35 | 1928.65 | 5093.27 | 1928.86 | 5094.3 | 1928.99 | 5094.94 | 1929 |
| 5097 | 1929.09 | 5098.82 | 1929.19 | 5099.99 | 1929.27 | 5102.11 | 1929.35 | 5107.31 | 1929.66 |
| 5111.31 | 1929.84 | 5113.8 | 1929.87 | 5118.99 | 1930 | 5128.35 | 1930.22 | 5131.95 | 1930.33 |
| 5136.03 | 1930.41 | 5150.18 | 1931 | 5155.21 | 1931.25 | 5160.69 | 1931.55 | 5169.07 | 1932 |
| 5172.44 | 1932.14 | 5178.41 | 1932.37 | 5182.1 | 1932.5 | 5189.49 | 1932.72 | 5190.2 | 1932.73 |
| 5199.36 | 1932.93 | 5203.38 | 1932.91 | 5208.18 | 1932.96 | 5212.82 | 1932.98 | 5213.98 | 1933 |
| 5229.45 | 1933.57 | 5240.86 | 1934 | 5245.47 | 1934.27 | 5258.13 | 1935 | 5274.47 | 1935.85 |
| 5277.49 | 1936 | 5328.78 | 1936 | 5336.06 | 1935.83 | 5345.9 | 1935.63 | 5347.66 | 1935.59 |
| 5362.28 | 1935.28 | 5374.61 | 1935 | 5387.67 | 1934.62 | 5408.44 | 1934 | 5409.62 | 1933.96 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5409.62 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5409.62 | 134.51 | 134.51 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1914.72 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.20 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1914.52 | Reach Len. (ft) | 134.51 | 134.51 | 134.51 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6270.82 | | |
| E.G. Slope (ft/ft) | 0.004307 | Area (sq ft) | | 6270.82 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3533.97 | Top Width (ft) | | 3533.97 | | |
| Vel Total (ft/s) | 3.57 | Avg. Vel. (ft/s) | | 3.57 | | |

| | | | | | |
|---|---|---|---|---|---|
| Max Chl Dpth (ft) | 3.54 | Hydr. Depth (ft) | | 1.77 | |
| Conv. Total (cfs) | 341334.8 | Conv. (cfs) | | 341334.8 | |
| Length Wtd. (ft) | 134.51 | Wetted Per. (ft) | | 3535.44 | |
| Min Ch El (ft) | 1910.98 | Shear (lb/sq ft) | | 0.48 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5409.62 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.56 | Cum Volume (acre-ft) | | 778.44 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 345.84 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -15343.3

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1918.48 | 108.66 | 1918.39 | 117.79 | 1918.39 | 120.87 | 1918.38 | 125.66 | 1918.38 |
| 160.08 | 1918.34 | 165.51 | 1918.34 | 171.47 | 1918.33 | 173.33 | 1918.33 | 195.62 | 1918.31 |
| 209.58 | 1918.3 | 218.92 | 1918.29 | 224.37 | 1918.28 | 231.2 | 1918.28 | 246.24 | 1918.26 |
| 255.31 | 1918.25 | 262.28 | 1918.25 | 266.18 | 1918.24 | 328.71 | 1918.18 | 366.42 | 1918.15 |
| 371.33 | 1918.14 | 376.43 | 1918.14 | 379.35 | 1918.13 | 389.19 | 1918.13 | 392.81 | 1918.12 |
| 397.23 | 1918.12 | 405.79 | 1918.11 | 409.68 | 1918.11 | 433.04 | 1918.08 | 442.2 | 1918.07 |
| 448.49 | 1918.07 | 452.54 | 1918.06 | 463.1 | 1918.05 | 470.97 | 1918.05 | 475.39 | 1918.04 |
| 482.48 | 1918.04 | 492.41 | 1918.03 | 496.6 | 1918.02 | 509.37 | 1918.01 | 512.19 | 1918.01 |
| 514.63 | 1918 | 521.77 | 1918 | 526.05 | 1917.99 | 529.64 | 1917.99 | 535.55 | 1917.98 |
| 538.9 | 1917.98 | 552.57 | 1917.97 | 555.64 | 1917.97 | 558.06 | 1917.96 | 560.23 | 1917.96 |
| 603.44 | 1917.92 | 606.23 | 1917.92 | 615.1 | 1917.91 | 628.56 | 1917.9 | 638.42 | 1917.89 |
| 640.15 | 1917.88 | 645.86 | 1917.88 | 652.79 | 1917.87 | 722.19 | 1917.81 | 723.12 | 1917.8 |
| 730.54 | 1917.8 | 733.58 | 1917.79 | 743.09 | 1917.79 | 747.44 | 1917.78 | 760.35 | 1917.77 |
| 777.97 | 1917.75 | 780.85 | 1917.75 | 785.6 | 1917.74 | 795.69 | 1917.74 | 805.76 | 1917.73 |
| 809.11 | 1917.72 | 817.65 | 1917.72 | 825.3 | 1917.71 | 841.47 | 1917.7 | 853.71 | 1917.69 |
| 857.78 | 1917.68 | 866.74 | 1917.68 | 870.56 | 1917.67 | 879.92 | 1917.67 | 880.35 | 1917.66 |
| 884.26 | 1917.66 | 892.44 | 1917.65 | 901.73 | 1917.65 | 912.39 | 1917.64 | 915.98 | 1917.64 |
| 947.01 | 1917.61 | 949.43 | 1917.61 | 965.02 | 1917.59 | 980.08 | 1917.58 | 1006.59 | 1917.56 |
| 1018.86 | 1917.55 | 1028.66 | 1917.54 | 1114.58 | 1914.94 | 1127.17 | 1914.56 | 1170.53 | 1913.24 |
| 1173.61 | 1913.15 | 1178.23 | 1913 | 1254.76 | 1913 | 1264.71 | 1912.92 | 1265.24 | 1912.92 |
| 1275.42 | 1912.86 | 1284.46 | 1912.81 | 1290.28 | 1912.81 | 1307.13 | 1912.75 | 1309.48 | 1912.75 |
| 1329.68 | 1912.99 | 1330.85 | 1913 | 1363.09 | 1913 | 1437.36 | 1912.08 | 1441.89 | 1912 |
| 1442.6 | 1912 | 1446.48 | 1911.92 | 1460.54 | 1911.73 | 1462.11 | 1911.72 | 1472.22 | 1911.58 |
| 1472.78 | 1911.58 | 1479.66 | 1911.49 | 1480.51 | 1911.49 | 1485.58 | 1911.44 | 1487.88 | 1911.43 |
| 1491.98 | 1911.4 | 1493.61 | 1911.42 | 1516.77 | 1911.44 | 1520.77 | 1911.46 | 1521.76 | 1911.47 |
| 1540.59 | 1911.58 | 1541.48 | 1911.59 | 1548.4 | 1911.64 | 1569.37 | 1911.82 | 1569.74 | 1911.82 |
| 1589.24 | 1912 | 1713.02 | 1912 | 1718.25 | 1911.82 | 1725.77 | 1911.73 | 1736.49 | 1911.36 |
| 1763.51 | 1911.5 | 1765.76 | 1911.51 | 1767.69 | 1911.53 | 1777.58 | 1911.61 | 1789.48 | 1911.67 |
| 1793.97 | 1911.71 | 1829.9 | 1912 | 1906.34 | 1912 | 1923.36 | 1911.67 | 1926.92 | 1911.57 |
| 1935.21 | 1911.4 | 1948.45 | 1911 | 1955.42 | 1910.13 | 1956.58 | 1910 | 1962.09 | 1910 |
| 1963.17 | 1910.68 | 1963.71 | 1911 | 1966.47 | 1912.42 | 1967.65 | 1913 | 1968.36 | 1913 |
| 1970.37 | 1913.14 | 1977.92 | 1913.41 | 1978.95 | 1913.42 | 1981.49 | 1913.42 | 1982.39 | 1913.41 |
| 1983.8 | 1913.37 | 1985.49 | 1913.3 | 1988.68 | 1913 | 1991.6 | 1912.36 | 1992.91 | 1912.17 |
| 1994.59 | 1912 | 1995.91 | 1911.84 | 1997.54 | 1911.69 | 1999.89 | 1911.55 | 2001.03 | 1911.42 |
| 2002.85 | 1911.16 | 2003.82 | 1911 | 2130.57 | 1911 | 2161.99 | 1910.99 | 2169.07 | 1910.99 |
| 2204.16 | 1911 | 2266.14 | 1911 | 2271.14 | 1910.97 | 2276.71 | 1910.97 | 2286.85 | 1911 |
| 2467.73 | 1911 | 2471.45 | 1911.02 | 2472.99 | 1911.02 | 2479.98 | 1911 | 2490.65 | 1911 |
| 2497.99 | 1911.01 | 2499.89 | 1911.03 | 2519.71 | 1911.12 | 2521.99 | 1911.17 | 2536.46 | 1911.26 |
| 2539 | 1911.27 | 2540 | 1911.3 | 2541.12 | 1911.31 | 2544.19 | 1911.38 | 2549.42 | 1911.51 |
| 2550.19 | 1911.52 | 2552.57 | 1911.58 | 2554.69 | 1911.62 | 2572.03 | 1912 | 2573.87 | 1912.64 |
| 2574.79 | 1913 | 2576.44 | 1913.56 | 2577.97 | 1914 | 2580.33 | 1914.7 | 2581.19 | 1915 |
| 2582.24 | 1915.32 | 2584.34 | 1916 | 2586.79 | 1916.75 | 2587.58 | 1917 | 2589.78 | 1917 |
| 2591.67 | 1916.27 | 2592.32 | 1916.08 | 2594.17 | 1915.59 | 2596.49 | 1914.99 | 2598.02 | 1914.58 |
| 2600.11 | 1914 | 2602.99 | 1913 | 2603.17 | 1912.93 | 2604.56 | 1912 | 2619.31 | 1912 |
| 2620.13 | 1912.04 | 2625.75 | 1912.28 | 2629.13 | 1912.42 | 2641.92 | 1913 | 2817.51 | 1913 |
| 2818.12 | 1913.01 | 2840.85 | 1913.2 | 2853.5 | 1913.3 | 2873.24 | 1913.47 | 2892.34 | 1913.62 |
| 2895.94 | 1913.66 | 2899.49 | 1913.68 | 2905.98 | 1913.74 | 2923.92 | 1913.85 | 2947.94 | 1914 |
| 2964.57 | 1914 | 2965.9 | 1913.98 | 2979.71 | 1913.82 | 2983.57 | 1913.82 | 2985.07 | 1913.79 |
| 2987.41 | 1913.72 | 2990.54 | 1913.66 | 2990.68 | 1913.65 | 2999.62 | 1913.45 | 2999.93 | 1913.44 |
| 3003.19 | 1913.44 | 3008.43 | 1913.33 | 3021.06 | 1913.4 | 3040.58 | 1913.61 | 3040.87 | 1913.61 |
| 3056.36 | 1914 | 3060.61 | 1914.1 | 3097.51 | 1914.99 | 3097.84 | 1915 | 3262.64 | 1915 |
| 3262.79 | 1914.99 | 3272.48 | 1914 | 3277.55 | 1913.48 | 3283.52 | 1913 | 3289.78 | 1912.88 |
| 3290.94 | 1912.89 | 3300.06 | 1912.76 | 3311.45 | 1912.68 | 3335.15 | 1912.51 | 3335.29 | 1912.5 |
| 3347.25 | 1912.39 | 3347.69 | 1912.38 | 3357.83 | 1912.29 | 3360.15 | 1912.28 | 3361.66 | 1912.26 |
| 3371.08 | 1912.19 | 3380.49 | 1912.11 | 3384.59 | 1912.08 | 3394.12 | 1912 | 3473.67 | 1912 |
| 3476.14 | 1912.03 | 3484.48 | 1912.11 | 3484.62 | 1912.1 | 3496.83 | 1912.01 | 3498.92 | 1912.02 |
| 3503.81 | 1912.02 | 3507.62 | 1912.01 | 3522.57 | 1912.01 | 3527 | 1912 | 3574.47 | 1912 |
| 3576.39 | 1912.01 | 3600.55 | 1912.01 | 3601.34 | 1912.02 | 3619.98 | 1912.02 | 3636.68 | 1912.01 |
| 3657.45 | 1912.08 | 3661.55 | 1912.04 | 3667.05 | 1912 | 3757.58 | 1912 | 3774.62 | 1912.23 |
| 3823.77 | 1912.94 | 3828.08 | 1913 | 3831.15 | 1913 | 3832.28 | 1912.67 | 3834.65 | 1912 |
| 3840.88 | 1911.07 | 3841.4 | 1911 | 3843.91 | 1911 | 3885.05 | 1910.98 | 3887.83 | 1910.98 |
| 3900.57 | 1910.99 | 3929.26 | 1910.99 | 3933.38 | 1911 | 3933.86 | 1911.01 | 4030.5 | 1912 |
| 4048.8 | 1912 | 4069.22 | 1912.01 | 4082.26 | 1912.01 | 4087.56 | 1912 | 4101.37 | 1912 |
| 4102.02 | 1911.99 | 4117.46 | 1911.85 | 4120.25 | 1911.8 | 4125.08 | 1911.75 | 4129.34 | 1911.68 |
| 4141.46 | 1911.54 | 4145.24 | 1911.5 | 4149.54 | 1911.47 | 4157.41 | 1911.42 | 4157.95 | 1911.41 |
| 4168.17 | 1911.33 | 4172.07 | 1911.28 | 4176.38 | 1911.23 | 4191.33 | 1911.01 | 4192.15 | 1911 |
| 4218.77 | 1911 | 4234.73 | 1911.35 | 4236.9 | 1911.44 | 4240.13 | 1911.54 | 4242.75 | 1911.61 |

```
  4245.1 1911.69 4252.09    1912  4254.4 1912.07  4261.2 1912.21 4266.38 1912.29
  4267.7 1912.29 4275.64 1912.38  4275.9 1912.37 4278.72 1912.41 4302.31 1912.32
 4303.61 1912.33 4356.46  1912.8 4372.01 1912.95 4377.97 1912.96 4388.58 1912.96
 4394.73 1912.97 4400.51 1912.97 4423.82 1912.99 4434.93 1912.99 4439.11    1913
 4440.92 1912.68 4447.37 1911.76 4448.25  1911.6 4450.69    1911 4460.94 1910.99
 4475.28 1910.98 4486.65 1910.98 4492.24 1910.97 4509.25 1910.97 4510.09 1910.96
 4521.83 1910.97 4560.52 1910.99 4562.44 1910.99 4567.32    1911 4568.36 1911.08
 4579.15 1911.96 4585.46 1912.46 4592.35    1913 4592.57    1913 4597.44  1913.3
 4601.04 1913.51 4609.21    1914 4611.34    1914 4613.93 1914.07 4621.81 1914.27
 4623.13 1914.28 4629.94  1914.3 4637.83 1914.33 4667.58 1914.58 4671.09 1914.62
  4690.3 1914.83 4693.97 1914.85 4699.21 1914.86 4704.21 1914.86 4706.66 1914.85
 4711.43 1914.82  4717.8 1914.73  4723.2 1914.64 4734.37 1914.44 4734.76 1914.44
 4757.35    1914  4757.9 1913.98 4792.98 1913.88 4798.56 1913.86  4804.6 1913.88
 4832.43 1913.86 4834.84  1913.9 4840.48 1913.95 4849.01 1914.01 4852.09 1914.06
 4853.68 1914.11 4870.38 1914.39 4875.97 1914.44 4881.41 1914.43 4890.17  1914.4
 4892.75 1914.35 4897.76 1914.34 4908.49 1914.12 4910.88 1914.06 4912.43    1914
 4917.65 1913.73  4924.2 1913.48 4931.14 1913.78 4932.23    1914 4935.07 1914.45
 4938.01 1914.88 4938.41 1914.93 4946.03    1916  4953.3    1917 4955.02 1917.56
 4956.62    1918 4958.44    1919 4960.14 1919.87 4962.44 1921.12 4966.05 1923.15
  4967.5    1924 4969.43 1925.08 4970.98 1925.96 4972.68    1927  4973.8 1927.67
 4974.35 1928.06 4975.79    1929 4987.86 1929.78 4988.77 1929.81 4992.89 1929.92
 4994.64    1930 5007.59 1930.44 5010.13 1930.48  5022.5 1930.93  5024.5    1931
 5038.94    1931 5040.21 1931.01 5050.82 1931.22 5053.63  1931.3 5055.01 1931.35
 5055.95 1931.37 5064.09 1931.64 5065.21 1931.67 5074.72    1932 5078.37 1932.14
  5083.5 1932.31 5089.53 1932.43 5104.81 1932.79 5112.03    1933 5115.42 1933.15
 5135.25    1934 5143.12 1934.37 5149.39 1934.66 5155.08 1934.93 5156.95    1935
 5159.72 1935.02 5168.02 1935.32 5176.81 1935.61 5177.87 1935.64 5183.77 1935.78
 5186.58 1935.83 5186.76 1935.84 5189.36 1935.87 5189.47 1935.88  5193.5 1935.92
 5194.68 1935.95 5196.55 1935.96 5200.35 1935.96 5203.42 1935.94 5204.09 1935.95
    5207 1935.92 5210.57 1935.91 5219.11 1935.82 5238.74 1935.63 5248.25  1935.4
 5252.99 1935.27 5262.98    1935 5265.52 1934.97 5267.67 1934.97  5278.3 1934.69

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .045       0     .04  5278.3    .045

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
             0  5278.3           130.44  130.44  130.44             .1       .3

CROSS SECTION OUTPUT  Profile #PF 1

  E.G. Elev (ft)           1914.16    Element                    Left OB    Channel   Right OB
  Vel Head (ft)               0.20    Wt. n-Val.                             0.040
  W.S. Elev (ft)           1913.96    Reach Len. (ft)            130.44     130.44     130.44
  Crit W.S. (ft)                      Flow Area (sq ft)                    6239.83
  E.G. Slope (ft/ft)       0.003985   Area (sq ft)                         6239.83
  Q Total (cfs)           22400.00    Flow (cfs)                          22400.00
  Top Width (ft)           3292.15    Top Width (ft)                       3292.15
  Vel Total (ft/s)            3.59    Avg. Vel. (ft/s)                        3.59
  Max Chl Dpth (ft)           3.96    Hydr. Depth (ft)                        1.90
  Conv. Total (cfs)       354825.7    Conv. (cfs)                         354825.7
  Length Wtd. (ft)          130.44    Wetted Per. (ft)                     3294.67
  Min Ch El (ft)           1910.00    Shear (lb/sq ft)                        0.47
  Alpha                       1.00    Stream Power (lb/ft s)   5278.30       0.00       0.00
  Frctn Loss (ft)             0.46    Cum Volume (acre-ft)                  759.12
  C & E Loss (ft)             0.01    Cum SA (acres)                        335.30


Warning: Divided flow computed for this cross-section.

CROSS SECTION


RIVER: MOJAVE
REACH: MOJAVE             RS: -15473.7

INPUT
Description:
Station Elevation Data    num=     490
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0 1917.88  315.56 1917.65  324.22 1917.65  325.97 1917.64  335.05 1917.64
  339.78 1917.63  388.69 1917.59  390.88 1917.59  391.69 1917.58  396.39 1917.58
  404.84 1917.57  407.49 1917.57  439.03 1917.54  458.69 1917.52  471.95 1917.51
  479.71 1917.51  479.78  1917.5  489.27  1917.5  510.45 1917.48  523.21 1917.47
  524.23 1917.46  533.01 1917.46  538.49 1917.45  626.09 1917.37  678.67 1917.32
  686.11 1917.32  689.57 1917.31  699.87 1917.31  710.34  1917.3  715.37 1917.29
   721.5 1917.29  733.39 1917.27  738.77 1917.27  771.13 1917.24   783.8 1917.23
  788.06 1917.23   789.3 1917.22  798.09 1917.22  812.66  1917.2  820.63  1917.2
  822.65 1917.19  829.62 1917.19  834.06 1917.18  839.38 1917.18  853.05 1917.17
  858.82 1917.16  876.38 1917.15  879.23 1917.14  883.61 1917.14   893.4 1917.13
  899.28 1917.12  904.19 1917.12   912.3 1917.11  916.89 1917.11  935.62 1917.09
  939.82 1917.09  943.13 1917.08  944.92 1917.08  946.03 1915.75  946.42 1915.88
  948.04 1914.57  948.92    1911   952.5    1911   953.4  1912.3  953.63 1912.17
  955.81    1911 1013.16    1911 1015.99 1911.04 1017.48 1911.05 1077.38 1911.62
 1092.55 1911.76 1098.86 1911.78 1128.37 1911.76 1131.57 1911.74 1139.79 1911.75
 1144.57 1911.75 1148.33 1911.74 1149.22 1911.73  1152.9 1911.73 1153.28 1911.72
 1161.04  1911.7 1164.12 1911.69  1165.7 1911.69 1188.36 1911.59 1230.92 1911.41
 1231.93 1911.41 1241.92 1911.36 1260.46 1911.38 1281.04  1911.4 1282.62 1911.37
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1282.93 | 1911.38 | 1283.76 | 1911.36 | 1288.25 | 1911.44 | 1296.43 | 1911.66 | 1297.39 | 1911.7 |
| 1298.1 | 1911.71 | 1301.32 | 1911.78 | 1304.3 | 1911.83 | 1304.44 | 1911.84 | 1307.51 | 1911.88 |
| 1307.72 | 1911.89 | 1309.93 | 1911.91 | 1312.79 | 1911.92 | 1315.39 | 1911.89 | 1316.25 | 1911.86 |
| 1318.42 | 1911.82 | 1325.9 | 1911.58 | 1334.71 | 1911.25 | 1336.16 | 1911.21 | 1338.49 | 1911.12 |
| 1341.75 | 1911 | 1530.1 | 1911 | 1534.79 | 1910.99 | 1549.63 | 1910.99 | 1553.49 | 1911 |
| 1598.56 | 1911 | 1607.04 | 1910.99 | 1609.22 | 1910.99 | 1612.23 | 1910.98 | 1616.96 | 1910.99 |
| 1633.06 | 1910.99 | 1651.25 | 1911 | 1654.78 | 1911 | 1667.59 | 1911.43 | 1683.01 | 1912 |
| 1741.26 | 1912 | 1761.84 | 1912.18 | 1765.69 | 1912.17 | 1782.3 | 1912.06 | 1788.03 | 1912.02 |
| 1792.24 | 1912.01 | 1794.61 | 1912 | 1806.53 | 1911.49 | 1822.93 | 1911 | 1902.56 | 1911 |
| 1903.85 | 1911.46 | 1904.96 | 1911.89 | 1905.87 | 1912.28 | 1907.68 | 1913 | 1908.37 | 1913.24 |
| 1910.28 | 1914 | 1912.36 | 1914.79 | 1913.68 | 1915.27 | 1914.25 | 1915.43 | 1914.68 | 1915.48 |
| 1915.36 | 1915.68 | 1915.96 | 1915.7 | 1916.36 | 1915.76 | 1917.87 | 1915.83 | 1920.14 | 1916 |
| 1924.15 | 1916.16 | 1925.95 | 1916.07 | 1926.93 | 1915.98 | 1927.87 | 1915.71 | 1930.13 | 1915 |
| 1932.93 | 1914.04 | 1933.61 | 1913.89 | 1934.58 | 1913.81 | 1935.42 | 1913.64 | 1936.16 | 1913.41 |
| 1938.06 | 1912.74 | 1940.05 | 1912 | 1941.79 | 1911.26 | 1942.43 | 1911 | 2089.61 | 1911 |
| 2096.52 | 1910.82 | 2103.15 | 1910.66 | 2120.37 | 1910.25 | 2126.61 | 1910.1 | 2127.02 | 1910.1 |
| 2130.58 | 1910 | 2221.15 | 1910 | 2226.59 | 1910.04 | 2259.94 | 1910.29 | 2282.22 | 1910.36 |
| 2291.15 | 1910.4 | 2295.03 | 1910.42 | 2295.35 | 1910.43 | 2297.17 | 1910.43 | 2351.07 | 1911 |
| 2565.22 | 1911 | 2567.33 | 1910.94 | 2570.01 | 1910.93 | 2573.57 | 1910.98 | 2575.68 | 1910.97 |
| 2576.73 | 1910.95 | 2579.82 | 1910.87 | 2588.86 | 1910.57 | 2592.8 | 1910.61 | 2601.23 | 1911 |
| 2610.36 | 1911.43 | 2618.58 | 1911.79 | 2621.68 | 1911.92 | 2623.7 | 1912 | 2648.26 | 1912.63 |
| 2650.93 | 1912.73 | 2657.69 | 1912.91 | 2660.89 | 1913 | 2734.9 | 1913 | 2743.19 | 1912.79 |
| 2744.39 | 1912.79 | 2745.73 | 1912.72 | 2759.84 | 1912.85 | 2769.62 | 1912.98 | 2776.2 | 1913 |
| 2778.02 | 1913 | 2789.48 | 1913.51 | 2800.42 | 1914 | 2807.23 | 1914.01 | 2809.64 | 1914.01 |
| 2816.93 | 1914 | 2818.4 | 1914.03 | 2820.84 | 1914.05 | 2820.88 | 1914.06 | 2822.6 | 1914.08 |
| 2828.19 | 1914.17 | 2829.82 | 1914.19 | 2840.6 | 1914.38 | 2842.04 | 1914.39 | 2845.37 | 1914.43 |
| 2848.24 | 1914.47 | 2849.74 | 1914.46 | 2853.52 | 1914.48 | 2854.6 | 1914.47 | 2855.32 | 1914.48 |
| 2856.74 | 1914.46 | 2864.96 | 1914.45 | 2873.28 | 1914.47 | 2873.99 | 1914.47 | 2877.66 | 1914.51 |
| 2879.94 | 1914.54 | 2881.68 | 1914.55 | 2892.98 | 1914.67 | 2911.32 | 1914.89 | 2913.66 | 1914.93 |
| 2915.04 | 1914.94 | 2918.47 | 1915 | 2954.24 | 1915 | 2955.76 | 1914.93 | 2967.1 | 1914.33 |
| 2970.78 | 1914.2 | 2970.85 | 1914.19 | 2972.39 | 1914.25 | 2973.17 | 1914.25 | 2975.82 | 1914.29 |
| 2976.83 | 1914.32 | 2978.64 | 1914.36 | 2987.95 | 1914.73 | 2990.82 | 1914.88 | 2992.92 | 1915 |
| 3097.22 | 1915 | 3101.67 | 1914.55 | 3105.65 | 1914.14 | 3110.92 | 1913.66 | 3118.26 | 1913 |
| 3120.77 | 1912.84 | 3130.21 | 1912.45 | 3134.11 | 1912.28 | 3137.73 | 1912.13 | 3141.17 | 1912 |
| 3143.85 | 1911.77 | 3155.33 | 1911.14 | 3157.72 | 1911 | 3207.92 | 1911 | 3217.87 | 1911.59 |
| 3224.3 | 1912 | 3239.98 | 1912.95 | 3241.09 | 1913 | 3242.59 | 1913.01 | 3246.23 | 1913.13 |
| 3250.23 | 1913.24 | 3251.49 | 1913.31 | 3252.28 | 1913.33 | 3256.23 | 1913.05 | 3256.83 | 1913 |
| 3269.48 | 1912.78 | 3271.47 | 1912.73 | 3274.24 | 1912.61 | 3282.93 | 1912.02 | 3284.72 | 1912 |
| 3316 | 1912 | 3340.11 | 1911.99 | 3342.56 | 1911.99 | 3350.6 | 1911.97 | 3399.76 | 1911.85 |
| 3412.28 | 1911.89 | 3418.1 | 1911.87 | 3434.37 | 1911.93 | 3437.35 | 1911.93 | 3448.24 | 1911.95 |
| 3460.02 | 1911.96 | 3469.77 | 1911.98 | 3472.33 | 1911.98 | 3481.6 | 1911.99 | 3490.98 | 1911.99 |
| 3494.37 | 1912 | 3495.72 | 1911.99 | 3499.01 | 1911.99 | 3500.62 | 1911.98 | 3515.25 | 1911.92 |
| 3528.15 | 1911.87 | 3530.95 | 1911.85 | 3539.73 | 1911.81 | 3552.66 | 1911.76 | 3554.09 | 1911.76 |
| 3598.6 | 1911.87 | 3599.32 | 1911.87 | 3647.01 | 1911.8 | 3650.68 | 1911.82 | 3653.39 | 1911.83 |
| 3658.53 | 1911.78 | 3670.09 | 1911.61 | 3671.04 | 1911.62 | 3673.61 | 1911.54 | 3673.99 | 1911.55 |
| 3675.91 | 1911.5 | 3682.19 | 1911.52 | 3683.11 | 1911.53 | 3683.72 | 1911.51 | 3687.7 | 1911.59 |
| 3688.83 | 1911.58 | 3691.47 | 1911.6 | 3692.46 | 1911.59 | 3694.02 | 1911.6 | 3696.91 | 1911.43 |
| 3703.64 | 1911 | 3705.28 | 1910.99 | 3707.73 | 1910.99 | 3737.35 | 1910.88 | 3751.01 | 1910.93 |
| 3764.85 | 1910.97 | 3770.8 | 1910.99 | 3771.31 | 1911 | 3851.98 | 1911 | 3863.93 | 1911.16 |
| 3866.33 | 1911.17 | 3878.8 | 1911.24 | 3879.85 | 1911.25 | 3882.82 | 1911.26 | 3884.35 | 1911.27 |
| 3931.03 | 1911.02 | 3934.17 | 1911 | 4109.19 | 1911 | 4120.89 | 1911.33 | 4140.89 | 1912 |
| 4170.5 | 1912.3 | 4171.83 | 1912.32 | 4173.31 | 1912.33 | 4174.87 | 1912.35 | 4198.73 | 1912.59 |
| 4200.08 | 1912.61 | 4234.38 | 1913 | 4263.23 | 1913 | 4266.08 | 1912.99 | 4266.91 | 1913 |
| 4269.99 | 1912.06 | 4270.28 | 1912 | 4270.78 | 1911.81 | 4272.82 | 1911 | 4274.77 | 1910.95 |
| 4282.05 | 1910.75 | 4319.1 | 1910.92 | 4323.68 | 1910.92 | 4330.54 | 1910.91 | 4336.43 | 1910.92 |
| 4344.94 | 1910.94 | 4354.48 | 1910.96 | 4360.43 | 1910.96 | 4371.06 | 1910.97 | 4375.62 | 1910.98 |
| 4397.86 | 1910.99 | 4403.07 | 1910.99 | 4405.04 | 1911 | 4410.83 | 1911 | 4415.75 | 1911.22 |
| 4424.24 | 1912 | 4427.37 | 1912.28 | 4435.56 | 1913 | 4459.59 | 1913.83 | 4462.18 | 1914 |
| 4480.72 | 1914 | 4487.37 | 1914.06 | 4520.17 | 1914.36 | 4530.47 | 1914.39 | 4551.31 | 1914.42 |
| 4571.56 | 1914.44 | 4581.58 | 1914.38 | 4593.66 | 1914.32 | 4601 | 1914.24 | 4610.37 | 1914.13 |
| 4619.47 | 1914 | 4626.34 | 1913.68 | 4627.66 | 1913.63 | 4628.51 | 1913.62 | 4635.64 | 1913.31 |
| 4643.28 | 1913.28 | 4643.95 | 1913.26 | 4647.35 | 1913.26 | 4648.1 | 1913.27 | 4649.89 | 1913.2 |
| 4650.48 | 1913.2 | 4658.37 | 1913.14 | 4664.75 | 1913.14 | 4666.48 | 1913.16 | 4675.81 | 1913.24 |
| 4676.07 | 1913.24 | 4685.03 | 1913.3 | 4685.48 | 1913.31 | 4687.37 | 1913.32 | 4691.36 | 1913.35 |
| 4693.95 | 1913.38 | 4702.03 | 1913.44 | 4706.63 | 1913.49 | 4707.68 | 1913.49 | 4709.41 | 1913.51 |
| 4733.75 | 1913.69 | 4738.88 | 1913.7 | 4745.23 | 1913.65 | 4754.25 | 1913.57 | 4759.23 | 1913.47 |
| 4765.57 | 1913.5 | 4780.5 | 1913 | 4784.02 | 1913 | 4788.34 | 1914.18 | 4791.15 | 1915 |
| 4793.46 | 1915.97 | 4793.57 | 1916 | 4800.59 | 1917 | 4802.51 | 1918.2 | 4802.78 | 1918.3 |
| 4805.03 | 1919 | 4805.5 | 1919.14 | 4806.25 | 1919.42 | 4806.7 | 1919.62 | 4807.69 | 1920.1 |
| 4809.46 | 1921 | 4810.46 | 1921.5 | 4812.65 | 1922.57 | 4817.73 | 1924.91 | 4817.9 | 1925 |
| 4819.84 | 1925.91 | 4820.01 | 1926 | 4821.98 | 1926.89 | 4822.49 | 1927.19 | 4822.89 | 1927.26 |
| 4824.71 | 1927.4 | 4829.77 | 1927.87 | 4831.04 | 1928 | 4836.75 | 1928.43 | 4844.02 | 1929 |
| 4853.89 | 1929.51 | 4863.94 | 1930 | 4871.1 | 1930.42 | 4880.93 | 1931 | 4882.26 | 1931.01 |
| 4909.13 | 1931.44 | 4935.85 | 1931.84 | 4940.6 | 1931.9 | 4945.05 | 1932 | 4964.61 | 1932.7 |
| 4965.76 | 1932.74 | 4973.61 | 1933 | 4977.44 | 1933.13 | 4995.49 | 1933.84 | 4999.47 | 1934 |
| 5000.52 | 1934.03 | 5018.32 | 1934.52 | 5019.36 | 1934.53 | 5044.51 | 1934.99 | 5053.28 | 1934.99 |
| 5054.31 | 1935 | 5057.51 | 1935 | 5060.91 | 1935.07 | 5061.12 | 1935.06 | 5070.96 | 1935.24 |
| 5071.7 | 1935.23 | 5097.67 | 1935.12 | 5101.54 | 1935.14 | 5109.8 | 1935.14 | 5120.26 | 1935.1 |
| 5121.28 | 1935.09 | 5122.89 | 1935.09 | 5123.42 | 1935.08 | 5132.21 | 1935.06 | 5133.08 | 1935.06 |
| 5142.98 | 1935.04 | 5145.46 | 1935.04 | 5150.32 | 1935 | 5153.65 | 1934.88 | 5161.73 | 1934.6 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5161.73 | .045 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 0 | 5161.73 | 69.83 | 69.83 | 69.83 | .1 | .3 |

CROSS SECTION OUTPUT  Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1913.70 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.17 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1913.52 | Reach Len. (ft) | 69.83 | 69.83 | 69.83 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6699.63 | | |
| E.G. Slope (ft/ft) | 0.003110 | Area (sq ft) | | 6699.63 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3262.64 | Top Width (ft) | | 3262.64 | | |
| Vel Total (ft/s) | 3.34 | Avg. Vel. (ft/s) | | 3.34 | | |
| Max Chl Dpth (ft) | 3.52 | Hydr. Depth (ft) | | 2.05 | | |
| Conv. Total (cfs) | 401679.3 | Conv. (cfs) | | 401679.3 | | |
| Length Wtd. (ft) | 69.83 | Wetted Per. (ft) | | 3267.46 | | |
| Min Ch El (ft) | 1910.00 | Shear (lb/sq ft) | | 0.40 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5161.73 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.20 | Cum Volume (acre-ft) | | 739.75 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 325.49 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE  RS: -15543.5

INPUT
Description:
Station Elevation Data  num=  490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1917.67 | 439.79 | 1917.35 | 447.69 | 1917.35 | 449.51 | 1917.34 | 460.01 | 1917.34 |
| 460.22 | 1917.33 | 466.97 | 1917.33 | 521.81 | 1917.28 | 526.85 | 1917.28 | 530.46 | 1917.27 |
| 539.92 | 1917.26 | 542.89 | 1917.26 | 578.23 | 1917.23 | 600.26 | 1917.21 | 615.1 | 1917.2 |
| 623.7 | 1917.19 | 626.65 | 1917.19 | 631.14 | 1917.18 | 634.5 | 1917.18 | 658.2 | 1917.16 |
| 672.48 | 1917.14 | 683.44 | 1917.14 | 689.58 | 1917.13 | 787.52 | 1917.04 | 846.25 | 1916.99 |
| 853.87 | 1916.98 | 861.79 | 1916.98 | 866.33 | 1916.97 | 869.91 | 1916.97 | 881.6 | 1916.96 |
| 887.21 | 1916.95 | 894.05 | 1916.95 | 907.31 | 1916.93 | 913.31 | 1916.93 | 949.83 | 1916.9 |
| 955.19 | 1912.36 | 956.18 | 1911 | 971.64 | 1911 | 975.14 | 1910.99 | 1006.17 | 1910.99 |
| 1014.47 | 1910.98 | 1051.08 | 1911 | 1067.26 | 1911 | 1070 | 1911.01 | 1084.62 | 1911 |
| 1279.05 | 1911 | 1290.18 | 1910.95 | 1337.2 | 1910.72 | 1364.73 | 1910.62 | 1385.75 | 1910.55 |
| 1387.51 | 1910.54 | 1394.32 | 1910.53 | 1401.36 | 1910.51 | 1407.92 | 1910.48 | 1411.46 | 1910.47 |
| 1419.07 | 1910.43 | 1469.35 | 1910.41 | 1474.04 | 1910.43 | 1487.78 | 1910.34 | 1506.42 | 1910.22 |
| 1507.24 | 1910.23 | 1513.43 | 1910.23 | 1524.2 | 1910.39 | 1561.03 | 1910.99 | 1562.38 | 1911 |
| 1574.42 | 1911 | 1580.65 | 1910.88 | 1582.22 | 1910.8 | 1584.68 | 1910.81 | 1587.23 | 1910.77 |
| 1588.27 | 1910.72 | 1589.8 | 1910.69 | 1605.46 | 1910 | 1628.3 | 1910 | 1657.99 | 1910.54 |
| 1659.2 | 1910.56 | 1691.33 | 1910.93 | 1697.23 | 1911 | 1709.66 | 1911.36 | 1713.8 | 1911.43 |
| 1719.2 | 1911.54 | 1721.41 | 1911.59 | 1726.1 | 1911.68 | 1732.53 | 1911.81 | 1740.02 | 1912 |
| 1749.74 | 1912.34 | 1757 | 1912.44 | 1763.54 | 1912.6 | 1767.82 | 1912.64 | 1768.72 | 1912.67 |
| 1783.97 | 1912.8 | 1784.59 | 1912.82 | 1793.71 | 1912.92 | 1800.58 | 1912.95 | 1804.02 | 1912.95 |
| 1807.24 | 1912.92 | 1811.49 | 1912.89 | 1813.56 | 1912.86 | 1816.97 | 1912.78 | 1822.72 | 1912.72 |
| 1834.24 | 1912.4 | 1838.94 | 1912.31 | 1848.65 | 1912 | 1863.64 | 1911.73 | 1874.03 | 1911.63 |
| 1890.62 | 1911.4 | 1898.79 | 1911.32 | 1909.23 | 1911.23 | 1921.79 | 1911.02 | 1925.04 | 1911.02 |
| 1925.65 | 1911.01 | 1935.87 | 1911.01 | 1940.14 | 1911.02 | 1957.37 | 1911.02 | 1964.11 | 1911.01 |
| 1973.87 | 1911 | 1987.94 | 1911 | 2001.81 | 1910.99 | 2040.62 | 1910.99 | 2053.37 | 1911 |
| 2062.25 | 1910.77 | 2063.3 | 1910.74 | 2064.88 | 1910.73 | 2066.83 | 1910.7 | 2070.3 | 1910.67 |
| 2070.99 | 1910.65 | 2080.41 | 1910.53 | 2082.68 | 1910.52 | 2086.89 | 1910.4 | 2094.82 | 1910 |
| 2097.06 | 1910 | 2098.83 | 1911 | 2100.82 | 1912 | 2102.78 | 1913 | 2103.5 | 1913.38 |
| 2104.39 | 1913.68 | 2105.66 | 1914 | 2110.37 | 1915 | 2112.22 | 1915.42 | 2113.12 | 1915.64 |
| 2117.83 | 1916.68 | 2118.35 | 1916.81 | 2121.83 | 1917.59 | 2123.88 | 1918 | 2124.82 | 1918 |
| 2125.42 | 1917.85 | 2129.21 | 1917 | 2133.64 | 1916 | 2136.27 | 1915.43 | 2137.98 | 1915 |
| 2138.68 | 1914.61 | 2140.25 | 1914 | 2142.99 | 1912.4 | 2143.72 | 1912 | 2145.4 | 1911 |
| 2146.34 | 1910.46 | 2147.29 | 1910 | 2150.45 | 1910 | 2153.14 | 1910.33 | 2153.27 | 1910.32 |
| 2159.27 | 1910.43 | 2164.1 | 1910.46 | 2170.66 | 1910.31 | 2180.05 | 1910 | 2220.01 | 1910 |
| 2222.76 | 1911 | 2226.15 | 1912.18 | 2229.11 | 1913 | 2232.57 | 1914 | 2238.72 | 1914 |
| 2242.32 | 1913.41 | 2248.29 | 1912 | 2253.18 | 1910.32 | 2253.92 | 1910 | 2266.78 | 1910 |
| 2269.01 | 1910.01 | 2273.37 | 1910.01 | 2277.92 | 1910.02 | 2290.41 | 1910.15 | 2317.53 | 1910.38 |
| 2326.3 | 1910.41 | 2341.4 | 1910.45 | 2347.07 | 1910.47 | 2354.02 | 1910.49 | 2355.4 | 1910.49 |
| 2361.66 | 1910.55 | 2377.13 | 1910.58 | 2394.36 | 1910.61 | 2425.22 | 1911 | 2587.91 | 1911 |
| 2590.52 | 1911.5 | 2592.65 | 1912 | 2593.68 | 1912.32 | 2596.07 | 1913 | 2597.86 | 1913.57 |
| 2599.37 | 1914 | 2601.1 | 1914.03 | 2603.3 | 1914 | 2607.8 | 1913.5 | 2612.35 | 1913 |
| 2613.6 | 1912.96 | 2614.31 | 1912.97 | 2616.25 | 1912.75 | 2616.66 | 1912.75 | 2617.31 | 1912.63 |
| 2617.7 | 1912.5 | 2619.46 | 1912.14 | 2620.29 | 1912 | 2626.68 | 1911 | 2639.85 | 1911 |
| 2643.55 | 1911.35 | 2646.11 | 1911.57 | 2649.09 | 1911.76 | 2652.3 | 1912 | 2655.97 | 1912 |
| 2664.62 | 1912.24 | 2671.3 | 1912.32 | 2679.33 | 1912.34 | 2686.84 | 1912.35 | 2691.23 | 1912.33 |
| 2697.63 | 1912.27 | 2702.24 | 1912.24 | 2704.93 | 1912.23 | 2724.68 | 1912.1 | 2730.99 | 1912.04 |
| 2740.51 | 1912 | 2764.37 | 1912 | 2776.85 | 1912.45 | 2783.51 | 1912.67 | 2786.51 | 1912.75 |
| 2793.7 | 1913 | 2793.86 | 1913.01 | 2804.03 | 1914 | 2804.56 | 1914.07 | 2807.74 | 1914.28 |
| 2809.88 | 1914.38 | 2810.41 | 1914.36 | 2818.32 | 1914.29 | 2818.85 | 1914.27 | 2822.58 | 1914 |
| 2830.25 | 1914 | 2832.98 | 1914.01 | 2834.73 | 1914 | 2840.9 | 1914 | 2852.31 | 1913.53 |
| 2853.23 | 1913.52 | 2856.94 | 1913.39 | 2860.17 | 1913.34 | 2860.81 | 1913.35 | 2864.01 | 1913.33 |
| 2866.83 | 1913.36 | 2871.38 | 1913.44 | 2878.05 | 1913.65 | 2879.39 | 1913.68 | 2881.97 | 1913.77 |
| 2885.39 | 1913.9 | 2887.71 | 1914 | 2889.64 | 1914.12 | 2895.53 | 1914.41 | 2898.04 | 1914.55 |
| 2901.87 | 1914.73 | 2908.06 | 1915 | 2915.46 | 1915 | 2922.35 | 1915.04 | 2928.18 | 1915.08 |
| 2949.11 | 1915.13 | 2957 | 1915.19 | 2968.44 | 1915.52 | 2983.02 | 1915.88 | 2983.39 | 1915.84 |
| 2984.07 | 1916 | 2985.63 | 1916.62 | 2986.54 | 1917 | 2988.11 | 1917.58 | 2989.47 | 1918 |
| 2992.22 | 1918.23 | 2996.44 | 1918.57 | 2997.32 | 1918.66 | 3000.82 | 1918.93 | 3001.85 | 1919 |
| 3010.17 | 1919.61 | 3015.9 | 1921 | 3016.42 | 1921.14 | 3018.6 | 1921.51 | 3019.38 | 1921.62 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3020.95 | 1921.59 | 3021.93 | 1921.61 | 3028.97 | 1921.92 | 3030.9 | 1921.96 | 3032.5 | 1921.68 |
| 3033.66 | 1921.51 | 3035.76 | 1921 | 3036.61 | 1920.88 | 3043.11 | 1920 | 3048.83 | 1919.24 |
| 3050.59 | 1919 | 3053.41 | 1918.77 | 3056.14 | 1918.6 | 3063.16 | 1918.13 | 3067.31 | 1918 |
| 3068.82 | 1917.91 | 3071.1 | 1917.75 | 3072.29 | 1917.63 | 3075.6 | 1917.33 | 3078.74 | 1917.07 |
| 3083.33 | 1916.6 | 3087.43 | 1916 | 3090.43 | 1915.39 | 3096.19 | 1914.06 | 3097.03 | 1913.86 |
| 3100.81 | 1913 | 3105.16 | 1912 | 3106.87 | 1911.6 | 3110.32 | 1911 | 3268.8 | 1911 |
| 3280.71 | 1911.02 | 3283.33 | 1911.02 | 3311.99 | 1911.27 | 3336.33 | 1911.42 | 3345.15 | 1911.39 |
| 3354.9 | 1911.35 | 3356.84 | 1911.35 | 3369.99 | 1911.28 | 3382.29 | 1911.27 | 3385.38 | 1911.27 |
| 3412.04 | 1911.2 | 3414.95 | 1911.21 | 3434.16 | 1911.17 | 3455.17 | 1911.13 | 3456.76 | 1911.14 |
| 3459.91 | 1911.12 | 3464.21 | 1911.12 | 3465.68 | 1911.13 | 3492.4 | 1911.13 | 3496.98 | 1911.15 |
| 3548.56 | 1911.12 | 3576.2 | 1911.04 | 3589.7 | 1911 | 3621.73 | 1911 | 3626.08 | 1911.01 |
| 3628.87 | 1911.01 | 3636.31 | 1911.02 | 3640.06 | 1911.03 | 3647.23 | 1911.04 | 3668.31 | 1911.01 |
| 3673.01 | 1911 | 3698.34 | 1911 | 3712.38 | 1910.03 | 3712.64 | 1910 | 3721.44 | 1910 |
| 3734.83 | 1910.09 | 3743.1 | 1910.11 | 3749.43 | 1910.13 | 3751.03 | 1910.13 | 3762.68 | 1910.05 |
| 3771.48 | 1910.01 | 3775.52 | 1910 | 3789.57 | 1910 | 3798.84 | 1910.1 | 3807.56 | 1910.19 |
| 3814.38 | 1910.21 | 3823.87 | 1910.26 | 3829.32 | 1910.35 | 3829.93 | 1910.35 | 3834.57 | 1910.43 |
| 3845.08 | 1910.53 | 3852.96 | 1910.57 | 3854.94 | 1910.59 | 3860.43 | 1910.69 | 3869.9 | 1911 |
| 4085.01 | 1911 | 4087.72 | 1911.04 | 4091.77 | 1911.05 | 4099.87 | 1911.22 | 4116.21 | 1911.51 |
| 4131.06 | 1911.95 | 4132.65 | 1912 | 4209.71 | 1913 | 4217.85 | 1913 | 4220 | 1912.38 |
| 4220.33 | 1912.09 | 4220.53 | 1912.22 | 4221.42 | 1911.93 | 4223.94 | 1911 | 4262.66 | 1910.13 |
| 4265.89 | 1910.06 | 4268.2 | 1910 | 4271.29 | 1910 | 4276.41 | 1910.05 | 4278.66 | 1910.08 |
| 4286.53 | 1910.17 | 4352.37 | 1910.99 | 4355.2 | 1911 | 4369.01 | 1911.81 | 4373.06 | 1912 |
| 4373.44 | 1912 | 4375.81 | 1912.11 | 4377.25 | 1912.2 | 4377.7 | 1912.25 | 4387.44 | 1912.72 |
| 4389.28 | 1912.84 | 4392.08 | 1913 | 4392.61 | 1913 | 4394.46 | 1913.06 | 4402.66 | 1913.28 |
| 4407.85 | 1913.4 | 4411.23 | 1913.41 | 4427.81 | 1913.77 | 4430.92 | 1913.86 | 4433.56 | 1913.87 |
| 4444.39 | 1913.94 | 4448.86 | 1913.95 | 4456.82 | 1913.9 | 4462.92 | 1913.92 | 4479.12 | 1914 |
| 4492.84 | 1914.05 | 4508.38 | 1914 | 4530.64 | 1914 | 4557.53 | 1914.03 | 4558.53 | 1914.03 |
| 4563.51 | 1914 | 4587.72 | 1914 | 4604.73 | 1913.12 | 4607.44 | 1913 | 4641.15 | 1913 |
| 4642.14 | 1912.99 | 4644.49 | 1913 | 4682.8 | 1913 | 4697.54 | 1913.11 | 4719.7 | 1913.27 |
| 4721.68 | 1913.27 | 4737.12 | 1913.15 | 4754.62 | 1913 | 4758 | 1913 | 4759.17 | 1912.99 |
| 4760.94 | 1913 | 4761.5 | 1913.25 | 4763.43 | 1914 | 4764.56 | 1914.32 | 4769.15 | 1915.55 |
| 4770.49 | 1916 | 4772.62 | 1916.78 | 4773.27 | 1917 | 4774.79 | 1918 | 4778.95 | 1920.79 |
| 4780.72 | 1921.96 | 4783.87 | 1924 | 4785.39 | 1925 | 4786.83 | 1925.78 | 4787.52 | 1925.9 |
| 4788.33 | 1926 | 4789.88 | 1926.03 | 4791.45 | 1926.11 | 4797.91 | 1926.41 | 4806.59 | 1927 |
| 4810.66 | 1927.24 | 4816.51 | 1927.56 | 4819.84 | 1927.75 | 4823.33 | 1927.91 | 4824.49 | 1928 |
| 4827.56 | 1928.27 | 4833.1 | 1928.73 | 4835.32 | 1928.92 | 4850.78 | 1930 | 4855.04 | 1930.25 |
| 4868.22 | 1931 | 4871.98 | 1931.01 | 4872.62 | 1931 | 4883.03 | 1931 | 4903.64 | 1931.56 |
| 4910.85 | 1931.76 | 4912 | 1931.78 | 4922.1 | 1931.99 | 4923.8 | 1932 | 4924.94 | 1932.04 |
| 4953.55 | 1933 | 4957.18 | 1933.12 | 4979.9 | 1933.82 | 4984.69 | 1934 | 4990.33 | 1934 |
| 5019.55 | 1934.49 | 5027.06 | 1934.65 | 5040.74 | 1934.91 | 5045.98 | 1935 | 5058.31 | 1935.04 |
| 5065.96 | 1935.02 | 5067.63 | 1935.02 | 5071.08 | 1935 | 5118.25 | 1935 | 5122.81 | 1935.02 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5122.81 | .045 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 0 | 5122.81 | 97.76 | 97.76 | 97.76 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1913.49 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.16 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1913.34 | Reach Len. (ft) | 97.76 | 97.76 | 97.76 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7039.32 | | |
| E.G. Slope (ft/ft) | 0.002623 | Area (sq ft) | | 7039.32 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3248.75 | Top Width (ft) | | 3248.75 | | |
| Vel Total (ft/s) | 3.18 | Avg. Vel. (ft/s) | | 3.18 | | |
| Max Chl Dpth (ft) | 3.33 | Hydr. Depth (ft) | | 2.17 | | |
| Conv. Total (cfs) | 437382.3 | Conv. (cfs) | | 437382.3 | | |
| Length Wtd. (ft) | 97.76 | Wetted Per. (ft) | | 3254.16 | | |
| Min Ch El (ft) | 1910.00 | Shear (lb/sq ft) | | 0.35 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5122.81 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.28 | Cum Volume (acre-ft) | | 728.73 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 320.27 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -15641.3

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1917.39 | 532.99 | 1917.02 | 541.84 | 1917.01 | 546.07 | 1917.01 | 549.36 | 1917 |
| 557.49 | 1917 | 563.42 | 1916.99 | 624.81 | 1916.94 | 627.56 | 1916.94 | 628.57 | 1916.93 |
| 634.48 | 1916.93 | 645.07 | 1916.92 | 648.38 | 1916.92 | 687.91 | 1916.88 | 712.52 | 1916.86 |
| 729.11 | 1916.85 | 738.72 | 1916.84 | 740.59 | 1916.84 | 741.88 | 1916.83 | 750.78 | 1916.83 |
| 777.26 | 1916.8 | 794.7 | 1916.79 | 799.13 | 1916.78 | 805.44 | 1916.78 | 812.29 | 1916.77 |
| 909.96 | 1916.69 | 911.45 | 1915.97 | 916.33 | 1915.76 | 933.17 | 1913.33 | 933.22 | 1913.32 |
| 939.65 | 1912.99 | 940.89 | 1912.83 | 946.21 | 1912.57 | 946.84 | 1912.5 | 952.44 | 1912.24 |
| 952.97 | 1912.18 | 963.3 | 1911.66 | 963.94 | 1911.6 | 965.6 | 1911.52 | 967.01 | 1911.48 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 968.32 | 1911.36 | 969.71 | 1911.34 | 970.27 | 1911.29 | 970.93 | 1911.29 | 971.18 | 1911.26 |
| 972.83 | 1911.23 | 974.48 | 1910.16 | 975.93 | 1910.15 | 985.84 | 1910.15 | 996.7 | 1910.16 |
| 999.41 | 1910.17 | 1013.18 | 1910.21 | 1016.74 | 1910.23 | 1018.12 | 1910.23 | 1025.38 | 1910.26 |
| 1040.15 | 1910.31 | 1064.72 | 1910.48 | 1142.01 | 1911 | 1282.05 | 1911 | 1350.94 | 1910.64 |
| 1352.13 | 1910.64 | 1355.16 | 1910.62 | 1357.95 | 1910.61 | 1360.6 | 1910.59 | 1384.93 | 1910.47 |
| 1431.38 | 1910.22 | 1434.13 | 1910.21 | 1458.37 | 1910.1 | 1465.65 | 1910.06 | 1480.67 | 1910.03 |
| 1492.74 | 1910 | 1509.82 | 1910 | 1527.55 | 1910.4 | 1530.17 | 1910.49 | 1538.86 | 1910.67 |
| 1543.02 | 1910.76 | 1545.85 | 1910.94 | 1546.93 | 1911 | 1566.57 | 1911 | 1571.83 | 1910.86 |
| 1596.7 | 1910 | 1624.83 | 1910 | 1632.36 | 1910.18 | 1634.59 | 1910.21 | 1637.17 | 1910.3 |
| 1639.62 | 1910.34 | 1640.26 | 1910.37 | 1642.46 | 1910.41 | 1645.48 | 1910.51 | 1647.15 | 1910.55 |
| 1648.37 | 1910.59 | 1661.39 | 1911 | 1675.44 | 1911.48 | 1681.28 | 1911.69 | 1683.9 | 1911.79 |
| 1689.61 | 1912 | 1689.78 | 1912 | 1695.59 | 1912.18 | 1711.71 | 1912.62 | 1715.78 | 1912.71 |
| 1724.37 | 1912.93 | 1727.02 | 1912.99 | 1729.55 | 1912.98 | 1732.38 | 1912.94 | 1765.7 | 1912.83 |
| 1795.56 | 1912.84 | 1797.03 | 1912.95 | 1797.98 | 1913 | 1800.47 | 1913.54 | 1801.03 | 1913.71 |
| 1801.49 | 1913.78 | 1801.72 | 1913.86 | 1802.36 | 1913.88 | 1804.7 | 1913.8 | 1805.76 | 1913.71 |
| 1806.36 | 1913.62 | 1807.31 | 1913.37 | 1808.45 | 1912.98 | 1810.88 | 1912 | 1820.3 | 1911.88 |
| 1833.87 | 1911.71 | 1843.1 | 1911.6 | 1852.67 | 1911.44 | 1875.8 | 1911.04 | 1877.78 | 1911 |
| 1974.07 | 1911 | 1975.55 | 1910.96 | 1978.21 | 1910.99 | 1980.54 | 1911 | 2084.03 | 1911 |
| 2085.54 | 1910.98 | 2104.03 | 1910.82 | 2129.53 | 1910.63 | 2130.09 | 1910.65 | 2131.66 | 1910.67 |
| 2134.62 | 1910.67 | 2139.12 | 1910.66 | 2139.64 | 1910.68 | 2142.42 | 1910.71 | 2144.32 | 1910.74 |
| 2147.44 | 1910.77 | 2151.11 | 1910.76 | 2155.44 | 1910.73 | 2155.82 | 1910.74 | 2157.26 | 1910.71 |
| 2157.95 | 1910.71 | 2160.9 | 1910.65 | 2165.5 | 1910.5 | 2166.24 | 1910.49 | 2168.11 | 1910.43 |
| 2171.89 | 1910.35 | 2173.43 | 1910.31 | 2180.22 | 1910.01 | 2182.92 | 1910 | 2185.85 | 1910 |
| 2192.9 | 1910.91 | 2193.53 | 1911 | 2199.6 | 1911.9 | 2200.42 | 1912.06 | 2204.13 | 1913 |
| 2204.82 | 1913.39 | 2205.55 | 1914 | 2206.79 | 1914.39 | 2210.11 | 1915 | 2212.01 | 1915.49 |
| 2214.67 | 1916 | 2218.61 | 1917 | 2220.46 | 1917.43 | 2221.48 | 1917.46 | 2222.45 | 1917.35 |
| 2222.59 | 1917.37 | 2223.19 | 1917.28 | 2224.61 | 1917 | 2229.48 | 1916.36 | 2231.94 | 1916 |
| 2237.86 | 1915.46 | 2238.35 | 1915.38 | 2239.27 | 1915.19 | 2240.02 | 1915 | 2240.68 | 1914.73 |
| 2243.06 | 1913.5 | 2243.99 | 1913 | 2247.87 | 1911 | 2248.16 | 1910.82 | 2249.75 | 1910 |
| 2253.72 | 1909.83 | 2264.71 | 1909.45 | 2269 | 1909.36 | 2271.89 | 1909.33 | 2272.06 | 1909.32 |
| 2277 | 1909.29 | 2279.92 | 1909.35 | 2280.09 | 1909.34 | 2290.66 | 1909.35 | 2303.05 | 1909.39 |
| 2314 | 1909.52 | 2318.3 | 1909.59 | 2336.19 | 1909.92 | 2338.1 | 1909.96 | 2339.94 | 1909.96 |
| 2343.22 | 1909.97 | 2346.38 | 1910 | 2363.72 | 1910.67 | 2376.1 | 1911 | 2480.28 | 1911 |
| 2480.8 | 1910.98 | 2502.05 | 1910 | 2503.07 | 1910 | 2504.85 | 1909.92 | 2505.34 | 1909.93 |
| 2512.31 | 1909.71 | 2516.63 | 1909.58 | 2517.9 | 1909.59 | 2523.85 | 1909.46 | 2534.52 | 1909.46 |
| 2547.16 | 1909.54 | 2549.35 | 1909.57 | 2561.44 | 1909.77 | 2571.05 | 1909.95 | 2572.6 | 1910 |
| 2574.25 | 1910 | 2579.65 | 1910.05 | 2583.14 | 1910.06 | 2586.39 | 1910 | 2621.64 | 1910 |
| 2641.77 | 1910.89 | 2644.08 | 1911 | 2682.96 | 1911.79 | 2688.21 | 1911.9 | 2691.1 | 1911.95 |
| 2693.29 | 1912 | 2694.72 | 1912.02 | 2697.53 | 1912.03 | 2698.08 | 1912.04 | 2700.7 | 1912.03 |
| 2702.72 | 1912.04 | 2712.22 | 1912.52 | 2713.27 | 1912.56 | 2720.15 | 1913 | 2778.2 | 1913 |
| 2780.22 | 1912.96 | 2784.6 | 1912.79 | 2788.44 | 1912.66 | 2795.2 | 1912.37 | 2799.89 | 1912.19 |
| 2804.51 | 1912 | 2805.05 | 1912 | 2812.28 | 1911.37 | 2816.49 | 1911 | 2818.39 | 1910.99 |
| 2822.35 | 1910.96 | 2823.31 | 1910.97 | 2828.26 | 1911 | 2830.42 | 1911.36 | 2834.96 | 1912 |
| 2838.28 | 1912.26 | 2841.73 | 1912.49 | 2846.93 | 1913 | 2855.6 | 1914 | 2858.91 | 1914.57 |
| 2861.29 | 1915.02 | 2862.36 | 1915.18 | 2863.15 | 1915.28 | 2863.81 | 1915.41 | 2864.93 | 1915.55 |
| 2868.76 | 1915.74 | 2870.9 | 1915.93 | 2875.15 | 1916.03 | 2876.47 | 1916.01 | 2877.35 | 1915.97 |
| 2878.29 | 1915.86 | 2878.95 | 1915.68 | 2879.69 | 1915.43 | 2880.91 | 1914.94 | 2882.03 | 1914.42 |
| 2882.86 | 1914 | 2883.12 | 1913.64 | 2883.82 | 1913 | 2884.45 | 1912.63 | 2887.26 | 1912 |
| 2890.56 | 1912 | 2896.73 | 1912.75 | 2899.07 | 1913 | 2905.18 | 1913.61 | 2908.84 | 1914 |
| 2915.53 | 1915 | 2920.7 | 1916 | 2923.86 | 1916.58 | 2925.97 | 1917 | 2930.05 | 1917.78 |
| 2931.27 | 1918 | 2932.39 | 1918.15 | 2938.47 | 1919 | 2944.48 | 1919.78 | 2946.3 | 1920 |
| 2946.63 | 1920.02 | 2947.87 | 1920.04 | 2949.5 | 1920 | 2952.94 | 1918.8 | 2955.19 | 1918 |
| 2958.55 | 1916.85 | 2960.85 | 1916 | 2961.72 | 1915.69 | 2963.58 | 1915 | 2969 | 1913 |
| 2974.81 | 1912.12 | 2975.57 | 1912 | 2978.03 | 1911.7 | 2983.67 | 1911 | 2988.11 | 1910.48 |
| 2991.31 | 1910.13 | 2994.01 | 1910.22 | 3010.56 | 1910.81 | 3015.28 | 1911 | 3017.24 | 1911 |
| 3022.94 | 1911.01 | 3026.71 | 1911.01 | 3032.3 | 1911 | 3168.76 | 1911 | 3224.27 | 1910.98 |
| 3241.76 | 1910.99 | 3288.36 | 1910.99 | 3293.94 | 1911 | 3619.19 | 1911 | 3642.61 | 1910.52 |
| 3669.4 | 1910 | 3670.5 | 1910 | 3671.08 | 1909.98 | 3675.67 | 1909.57 | 3679.13 | 1909.27 |
| 3681.07 | 1909 | 3694.45 | 1909 | 3695.34 | 1909.03 | 3702.21 | 1909.22 | 3703.84 | 1909.27 |
| 3729.87 | 1910 | 3760.98 | 1910 | 3772.72 | 1910.19 | 3776.83 | 1910.24 | 3795.31 | 1910.39 |
| 3803.26 | 1910.45 | 3819.89 | 1910.71 | 3822.09 | 1910.76 | 3823.57 | 1910.78 | 3834.89 | 1911 |
| 3919.26 | 1911 | 3926.14 | 1910.99 | 3932.95 | 1911 | 3987.74 | 1911 | 3990.05 | 1910.97 |
| 4019.12 | 1910.6 | 4022.13 | 1910.59 | 4025.47 | 1910.59 | 4025.92 | 1910.58 | 4037.1 | 1910.66 |
| 4052.46 | 1910.8 | 4053.22 | 1910.81 | 4055.87 | 1910.81 | 4056.64 | 1910.82 | 4074.68 | 1911 |
| 4077.69 | 1911 | 4084.26 | 1912 | 4084.88 | 1912 | 4104.28 | 1912.12 | 4121.69 | 1912.02 |
| 4124.88 | 1912 | 4126.07 | 1911.69 | 4129.75 | 1911 | 4134.76 | 1910.89 | 4143.18 | 1911 |
| 4166.5 | 1911 | 4221.64 | 1910.46 | 4223.86 | 1910.46 | 4257.95 | 1910.95 | 4263.26 | 1911.03 |
| 4263.56 | 1911.04 | 4266.41 | 1911.04 | 4274.9 | 1911.42 | 4284.13 | 1911.68 | 4289.93 | 1911.87 |
| 4293.06 | 1912 | 4297.08 | 1912.33 | 4306.29 | 1913 | 4310.35 | 1913.31 | 4314.21 | 1913.62 |
| 4318.04 | 1914 | 4322.97 | 1914.33 | 4323.76 | 1914.31 | 4332.47 | 1914.02 | 4335.9 | 1914.02 |
| 4350.9 | 1914 | 4354.16 | 1914 | 4368.03 | 1913.67 | 4384.94 | 1913.41 | 4393.99 | 1913.36 |
| 4402.25 | 1913.4 | 4408.47 | 1913.45 | 4416.69 | 1913.53 | 4418.74 | 1913.56 | 4420.61 | 1913.57 |
| 4423.78 | 1913.6 | 4442.17 | 1913.68 | 4454.28 | 1913.73 | 4465.44 | 1913.45 | 4467.18 | 1913.46 |
| 4473.31 | 1913.48 | 4474.91 | 1913.47 | 4486.24 | 1913.1 | 4486.91 | 1913.09 | 4490.55 | 1913 |
| 4567.42 | 1913 | 4571.91 | 1912.99 | 4576.48 | 1913 | 4637.76 | 1913 | 4642.98 | 1912.99 |
| 4653.08 | 1912.99 | 4658.35 | 1912.98 | 4687.47 | 1912.98 | 4692.78 | 1912.99 | 4698.62 | 1912.99 |
| 4702.23 | 1913 | 4703.87 | 1913.89 | 4704.05 | 1914 | 4704.91 | 1914.16 | 4710.19 | 1915 |
| 4712.4 | 1915.41 | 4713.92 | 1915.65 | 4716.01 | 1916 | 4716.39 | 1916.25 | 4718.81 | 1918.19 |
| 4719.81 | 1918.95 | 4721.11 | 1919.99 | 4722.43 | 1921 | 4725.14 | 1923 | 4725.45 | 1923.26 |
| 4726.42 | 1924 | 4726.8 | 1924.32 | 4727.68 | 1925 | 4728.14 | 1925.39 | 4729.07 | 1926 |
| 4729.75 | 1926.32 | 4731.38 | 1927 | 4732.46 | 1927.48 | 4733.39 | 1927.91 | 4736.06 | 1928.99 |
| 4736.67 | 1928.9 | 4740.04 | 1928 | 4743.66 | 1927.06 | 4747.42 | 1926 | 4766.25 | 1926 |
| 4768.66 | 1926.1 | 4771.73 | 1926.26 | 4785.1 | 1927 | 4785.23 | 1927 | 4787.64 | 1927.22 |
| 4795.23 | 1928 | 4802.73 | 1928.88 | 4803.79 | 1929 | 4804.05 | 1929 | 4809.49 | 1929.32 |
| 4809.59 | 1929.32 | 4817.62 | 1929.73 | 4817.72 | 1929.73 | 4826.31 | 1930 | 4832.43 | 1930 |
| 4839.71 | 1930.92 | 4840.38 | 1931 | 4842.46 | 1931.08 | 4870.21 | 1932 | 4882.7 | 1932.31 |
| 4905.04 | 1933 | 4908.74 | 1933.12 | 4917.14 | 1933.34 | 4932.5 | 1933.75 | 4941.76 | 1934 |
| 4942.62 | 1934 | 4953.84 | 1934.26 | 4960.58 | 1934.4 | 4961.41 | 1934.4 | 4974.47 | 1934.49 |

```
  4979.4 1934.56 5003.65    1935 5043.12    1935 5058.45 1934.74 5095.79 1934.11
 5096.87 1934.08 5099.16    1934 5101.06    1934 5102.11 1933.94 5113.82 1933.33

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .045       0     .04 5113.82    .045

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
             0 5113.82            82.86   82.86   82.86             .1       .3

CROSS SECTION OUTPUT  Profile #PF 1

  E.G. Elev (ft)           1913.21    Element                    Left OB    Channel   Right OB
  Vel Head (ft)               0.17    Wt. n-Val.                            0.040
  W.S. Elev (ft)           1913.05    Reach Len. (ft)             82.86      82.86      82.86
  Crit W.S. (ft)                      Flow Area (sq ft)                    6844.55
  E.G. Slope (ft/ft)       0.003089   Area (sq ft)                         6844.55
  Q Total (cfs)           22400.00    Flow (cfs)                          22400.00
  Top Width (ft)           3426.54    Top Width (ft)                       3426.54
  Vel Total (ft/s)            3.27    Avg. Vel. (ft/s)                        3.27
  Max Chl Dpth (ft)           4.05    Hydr. Depth (ft)                        2.00
  Conv. Total (cfs)       403056.8    Conv. (cfs)                         403056.8
  Length Wtd. (ft)           82.86    Wetted Per. (ft)                     3429.38
  Min Ch El (ft)           1909.00    Shear (lb/sq ft)                        0.38
  Alpha                       1.00    Stream Power (lb/ft s)   5113.82       0.00       0.00
  Frctn Loss (ft)             0.19    Cum Volume (acre-ft)                  713.15
  C & E Loss (ft)             0.01    Cum SA (acres)                        312.78


Warning: Divided flow computed for this cross-section.

CROSS SECTION


RIVER: MOJAVE
REACH: MOJAVE             RS: -15724.2

INPUT
Description:
Station Elevation Data    num=     490
     Sta    Elev      Sta    Elev      Sta    Elev      Sta    Elev      Sta    Elev
       0 1917.22  646.88 1916.78  656.33 1916.78  658.51 1916.77  664.37 1916.77
  670.24 1916.76   679.4 1916.76  744.93  1916.7  749.21  1916.7  750.94 1916.69
  755.24 1916.69  766.53 1916.68  770.07 1916.68   812.2 1916.64  838.51 1916.62
  856.09  1916.6  866.53  1916.6  866.79 1916.59  875.17 1916.59  879.15 1916.58
  907.33 1916.56  924.28 1916.55  925.64 1916.54  930.72 1916.54  935.75 1911.11
  938.04    1910  949.44 1909.96   962.3    1910 1067.93    1910 1071.84 1910.04
 1074.24 1910.07 1106.11  1910.4 1130.16 1910.61 1143.06 1910.72  1154.6 1910.83
 1156.14 1910.84  1157.9 1910.86 1174.59    1911 1398.48    1911 1429.61 1910.85
 1494.91 1910.55 1502.38 1910.54 1509.93 1910.52  1512.4 1910.51 1537.63 1910.39
 1580.93 1910.16 1584.72 1910.13 1592.43 1910.08 1601.23    1910 1604.21    1910
 1605.52 1909.97 1608.74 1909.97 1625.23 1909.48  1626.5 1909.45 1627.23 1909.42
 1628.38 1909.39 1632.89 1909.25 1633.66 1909.23 1641.37    1909 1674.79    1909
 1677.63  1909.1 1678.33 1909.11 1679.29 1909.14  1683.1 1909.24  1704.5 1909.79
 1707.28 1909.87    1712    1910 1727.28 1910.84 1729.91 1910.95  1731.5    1911
 1736.19 1911.25  1736.9 1911.34 1738.25 1911.48 1741.66 1911.75 1742.32 1911.82
  1743.2  1911.9 1744.41    1912  1758.8    1912 1760.24 1911.99  1768.2 1911.99
  1769.9 1911.98 1772.72 1911.97 1777.78 1911.96 1778.89 1911.96 1785.35 1911.95
 1789.12 1911.95 1790.11 1911.96 1792.37 1911.96 1797.44 1911.99 1798.15 1912.01
 1798.77 1912.08 1799.25 1912.15  1800.7  1912.3 1801.78 1912.37 1810.36 1912.19
 1812.62  1912.1 1813.79 1912.09  1815.6 1912.11 1816.39 1912.14 1817.61  1912.1
 1823.16 1912.23  1825.1 1912.25 1826.97 1912.26 1833.11 1912.22 1833.84  1912.2
 1850.42 1912.11 1850.61 1912.12 1853.93 1912.08 1854.15 1912.08 1860.42    1912
 1868.05 1911.87  1869.5 1911.83 1869.89  1911.8 1874.08 1911.76 1875.16 1911.69
 1876.65 1911.65 1878.01 1911.59 1879.16 1911.53  1886.7    1911 1979.03    1911
 1995.61 1910.58 1996.59 1910.55 2004.12 1910.31 2012.84 1910.01 2013.93    1910
 2027.06    1910 2031.89 1909.86 2042.42 1909.57 2042.94 1909.57 2048.77 1909.55
 2052.78 1909.58  2057.3 1909.62 2058.54 1909.62 2063.93 1909.61 2070.75 1909.71
 2072.54 1909.72 2075.78 1909.99 2076.03    1910 2259.43    1910 2282.58 1909.08
 2285.81    1909  2330.6    1909 2333.35 1909.14 2333.58 1909.14 2361.08 1909.27
 2366.83 1909.35 2377.69 1909.51 2389.16 1909.71 2392.85 1909.74 2396.38  1909.8
 2397.17 1909.81 2407.87    1910 2411.04 1910.01 2412.27 1910.01 2415.22 1910.03
 2417.05 1910.03 2419.26 1910.04 2420.42 1910.04  2425.4 1910.14 2451.31  1910.6
 2451.91  1910.6 2464.06 1910.67 2472.89 1910.71 2473.14 1910.71 2477.84 1910.62
  2478.5 1910.61 2484.82  1910.5 2485.14  1910.5 2491.84 1910.39 2494.09 1910.36
 2496.05 1910.34 2500.56 1910.38 2503.11 1910.21 2505.99    1910 2507.13    1910
 2508.51 1909.89  2515.3 1909.38 2520.03    1909 2536.91    1909 2547.01 1909.77
 2548.39    1910  2548.9 1910.27 2550.36    1911 2552.38  1911.7 2554.42    1913
  2555.7 1913.82 2555.99 1913.85 2558.04    1914 2567.29 1914.79 2567.83 1914.82
 2568.35 1914.82 2569.12 1914.79 2577.16    1914  2578.6 1913.81 2579.76 1913.69
 2580.09 1913.64 2581.03 1913.46 2581.92 1913.24 2582.85    1913 2583.32 1912.85
 2583.77 1912.68 2585.89    1912 2591.81 1911.15 2592.95 1911.07 2593.43 1911.06
 2594.75 1911.01 2595.52    1911 2596.49 1910.91 2602.37    1910 2615.57    1910
  2616.6 1910.07 2619.71 1910.02 2623.05 1910.03 2635.68 1910.09 2642.89  1910.1
 2644.98 1910.11 2653.44 1910.06 2661.93    1910 2701.79    1910 2701.87 1910.01
 2703.28 1910.02 2714.22 1910.39 2720.75 1910.53 2720.99 1910.54 2722.17 1910.55
  2730.1 1910.68 2734.73 1910.74 2746.28    1911 2747.38 1911.03 2752.35 1911.14
 2755.74 1911.18 2758.52  1911.2 2771.43 1911.28  2776.5  1911.3 2780.67 1911.28
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 2790.02 1911.29 2793.03 1911.27 2806.82  1911.3 2817.24 1911.27 2823.95 1911.13
 2827.85 1911.02 2830.19 1911.01 2830.57    1911  2831.5    1911 2834.78 1910.82
 2841.44 1910.45 2849.45    1910  3003.7    1910 3005.37 1910.05 3008.45 1910.15
 3020.63 1910.55 3030.88 1910.88  3034.5    1911 3052.33    1911 3058.31 1910.96
 3061.52    1911 3087.37    1911 3120.72 1910.99 3142.18    1911 3143.87    1911
 3164.46 1910.99  3195.1 1910.99 3214.58 1910.98 3234.05 1910.98 3274.09 1910.97
 3287.67 1910.97 3315.17 1910.98 3319.67 1910.98 3329.13 1910.99 3350.68 1910.99
 3352.69    1911 3678.76    1911 3680.72 1910.93 3681.67 1910.89 3686.23 1910.61
 3691.46 1910.31 3696.64    1910  3706.5 1909.67 3724.32    1909 3741.82    1909
    3743 1909.01 3746.78 1909.11  3753.7 1909.29 3771.03  1909.7 3779.65    1910
 3866.36    1910 3868.66 1910.02 3868.82 1910.03 3871.53 1910.06 3872.73 1910.07
 3875.87 1910.12 3882.52 1910.16 3890.05  1910.2 3890.79  1910.2 3896.79 1910.27
 3909.65 1910.43 3910.97 1910.44 3912.88 1910.49  3914.7 1910.51 3917.51 1910.58
 3918.74 1910.59 3922.85 1910.69 3926.43 1910.74  3929.1 1910.77 3929.71 1910.79
 3931.02  1910.8 3931.34 1910.81 3933.12 1910.83  3934.6 1910.84 3938.62 1910.84
 3940.92 1910.83 3941.77 1910.83    3944 1910.82 3945.48  1910.8 3947.45 1910.76
 3951.95 1910.72 3955.43 1910.65 3958.12 1910.62 3961.35 1910.58 3962.08 1910.56
 3966.86 1910.51 3970.56 1910.48 3971.49 1910.48 3971.63 1910.47 3994.34 1910.18
  3999.7 1910.11 4013.38 1910.09 4014.92 1910.09 4016.68  1910.1 4019.18 1910.13
 4032.06 1910.14 4034.27 1910.17 4037.33  1910.2 4040.06 1910.24 4053.73 1910.28
    4061 1910.24 4069.31 1910.18 4070.92 1910.26 4071.86 1910.24 4073.33 1910.31
 4073.92  1910.3 4074.72 1910.31 4076.59 1910.39 4077.01  1910.4 4083.26 1910.48
 4084.09 1910.52 4084.93 1910.52 4085.77 1910.51  4087.1 1910.48 4087.56  1910.5
 4089.48 1910.55 4094.49 1910.31 4095.14 1910.29 4102.18    1910 4115.38    1910
 4120.86 1910.17 4122.38 1910.13 4125.64  1910.2  4127.1 1910.24 4128.94  1910.2
 4152.42 1910.51 4187.89 1910.99 4188.54    1911 4214.68    1911 4228.43 1910.85
 4229.49 1910.86 4239.91    1911 4256.52    1911 4272.74 1911.94 4276.96 1912.27
 4285.74    1913    4287 1913.12 4297.37 1914.06 4301.52 1914.43 4303.25 1914.49
 4308.72 1914.62 4308.94 1914.63  4312.1 1914.72 4312.35 1914.74 4317.32 1914.98
  4318.5    1915 4319.68 1915.13 4319.81 1915.13 4322.09 1915.38 4322.45 1915.37
 4325.17 1915.19 4326.32 1915.21 4328.74 1915.15 4334.32 1915.04 4336.79 1914.98
 4340.01 1914.72 4347.86    1914 4350.55    1914 4352.71 1913.99  4369.4 1913.43
 4386.99    1913 4392.28    1913 4433.85 1913.24 4461.82 1913.39 4469.73  1913.2
 4477.35    1913 4653.16    1913 4658.66 1912.99 4660.66 1912.99 4667.34 1912.98
 4676.75 1912.97 4682.05 1912.97 4686.44 1912.98    4700    1913 4701.17 1913.33
 4702.23 1913.72 4703.04    1914 4704.59 1914.47  4706.2    1915 4707.06 1915.27
 4708.47  1915.7 4709.39    1916 4712.44 1916.96 4712.58    1917 4715.96 1918.03
 4718.07 1918.62 4719.01    1919 4721.07 1919.89 4721.29    1920 4721.72 1920.31
 4722.13 1920.49 4722.86  1920.9 4723.05 1921.08 4724.52 1922.54 4725.01    1923
  4725.7 1923.69 4725.99    1924 4726.39 1924.56 4726.77 1924.82 4726.97    1925
 4727.22 1925.27 4727.59 1925.58 4728.21    1926 4732.32 1926.82 4733.26    1927
 4738.58    1928  4738.9 1928.07 4741.94 1928.33 4744.19 1928.33 4744.42 1928.29
 4745.45    1928 4748.69 1927.21  4749.6    1927 4750.43 1926.82 4754.13    1926
 4775.23    1926 4782.36 1926.63 4786.94    1927 4798.16 1927.95 4798.78    1928
 4801.51 1928.15 4802.01 1928.17 4804.29 1928.31  4815.7    1929 4836.22 1929.89
 4837.09 1929.92 4838.82    1930 4839.11 1930.03  4847.1    1931  4857.8 1931.58
 4867.01 1931.94 4868.32    1932 4890.12 1932.55 4907.87    1933 4914.68  1933.2
  4940.5    1934 4941.32 1934.02 4963.54 1934.52 4968.03 1934.61 4969.39 1934.64
 4970.66 1934.66 4974.49 1934.75 4977.55  1934.8 4978.44  1934.8 4990.01 1934.87
 5003.95 1934.96 5004.35 1934.96 5006.34    1935  5027.6    1935 5052.51 1934.58
 5053.25 1934.57 5083.14 1934.23 5102.05    1934 5102.94    1934 5103.06 1933.99

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .045       0     .04 5103.06    .045

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            0 5103.06             68.5    68.5    68.5             .1       .3

CROSS SECTION OUTPUT  Profile #PF 1

  E.G. Elev (ft)           1913.01    Element                  Left OB    Channel   Right OB
  Vel Head (ft)               0.12    Wt. n-Val.                           0.040
  W.S. Elev (ft)           1912.88    Reach Len. (ft)           68.50      68.50      68.50
  Crit W.S. (ft)                      Flow Area (sq ft)                   7908.18
  E.G. Slope (ft/ft)       0.001830   Area (sq ft)                        7908.18
  Q Total (cfs)           22400.00    Flow (cfs)                         22400.00
  Top Width (ft)           3321.24    Top Width (ft)                      3321.24
  Vel Total (ft/s)            2.83    Avg. Vel. (ft/s)                       2.83
  Max Chl Dpth (ft)           3.88    Hydr. Depth (ft)                       2.38
  Conv. Total (cfs)       523565.8    Conv. (cfs)                        523565.8
  Length Wtd. (ft)           68.50    Wetted Per. (ft)                    3323.82
  Min Ch El (ft)           1909.00    Shear (lb/sq ft)                       0.27
  Alpha                       1.00    Stream Power (lb/ft s)   5103.06       0.00       0.00
  Frctn Loss (ft)             0.12    Cum Volume (acre-ft)                 699.12
  C & E Loss (ft)             0.00    Cum SA (acres)                       306.36


Warning: Divided flow computed for this cross-section.

CROSS SECTION


RIVER: MOJAVE
REACH: MOJAVE             RS: -15792.7

INPUT
Description:
```

Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1917 | 36.16 | 1916.98 | 55.33 | 1916.97 | 79.64 | 1916.95 | 90.79 | 1916.94 |
| 722.91 | 1916.52 | 733.07 | 1916.52 | 735.4 | 1916.51 | 741.7 | 1916.51 | 748 | 1916.5 |
| 751.02 | 1916.5 | 757.84 | 1916.49 | 828.18 | 1916.44 | 831.14 | 1916.43 | 839.24 | 1916.43 |
| 851.6 | 1916.42 | 852.66 | 1916.41 | 855.15 | 1916.41 | 900.34 | 1916.37 | 902.82 | 1916.37 |
| 908.9 | 1913.14 | 914.09 | 1912.46 | 916.81 | 1911.52 | 923.36 | 1910.83 | 924.38 | 1910.55 |
| 924.69 | 1910.52 | 924.86 | 1910.47 | 925 | 1910.48 | 930.32 | 1910.62 | 930.83 | 1910.51 |
| 936.05 | 1910.64 | 936.49 | 1910.56 | 938.67 | 1910.19 | 940.55 | 1909.13 | 943.41 | 1909.14 |
| 945.21 | 1909.13 | 946.31 | 1909.14 | 955.82 | 1909.17 | 970.74 | 1909.22 | 972.04 | 1909.22 |
| 976.2 | 1909.25 | 981.72 | 1909.3 | 983.64 | 1909.31 | 984.22 | 1909.31 | 985.87 | 1909.32 |
| 986.45 | 1909.33 | 1004.8 | 1909.45 | 1008.83 | 1909.48 | 1016.53 | 1909.53 | 1046.81 | 1909.76 |
| 1075.37 | 1909.99 | 1077.88 | 1909.99 | 1078.76 | 1910 | 1095.42 | 1910.22 | 1123.17 | 1910.61 |
| 1125.86 | 1910.65 | 1150.75 | 1911 | 1256.6 | 1911 | 1267.58 | 1910.82 | 1276.21 | 1910.69 |
| 1276.3 | 1910.69 | 1282.91 | 1910.62 | 1288.26 | 1910.56 | 1295.44 | 1910.51 | 1295.88 | 1910.51 |
| 1301.42 | 1910.47 | 1302.6 | 1910.47 | 1305.04 | 1910.49 | 1356.31 | 1910.6 | 1434.56 | 1910.76 |
| 1435.73 | 1910.76 | 1441.09 | 1910.79 | 1442.17 | 1910.79 | 1445.16 | 1910.81 | 1446.66 | 1910.81 |
| 1447.7 | 1910.82 | 1479.34 | 1911 | 1509.94 | 1911 | 1510.97 | 1910.98 | 1561.04 | 1910.37 |
| 1561.17 | 1910.37 | 1567.14 | 1910.14 | 1569.43 | 1910.03 | 1569.93 | 1910.03 | 1571.95 | 1910 |
| 1599.66 | 1910 | 1631.49 | 1909.62 | 1651.09 | 1909.37 | 1679 | 1909.01 | 1679.4 | 1909 |
| 1728.53 | 1909 | 1734.71 | 1909.77 | 1737.05 | 1910 | 1739.53 | 1910.56 | 1741.5 | 1911 |
| 1742.84 | 1911.37 | 1743.13 | 1911.43 | 1743.61 | 1911.47 | 1744.04 | 1911.49 | 1744.97 | 1911.55 |
| 1745.62 | 1911.53 | 1746.71 | 1911.63 | 1748.45 | 1911.85 | 1749.53 | 1912 | 1750.16 | 1912.07 |
| 1752.51 | 1912.3 | 1753.32 | 1912.33 | 1754.05 | 1912.35 | 1755.13 | 1912.32 | 1762.14 | 1912 |
| 1762.86 | 1911.97 | 1764.25 | 1911.88 | 1766.61 | 1911.69 | 1774.96 | 1911 | 1776.08 | 1910.95 |
| 1776.74 | 1910.95 | 1778.35 | 1910.89 | 1786.01 | 1910.81 | 1792.65 | 1910.77 | 1793.47 | 1910.8 |
| 1797.48 | 1910.87 | 1798.72 | 1910.89 | 1798.91 | 1910.9 | 1800.09 | 1910.91 | 1801.09 | 1910.91 |
| 1801.17 | 1910.92 | 1801.79 | 1910.92 | 1802.44 | 1910.91 | 1804.17 | 1910.98 | 1804.54 | 1911 |
| 1809.06 | 1911 | 1810.08 | 1910.99 | 1822.37 | 1910.99 | 1823.58 | 1911 | 1969.4 | 1911 |
| 1969.77 | 1911.12 | 1970.05 | 1911.23 | 1973.07 | 1912 | 1976.88 | 1913 | 1977.69 | 1913.22 |
| 1978.88 | 1913.52 | 1979.03 | 1913.55 | 1980.51 | 1913.79 | 1980.66 | 1913.79 | 1981.17 | 1913.86 |
| 1981.71 | 1913.9 | 1982.57 | 1913.89 | 1983.15 | 1913.82 | 1983.84 | 1913.69 | 1984.11 | 1913.67 |
| 1984.54 | 1913.61 | 1985.07 | 1913.51 | 1986.69 | 1913.09 | 1987.08 | 1913 | 1987.37 | 1912.95 |
| 1989.44 | 1912.52 | 1991.92 | 1912.03 | 1992.03 | 1912 | 1993.09 | 1911.83 | 1994.82 | 1911.6 |
| 1997.01 | 1911 | 2003.39 | 1911 | 2004.24 | 1910.94 | 2004.83 | 1910.92 | 2008.98 | 1910.69 |
| 2010.07 | 1910.64 | 2011.11 | 1910.57 | 2020.84 | 1910.01 | 2021.23 | 1910 | 2023.98 | 1910 |
| 2024.81 | 1909.98 | 2026.43 | 1909.95 | 2048.57 | 1909.55 | 2058.05 | 1909.37 | 2059.03 | 1909.35 |
| 2064.03 | 1909.28 | 2071.03 | 1909.11 | 2074.11 | 1909 | 2128.91 | 1909 | 2134.73 | 1909.1 |
| 2141.81 | 1909.21 | 2176.86 | 1909.74 | 2187.63 | 1909.9 | 2189.18 | 1909.93 | 2189.47 | 1909.93 |
| 2194.06 | 1910 | 2280.18 | 1910 | 2281.19 | 1909.99 | 2302.39 | 1909.85 | 2305.13 | 1909.85 |
| 2314.83 | 1909.76 | 2358.88 | 1909.99 | 2359.31 | 1910 | 2373.6 | 1910 | 2396.9 | 1909.61 |
| 2397.48 | 1909.63 | 2399.08 | 1909.65 | 2411.03 | 1909.82 | 2411.16 | 1909.82 | 2421.74 | 1910 |
| 2437.04 | 1910 | 2446.24 | 1909.85 | 2446.36 | 1909.85 | 2460.72 | 1909.99 | 2498.03 | 1909.99 |
| 2507.59 | 1910 | 2508.62 | 1910 | 2510.58 | 1910.08 | 2513.95 | 1910.16 | 2516.65 | 1910.24 |
| 2541.05 | 1910.97 | 2542.91 | 1910.98 | 2544.61 | 1910.98 | 2544.78 | 1910.99 | 2549.61 | 1910.99 |
| 2549.75 | 1910.98 | 2551.58 | 1910.93 | 2560.05 | 1910.71 | 2560.71 | 1910.7 | 2561.37 | 1910.68 |
| 2564.49 | 1910.61 | 2568.67 | 1910.49 | 2569.18 | 1910.49 | 2571.22 | 1910.44 | 2572.31 | 1910.43 |
| 2574.05 | 1910.43 | 2579.12 | 1910.31 | 2587.24 | 1910.29 | 2596.36 | 1910.23 | 2609.09 | 1910.06 |
| 2609.41 | 1910.06 | 2612.21 | 1910.03 | 2615.54 | 1910 | 2617.28 | 1909.99 | 2631.14 | 1909.89 |
| 2631.23 | 1909.89 | 2642.32 | 1909.82 | 2642.55 | 1909.82 | 2645.22 | 1909.79 | 2652.43 | 1909.83 |
| 2658.41 | 1909.83 | 2661.99 | 1909.8 | 2664.21 | 1909.79 | 2665.2 | 1909.78 | 2678.16 | 1909.68 |
| 2688.25 | 1909.6 | 2689.15 | 1909.6 | 2710.18 | 1909.5 | 2725.26 | 1909.43 | 2726.85 | 1909.43 |
| 2773.56 | 1909.71 | 2819.86 | 1910 | 2876.48 | 1910 | 2898.29 | 1910.01 | 2953.27 | 1910.01 |
| 2958.22 | 1910 | 3030.28 | 1910 | 3039.72 | 1910.14 | 3040.03 | 1910.14 | 3041.06 | 1910.16 |
| 3041.96 | 1910.17 | 3049.71 | 1910.23 | 3112 | 1910.98 | 3113.43 | 1911 | 3259.75 | 1911 |
| 3270.87 | 1910.99 | 3275.86 | 1910.99 | 3279.93 | 1910.98 | 3317.25 | 1910.95 | 3327.6 | 1910.96 |
| 3337.7 | 1910.96 | 3376.43 | 1911 | 3671.64 | 1911 | 3676.3 | 1910.83 | 3677.83 | 1910.76 |
| 3690.11 | 1910.26 | 3695.36 | 1910.05 | 3696.37 | 1910 | 3699.49 | 1909.84 | 3700.69 | 1909.79 |
| 3711.51 | 1909.36 | 3718.57 | 1909.06 | 3719.01 | 1909.04 | 3720.58 | 1909 | 3748.66 | 1909 |
| 3750.69 | 1909.01 | 3755.45 | 1909.01 | 3755.97 | 1909.02 | 3761.52 | 1909.02 | 3763.01 | 1909.03 |
| 3766.53 | 1909.03 | 3767.16 | 1909.02 | 3772.37 | 1909.01 | 3780.78 | 1909.19 | 3781.8 | 1909.19 |
| 3784.01 | 1909.18 | 3786.26 | 1909.18 | 3787.39 | 1909.19 | 3788.58 | 1909.21 | 3789.04 | 1909.21 |
| 3798.54 | 1909.35 | 3798.63 | 1909.34 | 3801.36 | 1909.39 | 3804.52 | 1909.43 | 3817.41 | 1909.43 |
| 3830.72 | 1909.44 | 3832.09 | 1909.45 | 3832.81 | 1909.46 | 3839.19 | 1909.5 | 3846.86 | 1909.55 |
| 3861.75 | 1909.66 | 3868.8 | 1909.72 | 3870.97 | 1909.74 | 3881.53 | 1909.82 | 3894.98 | 1909.94 |
| 3899.33 | 1909.98 | 3900.97 | 1909.98 | 3901.8 | 1909.99 | 3902.02 | 1910 | 3906.95 | 1910 |
| 3908.93 | 1910.02 | 3917.42 | 1910 | 3920.75 | 1910 | 3932.88 | 1909.98 | 3934.07 | 1909.98 |
| 3954.47 | 1909.95 | 3975 | 1909.98 | 3975.25 | 1909.99 | 3976.33 | 1909.99 | 3994.26 | 1909.94 |
| 4010.39 | 1909.89 | 4028.15 | 1910 | 4097.68 | 1910 | 4115.8 | 1910.2 | 4116.25 | 1910.21 |
| 4126.9 | 1910.32 | 4164.78 | 1910.74 | 4167.91 | 1910.77 | 4169.97 | 1910.8 | 4176.64 | 1910.87 |
| 4179.84 | 1910.9 | 4180.43 | 1910.91 | 4185.09 | 1910.96 | 4185.37 | 1910.96 | 4188.22 | 1911 |
| 4189.75 | 1911 | 4190.45 | 1911.01 | 4191.08 | 1911.01 | 4194.7 | 1911.17 | 4206.56 | 1911.53 |
| 4209.74 | 1911.66 | 4211.06 | 1911.71 | 4212.58 | 1911.78 | 4213.34 | 1911.81 | 4213.97 | 1911.82 |
| 4219.15 | 1911.99 | 4219.38 | 1912 | 4219.52 | 1912.03 | 4225.81 | 1913 | 4230.73 | 1913.35 |
| 4232.02 | 1913.42 | 4232.67 | 1913.46 | 4234.15 | 1913.52 | 4234.6 | 1913.55 | 4235.12 | 1913.57 |
| 4235.85 | 1913.58 | 4242.6 | 1913.99 | 4247.24 | 1913.99 | 4252.47 | 1914 | 4254.64 | 1914 |
| 4264.08 | 1914.49 | 4266.22 | 1914.71 | 4268.24 | 1914.93 | 4268.85 | 1915 | 4270.98 | 1915.73 |
| 4271.84 | 1916 | 4272.53 | 1916.18 | 4273.4 | 1916.39 | 4275.97 | 1917 | 4276.74 | 1917.16 |
| 4278.72 | 1917.52 | 4279.53 | 1917.66 | 4279.95 | 1917.71 | 4280.89 | 1917.84 | 4282.31 | 1918 |
| 4283.54 | 1918.12 | 4287.4 | 1918.45 | 4288.71 | 1918.55 | 4289.26 | 1918.6 | 4289.91 | 1918.7 |
| 4290.77 | 1918.86 | 4291.42 | 1919 | 4291.71 | 1919.09 | 4294.33 | 1920 | 4300.02 | 1920 |
| 4301.38 | 1919.44 | 4302.49 | 1919 | 4304.74 | 1918.03 | 4306.8 | 1917.31 | 4307.38 | 1917.12 |
| 4307.97 | 1916.97 | 4311.62 | 1916 | 4312.57 | 1915.68 | 4315.01 | 1915 | 4322.15 | 1914.6 |
| 4334.14 | 1914 | 4341.22 | 1913.64 | 4341.75 | 1913.6 | 4342.62 | 1913.55 | 4343.91 | 1913.49 |
| 4345.73 | 1913.39 | 4350.5 | 1913.14 | 4352.89 | 1913.03 | 4353.38 | 1913 | 4362.68 | 1913 |
| 4390.09 | 1913.01 | 4403.23 | 1913.01 | 4432.92 | 1913 | 4441.82 | 1913 | 4444.5 | 1913.02 |
| 4445.1 | 1913 | 4627.81 | 1913 | 4630.21 | 1912.99 | 4633.55 | 1912.99 | 4635.94 | 1912.98 |
| 4639.06 | 1912.98 | 4648.89 | 1912.96 | 4653.45 | 1912.95 | 4660.28 | 1912.96 | 4677.35 | 1913 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4680.61 | 1913.78 | 4681.5 | 1914 | 4681.9 | 1914.13 | 4684.7 | 1915 | 4687.27 | 1915.75 |
| 4687.89 | 1916 | 4690.32 | 1917 | 4691.84 | 1917.61 | 4692.75 | 1918 | 4693.94 | 1918.48 |
| 4695.2 | 1919 | 4695.66 | 1919.23 | 4696.89 | 1920 | 4697.91 | 1920.77 | 4698.52 | 1921.21 |
| 4700.34 | 1922.55 | 4700.98 | 1923 | 4703.57 | 1923.79 | 4704.65 | 1924 | 4711.58 | 1924.96 |
| 4711.78 | 1925 | 4712.14 | 1925.01 | 4712.61 | 1925.07 | 4715.86 | 1925.46 | 4717.99 | 1925.67 |
| 4720.89 | 1926 | 4721.42 | 1926.02 | 4722.57 | 1926.02 | 4723.58 | 1926 | 4751.76 | 1926 |
| 4755.89 | 1926.29 | 4763.61 | 1927 | 4769.35 | 1927.35 | 4777.66 | 1928 | 4782.39 | 1928.31 |
| 4793.26 | 1929 | 4813.95 | 1929.87 | 4817.07 | 1930 | 4826.63 | 1931 | 4846.6 | 1931.88 |
| 4848.79 | 1932 | 4849.1 | 1932 | 4872.08 | 1932.72 | 4880.72 | 1933 | 4881.61 | 1933.01 |
| 4882.82 | 1933.01 | 4900.35 | 1933.49 | 4901.9 | 1933.53 | 4903.25 | 1933.57 | 4912.11 | 1933.84 |
| 4917.74 | 1934 | 4924.68 | 1934.19 | 4926.92 | 1934.24 | 4940.12 | 1934.6 | 4958.92 | 1935 |
| 4997.5 | 1935 | 5022.37 | 1934.71 | 5049.87 | 1934.39 | 5081.49 | 1934 | 5086.03 | 1933.73 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5086.03 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5086.03 | 89.96 | 89.96 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | Left OB | Channel | Right OB |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1912.89 | Element | | | |
| Vel Head (ft) | 0.12 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1912.77 | Reach Len. (ft) | 89.96 | 89.96 | 89.96 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8174.86 | |
| E.G. Slope (ft/ft) | 0.001625 | Area (sq ft) | | 8174.86 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 3300.36 | Top Width (ft) | | 3300.36 | |
| Vel Total (ft/s) | 2.74 | Avg. Vel. (ft/s) | | 2.74 | |
| Max Chl Dpth (ft) | 3.77 | Hydr. Depth (ft) | | 2.48 | |
| Conv. Total (cfs) | 555759.8 | Conv. (cfs) | | 555759.8 | |
| Length Wtd. (ft) | 89.96 | Wetted Per. (ft) | | 3301.97 | |
| Min Ch El (ft) | 1909.00 | Shear (lb/sq ft) | | 0.25 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5086.03 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.14 | Cum Volume (acre-ft) | | 686.48 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 301.16 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -15882.6

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1916.86 | 50.72 | 1916.82 | 165.67 | 1916.75 | 167.96 | 1916.75 | 168.88 | 1916.74 |
| 182.08 | 1916.74 | 183.86 | 1916.73 | 197.68 | 1916.73 | 216.61 | 1916.71 | 218.2 | 1916.71 |
| 233.2 | 1916.7 | 238.66 | 1916.7 | 246.74 | 1916.69 | 263.45 | 1916.68 | 281.46 | 1916.67 |
| 312.07 | 1916.65 | 367.38 | 1916.61 | 396.8 | 1916.59 | 434.2 | 1916.57 | 451.36 | 1916.55 |
| 801.18 | 1916.32 | 802.36 | 1916.32 | 812 | 1916.31 | 814.49 | 1916.31 | 817.17 | 1916.3 |
| 821.19 | 1916.3 | 827.91 | 1916.29 | 838.39 | 1916.29 | 897.57 | 1916.23 | 915.11 | 1912.41 |
| 915.23 | 1912.39 | 930.65 | 1909.46 | 930.98 | 1909.39 | 931.18 | 1909.36 | 932.88 | 1909 |
| 974.24 | 1909 | 1038.42 | 1909.79 | 1057.71 | 1910 | 1060.39 | 1910.01 | 1062.99 | 1910.01 |
| 1066.3 | 1910.03 | 1070.75 | 1910.03 | 1078.82 | 1910.06 | 1080.6 | 1910.06 | 1095.29 | 1910.2 |
| 1156.57 | 1910.75 | 1161.62 | 1910.78 | 1182.81 | 1910.98 | 1182.95 | 1910.99 | 1184.49 | 1911 |
| 1274.15 | 1911 | 1289.4 | 1910.29 | 1295.78 | 1910 | 1309.58 | 1910 | 1319.82 | 1909.99 |
| 1330.89 | 1910 | 1343.28 | 1910 | 1357.85 | 1910.09 | 1390.35 | 1910.29 | 1441.55 | 1910.57 |
| 1463.34 | 1910.7 | 1469.57 | 1910.73 | 1469.96 | 1910.73 | 1483.14 | 1910.79 | 1487.26 | 1910.81 |
| 1490.68 | 1910.82 | 1519.54 | 1911 | 1558.24 | 1911 | 1564.52 | 1910.99 | 1573.97 | 1910.99 |
| 1587.66 | 1910.98 | 1602.85 | 1910.98 | 1629.48 | 1911 | 1669.37 | 1911 | 1669.53 | 1910.99 |
| 1669.85 | 1910.99 | 1673.71 | 1910.81 | 1680.5 | 1910.51 | 1681.26 | 1910.48 | 1684.78 | 1910.26 |
| 1685.16 | 1910.24 | 1689.05 | 1910 | 1691.34 | 1909.84 | 1704.48 | 1909 | 1767.91 | 1909 |
| 1768.4 | 1909.15 | 1771.14 | 1910 | 1773.28 | 1910.68 | 1774.41 | 1911 | 1777.46 | 1911.96 |
| 1777.59 | 1912 | 1779.92 | 1912.67 | 1780.54 | 1912.84 | 1781.76 | 1913.12 | 1781.88 | 1913.14 |
| 1782.37 | 1913.24 | 1782.78 | 1913.31 | 1783.86 | 1913.45 | 1785.74 | 1913.68 | 1786.36 | 1913.73 |
| 1787.07 | 1913.78 | 1787.55 | 1913.81 | 1788.08 | 1913.82 | 1788.44 | 1913.81 | 1788.65 | 1913.79 |
| 1788.87 | 1913.8 | 1789.05 | 1913.78 | 1789.24 | 1913.78 | 1789.42 | 1913.75 | 1789.87 | 1913.71 |
| 1790.08 | 1913.68 | 1790.87 | 1913.54 | 1792.31 | 1913.27 | 1792.62 | 1913.21 | 1793.61 | 1913 |
| 1794.59 | 1912.8 | 1794.96 | 1912.73 | 1797.11 | 1912.27 | 1798.11 | 1912 | 1799.86 | 1911.46 |
| 1801.05 | 1911.36 | 1801.87 | 1911.32 | 1808.89 | 1911.53 | 1815.35 | 1911.54 | 1818.24 | 1911.57 |
| 1819.15 | 1911.58 | 1820.62 | 1911.6 | 1821.4 | 1911.6 | 1822.21 | 1911.59 | 1823.3 | 1911.59 |
| 1823.82 | 1911.58 | 1832.24 | 1911.13 | 1832.55 | 1911.12 | 1832.92 | 1911.1 | 1834.61 | 1911 |
| 1877.69 | 1911 | 1877.84 | 1910.99 | 1882.01 | 1910.93 | 1909.48 | 1910.53 | 1910 | 1910.53 |
| 1910.09 | 1910.52 | 1911.74 | 1910.52 | 1912.27 | 1910.51 | 1913.24 | 1910.51 | 1930.26 | 1910.43 |
| 1943.84 | 1910.4 | 1959.69 | 1910.61 | 1988.27 | 1911 | 2001.25 | 1911 | 2002.14 | 1910.97 |
| 2012.35 | 1910.7 | 2019.16 | 1910.51 | 2037.9 | 1910 | 2038.14 | 1910 | 2038.49 | 1909.98 |
| 2039.09 | 1909.96 | 2043.4 | 1909.86 | 2081.22 | 1909.01 | 2081.67 | 1909 | 2143.97 | 1909 |
| 2146.14 | 1908.99 | 2146.75 | 1908.99 | 2165.62 | 1908.97 | 2169.18 | 1908.97 | 2173.04 | 1908.98 |
| 2179.41 | 1909 | 2194.79 | 1909.57 | 2206.96 | 1910 | 2262.51 | 1910 | 2277.1 | 1909.7 |
| 2308.78 | 1909.06 | 2310.61 | 1909 | 2510.64 | 1909 | 2513.23 | 1909.05 | 2514.4 | 1909.11 |
| 2519.3 | 1909.3 | 2529.58 | 1909.14 | 2530.18 | 1909.14 | 2537.95 | 1909 | 2564.63 | 1909 |
| 2574.43 | 1909.18 | 2577.3 | 1909.18 | 2580.08 | 1909.15 | 2581.93 | 1909.15 | 2583.41 | 1909.17 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2585.76 | 1909.15 | 2585.99 | 1909.15 | 2586.22 | 1909.16 | 2586.93 | 1909.17 | 2594.4 | 1909.27 |
| 2594.67 | 1909.28 | 2595.18 | 1909.28 | 2598.84 | 1909.34 | 2599.13 | 1909.34 | 2601.2 | 1909.39 |
| 2602.37 | 1909.4 | 2603.71 | 1909.39 | 2604.4 | 1909.39 | 2610.28 | 1909.42 | 2618.61 | 1909.52 |
| 2620.96 | 1909.53 | 2627.35 | 1909.5 | 2634.6 | 1909.47 | 2635.72 | 1909.45 | 2642.16 | 1909.44 |
| 2643.21 | 1909.42 | 2643.78 | 1909.42 | 2644.35 | 1909.41 | 2645.74 | 1909.41 | 2646.28 | 1909.4 |
| 2646.8 | 1909.4 | 2647.53 | 1909.39 | 2648 | 1909.4 | 2648.95 | 1909.4 | 2653.72 | 1909.34 |
| 2654.86 | 1909.36 | 2655.87 | 1909.38 | 2656.29 | 1909.39 | 2659.44 | 1909.36 | 2662.23 | 1909.34 |
| 2662.79 | 1909.35 | 2663 | 1909.35 | 2663.4 | 1909.36 | 2683.44 | 1909.32 | 2712.25 | 1909.01 |
| 2714.64 | 1909 | 2815.49 | 1909 | 2824.21 | 1909.01 | 2825.39 | 1909.01 | 2833.61 | 1909 |
| 2882.02 | 1909 | 2888.87 | 1909.21 | 2894.56 | 1909.36 | 2895.25 | 1909.38 | 2902.11 | 1909.55 |
| 2902.32 | 1909.56 | 2902.52 | 1909.56 | 2902.9 | 1909.57 | 2920.17 | 1910 | 2962.1 | 1910.4 |
| 2964.14 | 1910.42 | 2994.69 | 1910.67 | 3007.6 | 1910.76 | 3008.69 | 1910.78 | 3010.86 | 1910.79 |
| 3019.6 | 1911 | 3256.9 | 1911 | 3354.07 | 1910.69 | 3360.62 | 1910.67 | 3420.47 | 1910.6 |
| 3421.92 | 1910.6 | 3428 | 1910.64 | 3434.88 | 1910.68 | 3435.46 | 1910.69 | 3439.16 | 1910.66 |
| 3441.14 | 1910.65 | 3443.31 | 1910.63 | 3447.77 | 1910.66 | 3448 | 1910.66 | 3450.37 | 1910.68 |
| 3454.72 | 1910.68 | 3456.84 | 1910.67 | 3465.83 | 1910.66 | 3466.32 | 1910.66 | 3469.79 | 1910.65 |
| 3470.05 | 1910.65 | 3504.29 | 1910.88 | 3521.25 | 1911 | 3678.29 | 1911 | 3698.63 | 1910.28 |
| 3702.99 | 1910.12 | 3706.53 | 1910 | 3736.57 | 1909.57 | 3757.31 | 1909.27 | 3776.69 | 1909 |
| 3784.12 | 1909 | 3810.66 | 1908.99 | 3831.14 | 1909 | 3912.51 | 1909 | 3916.8 | 1909.05 |
| 3920.65 | 1909.07 | 3936.94 | 1909.15 | 3938.94 | 1909.15 | 3939.89 | 1909.16 | 3940.95 | 1909.16 |
| 3945.45 | 1909.19 | 3951.97 | 1909.24 | 3956.46 | 1909.23 | 3960.57 | 1909.22 | 3975.15 | 1909.32 |
| 4011.39 | 1909.56 | 4012.24 | 1909.56 | 4012.5 | 1909.57 | 4013.4 | 1909.57 | 4015.12 | 1909.59 |
| 4015.41 | 1909.59 | 4023.58 | 1909.65 | 4033.62 | 1909.72 | 4040.25 | 1909.78 | 4044.72 | 1909.81 |
| 4047.17 | 1909.83 | 4047.64 | 1909.83 | 4065.96 | 1910 | 4084.02 | 1910 | 4089.01 | 1910.02 |
| 4090.02 | 1910.02 | 4090.33 | 1910.01 | 4090.92 | 1910.02 | 4091.11 | 1910.02 | 4093.69 | 1910.01 |
| 4098.02 | 1910.01 | 4102.5 | 1910.07 | 4103.96 | 1910.08 | 4105.43 | 1910.1 | 4106.98 | 1910.11 |
| 4107.17 | 1910.12 | 4109.75 | 1910.18 | 4117.53 | 1910.35 | 4128.67 | 1910.55 | 4138.81 | 1910.84 |
| 4144.17 | 1911 | 4147.32 | 1911.29 | 4150.91 | 1911.64 | 4155.27 | 1912 | 4164.12 | 1912.71 |
| 4168.04 | 1913 | 4168.35 | 1913.01 | 4169.57 | 1913.04 | 4169.64 | 1913.05 | 4173.93 | 1913.15 |
| 4179.12 | 1913.24 | 4183.37 | 1913.31 | 4183.82 | 1913.31 | 4184.53 | 1913.32 | 4192.09 | 1913.56 |
| 4205.08 | 1913.99 | 4205.92 | 1913.99 | 4206.11 | 1914 | 4216.7 | 1914 | 4221.56 | 1914.41 |
| 4222.09 | 1914.46 | 4225.27 | 1914.69 | 4228.34 | 1914.98 | 4229.09 | 1915 | 4229.26 | 1915 |
| 4232.98 | 1916 | 4233.07 | 1916.03 | 4235.84 | 1917 | 4236.95 | 1917.4 | 4239.83 | 1918.48 |
| 4241.22 | 1919 | 4241.44 | 1919.08 | 4242.2 | 1919.28 | 4242.7 | 1919.39 | 4242.84 | 1919.45 |
| 4243.02 | 1919.48 | 4244.83 | 1919.64 | 4245.78 | 1919.71 | 4246.13 | 1919.76 | 4246.51 | 1919.86 |
| 4246.92 | 1920 | 4248.12 | 1920.45 | 4249.66 | 1921 | 4253.4 | 1921.63 | 4253.86 | 1921.7 |
| 4255.93 | 1922 | 4260.31 | 1922.52 | 4262.94 | 1922.71 | 4266.72 | 1922.91 | 4268.05 | 1922.97 |
| 4268.43 | 1922.97 | 4269.32 | 1923 | 4270.5 | 1923 | 4271.22 | 1922.98 | 4272.17 | 1922.92 |
| 4272.28 | 1922.92 | 4273.19 | 1922.84 | 4273.94 | 1922.75 | 4274.54 | 1922.67 | 4278.61 | 1922 |
| 4279.89 | 1921.68 | 4282.58 | 1921 | 4282.72 | 1920.97 | 4283 | 1920.89 | 4284.12 | 1920.66 |
| 4285.38 | 1920.39 | 4286.24 | 1920.17 | 4286.83 | 1920 | 4287.09 | 1919.92 | 4287.34 | 1919.85 |
| 4288.17 | 1919.58 | 4289.04 | 1919.29 | 4289.9 | 1919 | 4291.08 | 1918.61 | 4292.9 | 1918 |
| 4295.89 | 1917 | 4295.9 | 1917 | 4298.41 | 1916.19 | 4299.01 | 1916 | 4300.48 | 1915.53 |
| 4301.38 | 1915.24 | 4302 | 1915.03 | 4302.08 | 1915 | 4304.68 | 1914 | 4305.2 | 1913.78 |
| 4305.32 | 1913.75 | 4305.5 | 1913.73 | 4311.85 | 1913 | 4413.11 | 1913 | 4413.34 | 1912.99 |
| 4419.96 | 1912.99 | 4421.47 | 1912.98 | 4436.11 | 1912.96 | 4437.1 | 1912.96 | 4453.51 | 1912.99 |
| 4457.33 | 1912.99 | 4465.09 | 1913 | 4572.58 | 1913 | 4580.55 | 1912.9 | 4592.48 | 1912.76 |
| 4592.51 | 1912.76 | 4610.67 | 1912.63 | 4624.17 | 1912.57 | 4625.54 | 1912.57 | 4626.01 | 1912.56 |
| 4637.87 | 1912.73 | 4644.84 | 1912.92 | 4656.48 | 1912.98 | 4658.58 | 1912.99 | 4661.39 | 1913 |
| 4661.84 | 1913.32 | 4662.78 | 1914 | 4664.34 | 1914.51 | 4666.07 | 1915 | 4667.04 | 1915.43 |
| 4668.33 | 1916 | 4671.28 | 1917.3 | 4672.86 | 1918 | 4674.56 | 1918.67 | 4675.39 | 1919 |
| 4676 | 1919.24 | 4677.78 | 1920 | 4679.29 | 1920.65 | 4680.12 | 1921 | 4682.28 | 1921.99 |
| 4682.3 | 1922 | 4683.8 | 1923 | 4684.51 | 1923.51 | 4685.25 | 1924 | 4686.58 | 1925 |
| 4686.6 | 1925 | 4689.81 | 1925.12 | 4702.58 | 1925.51 | 4712.46 | 1925.99 | 4712.84 | 1925.99 |
| 4715.86 | 1926 | 4731.62 | 1926.55 | 4736.43 | 1926.75 | 4742.31 | 1927 | 4742.38 | 1927 |
| 4745.63 | 1927.27 | 4746.92 | 1927.38 | 4747.86 | 1927.47 | 4755.3 | 1928 | 4762.35 | 1928.44 |
| 4770.1 | 1929 | 4782.93 | 1929.4 | 4801.78 | 1930 | 4805.23 | 1930.16 | 4806.86 | 1930.24 |
| 4811 | 1930.45 | 4813.98 | 1930.6 | 4815.87 | 1930.69 | 4821.78 | 1931 | 4830.76 | 1931.43 |
| 4842.51 | 1932 | 4848.6 | 1932.27 | 4865.51 | 1933 | 4878.06 | 1933.44 | 4896.7 | 1934 |
| 4897.83 | 1934.03 | 4898.49 | 1934.04 | 4899.98 | 1934.08 | 4935.68 | 1935 | 4990.5 | 1935 |
| 4991.48 | 1934.99 | 4992.31 | 1934.99 | 5024.78 | 1934.52 | 5046.5 | 1934.21 | 5059.86 | 1934.04 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5059.86 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5059.86 | 104.77 | 104.77 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1912.74 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.11 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1912.63 | Reach Len. (ft) | 104.77 | 104.77 | 104.77 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8267.19 | | |
| E.G. Slope (ft/ft) | 0.001535 | Area (sq ft) | | 8267.19 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3253.48 | Top Width (ft) | | 3253.48 | | |
| Vel Total (ft/s) | 2.71 | Avg. Vel. (ft/s) | | 2.71 | | |
| Max Chl Dpth (ft) | 3.66 | Hydr. Depth (ft) | | 2.54 | | |
| Conv. Total (cfs) | 571710.8 | Conv. (cfs) | | 571710.8 | | |
| Length Wtd. (ft) | 104.77 | Wetted Per. (ft) | | 3254.86 | | |
| Min Ch El (ft) | 1908.97 | Shear (lb/sq ft) | | 0.24 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5059.86 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.16 | Cum Volume (acre-ft) | | 669.50 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 294.39 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -15987.4

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1916.87 | 223.78 | 1916.28 | 238.64 | 1916.28 | 244.73 | 1916.27 | 254.34 | 1916.27 |
| 298.39 | 1916.24 | 304.36 | 1916.24 | 368.1 | 1916.2 | 373.79 | 1916.19 | 390.13 | 1916.19 |
| 411.93 | 1916.17 | 415.68 | 1916.17 | 425.92 | 1916.16 | 428.9 | 1916.16 | 470.16 | 1916.14 |
| 473.09 | 1916.14 | 480.01 | 1916.13 | 488.94 | 1916.13 | 634.87 | 1916.04 | 826 | 1915.92 |
| 839.96 | 1915.92 | 850.57 | 1915.91 | 855.66 | 1915.91 | 858.41 | 1915.9 | 873.23 | 1915.9 |
| 875.83 | 1915.89 | 878.12 | 1915.63 | 897.45 | 1913.41 | 913.32 | 1911.55 | 922.15 | 1908.77 |
| 933.64 | 1909 | 956.59 | 1909 | 965.59 | 1909.01 | 972.19 | 1909.01 | 993.48 | 1909 |
| 1011.24 | 1909 | 1081.94 | 1909.46 | 1083.45 | 1909.46 | 1096.38 | 1909.58 | 1097.94 | 1909.59 |
| 1120.72 | 1909.79 | 1121.24 | 1909.8 | 1141.08 | 1909.97 | 1145.57 | 1910.01 | 1236.66 | 1910.94 |
| 1242.64 | 1911 | 1352.2 | 1911 | 1355.31 | 1910.87 | 1360.38 | 1910.73 | 1368.41 | 1910.49 |
| 1383.95 | 1910.01 | 1384.51 | 1910 | 1494.41 | 1910 | 1496.33 | 1911 | 1498.31 | 1912 |
| 1500.73 | 1913 | 1501.67 | 1913.15 | 1503.27 | 1913.3 | 1505.49 | 1913.41 | 1506.37 | 1913.42 |
| 1511.38 | 1913.11 | 1512.12 | 1913 | 1514.07 | 1912 | 1515.01 | 1911.49 | 1516.86 | 1911 |
| 1520.36 | 1910 | 1528.4 | 1910 | 1544.17 | 1910.77 | 1548.5 | 1911 | 1561.88 | 1911.02 |
| 1570.88 | 1911.01 | 1575.23 | 1911 | 1576.4 | 1910.99 | 1580.26 | 1910.9 | 1589.07 | 1910.74 |
| 1594.29 | 1910.66 | 1608.02 | 1910.5 | 1614.27 | 1910.44 | 1617.69 | 1910.45 | 1620.89 | 1910.47 |
| 1650.16 | 1910.1 | 1657.73 | 1910 | 1691.75 | 1910.69 | 1701.12 | 1911 | 1706.21 | 1911.01 |
| 1713.02 | 1911.01 | 1719.48 | 1911 | 1725.69 | 1910.5 | 1728.44 | 1910.26 | 1730.88 | 1910 |
| 1733.12 | 1909.84 | 1735.29 | 1909.71 | 1736.85 | 1909.6 | 1744.03 | 1909.12 | 1745.76 | 1909 |
| 1747.17 | 1909 | 1757.73 | 1909.82 | 1760.27 | 1910 | 1761.84 | 1910.95 | 1763.72 | 1911.98 |
| 1763.9 | 1912.05 | 1767.09 | 1913 | 1767.98 | 1913.34 | 1771.3 | 1914.56 | 1775.05 | 1916 |
| 1777.96 | 1916.01 | 1780.88 | 1916 | 1781.07 | 1915.96 | 1786.7 | 1915.03 | 1794.59 | 1914.04 |
| 1795.09 | 1913.95 | 1797.93 | 1913 | 1800.42 | 1912.14 | 1803.63 | 1911 | 1809.43 | 1910.96 |
| 1814.28 | 1911 | 1816.94 | 1911 | 1827.79 | 1910.98 | 1847.31 | 1910.99 | 1856.75 | 1910.99 |
| 1862.73 | 1911 | 1872.01 | 1911 | 1874.26 | 1910.89 | 1876.3 | 1910.84 | 1891.93 | 1910.32 |
| 1900.84 | 1910.01 | 1905.13 | 1910 | 1923.97 | 1909.99 | 1941.05 | 1909.99 | 1952.61 | 1910 |
| 1959.33 | 1910 | 1960.08 | 1910.27 | 1963.93 | 1911 | 1965.49 | 1911.34 | 1965.84 | 1911.4 |
| 1966.85 | 1911.41 | 1968.79 | 1911.11 | 1976.2 | 1910.54 | 1978.41 | 1910 | 1985.11 | 1909.99 |
| 1991.94 | 1909.82 | 2001.34 | 1909.62 | 2015.69 | 1909.36 | 2030.55 | 1909 | 2047.4 | 1908.28 |
| 2049.6 | 1908.18 | 2054.14 | 1908 | 2071.59 | 1907.19 | 2073.7 | 1907.13 | 2075.19 | 1907.12 |
| 2082.01 | 1907.04 | 2083.1 | 1907.04 | 2083.34 | 1907.07 | 2088.86 | 1907.99 | 2091.01 | 1908 |
| 2091.93 | 1908.11 | 2094.08 | 1908.32 | 2095.52 | 1908.48 | 2096.59 | 1908.56 | 2097 | 1908.55 |
| 2099.93 | 1908.35 | 2101.34 | 1908.22 | 2103.4 | 1908 | 2109.38 | 1907.98 | 2111.14 | 1907.96 |
| 2113.96 | 1907.96 | 2118.58 | 1907.93 | 2121.76 | 1907.95 | 2134.58 | 1907.97 | 2136.42 | 1907.98 |
| 2143.5 | 1907.99 | 2145.66 | 1908 | 2148.31 | 1908.23 | 2149.58 | 1908.36 | 2163.18 | 1909 |
| 2163.63 | 1909.14 | 2164.09 | 1909.17 | 2165.17 | 1909.14 | 2170.93 | 1909.34 | 2171.54 | 1909.3 |
| 2173.3 | 1909 | 2207.59 | 1909 | 2231.64 | 1909.01 | 2238.87 | 1909.01 | 2241.51 | 1909.22 |
| 2246.18 | 1909.58 | 2249.39 | 1909.57 | 2252.55 | 1909.01 | 2323.34 | 1909.01 | 2340.78 | 1909.15 |
| 2342.53 | 1909.13 | 2343.3 | 1909.14 | 2354.28 | 1909.01 | 2357.09 | 1909.01 | 2361.36 | 1909 |
| 2364.57 | 1909 | 2381.76 | 1908 | 2442.72 | 1908 | 2449.36 | 1908.14 | 2463.83 | 1908.47 |
| 2467.47 | 1908.54 | 2468.49 | 1908.57 | 2479.2 | 1908.76 | 2490.27 | 1908.94 | 2494.63 | 1909 |
| 2524.34 | 1909 | 2558.3 | 1909.57 | 2570.31 | 1909.77 | 2592.5 | 1909.77 | 2599.42 | 1909.8 |
| 2610.43 | 1909.87 | 2613.84 | 1909.85 | 2629.65 | 1909.81 | 2632.32 | 1909.82 | 2636.8 | 1909.82 |
| 2644.93 | 1909.78 | 2652.4 | 1909.75 | 2655.85 | 1909.76 | 2658.93 | 1909.78 | 2659.83 | 1909.77 |
| 2662.95 | 1909.78 | 2663.7 | 1909.77 | 2671.79 | 1909.72 | 2684.92 | 1909.63 | 2687.05 | 1909.62 |
| 2692.18 | 1909.57 | 2709.8 | 1909.43 | 2716.37 | 1909.4 | 2725.69 | 1909.38 | 2736.07 | 1909.34 |
| 2738.38 | 1909.32 | 2740.01 | 1909.32 | 2747.42 | 1909.26 | 2750.47 | 1909.26 | 2769.53 | 1909.16 |
| 2811.91 | 1909.43 | 2813.02 | 1909.43 | 2827.73 | 1909.57 | 2846.9 | 1909.75 | 2871.83 | 1910 |
| 2872.07 | 1910 | 2877.63 | 1910.17 | 2877.98 | 1910.16 | 2913.07 | 1910.4 | 2988.42 | 1910.96 |
| 2998.05 | 1910.96 | 3004.51 | 1910.97 | 3009.07 | 1910.97 | 3012.91 | 1910.98 | 3017.38 | 1910.98 |
| 3040.51 | 1910.89 | 3043.22 | 1910.9 | 3045.46 | 1910.89 | 3049.66 | 1910.92 | 3059.18 | 1910.95 |
| 3062.22 | 1910.95 | 3065.7 | 1910.94 | 3085.43 | 1910.84 | 3105.47 | 1910.86 | 3152.3 | 1910.7 |
| 3167.65 | 1910.66 | 3185.44 | 1910.61 | 3188 | 1910.61 | 3188.31 | 1910.6 | 3214.42 | 1910.58 |
| 3242.11 | 1910.51 | 3264.09 | 1910.46 | 3282.73 | 1910.46 | 3287.26 | 1910.45 | 3340.08 | 1910.31 |
| 3428.31 | 1910.08 | 3432.08 | 1910.06 | 3445.51 | 1910 | 3446.81 | 1909.99 | 3469.65 | 1909.96 |
| 3475.12 | 1909.96 | 3475.96 | 1909.95 | 3480.13 | 1909.95 | 3497.14 | 1909.96 | 3501.59 | 1909.96 |
| 3516.6 | 1909.82 | 3528.65 | 1909.85 | 3531.49 | 1909.84 | 3535.13 | 1909.85 | 3549.85 | 1910 |
| 3587.16 | 1910 | 3595.43 | 1910.29 | 3598.91 | 1910.39 | 3611.86 | 1910.66 | 3613.08 | 1910.7 |
| 3629.32 | 1911 | 3649.25 | 1911 | 3656.59 | 1910.92 | 3680.39 | 1910.62 | 3693.39 | 1910.46 |
| 3706.76 | 1910.31 | 3709.4 | 1910.27 | 3728.18 | 1910 | 3731.79 | 1909.91 | 3733.76 | 1909.9 |
| 3741.89 | 1909.74 | 3745.82 | 1909.71 | 3747.89 | 1909.66 | 3748.87 | 1909.66 | 3751.23 | 1909.61 |
| 3779.52 | 1909.3 | 3783.99 | 1909.26 | 3806.75 | 1909.01 | 3816.51 | 1909 | 3818.34 | 1908.99 |
| 3836.37 | 1908.98 | 3848.25 | 1908.96 | 3865.03 | 1908.98 | 3879.05 | 1909 | 3959.64 | 1909 |
| 3997.09 | 1909.53 | 4013.57 | 1909.66 | 4041.32 | 1909.89 | 4047.88 | 1909.94 | 4050.91 | 1909.97 |
| 4054.84 | 1910 | 4057.53 | 1910 | 4058.18 | 1910.02 | 4069.03 | 1910.11 | 4070.59 | 1910.2 |
| 4071.37 | 1910.22 | 4073.08 | 1910.35 | 4074.11 | 1910.4 | 4080 | 1911 | 4089.41 | 1911.91 |
| 4094.17 | 1912.32 | 4100.83 | 1912.86 | 4102.06 | 1913 | 4106.46 | 1913.62 | 4109.25 | 1914 |
| 4112.91 | 1915 | 4117.88 | 1916.28 | 4118.74 | 1916.34 | 4121.79 | 1915.61 | 4124.62 | 1915 |
| 4128.08 | 1914.24 | 4130.8 | 1913.65 | 4134.33 | 1913 | 4135.98 | 1912.99 | 4137.35 | 1912.82 |
| 4144.11 | 1912.08 | 4144.99 | 1912.07 | 4146.02 | 1912.17 | 4146.48 | 1912.19 | 4148.71 | 1912.56 |
| 4149.38 | 1912.63 | 4151.28 | 1912.99 | 4151.49 | 1913.01 | 4152.95 | 1913.27 | 4153.36 | 1913.29 |
| 4155.73 | 1913.58 | 4157.8 | 1913.64 | 4160.02 | 1913.66 | 4161.4 | 1913.62 | 4162.17 | 1913.66 |
| 4162.74 | 1913.62 | 4165.21 | 1913.59 | 4167.02 | 1913.48 | 4171.56 | 1913.13 | 4171.96 | 1913.13 |
| 4175.33 | 1913.01 | 4178.78 | 1912.99 | 4180.53 | 1913 | 4182.18 | 1913.5 | 4183.91 | 1914 |
| 4185.45 | 1914.47 | 4186.7 | 1914.8 | 4187.38 | 1915.01 | 4190.3 | 1916 | 4191.48 | 1916.41 |
| 4192.45 | 1916.47 | 4196.56 | 1917 | 4197.99 | 1917.99 | 4199.62 | 1918.79 | 4200.42 | 1919.16 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4201.15 | 1919.45 | 4201.81 | 1919.58 | 4203 | 1919.59 | 4203.35 | 1919.65 | 4204.52 | 1919.63 |
| 4204.99 | 1920 | 4205.38 | 1920.4 | 4205.81 | 1920.45 | 4206.06 | 1920.54 | 4206.87 | 1920.44 |
| 4208.18 | 1919.99 | 4209.92 | 1919.16 | 4210.25 | 1919.07 | 4211.63 | 1918.79 | 4212.31 | 1918.58 |
| 4213.75 | 1918 | 4219.41 | 1918 | 4220.34 | 1918.31 | 4222.17 | 1919 | 4223.52 | 1919.44 |
| 4225.03 | 1920 | 4226.36 | 1920.47 | 4227.8 | 1921 | 4229.5 | 1921.47 | 4231.06 | 1922 |
| 4233.16 | 1922.54 | 4243.71 | 1924.18 | 4248.21 | 1925 | 4250.16 | 1925 | 4257.28 | 1924 |
| 4263.83 | 1923.11 | 4264.96 | 1922.95 | 4269.44 | 1922 | 4270.75 | 1921.35 | 4272.08 | 1920.75 |
| 4276.12 | 1919 | 4279.01 | 1917.76 | 4281.65 | 1916.64 | 4285.46 | 1915 | 4287.82 | 1914 |
| 4289.65 | 1913.32 | 4290.4 | 1913 | 4412.17 | 1913 | 4424.6 | 1912.97 | 4432.35 | 1912.96 |
| 4434.5 | 1912.95 | 4453.24 | 1912.91 | 4459.19 | 1912.92 | 4462.31 | 1912.92 | 4487.61 | 1912.97 |
| 4499.83 | 1912.98 | 4503.61 | 1913 | 4552.18 | 1913 | 4559.17 | 1912.98 | 4563.66 | 1912.96 |
| 4616.58 | 1912.26 | 4616.73 | 1912.26 | 4631.11 | 1912.02 | 4632.47 | 1912 | 4648.67 | 1912 |
| 4650.05 | 1912.79 | 4652.45 | 1914 | 4654.34 | 1915 | 4655.12 | 1915.39 | 4657.55 | 1916.66 |
| 4660.09 | 1918 | 4660.58 | 1918.47 | 4661.67 | 1919.62 | 4662.06 | 1920 | 4664.52 | 1922.5 |
| 4664.75 | 1922.63 | 4667.57 | 1924 | 4670.03 | 1924.28 | 4673.4 | 1924.61 | 4675.05 | 1924.8 |
| 4677.01 | 1925 | 4688.13 | 1925.75 | 4689.54 | 1925.79 | 4689.91 | 1925.82 | 4697.13 | 1926 |
| 4698.4 | 1926.01 | 4700.26 | 1926.09 | 4701.11 | 1926.15 | 4704.86 | 1926.31 | 4707.02 | 1926.43 |
| 4713.99 | 1927 | 4727.42 | 1927.88 | 4729.44 | 1928 | 4735.18 | 1928.3 | 4745.75 | 1928.82 |
| 4749.18 | 1929 | 4767.46 | 1929.54 | 4783.58 | 1930 | 4788.89 | 1930.32 | 4795.1 | 1930.54 |
| 4796.72 | 1930.62 | 4802.8 | 1930.85 | 4812.67 | 1931.29 | 4828.95 | 1932 | 4839.28 | 1932.39 |
| 4851.62 | 1932.94 | 4854.36 | 1933.05 | 4879.57 | 1934 | 4891.16 | 1934.3 | 4918.34 | 1935 |
| 5001.37 | 1935 | 5017.12 | 1934.61 | 5034.67 | 1934.17 | 5041.72 | 1934 | 5046.59 | 1933.76 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5046.59 | .045 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | |
|---|---|---|---|---|---|---|
| 0 | 5046.59 | 74.87 | 74.87 | 74.87 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1912.58 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.12 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1912.47 | Reach Len. (ft) | 74.87 | 74.87 | 74.87 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8197.63 | | |
| E.G. Slope (ft/ft) | 0.001545 | Area (sq ft) | | 8197.63 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3198.61 | Top Width (ft) | | 3198.61 | | |
| Vel Total (ft/s) | 2.73 | Avg. Vel. (ft/s) | | 2.73 | | |
| Max Chl Dpth (ft) | 5.43 | Hydr. Depth (ft) | | 2.56 | | |
| Conv. Total (cfs) | 569884.8 | Conv. (cfs) | | 569884.8 | | |
| Length Wtd. (ft) | 74.87 | Wetted Per. (ft) | | 3202.16 | | |
| Min Ch El (ft) | 1907.04 | Shear (lb/sq ft) | | 0.25 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5046.59 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.11 | Cum Volume (acre-ft) | | 649.70 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 286.63 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -16062.3

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1917.01 | 352.28 | 1916.09 | 364.85 | 1916.08 | 369.08 | 1916.08 | 375.96 | 1916.07 |
| 386.82 | 1916.07 | 436.58 | 1916.04 | 439.73 | 1916.04 | 443.31 | 1916.03 | 515.26 | 1915.99 |
| 521.68 | 1915.99 | 529.57 | 1915.98 | 540.11 | 1915.98 | 548.73 | 1915.97 | 551.54 | 1915.97 |
| 564.69 | 1915.96 | 568.92 | 1915.96 | 580.46 | 1915.95 | 583.82 | 1915.95 | 630.32 | 1915.92 |
| 641.41 | 1915.92 | 651.47 | 1915.91 | 815.67 | 1915.81 | 880.68 | 1915.77 | 913.18 | 1910.68 |
| 914.84 | 1910.34 | 915.93 | 1910.17 | 917.93 | 1909.91 | 923.49 | 1909.36 | 923.58 | 1909.34 |
| 927.47 | 1909 | 985.74 | 1909 | 1010.1 | 1908.99 | 1018.2 | 1908.99 | 1030.19 | 1908.98 |
| 1035.94 | 1908.99 | 1048.17 | 1908.99 | 1056.77 | 1909 | 1065.09 | 1909 | 1073.65 | 1909.07 |
| 1097.4 | 1909.28 | 1127.71 | 1909.53 | 1128.33 | 1909.53 | 1143.34 | 1909.66 | 1153.79 | 1909.72 |
| 1172.48 | 1909.85 | 1177.65 | 1909.89 | 1180.85 | 1909.91 | 1189.44 | 1909.95 | 1195.81 | 1910 |
| 1220.8 | 1910 | 1224.5 | 1910.03 | 1239.06 | 1910.21 | 1254.73 | 1910.46 | 1254.99 | 1910.46 |
| 1285.95 | 1910.85 | 1297.93 | 1911 | 1364.53 | 1911 | 1373.38 | 1910.81 | 1385.51 | 1910.57 |
| 1421.7 | 1910.06 | 1423.64 | 1910.04 | 1425.99 | 1910 | 1470.92 | 1910 | 1474.32 | 1910.66 |
| 1477.74 | 1911.31 | 1478.84 | 1911.53 | 1482.01 | 1912 | 1483.26 | 1912.2 | 1484.57 | 1912.26 |
| 1485.64 | 1912.22 | 1489.6 | 1912 | 1493.42 | 1911.68 | 1494.02 | 1911.65 | 1495.15 | 1911.65 |
| 1497.92 | 1911.58 | 1499.14 | 1911.47 | 1500.23 | 1911.29 | 1501.42 | 1911.12 | 1501.75 | 1911.12 |
| 1508.62 | 1910.89 | 1509.89 | 1910.67 | 1511.25 | 1910.34 | 1512.52 | 1910 | 1531.37 | 1910 |
| 1534.27 | 1909.99 | 1548.71 | 1909.99 | 1557.88 | 1909.73 | 1558.63 | 1909.73 | 1569.96 | 1909.63 |
| 1596.73 | 1909.37 | 1598.29 | 1909.36 | 1598.77 | 1909.34 | 1601.32 | 1909.32 | 1608.44 | 1909 |
| 1612.31 | 1909 | 1617.86 | 1909.12 | 1655.97 | 1910 | 1664.56 | 1910.24 | 1694.41 | 1910.97 |
| 1698.01 | 1911 | 1702.64 | 1911.32 | 1707.32 | 1911.24 | 1713.7 | 1911.01 | 1716.04 | 1911 |
| 1724.57 | 1911.66 | 1728.92 | 1912 | 1731.56 | 1912.15 | 1733.59 | 1912.21 | 1733.87 | 1912.19 |
| 1735.22 | 1912 | 1741.77 | 1911 | 1746.97 | 1910.21 | 1752.77 | 1909.36 | 1755.07 | 1909 |
| 1757.6 | 1909 | 1758.3 | 1908.99 | 1770.95 | 1908.19 | 1772.19 | 1908.13 | 1775.58 | 1908.07 |
| 1781.37 | 1908.74 | 1782.13 | 1908.82 | 1785.32 | 1908.94 | 1786.23 | 1908.99 | 1788.28 | 1908.98 |
| 1789.61 | 1908.96 | 1791.06 | 1908.99 | 1795.49 | 1908.95 | 1799.17 | 1908.97 | 1800.58 | 1909 |
| 1810.66 | 1909.67 | 1812.5 | 1910 | 1815.78 | 1910.77 | 1817.76 | 1911.25 | 1820.93 | 1912 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1822.37 | 1912.35 | 1825.16 | 1913 | 1827.11 | 1913.47 | 1829.2 | 1914 | 1846 | 1914 |
| 1848.14 | 1913.62 | 1851.8 | 1913 | 1852.46 | 1912.86 | 1853.09 | 1912.65 | 1854.92 | 1912 |
| 1856.31 | 1911.43 | 1859.68 | 1910 | 1860.64 | 1909.99 | 1865.75 | 1909.59 | 1868.66 | 1909.37 |
| 1874.88 | 1909 | 1894.04 | 1909 | 1898.2 | 1909.26 | 1898.52 | 1909.25 | 1902.05 | 1909.46 |
| 1902.39 | 1909.44 | 1903 | 1909.48 | 1917.13 | 1909.41 | 1927.84 | 1909.36 | 1937.45 | 1909.46 |
| 1967.62 | 1909.66 | 1983.36 | 1909.72 | 1984.59 | 1909.72 | 1989.31 | 1909.65 | 1990.74 | 1909.66 |
| 1995.96 | 1909.58 | 1998.67 | 1909.53 | 2003.68 | 1909.51 | 2010.87 | 1909.41 | 2016.67 | 1909.29 |
| 2025.31 | 1909.12 | 2027.05 | 1909.09 | 2031.32 | 1909 | 2035.51 | 1909 | 2036.43 | 1909.57 |
| 2036.99 | 1910 | 2039.03 | 1911.28 | 2039.59 | 1911.56 | 2040.59 | 1912 | 2041.44 | 1912.31 |
| 2043.57 | 1913 | 2045.57 | 1913 | 2049.26 | 1911.7 | 2055.31 | 1909.53 | 2056.84 | 1909 |
| 2058.16 | 1908.82 | 2059.37 | 1908.68 | 2062.85 | 1908.24 | 2065.12 | 1908 | 2065.65 | 1908 |
| 2068.24 | 1907.87 | 2074.59 | 1907.61 | 2077.93 | 1907.46 | 2079.66 | 1907.43 | 2085.47 | 1907 |
| 2086.58 | 1907 | 2091.77 | 1907.16 | 2093.5 | 1907.19 | 2097.43 | 1907.3 | 2113.06 | 1907.75 |
| 2115.45 | 1907.83 | 2120.93 | 1908 | 2137.89 | 1908 | 2151.39 | 1908.57 | 2154.7 | 1908.69 |
| 2157.46 | 1908.77 | 2160.58 | 1908.84 | 2162.75 | 1908.91 | 2168.22 | 1909 | 2182.78 | 1909 |
| 2184.86 | 1908.99 | 2186.31 | 1909 | 2278.32 | 1909 | 2281.26 | 1908.93 | 2291.89 | 1908.82 |
| 2300.73 | 1908.77 | 2301.7 | 1908.76 | 2307.59 | 1908.81 | 2309.76 | 1908.75 | 2312.55 | 1908.77 |
| 2317.4 | 1908.65 | 2327.3 | 1908.56 | 2330.39 | 1908.49 | 2333.28 | 1908.45 | 2342.28 | 1908 |
| 2403.49 | 1908 | 2404.28 | 1908.01 | 2419.92 | 1908.29 | 2428.85 | 1908.41 | 2437.48 | 1908.44 |
| 2445.65 | 1908.65 | 2447.83 | 1908.68 | 2449.77 | 1908.72 | 2454.47 | 1908.78 | 2454.81 | 1908.79 |
| 2463.29 | 1908.94 | 2464 | 1908.96 | 2466.92 | 1909 | 2489.55 | 1909 | 2497.13 | 1908.97 |
| 2501.13 | 1908.97 | 2501.89 | 1908.96 | 2507.5 | 1908.96 | 2512.59 | 1908.97 | 2516.74 | 1908.97 |
| 2519.91 | 1908.98 | 2525.99 | 1908.98 | 2543.82 | 1909 | 2549.85 | 1909 | 2584.39 | 1909.01 |
| 2588.69 | 1909.02 | 2597.85 | 1909.01 | 2612.35 | 1909.01 | 2625.38 | 1909 | 2669.74 | 1909 |
| 2673.29 | 1909.02 | 2686.16 | 1909.07 | 2699.2 | 1909.08 | 2710.74 | 1909 | 2799.44 | 1909 |
| 2809.13 | 1909.2 | 2827.75 | 1909.58 | 2829.67 | 1909.6 | 2832.05 | 1909.65 | 2856.16 | 1909.99 |
| 2862.79 | 1910 | 2880.04 | 1910.74 | 2882.2 | 1910.8 | 2890.16 | 1910.97 | 2891.31 | 1911 |
| 2921.65 | 1911 | 3025.71 | 1910.48 | 3061.97 | 1910.34 | 3062.64 | 1910.35 | 3076.55 | 1910.24 |
| 3080.44 | 1910.25 | 3083.74 | 1910.23 | 3086.83 | 1910.22 | 3098.05 | 1910.21 | 3104.41 | 1910.21 |
| 3106.7 | 1910.2 | 3106.84 | 1910.21 | 3109.51 | 1910.19 | 3110.7 | 1910.2 | 3162.49 | 1910.26 |
| 3207.25 | 1910.31 | 3224.03 | 1910.25 | 3236 | 1910.22 | 3237.43 | 1910.22 | 3262.8 | 1910.19 |
| 3289.82 | 1910.16 | 3297.75 | 1910.14 | 3303.98 | 1910.13 | 3310.59 | 1910.13 | 3357.35 | 1910 |
| 3477.76 | 1910 | 3479.05 | 1909.98 | 3487.59 | 1909.82 | 3527.45 | 1909.3 | 3537.27 | 1909.2 |
| 3541.55 | 1909.21 | 3556.22 | 1909.17 | 3559.13 | 1909.17 | 3572.41 | 1909.31 | 3576.45 | 1909.37 |
| 3583.13 | 1909.53 | 3585.38 | 1909.54 | 3589.49 | 1909.63 | 3594.05 | 1909.67 | 3595.95 | 1909.71 |
| 3597.69 | 1909.73 | 3599.73 | 1909.77 | 3607.32 | 1909.9 | 3612.36 | 1910 | 3621.84 | 1910.1 |
| 3641.4 | 1910.21 | 3657.51 | 1910.26 | 3679.94 | 1910.26 | 3697.17 | 1910.16 | 3716.76 | 1910 |
| 3718.79 | 1910 | 3722.2 | 1909.94 | 3724.4 | 1909.91 | 3745.68 | 1909.57 | 3759.85 | 1909.33 |
| 3776.33 | 1909.01 | 3777.83 | 1909 | 3785.5 | 1908.99 | 3813.85 | 1908.96 | 3839.57 | 1908.93 |
| 3848.23 | 1908.94 | 3852.97 | 1908.94 | 3876.83 | 1908.92 | 3886.34 | 1908.89 | 3894.86 | 1908.9 |
| 3898.62 | 1908.9 | 3908.33 | 1908.93 | 3909.53 | 1908.94 | 3912.31 | 1908.94 | 3913.1 | 1908.95 |
| 3916.6 | 1908.95 | 3917.5 | 1908.96 | 3921.3 | 1908.96 | 3924.06 | 1908.97 | 3929.87 | 1908.98 |
| 3931.89 | 1908.99 | 3934.31 | 1908.99 | 3938.27 | 1909 | 3949.66 | 1909 | 3962.2 | 1908.96 |
| 3968.01 | 1909 | 3977.27 | 1909 | 3987.52 | 1909.16 | 3990.86 | 1909.25 | 3994.85 | 1909.39 |
| 4011.19 | 1910 | 4015.83 | 1910.35 | 4027.25 | 1911 | 4032.83 | 1911.14 | 4046.64 | 1911.68 |
| 4053.69 | 1911.41 | 4061.37 | 1911 | 4078.82 | 1911 | 4081.14 | 1911.13 | 4082.69 | 1911.25 |
| 4085.53 | 1911.59 | 4086.29 | 1911.66 | 4088.91 | 1912 | 4089.94 | 1912.37 | 4091.98 | 1913 |
| 4093.3 | 1913.67 | 4094.89 | 1914.5 | 4096.67 | 1915.41 | 4099.09 | 1916.96 | 4099.75 | 1917.32 |
| 4101.53 | 1918.22 | 4102.38 | 1918.53 | 4103.02 | 1918.69 | 4103.84 | 1918.84 | 4104.53 | 1919 |
| 4115.86 | 1919 | 4121.43 | 1918.42 | 4123.45 | 1918.34 | 4124.26 | 1918.35 | 4126.92 | 1918.3 |
| 4129.19 | 1918.1 | 4130.75 | 1918 | 4140.87 | 1917.53 | 4141.96 | 1917.44 | 4145.92 | 1917 |
| 4147.55 | 1916.81 | 4152.6 | 1916.13 | 4157.23 | 1915.41 | 4159.8 | 1915 | 4162.93 | 1914.45 |
| 4165.59 | 1914 | 4167.09 | 1913.93 | 4169.39 | 1914 | 4173.36 | 1914.27 | 4177.76 | 1914.88 |
| 4178.51 | 1915 | 4180.01 | 1915.06 | 4196.14 | 1915.99 | 4199.7 | 1916 | 4206.24 | 1917 |
| 4207.43 | 1917.36 | 4209.62 | 1918 | 4211.28 | 1918.52 | 4212.91 | 1919 | 4215.52 | 1919.85 |
| 4216.07 | 1920 | 4221.26 | 1920 | 4222.3 | 1919.82 | 4224.41 | 1919.43 | 4225.61 | 1919.19 |
| 4227.81 | 1918.72 | 4231.72 | 1918 | 4237.47 | 1917.72 | 4243.7 | 1917.34 | 4249.12 | 1917 |
| 4251.95 | 1916.75 | 4259.02 | 1916 | 4264.36 | 1915.24 | 4265.97 | 1915 | 4273.18 | 1913.41 |
| 4274.97 | 1913 | 4415.86 | 1913 | 4453.43 | 1912.88 | 4466.26 | 1912.85 | 4490.46 | 1912.88 |
| 4506.04 | 1912.89 | 4540.35 | 1912.98 | 4543.35 | 1912.99 | 4543.46 | 1913 | 4584.2 | 1913 |
| 4592.68 | 1912.75 | 4594.43 | 1912.71 | 4607.4 | 1912.44 | 4628.71 | 1912 | 4632.17 | 1912 |
| 4637.29 | 1911.99 | 4642.27 | 1912 | 4644.21 | 1913 | 4647.05 | 1914.16 | 4649.13 | 1915 |
| 4650.64 | 1915.73 | 4651.9 | 1916.27 | 4653.31 | 1917 | 4656.33 | 1918.45 | 4657.58 | 1919 |
| 4660.1 | 1920 | 4662.48 | 1921 | 4664.8 | 1922 | 4668.19 | 1923 | 4672.89 | 1923.99 |
| 4676.09 | 1924.42 | 4680.48 | 1925 | 4685.23 | 1925.32 | 4685.71 | 1925.37 | 4694.67 | 1926 |
| 4700.57 | 1926.41 | 4707.95 | 1927 | 4712.96 | 1927.25 | 4725.34 | 1928 | 4730.32 | 1928.27 |
| 4743.12 | 1929 | 4751.34 | 1929.3 | 4766.57 | 1929.85 | 4771.01 | 1930 | 4790.08 | 1930.84 |
| 4792.95 | 1931 | 4798.35 | 1931.16 | 4819.1 | 1931.78 | 4826.56 | 1932 | 4858.88 | 1933 |
| 4861.52 | 1933.09 | 4866.3 | 1933.23 | 4891.45 | 1934 | 4895.13 | 1934.09 | 4925.67 | 1934.86 |
| 4930.7 | 1935 | 5005.82 | 1935 | 5009.95 | 1934.95 | 5011.29 | 1934.89 | 5013.07 | 1934.84 |
| 5019.06 | 1934.56 | 5020.4 | 1934.51 | 5025.74 | 1934.25 | 5031.29 | 1934 | 5047.18 | 1933.5 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5047.18 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5047.18 | 97.47 | 97.47 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1912.47 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.11 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1912.37 | Reach Len. (ft) | 97.47 | 97.47 | 97.47 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8588.43 | | |
| E.G. Slope (ft/ft) | 0.001314 | Area (sq ft) | | 8588.43 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3182.36 | Top Width (ft) | | 3182.36 | | |

| | | | | | |
|---|---|---|---|---|---|
| Vel Total (ft/s) | 2.61 | Avg. Vel. (ft/s) | 2.61 | | |
| Max Chl Dpth (ft) | 5.37 | Hydr. Depth (ft) | 2.70 | | |
| Conv. Total (cfs) | 617933.2 | Conv. (cfs) | 617933.2 | | |
| Length Wtd. (ft) | 97.47 | Wetted Per. (ft) | 3186.22 | | |
| Min Ch El (ft) | 1907.00 | Shear (lb/sq ft) | 0.22 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5047.18 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.13 | Cum Volume (acre-ft) | 635.27 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | 281.15 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -16159.7

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1917.05 | 402.13 | 1916.01 | 415.61 | 1916 | 420.14 | 1916 | 427.53 | 1915.99 |
| 439.18 | 1915.98 | 492.67 | 1915.95 | 499.93 | 1915.95 | 577.54 | 1915.9 | 584.47 | 1915.89 |
| 598.32 | 1915.89 | 600.89 | 1915.88 | 613.74 | 1915.88 | 616.78 | 1915.87 | 631.99 | 1915.87 |
| 635.6 | 1915.86 | 648.11 | 1915.86 | 651.76 | 1915.85 | 702.24 | 1915.82 | 705.82 | 1915.82 |
| 714.3 | 1915.81 | 725.24 | 1915.81 | 878.23 | 1915.71 | 911.21 | 1910.52 | 912.84 | 1910.32 |
| 921.78 | 1909.39 | 925.57 | 1909 | 962.71 | 1909 | 974.15 | 1908.99 | 987.17 | 1908.99 |
| 991.33 | 1908.98 | 1015.03 | 1908.97 | 1018.66 | 1908.97 | 1023.79 | 1908.96 | 1032.43 | 1908.97 |
| 1076.31 | 1909 | 1091.83 | 1909.12 | 1122.08 | 1909.32 | 1141.07 | 1909.45 | 1154.34 | 1909.51 |
| 1163.56 | 1909.56 | 1166.82 | 1909.57 | 1195.33 | 1909.78 | 1225.87 | 1910 | 1235.15 | 1910 |
| 1271.09 | 1910.48 | 1276.95 | 1910.56 | 1281.76 | 1910.63 | 1283.83 | 1910.65 | 1309.51 | 1910.99 |
| 1310.75 | 1911 | 1352.34 | 1911 | 1359.77 | 1910.98 | 1368.12 | 1910.97 | 1385.74 | 1910.93 |
| 1390.28 | 1910.94 | 1393.17 | 1910.94 | 1406.23 | 1910.97 | 1411.82 | 1910.99 | 1418.57 | 1910.92 |
| 1423.04 | 1910.86 | 1434.79 | 1910.88 | 1447.37 | 1910.93 | 1451.69 | 1911 | 1453.22 | 1911 |
| 1461.93 | 1911.02 | 1468.17 | 1911.01 | 1470.8 | 1911.01 | 1476.19 | 1911.02 | 1482.49 | 1911.91 |
| 1483.52 | 1912.06 | 1484.97 | 1912.2 | 1485.7 | 1912.25 | 1487.56 | 1912.25 | 1492.23 | 1912.43 |
| 1493.14 | 1912.45 | 1498.35 | 1912.03 | 1499.21 | 1911.97 | 1500.56 | 1911.93 | 1502.9 | 1911.9 |
| 1503.94 | 1911.79 | 1504.7 | 1911.74 | 1505.92 | 1911.6 | 1508.09 | 1911.3 | 1509.42 | 1911.13 |
| 1509.99 | 1911.12 | 1510.82 | 1911.01 | 1512.5 | 1911.01 | 1513.17 | 1910.98 | 1513.56 | 1910.92 |
| 1514.22 | 1910.69 | 1515.78 | 1910 | 1516.55 | 1909.69 | 1517.19 | 1909.69 | 1518.82 | 1909.3 |
| 1519.35 | 1909.2 | 1527.27 | 1909 | 1565.02 | 1909.01 | 1590.07 | 1909.01 | 1609.76 | 1909 |
| 1614.75 | 1909 | 1617.87 | 1909.05 | 1663.15 | 1909.88 | 1667.98 | 1909.97 | 1670.01 | 1910 |
| 1670.94 | 1910 | 1681.1 | 1910.88 | 1691.71 | 1911.65 | 1692.81 | 1911.66 | 1693.62 | 1911.64 |
| 1696.57 | 1911.8 | 1697.06 | 1911.81 | 1701.68 | 1911.75 | 1708.15 | 1911.78 | 1715.18 | 1911.82 |
| 1715.45 | 1911.83 | 1723.75 | 1912 | 1730.58 | 1913 | 1734.73 | 1913.55 | 1737.97 | 1914 |
| 1742.44 | 1914.61 | 1744.22 | 1914.75 | 1747.17 | 1915 | 1748.58 | 1915 | 1749.9 | 1914.71 |
| 1752.77 | 1914 | 1755.84 | 1913.29 | 1758.64 | 1912.62 | 1760.03 | 1912.22 | 1760.88 | 1912 |
| 1762.5 | 1911.68 | 1767.05 | 1911 | 1769.28 | 1910.52 | 1771.97 | 1910 | 1775.29 | 1909.29 |
| 1776.72 | 1909 | 1781.56 | 1908 | 1783.78 | 1907.55 | 1790.14 | 1907.33 | 1793.5 | 1907.3 |
| 1803.22 | 1907.4 | 1808.91 | 1907.48 | 1818.28 | 1907.58 | 1824.57 | 1907.67 | 1829.38 | 1907.71 |
| 1833.75 | 1907.78 | 1841.22 | 1907.93 | 1843.74 | 1907.96 | 1850.84 | 1907.97 | 1857.88 | 1907.97 |
| 1863.58 | 1907.98 | 1865.23 | 1908 | 1866.38 | 1908.03 | 1870.09 | 1908.08 | 1871.47 | 1908.12 |
| 1906.77 | 1909 | 1912.81 | 1909.01 | 1924.24 | 1909.02 | 1956.18 | 1909.07 | 1965.24 | 1909.07 |
| 1989.88 | 1909.03 | 1992.88 | 1909.03 | 2000.73 | 1909.02 | 2004.57 | 1909.01 | 2009.28 | 1909.03 |
| 2015.23 | 1908.96 | 2025.07 | 1908.55 | 2025.76 | 1908.53 | 2035.18 | 1908 | 2048.24 | 1907.42 |
| 2049.56 | 1907.38 | 2056.54 | 1907.01 | 2059.82 | 1907 | 2064.03 | 1907 | 2066.41 | 1907.09 |
| 2068.81 | 1907.09 | 2070.74 | 1907.14 | 2073.56 | 1907.23 | 2078 | 1907.4 | 2083.16 | 1907.58 |
| 2086.86 | 1907.68 | 2093.47 | 1907.75 | 2097.56 | 1908 | 2104.76 | 1908.14 | 2106.72 | 1908.17 |
| 2110.97 | 1908.22 | 2125.2 | 1908.46 | 2131.87 | 1908.57 | 2141.82 | 1908.76 | 2147.61 | 1908.89 |
| 2152.73 | 1909 | 2228.41 | 1909 | 2231.65 | 1908.87 | 2249.82 | 1908.16 | 2255.88 | 1908 |
| 2263.98 | 1907.98 | 2273.52 | 1907.98 | 2290.37 | 1907.78 | 2294.1 | 1907.77 | 2312.82 | 1907.99 |
| 2348.79 | 1907.99 | 2369.88 | 1908 | 2374.17 | 1908.13 | 2387.35 | 1908.5 | 2389 | 1908.52 |
| 2391.74 | 1908.58 | 2397.83 | 1908.66 | 2402.53 | 1908.74 | 2405.94 | 1908.76 | 2426.13 | 1909 |
| 2516.25 | 1909 | 2523.12 | 1908.99 | 2529.99 | 1908.99 | 2540.76 | 1909 | 2545.51 | 1908.99 |
| 2607.99 | 1908.99 | 2634.68 | 1909 | 2752.76 | 1909 | 2782.27 | 1909.36 | 2782.51 | 1909.36 |
| 2801.89 | 1909.55 | 2802.47 | 1909.55 | 2810.01 | 1909.64 | 2810.33 | 1909.65 | 2818.3 | 1909.74 |
| 2823.61 | 1909.81 | 2827.92 | 1909.85 | 2838.53 | 1910 | 2853.74 | 1910 | 2858.64 | 1910.12 |
| 2859.61 | 1910.13 | 2875.49 | 1910.54 | 2893.52 | 1911 | 2909.97 | 1911 | 2921.12 | 1910.92 |
| 3046.62 | 1910.08 | 3047.72 | 1910.08 | 3058.38 | 1910 | 3486.28 | 1910 | 3508.5 | 1909.47 |
| 3516.67 | 1909.33 | 3523.15 | 1909.19 | 3537.26 | 1909 | 3605.59 | 1909 | 3607.36 | 1909.03 |
| 3618.26 | 1909.19 | 3623.19 | 1909.26 | 3627.32 | 1909.25 | 3632.33 | 1909.25 | 3679.82 | 1909.2 |
| 3715.17 | 1909.04 | 3725.51 | 1909 | 3755.65 | 1909 | 3773.25 | 1908.99 | 3791.19 | 1908.99 |
| 3802.94 | 1909 | 3854.5 | 1909 | 3859.28 | 1908.97 | 3862.33 | 1908.97 | 3862.45 | 1908.96 |
| 3868.39 | 1908.96 | 3882.96 | 1908.73 | 3887.3 | 1908.68 | 3908.02 | 1908.68 | 3927.37 | 1908.93 |
| 3937.69 | 1908.98 | 3940.45 | 1909 | 3941.75 | 1909.13 | 3947.8 | 1909.7 | 3950.59 | 1909.98 |
| 3952.46 | 1910.25 | 3958.32 | 1911 | 3963.98 | 1911.76 | 3971.02 | 1912.69 | 3981.82 | 1912.83 |
| 3992.11 | 1912.99 | 3995.03 | 1913 | 3998.74 | 1913 | 4003.27 | 1912.78 | 4021.29 | 1912 |
| 4024.3 | 1911.71 | 4032.46 | 1911 | 4043.42 | 1911 | 4044.8 | 1912.35 | 4045.5 | 1913 |
| 4047.07 | 1914.54 | 4047.52 | 1915 | 4048.58 | 1916 | 4049.77 | 1917 | 4051.24 | 1918 |
| 4054.25 | 1920 | 4057.3 | 1920 | 4060 | 1918.89 | 4062.23 | 1918 | 4064.69 | 1917 |
| 4068.7 | 1915.34 | 4070.53 | 1914.55 | 4073.31 | 1913.4 | 4073.65 | 1913.27 | 4074.55 | 1913 |
| 4077.01 | 1913 | 4077.35 | 1912.99 | 4081.85 | 1912.99 | 4087.22 | 1913 | 4088.5 | 1913.09 |
| 4089.49 | 1913.2 | 4092.29 | 1913.46 | 4093.05 | 1913.55 | 4095.75 | 1914 | 4097.04 | 1914.49 |
| 4097.51 | 1914.61 | 4099.5 | 1914.91 | 4100.45 | 1915.07 | 4101.29 | 1915.24 | 4104.14 | 1915.86 |
| 4104.84 | 1915.97 | 4105.99 | 1916.04 | 4108.96 | 1916.14 | 4112.99 | 1916.32 | 4114.17 | 1916.33 |
| 4115.26 | 1916.29 | 4117.49 | 1916.14 | 4119.03 | 1915.96 | 4121.8 | 1915.95 | 4122.92 | 1915.93 |
| 4125.08 | 1915.97 | 4128.59 | 1916.06 | 4129.16 | 1916.05 | 4131.84 | 1916.11 | 4132.9 | 1916 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4139.02 | 1915.29 | 4141.62 | 1915 | 4143.74 | 1914.69 | 4147.96 | 1914.37 | 4152.84 | 1913.9 |
| 4153.29 | 1913.73 | 4153.79 | 1913 | 4154.34 | 1912.42 | 4154.55 | 1912 | 4154.88 | 1911.98 |
| 4156.59 | 1911.97 | 4156.87 | 1912 | 4157.43 | 1912.22 | 4159.73 | 1913 | 4162.19 | 1914 |
| 4164.75 | 1915 | 4168.69 | 1915.61 | 4171.04 | 1916 | 4176.77 | 1916.36 | 4177.71 | 1916.41 |
| 4183.79 | 1916.43 | 4189.99 | 1916.4 | 4190.69 | 1916.33 | 4192.83 | 1916.22 | 4194.63 | 1916.14 |
| 4198.88 | 1916 | 4203.52 | 1915.86 | 4204.1 | 1915.8 | 4205.2 | 1915.74 | 4206.75 | 1915.62 |
| 4216.46 | 1914.45 | 4220.77 | 1914 | 4224.28 | 1913.55 | 4226.28 | 1913.26 | 4228.22 | 1913 |
| 4230.49 | 1913 | 4238.14 | 1912.82 | 4239.24 | 1912.81 | 4254.57 | 1912.85 | 4260.54 | 1912.87 |
| 4268.23 | 1913 | 4287.18 | 1913 | 4291.26 | 1914 | 4294.22 | 1914.77 | 4295.05 | 1915 |
| 4298.41 | 1915.76 | 4299.66 | 1916 | 4303.65 | 1916 | 4304.42 | 1915.87 | 4307.07 | 1915.37 |
| 4308.86 | 1915 | 4310.01 | 1914.85 | 4316.23 | 1914 | 4317.73 | 1913.8 | 4323.22 | 1913 |
| 4344.74 | 1913 | 4346.47 | 1913.01 | 4353.09 | 1913.21 | 4360.21 | 1913.4 | 4370.42 | 1913.4 |
| 4380.75 | 1913.1 | 4386.79 | 1913 | 4389.73 | 1913 | 4420.09 | 1912.73 | 4429.94 | 1912.64 |
| 4444.32 | 1912.5 | 4479 | 1912.36 | 4506.21 | 1912.39 | 4510.33 | 1912.34 | 4515.07 | 1912.29 |
| 4518 | 1912.25 | 4519.89 | 1912.29 | 4522.72 | 1912.39 | 4524.1 | 1912.37 | 4531.77 | 1912.49 |
| 4546.9 | 1912.45 | 4565.94 | 1912.36 | 4571.36 | 1912.27 | 4573.15 | 1912.25 | 4578.7 | 1912.21 |
| 4588.48 | 1912 | 4602.2 | 1911.97 | 4609.38 | 1911.99 | 4614.69 | 1912 | 4617.05 | 1913 |
| 4618.84 | 1914 | 4619.76 | 1914.37 | 4621.23 | 1915 | 4623.24 | 1915.54 | 4625.39 | 1916 |
| 4626.92 | 1916.51 | 4628.64 | 1917 | 4630.8 | 1919.94 | 4631.01 | 1920.21 | 4631.85 | 1921 |
| 4632.29 | 1921.25 | 4633.1 | 1921.53 | 4634.41 | 1921.77 | 4635 | 1921.92 | 4637.56 | 1923 |
| 4638.07 | 1923.09 | 4639.39 | 1923.26 | 4639.95 | 1923.31 | 4642.19 | 1923.46 | 4642.72 | 1923.45 |
| 4644.33 | 1923.6 | 4648.34 | 1923.4 | 4649.53 | 1923.48 | 4651.09 | 1923.52 | 4652.36 | 1923.61 |
| 4655.53 | 1924 | 4661.23 | 1924.92 | 4663.3 | 1925.14 | 4666.05 | 1925.41 | 4667.33 | 1925.56 |
| 4672.21 | 1926 | 4680.13 | 1926.44 | 4690.86 | 1927 | 4694.88 | 1927.18 | 4709.01 | 1928 |
| 4715.92 | 1928.25 | 4719.69 | 1928.38 | 4722.8 | 1928.48 | 4727.65 | 1928.61 | 4730.67 | 1928.67 |
| 4732.66 | 1928.7 | 4738.38 | 1929 | 4746.11 | 1929.34 | 4759.29 | 1930 | 4765.08 | 1930.23 |
| 4786.93 | 1931 | 4791.29 | 1931.13 | 4803.25 | 1931.48 | 4816.02 | 1931.86 | 4820.6 | 1932 |
| 4837.16 | 1932.52 | 4850.5 | 1933 | 4867.06 | 1933.5 | 4876.89 | 1933.79 | 4884.14 | 1934 |
| 4894.31 | 1934.24 | 4894.66 | 1934.24 | 4903.63 | 1934.45 | 4903.95 | 1934.45 | 4908.45 | 1934.54 |
| 4908.92 | 1934.53 | 4927.1 | 1934.56 | 4946.59 | 1934.5 | 4957.64 | 1934.5 | 4966.1 | 1934.35 |
| 4967.84 | 1934.34 | 4981.34 | 1934.09 | 4983.23 | 1934.07 | 4986.36 | 1934 | 4987.29 | 1933.99 |
| 4997.35 | 1933.76 | 5007.46 | 1933.57 | 5009.29 | 1933.54 | 5013.05 | 1933.46 | 5020.25 | 1933.28 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5020.25 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5020.25 | 78.15 | 78.15 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1912.35 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.11 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1912.24 | Reach Len. (ft) | 78.15 | 78.15 | 78.15 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8554.59 | | |
| E.G. Slope (ft/ft) | 0.001282 | Area (sq ft) | | 8554.59 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3095.16 | Top Width (ft) | | 3095.16 | | |
| Vel Total (ft/s) | 2.62 | Avg. Vel. (ft/s) | | 2.62 | | |
| Max Chl Dpth (ft) | 5.24 | Hydr. Depth (ft) | | 2.76 | | |
| Conv. Total (cfs) | 625536.6 | Conv. (cfs) | | 625536.6 | | |
| Length Wtd. (ft) | 78.15 | Wetted Per. (ft) | | 3097.57 | | |
| Min Ch El (ft) | 1907.00 | Shear (lb/sq ft) | | 0.22 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5020.25 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.11 | Cum Volume (acre-ft) | | 616.09 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 274.12 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -16237.9

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1917.13 | 461.88 | 1915.93 | 476.11 | 1915.92 | 480.9 | 1915.92 | 488.7 | 1915.91 |
| 501.01 | 1915.91 | 557.55 | 1915.87 | 561.14 | 1915.87 | 565.23 | 1915.86 | 647.39 | 1915.81 |
| 654.75 | 1915.81 | 663.78 | 1915.8 | 672.14 | 1915.8 | 675.87 | 1915.79 | 689 | 1915.79 |
| 705.13 | 1915.78 | 708.96 | 1915.77 | 722.23 | 1915.77 | 726.1 | 1915.76 | 779.71 | 1915.73 |
| 783.52 | 1915.73 | 802.61 | 1915.71 | 804.15 | 1915.71 | 888.42 | 1915.66 | 906.26 | 1912.85 |
| 907.05 | 1912.75 | 908.31 | 1912.56 | 913.42 | 1912.02 | 914.52 | 1911.86 | 921.76 | 1911.13 |
| 921.85 | 1911.11 | 924.36 | 1910.85 | 925.54 | 1910.77 | 926.5 | 1910.73 | 930.42 | 1910.22 |
| 936.17 | 1908.85 | 942.33 | 1908.87 | 959.54 | 1908.87 | 960.54 | 1908.86 | 1025.28 | 1908.86 |
| 1095.46 | 1908.96 | 1102.33 | 1909 | 1109.63 | 1909 | 1122.38 | 1909.08 | 1122.77 | 1909.09 |
| 1141.58 | 1909.18 | 1161.53 | 1909.27 | 1174.72 | 1909.36 | 1202.82 | 1909.57 | 1205.96 | 1909.58 |
| 1208.4 | 1909.6 | 1217.58 | 1909.66 | 1232.34 | 1909.8 | 1253.26 | 1910 | 1255.33 | 1910.01 |
| 1279.75 | 1910.33 | 1298.07 | 1910.56 | 1319.47 | 1910.84 | 1329.98 | 1910.98 | 1331.96 | 1911 |
| 1351.78 | 1911 | 1353.74 | 1910.99 | 1357.21 | 1910.99 | 1367.66 | 1910.97 | 1370.8 | 1910.97 |
| 1373.37 | 1910.96 | 1382.17 | 1910.98 | 1387.24 | 1910.98 | 1390.82 | 1910.99 | 1393.86 | 1910.99 |
| 1408.85 | 1911 | 1438.2 | 1911 | 1448.06 | 1910.99 | 1455.52 | 1910.99 | 1474.11 | 1911 |
| 1476.35 | 1911 | 1486.66 | 1911.02 | 1495.53 | 1911.01 | 1498 | 1911.01 | 1498.75 | 1911 |
| 1503.28 | 1911 | 1506.6 | 1911.01 | 1509.03 | 1911.01 | 1515.11 | 1911 | 1517.29 | 1910.77 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1525.19 | 1910 | 1526.4 | 1909.99 | 1533.93 | 1909.9 | 1537.65 | 1909.87 | 1543.39 | 1909.83 |
| 1577.08 | 1909 | 1633.87 | 1909 | 1636.89 | 1909.05 | 1662.41 | 1909.49 | 1662.71 | 1909.5 |
| 1672.37 | 1909.66 | 1691.82 | 1910 | 1691.96 | 1910.01 | 1712.29 | 1910.76 | 1715.36 | 1910.85 |
| 1719.32 | 1911 | 1742.2 | 1911.86 | 1743.6 | 1911.93 | 1745.58 | 1912 | 1746.2 | 1912 |
| 1748.65 | 1911.93 | 1758.72 | 1911.54 | 1763.07 | 1911.53 | 1765.18 | 1911.54 | 1766.69 | 1911.56 |
| 1769.13 | 1911.62 | 1772.14 | 1911.74 | 1776.58 | 1912 | 1778.68 | 1912.01 | 1780.81 | 1912 |
| 1781.71 | 1912.01 | 1790.41 | 1912.01 | 1790.89 | 1912 | 1793.12 | 1912 | 1793.57 | 1911.85 |
| 1794.22 | 1911.56 | 1800.05 | 1911 | 1803.16 | 1910.52 | 1809.63 | 1909.53 | 1812.96 | 1909.1 |
| 1813.57 | 1909 | 1814.92 | 1908.73 | 1819.78 | 1907.57 | 1821.9 | 1907 | 1869.11 | 1907 |
| 1872.1 | 1907.11 | 1896.13 | 1908 | 1899.29 | 1908.1 | 1921.11 | 1908.72 | 1928.92 | 1908.95 |
| 1930 | 1908.96 | 1935.56 | 1908.99 | 1938.84 | 1908.99 | 1940.42 | 1909 | 1944.05 | 1909 |
| 1965.46 | 1909.03 | 1988.4 | 1909 | 1996.77 | 1909 | 2002.56 | 1909.01 | 2013.29 | 1909.01 |
| 2013.48 | 1909 | 2016.93 | 1909 | 2023.02 | 1908.53 | 2029.74 | 1908 | 2030.59 | 1907.94 |
| 2033.41 | 1907.77 | 2047.39 | 1907 | 2073.89 | 1907 | 2078.23 | 1907.21 | 2079.96 | 1907.3 |
| 2081.38 | 1907.39 | 2085.08 | 1907.51 | 2085.41 | 1907.53 | 2089.46 | 1907.71 | 2096.66 | 1908.04 |
| 2110.56 | 1909 | 2243.97 | 1909 | 2244.51 | 1908.97 | 2251.22 | 1908.55 | 2252.87 | 1908.45 |
| 2258.73 | 1908.14 | 2261.65 | 1908 | 2266.82 | 1908 | 2271.03 | 1907.89 | 2272.19 | 1907.88 |
| 2274.85 | 1907.82 | 2275.48 | 1907.79 | 2278.41 | 1907.78 | 2281.85 | 1907.76 | 2293.83 | 1907.48 |
| 2305.54 | 1907.32 | 2311.65 | 1907.25 | 2312.87 | 1907.25 | 2323.79 | 1907.37 | 2360.18 | 1907.83 |
| 2368.02 | 1908 | 2368.23 | 1908 | 2377.11 | 1908.24 | 2387.84 | 1908.51 | 2390 | 1908.54 |
| 2396.57 | 1908.72 | 2405.49 | 1908.88 | 2408.08 | 1908.92 | 2415.15 | 1908.94 | 2415.98 | 1908.93 |
| 2418.97 | 1908.93 | 2452.27 | 1908.97 | 2474.53 | 1909 | 2598.76 | 1909 | 2626.65 | 1908.99 |
| 2678.37 | 1908.99 | 2729.47 | 1909 | 2750.75 | 1909 | 2780.58 | 1909.36 | 2845.65 | 1910 |
| 2876.2 | 1910 | 2912.36 | 1911 | 2916.06 | 1911 | 2929.49 | 1910.91 | 2933.13 | 1910.88 |
| 3005.25 | 1910.32 | 3043.88 | 1910 | 3209.34 | 1910 | 3214.91 | 1909.88 | 3219.6 | 1909.8 |
| 3220.87 | 1909.79 | 3229.41 | 1909.56 | 3229.83 | 1909.57 | 3234.97 | 1909.44 | 3236.73 | 1909.41 |
| 3238.05 | 1909.42 | 3272.66 | 1909.64 | 3330.82 | 1910 | 3525.85 | 1910 | 3530.18 | 1909.95 |
| 3531.47 | 1909.94 | 3549.73 | 1909.75 | 3550.53 | 1909.75 | 3554.25 | 1909.71 | 3559.05 | 1909.67 |
| 3567.18 | 1909.58 | 3589.44 | 1909.31 | 3610.15 | 1909.01 | 3654.65 | 1909.01 | 3656.44 | 1909.02 |
| 3684.42 | 1909.02 | 3686.74 | 1909.01 | 3698.14 | 1909.01 | 3718.09 | 1909 | 3758.87 | 1909 |
| 3765.66 | 1908.95 | 3768.39 | 1908.91 | 3773.03 | 1908.8 | 3776.22 | 1908.74 | 3779.3 | 1908.67 |
| 3789.03 | 1908.48 | 3798.21 | 1908.25 | 3815.19 | 1908.01 | 3815.25 | 1908 | 3844.53 | 1908 |
| 3849.79 | 1908.09 | 3853.97 | 1908.18 | 3865.14 | 1908.3 | 3873.64 | 1908.38 | 3874.08 | 1908.37 |
| 3880.11 | 1908.3 | 3889.96 | 1908.42 | 3916.65 | 1908.8 | 3924.13 | 1909 | 3925.14 | 1909 |
| 3928.78 | 1909.42 | 3929.39 | 1909.44 | 3931.94 | 1909.56 | 3936.47 | 1909.79 | 3938.3 | 1909.9 |
| 3939.25 | 1909.94 | 3941.88 | 1910 | 3943.54 | 1910.25 | 3948.19 | 1911 | 3951.71 | 1912 |
| 3953.28 | 1912.7 | 3954.04 | 1913 | 3954.36 | 1913.25 | 3957 | 1915.25 | 3959.05 | 1916.81 |
| 3959.61 | 1917.22 | 3960.94 | 1918.23 | 3962.37 | 1919.33 | 3964.58 | 1921 | 3969.95 | 1921 |
| 3973.77 | 1920.51 | 3976.24 | 1920.21 | 3977.75 | 1920.04 | 3981.21 | 1919.7 | 3982.28 | 1919.61 |
| 3984.34 | 1919.46 | 3985.52 | 1919.39 | 3987.51 | 1919.37 | 3989.04 | 1919.3 | 3990.81 | 1919.11 |
| 3991.05 | 1919 | 3992.91 | 1918 | 3993.7 | 1917.66 | 3995.35 | 1917 | 3995.62 | 1916.98 |
| 3996.57 | 1916.81 | 3997.94 | 1916.85 | 3998.61 | 1916.85 | 4000.25 | 1916.76 | 4001.15 | 1916.6 |
| 4002.1 | 1916.46 | 4003.72 | 1916.09 | 4004.4 | 1915.83 | 4004.97 | 1915.46 | 4005.74 | 1915 |
| 4009.7 | 1914.43 | 4010.85 | 1914.32 | 4012.01 | 1914 | 4015.2 | 1913.41 | 4016.54 | 1913.19 |
| 4017.86 | 1913 | 4022.12 | 1913 | 4026.63 | 1912.99 | 4037.83 | 1912.03 | 4038.23 | 1912.02 |
| 4044.91 | 1912.62 | 4046.54 | 1912.76 | 4047.92 | 1912.77 | 4056.39 | 1913 | 4074.84 | 1913 |
| 4076.81 | 1913.24 | 4081.54 | 1914 | 4085.98 | 1915.09 | 4090.36 | 1916.27 | 4093.09 | 1917 |
| 4096.48 | 1917.95 | 4097.31 | 1918.13 | 4098.71 | 1918.36 | 4099.96 | 1918.54 | 4100.97 | 1918.66 |
| 4102.36 | 1918.8 | 4103.84 | 1918.85 | 4104.78 | 1918.76 | 4110.09 | 1918 | 4113.08 | 1917.61 |
| 4117.51 | 1917 | 4119.29 | 1916.77 | 4123.84 | 1916 | 4128.57 | 1915 | 4129.37 | 1914.82 |
| 4133.28 | 1914 | 4134.14 | 1913.81 | 4135.6 | 1913.52 | 4136.62 | 1913.3 | 4137.86 | 1913 |
| 4138.9 | 1912.72 | 4141.23 | 1912 | 4142.28 | 1911.64 | 4144.02 | 1911 | 4176.48 | 1911 |
| 4177.04 | 1911.29 | 4177.87 | 1912 | 4178.84 | 1912.54 | 4179.73 | 1913 | 4180.62 | 1913.49 |
| 4181.78 | 1914 | 4183.93 | 1915 | 4187.47 | 1915.73 | 4188.93 | 1916 | 4196.21 | 1916.81 |
| 4197.2 | 1916.89 | 4198.08 | 1916.93 | 4198.62 | 1916.93 | 4200.51 | 1916.64 | 4201.43 | 1916.52 |
| 4203.74 | 1916.15 | 4205.56 | 1915.88 | 4211.21 | 1915 | 4215.36 | 1914.37 | 4217.62 | 1914 |
| 4219.67 | 1913.7 | 4226.65 | 1913 | 4230.38 | 1912.7 | 4232.88 | 1912.48 | 4238.69 | 1912 |
| 4247.49 | 1911.59 | 4250.63 | 1911.54 | 4256.24 | 1911.38 | 4261 | 1911.33 | 4261.24 | 1911.32 |
| 4264.31 | 1911.3 | 4269.54 | 1911.24 | 4274.52 | 1911.28 | 4276.72 | 1911.29 | 4282.03 | 1911.48 |
| 4289.55 | 1911.83 | 4289.71 | 1911.83 | 4293.22 | 1912 | 4297.91 | 1912.65 | 4300.17 | 1913 |
| 4300.83 | 1913.14 | 4304.41 | 1914 | 4307.02 | 1914.7 | 4308.3 | 1915 | 4312.47 | 1916 |
| 4320.73 | 1916 | 4324.85 | 1915.27 | 4326.3 | 1915 | 4328.7 | 1914.66 | 4332.86 | 1914.02 |
| 4333.48 | 1913.78 | 4335.86 | 1913 | 4356.31 | 1913 | 4363.71 | 1914 | 4374.44 | 1914 |
| 4381.48 | 1913.21 | 4383.38 | 1913 | 4392.27 | 1912.96 | 4394.73 | 1912.96 | 4399.55 | 1912.94 |
| 4404.68 | 1912.93 | 4405.55 | 1912.94 | 4407.99 | 1912.93 | 4411.41 | 1912.95 | 4460.35 | 1912.51 |
| 4460.68 | 1912.51 | 4467.19 | 1912.43 | 4476.44 | 1912.31 | 4497.68 | 1912 | 4500.98 | 1911.99 |
| 4508.27 | 1911.98 | 4515.25 | 1911.96 | 4518.53 | 1911.96 | 4529.84 | 1911.97 | 4536.93 | 1911.97 |
| 4550.65 | 1912 | 4556.22 | 1912 | 4559.92 | 1912.01 | 4562.42 | 1912 | 4566.16 | 1912 |
| 4577.86 | 1911.69 | 4590.22 | 1911.65 | 4606.7 | 1911.92 | 4607.54 | 1912 | 4612.32 | 1912.91 |
| 4612.62 | 1913 | 4617.89 | 1914 | 4622.71 | 1914.88 | 4623.34 | 1915 | 4624.05 | 1915.28 |
| 4625.94 | 1916 | 4626.43 | 1916.73 | 4626.81 | 1917.01 | 4627.48 | 1917.32 | 4628.15 | 1917.53 |
| 4628.68 | 1917.74 | 4629.3 | 1918.06 | 4630.77 | 1918.91 | 4632.07 | 1919.61 | 4632.52 | 1919.79 |
| 4633.18 | 1920.13 | 4633.71 | 1920.27 | 4634.18 | 1920.3 | 4634.38 | 1920.46 | 4634.77 | 1920.63 |
| 4635.3 | 1920.63 | 4635.9 | 1920.8 | 4637.68 | 1920.83 | 4638.09 | 1920.99 | 4638.52 | 1921 |
| 4638.84 | 1921.06 | 4639.61 | 1921.13 | 4642.41 | 1921.62 | 4644.33 | 1921.98 | 4644.67 | 1922 |
| 4646.93 | 1922.53 | 4649.95 | 1923 | 4657.13 | 1924 | 4672.21 | 1924.89 | 4674.51 | 1925 |
| 4676.22 | 1925.03 | 4704.65 | 1926 | 4704.71 | 1926 | 4726.32 | 1927 | 4731.05 | 1927.41 |
| 4736.43 | 1928 | 4741.6 | 1928.36 | 4751.33 | 1929 | 4769.29 | 1929.8 | 4774.62 | 1930 |
| 4783.52 | 1930.32 | 4804.44 | 1931 | 4815.39 | 1931.43 | 4830.05 | 1932 | 4854.78 | 1932.68 |
| 4866.57 | 1933 | 4879.93 | 1933.36 | 4904.13 | 1934 | 4917.61 | 1934.02 | 4926.73 | 1934.04 |
| 4938.16 | 1934.04 | 4959.7 | 1934 | 4961.18 | 1934 | 4982.77 | 1933.64 | 5012.46 | 1933.24 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 5012.46 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 5012.46 | 59.93 | 59.93 | .1 | .3 |

CROSS SECTION OUTPUT  Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1912.24 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.11 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1912.13 | Reach Len. (ft) | 59.93 | 59.93 | 59.93 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8403.24 | | |
| E.G. Slope (ft/ft) | 0.001456 | Area (sq ft) | | 8403.24 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3255.97 | Top Width (ft) | | 3255.97 | | |
| Vel Total (ft/s) | 2.67 | Avg. Vel. (ft/s) | | 2.67 | | |
| Max Chl Dpth (ft) | 5.13 | Hydr. Depth (ft) | | 2.58 | | |
| Conv. Total (cfs) | 587093.2 | Conv. (cfs) | | 587093.2 | | |
| Length Wtd. (ft) | 59.93 | Wetted Per. (ft) | | 3258.06 | | |
| Min Ch El (ft) | 1907.00 | Shear (lb/sq ft) | | 0.23 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 5012.46 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.09 | Cum Volume (acre-ft) | | 600.88 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 268.43 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE  RS: -16297.8

INPUT
Description:
Station Elevation Data  num=  490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1917.17 | 498.87 | 1915.87 | 513.53 | 1915.86 | 518.46 | 1915.86 | 526.49 | 1915.85 |
| 539.17 | 1915.85 | 597.41 | 1915.81 | 601.11 | 1915.81 | 605.32 | 1915.8 | 689.92 | 1915.75 |
| 697.49 | 1915.75 | 706.79 | 1915.74 | 715.4 | 1915.74 | 719.23 | 1915.73 | 729.42 | 1915.73 |
| 732.74 | 1915.72 | 748.28 | 1915.71 | 753.29 | 1915.71 | 766.95 | 1915.7 | 770.93 | 1915.7 |
| 826.09 | 1915.67 | 827.08 | 1915.66 | 839.28 | 1915.66 | 851.24 | 1915.65 | 888.87 | 1915.63 |
| 896.86 | 1914.37 | 899.19 | 1914.02 | 901.85 | 1913.74 | 903.57 | 1913.49 | 907.65 | 1913.07 |
| 908.47 | 1912.97 | 910.28 | 1912.8 | 910.95 | 1912.77 | 919.49 | 1911.66 | 932.05 | 1908.66 |
| 945.45 | 1908.72 | 948.62 | 1908.71 | 956.63 | 1908.71 | 962.69 | 1908.72 | 963.6 | 1908.71 |
| 1019.62 | 1908.71 | 1077.99 | 1908.79 | 1110.09 | 1908.99 | 1121.99 | 1908.99 | 1127.58 | 1909 |
| 1135.13 | 1909 | 1147.78 | 1909.06 | 1152.95 | 1909.08 | 1165.52 | 1909.17 | 1171.52 | 1909.21 |
| 1172.38 | 1909.21 | 1190.67 | 1909.33 | 1209.47 | 1909.51 | 1225.9 | 1909.64 | 1230.24 | 1909.68 |
| 1237.18 | 1909.73 | 1237.78 | 1909.74 | 1268.22 | 1910 | 1277.49 | 1910.12 | 1286.15 | 1910.24 |
| 1288.13 | 1910.26 | 1310.46 | 1910.53 | 1320.63 | 1910.66 | 1322.28 | 1910.67 | 1332.03 | 1910.8 |
| 1332.67 | 1910.8 | 1359.91 | 1910.98 | 1365.45 | 1910.98 | 1366.01 | 1910.99 | 1377.05 | 1910.99 |
| 1385.97 | 1911 | 1460.93 | 1911 | 1468.83 | 1910.99 | 1476.29 | 1910.99 | 1477.95 | 1911 |
| 1484.12 | 1911 | 1504.06 | 1910.67 | 1506.12 | 1910.63 | 1523.15 | 1910.08 | 1525.09 | 1910.04 |
| 1525.72 | 1910 | 1543.59 | 1909.75 | 1554.99 | 1909.6 | 1556.86 | 1909.58 | 1566.12 | 1909.53 |
| 1582.65 | 1909.43 | 1600.08 | 1909 | 1641.52 | 1909 | 1642.99 | 1909.03 | 1660.28 | 1909.32 |
| 1669.78 | 1909.49 | 1676.47 | 1909.65 | 1683.33 | 1909.72 | 1688.17 | 1909.78 | 1691.06 | 1909.8 |
| 1706.93 | 1909.99 | 1708 | 1910 | 1723.11 | 1910.43 | 1723.72 | 1910.46 | 1729.51 | 1910.68 |
| 1732.36 | 1910.8 | 1733.38 | 1910.82 | 1738.23 | 1911 | 1740.69 | 1911.04 | 1742.05 | 1911.04 |
| 1745.01 | 1911 | 1751.82 | 1911 | 1754.56 | 1910.99 | 1757.58 | 1910.99 | 1762.12 | 1911 |
| 1804 | 1911 | 1812.09 | 1911.57 | 1814.67 | 1911.68 | 1817.33 | 1912 | 1821.91 | 1912.45 |
| 1823.31 | 1912.49 | 1824.65 | 1912.47 | 1825.81 | 1912.22 | 1826.64 | 1912 | 1828.29 | 1911.42 |
| 1828.89 | 1911.24 | 1829.77 | 1910.83 | 1831.64 | 1910.26 | 1832.21 | 1910.06 | 1833.4 | 1909.76 |
| 1835.66 | 1909 | 1837.29 | 1908.42 | 1838.57 | 1907.81 | 1840.86 | 1907 | 1876.28 | 1907 |
| 1893.64 | 1907.66 | 1901.9 | 1908 | 1918.9 | 1908.78 | 1920.57 | 1908.84 | 1926.95 | 1909 |
| 1934.18 | 1909 | 1937.88 | 1909.01 | 1942.74 | 1909.01 | 1966.91 | 1909.02 | 1979.74 | 1909.02 |
| 1986.53 | 1909.01 | 1994.12 | 1909.01 | 1998.46 | 1909 | 2011.83 | 1908.14 | 2013.82 | 1908 |
| 2015.45 | 1907.99 | 2018.59 | 1908 | 2022.53 | 1907.98 | 2028.76 | 1907.81 | 2034.36 | 1907.5 |
| 2038.47 | 1907.36 | 2039.95 | 1907.3 | 2044.54 | 1907 | 2048.31 | 1907 | 2051.46 | 1907.02 |
| 2058.07 | 1907.17 | 2068.82 | 1907.58 | 2076.77 | 1907.79 | 2079.92 | 1907.96 | 2086.15 | 1908.21 |
| 2097.57 | 1908.64 | 2101.88 | 1908.87 | 2104.09 | 1908.96 | 2104.72 | 1909 | 2241.82 | 1909 |
| 2243.67 | 1908.96 | 2245.23 | 1908.85 | 2247.89 | 1908.69 | 2250.93 | 1908.47 | 2251.67 | 1908.4 |
| 2257.42 | 1908 | 2266.28 | 1907.78 | 2271.61 | 1907.62 | 2282.11 | 1907.35 | 2288.37 | 1907.21 |
| 2291.96 | 1907.17 | 2303.68 | 1907.11 | 2317.38 | 1907.03 | 2318.42 | 1907.01 | 2320.77 | 1907.04 |
| 2323.29 | 1907.09 | 2363.26 | 1908 | 2367.41 | 1908.11 | 2395.75 | 1908.63 | 2403.95 | 1908.74 |
| 2415.25 | 1908.78 | 2423.88 | 1908.8 | 2427.8 | 1908.79 | 2431.52 | 1908.79 | 2459.73 | 1908.82 |
| 2490.72 | 1908.86 | 2495.2 | 1908.88 | 2496.86 | 1908.88 | 2517.22 | 1908.97 | 2522.52 | 1909 |
| 2604.01 | 1909 | 2639.35 | 1908.99 | 2663.82 | 1909 | 2748.1 | 1909 | 2750.23 | 1909.03 |
| 2786.18 | 1909.38 | 2849.69 | 1910 | 2883.94 | 1910 | 2901.29 | 1910.5 | 2908.33 | 1910.65 |
| 2911.2 | 1910.75 | 2919.29 | 1910.9 | 2922.23 | 1910.91 | 2947.98 | 1910.7 | 3021.87 | 1910.12 |
| 3036.29 | 1910 | 3189.03 | 1910 | 3199.4 | 1909.71 | 3204.33 | 1909.58 | 3206.17 | 1909.54 |
| 3210.21 | 1909.41 | 3217.5 | 1909.21 | 3226.8 | 1909 | 3243.5 | 1909 | 3267.3 | 1909.2 |
| 3271.85 | 1909.23 | 3275.36 | 1909.26 | 3294.88 | 1909.45 | 3304.31 | 1909.54 | 3309.23 | 1909.58 |
| 3313.67 | 1909.63 | 3314.42 | 1909.63 | 3319.53 | 1909.68 | 3327.77 | 1909.75 | 3348.92 | 1909.94 |
| 3351.69 | 1909.97 | 3356.98 | 1910 | 3536.94 | 1910 | 3543.78 | 1909.85 | 3546.25 | 1909.79 |
| 3550.56 | 1909.7 | 3552.61 | 1909.65 | 3557.82 | 1909.55 | 3569.26 | 1909.28 | 3573.72 | 1909.22 |
| 3576.29 | 1909.16 | 3594.72 | 1909 | 3595.18 | 1909 | 3612.8 | 1908.92 | 3614.87 | 1908.9 |
| 3621.09 | 1908.86 | 3649.29 | 1908.72 | 3670.79 | 1908.65 | 3671.3 | 1908.64 | 3673.83 | 1908.65 |
| 3677.99 | 1908.58 | 3684.58 | 1908.59 | 3688.76 | 1908.54 | 3694.93 | 1908.49 | 3699.06 | 1908.45 |
| 3707.09 | 1908.4 | 3712.9 | 1908.35 | 3715.63 | 1908.34 | 3721.88 | 1908.3 | 3734.09 | 1908.3 |
| 3758.22 | 1908.09 | 3767.1 | 1908.01 | 3778.23 | 1908 | 3803.09 | 1908 | 3818.84 | 1907.99 |
| 3856.93 | 1907.99 | 3879.13 | 1908 | 3880.1 | 1907.99 | 3886.13 | 1908 | 3890.49 | 1908.16 |
| 3907.14 | 1909 | 3910.47 | 1909.43 | 3911.36 | 1909.53 | 3915.91 | 1910 | 3920.03 | 1910.62 |
| 3921.55 | 1910.82 | 3922.75 | 1911 | 3924.13 | 1911.15 | 3928.93 | 1912 | 3929.6 | 1912.47 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3931.28 | 1913.52 | 3935 | 1915.75 | 3937.04 | 1917 | 3940.37 | 1919 | 3941.99 | 1920 |
| 3945.84 | 1920 | 3948.62 | 1919.53 | 3951.55 | 1919 | 3956.42 | 1918.32 | 3961.75 | 1917.55 |
| 3964.12 | 1917.2 | 3965.62 | 1917 | 3968.85 | 1917 | 3970.06 | 1917.49 | 3971.46 | 1918 |
| 3974.04 | 1919 | 3975.72 | 1919.62 | 3976.62 | 1920 | 3978.41 | 1920.68 | 3979.17 | 1920.92 |
| 3979.74 | 1921.05 | 3981.97 | 1921.43 | 3986 | 1922.16 | 3987.29 | 1922.52 | 3987.63 | 1922.53 |
| 3988.53 | 1922.46 | 3993.52 | 1921.66 | 3994.13 | 1921.53 | 3996.19 | 1921 | 3999.04 | 1920.39 |
| 4000.97 | 1920 | 4001.98 | 1919.71 | 4003.71 | 1919 | 4006.23 | 1918 | 4006.98 | 1917.9 |
| 4009.19 | 1917.79 | 4011.04 | 1917.75 | 4012.68 | 1917.85 | 4014.98 | 1917.94 | 4017.56 | 1917.98 |
| 4018.91 | 1917.97 | 4022.06 | 1917.88 | 4023.39 | 1917.92 | 4033.83 | 1918.99 | 4034.96 | 1919 |
| 4036.12 | 1918.85 | 4037.94 | 1918.52 | 4040.75 | 1917.99 | 4042.14 | 1917.65 | 4043.45 | 1917.38 |
| 4045.67 | 1916.86 | 4047.34 | 1916.44 | 4049.85 | 1915.83 | 4053.2 | 1915 | 4054.67 | 1914.62 |
| 4060.59 | 1913 | 4092.07 | 1913 | 4094.49 | 1913.49 | 4096.55 | 1913.77 | 4098.46 | 1914 |
| 4100.47 | 1914.04 | 4101.88 | 1914.01 | 4102.61 | 1914.02 | 4103.13 | 1913.91 | 4106.67 | 1913.28 |
| 4110.25 | 1912.59 | 4113.2 | 1912 | 4116.56 | 1911.39 | 4118.54 | 1911 | 4126.97 | 1911 |
| 4127.99 | 1911.05 | 4133.55 | 1911.11 | 4135.22 | 1911.11 | 4137.9 | 1911.09 | 4144.96 | 1911.15 |
| 4151.24 | 1911 | 4157.01 | 1911.01 | 4159.32 | 1911.06 | 4165.65 | 1911.12 | 4166.85 | 1911.14 |
| 4170.29 | 1911.17 | 4192.88 | 1911.27 | 4214.81 | 1911.19 | 4215 | 1911.2 | 4223.41 | 1911 |
| 4237.75 | 1911 | 4237.79 | 1911.01 | 4247.28 | 1911.24 | 4249.3 | 1911.26 | 4256.51 | 1911.39 |
| 4267.61 | 1911.61 | 4278.42 | 1911.77 | 4278.79 | 1911.77 | 4287.58 | 1912 | 4310.71 | 1912 |
| 4311.83 | 1912.03 | 4316.45 | 1912.03 | 4319.98 | 1912 | 4333.69 | 1911.99 | 4339.15 | 1911.99 |
| 4346.42 | 1912 | 4365.08 | 1911.14 | 4367.12 | 1911.06 | 4372.32 | 1911 | 4374.56 | 1911 |
| 4375.81 | 1911.04 | 4387.62 | 1911.27 | 4395.01 | 1911.4 | 4397.12 | 1911.54 | 4398.22 | 1911.56 |
| 4401.79 | 1912 | 4406.88 | 1912.57 | 4408.16 | 1912.7 | 4409.71 | 1912.82 | 4411.19 | 1912.91 |
| 4412.6 | 1912.95 | 4415.34 | 1912.97 | 4420.15 | 1912.93 | 4426.01 | 1912.89 | 4428.28 | 1912.85 |
| 4431.28 | 1912.78 | 4432.61 | 1912.73 | 4433.42 | 1912.67 | 4435.75 | 1912.57 | 4440.89 | 1912.28 |
| 4444.41 | 1912 | 4451.19 | 1912 | 4455.15 | 1911.97 | 4468.55 | 1911.85 | 4469.14 | 1911.85 |
| 4482.58 | 1911.78 | 4488.12 | 1911.74 | 4489.07 | 1911.72 | 4503.7 | 1911.64 | 4536.21 | 1911.39 |
| 4538.77 | 1911.36 | 4574.11 | 1911 | 4584.38 | 1911 | 4588.01 | 1912 | 4591.48 | 1912.28 |
| 4593.96 | 1912.47 | 4600.38 | 1913 | 4601.34 | 1913.18 | 4603.97 | 1914 | 4605.58 | 1914.56 |
| 4607.92 | 1915.92 | 4610.5 | 1917 | 4612.44 | 1917.64 | 4613.9 | 1918.17 | 4616.4 | 1919 |
| 4617.26 | 1919.31 | 4620.11 | 1920.43 | 4621.63 | 1921 | 4624.22 | 1922 | 4625.85 | 1922.71 |
| 4626.63 | 1923 | 4627.3 | 1923.21 | 4628.69 | 1923.58 | 4629.78 | 1923.76 | 4630.28 | 1923.87 |
| 4639.02 | 1925 | 4641.71 | 1925.38 | 4642.82 | 1925.56 | 4644.53 | 1925.81 | 4646.74 | 1926.18 |
| 4647.52 | 1926.29 | 4649.71 | 1926.68 | 4651.31 | 1927 | 4662.32 | 1928 | 4668.22 | 1928.32 |
| 4668.54 | 1928.33 | 4674.89 | 1928.69 | 4675.06 | 1928.68 | 4692.51 | 1929 | 4702.25 | 1930 |
| 4707.93 | 1930 | 4719.38 | 1930.17 | 4724.71 | 1930.29 | 4726.6 | 1930.32 | 4738.99 | 1930.56 |
| 4752 | 1930.86 | 4755.02 | 1930.9 | 4757.12 | 1930.96 | 4759.19 | 1931 | 4764.18 | 1931.01 |
| 4772.45 | 1931.02 | 4778.91 | 1931.02 | 4789.75 | 1931.01 | 4793.71 | 1931 | 4812.39 | 1931 |
| 4828.91 | 1931.52 | 4842.56 | 1932 | 4858.62 | 1932.54 | 4862.04 | 1932.63 | 4862.8 | 1932.66 |
| 4870.88 | 1932.87 | 4875.22 | 1933 | 4879.21 | 1933.03 | 4890.68 | 1933.22 | 4893.42 | 1933.24 |
| 4894.6 | 1933.26 | 4896.78 | 1933.27 | 4901.34 | 1933.39 | 4905.1 | 1933.48 | 4934.03 | 1933.62 |
| 4951.05 | 1933.69 | 4960.3 | 1933.64 | 4965.31 | 1933.6 | 4966.3 | 1933.6 | 4973.16 | 1933.54 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4973.16 | .045 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | |
|---|---|---|---|---|---|---|
| 0 | 4973.16 | 88.24 | 88.24 | 88.24 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1912.15 | Element | Left OB | Channel | Right OB |
| Vel Head (ft) | 0.11 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1912.04 | Reach Len. (ft) | 88.24 | 88.24 | 88.24 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8491.05 | |
| E.G. Slope (ft/ft) | 0.001512 | Area (sq ft) | | 8491.05 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 3437.48 | Top Width (ft) | | 3437.48 | |
| Vel Total (ft/s) | 2.64 | Avg. Vel. (ft/s) | | 2.64 | |
| Max Chl Dpth (ft) | 5.04 | Hydr. Depth (ft) | | 2.47 | |
| Conv. Total (cfs) | 576139.4 | Conv. (cfs) | | 576139.4 | |
| Length Wtd. (ft) | 88.24 | Wetted Per. (ft) | | 3439.66 | |
| Min Ch El (ft) | 1907.00 | Shear (lb/sq ft) | | 0.23 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4973.16 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.13 | Cum Volume (acre-ft) | | 589.26 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 263.82 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -16386.0

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1917.17 | 529.96 | 1915.79 | 545.25 | 1915.79 | 545.72 | 1915.78 | 558.76 | 1915.78 |
| 571.99 | 1915.77 | 632.71 | 1915.73 | 636.57 | 1915.73 | 640.95 | 1915.72 | 729.18 | 1915.67 |
| 737.08 | 1915.66 | 749.03 | 1915.66 | 752.83 | 1915.65 | 759.76 | 1915.65 | 770.38 | 1915.64 |
| 773.85 | 1915.64 | 790.06 | 1915.63 | 795.28 | 1915.63 | 809.53 | 1915.62 | 813.68 | 1915.62 |
| 871.23 | 1915.58 | 871.83 | 1915.56 | 886.7 | 1913.63 | 908.56 | 1908.41 | 931.91 | 1908.5 |
| 943.12 | 1908.5 | 949.64 | 1908.51 | 993.89 | 1908.51 | 1035.71 | 1908.57 | 1102.96 | 1908.98 |
| 1110.22 | 1908.98 | 1115.02 | 1908.99 | 1134.96 | 1908.99 | 1142.24 | 1909 | 1154.22 | 1909 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1162.67 | 1909.06 | 1166.31 | 1909.09 | 1168.93 | 1909.12 | 1170.11 | 1909.12 | 1172.06 | 1909.14 |
| 1177.49 | 1909.19 | 1182.23 | 1909.23 | 1185.28 | 1909.26 | 1186.73 | 1909.27 | 1190.23 | 1909.31 |
| 1213.36 | 1909.5 | 1270.1 | 1910 | 1272.19 | 1910 | 1274.99 | 1910.04 | 1276.4 | 1910.05 |
| 1277.78 | 1910.08 | 1291.71 | 1910.26 | 1301.89 | 1910.39 | 1316.34 | 1910.48 | 1341.76 | 1910.68 |
| 1342.09 | 1910.68 | 1358.99 | 1910.84 | 1362.94 | 1910.88 | 1371.23 | 1910.95 | 1373.99 | 1910.98 |
| 1377.08 | 1911 | 1446.07 | 1911 | 1451.85 | 1910.92 | 1456.49 | 1910.86 | 1522.11 | 1910 |
| 1524.45 | 1909.98 | 1525.46 | 1909.98 | 1544.57 | 1909.57 | 1557 | 1909.34 | 1562.33 | 1909.24 |
| 1566.94 | 1909.18 | 1569.67 | 1909.14 | 1570.26 | 1909.14 | 1589.35 | 1909.03 | 1594.98 | 1909 |
| 1599.54 | 1909 | 1606.39 | 1908.82 | 1606.59 | 1908.82 | 1610.46 | 1908.76 | 1621.06 | 1908.72 |
| 1624.24 | 1908.73 | 1626.34 | 1908.73 | 1634.17 | 1908.77 | 1644.07 | 1908.92 | 1644.4 | 1908.92 |
| 1648.31 | 1909 | 1660.02 | 1909.13 | 1667.4 | 1909.18 | 1670.89 | 1909.22 | 1672.26 | 1909.24 |
| 1677.79 | 1909.3 | 1683.29 | 1909.38 | 1696.65 | 1909.59 | 1705.75 | 1909.58 | 1719.58 | 1909.34 |
| 1721 | 1909.18 | 1721.07 | 1909.18 | 1722.9 | 1909 | 1731.68 | 1909 | 1733.05 | 1909.09 |
| 1734.35 | 1909.2 | 1734.84 | 1909.25 | 1741.82 | 1910 | 1746.68 | 1910.22 | 1748.92 | 1910.4 |
| 1751.32 | 1910.55 | 1756.41 | 1911 | 1762.33 | 1911.52 | 1766.68 | 1911.63 | 1769.5 | 1911.69 |
| 1769.67 | 1911.68 | 1774.91 | 1911.98 | 1776.34 | 1912.08 | 1778.03 | 1912.18 | 1781.34 | 1912.41 |
| 1783.25 | 1912.53 | 1786.86 | 1912.63 | 1787.61 | 1912.72 | 1788 | 1912.73 | 1789.26 | 1912.82 |
| 1790.72 | 1913 | 1792.76 | 1913.31 | 1794.34 | 1913.45 | 1800.3 | 1913.96 | 1801.63 | 1914 |
| 1804.63 | 1914.01 | 1808.77 | 1914.01 | 1811.63 | 1914 | 1814.43 | 1913.41 | 1816.29 | 1913 |
| 1820.17 | 1912.2 | 1821.09 | 1912 | 1826 | 1910.98 | 1829.07 | 1910 | 1831.32 | 1909 |
| 1832.31 | 1908.54 | 1834.7 | 1907.46 | 1835.9 | 1907 | 1859.81 | 1907 | 1876.96 | 1907.66 |
| 1879.13 | 1907.74 | 1885.92 | 1908 | 1890.07 | 1908 | 1899.03 | 1908.28 | 1899.21 | 1908.29 |
| 1926.67 | 1909 | 1933.29 | 1909 | 1956.16 | 1909.01 | 1980.11 | 1909 | 1985.03 | 1909 |
| 2000.41 | 1908 | 2022.6 | 1907.31 | 2031.74 | 1907 | 2035.69 | 1907 | 2037.86 | 1907.1 |
| 2050.91 | 1907.57 | 2053.98 | 1907.69 | 2056.44 | 1907.77 | 2058.29 | 1907.85 | 2062.51 | 1908 |
| 2082.02 | 1908.79 | 2088.64 | 1909 | 2193.87 | 1909 | 2205.87 | 1908.65 | 2209.35 | 1908.56 |
| 2218.05 | 1908 | 2220.87 | 1907.88 | 2221.61 | 1907.84 | 2223.06 | 1907.79 | 2229.67 | 1907.49 |
| 2232.07 | 1907.42 | 2234.65 | 1907.38 | 2234.99 | 1907.36 | 2237.62 | 1907.26 | 2237.82 | 1907.26 |
| 2245.19 | 1907.19 | 2255.73 | 1907.01 | 2256.66 | 1907 | 2300.91 | 1907 | 2324 | 1907.53 |
| 2324.42 | 1907.53 | 2339.77 | 1908 | 2340.85 | 1908.01 | 2342.86 | 1908.04 | 2344.38 | 1908.04 |
| 2347.42 | 1908.06 | 2351.69 | 1908.06 | 2361.27 | 1908.23 | 2378.39 | 1908.46 | 2401.65 | 1908.54 |
| 2419.7 | 1908.58 | 2421.08 | 1908.58 | 2431.68 | 1908.56 | 2432.49 | 1908.56 | 2452.59 | 1908.58 |
| 2474.67 | 1908.62 | 2476.71 | 1908.62 | 2478.3 | 1908.63 | 2479.49 | 1908.63 | 2493.98 | 1908.69 |
| 2511.91 | 1908.78 | 2513.71 | 1908.79 | 2514.82 | 1908.79 | 2515.68 | 1908.8 | 2518.82 | 1908.81 |
| 2519.96 | 1908.82 | 2523.47 | 1908.83 | 2527.1 | 1908.85 | 2541.96 | 1908.91 | 2556.73 | 1909 |
| 2696.93 | 1909 | 2697.63 | 1909.01 | 2711.14 | 1909.07 | 2712.13 | 1909.07 | 2715.51 | 1909.09 |
| 2718.13 | 1909.09 | 2721.36 | 1909.12 | 2726.83 | 1909.16 | 2746.48 | 1909.28 | 2746.94 | 1909.29 |
| 2761.18 | 1909.37 | 2762.93 | 1909.39 | 2764.19 | 1909.39 | 2764.87 | 1909.4 | 2776.73 | 1909.47 |
| 2795.74 | 1909.6 | 2797.5 | 1909.61 | 2797.73 | 1909.62 | 2836.99 | 1910 | 2878.58 | 1910 |
| 2880.56 | 1910.07 | 2901.82 | 1910.48 | 2910.29 | 1910.63 | 2914.43 | 1910.65 | 2917.83 | 1910.68 |
| 2918.52 | 1910.68 | 3004.32 | 1910.01 | 3004.99 | 1910 | 3162.9 | 1910 | 3163.19 | 1909.99 |
| 3174.43 | 1909.73 | 3175.63 | 1909.71 | 3178.36 | 1909.63 | 3222.39 | 1909 | 3250.94 | 1909 |
| 3264.65 | 1909.12 | 3305.3 | 1909.47 | 3305.54 | 1909.47 | 3313.69 | 1909.52 | 3314.55 | 1909.52 |
| 3324.6 | 1909.57 | 3326.33 | 1909.59 | 3327.97 | 1909.59 | 3328.28 | 1909.6 | 3339.9 | 1909.64 |
| 3340.49 | 1909.64 | 3354 | 1909.69 | 3354.26 | 1909.7 | 3386.98 | 1910 | 3477.82 | 1910 |
| 3512.99 | 1909.22 | 3515.99 | 1909.17 | 3524.15 | 1909 | 3525.18 | 1909 | 3537.15 | 1908.92 |
| 3556.8 | 1908.81 | 3561.27 | 1908.79 | 3573.44 | 1908.73 | 3601.04 | 1908.56 | 3687.16 | 1908 |
| 3708.9 | 1908 | 3748.31 | 1907.63 | 3764.29 | 1907.49 | 3776.38 | 1907.38 | 3788 | 1907.25 |
| 3790.1 | 1907.24 | 3795.58 | 1907.24 | 3807.02 | 1907.05 | 3810.25 | 1907 | 3836.99 | 1907 |
| 3838.92 | 1907.04 | 3842.5 | 1907.06 | 3857.37 | 1907.91 | 3858.48 | 1907.96 | 3859.15 | 1908.04 |
| 3866.69 | 1909 | 3869.83 | 1909.41 | 3872.73 | 1909.77 | 3874.49 | 1910 | 3879.64 | 1911 |
| 3880.28 | 1911.13 | 3880.66 | 1911.18 | 3881.22 | 1911.3 | 3881.86 | 1911.38 | 3882.43 | 1911.48 |
| 3883.49 | 1911.69 | 3889.27 | 1913 | 3890.55 | 1913.26 | 3891.21 | 1913.28 | 3892.81 | 1913.39 |
| 3894.07 | 1913.44 | 3896.53 | 1913.28 | 3898.38 | 1913.24 | 3898.92 | 1913.2 | 3899.86 | 1913.22 |
| 3906.51 | 1913.42 | 3907.59 | 1913.49 | 3909.08 | 1913.56 | 3909.8 | 1913.56 | 3910.33 | 1913.61 |
| 3911.18 | 1913.61 | 3911.53 | 1913.57 | 3914.91 | 1913.55 | 3916.49 | 1913.44 | 3917.62 | 1913.39 |
| 3920.34 | 1913.33 | 3921.59 | 1913.33 | 3921.72 | 1913.34 | 3927.58 | 1913.59 | 3930.56 | 1913.76 |
| 3935.15 | 1914 | 3940.39 | 1914.3 | 3945.43 | 1914.6 | 3947.73 | 1914.75 | 3949.74 | 1914.87 |
| 3951.59 | 1915 | 3953.55 | 1915.02 | 3957.48 | 1915 | 3958.09 | 1915 | 3958.68 | 1914.97 |
| 3962.35 | 1914.74 | 3967.06 | 1914.41 | 3967.43 | 1914.39 | 3975.15 | 1914.09 | 3976.82 | 1914 |
| 3978.63 | 1913.97 | 3981.68 | 1914 | 3982.66 | 1914.13 | 3983.35 | 1914.2 | 3984.52 | 1914.27 |
| 3984.97 | 1914.28 | 3986.18 | 1914.28 | 3987.33 | 1914.25 | 3988.96 | 1914.15 | 3990.61 | 1914 |
| 3995.8 | 1913.59 | 4003.45 | 1913 | 4003.53 | 1912.99 | 4008.14 | 1912.7 | 4008.29 | 1912.71 |
| 4009.47 | 1912.68 | 4009.68 | 1912.7 | 4010.36 | 1912.69 | 4016.9 | 1912.64 | 4023.4 | 1912.69 |
| 4024.35 | 1912.72 | 4025.95 | 1912.75 | 4027.1 | 1912.76 | 4028.08 | 1912.8 | 4028.82 | 1912.81 |
| 4035.74 | 1913 | 4037.84 | 1912.99 | 4043.14 | 1912.99 | 4048.54 | 1912.98 | 4049.8 | 1912.97 |
| 4053.97 | 1912.98 | 4056.5 | 1912.98 | 4060.36 | 1913 | 4093.02 | 1913 | 4094.92 | 1912.9 |
| 4096.07 | 1912.83 | 4101.01 | 1912.55 | 4103.91 | 1912.38 | 4109.57 | 1912 | 4128.78 | 1911.15 |
| 4133 | 1911 | 4153.35 | 1911 | 4155.38 | 1911.07 | 4164.17 | 1911.44 | 4171.03 | 1911.72 |
| 4177.3 | 1912 | 4177.47 | 1912 | 4179.31 | 1912.16 | 4191.13 | 1913 | 4239.87 | 1913 |
| 4247.4 | 1912.99 | 4248.82 | 1912.98 | 4249.67 | 1912.99 | 4255.44 | 1912.99 | 4256.25 | 1913 |
| 4284.74 | 1913 | 4292.65 | 1912.18 | 4293.52 | 1912.08 | 4294.34 | 1912 | 4295.72 | 1912 |
| 4301.27 | 1911.98 | 4313.18 | 1911.94 | 4316.22 | 1911.94 | 4323.33 | 1911.9 | 4324.54 | 1911.9 |
| 4353.92 | 1911.43 | 4354.8 | 1911.41 | 4356.91 | 1911.41 | 4362.96 | 1911.28 | 4368.96 | 1911.06 |
| 4370.93 | 1911.06 | 4373.3 | 1911.03 | 4375.81 | 1911.01 | 4376.92 | 1911.01 | 4377.1 | 1911 |
| 4544.52 | 1911 | 4546.17 | 1911.38 | 4546.57 | 1911.49 | 4548.86 | 1912 | 4551.62 | 1912.63 |
| 4553.22 | 1913 | 4556.13 | 1913.64 | 4557.64 | 1914 | 4560.48 | 1914.65 | 4561.96 | 1915 |
| 4563.75 | 1915.67 | 4564.59 | 1916 | 4566.99 | 1917 | 4569 | 1917.87 | 4569.32 | 1918 |
| 4570.1 | 1918.36 | 4571.71 | 1919 | 4574.3 | 1920 | 4577.89 | 1921.33 | 4579.76 | 1922 |
| 4583.16 | 1923.19 | 4585.17 | 1923.85 | 4586.06 | 1924.13 | 4586.97 | 1924.39 | 4587.2 | 1924.47 |
| 4588.22 | 1924.75 | 4589.24 | 1925 | 4591.22 | 1925.7 | 4591.73 | 1926 | 4593.1 | 1926.69 |
| 4593.8 | 1927 | 4594 | 1927.02 | 4595.55 | 1927.66 | 4596.19 | 1927.89 | 4596.6 | 1928 |
| 4596.91 | 1928.01 | 4597.21 | 1928.12 | 4598.37 | 1928.31 | 4599.06 | 1928.46 | 4599.35 | 1928.54 |
| 4599.98 | 1928.64 | 4600.39 | 1928.74 | 4601.18 | 1929.01 | 4603.68 | 1930 | 4605.48 | 1930.01 |
| 4606.64 | 1930.01 | 4610.04 | 1930.02 | 4613.87 | 1930.02 | 4623.36 | 1930.23 | 4628.32 | 1930.31 |
| 4630.96 | 1930.36 | 4656.39 | 1931 | 4658.06 | 1931 | 4658.33 | 1930.99 | 4698.81 | 1930.28 |
| 4698.89 | 1930.28 | 4717 | 1930 | 4764.06 | 1930 | 4780.17 | 1930.46 | 4781.55 | 1930.51 |
| 4785.21 | 1930.61 | 4786.42 | 1930.65 | 4798.02 | 1931 | 4807.35 | 1931.37 | 4824.91 | 1932 |

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 4829.81 1932.11 4831.36 1932.14 4846.88 1932.47 4854.26 1932.57 4861.37  1932.7
 4864.09 1932.73 4864.91 1932.73 4866.57 1932.76 4867.28 1932.76  4870.4 1932.81
 4872.61 1932.84  4873.4 1932.84 4874.74 1932.86 4888.78    1933 4928.18    1933

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .045       0     .04 4928.18    .045

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
             0 4928.18           103.96  103.96  103.96             .1       .3

CROSS SECTION OUTPUT  Profile #PF 1

  E.G. Elev (ft)           1912.02    Element                    Left OB    Channel   Right OB
  Vel Head (ft)               0.11    Wt. n-Val.                             0.040
  W.S. Elev (ft)           1911.91    Reach Len. (ft)           103.96     103.96     103.96
  Crit W.S. (ft)                      Flow Area (sq ft)                    8456.55
  E.G. Slope (ft/ft)       0.001412   Area (sq ft)                         8456.55
  Q Total (cfs)           22400.00    Flow (cfs)                          22400.00
  Top Width (ft)           3233.60    Top Width (ft)                       3233.60
  Vel Total (ft/s)            2.65    Avg. Vel. (ft/s)                        2.65
  Max Chl Dpth (ft)           4.91    Hydr. Depth (ft)                        2.62
  Conv. Total (cfs)       596034.1    Conv. (cfs)                         596034.1
  Length Wtd. (ft)          103.96    Wetted Per. (ft)                     3235.78
  Min Ch El (ft)           1907.00    Shear (lb/sq ft)                        0.23
  Alpha                       1.00    Stream Power (lb/ft s)   4928.18       0.00       0.00
  Frctn Loss (ft)             0.15    Cum Volume (acre-ft)                  572.09
  C & E Loss (ft)             0.00    Cum SA (acres)                        257.06


Warning: Divided flow computed for this cross-section.

CROSS SECTION


RIVER: MOJAVE
REACH: MOJAVE             RS: -16490.0

INPUT
Description:
Station Elevation Data    num=     490
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0 1917.22  575.87 1915.73   592.2 1915.72  597.04 1915.71  605.71 1915.71
  619.41  1915.7  682.33 1915.66  686.33 1915.66  690.87 1915.65  782.29  1915.6
  790.47 1915.59  800.53 1915.58  813.97 1915.58  824.98 1915.57  828.57 1915.57
  845.37 1915.56  846.52 1915.55  850.78 1915.55  865.55 1915.54  874.01 1915.54
  875.09  1915.4  905.27 1908.19  937.51 1908.32  945.13 1908.31  948.77 1908.31
  957.78 1908.32  959.23 1908.32  961.45 1908.33  988.63 1908.33 1015.72 1908.37
 1061.13 1908.64 1114.28 1908.99 1152.43 1908.99 1153.47    1909 1164.01    1909
  1181.1 1909.15 1286.31 1909.99 1288.75    1910 1290.64    1910 1292.24 1910.02
 1292.93 1910.02 1296.13 1910.05 1297.58 1910.07 1298.21 1910.07 1317.29 1910.27
 1329.54  1910.4 1341.78 1910.52 1350.14 1910.59 1355.46 1910.63 1361.49 1910.67
 1363.67 1910.69 1365.81  1910.7 1366.22 1910.71 1370.04 1910.74 1374.31 1910.77
 1388.33 1910.85 1388.58 1910.85 1408.89 1910.95 1415.23 1910.98 1416.16 1910.99
    1419 1910.99 1428.07 1910.98 1442.33 1910.96 1445.76 1910.95 1450.13 1910.92
 1464.31 1910.83 1468.62 1910.79 1475.62 1910.73  1478.2 1910.71 1498.06 1910.52
 1501.16  1910.5 1510.92  1910.4 1520.42 1910.32 1550.38    1910 1553.28    1910
 1561.24 1909.78 1563.79 1909.72 1568.42  1909.6 1588.46    1909 1600.01 1908.55
  1606.7 1908.33 1609.61 1908.23 1612.86 1908.13 1614.51  1908.1 1615.73 1908.06
 1618.23    1908 1626.17    1908 1632.59 1908.02  1640.4 1908.02 1641.84 1908.03
 1644.75 1908.06 1647.04  1908.1 1651.19  1908.2 1652.02 1908.21 1655.36  1908.3
 1655.58  1908.3 1660.09 1908.39 1669.42 1908.62 1673.37 1908.72 1677.11  1908.8
 1679.29 1908.83 1685.81    1909 1696.14 1909.05 1701.12 1909.06 1704.99 1909.09
 1707.58 1909.09 1712.68 1909.08  1715.4  1909.1 1723.57 1909.04 1728.57 1909.01
 1729.06    1909 1731.45 1908.99 1735.67 1908.98 1743.15    1909 1748.73 1909.62
 1757.99 1910.68 1767.71 1911.77 1769.87    1912 1776.39 1912.99 1776.48    1913
 1781.43 1913.79 1783.71 1914.16 1787.49 1914.72 1789.27    1915 1806.43    1915
 1810.61 1914.99 1814.89    1915 1824.42    1915 1825.89 1914.57 1827.52    1914
 1829.42 1913.38 1831.38 1912.67 1833.27    1912 1834.79 1911.45  1836.1    1911
 1838.16 1910.17  1838.6    1910 1840.41 1909.18 1842.98    1908 1844.57 1907.21
 1845.02    1907 1863.12    1907  1866.8 1907.01 1868.74    1907 1877.39    1907
 1888.72 1907.42 1898.66  1907.8 1903.67    1908 1908.98 1908.14 1939.17    1909
 1940.07    1909 1941.37 1909.06 1942.39 1909.12 1943.45 1909.17 1948.26 1909.46
 1949.37 1909.46 1960.28  1909.6 1975.16 1909.27 1975.97 1909.27 1977.37 1909.25
 1979.28    1909 1983.06 1908.52 1984.18 1908.36 1985.48  1908.2 1987.29    1908
 1990.96 1907.84  1991.8  1907.8 1997.59  1907.5 1999.24 1907.44 2000.55  1907.4
 2003.63 1907.37 2012.45    1907 2043.81    1907 2045.17 1907.04 2046.35 1907.09
 2064.71    1908 2086.18  1908.8 2091.96    1909 2166.54    1909 2169.09 1908.87
 2171.19 1908.77 2174.76 1908.61 2176.59 1908.55 2182.96 1908.37 2190.32 1908.19
 2193.27 1908.09 2195.05    1908  2204.7 1907.39 2208.47 1907.16 2210.41 1907.09
 2214.73    1907 2222.72    1907 2224.99 1907.01 2225.52    1907 2287.42    1907
 2314.39 1907.35 2315.74 1907.37 2321.85 1907.45 2330.46 1907.62 2332.43 1907.64
 2337.79 1907.73 2350.67    1908 2352.26 1908.02    2357 1908.05 2361.01 1908.05
 2373.66 1908.22  2407.3 1908.34  2433.5 1908.39 2434.87 1908.39 2450.23 1908.37
 2450.75 1908.36 2463.84 1908.38  2478.2  1908.4 2480.07  1908.4 2481.88 1908.41
 2502.94  1908.5 2504.99 1908.52  2506.1 1908.52 2513.55 1908.56 2521.23 1908.59
 2531.61 1908.64 2542.35  1908.7 2543.18 1908.71 2544.71 1908.71 2546.22 1908.72
 2571.49    1909 2677.61    1909 2678.46 1909.01 2697.78 1909.17 2715.78 1909.29
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2716.49 | 1909.29 | 2726.15 | 1909.33 | 2727.48 | 1909.34 | 2731.06 | 1909.34 | 2733.46 | 1909.35 |
| 2743.92 | 1909.37 | 2756.84 | 1909.46 | 2778.69 | 1909.63 | 2787.29 | 1909.69 | 2788.4 | 1909.7 |
| 2794.46 | 1909.73 | 2795.93 | 1909.74 | 2797.7 | 1909.76 | 2798.68 | 1909.76 | 2821.36 | 1909.9 |
| 2835.34 | 1910 | 2893.8 | 1910 | 2894.03 | 1910.01 | 2898.6 | 1910.01 | 2906.14 | 1910.15 |
| 2919.9 | 1910.4 | 2920.52 | 1910.4 | 2926.39 | 1910.44 | 2931.88 | 1910.48 | 2932.68 | 1910.48 |
| 2993.39 | 1910 | 3143.99 | 1910 | 3162.77 | 1909.86 | 3179.11 | 1909.73 | 3198.22 | 1909.59 |
| 3211.04 | 1909.49 | 3211.4 | 1909.49 | 3238.31 | 1909.28 | 3239.05 | 1909.28 | 3251.31 | 1909.19 |
| 3265.35 | 1909 | 3286.89 | 1909 | 3289.36 | 1909.02 | 3294.88 | 1909.07 | 3395.7 | 1910 |
| 3423.28 | 1910 | 3423.81 | 1909.99 | 3434.21 | 1909.85 | 3466.4 | 1909.43 | 3466.78 | 1909.42 |
| 3469.38 | 1909.42 | 3491.98 | 1909.22 | 3503.75 | 1909.06 | 3510.99 | 1909.05 | 3513.63 | 1909.04 |
| 3518.6 | 1909 | 3537.52 | 1908.83 | 3560.95 | 1908.64 | 3601.14 | 1908.3 | 3621.67 | 1908.15 |
| 3622.13 | 1908.15 | 3627.11 | 1908.1 | 3635.15 | 1908.04 | 3636.02 | 1908.03 | 3642.93 | 1908 |
| 3643.71 | 1908 | 3658.89 | 1907.91 | 3664.77 | 1907.87 | 3687.55 | 1907.73 | 3693.56 | 1907.68 |
| 3707.89 | 1907.6 | 3719.35 | 1907.54 | 3728.08 | 1907.46 | 3729.62 | 1907.45 | 3741.79 | 1907.33 |
| 3742.45 | 1907.33 | 3758.44 | 1907.17 | 3759.81 | 1907.16 | 3774.16 | 1907 | 3820.49 | 1907 |
| 3822.53 | 1907.24 | 3828.72 | 1908 | 3836.62 | 1908.96 | 3836.97 | 1909 | 3844.85 | 1909.83 |
| 3849.09 | 1910.29 | 3855.93 | 1911 | 3863.01 | 1911.4 | 3869.99 | 1912 | 3876.39 | 1912.75 |
| 3880.06 | 1913 | 3883.87 | 1914 | 3887.57 | 1915 | 3888.58 | 1915.26 | 3891.51 | 1916 |
| 3893.35 | 1916.48 | 3895.81 | 1917 | 3899.15 | 1917.4 | 3900.1 | 1917.43 | 3903 | 1917.46 |
| 3904.23 | 1917.42 | 3905.69 | 1917.36 | 3909.21 | 1917.18 | 3911.08 | 1917.2 | 3911.95 | 1917.15 |
| 3912.99 | 1917.13 | 3914.91 | 1917 | 3915.12 | 1916.97 | 3916.46 | 1916.7 | 3918.58 | 1916.35 |
| 3919.54 | 1916.16 | 3920.54 | 1915.99 | 3922.3 | 1915.64 | 3924.52 | 1915.18 | 3926.47 | 1914.84 |
| 3931.79 | 1914 | 3934.37 | 1913.59 | 3937.76 | 1913 | 3940.63 | 1912.54 | 3943.82 | 1912 |
| 3949.77 | 1911 | 3954.13 | 1910.97 | 3954.77 | 1910.97 | 3957.02 | 1910.95 | 3960.25 | 1910.93 |
| 3969.19 | 1910.86 | 3971.68 | 1910.88 | 3973.71 | 1910.89 | 3973.97 | 1910.9 | 3986.44 | 1910.93 |
| 3988.8 | 1911 | 3989.1 | 1911.32 | 3989.65 | 1911.76 | 3990 | 1912 | 3990.76 | 1912.37 |
| 3991.52 | 1912.72 | 3991.98 | 1912.91 | 3992.26 | 1913 | 3995.9 | 1913.65 | 3996.36 | 1914 |
| 3997.06 | 1914.46 | 3997.23 | 1914.6 | 3997.85 | 1915 | 3998.24 | 1915.02 | 3998.72 | 1915.11 |
| 3999.59 | 1915.19 | 4000.52 | 1915.15 | 4001.62 | 1915 | 4002.25 | 1914.79 | 4003.19 | 1914.62 |
| 4005.77 | 1914 | 4008.09 | 1913.39 | 4008.66 | 1913.28 | 4010.6 | 1913 | 4012.22 | 1912.53 |
| 4013.73 | 1912 | 4015.2 | 1911.46 | 4016.7 | 1911 | 4020.11 | 1910.99 | 4033.26 | 1910.99 |
| 4041.49 | 1911 | 4067.14 | 1911 | 4070.53 | 1910.99 | 4073.04 | 1911 | 4254.07 | 1911 |
| 4261.81 | 1911.01 | 4264.73 | 1911.01 | 4287.46 | 1911.38 | 4309.72 | 1911.75 | 4310.76 | 1911.77 |
| 4313.72 | 1911.72 | 4314.05 | 1911.72 | 4318.62 | 1911.65 | 4320.5 | 1911.63 | 4321.57 | 1911.61 |
| 4326.3 | 1911.49 | 4336.7 | 1911.13 | 4338.33 | 1911.06 | 4339.86 | 1911.03 | 4341.37 | 1911.01 |
| 4351.95 | 1911.07 | 4356.46 | 1911.05 | 4361.95 | 1911.03 | 4363.82 | 1911.01 | 4364.52 | 1911.02 |
| 4366.75 | 1910.98 | 4370.13 | 1910.87 | 4376.48 | 1910.65 | 4382.64 | 1910.44 | 4383.37 | 1910.42 |
| 4389.83 | 1910.18 | 4393.73 | 1910.13 | 4395.59 | 1910.11 | 4398.06 | 1910.11 | 4403.59 | 1910.15 |
| 4404.8 | 1910.17 | 4405.96 | 1910.16 | 4406.25 | 1910.17 | 4411.93 | 1910.29 | 4444.56 | 1911 |
| 4522.02 | 1911 | 4523.27 | 1911.02 | 4524.05 | 1911.02 | 4525.53 | 1911.04 | 4527.07 | 1911.05 |
| 4529.69 | 1911.01 | 4529.8 | 1911 | 4532.25 | 1911 | 4535.86 | 1911.46 | 4539.78 | 1912 |
| 4543.44 | 1912.54 | 4548.25 | 1913 | 4563.47 | 1913.97 | 4564.49 | 1914.08 | 4569.3 | 1914.69 |
| 4572.23 | 1915 | 4573.21 | 1915.18 | 4579.71 | 1916 | 4584.89 | 1917 | 4588.6 | 1917.75 |
| 4589.6 | 1918 | 4590.47 | 1918.86 | 4590.58 | 1919 | 4590.95 | 1919.34 | 4592.59 | 1921 |
| 4593.48 | 1922 | 4593.79 | 1922.3 | 4594.4 | 1923 | 4595.34 | 1924 | 4596.2 | 1924.76 |
| 4596.42 | 1925 | 4597.31 | 1925.9 | 4598.32 | 1927 | 4599.46 | 1928.15 | 4600.95 | 1929.74 |
| 4601.22 | 1930 | 4602.18 | 1931 | 4605.82 | 1931.02 | 4606.54 | 1931.03 | 4610.14 | 1931 |
| 4612.42 | 1931 | 4617.52 | 1930.99 | 4623.15 | 1930.99 | 4628.24 | 1930.89 | 4656.27 | 1930.33 |
| 4656.67 | 1930.33 | 4659.8 | 1930.23 | 4660.2 | 1930.23 | 4667.17 | 1930 | 4688.91 | 1929.6 |
| 4695.25 | 1929.49 | 4727.19 | 1929 | 4765.97 | 1929 | 4793.49 | 1929.55 | 4817.92 | 1930 |
| 4818.9 | 1930.03 | 4820.07 | 1930.05 | 4844.89 | 1930.68 | 4857.75 | 1931 | 4871.56 | 1931.3 |
| 4892.45 | 1931.78 | 4898.58 | 1931.91 | 4901.83 | 1932 | 4913 | 1932.14 | 4913.98 | 1932.15 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4913.98 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 4913.98 | 145.78 | 145.78 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1911.87 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.11 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1911.76 | Reach Len. (ft) | 145.78 | 145.78 | 145.78 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8463.49 | | |
| E.G. Slope (ft/ft) | 0.001552 | Area (sq ft) | | 8463.49 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3477.10 | Top Width (ft) | | 3477.10 | | |
| Vel Total (ft/s) | 2.65 | Avg. Vel. (ft/s) | | 2.65 | | |
| Max Chl Dpth (ft) | 4.76 | Hydr. Depth (ft) | | 2.43 | | |
| Conv. Total (cfs) | 568606.5 | Conv. (cfs) | | 568606.5 | | |
| Length Wtd. (ft) | 145.78 | Wetted Per. (ft) | | 3479.84 | | |
| Min Ch El (ft) | 1907.00 | Shear (lb/sq ft) | | 0.24 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4913.98 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.25 | Cum Volume (acre-ft) | | 551.90 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 249.06 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -16635.8

INPUT

Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1917.29 | 635.98 | 1915.64 | 652.45 | 1915.63 | 657.99 | 1915.63 | 667.02 | 1915.62 |
| 681.26 | 1915.61 | 746.69 | 1915.57 | 755.57 | 1915.57 | 850.6 | 1915.51 | 859.1 | 1915.5 |
| 869.55 | 1915.49 | 881.11 | 1915.49 | 882.21 | 1913.76 | 887.87 | 1913.22 | 896.97 | 1910.17 |
| 902.72 | 1908.02 | 929.64 | 1908.02 | 948.56 | 1908.09 | 959.86 | 1908.08 | 971.85 | 1908.1 |
| 975.25 | 1908.11 | 977.36 | 1908.11 | 978.07 | 1908.12 | 986.67 | 1908.12 | 996.16 | 1908.13 |
| 1012.09 | 1908.23 | 1132.16 | 1909 | 1162.75 | 1909 | 1204.07 | 1909.23 | 1215.34 | 1909.31 |
| 1238.02 | 1909.46 | 1266.63 | 1909.67 | 1309.92 | 1910 | 1311.41 | 1910 | 1326.59 | 1910.14 |
| 1334.87 | 1910.2 | 1336.61 | 1910.22 | 1346.86 | 1910.3 | 1355.13 | 1910.37 | 1356.52 | 1910.38 |
| 1363.42 | 1910.42 | 1364.36 | 1910.42 | 1379.55 | 1910.51 | 1384.77 | 1910.56 | 1385.1 | 1910.56 |
| 1389.36 | 1910.6 | 1394.62 | 1910.66 | 1398.69 | 1910.69 | 1423.4 | 1910.79 | 1436.49 | 1910.84 |
| 1441.89 | 1910.82 | 1448.55 | 1910.8 | 1449.3 | 1910.79 | 1456.75 | 1910.78 | 1468.12 | 1910.76 |
| 1471.01 | 1910.76 | 1491.6 | 1910.63 | 1558.27 | 1910.21 | 1578.48 | 1910.03 | 1581.21 | 1910 |
| 1581.78 | 1910 | 1589.89 | 1909.7 | 1590.53 | 1909.68 | 1603.1 | 1909.24 | 1605.19 | 1909.16 |
| 1609.89 | 1909 | 1621.04 | 1908.52 | 1632.79 | 1908 | 1704.49 | 1908 | 1709.24 | 1908.09 |
| 1711.99 | 1908.1 | 1713.18 | 1908.13 | 1714.81 | 1908.14 | 1716.55 | 1908.19 | 1718.51 | 1908.27 |
| 1721.52 | 1908.38 | 1724.14 | 1908.49 | 1728.87 | 1908.73 | 1729.01 | 1908.73 | 1734.51 | 1908.98 |
| 1735.24 | 1908.98 | 1749.79 | 1908.96 | 1751 | 1908.96 | 1764.12 | 1909 | 1769.65 | 1909.56 |
| 1774.03 | 1910 | 1777.08 | 1910.32 | 1783.79 | 1911 | 1787.03 | 1911.35 | 1791.39 | 1911.76 |
| 1794.2 | 1912 | 1799.28 | 1912.56 | 1807.4 | 1913 | 1809.56 | 1913.21 | 1811.83 | 1913.45 |
| 1812.77 | 1913.6 | 1813.11 | 1913.62 | 1814.49 | 1913.77 | 1815.21 | 1913.8 | 1815.5 | 1913.79 |
| 1816.98 | 1913.67 | 1819.94 | 1913.46 | 1820.3 | 1913.44 | 1823.32 | 1913.35 | 1826.33 | 1913.09 |
| 1827.77 | 1913 | 1835.89 | 1913 | 1837.72 | 1913.1 | 1838.44 | 1913.13 | 1839.89 | 1913 |
| 1840.92 | 1912.75 | 1847.13 | 1910.89 | 1849.85 | 1910 | 1853.07 | 1908.7 | 1855.64 | 1907.64 |
| 1857.09 | 1907 | 1862.45 | 1907 | 1864.63 | 1907.33 | 1869.43 | 1908 | 1873.73 | 1908.99 |
| 1873.88 | 1909 | 1875.53 | 1909.19 | 1876.8 | 1909.3 | 1877.51 | 1909.31 | 1878.25 | 1909.35 |
| 1883.61 | 1909.01 | 1884.95 | 1908.99 | 1887.28 | 1908.99 | 1888.55 | 1908.98 | 1889.72 | 1908.94 |
| 1890.76 | 1908.89 | 1891.74 | 1908.79 | 1892.08 | 1908.71 | 1892.44 | 1908.56 | 1893.08 | 1908 |
| 1894.28 | 1907.6 | 1896.2 | 1907 | 1903.6 | 1907 | 1906.15 | 1907.34 | 1909.59 | 1907.77 |
| 1910.53 | 1907.87 | 1911.17 | 1907.91 | 1912.11 | 1908 | 1916.83 | 1908.03 | 1917.83 | 1908.05 |
| 1941.74 | 1908.68 | 1945.44 | 1908.79 | 1949.53 | 1908.89 | 1950.36 | 1908.92 | 1953.82 | 1909 |
| 1962.43 | 1909 | 1963.3 | 1909.23 | 1966.08 | 1910 | 1967.67 | 1910.43 | 1969.83 | 1911 |
| 1971.85 | 1911.54 | 1977.54 | 1913.04 | 1981.04 | 1914 | 1984.01 | 1914 | 1986.45 | 1913.28 |
| 1988.36 | 1912.73 | 1990.86 | 1912 | 1991.54 | 1911.81 | 1994.35 | 1910.98 | 1997.89 | 1910 |
| 1999.49 | 1909.53 | 2001.34 | 1909 | 2002.84 | 1908.56 | 2005.91 | 1907.52 | 2007.69 | 1907 |
| 2018.86 | 1906.99 | 2022.98 | 1906.99 | 2033.72 | 1907 | 2038.24 | 1907 | 2040.08 | 1907.07 |
| 2050.77 | 1907.45 | 2053.94 | 1907.57 | 2058.44 | 1907.73 | 2060.53 | 1907.8 | 2062.27 | 1907.85 |
| 2064.61 | 1907.94 | 2066.63 | 1908 | 2068.59 | 1908.07 | 2069.4 | 1908.09 | 2081.24 | 1908.44 |
| 2094.55 | 1908.84 | 2095.39 | 1908.86 | 2095.95 | 1908.89 | 2099.82 | 1909 | 2105.18 | 1909 |
| 2108.19 | 1908.93 | 2108.38 | 1908.93 | 2116.59 | 1908.86 | 2123.93 | 1908.83 | 2126.51 | 1908.79 |
| 2127.85 | 1908.75 | 2133.75 | 1908.77 | 2133.99 | 1908.76 | 2135.62 | 1908.76 | 2137.02 | 1908.74 |
| 2142.89 | 1908.53 | 2144.22 | 1908.5 | 2159.11 | 1908 | 2162.02 | 1907.83 | 2165.68 | 1907.65 |
| 2172.64 | 1907.32 | 2180.11 | 1907 | 2265.76 | 1907 | 2269.09 | 1907.06 | 2270.88 | 1907.08 |
| 2276.49 | 1907.13 | 2281.53 | 1907.17 | 2295.41 | 1907.23 | 2326.64 | 1907.39 | 2351.7 | 1907.66 |
| 2377.17 | 1907.96 | 2380.29 | 1908 | 2391.46 | 1908.01 | 2418.64 | 1908.11 | 2453.89 | 1908.18 |
| 2455.25 | 1908.18 | 2465.39 | 1908.17 | 2475.89 | 1908.15 | 2481.39 | 1908.15 | 2487.2 | 1908.16 |
| 2489.61 | 1908.16 | 2493.39 | 1908.18 | 2498.08 | 1908.2 | 2498.95 | 1908.21 | 2500.59 | 1908.21 |
| 2512.81 | 1908.28 | 2517.21 | 1908.3 | 2518.5 | 1908.3 | 2519.82 | 1908.31 | 2525.26 | 1908.33 |
| 2530.89 | 1908.37 | 2531.79 | 1908.37 | 2534.09 | 1908.39 | 2535.41 | 1908.39 | 2590.41 | 1909 |
| 2676.09 | 1909 | 2683.36 | 1909.07 | 2684.78 | 1909.08 | 2686.41 | 1909.1 | 2696.82 | 1909.24 |
| 2699.87 | 1909.25 | 2703.45 | 1909.28 | 2715.12 | 1909.4 | 2715.52 | 1909.4 | 2730.64 | 1909.53 |
| 2740.86 | 1909.59 | 2742.34 | 1909.6 | 2750.27 | 1909.63 | 2756.97 | 1909.63 | 2758.31 | 1909.64 |
| 2767.52 | 1909.65 | 2777.31 | 1909.68 | 2800.78 | 1909.84 | 2820.5 | 1909.99 | 2824.93 | 1910 |
| 2871.78 | 1910 | 2892.81 | 1910.01 | 2923.42 | 1910.01 | 2923.98 | 1910 | 2927.63 | 1910 |
| 2935.61 | 1910.15 | 2936.44 | 1910.15 | 2944.58 | 1910.21 | 2944.63 | 1910.2 | 2952.4 | 1910.26 |
| 2953.32 | 1910.26 | 2986.92 | 1910 | 3134.72 | 1910 | 3139.39 | 1909.97 | 3142.61 | 1909.97 |
| 3147.34 | 1909.94 | 3160.96 | 1909.66 | 3163.63 | 1909.66 | 3166.03 | 1909.65 | 3175.05 | 1909.56 |
| 3175.63 | 1909.56 | 3242 | 1909.01 | 3242.59 | 1909 | 3248.99 | 1909 | 3251.58 | 1909.01 |
| 3330.89 | 1909.01 | 3333.03 | 1909.03 | 3394.25 | 1909.59 | 3397.09 | 1909.59 | 3402.71 | 1909.62 |
| 3419.66 | 1909.47 | 3457.71 | 1909.01 | 3464.3 | 1909 | 3540.25 | 1909 | 3542.48 | 1908.96 |
| 3586.56 | 1908 | 3588.91 | 1908 | 3592.22 | 1907.92 | 3599.33 | 1907.77 | 3619.72 | 1907.75 |
| 3653.57 | 1907.61 | 3668.01 | 1907.53 | 3678.01 | 1907.47 | 3685.74 | 1907.43 | 3692.26 | 1907.4 |
| 3720.08 | 1907.22 | 3730.63 | 1907.15 | 3754.72 | 1907 | 3806.18 | 1907 | 3806.55 | 1907.03 |
| 3808.61 | 1907.48 | 3809.6 | 1907.8 | 3809.82 | 1907.85 | 3810.24 | 1908 | 3810.32 | 1908 |
| 3811.83 | 1908.32 | 3815.22 | 1909 | 3820.38 | 1910 | 3821.41 | 1910.24 | 3825.19 | 1911 |
| 3825.78 | 1912 | 3826.24 | 1912.97 | 3826.9 | 1914 | 3827.31 | 1914.6 | 3827.66 | 1915 |
| 3828.02 | 1915.2 | 3829.62 | 1916 | 3831.33 | 1916.63 | 3832.3 | 1917 | 3835.09 | 1918 |
| 3838.03 | 1919 | 3839.7 | 1919.63 | 3840.75 | 1920 | 3842.78 | 1920 | 3843.33 | 1919.93 |
| 3846.34 | 1919.41 | 3846.84 | 1919.31 | 3849.35 | 1919 | 3850.63 | 1918.89 | 3856.3 | 1918 |
| 3856.69 | 1917.95 | 3860.08 | 1917.23 | 3861.68 | 1916.92 | 3866.47 | 1916 | 3869.74 | 1915.23 |
| 3870.62 | 1915 | 3871.4 | 1914.72 | 3874.04 | 1913.71 | 3875.8 | 1913 | 3877.12 | 1912.56 |
| 3878.64 | 1912 | 3878.8 | 1912.01 | 3879.04 | 1912.12 | 3879.77 | 1912.11 | 3880.64 | 1912.14 |
| 3889.33 | 1913 | 3895.9 | 1913.13 | 3896.51 | 1913.13 | 3897.93 | 1913.25 | 3903.43 | 1913.91 |
| 3905.52 | 1913.96 | 3908.74 | 1913.95 | 3933.64 | 1913.3 | 3941.35 | 1913.12 | 3942.14 | 1913.09 |
| 3943.62 | 1913.07 | 3945.24 | 1913.01 | 3946.76 | 1913 | 3953.82 | 1912.68 | 3955.03 | 1912.62 |
| 3965.91 | 1911.82 | 3969.04 | 1911.64 | 3971.74 | 1911.46 | 3978.54 | 1911 | 3982.56 | 1910.6 |
| 3989.44 | 1910 | 4014.69 | 1909.98 | 4037.32 | 1909.98 | 4050.46 | 1909.99 | 4052.04 | 1909.99 |
| 4056.39 | 1910 | 4063.08 | 1910 | 4064.74 | 1910.4 | 4067.34 | 1911 | 4069.54 | 1911.5 |
| 4072.55 | 1911.93 | 4073.25 | 1912 | 4073.64 | 1912.02 | 4078.54 | 1912.2 | 4078.86 | 1912.22 |
| 4081.9 | 1912.3 | 4082.09 | 1912.3 | 4083.63 | 1912.37 | 4085.53 | 1912.37 | 4087.07 | 1912.35 |
| 4090.6 | 1912.2 | 4093.94 | 1912.02 | 4094.62 | 1912 | 4095.61 | 1911.91 | 4096.98 | 1911.76 |
| 4101.32 | 1911 | 4218.4 | 1911 | 4224.3 | 1910.75 | 4247.89 | 1910 | 4369 | 1910 |
| 4379.32 | 1910.22 | 4380.45 | 1910.23 | 4384.07 | 1910.29 | 4405.15 | 1910.99 | 4405.34 | 1911 |
| 4539.15 | 1911 | 4542.16 | 1911.44 | 4546.06 | 1912 | 4550.33 | 1912.4 | 4556.86 | 1913 |
| 4558.38 | 1913.34 | 4561.43 | 1914 | 4564.51 | 1914.66 | 4566.12 | 1915 | 4567.53 | 1915.29 |
| 4570.92 | 1916 | 4572.95 | 1916.44 | 4574.93 | 1917 | 4576.75 | 1917.53 | 4578.08 | 1918 |

```
 4578.77 1918.46 4579.73    1919 4580.43    1921 4581.17    1923 4581.76 1924.43
 4581.87 1924.55 4583.94 1925.99 4583.98 1926.01 4584.53  1926.6 4585.82 1928.25
 4586.58    1929 4587.01 1929.31 4587.87    1930 4588.55  1930.5 4589.56 1931.13
 4590.18 1931.36 4590.56 1931.47 4591.66 1931.69 4591.82 1931.66 4594.53 1931.85
 4595.52 1931.89 4602.52 1931.73 4626.12 1931.52 4684.26    1931 4691.55    1931
 4697.05 1931.07 4698.18 1931.06 4700.13 1931.06 4704.36    1931 4706.87    1931
  4709.3 1930.98  4710.7 1930.99 4715.25 1930.89  4726.1 1930.74 4729.26  1930.7
 4732.42 1930.65 4733.32 1930.63  4746.3 1930.36  4760.5 1930.03 4763.86 1930.02
 4765.34    1930 4775.38  1929.7 4779.48 1929.59 4780.23 1929.59 4787.62  1929.4
 4790.19 1929.35 4796.29 1929.34 4805.55 1929.23 4810.23 1929.17 4811.36 1929.16
 4822.75 1929.17  4832.2 1929.19 4845.56 1929.24 4847.85 1929.27 4848.49 1929.27
  4851.9 1929.31 4865.35  1929.5 4894.68 1929.98 4898.37 1929.98 4900.79    1930
 4904.51 1930.15 4908.43 1930.33 4926.28    1931 4930.69 1931.29 4932.17 1931.35

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .045       0     .04 4932.17    .045

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            0 4932.17           194.81  194.81  194.81             .1       .3

CROSS SECTION OUTPUT  Profile #PF 1

  E.G. Elev (ft)           1911.62    Element                  Left OB    Channel   Right OB
  Vel Head (ft)               0.12    Wt. n-Val.                           0.040
  W.S. Elev (ft)           1911.50    Reach Len. (ft)          194.81     194.81     194.81
  Crit W.S. (ft)                      Flow Area (sq ft)                  7958.31
  E.G. Slope (ft/ft)       0.001849   Area (sq ft)                       7958.31
  Q Total (cfs)           22400.00    Flow (cfs)                        22400.00
  Top Width (ft)           3397.40    Top Width (ft)                     3397.40
  Vel Total (ft/s)            2.81    Avg. Vel. (ft/s)                      2.81
  Max Chl Dpth (ft)           4.51    Hydr. Depth (ft)                      2.34
  Conv. Total (cfs)       520982.3    Conv. (cfs)                       520982.3
  Length Wtd. (ft)          194.81    Wetted Per. (ft)                   3401.90
  Min Ch El (ft)           1906.99    Shear (lb/sq ft)                      0.27
  Alpha                       1.00    Stream Power (lb/ft s)   4932.17      0.00       0.00
  Frctn Loss (ft)             0.38    Cum Volume (acre-ft)                524.43
  C & E Loss (ft)             0.00    Cum SA (acres)                      237.55


Warning: Divided flow computed for this cross-section.

CROSS SECTION


RIVER: MOJAVE
REACH: MOJAVE             RS: -16830.6

INPUT
Description:
Station Elevation Data    num=     490
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0 1917.33  759.26 1915.44  780.09 1915.42  787.12 1915.42  798.59 1915.41
  816.75 1915.39  874.94 1915.35  876.71 1913.63  879.03 1913.32  879.59 1913.04
  885.07 1907.99  895.07 1907.99  896.56    1908 1011.41    1908 1024.24 1908.11
 1038.58 1908.17  1050.9 1908.23  1052.1 1908.23 1057.89 1908.29 1065.35 1908.38
 1068.47 1908.41 1069.97 1908.43  1071.1 1908.44 1092.13 1908.66 1094.55 1908.68
 1124.99    1909  1214.5    1909 1283.37 1909.36 1287.88 1909.41 1294.06 1909.49
 1300.74 1909.59 1301.07 1909.59 1312.14 1909.77 1315.88 1909.83 1321.91 1909.94
  1323.2 1909.96 1324.15 1909.97 1326.32    1910 1432.31    1910 1470.12 1910.13
  1470.8 1910.12 1500.15 1910.01  1502.1    1910 1565.65    1910 1567.84 1910.64
 1569.28    1911 1570.43 1911.28 1573.41    1912 1581.39    1914 1584.16 1914.01
 1589.36 1914.01 1592.57    1914 1593.48    1914 1594.35 1913.99 1595.77 1913.76
 1597.09 1913.58 1599.33 1913.52 1603.51 1913.21 1605.27    1913 1606.74  1912.7
 1607.54 1912.55  1611.2    1912 1613.17 1911.71 1613.68 1911.63 1616.43    1911
 1620.75    1910 1627.72    1910 1628.68 1910.19 1633.17    1911 1637.77 1911.95
 1640.03  1912.3 1644.69    1913 1645.51 1913.12 1645.54 1913.11 1647.23 1913.02
 1648.58 1913.03  1650.8    1913  1651.7 1912.87 1655.43    1912 1659.14 1911.15
 1660.18 1910.92 1665.05    1910 1668.27 1909.39 1670.48    1909 1679.45    1909
 1680.09 1909.22  1682.5    1910 1684.68 1910.67 1685.78    1911 1686.74  1911.3
 1689.19 1912.05 1692.09    1913 1694.28 1913.68 1695.35    1914 1698.62    1915
  1701.9    1916 1704.87    1916 1707.69 1915.13 1710.19  1914.4 1712.32  1913.8
 1715.11    1913 1718.67 1911.99 1721.86    1911  1723.7 1910.49 1725.38    1910
 1727.71 1909.35 1728.91    1909 1767.67    1909 1774.61  1908.3 1777.38    1908
 1784.96 1907.88 1785.76 1907.87  1791.4 1907.79  1796.1 1907.72 1805.34 1907.63
 1812.94 1907.89 1815.66 1907.99 1816.12    1908 1830.45    1908    1832 1908.38
 1837.07 1909.59  1838.8    1910 1841.47 1910.08 1841.89 1910.12 1845.01  1910.3
 1849.88 1910.22 1851.59 1910.18 1851.73 1910.17 1853.49 1910.12 1853.64 1910.11
  1856.4    1910 1861.08    1910  1862.3 1909.99 1871.24 1909.99  1874.2    1910
 1875.75    1910 1876.42 1910.04 1880.74 1910.19  1882.6 1910.16 1886.68    1910
 1886.97    1910 1891.32  1909.6  1894.7    1909 1896.88 1908.64 1900.86    1908
 1903.34 1907.59 1906.96    1907 1907.24 1906.99 1911.46 1906.61 1914.36 1906.36
  1920.2    1906  1923.7 1905.79 1933.67 1905.93 1941.44 1905.87 1945.92 1905.87
 1954.17 1905.86 1958.03 1905.84 1960.81 1905.85 1977.92 1905.87 1979.21 1905.87
 1998.48 1905.96 2006.26 1905.96 2015.18 1905.99 2016.04 1905.99 2017.52    1906
 2019.08    1906 2020.55 1906.05 2020.74 1906.05 2033.12 1906.39 2033.92  1906.4
 2034.82 1906.39 2036.06 1906.35 2037.61 1906.37 2039.75 1906.37 2040.05 1906.39
 2040.68 1906.38 2041.53 1906.43 2041.82 1906.42 2045.87  1906.4 2050.41 1906.56
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2053.94 | 1906.62 | 2056.6 | 1906.66 | 2062.19 | 1906.74 | 2069.31 | 1906.85 | 2069.48 | 1906.85 |
| 2074.26 | 1907 | 2150.53 | 1907 | 2256.51 | 1907.95 | 2260.28 | 1907.99 | 2261.57 | 1908 |
| 2366.06 | 1908 | 2372.47 | 1908.05 | 2378.55 | 1908.1 | 2443.05 | 1908.5 | 2467.69 | 1908.66 |
| 2468 | 1908.66 | 2534.77 | 1908.93 | 2551.74 | 1909 | 2689.05 | 1909 | 2711.05 | 1909.18 |
| 2711.53 | 1909.19 | 2717.29 | 1909.19 | 2733.11 | 1909.22 | 2757.81 | 1909.3 | 2761.46 | 1909.32 |
| 2765.69 | 1909.33 | 2778.99 | 1909.4 | 2795.58 | 1909.47 | 2808.4 | 1909.53 | 2809.52 | 1909.54 |
| 2810.93 | 1909.54 | 2811.63 | 1909.55 | 2906.06 | 1909.99 | 2918.04 | 1909.99 | 2920.26 | 1910 |
| 2932.47 | 1910 | 2935.91 | 1910.01 | 2938.74 | 1910.03 | 2940.68 | 1910.03 | 2941.99 | 1910.04 |
| 2955.12 | 1910.09 | 2959.22 | 1910.08 | 2977.7 | 1910 | 2988.43 | 1909.49 | 2998.64 | 1909 |
| 3014.81 | 1909 | 3041.16 | 1908.99 | 3113 | 1908.99 | 3115.65 | 1909 | 3127.52 | 1909 |
| 3129.77 | 1908.99 | 3169.15 | 1908.99 | 3199.8 | 1909 | 3315.8 | 1909 | 3330.38 | 1908.84 |
| 3334.88 | 1908.8 | 3339.96 | 1908.76 | 3356.47 | 1908.6 | 3359.73 | 1908.57 | 3361.65 | 1908.55 |
| 3364.97 | 1908.52 | 3368.88 | 1908.48 | 3419.57 | 1908.02 | 3421.92 | 1908 | 3427.52 | 1908 |
| 3429.11 | 1907.97 | 3432.36 | 1907.9 | 3477.19 | 1907 | 3700.61 | 1907 | 3705.12 | 1907.4 |
| 3711.44 | 1908 | 3714.24 | 1908.25 | 3723.38 | 1909 | 3727.08 | 1909.33 | 3734.68 | 1910 |
| 3740.35 | 1910.6 | 3742.53 | 1910.74 | 3745.27 | 1910.99 | 3745.71 | 1911 | 3747.1 | 1911.31 |
| 3748.53 | 1911.47 | 3749.15 | 1911.58 | 3751.96 | 1911.93 | 3752.47 | 1911.99 | 3752.81 | 1912 |
| 3753.73 | 1912.33 | 3754.32 | 1912.58 | 3754.86 | 1912.69 | 3755.32 | 1912.73 | 3756.35 | 1912.99 |
| 3758.36 | 1912.99 | 3759.21 | 1912.98 | 3760.18 | 1912.99 | 3762.42 | 1913.19 | 3767.15 | 1913.58 |
| 3769.42 | 1913.66 | 3770.55 | 1913.68 | 3771.47 | 1913.67 | 3777.98 | 1913.89 | 3778.02 | 1913.9 |
| 3778.98 | 1913.98 | 3779.61 | 1913.98 | 3780.59 | 1914 | 3783.36 | 1914.12 | 3783.67 | 1914.14 |
| 3786.17 | 1914.26 | 3786.31 | 1914.28 | 3787.7 | 1914.35 | 3787.78 | 1914.36 | 3789.19 | 1914.44 |
| 3789.51 | 1914.47 | 3789.82 | 1914.48 | 3793.44 | 1914.81 | 3794.8 | 1914.94 | 3795.64 | 1914.94 |
| 3796.77 | 1914.96 | 3797.42 | 1915 | 3801.14 | 1915 | 3801.55 | 1914.95 | 3808.88 | 1914 |
| 3810.33 | 1913.82 | 3814.05 | 1913.39 | 3816.05 | 1913.17 | 3820.1 | 1912.71 | 3826.6 | 1912 |
| 3834.22 | 1911.19 | 3835.99 | 1911 | 3839.66 | 1910.61 | 3840.22 | 1910.54 | 3843.51 | 1910.19 |
| 3845.13 | 1910 | 3845.79 | 1910 | 3846.27 | 1910.09 | 3847.68 | 1910.34 | 3849.64 | 1910.64 |
| 3850.24 | 1910.74 | 3851.61 | 1911 | 3854.25 | 1911.62 | 3854.58 | 1911.69 | 3855.39 | 1911.83 |
| 3856.32 | 1911.94 | 3857.32 | 1912.02 | 3858.23 | 1912.08 | 3858.35 | 1912.08 | 3860.75 | 1912.17 |
| 3861.92 | 1912.18 | 3867.67 | 1912.21 | 3868.05 | 1912.2 | 3868.98 | 1912.15 | 3869.31 | 1912.11 |
| 3869.99 | 1912 | 3870.34 | 1911.93 | 3872.22 | 1911.51 | 3872.58 | 1911.4 | 3873.16 | 1911.24 |
| 3873.63 | 1911 | 3898.87 | 1911 | 3900.79 | 1911.08 | 3915.14 | 1911.79 | 3916.41 | 1911.85 |
| 3917.05 | 1911.89 | 3918.66 | 1911.97 | 3919.49 | 1912 | 3919.7 | 1912 | 3923.03 | 1913 |
| 3924.95 | 1913.59 | 3925.06 | 1913.64 | 3925.75 | 1913.85 | 3926.34 | 1914 | 3932.48 | 1914 |
| 3933.16 | 1913.95 | 3933.91 | 1913.87 | 3935.21 | 1913.71 | 3936.8 | 1913.46 | 3937.2 | 1913.39 |
| 3938.78 | 1913.09 | 3939.21 | 1913 | 3941.59 | 1912.46 | 3943.86 | 1912 | 3948.75 | 1911 |
| 3951.44 | 1910.41 | 3953.4 | 1910 | 3954.74 | 1909.98 | 3961.19 | 1909.96 | 3962.31 | 1909.95 |
| 3964.39 | 1909.96 | 3971.39 | 1909.85 | 3972.67 | 1909.85 | 3974.55 | 1909.87 | 3975.93 | 1909.87 |
| 3976.19 | 1909.86 | 3976.63 | 1909.87 | 3985.65 | 1910 | 3991.41 | 1910 | 4018.83 | 1909.56 |
| 4032.53 | 1909.35 | 4032.63 | 1909.35 | 4044.19 | 1909.25 | 4060.29 | 1909.1 | 4060.99 | 1909.09 |
| 4067.91 | 1909 | 4092.35 | 1909 | 4111.85 | 1909.02 | 4127.22 | 1909.06 | 4160.26 | 1909.07 |
| 4160.94 | 1909.06 | 4165.48 | 1909.01 | 4165.53 | 1909 | 4177.25 | 1909 | 4177.78 | 1909.01 |
| 4191.6 | 1909.01 | 4196.74 | 1909.02 | 4200.15 | 1909.02 | 4203.32 | 1909.03 | 4206.58 | 1909.03 |
| 4223.32 | 1909.44 | 4224.46 | 1909.46 | 4230.06 | 1909.48 | 4231.38 | 1909.5 | 4234.2 | 1909.52 |
| 4239.17 | 1909.58 | 4240.25 | 1909.59 | 4252.05 | 1909.94 | 4252.52 | 1909.95 | 4254.27 | 1909.95 |
| 4256.06 | 1909.97 | 4257.77 | 1909.97 | 4260.97 | 1909.99 | 4262.24 | 1909.99 | 4262.72 | 1910 |
| 4265.64 | 1910.13 | 4273.41 | 1911 | 4280.31 | 1911.94 | 4281.5 | 1911.96 | 4282.51 | 1911.97 |
| 4283.48 | 1911.94 | 4284.12 | 1911.91 | 4285.06 | 1911.93 | 4285.97 | 1911.91 | 4288.93 | 1911.83 |
| 4290.45 | 1911.81 | 4292.95 | 1911.76 | 4297.03 | 1911.58 | 4309.05 | 1911 | 4468.14 | 1911 |
| 4469.03 | 1911.1 | 4476.26 | 1912 | 4481.22 | 1912.49 | 4488.72 | 1913 | 4495.47 | 1914 |
| 4499.58 | 1914.76 | 4500.62 | 1915 | 4504.8 | 1916 | 4508.51 | 1916.9 | 4512.79 | 1917.93 |
| 4513.03 | 1918 | 4513.61 | 1918.99 | 4514.27 | 1920 | 4514.91 | 1921 | 4515.23 | 1921.51 |
| 4515.61 | 1922 | 4516.28 | 1923 | 4516.53 | 1923.4 | 4516.98 | 1924 | 4517.64 | 1925 |
| 4518.1 | 1925.67 | 4518.61 | 1926.43 | 4519.77 | 1927 | 4523.06 | 1927.72 | 4524.38 | 1928 |
| 4526.36 | 1928.41 | 4527.89 | 1928.64 | 4529.94 | 1929 | 4530.23 | 1929.01 | 4533.43 | 1929.43 |
| 4534.3 | 1929.55 | 4537.86 | 1930 | 4541.29 | 1930.41 | 4546.02 | 1931 | 4553.5 | 1932 |
| 4567.95 | 1932.53 | 4572.49 | 1932.7 | 4578.46 | 1932.91 | 4580.65 | 1933 | 4626.9 | 1933 |
| 4631.88 | 1932.84 | 4638.32 | 1932.6 | 4649.09 | 1932 | 4656.17 | 1931.8 | 4656.74 | 1931.8 |
| 4667.09 | 1931.58 | 4672.54 | 1931.46 | 4679.1 | 1931.32 | 4679.65 | 1931.3 | 4693.4 | 1931.03 |
| 4694.68 | 1931 | 4698.37 | 1930.9 | 4698.6 | 1930.89 | 4702.7 | 1930.78 | 4706.5 | 1930.67 |
| 4708.02 | 1930.63 | 4710.02 | 1930.57 | 4725.22 | 1930.12 | 4726.61 | 1930.07 | 4729.1 | 1930 |
| 4753.44 | 1930 | 4764.19 | 1929.99 | 4836.23 | 1929.99 | 4838.18 | 1930 | 4865.63 | 1930 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4865.63 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 4865.63 | 160.97 | 160.97 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1911.24 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.13 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1911.11 | Reach Len. (ft) | 160.97 | 160.97 | 160.97 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7628.79 | | |
| E.G. Slope (ft/ft) | 0.002039 | Area (sq ft) | | 7628.79 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3290.20 | Top Width (ft) | | 3290.20 | | |
| Vel Total (ft/s) | 2.94 | Avg. Vel. (ft/s) | | 2.94 | | |
| Max Chl Dpth (ft) | 5.31 | Hydr. Depth (ft) | | 2.32 | | |
| Conv. Total (cfs) | 496086.2 | Conv. (cfs) | | 496086.2 | | |
| Length Wtd. (ft) | 160.97 | Wetted Per. (ft) | | 3293.87 | | |
| Min Ch El (ft) | 1905.79 | Shear (lb/sq ft) | | 0.29 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4865.63 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.32 | Cum Volume (acre-ft) | | 489.57 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 222.60 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -16991.6

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1917.38 | 842.65 | 1915.36 | 847.32 | 1915.35 | 864.63 | 1915.31 | 878.03 | 1915.28 |
| 878.62 | 1915.28 | 879.03 | 1914.9 | 888.87 | 1908 | 1003.66 | 1908 | 1019.32 | 1908.13 |
| 1059.16 | 1908.54 | 1102.74 | 1909 | 1266.58 | 1909 | 1269.55 | 1909.04 | 1309.34 | 1909.46 |
| 1319.65 | 1909.64 | 1319.93 | 1909.64 | 1334.29 | 1909.91 | 1337.82 | 1909.99 | 1339.73 | 1910 |
| 1364.68 | 1910.59 | 1365.25 | 1910.6 | 1367.06 | 1910.64 | 1372.78 | 1910.76 | 1373.27 | 1910.76 |
| 1378.54 | 1910.86 | 1380.84 | 1910.9 | 1382.01 | 1910.9 | 1382.6 | 1910.91 | 1383.68 | 1910.92 |
| 1388.44 | 1910.92 | 1394.32 | 1910.91 | 1394.4 | 1910.9 | 1411.91 | 1910.95 | 1426.17 | 1911 |
| 1441.04 | 1911 | 1453.23 | 1910.87 | 1455.38 | 1910.82 | 1459.89 | 1910.72 | 1460.94 | 1910.71 |
| 1470.12 | 1910.63 | 1470.52 | 1910.61 | 1471.4 | 1910.59 | 1484.28 | 1910 | 1489.86 | 1909.91 |
| 1490.86 | 1909.9 | 1545.47 | 1909.02 | 1547.52 | 1909.01 | 1550.31 | 1909.01 | 1552.27 | 1909 |
| 1560.1 | 1908.99 | 1564.25 | 1908.99 | 1567.53 | 1909 | 1570.69 | 1909 | 1584.77 | 1909.39 |
| 1585.28 | 1909.4 | 1598.79 | 1909.6 | 1606.86 | 1909.64 | 1611.27 | 1909.52 | 1613.33 | 1909.55 |
| 1614.94 | 1909.49 | 1617.3 | 1909.39 | 1618.18 | 1909.4 | 1619.13 | 1909.4 | 1620.1 | 1909.39 |
| 1628.32 | 1909 | 1701.38 | 1909 | 1708.87 | 1909.13 | 1714.16 | 1909.15 | 1718.19 | 1909.2 |
| 1720.64 | 1909.24 | 1720.86 | 1909.25 | 1725.29 | 1909.25 | 1725.78 | 1909.26 | 1748.51 | 1909.29 |
| 1754.18 | 1909.33 | 1780.71 | 1909 | 1817.24 | 1909 | 1821.44 | 1908.65 | 1828.94 | 1908 |
| 1830.93 | 1907.83 | 1839.98 | 1907 | 1845.11 | 1906.57 | 1845.48 | 1906.54 | 1846.55 | 1906.47 |
| 1851.15 | 1906 | 1860.6 | 1905.03 | 1860.9 | 1905 | 1895.8 | 1905 | 1905.99 | 1905.58 |
| 1912.62 | 1905.98 | 1912.76 | 1905.99 | 1913.56 | 1906 | 1915.03 | 1906.08 | 1920.08 | 1906.36 |
| 1930.57 | 1906.99 | 1931.73 | 1907 | 2009.57 | 1907 | 2055.41 | 1907.63 | 2074.66 | 1907.89 |
| 2075.88 | 1907.86 | 2076.51 | 1907.88 | 2084.09 | 1908 | 2086.43 | 1908.13 | 2086.69 | 1908.16 |
| 2087.17 | 1908.19 | 2087.89 | 1908.22 | 2088.82 | 1908.27 | 2097.14 | 1908.7 | 2099.9 | 1908.76 |
| 2101.72 | 1908.77 | 2101.98 | 1908.78 | 2103.08 | 1908.78 | 2103.82 | 1908.77 | 2105.1 | 1908.77 |
| 2106.41 | 1908.74 | 2107.16 | 1908.71 | 2107.66 | 1908.68 | 2112.58 | 1908.63 | 2115.42 | 1908.51 |
| 2116.54 | 1908.47 | 2125.54 | 1908 | 2129.26 | 1907.89 | 2129.65 | 1907.88 | 2154.55 | 1907.1 |
| 2157.49 | 1907.1 | 2159.64 | 1907.08 | 2161.39 | 1907.08 | 2165.31 | 1907.05 | 2167.64 | 1907.04 |
| 2169.86 | 1907.02 | 2172.72 | 1907.02 | 2173.21 | 1907.01 | 2174.44 | 1907.01 | 2174.64 | 1907 |
| 2240.32 | 1907 | 2261.05 | 1907.09 | 2301.46 | 1907.25 | 2302.84 | 1907.25 | 2302.94 | 1907.24 |
| 2308.24 | 1907.22 | 2314.69 | 1907.22 | 2315.97 | 1907.24 | 2336.68 | 1907.34 | 2404.2 | 1907.77 |
| 2405.19 | 1907.78 | 2431.58 | 1907.78 | 2431.66 | 1907.77 | 2432.08 | 1907.82 | 2432.29 | 1907.8 |
| 2432.74 | 1907.85 | 2432.85 | 1907.84 | 2433.25 | 1907.88 | 2433.35 | 1907.87 | 2433.67 | 1907.9 |
| 2433.75 | 1907.89 | 2434.26 | 1907.93 | 2435.13 | 1907.96 | 2436.07 | 1908 | 2554.97 | 1908 |
| 2555.19 | 1908.01 | 2556.57 | 1908.01 | 2558.4 | 1908.03 | 2559.18 | 1908.03 | 2619.48 | 1908.46 |
| 2642.76 | 1908.63 | 2654.98 | 1908.69 | 2656.94 | 1908.7 | 2657.64 | 1908.7 | 2663.45 | 1908.73 |
| 2664.16 | 1908.74 | 2666.55 | 1908.75 | 2670.52 | 1908.77 | 2673.73 | 1908.79 | 2673.99 | 1908.8 |
| 2681.92 | 1908.84 | 2686.83 | 1908.87 | 2688.03 | 1908.88 | 2690.28 | 1908.89 | 2713.79 | 1909 |
| 2969.89 | 1909 | 2988.7 | 1908.12 | 2990.38 | 1908.05 | 2991.68 | 1908 | 3040.1 | 1908 |
| 3054.03 | 1908.12 | 3054.15 | 1908.13 | 3067.61 | 1908.25 | 3109.56 | 1908.62 | 3143.46 | 1909 |
| 3144.82 | 1909 | 3154.46 | 1908.93 | 3154.72 | 1908.92 | 3155.26 | 1908.92 | 3183.77 | 1908.7 |
| 3295.16 | 1908.01 | 3306.33 | 1908.01 | 3317.09 | 1908 | 3319.79 | 1908 | 3320.21 | 1907.99 |
| 3329.32 | 1907.73 | 3330.07 | 1907.71 | 3344.87 | 1907.33 | 3357.44 | 1907.01 | 3361.68 | 1907 |
| 3617.63 | 1907 | 3628.08 | 1906.99 | 3639.18 | 1906.97 | 3653.03 | 1906.97 | 3672.47 | 1907 |
| 3680.93 | 1907.81 | 3683.19 | 1908 | 3688.02 | 1908.67 | 3690.43 | 1909 | 3691.14 | 1909.1 |
| 3698.83 | 1910 | 3702.66 | 1910.5 | 3708.25 | 1911.12 | 3708.51 | 1911.16 | 3710.09 | 1911.36 |
| 3711.16 | 1911.48 | 3712.44 | 1911.64 | 3715.32 | 1912.02 | 3718.91 | 1912.48 | 3723.06 | 1913 |
| 3723.12 | 1913 | 3724.18 | 1913.11 | 3726.12 | 1913.3 | 3727.61 | 1913.42 | 3728.38 | 1913.5 |
| 3729.5 | 1913.59 | 3730.5 | 1913.68 | 3731.83 | 1913.78 | 3733.64 | 1913.92 | 3734.79 | 1914 |
| 3737.57 | 1914.2 | 3738.35 | 1914.26 | 3742.66 | 1915 | 3749.55 | 1915 | 3753.25 | 1914.8 |
| 3753.68 | 1914.78 | 3754.94 | 1914.69 | 3758.43 | 1914.48 | 3758.85 | 1914.45 | 3762.87 | 1914 |
| 3767.04 | 1913.53 | 3771.1 | 1913.06 | 3771.66 | 1913 | 3775.78 | 1912.52 | 3780.33 | 1912 |
| 3785.27 | 1911.42 | 3788.73 | 1911 | 3803.15 | 1911 | 3805.45 | 1911.6 | 3807 | 1912 |
| 3807.61 | 1912.14 | 3810.64 | 1912.77 | 3811.77 | 1913 | 3816.59 | 1914 | 3819.94 | 1914.73 |
| 3821.27 | 1915 | 3822.14 | 1915 | 3823.51 | 1914.75 | 3827.57 | 1914 | 3831.67 | 1913.27 |
| 3833.17 | 1913 | 3834.91 | 1912.69 | 3839.54 | 1912 | 3845.83 | 1911.72 | 3845.97 | 1911.71 |
| 3846.9 | 1911.68 | 3850.45 | 1911.51 | 3857.46 | 1911.27 | 3862.95 | 1911.02 | 3865.18 | 1911.01 |
| 3865.78 | 1911 | 3874.82 | 1911 | 3880.98 | 1911.35 | 3883.33 | 1911.48 | 3892.32 | 1912 |
| 3896.22 | 1912.38 | 3898.27 | 1912.53 | 3899.57 | 1912.61 | 3904.05 | 1913 | 3906.84 | 1913.33 |
| 3912.87 | 1914 | 3914.23 | 1914.14 | 3915.63 | 1914.28 | 3916.87 | 1914.42 | 3920.06 | 1914.71 |
| 3920.47 | 1914.76 | 3921.47 | 1914.85 | 3922.67 | 1915 | 3923.75 | 1915.01 | 3927.31 | 1915.06 |
| 3929.11 | 1915.04 | 3931.21 | 1915.03 | 3933.14 | 1915 | 3940.17 | 1914.43 | 3945.62 | 1914 |
| 3949.85 | 1913.74 | 3950.7 | 1913.75 | 3950.87 | 1913.76 | 3955.65 | 1913.74 | 3962.76 | 1913.64 |
| 3966.99 | 1913.54 | 3968.61 | 1913.5 | 3970.53 | 1913.46 | 3979.52 | 1913.28 | 3983.68 | 1913.21 |
| 3988.37 | 1913 | 4003.64 | 1912.08 | 4004.82 | 1912 | 4005.36 | 1911.93 | 4010.82 | 1911 |
| 4011.01 | 1910.97 | 4016.88 | 1910 | 4021.98 | 1909.11 | 4022.64 | 1909 | 4028.57 | 1908.03 |
| 4029.32 | 1908.02 | 4030.03 | 1908.02 | 4031 | 1908.03 | 4037.64 | 1908.25 | 4039.9 | 1908.14 |
| 4052.92 | 1908.03 | 4053.76 | 1908.03 | 4056.42 | 1908.02 | 4057.19 | 1908.02 | 4059.59 | 1908 |
| 4074.15 | 1908 | 4098.25 | 1908.41 | 4099.88 | 1908.44 | 4101.04 | 1908.45 | 4126.28 | 1909 |
| 4160.07 | 1909 | 4160.62 | 1909.02 | 4162.8 | 1909.19 | 4165.59 | 1909.34 | 4166.87 | 1909.37 |
| 4167.67 | 1909.37 | 4168 | 1909.39 | 4169.51 | 1909.39 | 4171.07 | 1909.48 | 4171.44 | 1909.47 |
| 4173.24 | 1909.58 | 4173.93 | 1909.56 | 4174.26 | 1909.58 | 4174.52 | 1909.57 | 4187.66 | 1909.68 |
| 4207.61 | 1909.86 | 4209.65 | 1909.9 | 4211.87 | 1909.95 | 4215.89 | 1910.01 | 4216.32 | 1910.01 |
| 4220.78 | 1910.04 | 4221.32 | 1910.05 | 4232.53 | 1910.23 | 4232.87 | 1910.24 | 4233.65 | 1910.24 |
| 4239.42 | 1910.3 | 4244.57 | 1910.32 | 4245.16 | 1910.32 | 4246.1 | 1910.33 | 4247.63 | 1910.33 |
| 4255.85 | 1910.39 | 4258.19 | 1910.39 | 4260.84 | 1910.38 | 4266.17 | 1910.34 | 4272.31 | 1910.29 |
| 4272.73 | 1910.28 | 4280.83 | 1910.19 | 4281.66 | 1910.17 | 4282.48 | 1910.17 | 4283.51 | 1910.14 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4283.97 | 1910.14 | 4293.96 | 1910.05 | 4297.92 | 1910.01 | 4298.75 | 1910 | 4323.58 | 1910 |
| 4325.33 | 1910.02 | 4327.26 | 1910.03 | 4331.49 | 1910.14 | 4351.71 | 1910.66 | 4362.77 | 1910.99 |
| 4362.93 | 1911 | 4393 | 1911 | 4395.2 | 1910.96 | 4409.6 | 1910.71 | 4425.65 | 1910.51 |
| 4425.69 | 1910.51 | 4430.23 | 1910.82 | 4431.19 | 1910.89 | 4433.03 | 1910.99 | 4433.35 | 1911 |
| 4445.88 | 1911 | 4446.61 | 1911.15 | 4450.96 | 1912 | 4457.32 | 1913 | 4462.03 | 1913.71 |
| 4464.2 | 1914 | 4466.34 | 1914.4 | 4469.37 | 1915 | 4470.83 | 1915.45 | 4472.74 | 1916 |
| 4474.64 | 1916.6 | 4475.94 | 1917 | 4478.2 | 1917.7 | 4479.18 | 1918 | 4481.66 | 1918.75 |
| 4482.46 | 1919 | 4485.65 | 1919.94 | 4489.12 | 1921 | 4491.51 | 1921.78 | 4492.29 | 1922 |
| 4492.87 | 1922.37 | 4493.48 | 1923 | 4493.77 | 1923.38 | 4494.4 | 1924 | 4495.3 | 1924.96 |
| 4495.38 | 1925.04 | 4496.26 | 1926 | 4497.46 | 1926.54 | 4498.07 | 1927 | 4500.36 | 1927.85 |
| 4500.78 | 1928 | 4501.52 | 1928.15 | 4505.79 | 1929 | 4507.62 | 1929.47 | 4509.44 | 1930 |
| 4515.88 | 1931 | 4521.25 | 1931.47 | 4522.81 | 1931.6 | 4526.06 | 1931.88 | 4527.55 | 1932 |
| 4527.67 | 1932 | 4532.27 | 1932.32 | 4536.16 | 1932.58 | 4537.69 | 1932.68 | 4538.29 | 1932.71 |
| 4540.53 | 1932.85 | 4541.6 | 1932.89 | 4542.84 | 1932.95 | 4543.98 | 1932.97 | 4544.63 | 1932.97 |
| 4546.25 | 1932.93 | 4561.76 | 1932.61 | 4569.92 | 1932.45 | 4581.96 | 1932.16 | 4584.51 | 1932.11 |
| 4588.43 | 1932 | 4606.23 | 1931.41 | 4606.88 | 1931.38 | 4608.64 | 1931.32 | 4613.64 | 1931.14 |
| 4617.59 | 1931 | 4627.03 | 1930.83 | 4630.21 | 1930.78 | 4630.67 | 1930.77 | 4645.92 | 1930.54 |
| 4646.66 | 1930.52 | 4647.47 | 1930.51 | 4656.34 | 1930.38 | 4656.97 | 1930.37 | 4657.58 | 1930.37 |
| 4661.87 | 1930.31 | 4665.27 | 1930.28 | 4667.91 | 1930.25 | 4670.02 | 1930.22 | 4684.84 | 1930.11 |
| 4685.19 | 1930.1 | 4695.52 | 1930.03 | 4698.12 | 1930.01 | 4698.89 | 1930 | 4719.21 | 1929.99 |
| 4722.23 | 1929.99 | 4730.31 | 1929.98 | 4742.85 | 1929.98 | 4752.16 | 1929.97 | 4772.28 | 1929.97 |
| 4799.46 | 1929.99 | 4804.6 | 1929.99 | 4810.33 | 1930 | 4811.59 | 1930.04 | 4817.96 | 1930.19 |
| 4842.92 | 1930.83 | 4850.55 | 1931 | 4851.21 | 1931 | 4856.56 | 1931.01 | 4860.24 | 1931.01 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4860.24 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 4860.24 | 156.29 | 156.29 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1910.92 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.14 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1910.78 | Reach Len. (ft) | 156.29 | 156.29 | 156.29 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7572.30 | | |
| E.G. Slope (ft/ft) | 0.001934 | Area (sq ft) | | 7572.30 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3105.72 | Top Width (ft) | | 3105.72 | | |
| Vel Total (ft/s) | 2.96 | Avg. Vel. (ft/s) | | 2.96 | | |
| Max Chl Dpth (ft) | 5.78 | Hydr. Depth (ft) | | 2.44 | | |
| Conv. Total (cfs) | 509372.6 | Conv. (cfs) | | 509372.6 | | |
| Length Wtd. (ft) | 156.29 | Wetted Per. (ft) | | 3107.56 | | |
| Min Ch El (ft) | 1905.00 | Shear (lb/sq ft) | | 0.29 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4860.24 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.33 | Cum Volume (acre-ft) | | 461.48 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 210.78 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -17147.9

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1917.39 | 728 | 1915.69 | 732.06 | 1915.68 | 747.14 | 1915.64 | 758.8 | 1915.62 |
| 769.57 | 1915.59 | 780.8 | 1915.57 | 788.09 | 1915.55 | 789.36 | 1915.55 | 789.92 | 1915.54 |
| 791.86 | 1915.54 | 794.37 | 1915.53 | 798.28 | 1915.53 | 799.71 | 1915.52 | 801.45 | 1915.52 |
| 813.28 | 1915.49 | 815.16 | 1915.49 | 816.23 | 1915.48 | 817.83 | 1915.48 | 854 | 1915.39 |
| 864.12 | 1915.37 | 865.73 | 1915.37 | 865.99 | 1915.31 | 866.09 | 1915.31 | 868.28 | 1914.97 |
| 891.59 | 1907.8 | 913.15 | 1907.78 | 915.49 | 1907.77 | 930.12 | 1907.77 | 935.98 | 1907.76 |
| 943.24 | 1907.77 | 944.11 | 1907.77 | 969.16 | 1907.91 | 977.87 | 1907.89 | 990.02 | 1907.93 |
| 1002.91 | 1907.96 | 1012.3 | 1907.96 | 1016.42 | 1907.98 | 1019.48 | 1908 | 1045.36 | 1908.85 |
| 1050.93 | 1909 | 1237.75 | 1909 | 1242.74 | 1909.06 | 1267.92 | 1909.25 | 1274.52 | 1909.32 |
| 1280.53 | 1909.37 | 1310.79 | 1909.64 | 1319.05 | 1909.71 | 1319.62 | 1909.71 | 1333.7 | 1909.84 |
| 1334.03 | 1909.85 | 1345.09 | 1909.95 | 1345.89 | 1909.95 | 1351.63 | 1910 | 1356.37 | 1910.16 |
| 1358.21 | 1910.22 | 1370.73 | 1910.59 | 1372.95 | 1910.68 | 1374.59 | 1910.74 | 1375.81 | 1910.77 |
| 1377.17 | 1910.81 | 1379.36 | 1910.87 | 1383.07 | 1910.95 | 1386.24 | 1911 | 1393.26 | 1911 |
| 1394.36 | 1910.98 | 1402.46 | 1910.84 | 1404.45 | 1910.8 | 1405.02 | 1910.78 | 1416.67 | 1910.58 |
| 1419.82 | 1910.48 | 1426.13 | 1910.4 | 1435.22 | 1910.14 | 1440.09 | 1910 | 1441.65 | 1909.97 |
| 1442.42 | 1909.95 | 1444.99 | 1909.87 | 1448.43 | 1909.8 | 1462.37 | 1909.49 | 1463.62 | 1909.46 |
| 1478.33 | 1909.06 | 1478.93 | 1909.04 | 1480.48 | 1909 | 1481.81 | 1909 | 1483.7 | 1908.99 |
| 1501.77 | 1908.99 | 1511.32 | 1908.98 | 1513.56 | 1908.98 | 1526.13 | 1908.97 | 1532.81 | 1908.97 |
| 1546.66 | 1908.95 | 1565.51 | 1908.97 | 1580.99 | 1908.98 | 1581.08 | 1908.99 | 1581.48 | 1908.98 |
| 1583.54 | 1908.99 | 1590.34 | 1908.99 | 1592.55 | 1909 | 1596.25 | 1909 | 1596.8 | 1908.99 |
| 1609.3 | 1908.97 | 1618.13 | 1908.99 | 1627.69 | 1908.99 | 1633.07 | 1909 | 1636.71 | 1910 |
| 1639.17 | 1910.72 | 1640.22 | 1911 | 1643.28 | 1911.84 | 1643.9 | 1912 | 1646.38 | 1912.69 |
| 1647.52 | 1913 | 1649.44 | 1913.16 | 1649.98 | 1913.21 | 1656.49 | 1913.72 | 1657.58 | 1913.81 |
| 1658.6 | 1913.88 | 1659.11 | 1913.91 | 1660.82 | 1914 | 1661.57 | 1914 | 1663.14 | 1914.12 |
| 1664.67 | 1914.2 | 1664.77 | 1914.21 | 1666.06 | 1914.29 | 1667.22 | 1914.38 | 1668.7 | 1914.47 |
| 1671.73 | 1914.68 | 1673.08 | 1914.75 | 1678.95 | 1915 | 1683.59 | 1915.03 | 1684.32 | 1915.04 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1685.94 | 1915.05 | 1690.48 | 1915.35 | 1704.89 | 1916 | 1708.12 | 1916.23 | 1708.44 | 1916.25 |
| 1708.88 | 1916.26 | 1709.79 | 1916.31 | 1710.61 | 1916.35 | 1711.44 | 1916.38 | 1714.76 | 1916.47 |
| 1716.08 | 1916.53 | 1716.21 | 1916.53 | 1718.13 | 1916.57 | 1718.18 | 1916.58 | 1719.83 | 1916.52 |
| 1722.2 | 1916.39 | 1722.25 | 1916.39 | 1723.15 | 1916 | 1725.19 | 1915.14 | 1727.26 | 1914.28 |
| 1727.88 | 1914 | 1728.79 | 1913.57 | 1730.04 | 1913 | 1731.2 | 1912.39 | 1732.01 | 1912 |
| 1732.53 | 1911.76 | 1733.95 | 1911 | 1735.07 | 1910.42 | 1735.93 | 1910 | 1747.27 | 1910 |
| 1748.46 | 1909.97 | 1748.69 | 1910 | 1749.32 | 1910.16 | 1750.01 | 1910.3 | 1750.66 | 1910.4 |
| 1751.05 | 1910.41 | 1751.36 | 1910.38 | 1751.67 | 1910.37 | 1753.58 | 1910.07 | 1754.15 | 1909.95 |
| 1759.9 | 1909 | 1761.28 | 1908.91 | 1764.09 | 1908.6 | 1765.87 | 1908.44 | 1768.75 | 1908.24 |
| 1769.48 | 1908 | 1770.95 | 1907.45 | 1772.13 | 1907 | 1773.43 | 1906.52 | 1773.69 | 1906.43 |
| 1774.27 | 1906.25 | 1774.53 | 1906.16 | 1775.09 | 1905.93 | 1777.32 | 1905 | 1823.95 | 1905 |
| 1826.15 | 1905.23 | 1828.23 | 1905.23 | 1833.12 | 1905.39 | 1835.1 | 1905.46 | 1841.31 | 1905.7 |
| 1846.34 | 1905.9 | 1848.6 | 1906 | 1862.82 | 1906.44 | 1871.81 | 1906.75 | 1878.77 | 1907 |
| 2419.89 | 1907 | 2457.05 | 1907.51 | 2463.96 | 1907.55 | 2464.11 | 1907.55 | 2472.76 | 1907.59 |
| 2473.23 | 1907.59 | 2508.61 | 1907.87 | 2521.06 | 1907.98 | 2522.7 | 1907.98 | 2525.13 | 1907.99 |
| 2537.7 | 1907.99 | 2542.7 | 1908 | 2545.31 | 1908 | 2559.93 | 1908.07 | 2569.34 | 1908.12 |
| 2606.93 | 1908.29 | 2607.17 | 1908.29 | 2650.25 | 1908.5 | 2653.32 | 1908.51 | 2654.1 | 1908.52 |
| 2655.46 | 1908.52 | 2656.76 | 1908.53 | 2680 | 1908.65 | 2682.71 | 1908.66 | 2685.74 | 1908.68 |
| 2713.14 | 1908.78 | 2751.14 | 1908.94 | 2751.58 | 1908.94 | 2767.31 | 1909 | 2932.98 | 1909 |
| 2953.04 | 1908.33 | 2963.2 | 1908 | 3053.57 | 1908 | 3064.56 | 1908.01 | 3069.72 | 1908.01 |
| 3074.55 | 1908 | 3131.02 | 1908 | 3164.09 | 1907.91 | 3201.67 | 1907.82 | 3203.74 | 1907.79 |
| 3204.34 | 1907.8 | 3205.02 | 1907.8 | 3206.37 | 1907.78 | 3207.85 | 1907.78 | 3208.59 | 1907.77 |
| 3211.96 | 1907.78 | 3214.85 | 1907.74 | 3219.83 | 1907.74 | 3222.23 | 1907.7 | 3228.15 | 1907.68 |
| 3235.85 | 1907.64 | 3241.71 | 1907.57 | 3243.25 | 1907.56 | 3252.24 | 1907.43 | 3252.77 | 1907.42 |
| 3253.32 | 1907.42 | 3256.55 | 1907.36 | 3257.22 | 1907.35 | 3263.14 | 1907.24 | 3264.01 | 1907.23 |
| 3276.65 | 1907 | 3622.98 | 1907 | 3623.43 | 1907.03 | 3641.02 | 1908 | 3644.07 | 1908.39 |
| 3648.9 | 1909 | 3650.35 | 1909.19 | 3657.06 | 1910 | 3664.48 | 1910.91 | 3665.2 | 1911 |
| 3667.13 | 1911.22 | 3673.59 | 1911.93 | 3674.25 | 1912 | 3676.6 | 1912.23 | 3686.59 | 1913 |
| 3702.75 | 1913 | 3706.83 | 1912.73 | 3708.74 | 1912.61 | 3709.4 | 1912.56 | 3711.12 | 1912.45 |
| 3712.32 | 1912.36 | 3717.38 | 1912 | 3723.73 | 1912 | 3724.79 | 1911.93 | 3729.4 | 1911.91 |
| 3734.82 | 1911.83 | 3745.51 | 1911.83 | 3757.78 | 1911.92 | 3758.12 | 1911.92 | 3764.93 | 1911.95 |
| 3765.12 | 1911.96 | 3766.22 | 1911.93 | 3769.01 | 1911.92 | 3769.11 | 1911.91 | 3770.03 | 1911.9 |
| 3770.61 | 1911.88 | 3771.04 | 1911.84 | 3771.39 | 1911.83 | 3772.16 | 1911.79 | 3772.74 | 1911.74 |
| 3773.46 | 1911.69 | 3780.78 | 1911 | 3784.79 | 1910.65 | 3787 | 1910.46 | 3789.22 | 1910.25 |
| 3791.63 | 1910 | 3815.65 | 1910 | 3823.03 | 1909.87 | 3824.44 | 1909.84 | 3825.23 | 1909.83 |
| 3826.19 | 1909.83 | 3826.59 | 1909.82 | 3827.56 | 1909.81 | 3827.94 | 1909.8 | 3829.89 | 1909.78 |
| 3830.17 | 1909.77 | 3833.91 | 1909.72 | 3834.21 | 1909.72 | 3843.89 | 1909.61 | 3846.85 | 1909.6 |
| 3849.81 | 1909.61 | 3858.43 | 1909.75 | 3858.56 | 1909.75 | 3869.97 | 1910 | 3870.96 | 1910.04 |
| 3871.79 | 1910.06 | 3872.83 | 1910.11 | 3885.19 | 1910.6 | 3894.74 | 1911 | 3931.06 | 1911 |
| 3951.12 | 1910.06 | 3952.36 | 1910 | 3953.24 | 1909.99 | 3954.76 | 1909.99 | 3955.77 | 1910 |
| 3962.25 | 1910.65 | 3965.75 | 1911 | 3967.69 | 1911.14 | 3968.34 | 1911.19 | 3972.15 | 1911.42 |
| 3973.03 | 1911.46 | 3973.7 | 1911.47 | 3974.45 | 1911.51 | 3975.01 | 1911.52 | 3975.73 | 1911.52 |
| 3976.23 | 1911.51 | 3977.12 | 1911.47 | 3978.1 | 1911.41 | 3980.15 | 1911.26 | 3981.63 | 1911.12 |
| 3982.94 | 1911 | 3984.74 | 1910.82 | 3986.43 | 1910.63 | 3987.21 | 1910.55 | 3989.19 | 1910.31 |
| 3991.78 | 1909.98 | 3998.36 | 1909 | 4000.42 | 1908.69 | 4006.39 | 1908.48 | 4008.94 | 1908.36 |
| 4010.78 | 1908.29 | 4014.4 | 1908.16 | 4016.59 | 1908.01 | 4017.22 | 1908.01 | 4017.37 | 1908 |
| 4019.31 | 1908 | 4041.99 | 1907.46 | 4048.94 | 1907.3 | 4049.94 | 1907.3 | 4051.83 | 1907.31 |
| 4052.19 | 1907.32 | 4061.05 | 1907.51 | 4081.05 | 1907.99 | 4082.27 | 1907.99 | 4083.82 | 1908 |
| 4084.63 | 1908 | 4098.29 | 1908.92 | 4099.85 | 1909 | 4113.52 | 1909 | 4114.14 | 1909.2 |
| 4115.39 | 1909.57 | 4117.15 | 1910 | 4117.58 | 1910.09 | 4118.18 | 1910.19 | 4118.98 | 1910.27 |
| 4119.66 | 1910.31 | 4120.87 | 1910.29 | 4122.68 | 1910.2 | 4124.04 | 1910.1 | 4124.73 | 1910.02 |
| 4125.56 | 1909.91 | 4128.91 | 1909.38 | 4131.17 | 1909 | 4180.13 | 1909 | 4181.37 | 1909.01 |
| 4182.34 | 1909.01 | 4197.19 | 1909.03 | 4203.51 | 1909.03 | 4222.33 | 1909 | 4243.6 | 1909 |
| 4254.41 | 1909.16 | 4255.16 | 1909.17 | 4256.73 | 1909.2 | 4257.87 | 1909.2 | 4258.15 | 1909.21 |
| 4260.14 | 1909.25 | 4260.9 | 1909.26 | 4268 | 1909.4 | 4275.51 | 1909.58 | 4277.1 | 1909.61 |
| 4284.55 | 1909.79 | 4287.78 | 1909.87 | 4292.5 | 1910 | 4294.2 | 1910 | 4301.73 | 1910.32 |
| 4302.65 | 1910.36 | 4303.24 | 1910.4 | 4317.89 | 1911 | 4329.81 | 1911 | 4338.08 | 1910.62 |
| 4349.63 | 1910 | 4351.34 | 1909.99 | 4359.24 | 1909.97 | 4369.56 | 1909.95 | 4384.08 | 1909.91 |
| 4415.97 | 1909.99 | 4417.18 | 1910 | 4418 | 1910 | 4426.75 | 1911 | 4431.14 | 1911.42 |
| 4436.84 | 1912 | 4440.42 | 1912.48 | 4444.05 | 1913 | 4448.27 | 1913.83 | 4449.1 | 1914 |
| 4449.42 | 1914.11 | 4452.94 | 1915.24 | 4455.26 | 1916 | 4457.28 | 1916.64 | 4458.4 | 1917 |
| 4460.64 | 1917.73 | 4461.45 | 1918 | 4462.35 | 1918.29 | 4464.47 | 1919 | 4465.68 | 1919.44 |
| 4467.02 | 1920 | 4468.63 | 1920.75 | 4469.18 | 1921 | 4471.41 | 1921.99 | 4471.44 | 1922.01 |
| 4474.2 | 1923 | 4475.49 | 1923.48 | 4476.93 | 1924 | 4478.29 | 1924.56 | 4479.49 | 1925 |
| 4481.25 | 1925.66 | 4482.18 | 1926 | 4483.54 | 1926.58 | 4484.76 | 1927 | 4486.84 | 1927.77 |
| 4487.23 | 1927.83 | 4488.62 | 1928 | 4494.88 | 1928.7 | 4495.64 | 1928.81 | 4497.19 | 1929 |
| 4502.35 | 1929.39 | 4506.39 | 1930 | 4506.88 | 1930.03 | 4510.46 | 1930.19 | 4513.8 | 1930.35 |
| 4514.5 | 1930.39 | 4522.78 | 1931 | 4538.44 | 1931.02 | 4554.73 | 1931.04 | 4562.26 | 1931.05 |
| 4576.44 | 1931.03 | 4602.6 | 1931 | 4608.55 | 1930.82 | 4633.72 | 1930 | 4644.8 | 1929.73 |
| 4645.92 | 1929.7 | 4651.76 | 1929.57 | 4672.93 | 1929.15 | 4677.54 | 1929.05 | 4680.28 | 1929 |
| 4715.14 | 1929 | 4718.56 | 1929.07 | 4728.78 | 1929.26 | 4730.25 | 1929.28 | 4732.21 | 1929.32 |
| 4734.71 | 1929.36 | 4745.12 | 1929.56 | 4746.58 | 1929.59 | 4748.27 | 1929.62 | 4755.4 | 1929.76 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4755.4 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 4755.4 | 178.24 | 178.24 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1910.59 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.15 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1910.44 | Reach Len. (ft) | 178.24 | 178.24 | 178.24 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7211.97 | | |
| E.G. Slope (ft/ft) | 0.002300 | Area (sq ft) | | 7211.97 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |

| | | | | | |
|---|---|---|---|---|---|
| Top Width (ft) | 3131.00 | Top Width (ft) | | 3131.00 | |
| Vel Total (ft/s) | 3.11 | Avg. Vel. (ft/s) | | 3.11 | |
| Max Chl Dpth (ft) | 5.44 | Hydr. Depth (ft) | | 2.30 | |
| Conv. Total (cfs) | 467038.3 | Conv. (cfs) | | 467038.3 | |
| Length Wtd. (ft) | 178.24 | Wetted Per. (ft) | | 3133.35 | |
| Min Ch El (ft) | 1905.00 | Shear (lb/sq ft) | | 0.33 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4755.40 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.44 | Cum Volume (acre-ft) | | 434.96 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 199.59 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -17326.1

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1917.4 | 613.48 | 1916.01 | 616.95 | 1916 | 629.82 | 1915.97 | 639.76 | 1915.95 |
| 658.47 | 1915.91 | 664.66 | 1915.89 | 667.86 | 1915.89 | 669.99 | 1915.88 | 672.46 | 1915.88 |
| 673.31 | 1915.87 | 676 | 1915.87 | 686.01 | 1915.85 | 686.79 | 1915.84 | 689.86 | 1915.84 |
| 720.41 | 1915.77 | 741.77 | 1915.72 | 773.26 | 1915.65 | 791.98 | 1915.6 | 828.63 | 1915.52 |
| 829.29 | 1915.52 | 851.55 | 1915.47 | 852.7 | 1914.01 | 853.52 | 1913.99 | 855.62 | 1912.4 |
| 857.1 | 1912.39 | 858.22 | 1911.77 | 858.64 | 1911.77 | 858.82 | 1911.67 | 864.32 | 1911.65 |
| 866.45 | 1911.02 | 872.92 | 1911 | 874.14 | 1910.74 | 882.25 | 1910.64 | 883.23 | 1910.49 |
| 893.54 | 1907.35 | 902.91 | 1907.33 | 909.9 | 1907.32 | 917.21 | 1907.3 | 928.53 | 1907.3 |
| 946.13 | 1907.4 | 1002.63 | 1907.97 | 1005.02 | 1908 | 1005.95 | 1908.03 | 1021.44 | 1908.47 |
| 1022.37 | 1908.47 | 1024.31 | 1908.53 | 1025.91 | 1908.53 | 1030.39 | 1908.63 | 1033.24 | 1908.7 |
| 1036.6 | 1908.76 | 1039.84 | 1908.8 | 1045.26 | 1908.79 | 1050.6 | 1908.79 | 1051.78 | 1908.78 |
| 1053.8 | 1908.81 | 1058.15 | 1908.84 | 1075.48 | 1908.76 | 1076.68 | 1908.76 | 1123.06 | 1909 |
| 1258.81 | 1909 | 1277.74 | 1909.01 | 1306.01 | 1909.01 | 1324 | 1909.09 | 1328.16 | 1909.12 |
| 1329.24 | 1909.12 | 1332.7 | 1909.15 | 1363.48 | 1909.23 | 1392.02 | 1909.24 | 1403.54 | 1909.11 |
| 1409.6 | 1909.02 | 1412.11 | 1909 | 1456.6 | 1908.91 | 1492.85 | 1908.85 | 1506.68 | 1908.87 |
| 1518.87 | 1908.9 | 1546.91 | 1908.95 | 1555.03 | 1908.97 | 1565.67 | 1908.99 | 1568.7 | 1909 |
| 1571.64 | 1909 | 1586.31 | 1909.65 | 1590.74 | 1909.85 | 1594.46 | 1910 | 1596.04 | 1910.21 |
| 1602.58 | 1911 | 1609.99 | 1912 | 1612.95 | 1912.07 | 1615.9 | 1912 | 1618.7 | 1911.71 |
| 1619.09 | 1911.66 | 1623.76 | 1911.2 | 1625.62 | 1911 | 1630.61 | 1910.92 | 1635.59 | 1911 |
| 1644.15 | 1911.8 | 1646.21 | 1912 | 1649.98 | 1912.44 | 1651.48 | 1912.61 | 1654.42 | 1912.89 |
| 1656.12 | 1913 | 1658.2 | 1913.02 | 1662.49 | 1913.03 | 1664.38 | 1913.02 | 1665.82 | 1913.11 |
| 1678.7 | 1913.33 | 1680.57 | 1913.18 | 1681.71 | 1913.17 | 1684.35 | 1913 | 1686.55 | 1912.28 |
| 1687.47 | 1912 | 1688.22 | 1911.74 | 1690.75 | 1911 | 1694.07 | 1910 | 1696.91 | 1909.1 |
| 1697.51 | 1909 | 1701.64 | 1908.37 | 1706.92 | 1907.5 | 1708.96 | 1907 | 1710.3 | 1906.63 |
| 1712.68 | 1906 | 1716.27 | 1905 | 1724.77 | 1905 | 1729.84 | 1904.99 | 1736.86 | 1904.99 |
| 1748.46 | 1905 | 1749.03 | 1905.01 | 1762.28 | 1905.83 | 1763.77 | 1905.91 | 1764.75 | 1905.93 |
| 1766.35 | 1906 | 1770.77 | 1906.03 | 1773.89 | 1906.02 | 1791.15 | 1906.3 | 1793.77 | 1906.35 |
| 1797.39 | 1906.43 | 1798.64 | 1906.45 | 1800.86 | 1906.5 | 1813.11 | 1906.89 | 1821.77 | 1906.94 |
| 1823.1 | 1906.94 | 1825.46 | 1907 | 1901.63 | 1907 | 1904.48 | 1907.12 | 1908.62 | 1907.28 |
| 1911.72 | 1907.37 | 1917.31 | 1907.51 | 1919.47 | 1907.53 | 1920.67 | 1907.52 | 1921.23 | 1907.54 |
| 1928.17 | 1907.49 | 1934.11 | 1907.59 | 1941 | 1907.72 | 1946.94 | 1907.86 | 1955.03 | 1908 |
| 2010.95 | 1908 | 2013.54 | 1907.88 | 2023.95 | 1907.37 | 2031.87 | 1907 | 2096.2 | 1907 |
| 2194.81 | 1906.81 | 2196.7 | 1906.83 | 2198.72 | 1906.83 | 2200.27 | 1906.82 | 2203.37 | 1906.82 |
| 2212.99 | 1906.78 | 2221.88 | 1906.74 | 2263.52 | 1906.87 | 2304.27 | 1907 | 2420.52 | 1907 |
| 2421.12 | 1907.01 | 2447.63 | 1907.42 | 2465.4 | 1907.68 | 2467.15 | 1907.7 | 2483.66 | 1907.84 |
| 2484.17 | 1907.84 | 2500.77 | 1907.99 | 2502.68 | 1908 | 2538.07 | 1908 | 2542.47 | 1908.01 |
| 2546.09 | 1908.01 | 2598.93 | 1908.24 | 2601.06 | 1908.24 | 2664.04 | 1908.39 | 2706.49 | 1908.49 |
| 2709.45 | 1908.49 | 2716.48 | 1908.51 | 2721.5 | 1908.51 | 2726.37 | 1908.52 | 2729.11 | 1908.52 |
| 2774.02 | 1908.5 | 2822.5 | 1908.48 | 2876.61 | 1908.26 | 2899.72 | 1908.11 | 2913.67 | 1908.01 |
| 2915.36 | 1908 | 2918.01 | 1908 | 2926.56 | 1907.74 | 2930.13 | 1907.66 | 2932.23 | 1907.59 |
| 2932.49 | 1907.59 | 2934.85 | 1907.5 | 2935.08 | 1907.5 | 2940.09 | 1907.32 | 2940.46 | 1907.33 |
| 2943.1 | 1907.24 | 2943.4 | 1907.25 | 2961.56 | 1907.02 | 2965.99 | 1907.02 | 2978.23 | 1907.03 |
| 2990.19 | 1907.03 | 2998.98 | 1907.04 | 3023.17 | 1907.04 | 3025.4 | 1907.05 | 3034.22 | 1907.13 |
| 3034.69 | 1907.14 | 3065.68 | 1907.4 | 3070.93 | 1907.37 | 3076.41 | 1907.33 | 3082.59 | 1907.29 |
| 3086.79 | 1907.29 | 3087.63 | 1907.28 | 3090.75 | 1907.28 | 3102.93 | 1907.18 | 3106.11 | 1907.15 |
| 3114.4 | 1907.09 | 3124.08 | 1907.01 | 3125.63 | 1907 | 3143.96 | 1906.8 | 3144.58 | 1906.79 |
| 3157.31 | 1906.65 | 3159.46 | 1906.64 | 3168.75 | 1906.54 | 3174.22 | 1906.53 | 3181.76 | 1906.46 |
| 3188.33 | 1906.45 | 3194.92 | 1906.43 | 3201.77 | 1906.37 | 3202.3 | 1906.37 | 3207.25 | 1906.33 |
| 3211.79 | 1906.3 | 3214.74 | 1906.27 | 3242.72 | 1906.28 | 3273.38 | 1906.3 | 3276.97 | 1906.31 |
| 3378.95 | 1907 | 3456.74 | 1907 | 3469.69 | 1906.8 | 3476.03 | 1906.69 | 3487.04 | 1906.49 |
| 3489.96 | 1906.45 | 3502.06 | 1906.24 | 3515.2 | 1906.01 | 3516.54 | 1906 | 3522.68 | 1905.79 |
| 3544.4 | 1905 | 3558.17 | 1905 | 3566.68 | 1905.41 | 3578.71 | 1906 | 3586.61 | 1906.49 |
| 3594.38 | 1907 | 3600.02 | 1907.56 | 3604.56 | 1908 | 3607.38 | 1909.47 | 3609.94 | 1910.79 |
| 3610.38 | 1911 | 3612.31 | 1912 | 3614.29 | 1913 | 3616.73 | 1913.02 | 3619.29 | 1913 |
| 3623.54 | 1912.39 | 3627.99 | 1911.49 | 3630.49 | 1911 | 3632.08 | 1910.99 | 3636.33 | 1910.98 |
| 3642.4 | 1911 | 3652.9 | 1911.68 | 3657.47 | 1912 | 3661.33 | 1912.22 | 3663.32 | 1912.36 |
| 3666.96 | 1912.58 | 3673.47 | 1913 | 3676.57 | 1913 | 3676.79 | 1913.01 | 3680.67 | 1913.01 |
| 3682.1 | 1913 | 3684.47 | 1913 | 3688.53 | 1913.14 | 3689.99 | 1913.17 | 3692.29 | 1913.27 |
| 3700.36 | 1913.68 | 3705.4 | 1913.81 | 3705.57 | 1913.83 | 3706.44 | 1913.79 | 3707.05 | 1913.79 |
| 3708.72 | 1913.6 | 3720.19 | 1913.06 | 3721.63 | 1913 | 3729.1 | 1912.71 | 3730.06 | 1912.65 |
| 3734.21 | 1912 | 3740.24 | 1911.02 | 3740.7 | 1910.94 | 3742.52 | 1910.55 | 3746.69 | 1909.53 |
| 3748.81 | 1909 | 3753.47 | 1909 | 3755.85 | 1910 | 3756.26 | 1910.16 | 3758.09 | 1911 |
| 3759.1 | 1911.32 | 3760.9 | 1911.74 | 3762.07 | 1911.98 | 3762.39 | 1912 | 3764.66 | 1912.06 |
| 3767.19 | 1912 | 3771.83 | 1911.85 | 3772.77 | 1911.88 | 3773.48 | 1911.88 | 3775.6 | 1911.83 |
| 3780.79 | 1911.95 | 3782.42 | 1911.98 | 3786.15 | 1912 | 3790.97 | 1912.37 | 3793.7 | 1912.54 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3795.14 | 1912.62 | 3795.61 | 1912.66 | 3797.01 | 1912.72 | 3799.24 | 1912.8 | 3801.29 | 1912.89 |
| 3804.2 | 1913 | 3807.96 | 1913.01 | 3808.66 | 1913 | 3812.83 | 1912.75 | 3821.96 | 1912 |
| 3825.27 | 1911.18 | 3830.35 | 1910 | 3833.16 | 1909.33 | 3835.25 | 1909 | 3840.53 | 1909 |
| 3841.91 | 1909.24 | 3845.9 | 1909.91 | 3849.31 | 1910.44 | 3853.03 | 1911 | 3858.86 | 1911.86 |
| 3859.88 | 1912 | 3864.6 | 1912 | 3869.51 | 1911.35 | 3869.99 | 1911.28 | 3871.29 | 1911.04 |
| 3873.14 | 1910.62 | 3875.56 | 1910 | 3879.68 | 1909 | 3882.66 | 1908.99 | 3885.79 | 1909 |
| 3887.53 | 1909.25 | 3889.69 | 1909.47 | 3892.62 | 1909.71 | 3894.75 | 1909.59 | 3895.7 | 1909.72 |
| 3896.3 | 1909.73 | 3897.08 | 1909.68 | 3897.6 | 1909.71 | 3898.94 | 1909.58 | 3901.8 | 1909.05 |
| 3902.02 | 1909 | 3904.11 | 1908 | 3908.76 | 1907.56 | 3912.89 | 1907.38 | 3916.06 | 1907.19 |
| 3918.22 | 1907.12 | 3920.12 | 1907.07 | 3921.01 | 1907.02 | 3923.51 | 1907.01 | 3923.89 | 1907 |
| 3931.53 | 1907.02 | 3937.26 | 1907.01 | 3938.4 | 1907 | 3994.15 | 1907 | 4014.4 | 1907.66 |
| 4024.62 | 1908 | 4030.37 | 1908.17 | 4038.92 | 1908.43 | 4040.45 | 1908.46 | 4052.19 | 1908.55 |
| 4070.27 | 1908.71 | 4076.96 | 1908.81 | 4087.35 | 1908.96 | 4090.35 | 1909 | 4105.68 | 1909 |
| 4112.12 | 1909.01 | 4118.78 | 1909.01 | 4128.06 | 1909.37 | 4128.75 | 1909.38 | 4143.98 | 1909.76 |
| 4148.75 | 1909.86 | 4153.07 | 1910 | 4164.32 | 1910.61 | 4167.06 | 1910.68 | 4169.05 | 1910.71 |
| 4170.52 | 1910.75 | 4175.31 | 1910.93 | 4176 | 1910.96 | 4177.73 | 1911 | 4233.52 | 1911 |
| 4241.9 | 1910.28 | 4244.94 | 1910 | 4259.34 | 1909.11 | 4260.44 | 1909 | 4347.42 | 1909 |
| 4352.07 | 1909.06 | 4352.27 | 1909.07 | 4356.25 | 1909 | 4360.87 | 1909 | 4365.1 | 1909.34 |
| 4372.98 | 1910 | 4382.41 | 1910.92 | 4383.14 | 1911 | 4388.49 | 1911.63 | 4390.08 | 1911.8 |
| 4400.84 | 1913 | 4403.15 | 1913.28 | 4413.84 | 1914.81 | 4415.19 | 1915 | 4419.07 | 1915.56 |
| 4421.37 | 1915.86 | 4428.4 | 1916.79 | 4432.49 | 1918 | 4433.78 | 1918.39 | 4435.85 | 1919 |
| 4437.64 | 1919.54 | 4439.26 | 1920 | 4442.16 | 1920.93 | 4446.01 | 1922.1 | 4449.06 | 1923 |
| 4450.09 | 1923.31 | 4452.46 | 1924 | 4454.98 | 1924.7 | 4456.48 | 1925 | 4462.05 | 1926 |
| 4463.4 | 1926.25 | 4467.57 | 1927 | 4471.38 | 1927.69 | 4473.02 | 1928 | 4476.25 | 1928.58 |
| 4478.52 | 1929 | 4480.49 | 1929.16 | 4496.13 | 1930.27 | 4496.66 | 1930.29 | 4502.49 | 1930.69 |
| 4502.6 | 1930.69 | 4510 | 1930.86 | 4515.04 | 1930.99 | 4518.11 | 1931 | 4519.95 | 1931.16 |
| 4527.44 | 1932 | 4539.63 | 1932.91 | 4541.17 | 1933 | 4591.64 | 1933 | 4594.53 | 1932.88 |
| 4609.31 | 1932.25 | 4615.73 | 1932.13 | 4625.34 | 1932 | 4629.21 | 1931.96 | 4630.45 | 1931.93 |
| 4633.35 | 1931.83 | 4635.25 | 1931.8 | 4640.44 | 1931.76 | 4644.13 | 1931.71 | 4658.25 | 1931.62 |
| 4660.1 | 1931.58 | 4662.33 | 1931.52 | 4675.12 | 1931.07 | 4675.84 | 1931.04 | 4677.43 | 1931 |
| 4679.56 | 1930.99 | 4680.41 | 1931 | 4683.98 | 1931.07 | 4693.43 | 1931.25 | 4700.13 | 1931.34 |
| 4709.19 | 1931.23 | 4714.02 | 1931.26 | 4717.92 | 1931.31 | 4720.35 | 1931.31 | 4727.66 | 1931.29 |
| 4732.43 | 1931.33 | 4734.83 | 1931.39 | 4742.72 | 1931.37 | 4744.89 | 1931.41 | 4748.55 | 1931.41 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4748.55 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 4748.55 | 116.07 | 116.07 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1910.15 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.17 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1909.99 | Reach Len. (ft) | 116.07 | 116.07 | 116.07 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6870.16 | | |
| E.G. Slope (ft/ft) | 0.002618 | Area (sq ft) | | 6870.16 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3055.21 | Top Width (ft) | | 3055.21 | | |
| Vel Total (ft/s) | 3.26 | Avg. Vel. (ft/s) | | 3.26 | | |
| Max Chl Dpth (ft) | 5.00 | Hydr. Depth (ft) | | 2.25 | | |
| Conv. Total (cfs) | 437772.0 | Conv. (cfs) | | 437772.0 | | |
| Length Wtd. (ft) | 116.07 | Wetted Per. (ft) | | 3058.08 | | |
| Min Ch El (ft) | 1904.99 | Shear (lb/sq ft) | | 0.37 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4748.55 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.30 | Cum Volume (acre-ft) | | 406.15 | | |
| C & E Loss (ft) | 0.01 | Cum SA (acres) | | 186.94 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -17442.2

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1917.47 | 537.14 | 1916.29 | 540.15 | 1916.29 | 551.28 | 1916.26 | 559.87 | 1916.24 |
| 567.78 | 1916.22 | 576.02 | 1916.21 | 581.35 | 1916.19 | 584.1 | 1916.19 | 585.94 | 1916.18 |
| 589.84 | 1916.18 | 591.11 | 1916.17 | 599.72 | 1916.15 | 603.03 | 1916.15 | 629.22 | 1916.09 |
| 636.51 | 1916.07 | 647.49 | 1916.05 | 670.36 | 1916 | 673.26 | 1915.99 | 674.34 | 1915.99 |
| 690.26 | 1915.95 | 721.32 | 1915.89 | 721.88 | 1915.89 | 754.08 | 1915.81 | 773.02 | 1915.77 |
| 788.22 | 1915.74 | 798.91 | 1915.72 | 804.97 | 1915.7 | 807.63 | 1915.7 | 810.07 | 1915.69 |
| 820.14 | 1915.67 | 862.74 | 1915.57 | 863.6 | 1915.57 | 863.81 | 1913.52 | 863.9 | 1912.84 |
| 864.3 | 1909.14 | 864.67 | 1907 | 964.66 | 1907 | 967.95 | 1907.05 | 970.29 | 1907.1 |
| 988.16 | 1907.4 | 997.15 | 1907.55 | 999.69 | 1907.58 | 1005.61 | 1907.68 | 1022.1 | 1907.9 |
| 1028.8 | 1908 | 1035.39 | 1908.07 | 1037.06 | 1908.09 | 1047.21 | 1908.17 | 1053.85 | 1908.23 |
| 1056.13 | 1908.22 | 1057.71 | 1908.23 | 1060.48 | 1908.22 | 1113.78 | 1908.49 | 1215.48 | 1909 |
| 1327.72 | 1909 | 1340.44 | 1909.01 | 1376.74 | 1909.01 | 1379.73 | 1909 | 1383.95 | 1909 |
| 1395.79 | 1908.61 | 1398.02 | 1908.6 | 1402.52 | 1908.5 | 1405.76 | 1908.43 | 1412.02 | 1908.34 |
| 1414.25 | 1908.33 | 1417.16 | 1908.29 | 1419.18 | 1908.29 | 1420.61 | 1908.27 | 1424.11 | 1908.24 |
| 1426.03 | 1908.22 | 1428.96 | 1908.22 | 1429.64 | 1908.23 | 1430.88 | 1908.21 | 1432.36 | 1908.23 |
| 1459.22 | 1908.31 | 1552.84 | 1908.95 | 1569.03 | 1908.98 | 1572.05 | 1908.98 | 1572.68 | 1908.99 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1573.61 | 1908.99 | 1581.32 | 1908.98 | 1582.49 | 1908.98 | 1584.95 | 1908.99 | 1586.31 | 1909 |
| 1592.52 | 1909.11 | 1592.78 | 1909.11 | 1596.34 | 1909.22 | 1598.96 | 1909.28 | 1600.18 | 1909.32 |
| 1606.71 | 1909.5 | 1610.2 | 1909.58 | 1611.32 | 1909.61 | 1615.54 | 1909.7 | 1620.12 | 1909.58 |
| 1620.77 | 1909.61 | 1621.31 | 1909.61 | 1631.07 | 1909.08 | 1632.28 | 1909 | 1635.19 | 1908.99 |
| 1640.94 | 1908.98 | 1643.53 | 1908.99 | 1645.97 | 1908.99 | 1648.3 | 1909 | 1651.81 | 1909.01 |
| 1655.15 | 1909.01 | 1657.06 | 1909 | 1662.62 | 1908.6 | 1663.95 | 1908.51 | 1666.36 | 1908.39 |
| 1667.42 | 1908.37 | 1669.67 | 1908.34 | 1670.02 | 1908.34 | 1671.31 | 1908 | 1673.45 | 1907.09 |
| 1674 | 1906.86 | 1676.22 | 1906 | 1679.09 | 1905.05 | 1679.25 | 1905 | 1680.68 | 1905 |
| 1689.08 | 1904.98 | 1694.98 | 1904.98 | 1700.49 | 1904.99 | 1707.53 | 1904.99 | 1713.44 | 1905 |
| 1716.6 | 1905 | 1722.69 | 1904.99 | 1731.14 | 1905 | 1733.21 | 1905 | 1735.34 | 1905.03 |
| 1736.71 | 1905.06 | 1739.48 | 1905.13 | 1740.56 | 1905.15 | 1773.57 | 1906 | 1774.7 | 1906.02 |
| 1782.07 | 1906.09 | 1854.51 | 1906.85 | 1861.07 | 1906.92 | 1868.15 | 1907 | 1871.3 | 1907 |
| 1879.26 | 1907.17 | 1880.51 | 1907.18 | 1881.42 | 1907.2 | 1882.94 | 1907.2 | 1883.87 | 1907.23 |
| 1884.87 | 1907.25 | 1891.57 | 1907.44 | 1901.32 | 1907.55 | 1903.6 | 1907.53 | 1904.33 | 1907.53 |
| 1905.55 | 1907.51 | 1918.23 | 1907.51 | 1931.13 | 1907.52 | 1931.99 | 1907.53 | 1937.04 | 1907.57 |
| 1943.1 | 1907.63 | 1964.74 | 1907.9 | 1970.71 | 1907.99 | 1973.57 | 1908 | 2009.97 | 1908 |
| 2011.95 | 1907.95 | 2015.17 | 1907.84 | 2019.12 | 1907.72 | 2021.73 | 1907.63 | 2040.66 | 1907 |
| 2041.35 | 1906.99 | 2042.64 | 1906.99 | 2212.71 | 1906 | 2261.71 | 1906 | 2281.38 | 1906.34 |
| 2285.32 | 1906.42 | 2287.08 | 1906.46 | 2301.58 | 1906.73 | 2315.3 | 1907 | 2392.72 | 1907 |
| 2450.87 | 1907.36 | 2533.26 | 1907.86 | 2533.66 | 1907.86 | 2547.19 | 1908 | 2687.98 | 1908 |
| 2697.85 | 1908.02 | 2699.25 | 1908.02 | 2729.27 | 1908 | 2879.57 | 1908 | 2880.7 | 1907.98 |
| 2897 | 1907.73 | 2898.9 | 1907.7 | 2904.61 | 1907.58 | 2918.63 | 1907.27 | 2919.89 | 1907.24 |
| 2922.06 | 1907.2 | 2922.75 | 1907.18 | 2929.11 | 1907.06 | 2931.56 | 1907 | 2943.35 | 1907 |
| 2954.64 | 1906.99 | 2985.44 | 1906.99 | 2992.02 | 1907 | 3005.99 | 1907 | 3010.03 | 1907.01 |
| 3014.06 | 1907 | 3016.72 | 1907 | 3018.13 | 1906.99 | 3033.23 | 1906.99 | 3041.31 | 1906.97 |
| 3046.07 | 1906.97 | 3050.96 | 1906.96 | 3052.73 | 1906.96 | 3057.57 | 1906.95 | 3059.2 | 1906.95 |
| 3125.12 | 1906.26 | 3128.49 | 1906.24 | 3130.8 | 1906.22 | 3140.81 | 1906.15 | 3140.86 | 1906.14 |
| 3162.17 | 1906 | 3214.96 | 1906 | 3222.37 | 1906.01 | 3239.6 | 1906.01 | 3293.42 | 1906.5 |
| 3324.26 | 1906.77 | 3326.04 | 1906.79 | 3326.96 | 1906.79 | 3331.81 | 1906.83 | 3335.99 | 1906.85 |
| 3337.25 | 1906.86 | 3360.96 | 1907 | 3419.62 | 1907 | 3423.34 | 1906.96 | 3427.99 | 1906.92 |
| 3430.42 | 1906.89 | 3430.87 | 1906.89 | 3435.08 | 1906.82 | 3437.03 | 1906.82 | 3438.95 | 1906.81 |
| 3439.23 | 1906.8 | 3452.33 | 1906.63 | 3453.68 | 1906.63 | 3455.82 | 1906.6 | 3463.01 | 1906.56 |
| 3472.15 | 1906.49 | 3488.3 | 1906.32 | 3489.13 | 1906.3 | 3508.89 | 1906.05 | 3512.63 | 1906 |
| 3517.44 | 1906 | 3520.38 | 1905.9 | 3530.14 | 1905.46 | 3536.77 | 1905.18 | 3537.72 | 1905.13 |
| 3540.49 | 1905 | 3553.9 | 1905 | 3561.67 | 1905.65 | 3565.98 | 1906 | 3570.69 | 1906.31 |
| 3576.02 | 1906.71 | 3576.97 | 1906.77 | 3579.95 | 1907 | 3581.55 | 1907.07 | 3597.06 | 1908 |
| 3606.57 | 1908.69 | 3610.73 | 1909 | 3615.7 | 1909 | 3622.52 | 1909.01 | 3649.76 | 1909.01 |
| 3658.23 | 1909.15 | 3659.3 | 1909.19 | 3660.34 | 1909.14 | 3663.52 | 1909 | 3665.49 | 1909 |
| 3666.52 | 1908.99 | 3668.41 | 1909 | 3670.67 | 1909 | 3674.15 | 1909.49 | 3674.63 | 1909.53 |
| 3675.12 | 1909.6 | 3675.37 | 1909.6 | 3676.4 | 1909.73 | 3676.77 | 1909.7 | 3677.03 | 1909.73 |
| 3678.49 | 1909.74 | 3679.04 | 1909.7 | 3680.58 | 1909.63 | 3681.43 | 1909.57 | 3684.99 | 1909.34 |
| 3685.62 | 1909.29 | 3687.55 | 1909.16 | 3689.08 | 1909.1 | 3690.36 | 1909.07 | 3690.87 | 1909.05 |
| 3702.33 | 1909.01 | 3702.61 | 1909.06 | 3703.32 | 1909.11 | 3703.4 | 1909.13 | 3704.18 | 1909.2 |
| 3704.81 | 1909.28 | 3705.72 | 1909.58 | 3706.04 | 1909.65 | 3707.05 | 1910 | 3707.97 | 1910.28 |
| 3709.03 | 1910.58 | 3709.4 | 1910.72 | 3709.56 | 1910.75 | 3710.29 | 1911 | 3711.73 | 1911.42 |
| 3712.12 | 1911.52 | 3712.42 | 1911.63 | 3713.63 | 1912 | 3714.24 | 1912.16 | 3714.59 | 1912.27 |
| 3716.56 | 1912.78 | 3716.71 | 1912.83 | 3717.4 | 1913 | 3717.56 | 1913.01 | 3718.12 | 1913.12 |
| 3719.58 | 1913.38 | 3720.03 | 1913.43 | 3720.49 | 1913.46 | 3720.86 | 1913.44 | 3724.69 | 1913 |
| 3725.46 | 1912.92 | 3725.95 | 1912.9 | 3727.65 | 1912.91 | 3728.2 | 1912.88 | 3728.99 | 1912.79 |
| 3729.41 | 1912.73 | 3733.85 | 1912 | 3739.32 | 1911.11 | 3739.92 | 1911 | 3740.68 | 1910.83 |
| 3741.13 | 1910.71 | 3743.19 | 1910 | 3746.13 | 1909 | 3747.77 | 1908.41 | 3748.56 | 1908.39 |
| 3749.89 | 1908.31 | 3750.76 | 1908.25 | 3751.8 | 1908.22 | 3752.63 | 1908.23 | 3758.76 | 1908.28 |
| 3761.82 | 1908.23 | 3767.63 | 1908.24 | 3767.71 | 1908.23 | 3774.56 | 1908.2 | 3775.54 | 1908.19 |
| 3777.4 | 1908.13 | 3778.1 | 1908.14 | 3779.86 | 1908.12 | 3781.2 | 1908.1 | 3781.77 | 1908.11 |
| 3790.1 | 1908.28 | 3816.13 | 1908.9 | 3820.26 | 1909 | 3833.53 | 1909 | 3836.76 | 1908.84 |
| 3848.81 | 1908.23 | 3850.66 | 1908.24 | 3852.42 | 1908.24 | 3856.44 | 1908.03 | 3857.63 | 1907.98 |
| 3862.56 | 1907.87 | 3862.92 | 1907.87 | 3867.57 | 1908 | 3868.66 | 1908.12 | 3874.59 | 1908.68 |
| 3876.52 | 1908.87 | 3876.9 | 1908.9 | 3877.67 | 1909 | 3879.49 | 1909.26 | 3881.24 | 1909.57 |
| 3883.25 | 1909.91 | 3883.69 | 1909.97 | 3884.03 | 1909.98 | 3884.89 | 1909.81 | 3885.99 | 1909.51 |
| 3887.67 | 1909 | 3888.94 | 1908.66 | 3891.8 | 1908 | 3896.04 | 1907 | 3980.13 | 1907 |
| 3983.38 | 1907.01 | 3987.1 | 1907 | 4002.9 | 1907 | 4003.34 | 1907.01 | 4032.3 | 1908 |
| 4033.13 | 1908 | 4064.66 | 1908.98 | 4065.33 | 1909 | 4132.56 | 1909 | 4138.55 | 1909.46 |
| 4139.96 | 1909.51 | 4140.73 | 1909.52 | 4142.03 | 1909.56 | 4143.95 | 1909.61 | 4144.86 | 1909.66 |
| 4147.29 | 1909.71 | 4147.88 | 1909.74 | 4150.42 | 1909.77 | 4150.65 | 1909.78 | 4151.78 | 1909.79 |
| 4151.91 | 1909.8 | 4153.64 | 1909.8 | 4156.33 | 1909.89 | 4157.42 | 1909.92 | 4159.89 | 1909.9 |
| 4162.15 | 1909.86 | 4164.11 | 1909.84 | 4167.26 | 1909.78 | 4176.18 | 1909.63 | 4177.22 | 1909.61 |
| 4191.13 | 1909.29 | 4198.92 | 1909.17 | 4199.33 | 1909.17 | 4204.29 | 1909 | 4212.39 | 1908.61 |
| 4225.01 | 1908.14 | 4229.59 | 1908 | 4260.6 | 1908 | 4261.86 | 1908.02 | 4262.06 | 1908.03 |
| 4274.17 | 1908.24 | 4282.55 | 1908.39 | 4317.28 | 1909 | 4344.37 | 1909.97 | 4345.15 | 1910.01 |
| 4349.12 | 1910.39 | 4351.59 | 1910.62 | 4353.91 | 1910.84 | 4355.03 | 1910.93 | 4355.77 | 1911 |
| 4361.13 | 1911.47 | 4361.98 | 1911.55 | 4364.14 | 1911.73 | 4366.61 | 1911.94 | 4367.45 | 1912 |
| 4369.76 | 1912.03 | 4373.76 | 1912.07 | 4375.13 | 1912.07 | 4379.86 | 1912.4 | 4388.24 | 1912.44 |
| 4390.28 | 1912.48 | 4392.39 | 1912.57 | 4395.63 | 1912.92 | 4395.66 | 1912.92 | 4398.12 | 1913.23 |
| 4399.68 | 1913.42 | 4403.12 | 1913.87 | 4404.88 | 1914.09 | 4406.38 | 1914.27 | 4407.1 | 1914.38 |
| 4410.23 | 1914.83 | 4411.17 | 1914.96 | 4411.39 | 1915 | 4416.55 | 1915.85 | 4416.63 | 1915.85 |
| 4423.15 | 1916 | 4425.67 | 1916 | 4429.97 | 1916.12 | 4433.04 | 1916.26 | 4434.29 | 1916.33 |
| 4436.57 | 1916.47 | 4444.44 | 1917 | 4446.45 | 1917.61 | 4447.77 | 1918 | 4449.35 | 1918.48 |
| 4452.96 | 1919.56 | 4456.3 | 1920.57 | 4460.99 | 1922 | 4464.02 | 1922.91 | 4464.5 | 1923.05 |
| 4467.65 | 1924 | 4472.93 | 1925 | 4479.37 | 1925.93 | 4480.04 | 1926.03 | 4486.24 | 1927 |
| 4490.69 | 1927.67 | 4492.97 | 1928 | 4508.36 | 1928.83 | 4511.28 | 1929 | 4520.49 | 1929 |
| 4521.72 | 1928.99 | 4522.83 | 1929 | 4525.67 | 1929 | 4546.21 | 1929.23 | 4561.67 | 1929.36 |
| 4561.76 | 1929.36 | 4569 | 1929.24 | 4578.52 | 1929.01 | 4579.33 | 1929 | 4769.28 | 1929 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4769.28 | .045 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

0 4769.28 84.68 84.68 84.68 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1909.85 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.15 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1909.70 | Reach Len. (ft) | 84.68 | 84.68 | 84.68 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7249.36 | | |
| E.G. Slope (ft/ft) | 0.002529 | Area (sq ft) | | 7249.36 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3403.46 | Top Width (ft) | | 3403.46 | | |
| Vel Total (ft/s) | 3.09 | Avg. Vel. (ft/s) | | 3.09 | | |
| Max Chl Dpth (ft) | 4.72 | Hydr. Depth (ft) | | 2.13 | | |
| Conv. Total (cfs) | 445448.7 | Conv. (cfs) | | 445448.7 | | |
| Length Wtd. (ft) | 84.68 | Wetted Per. (ft) | | 3407.65 | | |
| Min Ch El (ft) | 1904.98 | Shear (lb/sq ft) | | 0.34 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4769.28 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.22 | Cum Volume (acre-ft) | | 387.34 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 178.33 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -17526.8

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1917.58 | 453.12 | 1916.6 | 455.82 | 1916.59 | 465.79 | 1916.57 | 473.48 | 1916.55 |
| 480.56 | 1916.54 | 487.92 | 1916.52 | 492.69 | 1916.51 | 495.15 | 1916.51 | 496.79 | 1916.5 |
| 499.35 | 1916.5 | 501.41 | 1916.49 | 509.11 | 1916.48 | 509.71 | 1916.47 | 512.06 | 1916.47 |
| 535.45 | 1916.42 | 541.96 | 1916.4 | 551.75 | 1916.38 | 572.13 | 1916.34 | 575.67 | 1916.33 |
| 589.85 | 1916.3 | 617.47 | 1916.24 | 617.97 | 1916.24 | 646.58 | 1916.18 | 663.38 | 1916.14 |
| 676.86 | 1916.11 | 686.33 | 1916.09 | 691.7 | 1916.08 | 694.06 | 1916.07 | 696.51 | 1916.07 |
| 700.32 | 1916.06 | 742.81 | 1915.97 | 743.67 | 1915.96 | 746.66 | 1915.96 | 763.68 | 1915.92 |
| 779.62 | 1915.89 | 783.7 | 1915.88 | 786.05 | 1915.87 | 790.81 | 1915.86 | 806.36 | 1915.83 |
| 812.16 | 1915.82 | 829.83 | 1915.78 | 838.4 | 1915.76 | 863.07 | 1915.71 | 868.6 | 1915.69 |
| 875.56 | 1915.68 | 875.92 | 1911.49 | 876.48 | 1907 | 988.77 | 1907 | 1058.45 | 1907.9 |
| 1066.53 | 1908 | 1077.05 | 1908 | 1240.2 | 1908.91 | 1244.83 | 1908.94 | 1252.31 | 1908.97 |
| 1257.8 | 1909 | 1343.28 | 1909 | 1347.72 | 1908.9 | 1370.96 | 1908.36 | 1388.31 | 1908 |
| 1389.07 | 1907.98 | 1396.74 | 1907.83 | 1397.11 | 1907.84 | 1423.26 | 1907.79 | 1446.68 | 1907.75 |
| 1447.23 | 1907.76 | 1451.44 | 1907.79 | 1467.58 | 1907.97 | 1473.52 | 1907.98 | 1475.59 | 1907.99 |
| 1478.34 | 1907.99 | 1485.25 | 1908 | 1488.8 | 1908.04 | 1489.23 | 1908.05 | 1495.61 | 1908.15 |
| 1497.01 | 1908.17 | 1530.72 | 1908.99 | 1531.2 | 1909 | 1543.06 | 1909 | 1547.25 | 1909.01 |
| 1558.79 | 1909.01 | 1593.29 | 1909.98 | 1593.77 | 1910 | 1594.45 | 1910.07 | 1598.21 | 1910.4 |
| 1600.04 | 1910.55 | 1601.17 | 1910.55 | 1601.93 | 1910.54 | 1607.72 | 1910.91 | 1611.17 | 1910.91 |
| 1618.29 | 1911 | 1621.09 | 1911.18 | 1623.93 | 1911.04 | 1625 | 1911.05 | 1626.52 | 1911 |
| 1634.13 | 1910 | 1635.62 | 1909.56 | 1637.73 | 1909 | 1641.17 | 1908 | 1644.6 | 1907.03 |
| 1644.83 | 1906.97 | 1647.83 | 1906 | 1650.85 | 1905 | 1652.95 | 1904.99 | 1654.64 | 1904.99 |
| 1659.25 | 1904.97 | 1667.4 | 1905 | 1671.03 | 1905.01 | 1690.24 | 1905.01 | 1692.94 | 1905.02 |
| 1700.04 | 1905.02 | 1718.55 | 1905.52 | 1727.15 | 1905.74 | 1728.56 | 1905.77 | 1729.04 | 1905.79 |
| 1732.38 | 1905.86 | 1733.58 | 1905.89 | 1738.53 | 1905.99 | 1739.96 | 1906 | 1747.05 | 1906.14 |
| 1748.92 | 1906.18 | 1750.13 | 1906.22 | 1751.83 | 1906.25 | 1753.01 | 1906.29 | 1754.22 | 1906.32 |
| 1762.62 | 1906.51 | 1767.89 | 1906.58 | 1777.52 | 1906.79 | 1782.66 | 1906.84 | 1787.13 | 1906.9 |
| 1792.63 | 1907 | 1794.28 | 1907 | 1806.62 | 1907.01 | 1813.08 | 1907 | 1826.1 | 1907 |
| 1837.46 | 1906.99 | 1839.84 | 1906.99 | 1847.08 | 1907 | 1853.96 | 1907 | 1854.22 | 1907.14 |
| 1856.05 | 1908 | 1857.27 | 1908.5 | 1858.18 | 1908.83 | 1858.57 | 1909 | 1860.7 | 1909.86 |
| 1861.01 | 1910 | 1863.4 | 1911 | 1865.25 | 1911.79 | 1865.76 | 1912 | 1870.58 | 1912.85 |
| 1871.46 | 1913 | 1877.57 | 1913.92 | 1880.03 | 1914.28 | 1884.82 | 1915 | 1889.26 | 1915 |
| 1890.3 | 1914.84 | 1890.95 | 1914.72 | 1893.19 | 1914.28 | 1894.84 | 1914 | 1898.45 | 1913.34 |
| 1900.33 | 1913 | 1904.25 | 1912 | 1904.59 | 1911.74 | 1906.2 | 1910.35 | 1908.87 | 1908 |
| 2021.33 | 1908 | 2021.72 | 1907.99 | 2024.78 | 1907.86 | 2027.24 | 1907.75 | 2030.14 | 1907.61 |
| 2040.28 | 1907.17 | 2044 | 1907 | 2044.61 | 1907 | 2045.3 | 1906.97 | 2049.22 | 1906.77 |
| 2051.86 | 1906.65 | 2066.77 | 1906 | 2070.81 | 1906 | 2075.99 | 1905.99 | 2078.73 | 1906 |
| 2081.31 | 1906 | 2084.59 | 1906.02 | 2094.37 | 1906.05 | 2099.13 | 1906.09 | 2115.67 | 1906.15 |
| 2118.75 | 1906.12 | 2120.14 | 1906.1 | 2121.05 | 1906.1 | 2138.2 | 1906 | 2188.33 | 1906 |
| 2196.96 | 1905.99 | 2210.3 | 1905.99 | 2216.2 | 1905.98 | 2232.87 | 1905.98 | 2239.99 | 1905.99 |
| 2267.48 | 1905.99 | 2281.79 | 1906 | 2292.74 | 1906 | 2313.55 | 1906.23 | 2319.27 | 1906.31 |
| 2323.22 | 1906.37 | 2325.71 | 1906.4 | 2328.09 | 1906.44 | 2329.24 | 1906.45 | 2330.29 | 1906.47 |
| 2354.91 | 1906.83 | 2355.46 | 1906.84 | 2365.7 | 1907 | 2370.27 | 1907 | 2446.2 | 1907.37 |
| 2484.95 | 1907.54 | 2525.06 | 1907.57 | 2560.43 | 1907.6 | 2561.99 | 1907.59 | 2567.73 | 1907.58 |
| 2585.91 | 1907.58 | 2589.7 | 1907.57 | 2605.46 | 1907.57 | 2619.17 | 1907.55 | 2658.68 | 1907.55 |
| 2665.53 | 1907.57 | 2679.32 | 1907.6 | 2694.52 | 1907.63 | 2696.34 | 1907.64 | 2701.17 | 1907.65 |
| 2711.47 | 1907.66 | 2711.91 | 1907.67 | 2719.03 | 1907.68 | 2724.8 | 1907.68 | 2734.04 | 1907.69 |
| 2743.59 | 1907.71 | 2748.16 | 1907.71 | 2767.27 | 1907.75 | 2788.33 | 1907.78 | 2818.15 | 1907.83 |
| 2838.17 | 1907.85 | 2838.42 | 1907.86 | 2843.58 | 1907.82 | 2852.31 | 1907.76 | 2857.03 | 1907.69 |
| 2858.02 | 1907.69 | 2875.5 | 1907.51 | 2876.05 | 1907.51 | 2881.98 | 1907.43 | 2890.1 | 1907.33 |
| 2891.52 | 1907.32 | 2893.16 | 1907.3 | 2899.68 | 1907.26 | 2906.33 | 1907.19 | 2913.1 | 1907.11 |
| 2921.53 | 1907 | 2948.64 | 1907 | 2961.29 | 1906.9 | 2996.24 | 1906.74 | 3002.07 | 1906.79 |
| 3008.85 | 1906.86 | 3011.61 | 1906.84 | 3014.56 | 1906.83 | 3019.25 | 1906.81 | 3020.08 | 1906.81 |
| 3024.91 | 1906.79 | 3033.71 | 1906.76 | 3034.2 | 1906.76 | 3043.44 | 1906.72 | 3048.07 | 1906.73 |
| 3050.31 | 1906.71 | 3053.2 | 1906.72 | 3055.45 | 1906.7 | 3056.68 | 1906.68 | 3057.3 | 1906.68 |
| 3058.21 | 1906.66 | 3080.82 | 1906.63 | 3109 | 1906.58 | 3110.35 | 1906.57 | 3127.66 | 1906.47 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3138.85 | 1906.39 | 3147.05 | 1906.34 | 3157.56 | 1906.28 | 3169.25 | 1906.21 | 3173.25 | 1906.19 |
| 3173.36 | 1906.18 | 3194.97 | 1906.01 | 3195.98 | 1906 | 3294.65 | 1906 | 3305.37 | 1906.1 |
| 3326.82 | 1906.27 | 3377.91 | 1906.13 | 3417.27 | 1906 | 3454.66 | 1906 | 3466.48 | 1905.99 |
| 3470.32 | 1905.98 | 3482.17 | 1905.97 | 3517.04 | 1905.92 | 3519.41 | 1905.93 | 3521.9 | 1905.93 |
| 3550.19 | 1905.97 | 3569.39 | 1905.99 | 3573.82 | 1905.99 | 3575.04 | 1906 | 3579.35 | 1906.62 |
| 3580.99 | 1907 | 3585.14 | 1908 | 3586.87 | 1908.41 | 3589.84 | 1909 | 3591.37 | 1909.31 |
| 3592.09 | 1909.49 | 3592.71 | 1909.69 | 3593.61 | 1910 | 3594.86 | 1910.82 | 3595.17 | 1911 |
| 3597.25 | 1912 | 3599.54 | 1913 | 3600.7 | 1913.52 | 3601.42 | 1913.81 | 3601.96 | 1914 |
| 3602.74 | 1914.24 | 3603.29 | 1914.38 | 3604.65 | 1914.69 | 3606.28 | 1915 | 3608 | 1915.31 |
| 3610.29 | 1916 | 3611.84 | 1916.48 | 3613.56 | 1917 | 3615.24 | 1917.53 | 3615.5 | 1917.62 |
| 3618.48 | 1918.49 | 3618.72 | 1918.57 | 3620.18 | 1919 | 3620.36 | 1919.03 | 3622.83 | 1919.51 |
| 3624.2 | 1919.59 | 3625.31 | 1919.59 | 3625.82 | 1919.54 | 3626.87 | 1919.35 | 3629.51 | 1919 |
| 3636.82 | 1918.01 | 3636.93 | 1918 | 3644.46 | 1917 | 3645.08 | 1916.91 | 3648.07 | 1916 |
| 3651.36 | 1914.18 | 3652.08 | 1913.8 | 3655.26 | 1912 | 3655.56 | 1911.84 | 3656.83 | 1911 |
| 3657.52 | 1910.66 | 3658.54 | 1910 | 3659.26 | 1909.57 | 3660.18 | 1909 | 3676.93 | 1908.22 |
| 3682.3 | 1908 | 3694.45 | 1907.37 | 3694.59 | 1907.37 | 3696.58 | 1907.28 | 3698.87 | 1907.23 |
| 3703.43 | 1907.34 | 3718.56 | 1907.75 | 3721.44 | 1907.88 | 3723.14 | 1907.95 | 3724.75 | 1908 |
| 3725.42 | 1907.97 | 3739.77 | 1907 | 3768.66 | 1907 | 3775.72 | 1907.28 | 3781.63 | 1907.5 |
| 3794.55 | 1907.93 | 3796.25 | 1907.98 | 3799.02 | 1907.98 | 3801.76 | 1907.96 | 3803.22 | 1907.96 |
| 3805.6 | 1907.97 | 3808.11 | 1907.97 | 3808.59 | 1907.98 | 3811.89 | 1907.98 | 3815.21 | 1908 |
| 3816.39 | 1908 | 3817.45 | 1908.06 | 3819.27 | 1908.2 | 3821.23 | 1908.34 | 3822.68 | 1908.45 |
| 3825.99 | 1908.72 | 3827.2 | 1908.79 | 3830.39 | 1909 | 3832.87 | 1909.63 | 3834.28 | 1910 |
| 3836.05 | 1910.45 | 3838.14 | 1911 | 3839.17 | 1911.21 | 3841.66 | 1911.34 | 3847.01 | 1911.78 |
| 3847.44 | 1911.81 | 3849.14 | 1911.9 | 3850.53 | 1911.93 | 3851.18 | 1911.93 | 3852.77 | 1911.9 |
| 3854.56 | 1911.81 | 3855.09 | 1911.77 | 3860.62 | 1911.31 | 3862.5 | 1911.11 | 3863.43 | 1911 |
| 3865.96 | 1910.36 | 3867.36 | 1910 | 3872.49 | 1908.7 | 3873.81 | 1908.31 | 3874.75 | 1908 |
| 3877.99 | 1907 | 4007.54 | 1907 | 4012.86 | 1907.17 | 4013.63 | 1907.19 | 4023.59 | 1907.51 |
| 4024.06 | 1907.52 | 4025.98 | 1907.53 | 4049.49 | 1907.97 | 4052.16 | 1907.97 | 4059.07 | 1908 |
| 4064.89 | 1908.26 | 4065.17 | 1908.27 | 4070.17 | 1908.51 | 4075.71 | 1908.8 | 4079.31 | 1909 |
| 4079.9 | 1909.01 | 4080.59 | 1909 | 4155.12 | 1909 | 4168.88 | 1908.95 | 4207.03 | 1908.03 |
| 4208.17 | 1908 | 4269.02 | 1908 | 4283.34 | 1908.77 | 4286.34 | 1908.93 | 4287.35 | 1908.99 |
| 4287.71 | 1909 | 4294.97 | 1909 | 4320.24 | 1909.4 | 4334.35 | 1909.63 | 4336.13 | 1909.65 |
| 4356.34 | 1909.99 | 4359.24 | 1910 | 4360.6 | 1910.08 | 4379.39 | 1911 | 4390.46 | 1912 |
| 4393.21 | 1912.27 | 4400.83 | 1913 | 4409.7 | 1914 | 4411.01 | 1914.15 | 4415.02 | 1914.59 |
| 4417.16 | 1914.84 | 4418.59 | 1915 | 4419.26 | 1915.12 | 4420.33 | 1915.33 | 4420.67 | 1915.36 |
| 4425.66 | 1915.98 | 4427.03 | 1915.99 | 4429.31 | 1915.98 | 4431.53 | 1915.99 | 4432.39 | 1916 |
| 4433.02 | 1916.03 | 4450.88 | 1917 | 4454.81 | 1917.19 | 4463.92 | 1918 | 4466.01 | 1918.29 |
| 4470.97 | 1919 | 4472.98 | 1919.45 | 4476.85 | 1920 | 4479.28 | 1920.6 | 4480.92 | 1921 |
| 4484.12 | 1921.8 | 4484.94 | 1922 | 4485.99 | 1922.27 | 4488.9 | 1923 | 4492.07 | 1923.79 |
| 4493.78 | 1924.21 | 4500.64 | 1925.95 | 4500.92 | 1926 | 4512.09 | 1927 | 4523.31 | 1928 |
| 4524.35 | 1928.03 | 4542.52 | 1928.51 | 4543.46 | 1928.53 | 4546.87 | 1928.57 | 4550.42 | 1928.66 |
| 4561.1 | 1928.75 | 4565.12 | 1928.83 | 4567.62 | 1928.86 | 4568.58 | 1928.86 | 4570.04 | 1928.89 |
| 4571.37 | 1928.9 | 4571.83 | 1928.89 | 4573.42 | 1928.91 | 4592.36 | 1929 | 4794.51 | 1929 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4794.51 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 4794.51 | 139.39 | 139.39 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1909.63 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.16 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1909.48 | Reach Len. (ft) | 139.39 | 139.39 | 139.39 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7084.44 | | |
| E.G. Slope (ft/ft) | 0.002554 | Area (sq ft) | | 7084.44 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3236.38 | Top Width (ft) | | 3236.38 | | |
| Vel Total (ft/s) | 3.16 | Avg. Vel. (ft/s) | | 3.16 | | |
| Max Chl Dpth (ft) | 4.51 | Hydr. Depth (ft) | | 2.19 | | |
| Conv. Total (cfs) | 443207.7 | Conv. (cfs) | | 443207.7 | | |
| Length Wtd. (ft) | 139.39 | Wetted Per. (ft) | | 3241.57 | | |
| Min Ch El (ft) | 1904.97 | Shear (lb/sq ft) | | 0.35 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4794.51 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.39 | Cum Volume (acre-ft) | | 373.41 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 171.88 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -17666.2

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1917.75 | 316.25 | 1917.08 | 318.5 | 1917.07 | 326.79 | 1917.05 | 339.06 | 1917.03 |
| 345.18 | 1917.01 | 349.14 | 1917.01 | 349.83 | 1917 | 354.12 | 1917 | 354.66 | 1916.99 |
| 356.38 | 1916.99 | 363.73 | 1916.98 | 363.78 | 1916.97 | 365.21 | 1916.97 | 384.59 | 1916.93 |
| 389.98 | 1916.92 | 398.07 | 1916.9 | 414.92 | 1916.87 | 417.85 | 1916.86 | 429.55 | 1916.83 |
| 452.33 | 1916.79 | 452.75 | 1916.78 | 476.29 | 1916.73 | 490.1 | 1916.7 | 501.34 | 1916.68 |
| 508.94 | 1916.66 | 513.35 | 1916.66 | 515.28 | 1916.65 | 517.29 | 1916.65 | 524.35 | 1916.63 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 555.2 | 1916.57 | 555.86 | 1916.56 | 558.34 | 1916.56 | 572.25 | 1916.53 | 585.26 | 1916.5 |
| 588.55 | 1916.49 | 590.5 | 1916.49 | 607.06 | 1916.45 | 626.16 | 1916.41 | 633.13 | 1916.4 |
| 653.17 | 1916.36 | 670.28 | 1916.32 | 672.18 | 1916.32 | 673.13 | 1916.31 | 676.11 | 1916.31 |
| 701.22 | 1916.25 | 708.18 | 1916.24 | 712.16 | 1916.23 | 714.53 | 1916.22 | 716.12 | 1916.22 |
| 775.98 | 1916.09 | 889.8 | 1915.85 | 890.02 | 1915.29 | 891.07 | 1915.32 | 891.16 | 1915.29 |
| 896.23 | 1913.18 | 913.02 | 1913.01 | 916.05 | 1912.64 | 937.32 | 1912.44 | 938.04 | 1912.41 |
| 938.9 | 1912.34 | 946.43 | 1912.03 | 947.25 | 1911.98 | 956.27 | 1911.61 | 956.77 | 1911.58 |
| 963.33 | 1911.28 | 964.36 | 1911.21 | 982.55 | 1910.33 | 983.43 | 1910.28 | 1009.81 | 1909 |
| 1010.31 | 1908.97 | 1040.97 | 1907.3 | 1041.06 | 1907.3 | 1046.59 | 1907 | 1047.9 | 1907 |
| 1057.36 | 1907.15 | 1062.03 | 1907.17 | 1067.96 | 1907.2 | 1083.01 | 1907.34 | 1086.75 | 1907.38 |
| 1095.59 | 1907.42 | 1111.48 | 1907.52 | 1128.99 | 1907.66 | 1133.96 | 1907.68 | 1140.48 | 1907.73 |
| 1158.41 | 1907.81 | 1162.03 | 1907.84 | 1183.57 | 1907.92 | 1184.04 | 1907.93 | 1188.9 | 1907.96 |
| 1191 | 1907.96 | 1192.42 | 1907.97 | 1196.18 | 1907.97 | 1210.58 | 1908 | 1218.91 | 1908 |
| 1226.54 | 1908.01 | 1242.34 | 1908.02 | 1247.92 | 1908 | 1252.29 | 1908 | 1266.04 | 1907.94 |
| 1267.08 | 1907.94 | 1283.81 | 1907.86 | 1286.47 | 1907.84 | 1289.7 | 1907.81 | 1304.66 | 1907.72 |
| 1305.1 | 1907.72 | 1310.84 | 1907.66 | 1314.22 | 1907.63 | 1317.37 | 1907.61 | 1327.65 | 1907.56 |
| 1336.33 | 1907.45 | 1343.85 | 1907.42 | 1347.26 | 1907.36 | 1353.29 | 1907.33 | 1355.12 | 1907.33 |
| 1358.94 | 1907.28 | 1372.44 | 1907.08 | 1372.72 | 1907.08 | 1378.72 | 1907 | 1414.86 | 1907 |
| 1434.34 | 1907.26 | 1480.69 | 1907.67 | 1519.07 | 1908 | 1543.9 | 1908 | 1558.05 | 1908.54 |
| 1564.82 | 1908.79 | 1571.48 | 1909 | 1575.26 | 1909.24 | 1584.88 | 1909.16 | 1588.49 | 1909.05 |
| 1592.82 | 1909.04 | 1596.3 | 1909 | 1599.51 | 1908 | 1602.16 | 1907.18 | 1602.71 | 1907 |
| 1603.73 | 1906.63 | 1605.87 | 1905.87 | 1608.17 | 1905 | 1627.23 | 1904.97 | 1639.29 | 1904.96 |
| 1640.59 | 1904.96 | 1670.11 | 1905 | 1676.68 | 1905.29 | 1685.82 | 1905.67 | 1688.12 | 1905.76 |
| 1690.03 | 1905.82 | 1692.51 | 1905.93 | 1694.03 | 1905.98 | 1698.8 | 1906.2 | 1699.34 | 1906.21 |
| 1707.37 | 1906.57 | 1714.36 | 1906.52 | 1714.99 | 1906.54 | 1722.15 | 1906.6 | 1722.77 | 1906.62 |
| 1731.21 | 1907 | 1843.63 | 1907 | 1844.59 | 1907.41 | 1847.32 | 1908.71 | 1847.89 | 1909 |
| 1849.7 | 1909.77 | 1850.21 | 1910 | 1850.95 | 1910.25 | 1853.11 | 1911 | 1854.97 | 1911.61 |
| 1858.28 | 1912.65 | 1859.52 | 1913 | 1860 | 1913.05 | 1861.25 | 1913.1 | 1861.68 | 1913.16 |
| 1863.61 | 1913.26 | 1864.1 | 1913.23 | 1866.33 | 1913 | 1869.59 | 1912.61 | 1873.82 | 1912.21 |
| 1875.54 | 1912 | 1877.1 | 1911.79 | 1878.35 | 1911.59 | 1879.55 | 1911.36 | 1880.15 | 1911.26 |
| 1881.35 | 1911 | 1881.81 | 1910.88 | 1884.63 | 1910 | 1885.96 | 1909.37 | 1887.93 | 1908.41 |
| 1888.75 | 1908 | 1890.53 | 1907.47 | 1891.77 | 1907.44 | 1893.27 | 1907.37 | 1895.72 | 1907 |
| 1958.66 | 1907 | 1959.04 | 1907.01 | 1969.93 | 1907.01 | 1982.47 | 1907.02 | 1985.23 | 1907.02 |
| 1989.51 | 1907.01 | 2004.36 | 1907.01 | 2020.31 | 1907 | 2029.81 | 1906.54 | 2039.89 | 1906 |
| 2041.2 | 1905.99 | 2044.83 | 1905.98 | 2049.92 | 1905.97 | 2050.93 | 1905.96 | 2106.99 | 1905.9 |
| 2137.91 | 1905.86 | 2210.24 | 1905.98 | 2223.64 | 1906 | 2235.6 | 1906.16 | 2240.4 | 1906.18 |
| 2258.93 | 1906.38 | 2259.31 | 1906.38 | 2291.63 | 1906.63 | 2305.33 | 1906.74 | 2312.03 | 1906.76 |
| 2340.71 | 1907 | 2712.41 | 1907 | 2768.77 | 1907.08 | 2875.88 | 1907.22 | 2904.06 | 1907.01 |
| 2905.94 | 1907 | 2927.16 | 1907 | 2945.21 | 1906.15 | 2948.28 | 1906 | 3028.65 | 1906 |
| 3033.52 | 1906.1 | 3034.19 | 1906.12 | 3041.82 | 1906.29 | 3046.93 | 1906.41 | 3062.2 | 1906.76 |
| 3064.38 | 1906.8 | 3073.93 | 1907 | 3106.43 | 1907 | 3107.61 | 1906.96 | 3109.14 | 1906.92 |
| 3112.82 | 1906.8 | 3114.43 | 1906.76 | 3115.07 | 1906.73 | 3117.91 | 1906.66 | 3118.17 | 1906.66 |
| 3122.05 | 1906.57 | 3122.62 | 1906.55 | 3128.23 | 1906.44 | 3129.04 | 1906.41 | 3140.51 | 1906.14 |
| 3146.89 | 1906 | 3194.3 | 1906 | 3296.1 | 1905.99 | 3388.53 | 1905.99 | 3401.33 | 1906 |
| 3406.68 | 1906 | 3409.07 | 1906.01 | 3414.91 | 1906.01 | 3426.87 | 1906.34 | 3427.59 | 1906.37 |
| 3432.67 | 1906.47 | 3437.36 | 1906.64 | 3438.37 | 1906.66 | 3439.15 | 1906.7 | 3441.36 | 1906.77 |
| 3442.62 | 1906.83 | 3444.71 | 1906.88 | 3446.98 | 1906.89 | 3448.72 | 1906.87 | 3451.96 | 1906.82 |
| 3457.5 | 1906.72 | 3461.9 | 1906.65 | 3464.85 | 1906.59 | 3469 | 1906.51 | 3479.99 | 1906.22 |
| 3480.89 | 1906.2 | 3488.13 | 1906 | 3488.37 | 1906 | 3491.89 | 1905.89 | 3496.38 | 1905.76 |
| 3499.73 | 1905.66 | 3503.93 | 1905.53 | 3510.29 | 1905.36 | 3513.22 | 1905.29 | 3519.84 | 1905.08 |
| 3521.62 | 1905.06 | 3522.34 | 1905.04 | 3524.53 | 1905.02 | 3528.14 | 1905 | 3539.17 | 1905 |
| 3549.37 | 1905.12 | 3557.57 | 1905.21 | 3558.69 | 1905.22 | 3561.22 | 1905.27 | 3561.55 | 1905.29 |
| 3563.75 | 1905.35 | 3567.34 | 1905.48 | 3581.25 | 1906 | 3592.57 | 1906.89 | 3593.83 | 1907 |
| 3598.59 | 1907 | 3609.93 | 1907.4 | 3618.79 | 1907.71 | 3630.05 | 1908 | 3630.84 | 1908.06 |
| 3640.62 | 1909 | 3649.42 | 1909.91 | 3650.26 | 1910 | 3651.81 | 1910.01 | 3652.92 | 1910 |
| 3674.46 | 1910 | 3680.03 | 1909.87 | 3699.49 | 1909.43 | 3700.08 | 1909.41 | 3704.32 | 1909.42 |
| 3704.94 | 1909.4 | 3707.1 | 1909.41 | 3717.19 | 1909.1 | 3718.99 | 1909.03 | 3719.54 | 1909 |
| 3720.37 | 1909 | 3722.47 | 1908.98 | 3723.91 | 1908.98 | 3729.93 | 1908.8 | 3730.6 | 1908.8 |
| 3730.94 | 1908.76 | 3735 | 1908.51 | 3738.99 | 1908.15 | 3740.74 | 1908 | 3751.78 | 1907.25 |
| 3752.48 | 1907.22 | 3754.32 | 1907.17 | 3759.04 | 1907.08 | 3759.51 | 1907.06 | 3762.63 | 1907.03 |
| 3762.65 | 1907.02 | 3763.91 | 1907.02 | 3767.1 | 1907.05 | 3767.97 | 1907.07 | 3793.43 | 1908 |
| 3798.48 | 1908.99 | 3798.93 | 1909.07 | 3803.92 | 1910 | 3805.52 | 1910.21 | 3806.37 | 1910.24 |
| 3807.31 | 1910.29 | 3808.33 | 1910.36 | 3810.64 | 1910.54 | 3816.87 | 1911 | 3823 | 1911.31 |
| 3823.92 | 1911.36 | 3828.91 | 1911.42 | 3833.29 | 1911.44 | 3836.17 | 1911.07 | 3838.67 | 1910.68 |
| 3842.96 | 1910 | 3847.3 | 1909.32 | 3849.26 | 1909 | 3854.18 | 1908.05 | 3854.9 | 1907.9 |
| 3861.33 | 1906.54 | 3861.54 | 1906.53 | 3868.62 | 1906.43 | 3872.6 | 1906.18 | 3876.08 | 1906.18 |
| 3877.12 | 1906.21 | 3878.73 | 1906.13 | 3881.52 | 1906.09 | 3893.11 | 1906.2 | 3898.95 | 1906.27 |
| 3911.35 | 1906.43 | 3920.14 | 1906.62 | 3932.91 | 1906.99 | 3934.7 | 1906.99 | 3935.05 | 1907 |
| 4025.4 | 1907 | 4041.73 | 1907.44 | 4049.05 | 1907.58 | 4054.25 | 1907.66 | 4056.5 | 1907.71 |
| 4058.26 | 1907.73 | 4068.51 | 1908 | 4078.1 | 1908 | 4079.82 | 1908.02 | 4081.54 | 1908.02 |
| 4084.2 | 1908.11 | 4084.53 | 1908.11 | 4088.37 | 1908.33 | 4099.63 | 1909 | 4110.56 | 1908.99 |
| 4121.76 | 1908.99 | 4140.54 | 1909 | 4143.94 | 1909 | 4148.46 | 1910 | 4149.08 | 1910.14 |
| 4152.98 | 1911 | 4157.53 | 1912.02 | 4162.04 | 1913 | 4171.27 | 1913 | 4171.71 | 1912.94 |
| 4177.91 | 1912 | 4181.6 | 1911.43 | 4183.81 | 1911.12 | 4187.28 | 1910.62 | 4191.17 | 1910 |
| 4193.41 | 1909.63 | 4197.29 | 1909 | 4202.48 | 1908.62 | 4212.64 | 1908 | 4215.71 | 1907.86 |
| 4223.68 | 1907.53 | 4224.77 | 1907.48 | 4226.62 | 1907.42 | 4231.41 | 1907.19 | 4235.25 | 1907.18 |
| 4239.15 | 1907.16 | 4241.91 | 1907.16 | 4245.59 | 1907.22 | 4248.52 | 1907.57 | 4248.57 | 1907.57 |
| 4252.14 | 1908 | 4254.87 | 1908 | 4256.31 | 1908.07 | 4264.63 | 1908.45 | 4267.51 | 1908.6 |
| 4270.38 | 1908.76 | 4275.2 | 1909 | 4362 | 1909 | 4374.17 | 1909.42 | 4384.24 | 1909.76 |
| 4406.8 | 1910 | 4416.6 | 1910 | 4417.96 | 1910.08 | 4430.08 | 1911 | 4437.49 | 1911.6 |
| 4442.12 | 1912 | 4447.84 | 1912.51 | 4452.41 | 1913 | 4454.76 | 1913.26 | 4455.37 | 1913.34 |
| 4460.9 | 1914 | 4466.38 | 1914.68 | 4468.19 | 1914.9 | 4469.1 | 1915 | 4469.33 | 1915 |
| 4471.37 | 1915.07 | 4474.49 | 1915.17 | 4481.26 | 1915.31 | 4483.44 | 1915.37 | 4494 | 1916 |
| 4497.94 | 1916.71 | 4499.48 | 1917 | 4504.02 | 1918 | 4509.08 | 1919.13 | 4513.25 | 1920 |
| 4515.65 | 1920.51 | 4517.85 | 1921 | 4522.27 | 1922 | 4524.82 | 1922.62 | 4526.5 | 1923 |
| 4529.98 | 1923.88 | 4530.72 | 1924.06 | 4534.77 | 1925 | 4537.5 | 1925.68 | 4538.9 | 1926 |
| 4542.19 | 1926.81 | 4543 | 1927 | 4552.52 | 1927.81 | 4554.7 | 1928 | 4566.36 | 1928 |
| 4595.7 | 1928.21 | 4623.34 | 1928.41 | 4658.11 | 1928.37 | 4699.07 | 1928.31 | 4700.73 | 1928.32 |

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 4706.59 1928.39 4709.28 1928.43 4711.63 1928.45 4719.15 1928.42 4727.69 1928.38
 4728.16 1928.37 4733.37 1928.41 4737.45 1928.38 4742.63 1928.44 4750.12 1928.38
 4751.62 1928.37 4754.62 1928.32 4757.51 1928.24 4764.12    1928 4765.73  1927.9
 4769.43 1927.82  4772.7 1927.79 4774.26 1927.79 4776.61 1927.76 4780.35 1927.64

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .045       0     .04 4780.35    .045

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
             0 4780.35            98.38   98.38   98.38             .1       .3

CROSS SECTION OUTPUT  Profile #PF 1

  E.G. Elev (ft)           1909.24    Element                  Left OB    Channel   Right OB
  Vel Head (ft)               0.18    Wt. n-Val.                           0.040
  W.S. Elev (ft)           1909.05    Reach Len. (ft)            98.38      98.38      98.38
  Crit W.S. (ft)                      Flow Area (sq ft)                   6547.46
  E.G. Slope (ft/ft)      0.003160    Area (sq ft)                        6547.46
  Q Total (cfs)           22400.00    Flow (cfs)                         22400.00
  Top Width (ft)           3120.05    Top Width (ft)                      3120.05
  Vel Total (ft/s)            3.42    Avg. Vel. (ft/s)                       3.42
  Max Chl Dpth (ft)           4.09    Hydr. Depth (ft)                       2.10
  Conv. Total (cfs)       398461.3    Conv. (cfs)                        398461.3
  Length Wtd. (ft)           98.38    Wetted Per. (ft)                    3122.52
  Min Ch El (ft)           1904.96    Shear (lb/sq ft)                       0.41
  Alpha                       1.00    Stream Power (lb/ft s)   4780.35       0.00       0.00
  Frctn Loss (ft)             0.29    Cum Volume (acre-ft)                 351.60
  C & E Loss (ft)             0.00    Cum SA (acres)                       161.71


Warning: Divided flow computed for this cross-section.

CROSS SECTION


RIVER: MOJAVE
REACH: MOJAVE             RS: -17764.6

INPUT
Description:
Station Elevation Data    num=     490
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0 1917.97  148.99 1917.65  150.83 1917.64  157.61 1917.63  172.66  1917.6
   175.9 1917.59  177.58 1917.59  178.69 1917.58  181.83 1917.58  187.06 1917.57
  187.54 1917.56  189.07 1917.56  204.95 1917.53  209.37 1917.52  216.01  1917.5
  229.84 1917.47  232.24 1917.47  260.57 1917.41   260.9 1917.41  280.27 1917.36
  291.63 1917.34  300.75 1917.32  307.15 1917.31  310.78  1917.3  312.37  1917.3
  313.83 1917.29   316.6 1917.29  319.85 1917.28  345.29 1917.22  347.88 1917.22
  359.36 1917.19  370.11 1917.17  372.82 1917.17  372.86 1917.16  377.12 1917.16
  377.65 1917.15  388.12 1917.13  392.03 1917.12  409.69 1917.09  426.28 1917.05
  430.06 1917.04  440.46 1917.02  442.04 1917.02  442.82 1917.01  445.29 1917.01
  452.15 1916.99  466.12 1916.96   471.9 1916.95   475.2 1916.94  478.49 1916.94
  528.24 1916.83  634.79  1916.6  635.57  1916.6  706.98 1916.44  725.76  1916.4
  729.41  1916.4  732.42 1916.39  734.21 1916.39  741.03 1916.37  743.44 1916.37
  745.81 1916.36  748.04 1916.36  749.09 1916.35  784.32 1916.28  848.56 1916.14
  849.67 1916.14  864.71  1916.1  878.12 1916.07  879.18 1916.07  890.31 1916.05
  900.61 1916.03  901.46 1916.02  901.69 1915.64  902.35  1914.5  905.62 1908.97
  906.34 1907.73  906.65 1907.95  907.87    1906  911.12    1906  960.59 1906.26
  961.85 1906.26  967.62  1906.3  971.62 1906.32  980.67 1906.38  996.71 1906.46
 1008.93 1906.51 1023.09 1906.62 1041.64 1906.77 1047.07  1906.8 1051.01 1906.83
 1055.25 1906.87 1058.85  1906.9 1061.36 1906.91 1073.25    1907 1074.83    1907
 1079.65 1907.01 1081.25 1907.02 1113.58 1907.19 1113.87 1907.19 1127.83 1907.25
 1157.38  1907.3 1183.61 1907.33 1184.33 1907.34 1193.77 1907.34 1198.77 1907.35
 1203.59 1907.35 1207.86 1907.36 1232.22 1907.28 1262.98 1907.19 1263.42 1907.18
 1264.17 1907.19 1264.76 1907.18 1272.93 1907.15 1276.21 1907.15  1289.5  1907.1
 1306.37 1907.01  1313.8 1907.01 1315.79    1907 1400.38    1907 1408.79 1907.01
 1464.33 1907.44 1498.77 1907.69 1511.27  1907.8 1528.63 1907.96 1530.59 1907.98
 1531.08 1907.98 1533.46    1908 1536.52 1908.18 1536.82 1908.19 1542.89 1908.45
 1546.03 1908.58 1550.02 1908.73 1556.58    1909 1562.42 1909.04 1568.73 1909.08
 1574.53 1909.05 1577.33 1909.03 1579.91    1909 1581.23 1908.18 1581.54    1908
 1582.73    1907 1583.96 1906.14 1584.33 1905.87 1586.45    1905 1588.63    1905
 1589.96 1904.99 1600.32 1904.97 1604.54 1904.96 1612.46 1904.95 1639.15 1904.98
 1640.07 1904.99 1646.69 1904.99 1648.31    1905 1649.84    1905 1653.53 1905.18
    1656 1905.31 1659.62 1905.51  1662.6 1905.67 1666.49 1905.86 1669.27    1906
 1677.84 1906.51 1679.64 1906.62 1680.12 1906.66  1685.8    1907 1751.34    1907
 1760.55 1906.34 1762.24 1906.25 1763.61 1906.17 1765.68 1906.08 1766.81 1906.07
 1767.33 1906.03 1768.34 1906.04 1768.77 1906.03 1771.98 1906.05 1776.91 1906.12
 1780.61 1906.19 1782.89 1906.14 1785.12 1906.18 1785.17 1906.17 1791.77 1906.46
 1804.22    1907 1979.35    1907 1980.79 1906.95 1980.99 1906.95 1990.57 1906.39
 1992.15 1906.33 1993.45 1906.27 1996.85 1906.13  2000.9    1906 2001.74 1905.99
 2004.29 1905.91  2008.4 1905.76 2010.61 1905.69 2028.76    1905 2032.55    1905
 2035.49 1905.04 2036.04 1905.06 2046.05 1905.07 2102.26 1905.31  2248.5    1906
 2250.33 1906.01 2251.92 1906.04 2273.98  1906.4 2275.88 1906.42 2276.76 1906.44
 2303.21 1906.77  2310.6 1906.88  2315.5 1906.94 2321.51    1907 2885.14    1907
  2890.9 1906.79 2899.46 1906.64  2914.6 1906.29 2919.79  1906.2 2922.65 1906.16
 2926.73 1906.11 2928.24 1906.11 2929.15 1906.12 2930.86 1906.09 2931.31  1906.1
 2933.06 1906.08 2934.29 1906.11 2936.04 1906.09 2936.23  1906.1  2948.5 1906.05
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2948.66 | 1906.06 | 2960.23 | 1906.01 | 2960.66 | 1906 | 3067.99 | 1906 | 3076.19 | 1906.01 |
| 3079.11 | 1906.01 | 3087.9 | 1906 | 3091.33 | 1906 | 3093.81 | 1905.96 | 3104.88 | 1905.84 |
| 3109.73 | 1905.78 | 3109.98 | 1905.78 | 3112.41 | 1905.74 | 3113.17 | 1905.76 | 3116.17 | 1905.71 |
| 3148.05 | 1905.99 | 3149.46 | 1906 | 3162.25 | 1906 | 3217.61 | 1905.99 | 3254.66 | 1905.99 |
| 3332.5 | 1905.98 | 3375.81 | 1905.98 | 3391.95 | 1905.97 | 3407.46 | 1905.97 | 3494.77 | 1905.17 |
| 3494.95 | 1905.18 | 3496.23 | 1905.15 | 3499.69 | 1905.11 | 3501.79 | 1905.08 | 3506.44 | 1905 |
| 3570.52 | 1905 | 3574.18 | 1905.52 | 3579.69 | 1906 | 3585.57 | 1906.82 | 3586.45 | 1906.89 |
| 3587.61 | 1906.95 | 3589.06 | 1907.01 | 3594.12 | 1907.2 | 3598.37 | 1907.38 | 3599.34 | 1907.43 |
| 3600.1 | 1907.48 | 3602.3 | 1907.58 | 3602.9 | 1907.63 | 3605.87 | 1907.83 | 3608.09 | 1907.99 |
| 3608.63 | 1908.01 | 3616.13 | 1908.25 | 3620.96 | 1908.36 | 3622.66 | 1908.31 | 3627.01 | 1908.27 |
| 3628.77 | 1908.28 | 3633.53 | 1908.18 | 3639.97 | 1908.03 | 3640.28 | 1908.03 | 3640.64 | 1908 |
| 3642.06 | 1907.99 | 3643.27 | 1907.99 | 3649.73 | 1907.59 | 3652.14 | 1907.49 | 3654.18 | 1907.4 |
| 3662.96 | 1907 | 3665.89 | 1907 | 3666.05 | 1907.02 | 3673.6 | 1907.74 | 3676.46 | 1907.94 |
| 3676.88 | 1908 | 3678.4 | 1908.39 | 3680.86 | 1909 | 3681.28 | 1909.1 | 3685.22 | 1910 |
| 3686.17 | 1910.23 | 3687 | 1910.35 | 3687.46 | 1910.4 | 3687.95 | 1910.43 | 3688.99 | 1910.46 |
| 3689.72 | 1910.46 | 3691.02 | 1910.43 | 3691.78 | 1910.34 | 3692.51 | 1910.27 | 3693.36 | 1910.26 |
| 3696.86 | 1910.29 | 3700.66 | 1910.32 | 3701.71 | 1910.39 | 3703.24 | 1910.56 | 3703.76 | 1910.58 |
| 3704.44 | 1910.63 | 3707.48 | 1910.9 | 3708.34 | 1911 | 3711.58 | 1911.36 | 3713.7 | 1911.58 |
| 3714.65 | 1911.65 | 3715.56 | 1911.68 | 3718.78 | 1911.73 | 3729.06 | 1911.76 | 3732.5 | 1911.78 |
| 3733.69 | 1911.74 | 3734.27 | 1911.7 | 3735.1 | 1911.7 | 3735.71 | 1911.66 | 3736.2 | 1911.65 |
| 3737.8 | 1911.54 | 3739.55 | 1911.38 | 3741.64 | 1911.16 | 3742.93 | 1911 | 3744.18 | 1910.81 |
| 3745.25 | 1910.64 | 3747.17 | 1910.41 | 3750.46 | 1910 | 3750.78 | 1909.97 | 3757.97 | 1909 |
| 3767.36 | 1908.71 | 3776.93 | 1908.37 | 3787.04 | 1908 | 3791.98 | 1908 | 3793.84 | 1908.62 |
| 3795.21 | 1909 | 3797.38 | 1909.5 | 3800.06 | 1910 | 3805.69 | 1910.09 | 3805.91 | 1910.1 |
| 3808.29 | 1910.13 | 3810.22 | 1910.11 | 3814.05 | 1910.06 | 3816.55 | 1910.03 | 3817.92 | 1910.06 |
| 3817.93 | 1910.07 | 3818.91 | 1910 | 3829.68 | 1909.28 | 3832.62 | 1909 | 3834.24 | 1908.56 |
| 3836.27 | 1908 | 3839.93 | 1907.02 | 3840.43 | 1906.88 | 3843.35 | 1906 | 3845.87 | 1905.91 |
| 3847.4 | 1905.85 | 3853.29 | 1905.64 | 3860.42 | 1905.38 | 3869.79 | 1905.03 | 3870.89 | 1905 |
| 3879.84 | 1905 | 3881.22 | 1905.05 | 3884.52 | 1905.19 | 3905.42 | 1906 | 3912.54 | 1906.2 |
| 3936.14 | 1906.99 | 3964.23 | 1906.99 | 3980.07 | 1907 | 4027.02 | 1907 | 4027.66 | 1907.13 |
| 4031.4 | 1908 | 4032.43 | 1908.22 | 4036.14 | 1909 | 4040.98 | 1910 | 4044.49 | 1910.72 |
| 4045.8 | 1911 | 4047.2 | 1911.32 | 4050.24 | 1912 | 4051.26 | 1912.03 | 4052.26 | 1912.05 |
| 4053.6 | 1912.04 | 4055.22 | 1912 | 4058.66 | 1911.17 | 4063.34 | 1910.11 | 4065.62 | 1909.59 |
| 4067.93 | 1909.1 | 4068.57 | 1908.97 | 4071.62 | 1908.96 | 4078.52 | 1908.93 | 4081.79 | 1908.99 |
| 4082.8 | 1909 | 4088.45 | 1909 | 4092.06 | 1909.37 | 4098.26 | 1910 | 4104.48 | 1910.02 |
| 4106.52 | 1910.03 | 4113.41 | 1910.01 | 4115.83 | 1909.99 | 4125.84 | 1909.46 | 4130.82 | 1909.2 |
| 4134.49 | 1909 | 4136.18 | 1908.85 | 4136.51 | 1908.83 | 4149.71 | 1908 | 4159.9 | 1907.82 |
| 4163.92 | 1907.74 | 4174.47 | 1907.52 | 4176.35 | 1907.47 | 4177.97 | 1907.44 | 4198.46 | 1907 |
| 4212.95 | 1907 | 4223.29 | 1907.45 | 4236.26 | 1908 | 4241.9 | 1908.26 | 4260.16 | 1909 |
| 4416.25 | 1909 | 4421.52 | 1909.16 | 4428.14 | 1909.38 | 4428.92 | 1909.4 | 4444.81 | 1910 |
| 4446.39 | 1910.14 | 4456.72 | 1911 | 4464.75 | 1911.75 | 4467.5 | 1912 | 4468.63 | 1912.11 |
| 4476.21 | 1913 | 4477.87 | 1913.19 | 4484.83 | 1914 | 4493.5 | 1915 | 4494.29 | 1915.11 |
| 4500.15 | 1916 | 4505.19 | 1916.79 | 4506.56 | 1917 | 4508.57 | 1917.32 | 4508.79 | 1917.34 |
| 4513.09 | 1918 | 4517.87 | 1918.7 | 4519.25 | 1918.82 | 4522.09 | 1919 | 4530.16 | 1919.52 |
| 4530.47 | 1919.53 | 4532.02 | 1919.65 | 4534.63 | 1919.89 | 4535.2 | 1920 | 4540.1 | 1920.98 |
| 4540.21 | 1921 | 4544.8 | 1922 | 4548.29 | 1922.66 | 4550.22 | 1923 | 4555.36 | 1923.94 |
| 4557.26 | 1924.28 | 4560.46 | 1924.83 | 4561.47 | 1925 | 4565.25 | 1925.6 | 4567.84 | 1926 |
| 4568.05 | 1926.04 | 4577.55 | 1927 | 4587.29 | 1927.04 | 4590.69 | 1927.05 | 4595.87 | 1927.07 |
| 4596.69 | 1927.07 | 4603.2 | 1927.1 | 4610.06 | 1927.08 | 4624.39 | 1927.2 | 4624.47 | 1927.2 |
| 4636.39 | 1927.02 | 4637.99 | 1927 | 4650.33 | 1926.67 | 4655.48 | 1926.62 | 4658.86 | 1926.55 |
| 4666.94 | 1926.31 | 4668.37 | 1926.28 | 4669.61 | 1926.24 | 4672.92 | 1926.15 | 4674.98 | 1926.11 |
| 4680.88 | 1926 | 4682.54 | 1925.98 | 4687.85 | 1925.89 | 4687.95 | 1925.89 | 4696.03 | 1925.8 |
| 4702.7 | 1925.73 | 4706.79 | 1925.71 | 4722.15 | 1925.71 | 4738.64 | 1925.76 | 4739.9 | 1925.77 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4739.9 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 4739.9 | 110.89 | 110.89 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1908.94 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.17 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1908.77 | Reach Len. (ft) | 110.89 | 110.89 | 110.89 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6762.57 | | |
| E.G. Slope (ft/ft) | 0.002806 | Area (sq ft) | | 6762.57 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3092.35 | Top Width (ft) | | 3092.35 | | |
| Vel Total (ft/s) | 3.31 | Avg. Vel. (ft/s) | | 3.31 | | |
| Max Chl Dpth (ft) | 3.82 | Hydr. Depth (ft) | | 2.19 | | |
| Conv. Total (cfs) | 422863.0 | Conv. (cfs) | | 422863.0 | | |
| Length Wtd. (ft) | 110.89 | Wetted Per. (ft) | | 3096.58 | | |
| Min Ch El (ft) | 1904.95 | Shear (lb/sq ft) | | 0.38 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4739.90 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.34 | Cum Volume (acre-ft) | | 336.57 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 154.69 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -17875.5

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1918.29 | .69 | 1918.28 | 2.28 | 1918.28 | 6.11 | 1918.27 | 7.59 | 1918.27 |
| 19.27 | 1918.24 | 22.52 | 1918.24 | 27.41 | 1918.23 | 37.6 | 1918.2 | 39.38 | 1918.2 |
| 46.47 | 1918.18 | 74.89 | 1918.12 | 83.31 | 1918.1 | 90.18 | 1918.09 | 94.83 | 1918.08 |
| 97.53 | 1918.07 | 99.94 | 1918.07 | 101.86 | 1918.06 | 104.27 | 1918.06 | 123.22 | 1918.02 |
| 123.62 | 1918.01 | 125.16 | 1918.01 | 141.75 | 1917.97 | 144.99 | 1917.97 | 147.39 | 1917.96 |
| 155.22 | 1917.95 | 158.15 | 1917.94 | 171.38 | 1917.91 | 183.84 | 1917.88 | 186.68 | 1917.88 |
| 194.5 | 1917.86 | 196.32 | 1917.86 | 196.5 | 1917.85 | 198.14 | 1917.85 | 213.83 | 1917.82 |
| 218.19 | 1917.81 | 220.68 | 1917.8 | 223.16 | 1917.8 | 260.82 | 1917.71 | 342.06 | 1917.54 |
| 342.66 | 1917.53 | 397.57 | 1917.41 | 412.08 | 1917.38 | 414.9 | 1917.38 | 421.36 | 1917.36 |
| 423.89 | 1917.36 | 425.76 | 1917.35 | 427.59 | 1917.35 | 430.13 | 1917.34 | 507.57 | 1917.17 |
| 508.44 | 1917.17 | 520.21 | 1917.14 | 530.72 | 1917.12 | 531.56 | 1917.12 | 548.39 | 1917.08 |
| 561.48 | 1917.05 | 564.07 | 1917.05 | 581.71 | 1917.01 | 592.4 | 1916.99 | 603.88 | 1916.96 |
| 606.07 | 1916.96 | 616.25 | 1916.93 | 629.69 | 1916.9 | 631.99 | 1916.9 | 635.75 | 1916.89 |
| 646.61 | 1916.87 | 659.46 | 1916.84 | 669.99 | 1916.82 | 673.9 | 1916.81 | 687.71 | 1916.78 |
| 696.23 | 1916.76 | 701.79 | 1916.75 | 714.55 | 1916.72 | 737.73 | 1916.67 | 944.78 | 1915.7 |
| 966.38 | 1908.43 | 967.79 | 1907.96 | 1004.86 | 1907.45 | 1005.29 | 1907.39 | 1026.72 | 1906.69 |
| 1026.92 | 1906.66 | 1047.6 | 1906 | 1061.41 | 1906 | 1068.49 | 1906.05 | 1069.91 | 1906.05 |
| 1073.24 | 1906.08 | 1076.04 | 1906.1 | 1121.56 | 1906.44 | 1123.4 | 1906.45 | 1134.01 | 1906.52 |
| 1134.8 | 1906.52 | 1143.21 | 1906.56 | 1143.86 | 1906.57 | 1150.68 | 1906.6 | 1151.35 | 1906.6 |
| 1182.61 | 1906.76 | 1230.09 | 1907 | 1288.66 | 1907 | 1292.56 | 1906.93 | 1293.23 | 1906.93 |
| 1301.05 | 1906.79 | 1302.38 | 1906.8 | 1356.38 | 1906.62 | 1390.73 | 1906.51 | 1392.98 | 1906.51 |
| 1393.57 | 1906.52 | 1396.78 | 1906.52 | 1396.88 | 1906.53 | 1418.35 | 1906.6 | 1447.03 | 1906.7 |
| 1447.24 | 1906.7 | 1486.95 | 1906.98 | 1491.79 | 1906.99 | 1500.11 | 1906.99 | 1501 | 1907 |
| 1514.05 | 1907 | 1545.12 | 1907.32 | 1564.99 | 1907.38 | 1565.57 | 1907.39 | 1574.8 | 1907.66 |
| 1579.02 | 1907.8 | 1584.2 | 1908 | 1586.2 | 1908.14 | 1589.1 | 1908.36 | 1597.27 | 1909 |
| 1602.08 | 1909 | 1604.76 | 1908 | 1607.35 | 1907 | 1609.84 | 1906 | 1610.53 | 1905.69 |
| 1611.97 | 1905 | 1616.02 | 1904.24 | 1617.19 | 1904 | 1619.5 | 1903.75 | 1624.22 | 1903.26 |
| 1625.54 | 1903.21 | 1626.48 | 1903.19 | 1627.24 | 1903.2 | 1631.35 | 1903.28 | 1631.81 | 1903.3 |
| 1635.25 | 1903.39 | 1642.53 | 1903.62 | 1649.12 | 1903.86 | 1658.66 | 1904.36 | 1659.23 | 1904.38 |
| 1661.34 | 1904.48 | 1672.08 | 1905 | 1680.67 | 1905 | 1685.21 | 1905.01 | 1692.14 | 1905.01 |
| 1702.78 | 1905.14 | 1726.39 | 1905.43 | 1728.03 | 1905.43 | 1729.22 | 1905.44 | 1751.71 | 1905.91 |
| 1756.14 | 1906 | 1832.18 | 1906 | 1837.62 | 1905.81 | 1849.42 | 1905.96 | 1852.42 | 1906 |
| 1853.23 | 1906 | 1855.15 | 1906.02 | 1869.39 | 1906.1 | 1882.11 | 1906.13 | 1885.6 | 1906.15 |
| 1890.79 | 1906.19 | 1903.76 | 1906.21 | 1914.75 | 1906.24 | 1919.47 | 1906.23 | 1920.09 | 1906.24 |
| 1927.06 | 1906.24 | 1929.51 | 1906.25 | 1935.07 | 1906.3 | 1943.77 | 1906.39 | 1950.69 | 1906.5 |
| 1951.36 | 1906.52 | 1959.27 | 1906.64 | 1964.06 | 1906.71 | 1973.36 | 1906.86 | 1973.92 | 1906.86 |
| 1982.46 | 1906.98 | 1984.08 | 1907 | 1999.45 | 1907 | 2001.02 | 1906.93 | 2003.72 | 1906.85 |
| 2006.01 | 1906.79 | 2008.84 | 1906.7 | 2018.09 | 1906.53 | 2020.87 | 1906.41 | 2021.78 | 1906.38 |
| 2027.03 | 1906 | 2035.95 | 1905.7 | 2043.63 | 1905.47 | 2054.6 | 1905 | 2058.58 | 1905 |
| 2092.79 | 1905.24 | 2152.46 | 1905.64 | 2155.14 | 1905.66 | 2162.91 | 1905.71 | 2165.87 | 1905.72 |
| 2178.16 | 1905.79 | 2180.76 | 1905.81 | 2194.99 | 1905.87 | 2202.88 | 1905.89 | 2203.59 | 1905.9 |
| 2224.51 | 1906 | 2317.51 | 1906 | 2319.53 | 1906.01 | 2330.2 | 1906.14 | 2344.62 | 1906.29 |
| 2345.3 | 1906.29 | 2378.61 | 1906.55 | 2436.37 | 1907 | 2920.28 | 1907 | 2935.34 | 1906.27 |
| 2941.08 | 1906 | 2942.61 | 1905.99 | 2945.04 | 1905.91 | 2946.04 | 1905.87 | 2956.01 | 1905.53 |
| 2960.47 | 1905.39 | 2963.94 | 1905.26 | 2976.15 | 1905.26 | 3009.63 | 1905.71 | 3011.62 | 1905.75 |
| 3023.21 | 1906 | 3070.67 | 1906 | 3084.97 | 1905.76 | 3100.91 | 1905.51 | 3111.66 | 1905.35 |
| 3135.35 | 1905 | 3154.48 | 1905 | 3188.73 | 1905.3 | 3205.36 | 1905.41 | 3215 | 1905.47 |
| 3215.75 | 1905.48 | 3255.46 | 1905.74 | 3257.7 | 1905.76 | 3282.86 | 1905.92 | 3283.41 | 1905.92 |
| 3295.5 | 1906 | 3296.26 | 1906 | 3303.2 | 1906.12 | 3309.24 | 1906.21 | 3314.24 | 1906.28 |
| 3324.59 | 1906.38 | 3327.07 | 1906.42 | 3336.06 | 1906.48 | 3337.66 | 1906.5 | 3341.92 | 1906.5 |
| 3347.13 | 1906.49 | 3350.03 | 1906.47 | 3353.65 | 1906.46 | 3355.33 | 1906.46 | 3358.34 | 1906.45 |
| 3363.45 | 1906.44 | 3370.47 | 1906.48 | 3377.15 | 1906.42 | 3385.84 | 1906.33 | 3386.35 | 1906.32 |
| 3400.32 | 1906 | 3403.1 | 1906 | 3419.61 | 1905.58 | 3423.08 | 1905.56 | 3424.49 | 1905.54 |
| 3426.74 | 1905.49 | 3470.35 | 1905.02 | 3474.54 | 1905 | 3597.4 | 1905 | 3600.64 | 1905.48 |
| 3604.08 | 1906 | 3609.28 | 1906.73 | 3610.85 | 1907 | 3613.18 | 1907.36 | 3617.23 | 1908 |
| 3621.93 | 1908.77 | 3623.84 | 1909 | 3624.48 | 1909.17 | 3628.54 | 1910 | 3632.92 | 1911 |
| 3637.04 | 1911.85 | 3637.81 | 1912 | 3639.31 | 1912.25 | 3641.04 | 1912.47 | 3642.12 | 1912.65 |
| 3643.27 | 1912.77 | 3644.77 | 1913 | 3648.9 | 1913.59 | 3651.91 | 1914 | 3652.81 | 1914.13 |
| 3654.65 | 1914.29 | 3655.97 | 1914.32 | 3656.39 | 1914.26 | 3657.62 | 1914 | 3661.76 | 1913.05 |
| 3662.71 | 1913 | 3676.01 | 1912.54 | 3677.11 | 1912.47 | 3682.47 | 1912 | 3690.81 | 1911.25 |
| 3693.46 | 1911 | 3697.3 | 1910.61 | 3699.67 | 1910.38 | 3709.43 | 1909.44 | 3714.02 | 1909 |
| 3724.77 | 1908.5 | 3732.88 | 1908 | 3735.59 | 1908 | 3739.6 | 1907.91 | 3754.24 | 1907.6 |
| 3771.9 | 1907.36 | 3780.07 | 1907.28 | 3789.14 | 1907 | 3797.06 | 1907 | 3805.11 | 1907.64 |
| 3807.66 | 1907.82 | 3809.25 | 1907.92 | 3810.93 | 1908 | 3813.18 | 1908.01 | 3815.45 | 1908.08 |
| 3823 | 1908.14 | 3823.64 | 1908.14 | 3835.54 | 1908.08 | 3837.58 | 1908.02 | 3847.07 | 1908 |
| 3847.92 | 1908 | 3848.65 | 1907.96 | 3850.32 | 1907.84 | 3860.82 | 1907 | 3866.61 | 1906.49 |
| 3872.22 | 1906 | 3874.72 | 1905.99 | 3875.73 | 1905.96 | 3879.65 | 1905.86 | 3893.79 | 1905.87 |
| 3907.73 | 1905.89 | 3909.48 | 1905.94 | 3912.39 | 1906 | 3913.15 | 1906.01 | 3915.38 | 1906.08 |
| 3920.97 | 1906.23 | 3921.92 | 1906.25 | 3923.87 | 1906.31 | 3926.93 | 1906.42 | 3927.7 | 1906.43 |
| 3933.99 | 1906.54 | 3938.72 | 1906.57 | 3940.31 | 1906.61 | 3941.66 | 1906.59 | 3953.01 | 1906.8 |
| 3954.44 | 1906.79 | 3957.55 | 1906.69 | 3959.88 | 1906.6 | 3962.29 | 1906.5 | 3966.48 | 1906.3 |
| 3967.74 | 1906.25 | 3972.57 | 1906 | 3977.49 | 1906 | 3986.43 | 1905.99 | 3995.38 | 1905.99 |
| 3997.19 | 1906 | 4013.39 | 1906 | 4018.74 | 1906.02 | 4027.36 | 1906.04 | 4028.03 | 1906.06 |
| 4029.15 | 1906.06 | 4032.37 | 1906.1 | 4034.71 | 1906.18 | 4043.54 | 1906.37 | 4048.26 | 1906.44 |
| 4051.65 | 1906.57 | 4052.85 | 1906.6 | 4061.39 | 1907 | 4068.09 | 1907.81 | 4069.93 | 1908 |
| 4075.82 | 1908.8 | 4076.06 | 1908.81 | 4076.99 | 1909 | 4082.99 | 1909 | 4088.48 | 1909.22 |
| 4089.33 | 1909.24 | 4092.43 | 1909.28 | 4100.77 | 1909.49 | 4101.4 | 1909.52 | 4103.08 | 1909.54 |
| 4103.67 | 1909.57 | 4104.41 | 1909.57 | 4105.18 | 1909.63 | 4106 | 1909.61 | 4107.32 | 1909.71 |
| 4107.67 | 1909.69 | 4113.32 | 1909.47 | 4125.03 | 1909 | 4135.04 | 1909 | 4140.44 | 1909.01 |
| 4146.47 | 1909 | 4155.07 | 1909 | 4158.63 | 1909.12 | 4161.51 | 1909.01 | 4163.78 | 1909.02 |
| 4164.89 | 1909.01 | 4167.54 | 1909 | 4180.43 | 1908.13 | 4182.2 | 1908 | 4186.92 | 1907.71 |
| 4199.83 | 1907 | 4223.7 | 1906.99 | 4228.1 | 1906.99 | 4247.1 | 1907 | 4275.49 | 1907 |
| 4286.78 | 1907.13 | 4313.67 | 1907.43 | 4314.08 | 1907.44 | 4319.63 | 1907.4 | 4325.92 | 1907.36 |
| 4326.59 | 1907.36 | 4331.55 | 1907.4 | 4338 | 1907.46 | 4348.15 | 1907.62 | 4351.58 | 1907.69 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4357.19 | 1907.79 | 4364.88 | 1907.94 | 4366.26 | 1907.97 | 4368.21 | 1908 | 4379.55 | 1908 |
| 4390.69 | 1907.86 | 4395.18 | 1907.85 | 4396.13 | 1907.84 | 4403.5 | 1907.99 | 4417.03 | 1907.99 |
| 4432.46 | 1908 | 4434.91 | 1908 | 4435.33 | 1908.03 | 4450.84 | 1909 | 4462.05 | 1909.95 |
| 4463.49 | 1910.06 | 4475.28 | 1911 | 4488.19 | 1912 | 4495.38 | 1912.55 | 4501.35 | 1913 |
| 4504.38 | 1913.38 | 4508.9 | 1914 | 4517.21 | 1916 | 4520.83 | 1916.88 | 4529.8 | 1919 |
| 4530.4 | 1919.15 | 4532.29 | 1919.36 | 4534.58 | 1919.6 | 4536.97 | 1919.98 | 4537.51 | 1920 |
| 4541.49 | 1920.7 | 4543.4 | 1921.07 | 4548.1 | 1922 | 4550.75 | 1922.51 | 4553.02 | 1923 |
| 4560.69 | 1923.36 | 4563.55 | 1923.38 | 4576.45 | 1923.42 | 4588.02 | 1923.44 | 4589.66 | 1923.43 |
| 4590.34 | 1923.41 | 4591.73 | 1923.4 | 4595.3 | 1923.33 | 4598.12 | 1923.32 | 4601.35 | 1923.27 |
| 4604.88 | 1923.28 | 4607.04 | 1923.28 | 4608.66 | 1923.29 | 4617.25 | 1923.31 | 4634.95 | 1923.59 |
| 4636.33 | 1923.64 | 4637 | 1923.64 | 4638.42 | 1923.69 | 4640.54 | 1923.74 | 4641.79 | 1923.76 |
| 4646.06 | 1923.88 | 4650.72 | 1924 | 4658.5 | 1924 | 4662.57 | 1924.15 | 4671.15 | 1924.47 |
| 4673.63 | 1924.5 | 4682.94 | 1924.54 | 4683.56 | 1924.55 | 4689.7 | 1924.59 | 4696.89 | 1924.64 |
| 4714.36 | 1924.94 | 4728.52 | 1924.94 | 4733.84 | 1924.99 | 4735.63 | 1925 | 4747.19 | 1925 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4747.19 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 4747.19 | 37.92 | 37.92 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | Left OB | Channel | Right OB |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1908.60 | Element | | | |
| Vel Head (ft) | 0.18 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1908.42 | Reach Len. (ft) | 37.92 | 37.92 | 37.92 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6574.78 | |
| E.G. Slope (ft/ft) | 0.003293 | Area (sq ft) | | 6574.78 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 3252.07 | Top Width (ft) | | 3252.07 | |
| Vel Total (ft/s) | 3.41 | Avg. Vel. (ft/s) | | 3.41 | |
| Max Chl Dpth (ft) | 5.23 | Hydr. Depth (ft) | | 2.02 | |
| Conv. Total (cfs) | 390369.0 | Conv. (cfs) | | 390369.0 | |
| Length Wtd. (ft) | 37.92 | Wetted Per. (ft) | | 3253.82 | |
| Min Ch El (ft) | 1903.19 | Shear (lb/sq ft) | | 0.42 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4747.19 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.12 | Cum Volume (acre-ft) | | 319.59 | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 146.62 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -17913.4

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1918.61 | 6.27 | 1918.6 | 11.62 | 1918.59 | 13.62 | 1918.58 | 20.67 | 1918.57 |
| 25.03 | 1918.56 | 27.88 | 1918.55 | 34.45 | 1918.54 | 46.42 | 1918.51 | 735.32 | 1915.49 |
| 961.42 | 1914.5 | 963.23 | 1913.89 | 966.18 | 1913.85 | 968.57 | 1913.52 | 971.15 | 1913.43 |
| 973.31 | 1913.19 | 977.16 | 1913.07 | 978.36 | 1912.97 | 980.45 | 1912.9 | 981.37 | 1912.82 |
| 983.8 | 1912.74 | 984.59 | 1912.67 | 987 | 1912.58 | 988.13 | 1912.5 | 992.42 | 1912.36 |
| 993.57 | 1912.28 | 999.04 | 1912.1 | 1003.05 | 1911.84 | 1048.71 | 1909.61 | 1052.83 | 1909.38 |
| 1123.4 | 1905.99 | 1129.86 | 1905.99 | 1137.67 | 1906 | 1141.83 | 1906 | 1149.27 | 1906.01 |
| 1156.8 | 1906.01 | 1171.17 | 1906.02 | 1172.24 | 1906.03 | 1174.49 | 1906.03 | 1200.82 | 1906.05 |
| 1221.37 | 1906.05 | 1249.83 | 1906.02 | 1258.48 | 1906.02 | 1277.32 | 1906 | 1372.43 | 1906 |
| 1403.5 | 1906.26 | 1419.82 | 1906.39 | 1421.45 | 1906.4 | 1426.37 | 1906.44 | 1430.79 | 1906.48 |
| 1436.99 | 1906.53 | 1473.96 | 1906.78 | 1485.19 | 1906.86 | 1486.05 | 1906.85 | 1486.95 | 1906.85 |
| 1490.9 | 1906.9 | 1493.98 | 1906.93 | 1498.03 | 1906.96 | 1499.19 | 1906.96 | 1499.67 | 1906.97 |
| 1501.72 | 1906.97 | 1512.53 | 1906.99 | 1514.72 | 1907 | 1519.89 | 1907 | 1529.46 | 1907.16 |
| 1538.44 | 1907.3 | 1539.19 | 1907.33 | 1540.14 | 1907.35 | 1540.7 | 1907.37 | 1550.92 | 1907.55 |
| 1552 | 1907.57 | 1552.78 | 1907.59 | 1554.73 | 1907.63 | 1556.75 | 1907.66 | 1557.02 | 1907.67 |
| 1563.9 | 1907.78 | 1564.39 | 1907.79 | 1571.71 | 1908 | 1579.27 | 1908 | 1584.08 | 1908.57 |
| 1587.73 | 1909 | 1601.15 | 1909 | 1603.3 | 1908.44 | 1604.54 | 1908.12 | 1605.04 | 1908 |
| 1605.34 | 1907.91 | 1608.52 | 1907 | 1611.7 | 1906.08 | 1612.09 | 1905.96 | 1615.43 | 1905 |
| 1617.05 | 1904.44 | 1618.37 | 1904 | 1625.98 | 1903.41 | 1631.29 | 1903 | 1654.34 | 1903 |
| 1655.31 | 1903.06 | 1671.45 | 1904 | 1693.42 | 1904.66 | 1693.88 | 1904.67 | 1696.03 | 1904.73 |
| 1698.94 | 1904.82 | 1704.91 | 1904.98 | 1705.73 | 1905 | 1743.86 | 1905 | 1745.48 | 1905.24 |
| 1745.99 | 1905.29 | 1748.66 | 1905.66 | 1749.86 | 1905.77 | 1750.54 | 1905.81 | 1751.38 | 1905.85 |
| 1752.63 | 1905.89 | 1752.74 | 1905.9 | 1755.49 | 1905.92 | 1757.29 | 1905.99 | 1759.45 | 1906 |
| 1761.47 | 1906.17 | 1761.84 | 1906.23 | 1762.14 | 1906.23 | 1762.44 | 1906.32 | 1763.05 | 1906.58 |
| 1763.3 | 1906.66 | 1767.47 | 1906.55 | 1771.02 | 1906.84 | 1773.06 | 1906.84 | 1783.43 | 1906.74 |
| 1787.71 | 1906.99 | 1792.04 | 1907 | 1809.41 | 1907 | 1812.17 | 1906.93 | 1814.86 | 1906.81 |
| 1824.57 | 1906.87 | 1825.26 | 1906.81 | 1832.13 | 1906.52 | 1833.89 | 1906 | 1838.52 | 1905.48 |
| 1844.51 | 1905 | 1913.18 | 1905 | 1920.81 | 1905.15 | 1924.12 | 1905.22 | 1934.27 | 1905.43 |
| 1940.38 | 1905.55 | 1950.51 | 1905.77 | 1952.67 | 1905.82 | 1953.82 | 1905.84 | 1960.72 | 1906 |
| 1992.35 | 1906 | 1997 | 1905.82 | 1997.54 | 1905.79 | 1998.23 | 1905.77 | 2000.88 | 1905.65 |
| 2005.89 | 1905.41 | 2008.48 | 1905.29 | 2009.41 | 1905.24 | 2014.98 | 1905 | 2095.81 | 1905 |
| 2119.24 | 1905.17 | 2121.06 | 1905.19 | 2122.05 | 1905.19 | 2123.82 | 1905.2 | 2124.33 | 1905.21 |
| 2126 | 1905.22 | 2126.99 | 1905.22 | 2128.56 | 1905.24 | 2129.27 | 1905.24 | 2131.19 | 1905.26 |
| 2137.32 | 1905.29 | 2151.28 | 1905.4 | 2158.91 | 1905.44 | 2168.12 | 1905.48 | 2168.64 | 1905.48 |
| 2174.87 | 1905.51 | 2183.36 | 1905.58 | 2225.13 | 1905.78 | 2240.14 | 1905.85 | 2248.19 | 1905.88 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2250.22 | 1905.88 | 2251.3 | 1905.89 | 2261.64 | 1905.89 | 2263.26 | 1905.9 | 2267.23 | 1905.9 |
| 2288.07 | 1906 | 2381.29 | 1906 | 2413.04 | 1906.34 | 2416.3 | 1906.38 | 2424.74 | 1906.47 |
| 2440.4 | 1906.64 | 2467.18 | 1906.91 | 2468.59 | 1906.93 | 2475.56 | 1907 | 2720.13 | 1907 |
| 2726.28 | 1906.99 | 2727.74 | 1906.99 | 2730.98 | 1906.98 | 2742.35 | 1906.98 | 2754.1 | 1906.97 |
| 2762.28 | 1906.96 | 2768.95 | 1906.96 | 2769.53 | 1906.95 | 2771.3 | 1906.95 | 2779.12 | 1906.94 |
| 2783.69 | 1906.94 | 2801.08 | 1906.95 | 2805.48 | 1906.95 | 2812.18 | 1906.96 | 2823.43 | 1906.96 |
| 2824.37 | 1906.97 | 2836.86 | 1906.97 | 2871.54 | 1907 | 2905.51 | 1907 | 2908.19 | 1906.96 |
| 2909.07 | 1906.96 | 2922.63 | 1906.5 | 2930.11 | 1906.35 | 2936.73 | 1906 | 2941.56 | 1905.79 |
| 2942.29 | 1905.79 | 2950.72 | 1905.5 | 2951.32 | 1905.5 | 2952.33 | 1905.47 | 2957.16 | 1905.36 |
| 2971.69 | 1905.42 | 2992.45 | 1905.51 | 2997 | 1905.59 | 3003.13 | 1905.69 | 3006.35 | 1905.72 |
| 3022.07 | 1906 | 3049.66 | 1906 | 3053.65 | 1905.97 | 3053.79 | 1905.96 | 3054.59 | 1905.96 |
| 3056.15 | 1905.93 | 3059.15 | 1905.87 | 3065.88 | 1905.71 | 3065.98 | 1905.71 | 3073.01 | 1905.55 |
| 3073.12 | 1905.55 | 3077.84 | 1905.47 | 3081.38 | 1905.42 | 3081.59 | 1905.42 | 3084.29 | 1905.38 |
| 3111.24 | 1905.01 | 3150.27 | 1905.01 | 3195.08 | 1905 | 3199.44 | 1905 | 3200 | 1905.01 |
| 3283.4 | 1905.76 | 3287.3 | 1905.8 | 3291.66 | 1905.86 | 3292.04 | 1905.86 | 3300.5 | 1906 |
| 3301.8 | 1906 | 3315.63 | 1906.38 | 3337.76 | 1907 | 3376.33 | 1907 | 3377.68 | 1906.95 |
| 3381.65 | 1906.83 | 3405.6 | 1906.04 | 3410.12 | 1906 | 3410.58 | 1906 | 3413.63 | 1905.94 |
| 3418.39 | 1905.85 | 3443.74 | 1905.43 | 3469.19 | 1905 | 3609 | 1905 | 3611.03 | 1905.46 |
| 3613.6 | 1906.08 | 3616.88 | 1906.79 | 3618.15 | 1907.05 | 3620.99 | 1907.66 | 3622.62 | 1908 |
| 3626.36 | 1908.74 | 3627.63 | 1909 | 3628.59 | 1909.19 | 3632.94 | 1910 | 3635.76 | 1910.48 |
| 3639.4 | 1911 | 3642 | 1911.79 | 3642.72 | 1912 | 3643.85 | 1912.31 | 3646.42 | 1913 |
| 3648 | 1913.44 | 3648.74 | 1913.58 | 3649.36 | 1913.67 | 3651.8 | 1914 | 3655.96 | 1914.52 |
| 3656.52 | 1914.6 | 3659.05 | 1915 | 3662 | 1915 | 3662.52 | 1914.94 | 3664.02 | 1914.78 |
| 3667.36 | 1914.4 | 3671.91 | 1913.89 | 3678.66 | 1913.16 | 3680.06 | 1913 | 3686.19 | 1912.36 |
| 3689.66 | 1912 | 3689.79 | 1912 | 3695.53 | 1911.59 | 3698.21 | 1911.42 | 3699.98 | 1911.3 |
| 3704.7 | 1911 | 3714.9 | 1910.3 | 3719.39 | 1910 | 3725.27 | 1909.6 | 3736.23 | 1909 |
| 3738.47 | 1908.89 | 3739.4 | 1908.86 | 3745.57 | 1908.61 | 3745.87 | 1908.59 | 3755.64 | 1908 |
| 3764.94 | 1907.8 | 3766.03 | 1907.77 | 3772.65 | 1907.64 | 3773.4 | 1907.62 | 3776.03 | 1907.56 |
| 3777.1 | 1907.53 | 3777.51 | 1907.53 | 3787 | 1907.29 | 3787.77 | 1907.29 | 3797.95 | 1907.05 |
| 3801.91 | 1907.06 | 3803.97 | 1907.06 | 3804.84 | 1907.05 | 3806.03 | 1907.06 | 3816.68 | 1907.06 |
| 3816.76 | 1907.05 | 3820.16 | 1907.05 | 3821.93 | 1907.12 | 3830.5 | 1907.37 | 3838.68 | 1907.42 |
| 3844.03 | 1907.41 | 3849.28 | 1907.38 | 3855.22 | 1907.33 | 3865.5 | 1907.07 | 3867.11 | 1907.02 |
| 3868.23 | 1907.02 | 3869.91 | 1907.01 | 3872.5 | 1907.01 | 3874.08 | 1907 | 3879.05 | 1906.31 |
| 3881.39 | 1906 | 3882.41 | 1905.89 | 3884.59 | 1905.77 | 3886.29 | 1905.69 | 3890.18 | 1905.58 |
| 3891.34 | 1905.55 | 3892.07 | 1905.51 | 3892.44 | 1905.53 | 3907.24 | 1905.94 | 3908.9 | 1905.98 |
| 3918.69 | 1905.98 | 3938.85 | 1905.64 | 3939.74 | 1905.63 | 3941.01 | 1905.64 | 3941.43 | 1905.63 |
| 3942.08 | 1905.64 | 3944.89 | 1905.64 | 3945.5 | 1905.63 | 3946.2 | 1905.63 | 3952.04 | 1905.6 |
| 3959.34 | 1905.6 | 3959.59 | 1905.61 | 3960.56 | 1905.61 | 3961.56 | 1905.62 | 3962.09 | 1905.61 |
| 3964.72 | 1905.67 | 3965.97 | 1905.65 | 3997.84 | 1905.98 | 4022.22 | 1905.98 | 4025.31 | 1905.99 |
| 4046.38 | 1905.99 | 4051.76 | 1906 | 4053.05 | 1906 | 4054.81 | 1906.9 | 4055.67 | 1907.32 |
| 4056.99 | 1908 | 4059.14 | 1909.01 | 4061 | 1910 | 4062.15 | 1910.65 | 4062.86 | 1911 |
| 4064.32 | 1911.93 | 4065.42 | 1912.54 | 4066.3 | 1913 | 4074.92 | 1913 | 4076.25 | 1912.92 |
| 4077.5 | 1912.83 | 4078.01 | 1912.8 | 4079.27 | 1912.69 | 4080.81 | 1912.58 | 4081.44 | 1912.55 |
| 4082.58 | 1912.48 | 4083.52 | 1912.4 | 4084.6 | 1912.28 | 4086.23 | 1912.09 | 4086.88 | 1912 |
| 4087.86 | 1911.84 | 4092.67 | 1911 | 4095.46 | 1910.1 | 4095.91 | 1909.97 | 4099.33 | 1909 |
| 4101.7 | 1908.33 | 4102.83 | 1908 | 4104.81 | 1908 | 4106.09 | 1908.41 | 4106.43 | 1908.44 |
| 4108.46 | 1908.52 | 4115.11 | 1908.66 | 4115.25 | 1908.67 | 4121.07 | 1908.99 | 4122.09 | 1908.99 |
| 4122.38 | 1909 | 4139.7 | 1909 | 4143.93 | 1909.01 | 4145.79 | 1909.01 | 4149.88 | 1909 |
| 4169.19 | 1909 | 4169.89 | 1908.98 | 4172.13 | 1908.87 | 4179.96 | 1908.51 | 4180.92 | 1908.47 |
| 4191.77 | 1908 | 4199.95 | 1907.67 | 4203.3 | 1907.53 | 4213.27 | 1907 | 4222.67 | 1906.99 |
| 4228.35 | 1906.99 | 4234.2 | 1906.98 | 4248.63 | 1906.96 | 4255.67 | 1906.96 | 4262.66 | 1906.98 |
| 4266.11 | 1906.98 | 4268.3 | 1906.99 | 4274.16 | 1906.99 | 4275.78 | 1907 | 4349.67 | 1907 |
| 4361.57 | 1907.01 | 4368.2 | 1907.01 | 4380.03 | 1907 | 4404.28 | 1907 | 4408.49 | 1907.12 |
| 4416.64 | 1907.35 | 4436.34 | 1908 | 4445.55 | 1908.51 | 4447.2 | 1908.6 | 4449.61 | 1908.75 |
| 4454.19 | 1909 | 4460.31 | 1909.67 | 4465.85 | 1910.22 | 4473.95 | 1911 | 4480.17 | 1911.52 |
| 4486.45 | 1912 | 4496.43 | 1912.94 | 4497.12 | 1913.02 | 4498.01 | 1913.14 | 4504.44 | 1914 |
| 4505.72 | 1914.24 | 4509.33 | 1915 | 4511.75 | 1915.52 | 4514.06 | 1916 | 4519.74 | 1917.17 |
| 4523.84 | 1918 | 4524.32 | 1918.1 | 4528.84 | 1919 | 4528.86 | 1919 | 4532.06 | 1919.59 |
| 4534.06 | 1919.95 | 4534.3 | 1920 | 4538.34 | 1920.71 | 4540.03 | 1921 | 4542.17 | 1921.34 |
| 4545.76 | 1922 | 4550.62 | 1922.87 | 4551.72 | 1923 | 4579.16 | 1923 | 4584.39 | 1922.98 |
| 4586.09 | 1922.99 | 4589.26 | 1923 | 4596.74 | 1923.01 | 4615.19 | 1923.01 | 4626.46 | 1923.02 |
| 4637.71 | 1923.02 | 4652.24 | 1923.43 | 4652.75 | 1923.45 | 4654.13 | 1923.47 | 4654.31 | 1923.48 |
| 4663.55 | 1923.63 | 4671.95 | 1923.82 | 4678.88 | 1923.99 | 4679.36 | 1924 | 4680.58 | 1924.04 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4680.58 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 4680.58 | 69.26 | 69.26 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1908.48 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.17 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1908.31 | Reach Len. (ft) | 69.26 | 69.26 | 69.26 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6705.19 | | |
| E.G. Slope (ft/ft) | 0.002889 | Area (sq ft) | | 6705.19 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3095.52 | Top Width (ft) | | 3095.52 | | |
| Vel Total (ft/s) | 3.34 | Avg. Vel. (ft/s) | | 3.34 | | |
| Max Chl Dpth (ft) | 5.31 | Hydr. Depth (ft) | | 2.17 | | |
| Conv. Total (cfs) | 416779.1 | Conv. (cfs) | | 416779.1 | | |
| Length Wtd. (ft) | 69.26 | Wetted Per. (ft) | | 3097.93 | | |
| Min Ch El (ft) | 1903.00 | Shear (lb/sq ft) | | 0.39 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4680.58 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.19 | Cum Volume (acre-ft) | | 313.81 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 143.85 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -17982.7

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1917.52 | 181.67 | 1916.78 | 214.09 | 1916.64 | 223.94 | 1916.6 | 224.74 | 1916.6 |
| 357.09 | 1916.06 | 408.07 | 1915.85 | 424.65 | 1915.78 | 430.41 | 1915.76 | 431.61 | 1915.76 |
| 678.97 | 1914.75 | 887.92 | 1913.89 | 952.86 | 1913.63 | 954.69 | 1911.19 | 960.04 | 1905 |
| 961.02 | 1905 | 975.8 | 1905.09 | 976.07 | 1905.09 | 1069.54 | 1905.54 | 1102.07 | 1905.68 |
| 1102.41 | 1905.69 | 1104.07 | 1905.69 | 1104.72 | 1905.7 | 1105.66 | 1905.7 | 1110.13 | 1905.72 |
| 1121.21 | 1905.73 | 1132.5 | 1905.73 | 1133.4 | 1905.74 | 1144.21 | 1905.74 | 1194.12 | 1905.98 |
| 1215.62 | 1905.98 | 1225.39 | 1905.97 | 1228.46 | 1905.98 | 1239.68 | 1905.98 | 1247.34 | 1905.99 |
| 1250.71 | 1905.99 | 1262.18 | 1906 | 1504.86 | 1906 | 1525.02 | 1906.41 | 1533.82 | 1906.58 |
| 1535.07 | 1906.61 | 1560.78 | 1906.96 | 1562.12 | 1906.96 | 1564.01 | 1906.97 | 1566.86 | 1906.98 |
| 1568.76 | 1906.98 | 1574.98 | 1906.99 | 1576.1 | 1907 | 1577.7 | 1907 | 1579.01 | 1907.01 |
| 1587.79 | 1907.01 | 1590.7 | 1907.02 | 1593.46 | 1907.01 | 1600.69 | 1907 | 1601.51 | 1906.64 |
| 1602.87 | 1906 | 1604.9 | 1905 | 1605.43 | 1904.77 | 1607.06 | 1904 | 1625.23 | 1903.99 |
| 1629.48 | 1903.99 | 1636.98 | 1904 | 1652.67 | 1904 | 1663.07 | 1904.35 | 1664.36 | 1904.4 |
| 1666.12 | 1904.46 | 1668.58 | 1904.54 | 1679.35 | 1904.9 | 1682.67 | 1905 | 1704.33 | 1905 |
| 1707.27 | 1904.92 | 1713.34 | 1904.74 | 1713.46 | 1904.74 | 1717.68 | 1904.61 | 1718.66 | 1904.59 |
| 1728.12 | 1904.41 | 1733.5 | 1904.34 | 1736 | 1904.42 | 1740.36 | 1904.59 | 1744.29 | 1905 |
| 1750.74 | 1905.7 | 1752.24 | 1906 | 1753.76 | 1906.37 | 1757.13 | 1907 | 1760.15 | 1907.44 |
| 1769.93 | 1907.77 | 1771.38 | 1907.84 | 1771.87 | 1907.85 | 1773.41 | 1907.98 | 1773.85 | 1907.98 |
| 1774.27 | 1908 | 1774.83 | 1908 | 1777.31 | 1908.01 | 1777.93 | 1908.01 | 1780.4 | 1908 |
| 1781.26 | 1907.83 | 1782.07 | 1907.64 | 1785.23 | 1907 | 1821.28 | 1907 | 1824.64 | 1906.85 |
| 1838.76 | 1906.16 | 1839.9 | 1906.11 | 1840.44 | 1906.08 | 1842.04 | 1906 | 1845.05 | 1905.87 |
| 1863.06 | 1905 | 2120.82 | 1905 | 2166.15 | 1905.23 | 2218.51 | 1905.48 | 2218.74 | 1905.48 |
| 2223.35 | 1905.5 | 2224.06 | 1905.51 | 2231.44 | 1905.51 | 2238.64 | 1905.54 | 2245.03 | 1905.57 |
| 2248.43 | 1905.57 | 2304.59 | 1905.85 | 2334.26 | 1906 | 2387.3 | 1906 | 2388.01 | 1906.01 |
| 2397.78 | 1906.11 | 2397.9 | 1906.12 | 2398.89 | 1906.13 | 2399.85 | 1906.13 | 2400.81 | 1906.14 |
| 2401.14 | 1906.15 | 2402.88 | 1906.17 | 2429.12 | 1906.48 | 2441.19 | 1906.62 | 2446.84 | 1906.66 |
| 2451.36 | 1906.69 | 2451.54 | 1906.69 | 2455.67 | 1906.72 | 2459.18 | 1906.74 | 2468.56 | 1906.75 |
| 2478.25 | 1906.77 | 2481.51 | 1906.77 | 2497.37 | 1907 | 2609.71 | 1907 | 2642.66 | 1906.99 |
| 2647.65 | 1906.99 | 2647.88 | 1907 | 2667.23 | 1907 | 2670.55 | 1906.99 | 2679.86 | 1906.99 |
| 2685.23 | 1907 | 2690.38 | 1907 | 2692.61 | 1906.99 | 2695.81 | 1906.99 | 2696.43 | 1906.98 |
| 2696.83 | 1906.98 | 2703.28 | 1906.98 | 2708.53 | 1906.96 | 2710.65 | 1906.96 | 2740.4 | 1906.9 |
| 2751.79 | 1906.9 | 2760.76 | 1906.89 | 2804.09 | 1906.99 | 2806.12 | 1906.99 | 2808.45 | 1907 |
| 2829.14 | 1907 | 2856.1 | 1906.85 | 2882.08 | 1906.74 | 2882.44 | 1906.74 | 2883.41 | 1906.72 |
| 2883.69 | 1906.71 | 2887.34 | 1906.73 | 2890.35 | 1906.68 | 2895.16 | 1906.7 | 2897.3 | 1906.7 |
| 2902.31 | 1906.54 | 2902.85 | 1906.54 | 2903.58 | 1906.53 | 2914.47 | 1906.12 | 2914.81 | 1906.12 |
| 2918.01 | 1906 | 2928.43 | 1905.62 | 2929.71 | 1905.57 | 2945.62 | 1905.03 | 2947.5 | 1905 |
| 2977.34 | 1905 | 2978.42 | 1905.01 | 2986.75 | 1905.14 | 2991.57 | 1905.21 | 2992.84 | 1905.22 |
| 2994.84 | 1905.25 | 2995.59 | 1905.25 | 2996.14 | 1905.27 | 3022.34 | 1905.27 | 3050.9 | 1905.2 |
| 3052.45 | 1905.16 | 3053.66 | 1905.14 | 3053.71 | 1905.13 | 3054.54 | 1905.12 | 3057.45 | 1905.07 |
| 3058.29 | 1905.06 | 3060.29 | 1905.03 | 3063.06 | 1905 | 3219.96 | 1905 | 3226.62 | 1905.06 |
| 3229.32 | 1905.06 | 3230.77 | 1905.08 | 3230.85 | 1905.09 | 3243.98 | 1905.09 | 3244.88 | 1905.1 |
| 3250.28 | 1905.1 | 3251.14 | 1905.12 | 3259.37 | 1905.14 | 3259.58 | 1905.15 | 3263.4 | 1905.17 |
| 3266.12 | 1905.19 | 3266.42 | 1905.2 | 3267.18 | 1905.21 | 3278.59 | 1905.35 | 3282.64 | 1905.4 |
| 3289.99 | 1905.5 | 3296.55 | 1905.59 | 3306.55 | 1905.77 | 3308.8 | 1905.81 | 3309.74 | 1905.82 |
| 3310.03 | 1905.83 | 3316.87 | 1905.98 | 3318.6 | 1905.98 | 3319.67 | 1906 | 3326.16 | 1906.15 |
| 3326.46 | 1906.14 | 3343.8 | 1906 | 3347.3 | 1906 | 3347.99 | 1906.01 | 3349.87 | 1906.01 |
| 3355.13 | 1906.05 | 3379.72 | 1906.24 | 3380.23 | 1906.24 | 3381.13 | 1906.23 | 3387.6 | 1906.17 |
| 3389.45 | 1906.15 | 3397.39 | 1906.1 | 3398.05 | 1906.09 | 3401.2 | 1906.07 | 3402.29 | 1906.07 |
| 3406.92 | 1906.13 | 3407.41 | 1906.13 | 3407.48 | 1906.14 | 3408.16 | 1906.14 | 3408.92 | 1906.16 |
| 3409.54 | 1906.17 | 3412.21 | 1906.24 | 3413.3 | 1906.26 | 3414.74 | 1906.3 | 3415.59 | 1906.32 |
| 3427.85 | 1906.48 | 3436.71 | 1906.51 | 3436.92 | 1906.51 | 3439.51 | 1906.42 | 3439.94 | 1906.42 |
| 3444.39 | 1906.3 | 3444.54 | 1906.3 | 3447.28 | 1906.18 | 3450.7 | 1906 | 3450.79 | 1906 |
| 3451.77 | 1905.94 | 3466.09 | 1905 | 3605.07 | 1905 | 3605.78 | 1905.09 | 3612.33 | 1906 |
| 3619.53 | 1906.96 | 3619.99 | 1907.03 | 3627.4 | 1908.5 | 3629.72 | 1909 | 3634.31 | 1909.82 |
| 3635.12 | 1909.9 | 3636.3 | 1910 | 3646.24 | 1910.72 | 3650.04 | 1911 | 3651.59 | 1911.03 |
| 3652.67 | 1911.03 | 3654.42 | 1911.01 | 3654.69 | 1911 | 3688.93 | 1911 | 3695.44 | 1910.98 |
| 3696.82 | 1910.98 | 3700.05 | 1910.99 | 3700.88 | 1910.99 | 3704.61 | 1910.85 | 3705.16 | 1910.87 |
| 3707.23 | 1911 | 3714 | 1911.59 | 3717.58 | 1911.93 | 3718.46 | 1912 | 3724.36 | 1912.44 |
| 3724.77 | 1912.45 | 3724.91 | 1912.44 | 3726.7 | 1912.39 | 3729.2 | 1912.22 | 3729.23 | 1912.22 |
| 3730.82 | 1912 | 3731.21 | 1911.94 | 3736.91 | 1911 | 3753.57 | 1910.17 | 3755.99 | 1910.1 |
| 3757.51 | 1910.11 | 3758.5 | 1910.03 | 3758.65 | 1910.05 | 3759.07 | 1910.02 | 3759.97 | 1910.04 |
| 3760.87 | 1910.08 | 3762.18 | 1910.17 | 3764.18 | 1910.33 | 3766.47 | 1910.39 | 3768.31 | 1910.56 |
| 3772.61 | 1911 | 3772.74 | 1911 | 3774.72 | 1911.74 | 3774.97 | 1911.84 | 3775.42 | 1912 |
| 3777.69 | 1912.61 | 3778.17 | 1912.71 | 3779.73 | 1913 | 3783.74 | 1913.71 | 3785.32 | 1914 |
| 3788.42 | 1914.55 | 3788.73 | 1914.6 | 3790.48 | 1914.92 | 3791.31 | 1915.06 | 3792.48 | 1915.21 |
| 3792.99 | 1915.13 | 3794.26 | 1915.22 | 3795.62 | 1915.12 | 3796.49 | 1915 | 3797.31 | 1914.7 |
| 3799.03 | 1914 | 3801.67 | 1913.06 | 3803.08 | 1912.52 | 3804.46 | 1912 | 3805.4 | 1911.55 |
| 3806.81 | 1911 | 3807.49 | 1910.66 | 3809.35 | 1910 | 3811.69 | 1909.04 | 3812.41 | 1908.8 |
| 3814.91 | 1908 | 3815.89 | 1907.69 | 3817.97 | 1907 | 3818.35 | 1906.94 | 3819.03 | 1906.81 |
| 3820.61 | 1906.68 | 3826.83 | 1906.02 | 3827.37 | 1906.02 | 3827.81 | 1906 | 3838.14 | 1906 |
| 3841.41 | 1906.01 | 3842.07 | 1906 | 3842.46 | 1906.02 | 3842.75 | 1906.02 | 3844.2 | 1906 |
| 3844.69 | 1906 | 3854.29 | 1906.01 | 3858.23 | 1906 | 3878.92 | 1906 | 3897.13 | 1905.54 |
| 3900.85 | 1905.43 | 3901.44 | 1905.41 | 3902.72 | 1905.38 | 3912.47 | 1905.01 | 3919.82 | 1905.01 |
| 3925.22 | 1905 | 3945.4 | 1905 | 3946.38 | 1905.01 | 3948.99 | 1905.01 | 3951.62 | 1905.02 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3983.39 | 1905.62 | 3995.88 | 1905.84 | 3996.26 | 1905.85 | 4003.66 | 1905.94 | 4004.16 | 1905.95 |
| 4008.89 | 1906 | 4017.92 | 1906.54 | 4026.4 | 1907 | 4028.15 | 1907.15 | 4032.37 | 1907.49 |
| 4038.58 | 1908 | 4045.87 | 1908.57 | 4048.72 | 1908.72 | 4055.94 | 1909 | 4112.17 | 1909 |
| 4120.63 | 1908.99 | 4123.23 | 1908.99 | 4133.57 | 1909 | 4170.84 | 1909 | 4186.05 | 1908.36 |
| 4195.5 | 1908 | 4203.85 | 1907.59 | 4217.22 | 1907 | 4222.28 | 1906.98 | 4224.76 | 1906.96 |
| 4233.43 | 1906.92 | 4234.89 | 1906.91 | 4239.57 | 1906.89 | 4240.29 | 1906.88 | 4253.44 | 1906.95 |
| 4254.98 | 1906.96 | 4255.42 | 1906.96 | 4263.77 | 1907 | 4275.59 | 1907.39 | 4276.38 | 1907.42 |
| 4277.99 | 1907.46 | 4278.83 | 1907.5 | 4279.98 | 1907.52 | 4280.75 | 1907.55 | 4282.08 | 1907.61 |
| 4300.99 | 1907.95 | 4301.46 | 1907.97 | 4303.24 | 1908 | 4303.6 | 1908 | 4304.92 | 1908.04 |
| 4305.93 | 1908.08 | 4306.88 | 1908.13 | 4310.1 | 1908.27 | 4312.35 | 1908.35 | 4312.7 | 1908.35 |
| 4322.36 | 1908.06 | 4322.75 | 1908.05 | 4324.09 | 1908 | 4333.96 | 1907.91 | 4334.08 | 1907.92 |
| 4336.13 | 1907.91 | 4338.45 | 1907.91 | 4346.19 | 1907.85 | 4346.94 | 1907.84 | 4373.25 | 1907.75 |
| 4396.02 | 1907.72 | 4397.15 | 1907.74 | 4400.09 | 1907.69 | 4404.58 | 1907.6 | 4405.85 | 1907.64 |
| 4405.96 | 1907.63 | 4411.21 | 1907.73 | 4411.84 | 1907.72 | 4415.58 | 1907.81 | 4419.38 | 1907.99 |
| 4420 | 1908 | 4427.54 | 1908.55 | 4431.74 | 1908.85 | 4433.73 | 1909 | 4433.9 | 1909.01 |
| 4435.92 | 1909.18 | 4445.86 | 1910 | 4451.1 | 1910.79 | 4452.12 | 1910.95 | 4452.67 | 1911.03 |
| 4455.11 | 1911.37 | 4458.26 | 1911.78 | 4459.8 | 1912 | 4461.55 | 1912.23 | 4467.27 | 1913 |
| 4471.56 | 1913.57 | 4479.2 | 1915 | 4483.38 | 1915.8 | 4489.78 | 1916.99 | 4489.85 | 1917 |
| 4494.65 | 1917.85 | 4495.53 | 1918 | 4498.39 | 1918.34 | 4501.9 | 1919 | 4506.7 | 1919.55 |
| 4510.74 | 1920 | 4519.77 | 1920.99 | 4520.41 | 1921.03 | 4535.39 | 1921.71 | 4539.4 | 1921.88 |
| 4541.94 | 1922 | 4542.58 | 1922 | 4543.13 | 1922.01 | 4557.84 | 1922.21 | 4569.68 | 1922.34 |
| 4576.23 | 1922.36 | 4582.47 | 1922.37 | 4583.12 | 1922.37 | 4583.33 | 1922.36 | 4583.74 | 1922.37 |
| 4584.02 | 1922.36 | 4591.3 | 1922.34 | 4593.51 | 1922.34 | 4597.39 | 1922.35 | 4601.66 | 1922.37 |
| 4602.17 | 1922.38 | 4603.05 | 1922.38 | 4623.03 | 1922.66 | 4647.35 | 1923 | 4721.98 | 1923 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4721.98 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 4721.98 | 104.69 | 104.69 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1908.29 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.17 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1908.12 | Reach Len. (ft) | 104.69 | 104.69 | 104.69 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6834.55 | | |
| E.G. Slope (ft/ft) | 0.002727 | Area (sq ft) | | 6834.55 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3109.22 | Top Width (ft) | | 3109.22 | | |
| Vel Total (ft/s) | 3.28 | Avg. Vel. (ft/s) | | 3.28 | | |
| Max Chl Dpth (ft) | 4.13 | Hydr. Depth (ft) | | 2.20 | | |
| Conv. Total (cfs) | 428923.0 | Conv. (cfs) | | 428923.0 | | |
| Length Wtd. (ft) | 104.69 | Wetted Per. (ft) | | 3112.49 | | |
| Min Ch El (ft) | 1903.99 | Shear (lb/sq ft) | | 0.37 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4721.98 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.26 | Cum Volume (acre-ft) | | 303.05 | | |
| C & E Loss (ft) | 0.01 | Cum SA (acres) | | 138.92 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -18087.4

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1914.89 | 32.14 | 1914.48 | 46.84 | 1914.48 | 48.34 | 1914.47 | 50.07 | 1914.47 |
| 55.35 | 1914.45 | 56.57 | 1914.44 | 58.5 | 1914.44 | 59.95 | 1914.43 | 60.44 | 1914.43 |
| 63.5 | 1914.42 | 64.73 | 1914.42 | 65.41 | 1914.41 | 66.33 | 1914.41 | 69.02 | 1914.4 |
| 69.72 | 1914.4 | 76.91 | 1914.37 | 79.48 | 1914.37 | 79.89 | 1914.36 | 83.88 | 1914.35 |
| 93.78 | 1914.32 | 95.18 | 1914.31 | 95.92 | 1914.31 | 106.17 | 1914.27 | 107.58 | 1914.27 |
| 117.88 | 1914.23 | 119.28 | 1914.23 | 129.43 | 1914.2 | 130.17 | 1914.19 | 139.95 | 1914.16 |
| 141.45 | 1914.15 | 150.64 | 1914.12 | 151.86 | 1914.12 | 160.17 | 1914.09 | 163.18 | 1914.08 |
| 163.47 | 1914.08 | 175.89 | 1914.04 | 178.27 | 1914.03 | 181.36 | 1914.02 | 187.05 | 1914 |
| 194.22 | 1913.97 | 196.8 | 1913.97 | 199.48 | 1913.96 | 200.07 | 1913.95 | 202.43 | 1913.95 |
| 458.79 | 1913.07 | 460.22 | 1913.07 | 460.54 | 1913.06 | 462.48 | 1913.06 | 464.55 | 1913.05 |
| 472.33 | 1913.02 | 481.49 | 1912.99 | 482.67 | 1912.99 | 500.58 | 1912.93 | 510.87 | 1912.89 |
| 521.09 | 1912.86 | 521.71 | 1912.85 | 522.57 | 1912.85 | 525.94 | 1912.84 | 527.11 | 1912.84 |
| 531.17 | 1912.82 | 536.14 | 1912.81 | 554.39 | 1912.74 | 600.2 | 1912.59 | 601.55 | 1912.58 |
| 603.07 | 1912.58 | 604.5 | 1912.57 | 605.89 | 1912.57 | 616.02 | 1912.53 | 673.82 | 1912.34 |
| 692.02 | 1912.27 | 699.35 | 1912.25 | 704.3 | 1912.23 | 705.6 | 1912.23 | 912.77 | 1911.52 |
| 915.15 | 1908.82 | 919.56 | 1907.18 | 919.72 | 1907.09 | 920 | 1907.02 | 920.09 | 1906.96 |
| 920.55 | 1906.88 | 920.78 | 1906.74 | 922.13 | 1906.59 | 922.76 | 1906.26 | 930.79 | 1905.76 |
| 930.89 | 1905.73 | 933.39 | 1905.59 | 933.79 | 1905.57 | 933.8 | 1905.56 | 934.22 | 1905.55 |
| 934.23 | 1905.54 | 934.68 | 1905.53 | 934.69 | 1905.52 | 935.11 | 1905.51 | 935.44 | 1905.42 |
| 947.95 | 1904.99 | 952.83 | 1905 | 1175.05 | 1905 | 1183.16 | 1905.05 | 1183.41 | 1905.04 |
| 1183.9 | 1905.04 | 1184.22 | 1905.05 | 1187.09 | 1905.05 | 1187.47 | 1905.06 | 1187.66 | 1905.06 |
| 1200.24 | 1905.08 | 1205.01 | 1905.08 | 1209.78 | 1905.09 | 1209.98 | 1905.09 | 1223.37 | 1905.11 |
| 1225.75 | 1905.12 | 1237.52 | 1905.11 | 1246.79 | 1905.1 | 1250.35 | 1905.1 | 1253.8 | 1905.09 |
| 1254.78 | 1905.1 | 1259.91 | 1905.1 | 1267.21 | 1905.13 | 1274.12 | 1905.15 | 1274.36 | 1905.15 |
| 1275.04 | 1905.16 | 1276.65 | 1905.16 | 1280.84 | 1905.2 | 1280.92 | 1905.2 | 1284.51 | 1905.24 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1310.01 | 1905.69 | 1327.07 | 1905.99 | 1327.81 | 1905.99 | 1390.68 | 1906 | 1454.06 | 1906 |
| 1461.61 | 1906.69 | 1465.01 | 1907 | 1510.68 | 1907 | 1511.02 | 1906.98 | 1523.24 | 1906.47 |
| 1534.09 | 1906 | 1537.51 | 1905.81 | 1537.94 | 1905.78 | 1538.29 | 1905.76 | 1549.82 | 1905 |
| 1565.02 | 1904.36 | 1573.28 | 1904 | 1579.06 | 1903.82 | 1580.68 | 1903.79 | 1593.07 | 1903.43 |
| 1610.35 | 1903.21 | 1618.83 | 1903.1 | 1620.97 | 1903.06 | 1622.58 | 1903.04 | 1623.99 | 1903.03 |
| 1624.48 | 1903.02 | 1625.86 | 1903.02 | 1626.1 | 1903.01 | 1627.76 | 1903.01 | 1628.37 | 1903.02 |
| 1628.79 | 1903.02 | 1629.16 | 1903.03 | 1629.97 | 1903.03 | 1631.3 | 1903.04 | 1632.72 | 1903.06 |
| 1641.52 | 1903.16 | 1643.29 | 1903.19 | 1658.05 | 1903.37 | 1660.83 | 1903.4 | 1664.64 | 1903.45 |
| 1666.87 | 1903.48 | 1668.25 | 1903.5 | 1669.27 | 1903.51 | 1670.64 | 1903.53 | 1690.23 | 1903.99 |
| 1708.53 | 1903.99 | 1710.82 | 1904 | 1714 | 1904 | 1729.05 | 1904.49 | 1733.29 | 1904.64 |
| 1744.79 | 1905 | 1874.23 | 1905 | 1879.31 | 1904.9 | 1879.5 | 1904.89 | 1888.94 | 1904.68 |
| 1889.31 | 1904.68 | 1898.16 | 1904.51 | 1899.33 | 1904.51 | 1921.96 | 1904.41 | 1941.24 | 1904.44 |
| 1943.24 | 1904.44 | 1944.78 | 1904.45 | 1954.56 | 1904.58 | 1974.59 | 1904.91 | 1975.37 | 1904.92 |
| 1978.53 | 1905 | 2157.41 | 1905 | 2175.96 | 1904.99 | 2193.64 | 1905 | 2204.99 | 1905 |
| 2209.13 | 1905.01 | 2215.2 | 1905.01 | 2216.75 | 1905.03 | 2252.28 | 1905.55 | 2252.55 | 1905.55 |
| 2258.83 | 1905.63 | 2263.21 | 1905.69 | 2267 | 1905.73 | 2267.18 | 1905.73 | 2279.81 | 1905.75 |
| 2291.27 | 1905.76 | 2292.01 | 1905.76 | 2294.11 | 1905.74 | 2296.55 | 1905.72 | 2297.2 | 1905.71 |
| 2298.54 | 1905.71 | 2298.67 | 1905.7 | 2299.08 | 1905.7 | 2332.46 | 1905.34 | 2371.84 | 1905.83 |
| 2372.32 | 1905.83 | 2372.9 | 1905.84 | 2373.74 | 1905.86 | 2380.41 | 1906 | 2382.08 | 1906 |
| 2383.18 | 1906.02 | 2383.63 | 1906.04 | 2392.05 | 1906.25 | 2397.51 | 1906.37 | 2397.61 | 1906.38 |
| 2397.86 | 1906.37 | 2398.07 | 1906.37 | 2442.06 | 1907 | 2535.61 | 1907 | 2538.05 | 1906.99 |
| 2602.56 | 1906.68 | 2606.53 | 1906.71 | 2606.81 | 1906.71 | 2608.79 | 1906.72 | 2614.8 | 1906.76 |
| 2621.47 | 1906.8 | 2621.7 | 1906.8 | 2644.67 | 1907 | 2655.5 | 1907 | 2659.9 | 1907.06 |
| 2660.52 | 1907.06 | 2664.77 | 1907.07 | 2671.4 | 1907.05 | 2681.39 | 1907.01 | 2682.74 | 1907 |
| 2684.67 | 1907 | 2685.03 | 1906.99 | 2690.28 | 1906.88 | 2691.01 | 1906.86 | 2691.55 | 1906.85 |
| 2709.26 | 1906.55 | 2716 | 1906.39 | 2730.24 | 1906.04 | 2731.64 | 1906 | 2853.42 | 1906 |
| 2854.42 | 1905.99 | 2855.77 | 1905.99 | 2857.04 | 1905.98 | 2859.16 | 1905.97 | 2888.18 | 1905.1 |
| 2891.63 | 1905 | 3266.28 | 1905 | 3272.4 | 1905.11 | 3273.14 | 1905.12 | 3275.76 | 1905.19 |
| 3276.22 | 1905.19 | 3276.46 | 1905.2 | 3279.95 | 1905.3 | 3282.14 | 1905.37 | 3285.71 | 1905.49 |
| 3286.47 | 1905.51 | 3301.23 | 1906 | 3307.77 | 1906.44 | 3309.01 | 1906.52 | 3314.21 | 1906.86 |
| 3314.5 | 1906.87 | 3316.61 | 1907 | 3357.1 | 1907 | 3361.68 | 1906.8 | 3362.08 | 1906.79 |
| 3380.01 | 1906 | 3381.01 | 1906 | 3382.98 | 1905.93 | 3385.25 | 1905.86 | 3386.91 | 1905.8 |
| 3411.73 | 1905 | 3569.84 | 1905 | 3573.12 | 1905.26 | 3581.55 | 1906 | 3592.43 | 1906.84 |
| 3594.69 | 1907 | 3594.82 | 1907 | 3596.9 | 1907.13 | 3602.72 | 1907.47 | 3603.4 | 1907.51 |
| 3607.23 | 1907.73 | 3612.26 | 1908 | 3634.94 | 1908.37 | 3636.24 | 1908.39 | 3656.5 | 1908.67 |
| 3662 | 1908.75 | 3669.03 | 1908.86 | 3678.39 | 1909 | 3682.13 | 1909.62 | 3684.19 | 1910 |
| 3688.59 | 1910.71 | 3689.42 | 1910.89 | 3690 | 1911 | 3692.95 | 1911.24 | 3696.32 | 1911.52 |
| 3698.16 | 1911.66 | 3701.55 | 1911.92 | 3702.6 | 1912 | 3714.69 | 1913 | 3714.84 | 1913 |
| 3718.88 | 1913.05 | 3725.08 | 1913.08 | 3736.75 | 1913.15 | 3737.32 | 1913.15 | 3741.84 | 1913.11 |
| 3742.08 | 1913.1 | 3742.45 | 1913.1 | 3743.82 | 1913.09 | 3751.77 | 1913.03 | 3753.14 | 1913.01 |
| 3754.94 | 1913 | 3755.46 | 1912.88 | 3756.18 | 1912.7 | 3759.33 | 1912 | 3763.68 | 1911.07 |
| 3765.46 | 1910.69 | 3767.01 | 1910.38 | 3767.94 | 1910.2 | 3769.02 | 1910 | 3773.09 | 1909.24 |
| 3774.47 | 1909 | 3780.23 | 1908.01 | 3780.29 | 1907.99 | 3785.8 | 1907 | 3791.97 | 1906.48 |
| 3795.28 | 1906.24 | 3798.76 | 1906 | 3799.12 | 1905.99 | 3800.16 | 1905.99 | 3807.2 | 1905.74 |
| 3807.26 | 1905.74 | 3813.09 | 1905.58 | 3813.97 | 1905.56 | 3820.54 | 1905.4 | 3821.18 | 1905.38 |
| 3821.66 | 1905.38 | 3822.12 | 1905.37 | 3822.85 | 1905.35 | 3825.31 | 1905.32 | 3827.61 | 1905.29 |
| 3828.86 | 1905.29 | 3829.08 | 1905.28 | 3829.51 | 1905.28 | 3829.73 | 1905.27 | 3829.92 | 1905.28 |
| 3830.44 | 1905.28 | 3847.42 | 1905.03 | 3847.83 | 1905.03 | 3850.07 | 1905.04 | 3850.69 | 1905.03 |
| 3852.78 | 1905.03 | 3857.88 | 1905.02 | 3862.37 | 1905.01 | 3863.68 | 1905.01 | 3865.85 | 1905 |
| 3890.31 | 1905 | 3895.41 | 1905.12 | 3896.15 | 1905.13 | 3896.41 | 1905.13 | 3907.59 | 1905.73 |
| 3907.88 | 1905.74 | 3908.21 | 1905.76 | 3911.39 | 1905.79 | 3911.63 | 1905.8 | 3912.04 | 1905.8 |
| 3914.39 | 1905.84 | 3917.06 | 1905.92 | 3917.22 | 1905.92 | 3918.42 | 1906 | 3933.47 | 1906.92 |
| 3934.45 | 1907 | 3991.28 | 1907 | 3993.79 | 1906.99 | 4000.04 | 1906.99 | 4003.82 | 1907 |
| 4004.53 | 1907 | 4011.91 | 1907.33 | 4013.27 | 1907.39 | 4027.42 | 1908 | 4039.44 | 1908.91 |
| 4040.9 | 1909 | 4083.61 | 1909 | 4084.88 | 1908.91 | 4086.57 | 1908.8 | 4091.29 | 1908.5 |
| 4098.93 | 1908 | 4103.54 | 1907.91 | 4109.58 | 1907.66 | 4116.91 | 1907.49 | 4125.36 | 1907.31 |
| 4127.81 | 1907.29 | 4130.38 | 1907.17 | 4133.68 | 1907 | 4133.91 | 1907 | 4134.66 | 1906.95 |
| 4135.97 | 1906.88 | 4136.73 | 1906.83 | 4150.65 | 1906 | 4203.77 | 1906 | 4222.4 | 1906.32 |
| 4230.79 | 1906.54 | 4239.16 | 1906.7 | 4249.68 | 1907 | 4260.9 | 1907.06 | 4265.01 | 1907.08 |
| 4266.64 | 1907.08 | 4267.29 | 1907.07 | 4273.86 | 1907.05 | 4279.98 | 1907.03 | 4284.43 | 1907.03 |
| 4293.87 | 1907.04 | 4294.24 | 1907.04 | 4297.25 | 1907.03 | 4297.55 | 1907.03 | 4298.82 | 1907 |
| 4333.57 | 1907 | 4354.34 | 1907.37 | 4357.97 | 1907.43 | 4361.05 | 1907.47 | 4361.21 | 1907.47 |
| 4370.79 | 1907.85 | 4370.89 | 1907.86 | 4374.39 | 1908 | 4384.54 | 1908.68 | 4389.53 | 1909 |
| 4393.45 | 1909.27 | 4403.3 | 1910 | 4408.56 | 1910.6 | 4412.17 | 1911 | 4419.38 | 1911.8 |
| 4420.73 | 1912 | 4427.19 | 1913 | 4432.01 | 1913.92 | 4432.42 | 1914 | 4437.72 | 1914.98 |
| 4438.03 | 1915.04 | 4442.18 | 1916 | 4445.12 | 1916.73 | 4446.26 | 1917 | 4449.91 | 1917.93 |
| 4450.17 | 1918 | 4450.81 | 1918.11 | 4451.06 | 1918.18 | 4451.62 | 1918.31 | 4454.67 | 1919 |
| 4455 | 1919 | 4455.15 | 1919.01 | 4455.59 | 1919.01 | 4471.58 | 1919.93 | 4472.66 | 1919.99 |
| 4472.8 | 1920 | 4477.51 | 1920 | 4510.98 | 1920.34 | 4511.45 | 1920.35 | 4516.82 | 1920.4 |
| 4517.1 | 1920.4 | 4517.83 | 1920.41 | 4579.06 | 1921 | 4590.15 | 1921.67 | 4591.24 | 1921.74 |
| 4593.5 | 1921.88 | 4594.88 | 1921.96 | 4595.51 | 1922 | 4595.89 | 1922.01 | 4597.38 | 1922.04 |
| 4597.94 | 1922.04 | 4606.3 | 1922.47 | 4606.87 | 1922.5 | 4608.21 | 1922.55 | 4608.56 | 1922.56 |
| 4613.24 | 1922.74 | 4613.41 | 1922.74 | 4613.69 | 1922.76 | 4620.81 | 1923 | 4650.29 | 1923 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4650.29 | .045 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 0 | 4650.29 | 172.85 | 172.85 | 172.85 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1908.02 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.15 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1907.87 | Reach Len. (ft) | 172.85 | 172.85 | 172.85 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7274.91 | | |
| E.G. Slope (ft/ft) | 0.002301 | Area (sq ft) | | 7274.91 | | |

| | | | | | |
|---|---|---|---|---|---|
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |
| Top Width (ft) | 3202.25 | Top Width (ft) | | 3202.25 | |
| Vel Total (ft/s) | 3.08 | Avg. Vel. (ft/s) | | 3.08 | |
| Max Chl Dpth (ft) | 4.86 | Hydr. Depth (ft) | | 2.27 | |
| Conv. Total (cfs) | 466926.8 | Conv. (cfs) | | 466926.8 | |
| Length Wtd. (ft) | 172.85 | Wetted Per. (ft) | | 3203.31 | |
| Min Ch El (ft) | 1903.01 | Shear (lb/sq ft) | | 0.33 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4650.29 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.36 | Cum Volume (acre-ft) | | 286.09 | |
| C & E Loss (ft) | 0.01 | Cum SA (acres) | | 131.34 | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -18260.2

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1914.82 | .37 | 1914.81 | 2.26 | 1914.81 | 8.97 | 1914.74 | 71.23 | 1914.14 |
| 82.34 | 1914.09 | 83.9 | 1914.09 | 84.93 | 1914.08 | 86.31 | 1914.08 | 86.54 | 1914.07 |
| 88.74 | 1914.07 | 89.22 | 1914.06 | 90.87 | 1914.06 | 91.39 | 1914.05 | 93.48 | 1914.05 |
| 95.15 | 1914.04 | 109.1 | 1913.98 | 114.6 | 1913.96 | 119.24 | 1913.94 | 119.91 | 1913.94 |
| 121.2 | 1913.92 | 122.09 | 1913.91 | 122.87 | 1913.91 | 123.14 | 1913.9 | 123.89 | 1913.9 |
| 124.33 | 1913.89 | 125.81 | 1913.88 | 126.28 | 1913.87 | 128.31 | 1913.85 | 128.82 | 1913.85 |
| 130.16 | 1913.83 | 130.88 | 1913.83 | 175.59 | 1913.38 | 175.94 | 1913.38 | 177.87 | 1913.36 |
| 180.46 | 1913.34 | 184.6 | 1913.3 | 187.29 | 1913.27 | 227.03 | 1912.88 | 230.42 | 1912.87 |
| 231.99 | 1912.86 | 232.64 | 1912.86 | 236.15 | 1912.85 | 241.87 | 1912.83 | 243.83 | 1912.83 |
| 248.21 | 1912.82 | 255.62 | 1912.8 | 259.64 | 1912.79 | 262.44 | 1912.75 | 271.99 | 1912.63 |
| 273.78 | 1912.61 | 307.22 | 1912.19 | 316.35 | 1912.18 | 328.13 | 1912.18 | 330.28 | 1912.17 |
| 331.63 | 1912.17 | 332.73 | 1912.16 | 340.25 | 1912.14 | 341.98 | 1912.13 | 343.69 | 1912.13 |
| 344.73 | 1912.12 | 346.8 | 1912.11 | 347.49 | 1912.11 | 351.85 | 1912.1 | 352.34 | 1912.1 |
| 352.63 | 1912.09 | 354.85 | 1912.09 | 355.42 | 1912.08 | 355.87 | 1912.08 | 359.71 | 1912.07 |
| 360.7 | 1912.07 | 370.94 | 1912.03 | 374.6 | 1912.02 | 375.18 | 1912.02 | 394.95 | 1911.95 |
| 396.95 | 1911.94 | 398 | 1911.94 | 412.6 | 1911.89 | 414.6 | 1911.88 | 429.27 | 1911.83 |
| 431.27 | 1911.82 | 445.73 | 1911.77 | 446.79 | 1911.77 | 460.73 | 1911.72 | 462.86 | 1911.71 |
| 475.95 | 1911.67 | 476.5 | 1911.67 | 477.7 | 1911.66 | 489.55 | 1911.62 | 494.24 | 1911.61 |
| 511.96 | 1911.55 | 515.35 | 1911.53 | 519.75 | 1911.52 | 527.87 | 1911.49 | 538.09 | 1911.46 |
| 539.39 | 1911.45 | 541.78 | 1911.44 | 545.6 | 1911.43 | 546.44 | 1911.43 | 548.16 | 1911.42 |
| 549.8 | 1911.42 | 916.24 | 1910.15 | 918.29 | 1910.15 | 918.92 | 1910.14 | 924.5 | 1910.12 |
| 931.93 | 1910.1 | 932.71 | 1908.33 | 933.78 | 1909.61 | 938.39 | 1908.39 | 939.37 | 1908.46 |
| 939.89 | 1908.34 | 970.92 | 1904.17 | 1006.34 | 1904.34 | 1007.47 | 1904.34 | 1008.59 | 1904.35 |
| 1017.53 | 1904.36 | 1023.1 | 1904.38 | 1030.77 | 1904.39 | 1036.69 | 1904.41 | 1050.92 | 1904.5 |
| 1073.5 | 1904.65 | 1076.15 | 1904.66 | 1077.36 | 1904.67 | 1079.01 | 1904.67 | 1080.99 | 1904.69 |
| 1081.44 | 1904.69 | 1082.44 | 1904.7 | 1083.3 | 1904.7 | 1084.46 | 1904.71 | 1088.75 | 1904.73 |
| 1092.38 | 1904.75 | 1093.57 | 1904.76 | 1100.09 | 1904.78 | 1100.81 | 1904.78 | 1101.53 | 1904.79 |
| 1112.7 | 1904.83 | 1124.26 | 1904.97 | 1128.21 | 1904.97 | 1133.84 | 1904.99 | 1135.93 | 1904.99 |
| 1143.05 | 1905 | 1223.9 | 1905 | 1224.68 | 1904.99 | 1298.7 | 1904.99 | 1303.34 | 1905 |
| 1330.38 | 1905 | 1336.61 | 1905.18 | 1339.05 | 1905.18 | 1341.48 | 1905.15 | 1342.84 | 1905.15 |
| 1343.5 | 1905.14 | 1344.15 | 1905.15 | 1344.72 | 1905.17 | 1345.3 | 1905.18 | 1346.7 | 1905.18 |
| 1348.12 | 1905.19 | 1349.89 | 1905.23 | 1350.76 | 1905.26 | 1351.57 | 1905.28 | 1352.24 | 1905.31 |
| 1352.95 | 1905.33 | 1353.39 | 1905.35 | 1353.67 | 1905.35 | 1353.92 | 1905.37 | 1354.01 | 1905.36 |
| 1370.4 | 1905.22 | 1377.58 | 1905.17 | 1384.6 | 1905.01 | 1398.6 | 1905 | 1417.38 | 1905 |
| 1432.87 | 1905.01 | 1458.87 | 1905.01 | 1490.91 | 1905.02 | 1534.71 | 1905 | 1560.31 | 1905 |
| 1560.63 | 1905.01 | 1566.05 | 1905.01 | 1571.8 | 1905.02 | 1576.46 | 1905.01 | 1586.96 | 1905 |
| 1593.99 | 1904.81 | 1605.77 | 1904.33 | 1606.67 | 1904.29 | 1607.54 | 1904.26 | 1608.73 | 1904.21 |
| 1613.45 | 1904 | 1620.19 | 1903.01 | 1620.25 | 1903 | 1623.27 | 1903 | 1623.85 | 1903.02 |
| 1624.47 | 1903 | 1655.51 | 1903 | 1664.81 | 1903.25 | 1668.02 | 1903.31 | 1682.32 | 1903.59 |
| 1684.2 | 1903.62 | 1686.88 | 1903.68 | 1687.74 | 1903.69 | 1703.69 | 1904 | 1707.1 | 1904.06 |
| 1709.66 | 1904.13 | 1710.66 | 1904.16 | 1711.46 | 1904.19 | 1763.15 | 1904.14 | 1824.65 | 1904.04 |
| 1827.55 | 1904.01 | 1828.81 | 1904 | 1927.41 | 1904 | 1935.98 | 1904.46 | 1936.27 | 1904.48 |
| 1936.62 | 1904.49 | 1941.18 | 1904.71 | 1945.86 | 1904.87 | 1947.26 | 1904.91 | 1949.58 | 1905 |
| 2080.64 | 1905 | 2081.59 | 1904.98 | 2083.28 | 1904.94 | 2083.4 | 1904.94 | 2098.63 | 1904.57 |
| 2098.81 | 1904.57 | 2116.72 | 1904.31 | 2123.55 | 1904.22 | 2124.16 | 1904.22 | 2136.36 | 1904.29 |
| 2166.62 | 1904.54 | 2166.87 | 1904.54 | 2176.14 | 1904.69 | 2192.7 | 1904.96 | 2192.9 | 1904.97 |
| 2194.89 | 1905 | 2392.52 | 1905 | 2405.8 | 1905.27 | 2406.42 | 1905.27 | 2411.97 | 1905.29 |
| 2416.33 | 1905.3 | 2420.45 | 1905.32 | 2424.9 | 1905.34 | 2442.03 | 1905.44 | 2454.72 | 1905.51 |
| 2460.14 | 1905.53 | 2462.19 | 1905.53 | 2484.82 | 1905.62 | 2486.24 | 1905.62 | 2493.63 | 1905.63 |
| 2509.8 | 1905.63 | 2517.21 | 1905.62 | 2517.77 | 1905.62 | 2521.68 | 1905.65 | 2525.12 | 1905.67 |
| 2525.52 | 1905.67 | 2566.66 | 1905.75 | 2620.45 | 1905.87 | 2622.38 | 1905.88 | 2623.55 | 1905.88 |
| 2624.97 | 1905.89 | 2627.21 | 1905.9 | 2636.1 | 1905.91 | 2643.37 | 1905.92 | 2646.28 | 1905.92 |
| 2650.33 | 1905.93 | 2651.06 | 1905.93 | 2659.52 | 1905.94 | 2668.2 | 1905.96 | 2678.18 | 1905.98 |
| 2683.27 | 1905.98 | 2685.91 | 1906 | 2874.15 | 1906 | 2875.7 | 1905.94 | 2897.12 | 1905 |
| 2897.33 | 1905 | 2920.68 | 1904.96 | 2925.25 | 1904.95 | 2937.58 | 1904.97 | 2953.65 | 1905 |
| 3255.47 | 1905 | 3263.52 | 1905.01 | 3309.67 | 1905.01 | 3315.86 | 1905.02 | 3332.09 | 1905.01 |
| 3361.69 | 1905.01 | 3364.43 | 1905 | 3380.05 | 1905 | 3410.47 | 1904.21 | 3414.22 | 1904.11 |
| 3418.27 | 1904 | 3423.32 | 1904 | 3424.77 | 1904.02 | 3425.26 | 1904.02 | 3426.3 | 1904.04 |
| 3432.16 | 1904.08 | 3478.85 | 1904.34 | 3486.89 | 1904.39 | 3498.6 | 1904.47 | 3505.06 | 1904.51 |
| 3507.42 | 1904.52 | 3541.68 | 1904.73 | 3583.62 | 1905 | 3585.61 | 1905 | 3589.03 | 1905.4 |
| 3594.01 | 1906 | 3596.68 | 1906.3 | 3602.09 | 1907 | 3606.6 | 1907.05 | 3632.47 | 1907.89 |
| 3634.68 | 1907.95 | 3634.77 | 1907.95 | 3636.28 | 1908 | 3644.27 | 1908.01 | 3654.61 | 1908.01 |
| 3662.28 | 1908 | 3664.68 | 1908 | 3668.47 | 1907.61 | 3669.46 | 1907.51 | 3670.5 | 1907.42 |
| 3671.39 | 1907.35 | 3671.91 | 1907.3 | 3674.39 | 1907.11 | 3675.01 | 1907.08 | 3675.48 | 1907.03 |

```
 3676.01    1907 3677.45 1906.98 3678.55 1906.95  3680.8 1906.92  3682.6 1906.94
 3684.05  1906.8 3684.09 1906.79 3685.27 1906.76 3686.76  1906.7 3687.54 1906.66
 3688.07 1906.61 3688.59 1906.55 3692.27    1906  3697.8 1905.99 3703.47 1905.99
 3710.62    1906 3716.48    1906 3719.72 1906.11 3721.29 1906.19 3722.38 1906.24
 3723.25 1906.29 3724.13 1906.35  3730.2 1906.59 3730.89 1906.64  3734.2 1906.81
 3735.44 1906.86 3735.57 1906.86 3737.86 1906.91 3739.04 1906.93 3740.01 1906.99
 3742.49 1906.99 3744.18 1906.76 3744.94 1906.73 3746.03 1906.68  3746.1 1906.67
 3748.62 1906.53 3748.81 1906.51  3750.9 1906.37 3751.81 1906.29 3756.77    1906
 3759.33 1905.99 3760.51 1905.99 3763.34    1906 3766.14    1906 3766.57 1906.01
 3767.61    1906 3769.64    1906  3770.9 1905.99 3788.39 1905.12 3789.74 1905.04
 3790.15 1905.02 3790.35    1905 3886.97    1905 3888.61 1905.04 3889.78 1905.04
 3892.83 1905.09 3894.73 1905.11 3902.83 1905.59 3903.35  1905.6  3903.7 1905.62
 3907.98    1906 3918.75 1906.97 3919.12    1907 4034.44    1907 4034.84 1906.99
 4035.51 1906.99 4091.69 1906.21 4109.07    1906 4179.58    1906 4203.14 1905.69
  4237.9 1905.24 4240.37 1905.22 4241.43 1905.22 4262.11    1905 4274.22    1905
 4274.43 1905.01 4296.45  1905.8 4300.73 1905.95 4301.93    1906 4316.08 1906.97
 4316.62    1907 4356.79    1907 4359.65 1907.18 4370.39 1907.85 4372.22    1908
  4375.7 1908.29 4383.47    1909  4386.1 1909.64 4387.55    1910 4391.55    1911
 4392.87 1911.45 4394.02    1912 4397.03 1912.59 4399.03    1913 4399.45 1913.09
 4402.66 1913.72 4404.92 1914.17 4405.17 1914.23 4406.74 1914.57 4408.76    1915
 4409.73 1915.01    4411 1915.12 4418.62  1915.3 4419.43 1915.31 4420.49 1915.38
 4422.19 1915.51  4422.4 1915.51 4423.73 1915.65 4427.67    1916 4435.03 1916.72
 4435.58 1916.78 4437.35    1917 4443.73 1917.92 4444.97 1918.09 4448.43 1918.62
 4450.84    1919  4452.7 1919.29 4456.86    1920 4463.13 1920.97 4463.54    1921
 4466.43    1921 4469.07 1921.05 4479.69 1921.23 4482.25 1921.26 4484.63 1921.29
    4485 1921.29 4490.04 1921.33 4492.09 1921.35 4494.07 1921.36 4498.39  1921.4
 4504.06 1921.47 4504.64 1921.47 4505.09 1921.48 4507.11 1921.51 4507.52 1921.51
 4518.19 1921.63 4518.89 1921.65 4526.36 1921.75 4530.58  1921.8 4536.11 1921.85
 4537.31 1921.85 4540.33 1921.87 4541.11 1921.88 4543.62 1921.88 4546.38 1921.83
 4558.17 1921.51 4560.12 1921.44 4560.89 1921.42 4561.67 1921.39 4562.48 1921.38
  4569.3 1921.18 4571.75 1921.13  4573.7 1921.15 4574.37 1921.14 4575.53 1921.13
 4576.08 1921.14 4583.04 1921.12 4584.71 1921.15 4585.51 1921.17 4594.57 1921.17
 4595.31 1921.18 4597.06 1921.24 4600.81 1921.39 4601.05 1921.39 4601.77 1921.42
 4612.55    1922 4616.33 1922.02    4621 1922.09 4631.45 1922.23 4631.77 1922.23

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .045       0     .04 4631.77    .045

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            0 4631.77             96.87   96.87   96.87             .1       .3

CROSS SECTION OUTPUT  Profile #PF 1

  E.G. Elev (ft)           1907.65    Element                  Left OB    Channel   Right OB
  Vel Head (ft)               0.13    Wt. n-Val.                          0.040
  W.S. Elev (ft)           1907.53    Reach Len. (ft)           96.87      96.87      96.87
  Crit W.S. (ft)                      Flow Area (sq ft)                  7877.33
  E.G. Slope (ft/ft)       0.001890   Area (sq ft)                       7877.33
  Q Total (cfs)           22400.00    Flow (cfs)                        22400.00
  Top Width (ft)           3371.19    Top Width (ft)                     3371.19
  Vel Total (ft/s)            2.84    Avg. Vel. (ft/s)                      2.84
  Max Chl Dpth (ft)           4.53    Hydr. Depth (ft)                      2.34
  Conv. Total (cfs)       515191.6    Conv. (cfs)                       515191.6
  Length Wtd. (ft)           96.87    Wetted Per. (ft)                   3372.07
  Min Ch El (ft)           1903.00    Shear (lb/sq ft)                      0.28
  Alpha                       1.00    Stream Power (lb/ft s)   4631.77      0.00       0.00
  Frctn Loss (ft)             0.27    Cum Volume (acre-ft)                256.03
  C & E Loss (ft)             0.01    Cum SA (acres)                      118.29


Warning: Divided flow computed for this cross-section.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater
than 1.4.
          This may indicate the need for additional cross sections.

CROSS SECTION


RIVER: MOJAVE
REACH: MOJAVE             RS: -18357.1

INPUT
Description:
Station Elevation Data    num=     417
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1915  615.23 1905.01  623.75    1905  624.95    1905  636.13 1904.82
  646.88 1904.67  647.24 1904.67  647.78 1904.66  652.99 1904.56  662.37 1904.38
  664.73 1904.35  665.54 1904.33  679.92    1904  682.31    1904  689.37 1903.66
  696.79 1903.32  696.89 1903.31  702.71    1903  757.29    1903  767.61 1903.32
  773.04 1903.47  775.43 1903.54  777.38  1903.6  790.13    1904  825.18    1904
  834.43 1904.03  871.35 1904.13  886.95    1904  985.03    1904  991.42 1904.16
  995.94 1904.26 1013.78 1904.65 1022.86 1904.85 1028.33    1905 1089.09    1905
 1091.05 1904.94 1092.49  1904.9 1096.43 1904.79 1111.16 1904.42 1112.53 1904.39
 1112.99 1904.37 1124.88 1904.04 1125.04 1904.04 1126.63    1904 1169.43    1904
 1173.37 1904.06 1173.45 1904.06 1175.84 1904.11 1191.75 1904.43 1192.94 1904.45
 1209.27 1904.76 1213.79 1904.85 1214.32 1904.86 1214.44 1904.87 1215.34 1904.89
  1215.4 1904.89 1216.83 1904.93 1216.85 1904.93  1217.7 1904.94 1218.31 1904.95
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1219.29 | 1904.99 | 1219.3 | 1904.99 | 1219.52 | 1905 | 1283.67 | 1905 | 1291.91 | 1905.09 |
| 1309.89 | 1905 | 1453 | 1905 | 1455.36 | 1905.75 | 1456.2 | 1906 | 1458.07 | 1906.59 |
| 1459.42 | 1907 | 1461.14 | 1907.52 | 1462.78 | 1908 | 1464.82 | 1908.61 | 1466.29 | 1909 |
| 1469.49 | 1909 | 1471.52 | 1908.38 | 1472.79 | 1908 | 1474.93 | 1907.34 | 1475.97 | 1907 |
| 1478.32 | 1906.28 | 1479.18 | 1906 | 1480.09 | 1905.7 | 1482.35 | 1905 | 1537.62 | 1905 |
| 1546.99 | 1905.06 | 1556.24 | 1905.11 | 1556.31 | 1905.11 | 1563.39 | 1905.13 | 1572.81 | 1905.15 |
| 1585.77 | 1905.2 | 1586.04 | 1905.2 | 1586.38 | 1905.21 | 1602.58 | 1905.28 | 1665.71 | 1905.37 |
| 1716.28 | 1905.43 | 1716.66 | 1905.43 | 1718.29 | 1905.42 | 1719.51 | 1905.42 | 1721.36 | 1905.43 |
| 1721.64 | 1905.42 | 1721.96 | 1905.43 | 1725.82 | 1905.43 | 1729.78 | 1905.44 | 1734.35 | 1905.45 |
| 1737.32 | 1905.45 | 1741.05 | 1905.46 | 1741.46 | 1905.46 | 1782.89 | 1905.76 | 1815.75 | 1906 |
| 1927.2 | 1906 | 1928.67 | 1905.93 | 1949.71 | 1905 | 1959.54 | 1904.44 | 1961.19 | 1904.32 |
| 1962.15 | 1904.26 | 1965.31 | 1904.08 | 1966.6 | 1904 | 1986.9 | 1904 | 1988.49 | 1904.04 |
| 1989.74 | 1904.05 | 1990.64 | 1904.07 | 1992.08 | 1904.1 | 1992.55 | 1904.1 | 1992.73 | 1904.11 |
| 2007.93 | 1904.41 | 2009.73 | 1904.44 | 2011.37 | 1904.47 | 2013.76 | 1904.49 | 2017.74 | 1904.54 |
| 2022.43 | 1904.57 | 2028.75 | 1904.64 | 2031.2 | 1904.65 | 2032.39 | 1904.66 | 2033.5 | 1904.67 |
| 2035.57 | 1904.67 | 2035.9 | 1904.68 | 2036.92 | 1904.68 | 2062.24 | 1904.86 | 2082.27 | 1905 |
| 2274.11 | 1905 | 2285.05 | 1905.01 | 2373.1 | 1905.01 | 2407.21 | 1905 | 2431.3 | 1905 |
| 2460.43 | 1904.97 | 2476.71 | 1904.96 | 2500.22 | 1904.95 | 2508.12 | 1904.96 | 2508.16 | 1904.96 |
| 2523.82 | 1904.92 | 2544.59 | 1904.85 | 2551.79 | 1904.83 | 2552.35 | 1904.83 | 2578.65 | 1904.98 |
| 2587.15 | 1905 | 2652.08 | 1905 | 2656.7 | 1905.32 | 2667.48 | 1906 | 2674.27 | 1906.77 |
| 2675.98 | 1907 | 2678.07 | 1907.28 | 2684.15 | 1908 | 2688.01 | 1908.39 | 2693.97 | 1909 |
| 2700.93 | 1909 | 2705.68 | 1908.73 | 2706 | 1908.71 | 2706.39 | 1908.69 | 2708.87 | 1908.55 |
| 2709.63 | 1908.51 | 2710.68 | 1908.45 | 2711.38 | 1908.41 | 2713.39 | 1908.27 | 2717.59 | 1908 |
| 2719.67 | 1907.96 | 2724.72 | 1907.91 | 2728.24 | 1907.96 | 2731.33 | 1908 | 2732.74 | 1908.07 |
| 2733.13 | 1908.08 | 2733.2 | 1908.09 | 2733.24 | 1908.09 | 2743.96 | 1908.57 | 2744.03 | 1908.57 |
| 2747.9 | 1908.52 | 2753.8 | 1908.34 | 2753.82 | 1908.34 | 2756.25 | 1908 | 2760.04 | 1907.46 |
| 2763.5 | 1907 | 2767.78 | 1906.41 | 2768.54 | 1906.3 | 2770.74 | 1906 | 2775.46 | 1905.56 |
| 2775.73 | 1905.54 | 2776.42 | 1905.47 | 2777.87 | 1905.33 | 2780.9 | 1905.01 | 2781.17 | 1905 |
| 2805.35 | 1905 | 2811.88 | 1904.99 | 2823.25 | 1905 | 2941.26 | 1905 | 2944.29 | 1905.32 |
| 2946.47 | 1905.56 | 2950.69 | 1906 | 2952.54 | 1906.18 | 2953.8 | 1906.3 | 2954.68 | 1906.39 |
| 2956.36 | 1906.58 | 2957.57 | 1906.7 | 2958.18 | 1906.77 | 2959.96 | 1907 | 3035.12 | 1907 |
| 3036.27 | 1906.98 | 3052.45 | 1906.68 | 3066.35 | 1906.47 | 3066.83 | 1906.47 | 3073.77 | 1906.55 |
| 3074.29 | 1906.55 | 3076.43 | 1906.57 | 3082.76 | 1906.62 | 3083.67 | 1906.62 | 3084.29 | 1906.63 |
| 3084.69 | 1906.63 | 3089.06 | 1906.67 | 3089.7 | 1906.67 | 3097.61 | 1906.65 | 3106.47 | 1906.63 |
| 3106.73 | 1906.63 | 3113.55 | 1906.53 | 3113.98 | 1906.53 | 3121.1 | 1906.41 | 3133.25 | 1906.2 |
| 3133.6 | 1906.19 | 3134.13 | 1906.18 | 3135.25 | 1906.17 | 3144.06 | 1906 | 3169.13 | 1906 |
| 3174.26 | 1906 | 3184.82 | 1906 | 3191.27 | 1906 | 3192.59 | 1906 | 3194.25 | 1906 |
| 3195.34 | 1906 | 3196.18 | 1906 | 3201.52 | 1906 | 3251.59 | 1906 | 3252.33 | 1906 |
| 3252.55 | 1906 | 3252.93 | 1906 | 3253.42 | 1906 | 3256.79 | 1906 | 3263.49 | 1905.8 |
| 3263.83 | 1905.79 | 3265.23 | 1905.75 | 3267.34 | 1905.68 | 3287.12 | 1905 | 3288.95 | 1905 |
| 3294.99 | 1904.99 | 3295.16 | 1904.99 | 3295.58 | 1904.99 | 3299.01 | 1904.99 | 3299.27 | 1904.99 |
| 3299.73 | 1904.99 | 3300.23 | 1904.99 | 3317.28 | 1904.97 | 3328.72 | 1904.97 | 3340.86 | 1904.97 |
| 3355.56 | 1904.98 | 3359.65 | 1904.99 | 3360.76 | 1904.99 | 3360.83 | 1904.99 | 3362.66 | 1905 |
| 3364.47 | 1905.1 | 3366.53 | 1905.15 | 3372.95 | 1905.44 | 3379.27 | 1905.57 | 3379.88 | 1905.58 |
| 3380.53 | 1905.6 | 3389.41 | 1905.86 | 3392.01 | 1905.93 | 3393.98 | 1906 | 3407.36 | 1906.49 |
| 3407.63 | 1906.49 | 3411.8 | 1906.57 | 3417.6 | 1906.69 | 3421.61 | 1906.78 | 3423.91 | 1906.82 |
| 3426.94 | 1906.96 | 3428.94 | 1906.96 | 3429.13 | 1906.96 | 3429.25 | 1906.96 | 3430.03 | 1906.98 |
| 3430.35 | 1906.99 | 3430.58 | 1906.99 | 3430.73 | 1906.99 | 3431.12 | 1907 | 3431.17 | 1907 |
| 3431.19 | 1907 | 3431.22 | 1907 | 3432.18 | 1907.09 | 3436.01 | 1908 | 3438.71 | 1908.7 |
| 3439.98 | 1909 | 3441.07 | 1909.25 | 3444.11 | 1910 | 3447.5 | 1910.76 | 3448.56 | 1911 |
| 3449.69 | 1911 | 3450.44 | 1911.01 | 3451.17 | 1911 | 3452.71 | 1911 | 3454.45 | 1911 |
| 3456.33 | 1910.91 | 3456.81 | 1910.91 | 3458.91 | 1910.99 | 3459.16 | 1910.99 | 3459.27 | 1911 |
| 3459.35 | 1911.03 | 3461.63 | 1912 | 3464.07 | 1912.96 | 3464.15 | 1913 | 3464.27 | 1913.06 |
| 3466.2 | 1914 | 3467.61 | 1914.68 | 3468.23 | 1915 | 3468.83 | 1915.31 | 3470.13 | 1916 |
| 3471.02 | 1916.45 | 3472.03 | 1917 | 3472.6 | 1917.3 | 3473.91 | 1918 | 3474.71 | 1918.31 |
| 3476.07 | 1919 | 3477.35 | 1919.84 | 3477.7 | 1920 | 3478.24 | 1920.21 | 3478.8 | 1920.31 |
| 3479.3 | 1920.4 | 3480.01 | 1920.5 | 3480.71 | 1920.6 | 3481.23 | 1920.66 | 3482.34 | 1920.87 |
| 3482.59 | 1920.88 | 3482.74 | 1920.91 | 3482.85 | 1920.91 | 3482.95 | 1920.92 | 3483.03 | 1920.92 |
| 3483.39 | 1920.96 | 3483.56 | 1920.96 | 3484.39 | 1921 | 3484.9 | 1921 | 3484.96 | 1921 |
| 3485.78 | 1921 | 3485.93 | 1921 | 3488.64 | 1920.99 | 3490.14 | 1920.99 | 3492.42 | 1921 |
| 3497.36 | 1921.54 | 3503.37 | 1922 | 3512.81 | 1922.88 | 3513.31 | 1922.92 | 3513.43 | 1922.93 |
| 3513.53 | 1922.94 | 3514.48 | 1923 | 3514.64 | 1923 | 3516.07 | 1923 | 3517.37 | 1923 |
| 3517.43 | 1923 | 3517.94 | 1923 | 3517.99 | 1923 | 3518.38 | 1923 | 3518.9 | 1923 |
| 3520.9 | 1923 | 3523.59 | 1923 | 3523.94 | 1923 | 3527.07 | 1923 | 3527.31 | 1923 |
| 3527.55 | 1923 | 3528.59 | 1923 | 3533.53 | 1923 | 3533.99 | 1923 | 3534.15 | 1923 |
| 3534.6 | 1923 | 3570.02 | 1923 | 3577.93 | 1923 | 3584.3 | 1923 | 3631.77 | 1923 |
| 3632.04 | 1923 | 3632.13 | 1923 | 3632.14 | 1923 | 3632.42 | 1923 | 3632.48 | 1923 |
| 3632.56 | 1923 | 3632.59 | 1923 | 3633.82 | 1923 | 3633.91 | 1923 | 3634.63 | 1923 |
| 3634.82 | 1923 | 3634.83 | 1923 | 3637.6 | 1923 | 3637.61 | 1923 | 3637.76 | 1923 |
| 3637.92 | 1923 | 3639.75 | 1923 | 3640.74 | 1923 | 3642.15 | 1923 | 3644.84 | 1923 |
| 3645.52 | 1923 | 3646.26 | 1923 | 3647.01 | 1923 | 3649.97 | 1923 | 3650.16 | 1923 |
| 3650.41 | 1923 | 3662.06 | 1923.23 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 3662.06 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 3662.06 | 87.88 | 87.88 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | Left OB | Channel | Right OB |
|---|---|---|---|---|---|
| E.G. Elev (ft) | 1907.37 | Element | | | |
| Vel Head (ft) | 0.24 | Wt. n-Val. | | 0.040 | |
| W.S. Elev (ft) | 1907.13 | Reach Len. (ft) | 87.88 | 87.88 | 87.88 |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 5669.69 | |
| E.G. Slope (ft/ft) | 0.004515 | Area (sq ft) | | 5669.69 | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | |

| | | | | | |
|---|---|---|---|---|---|
| Top Width (ft) | 2846.14 | Top Width (ft) | 2846.14 | | |
| Vel Total (ft/s) | 3.95 | Avg. Vel. (ft/s) | 3.95 | | |
| Max Chl Dpth (ft) | 4.13 | Hydr. Depth (ft) | 1.99 | | |
| Conv. Total (cfs) | 333354.3 | Conv. (cfs) | 333354.3 | | |
| Length Wtd. (ft) | 87.88 | Wetted Per. (ft) | 2847.36 | | |
| Min Ch El (ft) | 1903.00 | Shear (lb/sq ft) | 0.56 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 3662.06 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.30 | Cum Volume (acre-ft) | 240.96 | | |
| C & E Loss (ft) | 0.03 | Cum SA (acres) | 111.38 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -18445.0

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1914.73 | 40.96 | 1914.34 | 44 | 1914.32 | 46.21 | 1914.29 | 48.7 | 1914.27 |
| 149.24 | 1913.32 | 156.88 | 1913.26 | 159.4 | 1913.23 | 251.59 | 1912.4 | 278.19 | 1912.27 |
| 280.96 | 1912.26 | 290.75 | 1912.17 | 337.02 | 1911.72 | 352.41 | 1911.66 | 356.01 | 1911.64 |
| 357.92 | 1911.64 | 358.24 | 1911.63 | 359.65 | 1911.63 | 364.2 | 1911.61 | 364.96 | 1911.61 |
| 370.16 | 1911.59 | 389.47 | 1911.51 | 397.06 | 1911.48 | 403.47 | 1911.45 | 404.4 | 1911.45 |
| 407.6 | 1911.42 | 409.91 | 1911.39 | 410.51 | 1911.39 | 414.53 | 1911.35 | 416.71 | 1911.33 |
| 419.56 | 1911.3 | 449.25 | 1911 | 449.73 | 1911 | 452.29 | 1910.97 | 455.76 | 1910.94 |
| 461.27 | 1910.88 | 464.86 | 1910.85 | 490.76 | 1910.59 | 495.16 | 1910.58 | 497.19 | 1910.58 |
| 498.03 | 1910.57 | 502.57 | 1910.56 | 509.99 | 1910.54 | 512.52 | 1910.54 | 518.2 | 1910.52 |
| 527.78 | 1910.5 | 528.18 | 1910.49 | 532.98 | 1910.48 | 536.61 | 1910.44 | 551.28 | 1910.25 |
| 571.26 | 1910 | 582.73 | 1910 | 589.33 | 1909.99 | 597.52 | 1909.99 | 600.21 | 1909.98 |
| 601.91 | 1909.98 | 603.29 | 1909.97 | 612.72 | 1909.94 | 614.9 | 1909.93 | 617.03 | 1909.93 |
| 618.34 | 1909.92 | 621.81 | 1909.91 | 627.27 | 1909.89 | 629.46 | 1909.89 | 630.67 | 1909.88 |
| 632.31 | 1909.88 | 637.12 | 1909.86 | 638.36 | 1909.86 | 651.19 | 1909.81 | 656.51 | 1909.8 |
| 663.61 | 1909.77 | 681.25 | 1909.71 | 683.76 | 1909.71 | 685.06 | 1909.7 | 703.33 | 1909.64 |
| 705.82 | 1909.63 | 724.16 | 1909.57 | 726.65 | 1909.56 | 744.71 | 1909.5 | 746.04 | 1909.5 |
| 766.09 | 1909.43 | 782.41 | 1909.38 | 783.09 | 1909.37 | 784.59 | 1909.37 | 805.2 | 1909.3 |
| 827.25 | 1909.23 | 831.47 | 1909.21 | 836.95 | 1909.2 | 847.05 | 1909.16 | 859.76 | 1909.12 |
| 864.34 | 1909.1 | 869.09 | 1909.09 | 870.13 | 1909.08 | 872.26 | 1909.08 | 874.3 | 1909.07 |
| 952.7 | 1908.81 | 952.79 | 1907.49 | 952.82 | 1903.23 | 953.28 | 1903.22 | 955.88 | 1903.24 |
| 959.21 | 1903.25 | 961.85 | 1903.27 | 964.32 | 1903.27 | 968.69 | 1903.28 | 979.36 | 1903.3 |
| 981.11 | 1903.31 | 982.89 | 1903.31 | 993.74 | 1903.33 | 1002.46 | 1903.35 | 1012.41 | 1903.38 |
| 1014.46 | 1903.39 | 1021.7 | 1903.41 | 1022.55 | 1903.42 | 1027.18 | 1903.43 | 1028.79 | 1903.44 |
| 1036.84 | 1903.48 | 1043.8 | 1903.51 | 1052.99 | 1903.53 | 1053.6 | 1903.54 | 1057.3 | 1903.54 |
| 1067.18 | 1903.56 | 1080.3 | 1903.59 | 1094.94 | 1903.62 | 1104.42 | 1903.65 | 1114.82 | 1903.68 |
| 1168.49 | 1904 | 1266.5 | 1904 | 1269.94 | 1904.1 | 1270.8 | 1904.11 | 1286.68 | 1904.34 |
| 1329.78 | 1904.99 | 1332.51 | 1904.99 | 1332.64 | 1905 | 1430.47 | 1905 | 1454.87 | 1905.01 |
| 1465.32 | 1905.01 | 1495.03 | 1905 | 1498.38 | 1905 | 1500.85 | 1905.09 | 1501.44 | 1905.12 |
| 1503.11 | 1905.12 | 1503.25 | 1905.13 | 1506.6 | 1905.16 | 1507.1 | 1905.18 | 1512.78 | 1905.25 |
| 1515.3 | 1905.33 | 1524.85 | 1905.51 | 1531.66 | 1905.7 | 1535.81 | 1905.79 | 1537.08 | 1905.83 |
| 1544.64 | 1905.95 | 1544.89 | 1905.96 | 1549.41 | 1906 | 1557.45 | 1906.11 | 1559.02 | 1906.03 |
| 1561.12 | 1906.04 | 1563.31 | 1906.02 | 1564.07 | 1906 | 1567.37 | 1905.78 | 1568.78 | 1905.68 |
| 1580.33 | 1905 | 1598.75 | 1905 | 1613.19 | 1904.68 | 1614.34 | 1904.66 | 1618.47 | 1904.56 |
| 1619.96 | 1904.53 | 1621.87 | 1904.48 | 1635.86 | 1904.19 | 1644.44 | 1904 | 1658.97 | 1903.59 |
| 1678.49 | 1903 | 1685.01 | 1903 | 1690.02 | 1903.02 | 1690.54 | 1903.03 | 1694.76 | 1903.04 |
| 1701.06 | 1903.07 | 1705.66 | 1903.05 | 1710.77 | 1903.04 | 1722.85 | 1903 | 1734.14 | 1903 |
| 1742.93 | 1903.19 | 1753.08 | 1903.42 | 1755.43 | 1903.47 | 1756.78 | 1903.51 | 1774.36 | 1904 |
| 1858.14 | 1904 | 1902.53 | 1903.99 | 1950.39 | 1904 | 1975.97 | 1904.85 | 1980.8 | 1905 |
| 2050.5 | 1905 | 2063.73 | 1904.37 | 2065.72 | 1904.27 | 2071.38 | 1904 | 2130.79 | 1904 |
| 2148.4 | 1904.51 | 2150.66 | 1904.57 | 2159.84 | 1904.82 | 2169.3 | 1905 | 2178.16 | 1907.16 |
| 2179.88 | 1907.64 | 2181.25 | 1908 | 2182.58 | 1908.36 | 2184.99 | 1909 | 2186.24 | 1909.4 |
| 2186.87 | 1909.57 | 2187.48 | 1909.68 | 2188.04 | 1909.7 | 2188.3 | 1909.68 | 2189.09 | 1909.49 |
| 2189.7 | 1909.32 | 2190.49 | 1909 | 2193.26 | 1908.04 | 2194.58 | 1907.6 | 2196.28 | 1907 |
| 2197.37 | 1906.59 | 2198.31 | 1906.27 | 2198.82 | 1906.07 | 2199.07 | 1906 | 2200.62 | 1905.44 |
| 2201.71 | 1905 | 2222.13 | 1905 | 2225.85 | 1905.07 | 2240.32 | 1905.35 | 2241.6 | 1905.37 |
| 2248.67 | 1905.5 | 2249.35 | 1905.51 | 2274.71 | 1905.82 | 2285.16 | 1905.8 | 2287.13 | 1905.81 |
| 2289.02 | 1905.81 | 2290.2 | 1905.79 | 2291.87 | 1905.78 | 2293.63 | 1905.74 | 2294.18 | 1905.74 |
| 2300.62 | 1905.63 | 2307.84 | 1905.51 | 2308.18 | 1905.5 | 2316.85 | 1905.32 | 2330.32 | 1905 |
| 2331.89 | 1905 | 2332.61 | 1905.26 | 2334.75 | 1906 | 2335.71 | 1906.32 | 2337.82 | 1907 |
| 2339.95 | 1907.76 | 2340.72 | 1908 | 2341.22 | 1908.04 | 2342.36 | 1908.07 | 2343.16 | 1908 |
| 2344.86 | 1907.33 | 2345.67 | 1907 | 2348.06 | 1906.12 | 2349.02 | 1905.75 | 2351.32 | 1905 |
| 2356.57 | 1905 | 2363.71 | 1905.04 | 2367.06 | 1905.03 | 2371.49 | 1905 | 2430.2 | 1905 |
| 2432.9 | 1905.65 | 2438.71 | 1907 | 2441.43 | 1907.62 | 2442.77 | 1908 | 2448.37 | 1908 |
| 2450.66 | 1907.4 | 2452.98 | 1906.73 | 2455.13 | 1906 | 2456.09 | 1905.69 | 2458.15 | 1905 |
| 2552.45 | 1905 | 2615.29 | 1905.09 | 2688.46 | 1905.17 | 2690.97 | 1905.16 | 2695.98 | 1905.16 |
| 2697.66 | 1905.17 | 2700.03 | 1905.17 | 2705.84 | 1905.18 | 2722.17 | 1905.3 | 2799.51 | 1905.86 |
| 2800.38 | 1905.87 | 2813.39 | 1906 | 2876.74 | 1906 | 2893.53 | 1905.31 | 2901.83 | 1905 |
| 2915.85 | 1904.29 | 2921.55 | 1904 | 2994.75 | 1904 | 3003.74 | 1904.09 | 3007.09 | 1904.12 |
| 3012.02 | 1904.17 | 3015.89 | 1904.22 | 3018.23 | 1904.24 | 3020.96 | 1904.28 | 3022.97 | 1904.29 |
| 3036.95 | 1904.5 | 3044.4 | 1904.61 | 3048.33 | 1904.65 | 3051.28 | 1904.69 | 3055.11 | 1904.72 |
| 3109.04 | 1905 | 3364.58 | 1905 | 3374 | 1904.77 | 3387.2 | 1904.46 | 3387.49 | 1904.46 |
| 3392.89 | 1904.41 | 3394.34 | 1904.4 | 3406.75 | 1904.38 | 3408.76 | 1904.38 | 3413.9 | 1904.32 |
| 3415.24 | 1904.32 | 3419.98 | 1904.26 | 3420.73 | 1904.26 | 3439.55 | 1904.29 | 3467.96 | 1904.39 |
| 3470.22 | 1904.4 | 3486.94 | 1904.41 | 3503.3 | 1904.41 | 3504.47 | 1904.43 | 3516.99 | 1904.27 |
| 3518.39 | 1904.29 | 3523.68 | 1904.21 | 3531.05 | 1904.07 | 3535.75 | 1904 | 3579.31 | 1904 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3583.75 | 1904.3 | 3590.36 | 1904.77 | 3591.83 | 1904.86 | 3593.79 | 1905 | 3596.44 | 1905.24 |
| 3603.89 | 1906 | 3608.9 | 1906.52 | 3613.77 | 1907 | 3623.32 | 1907 | 3626.45 | 1907.01 |
| 3632.35 | 1907.01 | 3642.7 | 1907.02 | 3653.13 | 1907.02 | 3660.09 | 1907.01 | 3667.53 | 1907.01 |
| 3679.78 | 1907 | 3681.36 | 1906.9 | 3688.61 | 1906.46 | 3695.9 | 1906 | 3703.22 | 1905.38 |
| 3703.84 | 1905.33 | 3707.62 | 1905 | 3719.93 | 1904.89 | 3730.32 | 1904.79 | 3733.98 | 1904.79 |
| 3747.29 | 1904.68 | 3786.92 | 1904.72 | 3834.02 | 1904.8 | 3837.14 | 1904.8 | 3837.57 | 1904.81 |
| 3839.89 | 1904.81 | 3840.99 | 1904.82 | 3845.09 | 1904.78 | 3853.74 | 1904.62 | 3856.97 | 1904.66 |
| 3858.87 | 1904.67 | 3860.35 | 1904.67 | 3863.2 | 1904.57 | 3868.68 | 1904.36 | 3869.32 | 1904.35 |
| 3876.38 | 1904 | 3895.79 | 1904 | 3901.29 | 1904.6 | 3902.41 | 1904.75 | 3904.59 | 1905 |
| 3911.01 | 1905.69 | 3914.27 | 1906 | 3917.35 | 1906.18 | 3922.29 | 1906.46 | 3924.63 | 1906.58 |
| 3925.81 | 1906.65 | 3928.48 | 1906.71 | 3930.46 | 1906.74 | 3931.62 | 1906.79 | 3933.48 | 1906.81 |
| 3935.91 | 1906.8 | 3938.8 | 1906.81 | 3944.62 | 1906.73 | 3946.04 | 1906.7 | 3950.31 | 1906.54 |
| 3951.08 | 1906.49 | 3953.13 | 1906.4 | 3956.36 | 1906.23 | 3959.1 | 1906.01 | 3960.11 | 1906 |
| 3961.6 | 1905.89 | 3962.09 | 1905.84 | 3963.43 | 1905.74 | 3971.63 | 1905.05 | 3972.17 | 1905 |
| 3983.17 | 1905 | 3983.83 | 1905.01 | 3997.78 | 1905.01 | 4000.51 | 1905.02 | 4007.16 | 1905.02 |
| 4021.54 | 1905.36 | 4022.32 | 1905.37 | 4036.99 | 1906 | 4070.59 | 1906 | 4076.06 | 1905.9 |
| 4098.04 | 1905.29 | 4107.51 | 1905.04 | 4109.1 | 1905 | 4118.95 | 1905 | 4121.48 | 1905.03 |
| 4121.58 | 1905.02 | 4127.73 | 1905.11 | 4131.07 | 1905.07 | 4133.72 | 1905.06 | 4139.5 | 1905.09 |
| 4175.01 | 1905 | 4228.03 | 1905 | 4264.54 | 1904.98 | 4288.42 | 1904.98 | 4294.29 | 1904.99 |
| 4301.71 | 1904.99 | 4318.91 | 1904.58 | 4319.23 | 1904.57 | 4323.52 | 1904.33 | 4323.65 | 1904.33 |
| 4329.4 | 1904 | 4330.24 | 1904 | 4334.2 | 1904.28 | 4344.46 | 1905 | 4350.29 | 1905.57 |
| 4354.74 | 1906 | 4357.08 | 1906.36 | 4358.23 | 1906.53 | 4359.73 | 1906.73 | 4361.66 | 1907 |
| 4367.74 | 1907.94 | 4368.04 | 1908 | 4369.19 | 1908.11 | 4371.17 | 1908.23 | 4374.18 | 1908.42 |
| 4383.06 | 1909 | 4383.12 | 1909 | 4387.18 | 1909.31 | 4390.75 | 1909.59 | 4396.26 | 1910 |
| 4397.19 | 1910.09 | 4407.51 | 1911 | 4413.75 | 1911.63 | 4414.86 | 1911.76 | 4416.68 | 1911.99 |
| 4420.52 | 1913 | 4423.18 | 1913.66 | 4424.58 | 1914 | 4428.47 | 1915.02 | 4432.51 | 1916 |
| 4437.35 | 1917.13 | 4441.39 | 1918 | 4443.04 | 1918.35 | 4445.6 | 1919 | 4448.25 | 1919.7 |
| 4449.36 | 1920 | 4453.73 | 1920.75 | 4455.4 | 1921 | 4459.15 | 1921.33 | 4467.43 | 1922 |
| 4469.19 | 1922.21 | 4477.46 | 1923 | 4489.86 | 1923.45 | 4491.83 | 1923.52 | 4497.72 | 1923.71 |
| 4501.56 | 1923.83 | 4506.63 | 1924 | 4515.57 | 1924.54 | 4517.93 | 1924.66 | 4519.8 | 1924.74 |
| 4524.54 | 1924.96 | 4525.61 | 1925 | 4526.96 | 1925 | 4527.62 | 1924.97 | 4546.65 | 1924.27 |
| 4549.82 | 1924.16 | 4550.07 | 1924.16 | 4564.35 | 1924 | 4566.16 | 1924 | 4569.54 | 1923.99 |
| 4577.94 | 1923.99 | 4580.89 | 1923.98 | 4590.35 | 1924 | 4599 | 1924.19 | 4603.92 | 1924.3 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4603.92 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 4603.92 | 93.71 | 93.71 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1907.05 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.16 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1906.89 | Reach Len. (ft) | 93.71 | 93.71 | 93.71 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7073.35 | | |
| E.G. Slope (ft/ft) | 0.002633 | Area (sq ft) | | 7073.35 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3297.04 | Top Width (ft) | | 3297.04 | | |
| Vel Total (ft/s) | 3.17 | Avg. Vel. (ft/s) | | 3.17 | | |
| Max Chl Dpth (ft) | 3.89 | Hydr. Depth (ft) | | 2.15 | | |
| Conv. Total (cfs) | 436533.0 | Conv. (cfs) | | 436533.0 | | |
| Length Wtd. (ft) | 93.71 | Wetted Per. (ft) | | 3303.24 | | |
| Min Ch El (ft) | 1903.00 | Shear (lb/sq ft) | | 0.35 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4603.92 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.26 | Cum Volume (acre-ft) | | 228.11 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 105.18 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -18538.7

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1914.51 | 35.4 | 1914.18 | 39.99 | 1914.14 | 43.22 | 1914.11 | 155.26 | 1913.06 |
| 155.85 | 1913.06 | 158.86 | 1913.03 | 160.08 | 1913.02 | 162.38 | 1912.99 | 164.45 | 1912.98 |
| 257.54 | 1912.1 | 258.47 | 1912.09 | 261.63 | 1912.07 | 264.61 | 1912.04 | 267.95 | 1912.01 |
| 345.85 | 1911.28 | 352.15 | 1911.22 | 353.3 | 1911.21 | 354.1 | 1911.2 | 354.63 | 1911.2 |
| 355.08 | 1911.19 | 356.01 | 1911.19 | 358.67 | 1911.16 | 429.79 | 1910.52 | 461.89 | 1910.38 |
| 465.24 | 1910.36 | 477.03 | 1910.25 | 511.17 | 1909.92 | 529.32 | 1909.85 | 530.98 | 1909.85 |
| 531.85 | 1909.84 | 533.65 | 1909.84 | 534.06 | 1909.83 | 536.35 | 1909.83 | 536.9 | 1909.82 |
| 537.84 | 1909.82 | 539.74 | 1909.81 | 540.56 | 1909.81 | 543.2 | 1909.8 | 544.09 | 1909.8 |
| 547.5 | 1909.78 | 550.22 | 1909.77 | 572.92 | 1909.68 | 573.24 | 1909.68 | 581.84 | 1909.65 |
| 589.37 | 1909.62 | 590.46 | 1909.62 | 592.56 | 1909.6 | 594.78 | 1909.57 | 595.7 | 1909.57 |
| 596.12 | 1909.56 | 596.92 | 1909.55 | 597.63 | 1909.55 | 600.03 | 1909.52 | 600.78 | 1909.52 |
| 601.96 | 1909.5 | 602.34 | 1909.5 | 604.9 | 1909.47 | 608.25 | 1909.44 | 626.94 | 1909.26 |
| 627.49 | 1909.25 | 634.45 | 1909.18 | 640.83 | 1909.12 | 644.97 | 1909.08 | 660.79 | 1908.92 |
| 661.11 | 1908.92 | 665.8 | 1908.91 | 668.13 | 1908.9 | 669.08 | 1908.9 | 674.26 | 1908.89 |
| 682.72 | 1908.87 | 685.61 | 1908.86 | 692.07 | 1908.85 | 702.99 | 1908.82 | 703.44 | 1908.82 |
| 708.9 | 1908.81 | 713.04 | 1908.76 | 727.08 | 1908.58 | 727.33 | 1908.57 | 740.07 | 1908.41 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 769.54 | 1908.41 | 772.56 | 1908.4 | 774.46 | 1908.4 | 775.53 | 1908.39 | 776.01 | 1908.39 |
| 786.57 | 1908.36 | 791.41 | 1908.34 | 792.87 | 1908.34 | 795.77 | 1908.33 | 796.75 | 1908.33 |
| 802.86 | 1908.31 | 803.96 | 1908.31 | 804.27 | 1908.3 | 807.07 | 1908.3 | 807.87 | 1908.29 |
| 808.5 | 1908.29 | 813.88 | 1908.27 | 815.27 | 1908.27 | 829.61 | 1908.22 | 834.74 | 1908.21 |
| 835.55 | 1908.21 | 843.26 | 1908.18 | 843.49 | 1908.18 | 863.18 | 1908.12 | 865.97 | 1908.11 |
| 867.43 | 1908.11 | 887.79 | 1908.04 | 890.57 | 1908.03 | 910.98 | 1907.97 | 913.75 | 1907.96 |
| 933.82 | 1907.9 | 935.3 | 1907.89 | 944.99 | 1907.86 | 958.61 | 1906.52 | 994.58 | 1903 |
| 995.15 | 1903 | 999.02 | 1903.04 | 1000.92 | 1903.05 | 1007.16 | 1903.11 | 1013.35 | 1903.11 |
| 1018.24 | 1903.13 | 1038.35 | 1903.25 | 1041.4 | 1903.26 | 1041.68 | 1903.27 | 1042.8 | 1903.27 |
| 1163.03 | 1904 | 1277.37 | 1904 | 1288.3 | 1904.09 | 1289.27 | 1904.09 | 1289.38 | 1904.1 |
| 1314.23 | 1904.34 | 1380.47 | 1905 | 1413.28 | 1905 | 1420.46 | 1905.02 | 1426.47 | 1905.04 |
| 1431.34 | 1905.03 | 1435.51 | 1905.02 | 1448.27 | 1905 | 1485.85 | 1905 | 1490.17 | 1905.05 |
| 1504.28 | 1905.2 | 1505.7 | 1905.21 | 1520.71 | 1905.09 | 1530.22 | 1905.05 | 1534.1 | 1905 |
| 1543.46 | 1905 | 1555.22 | 1905.22 | 1555.71 | 1905.24 | 1555.81 | 1905.23 | 1556.22 | 1905.24 |
| 1556.28 | 1905.23 | 1557.07 | 1905.24 | 1559.01 | 1905.24 | 1561.1 | 1905.23 | 1561.63 | 1905.23 |
| 1567.62 | 1905.1 | 1568.45 | 1905.11 | 1569.68 | 1905.09 | 1574.2 | 1905 | 1580.69 | 1905 |
| 1604.19 | 1904.79 | 1627.5 | 1904.6 | 1627.91 | 1904.6 | 1629.21 | 1904.58 | 1638.62 | 1904.39 |
| 1639.74 | 1904.38 | 1656.22 | 1904 | 1659.29 | 1904 | 1670.92 | 1903.64 | 1674.14 | 1903.54 |
| 1676.25 | 1903.47 | 1690.99 | 1903 | 1691.49 | 1902.98 | 1691.72 | 1902.98 | 1692.23 | 1903 |
| 1708.48 | 1903.09 | 1739.34 | 1903.27 | 1742.46 | 1903.26 | 1744.68 | 1903.25 | 1757.8 | 1903.18 |
| 1778.79 | 1903.1 | 1780.34 | 1903.09 | 1781.25 | 1903.08 | 1781.59 | 1903.08 | 1786.8 | 1903.05 |
| 1789.05 | 1903.03 | 1790.43 | 1903.03 | 1790.65 | 1903.04 | 1791.24 | 1903.03 | 1794.61 | 1903.03 |
| 1794.77 | 1903.04 | 1796.05 | 1903.04 | 1799.55 | 1903.07 | 1800.55 | 1903.08 | 1802.45 | 1903.12 |
| 1804.13 | 1903.15 | 1806.93 | 1903.18 | 1810.88 | 1903.22 | 1817.48 | 1903.33 | 1817.56 | 1903.33 |
| 1821.28 | 1903.39 | 1830.42 | 1903.54 | 1834.25 | 1903.6 | 1838.38 | 1903.68 | 1866.99 | 1903.79 |
| 1908.94 | 1903.99 | 1909.84 | 1904 | 1914.06 | 1904.01 | 1920.56 | 1904.01 | 1925.23 | 1904.02 |
| 1926.12 | 1904.02 | 1930.75 | 1904.03 | 1933.9 | 1904.04 | 1938.58 | 1904.05 | 1939.31 | 1904.05 |
| 1993.73 | 1904.67 | 1994.26 | 1904.68 | 1995.54 | 1904.69 | 1995.89 | 1904.69 | 1997.3 | 1904.7 |
| 2002.65 | 1904.75 | 2004.93 | 1904.77 | 2005.6 | 1904.78 | 2005.98 | 1904.78 | 2013.36 | 1904.79 |
| 2021.03 | 1904.81 | 2021.54 | 1904.82 | 2028.28 | 1904.83 | 2040.2 | 1904.88 | 2047.21 | 1904.9 |
| 2048.52 | 1904.89 | 2049.91 | 1904.9 | 2050.8 | 1904.9 | 2051.53 | 1904.89 | 2052.95 | 1904.89 |
| 2070.7 | 1905 | 2071.15 | 1904.99 | 2101.52 | 1904.54 | 2118.57 | 1904.3 | 2125.17 | 1904.24 |
| 2125.36 | 1904.25 | 2126.97 | 1904.28 | 2127.64 | 1904.28 | 2128.03 | 1904.29 | 2130.67 | 1904.32 |
| 2130.91 | 1904.33 | 2135.37 | 1904.4 | 2135.76 | 1904.4 | 2148.49 | 1904.62 | 2149.17 | 1904.63 |
| 2157.67 | 1904.81 | 2166.4 | 1905 | 2185.1 | 1905 | 2189.28 | 1905.01 | 2193.07 | 1905 |
| 2253.29 | 1905 | 2260.3 | 1905.61 | 2262.99 | 1905.83 | 2265.19 | 1906 | 2266.4 | 1906.57 |
| 2267.33 | 1907 | 2268.95 | 1907.76 | 2271.33 | 1908.88 | 2271.58 | 1909 | 2272.19 | 1909.22 |
| 2272.36 | 1909.27 | 2272.91 | 1909.39 | 2273.35 | 1909.47 | 2275.3 | 1909.8 | 2275.68 | 1909.85 |
| 2276.11 | 1909.89 | 2276.56 | 1909.92 | 2277.11 | 1909.94 | 2277.64 | 1909.93 | 2279.19 | 1909.84 |
| 2280.4 | 1909.72 | 2281.28 | 1909.61 | 2281.59 | 1909.56 | 2283.55 | 1909.28 | 2283.72 | 1909.22 |
| 2284.96 | 1909 | 2285.25 | 1908.85 | 2286.93 | 1908 | 2288.51 | 1907.18 | 2288.84 | 1907 |
| 2289.32 | 1906.76 | 2291.17 | 1906 | 2297.91 | 1905.98 | 2303.92 | 1905.98 | 2304.2 | 1905.97 |
| 2304.79 | 1905.97 | 2313.2 | 1905.93 | 2320.15 | 1905.94 | 2330.21 | 1905.95 | 2332.41 | 1905.95 |
| 2332.66 | 1905.96 | 2334.03 | 1905.96 | 2335.35 | 1905.88 | 2346.59 | 1905.23 | 2346.69 | 1905.23 |
| 2352.48 | 1905 | 2731.79 | 1905 | 2732.7 | 1905.01 | 2734.03 | 1905.03 | 2736.39 | 1905.06 |
| 2812.77 | 1905.57 | 2836.77 | 1905.7 | 2837.27 | 1905.7 | 2841.43 | 1905.68 | 2846.48 | 1905.64 |
| 2847.02 | 1905.64 | 2848.73 | 1905.62 | 2850.71 | 1905.6 | 2860.04 | 1905.48 | 2878.34 | 1905.22 |
| 2878.9 | 1905.22 | 2891.75 | 1905 | 2891.88 | 1905 | 2893.01 | 1904.96 | 2918.28 | 1904.15 |
| 2922.85 | 1904 | 2991.63 | 1904 | 2997.86 | 1904.06 | 3024.72 | 1904.19 | 3046.95 | 1904.33 |
| 3088.45 | 1904.58 | 3119.85 | 1904.76 | 3127.78 | 1904.8 | 3143.31 | 1904.91 | 3144.77 | 1904.92 |
| 3151 | 1904.97 | 3153.59 | 1904.98 | 3155.57 | 1905 | 3306.03 | 1905 | 3314.07 | 1904.9 |
| 3330.34 | 1904.83 | 3332.44 | 1904.8 | 3340.84 | 1904.78 | 3342.3 | 1904.76 | 3343.48 | 1904.76 |
| 3351.16 | 1904.59 | 3378.9 | 1904 | 3411.27 | 1904 | 3475.11 | 1903.37 | 3497.25 | 1903.15 |
| 3502.26 | 1903.11 | 3513.73 | 1903 | 3516.41 | 1903 | 3516.63 | 1902.99 | 3516.84 | 1903.01 |
| 3517.86 | 1903.01 | 3518.04 | 1903 | 3528.8 | 1903 | 3529.83 | 1902.99 | 3530.37 | 1902.99 |
| 3531.62 | 1902.98 | 3533.73 | 1903 | 3535.32 | 1903 | 3539.83 | 1903.01 | 3543.04 | 1903.01 |
| 3545.12 | 1903.06 | 3564.56 | 1903.51 | 3573.11 | 1903.65 | 3573.88 | 1903.65 | 3574.61 | 1903.66 |
| 3575.93 | 1903.66 | 3584.6 | 1904 | 3589.03 | 1904.14 | 3589.12 | 1904.14 | 3616.33 | 1905 |
| 3620.05 | 1905.17 | 3638.64 | 1906 | 3641.93 | 1906.1 | 3646.9 | 1906.22 | 3650.75 | 1906.3 |
| 3651.17 | 1906.32 | 3651.37 | 1906.32 | 3660.36 | 1906.53 | 3664.62 | 1906.53 | 3669.25 | 1906.46 |
| 3669.72 | 1906.47 | 3673.01 | 1906.37 | 3676.74 | 1906.21 | 3676.82 | 1906.21 | 3679.75 | 1906.03 |
| 3680.19 | 1906 | 3685.9 | 1905.55 | 3693.37 | 1905 | 3695.63 | 1904.95 | 3697.87 | 1904.92 |
| 3708.02 | 1904.79 | 3712.23 | 1904.73 | 3715.87 | 1904.68 | 3760.65 | 1904 | 3848.52 | 1904 |
| 3858.05 | 1904.49 | 3858.57 | 1904.52 | 3859.87 | 1904.58 | 3861.03 | 1904.64 | 3861.93 | 1904.68 |
| 3864.09 | 1904.77 | 3867.27 | 1904.9 | 3869.74 | 1905 | 3895.2 | 1905 | 3896.25 | 1905.18 |
| 3901.05 | 1906 | 3903.64 | 1906.01 | 3908.93 | 1906.02 | 3913.44 | 1906.04 | 3914.69 | 1906.04 |
| 3918.08 | 1906.05 | 3923.08 | 1906.05 | 3926.26 | 1906.21 | 3935.55 | 1906.61 | 3936.18 | 1906.61 |
| 3937.06 | 1906.62 | 3941.59 | 1906.44 | 3951.46 | 1906 | 3954.5 | 1906 | 3962.29 | 1905 |
| 4018.45 | 1905 | 4019.34 | 1905.02 | 4019.95 | 1905.03 | 4020.74 | 1905.03 | 4037.78 | 1905.11 |
| 4039.59 | 1905.12 | 4040.19 | 1905.12 | 4046.77 | 1905.1 | 4055.7 | 1905.05 | 4062.67 | 1905.09 |
| 4064.84 | 1905 | 4261.87 | 1905 | 4262.41 | 1904.99 | 4299.37 | 1904.4 | 4320.28 | 1904.07 |
| 4322.1 | 1904 | 4335.73 | 1904 | 4345.61 | 1904.26 | 4372.87 | 1905 | 4387.06 | 1905 |
| 4388.48 | 1905.41 | 4390.37 | 1906 | 4392.18 | 1906.57 | 4393.54 | 1907 | 4394.38 | 1907.26 |
| 4396.65 | 1908 | 4397.62 | 1908.31 | 4399.8 | 1909 | 4402.93 | 1910 | 4405.27 | 1910.74 |
| 4406.3 | 1911.08 | 4406.73 | 1911.15 | 4407.4 | 1911.3 | 4410.41 | 1912 | 4411.42 | 1912.34 |
| 4411.99 | 1912.55 | 4413.77 | 1913 | 4417.22 | 1913.4 | 4420.22 | 1914 | 4423.19 | 1914.86 |
| 4423.71 | 1915 | 4424.7 | 1915.23 | 4427.72 | 1916 | 4431.41 | 1916.89 | 4431.86 | 1917 |
| 4432.15 | 1917.08 | 4433.09 | 1917.31 | 4434.41 | 1917.65 | 4435.74 | 1918 | 4436.84 | 1918.3 |
| 4439.12 | 1919 | 4440.15 | 1919.16 | 4446.9 | 1920 | 4455.17 | 1920.83 | 4456.85 | 1921 |
| 4463.58 | 1921.61 | 4468.83 | 1922 | 4478.89 | 1922.43 | 4483.08 | 1922.58 | 4492.52 | 1922.97 |
| 4493.15 | 1923 | 4497.36 | 1923.45 | 4498.9 | 1923.62 | 4499.19 | 1923.66 | 4502.8 | 1924 |
| 4516.51 | 1924 | 4534.53 | 1924.27 | 4534.8 | 1924.27 | 4554.54 | 1924.43 | 4560.95 | 1924.53 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4560.95 | .045 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

0 4560.95 155.33 155.33 155.33 .1 .3

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1906.79 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.16 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1906.63 | Reach Len. (ft) | 155.33 | 155.33 | 155.33 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6944.52 | | |
| E.G. Slope (ft/ft) | 0.002924 | Area (sq ft) | | 6944.52 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3411.68 | Top Width (ft) | | 3411.68 | | |
| Vel Total (ft/s) | 3.23 | Avg. Vel. (ft/s) | | 3.23 | | |
| Max Chl Dpth (ft) | 3.64 | Hydr. Depth (ft) | | 2.04 | | |
| Conv. Total (cfs) | 414245.6 | Conv. (cfs) | | 414245.6 | | |
| Length Wtd. (ft) | 155.33 | Wetted Per. (ft) | | 3412.88 | | |
| Min Ch El (ft) | 1902.98 | Shear (lb/sq ft) | | 0.37 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4560.95 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.45 | Cum Volume (acre-ft) | | 213.03 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 97.97 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -18694.0

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1914.28 | 20.74 | 1914.08 | 25.98 | 1914.03 | 27.59 | 1914.01 | 136.58 | 1912.97 |
| 142.29 | 1912.92 | 143.14 | 1912.91 | 146.82 | 1912.88 | 261.42 | 1911.8 | 268.21 | 1911.73 |
| 273 | 1911.69 | 365.53 | 1910.82 | 369.22 | 1910.78 | 375.37 | 1910.72 | 378.23 | 1910.7 |
| 453.67 | 1909.99 | 459.07 | 1909.94 | 462.99 | 1909.9 | 467.41 | 1909.86 | 529.25 | 1909.28 |
| 537.29 | 1909.2 | 541.36 | 1909.17 | 545.6 | 1909.13 | 600.66 | 1908.63 | 640.53 | 1908.44 |
| 644.69 | 1908.43 | 659.36 | 1908.28 | 683.29 | 1908.05 | 705.55 | 1907.96 | 706.68 | 1907.96 |
| 707.57 | 1907.95 | 708.68 | 1907.95 | 710.75 | 1907.94 | 711.81 | 1907.94 | 714.18 | 1907.93 |
| 714.85 | 1907.92 | 716.02 | 1907.92 | 718.34 | 1907.91 | 719.35 | 1907.91 | 722.59 | 1907.89 |
| 723.7 | 1907.89 | 727.88 | 1907.87 | 731.23 | 1907.86 | 759.15 | 1907.74 | 759.54 | 1907.74 |
| 770.13 | 1907.7 | 779.41 | 1907.66 | 780.75 | 1907.66 | 786.08 | 1907.6 | 787.74 | 1907.59 |
| 793.48 | 1907.53 | 794.94 | 1907.52 | 795.4 | 1907.51 | 797.71 | 1907.49 | 801.24 | 1907.45 |
| 802.69 | 1907.44 | 810.82 | 1907.36 | 811.48 | 1907.35 | 815.1 | 1907.32 | 827.75 | 1907.19 |
| 832.8 | 1907.14 | 838.64 | 1907.08 | 844.68 | 1907.07 | 847.49 | 1907.06 | 848.64 | 1907.06 |
| 854.89 | 1907.04 | 868.59 | 1907 | 876.39 | 1906.98 | 889.58 | 1906.95 | 890.13 | 1906.95 |
| 896.74 | 1906.93 | 901.74 | 1906.87 | 918.73 | 1906.65 | 919.04 | 1906.65 | 921.92 | 1906.61 |
| 925.47 | 1906.61 | 960.34 | 1905.72 | 993.51 | 1903.68 | 1005.72 | 1903.78 | 1006.71 | 1903.78 |
| 1022.83 | 1904 | 1404.88 | 1904 | 1411.19 | 1904.12 | 1413.89 | 1904.19 | 1414.77 | 1904.22 |
| 1418.83 | 1904.32 | 1438.18 | 1905 | 1440.23 | 1905.01 | 1456.07 | 1905.11 | 1459.35 | 1905.11 |
| 1471.69 | 1905.09 | 1481.85 | 1905.09 | 1491.56 | 1905.04 | 1495.15 | 1905.02 | 1495.75 | 1905 |
| 1501.06 | 1904.44 | 1505.19 | 1904 | 1514.06 | 1903.08 | 1514.35 | 1903.04 | 1514.77 | 1903.02 |
| 1516.32 | 1903.03 | 1517.12 | 1903.06 | 1538.07 | 1903.98 | 1540.08 | 1903.98 | 1540.95 | 1903.99 |
| 1541.64 | 1903.98 | 1543.1 | 1903.99 | 1544.35 | 1903.98 | 1547.46 | 1903.97 | 1548.84 | 1903.97 |
| 1550.15 | 1903.96 | 1553.56 | 1903.98 | 1557.99 | 1904 | 1558.77 | 1904.04 | 1559.55 | 1904.03 |
| 1566.22 | 1904.19 | 1568.89 | 1904.24 | 1573.58 | 1904.35 | 1577.08 | 1904.37 | 1581.22 | 1904.41 |
| 1581.3 | 1904.42 | 1590.49 | 1904.5 | 1609.79 | 1905 | 1619.24 | 1904.93 | 1624.37 | 1904.87 |
| 1624.7 | 1904.87 | 1626.67 | 1904.83 | 1627.11 | 1904.83 | 1630.2 | 1904.78 | 1632.39 | 1904.74 |
| 1637.34 | 1904.66 | 1639.08 | 1904.63 | 1641.59 | 1904.6 | 1659.75 | 1904.29 | 1676.29 | 1904.01 |
| 1678.26 | 1904 | 1696.06 | 1903 | 1697.29 | 1902.41 | 1699.22 | 1902.35 | 1700.83 | 1902.34 |
| 1706.52 | 1903 | 1732.81 | 1903.03 | 1734.39 | 1903.03 | 1752.22 | 1903.05 | 1759.94 | 1903.04 |
| 1779.41 | 1903.03 | 1796.16 | 1903.02 | 1799.03 | 1903.02 | 1800.9 | 1903.01 | 1804.99 | 1903.01 |
| 1805.88 | 1903 | 1807.12 | 1903 | 1817.75 | 1902.99 | 1819.89 | 1902.99 | 1822.58 | 1903 |
| 1864.79 | 1903 | 1897.53 | 1903.45 | 1898.19 | 1903.45 | 1899.59 | 1903.48 | 1901.15 | 1903.5 |
| 1902.46 | 1903.51 | 1921.84 | 1903.89 | 1922.03 | 1903.89 | 1927.65 | 1904 | 2026.82 | 1904 |
| 2039.66 | 1903.83 | 2040.31 | 1903.82 | 2049.74 | 1903.7 | 2050.71 | 1903.69 | 2054.54 | 1903.64 |
| 2054.92 | 1903.63 | 2063.12 | 1903.53 | 2064.09 | 1903.53 | 2068.37 | 1903.47 | 2071.91 | 1903.43 |
| 2072.27 | 1903.43 | 2086.84 | 1903.51 | 2113.2 | 1903.79 | 2120.97 | 1903.98 | 2123.25 | 1903.99 |
| 2123.27 | 1904 | 2148.36 | 1904.64 | 2162.41 | 1905 | 2281.25 | 1905 | 2286.23 | 1905.19 |
| 2289.78 | 1905.32 | 2296.74 | 1905.54 | 2297.18 | 1905.56 | 2298.77 | 1905.61 | 2304.4 | 1905.62 |
| 2311.26 | 1905.62 | 2311.45 | 1905.61 | 2312.64 | 1905.61 | 2312.79 | 1905.6 | 2316.01 | 1905.59 |
| 2320.04 | 1905.55 | 2322.16 | 1905.55 | 2325.1 | 1905.51 | 2337.76 | 1905 | 2426.8 | 1905 |
| 2427.16 | 1904.99 | 2475.25 | 1904.98 | 2523.43 | 1905 | 2535.46 | 1905 | 2539.67 | 1904.99 |
| 2549.77 | 1904.97 | 2552.22 | 1904.97 | 2556.71 | 1905 | 2561.63 | 1905 | 2580.62 | 1904.99 |
| 2593.32 | 1904.99 | 2602.72 | 1904.98 | 2629.61 | 1904.98 | 2645.15 | 1904.99 | 2667.43 | 1905 |
| 2690.71 | 1905 | 2697.09 | 1905.01 | 2780.31 | 1905.01 | 2785.66 | 1905 | 2811.78 | 1905 |
| 2844.4 | 1904.44 | 2865.7 | 1904 | 2870.15 | 1903.9 | 2877.11 | 1903.77 | 2881.06 | 1903.7 |
| 2887.02 | 1903.59 | 2891.47 | 1903.52 | 2919.18 | 1903.56 | 2954.77 | 1903.67 | 2957.72 | 1903.7 |
| 2959.08 | 1903.71 | 2960.83 | 1903.73 | 2961.56 | 1903.73 | 2980.03 | 1903.88 | 2987.68 | 1904 |
| 3000.42 | 1904 | 3008.43 | 1904.01 | 3009.77 | 1904.01 | 3020.19 | 1904.09 | 3021.77 | 1904.1 |
| 3023.68 | 1904.12 | 3041.69 | 1904.22 | 3044.29 | 1904.23 | 3044.41 | 1904.24 | 3046.77 | 1904.25 |
| 3077.12 | 1904.34 | 3104.08 | 1904.34 | 3105.69 | 1904.31 | 3106.41 | 1904.32 | 3116.04 | 1904.21 |
| 3116.6 | 1904.21 | 3121.62 | 1904.15 | 3122.74 | 1904.15 | 3137.33 | 1904.01 | 3138.22 | 1904 |
| 3177.82 | 1904 | 3204.27 | 1904.01 | 3225.26 | 1904.01 | 3273.53 | 1904.04 | 3276.65 | 1904 |
| 3280.71 | 1903.99 | 3284.21 | 1903.99 | 3287.96 | 1903.98 | 3322.25 | 1903.64 | 3324.36 | 1903.63 |
| 3331.82 | 1903.56 | 3341.26 | 1903.49 | 3377.48 | 1903.12 | 3386.54 | 1903.02 | 3390.26 | 1903.02 |
| 3392.98 | 1903.01 | 3398.13 | 1903.01 | 3400.72 | 1903 | 3403.84 | 1903 | 3409.35 | 1902.91 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3412.16 | 1902.86 | 3413.52 | 1902.84 | 3417.67 | 1902.77 | 3420.94 | 1902.71 | 3423.49 | 1902.67 |
| 3461.68 | 1902 | 3468.16 | 1902 | 3481.11 | 1901.99 | 3508.9 | 1901.99 | 3514.17 | 1902 |
| 3530.71 | 1902 | 3543.65 | 1902.52 | 3549.43 | 1902.77 | 3553.96 | 1902.95 | 3555.24 | 1902.96 |
| 3556.3 | 1902.94 | 3568.49 | 1902.63 | 3569.01 | 1902.63 | 3572.55 | 1902.54 | 3575.64 | 1902.48 |
| 3576.42 | 1902.46 | 3591.77 | 1902.99 | 3649.3 | 1902.99 | 3652.83 | 1903 | 3681.56 | 1903 |
| 3689.27 | 1903.02 | 3690.38 | 1903.01 | 3691.41 | 1903.01 | 3692.57 | 1903 | 3698.74 | 1903 |
| 3706.7 | 1903.08 | 3706.85 | 1903.08 | 3712.34 | 1903.01 | 3753.3 | 1903.01 | 3770.54 | 1903.42 |
| 3773.78 | 1903.35 | 3776.06 | 1903.32 | 3779.26 | 1903.48 | 3779.88 | 1903.48 | 3783.3 | 1903.6 |
| 3785.02 | 1903.64 | 3786.4 | 1903.71 | 3798.89 | 1904 | 3800.62 | 1904.26 | 3801.77 | 1904.4 |
| 3803.82 | 1904.42 | 3805.14 | 1904.44 | 3805.73 | 1904.5 | 3806.55 | 1904.61 | 3807.96 | 1904.97 |
| 3809.19 | 1905.26 | 3809.85 | 1905.39 | 3810.33 | 1905.47 | 3811.03 | 1905.61 | 3812.17 | 1905.8 |
| 3812.94 | 1905.91 | 3813.81 | 1906.05 | 3814.77 | 1906.17 | 3815.98 | 1906.31 | 3817.66 | 1906.44 |
| 3818.75 | 1906.48 | 3819.42 | 1906.47 | 3820.1 | 1906.44 | 3822.56 | 1906.21 | 3822.66 | 1906.19 |
| 3825.49 | 1905.84 | 3826.88 | 1905.64 | 3828.07 | 1905.48 | 3829.36 | 1905.26 | 3831.07 | 1905 |
| 3835.07 | 1904.99 | 3837.39 | 1904.99 | 3838.09 | 1904.98 | 3841.79 | 1904.97 | 3842.05 | 1904.96 |
| 3843.97 | 1904.96 | 3845.32 | 1904.95 | 3849.99 | 1904.93 | 3856.77 | 1904.89 | 3860.94 | 1904.91 |
| 3867.42 | 1904.92 | 3880.37 | 1904.98 | 3885.08 | 1904.94 | 3886.37 | 1905 | 3894.49 | 1905.97 |
| 3894.83 | 1906 | 3902.83 | 1906.64 | 3910.16 | 1907.37 | 3916.08 | 1908 | 3920.1 | 1908 |
| 3920.6 | 1907.99 | 3921.97 | 1907.88 | 3925.14 | 1907.67 | 3930.69 | 1907.44 | 3933.59 | 1907 |
| 3938.1 | 1906.3 | 3939.93 | 1906 | 3944.55 | 1905.27 | 3945.48 | 1905.1 | 3946.65 | 1904.82 |
| 3946.87 | 1904.75 | 3949.4 | 1904 | 3951.43 | 1903.98 | 3956.32 | 1903.95 | 3957.31 | 1903.95 |
| 3963.33 | 1904 | 3975.03 | 1904.27 | 4002.86 | 1904.99 | 4003.19 | 1905 | 4055.6 | 1905 |
| 4056.3 | 1904.99 | 4060.5 | 1904.88 | 4077.91 | 1904.44 | 4080.73 | 1904.42 | 4081.08 | 1904.43 |
| 4089.06 | 1904.36 | 4099.32 | 1904.26 | 4102.6 | 1904.22 | 4103.81 | 1904.21 | 4109.23 | 1904.15 |
| 4115.55 | 1904.07 | 4117.24 | 1904.05 | 4118.54 | 1904.05 | 4119.07 | 1904.04 | 4120.55 | 1904.04 |
| 4141.12 | 1904.01 | 4144.06 | 1904 | 4148.29 | 1903.95 | 4154.83 | 1903.85 | 4157.02 | 1903.84 |
| 4164.32 | 1903.68 | 4165.67 | 1903.69 | 4173.42 | 1903.58 | 4177.4 | 1903.63 | 4184.69 | 1903.58 |
| 4191.08 | 1903.55 | 4192.35 | 1903.55 | 4196.49 | 1903.56 | 4201.95 | 1903.61 | 4228.11 | 1903.98 |
| 4229.24 | 1903.99 | 4238.3 | 1903.99 | 4261.49 | 1904 | 4265.56 | 1904 | 4278.86 | 1904.72 |
| 4283.1 | 1904.96 | 4283.7 | 1905 | 4284.2 | 1905 | 4285.22 | 1905.1 | 4286.81 | 1905.31 |
| 4295.16 | 1906 | 4301.08 | 1906.53 | 4306.57 | 1907 | 4308.83 | 1907.24 | 4313.85 | 1908 |
| 4314.48 | 1909 | 4314.89 | 1909.57 | 4315.17 | 1910 | 4315.85 | 1911 | 4316.51 | 1912 |
| 4316.99 | 1912.86 | 4317.71 | 1913.97 | 4318.74 | 1915 | 4320.91 | 1915.54 | 4327.03 | 1917 |
| 4331.13 | 1917.97 | 4331.27 | 1918 | 4335.19 | 1918.92 | 4335.52 | 1919 | 4337.78 | 1919.33 |
| 4339.2 | 1919.56 | 4342.36 | 1920 | 4345.53 | 1920.25 | 4353.67 | 1921 | 4360.45 | 1921.61 |
| 4361.7 | 1921.7 | 4363.06 | 1921.82 | 4365.34 | 1921.95 | 4366.37 | 1921.98 | 4367.61 | 1921.98 |
| 4368.56 | 1921.97 | 4369.49 | 1921.95 | 4370.25 | 1921.92 | 4377.77 | 1921.6 | 4385.69 | 1921.14 |
| 4385.83 | 1921.12 | 4387.86 | 1921 | 4389.58 | 1920.88 | 4389.66 | 1920.89 | 4390.64 | 1920.83 |
| 4390.9 | 1920.79 | 4393.11 | 1920.84 | 4394.92 | 1920.83 | 4398.07 | 1920.72 | 4399.92 | 1920.65 |
| 4408.72 | 1920.39 | 4414.49 | 1920.44 | 4422.31 | 1920.52 | 4424.49 | 1920.64 | 4428.01 | 1920.85 |
| 4430.68 | 1921 | 4433.66 | 1921.19 | 4439.75 | 1921.53 | 4446.03 | 1921.92 | 4447.77 | 1921.94 |
| 4449.31 | 1921.98 | 4449.9 | 1921.98 | 4451.89 | 1922.03 | 4452.75 | 1922.04 | 4456.75 | 1922.13 |
| 4499.02 | 1923 | 4503.4 | 1923.21 | 4504.83 | 1923.27 | 4508.67 | 1923.45 | 4512.71 | 1923.65 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4512.71 | .045 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | |
|---|---|---|---|---|---|---|
| 0 | 4512.71 | 149.26 | 149.26 | 149.26 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1906.33 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.17 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1906.17 | Reach Len. (ft) | 149.26 | 149.26 | 149.26 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6853.06 | | |
| E.G. Slope (ft/ft) | 0.002928 | Area (sq ft) | | 6853.06 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3303.93 | Top Width (ft) | | 3303.93 | | |
| Vel Total (ft/s) | 3.27 | Avg. Vel. (ft/s) | | 3.27 | | |
| Max Chl Dpth (ft) | 4.17 | Hydr. Depth (ft) | | 2.07 | | |
| Conv. Total (cfs) | 413946.7 | Conv. (cfs) | | 413946.7 | | |
| Length Wtd. (ft) | 149.26 | Wetted Per. (ft) | | 3305.20 | | |
| Min Ch El (ft) | 1901.99 | Shear (lb/sq ft) | | 0.38 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4512.71 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.41 | Cum Volume (acre-ft) | | 188.43 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 85.99 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -18843.3

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1914.37 | 37.47 | 1914 | 39.38 | 1913.99 | 44.13 | 1913.94 | 169.73 | 1912.73 |
| 180.94 | 1912.63 | 182.71 | 1912.62 | 183.12 | 1912.61 | 186.05 | 1912.59 | 189.69 | 1912.55 |
| 195.1 | 1912.5 | 195.87 | 1912.49 | 196.75 | 1912.49 | 308.84 | 1911.41 | 317.09 | 1911.33 |
| 317.82 | 1911.32 | 319.63 | 1911.31 | 410.04 | 1910.44 | 411.55 | 1910.43 | 411.72 | 1910.42 |
| 419.67 | 1910.35 | 425.07 | 1910.3 | 517.52 | 1909.42 | 526.88 | 1909.33 | 533.49 | 1909.27 |
| 605.9 | 1908.59 | 610.78 | 1908.54 | 612.47 | 1908.52 | 618.91 | 1908.46 | 622.69 | 1908.43 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 679.86 | 1907.89 | 681.43 | 1907.87 | 686.77 | 1907.82 | 691.8 | 1907.77 | 697.46 | 1907.72 |
| 742.67 | 1907.29 | 752.7 | 1907.2 | 754.42 | 1907.18 | 755.98 | 1907.17 | 756.66 | 1907.16 |
| 757.52 | 1907.16 | 757.71 | 1907.15 | 758.62 | 1907.15 | 758.86 | 1907.14 | 763.09 | 1907.1 |
| 801.49 | 1906.75 | 850.26 | 1906.51 | 855.35 | 1906.49 | 873.35 | 1906.32 | 886.51 | 1906.19 |
| 913.49 | 1906.07 | 914.84 | 1906.06 | 915.96 | 1906.06 | 917.29 | 1906.05 | 919.79 | 1906.04 |
| 921.08 | 1906.04 | 923.71 | 1906.03 | 923.97 | 1906.02 | 924.86 | 1906.02 | 926.19 | 1906.01 |
| 929.01 | 1906 | 930.24 | 1906 | 934.18 | 1905.98 | 935.52 | 1905.97 | 940.61 | 1905.95 |
| 944.67 | 1905.93 | 978.66 | 1905.79 | 979.15 | 1905.78 | 992.06 | 1905.73 | 996.03 | 1905.71 |
| 997.37 | 1905.54 | 998.03 | 1905.52 | 998.96 | 1905.42 | 999.65 | 1905.4 | 1000.11 | 1905.35 |
| 1001.17 | 1905.31 | 1001.48 | 1905.28 | 1002.08 | 1905.26 | 1003.18 | 1905.24 | 1003.75 | 1905.2 |
| 1013.58 | 1905.04 | 1016.27 | 1904.92 | 1026.83 | 1904.77 | 1027.08 | 1904.76 | 1028.6 | 1903.63 |
| 1058.93 | 1903.98 | 1069.28 | 1903.98 | 1069.82 | 1903.99 | 1071.59 | 1903.99 | 1080.66 | 1903.98 |
| 1081.89 | 1903.98 | 1083.9 | 1903.99 | 1088.48 | 1904 | 1099.49 | 1904 | 1109.86 | 1904.01 |
| 1132.99 | 1904.01 | 1147.97 | 1904.23 | 1158.62 | 1904.12 | 1165.95 | 1904.06 | 1173.47 | 1904 |
| 1180.99 | 1903.95 | 1185.72 | 1903.93 | 1192.22 | 1903.88 | 1196.76 | 1903.86 | 1209.56 | 1903.79 |
| 1213.1 | 1903.75 | 1214.12 | 1903.75 | 1220.92 | 1903.69 | 1221.21 | 1903.69 | 1223.87 | 1903.66 |
| 1224.9 | 1903.66 | 1230.44 | 1903.62 | 1232.43 | 1903.6 | 1233.67 | 1903.58 | 1238.42 | 1903.53 |
| 1244.73 | 1903.45 | 1246.12 | 1903.42 | 1257.28 | 1903.36 | 1259.2 | 1903.33 | 1264.2 | 1903.29 |
| 1269.77 | 1903.25 | 1271.34 | 1903.23 | 1282.45 | 1903.14 | 1287.56 | 1903.11 | 1292.68 | 1903.11 |
| 1299.12 | 1903.15 | 1307.33 | 1903.22 | 1336.09 | 1903.51 | 1342.6 | 1903.57 | 1345.07 | 1903.61 |
| 1347.42 | 1903.64 | 1349.53 | 1903.66 | 1374.4 | 1904 | 1391.72 | 1904.6 | 1405.77 | 1905 |
| 1447.2 | 1905 | 1449.5 | 1904.8 | 1459.68 | 1904 | 1496.07 | 1904 | 1508.25 | 1904.6 |
| 1509.59 | 1904.66 | 1516.12 | 1904.99 | 1516.2 | 1905 | 1606.33 | 1905 | 1611.66 | 1904.92 |
| 1630.33 | 1904.63 | 1630.74 | 1904.62 | 1646.51 | 1904.56 | 1683.96 | 1904.02 | 1685.16 | 1904.02 |
| 1686.12 | 1904 | 1692.19 | 1903.82 | 1694 | 1903.76 | 1719.31 | 1903 | 1727.73 | 1902.24 |
| 1730.29 | 1902 | 1735.06 | 1901.94 | 1739.83 | 1902 | 1741.53 | 1902.38 | 1743.75 | 1903 |
| 1805.64 | 1903 | 1815.98 | 1902.97 | 1841.84 | 1902.91 | 1871.17 | 1902.98 | 1878 | 1903 |
| 1935.69 | 1903 | 1942.62 | 1903.04 | 2000.06 | 1903.24 | 2007.04 | 1903.24 | 2018.23 | 1903.29 |
| 2037.91 | 1903.42 | 2038.27 | 1903.42 | 2046.01 | 1903.52 | 2047.05 | 1903.53 | 2048.04 | 1903.53 |
| 2048.62 | 1903.54 | 2049.85 | 1903.54 | 2050.27 | 1903.55 | 2051.69 | 1903.55 | 2052.6 | 1903.56 |
| 2067.23 | 1903.58 | 2082.34 | 1903.58 | 2089.85 | 1903.69 | 2100.66 | 1903.84 | 2101.29 | 1903.86 |
| 2102.08 | 1903.87 | 2103.36 | 1903.87 | 2103.73 | 1903.88 | 2114.64 | 1904 | 2149.33 | 1904 |
| 2178.63 | 1904.01 | 2185.78 | 1904.01 | 2210.19 | 1904 | 2410.98 | 1904 | 2416.27 | 1903.94 |
| 2453.59 | 1903.76 | 2480.91 | 1903.69 | 2482.55 | 1903.69 | 2483.07 | 1903.68 | 2497.33 | 1903.68 |
| 2497.88 | 1903.67 | 2522.98 | 1903.99 | 2543.18 | 1903.99 | 2543.79 | 1904 | 2650.23 | 1904 |
| 2661.66 | 1904.05 | 2681.23 | 1904.14 | 2719.87 | 1904.16 | 2728.94 | 1904.02 | 2730.92 | 1904 |
| 2749.21 | 1903.75 | 2755.91 | 1903.67 | 2761.36 | 1903.61 | 2770.48 | 1903.53 | 2777.6 | 1903.49 |
| 2783.78 | 1903.46 | 2784.28 | 1903.46 | 2802.48 | 1903.3 | 2803.24 | 1903.3 | 2805.11 | 1903.28 |
| 2809.25 | 1903.26 | 2810.08 | 1903.25 | 2813.67 | 1903.23 | 2829.47 | 1903.15 | 2832.58 | 1903.13 |
| 2841.46 | 1903.01 | 2847.66 | 1903.01 | 2878.59 | 1903.48 | 2894.23 | 1903.74 | 2912.77 | 1904 |
| 2962.21 | 1904 | 2977.7 | 1903.78 | 2978.85 | 1903.76 | 2981.14 | 1903.73 | 2983.04 | 1903.69 |
| 2983.5 | 1903.69 | 2992.69 | 1903.57 | 2993.18 | 1903.57 | 2993.87 | 1903.55 | 3002.52 | 1903.45 |
| 3007.79 | 1903.36 | 3010.15 | 1903.33 | 3012.95 | 1903.28 | 3014.13 | 1903.27 | 3015.15 | 1903.27 |
| 3020.58 | 1903.17 | 3022.22 | 1903.15 | 3024.03 | 1903.14 | 3026.59 | 1903.11 | 3028.3 | 1903.1 |
| 3028.43 | 1903.09 | 3042.29 | 1903.07 | 3053.19 | 1903.05 | 3056.13 | 1903.03 | 3059.76 | 1903.06 |
| 3073.37 | 1903.05 | 3079.92 | 1903.05 | 3093.63 | 1903.07 | 3099.23 | 1903.07 | 3106.04 | 1903.05 |
| 3107.17 | 1903.04 | 3107.86 | 1903.05 | 3109.97 | 1903.05 | 3112.42 | 1903.06 | 3113.52 | 1903.07 |
| 3119.83 | 1903.11 | 3121.02 | 1903.13 | 3125.09 | 1903.17 | 3128.66 | 1903.22 | 3130.35 | 1903.25 |
| 3136.59 | 1903.35 | 3145.61 | 1903.5 | 3169.57 | 1903.93 | 3173.57 | 1904 | 3175.78 | 1904 |
| 3188.11 | 1903.25 | 3190.11 | 1903.17 | 3191.33 | 1903.14 | 3191.89 | 1903.11 | 3192.38 | 1903.11 |
| 3193.51 | 1903.08 | 3194.42 | 1903.1 | 3195.27 | 1903.08 | 3197.95 | 1903.18 | 3199.78 | 1903.23 |
| 3200.55 | 1903.26 | 3223.74 | 1903.41 | 3239.29 | 1903.51 | 3241.97 | 1903.48 | 3244.87 | 1903.46 |
| 3277.46 | 1903 | 3312.71 | 1903 | 3337.62 | 1902.64 | 3339.32 | 1902.61 | 3346.82 | 1902.47 |
| 3351.32 | 1902.38 | 3362.3 | 1902.2 | 3369.7 | 1902 | 3372.09 | 1902 | 3379.81 | 1901.98 |
| 3383.23 | 1901.97 | 3393.11 | 1901.97 | 3393.9 | 1901.96 | 3403.4 | 1901.95 | 3434.13 | 1901.94 |
| 3453.78 | 1901.92 | 3497.03 | 1901.98 | 3505.24 | 1901.99 | 3506.87 | 1901.99 | 3514.09 | 1902 |
| 3515.05 | 1901.99 | 3522.4 | 1901.99 | 3527.24 | 1902 | 3537.27 | 1902.43 | 3537.6 | 1902.44 |
| 3543.68 | 1902.71 | 3545.05 | 1902.74 | 3545.39 | 1902.76 | 3549.06 | 1902.76 | 3551.1 | 1902.87 |
| 3558.51 | 1902.85 | 3560.78 | 1902.91 | 3561.79 | 1902.93 | 3565.29 | 1902.96 | 3568.19 | 1902.95 |
| 3574.11 | 1902.92 | 3575.76 | 1902.91 | 3577.85 | 1902.89 | 3578.38 | 1902.88 | 3579.25 | 1902.88 |
| 3580.23 | 1902.87 | 3583.25 | 1902.85 | 3588.76 | 1902.8 | 3590.91 | 1902.79 | 3597.54 | 1902.73 |
| 3598.5 | 1902.73 | 3599.87 | 1902.72 | 3640.57 | 1902.4 | 3656.69 | 1902.28 | 3662.39 | 1902.25 |
| 3663.45 | 1902.25 | 3664.63 | 1902.24 | 3686.54 | 1902.11 | 3703.38 | 1902 | 3735.84 | 1902 |
| 3746.63 | 1903 | 3752.08 | 1903.62 | 3754.93 | 1904 | 3756.1 | 1904.35 | 3758.36 | 1905 |
| 3761.43 | 1905.73 | 3762.68 | 1906 | 3764.31 | 1906.2 | 3773.72 | 1906.89 | 3775.13 | 1907 |
| 3776.07 | 1907.06 | 3784.79 | 1907.19 | 3791.82 | 1907.24 | 3791.93 | 1907.23 | 3792.84 | 1907.23 |
| 3792.95 | 1907.22 | 3796.55 | 1907.35 | 3812.07 | 1908 | 3813.01 | 1908 | 3816.1 | 1908.16 |
| 3818.21 | 1908.25 | 3819.27 | 1908.27 | 3821.04 | 1908.28 | 3822.67 | 1908.24 | 3824.51 | 1908.17 |
| 3824.64 | 1908.17 | 3826.79 | 1908.05 | 3826.81 | 1908.04 | 3827.97 | 1907.96 | 3829.63 | 1907.81 |
| 3831.42 | 1907.62 | 3835.89 | 1907 | 3842.45 | 1906.17 | 3843.67 | 1906 | 3845.04 | 1905.76 |
| 3849.64 | 1905 | 3851.64 | 1904.63 | 3854.82 | 1904 | 3862.04 | 1903.09 | 3862.61 | 1903 |
| 3900.71 | 1903 | 3902.93 | 1903.18 | 3905.02 | 1903.32 | 3914.08 | 1904 | 3916.19 | 1904.23 |
| 3916.37 | 1904.23 | 3919.36 | 1904.3 | 3921.93 | 1904.34 | 3922.42 | 1904.32 | 3924.68 | 1904 |
| 3934.25 | 1903 | 3937.29 | 1903 | 3940.21 | 1903.15 | 3940.3 | 1903.15 | 3944.39 | 1903.36 |
| 3954.86 | 1903.59 | 3955.81 | 1903.62 | 3962.91 | 1904 | 3974.19 | 1904 | 3978.29 | 1904.95 |
| 3978.64 | 1905 | 3979.62 | 1905.11 | 3980.21 | 1905.16 | 3980.93 | 1905.19 | 3981.46 | 1905.19 |
| 3983.6 | 1905.16 | 3986.86 | 1904.99 | 3989.61 | 1904.75 | 3990.74 | 1904.62 | 3991.54 | 1904.48 |
| 3992.26 | 1904.34 | 3993.26 | 1904.16 | 3993.57 | 1904.08 | 3994.59 | 1904 | 4009.87 | 1904 |
| 4017.52 | 1903.86 | 4017.99 | 1903.85 | 4020.17 | 1903.83 | 4048.76 | 1903.62 | 4050.24 | 1903.62 |
| 4059.27 | 1903.58 | 4059.64 | 1903.58 | 4064.16 | 1903.54 | 4068.81 | 1903.52 | 4074.06 | 1903.48 |
| 4077.21 | 1903.46 | 4077.85 | 1903.45 | 4099.45 | 1903.27 | 4132.13 | 1903 | 4160.75 | 1903 |
| 4170.73 | 1903.62 | 4176.93 | 1904 | 4192.98 | 1904.74 | 4199.14 | 1905 | 4199.45 | 1905.53 |
| 4200.44 | 1907.01 | 4201.13 | 1908 | 4201.95 | 1909.12 | 4202.58 | 1910 | 4203.14 | 1910.81 |
| 4203.26 | 1911 | 4203.84 | 1911.81 | 4204.53 | 1912.85 | 4204.61 | 1913 | 4205.27 | 1914 |
| 4205.92 | 1914.92 | 4206.85 | 1916.33 | 4207.38 | 1917 | 4208.48 | 1917.87 | 4208.87 | 1918.04 |
| 4211.62 | 1919 | 4212.79 | 1919.4 | 4214.37 | 1920 | 4217.72 | 1920.66 | 4218.87 | 1921 |
| 4221.32 | 1921.32 | 4221.87 | 1921.4 | 4223.37 | 1921.59 | 4226.09 | 1921.91 | 4227.02 | 1922 |
| 4229.91 | 1922 | 4231.46 | 1922.12 | 4236.97 | 1922.17 | 4237.38 | 1922.19 | 4237.86 | 1922.19 |

```
 4249.45 1922.23 4252.49 1922.23 4254.24 1922.25  4255.6 1922.28  4257.1 1922.32
 4261.84 1922.46 4265.66 1922.61 4269.66 1922.75 4273.41    1923 4278.05 1923.32
 4283.39 1923.65 4285.02 1923.73 4285.64 1923.77 4290.06    1924 4297.28 1924.31
 4305.54 1924.79 4306.43 1924.84 4308.59 1924.99 4308.66    1925  4469.9    1925

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .045       0     .04  4469.9    .045

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
             0  4469.9           158.46  158.46  158.46             .1       .3

CROSS SECTION OUTPUT  Profile #PF 1

  E.G. Elev (ft)           1905.92    Element                  Left OB    Channel   Right OB
  Vel Head (ft)               0.16    Wt. n-Val.                          0.040
  W.S. Elev (ft)           1905.75    Reach Len. (ft)          158.46     158.46     158.46
  Crit W.S. (ft)                      Flow Area (sq ft)                  6920.93
  E.G. Slope (ft/ft)      0.002637    Area (sq ft)                       6920.93
  Q Total (cfs)           22400.00    Flow (cfs)                        22400.00
  Top Width (ft)           3129.75    Top Width (ft)                     3129.75
  Vel Total (ft/s)            3.24    Avg. Vel. (ft/s)                      3.24
  Max Chl Dpth (ft)           3.83    Hydr. Depth (ft)                      2.21
  Conv. Total (cfs)       436181.9    Conv. (cfs)                       436181.9
  Length Wtd. (ft)          158.46    Wetted Per. (ft)                   3131.93
  Min Ch El (ft)           1901.92    Shear (lb/sq ft)                      0.36
  Alpha                       1.00    Stream Power (lb/ft s)   4469.90       0.00       0.00
  Frctn Loss (ft)             0.43    Cum Volume (acre-ft)                 164.83
  C & E Loss (ft)             0.00    Cum SA (acres)                        74.97


Warning: Divided flow computed for this cross-section.

CROSS SECTION


RIVER: MOJAVE
REACH: MOJAVE             RS: -19001.7

INPUT
Description:
Station Elevation Data    num=     490
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0 1914.03  215.56 1912.29  225.37  1912.2   350.5 1910.98  353.54 1910.95
  356.75 1910.92  361.11 1910.87  459.41 1909.92  475.75 1909.78  478.18 1909.76
  478.91 1909.76  481.01 1909.74  481.45 1909.73   482.6 1909.72  483.19 1909.72
  484.43 1909.71   488.5 1909.67   496.4 1909.59  497.52 1909.58  498.81 1909.57
  582.92 1908.76  594.21 1908.65  594.97 1908.65  595.22 1908.64  597.69 1908.62
   663.9 1907.98  665.88 1907.97   666.1 1907.96  674.89 1907.88  675.26 1907.88
  676.32 1907.87  676.51 1907.86  683.61  1907.8  749.18 1907.17  760.96 1907.06
  769.29 1906.98  818.75 1906.51  820.07  1906.5  824.72 1906.46  826.79 1906.44
  829.52 1906.41  834.66 1906.36  839.28 1906.32   876.6 1905.96  878.47 1905.95
  884.85 1905.89  890.86 1905.83  897.62 1905.76  925.44  1905.5  937.22 1905.39
  939.24 1905.37  940.87 1905.36  941.06 1905.36   942.7 1905.34  943.46 1905.34
  943.74 1905.33  944.44 1905.33  949.41 1905.28  970.97 1905.08 1027.35  1904.8
 1033.26 1904.77  1054.1 1904.57 1056.73 1904.54 1078.33 1904.44 1087.93 1904.21
 1088.44  1904.2  1089.2 1904.18 1090.08 1904.16 1090.18 1904.15 1091.17 1904.13
 1091.35 1904.13 1093.51 1903.65 1094.46 1903.64 1095.47 1903.62 1095.71 1903.62
 1097.82 1903.61 1098.81  1903.6 1099.08  1903.6 1100.35 1903.59 1100.72 1903.59
 1103.71 1903.56 1104.12 1903.56 1104.45 1903.55 1110.99  1903.5 1111.23  1903.5
 1111.38 1903.49 1112.19 1903.49 1127.09 1903.39 1137.14 1903.33 1137.89 1903.33
 1143.64  1903.3 1149.85 1903.27 1150.92 1903.27 1157.29 1903.24 1158.02 1903.23
 1158.98 1903.23 1159.92 1903.22 1160.46 1903.22 1161.17 1903.21 1177.81 1903.18
 1196.62 1903.11 1198.19  1903.1 1199.49 1903.09  1207.5    1903 1298.21    1903
 1301.68  1903.1 1311.01 1903.33 1312.85 1903.37 1313.89 1903.39 1317.72 1903.49
  1318.9 1903.52 1321.61 1903.58 1322.62 1903.61 1325.45 1903.65 1332.13 1903.81
 1334.69 1903.87 1338.38  1903.9 1342.37 1903.94 1342.85 1903.94  1347.3    1904
  1498.1    1904 1500.03 1904.08 1551.92    1905 1553.19    1905 1553.54 1904.99
 1571.07 1904.73 1595.84 1904.36 1598.68 1904.38 1601.01 1904.36 1609.21 1904.24
 1621.19 1904.07 1621.91 1904.05 1622.71 1904.04 1623.06 1904.04 1623.79 1904.02
 1624.62 1904.01 1625.08    1904 1671.64    1904 1683.67 1903.79 1684.01 1903.79
 1689.36 1903.67    1695 1903.49 1710.29    1903 1710.99 1902.99 1713.08 1902.97
 1713.82 1902.97 1720.02 1902.93 1720.73 1902.93 1729.85 1902.61  1746.2 1902.06
 1746.25 1902.05  1746.4 1902.05  1747.5    1902 1747.71 1901.95 1753.63    1901
 1754.51 1900.98 1755.15 1900.97 1755.88 1900.98 1756.56    1901 1762.52 1901.43
 1770.61    1902 1776.58 1902.04 1779.82 1902.05 1784.31 1902.05 1787.65 1902.04
 1788.49 1902.04  1793.9 1902.03 1799.64 1902.03 1806.31 1902.01 1806.78 1902.01
 1807.13    1902 1818.89    1902 1825.01 1901.99  1848.8 1901.99  1860.7    1902
 1869.75 1902.29 1884.87  1902.7 1895.41    1903 1948.29    1903 1969.73 1903.01
 2009.71 1903.01 2035.32    1903 2066.68    1903 2068.81 1903.01 2073.87 1903.01
 2083.45    1903  2084.7    1903 2085.62 1903.03 2085.77 1903.05 2085.93 1903.06
 2086.26  1903.1 2090.21    1904 2093.31 1904.62 2095.45    1905 2097.77 1905.41
 2100.84    1906 2103.79 1906.52 2106.76    1907 2115.88    1907 2117.98 1906.65
 2122.26 1905.91 2125.34 1905.35 2127.26    1905 2128.21 1904.82 2128.99 1904.68
  2131.2 1904.25 2132.51    1904 2394.46    1904 2404.26 1903.91 2415.88 1903.81
 2417.12  1903.8 2417.28  1903.8 2418.26 1903.79 2424.39 1903.77 2432.02 1903.74
  2432.8 1903.73 2512.14 1903.01 2513.19    1903 2515.99    1903 2539.39 1903.01
 2581.57 1903.01 2585.23  1903.1 2602.17 1903.54 2618.14  1903.4 2649.75 1903.01
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2650.33 | 1903 | 2721.54 | 1903 | 2722.55 | 1902.98 | 2729.06 | 1902.9 | 2729.33 | 1902.9 |
| 2773.17 | 1903 | 2781.01 | 1903 | 2781.72 | 1902.99 | 2786.64 | 1902.99 | 2819.32 | 1903 |
| 2838.42 | 1903 | 2844.57 | 1903.03 | 2854.23 | 1903.08 | 2854.86 | 1903.08 | 2859.24 | 1903.09 |
| 2861.81 | 1903.09 | 2868.8 | 1903.08 | 2874.79 | 1903.09 | 2885.67 | 1903.09 | 2888.8 | 1903.1 |
| 2892.36 | 1903.09 | 2893.29 | 1903.09 | 2914.36 | 1903.07 | 2932.51 | 1903.06 | 2936.17 | 1903.06 |
| 2939.7 | 1903.07 | 2941.69 | 1903.07 | 2947.91 | 1903.05 | 2949.07 | 1903.05 | 2954.32 | 1903.02 |
| 2956.29 | 1903.01 | 2958.34 | 1903.01 | 2958.77 | 1903 | 3100.55 | 1903 | 3167.22 | 1903.01 |
| 3194.55 | 1903.01 | 3237.48 | 1903 | 3248.92 | 1903 | 3251.86 | 1902.99 | 3255.15 | 1902.99 |
| 3257.15 | 1902.98 | 3257.68 | 1902.98 | 3277.48 | 1902.96 | 3286.53 | 1902.97 | 3289.93 | 1902.98 |
| 3292.45 | 1902.98 | 3305.35 | 1903 | 3328.33 | 1903 | 3340.35 | 1902.52 | 3343.68 | 1902.4 |
| 3345.74 | 1902.32 | 3347.83 | 1902.25 | 3354.29 | 1902.01 | 3354.65 | 1902 | 3362.98 | 1901.71 |
| 3379.57 | 1901 | 3398.92 | 1901 | 3399.94 | 1901.02 | 3400.18 | 1901.01 | 3400.99 | 1901 |
| 3447.31 | 1901 | 3466.61 | 1901.35 | 3504.61 | 1901.74 | 3521.27 | 1901.94 | 3525.65 | 1902 |
| 3666.21 | 1902 | 3668.87 | 1901.98 | 3693.58 | 1901.85 | 3694.76 | 1901.85 | 3713.7 | 1901.74 |
| 3720.07 | 1901.7 | 3723.35 | 1901.68 | 3726.48 | 1901.67 | 3730.04 | 1901.64 | 3730.76 | 1901.64 |
| 3766.62 | 1901.57 | 3798.61 | 1901.57 | 3798.92 | 1901.56 | 3799.25 | 1901.56 | 3804.81 | 1901.63 |
| 3805.07 | 1901.63 | 3812.09 | 1901.73 | 3812.28 | 1901.73 | 3812.52 | 1901.72 | 3820.84 | 1901.84 |
| 3821.16 | 1901.84 | 3831.79 | 1902 | 3840.42 | 1902 | 3849.53 | 1902.54 | 3857.96 | 1903 |
| 3858.48 | 1903 | 3859.64 | 1903.58 | 3860.86 | 1904 | 3862.88 | 1904.88 | 3863.77 | 1905.39 |
| 3864.82 | 1906 | 3865.23 | 1906.25 | 3866.2 | 1906.72 | 3866.85 | 1907 | 3867.56 | 1907.28 |
| 3868.39 | 1907.55 | 3868.69 | 1907.64 | 3869.21 | 1907.74 | 3869.36 | 1907.76 | 3869.55 | 1907.77 |
| 3869.99 | 1907.83 | 3870.17 | 1907.83 | 3870.92 | 1907.9 | 3871.43 | 1907.88 | 3879.5 | 1908 |
| 3879.84 | 1908 | 3879.89 | 1908.01 | 3880.41 | 1908.04 | 3880.7 | 1908.07 | 3881 | 1908.12 |
| 3881.45 | 1908.21 | 3881.7 | 1908.27 | 3882.25 | 1908.39 | 3882.77 | 1908.52 | 3883.61 | 1908.7 |
| 3884.02 | 1908.77 | 3884.19 | 1908.77 | 3888.88 | 1908.65 | 3895.32 | 1908.52 | 3895.71 | 1908.51 |
| 3895.9 | 1908.49 | 3896.2 | 1908.48 | 3896.27 | 1908.47 | 3896.72 | 1908.43 | 3897.3 | 1908.37 |
| 3899.93 | 1908.06 | 3900.54 | 1908 | 3900.73 | 1907.96 | 3900.82 | 1907.95 | 3901.42 | 1907.86 |
| 3903.06 | 1907.68 | 3905 | 1907.47 | 3907.4 | 1907.17 | 3908.43 | 1907 | 3915.29 | 1906.11 |
| 3915.99 | 1906 | 3918.83 | 1905.55 | 3920.63 | 1905 | 3924.87 | 1904.64 | 3925.65 | 1904.58 |
| 3926.31 | 1904.54 | 3928.21 | 1904.46 | 3928.52 | 1904.44 | 3930.18 | 1904.32 | 3930.38 | 1904.3 |
| 3931.14 | 1904.2 | 3931.61 | 1904.12 | 3931.8 | 1904.1 | 3932.13 | 1904 | 3937.46 | 1903.28 |
| 3939.1 | 1903 | 4025.98 | 1903 | 4029.1 | 1903.01 | 4038.62 | 1903.01 | 4048.15 | 1903 |
| 4075.79 | 1903 | 4082.44 | 1903.84 | 4084.11 | 1904 | 4085.17 | 1904.19 | 4088.68 | 1905 |
| 4090.14 | 1905.79 | 4090.59 | 1906 | 4091.49 | 1906.46 | 4092.59 | 1907 | 4093.2 | 1907.31 |
| 4094.91 | 1908 | 4096.22 | 1908.64 | 4097.03 | 1909 | 4098.6 | 1909.77 | 4099.56 | 1910.21 |
| 4101.19 | 1911 | 4103.31 | 1912 | 4104.11 | 1912.38 | 4105.43 | 1913 | 4106.49 | 1913.49 |
| 4107.57 | 1914 | 4108.86 | 1914.59 | 4109.74 | 1915 | 4111.22 | 1915.67 | 4111.94 | 1916 |
| 4112.91 | 1916.42 | 4114.2 | 1917 | 4115.98 | 1917.74 | 4116.59 | 1918 | 4117.22 | 1918.01 |
| 4118.87 | 1918.02 | 4122.31 | 1918.04 | 4131.85 | 1918.13 | 4139.75 | 1918.08 | 4145.67 | 1918.2 |
| 4145.74 | 1918.2 | 4150.06 | 1918.03 | 4150.4 | 1918.07 | 4150.45 | 1918.07 | 4150.94 | 1918 |
| 4151.81 | 1917.84 | 4156.57 | 1917 | 4160.34 | 1916.13 | 4160.76 | 1916 | 4162.37 | 1915.65 |
| 4162.72 | 1915.58 | 4163.02 | 1915.53 | 4163.51 | 1915.49 | 4163.8 | 1915.46 | 4164.16 | 1915.44 |
| 4165.41 | 1915.3 | 4165.65 | 1915.3 | 4165.87 | 1915.32 | 4167.44 | 1915.37 | 4171.36 | 1915.8 |
| 4171.61 | 1915.83 | 4172.65 | 1916 | 4175.68 | 1916.34 | 4180.95 | 1917 | 4188.78 | 1917.52 |
| 4193.65 | 1917.87 | 4195.38 | 1918 | 4195.61 | 1918 | 4200 | 1918.32 | 4209.59 | 1919 |
| 4209.95 | 1919.01 | 4216.9 | 1919.5 | 4221.9 | 1919.85 | 4223.74 | 1919.97 | 4224.13 | 1920 |
| 4235.44 | 1920.7 | 4236.47 | 1920.76 | 4241.17 | 1921 | 4241.67 | 1921 | 4244.14 | 1921.14 |
| 4247.12 | 1921.29 | 4248.27 | 1921.34 | 4261.63 | 1921.98 | 4262.63 | 1922 | 4262.94 | 1922.01 |
| 4265.99 | 1922.26 | 4268.73 | 1922.48 | 4270.17 | 1922.6 | 4270.91 | 1922.67 | 4274.13 | 1923 |
| 4277.82 | 1923.4 | 4283.37 | 1924 | 4298.32 | 1924.47 | 4304.72 | 1924.59 | 4308.87 | 1924.65 |
| 4308.95 | 1924.65 | 4321.18 | 1924.83 | 4321.44 | 1924.84 | 4323.29 | 1924.85 | 4323.53 | 1924.86 |
| 4324.2 | 1924.87 | 4325.33 | 1924.89 | 4326.9 | 1924.89 | 4328.03 | 1924.91 | 4328.83 | 1924.92 |
| 4331.28 | 1924.91 | 4338.83 | 1924.86 | 4338.97 | 1924.86 | 4339.06 | 1924.87 | 4341.85 | 1924.88 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4341.85 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 4341.85 | 203.21 | 203.21 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1905.49 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.17 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1905.31 | Reach Len. (ft) | 203.21 | 203.21 | 203.21 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 6752.85 | | |
| E.G. Slope (ft/ft) | 0.002776 | Area (sq ft) | | 6752.85 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3059.01 | Top Width (ft) | | 3059.01 | | |
| Vel Total (ft/s) | 3.32 | Avg. Vel. (ft/s) | | 3.32 | | |
| Max Chl Dpth (ft) | 4.34 | Hydr. Depth (ft) | | 2.21 | | |
| Conv. Total (cfs) | 425146.0 | Conv. (cfs) | | 425146.0 | | |
| Length Wtd. (ft) | 203.21 | Wetted Per. (ft) | | 3060.64 | | |
| Min Ch El (ft) | 1900.97 | Shear (lb/sq ft) | | 0.38 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4341.85 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.52 | Cum Volume (acre-ft) | | 139.96 | | |
| C & E Loss (ft) | 0.00 | Cum SA (acres) | | 63.72 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -19204.9

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1912.23 | 239.83 | 1910.44 | 835.03 | 1905.62 | 853.85 | 1905.44 | 898.34 | 1905.01 |
| 903.52 | 1904.96 | 908.99 | 1904.9 | 916.42 | 1904.83 | 949.15 | 1904.51 | 974.84 | 1904.29 |
| 978.67 | 1904.26 | 979.4 | 1904.26 | 979.62 | 1904.25 | 979.82 | 1904.25 | 983.12 | 1904.22 |
| 983.81 | 1904.22 | 985.62 | 1904.2 | 986.55 | 1904.19 | 988.5 | 1904.18 | 994.9 | 1904.12 |
| 1007.34 | 1904 | 1009.11 | 1903.98 | 1011.14 | 1903.96 | 1031.77 | 1903.76 | 1048.44 | 1903.6 |
| 1049.1 | 1903.59 | 1049.92 | 1903.59 | 1053.58 | 1903.55 | 1067.19 | 1903.42 | 1069.97 | 1903.39 |
| 1070.28 | 1903.39 | 1082.64 | 1903.27 | 1083.16 | 1903.27 | 1084.65 | 1903.25 | 1084.93 | 1903.25 |
| 1094.91 | 1903.16 | 1104.35 | 1903.07 | 1120.17 | 1902.92 | 1131.36 | 1902.81 | 1134.54 | 1902.78 |
| 1136.25 | 1902.76 | 1142.28 | 1902.71 | 1144.96 | 1902.68 | 1148.5 | 1902.65 | 1151.07 | 1902.62 |
| 1151.2 | 1902.68 | 1151.25 | 1902.68 | 1151.46 | 1902.74 | 1151.54 | 1902.76 | 1151.74 | 1902.76 |
| 1152.07 | 1902.83 | 1152.5 | 1902.83 | 1152.82 | 1902.88 | 1168.98 | 1902.94 | 1170.74 | 1902.97 |
| 1172.93 | 1903.01 | 1197.68 | 1903.01 | 1199.55 | 1903 | 1241.3 | 1903 | 1247.47 | 1903.13 |
| 1247.6 | 1903.13 | 1250.23 | 1903.17 | 1288.26 | 1903.65 | 1298.74 | 1903.77 | 1302.35 | 1903.77 |
| 1306.18 | 1903.75 | 1306.27 | 1903.75 | 1308.49 | 1903.72 | 1309.27 | 1903.72 | 1309.48 | 1903.71 |
| 1309.87 | 1903.72 | 1310.55 | 1903.72 | 1314.7 | 1903.67 | 1315.73 | 1903.67 | 1318.32 | 1903.66 |
| 1323.96 | 1903.56 | 1336.22 | 1903.26 | 1343.39 | 1903 | 1404.03 | 1903 | 1404.52 | 1903.01 |
| 1406.28 | 1903.01 | 1415.64 | 1903.13 | 1442.45 | 1903.43 | 1443.49 | 1903.45 | 1444.29 | 1903.46 |
| 1445.62 | 1903.49 | 1468.51 | 1903.97 | 1469.85 | 1903.98 | 1471.07 | 1903.99 | 1472.74 | 1903.99 |
| 1473.71 | 1904 | 1530.79 | 1904 | 1546.68 | 1903.68 | 1547.08 | 1903.67 | 1547.33 | 1903.67 |
| 1554.66 | 1903.53 | 1554.79 | 1903.53 | 1554.93 | 1903.52 | 1562.23 | 1903.55 | 1570.67 | 1903.61 |
| 1570.75 | 1903.6 | 1571.25 | 1903.63 | 1571.41 | 1903.62 | 1571.83 | 1903.65 | 1572.1 | 1903.63 |
| 1572.41 | 1903.64 | 1572.86 | 1903.62 | 1573.06 | 1903.63 | 1573.27 | 1903.63 | 1573.49 | 1903.64 |
| 1574.4 | 1903.64 | 1579.18 | 1903.45 | 1579.78 | 1903.44 | 1580.42 | 1903.43 | 1581.66 | 1903.39 |
| 1584.03 | 1903.3 | 1585.29 | 1903.25 | 1587.29 | 1903.17 | 1589.94 | 1903.01 | 1590.12 | 1903 |
| 1590.38 | 1903 | 1592.35 | 1902.92 | 1592.41 | 1902.92 | 1592.48 | 1902.91 | 1604.75 | 1902.63 |
| 1604.94 | 1902.63 | 1607.53 | 1902.59 | 1608.16 | 1902.57 | 1608.86 | 1902.55 | 1609.17 | 1902.54 |
| 1612.19 | 1902.46 | 1615.37 | 1902.38 | 1615.92 | 1902.36 | 1616.27 | 1902.34 | 1618.43 | 1902.3 |
| 1618.92 | 1902.29 | 1619.22 | 1902.28 | 1626.95 | 1902 | 1631.36 | 1901.94 | 1634.16 | 1901.94 |
| 1636.45 | 1901.92 | 1637.52 | 1901.92 | 1638.11 | 1901.91 | 1638.51 | 1901.91 | 1644.21 | 1901.92 |
| 1645.81 | 1901.91 | 1646.19 | 1901.91 | 1647.53 | 1901.8 | 1653.43 | 1901.43 | 1656.46 | 1901.32 |
| 1657.08 | 1901.3 | 1662.18 | 1901 | 1695.83 | 1901 | 1701.35 | 1901.69 | 1703.18 | 1901.91 |
| 1703.75 | 1902 | 1706.39 | 1902 | 1706.85 | 1901.99 | 1707.66 | 1901.99 | 1715.12 | 1901.19 |
| 1716.21 | 1901.07 | 1716.9 | 1901 | 1718 | 1900.78 | 1721.81 | 1900 | 1722.53 | 1900 |
| 1728.62 | 1899.99 | 1730.43 | 1899.99 | 1735.23 | 1900 | 1739.47 | 1900.54 | 1739.63 | 1900.56 |
| 1739.83 | 1900.58 | 1740.01 | 1900.57 | 1741.97 | 1900.7 | 1743.07 | 1900.76 | 1743.15 | 1900.76 |
| 1752.8 | 1900.6 | 1752.87 | 1900.6 | 1758.58 | 1900.85 | 1759.84 | 1900.92 | 1764.38 | 1901 |
| 1765.17 | 1901 | 1768.47 | 1901.2 | 1768.57 | 1901.2 | 1772.29 | 1901.37 | 1807.89 | 1901.75 |
| 1829.52 | 1901.99 | 1839.82 | 1901.99 | 1853.8 | 1902 | 1855.74 | 1902 | 1863.4 | 1902.26 |
| 1866.11 | 1902.36 | 1889.31 | 1903 | 2118.84 | 1903 | 2127.4 | 1903.04 | 2127.46 | 1903.04 |
| 2139.46 | 1903.13 | 2141.5 | 1903.14 | 2154.5 | 1903.1 | 2169.22 | 1903.03 | 2169.25 | 1903.03 |
| 2171.82 | 1903 | 2257.87 | 1903 | 2260.72 | 1903.01 | 2260.99 | 1903.01 | 2276.44 | 1903.03 |
| 2278.38 | 1903.03 | 2291 | 1903.01 | 2292.53 | 1903.01 | 2292.99 | 1903 | 2404.32 | 1903 |
| 2408.28 | 1902.2 | 2409.29 | 1902 | 2422.86 | 1902 | 2458.94 | 1902.31 | 2493.39 | 1902.6 |
| 2498.77 | 1902.62 | 2503.48 | 1902.64 | 2503.64 | 1902.64 | 2512.48 | 1902.57 | 2528.92 | 1902.33 |
| 2528.96 | 1902.33 | 2532.85 | 1902 | 2534.25 | 1901.73 | 2536.51 | 1901.38 | 2537.45 | 1901.24 |
| 2538.49 | 1901.1 | 2539.22 | 1901 | 2552.1 | 1901 | 2559.68 | 1901.56 | 2561.45 | 1901.62 |
| 2562.78 | 1901.67 | 2570.3 | 1901.78 | 2570.56 | 1901.78 | 2573.7 | 1901.88 | 2576.99 | 1902 |
| 2641.24 | 1902 | 2684.03 | 1902.27 | 2723.93 | 1902.33 | 2757.84 | 1902.38 | 2758.95 | 1902.38 |
| 2763.71 | 1902.36 | 2768.86 | 1902.33 | 2770.61 | 1902.33 | 2771.53 | 1902.34 | 2771.9 | 1902.34 |
| 2772.64 | 1902.35 | 2773.11 | 1902.35 | 2778.73 | 1902.39 | 2779.39 | 1902.39 | 2779.8 | 1902.4 |
| 2780.9 | 1902.4 | 2783.07 | 1902.42 | 2783.88 | 1902.42 | 2789.97 | 1902.46 | 2790.58 | 1902.46 |
| 2793.26 | 1902.48 | 2798.15 | 1902.48 | 2798.77 | 1902.49 | 2806.01 | 1902.49 | 2806.44 | 1902.5 |
| 2807.02 | 1902.49 | 2807.41 | 1902.5 | 2807.81 | 1902.5 | 2854.38 | 1902.51 | 2908.7 | 1902.41 |
| 2909.69 | 1902.41 | 2936.4 | 1902.15 | 2952.11 | 1902 | 3023.3 | 1902 | 3029.67 | 1902.2 |
| 3043 | 1902.54 | 3059.83 | 1902.98 | 3060.25 | 1902.99 | 3061.32 | 1903 | 3092.34 | 1903 |
| 3130.27 | 1902.6 | 3187.41 | 1902 | 3246.63 | 1902 | 3253.3 | 1902.01 | 3260.13 | 1902.01 |
| 3271.78 | 1902 | 3277.86 | 1902 | 3283.62 | 1901.77 | 3292.85 | 1901.41 | 3305.39 | 1901.03 |
| 3307.14 | 1901 | 3361.94 | 1901 | 3370.12 | 1901.34 | 3380 | 1901.88 | 3380.35 | 1901.9 |
| 3380.53 | 1901.91 | 3380.59 | 1901.91 | 3382.3 | 1902 | 3395.92 | 1902.38 | 3396.41 | 1902.38 |
| 3396.9 | 1902.39 | 3397.34 | 1902.39 | 3400.38 | 1902.47 | 3400.91 | 1902.47 | 3406.98 | 1902.61 |
| 3407.22 | 1902.61 | 3410.06 | 1902.67 | 3412.21 | 1902.7 | 3412.43 | 1902.71 | 3412.56 | 1902.7 |
| 3427.33 | 1902.62 | 3453.53 | 1902.47 | 3454 | 1902.47 | 3468.52 | 1902.3 | 3469.11 | 1902.29 |
| 3471.51 | 1902.27 | 3473.11 | 1902.25 | 3473.85 | 1902.24 | 3475.56 | 1902.22 | 3481.84 | 1902.15 |
| 3483.18 | 1902.14 | 3484.49 | 1902.13 | 3487.17 | 1902.09 | 3504.76 | 1902 | 3505.91 | 1902 |
| 3521.04 | 1901.99 | 3523.46 | 1901.98 | 3526.57 | 1901.98 | 3536.42 | 1901.96 | 3541.72 | 1901.96 |
| 3546.01 | 1901.95 | 3549.86 | 1901.95 | 3554.19 | 1901.94 | 3554.21 | 1901.94 | 3557.05 | 1901.93 |
| 3572.93 | 1901.47 | 3583.86 | 1901.2 | 3584.13 | 1901.19 | 3586.54 | 1901.24 | 3587.22 | 1901.22 |
| 3587.8 | 1901.21 | 3588.3 | 1901.19 | 3590.11 | 1901.25 | 3590.56 | 1901.25 | 3596.49 | 1901.46 |
| 3596.77 | 1901.46 | 3599.36 | 1901.53 | 3599.89 | 1901.55 | 3600.2 | 1901.56 | 3600.34 | 1901.56 |
| 3611.58 | 1902 | 3621.72 | 1902 | 3622.68 | 1901.98 | 3624.69 | 1901.94 | 3625.86 | 1901.92 |
| 3626.24 | 1901.92 | 3629.75 | 1902 | 3630.4 | 1902 | 3633.81 | 1901.4 | 3645.41 | 1901.1 |
| 3649 | 1901 | 3856.77 | 1901 | 3859.79 | 1901.15 | 3860.22 | 1901.17 | 3865.91 | 1901.45 |
| 3872.4 | 1901.76 | 3877.49 | 1902 | 3877.57 | 1902 | 3882.11 | 1902.92 | 3882.49 | 1903 |
| 3893.72 | 1903 | 3903.73 | 1903.4 | 3905.52 | 1903.47 | 3909.87 | 1903.65 | 3922.3 | 1903.26 |
| 3924.12 | 1903.21 | 3924.34 | 1903.2 | 3924.66 | 1903.2 | 3925.88 | 1903.13 | 3926.12 | 1903.13 |
| 3927.74 | 1903.05 | 3928.81 | 1903 | 3940.75 | 1903 | 3940.77 | 1903 | 3940.82 | 1903 |
| 3940.9 | 1903 | 3944.12 | 1903.23 | 3946.54 | 1903.38 | 3955.72 | 1904 | 3958.82 | 1904.84 |
| 3959.11 | 1904.92 | 3959.35 | 1905 | 3959.43 | 1905.03 | 3962.15 | 1906 | 3964.69 | 1906.91 |
| 3964.96 | 1907 | 3967.44 | 1907.87 | 3967.83 | 1908 | 3970.4 | 1908.88 | 3970.76 | 1909 |
| 3973.37 | 1909.91 | 3973.62 | 1910 | 3973.91 | 1910.09 | 3979.1 | 1911 | 3979.6 | 1911.16 |
| 3982.29 | 1912 | 3983.53 | 1912.39 | 3985.49 | 1913 | 3987.48 | 1913.6 | 3988.74 | 1914 |
| 3991.28 | 1914.81 | 3991.97 | 1915 | 3992.48 | 1915.15 | 3992.64 | 1915.18 | 3996.1 | 1916 |
| 3998.51 | 1916.45 | 3999.21 | 1916.58 | 3999.6 | 1916.66 | 4000.61 | 1916.87 | 4001.24 | 1917 |
| 4004.87 | 1917.75 | 4005.38 | 1917.86 | 4006.07 | 1918 | 4008.09 | 1918.44 | 4010.78 | 1919 |

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 4012.72  1919.4 4015.48    1920 4020.15 1920.98 4020.24    1921 4020.48    1921
 4020.66    1921 4024.58 1921.24 4027.79 1921.42  4028.7 1921.47  4029.2  1921.5
 4030.44 1921.56 4030.73 1921.58 4030.89 1921.59 4037.79 1921.97  4039.3    1922
 4039.45    1922 4040.04 1922.02 4040.06 1922.02 4040.08 1922.02 4041.58 1922.07
 4041.61 1922.07 4042.59  1922.1 4042.61  1922.1 4043.21 1922.12 4056.43    1923
 4056.46    1923 4063.12    1923 4063.15    1923 4063.16    1923 4063.22    1923
 4069.47    1923  4069.5    1923 4069.61    1923 4069.65    1923 4069.83    1923
 4069.88    1923 4070.11    1923 4075.31    1923 4075.46    1923 4076.01 1922.99
 4084.48 1922.87 4119.88  1922.4 4120.57 1922.39 4121.01 1922.39 4122.16 1922.37
 4123.21 1922.35 4123.44 1922.35 4124.15 1922.34 4124.27 1922.34  4124.7 1922.33
 4134.76    1922 4134.82    1922 4134.95    1922 4144.01 1922.32 4144.23 1922.32
 4144.29 1922.32 4144.67 1922.33 4144.73 1922.33 4145.21 1922.34 4145.37 1922.34
 4145.69 1922.34 4150.82 1922.45 4153.31 1922.53 4156.98 1922.66 4157.38 1922.67
 4158.01 1922.68 4165.53    1923 4171.39 1923.01  4175.6 1923.01 4177.11 1923.01

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .045       0     .04 4177.11    .045

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
             0 4177.11            173.2   173.2   173.2             .1       .3

CROSS SECTION OUTPUT  Profile #PF 1

  E.G. Elev (ft)           1904.96    Element                  Left OB    Channel   Right OB
  Vel Head (ft)               0.16    Wt. n-Val.                           0.040
  W.S. Elev (ft)           1904.81    Reach Len. (ft)          173.20     173.20     173.20
  Crit W.S. (ft)                      Flow Area (sq ft)                  7082.17
  E.G. Slope (ft/ft)      0.002348    Area (sq ft)                       7082.17
  Q Total (cfs)           22400.00    Flow (cfs)                        22400.00
  Top Width (ft)           3039.80    Top Width (ft)                     3039.80
  Vel Total (ft/s)            3.16    Avg. Vel. (ft/s)                      3.16
  Max Chl Dpth (ft)           4.82    Hydr. Depth (ft)                      2.33
  Conv. Total (cfs)       462249.3    Conv. (cfs)                       462249.3
  Length Wtd. (ft)          173.20    Wetted Per. (ft)                   3040.92
  Min Ch El (ft)           1899.99    Shear (lb/sq ft)                      0.34
  Alpha                       1.00    Stream Power (lb/ft s)   4177.11       0.00       0.00
  Frctn Loss (ft)             0.55    Cum Volume (acre-ft)                 107.69
  C & E Loss (ft)             0.01    Cum SA (acres)                        49.49


CROSS SECTION


RIVER: MOJAVE
REACH: MOJAVE             RS: -19378.1

INPUT
Description:
Station Elevation Data    num=     490
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  1911.9   59.87 1911.28  117.05 1910.64  168.08 1910.07  188.08 1909.92
  262.03 1909.04  298.04 1908.57  707.91 1905.77 1261.64 1901.57  1265.8 1901.54
 1267.46 1901.52 1268.22 1901.52 1268.96 1901.51 1272.32 1901.49 1272.54 1901.48
 1273.52 1901.48 1276.94 1901.45 1280.13 1901.43 1283.25  1901.4 1284.72 1901.39
 1288.15 1901.37 1292.26 1901.34 1295.78 1901.31 1298.54 1901.29 1302.32 1901.26
 1304.56 1901.47  1310.6 1902.04 1323.33 1902.97 1337.68 1902.97 1364.41 1902.99
 1365.11    1903 1439.14    1903  1440.9 1902.97 1442.12 1902.97 1443.34 1902.98
 1443.35 1902.98 1443.77    1903 1582.44    1903 1584.47 1902.99  1586.4 1902.99
 1592.46 1902.98  1594.7 1902.98 1605.62    1903 1700.59    1903 1702.18 1902.96
 1704.78 1902.91 1706.64 1902.86 1707.67 1902.89 1712.33    1903 1716.06 1903.98
 1716.13    1904 1716.54  1904.1 1716.68 1904.15 1719.43 1904.91 1719.76    1905
 1721.01    1905 1724.78 1904.43 1728.83    1904 1734.14 1903.77 1736.13 1903.68
 1736.68 1903.65 1737.44 1903.62 1739.88 1903.49 1744.99 1903.22 1745.33  1903.2
 1748.63 1903.01 1748.99    1903 1749.88 1902.99 1750.16 1902.99  1753.7 1902.98
 1757.06 1902.99  1759.3    1903 1761.45 1903.13 1761.56 1903.14 1762.14 1903.17
 1762.25 1903.18 1765.11 1903.36 1766.97 1903.47 1767.17 1903.47 1767.38 1903.48
 1767.58 1903.48 1770.94 1903.39 1772.93 1903.18 1777.21    1903 1778.64 1902.11
 1778.81    1902 1778.86 1901.97 1782.09    1901  1787.3  1900.1 1787.89    1900
 1797.31 1899.87 1797.45 1899.87 1799.32 1899.89 1805.98 1899.98 1807.15    1900
  1808.5  1900.1 1819.72    1901 1823.03 1901.59 1825.36    1902  1829.4 1902.73
 1830.66 1902.93 1831.12    1903 1832.29 1903.17 1832.52  1903.2 1833.77 1903.36
 1834.37 1903.42 1836.23 1903.63 1840.18    1904 1843.47 1904.31 1846.16 1904.65
 1846.32 1904.66  1847.1 1904.76 1847.21 1904.76  1847.3 1904.77  1847.4 1904.78
 1847.49 1904.78 1847.58 1904.79 1847.75 1904.79 1848.38 1904.73 1849.65 1904.57
 1850.92 1904.29 1852.21    1904 1852.94 1903.83 1856.13    1903 1858.12 1902.47
 1859.93    1902 1864.11 1901.66 1864.35 1901.66 1864.63 1901.67 1865.05 1901.64
  1865.6 1901.65 1882.21 1901.42 1890.17 1901.31 1890.21 1901.31 1892.67 1901.33
 1892.72 1901.34 1894.89 1901.36 1895.78 1901.37  1895.9 1901.37 1896.63 1901.38
  1897.3 1901.39 1897.51 1901.39 1898.13  1901.4 1898.47  1901.4 1899.05 1901.41
 1899.58 1901.41 1934.09 1901.94  1938.7 1901.94 1948.11 1901.93 1950.04 1901.94
 1971.41 1901.98 1978.63 1901.99 1981.57 1901.99 1981.95    1902 1986.36    1902
 1989.82 1902.09 1996.38 1902.25 1997.81 1902.24 1998.64 1902.25 1999.16 1902.26
 2000.15 1902.26  2025.4 1902.46 2093.87    1903 2300.84    1903 2302.19 1902.99
 2312.02 1902.94 2312.09 1902.94  2314.3 1902.93 2314.51 1902.93 2340.32 1902.76
 2347.46 1902.72 2351.35 1902.69 2386.78 1902.82  2433.8    1903 2445.19    1903
 2446.45 1902.63 2448.46    1902 2449.47 1901.69 2467.09 1901.47 2478.88 1901.46
 2502.55 1901.82 2502.75 1901.82 2514.75    1902  2519.5    1902 2523.95 1902.01
```

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2528.75 | 1902.01 | 2534.91 | 1902 | 2537.33 | 1902 | 2540.56 | 1901.03 | 2540.66 | 1901 | | |
| 2563.08 | 1901 | 2570.38 | 1900.99 | 2576.57 | 1901 | 2598.86 | 1901 | 2602.57 | 1901.06 | | |
| 2602.61 | 1901.06 | 2648.26 | 1901.57 | 2662.92 | 1901.7 | 2665.46 | 1901.7 | 2665.69 | 1901.69 | | |
| 2665.93 | 1901.7 | 2666.29 | 1901.69 | 2668.92 | 1901.69 | 2714.9 | 1901.73 | 2767.16 | 1901.78 | | |
| 2767.53 | 1901.79 | 2770.96 | 1901.81 | 2772.12 | 1901.82 | 2773.47 | 1901.82 | 2788.74 | 1901.98 | | |
| 2792.06 | 1901.98 | 2792.12 | 1901.99 | 2803.28 | 1901.99 | 2807.72 | 1901.98 | 2813.59 | 1901.99 | | |
| 2815.43 | 1902 | 2817.28 | 1901.99 | 2820.17 | 1901.99 | 2822.59 | 1902 | 2835.39 | 1902 | | |
| 2840.19 | 1902.01 | 2840.88 | 1902.01 | 2860.44 | 1902.02 | 2868.05 | 1902.02 | 2890.34 | 1902.03 | | |
| 2902.42 | 1902.02 | 2948.73 | 1902.02 | 2950.05 | 1902.01 | 2993.82 | 1902.01 | 3009.92 | 1902 | | |
| 3044.62 | 1902 | 3083.76 | 1901.64 | 3107.78 | 1901.43 | 3107.9 | 1901.43 | 3113.86 | 1901.52 | | |
| 3124.23 | 1901.74 | 3124.3 | 1901.74 | 3128.22 | 1901.93 | 3132.08 | 1902 | 3135.24 | 1902.35 | | |
| 3165.88 | 1902.49 | 3192 | 1902.45 | 3194.57 | 1902.43 | 3196.02 | 1902.41 | 3231.15 | 1902.01 | | |
| 3234.58 | 1902.01 | 3236.41 | 1902 | 3239.06 | 1902 | 3240.18 | 1901.96 | 3240.93 | 1901.94 | | |
| 3241.24 | 1901.93 | 3242.56 | 1901.87 | 3261.15 | 1901 | 3335.75 | 1901 | 3352.15 | 1901.73 | | |
| 3354.44 | 1901.84 | 3355.66 | 1901.9 | 3357.92 | 1902 | 3358.22 | 1902 | 3367.45 | 1902.04 | | |
| 3369.22 | 1902.05 | 3379.15 | 1902.09 | 3389.42 | 1902.14 | 3410.38 | 1902.05 | 3414.43 | 1902.03 | | |
| 3419.4 | 1902.04 | 3419.53 | 1902.04 | 3420.79 | 1902 | 3548.13 | 1902 | 3555.47 | 1901.99 | | |
| 3584.18 | 1901.99 | 3608.27 | 1902 | 3610.76 | 1902 | 3611.73 | 1902.01 | 3612.91 | 1902.01 | | |
| 3616 | 1902.02 | 3616.46 | 1902.02 | 3647.96 | 1902.45 | 3648.42 | 1902.46 | 3648.9 | 1902.47 | | |
| 3665.2 | 1902.57 | 3676.57 | 1902.63 | 3676.84 | 1902.64 | 3677.17 | 1902.65 | 3677.5 | 1902.65 | | |
| 3681.85 | 1902.58 | 3682.11 | 1902.59 | 3682.42 | 1902.59 | 3682.75 | 1902.6 | 3683.3 | 1902.6 | | |
| 3687.96 | 1902.53 | 3688.17 | 1902.53 | 3691.72 | 1902.59 | 3696.37 | 1902.69 | 3696.54 | 1902.69 | | |
| 3696.8 | 1902.68 | 3698.17 | 1902.68 | 3705.05 | 1902.85 | 3705.2 | 1902.85 | 3705.36 | 1902.86 | | |
| 3705.52 | 1902.86 | 3705.99 | 1902.87 | 3707.44 | 1902.85 | 3707.9 | 1902.85 | 3708.38 | 1902.84 | | |
| 3708.96 | 1902.83 | 3709.47 | 1902.82 | 3709.96 | 1902.81 | 3710.24 | 1902.8 | 3710.48 | 1902.79 | | |
| 3710.75 | 1902.78 | 3711.07 | 1902.77 | 3711.56 | 1902.75 | 3712.49 | 1902.7 | 3712.94 | 1902.68 | | |
| 3713.42 | 1902.66 | 3717.78 | 1902.38 | 3718.2 | 1902.35 | 3718.58 | 1902.33 | 3719.21 | 1902.29 | | |
| 3723.4 | 1902 | 3724.9 | 1901.9 | 3726.25 | 1901.81 | 3728.13 | 1901.66 | 3740.48 | 1901 | | |
| 3750.36 | 1901 | 3756.64 | 1901 | 3757.72 | 1901.02 | 3759.91 | 1901.05 | 3761.37 | 1901.03 | | |
| 3762.28 | 1901.01 | 3763.06 | 1901 | 3774.17 | 1901 | 3775.68 | 1901 | 3778.54 | 1901 | | |
| 3779.1 | 1901.02 | 3779.21 | 1901.03 | 3779.41 | 1901.02 | 3779.63 | 1901 | 3780.91 | 1901 | | |
| 3783.66 | 1901 | 3788.97 | 1901 | 3797.04 | 1901 | 3801.16 | 1901 | 3802.22 | 1901 | | |
| 3806.43 | 1901 | 3811.81 | 1901 | 3816.95 | 1901 | 3821.08 | 1901 | 3821.16 | 1901 | | |
| 3823.1 | 1901 | 3828.43 | 1901 | 3828.48 | 1901 | 3828.51 | 1901 | 3828.66 | 1901 | | |
| 3829.08 | 1901 | 3829.19 | 1901 | 3829.26 | 1901 | 3829.46 | 1901 | 3829.8 | 1901 | | |
| 3850.36 | 1901 | 3850.41 | 1901 | 3850.49 | 1901 | 3850.63 | 1901 | 3859.33 | 1901 | | |
| 3862.67 | 1901 | 3862.75 | 1901 | 3862.78 | 1901 | 3870.38 | 1901 | 3871.55 | 1901 | | |
| 3872.19 | 1901 | 3872.3 | 1901 | 3882.14 | 1901 | 3892.67 | 1901 | 3892.86 | 1901 | | |
| 3893.8 | 1901 | 3896.06 | 1901 | 3897.99 | 1901 | 3901.23 | 1901 | 3905.28 | 1901 | | |
| 3909.63 | 1901 | 3915.03 | 1901 | 3916.23 | 1901.22 | 3920.78 | 1902 | 3924.98 | 1902.71 | | |
| 3926.66 | 1903 | 3927.99 | 1903.23 | 3932.85 | 1904 | 3937.05 | 1904.71 | 3937.5 | 1904.78 | | |
| 3939.13 | 1905 | 3939.6 | 1905.02 | 3944.79 | 1905.87 | 3945.53 | 1906 | 3945.55 | 1906 | | |
| 3945.58 | 1906 | 3945.73 | 1906 | 3945.96 | 1906 | 3946.16 | 1906 | 3946.82 | 1906 | | |
| 3946.97 | 1906 | 3948.17 | 1906 | 3948.33 | 1906 | 3948.34 | 1906 | 3948.35 | 1905.99 | | |
| 3948.36 | 1905.99 | 3948.4 | 1905.99 | 3960.77 | 1905.52 | 3961.55 | 1905.51 | 3964.38 | 1905.41 | | |
| 3964.79 | 1905.39 | 3965.24 | 1905.36 | 3965.54 | 1905.35 | 3965.86 | 1905.34 | 3967.55 | 1905.25 | | |
| 3967.76 | 1905.24 | 3967.98 | 1905.24 | 3968.32 | 1905.24 | 3969.25 | 1905.24 | 3972.67 | 1905.25 | | |
| 3972.9 | 1905.25 | 3973.58 | 1905.24 | 3974.27 | 1905.24 | 3974.41 | 1905.23 | 3974.5 | 1905.23 | | |
| 3974.53 | 1905.23 | 3982.32 | 1905.04 | 3982.33 | 1905.04 | 3982.34 | 1905.04 | 3983.5 | 1905 | | |
| 3983.6 | 1905 | 3983.62 | 1905 | 3986.14 | 1904.98 | 3987.95 | 1904.99 | 3988.72 | 1905 | | |
| 3990.31 | 1905.59 | 3991.7 | 1906 | 3993.24 | 1906.47 | 3994.99 | 1907 | 3997.32 | 1907.71 | | |
| 3998.28 | 1908 | 4003.05 | 1908.82 | 4004.23 | 1909 | 4004.65 | 1909.07 | 4010.66 | 1910 | | |
| 4015.83 | 1910.82 | 4016.97 | 1911 | 4018.26 | 1911.24 | 4022.07 | 1912 | 4023.67 | 1912.74 | | |
| 4024.48 | 1913 | 4025.23 | 1913.21 | 4029.4 | 1914 | 4033.83 | 1914.82 | 4034.85 | 1915 | | |
| 4039.9 | 1915.91 | 4040.39 | 1916 | 4041.08 | 1916.13 | 4043.1 | 1916.48 | 4045.96 | 1917 | | |
| 4050.93 | 1917.92 | 4051.38 | 1918 | 4051.75 | 1918.07 | 4055.59 | 1918.75 | 4055.83 | 1918.79 | | |
| 4057.13 | 1919 | 4061.92 | 1919.54 | 4065.89 | 1920 | 4066.53 | 1920.08 | 4074.49 | 1921 | | |
| 4077.3 | 1921.19 | 4077.59 | 1921.21 | 4077.97 | 1921.22 | 4078.44 | 1921.23 | 4089.74 | 1921.79 | | |
| 4091.98 | 1921.91 | 4098.46 | 1922 | 4098.74 | 1922 | 4099.16 | 1922 | 4099.28 | 1922 | | |
| 4109.07 | 1922 | 4111.68 | 1922 | 4114.62 | 1922 | 4116.81 | 1922 | 4117.77 | 1922 | | |
| 4119.17 | 1922 | 4123.59 | 1922 | 4125.38 | 1922 | 4147.52 | 1922 | 4152.28 | 1922 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4152.28 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 4152.28 | 210.95 | 210.95 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1904.41 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.23 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1904.18 | Reach Len. (ft) | 210.95 | 210.95 | 210.95 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 5814.02 | | |
| E.G. Slope (ft/ft) | 0.004448 | Area (sq ft) | | 5814.02 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 2995.99 | Top Width (ft) | | 2995.99 | | |
| Vel Total (ft/s) | 3.85 | Avg. Vel. (ft/s) | | 3.85 | | |
| Max Chl Dpth (ft) | 4.31 | Hydr. Depth (ft) | | 1.94 | | |
| Conv. Total (cfs) | 335859.5 | Conv. (cfs) | | 335859.5 | | |
| Length Wtd. (ft) | 210.95 | Wetted Per. (ft) | | 2998.18 | | |
| Min Ch El (ft) | 1899.87 | Shear (lb/sq ft) | | 0.54 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4152.28 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.71 | Cum Volume (acre-ft) | | 82.05 | | |
| C & E Loss (ft) | 0.02 | Cum SA (acres) | | 37.49 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -19589.1

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1908.79 | 31.35 | 1908.57 | 407.82 | 1905.6 | 457.56 | 1905.1 | 481.62 | 1904.84 |
| 503.29 | 1904.6 | 532.24 | 1904.39 | 563.02 | 1904.03 | 578.16 | 1903.84 | 1109.3 | 1900.44 |
| 1127.08 | 1900.31 | 1127.9 | 1900.31 | 1128.03 | 1900.3 | 1129.29 | 1900.3 | 1129.6 | 1900.29 |
| 1130.68 | 1900.29 | 1130.84 | 1900.28 | 1131.19 | 1900.28 | 1134.84 | 1900.26 | 1151.03 | 1900.25 |
| 1191.3 | 1900.2 | 1195.3 | 1900.19 | 1212.4 | 1900.17 | 1220.14 | 1900.16 | 1236.67 | 1900.14 |
| 1253.8 | 1900.14 | 1277.63 | 1900.12 | 1302.77 | 1900.11 | 1329.02 | 1900.09 | 1335.57 | 1900.09 |
| 1343.65 | 1900.08 | 1351.07 | 1900.08 | 1369.37 | 1900.06 | 1374.69 | 1900.06 | 1377.42 | 1900.05 |
| 1379.94 | 1900.05 | 1380.78 | 1900.36 | 1381.15 | 1900.49 | 1381.43 | 1900.52 | 1381.87 | 1900.65 |
| 1382.1 | 1900.73 | 1382.35 | 1900.75 | 1382.55 | 1900.8 | 1382.68 | 1900.84 | 1382.83 | 1900.85 |
| 1382.99 | 1900.89 | 1387.84 | 1902 | 1424.94 | 1902 | 1425.65 | 1901.99 | 1449.85 | 1901.8 |
| 1452.3 | 1901.75 | 1454.78 | 1901.74 | 1456.17 | 1901.71 | 1457.36 | 1901.7 | 1461.95 | 1901.61 |
| 1470.75 | 1901.43 | 1471.89 | 1901.42 | 1472.92 | 1901.4 | 1474.11 | 1901.38 | 1475.89 | 1901.34 |
| 1481.63 | 1901.23 | 1486.92 | 1901.15 | 1493.11 | 1901 | 1499.72 | 1901 | 1504.91 | 1901.99 |
| 1504.98 | 1902 | 1509.37 | 1902.82 | 1509.69 | 1902.87 | 1510.38 | 1903 | 1511.22 | 1903.08 |
| 1514.78 | 1903.81 | 1515.77 | 1904 | 1516.2 | 1904 | 1516.8 | 1903.81 | 1517.92 | 1903.51 |
| 1518.45 | 1903.38 | 1520 | 1903.33 | 1520.14 | 1903.31 | 1520.68 | 1903.29 | 1521.22 | 1903.25 |
| 1521.92 | 1903.17 | 1522.78 | 1903.06 | 1522.8 | 1903.06 | 1523.98 | 1902.89 | 1524.99 | 1902.74 |
| 1526.64 | 1902.49 | 1529.88 | 1902 | 1531.48 | 1901.76 | 1531.64 | 1901.74 | 1532.42 | 1901.61 |
| 1534.59 | 1901.26 | 1536.28 | 1901 | 1542.03 | 1901 | 1542.28 | 1901.01 | 1542.59 | 1901.01 |
| 1552.86 | 1901.39 | 1553.68 | 1901.42 | 1555.47 | 1901.48 | 1556.26 | 1901.51 | 1557.03 | 1901.53 |
| 1557.94 | 1901.57 | 1558.29 | 1901.58 | 1558.72 | 1901.6 | 1559.05 | 1901.6 | 1559.32 | 1901.62 |
| 1559.46 | 1901.62 | 1559.52 | 1901.63 | 1559.71 | 1901.63 | 1559.79 | 1901.64 | 1573.55 | 1902 |
| 1601.2 | 1902 | 1612.85 | 1902.47 | 1616.64 | 1902.62 | 1618.79 | 1902.7 | 1619.51 | 1902.72 |
| 1622.54 | 1902.83 | 1623.89 | 1902.88 | 1624.92 | 1902.9 | 1626.01 | 1902.93 | 1626.1 | 1902.93 |
| 1627.86 | 1902.99 | 1628.4 | 1903 | 1628.79 | 1903.11 | 1632.43 | 1904 | 1633.33 | 1904.23 |
| 1635.95 | 1904.83 | 1636.58 | 1904.99 | 1636.64 | 1905 | 1636.91 | 1905.01 | 1637.17 | 1905.03 |
| 1643.15 | 1905.34 | 1644.78 | 1905.41 | 1646.18 | 1905.45 | 1646.67 | 1905.45 | 1646.92 | 1905.47 |
| 1647.4 | 1905.48 | 1647.65 | 1905.5 | 1647.98 | 1905.52 | 1648.39 | 1905.53 | 1648.81 | 1905.55 |
| 1650.59 | 1905.64 | 1651.33 | 1905.68 | 1656.96 | 1905.92 | 1657.9 | 1905.97 | 1658.44 | 1906 |
| 1674.66 | 1906 | 1677.97 | 1905.22 | 1678.82 | 1905 | 1681.85 | 1904.22 | 1682.01 | 1904.16 |
| 1682.49 | 1903.91 | 1684.18 | 1903 | 1685.13 | 1903 | 1698.98 | 1903.02 | 1705.21 | 1903.02 |
| 1708.54 | 1903.01 | 1713.5 | 1903.01 | 1716.18 | 1903 | 1720.69 | 1903 | 1721.34 | 1902.92 |
| 1721.8 | 1902.86 | 1722.63 | 1902.74 | 1723.6 | 1902.61 | 1724.51 | 1902.47 | 1725.2 | 1902.36 |
| 1725.6 | 1902.3 | 1725.93 | 1902.23 | 1727.49 | 1902 | 1732.3 | 1901.16 | 1733.41 | 1901 |
| 1738.04 | 1900.19 | 1739.11 | 1900 | 1747.54 | 1899.65 | 1760.11 | 1899.47 | 1761.53 | 1899.41 |
| 1773.61 | 1899.65 | 1773.62 | 1899.65 | 1779.57 | 1899.85 | 1779.6 | 1899.85 | 1783.7 | 1899.97 |
| 1785.03 | 1900 | 1793.61 | 1900.25 | 1796.38 | 1900.21 | 1797.23 | 1900.23 | 1802.59 | 1900.34 |
| 1806.58 | 1900.43 | 1808.86 | 1900.4 | 1811.61 | 1900.44 | 1832.01 | 1900.89 | 1832.86 | 1900.92 |
| 1836.39 | 1901 | 1896.94 | 1901 | 1904.79 | 1901.02 | 1907.34 | 1901.02 | 1914.83 | 1901.01 |
| 1917.2 | 1901.01 | 1919.59 | 1901.02 | 1925.63 | 1901.03 | 1931.18 | 1901.02 | 1931.7 | 1901.02 |
| 1934.83 | 1901.01 | 1937.06 | 1901.01 | 1941.15 | 1901.04 | 1941.48 | 1901.04 | 1941.81 | 1901.05 |
| 1942.7 | 1901.05 | 1943.22 | 1901.04 | 1943.79 | 1901.05 | 1945.79 | 1901.05 | 1949.01 | 1901.06 |
| 1953.36 | 1901.07 | 1957.35 | 1901.09 | 1957.72 | 1901.09 | 1961.84 | 1901.11 | 1962.03 | 1901.11 |
| 1965.71 | 1901.13 | 1971.15 | 1901.16 | 1979.4 | 1901.2 | 1984.91 | 1901.23 | 1992.57 | 1901.28 |
| 1995.29 | 1901.29 | 1997.56 | 1901.31 | 2000.32 | 1901.32 | 2001.25 | 1901.33 | 2003.4 | 1901.34 |
| 2023.82 | 1901.46 | 2037.85 | 1901.55 | 2038.54 | 1901.55 | 2065.13 | 1901.67 | 2080.56 | 1901.74 |
| 2081.8 | 1901.74 | 2082.16 | 1901.75 | 2084.22 | 1901.75 | 2084.99 | 1901.76 | 2086.02 | 1901.76 |
| 2103.07 | 1901.68 | 2137.16 | 1901.51 | 2137.33 | 1901.51 | 2143.95 | 1901.53 | 2146.03 | 1901.53 |
| 2147.07 | 1901.51 | 2148.2 | 1901.49 | 2148.47 | 1901.49 | 2148.77 | 1901.48 | 2154.24 | 1901.5 |
| 2160.28 | 1901.53 | 2160.64 | 1901.54 | 2160.83 | 1901.53 | 2161.5 | 1901.53 | 2169.57 | 1901.42 |
| 2169.99 | 1901.42 | 2174.71 | 1901.35 | 2175.05 | 1901.34 | 2175.53 | 1901.34 | 2176.75 | 1901.32 |
| 2177.91 | 1901.31 | 2180.15 | 1901.28 | 2181.98 | 1901.25 | 2185.18 | 1901.24 | 2185.89 | 1901.23 |
| 2186.39 | 1901.23 | 2188.33 | 1901.22 | 2190.17 | 1901.22 | 2193.41 | 1901.23 | 2193.91 | 1901.23 |
| 2194.72 | 1901.24 | 2198.66 | 1901.27 | 2202 | 1901.29 | 2207.84 | 1901.35 | 2213.34 | 1901.39 |
| 2215.71 | 1901.42 | 2216.26 | 1901.42 | 2217.14 | 1901.43 | 2217.62 | 1901.43 | 2218.15 | 1901.44 |
| 2219.2 | 1901.44 | 2219.5 | 1901.45 | 2222.07 | 1901.45 | 2223.57 | 1901.44 | 2243.02 | 1901.54 |
| 2256.95 | 1901.6 | 2258.4 | 1901.6 | 2265.59 | 1901.53 | 2266.3 | 1901.53 | 2272.03 | 1901.5 |
| 2277.29 | 1901.48 | 2277.86 | 1901.48 | 2285.71 | 1901.41 | 2286.18 | 1901.4 | 2289.03 | 1901.37 |
| 2289.84 | 1901.36 | 2290.3 | 1901.36 | 2305.26 | 1901.15 | 2305.53 | 1901.15 | 2307.52 | 1901.13 |
| 2309.17 | 1901.12 | 2309.33 | 1901.12 | 2315.4 | 1901 | 2336.74 | 1901 | 2337.38 | 1901.03 |
| 2340.98 | 1901.01 | 2341.32 | 1901 | 2344.26 | 1901.01 | 2363.46 | 1901.02 | 2367.98 | 1901.02 |
| 2390.42 | 1901 | 2397.4 | 1901 | 2418.06 | 1900.99 | 2470.22 | 1900.99 | 2505.64 | 1901 |
| 2523.93 | 1901 | 2528.59 | 1901.01 | 2529.64 | 1901.01 | 2530.16 | 1901 | 2578.91 | 1901 |
| 2580.21 | 1901.02 | 2581.62 | 1901.05 | 2581.67 | 1901.05 | 2599.8 | 1901.4 | 2600.26 | 1901.4 |
| 2603.59 | 1901.47 | 2604.01 | 1901.47 | 2615.86 | 1901.58 | 2634.46 | 1901.74 | 2644.74 | 1901.85 |
| 2649.56 | 1901.88 | 2654.38 | 1901.94 | 2659.68 | 1902 | 2676.4 | 1902 | 2680.24 | 1901.98 |
| 2680.35 | 1901.98 | 2711.24 | 1902 | 2854.54 | 1902 | 2856.5 | 1901.99 | 2860.69 | 1901.97 |
| 2862.49 | 1901.96 | 2867.64 | 1901.92 | 2870.35 | 1901.89 | 2880.16 | 1901.83 | 2884.63 | 1901.8 |
| 2888.15 | 1901.77 | 2892.63 | 1901.73 | 2894.24 | 1901.72 | 2898.43 | 1901.69 | 2901.78 | 1901.66 |
| 2981.26 | 1901.01 | 2982.88 | 1901 | 3026.2 | 1901 | 3027.6 | 1901.27 | 3031.28 | 1902 |
| 3033.46 | 1902.46 | 3033.71 | 1902.51 | 3033.97 | 1902.54 | 3035.46 | 1902.86 | 3035.52 | 1902.86 |
| 3038.19 | 1902.91 | 3040.53 | 1902.87 | 3041.46 | 1902.86 | 3042.65 | 1902.84 | 3043.21 | 1902.82 |
| 3053.07 | 1902.63 | 3071.7 | 1902.3 | 3077.5 | 1902.19 | 3077.71 | 1902.19 | 3079.16 | 1902.15 |
| 3080.57 | 1902.12 | 3080.65 | 1902.12 | 3081.9 | 1902.09 | 3083.21 | 1902.06 | 3083.3 | 1902.06 |
| 3086.01 | 1902.02 | 3086.1 | 1902.02 | 3088.36 | 1902 | 3092.05 | 1902 | 3103.56 | 1901.75 |
| 3130.43 | 1901 | 3231.84 | 1901 | 3233.24 | 1901.02 | 3276.54 | 1901.93 | 3279.71 | 1902 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3424.86 | 1902 | 3429.82 | 1901.97 | 3430.9 | 1901.96 | 3432.66 | 1901.95 | 3439.39 | 1901.91 |
| 3458.68 | 1901.79 | 3575.32 | 1901.1 | 3579.19 | 1901.16 | 3580.62 | 1901.12 | 3585.73 | 1901.02 |
| 3586.08 | 1901.02 | 3586.89 | 1901 | 3737.66 | 1901 | 3743.04 | 1900.85 | 3773.09 | 1900 |
| 3780.04 | 1899.99 | 3785.46 | 1899.99 | 3789.81 | 1900 | 3803.01 | 1900 | 3803.4 | 1899.99 |
| 3803.91 | 1899.99 | 3804.12 | 1900 | 3805.64 | 1900 | 3809.14 | 1899.41 | 3809.65 | 1899.41 |
| 3813.9 | 1899.23 | 3815.81 | 1899.18 | 3819.17 | 1899.25 | 3821.68 | 1899.27 | 3821.95 | 1899.27 |
| 3822.39 | 1899.29 | 3828.69 | 1899.35 | 3828.85 | 1899.36 | 3831.44 | 1899.39 | 3837.44 | 1899.48 |
| 3838.5 | 1899.5 | 3839.17 | 1899.51 | 3839.57 | 1899.52 | 3841.65 | 1899.56 | 3844.14 | 1899.62 |
| 3844.34 | 1899.63 | 3844.52 | 1899.63 | 3844.71 | 1899.64 | 3855.29 | 1900 | 3860.44 | 1900.09 |
| 3860.64 | 1900.09 | 3861.97 | 1900.11 | 3878.66 | 1900.34 | 3883.87 | 1900.4 | 3888.3 | 1900.44 |
| 3892.53 | 1900.49 | 3898.34 | 1900.57 | 3906.91 | 1900.72 | 3920.88 | 1901 | 3922.44 | 1901.44 |
| 3924.37 | 1902 | 3925.9 | 1902.94 | 3925.95 | 1903.04 | 3926.32 | 1904 | 3926.36 | 1904.14 |
| 3926.69 | 1905 | 3926.75 | 1905.25 | 3927.03 | 1906 | 3927.12 | 1906.35 | 3927.35 | 1907 |
| 3927.46 | 1907.44 | 3927.66 | 1908 | 3927.74 | 1908.6 | 3927.87 | 1909 | 3928.05 | 1909.66 |
| 3928.16 | 1910 | 3928.38 | 1910.77 | 3928.45 | 1911 | 3928.74 | 1911.97 | 3928.87 | 1912.05 |
| 3930.61 | 1913 | 3931.61 | 1913.55 | 3932.47 | 1914 | 3933.93 | 1914.73 | 3934.38 | 1915 |
| 3935.62 | 1915.64 | 3936.34 | 1916 | 3938.03 | 1916.81 | 3938.54 | 1917 | 3938.62 | 1917 |
| 3939.47 | 1917.08 | 3940.29 | 1917.16 | 3948.55 | 1917.99 | 3948.8 | 1917.99 | 3949.19 | 1918 |
| 3951.62 | 1918.24 | 3952.34 | 1918.32 | 3952.75 | 1918.37 | 3952.96 | 1918.41 | 3958.57 | 1919 |
| 3962.23 | 1919.39 | 3967.1 | 1920 | 3972.52 | 1920.45 | 3975.04 | 1920.65 | 3977.76 | 1920.88 |
| 3979.51 | 1921 | 3990.02 | 1921.65 | 3994.67 | 1922 | 4023.22 | 1922.07 | 4035.34 | 1922.09 |
| 4069.62 | 1922.02 | 4070.32 | 1922.01 | 4076.53 | 1922 | 4078.05 | 1922 | 4082.34 | 1921.98 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 4082.34 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 4082.34 | 156.22 | 156.22 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1903.68 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.16 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1903.52 | Reach Len. (ft) | 156.22 | 156.22 | 156.22 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 7041.14 | | |
| E.G. Slope (ft/ft) | 0.002609 | Area (sq ft) | | 7041.14 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3241.06 | Top Width (ft) | | 3241.06 | | |
| Vel Total (ft/s) | 3.18 | Avg. Vel. (ft/s) | | 3.18 | | |
| Max Chl Dpth (ft) | 4.34 | Hydr. Depth (ft) | | 2.17 | | |
| Conv. Total (cfs) | 438536.3 | Conv. (cfs) | | 438536.3 | | |
| Length Wtd. (ft) | 156.22 | Wetted Per. (ft) | | 3243.41 | | |
| Min Ch El (ft) | 1899.18 | Shear (lb/sq ft) | | 0.35 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 4082.34 | 0.00 | 0.00 | |
| Frctn Loss (ft) | 0.33 | Cum Volume (acre-ft) | | 50.93 | | |
| C & E Loss (ft) | 0.01 | Cum SA (acres) | | 22.39 | | |

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -19745.3

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1904.46 | 337.45 | 1902.47 | 702.62 | 1900.04 | 743.69 | 1900 | 1222.01 | 1900 |
| 1233.81 | 1899.99 | 1430.64 | 1899.99 | 1436.93 | 1900.56 | 1442.57 | 1901.07 | 1443.32 | 1901.14 |
| 1443.55 | 1901.16 | 1444.56 | 1901.24 | 1444.81 | 1901.26 | 1450.91 | 1901.73 | 1451.35 | 1901.77 |
| 1454.24 | 1902 | 1456.2 | 1902.65 | 1457.23 | 1903 | 1457.71 | 1903.16 | 1459.9 | 1904 |
| 1461.69 | 1904.92 | 1461.92 | 1905 | 1462.36 | 1905.18 | 1462.52 | 1905.23 | 1462.72 | 1905.3 |
| 1462.91 | 1905.35 | 1463.05 | 1905.37 | 1463.79 | 1905.6 | 1463.88 | 1905.61 | 1464.35 | 1905.69 |
| 1464.67 | 1905.73 | 1464.92 | 1905.71 | 1464.97 | 1905.72 | 1465.12 | 1905.72 | 1465.55 | 1905.68 |
| 1465.82 | 1905.67 | 1466.28 | 1905.65 | 1466.89 | 1905.59 | 1468.97 | 1905.27 | 1469.62 | 1905.18 |
| 1469.91 | 1905.12 | 1470.55 | 1905 | 1471.76 | 1904.8 | 1476.31 | 1904 | 1478.53 | 1903.8 |
| 1482.41 | 1903.42 | 1482.53 | 1903.41 | 1482.63 | 1903.39 | 1484.86 | 1903.11 | 1484.9 | 1903.11 |
| 1484.97 | 1903.09 | 1485.68 | 1903 | 1505.02 | 1903 | 1506.09 | 1902.97 | 1507.66 | 1902.92 |
| 1507.67 | 1902.92 | 1507.69 | 1902.91 | 1507.7 | 1902.91 | 1528.31 | 1902.71 | 1541.34 | 1902.58 |
| 1543.49 | 1902.62 | 1543.55 | 1902.62 | 1544.56 | 1902.63 | 1545.28 | 1902.64 | 1550.16 | 1902.68 |
| 1550.58 | 1902.68 | 1550.83 | 1902.69 | 1550.94 | 1902.69 | 1562.98 | 1902.91 | 1567.41 | 1903 |
| 1580.87 | 1903 | 1581.48 | 1902.93 | 1585.31 | 1902.49 | 1589.75 | 1902 | 1597.57 | 1902 |
| 1602.09 | 1902.66 | 1604.69 | 1903 | 1622.18 | 1903.77 | 1626.43 | 1904 | 1627.97 | 1904.21 |
| 1628.08 | 1904.22 | 1628.22 | 1904.23 | 1628.83 | 1904.27 | 1629.83 | 1904.33 | 1630.88 | 1904.44 |
| 1631.54 | 1904.47 | 1631.97 | 1904.49 | 1634.46 | 1904.73 | 1634.97 | 1904.77 | 1635.37 | 1904.79 |
| 1636.91 | 1904.77 | 1640.6 | 1904.5 | 1640.76 | 1904.51 | 1640.87 | 1904.5 | 1640.98 | 1904.5 |
| 1641.09 | 1904.49 | 1641.3 | 1904.46 | 1641.62 | 1904.42 | 1643.85 | 1904 | 1645.19 | 1903.71 |
| 1648.38 | 1903 | 1651.48 | 1902.37 | 1653.33 | 1902 | 1655.36 | 1901.6 | 1658.64 | 1901 |
| 1682.33 | 1901 | 1682.83 | 1900.94 | 1686.95 | 1900.46 | 1687.04 | 1900.46 | 1687.61 | 1900.43 |
| 1688.26 | 1900.39 | 1688.43 | 1900.38 | 1688.72 | 1900.37 | 1689.14 | 1900.35 | 1692.53 | 1900 |
| 1696.04 | 1899.29 | 1697.44 | 1899.06 | 1697.82 | 1899 | 1735.7 | 1899 | 1742.26 | 1899.34 |
| 1756.72 | 1900 | 1757.33 | 1900 | 1760.89 | 1900.01 | 1765.84 | 1900.01 | 1766.07 | 1900 |
| 1766.56 | 1900 | 1767.48 | 1900.01 | 1780.04 | 1900.01 | 1782.73 | 1900.03 | 1782.74 | 1900.03 |
| 1791.08 | 1900.04 | 1791.86 | 1900.04 | 1806.05 | 1900.01 | 1808.68 | 1900.01 | 1808.99 | 1900.02 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1810.02 | 1900.03 | 1810.11 | 1900.04 | 1810.45 | 1900.04 | 1810.7 | 1900.05 | 1810.91 | 1900.05 |
| 1811.35 | 1900.06 | 1812.12 | 1900.08 | 1812.98 | 1900.1 | 1814.21 | 1900.13 | 1815.71 | 1900.18 |
| 1817.59 | 1900.23 | 1823.96 | 1900.42 | 1838.24 | 1900.84 | 1842.91 | 1901 | 1994.51 | 1901 |
| 1995.65 | 1901.12 | 2007.44 | 1902 | 2008.92 | 1902 | 2014.86 | 1902.51 | 2015.2 | 1902.55 |
| 2015.64 | 1902.6 | 2016.13 | 1902.64 | 2016.61 | 1902.67 | 2016.98 | 1902.69 | 2017.1 | 1902.7 |
| 2017.66 | 1902.73 | 2018.13 | 1902.75 | 2019.67 | 1902.75 | 2020.03 | 1902.74 | 2020.31 | 1902.73 |
| 2020.9 | 1902.69 | 2021.77 | 1902.6 | 2021.97 | 1902.59 | 2022.09 | 1902.58 | 2022.15 | 1902.57 |
| 2022.21 | 1902.57 | 2022.32 | 1902.55 | 2022.48 | 1902.53 | 2022.67 | 1902.49 | 2025.17 | 1902 |
| 2027.73 | 1901.49 | 2030.91 | 1901 | 2033.07 | 1901 | 2034.74 | 1901.01 | 2036.57 | 1901.01 |
| 2039.17 | 1901.03 | 2043.67 | 1901.03 | 2046.84 | 1901.04 | 2057.32 | 1901.04 | 2060.88 | 1901.03 |
| 2069.06 | 1901.01 | 2072.8 | 1901 | 2074.56 | 1901 | 2087.88 | 1900.99 | 2103.66 | 1900.99 |
| 2109.78 | 1901 | 2125.77 | 1901 | 2138.02 | 1901.23 | 2145.45 | 1901.33 | 2154.81 | 1901.49 |
| 2181.24 | 1901.94 | 2183.32 | 1901.97 | 2184.69 | 1902 | 2184.95 | 1902 | 2205.18 | 1902.74 |
| 2208.72 | 1902.83 | 2213.25 | 1903 | 2243.5 | 1903 | 2244.21 | 1902.91 | 2248.25 | 1902.41 |
| 2251.82 | 1902 | 2254.74 | 1901.13 | 2255.09 | 1901.03 | 2255.19 | 1901 | 2255.32 | 1900.96 |
| 2258.69 | 1900 | 2268.28 | 1899.98 | 2272.6 | 1899.97 | 2272.95 | 1899.97 | 2292.52 | 1899.94 |
| 2293.64 | 1899.93 | 2294.86 | 1899.93 | 2304.71 | 1899.95 | 2311.87 | 1899.97 | 2315.59 | 1899.97 |
| 2331.1 | 1899.99 | 2331.99 | 1900 | 2332.25 | 1900 | 2338.29 | 1900.04 | 2354.35 | 1900.13 |
| 2360.12 | 1900.16 | 2440.52 | 1901 | 2602.39 | 1901 | 2606.44 | 1901.02 | 2616.15 | 1901.06 |
| 2620.02 | 1901.07 | 2620.78 | 1901.07 | 2622.11 | 1901.08 | 2622.19 | 1901.08 | 2623.39 | 1901.09 |
| 2623.63 | 1901.09 | 2625.33 | 1901.1 | 2626.44 | 1901.1 | 2675.02 | 1901 | 2912.4 | 1901 |
| 2950.21 | 1900.97 | 2965.95 | 1900.98 | 2992.54 | 1900.98 | 2993.36 | 1900.97 | 2996.14 | 1900.99 |
| 2996.29 | 1900.99 | 2996.51 | 1900.98 | 2997.47 | 1900.98 | 3000.18 | 1901 | 3004.26 | 1901.6 |
| 3006.03 | 1902 | 3010.14 | 1903 | 3010.26 | 1903 | 3010.79 | 1903.01 | 3011.13 | 1903 |
| 3011.6 | 1903 | 3011.95 | 1902.98 | 3012.11 | 1902.98 | 3018.17 | 1902.76 | 3018.28 | 1902.76 |
| 3027.01 | 1902.67 | 3054.13 | 1902.25 | 3062.42 | 1902.11 | 3067.96 | 1902 | 3068.15 | 1902 |
| 3072.96 | 1901.43 | 3076.58 | 1901 | 3078.96 | 1900.76 | 3079.16 | 1900.74 | 3086.83 | 1900 |
| 3137.41 | 1900 | 3144.16 | 1900.31 | 3160.58 | 1901 | 3396.34 | 1901 | 3396.45 | 1901 |
| 3404.94 | 1901.25 | 3405.04 | 1901.25 | 3406.37 | 1901.3 | 3406.64 | 1901.31 | 3420.64 | 1901.78 |
| 3421.01 | 1901.79 | 3422.97 | 1901.86 | 3423.27 | 1901.87 | 3425.56 | 1901.94 | 3427.08 | 1902 |
| 3430.08 | 1902.18 | 3443.51 | 1903 | 3448.16 | 1903 | 3454.6 | 1903 | 3459.52 | 1902.64 |
| 3467.89 | 1902 | 3476.64 | 1901.89 | 3476.76 | 1901.89 | 3476.88 | 1901.89 | 3492.49 | 1901.47 |
| 3509.68 | 1901.01 | 3510 | 1901.01 | 3511.21 | 1901.01 | 3516.3 | 1901.01 | 3516.34 | 1901.01 |
| 3517.04 | 1901.01 | 3517.28 | 1901.01 | 3518.87 | 1901.01 | 3524.69 | 1901.01 | 3524.71 | 1901.01 |
| 3524.91 | 1901.01 | 3532.43 | 1901.01 | 3532.45 | 1901.01 | 3532.57 | 1901.01 | 3533.01 | 1901.01 |
| 3533.02 | 1901.01 | 3533.1 | 1901.01 | 3533.11 | 1901.01 | 3533.14 | 1901.01 | 3535 | 1901.01 |
| 3535.04 | 1901.01 | 3536.57 | 1901.01 | 3536.59 | 1901.01 | 3536.65 | 1901.01 | 3546.21 | 1901.01 |
| 3574.57 | 1901 | 3579.19 | 1901 | 3590.41 | 1901 | 3590.66 | 1901 | 3590.79 | 1901 |
| 3590.8 | 1901 | 3590.86 | 1901 | 3591.02 | 1901 | 3591.6 | 1901 | 3592.1 | 1901 |
| 3594.05 | 1901 | 3623.1 | 1901 | 3633.15 | 1901 | 3655.28 | 1901 | 3669.3 | 1901 |
| 3670.94 | 1901 | 3671.3 | 1901 | 3671.98 | 1901 | 3672.5 | 1901 | 3676.42 | 1901 |
| 3678.39 | 1901 | 3678.74 | 1901 | 3688 | 1901 | 3696.7 | 1901 | 3700.84 | 1901 |
| 3712.5 | 1901 | 3713.26 | 1901 | 3713.94 | 1901 | 3714.62 | 1901 | 3715.13 | 1901 |
| 3717.25 | 1901 | 3717.98 | 1901 | 3718.21 | 1901 | 3720.2 | 1901 | 3724.22 | 1901.39 |
| 3726.26 | 1901.58 | 3727.75 | 1901.73 | 3730.66 | 1902 | 3734.11 | 1902 | 3735.34 | 1902 |
| 3736.03 | 1902 | 3736.47 | 1902 | 3737.02 | 1902 | 3738.46 | 1902 | 3743.49 | 1901.02 |
| 3743.63 | 1901 | 3749.92 | 1900.1 | 3750.52 | 1900 | 3779.38 | 1899.48 | 3800.96 | 1899.1 |
| 3803.65 | 1899.05 | 3806.67 | 1899 | 3807.49 | 1899 | 3807.79 | 1899 | 3816.52 | 1899 |
| 3816.97 | 1899 | 3818.54 | 1899 | 3822.97 | 1899.03 | 3825.15 | 1899.04 | 3833.31 | 1899.11 |
| 3834.34 | 1899.1 | 3837.24 | 1899.09 | 3838.94 | 1899.08 | 3852.95 | 1899.56 | 3853.13 | 1899.53 |
| 3853.35 | 1899.51 | 3853.55 | 1899.49 | 3853.71 | 1899.49 | 3853.82 | 1899.49 | 3853.87 | 1899.5 |
| 3853.9 | 1899.5 | 3853.98 | 1899.51 | 3856.23 | 1900 | 3858.33 | 1900.36 | 3862.11 | 1901 |
| 3866.26 | 1901.69 | 3868.09 | 1902 | 3870.73 | 1902.94 | 3870.81 | 1903 | 3871.02 | 1903.13 |
| 3872.39 | 1904 | 3873.14 | 1904.43 | 3873.9 | 1905 | 3875.09 | 1905.88 | 3875.25 | 1906 |
| 3875.38 | 1906.1 | 3876.6 | 1907 | 3876.94 | 1907.67 | 3877.1 | 1908 | 3877.43 | 1908.73 |
| 3877.54 | 1909 | 3877.94 | 1909.89 | 3877.99 | 1910 | 3878.01 | 1910.05 | 3878.44 | 1911 |
| 3878.64 | 1911.46 | 3878.95 | 1912 | 3879.2 | 1912.61 | 3879.44 | 1913 | 3879.76 | 1913.94 |
| 3879.79 | 1914 | 3880.05 | 1914.41 | 3880.43 | 1915 | 3880.46 | 1915.08 | 3880.99 | 1916 |
| 3881.12 | 1916.31 | 3881.46 | 1917 | 3881.95 | 1917.75 | 3882.06 | 1918 | 3882.44 | 1918.17 |
| 3883.09 | 1919 | 3887.91 | 1919.99 | 3887.97 | 1920 | 3888.09 | 1920.02 | 3893.34 | 1921 |
| 3902.55 | 1921.01 | 3902.74 | 1921.01 | 3903.03 | 1921.01 | 3903.21 | 1921.01 | 3903.23 | 1921.01 |
| 3903.3 | 1921.01 | 3903.31 | 1921.01 | 3903.43 | 1921.01 | 3903.45 | 1921.01 | 3903.69 | 1921.01 |
| 3903.73 | 1921.01 | 3904.11 | 1921 | 3904.2 | 1921 | 3908.37 | 1921 | 3908.59 | 1921 |
| 3909.08 | 1921 | 3909.37 | 1921 | 3910.06 | 1921 | 3916.15 | 1921 | 3916.36 | 1921 |
| 3917.03 | 1921 | 3917.26 | 1921 | 3918.01 | 1921 | 3918.04 | 1921 | 3918.27 | 1921 |
| 3919.02 | 1921 | 3919.25 | 1921 | 3919.95 | 1921 | 3919.96 | 1921 | 3920.13 | 1921 |
| 3920.62 | 1921 | 3920.73 | 1921 | 3921.03 | 1921 | 3921.05 | 1921 | 3921.12 | 1921 |
| 3921.28 | 1921 | 3921.32 | 1921 | 3921.39 | 1921 | 3921.43 | 1921 | 3921.45 | 1921 |
| 3921.48 | 1921 | 3921.55 | 1921 | 3921.58 | 1921 | 3921.67 | 1921 | 3921.73 | 1921 |
| 3921.86 | 1921 | 3921.95 | 1921 | 3922.06 | 1921 | 3922.25 | 1921 | 3922.37 | 1921 |
| 3922.76 | 1921.01 | 3923.16 | 1921.01 | 3923.94 | 1921.01 | 3940.24 | 1921.16 | 3975.12 | 1921.63 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 3975.12 | .045 |

| Bank Sta: Left | Right | Lengths: Left Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|
| 0 | 3975.12 | 153.58 | 153.58 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1903.34 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.11 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1903.23 | Reach Len. (ft) | 153.58 | 153.58 | 153.58 | |
| Crit W.S. (ft) | | Flow Area (sq ft) | | 8336.74 | | |
| E.G. Slope (ft/ft) | 0.001708 | Area (sq ft) | | 8336.74 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 3598.63 | Top Width (ft) | | 3598.63 | | |

| | | | | | |
|---|---|---|---|---|---|
| Vel Total (ft/s) | 2.69 | Avg. Vel. (ft/s) | | 2.69 | |
| Max Chl Dpth (ft) | 4.23 | Hydr. Depth (ft) | | 2.32 | |
| Conv. Total (cfs) | 541952.4 | Conv. (cfs) | | 541952.4 | |
| Length Wtd. (ft) | 153.58 | Wetted Per. (ft) | | 3601.24 | |
| Min Ch El (ft) | 1899.00 | Shear (lb/sq ft) | | 0.25 | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 3975.12 | 0.00 | 0.00 |
| Frctn Loss (ft) | 0.42 | Cum Volume (acre-ft) | | 23.35 | |
| C & E Loss (ft) | 0.02 | Cum SA (acres) | | 10.12 | |

Warning: Divided flow computed for this cross-section.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.

CROSS SECTION

RIVER: MOJAVE
REACH: MOJAVE RS: -19898.9

INPUT
Description:
Station Elevation Data num= 461

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1904 | 1228.16 | 1902.93 | 1229.54 | 1903 | 1230.19 | 1903.04 | 1230.67 | 1903.05 |
| 1231.67 | 1903.08 | 1232.27 | 1903.08 | 1233.18 | 1903.06 | 1234.64 | 1903.02 | 1235.03 | 1903.05 |
| 1235.04 | 1903.05 | 1235.71 | 1903 | 1239.22 | 1902.85 | 1239.56 | 1902.84 | 1239.74 | 1902.83 |
| 1239.94 | 1902.82 | 1240.16 | 1902.81 | 1240.43 | 1902.79 | 1241.32 | 1902.74 | 1241.69 | 1902.72 |
| 1242.49 | 1902.66 | 1246.83 | 1902.29 | 1248.33 | 1902.18 | 1248.55 | 1902.16 | 1248.73 | 1902.15 |
| 1249.64 | 1902.07 | 1250.54 | 1902 | 1250.71 | 1902 | 1250.79 | 1901.99 | 1251.44 | 1901.99 |
| 1259.02 | 1901.96 | 1265.5 | 1901.93 | 1276.59 | 1901.98 | 1279.87 | 1901.98 | 1280.7 | 1902 |
| 1284.68 | 1902.41 | 1284.92 | 1902.44 | 1285.2 | 1902.47 | 1285.63 | 1902.49 | 1286.04 | 1902.5 |
| 1286.56 | 1902.49 | 1286.82 | 1902.51 | 1287.16 | 1902.53 | 1287.58 | 1902.55 | 1288.03 | 1902.55 |
| 1291.04 | 1902.56 | 1291.49 | 1902.56 | 1291.91 | 1902.55 | 1292.24 | 1902.53 | 1292.53 | 1902.52 |
| 1292.83 | 1902.5 | 1293.03 | 1902.48 | 1293.8 | 1902.39 | 1294.05 | 1902.36 | 1294.28 | 1902.33 |
| 1296.65 | 1902 | 1297.79 | 1901.83 | 1299.19 | 1901.6 | 1299.8 | 1901.54 | 1300.6 | 1901.44 |
| 1301.81 | 1901.26 | 1303.49 | 1901 | 1306.21 | 1901 | 1316.35 | 1900.88 | 1328.18 | 1900.76 |
| 1329.09 | 1900.71 | 1330.06 | 1900.66 | 1336.07 | 1900.36 | 1336.95 | 1900.32 | 1340.37 | 1900.22 |
| 1343.26 | 1900 | 1344.01 | 1899.99 | 1344.5 | 1899.97 | 1350.9 | 1899.76 | 1351.62 | 1899.74 |
| 1367.62 | 1899.14 | 1367.97 | 1899.13 | 1370.16 | 1899 | 1371.31 | 1899 | 1400.51 | 1898.99 |
| 1416.57 | 1898.99 | 1427.61 | 1899 | 1436.9 | 1899 | 1452.16 | 1899.71 | 1452.35 | 1899.71 |
| 1452.54 | 1899.72 | 1452.72 | 1899.73 | 1454.29 | 1899.79 | 1456.36 | 1899.87 | 1456.61 | 1899.88 |
| 1456.75 | 1899.89 | 1460.02 | 1900 | 1468.03 | 1900.01 | 1472 | 1900.01 | 1478.08 | 1900 |
| 1478.34 | 1900 | 1479.17 | 1899.97 | 1479.86 | 1899.95 | 1480.29 | 1899.94 | 1481.09 | 1899.92 |
| 1481.76 | 1899.89 | 1482.02 | 1899.89 | 1487.14 | 1899.72 | 1490.72 | 1899.62 | 1497.46 | 1899.05 |
| 1497.7 | 1899.03 | 1498.18 | 1899 | 1501.92 | 1899 | 1527.77 | 1899.51 | 1550.29 | 1899.95 |
| 1552.77 | 1900 | 1555.83 | 1900.13 | 1556.07 | 1900.14 | 1560.48 | 1900.27 | 1575.67 | 1900.81 |
| 1583.1 | 1901 | 1727.84 | 1901 | 1728.15 | 1900.87 | 1729.96 | 1900 | 1730.8 | 1899.69 |
| 1732.53 | 1899 | 1776.05 | 1899 | 1835.55 | 1899.58 | 1839.59 | 1899.59 | 1845 | 1899.59 |
| 1847.97 | 1899.63 | 1848.88 | 1899.63 | 1861.45 | 1899.81 | 1862.01 | 1899.81 | 1862.64 | 1899.82 |
| 1875.76 | 1900 | 1888.21 | 1900.09 | 1918.69 | 1900.29 | 1924.23 | 1900.34 | 1944.44 | 1900.48 |
| 1945.43 | 1900.49 | 1946.57 | 1900.5 | 1958.8 | 1900.59 | 1959.97 | 1900.6 | 1961.24 | 1900.61 |
| 1963.11 | 1900.62 | 1976.55 | 1900.72 | 1977.2 | 1900.73 | 2002.36 | 1900.91 | 2004.82 | 1900.93 |
| 2014.81 | 1901 | 2334.92 | 1901 | 2336.35 | 1901 | 2356.04 | 1901 | 2365.83 | 1901 |
| 2373.51 | 1901 | 2383.21 | 1901 | 2390.41 | 1901 | 2390.55 | 1901 | 2390.83 | 1901 |
| 2391.01 | 1901 | 2408.61 | 1900.77 | 2411.85 | 1900.73 | 2465.94 | 1900 | 2466.27 | 1900 |
| 2466.35 | 1900 | 2467.2 | 1900 | 2468.04 | 1900 | 2468.91 | 1900 | 2469.54 | 1900 |
| 2470.16 | 1900 | 2470.38 | 1900 | 2470.48 | 1900 | 2470.95 | 1900 | 2472.83 | 1900 |
| 2483.66 | 1900 | 2490.31 | 1900 | 2499.54 | 1900 | 2499.86 | 1900 | 2500.31 | 1900 |
| 2500.54 | 1900 | 2501.64 | 1900 | 2502.12 | 1900 | 2502.62 | 1900 | 2502.68 | 1900 |
| 2503.05 | 1900 | 2505.45 | 1900 | 2505.49 | 1900 | 2505.94 | 1900 | 2506.19 | 1900 |
| 2506.37 | 1900 | 2507.58 | 1900 | 2514.22 | 1900 | 2520.81 | 1900 | 2521.17 | 1900 |
| 2521.53 | 1900 | 2524.65 | 1900 | 2525.77 | 1900 | 2529.83 | 1900 | 2530.86 | 1900 |
| 2532.23 | 1900 | 2536.21 | 1900 | 2539.82 | 1900 | 2541.79 | 1900 | 2549.92 | 1900 |
| 2560.43 | 1900.03 | 2569.69 | 1900.07 | 2573.13 | 1900.09 | 2576.56 | 1900.1 | 2586.23 | 1900.07 |
| 2599.78 | 1900 | 2602.24 | 1900 | 2614.06 | 1900 | 2615.16 | 1900 | 2615.28 | 1900 |
| 2615.29 | 1900 | 2619.5 | 1900 | 2623.15 | 1900 | 2624.94 | 1900 | 2625.47 | 1900 |
| 2626.94 | 1900 | 2630.17 | 1900 | 2631.06 | 1900 | 2634.73 | 1900 | 2638.42 | 1900 |
| 2638.49 | 1900 | 2638.53 | 1900 | 2638.55 | 1900 | 2638.59 | 1900 | 2638.65 | 1900 |
| 2638.79 | 1900 | 2639.04 | 1900 | 2639.13 | 1900 | 2644.92 | 1900.15 | 2645.04 | 1900.15 |
| 2645.24 | 1900.16 | 2656.54 | 1900.38 | 2657.12 | 1900.39 | 2657.77 | 1900.39 | 2660.35 | 1900.43 |
| 2661.09 | 1900.43 | 2662.54 | 1900.44 | 2669.88 | 1900.56 | 2670.69 | 1900.56 | 2671.15 | 1900.56 |
| 2671.61 | 1900.57 | 2675.09 | 1900.6 | 2675.86 | 1900.6 | 2676.36 | 1900.6 | 2676.76 | 1900.61 |
| 2677.05 | 1900.6 | 2677.39 | 1900.61 | 2677.55 | 1900.61 | 2677.82 | 1900.61 | 2677.89 | 1900.61 |
| 2677.94 | 1900.61 | 2678.16 | 1900.62 | 2678.26 | 1900.61 | 2678.45 | 1900.62 | 2694.69 | 1900.46 |
| 2704.38 | 1900.37 | 2708.19 | 1900.37 | 2709.85 | 1900.39 | 2709.99 | 1900.39 | 2712.28 | 1900.41 |
| 2788.02 | 1900.49 | 2799.96 | 1900.48 | 2863.58 | 1900.41 | 2863.68 | 1900.41 | 2876.37 | 1900.33 |
| 2877.48 | 1900.33 | 2897.25 | 1900.2 | 2926.26 | 1900 | 2926.28 | 1900 | 2926.29 | 1900 |
| 2926.31 | 1900 | 2926.32 | 1900 | 2926.46 | 1900 | 2926.6 | 1900 | 2926.63 | 1900 |
| 2926.65 | 1900 | 2926.67 | 1900 | 2933.91 | 1900.22 | 2938.79 | 1900.37 | 2948 | 1900.49 |
| 2954.69 | 1900.61 | 2967.64 | 1900.87 | 2969.74 | 1900.9 | 2970.66 | 1900.92 | 2971.68 | 1900.93 |
| 2972.12 | 1900.94 | 2977.03 | 1901 | 2977.13 | 1901 | 2977.75 | 1901 | 2977.76 | 1901 |
| 2978.47 | 1901 | 2978.48 | 1901 | 2979.13 | 1901 | 2979.62 | 1901 | 2979.99 | 1901 |
| 2980 | 1901 | 2981.94 | 1901 | 2982 | 1901 | 2986 | 1901 | 3003.82 | 1901 |
| 3014.84 | 1901 | 3015.31 | 1901 | 3037.49 | 1901 | 3046.98 | 1900.32 | 3049.15 | 1900.18 |
| 3049.71 | 1900.15 | 3050.09 | 1900.12 | 3050.23 | 1900.11 | 3052.06 | 1900 | 3058.77 | 1899.96 |
| 3061.36 | 1899.91 | 3075.32 | 1899.68 | 3076.25 | 1899.67 | 3076.28 | 1899.67 | 3076.35 | 1899.67 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3077.12 | 1899.66 | 3077.23 | 1899.66 | 3077.98 | 1899.65 | 3078.13 | 1899.65 | 3078.87 | 1899.64 |
| 3089.32 | 1899.55 | 3097.28 | 1899.49 | 3097.56 | 1899.49 | 3097.86 | 1899.49 | 3098.07 | 1899.49 |
| 3098.21 | 1899.49 | 3098.51 | 1899.49 | 3098.58 | 1899.49 | 3098.62 | 1899.49 | 3103.87 | 1899.44 |
| 3103.9 | 1899.44 | 3103.97 | 1899.45 | 3107.42 | 1899.42 | 3112.18 | 1899.4 | 3112.3 | 1899.4 |
| 3128.2 | 1899.43 | 3146.94 | 1899.47 | 3147.24 | 1899.47 | 3148.53 | 1899.49 | 3149.77 | 1899.5 |
| 3176.18 | 1899.64 | 3191.13 | 1899.71 | 3191.29 | 1899.71 | 3191.38 | 1899.71 | 3204.72 | 1899.67 |
| 3222.94 | 1899.61 | 3224.3 | 1899.6 | 3224.77 | 1899.59 | 3232.29 | 1899.6 | 3232.71 | 1899.59 |
| 3233.13 | 1899.59 | 3233.37 | 1899.59 | 3233.8 | 1899.59 | 3233.93 | 1899.59 | 3234.91 | 1899.58 |
| 3239.14 | 1899.57 | 3243.2 | 1899.56 | 3244.24 | 1899.55 | 3244.6 | 1899.55 | 3244.98 | 1899.55 |
| 3246.04 | 1899.55 | 3246.39 | 1899.54 | 3246.91 | 1899.54 | 3266.38 | 1899.36 | 3304.17 | 1899 |
| 3304.22 | 1899 | 3306.33 | 1899 | 3307.54 | 1899 | 3309.74 | 1899 | 3313.07 | 1899 |
| 3313.12 | 1899 | 3313.16 | 1899 | 3313.43 | 1899 | 3313.44 | 1899 | 3339.18 | 1899.01 |
| 3345.58 | 1899.01 | 3348.34 | 1899.01 | 3350.91 | 1899.01 | 3357.23 | 1899.01 | 3361.5 | 1899.01 |
| 3361.6 | 1899.01 | 3369.11 | 1899.81 | 3369.52 | 1899.79 | 3369.73 | 1899.78 | 3370.19 | 1899.82 |
| 3370.36 | 1899.81 | 3370.49 | 1899.81 | 3371.98 | 1899.91 | 3373.19 | 1900 | 3373.25 | 1900 |
| 3373.31 | 1900 | 3373.32 | 1900 | 3373.33 | 1900 | 3375.95 | 1900.4 | 3377.64 | 1900.66 |
| 3379.92 | 1901 | 3384.04 | 1901.63 | 3386.47 | 1902 | 3386.73 | 1902.15 | 3388.04 | 1902.94 |
| 3388.18 | 1903 | 3388.25 | 1903.06 | 3389.31 | 1904 | 3389.48 | 1904.16 | 3390.42 | 1905 |
| 3390.78 | 1905.32 | 3391.54 | 1906 | 3392 | 1906.41 | 3392.67 | 1907 | 3393.27 | 1907.79 |
| 3393.45 | 1908 | 3393.49 | 1908.15 | 3393.73 | 1909 | 3393.77 | 1909.14 | 3394.01 | 1910 |
| 3394.25 | 1910.87 | 3394.28 | 1911 | 3394.32 | 1911.14 | 3394.57 | 1912 | 3394.8 | 1912.83 |
| 3394.84 | 1913 | 3395.08 | 1913.88 | 3395.11 | 1914 | 3395.15 | 1914.12 | 3395.38 | 1915 |
| 3395.42 | 1915.16 | 3395.64 | 1916 | 3395.87 | 1916.88 | 3395.9 | 1917 | 3395.94 | 1917.12 |
| 3396.1 | 1918 | 3396.15 | 1918.19 | 3397.75 | 1919 | 3398.75 | 1919.1 | 3404.89 | 1920 |
| 3405.45 | 1920.06 | 3405.85 | 1920.1 | 3406.16 | 1920.13 | 3406.7 | 1920.18 | 3407.73 | 1920.27 |
| 3416.37 | 1921 | 3417.12 | 1921 | 3417.54 | 1921 | 3417.58 | 1921 | 3417.91 | 1921 |
| 3421.55 | 1921.08 | 3423 | 1921.11 | 3424.56 | 1921.14 | 3427.67 | 1921.21 | 3453.42 | 1921.88 |
| 3454.44 | 1921.9 | 3455.23 | 1921.92 | 3456.2 | 1921.95 | 3458.17 | 1922 | 3458.2 | 1922 |
| 3458.68 | 1922 | 3458.91 | 1922 | 3463.2 | 1922 | 3470.21 | 1922 | 3474.12 | 1922 |
| 3474.98 | 1922 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .045 | 0 | .04 | 3474.98 | .045 |

| Bank Sta: Left | Right | Coeff Contr. | Expan. |
|---|---|---|---|
| 0 | 3474.98 | .1 | .3 |

CROSS SECTION OUTPUT Profile #PF 1

| | | | | | | |
|---|---|---|---|---|---|---|
| E.G. Elev (ft) | 1902.90 | Element | Left OB | Channel | Right OB | |
| Vel Head (ft) | 0.32 | Wt. n-Val. | | 0.040 | | |
| W.S. Elev (ft) | 1902.58 | Reach Len. (ft) | | | | |
| Crit W.S. (ft) | 1901.75 | Flow Area (sq ft) | | 4909.37 | | |
| E.G. Slope (ft/ft) | 0.005002 | Area (sq ft) | | 4909.37 | | |
| Q Total (cfs) | 22400.00 | Flow (cfs) | | 22400.00 | | |
| Top Width (ft) | 2143.97 | Top Width (ft) | | 2143.97 | | |
| Vel Total (ft/s) | 4.56 | Avg. Vel. (ft/s) | | 4.56 | | |
| Max Chl Dpth (ft) | 3.59 | Hydr. Depth (ft) | | 2.29 | | |
| Conv. Total (cfs) | 316722.3 | Conv. (cfs) | | 316722.3 | | |
| Length Wtd. (ft) | | Wetted Per. (ft) | | 2145.11 | | |
| Min Ch El (ft) | 1898.99 | Shear (lb/sq ft) | | 0.71 | | |
| Alpha | 1.00 | Stream Power (lb/ft s) | 3474.98 | 0.00 | 0.00 | |
| Frctn Loss (ft) | | Cum Volume (acre-ft) | | | | |
| C & E Loss (ft) | | Cum SA (acres) | | | | |

SUMMARY OF MANNING'S N VALUES

River:MOJAVE

| Reach | River Sta. | n1 | n2 | n3 |
|---|---|---|---|---|
| MOJAVE | -0 | .045 | .04 | .045 |
| MOJAVE | -102.64 | .045 | .04 | .045 |
| MOJAVE | -213.85 | .045 | .04 | .045 |
| MOJAVE | -304.35 | .045 | .04 | .045 |
| MOJAVE | -389.51 | .045 | .04 | .045 |
| MOJAVE | -499.82 | .045 | .04 | .045 |
| MOJAVE | -558.26 | .045 | .04 | .045 |
| MOJAVE | -628.84 | .045 | .04 | .045 |
| MOJAVE | -786.82 | .045 | .04 | .045 |
| MOJAVE | -1003.92 | .045 | .04 | .045 |
| MOJAVE | -1259.11 | .045 | .04 | .045 |
| MOJAVE | -1504.11 | .045 | .04 | .045 |
| MOJAVE | -1759.33 | .045 | .04 | .045 |
| MOJAVE | -2039.63 | .045 | .04 | .045 |
| MOJAVE | -2275.69 | .045 | .04 | .045 |
| MOJAVE | -2419.17 | .045 | .04 | .045 |
| MOJAVE | -2581.62 | .045 | .04 | .045 |
| MOJAVE | -2820.45 | .045 | .04 | .045 |
| MOJAVE | -3038.99 | .045 | .04 | .045 |
| MOJAVE | -3287.31 | .045 | .04 | .045 |
| MOJAVE | -3669.8 | .045 | .04 | .045 |
| MOJAVE | -3946.09 | .045 | .04 | .045 |
| MOJAVE | -4152.74 | .045 | .04 | .045 |

| | | | | |
|---|---|---|---|---|
| MOJAVE | -4256.56 | .045 | .04 | .045 |
| MOJAVE | -4380.27 | .045 | .04 | .045 |
| MOJAVE | -4681.72 | .045 | .04 | .045 |
| MOJAVE | -4925.75 | .045 | .04 | .045 |
| MOJAVE | -5101.78 | .045 | .04 | .045 |
| MOJAVE | -5295.07 | .045 | .04 | .045 |
| MOJAVE | -5445.72 | .045 | .04 | .045 |
| MOJAVE | -5564.13 | .045 | .04 | .045 |
| MOJAVE | -5696.76 | .045 | .04 | .045 |
| MOJAVE | -5933.19 | .045 | .04 | .045 |
| MOJAVE | -6116.28 | .045 | .04 | .045 |
| MOJAVE | -6217.78 | .045 | .04 | .045 |
| MOJAVE | -6311.68 | .045 | .04 | .045 |
| MOJAVE | -6519.34 | .045 | .04 | .045 |
| MOJAVE | -6686.49 | .045 | .04 | .045 |
| MOJAVE | -6790.76 | .045 | .04 | .045 |
| MOJAVE | -6938.02 | .045 | .04 | .045 |
| MOJAVE | -6985.71 | .045 | .04 | .045 |
| MOJAVE | -7036.34 | .045 | .04 | .045 |
| MOJAVE | -7098.32 | .045 | .04 | .045 |
| MOJAVE | -7216.78 | .045 | .04 | .045 |
| MOJAVE | -7431.74 | .045 | .04 | .045 |
| MOJAVE | -7656.58 | .045 | .04 | .045 |
| MOJAVE | -7809.4 | .045 | .04 | .045 |
| MOJAVE | -7911.62 | .045 | .04 | .045 |
| MOJAVE | -7996.33 | .045 | .04 | .045 |
| MOJAVE | -8115.89 | .045 | .04 | .045 |
| MOJAVE | -8218.22 | .045 | .04 | .045 |
| MOJAVE | -8398.01 | .045 | .04 | .045 |
| MOJAVE | -8496.64 | .045 | .04 | .045 |
| MOJAVE | -8658.18 | .045 | .04 | .045 |
| MOJAVE | -8879.7 | .045 | .04 | .045 |
| MOJAVE | -9014.61 | .045 | .04 | .045 |
| MOJAVE | -9126.4 | .045 | .04 | .045 |
| MOJAVE | -9247.95 | .045 | .04 | .045 |
| MOJAVE | -9364.46 | .045 | .04 | .045 |
| MOJAVE | -9486.35 | .045 | .04 | .045 |
| MOJAVE | -9585.89 | .045 | .04 | .045 |
| MOJAVE | -9747.05 | .045 | .04 | .045 |
| MOJAVE | -9878.94 | .045 | .04 | .045 |
| MOJAVE | -9989.82 | .045 | .04 | .045 |
| MOJAVE | -10154.2 | .045 | .04 | .045 |
| MOJAVE | -10316.4 | .045 | .04 | .045 |
| MOJAVE | -10465.2 | .045 | .04 | .045 |
| MOJAVE | -10622.3 | .045 | .04 | .045 |
| MOJAVE | -10853.5 | .045 | .04 | .045 |
| MOJAVE | -11032.1 | .045 | .04 | .045 |
| MOJAVE | -11260.2 | .045 | .04 | .045 |
| MOJAVE | -11487.1 | .045 | .04 | .045 |
| MOJAVE | -11657.9 | .045 | .04 | .045 |
| MOJAVE | -12013.5 | .045 | .04 | .045 |
| MOJAVE | -12299.9 | .045 | .04 | .045 |
| MOJAVE | -12543.0 | .045 | .04 | .045 |
| MOJAVE | -12628.8 | .045 | .04 | .045 |
| MOJAVE | -12868.0 | .045 | .04 | .045 |
| MOJAVE | -13159.9 | .045 | .04 | .045 |
| MOJAVE | -13489.0 | .045 | .04 | .045 |
| MOJAVE | -13690.7 | .045 | .04 | .045 |
| MOJAVE | -13883.7 | .045 | .04 | .045 |
| MOJAVE | -14058.6 | .045 | .04 | .045 |
| MOJAVE | -14197.0 | .045 | .04 | .045 |
| MOJAVE | -14448.4 | .045 | .04 | .045 |
| MOJAVE | -14619.3 | .045 | .04 | .045 |
| MOJAVE | -14900.4 | .045 | .04 | .045 |
| MOJAVE | -15108.7 | .045 | .04 | .045 |
| MOJAVE | -15208.8 | .045 | .04 | .045 |
| MOJAVE | -15343.3 | .045 | .04 | .045 |
| MOJAVE | -15473.7 | .045 | .04 | .045 |
| MOJAVE | -15543.5 | .045 | .04 | .045 |
| MOJAVE | -15641.3 | .045 | .04 | .045 |
| MOJAVE | -15724.2 | .045 | .04 | .045 |
| MOJAVE | -15792.7 | .045 | .04 | .045 |
| MOJAVE | -15882.6 | .045 | .04 | .045 |
| MOJAVE | -15987.4 | .045 | .04 | .045 |
| MOJAVE | -16062.3 | .045 | .04 | .045 |
| MOJAVE | -16159.7 | .045 | .04 | .045 |
| MOJAVE | -16237.9 | .045 | .04 | .045 |
| MOJAVE | -16297.8 | .045 | .04 | .045 |
| MOJAVE | -16386.0 | .045 | .04 | .045 |
| MOJAVE | -16490.0 | .045 | .04 | .045 |
| MOJAVE | -16635.8 | .045 | .04 | .045 |
| MOJAVE | -16830.6 | .045 | .04 | .045 |
| MOJAVE | -16991.6 | .045 | .04 | .045 |
| MOJAVE | -17147.9 | .045 | .04 | .045 |
| MOJAVE | -17326.1 | .045 | .04 | .045 |
| MOJAVE | -17442.2 | .045 | .04 | .045 |
| MOJAVE | -17526.8 | .045 | .04 | .045 |
| MOJAVE | -17666.2 | .045 | .04 | .045 |

| | | | | |
|---|---|---|---|---|
| MOJAVE | -17764.6 | .045 | .04 | .045 |
| MOJAVE | -17875.5 | .045 | .04 | .045 |
| MOJAVE | -17913.4 | .045 | .04 | .045 |
| MOJAVE | -17982.7 | .045 | .04 | .045 |
| MOJAVE | -18087.4 | .045 | .04 | .045 |
| MOJAVE | -18260.2 | .045 | .04 | .045 |
| MOJAVE | -18357.1 | .045 | .04 | .045 |
| MOJAVE | -18445.0 | .045 | .04 | .045 |
| MOJAVE | -18538.7 | .045 | .04 | .045 |
| MOJAVE | -18694.0 | .045 | .04 | .045 |
| MOJAVE | -18843.3 | .045 | .04 | .045 |
| MOJAVE | -19001.7 | .045 | .04 | .045 |
| MOJAVE | -19204.9 | .045 | .04 | .045 |
| MOJAVE | -19378.1 | .045 | .04 | .045 |
| MOJAVE | -19589.1 | .045 | .04 | .045 |
| MOJAVE | -19745.3 | .045 | .04 | .045 |
| MOJAVE | -19898.9 | .045 | .04 | .045 |

SUMMARY OF REACH LENGTHS

River: MOJAVE

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| MOJAVE | -0 | 102.64 | 102.64 | 102.64 |
| MOJAVE | -102.64 | 111.21 | 111.21 | 111.21 |
| MOJAVE | -213.85 | 90.5 | 90.5 | 90.5 |
| MOJAVE | -304.35 | 85.16 | 85.16 | 85.16 |
| MOJAVE | -389.51 | 110.31 | 110.31 | 110.31 |
| MOJAVE | -499.82 | 58.44 | 58.44 | 58.44 |
| MOJAVE | -558.26 | 70.58 | 70.58 | 70.58 |
| MOJAVE | -628.84 | 157.98 | 157.98 | 157.98 |
| MOJAVE | -786.82 | 217.1 | 217.1 | 217.1 |
| MOJAVE | -1003.92 | 255.19 | 255.19 | 255.19 |
| MOJAVE | -1259.11 | 245 | 245 | 245 |
| MOJAVE | -1504.11 | 255.22 | 255.22 | 255.22 |
| MOJAVE | -1759.33 | 280.3 | 280.3 | 280.3 |
| MOJAVE | -2039.63 | 236.06 | 236.06 | 236.06 |
| MOJAVE | -2275.69 | 143.48 | 143.48 | 143.48 |
| MOJAVE | -2419.17 | 162.45 | 162.45 | 162.45 |
| MOJAVE | -2581.62 | 238.83 | 238.83 | 238.83 |
| MOJAVE | -2820.45 | 218.54 | 218.54 | 218.54 |
| MOJAVE | -3038.99 | 248.32 | 248.32 | 248.32 |
| MOJAVE | -3287.31 | 382.49 | 382.49 | 382.49 |
| MOJAVE | -3669.8 | 276.29 | 276.29 | 276.29 |
| MOJAVE | -3946.09 | 206.65 | 206.65 | 206.65 |
| MOJAVE | -4152.74 | 103.82 | 103.82 | 103.82 |
| MOJAVE | -4256.56 | 123.71 | 123.71 | 123.71 |
| MOJAVE | -4380.27 | 301.45 | 301.45 | 301.45 |
| MOJAVE | -4681.72 | 244.03 | 244.03 | 244.03 |
| MOJAVE | -4925.75 | 176.03 | 176.03 | 176.03 |
| MOJAVE | -5101.78 | 193.29 | 193.29 | 193.29 |
| MOJAVE | -5295.07 | 150.65 | 150.65 | 150.65 |
| MOJAVE | -5445.72 | 118.41 | 118.41 | 118.41 |
| MOJAVE | -5564.13 | 132.63 | 132.63 | 132.63 |
| MOJAVE | -5696.76 | 236.43 | 236.43 | 236.43 |
| MOJAVE | -5933.19 | 183.09 | 183.09 | 183.09 |
| MOJAVE | -6116.28 | 101.5 | 101.5 | 101.5 |
| MOJAVE | -6217.78 | 93.9 | 93.9 | 93.9 |
| MOJAVE | -6311.68 | 207.66 | 207.66 | 207.66 |
| MOJAVE | -6519.34 | 167.15 | 167.15 | 167.15 |
| MOJAVE | -6686.49 | 104.27 | 104.27 | 104.27 |
| MOJAVE | -6790.76 | 147.26 | 147.26 | 147.26 |
| MOJAVE | -6938.02 | 47.69 | 47.69 | 47.69 |
| MOJAVE | -6985.71 | 50.63 | 50.63 | 50.63 |
| MOJAVE | -7036.34 | 61.98 | 61.98 | 61.98 |
| MOJAVE | -7098.32 | 118.46 | 118.46 | 118.46 |
| MOJAVE | -7216.78 | 214.96 | 214.96 | 214.96 |
| MOJAVE | -7431.74 | 224.84 | 224.84 | 224.84 |
| MOJAVE | -7656.58 | 152.82 | 152.82 | 152.82 |
| MOJAVE | -7809.4 | 102.22 | 102.22 | 102.22 |
| MOJAVE | -7911.62 | 84.71 | 84.71 | 84.71 |
| MOJAVE | -7996.33 | 119.56 | 119.56 | 119.56 |
| MOJAVE | -8115.89 | 102.33 | 102.33 | 102.33 |
| MOJAVE | -8218.22 | 179.79 | 179.79 | 179.79 |
| MOJAVE | -8398.01 | 98.63 | 98.63 | 98.63 |
| MOJAVE | -8496.64 | 161.54 | 161.54 | 161.54 |
| MOJAVE | -8658.18 | 221.52 | 221.52 | 221.52 |
| MOJAVE | -8879.7 | 134.91 | 134.91 | 134.91 |
| MOJAVE | -9014.61 | 111.79 | 111.79 | 111.79 |
| MOJAVE | -9126.4 | 121.55 | 121.55 | 121.55 |
| MOJAVE | -9247.95 | 116.51 | 116.51 | 116.51 |
| MOJAVE | -9364.46 | 121.89 | 121.89 | 121.89 |
| MOJAVE | -9486.35 | 99.54 | 99.54 | 99.54 |
| MOJAVE | -9585.89 | 161.16 | 161.16 | 161.16 |

| | | | | |
|---|---|---|---|---|
| MOJAVE | -9747.05 | 131.89 | 131.89 | 131.89 |
| MOJAVE | -9878.94 | 110.88 | 110.88 | 110.88 |
| MOJAVE | -9989.82 | 164.39 | 164.39 | 164.39 |
| MOJAVE | -10154.2 | 162.2 | 162.2 | 162.2 |
| MOJAVE | -10316.4 | 148.82 | 148.82 | 148.82 |
| MOJAVE | -10465.2 | 157.11 | 157.11 | 157.11 |
| MOJAVE | -10622.3 | 231.16 | 231.16 | 231.16 |
| MOJAVE | -10853.5 | 178.64 | 178.64 | 178.64 |
| MOJAVE | -11032.1 | 228.13 | 228.13 | 228.13 |
| MOJAVE | -11260.2 | 226.83 | 226.83 | 226.83 |
| MOJAVE | -11487.1 | 170.89 | 170.89 | 170.89 |
| MOJAVE | -11657.9 | 355.58 | 355.58 | 355.58 |
| MOJAVE | -12013.5 | 286.4 | 286.4 | 286.4 |
| MOJAVE | -12299.9 | 243.05 | 243.05 | 243.05 |
| MOJAVE | -12543.0 | 85.86 | 85.86 | 85.86 |
| MOJAVE | -12628.8 | 239.2 | 239.2 | 239.2 |
| MOJAVE | -12868.0 | 291.82 | 291.82 | 291.82 |
| MOJAVE | -13159.9 | 329.18 | 329.18 | 329.18 |
| MOJAVE | -13489.0 | 201.71 | 201.71 | 201.71 |
| MOJAVE | -13690.7 | 192.98 | 192.98 | 192.98 |
| MOJAVE | -13883.7 | 174.9 | 174.9 | 174.9 |
| MOJAVE | -14058.6 | 138.34 | 138.34 | 138.34 |
| MOJAVE | -14197.0 | 251.45 | 251.45 | 251.45 |
| MOJAVE | -14448.4 | 170.92 | 170.92 | 170.92 |
| MOJAVE | -14619.3 | 281.06 | 281.06 | 281.06 |
| MOJAVE | -14900.4 | 208.31 | 208.31 | 208.31 |
| MOJAVE | -15108.7 | 100.05 | 100.05 | 100.05 |
| MOJAVE | -15208.8 | 134.51 | 134.51 | 134.51 |
| MOJAVE | -15343.3 | 130.44 | 130.44 | 130.44 |
| MOJAVE | -15473.7 | 69.83 | 69.83 | 69.83 |
| MOJAVE | -15543.5 | 97.76 | 97.76 | 97.76 |
| MOJAVE | -15641.3 | 82.86 | 82.86 | 82.86 |
| MOJAVE | -15724.2 | 68.5 | 68.5 | 68.5 |
| MOJAVE | -15792.7 | 89.96 | 89.96 | 89.96 |
| MOJAVE | -15882.6 | 104.77 | 104.77 | 104.77 |
| MOJAVE | -15987.4 | 74.87 | 74.87 | 74.87 |
| MOJAVE | -16062.3 | 97.47 | 97.47 | 97.47 |
| MOJAVE | -16159.7 | 78.15 | 78.15 | 78.15 |
| MOJAVE | -16237.9 | 59.93 | 59.93 | 59.93 |
| MOJAVE | -16297.8 | 88.24 | 88.24 | 88.24 |
| MOJAVE | -16386.0 | 103.96 | 103.96 | 103.96 |
| MOJAVE | -16490.0 | 145.78 | 145.78 | 145.78 |
| MOJAVE | -16635.8 | 194.81 | 194.81 | 194.81 |
| MOJAVE | -16830.6 | 160.97 | 160.97 | 160.97 |
| MOJAVE | -16991.6 | 156.29 | 156.29 | 156.29 |
| MOJAVE | -17147.9 | 178.24 | 178.24 | 178.24 |
| MOJAVE | -17326.1 | 116.07 | 116.07 | 116.07 |
| MOJAVE | -17442.2 | 84.68 | 84.68 | 84.68 |
| MOJAVE | -17526.8 | 139.39 | 139.39 | 139.39 |
| MOJAVE | -17666.2 | 98.38 | 98.38 | 98.38 |
| MOJAVE | -17764.6 | 110.89 | 110.89 | 110.89 |
| MOJAVE | -17875.5 | 37.92 | 37.92 | 37.92 |
| MOJAVE | -17913.4 | 69.26 | 69.26 | 69.26 |
| MOJAVE | -17982.7 | 104.69 | 104.69 | 104.69 |
| MOJAVE | -18087.4 | 172.85 | 172.85 | 172.85 |
| MOJAVE | -18260.2 | 96.87 | 96.87 | 96.87 |
| MOJAVE | -18357.1 | 87.88 | 87.88 | 87.88 |
| MOJAVE | -18445.0 | 93.71 | 93.71 | 93.71 |
| MOJAVE | -18538.7 | 155.33 | 155.33 | 155.33 |
| MOJAVE | -18694.0 | 149.26 | 149.26 | 149.26 |
| MOJAVE | -18843.3 | 158.46 | 158.46 | 158.46 |
| MOJAVE | -19001.7 | 203.21 | 203.21 | 203.21 |
| MOJAVE | -19204.9 | 173.2 | 173.2 | 173.2 |
| MOJAVE | -19378.1 | 210.95 | 210.95 | 210.95 |
| MOJAVE | -19589.1 | 156.22 | 156.22 | 156.22 |
| MOJAVE | -19745.3 | 153.58 | 153.58 | 153.58 |
| MOJAVE | -19898.9 | | | |

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS
River: MOJAVE

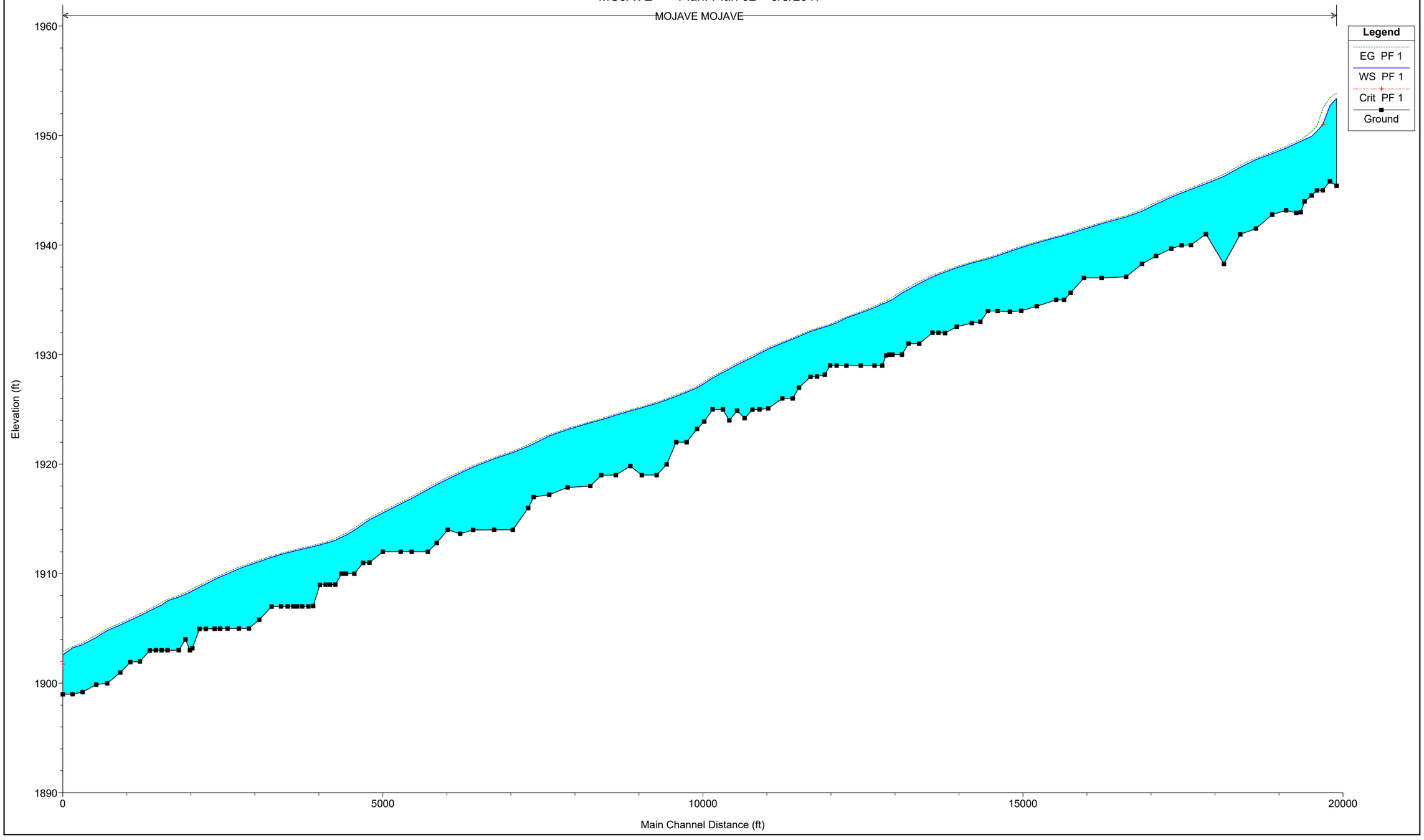
| Reach | River Sta. | Contr. | Expan. |
|---|---|---|---|
| MOJAVE | -0 | .1 | .3 |
| MOJAVE | -102.64 | .1 | .3 |
| MOJAVE | -213.85 | .1 | .3 |
| MOJAVE | -304.35 | .1 | .3 |
| MOJAVE | -389.51 | .1 | .3 |
| MOJAVE | -499.82 | .1 | .3 |
| MOJAVE | -558.26 | .1 | .3 |
| MOJAVE | -628.84 | .1 | .3 |
| MOJAVE | -786.82 | .1 | .3 |
| MOJAVE | -1003.92 | .1 | .3 |
| MOJAVE | -1259.11 | .1 | .3 |

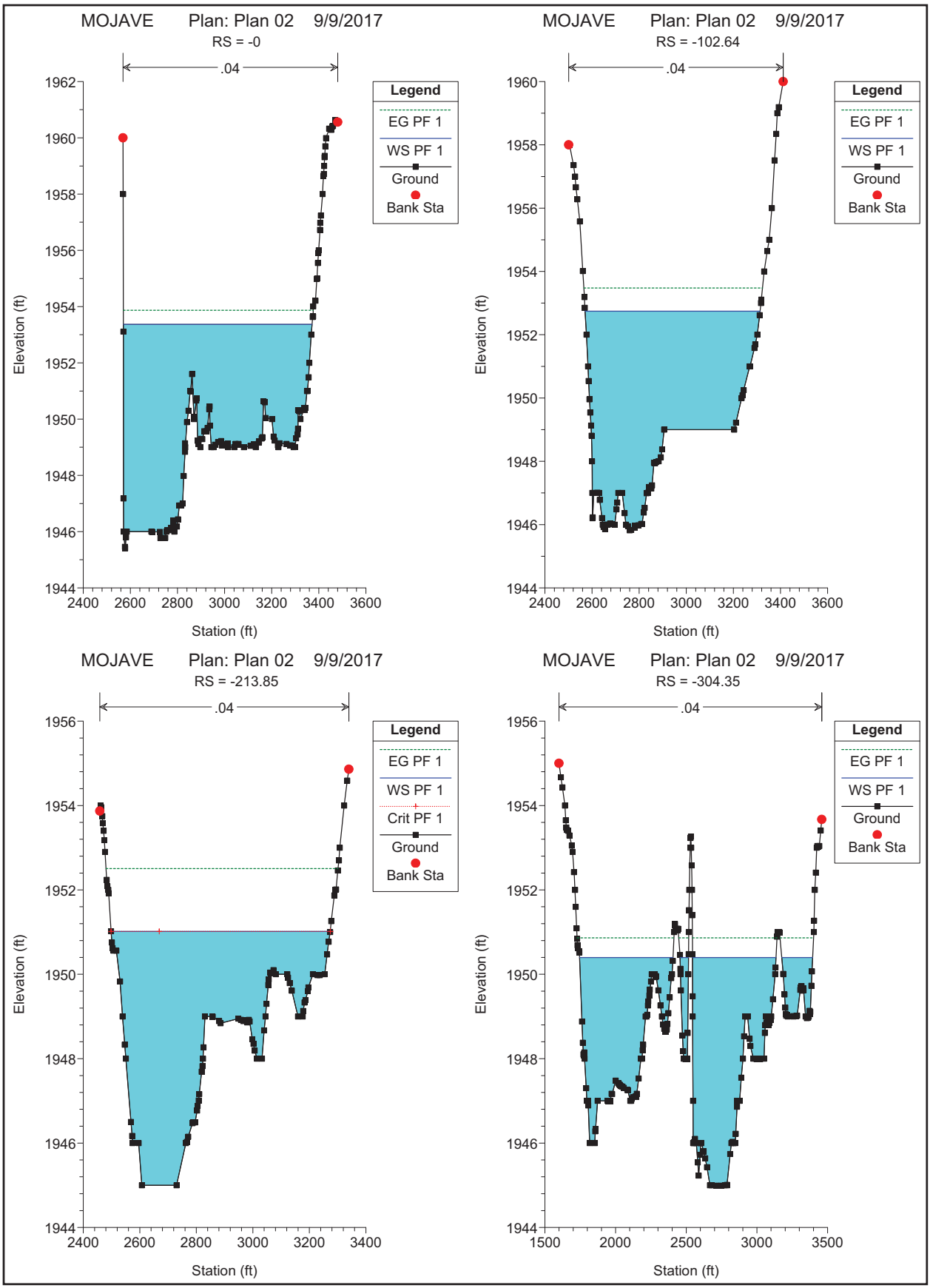
| | | | |
|---|---|---|---|
| MOJAVE | -1504.11 | .1 | .3 |
| MOJAVE | -1759.33 | .1 | .3 |
| MOJAVE | -2039.63 | .1 | .3 |
| MOJAVE | -2275.69 | .1 | .3 |
| MOJAVE | -2419.17 | .1 | .3 |
| MOJAVE | -2581.62 | .1 | .3 |
| MOJAVE | -2820.45 | .1 | .3 |
| MOJAVE | -3038.99 | .1 | .3 |
| MOJAVE | -3287.31 | .1 | .3 |
| MOJAVE | -3669.8 | .1 | .3 |
| MOJAVE | -3946.09 | .1 | .3 |
| MOJAVE | -4152.74 | .1 | .3 |
| MOJAVE | -4256.56 | .1 | .3 |
| MOJAVE | -4380.27 | .1 | .3 |
| MOJAVE | -4681.72 | .1 | .3 |
| MOJAVE | -4925.75 | .1 | .3 |
| MOJAVE | -5101.78 | .1 | .3 |
| MOJAVE | -5295.07 | .1 | .3 |
| MOJAVE | -5445.72 | .1 | .3 |
| MOJAVE | -5564.13 | .1 | .3 |
| MOJAVE | -5696.76 | .1 | .3 |
| MOJAVE | -5933.19 | .1 | .3 |
| MOJAVE | -6116.28 | .1 | .3 |
| MOJAVE | -6217.78 | .1 | .3 |
| MOJAVE | -6311.68 | .1 | .3 |
| MOJAVE | -6519.34 | .1 | .3 |
| MOJAVE | -6686.49 | .1 | .3 |
| MOJAVE | -6790.76 | .1 | .3 |
| MOJAVE | -6938.02 | .1 | .3 |
| MOJAVE | -6985.71 | .1 | .3 |
| MOJAVE | -7036.34 | .1 | .3 |
| MOJAVE | -7098.32 | .1 | .3 |
| MOJAVE | -7216.78 | .1 | .3 |
| MOJAVE | -7431.74 | .1 | .3 |
| MOJAVE | -7656.58 | .1 | .3 |
| MOJAVE | -7809.4 | .1 | .3 |
| MOJAVE | -7911.62 | .1 | .3 |
| MOJAVE | -7996.33 | .1 | .3 |
| MOJAVE | -8115.89 | .1 | .3 |
| MOJAVE | -8218.22 | .1 | .3 |
| MOJAVE | -8398.01 | .1 | .3 |
| MOJAVE | -8496.64 | .1 | .3 |
| MOJAVE | -8658.18 | .1 | .3 |
| MOJAVE | -8879.7 | .1 | .3 |
| MOJAVE | -9014.61 | .1 | .3 |
| MOJAVE | -9126.4 | .1 | .3 |
| MOJAVE | -9247.95 | .1 | .3 |
| MOJAVE | -9364.46 | .1 | .3 |
| MOJAVE | -9486.35 | .1 | .3 |
| MOJAVE | -9585.89 | .1 | .3 |
| MOJAVE | -9747.05 | .1 | .3 |
| MOJAVE | -9878.94 | .1 | .3 |
| MOJAVE | -9989.82 | .1 | .3 |
| MOJAVE | -10154.2 | .1 | .3 |
| MOJAVE | -10316.4 | .1 | .3 |
| MOJAVE | -10465.2 | .1 | .3 |
| MOJAVE | -10622.3 | .1 | .3 |
| MOJAVE | -10853.5 | .1 | .3 |
| MOJAVE | -11032.1 | .1 | .3 |
| MOJAVE | -11260.2 | .1 | .3 |
| MOJAVE | -11487.1 | .1 | .3 |
| MOJAVE | -11657.9 | .1 | .3 |
| MOJAVE | -12013.5 | .1 | .3 |
| MOJAVE | -12299.9 | .1 | .3 |
| MOJAVE | -12543.0 | .1 | .3 |
| MOJAVE | -12628.8 | .1 | .3 |
| MOJAVE | -12868.0 | .1 | .3 |
| MOJAVE | -13159.9 | .1 | .3 |
| MOJAVE | -13489.0 | .1 | .3 |
| MOJAVE | -13690.7 | .1 | .3 |
| MOJAVE | -13883.7 | .1 | .3 |
| MOJAVE | -14058.6 | .1 | .3 |
| MOJAVE | -14197.0 | .1 | .3 |
| MOJAVE | -14448.4 | .1 | .3 |
| MOJAVE | -14619.3 | .1 | .3 |
| MOJAVE | -14900.4 | .1 | .3 |
| MOJAVE | -15108.7 | .1 | .3 |
| MOJAVE | -15208.8 | .1 | .3 |
| MOJAVE | -15343.3 | .1 | .3 |
| MOJAVE | -15473.7 | .1 | .3 |
| MOJAVE | -15543.5 | .1 | .3 |
| MOJAVE | -15641.3 | .1 | .3 |
| MOJAVE | -15724.2 | .1 | .3 |
| MOJAVE | -15792.7 | .1 | .3 |
| MOJAVE | -15882.6 | .1 | .3 |
| MOJAVE | -15987.4 | .1 | .3 |
| MOJAVE | -16062.3 | .1 | .3 |
| MOJAVE | -16159.7 | .1 | .3 |

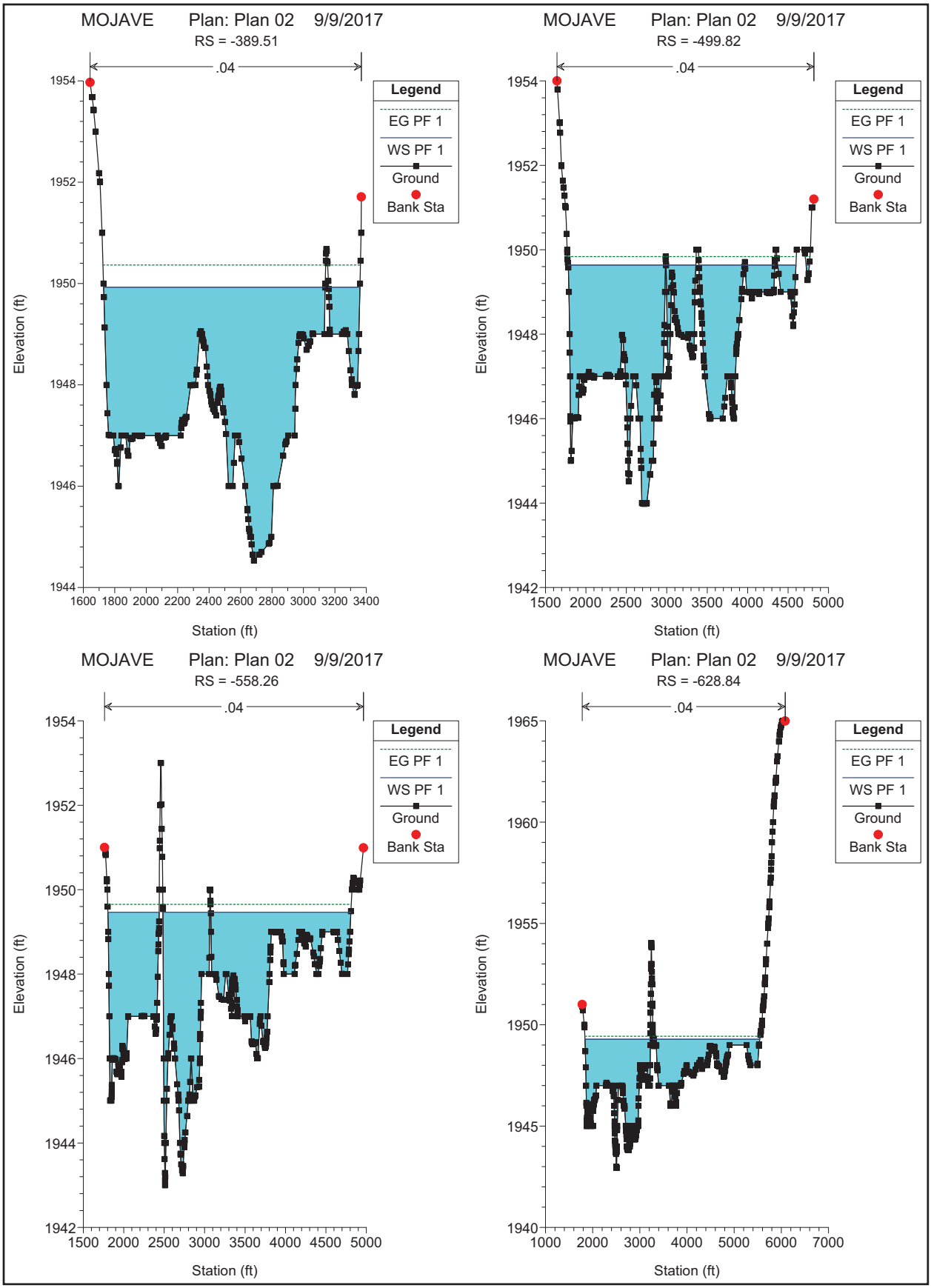
| | | | |
|---|---|---|---|
| MOJAVE | -16237.9 | .1 | .3 |
| MOJAVE | -16297.8 | .1 | .3 |
| MOJAVE | -16386.0 | .1 | .3 |
| MOJAVE | -16490.0 | .1 | .3 |
| MOJAVE | -16635.8 | .1 | .3 |
| MOJAVE | -16830.6 | .1 | .3 |
| MOJAVE | -16991.6 | .1 | .3 |
| MOJAVE | -17147.9 | .1 | .3 |
| MOJAVE | -17326.1 | .1 | .3 |
| MOJAVE | -17442.2 | .1 | .3 |
| MOJAVE | -17526.8 | .1 | .3 |
| MOJAVE | -17666.2 | .1 | .3 |
| MOJAVE | -17764.6 | .1 | .3 |
| MOJAVE | -17875.5 | .1 | .3 |
| MOJAVE | -17913.4 | .1 | .3 |
| MOJAVE | -17982.7 | .1 | .3 |
| MOJAVE | -18087.4 | .1 | .3 |
| MOJAVE | -18260.2 | .1 | .3 |
| MOJAVE | -18357.1 | .1 | .3 |
| MOJAVE | -18445.0 | .1 | .3 |
| MOJAVE | -18538.7 | .1 | .3 |
| MOJAVE | -18694.0 | .1 | .3 |
| MOJAVE | -18843.3 | .1 | .3 |
| MOJAVE | -19001.7 | .1 | .3 |
| MOJAVE | -19204.9 | .1 | .3 |
| MOJAVE | -19378.1 | .1 | .3 |
| MOJAVE | -19589.1 | .1 | .3 |
| MOJAVE | -19745.3 | .1 | .3 |
| MOJAVE | -19898.9 | .1 | .3 |

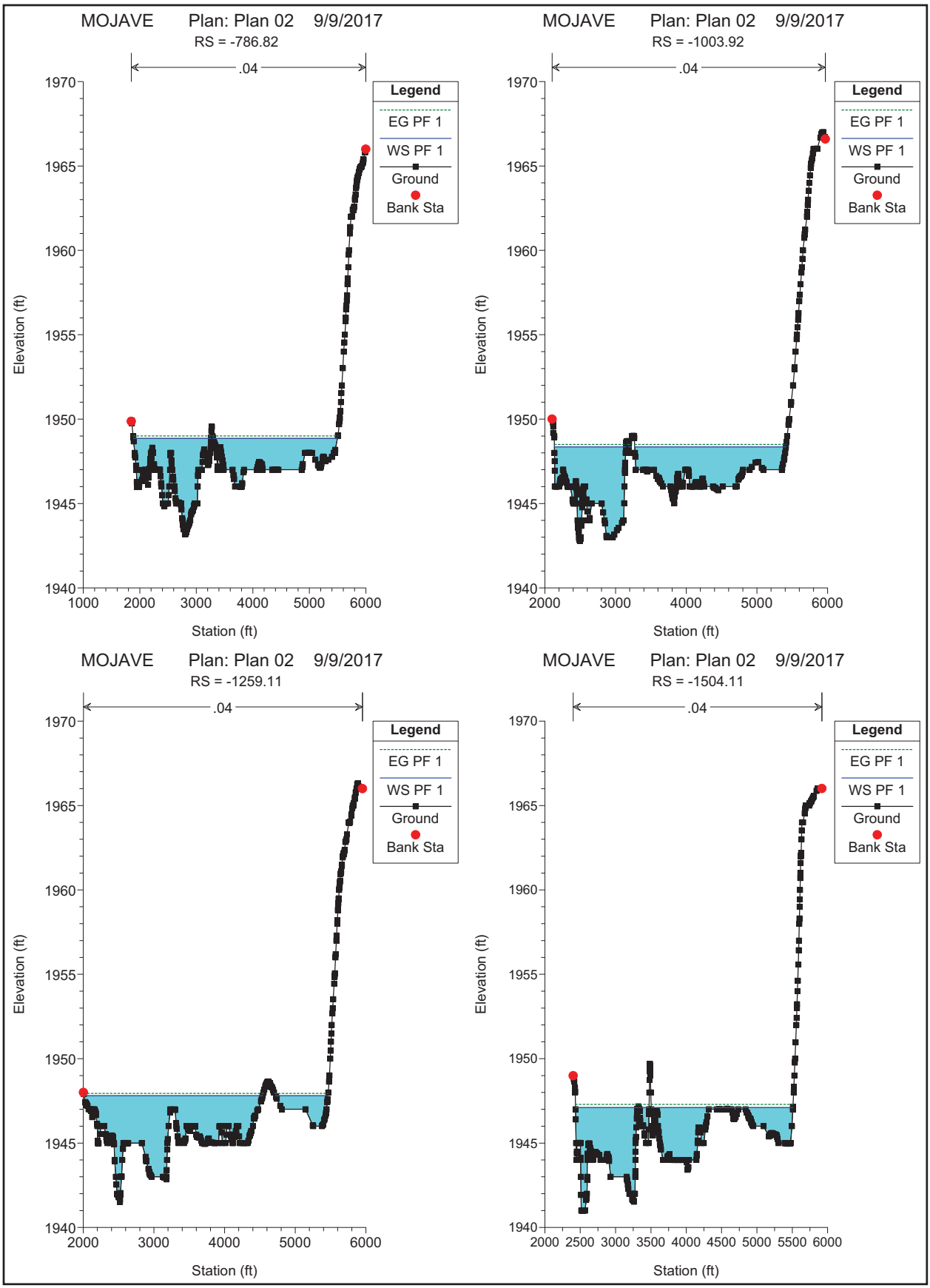
MOJAVE Plan: Plan 02 9/9/2017

MOJAVE MOJAVE




MOJAVE Plan: Plan 02 9/9/2017
RS = -0
.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -102.64
.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -213.85
.04
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -304.35
.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)


MOJAVE Plan: Plan 02 9/9/2017
RS = -389.51
.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -499.82
.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -558.26
.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -628.84
.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)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WS PF 1
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Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -1003.92
.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -1259.11
.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -1504.11
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Legend
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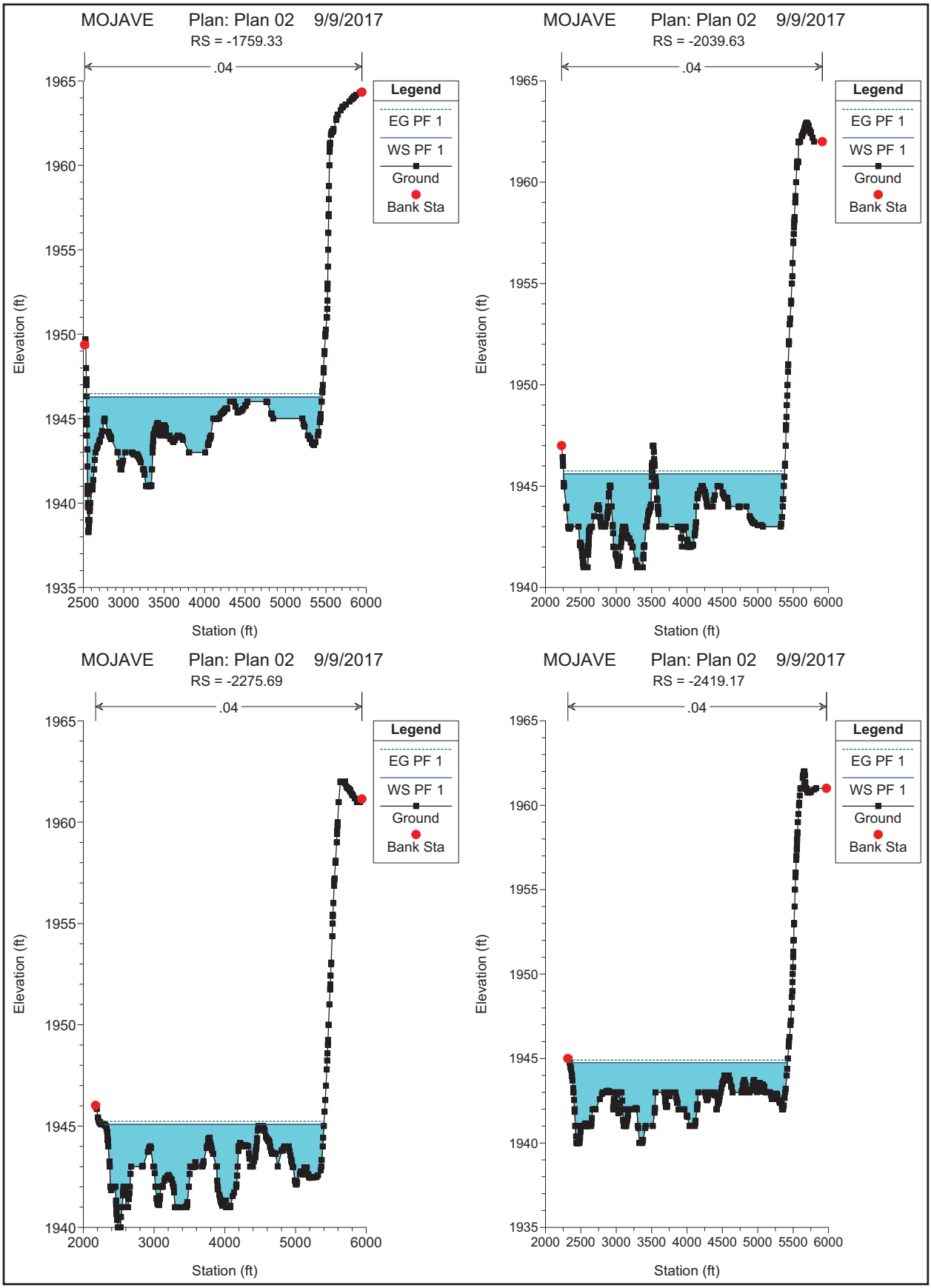
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)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Station (ft)
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RS = -2039.63
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Legend
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -2275.69
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Ground
Bank Sta
Elevation (ft)
Station (ft)
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RS = -2419.17
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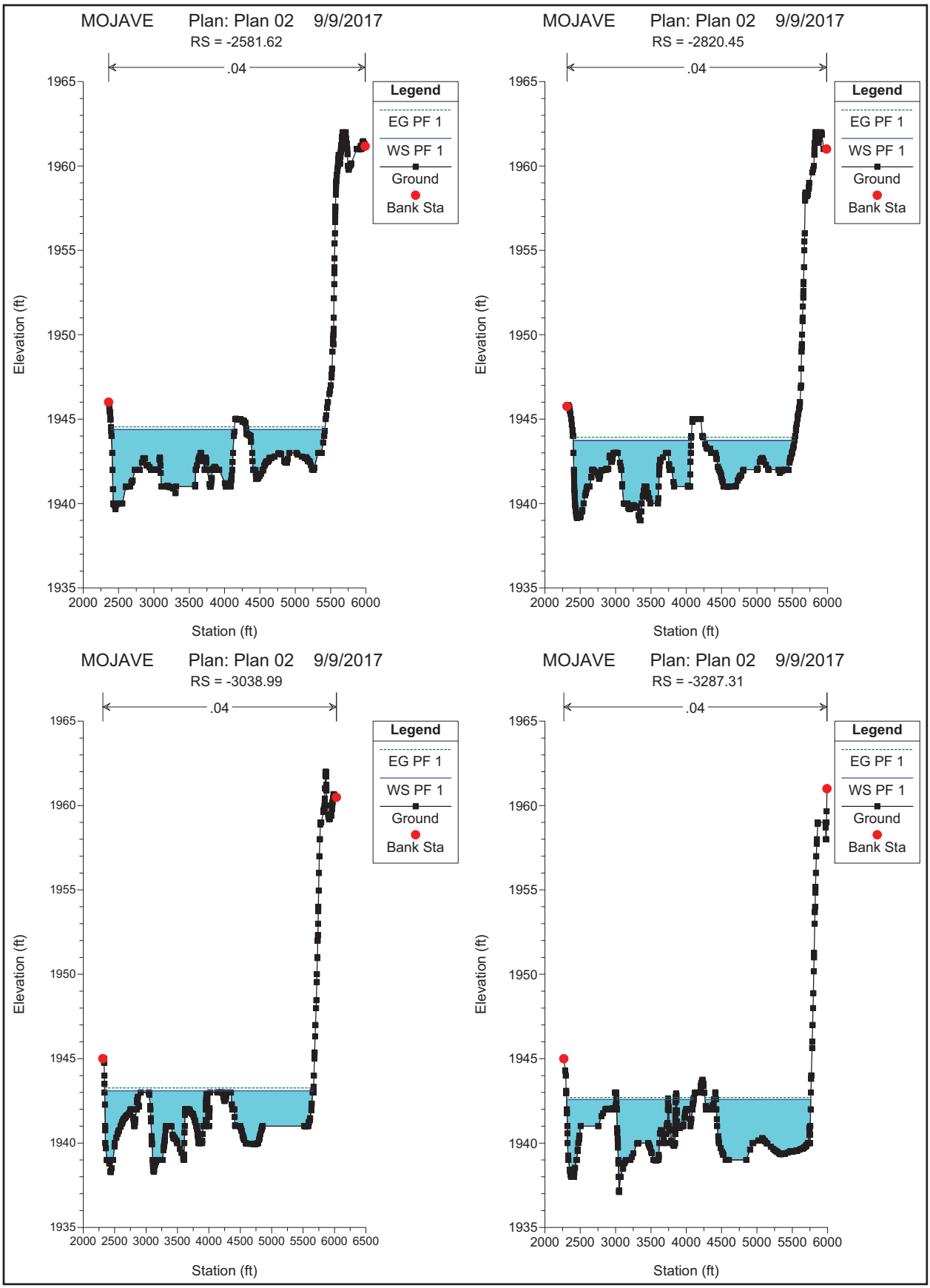
Bank Sta
Elevation (ft)
Station (ft)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MOJAVE Plan: Plan 02 9/9/2017
RS = -2820.45
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Legend
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -3038.99
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Legend
EG PF 1
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Ground
Bank Sta
Elevation (ft)
Station (ft)
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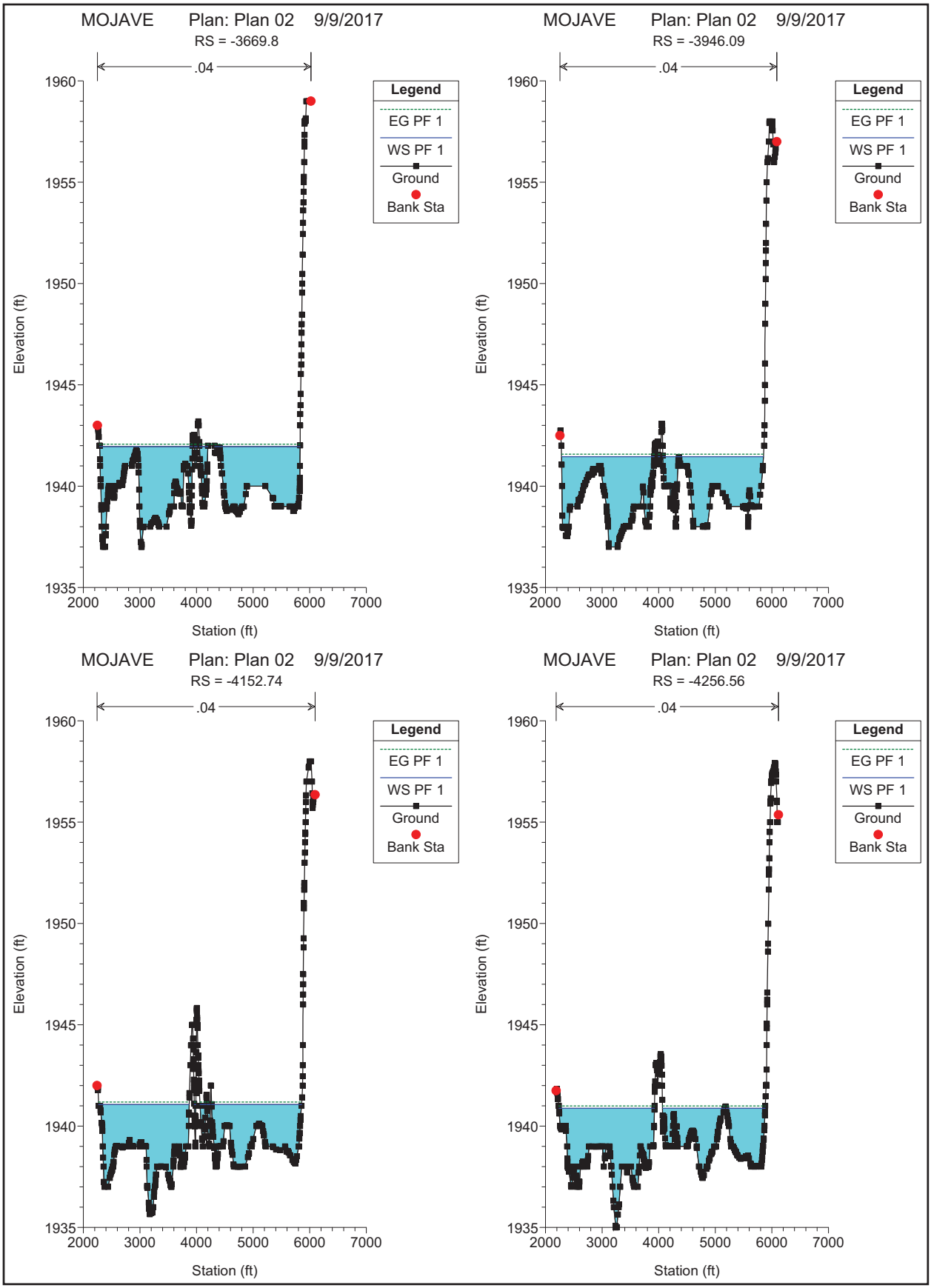
Bank Sta
Elevation (ft)
Station (ft)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MOJAVE Plan: Plan 02 9/9/2017
RS = -3946.09
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Legend
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -4152.74
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Legend
EG PF 1
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -4256.56
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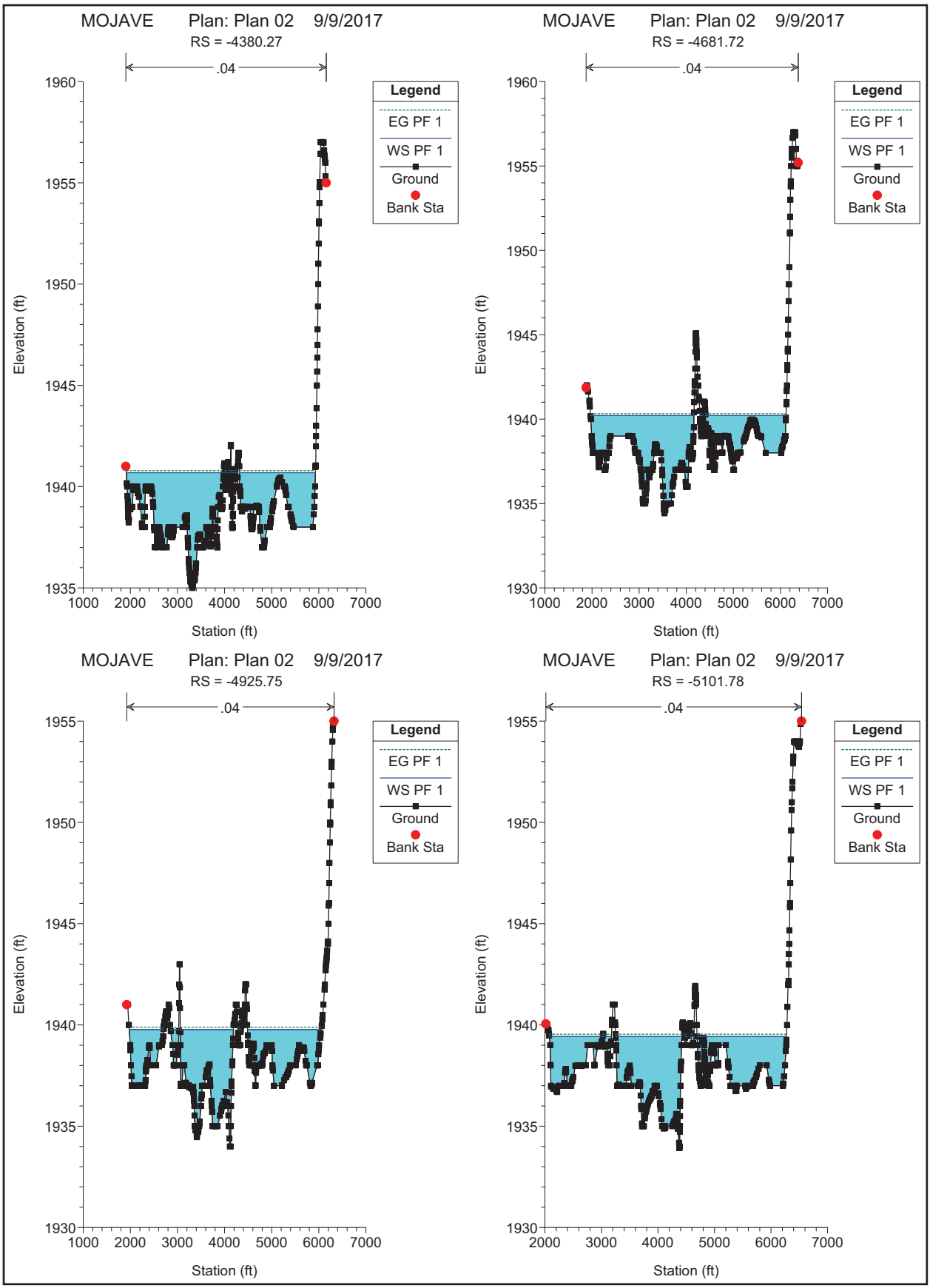
Bank Sta
Elevation (ft)
Station (ft)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Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -4681.72
.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -4925.75
.04
Legend
EG PF 1
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -5101.78
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Legend
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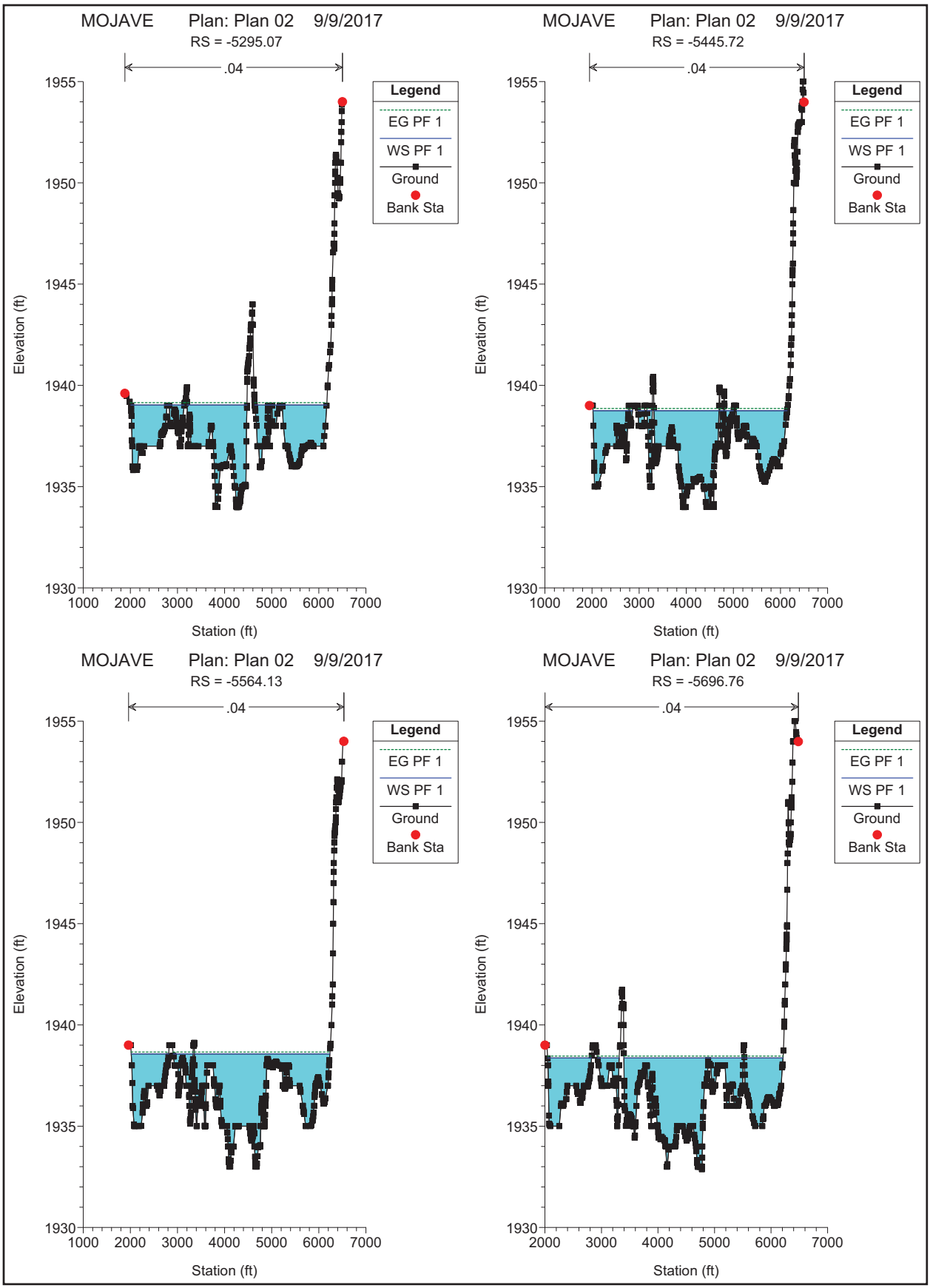
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)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Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -5445.72
.04
Legend
EG PF 1
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -5564.13
.04
Legend
EG PF 1
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -5696.76
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Legend
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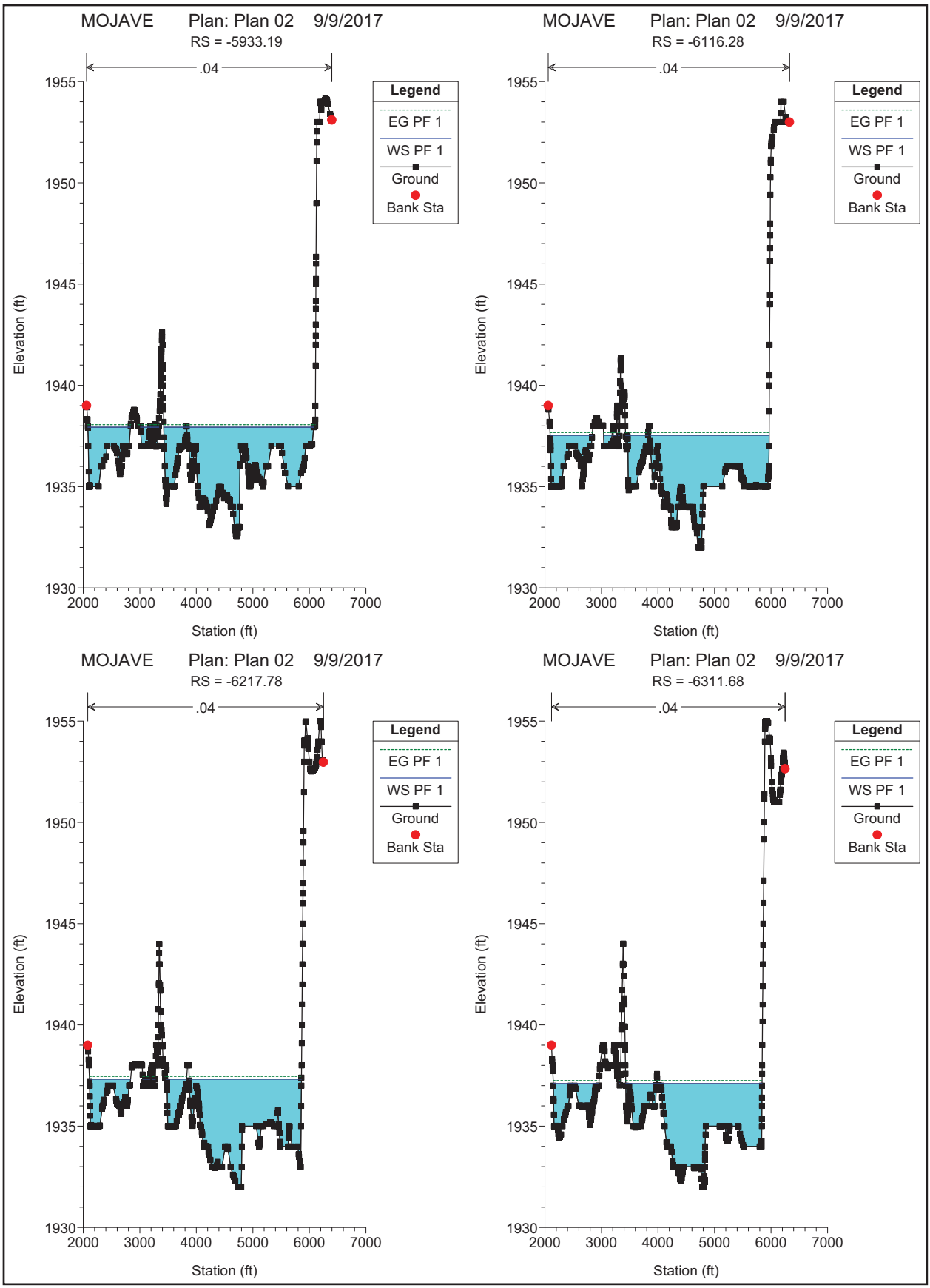
Ground
Bank Sta
Elevation (ft)
Station (ft)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Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -6116.28
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Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -6217.78
.04
Legend
EG PF 1
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -6311.68
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Legend
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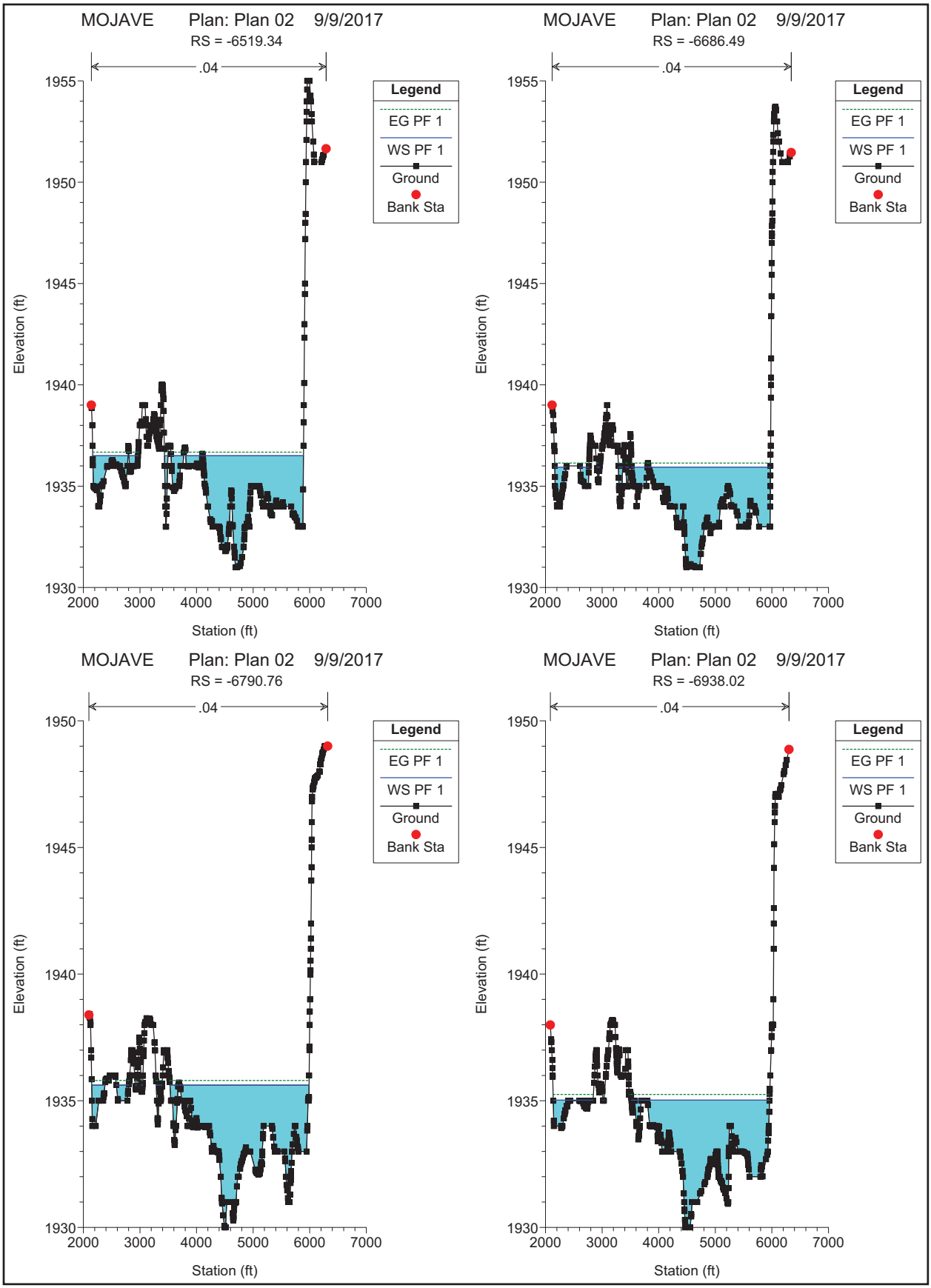
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)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Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -6686.49
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Legend
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WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -6790.76
.04
Legend
EG PF 1
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -6938.02
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Legend
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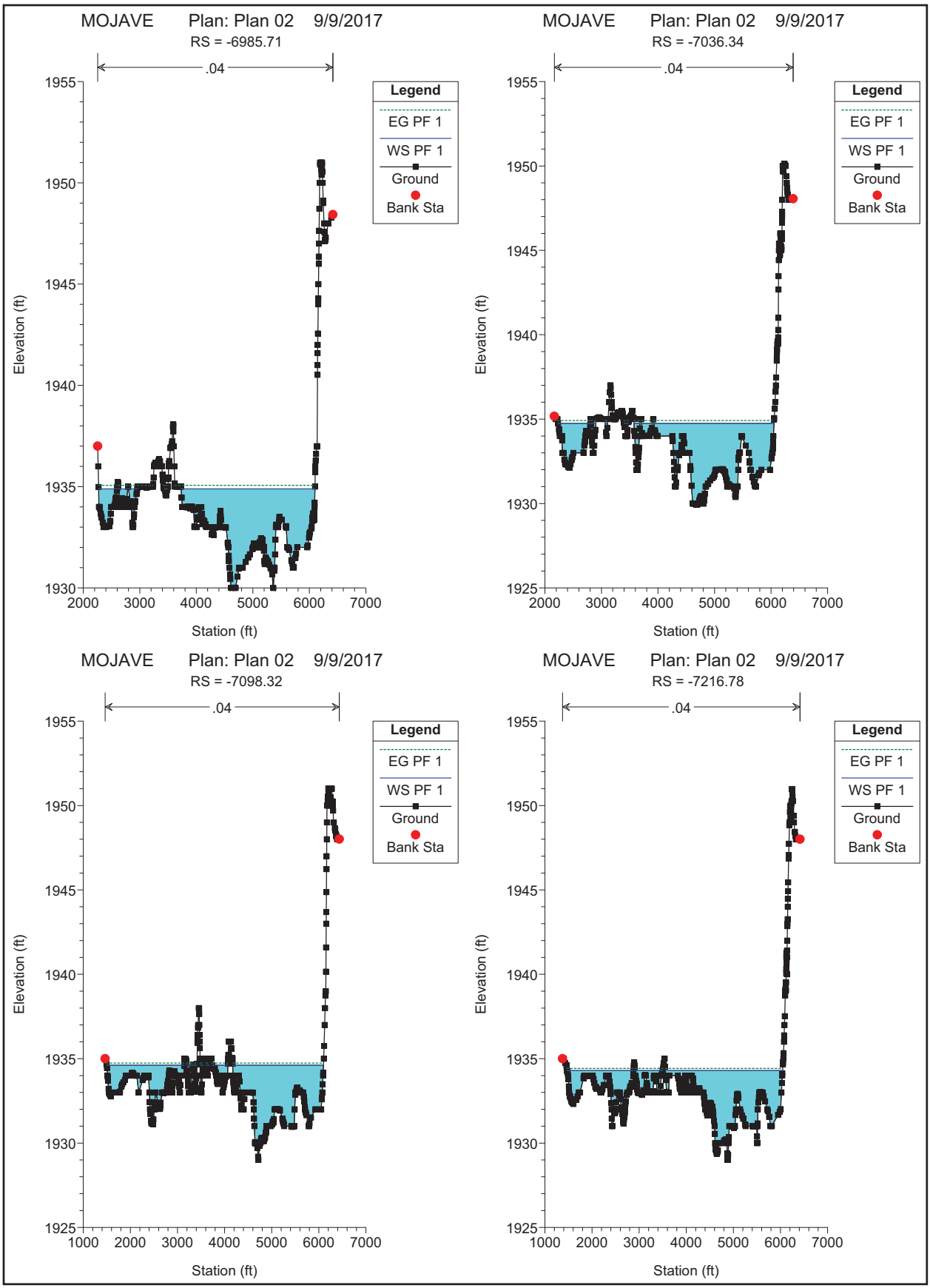
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)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Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -7036.34
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Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -7098.32
.04
Legend
EG PF 1
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -7216.78
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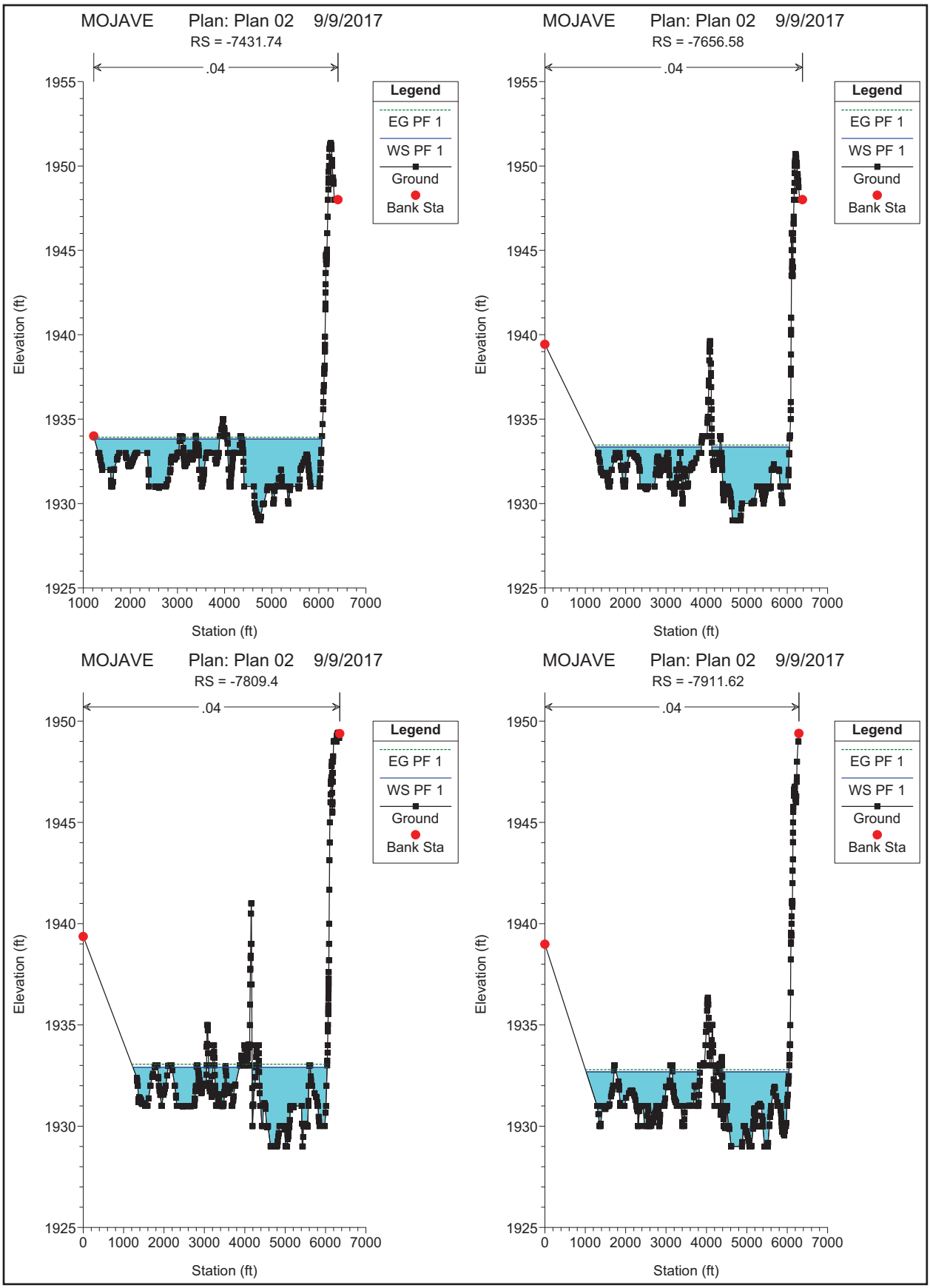
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)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Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -7656.58
.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -7809.4
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Legend
EG PF 1
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -7911.62
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Legend
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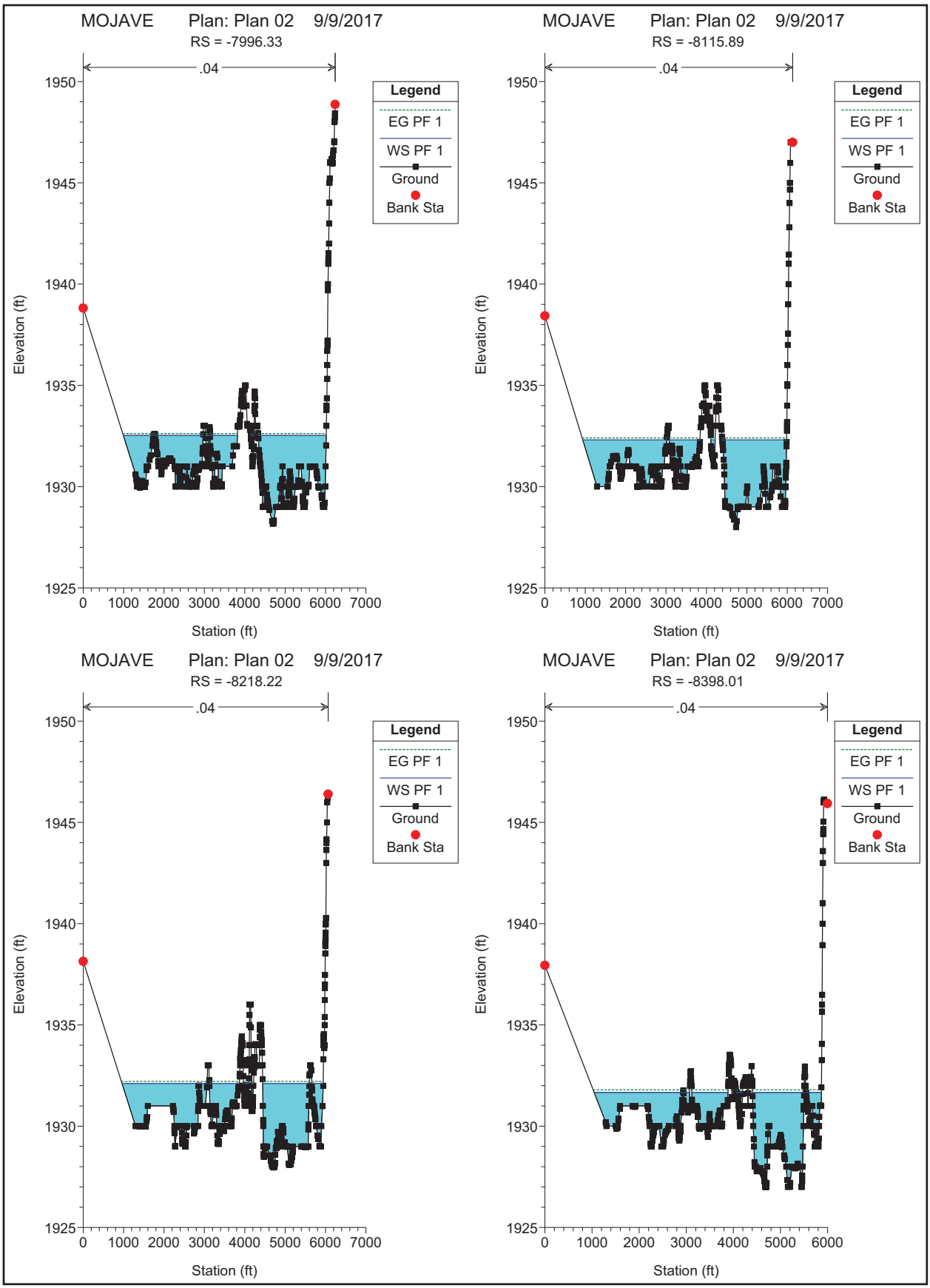
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)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Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -8115.89
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Legend
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WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -8218.22
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Legend
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -8398.01
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Legend
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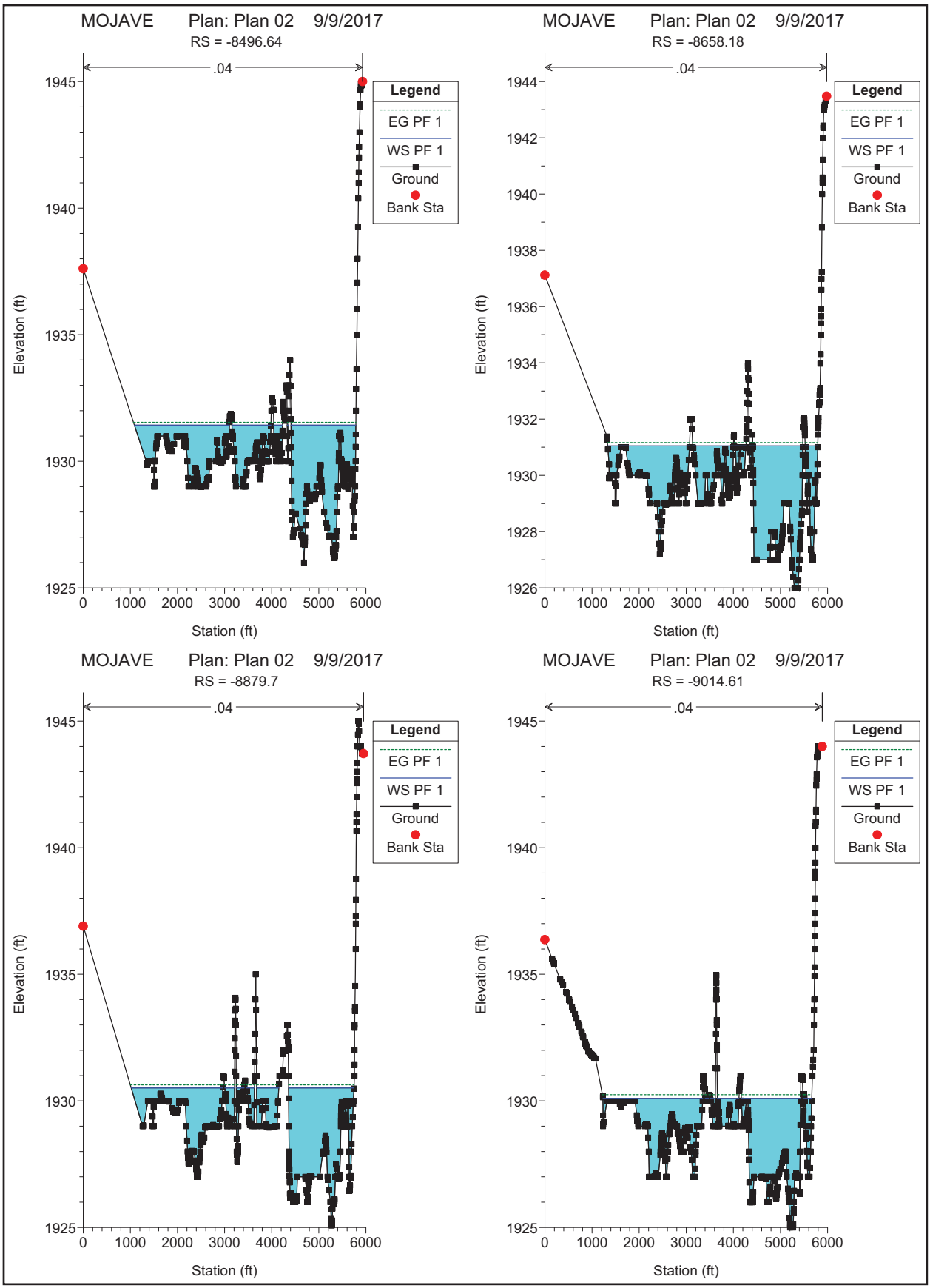
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)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Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -8658.18
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Legend
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -8879.7
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Legend
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -9014.61
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Legend
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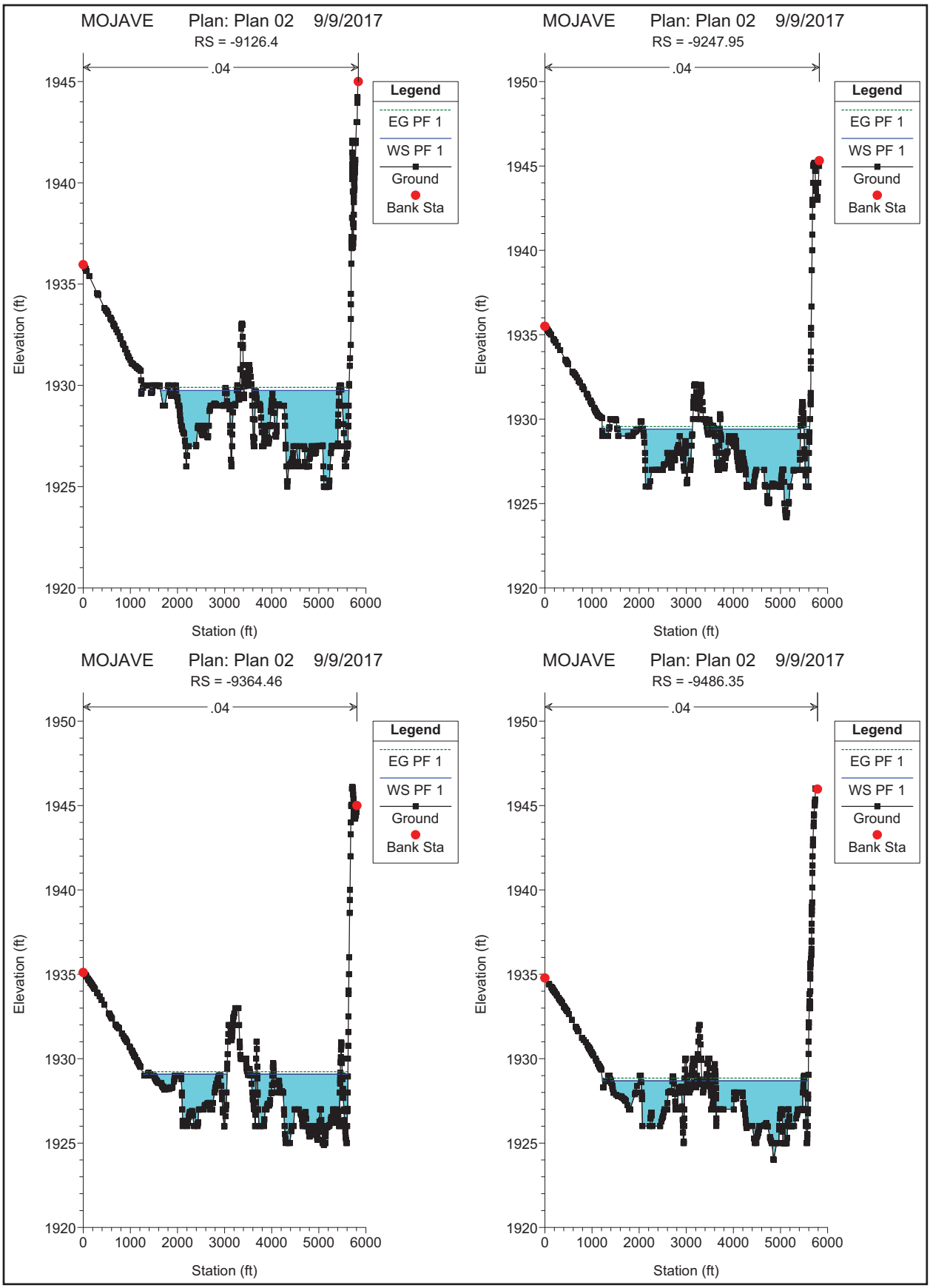
Ground
Bank Sta
Elevation (ft)
Station (ft)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Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -9247.95
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Legend
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -9364.46
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Legend
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -9486.35
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Legend
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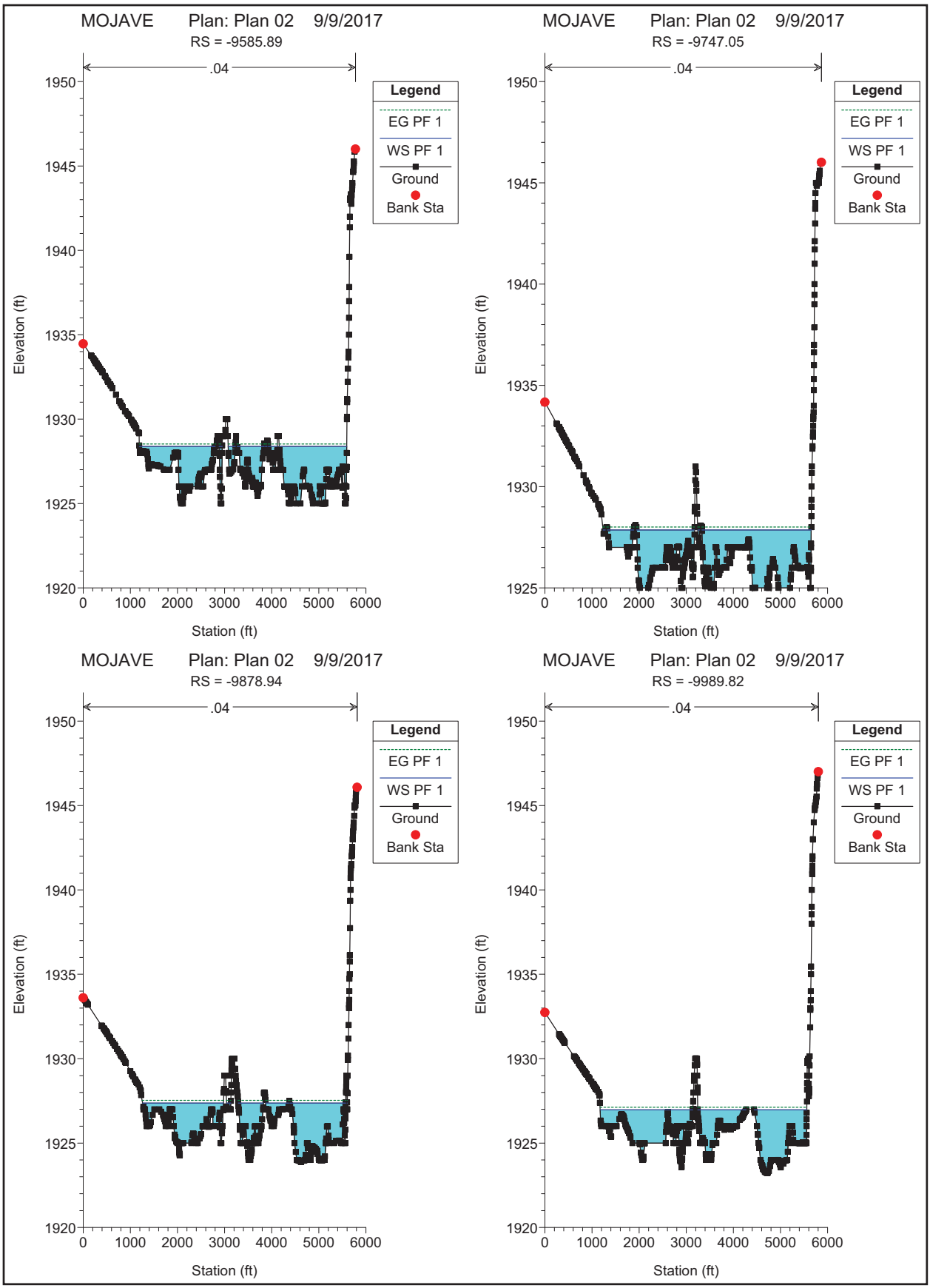
Ground
Bank Sta
Elevation (ft)
Station (ft)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MOJAVE Plan: Plan 02 9/9/2017
RS = -9878.94
MOJAVE Plan: Plan 02 9/9/2017
RS = -9989.82
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Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
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1930
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1950
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3000
4000
5000
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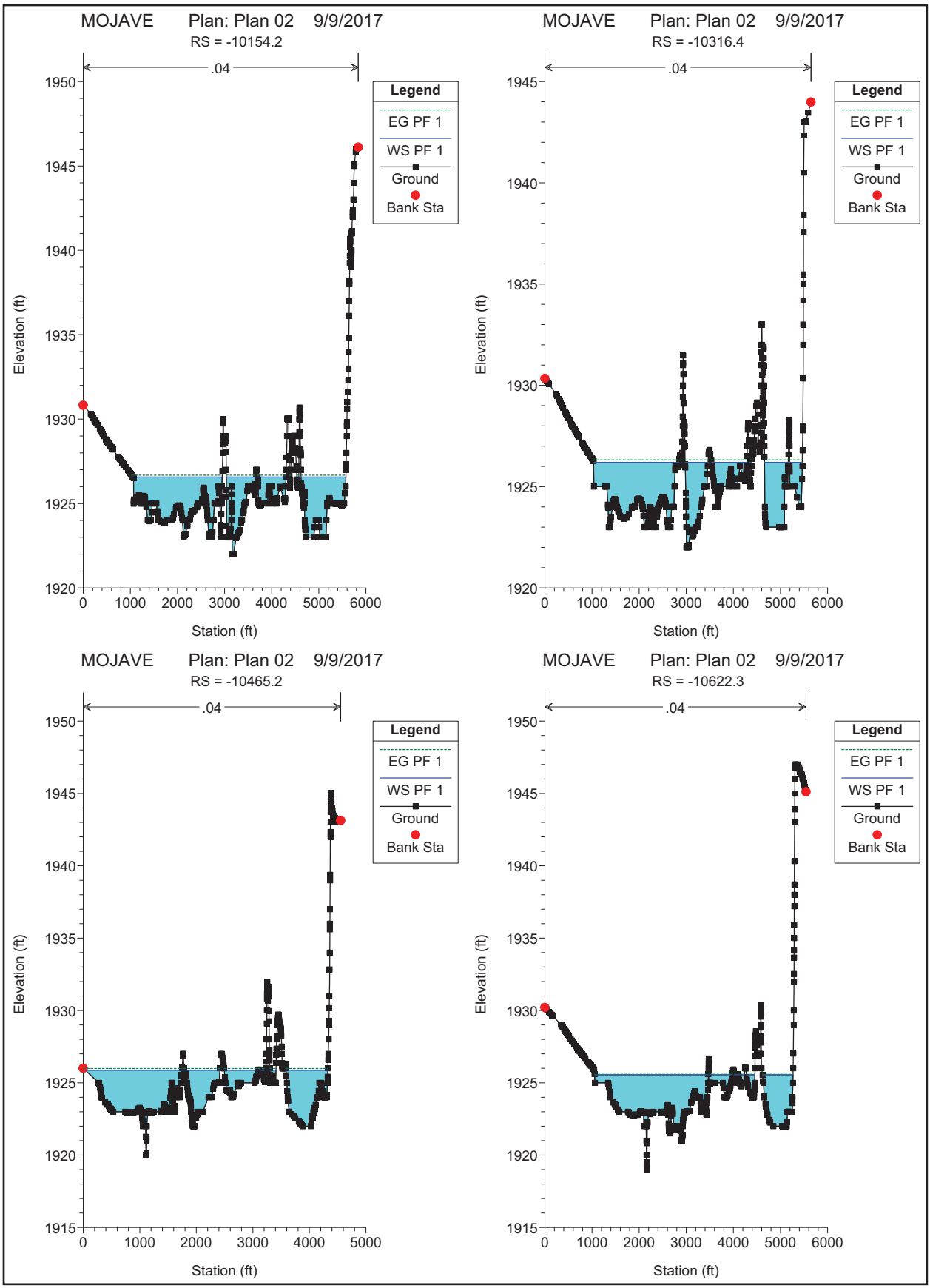
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Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
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Legend
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WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -10465.2
.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
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Legend
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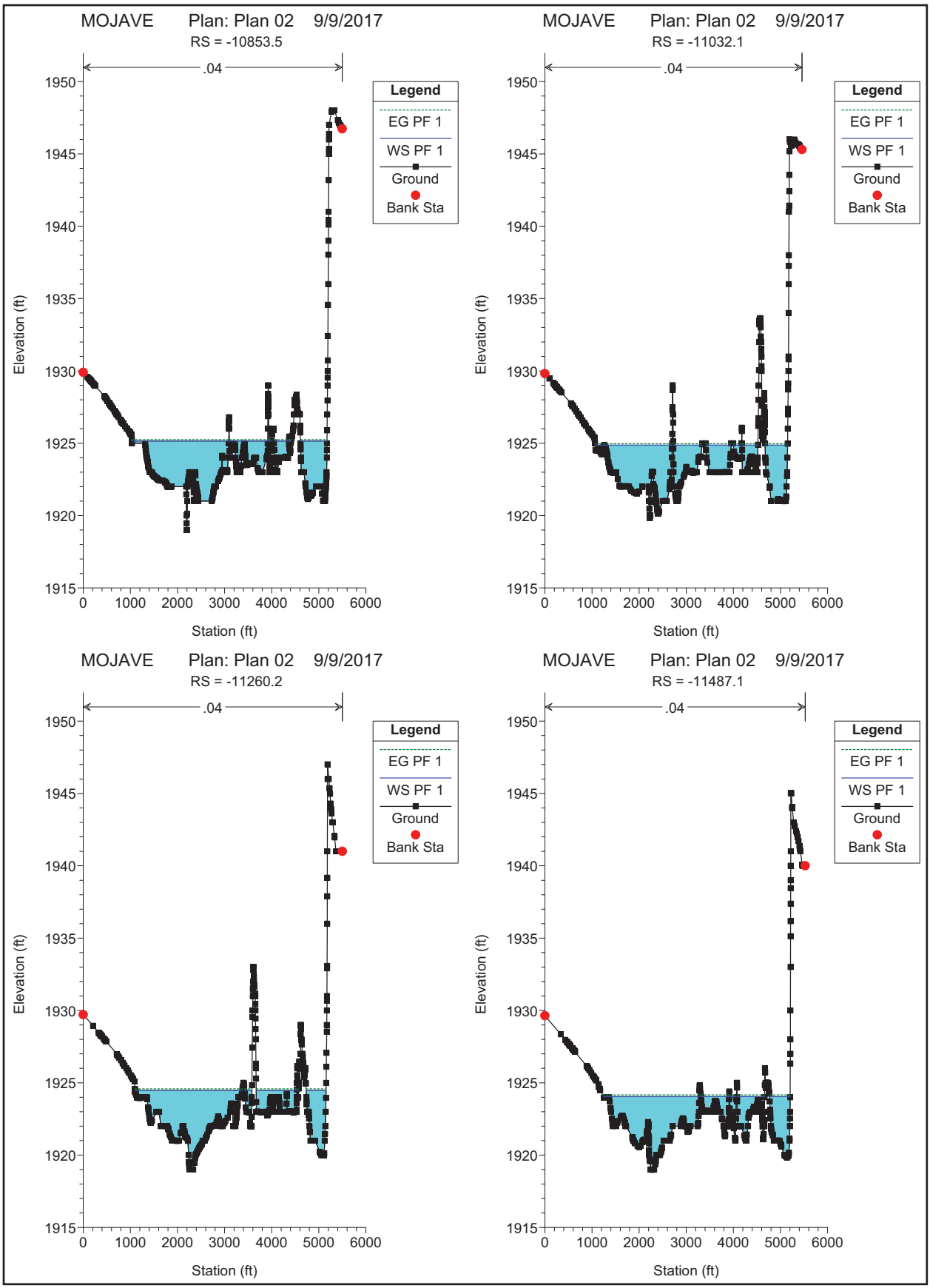
Ground
Bank Sta
Elevation (ft)
Station (ft)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Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -11032.1
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Legend
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WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -11260.2
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Legend
EG PF 1
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
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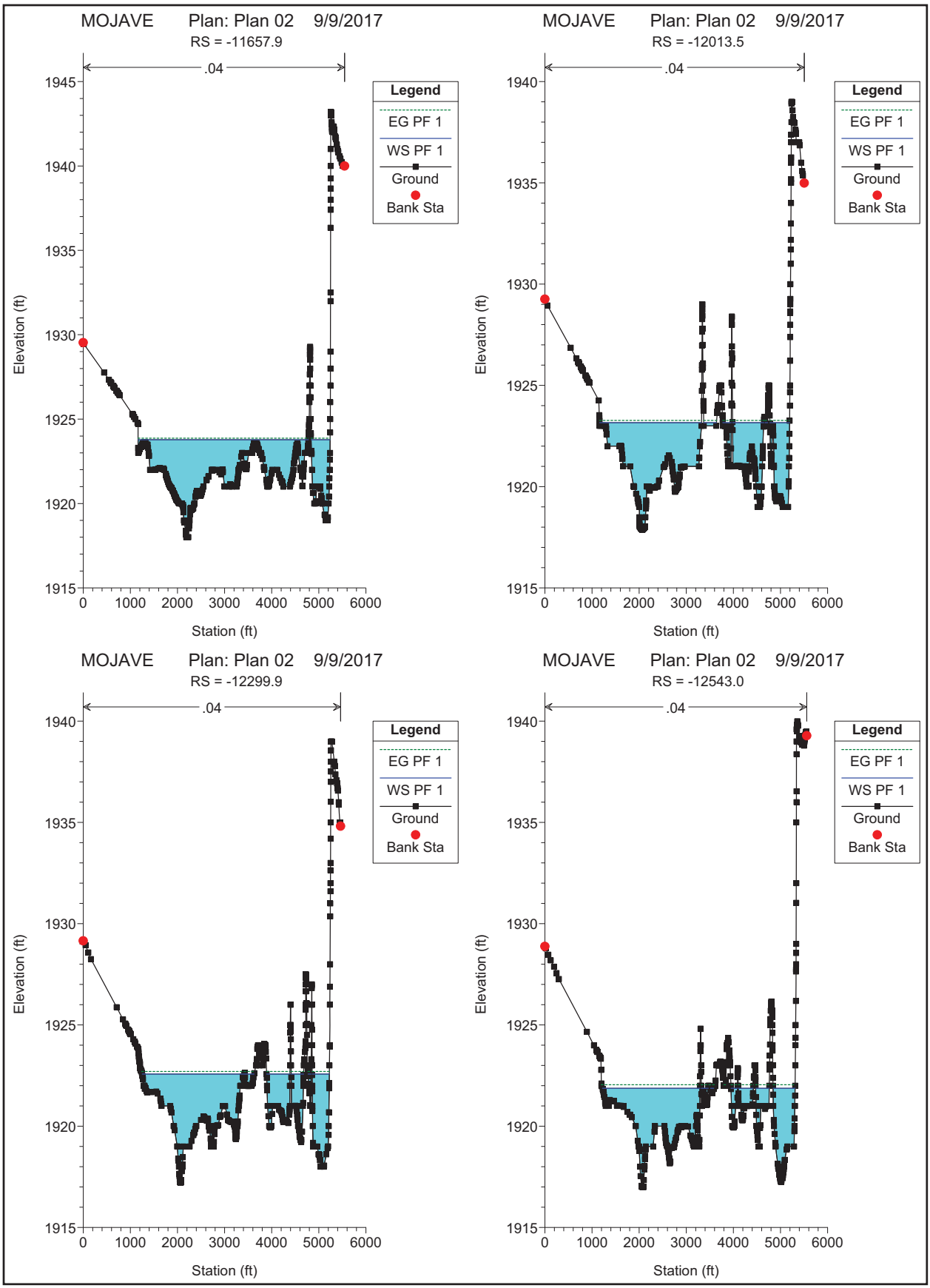
Bank Sta
Elevation (ft)
Station (ft)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Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -12013.5
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Legend
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WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -12299.9
.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -12543.0
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Legend
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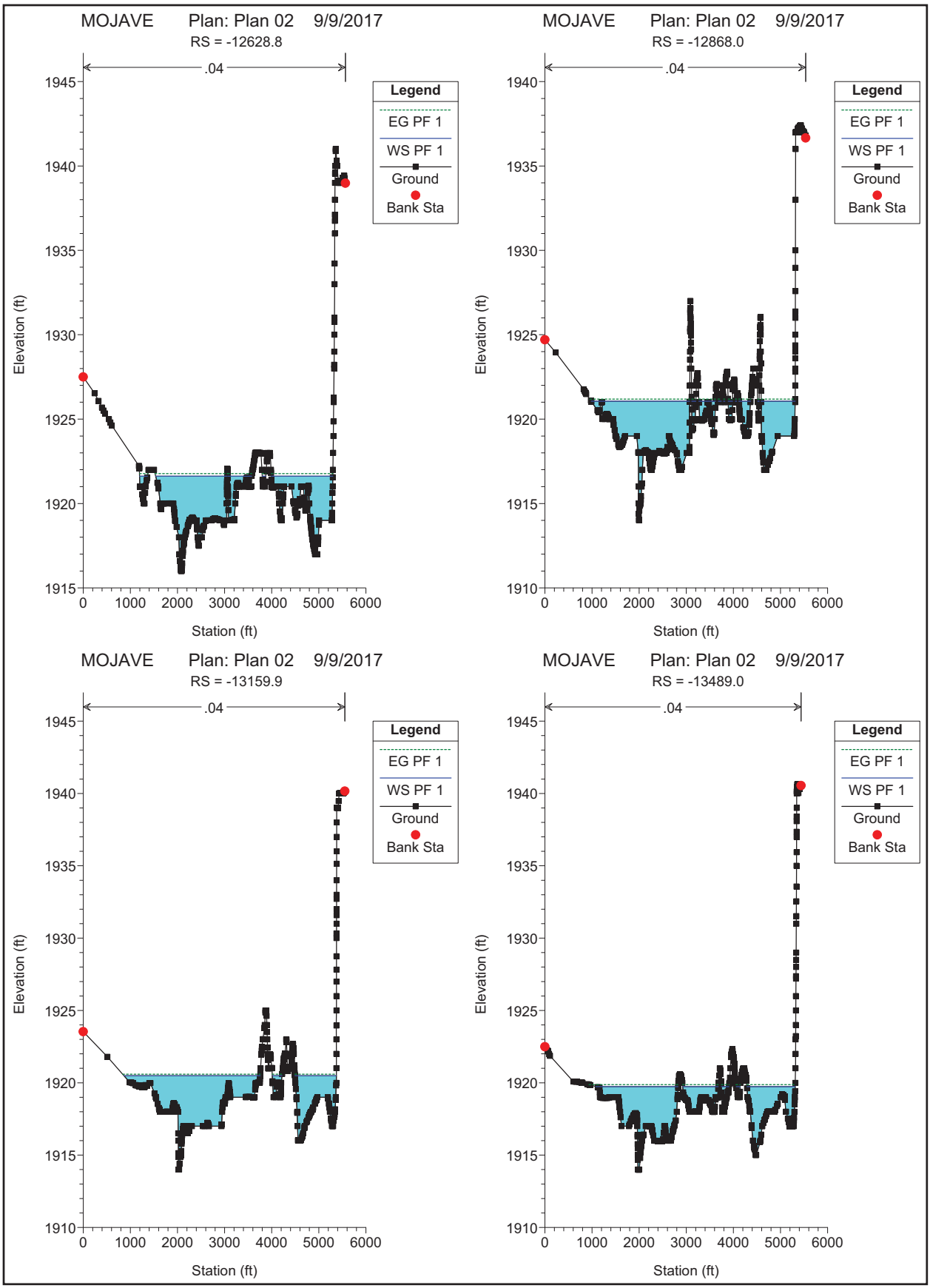
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)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Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -12868.0
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Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -13159.9
.04
Legend
EG PF 1
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -13489.0
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Legend
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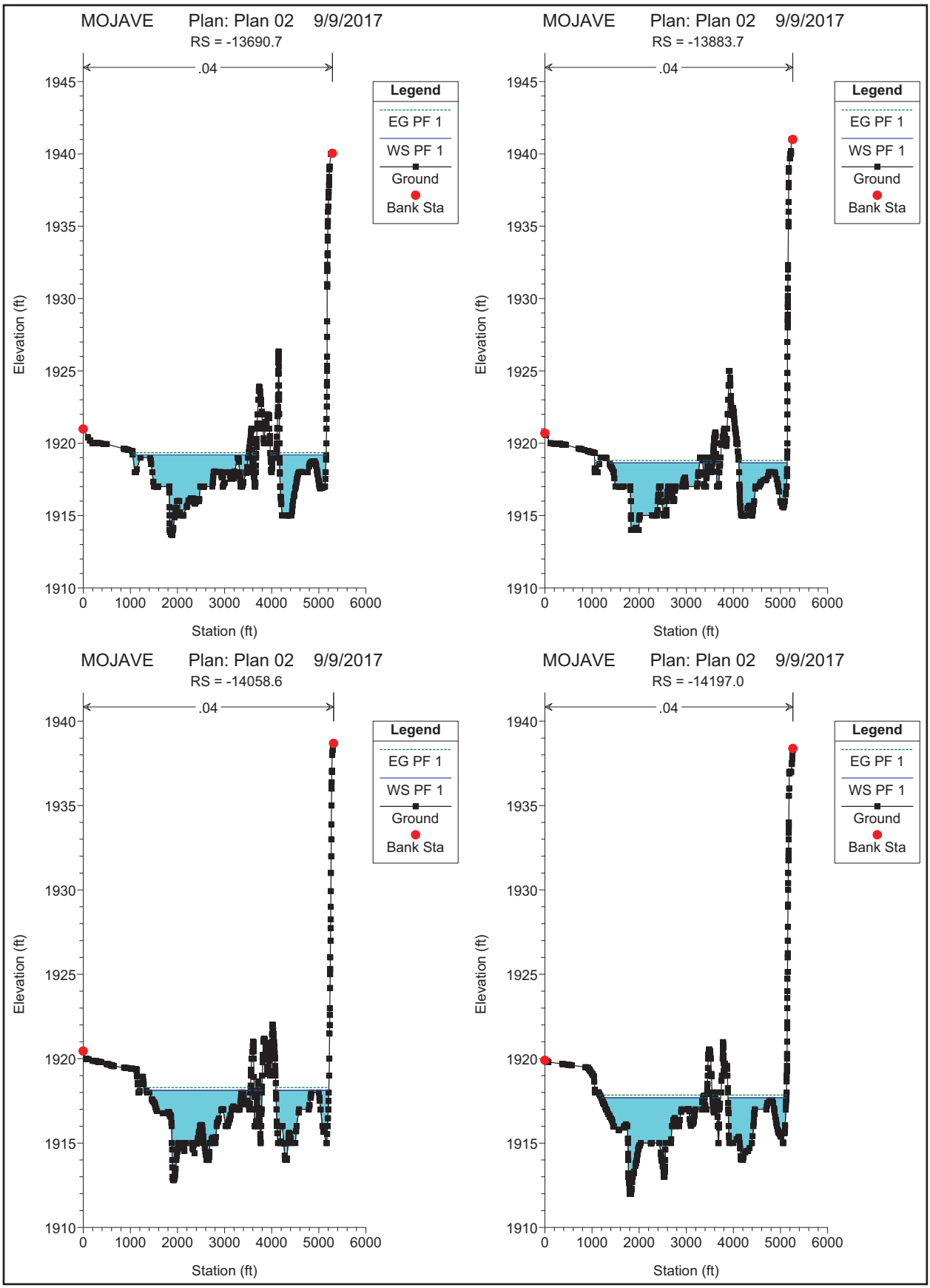
Ground
Bank Sta
Elevation (ft)
Station (ft)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Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -13883.7
.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -14058.6
.04
Legend
EG PF 1
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -14197.0
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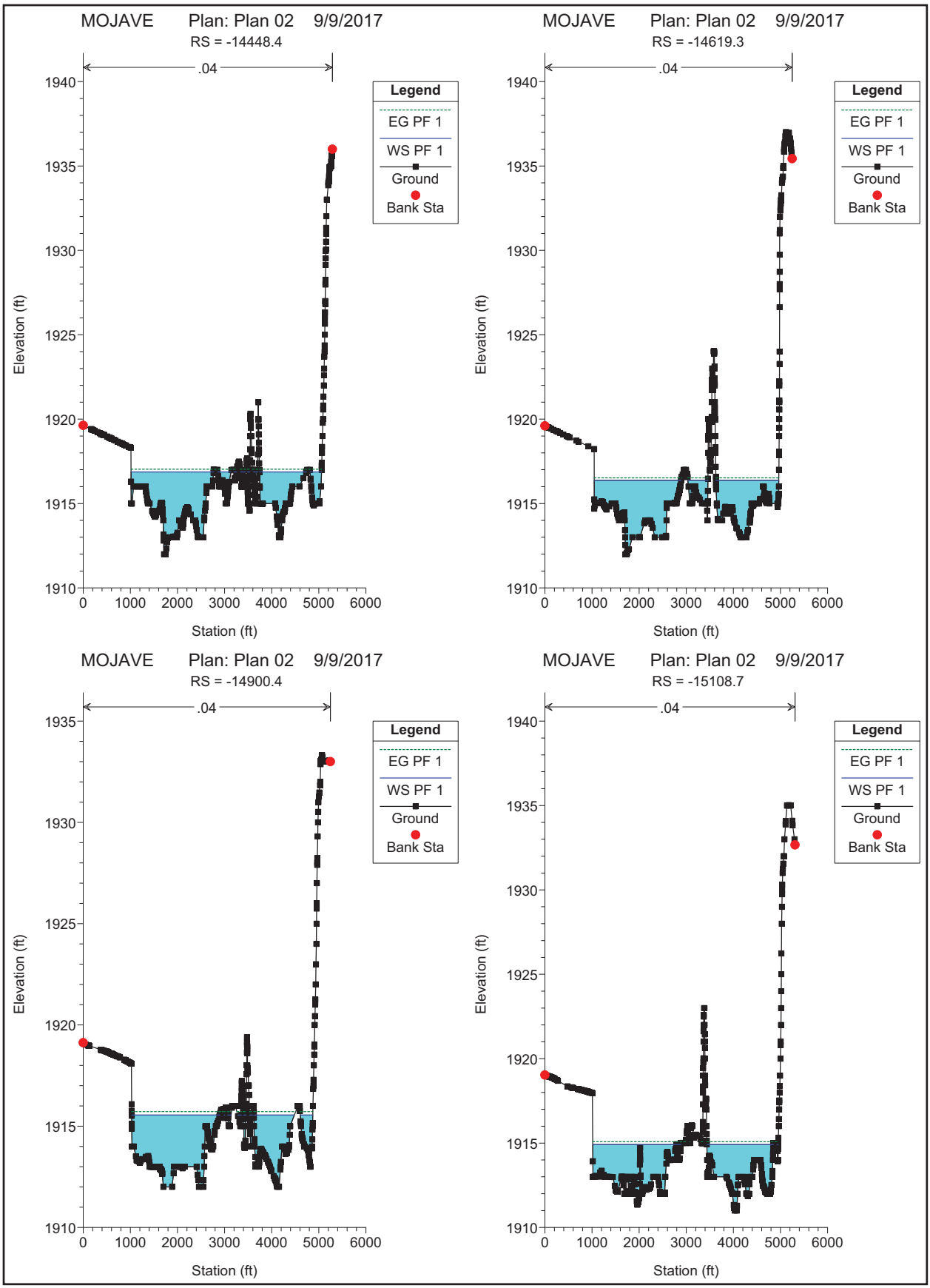
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)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MOJAVE Plan: Plan 02 9/9/2017
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Legend
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WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -14900.4
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Legend
EG PF 1
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Ground
Bank Sta
Elevation (ft)
Station (ft)
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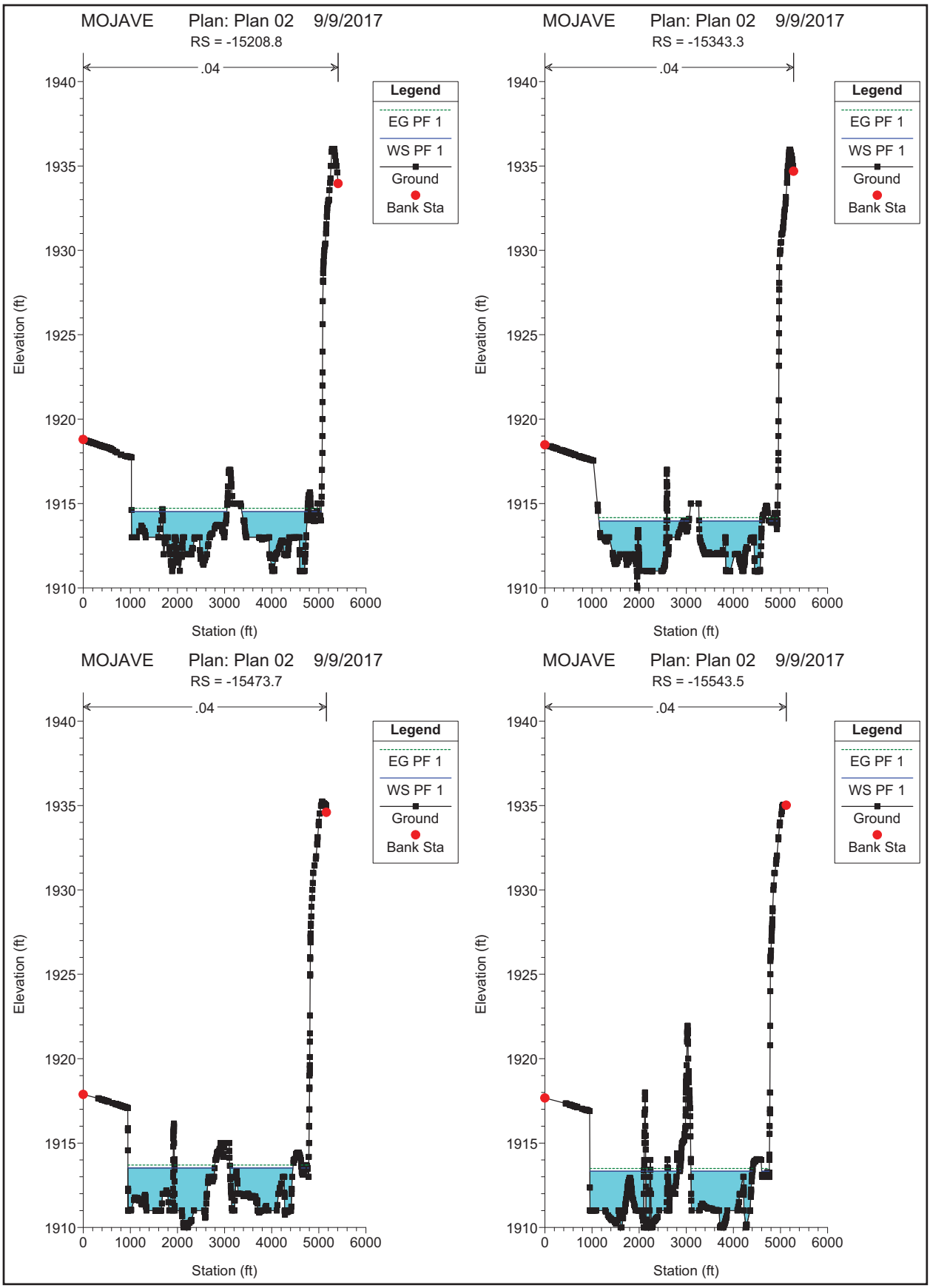
Bank Sta
Elevation (ft)
Station (ft)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MOJAVE Plan: Plan 02 9/9/2017
RS = -15343.3
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Legend
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WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -15473.7
.04
Legend
EG PF 1
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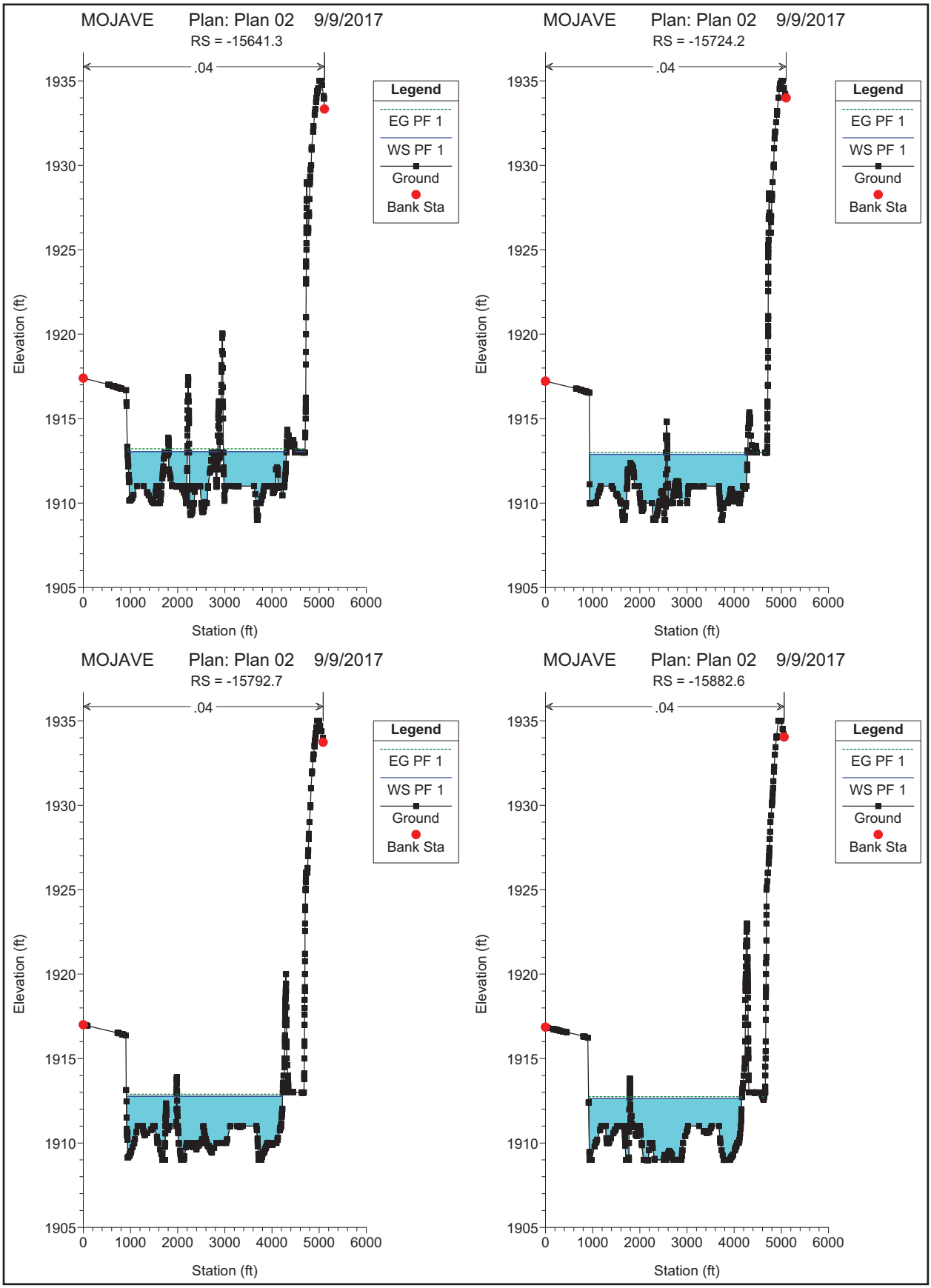
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -15543.5
.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)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.04
Legend
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WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
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.04
Legend
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WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
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Legend
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WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
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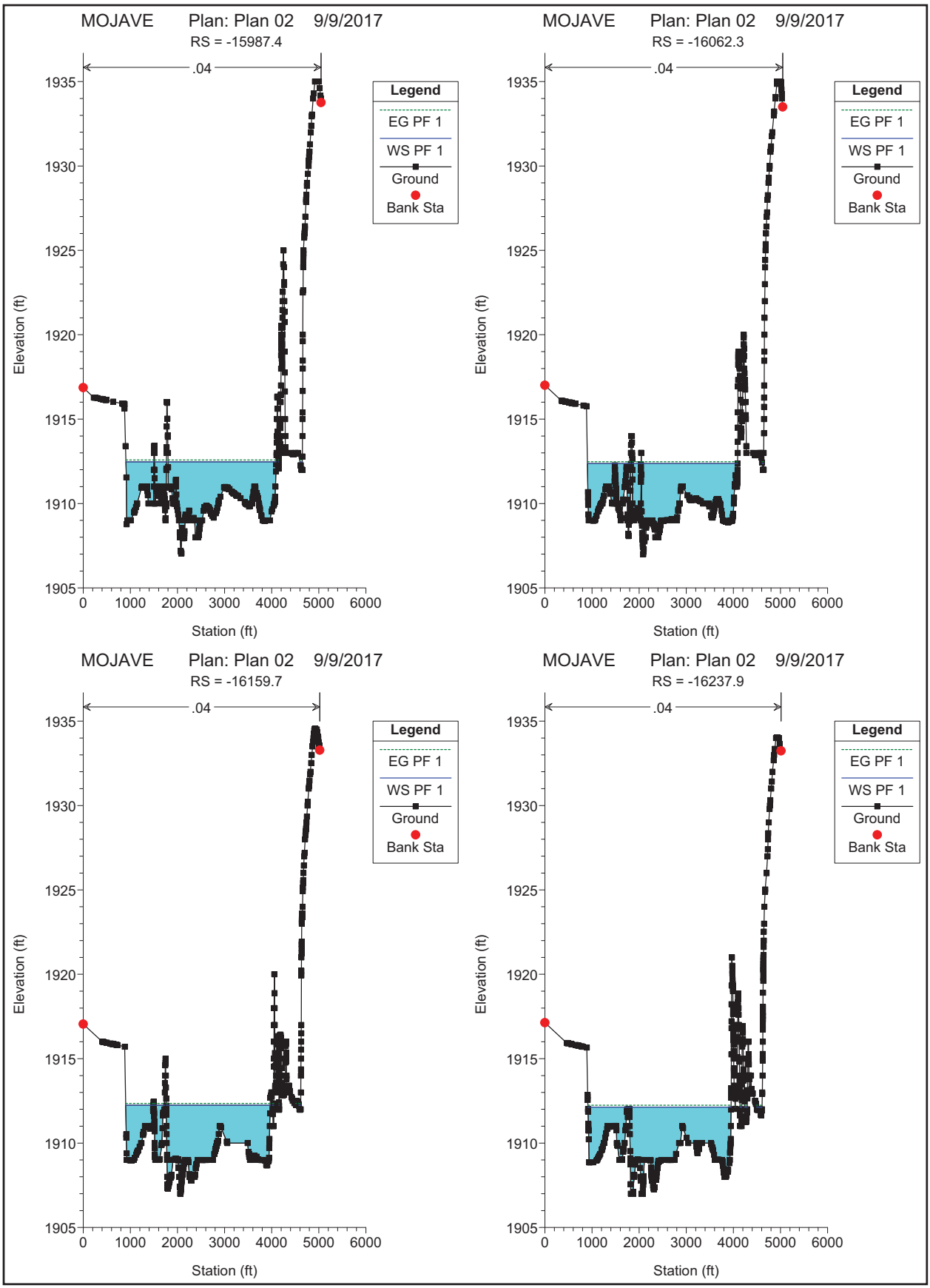
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)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Ground
Bank Sta
Elevation (ft)
Station (ft)
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.04
Legend
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WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
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Legend
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WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
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Legend
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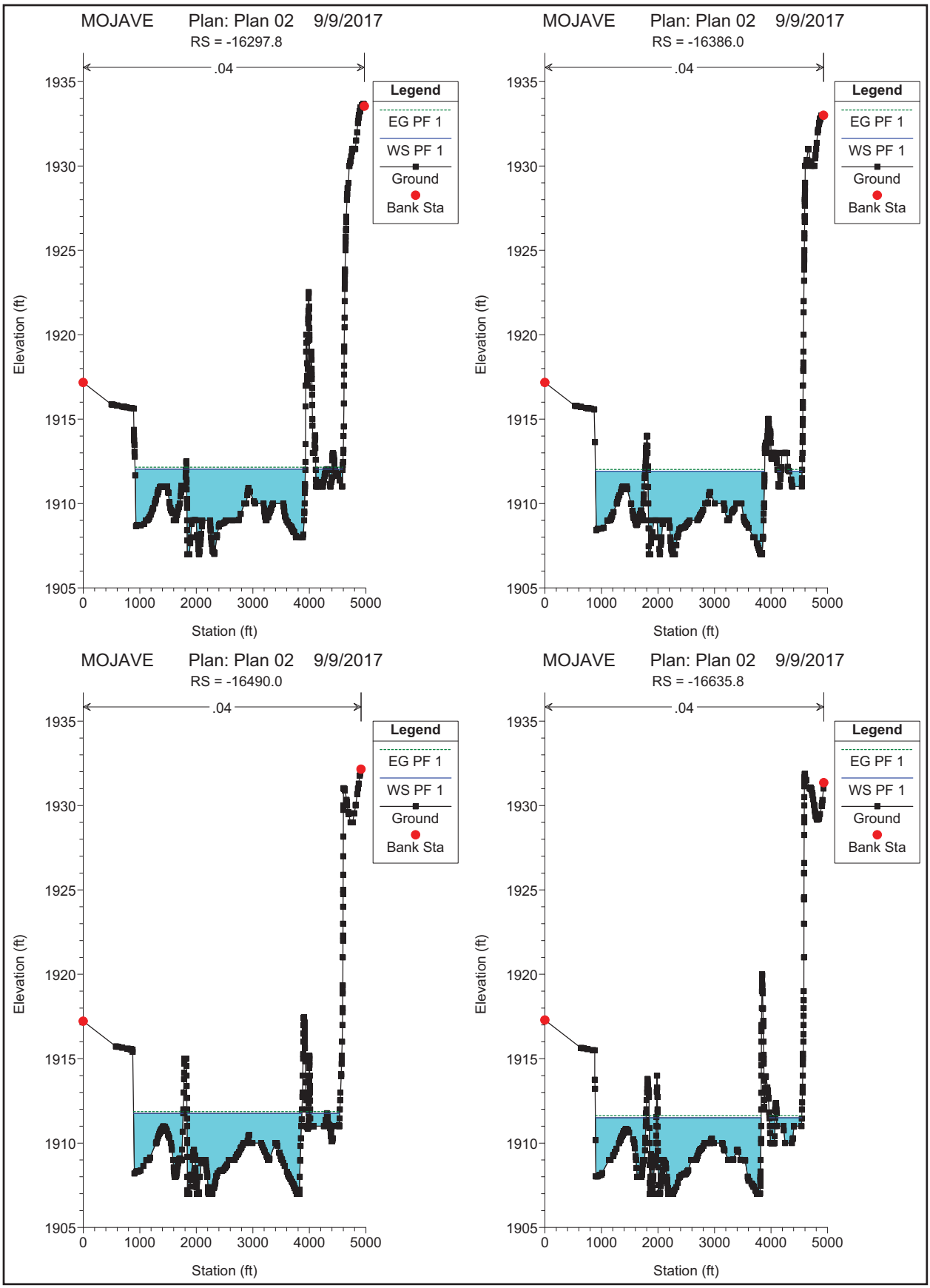
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
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.04
Legend
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WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
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Legend
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WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
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Legend
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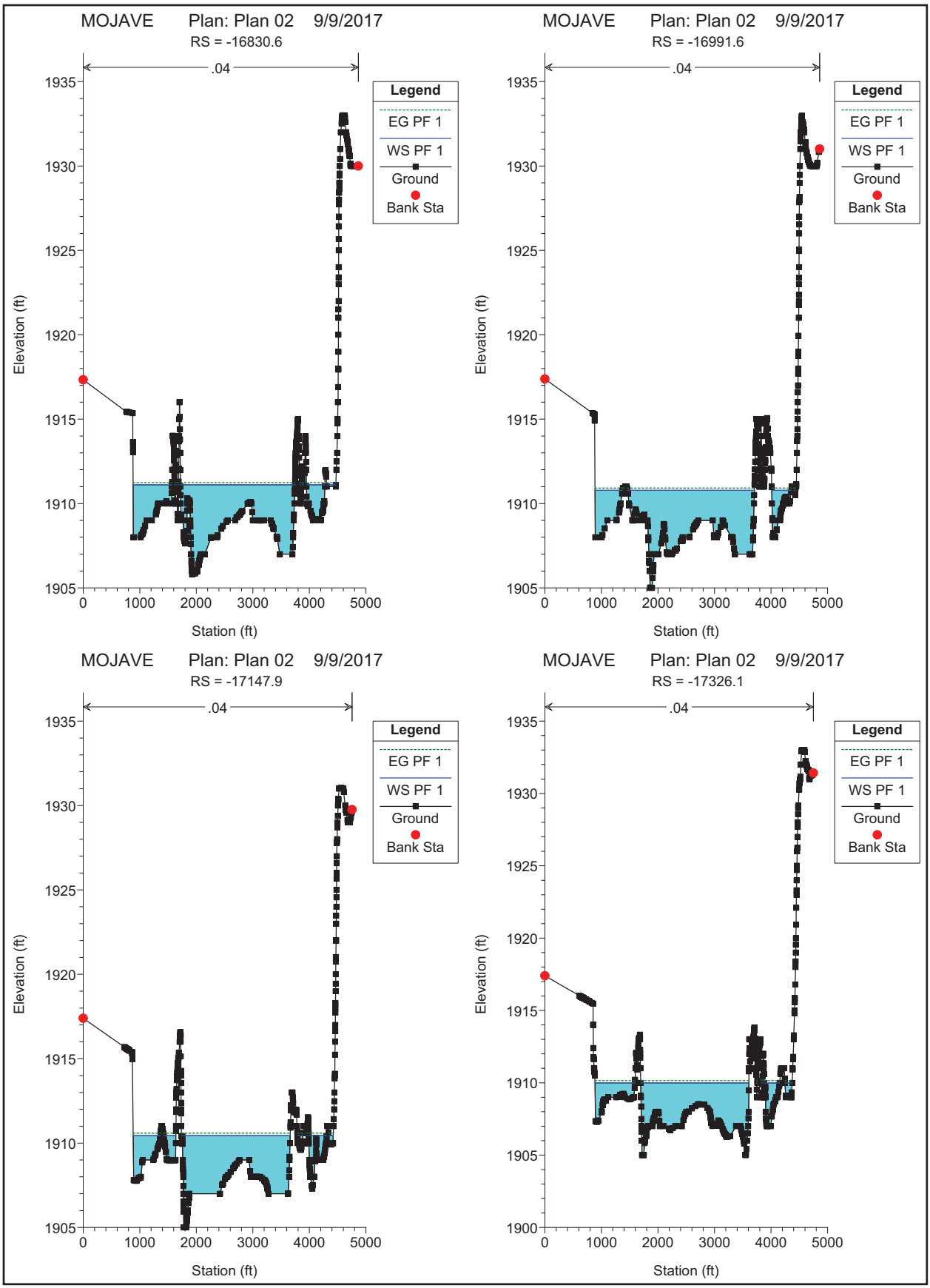
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)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Ground
Bank Sta
Elevation (ft)
Station (ft)
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Legend
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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
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Ground
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Elevation (ft)
Station (ft)
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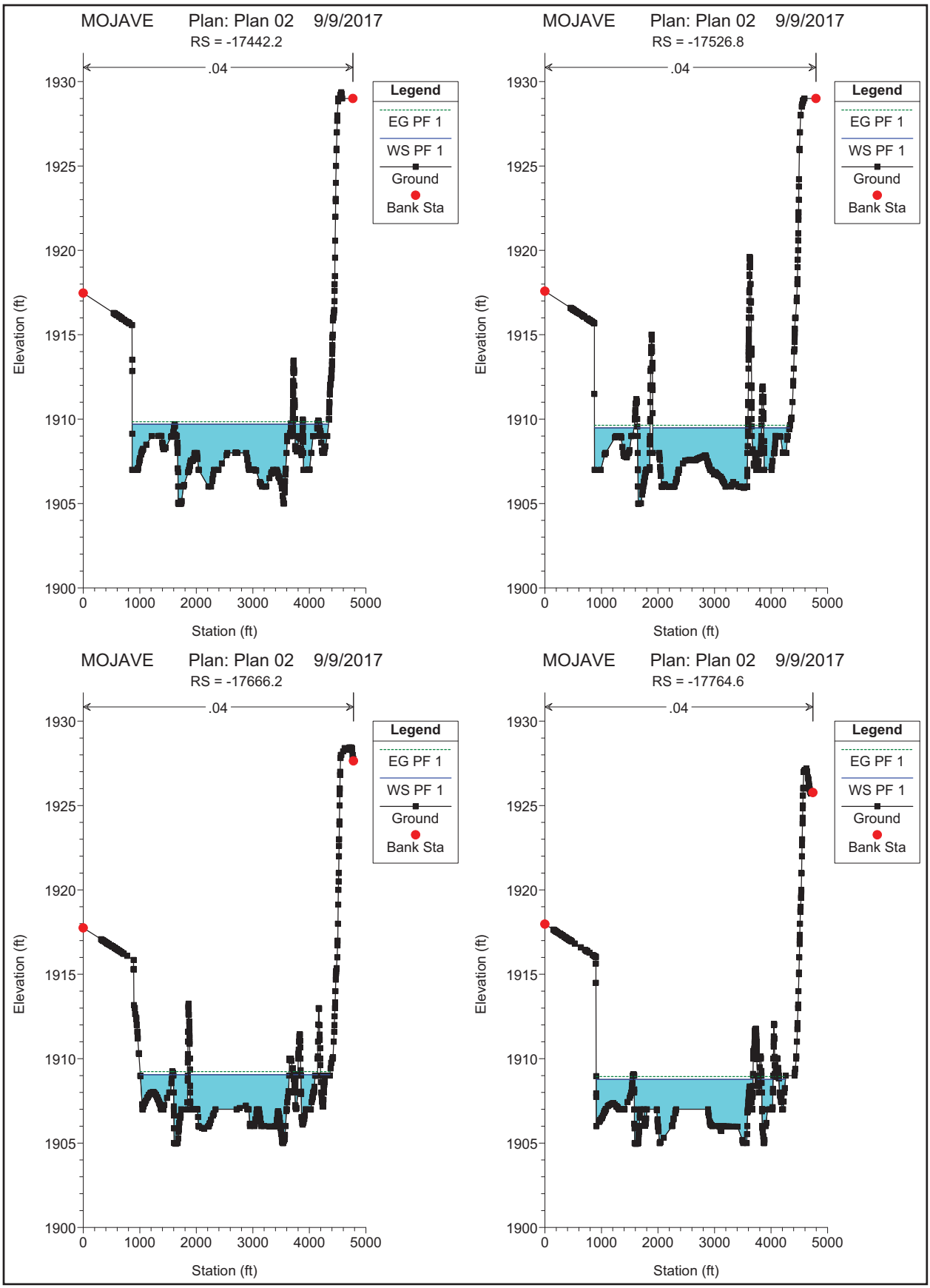
Bank Sta
Elevation (ft)
Station (ft)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Bank Sta
Elevation (ft)
Station (ft)
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Legend
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WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
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Ground
Bank Sta
Elevation (ft)
Station (ft)
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WS PF 1
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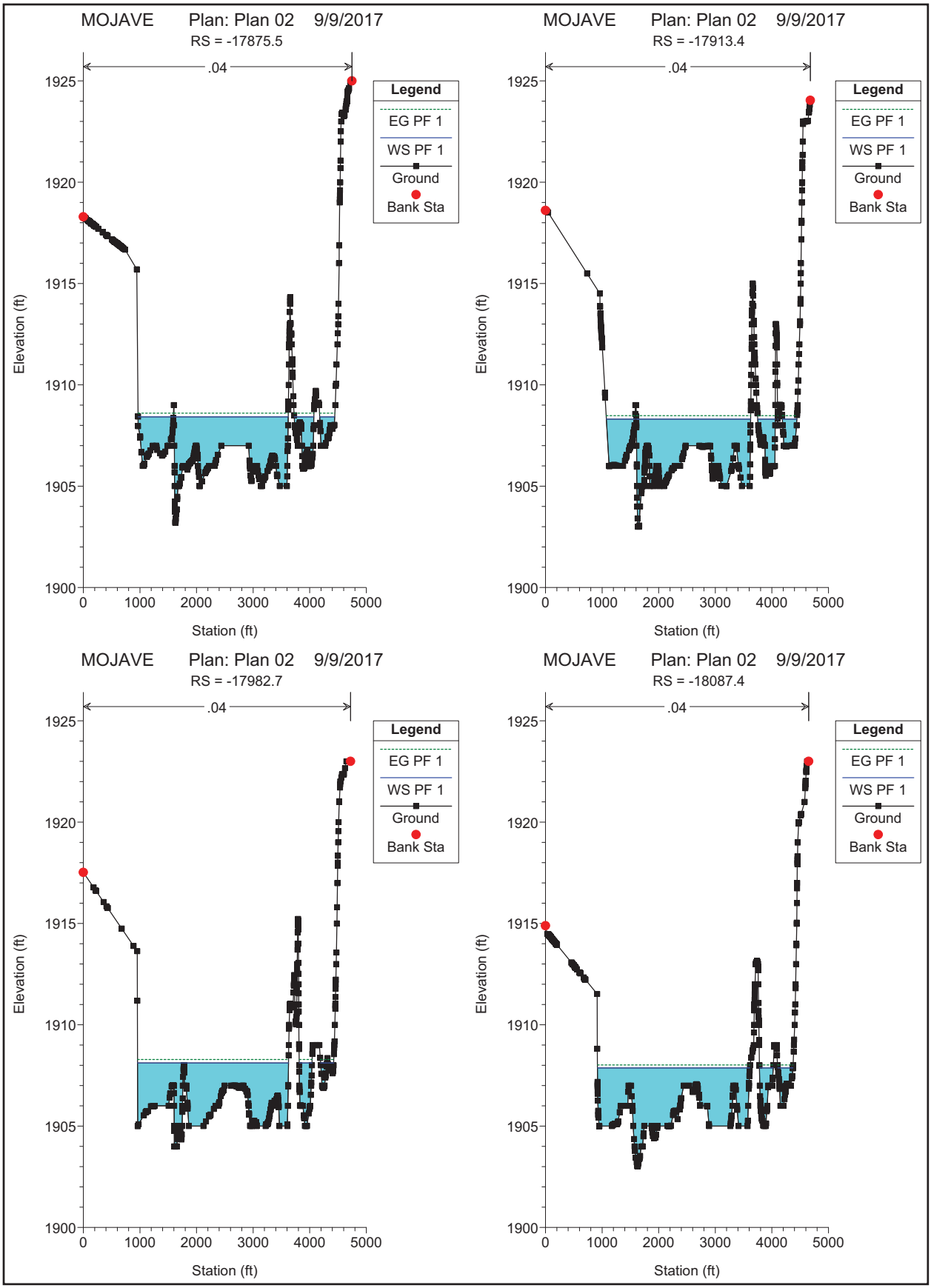
Bank Sta
Elevation (ft)
Station (ft)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MOJAVE Plan: Plan 02 9/9/2017
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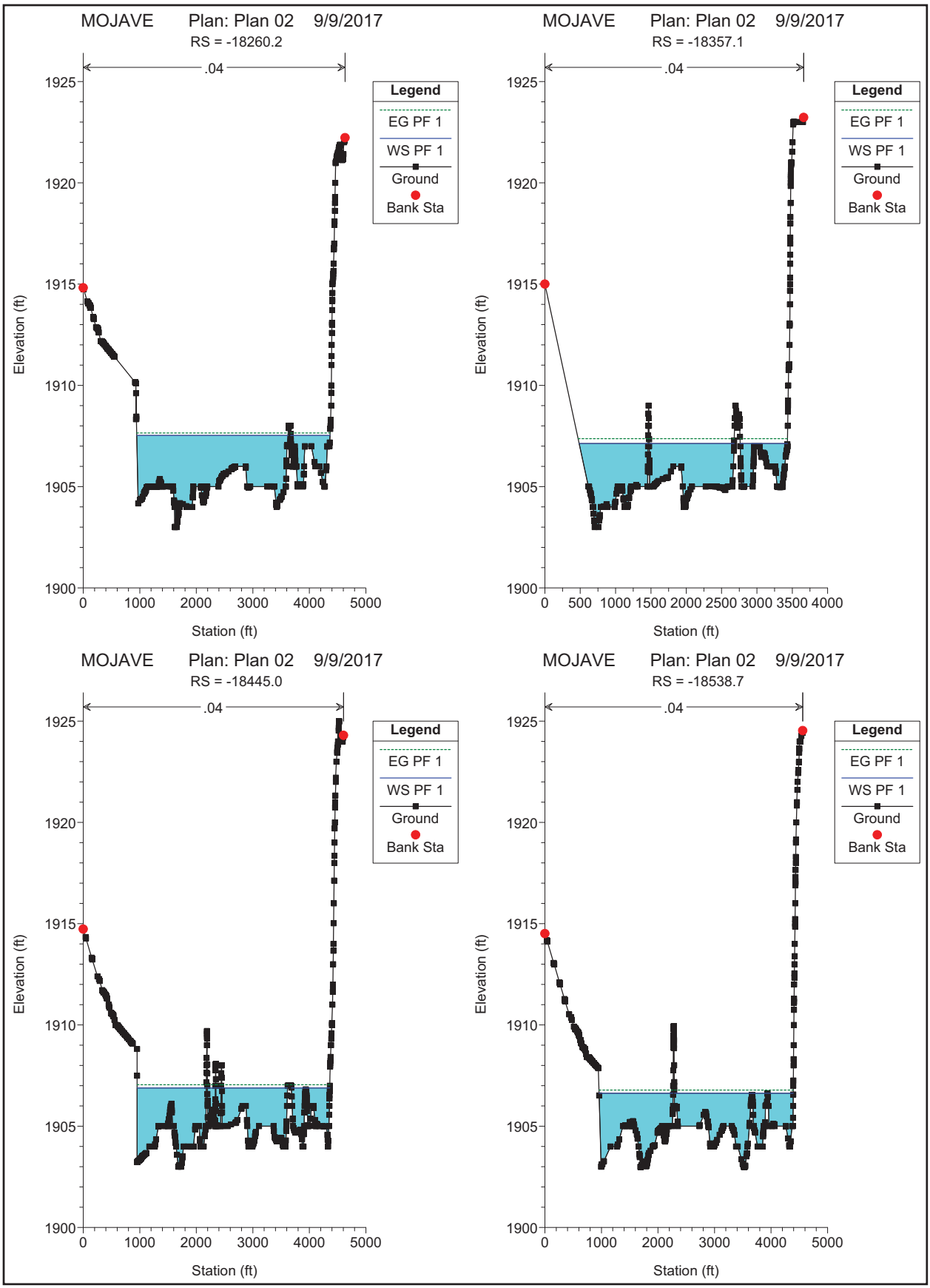
MOJAVE Plan: Plan 02 9/9/2017
RS = -17982.7
MOJAVE Plan: Plan 02 9/9/2017
RS = -18087.4
.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
1900
1905
1910
1915
1920
1925
0
1000
2000
3000
4000
5000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WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
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.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -18445.0
.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
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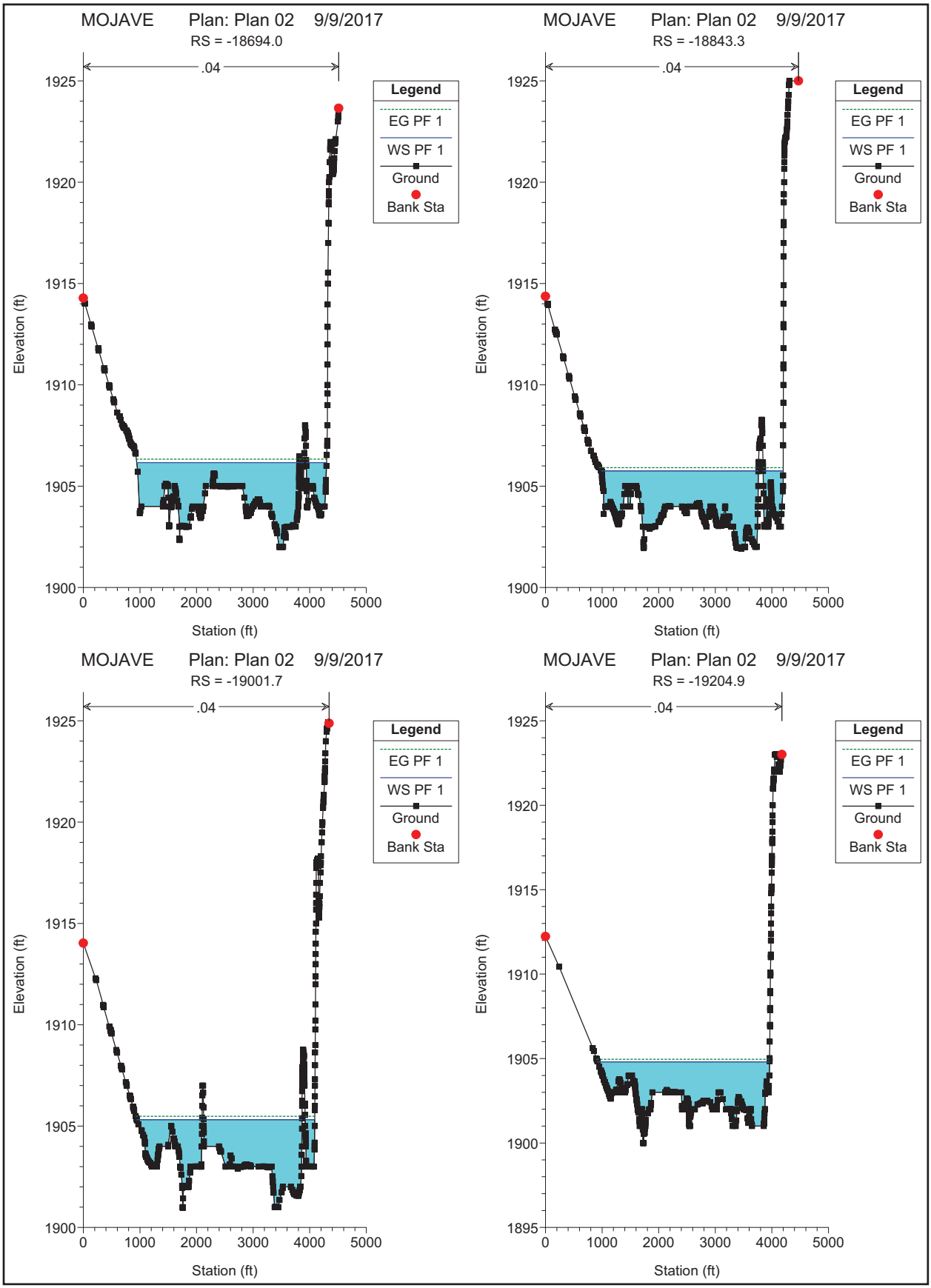
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)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Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
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Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
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Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
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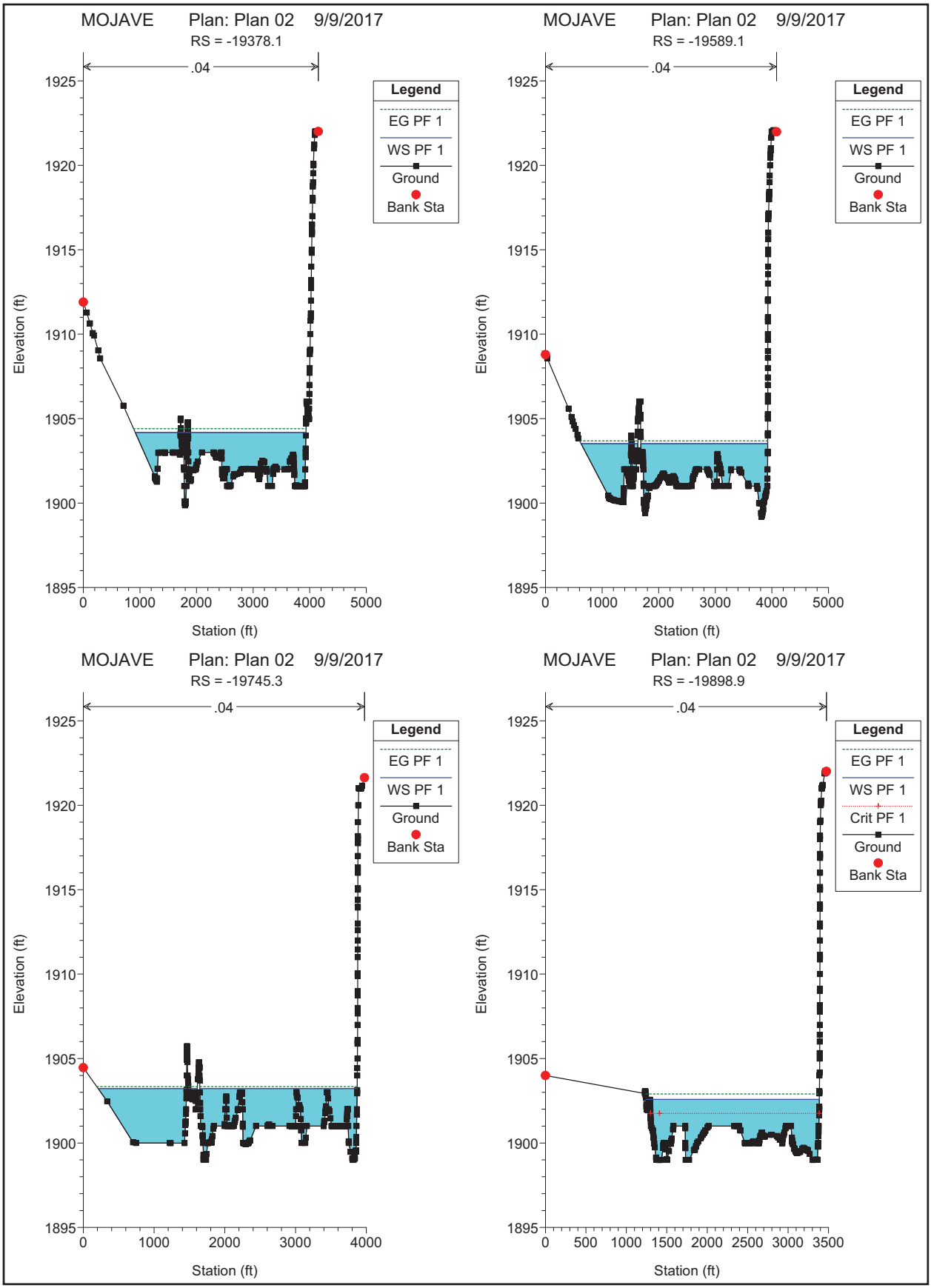
Ground
Bank Sta
Elevation (ft)
Station (ft)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EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -19589.1
.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -19745.3
.04
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
MOJAVE Plan: Plan 02 9/9/2017
RS = -19898.9
.04
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)

# ATTACHMENT NO. 4

Mojave River Wash
100-Year Hydrograph

Table 7 gives information concerning the velocity of water that would occur during the Standard Project Flood in the main channel and overbank areas on the Mojave River at the same points as shown in table 6.

Table 7

STANDARD PROJECT FLOOD

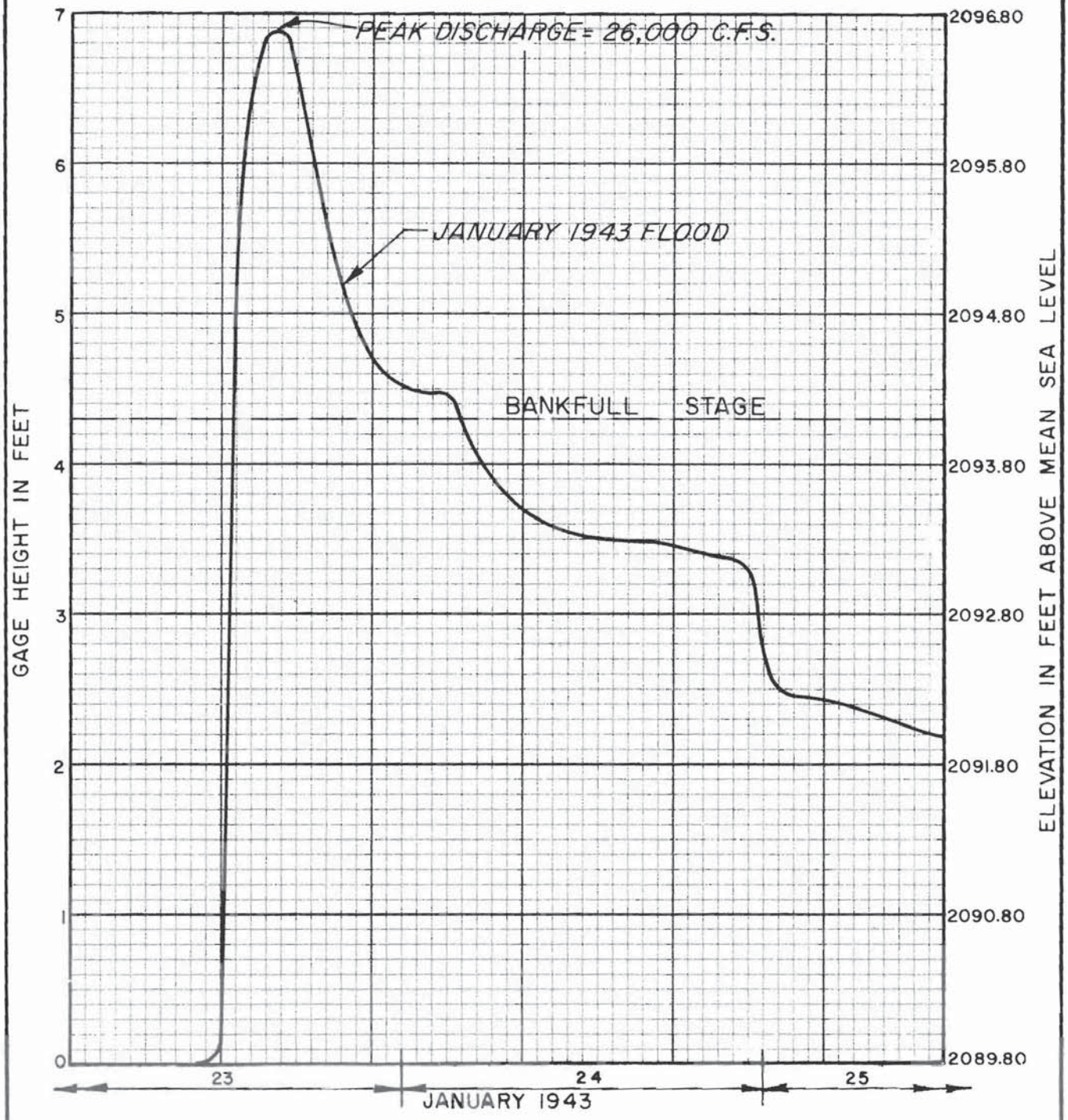
VELOCITY

| Stream | Location | Mile above mouth | Velocity | |
|---|---|---|---|---|
| | | | Channel fps | Overbank fps |
| Mojave River | Lower limit of study | 44.6 | 4.5 | 2.0 |
| | Daggett | 52.7 | 10.5 | 6.0 |
| | Old U.S. 91 (business) at Barstow | 61.5 | 5.5 | 2.5 |
| | Barstow | 62.1 | 10.0 | 7.0 |
| | Lenwood | 67.0 | 9.5 | 2.5 |
| | Hodge | 74.6 | 3.5 | 2.5 |
| | Upper limit of study | 84.0 | 5.0 | -- |

Velocities greater than 3 feet per second combined with depths of 3 feet or greater are generally considered hazardous.

Rate of rise and duration of flooding

The rise from streambed to extreme flood peak during a local storm (thunderstorm) would be approximately 2 to 3 hours and the floodwaters would remain on the flood plain for less than 1/2 day. During a general storm and with the Mojave River Reservoir in operation the rise from streambed to extreme flood peak would be approximately 1 1/2 days and the floodwaters would remain on the floodplain for approximately 2 to 3 days.




CORPS OF ENGINEERS, U. S. ARMY
LOS ANGELES DISTRICT, CALIFORNIA

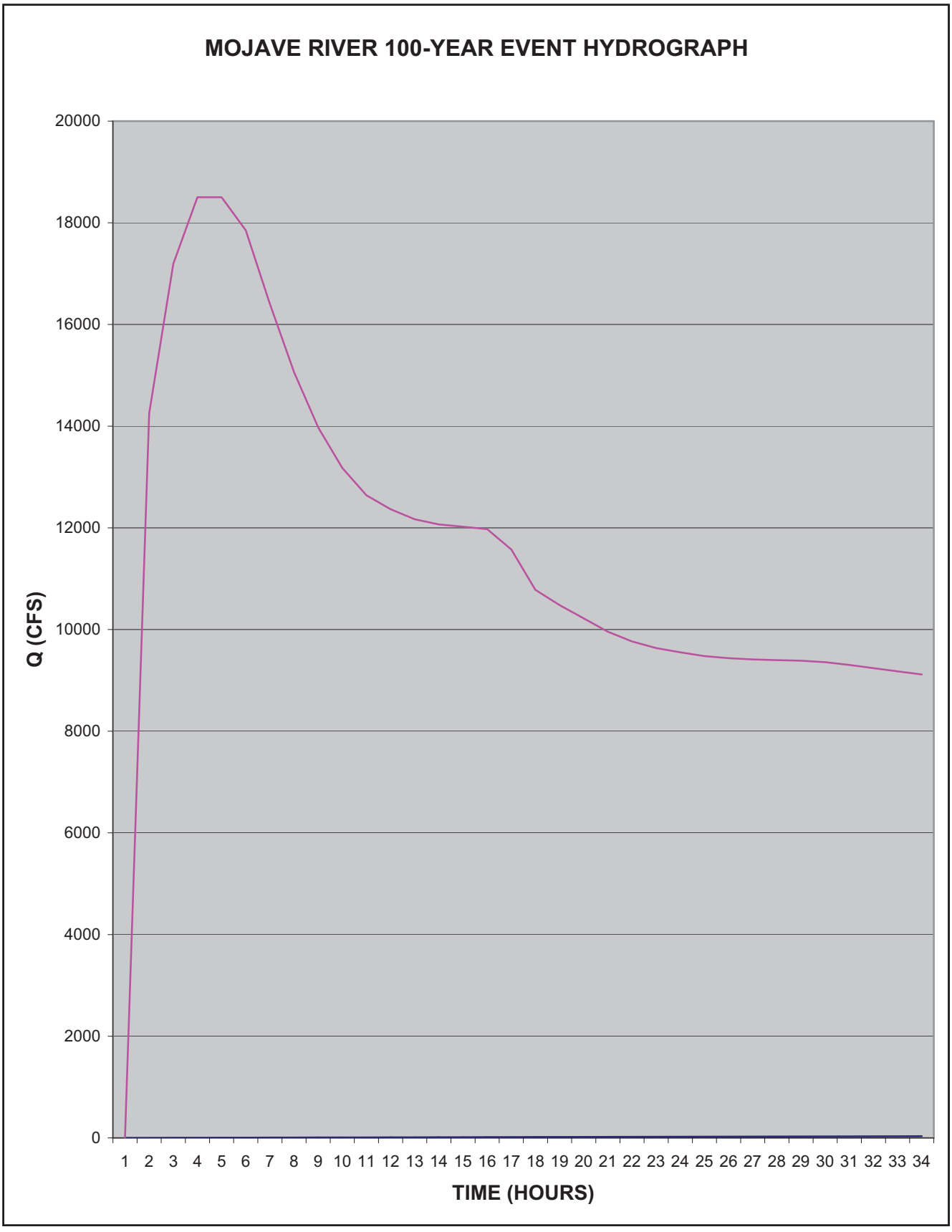
STREAM GAGE AT
RIVER MILE 61.6

# STAGE HYDROGRAPH

MOJAVE RIVER
VICINITY OF
BARSTOW, CALIFORNIA
OCTOBER 1968



FIGURE 11


MOJAVE RIVER 100-YEAR EVENT HYDROGRAPH
Q (CFS)
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34
TIME (HOURS)

```
0        29.8214
 0        0
 .0833    .17
 .1666    .62
 .2499    1.32
 .3332    2.29
 .4165    3.62
 .4998    5.85
 .5831    9.2
 .6664    12.51
 .7497    15.44
 .833     17.87
 .9163    19.73
 .9996    21.2
 1.0829   22.43
 1.1662   23.52
 1.2495   24.51
 1.3328   25.39
 1.4161   26.18
 1.4994   26.92
 1.5827   27.6
 1.666    28.2
 1.7493   28.79
 1.8326   29.31
 1.9159   29.83
 1.9992   30.32
 2.0825   30.79
 2.1658   31.24
 2.2491   31.66
 2.3324   32.06
 2.4157   32.41
 2.499    32.77
 2.5823   33.11
 2.6656   33.45
 2.7489   33.77
 2.8322   34.09
 2.9155   34.4
 2.9988   34.7
 3.0821   34.99
 3.1654   35.26
 3.2487   35.53
 3.332    35.8
 3.4153   36.08
 3.4986   36.33
 3.5819   36.58
 3.6652   36.84
 3.7485   37.09
 3.8318   37.34
 3.9151   37.57
 3.9984   37.81
 4.0817   38.04
 4.165    38.28
 4.2483   38.5
 4.3316   38.71
 4.4149   38.93
 4.4982   39.15
 4.5815   39.38
 4.6648   39.61
 4.7481   39.84
 4.8314   40.07
 4.9147   40.31
 4.998    40.55
 5.0813   40.79
 5.1646   41.04
 5.2479   41.28
 5.3312   41.53
 5.4145   41.76
 5.4978   42
 5.5811   42.23
 5.6644   42.47
 5.7477   42.72
 5.831    42.96
 5.9143   43.2
 5.9976   43.43
 6.0809   43.67
 6.1642   43.9
 6.2475   44.14
 6.3308   44.39
```

| | |
|---|---|
| 6.4141 | 44.63 |
| 6.4974 | 44.88 |
| 6.5807 | 45.14 |
| 6.664 | 45.4 |
| 6.7473 | 45.66 |
| 6.8306 | 45.92 |
| 6.9139 | 46.19 |
| 6.9972 | 46.46 |
| 7.0805 | 46.74 |
| 7.1638 | 47.02 |
| 7.2471 | 47.3 |
| 7.3304 | 47.59 |
| 7.4137 | 47.88 |
| 7.497 | 48.18 |
| 7.5803 | 48.48 |
| 7.6636 | 48.78 |
| 7.7469 | 49.1 |
| 7.8302 | 49.41 |
| 7.9135 | 49.73 |
| 7.9968 | 50.06 |
| 8.0801 | 50.39 |
| 8.1634 | 50.72 |
| 8.2467 | 51.07 |
| 8.33 | 51.41 |
| 8.4133 | 51.77 |
| 8.4966 | 52.12 |
| 8.5799 | 52.49 |
| 8.6632 | 52.86 |
| 8.7465 | 53.24 |
| 8.8298 | 53.62 |
| 8.9131 | 54.01 |
| 8.9964 | 54.41 |
| 9.0797 | 54.82 |
| 9.163 | 55.23 |
| 9.2463 | 55.65 |
| 9.3296 | 56.08 |
| 9.4129 | 56.51 |
| 9.4962 | 56.96 |
| 9.5795 | 57.41 |
| 9.6628 | 57.87 |
| 9.7461 | 58.34 |
| 9.8294 | 58.82 |
| 9.9127 | 59.32 |
| 9.996 | 59.81 |
| 10.0793 | 60.33 |
| 10.1626 | 60.85 |
| 10.2459 | 61.38 |
| 10.3292 | 61.92 |
| 10.4125 | 62.48 |
| 10.4958 | 63.05 |
| 10.5791 | 63.63 |
| 10.6624 | 64.22 |
| 10.7457 | 64.83 |
| 10.829 | 65.45 |
| 10.9123 | 66.09 |
| 10.9956 | 66.74 |
| 11.0789 | 67.41 |
| 11.1622 | 68.09 |
| 11.2455 | 68.8 |
| 11.3288 | 69.51 |
| 11.4121 | 70.25 |
| 11.4954 | 71.01 |
| 11.5787 | 71.79 |
| 11.662 | 72.59 |
| 11.7453 | 73.41 |
| 11.8286 | 74.25 |
| 11.9119 | 75.12 |
| 11.9952 | 76.02 |
| 12.0785 | 76.93 |
| 12.1618 | 77.86 |
| 12.2451 | 78.81 |
| 12.3284 | 79.78 |
| 12.4117 | 80.78 |
| 12.495 | 81.77 |
| 12.5783 | 82.76 |
| 12.6616 | 83.78 |
| 12.7449 | 84.86 |
| 12.8282 | 85.99 |

| | |
|---|---|
| 12.9115 | 87.2 |
| 12.9948 | 88.46 |
| 13.0781 | 89.78 |
| 13.1614 | 91.16 |
| 13.2447 | 92.6 |
| 13.328 | 94.1 |
| 13.4113 | 95.67 |
| 13.4946 | 97.31 |
| 13.5779 | 99.03 |
| 13.6612 | 100.82 |
| 13.7445 | 102.7 |
| 13.8278 | 104.67 |
| 13.9111 | 106.75 |
| 13.9944 | 108.93 |
| 14.0777 | 111.37 |
| 14.161 | 114.15 |
| 14.2443 | 117.3 |
| 14.3276 | 120.81 |
| 14.4109 | 124.8 |
| 14.4942 | 129.7 |
| 14.5775 | 135.75 |
| 14.6608 | 142.02 |
| 14.7441 | 148.29 |
| 14.8274 | 154.46 |
| 14.9107 | 160.54 |
| 14.994 | 166.69 |
| 15.0773 | 173.12 |
| 15.1606 | 179.93 |
| 15.2439 | 187.28 |
| 15.3272 | 195.23 |
| 15.4105 | 203.77 |
| 15.4938 | 212.91 |
| 15.5771 | 222.98 |
| 15.6604 | 234.17 |
| 15.7437 | 247.07 |
| 15.827 | 261.88 |
| 15.9103 | 281.74 |
| 15.9936 | 313.39 |
| 16.0769 | 400.68 |
| 16.1602 | 522.54 |
| 16.2435 | 646.33 |
| 16.3268 | 784.03 |
| 16.4101 | 968.63 |
| 16.4934 | 1283.7 |
| 16.5767 | 1600.72 |
| 16.66 | 1569.92 |
| 16.7433 | 1413.19 |
| 16.8266 | 1211.27 |
| 16.9099 | 1000.01 |
| 16.9932 | 846.49 |
| 17.0765 | 746.54 |
| 17.1598 | 673.86 |
| 17.2431 | 619.38 |
| 17.3264 | 564.87 |
| 17.4097 | 517.51 |
| 17.493 | 483.48 |
| 17.5763 | 445.31 |
| 17.6596 | 406.78 |
| 17.7429 | 385.33 |
| 17.8262 | 354.7 |
| 17.9095 | 339.81 |
| 17.9928 | 319.37 |
| 18.0761 | 305.98 |
| 18.1594 | 286.34 |
| 18.2427 | 270.34 |
| 18.326 | 253.75 |
| 18.4093 | 234.09 |
| 18.4926 | 225.99 |
| 18.5759 | 216.06 |
| 18.6592 | 209.05 |
| 18.7425 | 197.74 |
| 18.8258 | 190.64 |
| 18.9091 | 182.8 |
| 18.9924 | 175.51 |
| 19.0757 | 166.81 |
| 19.159 | 155.78 |
| 19.2423 | 151.81 |
| 19.3256 | 148.12 |

| | |
|---|---|
| 19.4089 | 143.79 |
| 19.4922 | 135.03 |
| 19.5755 | 130.02 |
| 19.6588 | 127.01 |
| 19.7421 | 123.71 |
| 19.8254 | 118.04 |
| 19.9087 | 110.09 |
| 19.992 | 107.28 |
| 20.0753 | 104.67 |
| 20.1586 | 101.51 |
| 20.2419 | 94.19 |
| 20.3252 | 90.12 |
| 20.4085 | 88.38 |
| 20.4918 | 86.96 |
| 20.5751 | 86.03 |
| 20.6584 | 85.68 |
| 20.7417 | 84.42 |
| 20.825 | 83.1 |
| 20.9083 | 81.77 |
| 20.9916 | 80.33 |
| 21.0749 | 78.92 |
| 21.1582 | 77.46 |
| 21.2415 | 75.69 |
| 21.3248 | 72.51 |
| 21.4081 | 67.1 |
| 21.4914 | 65.46 |
| 21.5747 | 64.25 |
| 21.658 | 63.06 |
| 21.7413 | 61.68 |
| 21.8246 | 59.93 |
| 21.9079 | 55.47 |
| 21.9912 | 51.39 |
| 22.0745 | 50.34 |
| 22.1578 | 49.47 |
| 22.2411 | 48.67 |
| 22.3244 | 47.92 |
| 22.4077 | 47.23 |
| 22.491 | 46.57 |
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| 22.6576 | 45.34 |
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| 23.0741 | 42.69 |
| 23.1574 | 42.22 |
| 23.2407 | 41.77 |
| 23.324 | 41.33 |
| 23.4073 | 40.9 |
| 23.4906 | 40.48 |
| 23.5739 | 40.07 |
| 23.6572 | 39.68 |
| 23.7405 | 39.29 |
| 23.8238 | 38.92 |
| 23.9071 | 38.55 |
| 23.9904 | 38.19 |
| 24.0737 | 37.67 |
| 24.157 | 36.89 |
| 24.2403 | 35.86 |
| 24.3236 | 34.58 |
| 24.4069 | 32.95 |
| 24.4902 | 30.46 |
| 24.5735 | 26.88 |
| 24.6568 | 23.37 |
| 24.7401 | 20.28 |
| 24.8234 | 17.74 |
| 24.9067 | 15.79 |
| 24.99 | 14.26 |
| 25.0733 | 12.98 |
| 25.1566 | 11.87 |
| 25.2399 | 10.86 |
| 25.3232 | 9.98 |
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| 25.4898 | 8.48 |
| 25.5731 | 7.83 |
| 25.6564 | 7.27 |
| 25.7397 | 6.73 |
| 25.823 | 6.26 |

| | |
|---|---|
| 25.9063 | 5.8 |
| 25.9896 | 5.39 |
| 26.0729 | 4.98 |
| 26.1562 | 4.62 |
| 26.2395 | 4.28 |
| 26.3228 | 3.98 |
| 26.4061 | 3.72 |
| 26.4894 | 3.47 |
| 26.5727 | 3.23 |
| 26.656 | 3 |
| 26.7393 | 2.79 |
| 26.8226 | 2.59 |
| 26.9059 | 2.41 |
| 26.9892 | 2.23 |
| 27.0725 | 2.07 |
| 27.1558 | 1.93 |
| 27.2391 | 1.79 |
| 27.3224 | 1.66 |
| 27.4057 | 1.53 |
| 27.489 | 1.42 |
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| 19.2423 | 932.26 |

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| 28.5719 | 4.4 |
| 28.6552 | 4.07 |
| 28.7385 | 3.81 |
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| 29.7381 | 1.66 |
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| 29.9047 | 1.39 |
| 29.988 | 1.25 |
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| 1.4994 | 194.52 |
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| 2.2491 | 242.77 |
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| 2.5823 | 257.43 |
| 2.6656 | 260.85 |
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| 3.8318 | 297.72 |
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| 3.9984 | 302.03 |
| 4.0817 | 304.09 |
| 4.165 | 306.1 |
| 4.2483 | 308.14 |
| 4.3316 | 310.03 |
| 4.4149 | 311.82 |
| 4.4982 | 313.6 |
| 4.5815 | 315.42 |
| 4.6648 | 317.25 |
| 4.7481 | 319.1 |
| 4.8314 | 320.94 |
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| 4.998 | 324.54 |
| 5.0813 | 326.37 |
| 5.1646 | 328.21 |
| 5.2479 | 330.08 |
| 5.3312 | 331.95 |
| 5.4145 | 333.77 |
| 5.4978 | 335.56 |
| 5.5811 | 337.39 |
| 5.6644 | 339.23 |
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| 5.831 | 342.97 |
| 5.9143 | 344.87 |
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| 6.1642 | 350.58 |
| 6.2475 | 352.54 |
| 6.3308 | 354.5 |

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| 9.2463 | 438.84 |
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| 9.996 | 468.55 |
| 10.0793 | 472.2 |
| 10.1626 | 475.87 |
| 10.2459 | 479.66 |
| 10.3292 | 483.49 |
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| 10.4958 | 491.42 |
| 10.5791 | 495.53 |
| 10.6624 | 499.69 |
| 10.7457 | 503.98 |
| 10.829 | 508.32 |
| 10.9123 | 512.8 |
| 10.9956 | 517.34 |
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| 11.4121 | 541.8 |
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| 11.5787 | 552.43 |
| 11.662 | 557.91 |
| 11.7453 | 563.6 |
| 11.8286 | 569.37 |
| 11.9119 | 575.36 |
| 11.9952 | 581.45 |
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| 12.1618 | 593.6 |
| 12.2451 | 599.68 |
| 12.3284 | 605.7 |
| 12.4117 | 611.77 |
| 12.495 | 617.67 |
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| 12.6616 | 629.12 |
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| 12.8282 | 639.9 |

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| 13.9111 | 752.54 |
| 13.9944 | 765.51 |
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| 14.2443 | 826.37 |
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| 14.4942 | 916.7 |
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| 1.5827 | 63.38 |
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| 2.5823 | 72.32 |
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| 3.1654 | 75.62 |
| 3.2487 | 76.04 |
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| 3.7485 | 78.63 |
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| 4.0817 | 80.31 |
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| 4.2483 | 81.13 |
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| 4.8314 | 83.89 |
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| 5.3312 | 86.44 |
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| 5.4978 | 87.33 |
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| 18.9091 | 241.85 |
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| 3.332 | 1.51 |
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| 3.6652 | 1.54 |
| 3.7485 | 1.55 |
| 3.8318 | 1.56 |
| 3.9151 | 1.57 |
| 3.9984 | 1.57 |
| 4.0817 | 1.58 |
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| 4.4149 | 1.61 |
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| 4.5815 | 1.63 |
| 4.6648 | 1.64 |
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| 12.495 | 335.38 |
| 12.5783 | 339.35 |
| 12.6616 | 343.38 |
| 12.7449 | 347.57 |
| 12.8282 | 351.97 |

| | |
|---|---|
| 12.9115 | 356.58 |
| 12.9948 | 361.48 |
| 13.0781 | 366.59 |
| 13.1614 | 371.97 |
| 13.2447 | 377.55 |
| 13.328 | 383.41 |
| 13.4113 | 389.48 |
| 13.4946 | 395.86 |
| 13.5779 | 402.49 |
| 13.6612 | 409.47 |
| 13.7445 | 416.72 |
| 13.8278 | 424.38 |
| 13.9111 | 432.36 |
| 13.9944 | 440.8 |
| 14.0777 | 450.85 |
| 14.161 | 463.21 |
| 14.2443 | 477.7 |
| 14.3276 | 494.46 |
| 14.4109 | 513.62 |
| 14.4942 | 537.85 |
| 14.5775 | 569.08 |
| 14.6608 | 606.86 |
| 14.7441 | 643.94 |
| 14.8274 | 681.45 |
| 14.9107 | 716.16 |
| 14.994 | 748.41 |
| 15.0773 | 779.54 |
| 15.1606 | 811.11 |
| 15.2439 | 843.61 |
| 15.3272 | 878.03 |
| 15.4105 | 912.26 |
| 15.4938 | 946.11 |
| 15.5771 | 980.14 |
| 15.6604 | 1016.21 |
| 15.7437 | 1054.54 |
| 15.827 | 1093.56 |
| 15.9103 | 1134.93 |
| 15.9936 | 1190.81 |
| 16.0769 | 1360.91 |
| 16.1602 | 1585.72 |
| 16.2435 | 1816.71 |
| 16.3268 | 2067.88 |
| 16.4101 | 2366.34 |
| 16.4934 | 2864.71 |
| 16.5767 | 3462.07 |
| 16.66 | 3898.44 |
| 16.7433 | 3720.36 |
| 16.8266 | 3531.88 |
| 16.9099 | 3095.63 |
| 16.9932 | 2668.19 |
| 17.0765 | 2367.37 |
| 17.1598 | 2163.27 |
| 17.2431 | 2008.06 |
| 17.3264 | 1878.75 |
| 17.4097 | 1761.57 |
| 17.493 | 1641.5 |
| 17.5763 | 1529.02 |
| 17.6596 | 1441.41 |
| 17.7429 | 1329.8 |
| 17.8262 | 1241.97 |
| 17.9095 | 1178.35 |
| 17.9928 | 1100.23 |
| 18.0761 | 1056.34 |
| 18.1594 | 1003.01 |
| 18.2427 | 959.4 |
| 18.326 | 919.13 |
| 18.4093 | 866.46 |
| 18.4926 | 833.87 |
| 18.5759 | 782.55 |
| 18.6592 | 746.12 |
| 18.7425 | 721.21 |
| 18.8258 | 693.16 |
| 18.9091 | 672.18 |
| 18.9924 | 643.11 |
| 19.0757 | 620.55 |
| 19.159 | 600.65 |
| 19.2423 | 577.15 |
| 19.3256 | 559.12 |

| | |
|---|---|
| 19.4089 | 529.16 |
| 19.4922 | 509.64 |
| 19.5755 | 497.64 |
| 19.6588 | 486.11 |
| 19.7421 | 473.22 |
| 19.8254 | 452.18 |
| 19.9087 | 438.13 |
| 19.992 | 428.52 |
| 20.0753 | 418.88 |
| 20.1586 | 407.65 |
| 20.2419 | 387.84 |
| 20.3252 | 375.85 |
| 20.4085 | 367.99 |
| 20.4918 | 360.12 |
| 20.5751 | 350.61 |
| 20.6584 | 333.76 |
| 20.7417 | 324.18 |
| 20.825 | 318.13 |
| 20.9083 | 312.69 |
| 20.9916 | 307.61 |
| 21.0749 | 303.85 |
| 21.1582 | 299.16 |
| 21.2415 | 294.46 |
| 21.3248 | 289.86 |
| 21.4081 | 285.22 |
| 21.4914 | 280.2 |
| 21.5747 | 275.52 |
| 21.658 | 270.97 |
| 21.7413 | 265.93 |
| 21.8246 | 259.36 |
| 21.9079 | 246.91 |
| 21.9912 | 241.23 |
| 22.0745 | 237.37 |
| 22.1578 | 233.73 |
| 22.2411 | 229.91 |
| 22.3244 | 226.04 |
| 22.4077 | 221.66 |
| 22.491 | 216.51 |
| 22.5743 | 202.27 |
| 22.6576 | 198.61 |
| 22.7409 | 195.54 |
| 22.8242 | 192.77 |
| 22.9075 | 190.04 |
| 22.9908 | 187.48 |
| 23.0741 | 185.04 |
| 23.1574 | 182.72 |
| 23.2407 | 180.48 |
| 23.324 | 178.33 |
| 23.4073 | 176.26 |
| 23.4906 | 174.25 |
| 23.5739 | 172.44 |
| 23.6572 | 170.69 |
| 23.7405 | 168.99 |
| 23.8238 | 167.34 |
| 23.9071 | 165.73 |
| 23.9904 | 164.16 |
| 24.0737 | 161.96 |
| 24.157 | 158.83 |
| 24.2403 | 154.85 |
| 24.3236 | 150.05 |
| 24.4069 | 144.33 |
| 24.4902 | 136.36 |
| 24.5735 | 125.06 |
| 24.6568 | 110.89 |
| 24.7401 | 97.84 |
| 24.8234 | 85.45 |
| 24.9067 | 75.41 |
| 24.99 | 67.75 |
| 25.0733 | 61.63 |
| 25.1566 | 56.46 |
| 25.2399 | 51.94 |
| 25.3232 | 47.87 |
| 25.4065 | 44.19 |
| 25.4898 | 40.92 |
| 25.5731 | 37.99 |
| 25.6564 | 35.19 |
| 25.7397 | 32.76 |
| 25.823 | 30.55 |

| | |
|---|---|
| 25.9063 | 28.43 |
| 25.9896 | 26.58 |
| 26.0729 | 24.77 |
| 26.1562 | 23.11 |
| 26.2395 | 21.53 |
| 26.3228 | 20.02 |
| 26.4061 | 18.68 |
| 26.4894 | 17.38 |
| 26.5727 | 16.27 |
| 26.656 | 15.26 |
| 26.7393 | 14.28 |
| 26.8226 | 13.37 |
| 26.9059 | 12.47 |
| 26.9892 | 11.66 |
| 27.0725 | 10.9 |
| 27.1558 | 10.16 |
| 27.2391 | 9.48 |
| 27.3224 | 8.81 |
| 27.4057 | 8.26 |
| 27.489 | 7.75 |
| 27.5723 | 7.26 |
| 27.6556 | 6.76 |
| 27.7389 | 6.28 |
| 27.8222 | 5.87 |
| 27.9055 | 5.48 |
| 27.9888 | 5.1 |
| 28.0721 | 4.73 |
| 28.1554 | 4.36 |
| 28.2387 | 4.07 |
| 28.322 | 3.81 |
| 28.4053 | 3.55 |
| 28.4886 | 3.3 |
| 28.5719 | 3.05 |
| 28.6552 | 2.86 |
| 28.7385 | 2.7 |
| 28.8218 | 2.54 |
| 28.9051 | 2.39 |
| 28.9884 | 2.23 |
| 29.0717 | 2.06 |
| 29.155 | 1.89 |
| 29.2383 | 1.72 |
| 29.3216 | 1.56 |
| 29.4049 | 1.4 |
| 29.4882 | 1.24 |
| 29.5715 | 1.08 |
| 29.6548 | .92 |
| 29.7381 | .77 |
| 29.8214 | .62 |
| 29.9047 | .53 |
| 29.988 | .46 |
| 30.0713 | .38 |
| 30.1546 | .3 |
| 30.2379 | .23 |
| 30.3212 | .15 |
| 30.4045 | .07 |

```
0        35
 0        0
 1        3562
 2        4298.25
 3        4625
 4        4625
 5        4461.75
 6        4100.25
 7        3764.25
 8        3491.5
 9        3292.5
 10       3157.5
 11       3088.75
 12       3039
 13       3013.5
 14       3002
 15       2989.75
 16       2889.25
 17       2690.5
 18       2615.75
 19       2549.75
 20       2484.25
 21       2436.25
 22       2403.25
 23       2382
 24       2363.5
 25       2353
 26       2346.5
 27       2343
 28       2339.5
 29       2332
 30       2318.5
 31       2302.5
 32       2286.5
 33       2270.75
 34       2254.75
 35       2197.25
```

# ATTACHMENT NO. 5

FLO-2D - 100-Year Flood
Simulation Summary

SUMMARY.OUT
NEGATIVE VOLUME CONSERVATION (ACRE FEET)
INDICATES EXCESS VOLUME (OUTFLOW + STORAGE > INFLOW)

| SIMULATION TIME (HOURS) | AVERAGE TIMESTEP (SECONDS) | VOLUME CONSERVATION (ACRE FEET) | PERCENT OF INFLOW |
|---|---|---|---|
| 0.081 | 4.847 | -0.000010 | 0.000001 |
| 0.160 | 3.105 | 0.000001 | 0.000000 |
| 0.240 | 2.570 | 0.000032 | 0.000004 |
| 0.320 | 2.390 | -0.000001 | 0.000000 |
| 0.400 | 2.260 | 0.000021 | 0.000002 |
| 0.481 | 2.539 | 0.000039 | 0.000003 |
| 0.560 | 2.356 | 0.000033 | 0.000002 |
| 0.640 | 1.416 | 0.000011 | 0.000001 |
| 0.720 | 1.070 | 0.000027 | 0.000002 |
| 0.800 | 1.070 | 0.000004 | 0.000000 |
| 0.880 | 1.070 | 0.000030 | 0.000002 |
| 0.960 | 1.027 | 0.000104 | 0.000005 |
| 1.040 | 0.927 | -0.000004 | 0.000000 |
| 1.120 | 0.925 | 0.000035 | 0.000002 |
| 1.200 | 0.447 | 0.000125 | 0.000005 |
| 1.280 | 0.260 | 0.000077 | 0.000003 |
| 1.360 | 0.258 | 0.000062 | 0.000002 |
| 1.440 | 0.257 | 0.000054 | 0.000002 |
| 1.520 | 0.256 | 0.000073 | 0.000003 |
| 1.600 | 0.254 | 0.000132 | 0.000005 |
| 1.680 | 0.253 | 0.000090 | 0.000003 |
| 1.760 | 0.251 | 0.000094 | 0.000003 |
| 1.840 | 0.248 | 0.000164 | 0.000005 |
| 1.920 | 0.247 | -0.000037 | 0.000001 |
| 2.000 | 0.246 | 0.000178 | 0.000005 |
| 2.080 | 0.245 | -0.000108 | 0.000003 |
| 2.160 | 0.244 | 0.000109 | 0.000003 |
| 2.240 | 0.243 | 0.000199 | 0.000005 |
| 2.320 | 0.243 | -0.000129 | 0.000003 |
| 2.400 | 0.242 | -0.000013 | 0.000000 |
| 2.480 | 0.242 | -0.000025 | 0.000001 |
| 2.560 | 0.241 | 0.000094 | 0.000002 |
| 2.640 | 0.241 | 0.000148 | 0.000003 |
| 2.720 | 0.240 | 0.000098 | 0.000002 |
| 2.800 | 0.239 | -0.000152 | 0.000003 |
| 2.880 | 0.239 | 0.000023 | 0.000000 |
| 2.960 | 0.236 | -0.000190 | 0.000004 |
| 3.040 | 0.234 | -0.000043 | 0.000001 |
| 3.120 | 0.234 | -0.000004 | 0.000000 |
| 3.200 | 0.234 | -0.000060 | 0.000001 |
| 3.280 | 0.234 | -0.000081 | 0.000001 |
| 3.360 | 0.234 | -0.000197 | 0.000003 |
| 3.440 | 0.233 | 0.000091 | 0.000002 |
| 3.520 | 0.234 | -0.000279 | 0.000005 |
| 3.600 | 0.234 | -0.000199 | 0.000003 |
| 3.680 | 0.234 | 0.000051 | 0.000001 |
| 3.760 | 0.233 | -0.000206 | 0.000003 |
| 3.840 | 0.234 | -0.000132 | 0.000002 |
| 3.920 | 0.234 | 0.000286 | 0.000004 |
| 4.000 | 0.234 | 0.000207 | 0.000003 |
| 4.080 | 0.234 | -0.000308 | 0.000004 |
| 4.160 | 0.235 | 0.000318 | 0.000004 |
| 4.240 | 0.236 | 0.000282 | 0.000004 |
| 4.320 | 0.238 | 0.000119 | 0.000002 |
| 4.400 | 0.239 | 0.000398 | 0.000005 |
| 4.480 | 0.239 | 0.000036 | 0.000000 |
| 4.560 | 0.239 | -0.000150 | 0.000002 |
| 4.640 | 0.240 | 0.000318 | 0.000004 |
| 4.720 | 0.240 | -0.000150 | 0.000002 |
| 4.800 | 0.240 | -0.000140 | 0.000002 |
| 4.880 | 0.241 | 0.000132 | 0.000002 |
| 4.960 | 0.241 | -0.000319 | 0.000004 |
| 5.040 | 0.241 | 0.000375 | 0.000004 |
| 5.120 | 0.242 | -0.000193 | 0.000002 |
| 5.200 | 0.242 | 0.000091 | 0.000001 |

SUMMARY.OUT FILE
CREATED WITH BASIC VERSION: 2009.06 BUILD NO. 09b-12.10.11

| | | | |
|---|---|---|---|
| 5.280 | 0.243 | -0.000074 | 0.000001 |
| 5.360 | 0.244 | -0.000065 | 0.000001 |
| 5.440 | 0.244 | -0.000093 | 0.000001 |
| 5.520 | 0.245 | -0.000510 | 0.000005 |
| 5.600 | 0.245 | -0.000005 | 0.000000 |
| 5.680 | 0.246 | -0.000297 | 0.000003 |
| 5.760 | 0.247 | -0.000269 | 0.000003 |
| 5.840 | 0.247 | 0.000046 | 0.000000 |
| 5.920 | 0.248 | -0.000159 | 0.000002 |
| 6.000 | 0.249 | 0.000458 | 0.000004 |
| 6.080 | 0.251 | -0.000341 | 0.000003 |
| 6.160 | 0.251 | -0.000463 | 0.000004 |
| 6.240 | 0.252 | -0.000022 | 0.000000 |
| 6.320 | 0.253 | 0.000628 | 0.000006 |
| 6.400 | 0.254 | 0.000397 | 0.000004 |
| 6.480 | 0.254 | 0.000305 | 0.000003 |
| 6.560 | 0.255 | 0.000058 | 0.000001 |
| 6.640 | 0.256 | 0.000247 | 0.000002 |
| 6.720 | 0.256 | -0.000229 | 0.000002 |
| 6.800 | 0.257 | 0.000033 | 0.000000 |
| 6.880 | 0.258 | 0.000109 | 0.000001 |
| 6.960 | 0.258 | 0.000077 | 0.000001 |
| 7.040 | 0.259 | 0.000343 | 0.000003 |
| 7.120 | 0.260 | 0.000199 | 0.000002 |
| 7.200 | 0.260 | 0.000719 | 0.000006 |
| 7.280 | 0.270 | 0.000266 | 0.000002 |
| 7.360 | 2.252 | 0.000399 | 0.000003 |
| 7.440 | 2.452 | 0.000005 | 0.000000 |
| 7.520 | 2.450 | 0.000447 | 0.000004 |
| 7.601 | 2.454 | 0.000738 | 0.000006 |
| 7.680 | 2.451 | 0.000293 | 0.000002 |
| 7.760 | 2.464 | -0.000068 | 0.000001 |
| 7.840 | 2.458 | -0.000074 | 0.000001 |
| 7.920 | 2.469 | -0.000080 | 0.000001 |
| 8.000 | 2.484 | 0.000128 | 0.000001 |
| 8.080 | 2.474 | -0.000316 | 0.000002 |
| 8.161 | 2.477 | -0.000422 | 0.000003 |
| 8.241 | 2.484 | -0.000333 | 0.000002 |
| 8.320 | 2.477 | 0.000975 | 0.000007 |
| 8.401 | 2.485 | -0.000118 | 0.000001 |
| 8.480 | 2.496 | -0.000632 | 0.000005 |
| 8.560 | 2.478 | -0.000545 | 0.000004 |
| 8.640 | 2.489 | 0.000685 | 0.000005 |
| 8.720 | 2.481 | 0.000219 | 0.000002 |
| 8.800 | 2.488 | -0.000094 | 0.000001 |
| 8.880 | 2.497 | 0.000079 | 0.000001 |
| 8.960 | 2.499 | 0.000105 | 0.000001 |
| 9.041 | 2.498 | 0.000394 | 0.000003 |
| 9.120 | 2.501 | 0.000699 | 0.000005 |
| 9.200 | 2.503 | -0.000321 | 0.000002 |
| 9.280 | 2.501 | -0.000254 | 0.000002 |
| 9.361 | 2.511 | 0.000662 | 0.000004 |
| 9.441 | 2.511 | 0.001054 | 0.000007 |
| 9.520 | 2.514 | 0.000817 | 0.000005 |
| 9.601 | 2.514 | 0.000414 | 0.000003 |
| 9.680 | 2.521 | 0.000532 | 0.000003 |
| 9.760 | 2.514 | -0.000830 | 0.000005 |
| 9.840 | 2.519 | -0.000066 | 0.000000 |
| 9.920 | 2.521 | -0.000831 | 0.000005 |
| 10.001 | 2.534 | -0.001047 | 0.000007 |
| 10.080 | 2.519 | 0.001129 | 0.000007 |
| 10.160 | 2.531 | 0.000284 | 0.000002 |
| 10.240 | 2.525 | -0.000473 | 0.000003 |
| 10.320 | 2.527 | -0.000810 | 0.000005 |
| 10.400 | 2.536 | 0.000420 | 0.000003 |
| 10.481 | 2.547 | -0.000468 | 0.000003 |
| 10.560 | 2.535 | 0.000162 | 0.000001 |
| 10.640 | 2.542 | -0.000222 | 0.000001 |
| 10.721 | 2.547 | -0.000619 | 0.000004 |
| 10.800 | 2.539 | 0.000999 | 0.000006 |
| 10.880 | 2.541 | 0.000083 | 0.000000 |
| 10.960 | 2.553 | 0.000915 | 0.000005 |
| 11.040 | 2.560 | -0.000097 | 0.000001 |
| 11.120 | 2.548 | -0.000463 | 0.000003 |

| | | | |
|---|---|---|---|
| 11.200 | 2.553 | -0.000647 | 0.000004 |
| 11.280 | 2.554 | 0.000068 | 0.000000 |
| 11.361 | 2.557 | 0.000503 | 0.000003 |
| 11.440 | 2.562 | -0.001140 | 0.000006 |
| 11.521 | 2.556 | 0.000243 | 0.000001 |
| 11.600 | 2.563 | 0.000283 | 0.000002 |
| 11.680 | 2.572 | 0.000642 | 0.000004 |
| 11.761 | 2.580 | 0.000401 | 0.000002 |
| 11.840 | 2.599 | -0.000283 | 0.000002 |
| 11.920 | 2.603 | 0.000069 | 0.000000 |
| 12.000 | 2.597 | -0.001049 | 0.000006 |
| 12.080 | 2.598 | -0.001051 | 0.000006 |
| 12.160 | 2.604 | 0.000613 | 0.000003 |
| 12.240 | 2.597 | 0.001445 | 0.000008 |
| 12.320 | 2.598 | 0.001050 | 0.000006 |
| 12.400 | 2.600 | 0.000047 | 0.000000 |
| 12.481 | 2.603 | -0.000548 | 0.000003 |
| 12.561 | 2.597 | -0.001063 | 0.000006 |
| 12.640 | 2.599 | -0.000594 | 0.000003 |
| 12.720 | 2.603 | -0.000392 | 0.000002 |
| 12.800 | 2.597 | 0.000005 | 0.000000 |
| 12.881 | 2.598 | 0.001051 | 0.000005 |
| 12.960 | 2.590 | -0.000708 | 0.000004 |
| 13.040 | 2.590 | 0.001790 | 0.000009 |
| 13.120 | 2.603 | 0.000876 | 0.000004 |
| 13.201 | 2.597 | 0.000159 | 0.000001 |
| 13.281 | 2.598 | 0.000710 | 0.000004 |
| 13.360 | 2.604 | -0.000744 | 0.000004 |
| 13.440 | 2.597 | -0.000520 | 0.000003 |
| 13.520 | 2.598 | -0.000446 | 0.000002 |
| 13.601 | 2.600 | -0.001347 | 0.000007 |
| 13.680 | 2.600 | 0.000093 | 0.000000 |
| 13.760 | 2.598 | 0.000188 | 0.000001 |
| 13.840 | 2.600 | -0.000321 | 0.000002 |
| 13.921 | 2.603 | 0.000837 | 0.000004 |
| 14.001 | 2.597 | -0.000083 | 0.000000 |
| 14.080 | 2.599 | 0.000539 | 0.000003 |
| 14.160 | 2.603 | 0.001639 | 0.000008 |
| 14.240 | 2.597 | 0.001211 | 0.000006 |
| 14.320 | 2.598 | 0.000038 | 0.000000 |
| 14.400 | 2.604 | 0.000502 | 0.000002 |
| 14.480 | 2.597 | 0.000541 | 0.000002 |
| 14.560 | 2.598 | -0.000045 | 0.000000 |
| 14.640 | 2.600 | 0.000504 | 0.000002 |
| 14.721 | 2.603 | 0.000387 | 0.000002 |
| 14.801 | 2.597 | -0.000830 | 0.000004 |
| 14.880 | 2.599 | 0.000150 | 0.000001 |
| 14.960 | 2.603 | -0.000184 | 0.000001 |
| 15.040 | 2.597 | 0.000331 | 0.000001 |
| 15.121 | 2.598 | 0.000430 | 0.000002 |
| 15.200 | 2.604 | -0.000044 | 0.000000 |
| 15.280 | 2.597 | 0.000800 | 0.000003 |
| 15.360 | 2.570 | 0.000094 | 0.000000 |
| 15.440 | 2.596 | 0.000581 | 0.000002 |
| 15.520 | 2.598 | 0.000012 | 0.000000 |
| 15.600 | 2.600 | -0.000315 | 0.000001 |
| 15.681 | 2.603 | 0.000402 | 0.000002 |
| 15.760 | 2.595 | 0.000620 | 0.000003 |
| 15.840 | 2.560 | 0.000455 | 0.000002 |
| 15.921 | 2.602 | 0.000905 | 0.000004 |
| 16.001 | 2.597 | 0.000793 | 0.000003 |
| 16.080 | 2.599 | 0.000688 | 0.000003 |
| 16.161 | 2.564 | 0.000269 | 0.000001 |
| 16.241 | 2.594 | 0.000388 | 0.000002 |
| 16.320 | 2.579 | 0.000138 | 0.000001 |
| 16.400 | 2.582 | 0.000739 | 0.000003 |
| 16.481 | 2.596 | -0.001365 | 0.000005 |
| 16.560 | 1.307 | 0.000850 | 0.000003 |
| 16.640 | 0.859 | -0.000648 | 0.000003 |
| 16.721 | 0.986 | -0.000131 | 0.000001 |
| 16.800 | 2.597 | -0.000720 | 0.000003 |
| 16.880 | 2.581 | -0.001795 | 0.000007 |
| 16.961 | 2.578 | 0.000274 | 0.000001 |
| 17.041 | 1.447 | -0.001000 | 0.000004 |

| | | | |
|---|---|---|---|
| 17.120 | 2.555 | -0.000312 | 0.000001 |
| 17.201 | 2.546 | 0.000231 | 0.000001 |
| 17.280 | 2.537 | 0.000526 | 0.000002 |
| 17.360 | 2.532 | 0.000778 | 0.000003 |
| 17.440 | 2.513 | -0.001278 | 0.000005 |
| 17.521 | 2.504 | -0.001356 | 0.000005 |
| 17.601 | 2.501 | -0.000787 | 0.000003 |
| 17.680 | 2.496 | -0.000105 | 0.000000 |
| 17.760 | 2.441 | -0.001445 | 0.000005 |
| 17.841 | 2.489 | -0.000310 | 0.000001 |
| 17.921 | 2.467 | 0.001420 | 0.000005 |
| 18.000 | 2.454 | 0.000489 | 0.000002 |
| 18.080 | 2.461 | -0.001834 | 0.000006 |
| 18.160 | 2.494 | -0.001355 | 0.000005 |
| 18.240 | 2.492 | 0.001778 | 0.000006 |
| 18.320 | 2.497 | -0.002235 | 0.000007 |
| 18.400 | 2.510 | -0.001797 | 0.000006 |
| 18.480 | 2.479 | -0.000801 | 0.000003 |
| 18.560 | 2.504 | 0.001438 | 0.000005 |
| 18.640 | 2.501 | -0.001164 | 0.000004 |
| 18.720 | 2.501 | 0.001159 | 0.000004 |
| 18.800 | 2.413 | 0.000437 | 0.000001 |
| 18.880 | 2.416 | -0.000124 | 0.000000 |
| 18.960 | 2.498 | -0.000420 | 0.000001 |
| 19.040 | 2.492 | -0.000307 | 0.000001 |
| 19.121 | 2.510 | -0.000833 | 0.000003 |
| 19.200 | 2.499 | 0.000074 | 0.000000 |
| 19.280 | 2.484 | -0.001653 | 0.000005 |
| 19.361 | 2.506 | -0.000785 | 0.000002 |
| 19.441 | 2.485 | 0.000085 | 0.000000 |
| 19.520 | 2.533 | -0.001185 | 0.000004 |
| 19.601 | 2.503 | 0.000777 | 0.000002 |
| 19.681 | 2.504 | -0.001493 | 0.000005 |
| 19.760 | 2.518 | 0.000395 | 0.000001 |
| 19.840 | 2.535 | 0.000218 | 0.000001 |
| 19.920 | 1.378 | 0.001151 | 0.000004 |
| 20.000 | 0.952 | 0.001500 | 0.000005 |
| 20.080 | 0.951 | 0.001573 | 0.000005 |
| 20.160 | 0.952 | -0.000533 | 0.000002 |
| 20.240 | 0.952 | -0.000241 | 0.000001 |
| 20.320 | 0.951 | 0.002355 | 0.000007 |
| 20.400 | 0.952 | 0.001593 | 0.000005 |
| 20.480 | 0.951 | 0.001398 | 0.000004 |
| 20.560 | 0.952 | 0.000754 | 0.000002 |
| 20.640 | 0.951 | -0.000300 | 0.000001 |
| 20.720 | 0.952 | -0.001609 | 0.000005 |
| 20.800 | 0.951 | -0.001319 | 0.000004 |
| 20.880 | 0.952 | -0.001875 | 0.000006 |
| 20.960 | 0.951 | -0.000857 | 0.000003 |
| 21.040 | 0.952 | 0.002371 | 0.000007 |
| 21.120 | 0.951 | 0.001151 | 0.000003 |
| 21.200 | 0.951 | -0.003023 | 0.000009 |
| 21.280 | 0.952 | 0.000927 | 0.000003 |
| 21.360 | 0.951 | 0.001209 | 0.000004 |
| 21.440 | 0.952 | 0.001222 | 0.000004 |
| 21.520 | 0.951 | 0.001602 | 0.000005 |
| 21.600 | 0.952 | -0.001462 | 0.000004 |
| 21.680 | 0.951 | 0.000791 | 0.000002 |
| 21.760 | 0.952 | 0.001245 | 0.000004 |
| 21.840 | 0.951 | 0.000684 | 0.000002 |
| 21.920 | 0.952 | -0.001083 | 0.000003 |
| 22.000 | 0.951 | 0.002326 | 0.000007 |
| 22.080 | 0.952 | 0.001874 | 0.000005 |
| 22.160 | 0.951 | -0.001250 | 0.000004 |
| 22.240 | 0.952 | -0.000726 | 0.000002 |
| 22.320 | 0.952 | -0.000852 | 0.000002 |
| 22.400 | 0.951 | -0.000607 | 0.000002 |
| 22.480 | 0.952 | 0.000260 | 0.000001 |
| 22.560 | 0.951 | -0.002774 | 0.000008 |
| 22.640 | 0.952 | -0.000465 | 0.000001 |
| 22.720 | 0.951 | -0.001601 | 0.000005 |
| 22.800 | 0.952 | -0.001068 | 0.000003 |
| 22.880 | 0.951 | -0.000038 | 0.000000 |
| 22.960 | 0.952 | -0.001303 | 0.000004 |

| | | | |
|---|---|---|---|
| 23.040 | 0.951 | -0.000932 | 0.000003 |
| 23.120 | 0.952 | 0.002550 | 0.000007 |
| 23.200 | 0.951 | 0.000240 | 0.000001 |
| 23.280 | 0.952 | 0.003028 | 0.000008 |
| 23.360 | 0.952 | 0.003017 | 0.000008 |
| 23.440 | 0.951 | 0.001808 | 0.000005 |
| 23.520 | 0.952 | -0.002296 | 0.000006 |
| 23.600 | 0.951 | -0.001960 | 0.000005 |
| 23.680 | 0.952 | 0.002335 | 0.000006 |
| 23.760 | 0.951 | 0.003371 | 0.000009 |
| 23.840 | 0.952 | -0.002676 | 0.000007 |
| 23.920 | 0.951 | -0.001226 | 0.000003 |
| 24.000 | 0.952 | -0.002814 | 0.000008 |
| 24.080 | 0.951 | 0.002164 | 0.000006 |
| 24.160 | 0.952 | -0.000791 | 0.000002 |
| 24.240 | 0.951 | 0.000307 | 0.000001 |
| 24.320 | 0.951 | -0.000605 | 0.000002 |
| 24.400 | 0.952 | -0.000245 | 0.000001 |
| 24.480 | 0.951 | 0.001237 | 0.000003 |
| 24.560 | 0.952 | -0.000210 | 0.000001 |
| 24.640 | 0.951 | -0.001640 | 0.000004 |
| 24.720 | 0.952 | 0.000243 | 0.000001 |
| 24.800 | 0.951 | -0.001748 | 0.000005 |
| 24.880 | 0.952 | 0.000027 | 0.000000 |
| 24.960 | 0.951 | 0.001104 | 0.000003 |
| 25.040 | 0.952 | 0.001079 | 0.000003 |
| 25.120 | 0.951 | 0.002617 | 0.000007 |
| 25.200 | 0.952 | -0.000099 | 0.000000 |
| 25.280 | 0.951 | -0.000392 | 0.000001 |
| 25.360 | 0.952 | 0.000127 | 0.000000 |
| 25.440 | 0.952 | -0.001097 | 0.000003 |
| 25.520 | 0.951 | -0.000770 | 0.000002 |
| 25.600 | 0.952 | 0.002089 | 0.000006 |
| 25.680 | 0.951 | 0.000469 | 0.000001 |
| 25.760 | 0.954 | 0.002271 | 0.000006 |
| 25.840 | 0.960 | -0.000265 | 0.000001 |
| 25.920 | 0.970 | 0.001672 | 0.000004 |
| 26.000 | 0.997 | -0.001773 | 0.000005 |
| 26.080 | 1.004 | -0.000511 | 0.000001 |
| 26.160 | 1.004 | -0.000499 | 0.000001 |
| 26.240 | 1.004 | -0.000640 | 0.000002 |
| 26.320 | 1.004 | 0.001607 | 0.000004 |
| 26.400 | 1.004 | -0.000606 | 0.000002 |
| 26.480 | 1.004 | 0.000365 | 0.000001 |
| 26.560 | 1.004 | 0.000312 | 0.000001 |
| 26.640 | 1.004 | -0.001069 | 0.000003 |
| 26.720 | 1.004 | -0.001061 | 0.000003 |
| 26.800 | 1.003 | 0.000902 | 0.000002 |
| 26.880 | 1.004 | -0.000633 | 0.000002 |
| 26.960 | 1.004 | 0.003726 | 0.000010 |
| 27.040 | 1.004 | 0.002674 | 0.000007 |
| 27.120 | 1.004 | 0.001546 | 0.000004 |
| 27.200 | 1.004 | 0.001673 | 0.000004 |
| 27.280 | 1.004 | -0.000965 | 0.000002 |
| 27.360 | 1.004 | -0.000978 | 0.000002 |
| 27.440 | 1.004 | 0.000940 | 0.000002 |
| 27.520 | 1.004 | 0.000117 | 0.000000 |
| 27.600 | 1.004 | -0.001078 | 0.000003 |
| 27.680 | 1.003 | -0.000288 | 0.000001 |
| 27.760 | 1.073 | 0.004580 | 0.000012 |
| 27.840 | 2.601 | -0.002103 | 0.000005 |
| 27.921 | 2.600 | 0.000653 | 0.000002 |
| 28.001 | 2.602 | -0.003280 | 0.000008 |
| 28.080 | 2.594 | -0.001268 | 0.000003 |
| 28.160 | 2.600 | 0.001591 | 0.000004 |
| 28.240 | 2.603 | -0.003547 | 0.000009 |
| 28.321 | 2.597 | 0.001736 | 0.000004 |
| 28.401 | 2.598 | 0.000407 | 0.000001 |
| 28.480 | 2.604 | -0.001455 | 0.000004 |
| 28.560 | 2.597 | -0.000226 | 0.000001 |
| 28.640 | 2.598 | 0.000197 | 0.000000 |
| 28.721 | 2.600 | 0.000526 | 0.000001 |
| 28.800 | 2.600 | 0.001020 | 0.000003 |
| 28.880 | 2.598 | 0.000528 | 0.000001 |

| | | | |
|---|---|---|---|
| 28.960 | 2.600 | -0.000969 | 0.000002 |
| 29.041 | 2.603 | -0.001100 | 0.000003 |
| 29.121 | 2.597 | -0.000630 | 0.000002 |
| 29.200 | 2.599 | 0.000821 | 0.000002 |
| 29.280 | 2.603 | 0.003014 | 0.000007 |
| 29.360 | 2.597 | 0.001960 | 0.000005 |
| 29.440 | 2.598 | 0.001138 | 0.000003 |
| 29.520 | 2.604 | 0.001786 | 0.000004 |
| 29.600 | 2.597 | -0.000671 | 0.000002 |
| 29.680 | 2.598 | 0.001045 | 0.000003 |
| 29.760 | 2.600 | -0.000009 | 0.000000 |
| 29.841 | 2.603 | 0.001921 | 0.000005 |
| 29.921 | 2.597 | 0.003108 | 0.000008 |
| 30.000 | 2.599 | -0.002212 | 0.000005 |
| 30.080 | 2.603 | 0.002580 | 0.000006 |
| 30.160 | 2.597 | -0.000869 | 0.000002 |
| 30.241 | 2.598 | -0.000355 | 0.000001 |
| 30.320 | 2.604 | 0.002897 | 0.000007 |
| 30.400 | 2.597 | -0.002536 | 0.000006 |
| 30.480 | 2.598 | 0.001133 | 0.000003 |
| 30.560 | 2.600 | -0.000780 | 0.000002 |
| 30.641 | 2.603 | 0.000987 | 0.000002 |
| 30.720 | 2.595 | -0.002145 | 0.000005 |
| 30.800 | 2.600 | -0.002547 | 0.000006 |
| 30.880 | 2.603 | 0.000904 | 0.000002 |
| 30.961 | 2.597 | 0.001276 | 0.000003 |
| 31.041 | 2.598 | 0.000569 | 0.000001 |
| 31.120 | 2.604 | 0.002169 | 0.000005 |
| 31.200 | 2.597 | -0.000664 | 0.000002 |
| 31.280 | 2.598 | 0.000720 | 0.000002 |
| 31.361 | 2.600 | -0.000958 | 0.000002 |
| 31.440 | 2.600 | 0.000191 | 0.000000 |
| 31.520 | 2.598 | 0.003615 | 0.000008 |
| 31.600 | 2.600 | 0.000223 | 0.000001 |
| 31.681 | 2.603 | -0.001834 | 0.000004 |
| 31.761 | 2.597 | -0.001537 | 0.000004 |
| 31.840 | 2.599 | -0.002297 | 0.000005 |
| 31.920 | 2.603 | -0.003161 | 0.000007 |
| 32.000 | 2.597 | 0.000441 | 0.000001 |
| 32.080 | 2.598 | -0.001791 | 0.000004 |
| 32.160 | 2.604 | 0.000415 | 0.000001 |
| 32.240 | 2.597 | -0.000325 | 0.000001 |
| 32.320 | 2.598 | 0.000674 | 0.000002 |
| 32.400 | 2.600 | -0.001721 | 0.000004 |
| 32.481 | 2.603 | -0.000976 | 0.000002 |
| 32.561 | 2.597 | -0.000909 | 0.000002 |
| 32.640 | 2.599 | -0.000831 | 0.000002 |
| 32.720 | 2.603 | 0.000215 | 0.000000 |
| 32.800 | 2.597 | 0.001020 | 0.000002 |
| 32.881 | 2.598 | 0.001319 | 0.000003 |
| 32.960 | 2.604 | -0.000053 | 0.000000 |
| 33.040 | 2.597 | 0.001502 | 0.000003 |
| 33.120 | 2.598 | 0.001171 | 0.000003 |
| 33.200 | 2.600 | -0.001993 | 0.000005 |
| 33.281 | 2.603 | 0.000934 | 0.000002 |
| 33.361 | 2.597 | -0.000552 | 0.000001 |
| 33.440 | 2.599 | -0.000464 | 0.000001 |
| 33.520 | 2.603 | 0.000616 | 0.000001 |
| 33.600 | 2.597 | 0.001718 | 0.000004 |
| 33.681 | 2.598 | 0.002608 | 0.000006 |
| 33.760 | 2.604 | -0.000762 | 0.000002 |
| 33.840 | 2.597 | -0.001223 | 0.000003 |
| 33.920 | 2.598 | -0.000706 | 0.000002 |
| 34.001 | 2.600 | -0.000292 | 0.000001 |
| 34.081 | 2.603 | -0.000973 | 0.000002 |
| 34.160 | 2.595 | -0.000917 | 0.000002 |
| 34.240 | 2.600 | -0.001531 | 0.000003 |
| 34.320 | 2.618 | -0.000202 | 0.000000 |
| 34.401 | 2.602 | 0.001700 | 0.000004 |
| 34.481 | 2.603 | 0.000750 | 0.000002 |
| 34.560 | 2.595 | 0.000010 | 0.000000 |
| 34.640 | 2.600 | 0.000880 | 0.000002 |
| 34.720 | 2.603 | -0.001635 | 0.000004 |
| 34.801 | 2.597 | -0.000071 | 0.000000 |

| | | | |
|---|---|---|---|
| 34.881 | 2.598 | 0.002853 | 0.000006 |
| 34.960 | 2.604 | 0.002291 | 0.000005 |
| 35.040 | 2.597 | -0.000873 | 0.000002 |

MASS BALANCE INFLOW - OUTFLOW VOLUME

*** INFLOW (ACRE-FEET) ***

TOTAL POINT RAINFALL: 2.5300 INCHES

| | WATER |
|---|---|
| RAINFALL VOLUME | 2700.46 |
| INFLOW HYDROGRAPH | 42491.34 |
| INFLOW HYDROGRAPHS + RAINFALL | 45191.80 |

*** OUTFLOW (ACRE-FT) ***

OVERLAND INFILTRATED AND INTERCEPTED WATER 1.39 INCHES

| OVERLAND FLOW | WATER |
|---|---|
| WATER LOST TO INFILTRATION & INTERCEPTION | 1475.65 |
| FLOODPLAIN STORAGE | 3661.82 |
| FLOODPLAIN OUTFLOW HYDROGRAPH | 40054.68 |
| FLOODPLAIN OUTFLOW, INFILTRATION & STORAGE | 45192.14 |

*** TOTALS ***

| | |
|---|---|
| TOTAL OUTFLOW FROM GRID SYSTEM | 40054.68 |
| TOTAL VOLUME OF OUTFLOW AND STORAGE | 45192.14 |

SURFACE AREA OF INUNDATION REGARDLESS OF THE TIME OF OCCURRENCE:
(FOR FLOW DEPTHS GREATER THAN THE "TOL" VALUE TYPICALLY 0.1 FT OR 0.03 M)

THE MAXIMUM INUNDATED AREA IS: 7476.48 ACRES

COMPUTER RUN TIME IS : 6.22461 HRS

THIS OUTPUT FILE WAS TERMINATED ON: 9/ 9/2017 AT: 22:29: 1

# TECHNICAL APPENDIX NO. 1

Tributary Watershed
Unit Hydrograph Calculations
100-Year, 24-Hour Storm Event

U n i t  H y d r o g r a p h  A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

Study date 08/10/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREA "A"
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-10-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 1527.33 | 1 | 1.29 |
| Rainfall data for year 100 | | |
| 1527.33 | 6 | 2.13 |
| Rainfall data for year 100 | | |
| 1527.33 | 24 | 3.17 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 68.5 | 85.8 | 1527.33 | 1.000 | 0.269 | 0.985 | 0.265 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.265

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 1504.42 | 0.985 | 68.5 | 85.8 | 1.66 | 0.566 |
| 22.91 | 0.015 | 98.0 | 98.0 | 0.20 | 0.927 |

Area-averaged catchment yield fraction, Y = 0.571
Area-averaged low loss fraction, Yb = 0.429
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 29891.00(Ft.)
Length from concentration point to centroid = 13688.00(Ft.)
Elevation difference along watercourse = 2156.00(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 1527.33(Ac.)
Catchment Lag time = 0.754 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 11.0552
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.265(In/Hr)
Average low loss rate fraction (Yb) = 0.429 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.100
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.900

Computed peak 5-minute rainfall = 0.614(In)
Computed peak 30-minute rainfall = 1.050(In)
Specified peak 1-hour rainfall = 1.293(In)
Computed peak 3-hour rainfall = 1.756(In)
Specified peak 6-hour rainfall = 2.131(In)
Specified peak 24-hour rainfall = 3.172(In)

Rainfall depth area reduction factors:
Using a total area of 1527.33(Ac.) (Ref: fig. E-4)

5-minute factor = 0.928 Adjusted rainfall = 0.570(In)
30-minute factor = 0.928 Adjusted rainfall = 0.975(In)
1-hour factor = 0.928 Adjusted rainfall = 1.200(In)
3-hour factor = 0.991 Adjusted rainfall = 1.741(In)
6-hour factor = 0.995 Adjusted rainfall = 2.121(In)
24-hour factor = 0.998 Adjusted rainfall = 3.166(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 18471.15 (CFS)) | |
| 1 | 0.508 | 93.797 |
| 2 | 1.839 | 245.823 |
| 3 | 3.935 | 387.252 |
| 4 | 6.805 | 530.096 |
| 5 | 10.752 | 728.996 |

| | | |
|---|---|---|
| 6 | 17.358 | 1220.283 |
| 7 | 27.251 | 1827.257 |
| 8 | 37.024 | 1805.190 |
| 9 | 45.633 | 1590.336 |
| 10 | 52.696 | 1304.516 |
| 11 | 58.036 | 986.348 |
| 12 | 62.184 | 766.191 |
| 13 | 65.632 | 636.904 |
| 14 | 68.611 | 550.259 |
| 15 | 71.290 | 494.839 |
| 16 | 73.634 | 432.918 |
| 17 | 75.690 | 379.852 |
| 18 | 77.602 | 353.107 |
| 19 | 79.311 | 315.618 |
| 20 | 80.785 | 272.306 |
| 21 | 82.202 | 261.720 |
| 22 | 83.425 | 226.032 |
| 23 | 84.622 | 220.979 |
| 24 | 85.711 | 201.111 |
| 25 | 86.771 | 195.780 |
| 26 | 87.723 | 175.873 |
| 27 | 88.607 | 163.362 |
| 28 | 89.411 | 148.440 |
| 29 | 90.080 | 123.711 |
| 30 | 90.738 | 121.413 |
| 31 | 91.353 | 113.560 |
| 32 | 91.958 | 111.771 |
| 33 | 92.499 | 99.933 |
| 34 | 93.020 | 96.353 |
| 35 | 93.512 | 90.735 |
| 36 | 93.980 | 86.582 |
| 37 | 94.410 | 79.340 |
| 38 | 94.763 | 65.295 |
| 39 | 95.115 | 64.936 |
| 40 | 95.466 | 64.936 |
| 41 | 95.814 | 64.278 |
| 42 | 96.105 | 53.578 |
| 43 | 96.374 | 49.825 |
| 44 | 96.644 | 49.825 |
| 45 | 96.914 | 49.825 |
| 46 | 97.158 | 45.194 |
| 47 | 97.346 | 34.708 |
| 48 | 97.532 | 34.306 |
| 49 | 97.718 | 34.306 |
| 50 | 97.901 | 33.860 |
| 51 | 98.031 | 24.034 |
| 52 | 98.140 | 20.012 |
| 53 | 98.248 | 20.012 |
| 54 | 98.356 | 20.012 |
| 55 | 98.469 | 20.767 |
| 56 | 98.592 | 22.764 |
| 57 | 98.716 | 22.871 |
| 58 | 98.840 | 22.871 |
| 59 | 98.963 | 22.862 |
| 60 | 99.086 | 22.592 |
| 61 | 99.207 | 22.462 |
| 62 | 99.329 | 22.462 |
| 63 | 99.450 | 22.462 |
| 64 | 99.558 | 19.934 |

| | | |
|---|---|---|
| 65 | 99.623 | 12.022 |
| 66 | 99.686 | 11.486 |
| 67 | 99.748 | 11.486 |
| 68 | 99.810 | 11.486 |
| 69 | 99.872 | 11.486 |
| 70 | 99.934 | 11.486 |
| 71 | 100.000 | 5.743 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5696 | 0.5696 |
| 2 | 0.7013 | 0.1317 |
| 3 | 0.7920 | 0.0907 |
| 4 | 0.8634 | 0.0714 |
| 5 | 0.9232 | 0.0598 |
| 6 | 0.9751 | 0.0519 |
| 7 | 1.0212 | 0.0462 |
| 8 | 1.0629 | 0.0417 |
| 9 | 1.1012 | 0.0382 |
| 10 | 1.1365 | 0.0354 |
| 11 | 1.1695 | 0.0330 |
| 12 | 1.2004 | 0.0309 |
| 13 | 1.2334 | 0.0329 |
| 14 | 1.2647 | 0.0313 |
| 15 | 1.2945 | 0.0299 |
| 16 | 1.3231 | 0.0286 |
| 17 | 1.3505 | 0.0274 |
| 18 | 1.3768 | 0.0264 |
| 19 | 1.4023 | 0.0254 |
| 20 | 1.4268 | 0.0245 |
| 21 | 1.4505 | 0.0237 |
| 22 | 1.4735 | 0.0230 |
| 23 | 1.4958 | 0.0223 |
| 24 | 1.5175 | 0.0217 |
| 25 | 1.5386 | 0.0211 |
| 26 | 1.5592 | 0.0205 |
| 27 | 1.5792 | 0.0200 |
| 28 | 1.5987 | 0.0195 |
| 29 | 1.6178 | 0.0191 |
| 30 | 1.6365 | 0.0187 |
| 31 | 1.6547 | 0.0182 |
| 32 | 1.6726 | 0.0179 |
| 33 | 1.6901 | 0.0175 |
| 34 | 1.7072 | 0.0171 |
| 35 | 1.7240 | 0.0168 |
| 36 | 1.7405 | 0.0165 |
| 37 | 1.7542 | 0.0136 |
| 38 | 1.7676 | 0.0134 |
| 39 | 1.7807 | 0.0131 |
| 40 | 1.7936 | 0.0129 |
| 41 | 1.8063 | 0.0127 |
| 42 | 1.8187 | 0.0125 |
| 43 | 1.8310 | 0.0122 |
| 44 | 1.8430 | 0.0120 |
| 45 | 1.8549 | 0.0118 |
| 46 | 1.8665 | 0.0117 |
| 47 | 1.8780 | 0.0115 |
| 48 | 1.8893 | 0.0113 |
| 49 | 1.9005 | 0.0111 |

| | | |
|---|---|---|
| 50 | 1.9114 | 0.0110 |
| 51 | 1.9223 | 0.0108 |
| 52 | 1.9329 | 0.0107 |
| 53 | 1.9434 | 0.0105 |
| 54 | 1.9538 | 0.0104 |
| 55 | 1.9641 | 0.0102 |
| 56 | 1.9742 | 0.0101 |
| 57 | 1.9842 | 0.0100 |
| 58 | 1.9940 | 0.0099 |
| 59 | 2.0038 | 0.0097 |
| 60 | 2.0134 | 0.0096 |
| 61 | 2.0229 | 0.0095 |
| 62 | 2.0323 | 0.0094 |
| 63 | 2.0416 | 0.0093 |
| 64 | 2.0508 | 0.0092 |
| 65 | 2.0599 | 0.0091 |
| 66 | 2.0689 | 0.0090 |
| 67 | 2.0778 | 0.0089 |
| 68 | 2.0865 | 0.0088 |
| 69 | 2.0953 | 0.0087 |
| 70 | 2.1039 | 0.0086 |
| 71 | 2.1124 | 0.0085 |
| 72 | 2.1208 | 0.0084 |
| 73 | 2.1293 | 0.0085 |
| 74 | 2.1377 | 0.0084 |
| 75 | 2.1460 | 0.0083 |
| 76 | 2.1542 | 0.0082 |
| 77 | 2.1624 | 0.0082 |
| 78 | 2.1705 | 0.0081 |
| 79 | 2.1785 | 0.0080 |
| 80 | 2.1864 | 0.0079 |
| 81 | 2.1943 | 0.0079 |
| 82 | 2.2021 | 0.0078 |
| 83 | 2.2098 | 0.0077 |
| 84 | 2.2174 | 0.0077 |
| 85 | 2.2250 | 0.0076 |
| 86 | 2.2326 | 0.0075 |
| 87 | 2.2401 | 0.0075 |
| 88 | 2.2475 | 0.0074 |
| 89 | 2.2548 | 0.0074 |
| 90 | 2.2621 | 0.0073 |
| 91 | 2.2693 | 0.0072 |
| 92 | 2.2765 | 0.0072 |
| 93 | 2.2836 | 0.0071 |
| 94 | 2.2907 | 0.0071 |
| 95 | 2.2977 | 0.0070 |
| 96 | 2.3047 | 0.0070 |
| 97 | 2.3116 | 0.0069 |
| 98 | 2.3185 | 0.0069 |
| 99 | 2.3253 | 0.0068 |
| 100 | 2.3320 | 0.0068 |
| 101 | 2.3388 | 0.0067 |
| 102 | 2.3454 | 0.0067 |
| 103 | 2.3521 | 0.0066 |
| 104 | 2.3586 | 0.0066 |
| 105 | 2.3652 | 0.0065 |
| 106 | 2.3716 | 0.0065 |
| 107 | 2.3781 | 0.0064 |
| 108 | 2.3845 | 0.0064 |

| | | |
|---|---|---|
| 109 | 2.3909 | 0.0064 |
| 110 | 2.3972 | 0.0063 |
| 111 | 2.4035 | 0.0063 |
| 112 | 2.4097 | 0.0062 |
| 113 | 2.4159 | 0.0062 |
| 114 | 2.4220 | 0.0062 |
| 115 | 2.4282 | 0.0061 |
| 116 | 2.4343 | 0.0061 |
| 117 | 2.4403 | 0.0060 |
| 118 | 2.4463 | 0.0060 |
| 119 | 2.4523 | 0.0060 |
| 120 | 2.4582 | 0.0059 |
| 121 | 2.4641 | 0.0059 |
| 122 | 2.4700 | 0.0059 |
| 123 | 2.4758 | 0.0058 |
| 124 | 2.4816 | 0.0058 |
| 125 | 2.4874 | 0.0058 |
| 126 | 2.4931 | 0.0057 |
| 127 | 2.4988 | 0.0057 |
| 128 | 2.5045 | 0.0057 |
| 129 | 2.5101 | 0.0056 |
| 130 | 2.5157 | 0.0056 |
| 131 | 2.5213 | 0.0056 |
| 132 | 2.5269 | 0.0055 |
| 133 | 2.5324 | 0.0055 |
| 134 | 2.5379 | 0.0055 |
| 135 | 2.5433 | 0.0055 |
| 136 | 2.5488 | 0.0054 |
| 137 | 2.5542 | 0.0054 |
| 138 | 2.5595 | 0.0054 |
| 139 | 2.5649 | 0.0053 |
| 140 | 2.5702 | 0.0053 |
| 141 | 2.5755 | 0.0053 |
| 142 | 2.5808 | 0.0053 |
| 143 | 2.5860 | 0.0052 |
| 144 | 2.5912 | 0.0052 |
| 145 | 2.5964 | 0.0052 |
| 146 | 2.6016 | 0.0052 |
| 147 | 2.6067 | 0.0051 |
| 148 | 2.6118 | 0.0051 |
| 149 | 2.6169 | 0.0051 |
| 150 | 2.6220 | 0.0051 |
| 151 | 2.6270 | 0.0050 |
| 152 | 2.6320 | 0.0050 |
| 153 | 2.6370 | 0.0050 |
| 154 | 2.6420 | 0.0050 |
| 155 | 2.6469 | 0.0049 |
| 156 | 2.6519 | 0.0049 |
| 157 | 2.6568 | 0.0049 |
| 158 | 2.6616 | 0.0049 |
| 159 | 2.6665 | 0.0049 |
| 160 | 2.6713 | 0.0048 |
| 161 | 2.6762 | 0.0048 |
| 162 | 2.6809 | 0.0048 |
| 163 | 2.6857 | 0.0048 |
| 164 | 2.6905 | 0.0048 |
| 165 | 2.6952 | 0.0047 |
| 166 | 2.6999 | 0.0047 |
| 167 | 2.7046 | 0.0047 |

| | | |
|---|---|---|
| 168 | 2.7093 | 0.0047 |
| 169 | 2.7139 | 0.0047 |
| 170 | 2.7186 | 0.0046 |
| 171 | 2.7232 | 0.0046 |
| 172 | 2.7278 | 0.0046 |
| 173 | 2.7323 | 0.0046 |
| 174 | 2.7369 | 0.0046 |
| 175 | 2.7414 | 0.0045 |
| 176 | 2.7459 | 0.0045 |
| 177 | 2.7504 | 0.0045 |
| 178 | 2.7549 | 0.0045 |
| 179 | 2.7594 | 0.0045 |
| 180 | 2.7638 | 0.0044 |
| 181 | 2.7683 | 0.0044 |
| 182 | 2.7727 | 0.0044 |
| 183 | 2.7771 | 0.0044 |
| 184 | 2.7814 | 0.0044 |
| 185 | 2.7858 | 0.0044 |
| 186 | 2.7901 | 0.0043 |
| 187 | 2.7945 | 0.0043 |
| 188 | 2.7988 | 0.0043 |
| 189 | 2.8031 | 0.0043 |
| 190 | 2.8074 | 0.0043 |
| 191 | 2.8116 | 0.0043 |
| 192 | 2.8159 | 0.0042 |
| 193 | 2.8201 | 0.0042 |
| 194 | 2.8243 | 0.0042 |
| 195 | 2.8285 | 0.0042 |
| 196 | 2.8327 | 0.0042 |
| 197 | 2.8369 | 0.0042 |
| 198 | 2.8410 | 0.0042 |
| 199 | 2.8452 | 0.0041 |
| 200 | 2.8493 | 0.0041 |
| 201 | 2.8534 | 0.0041 |
| 202 | 2.8575 | 0.0041 |
| 203 | 2.8616 | 0.0041 |
| 204 | 2.8656 | 0.0041 |
| 205 | 2.8697 | 0.0041 |
| 206 | 2.8737 | 0.0040 |
| 207 | 2.8778 | 0.0040 |
| 208 | 2.8818 | 0.0040 |
| 209 | 2.8858 | 0.0040 |
| 210 | 2.8897 | 0.0040 |
| 211 | 2.8937 | 0.0040 |
| 212 | 2.8977 | 0.0040 |
| 213 | 2.9016 | 0.0039 |
| 214 | 2.9055 | 0.0039 |
| 215 | 2.9095 | 0.0039 |
| 216 | 2.9134 | 0.0039 |
| 217 | 2.9173 | 0.0039 |
| 218 | 2.9211 | 0.0039 |
| 219 | 2.9250 | 0.0039 |
| 220 | 2.9289 | 0.0039 |
| 221 | 2.9327 | 0.0038 |
| 222 | 2.9365 | 0.0038 |
| 223 | 2.9403 | 0.0038 |
| 224 | 2.9442 | 0.0038 |
| 225 | 2.9479 | 0.0038 |
| 226 | 2.9517 | 0.0038 |

| | | |
|---|---|---|
| 227 | 2.9555 | 0.0038 |
| 228 | 2.9592 | 0.0038 |
| 229 | 2.9630 | 0.0037 |
| 230 | 2.9667 | 0.0037 |
| 231 | 2.9705 | 0.0037 |
| 232 | 2.9742 | 0.0037 |
| 233 | 2.9779 | 0.0037 |
| 234 | 2.9815 | 0.0037 |
| 235 | 2.9852 | 0.0037 |
| 236 | 2.9889 | 0.0037 |
| 237 | 2.9925 | 0.0037 |
| 238 | 2.9962 | 0.0036 |
| 239 | 2.9998 | 0.0036 |
| 240 | 3.0034 | 0.0036 |
| 241 | 3.0071 | 0.0036 |
| 242 | 3.0107 | 0.0036 |
| 243 | 3.0142 | 0.0036 |
| 244 | 3.0178 | 0.0036 |
| 245 | 3.0214 | 0.0036 |
| 246 | 3.0250 | 0.0036 |
| 247 | 3.0285 | 0.0035 |
| 248 | 3.0320 | 0.0035 |
| 249 | 3.0356 | 0.0035 |
| 250 | 3.0391 | 0.0035 |
| 251 | 3.0426 | 0.0035 |
| 252 | 3.0461 | 0.0035 |
| 253 | 3.0496 | 0.0035 |
| 254 | 3.0531 | 0.0035 |
| 255 | 3.0565 | 0.0035 |
| 256 | 3.0600 | 0.0035 |
| 257 | 3.0634 | 0.0034 |
| 258 | 3.0669 | 0.0034 |
| 259 | 3.0703 | 0.0034 |
| 260 | 3.0737 | 0.0034 |
| 261 | 3.0771 | 0.0034 |
| 262 | 3.0805 | 0.0034 |
| 263 | 3.0839 | 0.0034 |
| 264 | 3.0873 | 0.0034 |
| 265 | 3.0907 | 0.0034 |
| 266 | 3.0941 | 0.0034 |
| 267 | 3.0974 | 0.0034 |
| 268 | 3.1008 | 0.0033 |
| 269 | 3.1041 | 0.0033 |
| 270 | 3.1074 | 0.0033 |
| 271 | 3.1108 | 0.0033 |
| 272 | 3.1141 | 0.0033 |
| 273 | 3.1174 | 0.0033 |
| 274 | 3.1207 | 0.0033 |
| 275 | 3.1240 | 0.0033 |
| 276 | 3.1272 | 0.0033 |
| 277 | 3.1305 | 0.0033 |
| 278 | 3.1338 | 0.0033 |
| 279 | 3.1370 | 0.0033 |
| 280 | 3.1403 | 0.0032 |
| 281 | 3.1435 | 0.0032 |
| 282 | 3.1467 | 0.0032 |
| 283 | 3.1500 | 0.0032 |
| 284 | 3.1532 | 0.0032 |
| 285 | 3.1564 | 0.0032 |

| | | |
|---|---|---|
| 286 | 3.1596 | 0.0032 |
| 287 | 3.1628 | 0.0032 |
| 288 | 3.1659 | 0.0032 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0032 | 0.0014 | 0.0018 |
| 2 | 0.0032 | 0.0014 | 0.0018 |
| 3 | 0.0032 | 0.0014 | 0.0018 |
| 4 | 0.0032 | 0.0014 | 0.0018 |
| 5 | 0.0032 | 0.0014 | 0.0018 |
| 6 | 0.0032 | 0.0014 | 0.0018 |
| 7 | 0.0033 | 0.0014 | 0.0019 |
| 8 | 0.0033 | 0.0014 | 0.0019 |
| 9 | 0.0033 | 0.0014 | 0.0019 |
| 10 | 0.0033 | 0.0014 | 0.0019 |
| 11 | 0.0033 | 0.0014 | 0.0019 |
| 12 | 0.0033 | 0.0014 | 0.0019 |
| 13 | 0.0033 | 0.0014 | 0.0019 |
| 14 | 0.0033 | 0.0014 | 0.0019 |
| 15 | 0.0034 | 0.0014 | 0.0019 |
| 16 | 0.0034 | 0.0014 | 0.0019 |
| 17 | 0.0034 | 0.0015 | 0.0019 |
| 18 | 0.0034 | 0.0015 | 0.0019 |
| 19 | 0.0034 | 0.0015 | 0.0019 |
| 20 | 0.0034 | 0.0015 | 0.0020 |
| 21 | 0.0034 | 0.0015 | 0.0020 |
| 22 | 0.0034 | 0.0015 | 0.0020 |
| 23 | 0.0035 | 0.0015 | 0.0020 |
| 24 | 0.0035 | 0.0015 | 0.0020 |
| 25 | 0.0035 | 0.0015 | 0.0020 |
| 26 | 0.0035 | 0.0015 | 0.0020 |
| 27 | 0.0035 | 0.0015 | 0.0020 |
| 28 | 0.0035 | 0.0015 | 0.0020 |
| 29 | 0.0036 | 0.0015 | 0.0020 |
| 30 | 0.0036 | 0.0015 | 0.0020 |
| 31 | 0.0036 | 0.0015 | 0.0021 |
| 32 | 0.0036 | 0.0015 | 0.0021 |
| 33 | 0.0036 | 0.0016 | 0.0021 |
| 34 | 0.0036 | 0.0016 | 0.0021 |
| 35 | 0.0037 | 0.0016 | 0.0021 |
| 36 | 0.0037 | 0.0016 | 0.0021 |
| 37 | 0.0037 | 0.0016 | 0.0021 |
| 38 | 0.0037 | 0.0016 | 0.0021 |
| 39 | 0.0037 | 0.0016 | 0.0021 |
| 40 | 0.0037 | 0.0016 | 0.0021 |
| 41 | 0.0038 | 0.0016 | 0.0021 |
| 42 | 0.0038 | 0.0016 | 0.0022 |
| 43 | 0.0038 | 0.0016 | 0.0022 |
| 44 | 0.0038 | 0.0016 | 0.0022 |
| 45 | 0.0038 | 0.0016 | 0.0022 |
| 46 | 0.0038 | 0.0016 | 0.0022 |
| 47 | 0.0039 | 0.0017 | 0.0022 |
| 48 | 0.0039 | 0.0017 | 0.0022 |
| 49 | 0.0039 | 0.0017 | 0.0022 |
| 50 | 0.0039 | 0.0017 | 0.0022 |
| 51 | 0.0039 | 0.0017 | 0.0023 |

| | | | |
|---|---|---|---|
| 52 | 0.0040 | 0.0017 | 0.0023 |
| 53 | 0.0040 | 0.0017 | 0.0023 |
| 54 | 0.0040 | 0.0017 | 0.0023 |
| 55 | 0.0040 | 0.0017 | 0.0023 |
| 56 | 0.0040 | 0.0017 | 0.0023 |
| 57 | 0.0041 | 0.0017 | 0.0023 |
| 58 | 0.0041 | 0.0017 | 0.0023 |
| 59 | 0.0041 | 0.0018 | 0.0023 |
| 60 | 0.0041 | 0.0018 | 0.0024 |
| 61 | 0.0042 | 0.0018 | 0.0024 |
| 62 | 0.0042 | 0.0018 | 0.0024 |
| 63 | 0.0042 | 0.0018 | 0.0024 |
| 64 | 0.0042 | 0.0018 | 0.0024 |
| 65 | 0.0042 | 0.0018 | 0.0024 |
| 66 | 0.0043 | 0.0018 | 0.0024 |
| 67 | 0.0043 | 0.0018 | 0.0025 |
| 68 | 0.0043 | 0.0018 | 0.0025 |
| 69 | 0.0043 | 0.0019 | 0.0025 |
| 70 | 0.0044 | 0.0019 | 0.0025 |
| 71 | 0.0044 | 0.0019 | 0.0025 |
| 72 | 0.0044 | 0.0019 | 0.0025 |
| 73 | 0.0044 | 0.0019 | 0.0025 |
| 74 | 0.0045 | 0.0019 | 0.0026 |
| 75 | 0.0045 | 0.0019 | 0.0026 |
| 76 | 0.0045 | 0.0019 | 0.0026 |
| 77 | 0.0046 | 0.0020 | 0.0026 |
| 78 | 0.0046 | 0.0020 | 0.0026 |
| 79 | 0.0046 | 0.0020 | 0.0026 |
| 80 | 0.0046 | 0.0020 | 0.0026 |
| 81 | 0.0047 | 0.0020 | 0.0027 |
| 82 | 0.0047 | 0.0020 | 0.0027 |
| 83 | 0.0047 | 0.0020 | 0.0027 |
| 84 | 0.0048 | 0.0020 | 0.0027 |
| 85 | 0.0048 | 0.0021 | 0.0027 |
| 86 | 0.0048 | 0.0021 | 0.0028 |
| 87 | 0.0049 | 0.0021 | 0.0028 |
| 88 | 0.0049 | 0.0021 | 0.0028 |
| 89 | 0.0049 | 0.0021 | 0.0028 |
| 90 | 0.0049 | 0.0021 | 0.0028 |
| 91 | 0.0050 | 0.0021 | 0.0029 |
| 92 | 0.0050 | 0.0022 | 0.0029 |
| 93 | 0.0051 | 0.0022 | 0.0029 |
| 94 | 0.0051 | 0.0022 | 0.0029 |
| 95 | 0.0051 | 0.0022 | 0.0029 |
| 96 | 0.0052 | 0.0022 | 0.0029 |
| 97 | 0.0052 | 0.0022 | 0.0030 |
| 98 | 0.0052 | 0.0022 | 0.0030 |
| 99 | 0.0053 | 0.0023 | 0.0030 |
| 100 | 0.0053 | 0.0023 | 0.0030 |
| 101 | 0.0054 | 0.0023 | 0.0031 |
| 102 | 0.0054 | 0.0023 | 0.0031 |
| 103 | 0.0055 | 0.0023 | 0.0031 |
| 104 | 0.0055 | 0.0024 | 0.0031 |
| 105 | 0.0055 | 0.0024 | 0.0032 |
| 106 | 0.0056 | 0.0024 | 0.0032 |
| 107 | 0.0056 | 0.0024 | 0.0032 |
| 108 | 0.0057 | 0.0024 | 0.0032 |
| 109 | 0.0057 | 0.0025 | 0.0033 |
| 110 | 0.0058 | 0.0025 | 0.0033 |

| | | | |
|---|---|---|---|
| 111 | 0.0058 | 0.0025 | 0.0033 |
| 112 | 0.0059 | 0.0025 | 0.0034 |
| 113 | 0.0059 | 0.0025 | 0.0034 |
| 114 | 0.0060 | 0.0026 | 0.0034 |
| 115 | 0.0060 | 0.0026 | 0.0035 |
| 116 | 0.0061 | 0.0026 | 0.0035 |
| 117 | 0.0062 | 0.0026 | 0.0035 |
| 118 | 0.0062 | 0.0027 | 0.0035 |
| 119 | 0.0063 | 0.0027 | 0.0036 |
| 120 | 0.0063 | 0.0027 | 0.0036 |
| 121 | 0.0064 | 0.0027 | 0.0037 |
| 122 | 0.0064 | 0.0028 | 0.0037 |
| 123 | 0.0065 | 0.0028 | 0.0037 |
| 124 | 0.0066 | 0.0028 | 0.0038 |
| 125 | 0.0067 | 0.0029 | 0.0038 |
| 126 | 0.0067 | 0.0029 | 0.0038 |
| 127 | 0.0068 | 0.0029 | 0.0039 |
| 128 | 0.0069 | 0.0029 | 0.0039 |
| 129 | 0.0070 | 0.0030 | 0.0040 |
| 130 | 0.0070 | 0.0030 | 0.0040 |
| 131 | 0.0071 | 0.0031 | 0.0041 |
| 132 | 0.0072 | 0.0031 | 0.0041 |
| 133 | 0.0073 | 0.0031 | 0.0042 |
| 134 | 0.0074 | 0.0032 | 0.0042 |
| 135 | 0.0075 | 0.0032 | 0.0043 |
| 136 | 0.0075 | 0.0032 | 0.0043 |
| 137 | 0.0077 | 0.0033 | 0.0044 |
| 138 | 0.0077 | 0.0033 | 0.0044 |
| 139 | 0.0079 | 0.0034 | 0.0045 |
| 140 | 0.0079 | 0.0034 | 0.0045 |
| 141 | 0.0081 | 0.0035 | 0.0046 |
| 142 | 0.0082 | 0.0035 | 0.0047 |
| 143 | 0.0083 | 0.0036 | 0.0047 |
| 144 | 0.0084 | 0.0036 | 0.0048 |
| 145 | 0.0084 | 0.0036 | 0.0048 |
| 146 | 0.0085 | 0.0037 | 0.0049 |
| 147 | 0.0087 | 0.0037 | 0.0050 |
| 148 | 0.0088 | 0.0038 | 0.0050 |
| 149 | 0.0090 | 0.0039 | 0.0051 |
| 150 | 0.0091 | 0.0039 | 0.0052 |
| 151 | 0.0093 | 0.0040 | 0.0053 |
| 152 | 0.0094 | 0.0040 | 0.0054 |
| 153 | 0.0096 | 0.0041 | 0.0055 |
| 154 | 0.0097 | 0.0042 | 0.0056 |
| 155 | 0.0100 | 0.0043 | 0.0057 |
| 156 | 0.0101 | 0.0043 | 0.0058 |
| 157 | 0.0104 | 0.0045 | 0.0059 |
| 158 | 0.0105 | 0.0045 | 0.0060 |
| 159 | 0.0108 | 0.0046 | 0.0062 |
| 160 | 0.0110 | 0.0047 | 0.0063 |
| 161 | 0.0113 | 0.0048 | 0.0065 |
| 162 | 0.0115 | 0.0049 | 0.0066 |
| 163 | 0.0118 | 0.0051 | 0.0068 |
| 164 | 0.0120 | 0.0052 | 0.0069 |
| 165 | 0.0125 | 0.0053 | 0.0071 |
| 166 | 0.0127 | 0.0054 | 0.0072 |
| 167 | 0.0131 | 0.0056 | 0.0075 |
| 168 | 0.0134 | 0.0057 | 0.0076 |
| 169 | 0.0165 | 0.0071 | 0.0094 |

| | | | |
|---|---|---|---|
| 170 | 0.0168 | 0.0072 | 0.0096 |
| 171 | 0.0175 | 0.0075 | 0.0100 |
| 172 | 0.0179 | 0.0077 | 0.0102 |
| 173 | 0.0187 | 0.0080 | 0.0107 |
| 174 | 0.0191 | 0.0082 | 0.0109 |
| 175 | 0.0200 | 0.0086 | 0.0114 |
| 176 | 0.0205 | 0.0088 | 0.0117 |
| 177 | 0.0217 | 0.0093 | 0.0124 |
| 178 | 0.0223 | 0.0096 | 0.0128 |
| 179 | 0.0237 | 0.0102 | 0.0136 |
| 180 | 0.0245 | 0.0105 | 0.0140 |
| 181 | 0.0264 | 0.0113 | 0.0151 |
| 182 | 0.0274 | 0.0117 | 0.0157 |
| 183 | 0.0299 | 0.0128 | 0.0171 |
| 184 | 0.0313 | 0.0134 | 0.0179 |
| 185 | 0.0309 | 0.0133 | 0.0177 |
| 186 | 0.0330 | 0.0141 | 0.0188 |
| 187 | 0.0382 | 0.0164 | 0.0218 |
| 188 | 0.0417 | 0.0179 | 0.0238 |
| 189 | 0.0519 | 0.0221 | 0.0298 |
| 190 | 0.0598 | 0.0221 | 0.0377 |
| 191 | 0.0907 | 0.0221 | 0.0687 |
| 192 | 0.1317 | 0.0221 | 0.1096 |
| 193 | 0.5696 | 0.0221 | 0.5476 |
| 194 | 0.0714 | 0.0221 | 0.0493 |
| 195 | 0.0462 | 0.0198 | 0.0264 |
| 196 | 0.0354 | 0.0152 | 0.0202 |
| 197 | 0.0329 | 0.0141 | 0.0188 |
| 198 | 0.0286 | 0.0122 | 0.0163 |
| 199 | 0.0254 | 0.0109 | 0.0145 |
| 200 | 0.0230 | 0.0099 | 0.0131 |
| 201 | 0.0211 | 0.0090 | 0.0121 |
| 202 | 0.0195 | 0.0084 | 0.0112 |
| 203 | 0.0182 | 0.0078 | 0.0104 |
| 204 | 0.0171 | 0.0074 | 0.0098 |
| 205 | 0.0136 | 0.0059 | 0.0078 |
| 206 | 0.0129 | 0.0055 | 0.0074 |
| 207 | 0.0122 | 0.0052 | 0.0070 |
| 208 | 0.0117 | 0.0050 | 0.0067 |
| 209 | 0.0111 | 0.0048 | 0.0064 |
| 210 | 0.0107 | 0.0046 | 0.0061 |
| 211 | 0.0102 | 0.0044 | 0.0059 |
| 212 | 0.0099 | 0.0042 | 0.0056 |
| 213 | 0.0095 | 0.0041 | 0.0054 |
| 214 | 0.0092 | 0.0039 | 0.0052 |
| 215 | 0.0089 | 0.0038 | 0.0051 |
| 216 | 0.0086 | 0.0037 | 0.0049 |
| 217 | 0.0085 | 0.0036 | 0.0048 |
| 218 | 0.0082 | 0.0035 | 0.0047 |
| 219 | 0.0080 | 0.0034 | 0.0046 |
| 220 | 0.0078 | 0.0033 | 0.0045 |
| 221 | 0.0076 | 0.0033 | 0.0043 |
| 222 | 0.0074 | 0.0032 | 0.0042 |
| 223 | 0.0072 | 0.0031 | 0.0041 |
| 224 | 0.0071 | 0.0030 | 0.0040 |
| 225 | 0.0069 | 0.0030 | 0.0039 |
| 226 | 0.0068 | 0.0029 | 0.0039 |
| 227 | 0.0066 | 0.0028 | 0.0038 |
| 228 | 0.0065 | 0.0028 | 0.0037 |

| | | | |
|---|---|---|---|
| 229 | 0.0064 | 0.0027 | 0.0036 |
| 230 | 0.0062 | 0.0027 | 0.0036 |
| 231 | 0.0061 | 0.0026 | 0.0035 |
| 232 | 0.0060 | 0.0026 | 0.0034 |
| 233 | 0.0059 | 0.0025 | 0.0034 |
| 234 | 0.0058 | 0.0025 | 0.0033 |
| 235 | 0.0057 | 0.0024 | 0.0033 |
| 236 | 0.0056 | 0.0024 | 0.0032 |
| 237 | 0.0055 | 0.0024 | 0.0032 |
| 238 | 0.0054 | 0.0023 | 0.0031 |
| 239 | 0.0053 | 0.0023 | 0.0031 |
| 240 | 0.0053 | 0.0023 | 0.0030 |
| 241 | 0.0052 | 0.0022 | 0.0030 |
| 242 | 0.0051 | 0.0022 | 0.0029 |
| 243 | 0.0050 | 0.0022 | 0.0029 |
| 244 | 0.0050 | 0.0021 | 0.0028 |
| 245 | 0.0049 | 0.0021 | 0.0028 |
| 246 | 0.0048 | 0.0021 | 0.0028 |
| 247 | 0.0048 | 0.0020 | 0.0027 |
| 248 | 0.0047 | 0.0020 | 0.0027 |
| 249 | 0.0047 | 0.0020 | 0.0027 |
| 250 | 0.0046 | 0.0020 | 0.0026 |
| 251 | 0.0045 | 0.0019 | 0.0026 |
| 252 | 0.0045 | 0.0019 | 0.0026 |
| 253 | 0.0044 | 0.0019 | 0.0025 |
| 254 | 0.0044 | 0.0019 | 0.0025 |
| 255 | 0.0043 | 0.0019 | 0.0025 |
| 256 | 0.0043 | 0.0018 | 0.0024 |
| 257 | 0.0042 | 0.0018 | 0.0024 |
| 258 | 0.0042 | 0.0018 | 0.0024 |
| 259 | 0.0041 | 0.0018 | 0.0024 |
| 260 | 0.0041 | 0.0018 | 0.0023 |
| 261 | 0.0041 | 0.0017 | 0.0023 |
| 262 | 0.0040 | 0.0017 | 0.0023 |
| 263 | 0.0040 | 0.0017 | 0.0023 |
| 264 | 0.0039 | 0.0017 | 0.0022 |
| 265 | 0.0039 | 0.0017 | 0.0022 |
| 266 | 0.0039 | 0.0017 | 0.0022 |
| 267 | 0.0038 | 0.0016 | 0.0022 |
| 268 | 0.0038 | 0.0016 | 0.0022 |
| 269 | 0.0037 | 0.0016 | 0.0021 |
| 270 | 0.0037 | 0.0016 | 0.0021 |
| 271 | 0.0037 | 0.0016 | 0.0021 |
| 272 | 0.0036 | 0.0016 | 0.0021 |
| 273 | 0.0036 | 0.0015 | 0.0021 |
| 274 | 0.0036 | 0.0015 | 0.0020 |
| 275 | 0.0035 | 0.0015 | 0.0020 |
| 276 | 0.0035 | 0.0015 | 0.0020 |
| 277 | 0.0035 | 0.0015 | 0.0020 |
| 278 | 0.0035 | 0.0015 | 0.0020 |
| 279 | 0.0034 | 0.0015 | 0.0020 |
| 280 | 0.0034 | 0.0015 | 0.0019 |
| 281 | 0.0034 | 0.0014 | 0.0019 |
| 282 | 0.0033 | 0.0014 | 0.0019 |
| 283 | 0.0033 | 0.0014 | 0.0019 |
| 284 | 0.0033 | 0.0014 | 0.0019 |
| 285 | 0.0033 | 0.0014 | 0.0019 |
| 286 | 0.0032 | 0.0014 | 0.0019 |
| 287 | 0.0032 | 0.0014 | 0.0018 |

288 0.0032 0.0014 0.0018

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Total soil rain loss = 1.07(In)
Total effective rainfall = 2.09(In)
Peak flow rate in flood hydrograph = 1600.72(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 425.0 | 850.0 | 1275.0 | 1700.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0012 | 0.17 | Q | | | | |
| 0+10 | 0.0054 | 0.62 | Q | | | | |
| 0+15 | 0.0145 | 1.32 | Q | | | | |
| 0+20 | 0.0303 | 2.29 | Q | | | | |
| 0+25 | 0.0553 | 3.62 | Q | | | | |
| 0+30 | 0.0956 | 5.85 | Q | | | | |
| 0+35 | 0.1589 | 9.20 | Q | | | | |
| 0+40 | 0.2451 | 12.51 | Q | | | | |
| 0+45 | 0.3514 | 15.44 | Q | | | | |
| 0+50 | 0.4745 | 17.87 | Q | | | | |
| 0+55 | 0.6104 | 19.73 | Q | | | | |
| 1+ 0 | 0.7564 | 21.20 | Q | | | | |
| 1+ 5 | 0.9109 | 22.43 | Q | | | | |
| 1+10 | 1.0729 | 23.52 | Q | | | | |
| 1+15 | 1.2417 | 24.51 | Q | | | | |
| 1+20 | 1.4166 | 25.39 | Q | | | | |
| 1+25 | 1.5968 | 26.18 | Q | | | | |
| 1+30 | 1.7822 | 26.92 | Q | | | | |
| 1+35 | 1.9723 | 27.60 | Q | | | | |
| 1+40 | 2.1666 | 28.20 | Q | | | | |
| 1+45 | 2.3648 | 28.79 | Q | | | | |
| 1+50 | 2.5667 | 29.31 | Q | | | | |
| 1+55 | 2.7722 | 29.83 | Q | | | | |
| 2+ 0 | 2.9809 | 30.32 | Q | | | | |
| 2+ 5 | 3.1930 | 30.79 | Q | | | | |
| 2+10 | 3.4081 | 31.24 | Q | | | | |
| 2+15 | 3.6262 | 31.66 | Q | | | | |
| 2+20 | 3.8470 | 32.06 | Q | | | | |
| 2+25 | 4.0702 | 32.41 | Q | | | | |
| 2+30 | 4.2959 | 32.77 | Q | | | | |
| 2+35 | 4.5239 | 33.11 | Q | | | | |
| 2+40 | 4.7543 | 33.45 | Q | | | | |
| 2+45 | 4.9869 | 33.77 | Q | | | | |
| 2+50 | 5.2216 | 34.09 | Q | | | | |
| 2+55 | 5.4585 | 34.40 | Q | | | | |
| 3+ 0 | 5.6975 | 34.70 | Q | | | | |
| 3+ 5 | 5.9385 | 34.99 | Q | | | | |
| 3+10 | 6.1814 | 35.26 | Q | | | | |
| 3+15 | 6.4261 | 35.53 | Q | | | | |
| 3+20 | 6.6727 | 35.80 | QV | | | | |
| 3+25 | 6.9211 | 36.08 | QV | | | | |
| 3+30 | 7.1714 | 36.33 | QV | | | | |
| 3+35 | 7.4233 | 36.58 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+40 | 7.6770 | 36.84 | QV | | | | |
| 3+45 | 7.9325 | 37.09 | QV | | | | |
| 3+50 | 8.1896 | 37.34 | QV | | | | |
| 3+55 | 8.4484 | 37.57 | QV | | | | |
| 4+ 0 | 8.7088 | 37.81 | QV | | | | |
| 4+ 5 | 8.9708 | 38.04 | QV | | | | |
| 4+10 | 9.2344 | 38.28 | QV | | | | |
| 4+15 | 9.4995 | 38.50 | QV | | | | |
| 4+20 | 9.7662 | 38.71 | QV | | | | |
| 4+25 | 10.0343 | 38.93 | QV | | | | |
| 4+30 | 10.3039 | 39.15 | QV | | | | |
| 4+35 | 10.5751 | 39.38 | QV | | | | |
| 4+40 | 10.8479 | 39.61 | QV | | | | |
| 4+45 | 11.1223 | 39.84 | QV | | | | |
| 4+50 | 11.3983 | 40.07 | QV | | | | |
| 4+55 | 11.6759 | 40.31 | QV | | | | |
| 5+ 0 | 11.9552 | 40.55 | QV | | | | |
| 5+ 5 | 12.2361 | 40.79 | QV | | | | |
| 5+10 | 12.5187 | 41.04 | QV | | | | |
| 5+15 | 12.8031 | 41.28 | QV | | | | |
| 5+20 | 13.0891 | 41.53 | QV | | | | |
| 5+25 | 13.3767 | 41.76 | Q V | | | | |
| 5+30 | 13.6659 | 42.00 | Q V | | | | |
| 5+35 | 13.9568 | 42.23 | Q V | | | | |
| 5+40 | 14.2493 | 42.47 | Q V | | | | |
| 5+45 | 14.5435 | 42.72 | \|QV | | | | |
| 5+50 | 14.8393 | 42.96 | \|QV | | | | |
| 5+55 | 15.1369 | 43.20 | \|QV | | | | |
| 6+ 0 | 15.4360 | 43.43 | \|QV | | | | |
| 6+ 5 | 15.7367 | 43.67 | \|QV | | | | |
| 6+10 | 16.0391 | 43.90 | \|QV | | | | |
| 6+15 | 16.3431 | 44.14 | \|QV | | | | |
| 6+20 | 16.6488 | 44.39 | \|QV | | | | |
| 6+25 | 16.9562 | 44.63 | \|QV | | | | |
| 6+30 | 17.2653 | 44.88 | \|QV | | | | |
| 6+35 | 17.5762 | 45.14 | \|QV | | | | |
| 6+40 | 17.8888 | 45.40 | \|QV | | | | |
| 6+45 | 18.2033 | 45.66 | \|QV | | | | |
| 6+50 | 18.5195 | 45.92 | \|QV | | | | |
| 6+55 | 18.8376 | 46.19 | \|QV | | | | |
| 7+ 0 | 19.1576 | 46.46 | \|QV | | | | |
| 7+ 5 | 19.4795 | 46.74 | \|QV | | | | |
| 7+10 | 19.8033 | 47.02 | \|QV | | | | |
| 7+15 | 20.1290 | 47.30 | \|Q V | | | | |
| 7+20 | 20.4568 | 47.59 | \|Q V | | | | |
| 7+25 | 20.7865 | 47.88 | \|Q V | | | | |
| 7+30 | 21.1183 | 48.18 | \|Q V | | | | |
| 7+35 | 21.4522 | 48.48 | \|Q V | | | | |
| 7+40 | 21.7882 | 48.78 | \|Q V | | | | |
| 7+45 | 22.1263 | 49.10 | \|Q V | | | | |
| 7+50 | 22.4666 | 49.41 | \|Q V | | | | |
| 7+55 | 22.8091 | 49.73 | \|Q V | | | | |
| 8+ 0 | 23.1539 | 50.06 | \|Q V | | | | |
| 8+ 5 | 23.5009 | 50.39 | \|Q V | | | | |
| 8+10 | 23.8502 | 50.72 | \|Q V | | | | |
| 8+15 | 24.2019 | 51.07 | \|Q V | | | | |
| 8+20 | 24.5560 | 51.41 | \|Q V | | | | |
| 8+25 | 24.9125 | 51.77 | \|Q V | | | | |
| 8+30 | 25.2715 | 52.12 | \|Q V | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 8+35 | 25.6330 | 52.49 | Q V | | | |
| 8+40 | 25.9970 | 52.86 | Q V | | | |
| 8+45 | 26.3637 | 53.24 | Q V | | | |
| 8+50 | 26.7329 | 53.62 | Q V | | | |
| 8+55 | 27.1049 | 54.01 | Q V | | | |
| 9+ 0 | 27.4797 | 54.41 | Q V | | | |
| 9+ 5 | 27.8572 | 54.82 | Q V | | | |
| 9+10 | 28.2376 | 55.23 | Q V | | | |
| 9+15 | 28.6208 | 55.65 | Q V | | | |
| 9+20 | 29.0070 | 56.08 | Q V | | | |
| 9+25 | 29.3962 | 56.51 | Q V | | | |
| 9+30 | 29.7885 | 56.96 | Q V | | | |
| 9+35 | 30.1839 | 57.41 | Q V | | | |
| 9+40 | 30.5825 | 57.87 | Q V | | | |
| 9+45 | 30.9843 | 58.34 | Q V | | | |
| 9+50 | 31.3894 | 58.82 | Q V | | | |
| 9+55 | 31.7979 | 59.32 | Q V | | | |
| 10+ 0 | 32.2099 | 59.81 | Q V | | | |
| 10+ 5 | 32.6253 | 60.33 | Q V | | | |
| 10+10 | 33.0444 | 60.85 | Q V | | | |
| 10+15 | 33.4671 | 61.38 | Q V | | | |
| 10+20 | 33.8936 | 61.92 | Q V | | | |
| 10+25 | 34.3239 | 62.48 | Q V | | | |
| 10+30 | 34.7581 | 63.05 | Q V | | | |
| 10+35 | 35.1963 | 63.63 | Q V | | | |
| 10+40 | 35.6386 | 64.22 | Q V | | | |
| 10+45 | 36.0851 | 64.83 | Q V | | | |
| 10+50 | 36.5359 | 65.45 | Q V | | | |
| 10+55 | 36.9910 | 66.09 | Q V | | | |
| 11+ 0 | 37.4507 | 66.74 | Q V | | | |
| 11+ 5 | 37.9149 | 67.41 | Q V | | | |
| 11+10 | 38.3839 | 68.09 | Q V | | | |
| 11+15 | 38.8577 | 68.80 | Q V | | | |
| 11+20 | 39.3364 | 69.51 | Q V | | | |
| 11+25 | 39.8203 | 70.25 | Q V | | | |
| 11+30 | 40.3093 | 71.01 | Q V | | | |
| 11+35 | 40.8038 | 71.79 | Q V | | | |
| 11+40 | 41.3037 | 72.59 | Q V | | | |
| 11+45 | 41.8092 | 73.41 | Q V | | | |
| 11+50 | 42.3206 | 74.25 | Q V | | | |
| 11+55 | 42.8380 | 75.12 | Q V | | | |
| 12+ 0 | 43.3615 | 76.02 | Q V | | | |
| 12+ 5 | 43.8914 | 76.93 | Q V | | | |
| 12+10 | 44.4276 | 77.86 | Q V | | | |
| 12+15 | 44.9704 | 78.81 | Q V | | | |
| 12+20 | 45.5199 | 79.78 | Q V | | | |
| 12+25 | 46.0762 | 80.78 | Q V | | | |
| 12+30 | 46.6393 | 81.77 | Q V | | | |
| 12+35 | 47.2093 | 82.76 | Q V | | | |
| 12+40 | 47.7863 | 83.78 | Q V | | | |
| 12+45 | 48.3707 | 84.86 | Q V | | | |
| 12+50 | 48.9630 | 85.99 | Q V | | | |
| 12+55 | 49.5635 | 87.20 | Q V | | | |
| 13+ 0 | 50.1728 | 88.46 | Q V | | | |
| 13+ 5 | 50.7911 | 89.78 | Q V | | | |
| 13+10 | 51.4189 | 91.16 | Q V | | | |
| 13+15 | 52.0567 | 92.60 | Q V | | | |
| 13+20 | 52.7047 | 94.10 | Q V | | | |
| 13+25 | 53.3636 | 95.67 | Q V | | | |

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13+30      54.0338     97.31  | Q     V |          |          |          |
13+35      54.7158     99.03  | Q     V |          |          |          |
13+40      55.4101    100.82  | Q     V |          |          |          |
13+45      56.1174    102.70  | Q     V |          |          |          |
13+50      56.8383    104.67  | Q     V |          |          |          |
13+55      57.5736    106.75  | Q     V |          |          |          |
14+ 0      58.3238    108.93  | Q     V |          |          |          |
14+ 5      59.0908    111.37  | Q     V |          |          |          |
14+10      59.8769    114.15  | Q     V |          |          |          |
14+15      60.6848    117.30  | Q      V|          |          |          |
14+20      61.5168    120.81  | Q      V|          |          |          |
14+25      62.3763    124.80  | Q      V|          |          |          |
14+30      63.2695    129.70  |  Q     V|          |          |          |
14+35      64.2044    135.75  |  Q     V|          |          |          |
14+40      65.1825    142.02  |  Q     V|          |          |          |
14+45      66.2038    148.29  |  Q     V|          |          |          |
14+50      67.2676    154.46  |  Q      V          |          |          |
14+55      68.3732    160.54  |  Q      V          |          |          |
15+ 0      69.5212    166.69  |  Q      V          |          |          |
15+ 5      70.7135    173.12  |   Q     V          |          |          |
15+10      71.9527    179.93  |   Q     V          |          |          |
15+15      73.2425    187.28  |   Q     V          |          |          |
15+20      74.5871    195.23  |   Q     |V         |          |          |
15+25      75.9904    203.77  |   Q     |V         |          |          |
15+30      77.4568    212.91  |    Q    |V         |          |          |
15+35      78.9925    222.98  |    Q    |V         |          |          |
15+40      80.6052    234.17  |    Q    | V        |          |          |
15+45      82.3067    247.07  |    Q    | V        |          |          |
15+50      84.1103    261.88  |     Q   | V        |          |          |
15+55      86.0507    281.74  |     Q   | V        |          |          |
16+ 0      88.2090    313.39  |      Q  |  V       |          |          |
16+ 5      90.9686    400.68  |        Q|  V       |          |          |
16+10      94.5673    522.54  |         | Q V      |          |          |
16+15      99.0187    646.33  |         |   VQ     |          |          |
16+20     104.4183    784.03  |         |    V  Q  |          |          |
16+25     111.0893    968.63  |         |     V    | Q        |          |
16+30     119.9302   1283.70  |         |       V  |          Q          |
16+35     130.9545   1600.72  |         |        V |          |       Q  |
16+40     141.7666   1569.92  |         |          |V         |     Q    |
16+45     151.4994   1413.19  |         |          | V        |  Q       |
16+50     159.8414   1211.27  |         |          |   V   Q  |          |
16+55     166.7286   1000.01  |         |          |  Q V     |          |
17+ 0     172.5584    846.49  |         |        Q |    V     |          |
17+ 5     177.6998    746.54  |         |      Q   |     V    |          |
17+10     182.3407    673.86  |         |    Q     |      V   |          |
17+15     186.6064    619.38  |         |   Q      |       V  |          |
17+20     190.4967    564.87  |         |  Q       |       V  |          |
17+25     194.0608    517.51  |         | Q        |        V |          |
17+30     197.3906    483.48  |         |Q         |        V |          |
17+35     200.4575    445.31  |         Q          |         V          |
17+40     203.2590    406.78  |        Q|          |         V          |
17+45     205.9128    385.33  |        Q|          |         V          |
17+50     208.3556    354.70  |       Q |          |         |V         |
17+55     210.6959    339.81  |      Q  |          |         |V         |
18+ 0     212.8954    319.37  |      Q  |          |         |V         |
18+ 5     215.0027    305.98  |      Q  |          |         | V        |
18+10     216.9747    286.34  |     Q   |          |         | V        |
18+15     218.8366    270.34  |     Q   |          |         | V        |
18+20     220.5842    253.75  |    Q    |          |         |  V       |
```

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18+25     222.1964    234.09  |    Q    |         |         |  V      |
18+30     223.7528    225.99  |    Q    |         |         |  V      |
18+35     225.2409    216.06  |    Q    |         |         |  V      |
18+40     226.6806    209.05  |   Q     |         |         |   V     |
18+45     228.0425    197.74  |   Q     |         |         |   V     |
18+50     229.3554    190.64  |   Q     |         |         |   V     |
18+55     230.6143    182.80  |   Q     |         |         |   V     |
19+ 0     231.8231    175.51  |   Q     |         |         |   V     |
19+ 5     232.9719    166.81  |  Q      |         |         |   V     |
19+10     234.0448    155.78  |  Q      |         |         |    V    |
19+15     235.0903    151.81  |  Q      |         |         |    V    |
19+20     236.1104    148.12  |  Q      |         |         |    V    |
19+25     237.1007    143.79  |  Q      |         |         |    V    |
19+30     238.0307    135.03  |  Q      |         |         |    V    |
19+35     238.9261    130.02  |  Q      |         |         |    V    |
19+40     239.8008    127.01  | Q       |         |         |     V   |
19+45     240.6528    123.71  | Q       |         |         |     V   |
19+50     241.4657    118.04  | Q       |         |         |     V   |
19+55     242.2240    110.09  | Q       |         |         |     V   |
20+ 0     242.9628    107.28  | Q       |         |         |     V   |
20+ 5     243.6837    104.67  | Q       |         |         |     V   |
20+10     244.3828    101.51  | Q       |         |         |     V   |
20+15     245.0315     94.19  | Q       |         |         |     V   |
20+20     245.6522     90.12  | Q       |         |         |     V   |
20+25     246.2608     88.38  | Q       |         |         |     V   |
20+30     246.8597     86.96  | Q       |         |         |      V  |
20+35     247.4522     86.03  | Q       |         |         |      V  |
20+40     248.0423     85.68  | Q       |         |         |      V  |
20+45     248.6237     84.42  |Q        |         |         |      V  |
20+50     249.1960     83.10  |Q        |         |         |      V  |
20+55     249.7592     81.77  |Q        |         |         |      V  |
21+ 0     250.3124     80.33  |Q        |         |         |      V  |
21+ 5     250.8559     78.92  |Q        |         |         |      V  |
21+10     251.3894     77.46  |Q        |         |         |      V  |
21+15     251.9107     75.69  |Q        |         |         |      V  |
21+20     252.4100     72.51  |Q        |         |         |      V  |
21+25     252.8721     67.10  |Q        |         |         |      V  |
21+30     253.3229     65.46  |Q        |         |         |       V |
21+35     253.7655     64.25  |Q        |         |         |       V |
21+40     254.1997     63.06  |Q        |         |         |       V |
21+45     254.6245     61.68  |Q        |         |         |       V |
21+50     255.0373     59.93  |Q        |         |         |       V |
21+55     255.4193     55.47  |Q        |         |         |       V |
22+ 0     255.7732     51.39  |Q        |         |         |       V |
22+ 5     256.1199     50.34  |Q        |         |         |       V |
22+10     256.4606     49.47  |Q        |         |         |       V |
22+15     256.7958     48.67  |Q        |         |         |       V |
22+20     257.1259     47.92  |Q        |         |         |       V |
22+25     257.4511     47.23  |Q        |         |         |       V |
22+30     257.7718     46.57  |Q        |         |         |       V |
22+35     258.0882     45.94  |Q        |         |         |       V |
22+40     258.4004     45.34  |Q        |         |         |       V |
22+45     258.7087     44.76  |Q        |         |         |       V |
22+50     259.0131     44.21  |Q        |         |         |       V |
22+55     259.3140     43.68  |Q        |         |         |       V |
23+ 0     259.6113     43.18  |Q        |         |         |       V |
23+ 5     259.9054     42.69  |Q        |         |         |        V|
23+10     260.1961     42.22  Q        |         |         |        V|
23+15     260.4838     41.77  Q        |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+20 | 260.7684 | 41.33 | Q | \| | \| | \| | V\| |
| 23+25 | 261.0501 | 40.90 | Q | \| | \| | \| | V\| |
| 23+30 | 261.3289 | 40.48 | Q | \| | \| | \| | V\| |
| 23+35 | 261.6049 | 40.07 | Q | \| | \| | \| | V\| |
| 23+40 | 261.8781 | 39.68 | Q | \| | \| | \| | V\| |
| 23+45 | 262.1487 | 39.29 | Q | \| | \| | \| | V\| |
| 23+50 | 262.4168 | 38.92 | Q | \| | \| | \| | V\| |
| 23+55 | 262.6822 | 38.55 | Q | \| | \| | \| | V\| |
| 24+ 0 | 262.9453 | 38.19 | Q | \| | \| | \| | V\| |
| 24+ 5 | 263.2047 | 37.67 | Q | \| | \| | \| | V\| |
| 24+10 | 263.4588 | 36.89 | Q | \| | \| | \| | V\| |
| 24+15 | 263.7057 | 35.86 | Q | \| | \| | \| | V\| |
| 24+20 | 263.9438 | 34.58 | Q | \| | \| | \| | V\| |
| 24+25 | 264.1708 | 32.95 | Q | \| | \| | \| | V\| |
| 24+30 | 264.3805 | 30.46 | Q | \| | \| | \| | V\| |
| 24+35 | 264.5657 | 26.88 | Q | \| | \| | \| | V\| |
| 24+40 | 264.7266 | 23.37 | Q | \| | \| | \| | V\| |
| 24+45 | 264.8663 | 20.28 | Q | \| | \| | \| | V\| |
| 24+50 | 264.9885 | 17.74 | Q | \| | \| | \| | V\| |
| 24+55 | 265.0973 | 15.79 | Q | \| | \| | \| | V\| |
| 25+ 0 | 265.1955 | 14.26 | Q | \| | \| | \| | V\| |
| 25+ 5 | 265.2849 | 12.98 | Q | \| | \| | \| | V\| |
| 25+10 | 265.3667 | 11.87 | Q | \| | \| | \| | V\| |
| 25+15 | 265.4415 | 10.86 | Q | \| | \| | \| | V\| |
| 25+20 | 265.5102 | 9.98 | Q | \| | \| | \| | V\| |
| 25+25 | 265.5736 | 9.20 | Q | \| | \| | \| | V\| |
| 25+30 | 265.6320 | 8.48 | Q | \| | \| | \| | V\| |
| 25+35 | 265.6860 | 7.83 | Q | \| | \| | \| | V\| |
| 25+40 | 265.7361 | 7.27 | Q | \| | \| | \| | V\| |
| 25+45 | 265.7824 | 6.73 | Q | \| | \| | \| | V\| |
| 25+50 | 265.8255 | 6.26 | Q | \| | \| | \| | V\| |
| 25+55 | 265.8655 | 5.80 | Q | \| | \| | \| | V\| |
| 26+ 0 | 265.9026 | 5.39 | Q | \| | \| | \| | V\| |
| 26+ 5 | 265.9369 | 4.98 | Q | \| | \| | \| | V\| |
| 26+10 | 265.9688 | 4.62 | Q | \| | \| | \| | V\| |
| 26+15 | 265.9983 | 4.28 | Q | \| | \| | \| | V\| |
| 26+20 | 266.0257 | 3.98 | Q | \| | \| | \| | V\| |
| 26+25 | 266.0513 | 3.72 | Q | \| | \| | \| | V\| |
| 26+30 | 266.0752 | 3.47 | Q | \| | \| | \| | V\| |
| 26+35 | 266.0974 | 3.23 | Q | \| | \| | \| | V\| |
| 26+40 | 266.1180 | 3.00 | Q | \| | \| | \| | V\| |
| 26+45 | 266.1373 | 2.79 | Q | \| | \| | \| | V\| |
| 26+50 | 266.1551 | 2.59 | Q | \| | \| | \| | V\| |
| 26+55 | 266.1717 | 2.41 | Q | \| | \| | \| | V\| |
| 27+ 0 | 266.1870 | 2.23 | Q | \| | \| | \| | V\| |
| 27+ 5 | 266.2013 | 2.07 | Q | \| | \| | \| | V\| |
| 27+10 | 266.2146 | 1.93 | Q | \| | \| | \| | V\| |
| 27+15 | 266.2269 | 1.79 | Q | \| | \| | \| | V\| |
| 27+20 | 266.2384 | 1.66 | Q | \| | \| | \| | V\| |
| 27+25 | 266.2489 | 1.53 | Q | \| | \| | \| | V\| |
| 27+30 | 266.2587 | 1.42 | Q | \| | \| | \| | V\| |
| 27+35 | 266.2678 | 1.32 | Q | \| | \| | \| | V\| |
| 27+40 | 266.2762 | 1.22 | Q | \| | \| | \| | V\| |
| 27+45 | 266.2839 | 1.12 | Q | \| | \| | \| | V\| |
| 27+50 | 266.2909 | 1.03 | Q | \| | \| | \| | V\| |
| 27+55 | 266.2975 | 0.95 | Q | \| | \| | \| | V\| |
| 28+ 0 | 266.3036 | 0.88 | Q | \| | \| | \| | V\| |
| 28+ 5 | 266.3092 | 0.81 | Q | \| | \| | \| | V\| |
| 28+10 | 266.3143 | 0.75 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 28+15 | 266.3191 | 0.70 | Q | \| | \| | \| | V\| |
| 28+20 | 266.3236 | 0.65 | Q | \| | \| | \| | V\| |
| 28+25 | 266.3279 | 0.61 | Q | \| | \| | \| | V\| |
| 28+30 | 266.3318 | 0.57 | Q | \| | \| | \| | V\| |
| 28+35 | 266.3355 | 0.53 | Q | \| | \| | \| | V\| |
| 28+40 | 266.3388 | 0.48 | Q | \| | \| | \| | V\| |
| 28+45 | 266.3418 | 0.44 | Q | \| | \| | \| | V\| |
| 28+50 | 266.3445 | 0.39 | Q | \| | \| | \| | V\| |
| 28+55 | 266.3469 | 0.35 | Q | \| | \| | \| | V\| |
| 29+ 0 | 266.3490 | 0.31 | Q | \| | \| | \| | V\| |
| 29+ 5 | 266.3509 | 0.26 | Q | \| | \| | \| | V\| |
| 29+10 | 266.3524 | 0.22 | Q | \| | \| | \| | V\| |
| 29+15 | 266.3536 | 0.18 | Q | \| | \| | \| | V\| |
| 29+20 | 266.3546 | 0.14 | Q | \| | \| | \| | V\| |
| 29+25 | 266.3554 | 0.12 | Q | \| | \| | \| | V\| |
| 29+30 | 266.3560 | 0.10 | Q | \| | \| | \| | V\| |
| 29+35 | 266.3565 | 0.07 | Q | \| | \| | \| | V\| |
| 29+40 | 266.3569 | 0.05 | Q | \| | \| | \| | V\| |
| 29+45 | 266.3571 | 0.03 | Q | \| | \| | \| | V\| |
| 29+50 | 266.3572 | 0.01 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 08/10/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREA "B"
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-10-17

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Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 1602.41 | 1 | 1.28 |
| Rainfall data for year 100 | | |
| 1602.41 | 6 | 2.07 |
| Rainfall data for year 100 | | |
| 1602.41 | 24 | 3.02 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 69.0 | 86.2 | 1602.41 | 1.000 | 0.261 | 0.979 | 0.256 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.256

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 1568.76 | 0.979 | 69.0 | 86.2 | 1.60 | 0.562 |
| 33.65 | 0.021 | 98.0 | 98.0 | 0.20 | 0.923 |

Area-averaged catchment yield fraction, Y = 0.570
Area-averaged low loss fraction, Yb = 0.430
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 27687.00(Ft.)
Length from concentration point to centroid = 11420.00(Ft.)
Elevation difference along watercourse = 1996.00(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 1602.41(Ac.)
Catchment Lag time = 0.684 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 12.1916
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.256(In/Hr)
Average low loss rate fraction (Yb) = 0.430 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.060
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.940

Computed peak 5-minute rainfall = 0.609(In)
Computed peak 30-minute rainfall = 1.043(In)
Specified peak 1-hour rainfall = 1.284(In)
Computed peak 3-hour rainfall = 1.721(In)
Specified peak 6-hour rainfall = 2.071(In)
Specified peak 24-hour rainfall = 3.025(In)

Rainfall depth area reduction factors:
Using a total area of 1602.41(Ac.) (Ref: fig. E-4)

5-minute factor = 0.925 Adjusted rainfall = 0.564(In)
30-minute factor = 0.925 Adjusted rainfall = 0.965(In)
1-hour factor = 0.925 Adjusted rainfall = 1.188(In)
3-hour factor = 0.990 Adjusted rainfall = 1.705(In)
6-hour factor = 0.995 Adjusted rainfall = 2.061(In)
24-hour factor = 0.998 Adjusted rainfall = 3.019(In)
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U n i t H y d r o g r a p h

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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 19379.15 (CFS)) | |
| 1 | 0.551 | 106.697 |
| 2 | 2.101 | 300.450 |
| 3 | 4.587 | 481.816 |
| 4 | 8.050 | 671.050 |
| 5 | 13.540 | 1063.845 |

| | | |
|---|---|---|
| 6 | 22.866 | 1807.363 |
| 7 | 34.306 | 2216.966 |
| 8 | 44.053 | 1888.882 |
| 9 | 51.886 | 1518.022 |
| 10 | 57.843 | 1154.348 |
| 11 | 62.367 | 876.755 |
| 12 | 66.076 | 718.845 |
| 13 | 69.264 | 617.701 |
| 14 | 72.098 | 549.263 |
| 15 | 74.522 | 469.777 |
| 16 | 76.676 | 417.340 |
| 17 | 78.664 | 385.298 |
| 18 | 80.318 | 320.580 |
| 19 | 81.893 | 305.156 |
| 20 | 83.249 | 262.742 |
| 21 | 84.555 | 253.197 |
| 22 | 85.746 | 230.658 |
| 23 | 86.897 | 223.094 |
| 24 | 87.902 | 194.863 |
| 25 | 88.859 | 185.406 |
| 26 | 89.638 | 150.927 |
| 27 | 90.369 | 141.671 |
| 28 | 91.058 | 133.585 |
| 29 | 91.731 | 130.369 |
| 30 | 92.335 | 117.012 |
| 31 | 92.912 | 111.964 |
| 32 | 93.453 | 104.735 |
| 33 | 93.975 | 101.243 |
| 34 | 94.415 | 85.228 |
| 35 | 94.814 | 77.211 |
| 36 | 95.212 | 77.211 |
| 37 | 95.610 | 77.139 |
| 38 | 95.954 | 66.643 |
| 39 | 96.259 | 59.160 |
| 40 | 96.564 | 59.160 |
| 41 | 96.870 | 59.160 |
| 42 | 97.129 | 50.207 |
| 43 | 97.340 | 40.828 |
| 44 | 97.550 | 40.826 |
| 45 | 97.761 | 40.826 |
| 46 | 97.936 | 33.947 |
| 47 | 98.057 | 23.454 |
| 48 | 98.178 | 23.343 |
| 49 | 98.298 | 23.343 |
| 50 | 98.425 | 24.539 |
| 51 | 98.565 | 27.129 |
| 52 | 98.705 | 27.218 |
| 53 | 98.845 | 27.218 |
| 54 | 98.986 | 27.151 |
| 55 | 99.125 | 26.948 |
| 56 | 99.264 | 26.934 |
| 57 | 99.403 | 26.934 |
| 58 | 99.530 | 24.736 |
| 59 | 99.608 | 14.988 |
| 60 | 99.679 | 13.880 |
| 61 | 99.751 | 13.880 |
| 62 | 99.822 | 13.880 |
| 63 | 99.894 | 13.880 |
| 64 | 100.000 | 6.940 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5635 | 0.5635 |
| 2 | 0.6938 | 0.1303 |
| 3 | 0.7835 | 0.0897 |
| 4 | 0.8541 | 0.0706 |
| 5 | 0.9133 | 0.0591 |
| 6 | 0.9646 | 0.0513 |
| 7 | 1.0102 | 0.0457 |
| 8 | 1.0515 | 0.0413 |
| 9 | 1.0894 | 0.0378 |
| 10 | 1.1243 | 0.0350 |
| 11 | 1.1570 | 0.0326 |
| 12 | 1.1876 | 0.0306 |
| 13 | 1.2193 | 0.0317 |
| 14 | 1.2494 | 0.0301 |
| 15 | 1.2781 | 0.0287 |
| 16 | 1.3055 | 0.0274 |
| 17 | 1.3318 | 0.0263 |
| 18 | 1.3571 | 0.0253 |
| 19 | 1.3815 | 0.0244 |
| 20 | 1.4050 | 0.0235 |
| 21 | 1.4278 | 0.0227 |
| 22 | 1.4498 | 0.0220 |
| 23 | 1.4712 | 0.0214 |
| 24 | 1.4919 | 0.0208 |
| 25 | 1.5121 | 0.0202 |
| 26 | 1.5318 | 0.0196 |
| 27 | 1.5509 | 0.0191 |
| 28 | 1.5696 | 0.0187 |
| 29 | 1.5878 | 0.0182 |
| 30 | 1.6056 | 0.0178 |
| 31 | 1.6231 | 0.0174 |
| 32 | 1.6401 | 0.0171 |
| 33 | 1.6568 | 0.0167 |
| 34 | 1.6732 | 0.0164 |
| 35 | 1.6892 | 0.0160 |
| 36 | 1.7050 | 0.0157 |
| 37 | 1.7178 | 0.0128 |
| 38 | 1.7303 | 0.0126 |
| 39 | 1.7427 | 0.0123 |
| 40 | 1.7548 | 0.0121 |
| 41 | 1.7667 | 0.0119 |
| 42 | 1.7783 | 0.0117 |
| 43 | 1.7898 | 0.0115 |
| 44 | 1.8011 | 0.0113 |
| 45 | 1.8122 | 0.0111 |
| 46 | 1.8231 | 0.0109 |
| 47 | 1.8339 | 0.0107 |
| 48 | 1.8444 | 0.0106 |
| 49 | 1.8549 | 0.0104 |
| 50 | 1.8651 | 0.0103 |
| 51 | 1.8753 | 0.0101 |
| 52 | 1.8852 | 0.0100 |
| 53 | 1.8951 | 0.0098 |
| 54 | 1.9048 | 0.0097 |
| 55 | 1.9144 | 0.0096 |
| 56 | 1.9238 | 0.0095 |

| | | |
|---|---|---|
| 57 | 1.9332 | 0.0093 |
| 58 | 1.9424 | 0.0092 |
| 59 | 1.9515 | 0.0091 |
| 60 | 1.9604 | 0.0090 |
| 61 | 1.9693 | 0.0089 |
| 62 | 1.9781 | 0.0088 |
| 63 | 1.9868 | 0.0087 |
| 64 | 1.9953 | 0.0086 |
| 65 | 2.0038 | 0.0085 |
| 66 | 2.0122 | 0.0084 |
| 67 | 2.0205 | 0.0083 |
| 68 | 2.0287 | 0.0082 |
| 69 | 2.0368 | 0.0081 |
| 70 | 2.0448 | 0.0080 |
| 71 | 2.0528 | 0.0079 |
| 72 | 2.0606 | 0.0079 |
| 73 | 2.0685 | 0.0078 |
| 74 | 2.0762 | 0.0078 |
| 75 | 2.0839 | 0.0077 |
| 76 | 2.0916 | 0.0076 |
| 77 | 2.0991 | 0.0075 |
| 78 | 2.1066 | 0.0075 |
| 79 | 2.1140 | 0.0074 |
| 80 | 2.1213 | 0.0073 |
| 81 | 2.1286 | 0.0073 |
| 82 | 2.1358 | 0.0072 |
| 83 | 2.1429 | 0.0071 |
| 84 | 2.1500 | 0.0071 |
| 85 | 2.1570 | 0.0070 |
| 86 | 2.1640 | 0.0070 |
| 87 | 2.1709 | 0.0069 |
| 88 | 2.1777 | 0.0068 |
| 89 | 2.1845 | 0.0068 |
| 90 | 2.1913 | 0.0067 |
| 91 | 2.1980 | 0.0067 |
| 92 | 2.2046 | 0.0066 |
| 93 | 2.2112 | 0.0066 |
| 94 | 2.2177 | 0.0065 |
| 95 | 2.2242 | 0.0065 |
| 96 | 2.2306 | 0.0064 |
| 97 | 2.2370 | 0.0064 |
| 98 | 2.2433 | 0.0063 |
| 99 | 2.2496 | 0.0063 |
| 100 | 2.2558 | 0.0062 |
| 101 | 2.2620 | 0.0062 |
| 102 | 2.2681 | 0.0061 |
| 103 | 2.2742 | 0.0061 |
| 104 | 2.2803 | 0.0061 |
| 105 | 2.2863 | 0.0060 |
| 106 | 2.2923 | 0.0060 |
| 107 | 2.2982 | 0.0059 |
| 108 | 2.3041 | 0.0059 |
| 109 | 2.3100 | 0.0059 |
| 110 | 2.3158 | 0.0058 |
| 111 | 2.3216 | 0.0058 |
| 112 | 2.3273 | 0.0057 |
| 113 | 2.3330 | 0.0057 |
| 114 | 2.3387 | 0.0057 |
| 115 | 2.3444 | 0.0056 |

| | | |
|---|---|---|
| 116 | 2.3499 | 0.0056 |
| 117 | 2.3555 | 0.0056 |
| 118 | 2.3610 | 0.0055 |
| 119 | 2.3665 | 0.0055 |
| 120 | 2.3720 | 0.0055 |
| 121 | 2.3774 | 0.0054 |
| 122 | 2.3828 | 0.0054 |
| 123 | 2.3882 | 0.0054 |
| 124 | 2.3935 | 0.0053 |
| 125 | 2.3988 | 0.0053 |
| 126 | 2.4041 | 0.0053 |
| 127 | 2.4093 | 0.0052 |
| 128 | 2.4145 | 0.0052 |
| 129 | 2.4197 | 0.0052 |
| 130 | 2.4249 | 0.0052 |
| 131 | 2.4300 | 0.0051 |
| 132 | 2.4351 | 0.0051 |
| 133 | 2.4402 | 0.0051 |
| 134 | 2.4452 | 0.0050 |
| 135 | 2.4502 | 0.0050 |
| 136 | 2.4552 | 0.0050 |
| 137 | 2.4602 | 0.0050 |
| 138 | 2.4651 | 0.0049 |
| 139 | 2.4700 | 0.0049 |
| 140 | 2.4749 | 0.0049 |
| 141 | 2.4798 | 0.0049 |
| 142 | 2.4846 | 0.0048 |
| 143 | 2.4894 | 0.0048 |
| 144 | 2.4942 | 0.0048 |
| 145 | 2.4989 | 0.0048 |
| 146 | 2.5037 | 0.0047 |
| 147 | 2.5084 | 0.0047 |
| 148 | 2.5131 | 0.0047 |
| 149 | 2.5177 | 0.0047 |
| 150 | 2.5224 | 0.0046 |
| 151 | 2.5270 | 0.0046 |
| 152 | 2.5316 | 0.0046 |
| 153 | 2.5362 | 0.0046 |
| 154 | 2.5407 | 0.0046 |
| 155 | 2.5453 | 0.0045 |
| 156 | 2.5498 | 0.0045 |
| 157 | 2.5543 | 0.0045 |
| 158 | 2.5587 | 0.0045 |
| 159 | 2.5632 | 0.0045 |
| 160 | 2.5676 | 0.0044 |
| 161 | 2.5720 | 0.0044 |
| 162 | 2.5764 | 0.0044 |
| 163 | 2.5808 | 0.0044 |
| 164 | 2.5852 | 0.0044 |
| 165 | 2.5895 | 0.0043 |
| 166 | 2.5938 | 0.0043 |
| 167 | 2.5981 | 0.0043 |
| 168 | 2.6024 | 0.0043 |
| 169 | 2.6066 | 0.0043 |
| 170 | 2.6109 | 0.0042 |
| 171 | 2.6151 | 0.0042 |
| 172 | 2.6193 | 0.0042 |
| 173 | 2.6235 | 0.0042 |
| 174 | 2.6277 | 0.0042 |

| | | |
|---|---|---|
| 175 | 2.6318 | 0.0042 |
| 176 | 2.6359 | 0.0041 |
| 177 | 2.6401 | 0.0041 |
| 178 | 2.6442 | 0.0041 |
| 179 | 2.6482 | 0.0041 |
| 180 | 2.6523 | 0.0041 |
| 181 | 2.6564 | 0.0041 |
| 182 | 2.6604 | 0.0040 |
| 183 | 2.6644 | 0.0040 |
| 184 | 2.6684 | 0.0040 |
| 185 | 2.6724 | 0.0040 |
| 186 | 2.6764 | 0.0040 |
| 187 | 2.6803 | 0.0040 |
| 188 | 2.6843 | 0.0039 |
| 189 | 2.6882 | 0.0039 |
| 190 | 2.6921 | 0.0039 |
| 191 | 2.6960 | 0.0039 |
| 192 | 2.6999 | 0.0039 |
| 193 | 2.7038 | 0.0039 |
| 194 | 2.7076 | 0.0039 |
| 195 | 2.7114 | 0.0038 |
| 196 | 2.7153 | 0.0038 |
| 197 | 2.7191 | 0.0038 |
| 198 | 2.7229 | 0.0038 |
| 199 | 2.7267 | 0.0038 |
| 200 | 2.7304 | 0.0038 |
| 201 | 2.7342 | 0.0038 |
| 202 | 2.7379 | 0.0037 |
| 203 | 2.7416 | 0.0037 |
| 204 | 2.7454 | 0.0037 |
| 205 | 2.7491 | 0.0037 |
| 206 | 2.7527 | 0.0037 |
| 207 | 2.7564 | 0.0037 |
| 208 | 2.7601 | 0.0037 |
| 209 | 2.7637 | 0.0036 |
| 210 | 2.7674 | 0.0036 |
| 211 | 2.7710 | 0.0036 |
| 212 | 2.7746 | 0.0036 |
| 213 | 2.7782 | 0.0036 |
| 214 | 2.7818 | 0.0036 |
| 215 | 2.7854 | 0.0036 |
| 216 | 2.7889 | 0.0036 |
| 217 | 2.7925 | 0.0036 |
| 218 | 2.7960 | 0.0035 |
| 219 | 2.7995 | 0.0035 |
| 220 | 2.8031 | 0.0035 |
| 221 | 2.8066 | 0.0035 |
| 222 | 2.8101 | 0.0035 |
| 223 | 2.8135 | 0.0035 |
| 224 | 2.8170 | 0.0035 |
| 225 | 2.8205 | 0.0035 |
| 226 | 2.8239 | 0.0034 |
| 227 | 2.8273 | 0.0034 |
| 228 | 2.8308 | 0.0034 |
| 229 | 2.8342 | 0.0034 |
| 230 | 2.8376 | 0.0034 |
| 231 | 2.8410 | 0.0034 |
| 232 | 2.8444 | 0.0034 |
| 233 | 2.8477 | 0.0034 |

| | | | |
|---|---|---|---|
| 234 | 2.8511 | 0.0034 | |
| 235 | 2.8545 | 0.0034 | |
| 236 | 2.8578 | 0.0033 | |
| 237 | 2.8611 | 0.0033 | |
| 238 | 2.8644 | 0.0033 | |
| 239 | 2.8678 | 0.0033 | |
| 240 | 2.8711 | 0.0033 | |
| 241 | 2.8743 | 0.0033 | |
| 242 | 2.8776 | 0.0033 | |
| 243 | 2.8809 | 0.0033 | |
| 244 | 2.8842 | 0.0033 | |
| 245 | 2.8874 | 0.0033 | |
| 246 | 2.8907 | 0.0032 | |
| 247 | 2.8939 | 0.0032 | |
| 248 | 2.8971 | 0.0032 | |
| 249 | 2.9003 | 0.0032 | |
| 250 | 2.9035 | 0.0032 | |
| 251 | 2.9067 | 0.0032 | |
| 252 | 2.9099 | 0.0032 | |
| 253 | 2.9131 | 0.0032 | |
| 254 | 2.9163 | 0.0032 | |
| 255 | 2.9194 | 0.0032 | |
| 256 | 2.9226 | 0.0031 | |
| 257 | 2.9257 | 0.0031 | |
| 258 | 2.9288 | 0.0031 | |
| 259 | 2.9320 | 0.0031 | |
| 260 | 2.9351 | 0.0031 | |
| 261 | 2.9382 | 0.0031 | |
| 262 | 2.9413 | 0.0031 | |
| 263 | 2.9444 | 0.0031 | |
| 264 | 2.9474 | 0.0031 | |
| 265 | 2.9505 | 0.0031 | |
| 266 | 2.9536 | 0.0031 | |
| 267 | 2.9566 | 0.0031 | |
| 268 | 2.9597 | 0.0030 | |
| 269 | 2.9627 | 0.0030 | |
| 270 | 2.9657 | 0.0030 | |
| 271 | 2.9688 | 0.0030 | |
| 272 | 2.9718 | 0.0030 | |
| 273 | 2.9748 | 0.0030 | |
| 274 | 2.9778 | 0.0030 | |
| 275 | 2.9808 | 0.0030 | |
| 276 | 2.9838 | 0.0030 | |
| 277 | 2.9867 | 0.0030 | |
| 278 | 2.9897 | 0.0030 | |
| 279 | 2.9927 | 0.0030 | |
| 280 | 2.9956 | 0.0030 | |
| 281 | 2.9985 | 0.0029 | |
| 282 | 3.0015 | 0.0029 | |
| 283 | 3.0044 | 0.0029 | |
| 284 | 3.0073 | 0.0029 | |
| 285 | 3.0102 | 0.0029 | |
| 286 | 3.0132 | 0.0029 | |
| 287 | 3.0160 | 0.0029 | |
| 288 | 3.0189 | 0.0029 | |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 1 | 0.0029 | 0.0012 | 0.0016 |
| 2 | 0.0029 | 0.0012 | 0.0017 |
| 3 | 0.0029 | 0.0013 | 0.0017 |
| 4 | 0.0029 | 0.0013 | 0.0017 |
| 5 | 0.0029 | 0.0013 | 0.0017 |
| 6 | 0.0029 | 0.0013 | 0.0017 |
| 7 | 0.0030 | 0.0013 | 0.0017 |
| 8 | 0.0030 | 0.0013 | 0.0017 |
| 9 | 0.0030 | 0.0013 | 0.0017 |
| 10 | 0.0030 | 0.0013 | 0.0017 |
| 11 | 0.0030 | 0.0013 | 0.0017 |
| 12 | 0.0030 | 0.0013 | 0.0017 |
| 13 | 0.0030 | 0.0013 | 0.0017 |
| 14 | 0.0030 | 0.0013 | 0.0017 |
| 15 | 0.0031 | 0.0013 | 0.0017 |
| 16 | 0.0031 | 0.0013 | 0.0017 |
| 17 | 0.0031 | 0.0013 | 0.0018 |
| 18 | 0.0031 | 0.0013 | 0.0018 |
| 19 | 0.0031 | 0.0013 | 0.0018 |
| 20 | 0.0031 | 0.0013 | 0.0018 |
| 21 | 0.0031 | 0.0013 | 0.0018 |
| 22 | 0.0031 | 0.0014 | 0.0018 |
| 23 | 0.0032 | 0.0014 | 0.0018 |
| 24 | 0.0032 | 0.0014 | 0.0018 |
| 25 | 0.0032 | 0.0014 | 0.0018 |
| 26 | 0.0032 | 0.0014 | 0.0018 |
| 27 | 0.0032 | 0.0014 | 0.0018 |
| 28 | 0.0032 | 0.0014 | 0.0018 |
| 29 | 0.0032 | 0.0014 | 0.0018 |
| 30 | 0.0033 | 0.0014 | 0.0019 |
| 31 | 0.0033 | 0.0014 | 0.0019 |
| 32 | 0.0033 | 0.0014 | 0.0019 |
| 33 | 0.0033 | 0.0014 | 0.0019 |
| 34 | 0.0033 | 0.0014 | 0.0019 |
| 35 | 0.0033 | 0.0014 | 0.0019 |
| 36 | 0.0033 | 0.0014 | 0.0019 |
| 37 | 0.0034 | 0.0014 | 0.0019 |
| 38 | 0.0034 | 0.0015 | 0.0019 |
| 39 | 0.0034 | 0.0015 | 0.0019 |
| 40 | 0.0034 | 0.0015 | 0.0019 |
| 41 | 0.0034 | 0.0015 | 0.0020 |
| 42 | 0.0034 | 0.0015 | 0.0020 |
| 43 | 0.0035 | 0.0015 | 0.0020 |
| 44 | 0.0035 | 0.0015 | 0.0020 |
| 45 | 0.0035 | 0.0015 | 0.0020 |
| 46 | 0.0035 | 0.0015 | 0.0020 |
| 47 | 0.0035 | 0.0015 | 0.0020 |
| 48 | 0.0035 | 0.0015 | 0.0020 |
| 49 | 0.0036 | 0.0015 | 0.0020 |
| 50 | 0.0036 | 0.0015 | 0.0020 |
| 51 | 0.0036 | 0.0015 | 0.0021 |
| 52 | 0.0036 | 0.0016 | 0.0021 |
| 53 | 0.0036 | 0.0016 | 0.0021 |
| 54 | 0.0036 | 0.0016 | 0.0021 |
| 55 | 0.0037 | 0.0016 | 0.0021 |
| 56 | 0.0037 | 0.0016 | 0.0021 |
| 57 | 0.0037 | 0.0016 | 0.0021 |
| 58 | 0.0037 | 0.0016 | 0.0021 |

| | | | |
|---|---|---|---|
| 59 | 0.0038 | 0.0016 | 0.0021 |
| 60 | 0.0038 | 0.0016 | 0.0021 |
| 61 | 0.0038 | 0.0016 | 0.0022 |
| 62 | 0.0038 | 0.0016 | 0.0022 |
| 63 | 0.0038 | 0.0017 | 0.0022 |
| 64 | 0.0039 | 0.0017 | 0.0022 |
| 65 | 0.0039 | 0.0017 | 0.0022 |
| 66 | 0.0039 | 0.0017 | 0.0022 |
| 67 | 0.0039 | 0.0017 | 0.0022 |
| 68 | 0.0039 | 0.0017 | 0.0022 |
| 69 | 0.0040 | 0.0017 | 0.0023 |
| 70 | 0.0040 | 0.0017 | 0.0023 |
| 71 | 0.0040 | 0.0017 | 0.0023 |
| 72 | 0.0040 | 0.0017 | 0.0023 |
| 73 | 0.0041 | 0.0018 | 0.0023 |
| 74 | 0.0041 | 0.0018 | 0.0023 |
| 75 | 0.0041 | 0.0018 | 0.0023 |
| 76 | 0.0041 | 0.0018 | 0.0024 |
| 77 | 0.0042 | 0.0018 | 0.0024 |
| 78 | 0.0042 | 0.0018 | 0.0024 |
| 79 | 0.0042 | 0.0018 | 0.0024 |
| 80 | 0.0042 | 0.0018 | 0.0024 |
| 81 | 0.0043 | 0.0018 | 0.0024 |
| 82 | 0.0043 | 0.0018 | 0.0024 |
| 83 | 0.0043 | 0.0019 | 0.0025 |
| 84 | 0.0044 | 0.0019 | 0.0025 |
| 85 | 0.0044 | 0.0019 | 0.0025 |
| 86 | 0.0044 | 0.0019 | 0.0025 |
| 87 | 0.0045 | 0.0019 | 0.0025 |
| 88 | 0.0045 | 0.0019 | 0.0025 |
| 89 | 0.0045 | 0.0019 | 0.0026 |
| 90 | 0.0045 | 0.0020 | 0.0026 |
| 91 | 0.0046 | 0.0020 | 0.0026 |
| 92 | 0.0046 | 0.0020 | 0.0026 |
| 93 | 0.0046 | 0.0020 | 0.0026 |
| 94 | 0.0047 | 0.0020 | 0.0027 |
| 95 | 0.0047 | 0.0020 | 0.0027 |
| 96 | 0.0047 | 0.0020 | 0.0027 |
| 97 | 0.0048 | 0.0021 | 0.0027 |
| 98 | 0.0048 | 0.0021 | 0.0027 |
| 99 | 0.0049 | 0.0021 | 0.0028 |
| 100 | 0.0049 | 0.0021 | 0.0028 |
| 101 | 0.0049 | 0.0021 | 0.0028 |
| 102 | 0.0050 | 0.0021 | 0.0028 |
| 103 | 0.0050 | 0.0022 | 0.0029 |
| 104 | 0.0050 | 0.0022 | 0.0029 |
| 105 | 0.0051 | 0.0022 | 0.0029 |
| 106 | 0.0051 | 0.0022 | 0.0029 |
| 107 | 0.0052 | 0.0022 | 0.0030 |
| 108 | 0.0052 | 0.0022 | 0.0030 |
| 109 | 0.0053 | 0.0023 | 0.0030 |
| 110 | 0.0053 | 0.0023 | 0.0030 |
| 111 | 0.0054 | 0.0023 | 0.0031 |
| 112 | 0.0054 | 0.0023 | 0.0031 |
| 113 | 0.0055 | 0.0024 | 0.0031 |
| 114 | 0.0055 | 0.0024 | 0.0031 |
| 115 | 0.0056 | 0.0024 | 0.0032 |
| 116 | 0.0056 | 0.0024 | 0.0032 |
| 117 | 0.0057 | 0.0024 | 0.0032 |

| | | | |
|---|---|---|---|
| 118 | 0.0057 | 0.0025 | 0.0033 |
| 119 | 0.0058 | 0.0025 | 0.0033 |
| 120 | 0.0058 | 0.0025 | 0.0033 |
| 121 | 0.0059 | 0.0025 | 0.0034 |
| 122 | 0.0059 | 0.0026 | 0.0034 |
| 123 | 0.0060 | 0.0026 | 0.0034 |
| 124 | 0.0061 | 0.0026 | 0.0035 |
| 125 | 0.0061 | 0.0026 | 0.0035 |
| 126 | 0.0062 | 0.0027 | 0.0035 |
| 127 | 0.0063 | 0.0027 | 0.0036 |
| 128 | 0.0063 | 0.0027 | 0.0036 |
| 129 | 0.0064 | 0.0028 | 0.0037 |
| 130 | 0.0065 | 0.0028 | 0.0037 |
| 131 | 0.0066 | 0.0028 | 0.0037 |
| 132 | 0.0066 | 0.0029 | 0.0038 |
| 133 | 0.0067 | 0.0029 | 0.0038 |
| 134 | 0.0068 | 0.0029 | 0.0039 |
| 135 | 0.0069 | 0.0030 | 0.0039 |
| 136 | 0.0070 | 0.0030 | 0.0040 |
| 137 | 0.0071 | 0.0030 | 0.0040 |
| 138 | 0.0071 | 0.0031 | 0.0041 |
| 139 | 0.0073 | 0.0031 | 0.0041 |
| 140 | 0.0073 | 0.0032 | 0.0042 |
| 141 | 0.0075 | 0.0032 | 0.0043 |
| 142 | 0.0075 | 0.0032 | 0.0043 |
| 143 | 0.0077 | 0.0033 | 0.0044 |
| 144 | 0.0078 | 0.0033 | 0.0044 |
| 145 | 0.0079 | 0.0034 | 0.0045 |
| 146 | 0.0079 | 0.0034 | 0.0045 |
| 147 | 0.0081 | 0.0035 | 0.0046 |
| 148 | 0.0082 | 0.0035 | 0.0047 |
| 149 | 0.0084 | 0.0036 | 0.0048 |
| 150 | 0.0085 | 0.0036 | 0.0048 |
| 151 | 0.0087 | 0.0037 | 0.0049 |
| 152 | 0.0088 | 0.0038 | 0.0050 |
| 153 | 0.0090 | 0.0039 | 0.0051 |
| 154 | 0.0091 | 0.0039 | 0.0052 |
| 155 | 0.0093 | 0.0040 | 0.0053 |
| 156 | 0.0095 | 0.0041 | 0.0054 |
| 157 | 0.0097 | 0.0042 | 0.0055 |
| 158 | 0.0098 | 0.0042 | 0.0056 |
| 159 | 0.0101 | 0.0044 | 0.0058 |
| 160 | 0.0103 | 0.0044 | 0.0059 |
| 161 | 0.0106 | 0.0046 | 0.0060 |
| 162 | 0.0107 | 0.0046 | 0.0061 |
| 163 | 0.0111 | 0.0048 | 0.0063 |
| 164 | 0.0113 | 0.0049 | 0.0064 |
| 165 | 0.0117 | 0.0050 | 0.0067 |
| 166 | 0.0119 | 0.0051 | 0.0068 |
| 167 | 0.0123 | 0.0053 | 0.0070 |
| 168 | 0.0126 | 0.0054 | 0.0072 |
| 169 | 0.0157 | 0.0068 | 0.0090 |
| 170 | 0.0160 | 0.0069 | 0.0091 |
| 171 | 0.0167 | 0.0072 | 0.0095 |
| 172 | 0.0171 | 0.0073 | 0.0097 |
| 173 | 0.0178 | 0.0077 | 0.0102 |
| 174 | 0.0182 | 0.0078 | 0.0104 |
| 175 | 0.0191 | 0.0082 | 0.0109 |
| 176 | 0.0196 | 0.0085 | 0.0112 |

| | | | |
|---|---|---|---|
| 177 | 0.0208 | 0.0089 | 0.0118 |
| 178 | 0.0214 | 0.0092 | 0.0122 |
| 179 | 0.0227 | 0.0098 | 0.0130 |
| 180 | 0.0235 | 0.0101 | 0.0134 |
| 181 | 0.0253 | 0.0109 | 0.0144 |
| 182 | 0.0263 | 0.0113 | 0.0150 |
| 183 | 0.0287 | 0.0123 | 0.0163 |
| 184 | 0.0301 | 0.0130 | 0.0172 |
| 185 | 0.0306 | 0.0132 | 0.0174 |
| 186 | 0.0326 | 0.0140 | 0.0186 |
| 187 | 0.0378 | 0.0163 | 0.0215 |
| 188 | 0.0413 | 0.0178 | 0.0235 |
| 189 | 0.0513 | 0.0213 | 0.0300 |
| 190 | 0.0591 | 0.0213 | 0.0378 |
| 191 | 0.0897 | 0.0213 | 0.0684 |
| 192 | 0.1303 | 0.0213 | 0.1089 |
| 193 | 0.5635 | 0.0213 | 0.5422 |
| 194 | 0.0706 | 0.0213 | 0.0493 |
| 195 | 0.0457 | 0.0196 | 0.0260 |
| 196 | 0.0350 | 0.0151 | 0.0199 |
| 197 | 0.0317 | 0.0136 | 0.0181 |
| 198 | 0.0274 | 0.0118 | 0.0156 |
| 199 | 0.0244 | 0.0105 | 0.0139 |
| 200 | 0.0220 | 0.0095 | 0.0126 |
| 201 | 0.0202 | 0.0087 | 0.0115 |
| 202 | 0.0187 | 0.0080 | 0.0106 |
| 203 | 0.0174 | 0.0075 | 0.0099 |
| 204 | 0.0164 | 0.0070 | 0.0093 |
| 205 | 0.0128 | 0.0055 | 0.0073 |
| 206 | 0.0121 | 0.0052 | 0.0069 |
| 207 | 0.0115 | 0.0049 | 0.0065 |
| 208 | 0.0109 | 0.0047 | 0.0062 |
| 209 | 0.0104 | 0.0045 | 0.0059 |
| 210 | 0.0100 | 0.0043 | 0.0057 |
| 211 | 0.0096 | 0.0041 | 0.0055 |
| 212 | 0.0092 | 0.0040 | 0.0052 |
| 213 | 0.0089 | 0.0038 | 0.0051 |
| 214 | 0.0086 | 0.0037 | 0.0049 |
| 215 | 0.0083 | 0.0036 | 0.0047 |
| 216 | 0.0080 | 0.0035 | 0.0046 |
| 217 | 0.0078 | 0.0034 | 0.0045 |
| 218 | 0.0076 | 0.0033 | 0.0043 |
| 219 | 0.0074 | 0.0032 | 0.0042 |
| 220 | 0.0072 | 0.0031 | 0.0041 |
| 221 | 0.0070 | 0.0030 | 0.0040 |
| 222 | 0.0068 | 0.0029 | 0.0039 |
| 223 | 0.0067 | 0.0029 | 0.0038 |
| 224 | 0.0065 | 0.0028 | 0.0037 |
| 225 | 0.0064 | 0.0027 | 0.0036 |
| 226 | 0.0062 | 0.0027 | 0.0036 |
| 227 | 0.0061 | 0.0026 | 0.0035 |
| 228 | 0.0060 | 0.0026 | 0.0034 |
| 229 | 0.0059 | 0.0025 | 0.0033 |
| 230 | 0.0057 | 0.0025 | 0.0033 |
| 231 | 0.0056 | 0.0024 | 0.0032 |
| 232 | 0.0055 | 0.0024 | 0.0031 |
| 233 | 0.0054 | 0.0023 | 0.0031 |
| 234 | 0.0053 | 0.0023 | 0.0030 |
| 235 | 0.0052 | 0.0023 | 0.0030 |

| | | | |
|---|---|---|---|
| 236 | 0.0052 | 0.0022 | 0.0029 |
| 237 | 0.0051 | 0.0022 | 0.0029 |
| 238 | 0.0050 | 0.0021 | 0.0028 |
| 239 | 0.0049 | 0.0021 | 0.0028 |
| 240 | 0.0048 | 0.0021 | 0.0028 |
| 241 | 0.0048 | 0.0020 | 0.0027 |
| 242 | 0.0047 | 0.0020 | 0.0027 |
| 243 | 0.0046 | 0.0020 | 0.0026 |
| 244 | 0.0046 | 0.0020 | 0.0026 |
| 245 | 0.0045 | 0.0019 | 0.0026 |
| 246 | 0.0044 | 0.0019 | 0.0025 |
| 247 | 0.0044 | 0.0019 | 0.0025 |
| 248 | 0.0043 | 0.0019 | 0.0025 |
| 249 | 0.0043 | 0.0018 | 0.0024 |
| 250 | 0.0042 | 0.0018 | 0.0024 |
| 251 | 0.0042 | 0.0018 | 0.0024 |
| 252 | 0.0041 | 0.0018 | 0.0023 |
| 253 | 0.0041 | 0.0017 | 0.0023 |
| 254 | 0.0040 | 0.0017 | 0.0023 |
| 255 | 0.0040 | 0.0017 | 0.0023 |
| 256 | 0.0039 | 0.0017 | 0.0022 |
| 257 | 0.0039 | 0.0017 | 0.0022 |
| 258 | 0.0038 | 0.0016 | 0.0022 |
| 259 | 0.0038 | 0.0016 | 0.0022 |
| 260 | 0.0037 | 0.0016 | 0.0021 |
| 261 | 0.0037 | 0.0016 | 0.0021 |
| 262 | 0.0037 | 0.0016 | 0.0021 |
| 263 | 0.0036 | 0.0016 | 0.0021 |
| 264 | 0.0036 | 0.0015 | 0.0020 |
| 265 | 0.0036 | 0.0015 | 0.0020 |
| 266 | 0.0035 | 0.0015 | 0.0020 |
| 267 | 0.0035 | 0.0015 | 0.0020 |
| 268 | 0.0034 | 0.0015 | 0.0020 |
| 269 | 0.0034 | 0.0015 | 0.0019 |
| 270 | 0.0034 | 0.0015 | 0.0019 |
| 271 | 0.0034 | 0.0014 | 0.0019 |
| 272 | 0.0033 | 0.0014 | 0.0019 |
| 273 | 0.0033 | 0.0014 | 0.0019 |
| 274 | 0.0033 | 0.0014 | 0.0019 |
| 275 | 0.0032 | 0.0014 | 0.0018 |
| 276 | 0.0032 | 0.0014 | 0.0018 |
| 277 | 0.0032 | 0.0014 | 0.0018 |
| 278 | 0.0031 | 0.0014 | 0.0018 |
| 279 | 0.0031 | 0.0013 | 0.0018 |
| 280 | 0.0031 | 0.0013 | 0.0018 |
| 281 | 0.0031 | 0.0013 | 0.0017 |
| 282 | 0.0030 | 0.0013 | 0.0017 |
| 283 | 0.0030 | 0.0013 | 0.0017 |
| 284 | 0.0030 | 0.0013 | 0.0017 |
| 285 | 0.0030 | 0.0013 | 0.0017 |
| 286 | 0.0030 | 0.0013 | 0.0017 |
| 287 | 0.0029 | 0.0013 | 0.0017 |
| 288 | 0.0029 | 0.0013 | 0.0017 |

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Total soil rain loss = 1.01(In)
Total effective rainfall = 2.01(In)
Peak flow rate in flood hydrograph = 1829.92(CFS)

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24 - H O U R  S T O R M
R u n o f f  H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 475.0 | 950.0 | 1425.0 | 1900.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0012 | 0.18 | Q | | | | |
| 0+10 | 0.0058 | 0.67 | Q | | | | |
| 0+15 | 0.0159 | 1.47 | Q | | | | |
| 0+20 | 0.0337 | 2.58 | Q | | | | |
| 0+25 | 0.0636 | 4.34 | Q | | | | |
| 0+30 | 0.1140 | 7.33 | Q | | | | |
| 0+35 | 0.1899 | 11.01 | Q | | | | |
| 0+40 | 0.2874 | 14.16 | Q | | | | |
| 0+45 | 0.4025 | 16.71 | Q | | | | |
| 0+50 | 0.5311 | 18.68 | Q | | | | |
| 0+55 | 0.6702 | 20.19 | Q | | | | |
| 1+ 0 | 0.8179 | 21.45 | Q | | | | |
| 1+ 5 | 0.9732 | 22.55 | Q | | | | |
| 1+10 | 1.1354 | 23.55 | Q | | | | |
| 1+15 | 1.3035 | 24.41 | Q | | | | |
| 1+20 | 1.4770 | 25.19 | Q | | | | |
| 1+25 | 1.6556 | 25.93 | Q | | | | |
| 1+30 | 1.8385 | 26.56 | Q | | | | |
| 1+35 | 2.0256 | 27.17 | Q | | | | |
| 1+40 | 2.2164 | 27.71 | Q | | | | |
| 1+45 | 2.4109 | 28.24 | Q | | | | |
| 1+50 | 2.6087 | 28.73 | Q | | | | |
| 1+55 | 2.8099 | 29.21 | Q | | | | |
| 2+ 0 | 3.0142 | 29.65 | Q | | | | |
| 2+ 5 | 3.2213 | 30.08 | Q | | | | |
| 2+10 | 3.4311 | 30.45 | Q | | | | |
| 2+15 | 3.6433 | 30.81 | Q | | | | |
| 2+20 | 3.8579 | 31.16 | Q | | | | |
| 2+25 | 4.0749 | 31.51 | Q | | | | |
| 2+30 | 4.2941 | 31.83 | Q | | | | |
| 2+35 | 4.5155 | 32.15 | Q | | | | |
| 2+40 | 4.7391 | 32.46 | Q | | | | |
| 2+45 | 4.9647 | 32.76 | Q | | | | |
| 2+50 | 5.1923 | 33.05 | Q | | | | |
| 2+55 | 5.4218 | 33.32 | Q | | | | |
| 3+ 0 | 5.6531 | 33.59 | Q | | | | |
| 3+ 5 | 5.8863 | 33.86 | Q | | | | |
| 3+10 | 6.1213 | 34.12 | Q | | | | |
| 3+15 | 6.3580 | 34.37 | Q | | | | |
| 3+20 | 6.5964 | 34.62 | Q | | | | |
| 3+25 | 6.8365 | 34.87 | QV | | | | |
| 3+30 | 7.0783 | 35.11 | QV | | | | |
| 3+35 | 7.3217 | 35.34 | QV | | | | |
| 3+40 | 7.5666 | 35.56 | QV | | | | |
| 3+45 | 7.8131 | 35.79 | QV | | | | |
| 3+50 | 8.0611 | 36.01 | QV | | | | |
| 3+55 | 8.3106 | 36.22 | QV | | | | |
| 4+ 0 | 8.5614 | 36.43 | QV | | | | |
| 4+ 5 | 8.8138 | 36.64 | QV | | | | |
| 4+10 | 9.0675 | 36.85 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4+15 | 9.3228 | 37.07 | QV | \| | \| | \| | \| |
| 4+20 | 9.5797 | 37.29 | QV | \| | \| | \| | \| |
| 4+25 | 9.8380 | 37.51 | QV | \| | \| | \| | \| |
| 4+30 | 10.0979 | 37.74 | QV | \| | \| | \| | \| |
| 4+35 | 10.3594 | 37.97 | QV | \| | \| | \| | \| |
| 4+40 | 10.6225 | 38.20 | QV | \| | \| | \| | \| |
| 4+45 | 10.8872 | 38.43 | QV | \| | \| | \| | \| |
| 4+50 | 11.1535 | 38.66 | QV | \| | \| | \| | \| |
| 4+55 | 11.4213 | 38.88 | QV | \| | \| | \| | \| |
| 5+ 0 | 11.6906 | 39.10 | QV | \| | \| | \| | \| |
| 5+ 5 | 11.9614 | 39.32 | QV | \| | \| | \| | \| |
| 5+10 | 12.2337 | 39.55 | QV | \| | \| | \| | \| |
| 5+15 | 12.5076 | 39.77 | QV | \| | \| | \| | \| |
| 5+20 | 12.7831 | 39.99 | QV | \| | \| | \| | \| |
| 5+25 | 13.0599 | 40.20 | QV | \| | \| | \| | \| |
| 5+30 | 13.3382 | 40.41 | QV | \| | \| | \| | \| |
| 5+35 | 13.6180 | 40.62 | Q V | \| | \| | \| | \| |
| 5+40 | 13.8992 | 40.84 | Q V | \| | \| | \| | \| |
| 5+45 | 14.1820 | 41.06 | Q V | \| | \| | \| | \| |
| 5+50 | 14.4663 | 41.28 | Q V | \| | \| | \| | \| |
| 5+55 | 14.7522 | 41.51 | Q V | \| | \| | \| | \| |
| 6+ 0 | 15.0396 | 41.73 | Q V | \| | \| | \| | \| |
| 6+ 5 | 15.3286 | 41.97 | Q V | \| | \| | \| | \| |
| 6+10 | 15.6193 | 42.20 | Q V | \| | \| | \| | \| |
| 6+15 | 15.9115 | 42.44 | Q V | \| | \| | \| | \| |
| 6+20 | 16.2055 | 42.68 | Q V | \| | \| | \| | \| |
| 6+25 | 16.5011 | 42.92 | Q V | \| | \| | \| | \| |
| 6+30 | 16.7984 | 43.17 | Q V | \| | \| | \| | \| |
| 6+35 | 17.0974 | 43.42 | Q V | \| | \| | \| | \| |
| 6+40 | 17.3982 | 43.67 | Q V | \| | \| | \| | \| |
| 6+45 | 17.7007 | 43.93 | Q V | \| | \| | \| | \| |
| 6+50 | 18.0051 | 44.19 | Q V | \| | \| | \| | \| |
| 6+55 | 18.3113 | 44.46 | Q V | \| | \| | \| | \| |
| 7+ 0 | 18.6193 | 44.73 | Q V | \| | \| | \| | \| |
| 7+ 5 | 18.9292 | 45.00 | Q V | \| | \| | \| | \| |
| 7+10 | 19.2410 | 45.28 | Q V | \| | \| | \| | \| |
| 7+15 | 19.5548 | 45.56 | Q V | \| | \| | \| | \| |
| 7+20 | 19.8705 | 45.84 | Q V | \| | \| | \| | \| |
| 7+25 | 20.1882 | 46.13 | Q  V | \| | \| | \| | \| |
| 7+30 | 20.5080 | 46.43 | Q  V | \| | \| | \| | \| |
| 7+35 | 20.8298 | 46.72 | Q  V | \| | \| | \| | \| |
| 7+40 | 21.1536 | 47.03 | Q  V | \| | \| | \| | \| |
| 7+45 | 21.4796 | 47.34 | Q  V | \| | \| | \| | \| |
| 7+50 | 21.8078 | 47.65 | \|Q V | \| | \| | \| | \| |
| 7+55 | 22.1381 | 47.97 | \|Q V | \| | \| | \| | \| |
| 8+ 0 | 22.4707 | 48.29 | \|Q V | \| | \| | \| | \| |
| 8+ 5 | 22.8055 | 48.62 | \|Q V | \| | \| | \| | \| |
| 8+10 | 23.1427 | 48.95 | \|Q V | \| | \| | \| | \| |
| 8+15 | 23.4821 | 49.29 | \|Q V | \| | \| | \| | \| |
| 8+20 | 23.8239 | 49.63 | \|Q V | \| | \| | \| | \| |
| 8+25 | 24.1682 | 49.98 | \|Q V | \| | \| | \| | \| |
| 8+30 | 24.5149 | 50.34 | \|Q V | \| | \| | \| | \| |
| 8+35 | 24.8641 | 50.70 | \|Q V | \| | \| | \| | \| |
| 8+40 | 25.2158 | 51.07 | \|Q V | \| | \| | \| | \| |
| 8+45 | 25.5702 | 51.45 | \|Q V | \| | \| | \| | \| |
| 8+50 | 25.9271 | 51.83 | \|Q V | \| | \| | \| | \| |
| 8+55 | 26.2868 | 52.22 | \|Q V | \| | \| | \| | \| |
| 9+ 0 | 26.6491 | 52.62 | \|Q V | \| | \| | \| | \| |
| 9+ 5 | 27.0143 | 53.02 | \|Q  V | \| | \| | \| | \| |

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 9+10      27.3822     53.43  |Q  V     |          |          |          |
 9+15      27.7531     53.85  |Q  V     |          |          |          |
 9+20      28.1269     54.27  |Q  V     |          |          |          |
 9+25      28.5037     54.71  |Q  V     |          |          |          |
 9+30      28.8835     55.15  |Q  V     |          |          |          |
 9+35      29.2665     55.61  |Q  V     |          |          |          |
 9+40      29.6526     56.07  |Q  V     |          |          |          |
 9+45      30.0420     56.54  |Q  V     |          |          |          |
 9+50      30.4346     57.02  |Q  V     |          |          |          |
 9+55      30.8307     57.51  |Q  V     |          |          |          |
10+ 0      31.2302     58.00  |Q  V     |          |          |          |
10+ 5      31.6332     58.52  |Q  V     |          |          |          |
10+10      32.0398     59.04  |Q  V     |          |          |          |
10+15      32.4500     59.57  |Q  V     |          |          |          |
10+20      32.8640     60.11  |Q  V     |          |          |          |
10+25      33.2819     60.67  |Q  V     |          |          |          |
10+30      33.7036     61.24  |Q   V    |          |          |          |
10+35      34.1294     61.82  |Q   V    |          |          |          |
10+40      34.5593     62.42  |Q   V    |          |          |          |
10+45      34.9934     63.03  |Q   V    |          |          |          |
10+50      35.4317     63.65  |Q   V    |          |          |          |
10+55      35.8745     64.29  |Q   V    |          |          |          |
11+ 0      36.3218     64.94  |Q   V    |          |          |          |
11+ 5      36.7737     65.62  |Q   V    |          |          |          |
11+10      37.2303     66.30  |Q   V    |          |          |          |
11+15      37.6918     67.01  |Q   V    |          |          |          |
11+20      38.1583     67.73  |Q   V    |          |          |          |
11+25      38.6299     68.48  |Q   V    |          |          |          |
11+30      39.1068     69.24  |Q   V    |          |          |          |
11+35      39.5890     70.02  |Q   V    |          |          |          |
11+40      40.0768     70.83  |Q   V    |          |          |          |
11+45      40.5704     71.66  |Q    V   |          |          |          |
11+50      41.0697     72.51  |Q    V   |          |          |          |
11+55      41.5752     73.39  |Q    V   |          |          |          |
12+ 0      42.0868     74.29  |Q    V   |          |          |          |
12+ 5      42.6048     75.22  |Q    V   |          |          |          |
12+10      43.1294     76.17  |Q    V   |          |          |          |
12+15      43.6607     77.14  |Q    V   |          |          |          |
12+20      44.1988     78.14  |Q    V   |          |          |          |
12+25      44.7439     79.15  |Q    V   |          |          |          |
12+30      45.2961     80.18  |Q    V   |          |          |          |
12+35      45.8556     81.23  |Q    V   |          |          |          |
12+40      46.4225     82.32  |Q    V   |          |          |          |
12+45      46.9975     83.48  |Q     V  |          |          |          |
12+50      47.5807     84.68  |Q     V  |          |          |          |
12+55      48.1726     85.95  |Q     V  |          |          |          |
13+ 0      48.7736     87.26  |Q     V  |          |          |          |
13+ 5      49.3840     88.64  |Q     V  |          |          |          |
13+10      50.0043     90.06  |Q     V  |          |          |          |
13+15      50.6349     91.56  |Q     V  |          |          |          |
13+20      51.2761     93.11  |Q     V  |          |          |          |
13+25      51.9286     94.74  |Q     V  |          |          |          |
13+30      52.5927     96.43  | Q    V  |          |          |          |
13+35      53.2691     98.21  | Q    V  |          |          |          |
13+40      53.9583    100.07  | Q     V |          |          |          |
13+45      54.6609    102.02  | Q     V |          |          |          |
13+50      55.3776    104.06  | Q     V |          |          |          |
13+55      56.1091    106.22  | Q     V |          |          |          |
14+ 0      56.8562    108.48  | Q     V |          |          |          |
```

| | | | |
|---|---|---|---|
| 14+ 5 | 57.6209 | 111.04 | Q V \| \| \| \| |
| 14+10 | 58.4062 | 114.01 | Q V \| \| \| \| |
| 14+15 | 59.2149 | 117.43 | Q V \| \| \| \| |
| 14+20 | 60.0503 | 121.30 | Q V \| \| \| \| |
| 14+25 | 60.9178 | 125.96 | Q V\| \| \| \| |
| 14+30 | 61.8267 | 131.97 | Q V\| \| \| \| |
| 14+35 | 62.7831 | 138.88 | Q V\| \| \| \| |
| 14+40 | 63.7858 | 145.58 | Q V\| \| \| \| |
| 14+45 | 64.8331 | 152.07 | Q V\| \| \| \| |
| 14+50 | 65.9238 | 158.36 | Q V\| \| \| \| |
| 14+55 | 67.0577 | 164.65 | Q V \| \| \| |
| 15+ 0 | 68.2362 | 171.12 | Q V \| \| \| |
| 15+ 5 | 69.4619 | 177.97 | Q V \| \| \| |
| 15+10 | 70.7379 | 185.27 | Q V \| \| \| |
| 15+15 | 72.0681 | 193.15 | Q V \| \| \| |
| 15+20 | 73.4574 | 201.72 | Q V \| \| \| |
| 15+25 | 74.9109 | 211.06 | Q \|V \| \| \| |
| 15+30 | 76.4336 | 221.09 | Q \|V \| \| \| |
| 15+35 | 78.0332 | 232.27 | Q \|V \| \| \| |
| 15+40 | 79.7193 | 244.82 | Q \|V \| \| \| |
| 15+45 | 81.5048 | 259.25 | Q \| V \| \| \| |
| 15+50 | 83.4067 | 276.15 | Q \| V \| \| \| |
| 15+55 | 85.4722 | 299.92 | Q \| V \| \| \| |
| 16+ 0 | 87.8036 | 338.52 | Q \| V \| \| \| |
| 16+ 5 | 90.8470 | 441.90 | Q\| V \| \| \| |
| 16+10 | 94.9528 | 596.16 | \| Q V \| \| \| |
| 16+15 | 100.1620 | 756.37 | \| VQ \| \| \| |
| 16+20 | 106.6435 | 941.12 | \| V Q\| \| \| |
| 16+25 | 115.1336 | 1232.77 | \| V \| Q \| \| |
| 16+30 | 126.4739 | 1646.61 | \| V \| \| Q \| |
| 16+35 | 139.0766 | 1829.92 | \| V \| \| Q |
| 16+40 | 150.2205 | 1618.09 | \| \| V \| \| Q \| |
| 16+45 | 159.6255 | 1365.60 | \| \| V Q \| \| \| |
| 16+50 | 167.3555 | 1122.40 | \| \| Q V \| \| \| |
| 16+55 | 173.7875 | 933.92 | \| \| Q\| V \| \| |
| 17+ 0 | 179.3950 | 814.22 | \| \| Q \| V \| \| |
| 17+ 5 | 184.4212 | 729.80 | \| Q \| V \| \| |
| 17+10 | 189.0007 | 664.94 | \| Q \| V \| \| |
| 17+15 | 193.1279 | 599.27 | \| Q \| V \| \| |
| 17+20 | 196.9100 | 549.15 | \|Q \| V\| \| |
| 17+25 | 200.4226 | 510.04 | Q \| V\| \| |
| 17+30 | 203.5760 | 457.87 | Q\| \| V \| |
| 17+35 | 206.5366 | 429.87 | Q\| \| V \| |
| 17+40 | 209.2408 | 392.66 | Q \| \| \|V \| |
| 17+45 | 211.8076 | 372.70 | Q \| \| \|V \| |
| 17+50 | 214.2073 | 348.43 | Q \| \| \| V \| |
| 17+55 | 216.4915 | 331.66 | Q \| \| \| V \| |
| 18+ 0 | 218.5997 | 306.11 | Q \| \| \| V \| |
| 18+ 5 | 220.5933 | 289.48 | Q \| \| \| V \| |
| 18+10 | 222.4047 | 263.01 | Q \| \| \| \| V \| |
| 18+15 | 224.1251 | 249.80 | Q \| \| \| \| V \| |
| 18+20 | 225.7658 | 238.23 | Q \| \| \| \| V \| |
| 18+25 | 227.3444 | 229.21 | Q \| \| \| \| V \| |
| 18+30 | 228.8326 | 216.09 | Q \| \| \| \| V \| |
| 18+35 | 230.2600 | 207.25 | Q \| \| \| \| V \| |
| 18+40 | 231.6213 | 197.66 | Q \| \| \| \| V \| |
| 18+45 | 232.9271 | 189.60 | Q \| \| \| \| V \| |
| 18+50 | 234.1415 | 176.34 | Q \| \| \| \| V \| |
| 18+55 | 235.2962 | 167.66 | Q \| \| \| \| V \| |

```
19+ 0     236.4196    163.12  |  Q      |          |          |    V     |
19+ 5     237.5098    158.30  |  Q      |          |          |    V     |
19+10     238.5350    148.85  |  Q      |          |          |    V     |
19+15     239.5086    141.38  | Q       |          |          |    V     |
19+20     240.4564    137.61  | Q       |          |          |    V     |
19+25     241.3759    133.52  | Q       |          |          |     V    |
19+30     242.2388    125.28  | Q       |          |          |     V    |
19+35     243.0474    117.41  | Q       |          |          |     V    |
19+40     243.8339    114.21  | Q       |          |          |     V    |
19+45     244.5968    110.78  | Q       |          |          |     V    |
19+50     245.3140    104.13  | Q       |          |          |     V    |
19+55     245.9782     96.45  | Q       |          |          |     V    |
20+ 0     246.6271     94.21  |Q        |          |          |     V    |
20+ 5     247.2641     92.50  |Q        |          |          |     V    |
20+10     247.8948     91.58  |Q        |          |          |      V   |
20+15     248.5235     91.28  |Q        |          |          |      V   |
20+20     249.1419     89.79  |Q        |          |          |      V   |
20+25     249.7494     88.21  |Q        |          |          |      V   |
20+30     250.3459     86.61  |Q        |          |          |      V   |
20+35     250.9307     84.92  |Q        |          |          |      V   |
20+40     251.5038     83.21  |Q        |          |          |      V   |
20+45     252.0627     81.15  |Q        |          |          |      V   |
20+50     252.5981     77.74  |Q        |          |          |      V   |
20+55     253.0881     71.15  |Q        |          |          |      V   |
21+ 0     253.5628     68.92  |Q        |          |          |      V   |
21+ 5     254.0269     67.40  |Q        |          |          |      V   |
21+10     254.4797     65.73  |Q        |          |          |       V  |
21+15     254.9179     63.63  |Q        |          |          |       V  |
21+20     255.3193     58.29  |Q        |          |          |       V  |
21+25     255.6871     53.41  |Q        |          |          |       V  |
21+30     256.0462     52.15  |Q        |          |          |       V  |
21+35     256.3984     51.13  |Q        |          |          |       V  |
21+40     256.7440     50.19  |Q        |          |          |       V  |
21+45     257.0837     49.32  |Q        |          |          |       V  |
21+50     257.4177     48.50  |Q        |          |          |       V  |
21+55     257.7465     47.74  |Q        |          |          |       V  |
22+ 0     258.0704     47.02  Q         |          |          |       V  |
22+ 5     258.3895     46.33  Q         |          |          |       V  |
22+10     258.7040     45.68  Q         |          |          |       V  |
22+15     259.0143     45.05  Q         |          |          |       V  |
22+20     259.3204     44.45  Q         |          |          |       V  |
22+25     259.6226     43.88  Q         |          |          |       V  |
22+30     259.9211     43.34  Q         |          |          |       V  |
22+35     260.2160     42.81  Q         |          |          |       V  |
22+40     260.5073     42.30  Q         |          |          |       V  |
22+45     260.7953     41.81  Q         |          |          |       V  |
22+50     261.0800     41.33  Q         |          |          |        V |
22+55     261.3614     40.87  Q         |          |          |        V |
23+ 0     261.6398     40.42  Q         |          |          |        V |
23+ 5     261.9152     39.98  Q         |          |          |        V |
23+10     262.1876     39.56  Q         |          |          |        V |
23+15     262.4571     39.14  Q         |          |          |        V |
23+20     262.7239     38.74  Q         |          |          |        V |
23+25     262.9880     38.35  Q         |          |          |        V |
23+30     263.2495     37.96  Q         |          |          |        V |
23+35     263.5084     37.59  Q         |          |          |        V |
23+40     263.7647     37.22  Q         |          |          |        V |
23+45     264.0186     36.87  Q         |          |          |        V |
23+50     264.2702     36.52  Q         |          |          |        V |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+55 | 264.5194 | 36.18 | Q | \| | \| | \| | V\| |
| 24+ 0 | 264.7663 | 35.85 | Q | \| | \| | \| | V\| |
| 24+ 5 | 265.0098 | 35.35 | Q | \| | \| | \| | V\| |
| 24+10 | 265.2477 | 34.54 | Q | \| | \| | \| | V\| |
| 24+15 | 265.4780 | 33.45 | Q | \| | \| | \| | V\| |
| 24+20 | 265.6988 | 32.05 | Q | \| | \| | \| | V\| |
| 24+25 | 265.9056 | 30.03 | Q | \| | \| | \| | V\| |
| 24+30 | 266.0901 | 26.80 | Q | \| | \| | \| | V\| |
| 24+35 | 266.2480 | 22.93 | Q | \| | \| | \| | V\| |
| 24+40 | 266.3832 | 19.62 | Q | \| | \| | \| | V\| |
| 24+45 | 266.4999 | 16.96 | Q | \| | \| | \| | V\| |
| 24+50 | 266.6026 | 14.91 | Q | \| | \| | \| | V\| |
| 24+55 | 266.6945 | 13.34 | Q | \| | \| | \| | V\| |
| 25+ 0 | 266.7774 | 12.04 | Q | \| | \| | \| | V\| |
| 25+ 5 | 266.8526 | 10.92 | Q | \| | \| | \| | V\| |
| 25+10 | 266.9209 | 9.92 | Q | \| | \| | \| | V\| |
| 25+15 | 266.9833 | 9.06 | Q | \| | \| | \| | V\| |
| 25+20 | 267.0404 | 8.29 | Q | \| | \| | \| | V\| |
| 25+25 | 267.0926 | 7.58 | Q | \| | \| | \| | V\| |
| 25+30 | 267.1407 | 6.99 | Q | \| | \| | \| | V\| |
| 25+35 | 267.1850 | 6.43 | Q | \| | \| | \| | V\| |
| 25+40 | 267.2259 | 5.94 | Q | \| | \| | \| | V\| |
| 25+45 | 267.2635 | 5.47 | Q | \| | \| | \| | V\| |
| 25+50 | 267.2983 | 5.04 | Q | \| | \| | \| | V\| |
| 25+55 | 267.3301 | 4.63 | Q | \| | \| | \| | V\| |
| 26+ 0 | 267.3595 | 4.27 | Q | \| | \| | \| | V\| |
| 26+ 5 | 267.3866 | 3.93 | Q | \| | \| | \| | V\| |
| 26+10 | 267.4117 | 3.64 | Q | \| | \| | \| | V\| |
| 26+15 | 267.4350 | 3.38 | Q | \| | \| | \| | V\| |
| 26+20 | 267.4565 | 3.13 | Q | \| | \| | \| | V\| |
| 26+25 | 267.4764 | 2.89 | Q | \| | \| | \| | V\| |
| 26+30 | 267.4948 | 2.67 | Q | \| | \| | \| | V\| |
| 26+35 | 267.5118 | 2.47 | Q | \| | \| | \| | V\| |
| 26+40 | 267.5275 | 2.27 | Q | \| | \| | \| | V\| |
| 26+45 | 267.5418 | 2.09 | Q | \| | \| | \| | V\| |
| 26+50 | 267.5551 | 1.93 | Q | \| | \| | \| | V\| |
| 26+55 | 267.5674 | 1.78 | Q | \| | \| | \| | V\| |
| 27+ 0 | 267.5787 | 1.64 | Q | \| | \| | \| | V\| |
| 27+ 5 | 267.5891 | 1.50 | Q | \| | \| | \| | V\| |
| 27+10 | 267.5986 | 1.38 | Q | \| | \| | \| | V\| |
| 27+15 | 267.6073 | 1.27 | Q | \| | \| | \| | V\| |
| 27+20 | 267.6153 | 1.16 | Q | \| | \| | \| | V\| |
| 27+25 | 267.6226 | 1.06 | Q | \| | \| | \| | V\| |
| 27+30 | 267.6292 | 0.96 | Q | \| | \| | \| | V\| |
| 27+35 | 267.6354 | 0.89 | Q | \| | \| | \| | V\| |
| 27+40 | 267.6410 | 0.82 | Q | \| | \| | \| | V\| |
| 27+45 | 267.6461 | 0.74 | Q | \| | \| | \| | V\| |
| 27+50 | 267.6508 | 0.68 | Q | \| | \| | \| | V\| |
| 27+55 | 267.6551 | 0.64 | Q | \| | \| | \| | V\| |
| 28+ 0 | 267.6592 | 0.59 | Q | \| | \| | \| | V\| |
| 28+ 5 | 267.6630 | 0.55 | Q | \| | \| | \| | V\| |
| 28+10 | 267.6665 | 0.50 | Q | \| | \| | \| | V\| |
| 28+15 | 267.6696 | 0.46 | Q | \| | \| | \| | V\| |
| 28+20 | 267.6724 | 0.41 | Q | \| | \| | \| | V\| |
| 28+25 | 267.6749 | 0.36 | Q | \| | \| | \| | V\| |
| 28+30 | 267.6770 | 0.31 | Q | \| | \| | \| | V\| |
| 28+35 | 267.6788 | 0.26 | Q | \| | \| | \| | V\| |
| 28+40 | 267.6803 | 0.22 | Q | \| | \| | \| | V\| |
| 28+45 | 267.6815 | 0.17 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 28+50 | 267.6824 | 0.13 | Q | \| | \| | \| | V\| |
| 28+55 | 267.6832 | 0.10 | Q | \| | \| | \| | V\| |
| 29+ 0 | 267.6837 | 0.08 | Q | \| | \| | \| | V\| |
| 29+ 5 | 267.6841 | 0.06 | Q | \| | \| | \| | V\| |
| 29+10 | 267.6843 | 0.03 | Q | \| | \| | \| | V\| |
| 29+15 | 267.6844 | 0.01 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 08/10/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREA "C"
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-10-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 1687.33 | 1 | 1.30 |
| Rainfall data for year 100 | | |
| 1687.33 | 6 | 2.10 |
| Rainfall data for year 100 | | |
| 1687.33 | 24 | 3.11 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 65.1 | 83.1 | 1687.33 | 1.000 | 0.316 | 0.990 | 0.313 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.313

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 1670.46 | 0.990 | 65.1 | 83.1 | 2.03 | 0.496 |
| 16.87 | 0.010 | 98.0 | 98.0 | 0.20 | 0.925 |

Area-averaged catchment yield fraction, Y = 0.501
Area-averaged low loss fraction, Yb = 0.499
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 28332.00(Ft.)
Length from concentration point to centroid = 13559.00(Ft.)
Elevation difference along watercourse = 1988.00(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 1687.33(Ac.)
Catchment Lag time = 0.740 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 11.2641
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.313(In/Hr)
Average low loss rate fraction (Yb) = 0.499 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.100
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.900

Computed peak 5-minute rainfall = 0.615(In)
Computed peak 30-minute rainfall = 1.053(In)
Specified peak 1-hour rainfall = 1.297(In)
Computed peak 3-hour rainfall = 1.745(In)
Specified peak 6-hour rainfall = 2.104(In)
Specified peak 24-hour rainfall = 3.114(In)

Rainfall depth area reduction factors:
Using a total area of 1687.33(Ac.) (Ref: fig. E-4)

5-minute factor = 0.921 Adjusted rainfall = 0.567(In)
30-minute factor = 0.921 Adjusted rainfall = 0.970(In)
1-hour factor = 0.921 Adjusted rainfall = 1.194(In)
3-hour factor = 0.990 Adjusted rainfall = 1.727(In)
6-hour factor = 0.995 Adjusted rainfall = 2.093(In)
24-hour factor = 0.998 Adjusted rainfall = 3.107(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 20406.15 (CFS)) | |
| 1 | 0.517 | 105.581 |
| 2 | 1.890 | 279.999 |
| 3 | 4.055 | 441.936 |
| 4 | 7.028 | 606.528 |
| 5 | 11.208 | 853.048 |

| | | |
|---|---|---|
| 6 | 18.240 | 1435.009 |
| 7 | 28.520 | 2097.674 |
| 8 | 38.313 | 1998.460 |
| 9 | 46.913 | 1754.974 |
| 10 | 53.757 | 1396.431 |
| 11 | 58.916 | 1052.785 |
| 12 | 62.977 | 828.805 |
| 13 | 66.371 | 692.597 |
| 14 | 69.320 | 601.632 |
| 15 | 71.967 | 540.234 |
| 16 | 74.265 | 468.881 |
| 17 | 76.295 | 414.201 |
| 18 | 78.210 | 390.788 |
| 19 | 79.827 | 330.049 |
| 20 | 81.327 | 306.152 |
| 21 | 82.686 | 277.223 |
| 22 | 83.916 | 251.004 |
| 23 | 85.098 | 241.158 |
| 24 | 86.182 | 221.236 |
| 25 | 87.232 | 214.345 |
| 26 | 88.149 | 187.035 |
| 27 | 89.035 | 180.856 |
| 28 | 89.760 | 147.868 |
| 29 | 90.439 | 138.704 |
| 30 | 91.082 | 131.227 |
| 31 | 91.704 | 126.881 |
| 32 | 92.287 | 118.966 |
| 33 | 92.819 | 108.540 |
| 34 | 93.337 | 105.724 |
| 35 | 93.817 | 97.928 |
| 36 | 94.280 | 94.547 |
| 37 | 94.654 | 76.276 |
| 38 | 95.012 | 73.094 |
| 39 | 95.371 | 73.094 |
| 40 | 95.729 | 73.073 |
| 41 | 96.041 | 63.760 |
| 42 | 96.316 | 56.085 |
| 43 | 96.591 | 56.085 |
| 44 | 96.866 | 56.085 |
| 45 | 97.125 | 52.822 |
| 46 | 97.320 | 39.937 |
| 47 | 97.510 | 38.616 |
| 48 | 97.699 | 38.616 |
| 49 | 97.887 | 38.377 |
| 50 | 98.024 | 28.038 |
| 51 | 98.135 | 22.526 |
| 52 | 98.245 | 22.526 |
| 53 | 98.355 | 22.526 |
| 54 | 98.470 | 23.391 |
| 55 | 98.596 | 25.630 |
| 56 | 98.722 | 25.744 |
| 57 | 98.848 | 25.744 |
| 58 | 98.974 | 25.724 |
| 59 | 99.098 | 25.399 |
| 60 | 99.222 | 25.284 |
| 61 | 99.346 | 25.284 |
| 62 | 99.470 | 25.284 |
| 63 | 99.572 | 20.767 |
| 64 | 99.636 | 13.053 |

| | | |
|---|---|---|
| 65 | 99.699 | 12.929 |
| 66 | 99.763 | 12.929 |
| 67 | 99.826 | 12.929 |
| 68 | 99.889 | 12.929 |
| 69 | 99.953 | 12.929 |
| 70 | 100.000 | 9.653 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5668 | 0.5668 |
| 2 | 0.6978 | 0.1310 |
| 3 | 0.7880 | 0.0903 |
| 4 | 0.8591 | 0.0710 |
| 5 | 0.9185 | 0.0595 |
| 6 | 0.9702 | 0.0516 |
| 7 | 1.0161 | 0.0459 |
| 8 | 1.0576 | 0.0415 |
| 9 | 1.0957 | 0.0380 |
| 10 | 1.1308 | 0.0352 |
| 11 | 1.1636 | 0.0328 |
| 12 | 1.1944 | 0.0308 |
| 13 | 1.2270 | 0.0325 |
| 14 | 1.2579 | 0.0309 |
| 15 | 1.2874 | 0.0295 |
| 16 | 1.3156 | 0.0282 |
| 17 | 1.3426 | 0.0271 |
| 18 | 1.3687 | 0.0260 |
| 19 | 1.3937 | 0.0251 |
| 20 | 1.4180 | 0.0242 |
| 21 | 1.4414 | 0.0234 |
| 22 | 1.4641 | 0.0227 |
| 23 | 1.4861 | 0.0220 |
| 24 | 1.5075 | 0.0214 |
| 25 | 1.5283 | 0.0208 |
| 26 | 1.5486 | 0.0203 |
| 27 | 1.5683 | 0.0198 |
| 28 | 1.5876 | 0.0193 |
| 29 | 1.6064 | 0.0188 |
| 30 | 1.6248 | 0.0184 |
| 31 | 1.6428 | 0.0180 |
| 32 | 1.6604 | 0.0176 |
| 33 | 1.6777 | 0.0172 |
| 34 | 1.6946 | 0.0169 |
| 35 | 1.7111 | 0.0166 |
| 36 | 1.7274 | 0.0163 |
| 37 | 1.7406 | 0.0132 |
| 38 | 1.7535 | 0.0129 |
| 39 | 1.7661 | 0.0127 |
| 40 | 1.7785 | 0.0124 |
| 41 | 1.7907 | 0.0122 |
| 42 | 1.8027 | 0.0120 |
| 43 | 1.8145 | 0.0118 |
| 44 | 1.8261 | 0.0116 |
| 45 | 1.8375 | 0.0114 |
| 46 | 1.8487 | 0.0112 |
| 47 | 1.8598 | 0.0110 |
| 48 | 1.8706 | 0.0109 |
| 49 | 1.8813 | 0.0107 |
| 50 | 1.8919 | 0.0106 |

| | | |
|---|---|---|
| 51 | 1.9023 | 0.0104 |
| 52 | 1.9126 | 0.0103 |
| 53 | 1.9227 | 0.0101 |
| 54 | 1.9327 | 0.0100 |
| 55 | 1.9425 | 0.0098 |
| 56 | 1.9522 | 0.0097 |
| 57 | 1.9618 | 0.0096 |
| 58 | 1.9713 | 0.0095 |
| 59 | 1.9806 | 0.0094 |
| 60 | 1.9899 | 0.0092 |
| 61 | 1.9990 | 0.0091 |
| 62 | 2.0080 | 0.0090 |
| 63 | 2.0169 | 0.0089 |
| 64 | 2.0257 | 0.0088 |
| 65 | 2.0345 | 0.0087 |
| 66 | 2.0431 | 0.0086 |
| 67 | 2.0516 | 0.0085 |
| 68 | 2.0600 | 0.0084 |
| 69 | 2.0684 | 0.0083 |
| 70 | 2.0766 | 0.0083 |
| 71 | 2.0848 | 0.0082 |
| 72 | 2.0929 | 0.0081 |
| 73 | 2.1012 | 0.0082 |
| 74 | 2.1093 | 0.0082 |
| 75 | 2.1174 | 0.0081 |
| 76 | 2.1254 | 0.0080 |
| 77 | 2.1334 | 0.0079 |
| 78 | 2.1412 | 0.0079 |
| 79 | 2.1490 | 0.0078 |
| 80 | 2.1567 | 0.0077 |
| 81 | 2.1644 | 0.0077 |
| 82 | 2.1720 | 0.0076 |
| 83 | 2.1795 | 0.0075 |
| 84 | 2.1869 | 0.0075 |
| 85 | 2.1943 | 0.0074 |
| 86 | 2.2017 | 0.0073 |
| 87 | 2.2089 | 0.0073 |
| 88 | 2.2161 | 0.0072 |
| 89 | 2.2233 | 0.0072 |
| 90 | 2.2304 | 0.0071 |
| 91 | 2.2374 | 0.0070 |
| 92 | 2.2444 | 0.0070 |
| 93 | 2.2513 | 0.0069 |
| 94 | 2.2582 | 0.0069 |
| 95 | 2.2650 | 0.0068 |
| 96 | 2.2718 | 0.0068 |
| 97 | 2.2785 | 0.0067 |
| 98 | 2.2852 | 0.0067 |
| 99 | 2.2918 | 0.0066 |
| 100 | 2.2984 | 0.0066 |
| 101 | 2.3049 | 0.0065 |
| 102 | 2.3114 | 0.0065 |
| 103 | 2.3178 | 0.0064 |
| 104 | 2.3242 | 0.0064 |
| 105 | 2.3306 | 0.0063 |
| 106 | 2.3369 | 0.0063 |
| 107 | 2.3432 | 0.0063 |
| 108 | 2.3494 | 0.0062 |
| 109 | 2.3556 | 0.0062 |

| | | |
|---|---|---|
| 110 | 2.3617 | 0.0061 |
| 111 | 2.3678 | 0.0061 |
| 112 | 2.3739 | 0.0061 |
| 113 | 2.3799 | 0.0060 |
| 114 | 2.3859 | 0.0060 |
| 115 | 2.3918 | 0.0059 |
| 116 | 2.3977 | 0.0059 |
| 117 | 2.4036 | 0.0059 |
| 118 | 2.4095 | 0.0058 |
| 119 | 2.4153 | 0.0058 |
| 120 | 2.4210 | 0.0058 |
| 121 | 2.4268 | 0.0057 |
| 122 | 2.4325 | 0.0057 |
| 123 | 2.4381 | 0.0057 |
| 124 | 2.4438 | 0.0056 |
| 125 | 2.4494 | 0.0056 |
| 126 | 2.4549 | 0.0056 |
| 127 | 2.4605 | 0.0055 |
| 128 | 2.4660 | 0.0055 |
| 129 | 2.4715 | 0.0055 |
| 130 | 2.4769 | 0.0054 |
| 131 | 2.4823 | 0.0054 |
| 132 | 2.4877 | 0.0054 |
| 133 | 2.4931 | 0.0054 |
| 134 | 2.4984 | 0.0053 |
| 135 | 2.5037 | 0.0053 |
| 136 | 2.5090 | 0.0053 |
| 137 | 2.5142 | 0.0052 |
| 138 | 2.5195 | 0.0052 |
| 139 | 2.5246 | 0.0052 |
| 140 | 2.5298 | 0.0052 |
| 141 | 2.5349 | 0.0051 |
| 142 | 2.5401 | 0.0051 |
| 143 | 2.5451 | 0.0051 |
| 144 | 2.5502 | 0.0051 |
| 145 | 2.5552 | 0.0050 |
| 146 | 2.5603 | 0.0050 |
| 147 | 2.5652 | 0.0050 |
| 148 | 2.5702 | 0.0050 |
| 149 | 2.5751 | 0.0049 |
| 150 | 2.5801 | 0.0049 |
| 151 | 2.5850 | 0.0049 |
| 152 | 2.5898 | 0.0049 |
| 153 | 2.5947 | 0.0048 |
| 154 | 2.5995 | 0.0048 |
| 155 | 2.6043 | 0.0048 |
| 156 | 2.6091 | 0.0048 |
| 157 | 2.6138 | 0.0048 |
| 158 | 2.6186 | 0.0047 |
| 159 | 2.6233 | 0.0047 |
| 160 | 2.6280 | 0.0047 |
| 161 | 2.6326 | 0.0047 |
| 162 | 2.6373 | 0.0047 |
| 163 | 2.6419 | 0.0046 |
| 164 | 2.6465 | 0.0046 |
| 165 | 2.6511 | 0.0046 |
| 166 | 2.6557 | 0.0046 |
| 167 | 2.6603 | 0.0046 |
| 168 | 2.6648 | 0.0045 |

| | | |
|---|---|---|
| 169 | 2.6693 | 0.0045 |
| 170 | 2.6738 | 0.0045 |
| 171 | 2.6783 | 0.0045 |
| 172 | 2.6827 | 0.0045 |
| 173 | 2.6872 | 0.0044 |
| 174 | 2.6916 | 0.0044 |
| 175 | 2.6960 | 0.0044 |
| 176 | 2.7004 | 0.0044 |
| 177 | 2.7047 | 0.0044 |
| 178 | 2.7091 | 0.0043 |
| 179 | 2.7134 | 0.0043 |
| 180 | 2.7177 | 0.0043 |
| 181 | 2.7220 | 0.0043 |
| 182 | 2.7263 | 0.0043 |
| 183 | 2.7306 | 0.0043 |
| 184 | 2.7348 | 0.0042 |
| 185 | 2.7390 | 0.0042 |
| 186 | 2.7433 | 0.0042 |
| 187 | 2.7474 | 0.0042 |
| 188 | 2.7516 | 0.0042 |
| 189 | 2.7558 | 0.0042 |
| 190 | 2.7599 | 0.0041 |
| 191 | 2.7641 | 0.0041 |
| 192 | 2.7682 | 0.0041 |
| 193 | 2.7723 | 0.0041 |
| 194 | 2.7764 | 0.0041 |
| 195 | 2.7805 | 0.0041 |
| 196 | 2.7845 | 0.0041 |
| 197 | 2.7886 | 0.0040 |
| 198 | 2.7926 | 0.0040 |
| 199 | 2.7966 | 0.0040 |
| 200 | 2.8006 | 0.0040 |
| 201 | 2.8046 | 0.0040 |
| 202 | 2.8086 | 0.0040 |
| 203 | 2.8125 | 0.0040 |
| 204 | 2.8165 | 0.0039 |
| 205 | 2.8204 | 0.0039 |
| 206 | 2.8243 | 0.0039 |
| 207 | 2.8282 | 0.0039 |
| 208 | 2.8321 | 0.0039 |
| 209 | 2.8360 | 0.0039 |
| 210 | 2.8398 | 0.0039 |
| 211 | 2.8437 | 0.0038 |
| 212 | 2.8475 | 0.0038 |
| 213 | 2.8513 | 0.0038 |
| 214 | 2.8551 | 0.0038 |
| 215 | 2.8589 | 0.0038 |
| 216 | 2.8627 | 0.0038 |
| 217 | 2.8665 | 0.0038 |
| 218 | 2.8703 | 0.0038 |
| 219 | 2.8740 | 0.0037 |
| 220 | 2.8777 | 0.0037 |
| 221 | 2.8815 | 0.0037 |
| 222 | 2.8852 | 0.0037 |
| 223 | 2.8889 | 0.0037 |
| 224 | 2.8926 | 0.0037 |
| 225 | 2.8962 | 0.0037 |
| 226 | 2.8999 | 0.0037 |
| 227 | 2.9036 | 0.0037 |

| | | |
|---|---|---|
| 228 | 2.9072 | 0.0036 |
| 229 | 2.9108 | 0.0036 |
| 230 | 2.9145 | 0.0036 |
| 231 | 2.9181 | 0.0036 |
| 232 | 2.9217 | 0.0036 |
| 233 | 2.9252 | 0.0036 |
| 234 | 2.9288 | 0.0036 |
| 235 | 2.9324 | 0.0036 |
| 236 | 2.9359 | 0.0036 |
| 237 | 2.9395 | 0.0035 |
| 238 | 2.9430 | 0.0035 |
| 239 | 2.9465 | 0.0035 |
| 240 | 2.9500 | 0.0035 |
| 241 | 2.9535 | 0.0035 |
| 242 | 2.9570 | 0.0035 |
| 243 | 2.9605 | 0.0035 |
| 244 | 2.9640 | 0.0035 |
| 245 | 2.9674 | 0.0035 |
| 246 | 2.9709 | 0.0034 |
| 247 | 2.9743 | 0.0034 |
| 248 | 2.9777 | 0.0034 |
| 249 | 2.9812 | 0.0034 |
| 250 | 2.9846 | 0.0034 |
| 251 | 2.9880 | 0.0034 |
| 252 | 2.9914 | 0.0034 |
| 253 | 2.9947 | 0.0034 |
| 254 | 2.9981 | 0.0034 |
| 255 | 3.0015 | 0.0034 |
| 256 | 3.0048 | 0.0034 |
| 257 | 3.0082 | 0.0033 |
| 258 | 3.0115 | 0.0033 |
| 259 | 3.0148 | 0.0033 |
| 260 | 3.0181 | 0.0033 |
| 261 | 3.0214 | 0.0033 |
| 262 | 3.0247 | 0.0033 |
| 263 | 3.0280 | 0.0033 |
| 264 | 3.0313 | 0.0033 |
| 265 | 3.0346 | 0.0033 |
| 266 | 3.0378 | 0.0033 |
| 267 | 3.0411 | 0.0033 |
| 268 | 3.0443 | 0.0032 |
| 269 | 3.0476 | 0.0032 |
| 270 | 3.0508 | 0.0032 |
| 271 | 3.0540 | 0.0032 |
| 272 | 3.0572 | 0.0032 |
| 273 | 3.0604 | 0.0032 |
| 274 | 3.0636 | 0.0032 |
| 275 | 3.0668 | 0.0032 |
| 276 | 3.0700 | 0.0032 |
| 277 | 3.0731 | 0.0032 |
| 278 | 3.0763 | 0.0032 |
| 279 | 3.0794 | 0.0032 |
| 280 | 3.0826 | 0.0031 |
| 281 | 3.0857 | 0.0031 |
| 282 | 3.0888 | 0.0031 |
| 283 | 3.0920 | 0.0031 |
| 284 | 3.0951 | 0.0031 |
| 285 | 3.0982 | 0.0031 |
| 286 | 3.1013 | 0.0031 |

| | | |
|---|---|---|
| 287 | 3.1044 | 0.0031 |
| 288 | 3.1074 | 0.0031 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0031 | 0.0015 | 0.0015 |
| 2 | 0.0031 | 0.0015 | 0.0015 |
| 3 | 0.0031 | 0.0015 | 0.0016 |
| 4 | 0.0031 | 0.0016 | 0.0016 |
| 5 | 0.0031 | 0.0016 | 0.0016 |
| 6 | 0.0031 | 0.0016 | 0.0016 |
| 7 | 0.0032 | 0.0016 | 0.0016 |
| 8 | 0.0032 | 0.0016 | 0.0016 |
| 9 | 0.0032 | 0.0016 | 0.0016 |
| 10 | 0.0032 | 0.0016 | 0.0016 |
| 11 | 0.0032 | 0.0016 | 0.0016 |
| 12 | 0.0032 | 0.0016 | 0.0016 |
| 13 | 0.0032 | 0.0016 | 0.0016 |
| 14 | 0.0032 | 0.0016 | 0.0016 |
| 15 | 0.0033 | 0.0016 | 0.0016 |
| 16 | 0.0033 | 0.0016 | 0.0016 |
| 17 | 0.0033 | 0.0016 | 0.0016 |
| 18 | 0.0033 | 0.0016 | 0.0016 |
| 19 | 0.0033 | 0.0017 | 0.0017 |
| 20 | 0.0033 | 0.0017 | 0.0017 |
| 21 | 0.0033 | 0.0017 | 0.0017 |
| 22 | 0.0033 | 0.0017 | 0.0017 |
| 23 | 0.0034 | 0.0017 | 0.0017 |
| 24 | 0.0034 | 0.0017 | 0.0017 |
| 25 | 0.0034 | 0.0017 | 0.0017 |
| 26 | 0.0034 | 0.0017 | 0.0017 |
| 27 | 0.0034 | 0.0017 | 0.0017 |
| 28 | 0.0034 | 0.0017 | 0.0017 |
| 29 | 0.0034 | 0.0017 | 0.0017 |
| 30 | 0.0035 | 0.0017 | 0.0017 |
| 31 | 0.0035 | 0.0017 | 0.0017 |
| 32 | 0.0035 | 0.0017 | 0.0017 |
| 33 | 0.0035 | 0.0018 | 0.0018 |
| 34 | 0.0035 | 0.0018 | 0.0018 |
| 35 | 0.0035 | 0.0018 | 0.0018 |
| 36 | 0.0036 | 0.0018 | 0.0018 |
| 37 | 0.0036 | 0.0018 | 0.0018 |
| 38 | 0.0036 | 0.0018 | 0.0018 |
| 39 | 0.0036 | 0.0018 | 0.0018 |
| 40 | 0.0036 | 0.0018 | 0.0018 |
| 41 | 0.0036 | 0.0018 | 0.0018 |
| 42 | 0.0037 | 0.0018 | 0.0018 |
| 43 | 0.0037 | 0.0018 | 0.0018 |
| 44 | 0.0037 | 0.0018 | 0.0018 |
| 45 | 0.0037 | 0.0019 | 0.0019 |
| 46 | 0.0037 | 0.0019 | 0.0019 |
| 47 | 0.0037 | 0.0019 | 0.0019 |
| 48 | 0.0038 | 0.0019 | 0.0019 |
| 49 | 0.0038 | 0.0019 | 0.0019 |
| 50 | 0.0038 | 0.0019 | 0.0019 |
| 51 | 0.0038 | 0.0019 | 0.0019 |
| 52 | 0.0038 | 0.0019 | 0.0019 |

| | | | |
|---|---|---|---|
| 53 | 0.0039 | 0.0019 | 0.0019 |
| 54 | 0.0039 | 0.0019 | 0.0019 |
| 55 | 0.0039 | 0.0019 | 0.0020 |
| 56 | 0.0039 | 0.0020 | 0.0020 |
| 57 | 0.0039 | 0.0020 | 0.0020 |
| 58 | 0.0040 | 0.0020 | 0.0020 |
| 59 | 0.0040 | 0.0020 | 0.0020 |
| 60 | 0.0040 | 0.0020 | 0.0020 |
| 61 | 0.0040 | 0.0020 | 0.0020 |
| 62 | 0.0040 | 0.0020 | 0.0020 |
| 63 | 0.0041 | 0.0020 | 0.0020 |
| 64 | 0.0041 | 0.0020 | 0.0020 |
| 65 | 0.0041 | 0.0021 | 0.0021 |
| 66 | 0.0041 | 0.0021 | 0.0021 |
| 67 | 0.0042 | 0.0021 | 0.0021 |
| 68 | 0.0042 | 0.0021 | 0.0021 |
| 69 | 0.0042 | 0.0021 | 0.0021 |
| 70 | 0.0042 | 0.0021 | 0.0021 |
| 71 | 0.0043 | 0.0021 | 0.0021 |
| 72 | 0.0043 | 0.0021 | 0.0021 |
| 73 | 0.0043 | 0.0022 | 0.0022 |
| 74 | 0.0043 | 0.0022 | 0.0022 |
| 75 | 0.0044 | 0.0022 | 0.0022 |
| 76 | 0.0044 | 0.0022 | 0.0022 |
| 77 | 0.0044 | 0.0022 | 0.0022 |
| 78 | 0.0044 | 0.0022 | 0.0022 |
| 79 | 0.0045 | 0.0022 | 0.0022 |
| 80 | 0.0045 | 0.0022 | 0.0022 |
| 81 | 0.0045 | 0.0023 | 0.0023 |
| 82 | 0.0046 | 0.0023 | 0.0023 |
| 83 | 0.0046 | 0.0023 | 0.0023 |
| 84 | 0.0046 | 0.0023 | 0.0023 |
| 85 | 0.0047 | 0.0023 | 0.0023 |
| 86 | 0.0047 | 0.0023 | 0.0023 |
| 87 | 0.0047 | 0.0024 | 0.0024 |
| 88 | 0.0047 | 0.0024 | 0.0024 |
| 89 | 0.0048 | 0.0024 | 0.0024 |
| 90 | 0.0048 | 0.0024 | 0.0024 |
| 91 | 0.0048 | 0.0024 | 0.0024 |
| 92 | 0.0049 | 0.0024 | 0.0024 |
| 93 | 0.0049 | 0.0025 | 0.0025 |
| 94 | 0.0049 | 0.0025 | 0.0025 |
| 95 | 0.0050 | 0.0025 | 0.0025 |
| 96 | 0.0050 | 0.0025 | 0.0025 |
| 97 | 0.0051 | 0.0025 | 0.0025 |
| 98 | 0.0051 | 0.0025 | 0.0025 |
| 99 | 0.0051 | 0.0026 | 0.0026 |
| 100 | 0.0052 | 0.0026 | 0.0026 |
| 101 | 0.0052 | 0.0026 | 0.0026 |
| 102 | 0.0052 | 0.0026 | 0.0026 |
| 103 | 0.0053 | 0.0026 | 0.0027 |
| 104 | 0.0053 | 0.0027 | 0.0027 |
| 105 | 0.0054 | 0.0027 | 0.0027 |
| 106 | 0.0054 | 0.0027 | 0.0027 |
| 107 | 0.0055 | 0.0027 | 0.0027 |
| 108 | 0.0055 | 0.0028 | 0.0028 |
| 109 | 0.0056 | 0.0028 | 0.0028 |
| 110 | 0.0056 | 0.0028 | 0.0028 |
| 111 | 0.0057 | 0.0028 | 0.0028 |

| | | | |
|---|---|---|---|
| 112 | 0.0057 | 0.0028 | 0.0029 |
| 113 | 0.0058 | 0.0029 | 0.0029 |
| 114 | 0.0058 | 0.0029 | 0.0029 |
| 115 | 0.0059 | 0.0029 | 0.0029 |
| 116 | 0.0059 | 0.0030 | 0.0030 |
| 117 | 0.0060 | 0.0030 | 0.0030 |
| 118 | 0.0060 | 0.0030 | 0.0030 |
| 119 | 0.0061 | 0.0030 | 0.0031 |
| 120 | 0.0061 | 0.0031 | 0.0031 |
| 121 | 0.0062 | 0.0031 | 0.0031 |
| 122 | 0.0063 | 0.0031 | 0.0031 |
| 123 | 0.0063 | 0.0032 | 0.0032 |
| 124 | 0.0064 | 0.0032 | 0.0032 |
| 125 | 0.0065 | 0.0032 | 0.0032 |
| 126 | 0.0065 | 0.0033 | 0.0033 |
| 127 | 0.0066 | 0.0033 | 0.0033 |
| 128 | 0.0067 | 0.0033 | 0.0033 |
| 129 | 0.0068 | 0.0034 | 0.0034 |
| 130 | 0.0068 | 0.0034 | 0.0034 |
| 131 | 0.0069 | 0.0035 | 0.0035 |
| 132 | 0.0070 | 0.0035 | 0.0035 |
| 133 | 0.0071 | 0.0035 | 0.0036 |
| 134 | 0.0072 | 0.0036 | 0.0036 |
| 135 | 0.0073 | 0.0036 | 0.0036 |
| 136 | 0.0073 | 0.0037 | 0.0037 |
| 137 | 0.0075 | 0.0037 | 0.0037 |
| 138 | 0.0075 | 0.0038 | 0.0038 |
| 139 | 0.0077 | 0.0038 | 0.0038 |
| 140 | 0.0077 | 0.0039 | 0.0039 |
| 141 | 0.0079 | 0.0039 | 0.0039 |
| 142 | 0.0079 | 0.0040 | 0.0040 |
| 143 | 0.0081 | 0.0040 | 0.0040 |
| 144 | 0.0082 | 0.0041 | 0.0041 |
| 145 | 0.0081 | 0.0040 | 0.0041 |
| 146 | 0.0082 | 0.0041 | 0.0041 |
| 147 | 0.0083 | 0.0042 | 0.0042 |
| 148 | 0.0084 | 0.0042 | 0.0042 |
| 149 | 0.0086 | 0.0043 | 0.0043 |
| 150 | 0.0087 | 0.0044 | 0.0044 |
| 151 | 0.0089 | 0.0045 | 0.0045 |
| 152 | 0.0090 | 0.0045 | 0.0045 |
| 153 | 0.0092 | 0.0046 | 0.0046 |
| 154 | 0.0094 | 0.0047 | 0.0047 |
| 155 | 0.0096 | 0.0048 | 0.0048 |
| 156 | 0.0097 | 0.0049 | 0.0049 |
| 157 | 0.0100 | 0.0050 | 0.0050 |
| 158 | 0.0101 | 0.0051 | 0.0051 |
| 159 | 0.0104 | 0.0052 | 0.0052 |
| 160 | 0.0106 | 0.0053 | 0.0053 |
| 161 | 0.0109 | 0.0054 | 0.0054 |
| 162 | 0.0110 | 0.0055 | 0.0055 |
| 163 | 0.0114 | 0.0057 | 0.0057 |
| 164 | 0.0116 | 0.0058 | 0.0058 |
| 165 | 0.0120 | 0.0060 | 0.0060 |
| 166 | 0.0122 | 0.0061 | 0.0061 |
| 167 | 0.0127 | 0.0063 | 0.0063 |
| 168 | 0.0129 | 0.0064 | 0.0065 |
| 169 | 0.0163 | 0.0081 | 0.0081 |
| 170 | 0.0166 | 0.0083 | 0.0083 |

| | | | |
|---|---|---|---|
| 171 | 0.0172 | 0.0086 | 0.0086 |
| 172 | 0.0176 | 0.0088 | 0.0088 |
| 173 | 0.0184 | 0.0092 | 0.0092 |
| 174 | 0.0188 | 0.0094 | 0.0094 |
| 175 | 0.0198 | 0.0099 | 0.0099 |
| 176 | 0.0203 | 0.0101 | 0.0101 |
| 177 | 0.0214 | 0.0107 | 0.0107 |
| 178 | 0.0220 | 0.0110 | 0.0110 |
| 179 | 0.0234 | 0.0117 | 0.0117 |
| 180 | 0.0242 | 0.0121 | 0.0121 |
| 181 | 0.0260 | 0.0130 | 0.0130 |
| 182 | 0.0271 | 0.0135 | 0.0135 |
| 183 | 0.0295 | 0.0147 | 0.0148 |
| 184 | 0.0309 | 0.0154 | 0.0155 |
| 185 | 0.0308 | 0.0154 | 0.0154 |
| 186 | 0.0328 | 0.0164 | 0.0164 |
| 187 | 0.0380 | 0.0190 | 0.0190 |
| 188 | 0.0415 | 0.0207 | 0.0208 |
| 189 | 0.0516 | 0.0258 | 0.0259 |
| 190 | 0.0595 | 0.0261 | 0.0334 |
| 191 | 0.0903 | 0.0261 | 0.0641 |
| 192 | 0.1310 | 0.0261 | 0.1049 |
| 193 | 0.5668 | 0.0261 | 0.5407 |
| 194 | 0.0710 | 0.0261 | 0.0449 |
| 195 | 0.0459 | 0.0229 | 0.0230 |
| 196 | 0.0352 | 0.0176 | 0.0176 |
| 197 | 0.0325 | 0.0163 | 0.0163 |
| 198 | 0.0282 | 0.0141 | 0.0141 |
| 199 | 0.0251 | 0.0125 | 0.0126 |
| 200 | 0.0227 | 0.0113 | 0.0114 |
| 201 | 0.0208 | 0.0104 | 0.0104 |
| 202 | 0.0193 | 0.0096 | 0.0096 |
| 203 | 0.0180 | 0.0090 | 0.0090 |
| 204 | 0.0169 | 0.0084 | 0.0085 |
| 205 | 0.0132 | 0.0066 | 0.0066 |
| 206 | 0.0124 | 0.0062 | 0.0062 |
| 207 | 0.0118 | 0.0059 | 0.0059 |
| 208 | 0.0112 | 0.0056 | 0.0056 |
| 209 | 0.0107 | 0.0053 | 0.0054 |
| 210 | 0.0103 | 0.0051 | 0.0051 |
| 211 | 0.0098 | 0.0049 | 0.0049 |
| 212 | 0.0095 | 0.0047 | 0.0047 |
| 213 | 0.0091 | 0.0046 | 0.0046 |
| 214 | 0.0088 | 0.0044 | 0.0044 |
| 215 | 0.0085 | 0.0043 | 0.0043 |
| 216 | 0.0083 | 0.0041 | 0.0041 |
| 217 | 0.0082 | 0.0041 | 0.0041 |
| 218 | 0.0080 | 0.0040 | 0.0040 |
| 219 | 0.0078 | 0.0039 | 0.0039 |
| 220 | 0.0076 | 0.0038 | 0.0038 |
| 221 | 0.0074 | 0.0037 | 0.0037 |
| 222 | 0.0072 | 0.0036 | 0.0036 |
| 223 | 0.0070 | 0.0035 | 0.0035 |
| 224 | 0.0069 | 0.0034 | 0.0034 |
| 225 | 0.0067 | 0.0034 | 0.0034 |
| 226 | 0.0066 | 0.0033 | 0.0033 |
| 227 | 0.0064 | 0.0032 | 0.0032 |
| 228 | 0.0063 | 0.0031 | 0.0032 |
| 229 | 0.0062 | 0.0031 | 0.0031 |

| | | | |
|---|---|---|---|
| 230 | 0.0061 | 0.0030 | 0.0030 |
| 231 | 0.0059 | 0.0030 | 0.0030 |
| 232 | 0.0058 | 0.0029 | 0.0029 |
| 233 | 0.0057 | 0.0029 | 0.0029 |
| 234 | 0.0056 | 0.0028 | 0.0028 |
| 235 | 0.0055 | 0.0028 | 0.0028 |
| 236 | 0.0054 | 0.0027 | 0.0027 |
| 237 | 0.0054 | 0.0027 | 0.0027 |
| 238 | 0.0053 | 0.0026 | 0.0026 |
| 239 | 0.0052 | 0.0026 | 0.0026 |
| 240 | 0.0051 | 0.0026 | 0.0026 |
| 241 | 0.0050 | 0.0025 | 0.0025 |
| 242 | 0.0050 | 0.0025 | 0.0025 |
| 243 | 0.0049 | 0.0024 | 0.0024 |
| 244 | 0.0048 | 0.0024 | 0.0024 |
| 245 | 0.0048 | 0.0024 | 0.0024 |
| 246 | 0.0047 | 0.0023 | 0.0023 |
| 247 | 0.0046 | 0.0023 | 0.0023 |
| 248 | 0.0046 | 0.0023 | 0.0023 |
| 249 | 0.0045 | 0.0023 | 0.0023 |
| 250 | 0.0045 | 0.0022 | 0.0022 |
| 251 | 0.0044 | 0.0022 | 0.0022 |
| 252 | 0.0043 | 0.0022 | 0.0022 |
| 253 | 0.0043 | 0.0021 | 0.0022 |
| 254 | 0.0042 | 0.0021 | 0.0021 |
| 255 | 0.0042 | 0.0021 | 0.0021 |
| 256 | 0.0041 | 0.0021 | 0.0021 |
| 257 | 0.0041 | 0.0020 | 0.0021 |
| 258 | 0.0041 | 0.0020 | 0.0020 |
| 259 | 0.0040 | 0.0020 | 0.0020 |
| 260 | 0.0040 | 0.0020 | 0.0020 |
| 261 | 0.0039 | 0.0020 | 0.0020 |
| 262 | 0.0039 | 0.0019 | 0.0019 |
| 263 | 0.0038 | 0.0019 | 0.0019 |
| 264 | 0.0038 | 0.0019 | 0.0019 |
| 265 | 0.0038 | 0.0019 | 0.0019 |
| 266 | 0.0037 | 0.0019 | 0.0019 |
| 267 | 0.0037 | 0.0018 | 0.0019 |
| 268 | 0.0037 | 0.0018 | 0.0018 |
| 269 | 0.0036 | 0.0018 | 0.0018 |
| 270 | 0.0036 | 0.0018 | 0.0018 |
| 271 | 0.0036 | 0.0018 | 0.0018 |
| 272 | 0.0035 | 0.0018 | 0.0018 |
| 273 | 0.0035 | 0.0017 | 0.0018 |
| 274 | 0.0035 | 0.0017 | 0.0017 |
| 275 | 0.0034 | 0.0017 | 0.0017 |
| 276 | 0.0034 | 0.0017 | 0.0017 |
| 277 | 0.0034 | 0.0017 | 0.0017 |
| 278 | 0.0034 | 0.0017 | 0.0017 |
| 279 | 0.0033 | 0.0017 | 0.0017 |
| 280 | 0.0033 | 0.0016 | 0.0017 |
| 281 | 0.0033 | 0.0016 | 0.0016 |
| 282 | 0.0032 | 0.0016 | 0.0016 |
| 283 | 0.0032 | 0.0016 | 0.0016 |
| 284 | 0.0032 | 0.0016 | 0.0016 |
| 285 | 0.0032 | 0.0016 | 0.0016 |
| 286 | 0.0031 | 0.0016 | 0.0016 |
| 287 | 0.0031 | 0.0016 | 0.0016 |
| 288 | 0.0031 | 0.0015 | 0.0015 |

Total soil rain loss = 1.22(In)
Total effective rainfall = 1.88(In)
Peak flow rate in flood hydrograph = 1742.41(CFS)

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 450.0 | 900.0 | 1350.0 | 1800.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0011 | 0.16 | Q | | | | |
| 0+10 | 0.0052 | 0.59 | Q | | | | |
| 0+15 | 0.0140 | 1.28 | Q | | | | |
| 0+20 | 0.0293 | 2.22 | Q | | | | |
| 0+25 | 0.0537 | 3.54 | Q | | | | |
| 0+30 | 0.0934 | 5.77 | Q | | | | |
| 0+35 | 0.1555 | 9.02 | Q | | | | |
| 0+40 | 0.2391 | 12.13 | Q | | | | |
| 0+45 | 0.3416 | 14.88 | Q | | | | |
| 0+50 | 0.4593 | 17.09 | Q | | | | |
| 0+55 | 0.5887 | 18.78 | Q | | | | |
| 1+ 0 | 0.7273 | 20.13 | Q | | | | |
| 1+ 5 | 0.8738 | 21.27 | Q | | | | |
| 1+10 | 1.0273 | 22.28 | Q | | | | |
| 1+15 | 1.1871 | 23.20 | Q | | | | |
| 1+20 | 1.3524 | 24.01 | Q | | | | |
| 1+25 | 1.5229 | 24.75 | Q | | | | |
| 1+30 | 1.6981 | 25.44 | Q | | | | |
| 1+35 | 1.8775 | 26.05 | Q | | | | |
| 1+40 | 2.0609 | 26.63 | Q | | | | |
| 1+45 | 2.2480 | 27.16 | Q | | | | |
| 1+50 | 2.4384 | 27.65 | Q | | | | |
| 1+55 | 2.6322 | 28.14 | Q | | | | |
| 2+ 0 | 2.8291 | 28.59 | Q | | | | |
| 2+ 5 | 3.0291 | 29.04 | Q | | | | |
| 2+10 | 3.2319 | 29.44 | Q | | | | |
| 2+15 | 3.4374 | 29.84 | Q | | | | |
| 2+20 | 3.6453 | 30.19 | Q | | | | |
| 2+25 | 3.8556 | 30.53 | Q | | | | |
| 2+30 | 4.0681 | 30.86 | Q | | | | |
| 2+35 | 4.2829 | 31.18 | Q | | | | |
| 2+40 | 4.4998 | 31.50 | Q | | | | |
| 2+45 | 4.7188 | 31.80 | Q | | | | |
| 2+50 | 4.9398 | 32.09 | Q | | | | |
| 2+55 | 5.1628 | 32.38 | Q | | | | |
| 3+ 0 | 5.3878 | 32.66 | Q | | | | |
| 3+ 5 | 5.6145 | 32.92 | Q | | | | |
| 3+10 | 5.8430 | 33.18 | Q | | | | |
| 3+15 | 6.0733 | 33.43 | Q | | | | |
| 3+20 | 6.3053 | 33.69 | Q | | | | |
| 3+25 | 6.5391 | 33.94 | Q | | | | |
| 3+30 | 6.7744 | 34.18 | QV | | | | |
| 3+35 | 7.0114 | 34.41 | QV | | | | |
| 3+40 | 7.2501 | 34.65 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+45 | 7.4904 | 34.89 | QV | | | | |
| 3+50 | 7.7322 | 35.11 | QV | | | | |
| 3+55 | 7.9755 | 35.33 | QV | | | | |
| 4+ 0 | 8.2204 | 35.55 | QV | | | | |
| 4+ 5 | 8.4668 | 35.77 | QV | | | | |
| 4+10 | 8.7146 | 35.98 | QV | | | | |
| 4+15 | 8.9638 | 36.19 | QV | | | | |
| 4+20 | 9.2144 | 36.39 | QV | | | | |
| 4+25 | 9.4665 | 36.60 | QV | | | | |
| 4+30 | 9.7200 | 36.81 | QV | | | | |
| 4+35 | 9.9749 | 37.02 | QV | | | | |
| 4+40 | 10.2314 | 37.24 | QV | | | | |
| 4+45 | 10.4894 | 37.46 | QV | | | | |
| 4+50 | 10.7489 | 37.68 | QV | | | | |
| 4+55 | 11.0100 | 37.91 | QV | | | | |
| 5+ 0 | 11.2727 | 38.13 | QV | | | | |
| 5+ 5 | 11.5369 | 38.36 | QV | | | | |
| 5+10 | 11.8027 | 38.59 | QV | | | | |
| 5+15 | 12.0701 | 38.82 | QV | | | | |
| 5+20 | 12.3389 | 39.04 | QV | | | | |
| 5+25 | 12.6093 | 39.26 | QV | | | | |
| 5+30 | 12.8812 | 39.48 | QV | | | | |
| 5+35 | 13.1547 | 39.71 | QV | | | | |
| 5+40 | 13.4297 | 39.93 | Q V | | | | |
| 5+45 | 13.7063 | 40.17 | Q V | | | | |
| 5+50 | 13.9845 | 40.39 | Q V | | | | |
| 5+55 | 14.2642 | 40.61 | Q V | | | | |
| 6+ 0 | 14.5454 | 40.83 | Q V | | | | |
| 6+ 5 | 14.8281 | 41.05 | Q V | | | | |
| 6+10 | 15.1123 | 41.27 | Q V | | | | |
| 6+15 | 15.3982 | 41.50 | Q V | | | | |
| 6+20 | 15.6856 | 41.73 | Q V | | | | |
| 6+25 | 15.9746 | 41.97 | Q V | | | | |
| 6+30 | 16.2652 | 42.20 | Q V | | | | |
| 6+35 | 16.5575 | 42.44 | Q V | | | | |
| 6+40 | 16.8515 | 42.69 | Q V | | | | |
| 6+45 | 17.1472 | 42.93 | Q V | | | | |
| 6+50 | 17.4446 | 43.18 | Q V | | | | |
| 6+55 | 17.7438 | 43.44 | Q V | | | | |
| 7+ 0 | 18.0447 | 43.69 | Q V | | | | |
| 7+ 5 | 18.3474 | 43.96 | Q V | | | | |
| 7+10 | 18.6520 | 44.22 | Q V | | | | |
| 7+15 | 18.9584 | 44.49 | Q V | | | | |
| 7+20 | 19.2667 | 44.76 | Q V | | | | |
| 7+25 | 19.5769 | 45.04 | QV | | | | |
| 7+30 | 19.8890 | 45.32 | Q V | | | | |
| 7+35 | 20.2031 | 45.61 | Q V | | | | |
| 7+40 | 20.5192 | 45.90 | Q V | | | | |
| 7+45 | 20.8373 | 46.19 | Q V | | | | |
| 7+50 | 21.1575 | 46.49 | Q V | | | | |
| 7+55 | 21.4798 | 46.79 | Q V | | | | |
| 8+ 0 | 21.8042 | 47.10 | Q V | | | | |
| 8+ 5 | 22.1307 | 47.42 | Q V | | | | |
| 8+10 | 22.4595 | 47.73 | Q V | | | | |
| 8+15 | 22.7905 | 48.06 | Q V | | | | |
| 8+20 | 23.1237 | 48.39 | Q V | | | | |
| 8+25 | 23.4593 | 48.72 | Q V | | | | |
| 8+30 | 23.7972 | 49.06 | Q V | | | | |
| 8+35 | 24.1374 | 49.41 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8+40 | 24.4801 | 49.76 | Q V | \| | \| | \| | \| |
| 8+45 | 24.8253 | 50.12 | Q V | \| | \| | \| | \| |
| 8+50 | 25.1730 | 50.48 | Q V | \| | \| | \| | \| |
| 8+55 | 25.5232 | 50.85 | Q V | \| | \| | \| | \| |
| 9+ 0 | 25.8760 | 51.23 | Q V | \| | \| | \| | \| |
| 9+ 5 | 26.2315 | 51.62 | Q V | \| | \| | \| | \| |
| 9+10 | 26.5897 | 52.01 | Q V | \| | \| | \| | \| |
| 9+15 | 26.9506 | 52.41 | Q V | \| | \| | \| | \| |
| 9+20 | 27.3143 | 52.81 | Q V | \| | \| | \| | \| |
| 9+25 | 27.6809 | 53.23 | Q V | \| | \| | \| | \| |
| 9+30 | 28.0504 | 53.65 | Q V | \| | \| | \| | \| |
| 9+35 | 28.4228 | 54.08 | Q V | \| | \| | \| | \| |
| 9+40 | 28.7982 | 54.52 | Q V | \| | \| | \| | \| |
| 9+45 | 29.1768 | 54.96 | Q V | \| | \| | \| | \| |
| 9+50 | 29.5584 | 55.42 | Q V | \| | \| | \| | \| |
| 9+55 | 29.9433 | 55.88 | Q V | \| | \| | \| | \| |
| 10+ 0 | 30.3315 | 56.36 | Q V | \| | \| | \| | \| |
| 10+ 5 | 30.7230 | 56.84 | Q V | \| | \| | \| | \| |
| 10+10 | 31.1179 | 57.34 | Q V | \| | \| | \| | \| |
| 10+15 | 31.5162 | 57.85 | Q V | \| | \| | \| | \| |
| 10+20 | 31.9182 | 58.36 | Q V | \| | \| | \| | \| |
| 10+25 | 32.3238 | 58.89 | Q V | \| | \| | \| | \| |
| 10+30 | 32.7330 | 59.43 | Q V | \| | \| | \| | \| |
| 10+35 | 33.1461 | 59.98 | Q V | \| | \| | \| | \| |
| 10+40 | 33.5631 | 60.55 | Q V | \| | \| | \| | \| |
| 10+45 | 33.9841 | 61.12 | Q V | \| | \| | \| | \| |
| 10+50 | 34.4091 | 61.71 | Q V | \| | \| | \| | \| |
| 10+55 | 34.8383 | 62.32 | Q V | \| | \| | \| | \| |
| 11+ 0 | 35.2718 | 62.94 | Q V | \| | \| | \| | \| |
| 11+ 5 | 35.7096 | 63.58 | Q V | \| | \| | \| | \| |
| 11+10 | 36.1519 | 64.22 | Q V | \| | \| | \| | \| |
| 11+15 | 36.5989 | 64.89 | Q V | \| | \| | \| | \| |
| 11+20 | 37.0505 | 65.58 | Q V | \| | \| | \| | \| |
| 11+25 | 37.5070 | 66.28 | Q V | \| | \| | \| | \| |
| 11+30 | 37.9684 | 67.00 | Q V | \| | \| | \| | \| |
| 11+35 | 38.4349 | 67.74 | Q V | \| | \| | \| | \| |
| 11+40 | 38.9067 | 68.50 | Q V | \| | \| | \| | \| |
| 11+45 | 39.3838 | 69.28 | Q V | \| | \| | \| | \| |
| 11+50 | 39.8665 | 70.08 | Q V | \| | \| | \| | \| |
| 11+55 | 40.3549 | 70.91 | Q V | \| | \| | \| | \| |
| 12+ 0 | 40.8491 | 71.76 | Q V | \| | \| | \| | \| |
| 12+ 5 | 41.3493 | 72.63 | Q V | \| | \| | \| | \| |
| 12+10 | 41.8554 | 73.49 | Q V | \| | \| | \| | \| |
| 12+15 | 42.3677 | 74.37 | Q V | \| | \| | \| | \| |
| 12+20 | 42.8860 | 75.26 | Q V | \| | \| | \| | \| |
| 12+25 | 43.4104 | 76.15 | Q V | \| | \| | \| | \| |
| 12+30 | 43.9406 | 76.99 | Q V | \| | \| | \| | \| |
| 12+35 | 44.4764 | 77.80 | Q V | \| | \| | \| | \| |
| 12+40 | 45.0181 | 78.64 | Q V | \| | \| | \| | \| |
| 12+45 | 45.5660 | 79.56 | Q V | \| | \| | \| | \| |
| 12+50 | 46.1207 | 80.55 | Q V | \| | \| | \| | \| |
| 12+55 | 46.6829 | 81.63 | Q V | \| | \| | \| | \| |
| 13+ 0 | 47.2529 | 82.77 | Q V | \| | \| | \| | \| |
| 13+ 5 | 47.8313 | 83.98 | Q V | \| | \| | \| | \| |
| 13+10 | 48.4184 | 85.25 | Q V | \| | \| | \| | \| |
| 13+15 | 49.0147 | 86.58 | Q V | \| | \| | \| | \| |
| 13+20 | 49.6206 | 87.97 | Q V | \| | \| | \| | \| |
| 13+25 | 50.2365 | 89.44 | Q V | \| | \| | \| | \| |
| 13+30 | 50.8630 | 90.96 | Q V | \| | \| | \| | \| |

| | | | |
|---|---|---|---|
| 13+35 | 51.5005 | 92.57 | Q V |
| 13+40 | 52.1496 | 94.25 | Q V |
| 13+45 | 52.8109 | 96.02 | Q V |
| 13+50 | 53.4850 | 97.87 | Q V |
| 13+55 | 54.1725 | 99.83 | Q V |
| 14+ 0 | 54.8742 | 101.88 | Q V |
| 14+ 5 | 55.5919 | 104.21 | Q V |
| 14+10 | 56.3281 | 106.90 | Q V |
| 14+15 | 57.0854 | 109.96 | Q V |
| 14+20 | 57.8665 | 113.41 | Q V |
| 14+25 | 58.6751 | 117.40 | Q V |
| 14+30 | 59.5180 | 122.40 | Q V |
| 14+35 | 60.4036 | 128.59 | Q V |
| 14+40 | 61.3325 | 134.88 | Q V |
| 14+45 | 62.3047 | 141.16 | Q V |
| 14+50 | 63.3187 | 147.23 | Q V |
| 14+55 | 64.3737 | 153.19 | Q V |
| 15+ 0 | 65.4702 | 159.21 | Q V |
| 15+ 5 | 66.6100 | 165.51 | Q V |
| 15+10 | 67.7957 | 172.15 | Q V |
| 15+15 | 69.0308 | 179.35 | Q V |
| 15+20 | 70.3193 | 187.09 | Q V |
| 15+25 | 71.6653 | 195.44 | Q V |
| 15+30 | 73.0730 | 204.39 | Q V |
| 15+35 | 74.5485 | 214.24 | Q V |
| 15+40 | 76.0996 | 225.23 | Q V |
| 15+45 | 77.7377 | 237.85 | Q V |
| 15+50 | 79.4761 | 252.42 | Q V |
| 15+55 | 81.3536 | 272.61 | Q V |
| 16+ 0 | 83.4601 | 305.86 | Q V |
| 16+ 5 | 86.2234 | 401.23 | Q V |
| 16+10 | 89.9183 | 536.51 | Q V |
| 16+15 | 94.5591 | 673.83 | Q |
| 16+20 | 100.2648 | 828.47 | V Q |
| 16+25 | 107.4571 | 1044.32 | V Q |
| 16+30 | 117.1355 | 1405.30 | V Q |
| 16+35 | 129.1356 | 1742.41 | V Q |
| 16+40 | 140.6183 | 1667.30 | V Q |
| 16+45 | 150.8676 | 1488.19 | V Q |
| 16+50 | 159.4575 | 1247.25 | V Q |
| 16+55 | 166.4985 | 1022.35 | Q V |
| 17+ 0 | 172.4688 | 866.88 | Q V |
| 17+ 5 | 177.7294 | 763.85 | Q V |
| 17+10 | 182.4744 | 688.98 | Q V |
| 17+15 | 186.8225 | 631.34 | Q V |
| 17+20 | 190.7656 | 572.54 | Q V |
| 17+25 | 194.3766 | 524.32 | Q V |
| 17+30 | 197.7597 | 491.22 | Q V |
| 17+35 | 200.8069 | 442.45 | Q V |
| 17+40 | 203.6500 | 412.82 | Q V |
| 17+45 | 206.2894 | 383.25 | Q V |
| 17+50 | 208.7496 | 357.22 | Q V |
| 17+55 | 211.0935 | 340.32 | Q V |
| 18+ 0 | 213.2959 | 319.80 | Q V |
| 18+ 5 | 215.4000 | 305.51 | Q V |
| 18+10 | 217.3445 | 282.35 | Q V |
| 18+15 | 219.1970 | 268.97 | Q V |
| 18+20 | 220.8818 | 244.64 | Q V |
| 18+25 | 222.4848 | 232.75 | Q V |

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18+30     224.0187    222.72  |   Q     |         |         |  V      |
18+35     225.4961    214.53  |   Q     |         |         |   V     |
18+40     226.9072    204.88  |   Q     |         |         |   V     |
18+45     228.2469    194.53  |   Q     |         |         |   V     |
18+50     229.5412    187.94  |   Q     |         |         |   V     |
18+55     230.7741    179.01  |  Q      |         |         |   V     |
19+ 0     231.9578    171.88  |  Q      |         |         |    V    |
19+ 5     233.0502    158.61  |  Q      |         |         |    V    |
19+10     234.1052    153.19  |  Q      |         |         |    V    |
19+15     235.1350    149.53  |  Q      |         |         |    V    |
19+20     236.1373    145.52  |  Q      |         |         |    V    |
19+25     237.0827    137.27  |  Q      |         |         |    V    |
19+30     237.9803    130.34  | Q       |         |         |    V    |
19+35     238.8572    127.33  | Q       |         |         |     V   |
19+40     239.7117    124.07  | Q       |         |         |     V   |
19+45     240.5309    118.95  | Q       |         |         |     V   |
19+50     241.2871    109.81  | Q       |         |         |     V   |
19+55     242.0208    106.53  | Q       |         |         |     V   |
20+ 0     242.7365    103.92  | Q       |         |         |     V   |
20+ 5     243.4308    100.82  | Q       |         |         |     V   |
20+10     244.0727     93.20  | Q       |         |         |     V   |
20+15     244.6815     88.40  |Q        |         |         |     V   |
20+20     245.2784     86.67  |Q        |         |         |      V  |
20+25     245.8658     85.29  |Q        |         |         |      V  |
20+30     246.4476     84.48  |Q        |         |         |      V  |
20+35     247.0280     84.28  |Q        |         |         |      V  |
20+40     247.6001     83.06  |Q        |         |         |      V  |
20+45     248.1632     81.76  |Q        |         |         |      V  |
20+50     248.7173     80.46  |Q        |         |         |      V  |
20+55     249.2615     79.02  |Q        |         |         |      V  |
21+ 0     249.7963     77.64  |Q        |         |         |      V  |
21+ 5     250.3207     76.15  |Q        |         |         |      V  |
21+10     250.8323     74.28  |Q        |         |         |      V  |
21+15     251.3154     70.16  |Q        |         |         |      V  |
21+20     251.7625     64.92  |Q        |         |         |       V |
21+25     252.2001     63.54  |Q        |         |         |       V |
21+30     252.6299     62.40  |Q        |         |         |       V |
21+35     253.0519     61.27  |Q        |         |         |       V |
21+40     253.4651     60.00  |Q        |         |         |       V |
21+45     253.8669     58.34  |Q        |         |         |       V |
21+50     254.2449     54.90  |Q        |         |         |       V |
21+55     254.5818     48.90  |Q        |         |         |       V |
22+ 0     254.9109     47.80  |Q        |         |         |       V |
22+ 5     255.2342     46.94  |Q        |         |         |       V |
22+10     255.5522     46.17  |Q        |         |         |       V |
22+15     255.8651     45.44  |Q        |         |         |       V |
22+20     256.1734     44.76  Q        |         |         |       V |
22+25     256.4772     44.12  Q        |         |         |       V |
22+30     256.7769     43.51  Q        |         |         |       V |
22+35     257.0726     42.93  Q        |         |         |       V |
22+40     257.3645     42.38  Q        |         |         |       V |
22+45     257.6526     41.84  Q        |         |         |       V |
22+50     257.9373     41.33  Q        |         |         |       V |
22+55     258.2186     40.85  Q        |         |         |        V|
23+ 0     258.4967     40.39  Q        |         |         |        V|
23+ 5     258.7718     39.94  Q        |         |         |        V|
23+10     259.0438     39.50  Q        |         |         |        V|
23+15     259.3130     39.08  Q        |         |         |        V|
23+20     259.5792     38.67  Q        |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+25 | 259.8428 | 38.27 | Q | \| | \| | \| | V\| |
| 23+30 | 260.1036 | 37.88 | Q | \| | \| | \| | V\| |
| 23+35 | 260.3619 | 37.50 | Q | \| | \| | \| | V\| |
| 23+40 | 260.6176 | 37.13 | Q | \| | \| | \| | V\| |
| 23+45 | 260.8708 | 36.77 | Q | \| | \| | \| | V\| |
| 23+50 | 261.1217 | 36.42 | Q | \| | \| | \| | V\| |
| 23+55 | 261.3701 | 36.08 | Q | \| | \| | \| | V\| |
| 24+ 0 | 261.6163 | 35.74 | Q | \| | \| | \| | V\| |
| 24+ 5 | 261.8590 | 35.25 | Q | \| | \| | \| | V\| |
| 24+10 | 262.0966 | 34.50 | Q | \| | \| | \| | V\| |
| 24+15 | 262.3275 | 33.51 | Q | \| | \| | \| | V\| |
| 24+20 | 262.5498 | 32.29 | Q | \| | \| | \| | V\| |
| 24+25 | 262.7612 | 30.69 | Q | \| | \| | \| | V\| |
| 24+30 | 262.9555 | 28.22 | Q | \| | \| | \| | V\| |
| 24+35 | 263.1259 | 24.75 | Q | \| | \| | \| | V\| |
| 24+40 | 263.2737 | 21.46 | Q | \| | \| | \| | V\| |
| 24+45 | 263.4016 | 18.57 | Q | \| | \| | \| | V\| |
| 24+50 | 263.5135 | 16.26 | Q | \| | \| | \| | V\| |
| 24+55 | 263.6133 | 14.49 | Q | \| | \| | \| | V\| |
| 25+ 0 | 263.7035 | 13.09 | Q | \| | \| | \| | V\| |
| 25+ 5 | 263.7855 | 11.90 | Q | \| | \| | \| | V\| |
| 25+10 | 263.8603 | 10.87 | Q | \| | \| | \| | V\| |
| 25+15 | 263.9288 | 9.94 | Q | \| | \| | \| | V\| |
| 25+20 | 263.9917 | 9.13 | Q | \| | \| | \| | V\| |
| 25+25 | 264.0497 | 8.41 | Q | \| | \| | \| | V\| |
| 25+30 | 264.1029 | 7.74 | Q | \| | \| | \| | V\| |
| 25+35 | 264.1523 | 7.16 | Q | \| | \| | \| | V\| |
| 25+40 | 264.1979 | 6.62 | Q | \| | \| | \| | V\| |
| 25+45 | 264.2402 | 6.14 | Q | \| | \| | \| | V\| |
| 25+50 | 264.2794 | 5.70 | Q | \| | \| | \| | V\| |
| 25+55 | 264.3157 | 5.28 | Q | \| | \| | \| | V\| |
| 26+ 0 | 264.3494 | 4.89 | Q | \| | \| | \| | V\| |
| 26+ 5 | 264.3805 | 4.52 | Q | \| | \| | \| | V\| |
| 26+10 | 264.4094 | 4.19 | Q | \| | \| | \| | V\| |
| 26+15 | 264.4360 | 3.87 | Q | \| | \| | \| | V\| |
| 26+20 | 264.4609 | 3.61 | Q | \| | \| | \| | V\| |
| 26+25 | 264.4841 | 3.37 | Q | \| | \| | \| | V\| |
| 26+30 | 264.5057 | 3.13 | Q | \| | \| | \| | V\| |
| 26+35 | 264.5257 | 2.91 | Q | \| | \| | \| | V\| |
| 26+40 | 264.5444 | 2.70 | Q | \| | \| | \| | V\| |
| 26+45 | 264.5617 | 2.51 | Q | \| | \| | \| | V\| |
| 26+50 | 264.5777 | 2.33 | Q | \| | \| | \| | V\| |
| 26+55 | 264.5926 | 2.16 | Q | \| | \| | \| | V\| |
| 27+ 0 | 264.6063 | 1.99 | Q | \| | \| | \| | V\| |
| 27+ 5 | 264.6191 | 1.86 | Q | \| | \| | \| | V\| |
| 27+10 | 264.6310 | 1.73 | Q | \| | \| | \| | V\| |
| 27+15 | 264.6421 | 1.60 | Q | \| | \| | \| | V\| |
| 27+20 | 264.6522 | 1.48 | Q | \| | \| | \| | V\| |
| 27+25 | 264.6616 | 1.37 | Q | \| | \| | \| | V\| |
| 27+30 | 264.6704 | 1.27 | Q | \| | \| | \| | V\| |
| 27+35 | 264.6785 | 1.17 | Q | \| | \| | \| | V\| |
| 27+40 | 264.6859 | 1.08 | Q | \| | \| | \| | V\| |
| 27+45 | 264.6927 | 0.99 | Q | \| | \| | \| | V\| |
| 27+50 | 264.6990 | 0.92 | Q | \| | \| | \| | V\| |
| 27+55 | 264.7048 | 0.85 | Q | \| | \| | \| | V\| |
| 28+ 0 | 264.7102 | 0.78 | Q | \| | \| | \| | V\| |
| 28+ 5 | 264.7151 | 0.72 | Q | \| | \| | \| | V\| |
| 28+10 | 264.7197 | 0.67 | Q | \| | \| | \| | V\| |
| 28+15 | 264.7241 | 0.63 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 28+20 | 264.7281 | 0.59 | Q | \| | \| | \| | V\| |
| 28+25 | 264.7319 | 0.55 | Q | \| | \| | \| | V\| |
| 28+30 | 264.7354 | 0.51 | Q | \| | \| | \| | V\| |
| 28+35 | 264.7386 | 0.46 | Q | \| | \| | \| | V\| |
| 28+40 | 264.7415 | 0.42 | Q | \| | \| | \| | V\| |
| 28+45 | 264.7441 | 0.38 | Q | \| | \| | \| | V\| |
| 28+50 | 264.7464 | 0.34 | Q | \| | \| | \| | V\| |
| 28+55 | 264.7484 | 0.29 | Q | \| | \| | \| | V\| |
| 29+ 0 | 264.7502 | 0.25 | Q | \| | \| | \| | V\| |
| 29+ 5 | 264.7516 | 0.21 | Q | \| | \| | \| | V\| |
| 29+10 | 264.7528 | 0.17 | Q | \| | \| | \| | V\| |
| 29+15 | 264.7538 | 0.14 | Q | \| | \| | \| | V\| |
| 29+20 | 264.7546 | 0.12 | Q | \| | \| | \| | V\| |
| 29+25 | 264.7552 | 0.10 | Q | \| | \| | \| | V\| |
| 29+30 | 264.7558 | 0.08 | Q | \| | \| | \| | V\| |
| 29+35 | 264.7561 | 0.06 | Q | \| | \| | \| | V\| |
| 29+40 | 264.7564 | 0.04 | Q | \| | \| | \| | V\| |
| 29+45 | 264.7565 | 0.01 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 08/10/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREA "D"
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-10-17

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Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 6665.22 | 1 | 1.38 |
| Rainfall data for year 100 | | |
| 6665.22 | 6 | 2.38 |
| Rainfall data for year 100 | | |
| 6665.22 | 24 | 3.75 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 73.1 | 89.4 | 6665.22 | 1.000 | 0.203 | 0.990 | 0.201 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.201

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 6598.57 | 0.990 | 73.1 | 89.4 | 1.18 | 0.702 |
| 66.65 | 0.010 | 98.0 | 98.0 | 0.20 | 0.938 |

Area-averaged catchment yield fraction, Y = 0.704
Area-averaged low loss fraction, Yb = 0.296
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 57103.00(Ft.)
Length from concentration point to centroid = 29646.00(Ft.)
Elevation difference along watercourse = 2548.00(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 6665.22(Ac.)
Catchment Lag time = 1.417 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 5.8827
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.201(In/Hr)
Average low loss rate fraction (Yb) = 0.296 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.360
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.640

Computed peak 5-minute rainfall = 0.653(In)
Computed peak 30-minute rainfall = 1.118(In)
Specified peak 1-hour rainfall = 1.376(In)
Computed peak 3-hour rainfall = 1.925(In)
Specified peak 6-hour rainfall = 2.379(In)
Specified peak 24-hour rainfall = 3.755(In)

Rainfall depth area reduction factors:
Using a total area of 6665.22(Ac.) (Ref: fig. E-4)

5-minute factor = 0.740 Adjusted rainfall = 0.483(In)
30-minute factor = 0.741 Adjusted rainfall = 0.828(In)
1-hour factor = 0.741 Adjusted rainfall = 1.019(In)
3-hour factor = 0.963 Adjusted rainfall = 1.853(In)
6-hour factor = 0.981 Adjusted rainfall = 2.335(In)
24-hour factor = 0.991 Adjusted rainfall = 3.719(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 80607.50 (CFS)) | |
| 1 | 0.300 | 241.647 |
| 2 | 0.899 | 483.294 |
| 3 | 1.628 | 587.217 |
| 4 | 2.640 | 815.959 |
| 5 | 3.778 | 916.938 |

| | | |
|---|---|---|
| 6 | 5.166 | 1119.168 |
| 7 | 6.708 | 1242.906 |
| 8 | 8.557 | 1490.322 |
| 9 | 10.594 | 1642.436 |
| 10 | 13.623 | 2441.067 |
| 11 | 17.015 | 2734.536 |
| 12 | 21.670 | 3751.939 |
| 13 | 26.607 | 3979.553 |
| 14 | 31.424 | 3883.264 |
| 15 | 36.286 | 3919.070 |
| 16 | 41.548 | 4241.779 |
| 17 | 47.370 | 4692.941 |
| 18 | 51.713 | 3500.496 |
| 19 | 55.110 | 2738.193 |
| 20 | 57.964 | 2300.841 |
| 21 | 60.388 | 1953.794 |
| 22 | 62.664 | 1834.369 |
| 23 | 64.588 | 1551.396 |
| 24 | 66.459 | 1508.111 |
| 25 | 68.118 | 1337.258 |
| 26 | 69.701 | 1275.493 |
| 27 | 71.130 | 1151.730 |
| 28 | 72.522 | 1122.617 |
| 29 | 73.804 | 1033.420 |
| 30 | 75.051 | 1004.713 |
| 31 | 76.159 | 893.468 |
| 32 | 77.211 | 848.036 |
| 33 | 78.245 | 833.206 |
| 34 | 79.267 | 823.952 |
| 35 | 80.179 | 734.826 |
| 36 | 80.981 | 646.416 |
| 37 | 81.782 | 646.416 |
| 38 | 82.584 | 646.416 |
| 39 | 83.346 | 614.214 |
| 40 | 84.011 | 536.102 |
| 41 | 84.672 | 532.610 |
| 42 | 85.333 | 532.610 |
| 43 | 85.982 | 522.839 |
| 44 | 86.558 | 464.798 |
| 45 | 87.123 | 455.222 |
| 46 | 87.688 | 455.222 |
| 47 | 88.249 | 452.798 |
| 48 | 88.746 | 400.533 |
| 49 | 89.217 | 379.352 |
| 50 | 89.688 | 379.352 |
| 51 | 90.158 | 379.352 |
| 52 | 90.574 | 335.081 |
| 53 | 90.935 | 291.342 |
| 54 | 91.297 | 291.342 |
| 55 | 91.658 | 291.342 |
| 56 | 92.006 | 280.149 |
| 57 | 92.320 | 253.090 |
| 58 | 92.632 | 251.890 |
| 59 | 92.945 | 251.890 |
| 60 | 93.251 | 247.081 |
| 61 | 93.522 | 218.630 |
| 62 | 93.788 | 213.955 |
| 63 | 94.053 | 213.955 |
| 64 | 94.317 | 212.904 |

| | | |
|---|---|---|
| 65 | 94.554 | 190.413 |
| 66 | 94.779 | 181.330 |
| 67 | 95.003 | 181.330 |
| 68 | 95.228 | 181.330 |
| 69 | 95.417 | 152.267 |
| 70 | 95.571 | 123.669 |
| 71 | 95.724 | 123.669 |
| 72 | 95.878 | 123.669 |
| 73 | 96.031 | 123.669 |
| 74 | 96.184 | 123.669 |
| 75 | 96.338 | 123.669 |
| 76 | 96.491 | 123.669 |
| 77 | 96.640 | 120.144 |
| 78 | 96.764 | 99.375 |
| 79 | 96.883 | 95.976 |
| 80 | 97.002 | 95.976 |
| 81 | 97.121 | 95.976 |
| 82 | 97.240 | 95.976 |
| 83 | 97.359 | 95.976 |
| 84 | 97.478 | 95.976 |
| 85 | 97.597 | 95.976 |
| 86 | 97.697 | 80.266 |
| 87 | 97.777 | 64.869 |
| 88 | 97.858 | 64.869 |
| 89 | 97.938 | 64.869 |
| 90 | 98.019 | 64.869 |
| 91 | 98.099 | 64.869 |
| 92 | 98.179 | 64.869 |
| 93 | 98.260 | 64.869 |
| 94 | 98.337 | 62.203 |
| 95 | 98.395 | 46.555 |
| 96 | 98.449 | 44.005 |
| 97 | 98.504 | 44.005 |
| 98 | 98.559 | 44.005 |
| 99 | 98.613 | 44.005 |
| 100 | 98.668 | 44.005 |
| 101 | 98.722 | 44.005 |
| 102 | 98.777 | 44.005 |
| 103 | 98.831 | 43.621 |
| 104 | 98.885 | 43.246 |
| 105 | 98.938 | 43.246 |
| 106 | 98.992 | 43.246 |
| 107 | 99.046 | 43.246 |
| 108 | 99.099 | 43.246 |
| 109 | 99.153 | 43.246 |
| 110 | 99.207 | 43.246 |
| 111 | 99.260 | 42.808 |
| 112 | 99.310 | 40.248 |
| 113 | 99.359 | 39.832 |
| 114 | 99.409 | 39.832 |
| 115 | 99.458 | 39.832 |
| 116 | 99.507 | 39.832 |
| 117 | 99.557 | 39.832 |
| 118 | 99.606 | 39.832 |
| 119 | 99.658 | 41.514 |
| 120 | 99.692 | 27.570 |
| 121 | 99.715 | 18.968 |
| 122 | 99.739 | 18.968 |
| 123 | 99.763 | 18.968 |

| | | |
|---|---|---|
| 124 | 99.786 | 18.968 |
| 125 | 99.810 | 18.968 |
| 126 | 99.833 | 18.968 |
| 127 | 99.857 | 18.968 |
| 128 | 99.880 | 18.968 |
| 129 | 99.904 | 18.968 |
| 130 | 99.927 | 18.968 |
| 131 | 99.951 | 18.968 |
| 132 | 99.974 | 18.968 |
| 133 | 100.000 | 9.484 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.4830 | 0.4830 |
| 2 | 0.5950 | 0.1119 |
| 3 | 0.6721 | 0.0771 |
| 4 | 0.7328 | 0.0607 |
| 5 | 0.7836 | 0.0508 |
| 6 | 0.8278 | 0.0442 |
| 7 | 0.8670 | 0.0392 |
| 8 | 0.9025 | 0.0355 |
| 9 | 0.9350 | 0.0325 |
| 10 | 0.9651 | 0.0301 |
| 11 | 0.9931 | 0.0280 |
| 12 | 1.0194 | 0.0263 |
| 13 | 1.0648 | 0.0454 |
| 14 | 1.1086 | 0.0438 |
| 15 | 1.1510 | 0.0424 |
| 16 | 1.1921 | 0.0411 |
| 17 | 1.2320 | 0.0400 |
| 18 | 1.2709 | 0.0389 |
| 19 | 1.3089 | 0.0379 |
| 20 | 1.3459 | 0.0370 |
| 21 | 1.3821 | 0.0362 |
| 22 | 1.4175 | 0.0354 |
| 23 | 1.4522 | 0.0347 |
| 24 | 1.4862 | 0.0340 |
| 25 | 1.5196 | 0.0334 |
| 26 | 1.5523 | 0.0328 |
| 27 | 1.5845 | 0.0322 |
| 28 | 1.6162 | 0.0317 |
| 29 | 1.6473 | 0.0311 |
| 30 | 1.6780 | 0.0307 |
| 31 | 1.7082 | 0.0302 |
| 32 | 1.7379 | 0.0298 |
| 33 | 1.7673 | 0.0293 |
| 34 | 1.7962 | 0.0289 |
| 35 | 1.8247 | 0.0285 |
| 36 | 1.8529 | 0.0282 |
| 37 | 1.8699 | 0.0170 |
| 38 | 1.8866 | 0.0167 |
| 39 | 1.9030 | 0.0164 |
| 40 | 1.9191 | 0.0161 |
| 41 | 1.9350 | 0.0159 |
| 42 | 1.9506 | 0.0156 |
| 43 | 1.9660 | 0.0154 |
| 44 | 1.9811 | 0.0151 |
| 45 | 1.9960 | 0.0149 |
| 46 | 2.0107 | 0.0147 |

| | | |
|---|---|---|
| 47 | 2.0251 | 0.0145 |
| 48 | 2.0394 | 0.0143 |
| 49 | 2.0535 | 0.0141 |
| 50 | 2.0674 | 0.0139 |
| 51 | 2.0811 | 0.0137 |
| 52 | 2.0946 | 0.0135 |
| 53 | 2.1079 | 0.0133 |
| 54 | 2.1211 | 0.0132 |
| 55 | 2.1341 | 0.0130 |
| 56 | 2.1470 | 0.0129 |
| 57 | 2.1597 | 0.0127 |
| 58 | 2.1722 | 0.0126 |
| 59 | 2.1846 | 0.0124 |
| 60 | 2.1969 | 0.0123 |
| 61 | 2.2091 | 0.0121 |
| 62 | 2.2211 | 0.0120 |
| 63 | 2.2329 | 0.0119 |
| 64 | 2.2447 | 0.0118 |
| 65 | 2.2563 | 0.0116 |
| 66 | 2.2678 | 0.0115 |
| 67 | 2.2792 | 0.0114 |
| 68 | 2.2905 | 0.0113 |
| 69 | 2.3017 | 0.0112 |
| 70 | 2.3128 | 0.0111 |
| 71 | 2.3237 | 0.0110 |
| 72 | 2.3346 | 0.0109 |
| 73 | 2.3454 | 0.0108 |
| 74 | 2.3562 | 0.0107 |
| 75 | 2.3668 | 0.0106 |
| 76 | 2.3774 | 0.0106 |
| 77 | 2.3879 | 0.0105 |
| 78 | 2.3982 | 0.0104 |
| 79 | 2.4085 | 0.0103 |
| 80 | 2.4187 | 0.0102 |
| 81 | 2.4288 | 0.0101 |
| 82 | 2.4389 | 0.0100 |
| 83 | 2.4488 | 0.0100 |
| 84 | 2.4587 | 0.0099 |
| 85 | 2.4685 | 0.0098 |
| 86 | 2.4782 | 0.0097 |
| 87 | 2.4879 | 0.0096 |
| 88 | 2.4974 | 0.0096 |
| 89 | 2.5069 | 0.0095 |
| 90 | 2.5163 | 0.0094 |
| 91 | 2.5257 | 0.0094 |
| 92 | 2.5350 | 0.0093 |
| 93 | 2.5442 | 0.0092 |
| 94 | 2.5534 | 0.0092 |
| 95 | 2.5625 | 0.0091 |
| 96 | 2.5715 | 0.0090 |
| 97 | 2.5805 | 0.0090 |
| 98 | 2.5894 | 0.0089 |
| 99 | 2.5982 | 0.0088 |
| 100 | 2.6070 | 0.0088 |
| 101 | 2.6157 | 0.0087 |
| 102 | 2.6244 | 0.0087 |
| 103 | 2.6330 | 0.0086 |
| 104 | 2.6416 | 0.0086 |
| 105 | 2.6501 | 0.0085 |

| | | |
|---|---|---|
| 106 | 2.6586 | 0.0085 |
| 107 | 2.6670 | 0.0084 |
| 108 | 2.6753 | 0.0083 |
| 109 | 2.6836 | 0.0083 |
| 110 | 2.6918 | 0.0082 |
| 111 | 2.7000 | 0.0082 |
| 112 | 2.7082 | 0.0081 |
| 113 | 2.7163 | 0.0081 |
| 114 | 2.7243 | 0.0081 |
| 115 | 2.7323 | 0.0080 |
| 116 | 2.7403 | 0.0080 |
| 117 | 2.7482 | 0.0079 |
| 118 | 2.7561 | 0.0079 |
| 119 | 2.7639 | 0.0078 |
| 120 | 2.7717 | 0.0078 |
| 121 | 2.7794 | 0.0077 |
| 122 | 2.7871 | 0.0077 |
| 123 | 2.7948 | 0.0077 |
| 124 | 2.8024 | 0.0076 |
| 125 | 2.8100 | 0.0076 |
| 126 | 2.8175 | 0.0075 |
| 127 | 2.8250 | 0.0075 |
| 128 | 2.8325 | 0.0075 |
| 129 | 2.8399 | 0.0074 |
| 130 | 2.8472 | 0.0074 |
| 131 | 2.8546 | 0.0073 |
| 132 | 2.8619 | 0.0073 |
| 133 | 2.8692 | 0.0073 |
| 134 | 2.8764 | 0.0072 |
| 135 | 2.8836 | 0.0072 |
| 136 | 2.8907 | 0.0072 |
| 137 | 2.8979 | 0.0071 |
| 138 | 2.9049 | 0.0071 |
| 139 | 2.9120 | 0.0071 |
| 140 | 2.9190 | 0.0070 |
| 141 | 2.9260 | 0.0070 |
| 142 | 2.9330 | 0.0070 |
| 143 | 2.9399 | 0.0069 |
| 144 | 2.9468 | 0.0069 |
| 145 | 2.9536 | 0.0069 |
| 146 | 2.9605 | 0.0068 |
| 147 | 2.9673 | 0.0068 |
| 148 | 2.9740 | 0.0068 |
| 149 | 2.9808 | 0.0067 |
| 150 | 2.9875 | 0.0067 |
| 151 | 2.9942 | 0.0067 |
| 152 | 3.0008 | 0.0066 |
| 153 | 3.0074 | 0.0066 |
| 154 | 3.0140 | 0.0066 |
| 155 | 3.0206 | 0.0066 |
| 156 | 3.0271 | 0.0065 |
| 157 | 3.0336 | 0.0065 |
| 158 | 3.0401 | 0.0065 |
| 159 | 3.0465 | 0.0065 |
| 160 | 3.0530 | 0.0064 |
| 161 | 3.0594 | 0.0064 |
| 162 | 3.0657 | 0.0064 |
| 163 | 3.0721 | 0.0063 |
| 164 | 3.0784 | 0.0063 |

| | | |
|---|---|---|
| 165 | 3.0847 | 0.0063 |
| 166 | 3.0910 | 0.0063 |
| 167 | 3.0972 | 0.0062 |
| 168 | 3.1034 | 0.0062 |
| 169 | 3.1096 | 0.0062 |
| 170 | 3.1158 | 0.0062 |
| 171 | 3.1219 | 0.0061 |
| 172 | 3.1280 | 0.0061 |
| 173 | 3.1341 | 0.0061 |
| 174 | 3.1402 | 0.0061 |
| 175 | 3.1463 | 0.0061 |
| 176 | 3.1523 | 0.0060 |
| 177 | 3.1583 | 0.0060 |
| 178 | 3.1643 | 0.0060 |
| 179 | 3.1703 | 0.0060 |
| 180 | 3.1762 | 0.0059 |
| 181 | 3.1821 | 0.0059 |
| 182 | 3.1880 | 0.0059 |
| 183 | 3.1939 | 0.0059 |
| 184 | 3.1997 | 0.0059 |
| 185 | 3.2056 | 0.0058 |
| 186 | 3.2114 | 0.0058 |
| 187 | 3.2172 | 0.0058 |
| 188 | 3.2229 | 0.0058 |
| 189 | 3.2287 | 0.0057 |
| 190 | 3.2344 | 0.0057 |
| 191 | 3.2401 | 0.0057 |
| 192 | 3.2458 | 0.0057 |
| 193 | 3.2515 | 0.0057 |
| 194 | 3.2571 | 0.0057 |
| 195 | 3.2628 | 0.0056 |
| 196 | 3.2684 | 0.0056 |
| 197 | 3.2740 | 0.0056 |
| 198 | 3.2795 | 0.0056 |
| 199 | 3.2851 | 0.0056 |
| 200 | 3.2906 | 0.0055 |
| 201 | 3.2962 | 0.0055 |
| 202 | 3.3017 | 0.0055 |
| 203 | 3.3071 | 0.0055 |
| 204 | 3.3126 | 0.0055 |
| 205 | 3.3180 | 0.0054 |
| 206 | 3.3235 | 0.0054 |
| 207 | 3.3289 | 0.0054 |
| 208 | 3.3343 | 0.0054 |
| 209 | 3.3397 | 0.0054 |
| 210 | 3.3450 | 0.0054 |
| 211 | 3.3504 | 0.0053 |
| 212 | 3.3557 | 0.0053 |
| 213 | 3.3610 | 0.0053 |
| 214 | 3.3663 | 0.0053 |
| 215 | 3.3716 | 0.0053 |
| 216 | 3.3768 | 0.0053 |
| 217 | 3.3821 | 0.0052 |
| 218 | 3.3873 | 0.0052 |
| 219 | 3.3925 | 0.0052 |
| 220 | 3.3977 | 0.0052 |
| 221 | 3.4029 | 0.0052 |
| 222 | 3.4081 | 0.0052 |
| 223 | 3.4132 | 0.0051 |

| | | |
|---|---|---|
| 224 | 3.4183 | 0.0051 |
| 225 | 3.4235 | 0.0051 |
| 226 | 3.4286 | 0.0051 |
| 227 | 3.4337 | 0.0051 |
| 228 | 3.4387 | 0.0051 |
| 229 | 3.4438 | 0.0051 |
| 230 | 3.4488 | 0.0050 |
| 231 | 3.4539 | 0.0050 |
| 232 | 3.4589 | 0.0050 |
| 233 | 3.4639 | 0.0050 |
| 234 | 3.4689 | 0.0050 |
| 235 | 3.4738 | 0.0050 |
| 236 | 3.4788 | 0.0050 |
| 237 | 3.4837 | 0.0049 |
| 238 | 3.4887 | 0.0049 |
| 239 | 3.4936 | 0.0049 |
| 240 | 3.4985 | 0.0049 |
| 241 | 3.5034 | 0.0049 |
| 242 | 3.5083 | 0.0049 |
| 243 | 3.5131 | 0.0049 |
| 244 | 3.5180 | 0.0049 |
| 245 | 3.5228 | 0.0048 |
| 246 | 3.5276 | 0.0048 |
| 247 | 3.5325 | 0.0048 |
| 248 | 3.5373 | 0.0048 |
| 249 | 3.5420 | 0.0048 |
| 250 | 3.5468 | 0.0048 |
| 251 | 3.5516 | 0.0048 |
| 252 | 3.5563 | 0.0047 |
| 253 | 3.5611 | 0.0047 |
| 254 | 3.5658 | 0.0047 |
| 255 | 3.5705 | 0.0047 |
| 256 | 3.5752 | 0.0047 |
| 257 | 3.5799 | 0.0047 |
| 258 | 3.5845 | 0.0047 |
| 259 | 3.5892 | 0.0047 |
| 260 | 3.5939 | 0.0046 |
| 261 | 3.5985 | 0.0046 |
| 262 | 3.6031 | 0.0046 |
| 263 | 3.6077 | 0.0046 |
| 264 | 3.6123 | 0.0046 |
| 265 | 3.6169 | 0.0046 |
| 266 | 3.6215 | 0.0046 |
| 267 | 3.6261 | 0.0046 |
| 268 | 3.6306 | 0.0046 |
| 269 | 3.6352 | 0.0045 |
| 270 | 3.6397 | 0.0045 |
| 271 | 3.6442 | 0.0045 |
| 272 | 3.6487 | 0.0045 |
| 273 | 3.6532 | 0.0045 |
| 274 | 3.6577 | 0.0045 |
| 275 | 3.6622 | 0.0045 |
| 276 | 3.6667 | 0.0045 |
| 277 | 3.6711 | 0.0045 |
| 278 | 3.6756 | 0.0044 |
| 279 | 3.6800 | 0.0044 |
| 280 | 3.6845 | 0.0044 |
| 281 | 3.6889 | 0.0044 |
| 282 | 3.6933 | 0.0044 |

| | | |
|---|---|---|
| 283 | 3.6977 | 0.0044 |
| 284 | 3.7021 | 0.0044 |
| 285 | 3.7064 | 0.0044 |
| 286 | 3.7108 | 0.0044 |
| 287 | 3.7151 | 0.0044 |
| 288 | 3.7195 | 0.0043 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0043 | 0.0013 | 0.0031 |
| 2 | 0.0044 | 0.0013 | 0.0031 |
| 3 | 0.0044 | 0.0013 | 0.0031 |
| 4 | 0.0044 | 0.0013 | 0.0031 |
| 5 | 0.0044 | 0.0013 | 0.0031 |
| 6 | 0.0044 | 0.0013 | 0.0031 |
| 7 | 0.0044 | 0.0013 | 0.0031 |
| 8 | 0.0044 | 0.0013 | 0.0031 |
| 9 | 0.0045 | 0.0013 | 0.0031 |
| 10 | 0.0045 | 0.0013 | 0.0032 |
| 11 | 0.0045 | 0.0013 | 0.0032 |
| 12 | 0.0045 | 0.0013 | 0.0032 |
| 13 | 0.0045 | 0.0013 | 0.0032 |
| 14 | 0.0045 | 0.0013 | 0.0032 |
| 15 | 0.0046 | 0.0014 | 0.0032 |
| 16 | 0.0046 | 0.0014 | 0.0032 |
| 17 | 0.0046 | 0.0014 | 0.0032 |
| 18 | 0.0046 | 0.0014 | 0.0032 |
| 19 | 0.0046 | 0.0014 | 0.0033 |
| 20 | 0.0046 | 0.0014 | 0.0033 |
| 21 | 0.0047 | 0.0014 | 0.0033 |
| 22 | 0.0047 | 0.0014 | 0.0033 |
| 23 | 0.0047 | 0.0014 | 0.0033 |
| 24 | 0.0047 | 0.0014 | 0.0033 |
| 25 | 0.0047 | 0.0014 | 0.0033 |
| 26 | 0.0048 | 0.0014 | 0.0034 |
| 27 | 0.0048 | 0.0014 | 0.0034 |
| 28 | 0.0048 | 0.0014 | 0.0034 |
| 29 | 0.0048 | 0.0014 | 0.0034 |
| 30 | 0.0048 | 0.0014 | 0.0034 |
| 31 | 0.0049 | 0.0014 | 0.0034 |
| 32 | 0.0049 | 0.0014 | 0.0034 |
| 33 | 0.0049 | 0.0015 | 0.0035 |
| 34 | 0.0049 | 0.0015 | 0.0035 |
| 35 | 0.0049 | 0.0015 | 0.0035 |
| 36 | 0.0050 | 0.0015 | 0.0035 |
| 37 | 0.0050 | 0.0015 | 0.0035 |
| 38 | 0.0050 | 0.0015 | 0.0035 |
| 39 | 0.0050 | 0.0015 | 0.0035 |
| 40 | 0.0050 | 0.0015 | 0.0036 |
| 41 | 0.0051 | 0.0015 | 0.0036 |
| 42 | 0.0051 | 0.0015 | 0.0036 |
| 43 | 0.0051 | 0.0015 | 0.0036 |
| 44 | 0.0051 | 0.0015 | 0.0036 |
| 45 | 0.0052 | 0.0015 | 0.0036 |
| 46 | 0.0052 | 0.0015 | 0.0036 |
| 47 | 0.0052 | 0.0015 | 0.0037 |
| 48 | 0.0052 | 0.0015 | 0.0037 |

| | | | |
|---|---|---|---|
| 49 | 0.0053 | 0.0016 | 0.0037 |
| 50 | 0.0053 | 0.0016 | 0.0037 |
| 51 | 0.0053 | 0.0016 | 0.0037 |
| 52 | 0.0053 | 0.0016 | 0.0038 |
| 53 | 0.0054 | 0.0016 | 0.0038 |
| 54 | 0.0054 | 0.0016 | 0.0038 |
| 55 | 0.0054 | 0.0016 | 0.0038 |
| 56 | 0.0054 | 0.0016 | 0.0038 |
| 57 | 0.0055 | 0.0016 | 0.0038 |
| 58 | 0.0055 | 0.0016 | 0.0039 |
| 59 | 0.0055 | 0.0016 | 0.0039 |
| 60 | 0.0055 | 0.0016 | 0.0039 |
| 61 | 0.0056 | 0.0016 | 0.0039 |
| 62 | 0.0056 | 0.0017 | 0.0039 |
| 63 | 0.0056 | 0.0017 | 0.0040 |
| 64 | 0.0057 | 0.0017 | 0.0040 |
| 65 | 0.0057 | 0.0017 | 0.0040 |
| 66 | 0.0057 | 0.0017 | 0.0040 |
| 67 | 0.0057 | 0.0017 | 0.0040 |
| 68 | 0.0058 | 0.0017 | 0.0041 |
| 69 | 0.0058 | 0.0017 | 0.0041 |
| 70 | 0.0058 | 0.0017 | 0.0041 |
| 71 | 0.0059 | 0.0017 | 0.0041 |
| 72 | 0.0059 | 0.0017 | 0.0042 |
| 73 | 0.0059 | 0.0018 | 0.0042 |
| 74 | 0.0060 | 0.0018 | 0.0042 |
| 75 | 0.0060 | 0.0018 | 0.0042 |
| 76 | 0.0060 | 0.0018 | 0.0042 |
| 77 | 0.0061 | 0.0018 | 0.0043 |
| 78 | 0.0061 | 0.0018 | 0.0043 |
| 79 | 0.0061 | 0.0018 | 0.0043 |
| 80 | 0.0062 | 0.0018 | 0.0043 |
| 81 | 0.0062 | 0.0018 | 0.0044 |
| 82 | 0.0062 | 0.0018 | 0.0044 |
| 83 | 0.0063 | 0.0019 | 0.0044 |
| 84 | 0.0063 | 0.0019 | 0.0045 |
| 85 | 0.0064 | 0.0019 | 0.0045 |
| 86 | 0.0064 | 0.0019 | 0.0045 |
| 87 | 0.0065 | 0.0019 | 0.0045 |
| 88 | 0.0065 | 0.0019 | 0.0046 |
| 89 | 0.0065 | 0.0019 | 0.0046 |
| 90 | 0.0066 | 0.0019 | 0.0046 |
| 91 | 0.0066 | 0.0020 | 0.0047 |
| 92 | 0.0066 | 0.0020 | 0.0047 |
| 93 | 0.0067 | 0.0020 | 0.0047 |
| 94 | 0.0067 | 0.0020 | 0.0047 |
| 95 | 0.0068 | 0.0020 | 0.0048 |
| 96 | 0.0068 | 0.0020 | 0.0048 |
| 97 | 0.0069 | 0.0020 | 0.0049 |
| 98 | 0.0069 | 0.0020 | 0.0049 |
| 99 | 0.0070 | 0.0021 | 0.0049 |
| 100 | 0.0070 | 0.0021 | 0.0049 |
| 101 | 0.0071 | 0.0021 | 0.0050 |
| 102 | 0.0071 | 0.0021 | 0.0050 |
| 103 | 0.0072 | 0.0021 | 0.0051 |
| 104 | 0.0072 | 0.0021 | 0.0051 |
| 105 | 0.0073 | 0.0022 | 0.0051 |
| 106 | 0.0073 | 0.0022 | 0.0052 |
| 107 | 0.0074 | 0.0022 | 0.0052 |

| | | | |
|---|---|---|---|
| 108 | 0.0075 | 0.0022 | 0.0052 |
| 109 | 0.0075 | 0.0022 | 0.0053 |
| 110 | 0.0076 | 0.0022 | 0.0053 |
| 111 | 0.0077 | 0.0023 | 0.0054 |
| 112 | 0.0077 | 0.0023 | 0.0054 |
| 113 | 0.0078 | 0.0023 | 0.0055 |
| 114 | 0.0078 | 0.0023 | 0.0055 |
| 115 | 0.0079 | 0.0023 | 0.0056 |
| 116 | 0.0080 | 0.0024 | 0.0056 |
| 117 | 0.0081 | 0.0024 | 0.0057 |
| 118 | 0.0081 | 0.0024 | 0.0057 |
| 119 | 0.0082 | 0.0024 | 0.0058 |
| 120 | 0.0082 | 0.0024 | 0.0058 |
| 121 | 0.0083 | 0.0025 | 0.0059 |
| 122 | 0.0084 | 0.0025 | 0.0059 |
| 123 | 0.0085 | 0.0025 | 0.0060 |
| 124 | 0.0086 | 0.0025 | 0.0060 |
| 125 | 0.0087 | 0.0026 | 0.0061 |
| 126 | 0.0087 | 0.0026 | 0.0061 |
| 127 | 0.0088 | 0.0026 | 0.0062 |
| 128 | 0.0089 | 0.0026 | 0.0063 |
| 129 | 0.0090 | 0.0027 | 0.0064 |
| 130 | 0.0091 | 0.0027 | 0.0064 |
| 131 | 0.0092 | 0.0027 | 0.0065 |
| 132 | 0.0093 | 0.0027 | 0.0065 |
| 133 | 0.0094 | 0.0028 | 0.0066 |
| 134 | 0.0095 | 0.0028 | 0.0067 |
| 135 | 0.0096 | 0.0029 | 0.0068 |
| 136 | 0.0097 | 0.0029 | 0.0068 |
| 137 | 0.0099 | 0.0029 | 0.0070 |
| 138 | 0.0100 | 0.0029 | 0.0070 |
| 139 | 0.0101 | 0.0030 | 0.0071 |
| 140 | 0.0102 | 0.0030 | 0.0072 |
| 141 | 0.0104 | 0.0031 | 0.0073 |
| 142 | 0.0105 | 0.0031 | 0.0074 |
| 143 | 0.0106 | 0.0031 | 0.0075 |
| 144 | 0.0107 | 0.0032 | 0.0076 |
| 145 | 0.0109 | 0.0032 | 0.0076 |
| 146 | 0.0110 | 0.0032 | 0.0077 |
| 147 | 0.0112 | 0.0033 | 0.0079 |
| 148 | 0.0113 | 0.0033 | 0.0079 |
| 149 | 0.0115 | 0.0034 | 0.0081 |
| 150 | 0.0116 | 0.0034 | 0.0082 |
| 151 | 0.0119 | 0.0035 | 0.0084 |
| 152 | 0.0120 | 0.0036 | 0.0085 |
| 153 | 0.0123 | 0.0036 | 0.0086 |
| 154 | 0.0124 | 0.0037 | 0.0087 |
| 155 | 0.0127 | 0.0038 | 0.0089 |
| 156 | 0.0129 | 0.0038 | 0.0091 |
| 157 | 0.0132 | 0.0039 | 0.0093 |
| 158 | 0.0133 | 0.0039 | 0.0094 |
| 159 | 0.0137 | 0.0041 | 0.0096 |
| 160 | 0.0139 | 0.0041 | 0.0098 |
| 161 | 0.0143 | 0.0042 | 0.0100 |
| 162 | 0.0145 | 0.0043 | 0.0102 |
| 163 | 0.0149 | 0.0044 | 0.0105 |
| 164 | 0.0151 | 0.0045 | 0.0107 |
| 165 | 0.0156 | 0.0046 | 0.0110 |
| 166 | 0.0159 | 0.0047 | 0.0112 |

| | | | |
|---|---|---|---|
| 167 | 0.0164 | 0.0049 | 0.0116 |
| 168 | 0.0167 | 0.0049 | 0.0118 |
| 169 | 0.0282 | 0.0083 | 0.0198 |
| 170 | 0.0285 | 0.0084 | 0.0201 |
| 171 | 0.0293 | 0.0087 | 0.0207 |
| 172 | 0.0298 | 0.0088 | 0.0210 |
| 173 | 0.0307 | 0.0091 | 0.0216 |
| 174 | 0.0311 | 0.0092 | 0.0219 |
| 175 | 0.0322 | 0.0095 | 0.0227 |
| 176 | 0.0328 | 0.0097 | 0.0231 |
| 177 | 0.0340 | 0.0101 | 0.0239 |
| 178 | 0.0347 | 0.0103 | 0.0244 |
| 179 | 0.0362 | 0.0107 | 0.0255 |
| 180 | 0.0370 | 0.0110 | 0.0261 |
| 181 | 0.0389 | 0.0115 | 0.0274 |
| 182 | 0.0400 | 0.0118 | 0.0281 |
| 183 | 0.0424 | 0.0125 | 0.0299 |
| 184 | 0.0438 | 0.0130 | 0.0308 |
| 185 | 0.0263 | 0.0078 | 0.0185 |
| 186 | 0.0280 | 0.0083 | 0.0197 |
| 187 | 0.0325 | 0.0096 | 0.0229 |
| 188 | 0.0355 | 0.0105 | 0.0250 |
| 189 | 0.0442 | 0.0131 | 0.0311 |
| 190 | 0.0508 | 0.0150 | 0.0358 |
| 191 | 0.0771 | 0.0167 | 0.0604 |
| 192 | 0.1119 | 0.0167 | 0.0952 |
| 193 | 0.4830 | 0.0167 | 0.4663 |
| 194 | 0.0607 | 0.0167 | 0.0440 |
| 195 | 0.0392 | 0.0116 | 0.0276 |
| 196 | 0.0301 | 0.0089 | 0.0212 |
| 197 | 0.0454 | 0.0134 | 0.0319 |
| 198 | 0.0411 | 0.0122 | 0.0290 |
| 199 | 0.0379 | 0.0112 | 0.0267 |
| 200 | 0.0354 | 0.0105 | 0.0249 |
| 201 | 0.0334 | 0.0099 | 0.0235 |
| 202 | 0.0317 | 0.0094 | 0.0223 |
| 203 | 0.0302 | 0.0089 | 0.0213 |
| 204 | 0.0289 | 0.0086 | 0.0204 |
| 205 | 0.0170 | 0.0050 | 0.0120 |
| 206 | 0.0161 | 0.0048 | 0.0114 |
| 207 | 0.0154 | 0.0045 | 0.0108 |
| 208 | 0.0147 | 0.0043 | 0.0103 |
| 209 | 0.0141 | 0.0042 | 0.0099 |
| 210 | 0.0135 | 0.0040 | 0.0095 |
| 211 | 0.0130 | 0.0038 | 0.0092 |
| 212 | 0.0126 | 0.0037 | 0.0088 |
| 213 | 0.0121 | 0.0036 | 0.0085 |
| 214 | 0.0118 | 0.0035 | 0.0083 |
| 215 | 0.0114 | 0.0034 | 0.0080 |
| 216 | 0.0111 | 0.0033 | 0.0078 |
| 217 | 0.0108 | 0.0032 | 0.0076 |
| 218 | 0.0106 | 0.0031 | 0.0074 |
| 219 | 0.0103 | 0.0030 | 0.0072 |
| 220 | 0.0100 | 0.0030 | 0.0071 |
| 221 | 0.0098 | 0.0029 | 0.0069 |
| 222 | 0.0096 | 0.0028 | 0.0067 |
| 223 | 0.0094 | 0.0028 | 0.0066 |
| 224 | 0.0092 | 0.0027 | 0.0064 |
| 225 | 0.0090 | 0.0027 | 0.0063 |

| | | | |
|---|---|---|---|
| 226 | 0.0088 | 0.0026 | 0.0062 |
| 227 | 0.0086 | 0.0025 | 0.0061 |
| 228 | 0.0085 | 0.0025 | 0.0060 |
| 229 | 0.0083 | 0.0025 | 0.0058 |
| 230 | 0.0081 | 0.0024 | 0.0057 |
| 231 | 0.0080 | 0.0024 | 0.0056 |
| 232 | 0.0079 | 0.0023 | 0.0055 |
| 233 | 0.0077 | 0.0023 | 0.0054 |
| 234 | 0.0076 | 0.0023 | 0.0054 |
| 235 | 0.0075 | 0.0022 | 0.0053 |
| 236 | 0.0074 | 0.0022 | 0.0052 |
| 237 | 0.0073 | 0.0021 | 0.0051 |
| 238 | 0.0072 | 0.0021 | 0.0050 |
| 239 | 0.0071 | 0.0021 | 0.0050 |
| 240 | 0.0070 | 0.0021 | 0.0049 |
| 241 | 0.0069 | 0.0020 | 0.0048 |
| 242 | 0.0068 | 0.0020 | 0.0048 |
| 243 | 0.0067 | 0.0020 | 0.0047 |
| 244 | 0.0066 | 0.0019 | 0.0046 |
| 245 | 0.0065 | 0.0019 | 0.0046 |
| 246 | 0.0064 | 0.0019 | 0.0045 |
| 247 | 0.0063 | 0.0019 | 0.0045 |
| 248 | 0.0063 | 0.0019 | 0.0044 |
| 249 | 0.0062 | 0.0018 | 0.0044 |
| 250 | 0.0061 | 0.0018 | 0.0043 |
| 251 | 0.0061 | 0.0018 | 0.0043 |
| 252 | 0.0060 | 0.0018 | 0.0042 |
| 253 | 0.0059 | 0.0018 | 0.0042 |
| 254 | 0.0059 | 0.0017 | 0.0041 |
| 255 | 0.0058 | 0.0017 | 0.0041 |
| 256 | 0.0057 | 0.0017 | 0.0040 |
| 257 | 0.0057 | 0.0017 | 0.0040 |
| 258 | 0.0056 | 0.0017 | 0.0040 |
| 259 | 0.0056 | 0.0016 | 0.0039 |
| 260 | 0.0055 | 0.0016 | 0.0039 |
| 261 | 0.0054 | 0.0016 | 0.0038 |
| 262 | 0.0054 | 0.0016 | 0.0038 |
| 263 | 0.0053 | 0.0016 | 0.0038 |
| 264 | 0.0053 | 0.0016 | 0.0037 |
| 265 | 0.0052 | 0.0016 | 0.0037 |
| 266 | 0.0052 | 0.0015 | 0.0037 |
| 267 | 0.0051 | 0.0015 | 0.0036 |
| 268 | 0.0051 | 0.0015 | 0.0036 |
| 269 | 0.0051 | 0.0015 | 0.0036 |
| 270 | 0.0050 | 0.0015 | 0.0035 |
| 271 | 0.0050 | 0.0015 | 0.0035 |
| 272 | 0.0049 | 0.0015 | 0.0035 |
| 273 | 0.0049 | 0.0014 | 0.0034 |
| 274 | 0.0049 | 0.0014 | 0.0034 |
| 275 | 0.0048 | 0.0014 | 0.0034 |
| 276 | 0.0048 | 0.0014 | 0.0034 |
| 277 | 0.0047 | 0.0014 | 0.0033 |
| 278 | 0.0047 | 0.0014 | 0.0033 |
| 279 | 0.0047 | 0.0014 | 0.0033 |
| 280 | 0.0046 | 0.0014 | 0.0033 |
| 281 | 0.0046 | 0.0014 | 0.0032 |
| 282 | 0.0046 | 0.0013 | 0.0032 |
| 283 | 0.0045 | 0.0013 | 0.0032 |
| 284 | 0.0045 | 0.0013 | 0.0032 |

| | | | |
|---|---|---|---|
| 285 | 0.0045 | 0.0013 | 0.0031 |
| 286 | 0.0044 | 0.0013 | 0.0031 |
| 287 | 0.0044 | 0.0013 | 0.0031 |
| 288 | 0.0044 | 0.0013 | 0.0031 |

Total soil rain loss = 0.95(In)
Total effective rainfall = 2.77(In)
Peak flow rate in flood hydrograph = 4307.31(CFS)

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 1100.0 | 2200.0 | 3300.0 | 4400.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0051 | 0.74 | Q | | | | |
| 0+10 | 0.0204 | 2.22 | Q | | | | |
| 0+15 | 0.0481 | 4.02 | Q | | | | |
| 0+20 | 0.0931 | 6.53 | Q | | | | |
| 0+25 | 0.1575 | 9.36 | Q | | | | |
| 0+30 | 0.2458 | 12.81 | Q | | | | |
| 0+35 | 0.3605 | 16.66 | Q | | | | |
| 0+40 | 0.5070 | 21.27 | Q | | | | |
| 0+45 | 0.6886 | 26.37 | Q | | | | |
| 0+50 | 0.9223 | 33.93 | Q | | | | |
| 0+55 | 1.2143 | 42.41 | Q | | | | |
| 1+ 0 | 1.5864 | 54.03 | Q | | | | |
| 1+ 5 | 2.0437 | 66.39 | Q | | | | |
| 1+10 | 2.5843 | 78.50 | Q | | | | |
| 1+15 | 3.2093 | 90.76 | Q | | | | |
| 1+20 | 3.9259 | 104.05 | Q | | | | |
| 1+25 | 4.7439 | 118.77 | VQ | | | | |
| 1+30 | 5.6385 | 129.89 | VQ | | | | |
| 1+35 | 6.5939 | 138.73 | VQ | | | | |
| 1+40 | 7.6012 | 146.26 | VQ | | | | |
| 1+45 | 8.6533 | 152.76 | VQ | | | | |
| 1+50 | 9.7478 | 158.92 | VQ | | | | |
| 1+55 | 10.8790 | 164.24 | VQ | | | | |
| 2+ 0 | 12.0460 | 169.46 | VQ | | | | |
| 2+ 5 | 13.2455 | 174.16 | VQ | | | | |
| 2+10 | 14.4762 | 178.70 | VQ | | | | |
| 2+15 | 15.7358 | 182.88 | VQ | | | | |
| 2+20 | 17.0236 | 187.00 | VQ | | | | |
| 2+25 | 18.3380 | 190.85 | VQ | | | | |
| 2+30 | 19.6785 | 194.64 | VQ | | | | |
| 2+35 | 21.0428 | 198.10 | VQ | | | | |
| 2+40 | 22.4302 | 201.44 | VQ | | | | |
| 2+45 | 23.8403 | 204.75 | VQ | | | | |
| 2+50 | 25.2732 | 208.05 | VQ | | | | |
| 2+55 | 26.7270 | 211.10 | VQ | | | | |
| 3+ 0 | 28.2001 | 213.89 | VQ | | | | |
| 3+ 5 | 29.6924 | 216.69 | VQ | | | | |
| 3+10 | 31.2042 | 219.51 | VQ | | | | |
| 3+15 | 32.7348 | 222.24 | V Q | | | | |
| 3+20 | 34.2826 | 224.75 | V Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+25 | 35.8478 | 227.27 | V Q | | | | |
| 3+30 | 37.4305 | 229.80 | V Q | | | | |
| 3+35 | 39.0304 | 232.31 | \|VQ | | | | |
| 3+40 | 40.6465 | 234.66 | \|VQ | | | | |
| 3+45 | 42.2788 | 237.00 | \|VQ | | | | |
| 3+50 | 43.9272 | 239.35 | \|VQ | | | | |
| 3+55 | 45.5918 | 241.71 | \|VQ | | | | |
| 4+ 0 | 47.2718 | 243.92 | \|VQ | | | | |
| 4+ 5 | 48.9665 | 246.08 | \|VQ | | | | |
| 4+10 | 50.6763 | 248.26 | \|VQ | | | | |
| 4+15 | 52.4012 | 250.45 | \|VQ | | | | |
| 4+20 | 54.1404 | 252.53 | \|VQ | | | | |
| 4+25 | 55.8930 | 254.48 | \|VQ | | | | |
| 4+30 | 57.6592 | 256.45 | \|VQ | | | | |
| 4+35 | 59.4389 | 258.43 | \|VQ | | | | |
| 4+40 | 61.2323 | 260.39 | \|VQ | | | | |
| 4+45 | 63.0386 | 262.28 | \|VQ | | | | |
| 4+50 | 64.8581 | 264.19 | \|VQ | | | | |
| 4+55 | 66.6908 | 266.11 | \|VQ | | | | |
| 5+ 0 | 68.5368 | 268.03 | \|VQ | | | | |
| 5+ 5 | 70.3955 | 269.88 | \|VQ | | | | |
| 5+10 | 72.2669 | 271.74 | \|VQ | | | | |
| 5+15 | 74.1512 | 273.60 | \|VQ | | | | |
| 5+20 | 76.0485 | 275.48 | \|VQ | | | | |
| 5+25 | 77.9583 | 277.31 | \| Q | | | | |
| 5+30 | 79.8807 | 279.13 | \| Q | | | | |
| 5+35 | 81.8156 | 280.96 | \| Q | | | | |
| 5+40 | 83.7633 | 282.81 | \| Q | | | | |
| 5+45 | 85.7233 | 284.58 | \| Q | | | | |
| 5+50 | 87.6950 | 286.29 | \| Q | | | | |
| 5+55 | 89.6785 | 288.01 | \| Q | | | | |
| 6+ 0 | 91.6741 | 289.76 | \| Q | | | | |
| 6+ 5 | 93.6818 | 291.51 | \| Q | | | | |
| 6+10 | 95.7018 | 293.30 | \| Q | | | | |
| 6+15 | 97.7340 | 295.09 | \| Q | | | | |
| 6+20 | 99.7789 | 296.91 | \| Q | | | | |
| 6+25 | 101.8362 | 298.73 | \| Q | | | | |
| 6+30 | 103.9058 | 300.51 | \| Q | | | | |
| 6+35 | 105.9877 | 302.29 | \| Q | | | | |
| 6+40 | 108.0821 | 304.11 | \| Q | | | | |
| 6+45 | 110.1891 | 305.93 | \| Q | | | | |
| 6+50 | 112.3088 | 307.78 | \| Q | | | | |
| 6+55 | 114.4413 | 309.65 | \| Q | | | | |
| 7+ 0 | 116.5870 | 311.55 | \| QV | | | | |
| 7+ 5 | 118.7458 | 313.46 | \| QV | | | | |
| 7+10 | 120.9176 | 315.35 | \| QV | | | | |
| 7+15 | 123.1022 | 317.21 | \| QV | | | | |
| 7+20 | 125.2999 | 319.10 | \| QV | | | | |
| 7+25 | 127.5107 | 321.01 | \| QV | | | | |
| 7+30 | 129.7348 | 322.95 | \| QV | | | | |
| 7+35 | 131.9724 | 324.90 | \| QV | | | | |
| 7+40 | 134.2238 | 326.89 | \| QV | | | | |
| 7+45 | 136.4889 | 328.90 | \| QV | | | | |
| 7+50 | 138.7681 | 330.93 | \|  Q | | | | |
| 7+55 | 141.0610 | 332.94 | \|  Q | | | | |
| 8+ 0 | 143.3680 | 334.97 | \|  Q | | | | |
| 8+ 5 | 145.6891 | 337.02 | \|  Q | | | | |
| 8+10 | 148.0246 | 339.11 | \|  Q | | | | |
| 8+15 | 150.3746 | 341.22 | \|  Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8+20 | 152.7394 | 343.37 | Q | | | | |
| 8+25 | 155.1191 | 345.54 | QV | | | | |
| 8+30 | 157.5141 | 347.75 | QV | | | | |
| 8+35 | 159.9245 | 349.99 | QV | | | | |
| 8+40 | 162.3506 | 352.26 | QV | | | | |
| 8+45 | 164.7924 | 354.56 | QV | | | | |
| 8+50 | 167.2505 | 356.91 | QV | | | | |
| 8+55 | 169.7248 | 359.27 | QV | | | | |
| 9+ 0 | 172.2158 | 361.69 | QV | | | | |
| 9+ 5 | 174.7236 | 364.13 | QV | | | | |
| 9+10 | 177.2486 | 366.63 | QV | | | | |
| 9+15 | 179.7909 | 369.15 | QV | | | | |
| 9+20 | 182.3509 | 371.71 | QV | | | | |
| 9+25 | 184.9288 | 374.31 | QV | | | | |
| 9+30 | 187.5249 | 376.95 | QV | | | | |
| 9+35 | 190.1394 | 379.63 | QV | | | | |
| 9+40 | 192.7729 | 382.37 | Q V | | | | |
| 9+45 | 195.4254 | 385.15 | Q V | | | | |
| 9+50 | 198.0974 | 387.98 | Q V | | | | |
| 9+55 | 200.7893 | 390.85 | Q V | | | | |
| 10+ 0 | 203.5010 | 393.75 | Q V | | | | |
| 10+ 5 | 206.2329 | 396.66 | Q V | | | | |
| 10+10 | 208.9852 | 399.64 | Q V | | | | |
| 10+15 | 211.7583 | 402.65 | Q V | | | | |
| 10+20 | 214.5527 | 405.75 | Q V | | | | |
| 10+25 | 217.3686 | 408.88 | Q V | | | | |
| 10+30 | 220.2067 | 412.09 | Q V | | | | |
| 10+35 | 223.0672 | 415.35 | Q V | | | | |
| 10+40 | 225.9508 | 418.69 | Q V | | | | |
| 10+45 | 228.8576 | 422.08 | Q V | | | | |
| 10+50 | 231.7884 | 425.55 | Q  V | | | | |
| 10+55 | 234.7435 | 429.08 | Q  V | | | | |
| 11+ 0 | 237.7236 | 432.71 | Q  V | | | | |
| 11+ 5 | 240.7288 | 436.36 | Q  V | | | | |
| 11+10 | 243.7597 | 440.08 | Q V | | | | |
| 11+15 | 246.8166 | 443.86 | Q V | | | | |
| 11+20 | 249.9003 | 447.75 | Q V | | | | |
| 11+25 | 253.0112 | 451.71 | Q V | | | | |
| 11+30 | 256.1503 | 455.78 | Q V | | | | |
| 11+35 | 259.3178 | 459.93 | Q V | | | | |
| 11+40 | 262.5147 | 464.20 | Q V | | | | |
| 11+45 | 265.7416 | 468.54 | Q V | | | | |
| 11+50 | 268.9993 | 473.02 | Q V | | | | |
| 11+55 | 272.2885 | 477.58 | Q  V | | | | |
| 12+ 0 | 275.6100 | 482.29 | Q  V | | | | |
| 12+ 5 | 278.9646 | 487.08 | Q  V | | | | |
| 12+10 | 282.3531 | 492.01 | Q  V | | | | |
| 12+15 | 285.7761 | 497.03 | Q  V | | | | |
| 12+20 | 289.2349 | 502.21 | Q  V | | | | |
| 12+25 | 292.7300 | 507.50 | Q  V | | | | |
| 12+30 | 296.2628 | 512.95 | Q  V | | | | |
| 12+35 | 299.8339 | 518.53 | Q  V | | | | |
| 12+40 | 303.4447 | 524.29 | Q  V | | | | |
| 12+45 | 307.0960 | 530.17 | Q  V | | | | |
| 12+50 | 310.7890 | 536.23 | Q   V | | | | |
| 12+55 | 314.5248 | 542.43 | Q   V | | | | |
| 13+ 0 | 318.3044 | 548.80 | Q   V | | | | |
| 13+ 5 | 322.1290 | 555.33 | Q  V | | | | |
| 13+10 | 326.0005 | 562.14 | Q  V | | | | |

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13+15     329.9201    569.13  |    Q  V |          |          |          |
13+20     333.8898    576.40  |    Q  V |          |          |          |
13+25     337.9109    583.86  |    Q  V |          |          |          |
13+30     341.9861    591.72  |    Q  V |          |          |          |
13+35     346.1174    599.86  |    Q   V|          |          |          |
13+40     350.3075    608.41  |    Q   V|          |          |          |
13+45     354.5585    617.25  |    Q   V|          |          |          |
13+50     358.8734    626.52  |    Q   V|          |          |          |
13+55     363.2545    636.13  |    Q   V|          |          |          |
14+ 0     367.7051    646.22  |    Q   V|          |          |          |
14+ 5     372.2405    658.55  |    Q   V|          |          |          |
14+10     376.8774    673.27  |     Q  V|          |          |          |
14+15     381.6244    689.26  |     Q  V|          |          |          |
14+20     386.4980    707.65  |     Q   V          |          |          |
14+25     391.5074    727.37  |     Q   V          |          |          |
14+30     396.6687    749.41  |     Q   V          |          |          |
14+35     401.9928    773.06  |      Q  V          |          |          |
14+40     407.4992    799.53  |      Q  V          |          |          |
14+45     413.2014    827.96  |      Q  V          |          |          |
14+50     419.1491    863.61  |      Q  V          |          |          |
14+55     425.3646    902.49  |       Q |V         |          |          |
15+ 0     431.9111    950.55  |       Q |V         |          |          |
15+ 5     438.8092   1001.60  |        Q|V         |          |          |
15+10     446.0659   1053.67  |        Q|V         |          |          |
15+15     453.6939   1107.59  |         QV         |          |          |
15+20     461.7253   1166.16  |         Q V        |          |          |
15+25     470.1735   1226.68  |         |QV        |          |          |
15+30     478.9707   1277.35  |         |QV        |          |          |
15+35     488.0845   1323.33  |         | Q        |          |          |
15+40     497.4944   1366.32  |         | Q        |          |          |
15+45     507.1998   1409.22  |         | QV       |          |          |
15+50     517.2145   1454.13  |         |  Q       |          |          |
15+55     527.5811   1505.23  |         |  Q       |          |          |
16+ 0     538.4067   1571.87  |         |   Q      |          |          |
16+ 5     550.3884   1739.75  |         |   VQ     |          |          |
16+10     563.4568   1897.53  |         |   V  Q   |          |          |
16+15     577.2116   1997.20  |         |    V  Q  |          |          |
16+20     591.8912   2131.49  |         |    V   Q|          |          |
16+25     607.1572   2216.62  |         |    V    Q          |          |
16+30     623.3442   2350.35  |         |     V   |Q         |          |
16+35     640.2756   2458.44  |         |     V   | Q        |          |
16+40     658.3756   2628.11  |         |      V  |  Q       |          |
16+45     677.5038   2777.42  |         |      V  |    Q     |          |
16+50     699.5698   3203.98  |         |       V |        Q |          |
16+55     723.2987   3445.44  |         |       V |          |Q         |
17+ 0     750.3961   3934.54  |         |        V|          |    Q     |
17+ 5     778.3934   4065.20  |         |         V          |     Q    |
17+10     806.2928   4051.00  |         |         V          |     Q    |
17+15     834.4659   4090.73  |         |         |V         |      Q   |
17+20     863.5152   4217.96  |         |         | V        |       Q  |
17+25     893.1799   4307.31  |         |         |  V       |        Q |
17+30     918.7254   3709.21  |         |         |  V       |  Q       |
17+35     941.3937   3291.44  |         |         |   V    Q |          |
17+40     962.2597   3029.74  |         |         |    V Q   |          |
17+45     981.7581   2831.17  |         |         |    Q     |          |
17+50    1000.4248   2710.41  |         |         |   Q V    |          |
17+55    1017.8251   2526.51  |         |         | Q   V    |          |
18+ 0    1034.5640   2430.49  |         |         | Q   V    |          |
18+ 5    1050.2999   2284.85  |         |         Q      V   |          |
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18+10    1065.3596   2186.67  |         |         Q|      V  |         |
18+15    1079.5971   2067.28  |         |        Q |       V |         |
18+20    1093.2802   1986.79  |         |        Q |       V |         |
18+25    1106.2257   1879.70  |         |       Q  |       V |         |
18+30    1118.6610   1805.61  |         |     Q    |        V|         |
18+35    1130.4225   1707.77  |         |    Q     |        V|         |
18+40    1141.7506   1644.84  |         |   Q      |        V|         |
18+45    1152.7514   1597.31  |         |   Q      |        V|         |
18+50    1163.4285   1550.31  |         |   Q      |         V         |
18+55    1173.5756   1473.36  |         |  Q       |         V         |
19+ 0    1183.2353   1402.58  |         | Q        |         V         |
19+ 5    1192.6807   1371.47  |         | Q        |         |V        |
19+10    1201.9111   1340.26  |         | Q        |         |V        |
19+15    1210.8322   1295.34  |         |Q         |         |V        |
19+20    1219.3396   1235.26  |         |Q         |         |V        |
19+25    1227.6625   1208.49  |         Q          |         |V        |
19+30    1235.8130   1183.46  |         Q          |         | V       |
19+35    1243.7601   1153.92  |         Q          |         | V       |
19+40    1251.3835   1106.91  |         Q          |         | V       |
19+45    1258.8328   1081.64  |        Q|          |         | V       |
19+50    1266.1347   1060.24  |        Q|          |         | V       |
19+55    1273.2760   1036.92  |        Q|          |         |  V      |
20+ 0    1280.1274    994.82  |        Q|          |         |  V      |
20+ 5    1286.7889    967.25  |       Q |          |         |  V      |
20+10    1293.3222    948.63  |       Q |          |         |  V      |
20+15    1299.7171    928.54  |       Q |          |         |  V      |
20+20    1305.8529    890.93  |       Q |          |         |  V      |
20+25    1311.7491    856.12  |      Q  |          |         |   V     |
20+30    1317.5367    840.37  |      Q  |          |         |   V     |
20+35    1323.2173    824.83  |      Q  |          |         |   V     |
20+40    1328.7586    804.59  |      Q  |          |         |   V     |
20+45    1334.1240    779.06  |      Q  |          |         |   V     |
20+50    1339.3921    764.93  |     Q   |          |         |   V     |
20+55    1344.5657    751.21  |     Q   |          |         |   V     |
21+ 0    1349.6296    735.27  |     Q   |          |         |    V    |
21+ 5    1354.5264    711.01  |     Q   |          |         |    V    |
21+10    1359.3300    697.48  |     Q   |          |         |    V    |
21+15    1364.0535    685.86  |     Q   |          |         |    V    |
21+20    1368.6920    673.50  |     Q   |          |         |    V    |
21+25    1373.1890    652.98  |    Q    |          |         |    V    |
21+30    1377.5865    638.52  |    Q    |          |         |    V    |
21+35    1381.9094    627.67  |    Q    |          |         |    V    |
21+40    1386.1496    615.68  |    Q    |          |         |     V   |
21+45    1390.2278    592.15  |    Q    |          |         |     V   |
21+50    1394.1581    570.68  |    Q    |          |         |     V   |
21+55    1398.0278    561.88  |    Q    |          |         |     V   |
22+ 0    1401.8424    553.88  |    Q    |          |         |     V   |
22+ 5    1405.6031    546.06  |   Q     |          |         |     V   |
22+10    1409.3087    538.05  |   Q     |          |         |     V   |
22+15    1412.9596    530.11  |   Q     |          |         |     V   |
22+20    1416.5529    521.74  |   Q     |          |         |     V   |
22+25    1420.0763    511.60  |   Q     |          |         |     V   |
22+30    1423.4893    495.57  |   Q     |          |         |      V  |
22+35    1426.8462    487.43  |   Q     |          |         |      V  |
22+40    1430.1601    481.17  |   Q     |          |         |      V  |
22+45    1433.4337    475.33  |   Q     |          |         |      V  |
22+50    1436.6672    469.51  |   Q     |          |         |      V  |
22+55    1439.8604    463.64  |   Q     |          |         |      V  |
23+ 0    1443.0110    457.47  |   Q     |          |         |      V  |
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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+ 5 | 1446.1136 | 450.50 | Q | | | | V |
| 23+10 | 1449.1254 | 437.31 | Q | | | | V |
| 23+15 | 1452.0548 | 425.34 | Q | | | | V |
| 23+20 | 1454.9489 | 420.23 | Q | | | | V |
| 23+25 | 1457.8107 | 415.54 | Q | | | | V |
| 23+30 | 1460.6411 | 410.97 | Q | | | | V |
| 23+35 | 1463.4392 | 406.28 | Q | | | | V |
| 23+40 | 1466.2049 | 401.59 | Q | | | | V |
| 23+45 | 1468.9359 | 396.54 | Q | | | | V |
| 23+50 | 1471.6220 | 390.01 | Q | | | | V |
| 23+55 | 1474.2310 | 378.83 | Q | | | | V |
| 24+ 0 | 1476.8023 | 373.35 | Q | | | | V |
| 24+ 5 | 1479.3401 | 368.49 | Q | | | | V |
| 24+10 | 1481.8415 | 363.20 | Q | | | | V |
| 24+15 | 1484.3046 | 357.65 | Q | | | | V |
| 24+20 | 1486.7253 | 351.49 | Q | | | | V |
| 24+25 | 1489.1022 | 345.12 | Q | | | | V |
| 24+30 | 1491.4315 | 338.21 | Q | | | | V |
| 24+35 | 1493.7102 | 330.87 | Q | | | | V |
| 24+40 | 1495.9342 | 322.92 | Q | | | | V |
| 24+45 | 1498.1020 | 314.76 | Q | | | | V |
| 24+50 | 1500.1974 | 304.26 | Q | | | | V |
| 24+55 | 1502.2158 | 293.07 | Q | | | | V |
| 25+ 0 | 1504.1364 | 278.86 | Q | | | | V |
| 25+ 5 | 1505.9543 | 263.97 | Q | | | | V |
| 25+10 | 1507.6713 | 249.31 | Q | | | | V |
| 25+15 | 1509.2853 | 234.35 | Q | | | | V |
| 25+20 | 1510.7860 | 217.91 | Q | | | | V |
| 25+25 | 1512.1719 | 201.23 | Q | | | | V |
| 25+30 | 1513.4700 | 188.49 | Q | | | | V |
| 25+35 | 1514.6969 | 178.14 | Q | | | | V |
| 25+40 | 1515.8615 | 169.09 | Q | | | | V |
| 25+45 | 1516.9709 | 161.09 | Q | | | | V |
| 25+50 | 1518.0258 | 153.18 | Q | | | | V |
| 25+55 | 1519.0322 | 146.12 | Q | | | | V |
| 26+ 0 | 1519.9484 | 133.04 | Q | | | | V |
| 26+ 5 | 1520.7969 | 123.19 | Q | | | | V |
| 26+10 | 1521.6055 | 117.41 | Q | | | | V |
| 26+15 | 1522.3788 | 112.29 | Q | | | | V |
| 26+20 | 1523.1170 | 107.18 | Q | | | | V |
| 26+25 | 1523.8226 | 102.45 | Q | | | | V |
| 26+30 | 1524.4975 | 98.00 | Q | | | | V |
| 26+35 | 1525.1443 | 93.92 | Q | | | | V |
| 26+40 | 1525.7641 | 89.99 | Q | | | | V |
| 26+45 | 1526.3570 | 86.09 | Q | | | | V |
| 26+50 | 1526.9229 | 82.17 | Q | | | | V |
| 26+55 | 1527.4619 | 78.27 | Q | | | | V |
| 27+ 0 | 1527.9732 | 74.23 | Q | | | | V |
| 27+ 5 | 1528.4308 | 66.44 | Q | | | | V |
| 27+10 | 1528.8383 | 59.17 | Q | | | | V |
| 27+15 | 1529.2253 | 56.19 | Q | | | | V |
| 27+20 | 1529.5952 | 53.70 | Q | | | | V |
| 27+25 | 1529.9478 | 51.20 | Q | | | | V |
| 27+30 | 1530.2828 | 48.65 | Q | | | | V |
| 27+35 | 1530.6010 | 46.20 | Q | | | | V |
| 27+40 | 1530.9040 | 44.00 | Q | | | | V |
| 27+45 | 1531.1924 | 41.87 | Q | | | | V |
| 27+50 | 1531.4664 | 39.78 | Q | | | | V |
| 27+55 | 1531.7263 | 37.75 | Q | | | | V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 28+ 0 | 1531.9736 | 35.90 | Q | \| | \| | \| | V\| |
| 28+ 5 | 1532.2094 | 34.23 | Q | \| | \| | \| | V\| |
| 28+10 | 1532.4343 | 32.66 | Q | \| | \| | \| | V\| |
| 28+15 | 1532.6485 | 31.11 | Q | \| | \| | \| | V\| |
| 28+20 | 1532.8532 | 29.72 | Q | \| | \| | \| | V\| |
| 28+25 | 1533.0493 | 28.48 | Q | \| | \| | \| | V\| |
| 28+30 | 1533.2371 | 27.27 | Q | \| | \| | \| | V\| |
| 28+35 | 1533.4166 | 26.07 | Q | \| | \| | \| | V\| |
| 28+40 | 1533.5883 | 24.92 | Q | \| | \| | \| | V\| |
| 28+45 | 1533.7527 | 23.87 | Q | \| | \| | \| | V\| |
| 28+50 | 1533.9100 | 22.84 | Q | \| | \| | \| | V\| |
| 28+55 | 1534.0603 | 21.83 | Q | \| | \| | \| | V\| |
| 29+ 0 | 1534.2039 | 20.84 | Q | \| | \| | \| | V\| |
| 29+ 5 | 1534.3413 | 19.95 | Q | \| | \| | \| | V\| |
| 29+10 | 1534.4727 | 19.08 | Q | \| | \| | \| | V\| |
| 29+15 | 1534.5982 | 18.23 | Q | \| | \| | \| | V\| |
| 29+20 | 1534.7180 | 17.39 | Q | \| | \| | \| | V\| |
| 29+25 | 1534.8325 | 16.63 | Q | \| | \| | \| | V\| |
| 29+30 | 1534.9421 | 15.91 | Q | \| | \| | \| | V\| |
| 29+35 | 1535.0467 | 15.19 | Q | \| | \| | \| | V\| |
| 29+40 | 1535.1464 | 14.48 | Q | \| | \| | \| | V\| |
| 29+45 | 1535.2420 | 13.87 | Q | \| | \| | \| | V\| |
| 29+50 | 1535.3339 | 13.35 | Q | \| | \| | \| | V\| |
| 29+55 | 1535.4224 | 12.85 | Q | \| | \| | \| | V\| |
| 30+ 0 | 1535.5074 | 12.34 | Q | \| | \| | \| | V\| |
| 30+ 5 | 1535.5890 | 11.84 | Q | \| | \| | \| | V\| |
| 30+10 | 1535.6671 | 11.35 | Q | \| | \| | \| | V\| |
| 30+15 | 1535.7420 | 10.86 | Q | \| | \| | \| | V\| |
| 30+20 | 1535.8135 | 10.38 | Q | \| | \| | \| | V\| |
| 30+25 | 1535.8818 | 9.92 | Q | \| | \| | \| | V\| |
| 30+30 | 1535.9474 | 9.52 | Q | \| | \| | \| | V\| |
| 30+35 | 1536.0103 | 9.14 | Q | \| | \| | \| | V\| |
| 30+40 | 1536.0706 | 8.76 | Q | \| | \| | \| | V\| |
| 30+45 | 1536.1284 | 8.39 | Q | \| | \| | \| | V\| |
| 30+50 | 1536.1836 | 8.02 | Q | \| | \| | \| | V\| |
| 30+55 | 1536.2363 | 7.65 | Q | \| | \| | \| | V\| |
| 31+ 0 | 1536.2865 | 7.29 | Q | \| | \| | \| | V\| |
| 31+ 5 | 1536.3342 | 6.93 | Q | \| | \| | \| | V\| |
| 31+10 | 1536.3798 | 6.62 | Q | \| | \| | \| | V\| |
| 31+15 | 1536.4237 | 6.37 | Q | \| | \| | \| | V\| |
| 31+20 | 1536.4657 | 6.11 | Q | \| | \| | \| | V\| |
| 31+25 | 1536.5061 | 5.86 | Q | \| | \| | \| | V\| |
| 31+30 | 1536.5447 | 5.61 | Q | \| | \| | \| | V\| |
| 31+35 | 1536.5817 | 5.36 | Q | \| | \| | \| | V\| |
| 31+40 | 1536.6169 | 5.12 | Q | \| | \| | \| | V\| |
| 31+45 | 1536.6505 | 4.88 | Q | \| | \| | \| | V\| |
| 31+50 | 1536.6825 | 4.64 | Q | \| | \| | \| | V\| |
| 31+55 | 1536.7132 | 4.46 | Q | \| | \| | \| | V\| |
| 32+ 0 | 1536.7428 | 4.29 | Q | \| | \| | \| | V\| |
| 32+ 5 | 1536.7711 | 4.12 | Q | \| | \| | \| | V\| |
| 32+10 | 1536.7984 | 3.95 | Q | \| | \| | \| | V\| |
| 32+15 | 1536.8244 | 3.79 | Q | \| | \| | \| | V\| |
| 32+20 | 1536.8494 | 3.62 | Q | \| | \| | \| | V\| |
| 32+25 | 1536.8732 | 3.46 | Q | \| | \| | \| | V\| |
| 32+30 | 1536.8958 | 3.29 | Q | \| | \| | \| | V\| |
| 32+35 | 1536.9174 | 3.13 | Q | \| | \| | \| | V\| |
| 32+40 | 1536.9379 | 2.98 | Q | \| | \| | \| | V\| |
| 32+45 | 1536.9574 | 2.82 | Q | \| | \| | \| | V\| |
| 32+50 | 1536.9757 | 2.67 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 32+55 | 1536.9931 | 2.51 | Q | \| | \| | \| | V\| |
| 33+ 0 | 1537.0093 | 2.36 | Q | \| | \| | \| | V\| |
| 33+ 5 | 1537.0246 | 2.21 | Q | \| | \| | \| | V\| |
| 33+10 | 1537.0388 | 2.06 | Q | \| | \| | \| | V\| |
| 33+15 | 1537.0520 | 1.92 | Q | \| | \| | \| | V\| |
| 33+20 | 1537.0642 | 1.78 | Q | \| | \| | \| | V\| |
| 33+25 | 1537.0756 | 1.64 | Q | \| | \| | \| | V\| |
| 33+30 | 1537.0860 | 1.51 | Q | \| | \| | \| | V\| |
| 33+35 | 1537.0954 | 1.38 | Q | \| | \| | \| | V\| |
| 33+40 | 1537.1040 | 1.25 | Q | \| | \| | \| | V\| |
| 33+45 | 1537.1117 | 1.11 | Q | \| | \| | \| | V\| |
| 33+50 | 1537.1185 | 0.98 | Q | \| | \| | \| | V\| |
| 33+55 | 1537.1243 | 0.85 | Q | \| | \| | \| | V\| |
| 34+ 0 | 1537.1296 | 0.76 | Q | \| | \| | \| | V\| |
| 34+ 5 | 1537.1344 | 0.70 | Q | \| | \| | \| | V\| |
| 34+10 | 1537.1387 | 0.63 | Q | \| | \| | \| | V\| |
| 34+15 | 1537.1427 | 0.57 | Q | \| | \| | \| | V\| |
| 34+20 | 1537.1462 | 0.51 | Q | \| | \| | \| | V\| |
| 34+25 | 1537.1493 | 0.45 | Q | \| | \| | \| | V\| |
| 34+30 | 1537.1519 | 0.39 | Q | \| | \| | \| | V\| |
| 34+35 | 1537.1542 | 0.33 | Q | \| | \| | \| | V\| |
| 34+40 | 1537.1560 | 0.27 | Q | \| | \| | \| | V\| |
| 34+45 | 1537.1574 | 0.21 | Q | \| | \| | \| | V\| |
| 34+50 | 1537.1584 | 0.15 | Q | \| | \| | \| | V\| |
| 34+55 | 1537.1590 | 0.09 | Q | \| | \| | \| | V\| |
| 35+ 0 | 1537.1592 | 0.03 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 08/10/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREA "E"
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-10-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 3444.14 | 1 | 1.45 |
| Rainfall data for year 100 | | |
| 3444.14 | 6 | 2.64 |
| Rainfall data for year 100 | | |
| 3444.14 | 24 | 4.24 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 88.0 | 97.6 | 3444.14 | 1.000 | 0.048 | 1.000 | 0.048 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.048

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 3444.14 | 1.000 | 88.0 | 97.6 | 0.25 | 0.934 |

Area-averaged catchment yield fraction, Y = 0.934
Area-averaged low loss fraction, Yb = 0.066
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 24414.00(Ft.)
Length from concentration point to centroid = 13905.00(Ft.)
Elevation difference along watercourse = 1760.00(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 3444.14(Ac.)
Catchment Lag time = 0.702 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 11.8667
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.048(In/Hr)
Average low loss rate fraction (Yb) = 0.066 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.950
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.050

Computed peak 5-minute rainfall = 0.689(In)
Computed peak 30-minute rainfall = 1.179(In)
Specified peak 1-hour rainfall = 1.451(In)
Computed peak 3-hour rainfall = 2.092(In)
Specified peak 6-hour rainfall = 2.636(In)
Specified peak 24-hour rainfall = 4.235(In)

Rainfall depth area reduction factors:
Using a total area of 3444.14(Ac.) (Ref: fig. E-4)

5-minute factor = 0.842 Adjusted rainfall = 0.580(In)
30-minute factor = 0.842 Adjusted rainfall = 0.992(In)
1-hour factor = 0.842 Adjusted rainfall = 1.222(In)
3-hour factor = 0.980 Adjusted rainfall = 2.050(In)
6-hour factor = 0.989 Adjusted rainfall = 2.608(In)
24-hour factor = 0.996 Adjusted rainfall = 4.216(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 41652.57 (CFS)) | |
| 1 | 0.740 | 308.265 |
| 2 | 2.435 | 705.927 |
| 3 | 4.806 | 987.787 |
| 4 | 7.863 | 1273.040 |
| 5 | 11.639 | 1573.119 |
| 6 | 16.946 | 2210.217 |

| | | |
|---|---|---|
| 7 | 23.871 | 2884.545 |
| 8 | 34.448 | 4405.419 |
| 9 | 49.916 | 6443.142 |
| 10 | 57.976 | 3356.832 |
| 11 | 63.349 | 2238.239 |
| 12 | 67.615 | 1776.795 |
| 13 | 71.209 | 1496.913 |
| 14 | 74.138 | 1220.236 |
| 15 | 76.904 | 1151.984 |
| 16 | 79.250 | 977.265 |
| 17 | 81.421 | 904.052 |
| 18 | 83.294 | 780.513 |
| 19 | 84.996 | 708.703 |
| 20 | 86.544 | 644.903 |
| 21 | 87.961 | 590.169 |
| 22 | 89.257 | 539.866 |
| 23 | 90.397 | 474.770 |
| 24 | 91.472 | 447.535 |
| 25 | 92.424 | 396.621 |
| 26 | 93.323 | 374.716 |
| 27 | 94.088 | 318.507 |
| 28 | 94.811 | 301.075 |
| 29 | 95.399 | 244.948 |
| 30 | 95.961 | 234.175 |
| 31 | 96.452 | 204.519 |
| 32 | 96.921 | 195.125 |
| 33 | 97.287 | 152.708 |
| 34 | 97.621 | 139.039 |
| 35 | 97.823 | 84.187 |
| 36 | 97.979 | 64.750 |
| 37 | 98.134 | 64.750 |
| 38 | 98.289 | 64.715 |
| 39 | 98.429 | 58.206 |
| 40 | 98.557 | 53.382 |
| 41 | 98.685 | 53.382 |
| 42 | 98.814 | 53.382 |
| 43 | 98.923 | 45.611 |
| 44 | 99.002 | 32.811 |
| 45 | 99.080 | 32.622 |
| 46 | 99.159 | 32.622 |
| 47 | 99.241 | 34.197 |
| 48 | 99.336 | 39.587 |
| 49 | 99.432 | 40.037 |
| 50 | 99.528 | 40.037 |
| 51 | 99.620 | 38.280 |
| 52 | 99.679 | 24.633 |
| 53 | 99.731 | 21.748 |
| 54 | 99.783 | 21.748 |
| 55 | 99.835 | 21.511 |
| 56 | 99.872 | 15.178 |
| 57 | 99.901 | 12.357 |
| 58 | 99.931 | 12.357 |
| 59 | 99.972 | 16.945 |
| 60 | 99.977 | 2.239 |
| 61 | 99.981 | 1.545 |
| 62 | 99.984 | 1.545 |
| 63 | 99.988 | 1.545 |
| 64 | 99.992 | 1.545 |
| 65 | 99.995 | 1.545 |

| | | |
|---|---|---|
| 66 | 100.000 | 0.772 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5797 | 0.5797 |
| 2 | 0.7137 | 0.1340 |
| 3 | 0.8060 | 0.0923 |
| 4 | 0.8787 | 0.0727 |
| 5 | 0.9395 | 0.0608 |
| 6 | 0.9924 | 0.0528 |
| 7 | 1.0393 | 0.0470 |
| 8 | 1.0818 | 0.0425 |
| 9 | 1.1207 | 0.0389 |
| 10 | 1.1567 | 0.0360 |
| 11 | 1.1902 | 0.0336 |
| 12 | 1.2217 | 0.0315 |
| 13 | 1.2687 | 0.0469 |
| 14 | 1.3137 | 0.0451 |
| 15 | 1.3571 | 0.0434 |
| 16 | 1.3990 | 0.0419 |
| 17 | 1.4396 | 0.0405 |
| 18 | 1.4789 | 0.0393 |
| 19 | 1.5170 | 0.0382 |
| 20 | 1.5541 | 0.0371 |
| 21 | 1.5902 | 0.0361 |
| 22 | 1.6255 | 0.0352 |
| 23 | 1.6599 | 0.0344 |
| 24 | 1.6935 | 0.0336 |
| 25 | 1.7264 | 0.0329 |
| 26 | 1.7586 | 0.0322 |
| 27 | 1.7901 | 0.0315 |
| 28 | 1.8210 | 0.0309 |
| 29 | 1.8514 | 0.0304 |
| 30 | 1.8812 | 0.0298 |
| 31 | 1.9105 | 0.0293 |
| 32 | 1.9393 | 0.0288 |
| 33 | 1.9676 | 0.0283 |
| 34 | 1.9955 | 0.0279 |
| 35 | 2.0229 | 0.0274 |
| 36 | 2.0499 | 0.0270 |
| 37 | 2.0695 | 0.0196 |
| 38 | 2.0888 | 0.0193 |
| 39 | 2.1077 | 0.0189 |
| 40 | 2.1263 | 0.0186 |
| 41 | 2.1447 | 0.0183 |
| 42 | 2.1627 | 0.0180 |
| 43 | 2.1804 | 0.0178 |
| 44 | 2.1979 | 0.0175 |
| 45 | 2.2152 | 0.0172 |
| 46 | 2.2321 | 0.0170 |
| 47 | 2.2489 | 0.0167 |
| 48 | 2.2654 | 0.0165 |
| 49 | 2.2817 | 0.0163 |
| 50 | 2.2977 | 0.0161 |
| 51 | 2.3136 | 0.0159 |
| 52 | 2.3293 | 0.0157 |
| 53 | 2.3447 | 0.0155 |
| 54 | 2.3600 | 0.0153 |
| 55 | 2.3751 | 0.0151 |

| | | |
|---|---|---|
| 56 | 2.3900 | 0.0149 |
| 57 | 2.4047 | 0.0147 |
| 58 | 2.4193 | 0.0146 |
| 59 | 2.4337 | 0.0144 |
| 60 | 2.4480 | 0.0143 |
| 61 | 2.4621 | 0.0141 |
| 62 | 2.4760 | 0.0139 |
| 63 | 2.4898 | 0.0138 |
| 64 | 2.5035 | 0.0137 |
| 65 | 2.5170 | 0.0135 |
| 66 | 2.5304 | 0.0134 |
| 67 | 2.5436 | 0.0133 |
| 68 | 2.5568 | 0.0131 |
| 69 | 2.5698 | 0.0130 |
| 70 | 2.5826 | 0.0129 |
| 71 | 2.5954 | 0.0128 |
| 72 | 2.6080 | 0.0126 |
| 73 | 2.6205 | 0.0125 |
| 74 | 2.6329 | 0.0124 |
| 75 | 2.6452 | 0.0123 |
| 76 | 2.6574 | 0.0122 |
| 77 | 2.6694 | 0.0121 |
| 78 | 2.6814 | 0.0120 |
| 79 | 2.6932 | 0.0119 |
| 80 | 2.7050 | 0.0118 |
| 81 | 2.7167 | 0.0117 |
| 82 | 2.7283 | 0.0116 |
| 83 | 2.7397 | 0.0115 |
| 84 | 2.7511 | 0.0114 |
| 85 | 2.7624 | 0.0113 |
| 86 | 2.7737 | 0.0112 |
| 87 | 2.7848 | 0.0111 |
| 88 | 2.7958 | 0.0111 |
| 89 | 2.8068 | 0.0110 |
| 90 | 2.8177 | 0.0109 |
| 91 | 2.8285 | 0.0108 |
| 92 | 2.8392 | 0.0107 |
| 93 | 2.8499 | 0.0107 |
| 94 | 2.8605 | 0.0106 |
| 95 | 2.8710 | 0.0105 |
| 96 | 2.8814 | 0.0104 |
| 97 | 2.8918 | 0.0104 |
| 98 | 2.9021 | 0.0103 |
| 99 | 2.9123 | 0.0102 |
| 100 | 2.9225 | 0.0102 |
| 101 | 2.9326 | 0.0101 |
| 102 | 2.9426 | 0.0100 |
| 103 | 2.9526 | 0.0100 |
| 104 | 2.9625 | 0.0099 |
| 105 | 2.9723 | 0.0098 |
| 106 | 2.9821 | 0.0098 |
| 107 | 2.9918 | 0.0097 |
| 108 | 3.0015 | 0.0097 |
| 109 | 3.0111 | 0.0096 |
| 110 | 3.0206 | 0.0095 |
| 111 | 3.0301 | 0.0095 |
| 112 | 3.0395 | 0.0094 |
| 113 | 3.0489 | 0.0094 |
| 114 | 3.0582 | 0.0093 |

| | | |
|---|---|---|
| 115 | 3.0675 | 0.0093 |
| 116 | 3.0767 | 0.0092 |
| 117 | 3.0859 | 0.0092 |
| 118 | 3.0950 | 0.0091 |
| 119 | 3.1041 | 0.0091 |
| 120 | 3.1131 | 0.0090 |
| 121 | 3.1220 | 0.0090 |
| 122 | 3.1310 | 0.0089 |
| 123 | 3.1398 | 0.0089 |
| 124 | 3.1487 | 0.0088 |
| 125 | 3.1574 | 0.0088 |
| 126 | 3.1662 | 0.0087 |
| 127 | 3.1748 | 0.0087 |
| 128 | 3.1835 | 0.0086 |
| 129 | 3.1921 | 0.0086 |
| 130 | 3.2006 | 0.0086 |
| 131 | 3.2092 | 0.0085 |
| 132 | 3.2176 | 0.0085 |
| 133 | 3.2260 | 0.0084 |
| 134 | 3.2344 | 0.0084 |
| 135 | 3.2428 | 0.0083 |
| 136 | 3.2511 | 0.0083 |
| 137 | 3.2593 | 0.0083 |
| 138 | 3.2676 | 0.0082 |
| 139 | 3.2758 | 0.0082 |
| 140 | 3.2839 | 0.0081 |
| 141 | 3.2920 | 0.0081 |
| 142 | 3.3001 | 0.0081 |
| 143 | 3.3081 | 0.0080 |
| 144 | 3.3161 | 0.0080 |
| 145 | 3.3241 | 0.0080 |
| 146 | 3.3320 | 0.0079 |
| 147 | 3.3399 | 0.0079 |
| 148 | 3.3478 | 0.0079 |
| 149 | 3.3556 | 0.0078 |
| 150 | 3.3634 | 0.0078 |
| 151 | 3.3711 | 0.0078 |
| 152 | 3.3788 | 0.0077 |
| 153 | 3.3865 | 0.0077 |
| 154 | 3.3942 | 0.0077 |
| 155 | 3.4018 | 0.0076 |
| 156 | 3.4094 | 0.0076 |
| 157 | 3.4169 | 0.0076 |
| 158 | 3.4245 | 0.0075 |
| 159 | 3.4320 | 0.0075 |
| 160 | 3.4394 | 0.0075 |
| 161 | 3.4469 | 0.0074 |
| 162 | 3.4543 | 0.0074 |
| 163 | 3.4616 | 0.0074 |
| 164 | 3.4690 | 0.0073 |
| 165 | 3.4763 | 0.0073 |
| 166 | 3.4836 | 0.0073 |
| 167 | 3.4908 | 0.0073 |
| 168 | 3.4981 | 0.0072 |
| 169 | 3.5053 | 0.0072 |
| 170 | 3.5124 | 0.0072 |
| 171 | 3.5196 | 0.0071 |
| 172 | 3.5267 | 0.0071 |
| 173 | 3.5338 | 0.0071 |

| | | |
|---|---|---|
| 174 | 3.5409 | 0.0071 |
| 175 | 3.5479 | 0.0070 |
| 176 | 3.5549 | 0.0070 |
| 177 | 3.5619 | 0.0070 |
| 178 | 3.5689 | 0.0070 |
| 179 | 3.5758 | 0.0069 |
| 180 | 3.5827 | 0.0069 |
| 181 | 3.5896 | 0.0069 |
| 182 | 3.5965 | 0.0069 |
| 183 | 3.6033 | 0.0068 |
| 184 | 3.6101 | 0.0068 |
| 185 | 3.6169 | 0.0068 |
| 186 | 3.6237 | 0.0068 |
| 187 | 3.6304 | 0.0067 |
| 188 | 3.6371 | 0.0067 |
| 189 | 3.6438 | 0.0067 |
| 190 | 3.6505 | 0.0067 |
| 191 | 3.6571 | 0.0066 |
| 192 | 3.6637 | 0.0066 |
| 193 | 3.6703 | 0.0066 |
| 194 | 3.6769 | 0.0066 |
| 195 | 3.6835 | 0.0066 |
| 196 | 3.6900 | 0.0065 |
| 197 | 3.6965 | 0.0065 |
| 198 | 3.7030 | 0.0065 |
| 199 | 3.7095 | 0.0065 |
| 200 | 3.7159 | 0.0064 |
| 201 | 3.7224 | 0.0064 |
| 202 | 3.7288 | 0.0064 |
| 203 | 3.7352 | 0.0064 |
| 204 | 3.7415 | 0.0064 |
| 205 | 3.7479 | 0.0063 |
| 206 | 3.7542 | 0.0063 |
| 207 | 3.7605 | 0.0063 |
| 208 | 3.7668 | 0.0063 |
| 209 | 3.7731 | 0.0063 |
| 210 | 3.7793 | 0.0062 |
| 211 | 3.7855 | 0.0062 |
| 212 | 3.7917 | 0.0062 |
| 213 | 3.7979 | 0.0062 |
| 214 | 3.8041 | 0.0062 |
| 215 | 3.8102 | 0.0062 |
| 216 | 3.8164 | 0.0061 |
| 217 | 3.8225 | 0.0061 |
| 218 | 3.8286 | 0.0061 |
| 219 | 3.8347 | 0.0061 |
| 220 | 3.8407 | 0.0061 |
| 221 | 3.8468 | 0.0060 |
| 222 | 3.8528 | 0.0060 |
| 223 | 3.8588 | 0.0060 |
| 224 | 3.8648 | 0.0060 |
| 225 | 3.8707 | 0.0060 |
| 226 | 3.8767 | 0.0060 |
| 227 | 3.8826 | 0.0059 |
| 228 | 3.8886 | 0.0059 |
| 229 | 3.8945 | 0.0059 |
| 230 | 3.9003 | 0.0059 |
| 231 | 3.9062 | 0.0059 |
| 232 | 3.9121 | 0.0059 |

| | | |
|---|---|---|
| 233 | 3.9179 | 0.0058 |
| 234 | 3.9237 | 0.0058 |
| 235 | 3.9295 | 0.0058 |
| 236 | 3.9353 | 0.0058 |
| 237 | 3.9411 | 0.0058 |
| 238 | 3.9468 | 0.0058 |
| 239 | 3.9526 | 0.0057 |
| 240 | 3.9583 | 0.0057 |
| 241 | 3.9640 | 0.0057 |
| 242 | 3.9697 | 0.0057 |
| 243 | 3.9754 | 0.0057 |
| 244 | 3.9810 | 0.0057 |
| 245 | 3.9867 | 0.0056 |
| 246 | 3.9923 | 0.0056 |
| 247 | 3.9979 | 0.0056 |
| 248 | 4.0035 | 0.0056 |
| 249 | 4.0091 | 0.0056 |
| 250 | 4.0147 | 0.0056 |
| 251 | 4.0202 | 0.0056 |
| 252 | 4.0258 | 0.0055 |
| 253 | 4.0313 | 0.0055 |
| 254 | 4.0368 | 0.0055 |
| 255 | 4.0423 | 0.0055 |
| 256 | 4.0478 | 0.0055 |
| 257 | 4.0533 | 0.0055 |
| 258 | 4.0587 | 0.0055 |
| 259 | 4.0642 | 0.0054 |
| 260 | 4.0696 | 0.0054 |
| 261 | 4.0750 | 0.0054 |
| 262 | 4.0804 | 0.0054 |
| 263 | 4.0858 | 0.0054 |
| 264 | 4.0912 | 0.0054 |
| 265 | 4.0966 | 0.0054 |
| 266 | 4.1019 | 0.0054 |
| 267 | 4.1073 | 0.0053 |
| 268 | 4.1126 | 0.0053 |
| 269 | 4.1179 | 0.0053 |
| 270 | 4.1232 | 0.0053 |
| 271 | 4.1285 | 0.0053 |
| 272 | 4.1337 | 0.0053 |
| 273 | 4.1390 | 0.0053 |
| 274 | 4.1443 | 0.0052 |
| 275 | 4.1495 | 0.0052 |
| 276 | 4.1547 | 0.0052 |
| 277 | 4.1599 | 0.0052 |
| 278 | 4.1651 | 0.0052 |
| 279 | 4.1703 | 0.0052 |
| 280 | 4.1755 | 0.0052 |
| 281 | 4.1806 | 0.0052 |
| 282 | 4.1858 | 0.0051 |
| 283 | 4.1909 | 0.0051 |
| 284 | 4.1961 | 0.0051 |
| 285 | 4.2012 | 0.0051 |
| 286 | 4.2063 | 0.0051 |
| 287 | 4.2114 | 0.0051 |
| 288 | 4.2164 | 0.0051 |

| Unit Period | Unit Rainfall | Unit Soil-Loss | Effective Rainfall |
|---|---|---|---|

| (number) | (In) | (In) | (In) |
|---|---|---|---|
| 1 | 0.0051 | 0.0003 | 0.0047 |
| 2 | 0.0051 | 0.0003 | 0.0048 |
| 3 | 0.0051 | 0.0003 | 0.0048 |
| 4 | 0.0051 | 0.0003 | 0.0048 |
| 5 | 0.0051 | 0.0003 | 0.0048 |
| 6 | 0.0052 | 0.0003 | 0.0048 |
| 7 | 0.0052 | 0.0003 | 0.0048 |
| 8 | 0.0052 | 0.0003 | 0.0049 |
| 9 | 0.0052 | 0.0003 | 0.0049 |
| 10 | 0.0052 | 0.0003 | 0.0049 |
| 11 | 0.0053 | 0.0003 | 0.0049 |
| 12 | 0.0053 | 0.0004 | 0.0049 |
| 13 | 0.0053 | 0.0004 | 0.0049 |
| 14 | 0.0053 | 0.0004 | 0.0050 |
| 15 | 0.0053 | 0.0004 | 0.0050 |
| 16 | 0.0054 | 0.0004 | 0.0050 |
| 17 | 0.0054 | 0.0004 | 0.0050 |
| 18 | 0.0054 | 0.0004 | 0.0050 |
| 19 | 0.0054 | 0.0004 | 0.0051 |
| 20 | 0.0054 | 0.0004 | 0.0051 |
| 21 | 0.0055 | 0.0004 | 0.0051 |
| 22 | 0.0055 | 0.0004 | 0.0051 |
| 23 | 0.0055 | 0.0004 | 0.0051 |
| 24 | 0.0055 | 0.0004 | 0.0051 |
| 25 | 0.0055 | 0.0004 | 0.0052 |
| 26 | 0.0056 | 0.0004 | 0.0052 |
| 27 | 0.0056 | 0.0004 | 0.0052 |
| 28 | 0.0056 | 0.0004 | 0.0052 |
| 29 | 0.0056 | 0.0004 | 0.0053 |
| 30 | 0.0056 | 0.0004 | 0.0053 |
| 31 | 0.0057 | 0.0004 | 0.0053 |
| 32 | 0.0057 | 0.0004 | 0.0053 |
| 33 | 0.0057 | 0.0004 | 0.0053 |
| 34 | 0.0057 | 0.0004 | 0.0054 |
| 35 | 0.0058 | 0.0004 | 0.0054 |
| 36 | 0.0058 | 0.0004 | 0.0054 |
| 37 | 0.0058 | 0.0004 | 0.0054 |
| 38 | 0.0058 | 0.0004 | 0.0054 |
| 39 | 0.0059 | 0.0004 | 0.0055 |
| 40 | 0.0059 | 0.0004 | 0.0055 |
| 41 | 0.0059 | 0.0004 | 0.0055 |
| 42 | 0.0059 | 0.0004 | 0.0055 |
| 43 | 0.0060 | 0.0004 | 0.0056 |
| 44 | 0.0060 | 0.0004 | 0.0056 |
| 45 | 0.0060 | 0.0004 | 0.0056 |
| 46 | 0.0060 | 0.0004 | 0.0056 |
| 47 | 0.0061 | 0.0004 | 0.0057 |
| 48 | 0.0061 | 0.0004 | 0.0057 |
| 49 | 0.0061 | 0.0004 | 0.0057 |
| 50 | 0.0062 | 0.0004 | 0.0057 |
| 51 | 0.0062 | 0.0004 | 0.0058 |
| 52 | 0.0062 | 0.0004 | 0.0058 |
| 53 | 0.0062 | 0.0004 | 0.0058 |
| 54 | 0.0063 | 0.0004 | 0.0058 |
| 55 | 0.0063 | 0.0004 | 0.0059 |
| 56 | 0.0063 | 0.0004 | 0.0059 |
| 57 | 0.0064 | 0.0004 | 0.0059 |

| | | | |
|---|---|---|---|
| 58 | 0.0064 | 0.0004 | 0.0060 |
| 59 | 0.0064 | 0.0004 | 0.0060 |
| 60 | 0.0064 | 0.0004 | 0.0060 |
| 61 | 0.0065 | 0.0004 | 0.0061 |
| 62 | 0.0065 | 0.0004 | 0.0061 |
| 63 | 0.0066 | 0.0004 | 0.0061 |
| 64 | 0.0066 | 0.0004 | 0.0061 |
| 65 | 0.0066 | 0.0004 | 0.0062 |
| 66 | 0.0066 | 0.0004 | 0.0062 |
| 67 | 0.0067 | 0.0004 | 0.0062 |
| 68 | 0.0067 | 0.0004 | 0.0063 |
| 69 | 0.0068 | 0.0004 | 0.0063 |
| 70 | 0.0068 | 0.0005 | 0.0063 |
| 71 | 0.0068 | 0.0005 | 0.0064 |
| 72 | 0.0069 | 0.0005 | 0.0064 |
| 73 | 0.0069 | 0.0005 | 0.0065 |
| 74 | 0.0069 | 0.0005 | 0.0065 |
| 75 | 0.0070 | 0.0005 | 0.0065 |
| 76 | 0.0070 | 0.0005 | 0.0065 |
| 77 | 0.0071 | 0.0005 | 0.0066 |
| 78 | 0.0071 | 0.0005 | 0.0066 |
| 79 | 0.0071 | 0.0005 | 0.0067 |
| 80 | 0.0072 | 0.0005 | 0.0067 |
| 81 | 0.0072 | 0.0005 | 0.0067 |
| 82 | 0.0073 | 0.0005 | 0.0068 |
| 83 | 0.0073 | 0.0005 | 0.0068 |
| 84 | 0.0073 | 0.0005 | 0.0069 |
| 85 | 0.0074 | 0.0005 | 0.0069 |
| 86 | 0.0074 | 0.0005 | 0.0069 |
| 87 | 0.0075 | 0.0005 | 0.0070 |
| 88 | 0.0075 | 0.0005 | 0.0070 |
| 89 | 0.0076 | 0.0005 | 0.0071 |
| 90 | 0.0076 | 0.0005 | 0.0071 |
| 91 | 0.0077 | 0.0005 | 0.0072 |
| 92 | 0.0077 | 0.0005 | 0.0072 |
| 93 | 0.0078 | 0.0005 | 0.0073 |
| 94 | 0.0078 | 0.0005 | 0.0073 |
| 95 | 0.0079 | 0.0005 | 0.0074 |
| 96 | 0.0079 | 0.0005 | 0.0074 |
| 97 | 0.0080 | 0.0005 | 0.0075 |
| 98 | 0.0080 | 0.0005 | 0.0075 |
| 99 | 0.0081 | 0.0005 | 0.0076 |
| 100 | 0.0081 | 0.0005 | 0.0076 |
| 101 | 0.0082 | 0.0005 | 0.0077 |
| 102 | 0.0083 | 0.0005 | 0.0077 |
| 103 | 0.0083 | 0.0006 | 0.0078 |
| 104 | 0.0084 | 0.0006 | 0.0078 |
| 105 | 0.0085 | 0.0006 | 0.0079 |
| 106 | 0.0085 | 0.0006 | 0.0079 |
| 107 | 0.0086 | 0.0006 | 0.0080 |
| 108 | 0.0086 | 0.0006 | 0.0081 |
| 109 | 0.0087 | 0.0006 | 0.0082 |
| 110 | 0.0088 | 0.0006 | 0.0082 |
| 111 | 0.0089 | 0.0006 | 0.0083 |
| 112 | 0.0089 | 0.0006 | 0.0083 |
| 113 | 0.0090 | 0.0006 | 0.0084 |
| 114 | 0.0091 | 0.0006 | 0.0085 |
| 115 | 0.0092 | 0.0006 | 0.0086 |
| 116 | 0.0092 | 0.0006 | 0.0086 |

| | | | |
|---|---|---|---|
| 117 | 0.0093 | 0.0006 | 0.0087 |
| 118 | 0.0094 | 0.0006 | 0.0088 |
| 119 | 0.0095 | 0.0006 | 0.0089 |
| 120 | 0.0095 | 0.0006 | 0.0089 |
| 121 | 0.0097 | 0.0006 | 0.0090 |
| 122 | 0.0097 | 0.0006 | 0.0091 |
| 123 | 0.0098 | 0.0007 | 0.0092 |
| 124 | 0.0099 | 0.0007 | 0.0092 |
| 125 | 0.0100 | 0.0007 | 0.0094 |
| 126 | 0.0101 | 0.0007 | 0.0094 |
| 127 | 0.0102 | 0.0007 | 0.0095 |
| 128 | 0.0103 | 0.0007 | 0.0096 |
| 129 | 0.0104 | 0.0007 | 0.0097 |
| 130 | 0.0105 | 0.0007 | 0.0098 |
| 131 | 0.0107 | 0.0007 | 0.0099 |
| 132 | 0.0107 | 0.0007 | 0.0100 |
| 133 | 0.0109 | 0.0007 | 0.0102 |
| 134 | 0.0110 | 0.0007 | 0.0102 |
| 135 | 0.0111 | 0.0007 | 0.0104 |
| 136 | 0.0112 | 0.0007 | 0.0105 |
| 137 | 0.0114 | 0.0008 | 0.0106 |
| 138 | 0.0115 | 0.0008 | 0.0107 |
| 139 | 0.0117 | 0.0008 | 0.0109 |
| 140 | 0.0118 | 0.0008 | 0.0110 |
| 141 | 0.0120 | 0.0008 | 0.0112 |
| 142 | 0.0121 | 0.0008 | 0.0113 |
| 143 | 0.0123 | 0.0008 | 0.0115 |
| 144 | 0.0124 | 0.0008 | 0.0116 |
| 145 | 0.0126 | 0.0008 | 0.0118 |
| 146 | 0.0128 | 0.0008 | 0.0119 |
| 147 | 0.0130 | 0.0009 | 0.0121 |
| 148 | 0.0131 | 0.0009 | 0.0123 |
| 149 | 0.0134 | 0.0009 | 0.0125 |
| 150 | 0.0135 | 0.0009 | 0.0126 |
| 151 | 0.0138 | 0.0009 | 0.0129 |
| 152 | 0.0139 | 0.0009 | 0.0130 |
| 153 | 0.0143 | 0.0009 | 0.0133 |
| 154 | 0.0144 | 0.0010 | 0.0135 |
| 155 | 0.0147 | 0.0010 | 0.0138 |
| 156 | 0.0149 | 0.0010 | 0.0139 |
| 157 | 0.0153 | 0.0010 | 0.0143 |
| 158 | 0.0155 | 0.0010 | 0.0144 |
| 159 | 0.0159 | 0.0011 | 0.0148 |
| 160 | 0.0161 | 0.0011 | 0.0150 |
| 161 | 0.0165 | 0.0011 | 0.0154 |
| 162 | 0.0167 | 0.0011 | 0.0156 |
| 163 | 0.0172 | 0.0011 | 0.0161 |
| 164 | 0.0175 | 0.0012 | 0.0163 |
| 165 | 0.0180 | 0.0012 | 0.0168 |
| 166 | 0.0183 | 0.0012 | 0.0171 |
| 167 | 0.0189 | 0.0013 | 0.0177 |
| 168 | 0.0193 | 0.0013 | 0.0180 |
| 169 | 0.0270 | 0.0018 | 0.0252 |
| 170 | 0.0274 | 0.0018 | 0.0256 |
| 171 | 0.0283 | 0.0019 | 0.0264 |
| 172 | 0.0288 | 0.0019 | 0.0269 |
| 173 | 0.0298 | 0.0020 | 0.0278 |
| 174 | 0.0304 | 0.0020 | 0.0283 |
| 175 | 0.0315 | 0.0021 | 0.0294 |

| | | | |
|---|---|---|---|
| 176 | 0.0322 | 0.0021 | 0.0301 |
| 177 | 0.0336 | 0.0022 | 0.0314 |
| 178 | 0.0344 | 0.0023 | 0.0321 |
| 179 | 0.0361 | 0.0024 | 0.0337 |
| 180 | 0.0371 | 0.0025 | 0.0346 |
| 181 | 0.0393 | 0.0026 | 0.0367 |
| 182 | 0.0405 | 0.0027 | 0.0378 |
| 183 | 0.0434 | 0.0029 | 0.0405 |
| 184 | 0.0451 | 0.0030 | 0.0421 |
| 185 | 0.0315 | 0.0021 | 0.0294 |
| 186 | 0.0336 | 0.0022 | 0.0313 |
| 187 | 0.0389 | 0.0026 | 0.0363 |
| 188 | 0.0425 | 0.0028 | 0.0397 |
| 189 | 0.0528 | 0.0035 | 0.0493 |
| 190 | 0.0608 | 0.0040 | 0.0569 |
| 191 | 0.0923 | 0.0040 | 0.0884 |
| 192 | 0.1340 | 0.0040 | 0.1300 |
| 193 | 0.5797 | 0.0040 | 0.5758 |
| 194 | 0.0727 | 0.0040 | 0.0687 |
| 195 | 0.0470 | 0.0031 | 0.0438 |
| 196 | 0.0360 | 0.0024 | 0.0336 |
| 197 | 0.0469 | 0.0031 | 0.0438 |
| 198 | 0.0419 | 0.0028 | 0.0391 |
| 199 | 0.0382 | 0.0025 | 0.0356 |
| 200 | 0.0352 | 0.0023 | 0.0329 |
| 201 | 0.0329 | 0.0022 | 0.0307 |
| 202 | 0.0309 | 0.0021 | 0.0289 |
| 203 | 0.0293 | 0.0019 | 0.0273 |
| 204 | 0.0279 | 0.0019 | 0.0260 |
| 205 | 0.0196 | 0.0013 | 0.0183 |
| 206 | 0.0186 | 0.0012 | 0.0174 |
| 207 | 0.0178 | 0.0012 | 0.0166 |
| 208 | 0.0170 | 0.0011 | 0.0158 |
| 209 | 0.0163 | 0.0011 | 0.0152 |
| 210 | 0.0157 | 0.0010 | 0.0146 |
| 211 | 0.0151 | 0.0010 | 0.0141 |
| 212 | 0.0146 | 0.0010 | 0.0136 |
| 213 | 0.0141 | 0.0009 | 0.0132 |
| 214 | 0.0137 | 0.0009 | 0.0128 |
| 215 | 0.0133 | 0.0009 | 0.0124 |
| 216 | 0.0129 | 0.0009 | 0.0120 |
| 217 | 0.0125 | 0.0008 | 0.0117 |
| 218 | 0.0122 | 0.0008 | 0.0114 |
| 219 | 0.0119 | 0.0008 | 0.0111 |
| 220 | 0.0116 | 0.0008 | 0.0108 |
| 221 | 0.0113 | 0.0008 | 0.0106 |
| 222 | 0.0111 | 0.0007 | 0.0103 |
| 223 | 0.0108 | 0.0007 | 0.0101 |
| 224 | 0.0106 | 0.0007 | 0.0099 |
| 225 | 0.0104 | 0.0007 | 0.0097 |
| 226 | 0.0102 | 0.0007 | 0.0095 |
| 227 | 0.0100 | 0.0007 | 0.0093 |
| 228 | 0.0098 | 0.0006 | 0.0091 |
| 229 | 0.0096 | 0.0006 | 0.0090 |
| 230 | 0.0094 | 0.0006 | 0.0088 |
| 231 | 0.0093 | 0.0006 | 0.0087 |
| 232 | 0.0091 | 0.0006 | 0.0085 |
| 233 | 0.0090 | 0.0006 | 0.0084 |
| 234 | 0.0088 | 0.0006 | 0.0082 |

| | | | |
|---|---|---|---|
| 235 | 0.0087 | 0.0006 | 0.0081 |
| 236 | 0.0086 | 0.0006 | 0.0080 |
| 237 | 0.0084 | 0.0006 | 0.0079 |
| 238 | 0.0083 | 0.0006 | 0.0078 |
| 239 | 0.0082 | 0.0005 | 0.0076 |
| 240 | 0.0081 | 0.0005 | 0.0075 |
| 241 | 0.0080 | 0.0005 | 0.0074 |
| 242 | 0.0079 | 0.0005 | 0.0073 |
| 243 | 0.0078 | 0.0005 | 0.0072 |
| 244 | 0.0077 | 0.0005 | 0.0071 |
| 245 | 0.0076 | 0.0005 | 0.0071 |
| 246 | 0.0075 | 0.0005 | 0.0070 |
| 247 | 0.0074 | 0.0005 | 0.0069 |
| 248 | 0.0073 | 0.0005 | 0.0068 |
| 249 | 0.0072 | 0.0005 | 0.0067 |
| 250 | 0.0071 | 0.0005 | 0.0066 |
| 251 | 0.0070 | 0.0005 | 0.0066 |
| 252 | 0.0070 | 0.0005 | 0.0065 |
| 253 | 0.0069 | 0.0005 | 0.0064 |
| 254 | 0.0068 | 0.0005 | 0.0064 |
| 255 | 0.0067 | 0.0004 | 0.0063 |
| 256 | 0.0067 | 0.0004 | 0.0062 |
| 257 | 0.0066 | 0.0004 | 0.0062 |
| 258 | 0.0065 | 0.0004 | 0.0061 |
| 259 | 0.0065 | 0.0004 | 0.0060 |
| 260 | 0.0064 | 0.0004 | 0.0060 |
| 261 | 0.0063 | 0.0004 | 0.0059 |
| 262 | 0.0063 | 0.0004 | 0.0059 |
| 263 | 0.0062 | 0.0004 | 0.0058 |
| 264 | 0.0062 | 0.0004 | 0.0058 |
| 265 | 0.0061 | 0.0004 | 0.0057 |
| 266 | 0.0061 | 0.0004 | 0.0057 |
| 267 | 0.0060 | 0.0004 | 0.0056 |
| 268 | 0.0060 | 0.0004 | 0.0056 |
| 269 | 0.0059 | 0.0004 | 0.0055 |
| 270 | 0.0059 | 0.0004 | 0.0055 |
| 271 | 0.0058 | 0.0004 | 0.0054 |
| 272 | 0.0058 | 0.0004 | 0.0054 |
| 273 | 0.0057 | 0.0004 | 0.0053 |
| 274 | 0.0057 | 0.0004 | 0.0053 |
| 275 | 0.0056 | 0.0004 | 0.0052 |
| 276 | 0.0056 | 0.0004 | 0.0052 |
| 277 | 0.0055 | 0.0004 | 0.0052 |
| 278 | 0.0055 | 0.0004 | 0.0051 |
| 279 | 0.0054 | 0.0004 | 0.0051 |
| 280 | 0.0054 | 0.0004 | 0.0050 |
| 281 | 0.0054 | 0.0004 | 0.0050 |
| 282 | 0.0053 | 0.0004 | 0.0050 |
| 283 | 0.0053 | 0.0004 | 0.0049 |
| 284 | 0.0052 | 0.0003 | 0.0049 |
| 285 | 0.0052 | 0.0003 | 0.0049 |
| 286 | 0.0052 | 0.0003 | 0.0048 |
| 287 | 0.0051 | 0.0003 | 0.0048 |
| 288 | 0.0051 | 0.0003 | 0.0048 |

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Total soil rain loss = 0.24(In)
Total effective rainfall = 3.98(In)
Peak flow rate in flood hydrograph = 5599.01(CFS)

24 - H O U R  S T O R M
R u n o f f  H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 1400.0 | 2800.0 | 4200.0 | 5600.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0101 | 1.46 | Q | | | | |
| 0+10 | 0.0432 | 4.81 | Q | | | | |
| 0+15 | 0.1087 | 9.51 | Q | | | | |
| 0+20 | 0.2160 | 15.58 | Q | | | | |
| 0+25 | 0.3750 | 23.09 | Q | | | | |
| 0+30 | 0.6066 | 33.64 | Q | | | | |
| 0+35 | 0.9333 | 47.43 | Q | | | | |
| 0+40 | 1.4048 | 68.47 | Q | | | | |
| 0+45 | 2.0883 | 99.24 | Q | | | | |
| 0+50 | 2.8837 | 115.48 | Q | | | | |
| 0+55 | 3.7549 | 126.50 | Q | | | | |
| 1+ 0 | 4.6870 | 135.35 | Q | | | | |
| 1+ 5 | 5.6714 | 142.93 | VQ | | | | |
| 1+10 | 6.6989 | 149.20 | VQ | | | | |
| 1+15 | 7.7678 | 155.19 | VQ | | | | |
| 1+20 | 8.8722 | 160.37 | VQ | | | | |
| 1+25 | 10.0102 | 165.23 | VQ | | | | |
| 1+30 | 11.1776 | 169.51 | VQ | | | | |
| 1+35 | 12.3724 | 173.49 | VQ | | | | |
| 1+40 | 13.5925 | 177.16 | VQ | | | | |
| 1+45 | 14.8363 | 180.60 | VQ | | | | |
| 1+50 | 16.1022 | 183.81 | VQ | | | | |
| 1+55 | 17.3883 | 186.74 | VQ | | | | |
| 2+ 0 | 18.6936 | 189.54 | VQ | | | | |
| 2+ 5 | 20.0168 | 192.13 | VQ | | | | |
| 2+10 | 21.3571 | 194.60 | VQ | | | | |
| 2+15 | 22.7128 | 196.85 | VQ | | | | |
| 2+20 | 24.0833 | 199.00 | VQ | | | | |
| 2+25 | 25.4671 | 200.92 | VQ | | | | |
| 2+30 | 26.8636 | 202.78 | VQ | | | | |
| 2+35 | 28.2722 | 204.53 | VQ | | | | |
| 2+40 | 29.6925 | 206.23 | \|Q | | | | |
| 2+45 | 31.1234 | 207.75 | \|Q | | | | |
| 2+50 | 32.5642 | 209.21 | \|Q | | | | |
| 2+55 | 34.0134 | 210.43 | \|Q | | | | |
| 3+ 0 | 35.4703 | 211.55 | \|Q | | | | |
| 3+ 5 | 36.9352 | 212.70 | \|Q | | | | |
| 3+10 | 38.4079 | 213.83 | \|Q | | | | |
| 3+15 | 39.8884 | 214.97 | \|Q | | | | |
| 3+20 | 41.3765 | 216.07 | \|Q | | | | |
| 3+25 | 42.8724 | 217.21 | \|Q | | | | |
| 3+30 | 44.3761 | 218.33 | \|Q | | | | |
| 3+35 | 45.8874 | 219.45 | \|Q | | | | |
| 3+40 | 47.4059 | 220.49 | \|Q | | | | |
| 3+45 | 48.9319 | 221.57 | \|Q | | | | |
| 3+50 | 50.4651 | 222.63 | \|Q | | | | |
| 3+55 | 52.0060 | 223.73 | \|Q | | | | |
| 4+ 0 | 53.5545 | 224.85 | \|Q | | | | |
| 4+ 5 | 55.1110 | 226.00 | \|Q | | | | |

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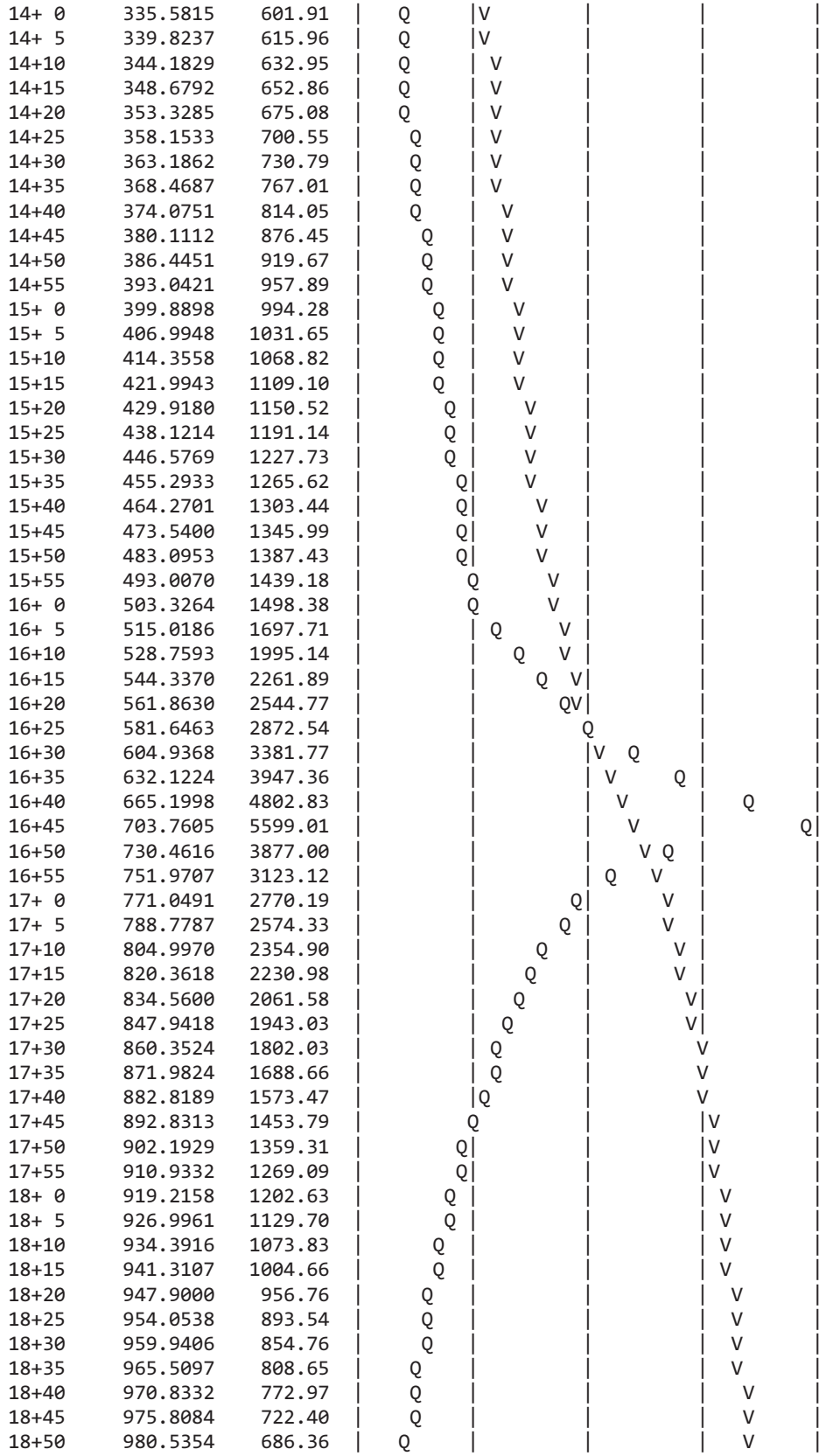
4+10      56.6753    227.14  |Q        |          |          |          |
4+15      58.2477    228.31  |QV       |          |          |          |
4+20      59.8276    229.40  |QV       |          |          |          |
4+25      61.4151    230.51  |QV       |          |          |          |
4+30      63.0102    231.61  |QV       |          |          |          |
4+35      64.6131    232.74  |QV       |          |          |          |
4+40      66.2235    233.83  |QV       |          |          |          |
4+45      67.8415    234.94  |QV       |          |          |          |
4+50      69.4672    236.04  |QV       |          |          |          |
4+55      71.1008    237.20  |QV       |          |          |          |
5+ 0      72.7418    238.28  |QV       |          |          |          |
5+ 5      74.3905    239.39  |QV       |          |          |          |
5+10      76.0468    240.49  |QV       |          |          |          |
5+15      77.7109    241.63  |QV       |          |          |          |
5+20      79.3828    242.75  |QV       |          |          |          |
5+25      81.0627    243.92  |QV       |          |          |          |
5+30      82.7505    245.07  |QV       |          |          |          |
5+35      84.4464    246.26  |QV       |          |          |          |
5+40      86.1505    247.43  |Q V      |          |          |          |
5+45      87.8629    248.64  |Q V      |          |          |          |
5+50      89.5836    249.84  |Q V      |          |          |          |
5+55      91.3129    251.09  |Q V      |          |          |          |
6+ 0      93.0506    252.32  |Q V      |          |          |          |
6+ 5      94.7972    253.60  |Q V      |          |          |          |
6+10      96.5525    254.86  |Q V      |          |          |          |
6+15      98.3168    256.18  |Q V      |          |          |          |
6+20     100.0900    257.47  |Q V      |          |          |          |
6+25     101.8725    258.82  |Q V      |          |          |          |
6+30     103.6642    260.15  |Q V      |          |          |          |
6+35     105.4654    261.53  |Q V      |          |          |          |
6+40     107.2760    262.90  |Q V      |          |          |          |
6+45     109.0963    264.32  |Q V      |          |          |          |
6+50     110.9264    265.72  |Q V      |          |          |          |
6+55     112.7665    267.18  |Q V      |          |          |          |
7+ 0     114.6165    268.62  |Q  V     |          |          |          |
7+ 5     116.4768    270.12  |Q  V     |          |          |          |
7+10     118.3474    271.61  |Q  V     |          |          |          |
7+15     120.2286    273.15  |Q  V     |          |          |          |
7+20     122.1203    274.68  |Q  V     |          |          |          |
7+25     124.0230    276.26  |Q  V     |          |          |          |
7+30     125.9364    277.83  |Q  V     |          |          |          |
7+35     127.8612    279.47  |Q  V     |          |          |          |
7+40     129.7970    281.09  | Q V     |          |          |          |
7+45     131.7445    282.77  | Q V     |          |          |          |
7+50     133.7034    284.44  | Q V     |          |          |          |
7+55     135.6743    286.18  | Q V     |          |          |          |
8+ 0     137.6571    287.89  | Q V     |          |          |          |
8+ 5     139.6522    289.68  | Q V     |          |          |          |
8+10     141.6594    291.46  | Q V     |          |          |          |
8+15     143.6794    293.31  | Q  V    |          |          |          |
8+20     145.7121    295.13  | Q  V    |          |          |          |
8+25     147.7578    297.04  | Q  V    |          |          |          |
8+30     149.8166    298.93  | Q  V    |          |          |          |
8+35     151.8889    300.90  | Q  V    |          |          |          |
8+40     153.9747    302.86  | Q  V    |          |          |          |
8+45     156.0745    304.90  | Q  V    |          |          |          |
8+50     158.1883    306.92  | Q  V    |          |          |          |
8+55     160.3165    309.02  | Q  V    |          |          |          |
9+ 0     162.4592    311.12  | Q  V    |          |          |          |
```

```
 9+ 5     164.6169    313.30  | Q  V    |          |          |          |
 9+10     166.7895    315.46  | Q  V    |          |          |          |
 9+15     168.9777    317.73  | Q  V    |          |          |          |
 9+20     171.1814    319.97  | Q  V    |          |          |          |
 9+25     173.4012    322.32  | Q   V   |          |          |          |
 9+30     175.6371    324.65  | Q   V   |          |          |          |
 9+35     177.8897    327.08  | Q   V   |          |          |          |
 9+40     180.1589    329.50  | Q   V   |          |          |          |
 9+45     182.4456    332.03  | Q   V   |          |          |          |
 9+50     184.7496    334.54  | Q   V   |          |          |          |
 9+55     187.0717    337.17  | Q   V   |          |          |          |
10+ 0     189.4118    339.78  | Q   V   |          |          |          |
10+ 5     191.7708    342.52  | Q   V   |          |          |          |
10+10     194.1484    345.24  | Q   V   |          |          |          |
10+15     196.5457    348.09  | Q   V   |          |          |          |
10+20     198.9626    350.92  | Q   V   |          |          |          |
10+25     201.3999    353.90  | Q    V  |          |          |          |
10+30     203.8575    356.85  | Q    V  |          |          |          |
10+35     206.3366    359.96  | Q    V  |          |          |          |
10+40     208.8369    363.05  | Q    V  |          |          |          |
10+45     211.3596    366.29  | Q    V  |          |          |          |
10+50     213.9045    369.52  | Q    V  |          |          |          |
10+55     216.4728    372.92  | Q    V  |          |          |          |
11+ 0     219.0644    376.30  | Q    V  |          |          |          |
11+ 5     221.6805    379.86  | Q    V  |          |          |          |
11+10     224.3210    383.40  | Q    V  |          |          |          |
11+15     226.9872    387.14  | Q    V  |          |          |          |
11+20     229.6791    390.86  | Q     V |          |          |          |
11+25     232.3980    394.78  | Q     V |          |          |          |
11+30     235.1439    398.70  | Q     V |          |          |          |
11+35     237.9182    402.83  | Q     V |          |          |          |
11+40     240.7209    406.95  | Q     V |          |          |          |
11+45     243.5535    411.30  | Q     V |          |          |          |
11+50     246.4162    415.66  | Q     V |          |          |          |
11+55     249.3105    420.25  |  Q    V |          |          |          |
12+ 0     252.2365    424.85  |  Q    V |          |          |          |
12+ 5     255.1960    429.73  |  Q    V |          |          |          |
12+10     258.1893    434.62  |  Q     V|          |          |          |
12+15     261.2182    439.81  |  Q     V|          |          |          |
12+20     264.2831    445.02  |  Q     V|          |          |          |
12+25     267.3860    450.54  |  Q     V|          |          |          |
12+30     270.5273    456.11  |  Q     V|          |          |          |
12+35     273.7093    462.03  |  Q     V|          |          |          |
12+40     276.9327    468.03  |  Q     V|          |          |          |
12+45     280.2003    474.46  |  Q     V|          |          |          |
12+50     283.5118    480.84  |  Q     V|          |          |          |
12+55     286.8698    487.58  |  Q      V          |          |          |
13+ 0     290.2746    494.37  |  Q      V          |          |          |
13+ 5     293.7291    501.59  |  Q      V          |          |          |
13+10     297.2338    508.88  |  Q      V          |          |          |
13+15     300.7920    516.65  |  Q      V          |          |          |
13+20     304.4043    524.51  |  Q      V          |          |          |
13+25     308.0745    532.91  |  Q      V          |          |          |
13+30     311.8033    541.42  |  Q      V          |          |          |
13+35     315.5948    550.53  |  Q      |V         |          |          |
13+40     319.4501    559.80  |  Q      |V         |          |          |
13+45     323.3740    569.74  |   Q     |V         |          |          |
13+50     327.3675    579.87  |   Q     |V         |          |          |
13+55     331.4362    590.77  |   Q     |V         |          |          |
```



| | | | |
|---|---|---|---|
| 14+ 0 | 335.5815 | 601.91 | |
| 14+ 5 | 339.8237 | 615.96 | |
| 14+10 | 344.1829 | 632.95 | |
| 14+15 | 348.6792 | 652.86 | |
| 14+20 | 353.3285 | 675.08 | |
| 14+25 | 358.1533 | 700.55 | |
| 14+30 | 363.1862 | 730.79 | |
| 14+35 | 368.4687 | 767.01 | |
| 14+40 | 374.0751 | 814.05 | |
| 14+45 | 380.1112 | 876.45 | |
| 14+50 | 386.4451 | 919.67 | |
| 14+55 | 393.0421 | 957.89 | |
| 15+ 0 | 399.8898 | 994.28 | |
| 15+ 5 | 406.9948 | 1031.65 | |
| 15+10 | 414.3558 | 1068.82 | |
| 15+15 | 421.9943 | 1109.10 | |
| 15+20 | 429.9180 | 1150.52 | |
| 15+25 | 438.1214 | 1191.14 | |
| 15+30 | 446.5769 | 1227.73 | |
| 15+35 | 455.2933 | 1265.62 | |
| 15+40 | 464.2701 | 1303.44 | |
| 15+45 | 473.5400 | 1345.99 | |
| 15+50 | 483.0953 | 1387.43 | |
| 15+55 | 493.0070 | 1439.18 | |
| 16+ 0 | 503.3264 | 1498.38 | |
| 16+ 5 | 515.0186 | 1697.71 | |
| 16+10 | 528.7593 | 1995.14 | |
| 16+15 | 544.3370 | 2261.89 | |
| 16+20 | 561.8630 | 2544.77 | |
| 16+25 | 581.6463 | 2872.54 | |
| 16+30 | 604.9368 | 3381.77 | |
| 16+35 | 632.1224 | 3947.36 | |
| 16+40 | 665.1998 | 4802.83 | |
| 16+45 | 703.7605 | 5599.01 | |
| 16+50 | 730.4616 | 3877.00 | |
| 16+55 | 751.9707 | 3123.12 | |
| 17+ 0 | 771.0491 | 2770.19 | |
| 17+ 5 | 788.7787 | 2574.33 | |
| 17+10 | 804.9970 | 2354.90 | |
| 17+15 | 820.3618 | 2230.98 | |
| 17+20 | 834.5600 | 2061.58 | |
| 17+25 | 847.9418 | 1943.03 | |
| 17+30 | 860.3524 | 1802.03 | |
| 17+35 | 871.9824 | 1688.66 | |
| 17+40 | 882.8189 | 1573.47 | |
| 17+45 | 892.8313 | 1453.79 | |
| 17+50 | 902.1929 | 1359.31 | |
| 17+55 | 910.9332 | 1269.09 | |
| 18+ 0 | 919.2158 | 1202.63 | |
| 18+ 5 | 926.9961 | 1129.70 | |
| 18+10 | 934.3916 | 1073.83 | |
| 18+15 | 941.3107 | 1004.66 | |
| 18+20 | 947.9000 | 956.76 | |
| 18+25 | 954.0538 | 893.54 | |
| 18+30 | 959.9406 | 854.76 | |
| 18+35 | 965.5097 | 808.65 | |
| 18+40 | 970.8332 | 772.97 | |
| 18+45 | 975.8084 | 722.40 | |
| 18+50 | 980.5354 | 686.36 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 18+55 | 984.9049 | 634.44 | Q | | | V |
| 19+ 0 | 989.0615 | 603.54 | Q | | | V |
| 19+ 5 | 993.0873 | 584.54 | Q | | | V |
| 19+10 | 996.9925 | 567.04 | Q | | | V |
| 19+15 | 1000.7611 | 547.21 | Q | | | V |
| 19+20 | 1004.4056 | 529.17 | Q | | | V |
| 19+25 | 1007.9503 | 514.69 | Q | | | V |
| 19+30 | 1011.3972 | 500.50 | Q | | | V |
| 19+35 | 1014.7248 | 483.17 | Q | | | V |
| 19+40 | 1017.9267 | 464.91 | Q | | | V |
| 19+45 | 1021.0546 | 454.17 | Q | | | V |
| 19+50 | 1024.1169 | 444.64 | Q | | | V |
| 19+55 | 1027.1253 | 436.82 | Q | | | V |
| 20+ 0 | 1030.0932 | 430.94 | Q | | | V |
| 20+ 5 | 1033.0047 | 422.76 | Q | | | V |
| 20+10 | 1035.8560 | 414.00 | Q | | | V |
| 20+15 | 1038.6384 | 404.01 | Q | | | V |
| 20+20 | 1041.3190 | 389.22 | Q | | | V |
| 20+25 | 1043.9381 | 380.29 | Q | | | V |
| 20+30 | 1046.5078 | 373.12 | Q | | | V |
| 20+35 | 1049.0281 | 365.95 | Q | | | V |
| 20+40 | 1051.4800 | 356.03 | Q | | | V |
| 20+45 | 1053.8790 | 348.32 | Q | | | V |
| 20+50 | 1056.2356 | 342.19 | Q | | | V |
| 20+55 | 1058.5621 | 337.81 | Q | | | V |
| 21+ 0 | 1060.7980 | 324.65 | Q | | | V |
| 21+ 5 | 1062.9928 | 318.69 | Q | | | V |
| 21+10 | 1065.1525 | 313.59 | Q | | | V |
| 21+15 | 1067.2799 | 308.90 | Q | | | V |
| 21+20 | 1069.3753 | 304.26 | Q | | | V |
| 21+25 | 1071.4400 | 299.78 | Q | | | V |
| 21+30 | 1073.4724 | 295.11 | Q | | | V |
| 21+35 | 1075.4742 | 290.65 | Q | | | V |
| 21+40 | 1077.4494 | 286.80 | Q | | | V |
| 21+45 | 1079.3992 | 283.12 | Q | | | V |
| 21+50 | 1081.3247 | 279.57 | Q | | | V |
| 21+55 | 1083.2262 | 276.10 | Q | | | V |
| 22+ 0 | 1085.1053 | 272.85 | Q | | | V |
| 22+ 5 | 1086.9627 | 269.70 | Q | | | V |
| 22+10 | 1088.7992 | 266.65 | Q | | | V |
| 22+15 | 1090.6153 | 263.70 | Q | | | V |
| 22+20 | 1092.4116 | 260.83 | Q | | | V |
| 22+25 | 1094.1888 | 258.05 | Q | | | V |
| 22+30 | 1095.9474 | 255.35 | Q | | | V |
| 22+35 | 1097.6880 | 252.73 | Q | | | V |
| 22+40 | 1099.4110 | 250.18 | Q | | | V |
| 22+45 | 1101.1169 | 247.70 | Q | | | V |
| 22+50 | 1102.8061 | 245.28 | Q | | | V |
| 22+55 | 1104.4791 | 242.92 | Q | | | V |
| 23+ 0 | 1106.1364 | 240.63 | Q | | | V |
| 23+ 5 | 1107.7781 | 238.39 | Q | | | V |
| 23+10 | 1109.4048 | 236.20 | Q | | | V |
| 23+15 | 1111.0169 | 234.06 | Q | | | V |
| 23+20 | 1112.6145 | 231.98 | Q | | | V |
| 23+25 | 1114.1982 | 229.94 | Q | | | V |
| 23+30 | 1115.7681 | 227.95 | Q | | | V |
| 23+35 | 1117.3246 | 226.01 | Q | | | V |
| 23+40 | 1118.8680 | 224.10 | Q | | | V |
| 23+45 | 1120.3986 | 222.24 | Q | | | V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+50 | 1121.9166 | 220.42 | \|Q | \| | \| | \| | V\| |
| 23+55 | 1123.4223 | 218.63 | \|Q | \| | \| | \| | V\| |
| 24+ 0 | 1124.9160 | 216.88 | \|Q | \| | \| | \| | V\| |
| 24+ 5 | 1126.3878 | 213.71 | \|Q | \| | \| | \| | V\| |
| 24+10 | 1127.8252 | 208.70 | \|Q | \| | \| | \| | V\| |
| 24+15 | 1129.2193 | 202.42 | \|Q | \| | \| | \| | V\| |
| 24+20 | 1130.5612 | 194.85 | \|Q | \| | \| | \| | V\| |
| 24+25 | 1131.8417 | 185.93 | \|Q | \| | \| | \| | V\| |
| 24+30 | 1133.0405 | 174.07 | \|Q | \| | \| | \| | V\| |
| 24+35 | 1134.1364 | 159.12 | \|Q | \| | \| | \| | V\| |
| 24+40 | 1135.0806 | 137.10 | Q | \| | \| | \| | V\| |
| 24+45 | 1135.8078 | 105.59 | Q | \| | \| | \| | V\| |
| 24+50 | 1136.4202 | 88.91 | Q | \| | \| | \| | V\| |
| 24+55 | 1136.9550 | 77.65 | Q | \| | \| | \| | V\| |
| 25+ 0 | 1137.4278 | 68.65 | Q | \| | \| | \| | V\| |
| 25+ 5 | 1137.8482 | 61.05 | Q | \| | \| | \| | V\| |
| 25+10 | 1138.2257 | 54.81 | Q | \| | \| | \| | V\| |
| 25+15 | 1138.5628 | 48.94 | Q | \| | \| | \| | V\| |
| 25+20 | 1138.8654 | 43.95 | Q | \| | \| | \| | V\| |
| 25+25 | 1139.1363 | 39.34 | Q | \| | \| | \| | V\| |
| 25+30 | 1139.3798 | 35.35 | Q | \| | \| | \| | V\| |
| 25+35 | 1139.5983 | 31.72 | Q | \| | \| | \| | V\| |
| 25+40 | 1139.7941 | 28.43 | Q | \| | \| | \| | V\| |
| 25+45 | 1139.9692 | 25.43 | Q | \| | \| | \| | V\| |
| 25+50 | 1140.1254 | 22.68 | Q | \| | \| | \| | V\| |
| 25+55 | 1140.2649 | 20.26 | Q | \| | \| | \| | V\| |
| 26+ 0 | 1140.3888 | 17.99 | Q | \| | \| | \| | V\| |
| 26+ 5 | 1140.4989 | 15.98 | Q | \| | \| | \| | V\| |
| 26+10 | 1140.5959 | 14.09 | Q | \| | \| | \| | V\| |
| 26+15 | 1140.6818 | 12.47 | Q | \| | \| | \| | V\| |
| 26+20 | 1140.7573 | 10.95 | Q | \| | \| | \| | V\| |
| 26+25 | 1140.8242 | 9.71 | Q | \| | \| | \| | V\| |
| 26+30 | 1140.8829 | 8.53 | Q | \| | \| | \| | V\| |
| 26+35 | 1140.9346 | 7.50 | Q | \| | \| | \| | V\| |
| 26+40 | 1140.9795 | 6.52 | Q | \| | \| | \| | V\| |
| 26+45 | 1141.0191 | 5.75 | Q | \| | \| | \| | V\| |
| 26+50 | 1141.0538 | 5.05 | Q | \| | \| | \| | V\| |
| 26+55 | 1141.0856 | 4.61 | Q | \| | \| | \| | V\| |
| 27+ 0 | 1141.1150 | 4.27 | Q | \| | \| | \| | V\| |
| 27+ 5 | 1141.1421 | 3.93 | Q | \| | \| | \| | V\| |
| 27+10 | 1141.1668 | 3.60 | Q | \| | \| | \| | V\| |
| 27+15 | 1141.1895 | 3.29 | Q | \| | \| | \| | V\| |
| 27+20 | 1141.2103 | 3.02 | Q | \| | \| | \| | V\| |
| 27+25 | 1141.2292 | 2.74 | Q | \| | \| | \| | V\| |
| 27+30 | 1141.2461 | 2.47 | Q | \| | \| | \| | V\| |
| 27+35 | 1141.2615 | 2.23 | Q | \| | \| | \| | V\| |
| 27+40 | 1141.2757 | 2.06 | Q | \| | \| | \| | V\| |
| 27+45 | 1141.2888 | 1.89 | Q | \| | \| | \| | V\| |
| 27+50 | 1141.3007 | 1.73 | Q | \| | \| | \| | V\| |
| 27+55 | 1141.3113 | 1.55 | Q | \| | \| | \| | V\| |
| 28+ 0 | 1141.3207 | 1.35 | Q | \| | \| | \| | V\| |
| 28+ 5 | 1141.3286 | 1.15 | Q | \| | \| | \| | V\| |
| 28+10 | 1141.3352 | 0.96 | Q | \| | \| | \| | V\| |
| 28+15 | 1141.3405 | 0.77 | Q | \| | \| | \| | V\| |
| 28+20 | 1141.3449 | 0.65 | Q | \| | \| | \| | V\| |
| 28+25 | 1141.3486 | 0.54 | Q | \| | \| | \| | V\| |
| 28+30 | 1141.3516 | 0.43 | Q | \| | \| | \| | V\| |
| 28+35 | 1141.3539 | 0.33 | Q | \| | \| | \| | V\| |
| 28+40 | 1141.3556 | 0.25 | Q | \| | \| | \| | V\| |

```
   28+45    1141.3569      0.19  Q         |          |          |        V|
   28+50    1141.3579      0.13  Q         |          |          |        V|
   28+55    1141.3582      0.05  Q         |          |          |        V|
   29+ 0    1141.3585      0.04  Q         |          |          |        V|
   29+ 5    1141.3587      0.03  Q         |          |          |        V|
   29+10    1141.3589      0.03  Q         |          |          |        V|
   29+15    1141.3590      0.02  Q         |          |          |        V|
   29+20    1141.3591      0.01  Q         |          |          |        V|
   29+25    1141.3591      0.00  Q         |          |          |         V
-------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 08/10/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREA "F"
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-10-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 4924.59 | 1 | 1.36 |
| Rainfall data for year 100 | | |
| 4924.59 | 6 | 2.10 |
| Rainfall data for year 100 | | |
| 4924.59 | 24 | 3.14 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 77.6 | 92.6 | 4924.59 | 1.000 | 0.145 | 0.987 | 0.143 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.143

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 4860.57 | 0.987 | 77.6 | 92.6 | 0.80 | 0.747 |
| 64.02 | 0.013 | 98.0 | 98.0 | 0.20 | 0.926 |

Area-averaged catchment yield fraction, Y = 0.749
Area-averaged low loss fraction, Yb = 0.251
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 36355.00(Ft.)
Length from concentration point to centroid = 13280.00(Ft.)
Elevation difference along watercourse = 2138.00(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 4924.59(Ac.)
Catchment Lag time = 0.834 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 9.9863
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.143(In/Hr)
Average low loss rate fraction (Yb) = 0.251 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.100
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.900

Computed peak 5-minute rainfall = 0.646(In)
Computed peak 30-minute rainfall = 1.105(In)
Specified peak 1-hour rainfall = 1.361(In)
Computed peak 3-hour rainfall = 1.777(In)
Specified peak 6-hour rainfall = 2.103(In)
Specified peak 24-hour rainfall = 3.138(In)

Rainfall depth area reduction factors:
Using a total area of 4924.59(Ac.) (Ref: fig. E-4)

5-minute factor = 0.793 Adjusted rainfall = 0.512(In)
30-minute factor = 0.793 Adjusted rainfall = 0.877(In)
1-hour factor = 0.793 Adjusted rainfall = 1.080(In)
3-hour factor = 0.972 Adjusted rainfall = 1.727(In)
6-hour factor = 0.986 Adjusted rainfall = 2.073(In)
24-hour factor = 0.993 Adjusted rainfall = 3.117(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 59556.76 (CFS)) | |
| 1 | 0.459 | 273.190 |
| 2 | 1.585 | 670.940 |
| 3 | 3.347 | 1048.957 |
| 4 | 5.732 | 1420.797 |
| 5 | 8.804 | 1829.681 |

| | | |
|---|---|---|
| 6 | 13.499 | 2796.008 |
| 7 | 20.640 | 4252.726 |
| 8 | 30.085 | 5625.466 |
| 9 | 38.658 | 5105.681 |
| 10 | 46.295 | 4548.264 |
| 11 | 52.608 | 3759.799 |
| 12 | 57.529 | 2931.143 |
| 13 | 61.394 | 2301.913 |
| 14 | 64.635 | 1929.922 |
| 15 | 67.454 | 1679.037 |
| 16 | 69.987 | 1508.590 |
| 17 | 72.285 | 1368.362 |
| 18 | 74.301 | 1200.791 |
| 19 | 76.102 | 1072.325 |
| 20 | 77.817 | 1021.584 |
| 21 | 79.339 | 906.299 |
| 22 | 80.669 | 792.293 |
| 23 | 81.973 | 776.499 |
| 24 | 83.097 | 669.578 |
| 25 | 84.187 | 649.471 |
| 26 | 85.216 | 612.857 |
| 27 | 86.175 | 571.010 |
| 28 | 87.117 | 560.791 |
| 29 | 87.939 | 489.556 |
| 30 | 88.738 | 475.803 |
| 31 | 89.447 | 422.203 |
| 32 | 90.050 | 359.330 |
| 33 | 90.648 | 356.022 |
| 34 | 91.207 | 332.888 |
| 35 | 91.758 | 328.304 |
| 36 | 92.273 | 306.738 |
| 37 | 92.744 | 280.778 |
| 38 | 93.211 | 277.850 |
| 39 | 93.642 | 256.514 |
| 40 | 94.065 | 252.176 |
| 41 | 94.441 | 224.009 |
| 42 | 94.759 | 189.226 |
| 43 | 95.077 | 189.132 |
| 44 | 95.394 | 189.132 |
| 45 | 95.712 | 189.132 |
| 46 | 95.997 | 169.752 |
| 47 | 96.241 | 145.203 |
| 48 | 96.484 | 145.120 |
| 49 | 96.728 | 145.120 |
| 50 | 96.972 | 145.120 |
| 51 | 97.182 | 125.505 |
| 52 | 97.350 | 100.024 |
| 53 | 97.518 | 99.919 |
| 54 | 97.686 | 99.919 |
| 55 | 97.853 | 99.919 |
| 56 | 97.991 | 82.117 |
| 57 | 98.089 | 58.404 |
| 58 | 98.187 | 58.286 |
| 59 | 98.285 | 58.286 |
| 60 | 98.383 | 58.286 |
| 61 | 98.487 | 61.794 |
| 62 | 98.599 | 66.584 |
| 63 | 98.710 | 66.612 |
| 64 | 98.822 | 66.612 |

| | | |
|---|---|---|
| 65 | 98.934 | 66.612 |
| 66 | 99.045 | 66.119 |
| 67 | 99.155 | 65.428 |
| 68 | 99.265 | 65.423 |
| 69 | 99.375 | 65.423 |
| 70 | 99.485 | 65.423 |
| 71 | 99.572 | 52.359 |
| 72 | 99.629 | 33.596 |
| 73 | 99.685 | 33.455 |
| 74 | 99.741 | 33.455 |
| 75 | 99.797 | 33.455 |
| 76 | 99.854 | 33.455 |
| 77 | 99.910 | 33.455 |
| 78 | 99.966 | 33.455 |
| 79 | 100.000 | 20.297 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5124 | 0.5124 |
| 2 | 0.6308 | 0.1184 |
| 3 | 0.7124 | 0.0816 |
| 4 | 0.7766 | 0.0642 |
| 5 | 0.8304 | 0.0538 |
| 6 | 0.8771 | 0.0467 |
| 7 | 0.9186 | 0.0415 |
| 8 | 0.9562 | 0.0375 |
| 9 | 0.9905 | 0.0344 |
| 10 | 1.0224 | 0.0318 |
| 11 | 1.0520 | 0.0297 |
| 12 | 1.0798 | 0.0278 |
| 13 | 1.1174 | 0.0376 |
| 14 | 1.1534 | 0.0360 |
| 15 | 1.1879 | 0.0345 |
| 16 | 1.2211 | 0.0332 |
| 17 | 1.2532 | 0.0321 |
| 18 | 1.2842 | 0.0310 |
| 19 | 1.3142 | 0.0300 |
| 20 | 1.3434 | 0.0291 |
| 21 | 1.3717 | 0.0283 |
| 22 | 1.3992 | 0.0276 |
| 23 | 1.4261 | 0.0268 |
| 24 | 1.4523 | 0.0262 |
| 25 | 1.4778 | 0.0256 |
| 26 | 1.5028 | 0.0250 |
| 27 | 1.5273 | 0.0244 |
| 28 | 1.5512 | 0.0239 |
| 29 | 1.5746 | 0.0234 |
| 30 | 1.5976 | 0.0230 |
| 31 | 1.6202 | 0.0226 |
| 32 | 1.6423 | 0.0221 |
| 33 | 1.6641 | 0.0217 |
| 34 | 1.6854 | 0.0214 |
| 35 | 1.7065 | 0.0210 |
| 36 | 1.7271 | 0.0207 |
| 37 | 1.7396 | 0.0125 |
| 38 | 1.7519 | 0.0123 |
| 39 | 1.7639 | 0.0120 |
| 40 | 1.7757 | 0.0118 |
| 41 | 1.7873 | 0.0116 |

| | | |
|---|---|---|
| 42 | 1.7987 | 0.0114 |
| 43 | 1.8098 | 0.0112 |
| 44 | 1.8208 | 0.0110 |
| 45 | 1.8316 | 0.0108 |
| 46 | 1.8423 | 0.0106 |
| 47 | 1.8527 | 0.0105 |
| 48 | 1.8630 | 0.0103 |
| 49 | 1.8732 | 0.0101 |
| 50 | 1.8832 | 0.0100 |
| 51 | 1.8930 | 0.0098 |
| 52 | 1.9027 | 0.0097 |
| 53 | 1.9123 | 0.0096 |
| 54 | 1.9217 | 0.0094 |
| 55 | 1.9310 | 0.0093 |
| 56 | 1.9402 | 0.0092 |
| 57 | 1.9493 | 0.0091 |
| 58 | 1.9582 | 0.0089 |
| 59 | 1.9670 | 0.0088 |
| 60 | 1.9758 | 0.0087 |
| 61 | 1.9844 | 0.0086 |
| 62 | 1.9929 | 0.0085 |
| 63 | 2.0013 | 0.0084 |
| 64 | 2.0096 | 0.0083 |
| 65 | 2.0178 | 0.0082 |
| 66 | 2.0260 | 0.0081 |
| 67 | 2.0340 | 0.0080 |
| 68 | 2.0419 | 0.0079 |
| 69 | 2.0498 | 0.0079 |
| 70 | 2.0576 | 0.0078 |
| 71 | 2.0653 | 0.0077 |
| 72 | 2.0729 | 0.0076 |
| 73 | 2.0813 | 0.0084 |
| 74 | 2.0897 | 0.0083 |
| 75 | 2.0980 | 0.0083 |
| 76 | 2.1061 | 0.0082 |
| 77 | 2.1143 | 0.0081 |
| 78 | 2.1223 | 0.0080 |
| 79 | 2.1303 | 0.0080 |
| 80 | 2.1382 | 0.0079 |
| 81 | 2.1460 | 0.0078 |
| 82 | 2.1538 | 0.0078 |
| 83 | 2.1615 | 0.0077 |
| 84 | 2.1691 | 0.0076 |
| 85 | 2.1767 | 0.0076 |
| 86 | 2.1842 | 0.0075 |
| 87 | 2.1916 | 0.0074 |
| 88 | 2.1990 | 0.0074 |
| 89 | 2.2063 | 0.0073 |
| 90 | 2.2136 | 0.0073 |
| 91 | 2.2208 | 0.0072 |
| 92 | 2.2279 | 0.0072 |
| 93 | 2.2350 | 0.0071 |
| 94 | 2.2421 | 0.0070 |
| 95 | 2.2491 | 0.0070 |
| 96 | 2.2560 | 0.0069 |
| 97 | 2.2629 | 0.0069 |
| 98 | 2.2697 | 0.0068 |
| 99 | 2.2765 | 0.0068 |
| 100 | 2.2833 | 0.0067 |

| | | |
|---|---|---|
| 101 | 2.2900 | 0.0067 |
| 102 | 2.2966 | 0.0066 |
| 103 | 2.3032 | 0.0066 |
| 104 | 2.3098 | 0.0066 |
| 105 | 2.3163 | 0.0065 |
| 106 | 2.3228 | 0.0065 |
| 107 | 2.3292 | 0.0064 |
| 108 | 2.3356 | 0.0064 |
| 109 | 2.3419 | 0.0063 |
| 110 | 2.3482 | 0.0063 |
| 111 | 2.3545 | 0.0063 |
| 112 | 2.3607 | 0.0062 |
| 113 | 2.3669 | 0.0062 |
| 114 | 2.3730 | 0.0061 |
| 115 | 2.3791 | 0.0061 |
| 116 | 2.3852 | 0.0061 |
| 117 | 2.3912 | 0.0060 |
| 118 | 2.3972 | 0.0060 |
| 119 | 2.4032 | 0.0060 |
| 120 | 2.4091 | 0.0059 |
| 121 | 2.4150 | 0.0059 |
| 122 | 2.4209 | 0.0059 |
| 123 | 2.4267 | 0.0058 |
| 124 | 2.4325 | 0.0058 |
| 125 | 2.4382 | 0.0058 |
| 126 | 2.4440 | 0.0057 |
| 127 | 2.4496 | 0.0057 |
| 128 | 2.4553 | 0.0057 |
| 129 | 2.4609 | 0.0056 |
| 130 | 2.4665 | 0.0056 |
| 131 | 2.4721 | 0.0056 |
| 132 | 2.4776 | 0.0055 |
| 133 | 2.4831 | 0.0055 |
| 134 | 2.4886 | 0.0055 |
| 135 | 2.4941 | 0.0055 |
| 136 | 2.4995 | 0.0054 |
| 137 | 2.5049 | 0.0054 |
| 138 | 2.5103 | 0.0054 |
| 139 | 2.5156 | 0.0053 |
| 140 | 2.5209 | 0.0053 |
| 141 | 2.5262 | 0.0053 |
| 142 | 2.5315 | 0.0053 |
| 143 | 2.5367 | 0.0052 |
| 144 | 2.5419 | 0.0052 |
| 145 | 2.5471 | 0.0052 |
| 146 | 2.5522 | 0.0052 |
| 147 | 2.5574 | 0.0051 |
| 148 | 2.5625 | 0.0051 |
| 149 | 2.5676 | 0.0051 |
| 150 | 2.5726 | 0.0051 |
| 151 | 2.5776 | 0.0050 |
| 152 | 2.5827 | 0.0050 |
| 153 | 2.5876 | 0.0050 |
| 154 | 2.5926 | 0.0050 |
| 155 | 2.5976 | 0.0049 |
| 156 | 2.6025 | 0.0049 |
| 157 | 2.6074 | 0.0049 |
| 158 | 2.6122 | 0.0049 |
| 159 | 2.6171 | 0.0049 |

| | | |
|---|---|---|
| 160 | 2.6219 | 0.0048 |
| 161 | 2.6267 | 0.0048 |
| 162 | 2.6315 | 0.0048 |
| 163 | 2.6363 | 0.0048 |
| 164 | 2.6411 | 0.0047 |
| 165 | 2.6458 | 0.0047 |
| 166 | 2.6505 | 0.0047 |
| 167 | 2.6552 | 0.0047 |
| 168 | 2.6598 | 0.0047 |
| 169 | 2.6645 | 0.0046 |
| 170 | 2.6691 | 0.0046 |
| 171 | 2.6737 | 0.0046 |
| 172 | 2.6783 | 0.0046 |
| 173 | 2.6829 | 0.0046 |
| 174 | 2.6875 | 0.0046 |
| 175 | 2.6920 | 0.0045 |
| 176 | 2.6965 | 0.0045 |
| 177 | 2.7010 | 0.0045 |
| 178 | 2.7055 | 0.0045 |
| 179 | 2.7099 | 0.0045 |
| 180 | 2.7144 | 0.0044 |
| 181 | 2.7188 | 0.0044 |
| 182 | 2.7232 | 0.0044 |
| 183 | 2.7276 | 0.0044 |
| 184 | 2.7320 | 0.0044 |
| 185 | 2.7364 | 0.0044 |
| 186 | 2.7407 | 0.0043 |
| 187 | 2.7450 | 0.0043 |
| 188 | 2.7494 | 0.0043 |
| 189 | 2.7536 | 0.0043 |
| 190 | 2.7579 | 0.0043 |
| 191 | 2.7622 | 0.0043 |
| 192 | 2.7664 | 0.0042 |
| 193 | 2.7707 | 0.0042 |
| 194 | 2.7749 | 0.0042 |
| 195 | 2.7791 | 0.0042 |
| 196 | 2.7833 | 0.0042 |
| 197 | 2.7874 | 0.0042 |
| 198 | 2.7916 | 0.0042 |
| 199 | 2.7957 | 0.0041 |
| 200 | 2.7999 | 0.0041 |
| 201 | 2.8040 | 0.0041 |
| 202 | 2.8081 | 0.0041 |
| 203 | 2.8122 | 0.0041 |
| 204 | 2.8162 | 0.0041 |
| 205 | 2.8203 | 0.0041 |
| 206 | 2.8243 | 0.0040 |
| 207 | 2.8284 | 0.0040 |
| 208 | 2.8324 | 0.0040 |
| 209 | 2.8364 | 0.0040 |
| 210 | 2.8404 | 0.0040 |
| 211 | 2.8443 | 0.0040 |
| 212 | 2.8483 | 0.0040 |
| 213 | 2.8522 | 0.0039 |
| 214 | 2.8562 | 0.0039 |
| 215 | 2.8601 | 0.0039 |
| 216 | 2.8640 | 0.0039 |
| 217 | 2.8679 | 0.0039 |
| 218 | 2.8718 | 0.0039 |

| | | |
|---|---|---|
| 219 | 2.8756 | 0.0039 |
| 220 | 2.8795 | 0.0039 |
| 221 | 2.8833 | 0.0038 |
| 222 | 2.8872 | 0.0038 |
| 223 | 2.8910 | 0.0038 |
| 224 | 2.8948 | 0.0038 |
| 225 | 2.8986 | 0.0038 |
| 226 | 2.9024 | 0.0038 |
| 227 | 2.9062 | 0.0038 |
| 228 | 2.9099 | 0.0038 |
| 229 | 2.9137 | 0.0037 |
| 230 | 2.9174 | 0.0037 |
| 231 | 2.9211 | 0.0037 |
| 232 | 2.9249 | 0.0037 |
| 233 | 2.9286 | 0.0037 |
| 234 | 2.9323 | 0.0037 |
| 235 | 2.9359 | 0.0037 |
| 236 | 2.9396 | 0.0037 |
| 237 | 2.9433 | 0.0037 |
| 238 | 2.9469 | 0.0036 |
| 239 | 2.9505 | 0.0036 |
| 240 | 2.9542 | 0.0036 |
| 241 | 2.9578 | 0.0036 |
| 242 | 2.9614 | 0.0036 |
| 243 | 2.9650 | 0.0036 |
| 244 | 2.9686 | 0.0036 |
| 245 | 2.9722 | 0.0036 |
| 246 | 2.9757 | 0.0036 |
| 247 | 2.9793 | 0.0036 |
| 248 | 2.9828 | 0.0035 |
| 249 | 2.9864 | 0.0035 |
| 250 | 2.9899 | 0.0035 |
| 251 | 2.9934 | 0.0035 |
| 252 | 2.9969 | 0.0035 |
| 253 | 3.0004 | 0.0035 |
| 254 | 3.0039 | 0.0035 |
| 255 | 3.0073 | 0.0035 |
| 256 | 3.0108 | 0.0035 |
| 257 | 3.0143 | 0.0035 |
| 258 | 3.0177 | 0.0034 |
| 259 | 3.0212 | 0.0034 |
| 260 | 3.0246 | 0.0034 |
| 261 | 3.0280 | 0.0034 |
| 262 | 3.0314 | 0.0034 |
| 263 | 3.0348 | 0.0034 |
| 264 | 3.0382 | 0.0034 |
| 265 | 3.0416 | 0.0034 |
| 266 | 3.0450 | 0.0034 |
| 267 | 3.0483 | 0.0034 |
| 268 | 3.0517 | 0.0034 |
| 269 | 3.0550 | 0.0033 |
| 270 | 3.0584 | 0.0033 |
| 271 | 3.0617 | 0.0033 |
| 272 | 3.0650 | 0.0033 |
| 273 | 3.0683 | 0.0033 |
| 274 | 3.0716 | 0.0033 |
| 275 | 3.0749 | 0.0033 |
| 276 | 3.0782 | 0.0033 |
| 277 | 3.0815 | 0.0033 |

| | | |
|---|---|---|
| 278 | 3.0847 | 0.0033 |
| 279 | 3.0880 | 0.0033 |
| 280 | 3.0913 | 0.0033 |
| 281 | 3.0945 | 0.0032 |
| 282 | 3.0977 | 0.0032 |
| 283 | 3.1010 | 0.0032 |
| 284 | 3.1042 | 0.0032 |
| 285 | 3.1074 | 0.0032 |
| 286 | 3.1106 | 0.0032 |
| 287 | 3.1138 | 0.0032 |
| 288 | 3.1170 | 0.0032 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0032 | 0.0008 | 0.0024 |
| 2 | 0.0032 | 0.0008 | 0.0024 |
| 3 | 0.0032 | 0.0008 | 0.0024 |
| 4 | 0.0032 | 0.0008 | 0.0024 |
| 5 | 0.0032 | 0.0008 | 0.0024 |
| 6 | 0.0032 | 0.0008 | 0.0024 |
| 7 | 0.0033 | 0.0008 | 0.0024 |
| 8 | 0.0033 | 0.0008 | 0.0024 |
| 9 | 0.0033 | 0.0008 | 0.0025 |
| 10 | 0.0033 | 0.0008 | 0.0025 |
| 11 | 0.0033 | 0.0008 | 0.0025 |
| 12 | 0.0033 | 0.0008 | 0.0025 |
| 13 | 0.0033 | 0.0008 | 0.0025 |
| 14 | 0.0033 | 0.0008 | 0.0025 |
| 15 | 0.0034 | 0.0008 | 0.0025 |
| 16 | 0.0034 | 0.0008 | 0.0025 |
| 17 | 0.0034 | 0.0008 | 0.0025 |
| 18 | 0.0034 | 0.0009 | 0.0025 |
| 19 | 0.0034 | 0.0009 | 0.0026 |
| 20 | 0.0034 | 0.0009 | 0.0026 |
| 21 | 0.0034 | 0.0009 | 0.0026 |
| 22 | 0.0035 | 0.0009 | 0.0026 |
| 23 | 0.0035 | 0.0009 | 0.0026 |
| 24 | 0.0035 | 0.0009 | 0.0026 |
| 25 | 0.0035 | 0.0009 | 0.0026 |
| 26 | 0.0035 | 0.0009 | 0.0026 |
| 27 | 0.0035 | 0.0009 | 0.0026 |
| 28 | 0.0035 | 0.0009 | 0.0027 |
| 29 | 0.0036 | 0.0009 | 0.0027 |
| 30 | 0.0036 | 0.0009 | 0.0027 |
| 31 | 0.0036 | 0.0009 | 0.0027 |
| 32 | 0.0036 | 0.0009 | 0.0027 |
| 33 | 0.0036 | 0.0009 | 0.0027 |
| 34 | 0.0036 | 0.0009 | 0.0027 |
| 35 | 0.0037 | 0.0009 | 0.0027 |
| 36 | 0.0037 | 0.0009 | 0.0028 |
| 37 | 0.0037 | 0.0009 | 0.0028 |
| 38 | 0.0037 | 0.0009 | 0.0028 |
| 39 | 0.0037 | 0.0009 | 0.0028 |
| 40 | 0.0037 | 0.0009 | 0.0028 |
| 41 | 0.0038 | 0.0009 | 0.0028 |
| 42 | 0.0038 | 0.0009 | 0.0028 |
| 43 | 0.0038 | 0.0010 | 0.0028 |

| | | | |
|---|---|---|---|
| 44 | 0.0038 | 0.0010 | 0.0029 |
| 45 | 0.0038 | 0.0010 | 0.0029 |
| 46 | 0.0038 | 0.0010 | 0.0029 |
| 47 | 0.0039 | 0.0010 | 0.0029 |
| 48 | 0.0039 | 0.0010 | 0.0029 |
| 49 | 0.0039 | 0.0010 | 0.0029 |
| 50 | 0.0039 | 0.0010 | 0.0029 |
| 51 | 0.0039 | 0.0010 | 0.0030 |
| 52 | 0.0040 | 0.0010 | 0.0030 |
| 53 | 0.0040 | 0.0010 | 0.0030 |
| 54 | 0.0040 | 0.0010 | 0.0030 |
| 55 | 0.0040 | 0.0010 | 0.0030 |
| 56 | 0.0040 | 0.0010 | 0.0030 |
| 57 | 0.0041 | 0.0010 | 0.0030 |
| 58 | 0.0041 | 0.0010 | 0.0031 |
| 59 | 0.0041 | 0.0010 | 0.0031 |
| 60 | 0.0041 | 0.0010 | 0.0031 |
| 61 | 0.0042 | 0.0010 | 0.0031 |
| 62 | 0.0042 | 0.0010 | 0.0031 |
| 63 | 0.0042 | 0.0011 | 0.0031 |
| 64 | 0.0042 | 0.0011 | 0.0032 |
| 65 | 0.0042 | 0.0011 | 0.0032 |
| 66 | 0.0043 | 0.0011 | 0.0032 |
| 67 | 0.0043 | 0.0011 | 0.0032 |
| 68 | 0.0043 | 0.0011 | 0.0032 |
| 69 | 0.0043 | 0.0011 | 0.0033 |
| 70 | 0.0044 | 0.0011 | 0.0033 |
| 71 | 0.0044 | 0.0011 | 0.0033 |
| 72 | 0.0044 | 0.0011 | 0.0033 |
| 73 | 0.0044 | 0.0011 | 0.0033 |
| 74 | 0.0045 | 0.0011 | 0.0033 |
| 75 | 0.0045 | 0.0011 | 0.0034 |
| 76 | 0.0045 | 0.0011 | 0.0034 |
| 77 | 0.0046 | 0.0011 | 0.0034 |
| 78 | 0.0046 | 0.0011 | 0.0034 |
| 79 | 0.0046 | 0.0012 | 0.0035 |
| 80 | 0.0046 | 0.0012 | 0.0035 |
| 81 | 0.0047 | 0.0012 | 0.0035 |
| 82 | 0.0047 | 0.0012 | 0.0035 |
| 83 | 0.0047 | 0.0012 | 0.0035 |
| 84 | 0.0047 | 0.0012 | 0.0036 |
| 85 | 0.0048 | 0.0012 | 0.0036 |
| 86 | 0.0048 | 0.0012 | 0.0036 |
| 87 | 0.0049 | 0.0012 | 0.0036 |
| 88 | 0.0049 | 0.0012 | 0.0037 |
| 89 | 0.0049 | 0.0012 | 0.0037 |
| 90 | 0.0049 | 0.0012 | 0.0037 |
| 91 | 0.0050 | 0.0013 | 0.0037 |
| 92 | 0.0050 | 0.0013 | 0.0038 |
| 93 | 0.0051 | 0.0013 | 0.0038 |
| 94 | 0.0051 | 0.0013 | 0.0038 |
| 95 | 0.0051 | 0.0013 | 0.0038 |
| 96 | 0.0052 | 0.0013 | 0.0039 |
| 97 | 0.0052 | 0.0013 | 0.0039 |
| 98 | 0.0052 | 0.0013 | 0.0039 |
| 99 | 0.0053 | 0.0013 | 0.0040 |
| 100 | 0.0053 | 0.0013 | 0.0040 |
| 101 | 0.0054 | 0.0013 | 0.0040 |
| 102 | 0.0054 | 0.0014 | 0.0040 |

| | | | |
|---|---|---|---|
| 103 | 0.0055 | 0.0014 | 0.0041 |
| 104 | 0.0055 | 0.0014 | 0.0041 |
| 105 | 0.0055 | 0.0014 | 0.0042 |
| 106 | 0.0056 | 0.0014 | 0.0042 |
| 107 | 0.0056 | 0.0014 | 0.0042 |
| 108 | 0.0057 | 0.0014 | 0.0042 |
| 109 | 0.0057 | 0.0014 | 0.0043 |
| 110 | 0.0058 | 0.0014 | 0.0043 |
| 111 | 0.0058 | 0.0015 | 0.0044 |
| 112 | 0.0059 | 0.0015 | 0.0044 |
| 113 | 0.0059 | 0.0015 | 0.0044 |
| 114 | 0.0060 | 0.0015 | 0.0045 |
| 115 | 0.0060 | 0.0015 | 0.0045 |
| 116 | 0.0061 | 0.0015 | 0.0045 |
| 117 | 0.0061 | 0.0015 | 0.0046 |
| 118 | 0.0062 | 0.0015 | 0.0046 |
| 119 | 0.0063 | 0.0016 | 0.0047 |
| 120 | 0.0063 | 0.0016 | 0.0047 |
| 121 | 0.0064 | 0.0016 | 0.0048 |
| 122 | 0.0064 | 0.0016 | 0.0048 |
| 123 | 0.0065 | 0.0016 | 0.0049 |
| 124 | 0.0066 | 0.0016 | 0.0049 |
| 125 | 0.0066 | 0.0017 | 0.0050 |
| 126 | 0.0067 | 0.0017 | 0.0050 |
| 127 | 0.0068 | 0.0017 | 0.0051 |
| 128 | 0.0068 | 0.0017 | 0.0051 |
| 129 | 0.0069 | 0.0017 | 0.0052 |
| 130 | 0.0070 | 0.0018 | 0.0052 |
| 131 | 0.0071 | 0.0018 | 0.0053 |
| 132 | 0.0072 | 0.0018 | 0.0054 |
| 133 | 0.0073 | 0.0018 | 0.0054 |
| 134 | 0.0073 | 0.0018 | 0.0055 |
| 135 | 0.0074 | 0.0019 | 0.0056 |
| 136 | 0.0075 | 0.0019 | 0.0056 |
| 137 | 0.0076 | 0.0019 | 0.0057 |
| 138 | 0.0077 | 0.0019 | 0.0058 |
| 139 | 0.0078 | 0.0020 | 0.0059 |
| 140 | 0.0079 | 0.0020 | 0.0059 |
| 141 | 0.0080 | 0.0020 | 0.0060 |
| 142 | 0.0081 | 0.0020 | 0.0061 |
| 143 | 0.0083 | 0.0021 | 0.0062 |
| 144 | 0.0083 | 0.0021 | 0.0063 |
| 145 | 0.0076 | 0.0019 | 0.0057 |
| 146 | 0.0077 | 0.0019 | 0.0058 |
| 147 | 0.0079 | 0.0020 | 0.0059 |
| 148 | 0.0079 | 0.0020 | 0.0060 |
| 149 | 0.0081 | 0.0020 | 0.0061 |
| 150 | 0.0082 | 0.0021 | 0.0062 |
| 151 | 0.0084 | 0.0021 | 0.0063 |
| 152 | 0.0085 | 0.0021 | 0.0064 |
| 153 | 0.0087 | 0.0022 | 0.0065 |
| 154 | 0.0088 | 0.0022 | 0.0066 |
| 155 | 0.0091 | 0.0023 | 0.0068 |
| 156 | 0.0092 | 0.0023 | 0.0069 |
| 157 | 0.0094 | 0.0024 | 0.0071 |
| 158 | 0.0096 | 0.0024 | 0.0072 |
| 159 | 0.0098 | 0.0025 | 0.0074 |
| 160 | 0.0100 | 0.0025 | 0.0075 |
| 161 | 0.0103 | 0.0026 | 0.0077 |

| | | | |
|---|---|---|---|
| 162 | 0.0105 | 0.0026 | 0.0078 |
| 163 | 0.0108 | 0.0027 | 0.0081 |
| 164 | 0.0110 | 0.0028 | 0.0082 |
| 165 | 0.0114 | 0.0029 | 0.0085 |
| 166 | 0.0116 | 0.0029 | 0.0087 |
| 167 | 0.0120 | 0.0030 | 0.0090 |
| 168 | 0.0123 | 0.0031 | 0.0092 |
| 169 | 0.0207 | 0.0052 | 0.0155 |
| 170 | 0.0210 | 0.0053 | 0.0157 |
| 171 | 0.0217 | 0.0054 | 0.0163 |
| 172 | 0.0221 | 0.0055 | 0.0166 |
| 173 | 0.0230 | 0.0058 | 0.0172 |
| 174 | 0.0234 | 0.0059 | 0.0176 |
| 175 | 0.0244 | 0.0061 | 0.0183 |
| 176 | 0.0250 | 0.0063 | 0.0187 |
| 177 | 0.0262 | 0.0066 | 0.0196 |
| 178 | 0.0268 | 0.0067 | 0.0201 |
| 179 | 0.0283 | 0.0071 | 0.0212 |
| 180 | 0.0291 | 0.0073 | 0.0218 |
| 181 | 0.0310 | 0.0078 | 0.0232 |
| 182 | 0.0321 | 0.0080 | 0.0240 |
| 183 | 0.0345 | 0.0087 | 0.0259 |
| 184 | 0.0360 | 0.0090 | 0.0270 |
| 185 | 0.0278 | 0.0070 | 0.0209 |
| 186 | 0.0297 | 0.0074 | 0.0222 |
| 187 | 0.0344 | 0.0086 | 0.0258 |
| 188 | 0.0375 | 0.0094 | 0.0281 |
| 189 | 0.0467 | 0.0117 | 0.0350 |
| 190 | 0.0538 | 0.0119 | 0.0419 |
| 191 | 0.0816 | 0.0119 | 0.0697 |
| 192 | 0.1184 | 0.0119 | 0.1065 |
| 193 | 0.5124 | 0.0119 | 0.5005 |
| 194 | 0.0642 | 0.0119 | 0.0523 |
| 195 | 0.0415 | 0.0104 | 0.0311 |
| 196 | 0.0318 | 0.0080 | 0.0238 |
| 197 | 0.0376 | 0.0094 | 0.0282 |
| 198 | 0.0332 | 0.0083 | 0.0249 |
| 199 | 0.0300 | 0.0075 | 0.0225 |
| 200 | 0.0276 | 0.0069 | 0.0206 |
| 201 | 0.0256 | 0.0064 | 0.0192 |
| 202 | 0.0239 | 0.0060 | 0.0179 |
| 203 | 0.0226 | 0.0057 | 0.0169 |
| 204 | 0.0214 | 0.0054 | 0.0160 |
| 205 | 0.0125 | 0.0031 | 0.0094 |
| 206 | 0.0118 | 0.0030 | 0.0088 |
| 207 | 0.0112 | 0.0028 | 0.0084 |
| 208 | 0.0106 | 0.0027 | 0.0080 |
| 209 | 0.0101 | 0.0025 | 0.0076 |
| 210 | 0.0097 | 0.0024 | 0.0073 |
| 211 | 0.0093 | 0.0023 | 0.0070 |
| 212 | 0.0089 | 0.0022 | 0.0067 |
| 213 | 0.0086 | 0.0022 | 0.0065 |
| 214 | 0.0083 | 0.0021 | 0.0062 |
| 215 | 0.0080 | 0.0020 | 0.0060 |
| 216 | 0.0078 | 0.0019 | 0.0058 |
| 217 | 0.0084 | 0.0021 | 0.0063 |
| 218 | 0.0082 | 0.0021 | 0.0061 |
| 219 | 0.0080 | 0.0020 | 0.0060 |
| 220 | 0.0078 | 0.0019 | 0.0058 |

| | | | |
|---|---|---|---|
| 221 | 0.0076 | 0.0019 | 0.0057 |
| 222 | 0.0074 | 0.0019 | 0.0055 |
| 223 | 0.0072 | 0.0018 | 0.0054 |
| 224 | 0.0070 | 0.0018 | 0.0053 |
| 225 | 0.0069 | 0.0017 | 0.0052 |
| 226 | 0.0067 | 0.0017 | 0.0051 |
| 227 | 0.0066 | 0.0017 | 0.0049 |
| 228 | 0.0065 | 0.0016 | 0.0048 |
| 229 | 0.0063 | 0.0016 | 0.0048 |
| 230 | 0.0062 | 0.0016 | 0.0047 |
| 231 | 0.0061 | 0.0015 | 0.0046 |
| 232 | 0.0060 | 0.0015 | 0.0045 |
| 233 | 0.0059 | 0.0015 | 0.0044 |
| 234 | 0.0058 | 0.0015 | 0.0043 |
| 235 | 0.0057 | 0.0014 | 0.0043 |
| 236 | 0.0056 | 0.0014 | 0.0042 |
| 237 | 0.0055 | 0.0014 | 0.0041 |
| 238 | 0.0054 | 0.0014 | 0.0041 |
| 239 | 0.0053 | 0.0013 | 0.0040 |
| 240 | 0.0053 | 0.0013 | 0.0039 |
| 241 | 0.0052 | 0.0013 | 0.0039 |
| 242 | 0.0051 | 0.0013 | 0.0038 |
| 243 | 0.0050 | 0.0013 | 0.0038 |
| 244 | 0.0050 | 0.0012 | 0.0037 |
| 245 | 0.0049 | 0.0012 | 0.0037 |
| 246 | 0.0048 | 0.0012 | 0.0036 |
| 247 | 0.0048 | 0.0012 | 0.0036 |
| 248 | 0.0047 | 0.0012 | 0.0035 |
| 249 | 0.0046 | 0.0012 | 0.0035 |
| 250 | 0.0046 | 0.0012 | 0.0034 |
| 251 | 0.0045 | 0.0011 | 0.0034 |
| 252 | 0.0045 | 0.0011 | 0.0034 |
| 253 | 0.0044 | 0.0011 | 0.0033 |
| 254 | 0.0044 | 0.0011 | 0.0033 |
| 255 | 0.0043 | 0.0011 | 0.0032 |
| 256 | 0.0043 | 0.0011 | 0.0032 |
| 257 | 0.0042 | 0.0011 | 0.0032 |
| 258 | 0.0042 | 0.0010 | 0.0031 |
| 259 | 0.0041 | 0.0010 | 0.0031 |
| 260 | 0.0041 | 0.0010 | 0.0031 |
| 261 | 0.0041 | 0.0010 | 0.0030 |
| 262 | 0.0040 | 0.0010 | 0.0030 |
| 263 | 0.0040 | 0.0010 | 0.0030 |
| 264 | 0.0039 | 0.0010 | 0.0029 |
| 265 | 0.0039 | 0.0010 | 0.0029 |
| 266 | 0.0039 | 0.0010 | 0.0029 |
| 267 | 0.0038 | 0.0010 | 0.0029 |
| 268 | 0.0038 | 0.0009 | 0.0028 |
| 269 | 0.0037 | 0.0009 | 0.0028 |
| 270 | 0.0037 | 0.0009 | 0.0028 |
| 271 | 0.0037 | 0.0009 | 0.0028 |
| 272 | 0.0036 | 0.0009 | 0.0027 |
| 273 | 0.0036 | 0.0009 | 0.0027 |
| 274 | 0.0036 | 0.0009 | 0.0027 |
| 275 | 0.0036 | 0.0009 | 0.0027 |
| 276 | 0.0035 | 0.0009 | 0.0026 |
| 277 | 0.0035 | 0.0009 | 0.0026 |
| 278 | 0.0035 | 0.0009 | 0.0026 |
| 279 | 0.0034 | 0.0009 | 0.0026 |

| | | | |
|---|---|---|---|
| 280 | 0.0034 | 0.0009 | 0.0026 |
| 281 | 0.0034 | 0.0008 | 0.0025 |
| 282 | 0.0034 | 0.0008 | 0.0025 |
| 283 | 0.0033 | 0.0008 | 0.0025 |
| 284 | 0.0033 | 0.0008 | 0.0025 |
| 285 | 0.0033 | 0.0008 | 0.0025 |
| 286 | 0.0033 | 0.0008 | 0.0024 |
| 287 | 0.0032 | 0.0008 | 0.0024 |
| 288 | 0.0032 | 0.0008 | 0.0024 |

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Total soil rain loss = 0.63(In)
Total effective rainfall = 2.48(In)
Peak flow rate in flood hydrograph = 4856.39(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 1225.0 | 2450.0 | 3675.0 | 4900.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0045 | 0.65 | Q | | | | |
| 0+10 | 0.0200 | 2.26 | Q | | | | |
| 0+15 | 0.0529 | 4.77 | Q | | | | |
| 0+20 | 0.1093 | 8.18 | Q | | | | |
| 0+25 | 0.1959 | 12.58 | Q | | | | |
| 0+30 | 0.3289 | 19.31 | Q | | | | |
| 0+35 | 0.5323 | 29.54 | Q | | | | |
| 0+40 | 0.8290 | 43.08 | Q | | | | |
| 0+45 | 1.2108 | 55.43 | Q | | | | |
| 0+50 | 1.6687 | 66.50 | Q | | | | |
| 0+55 | 2.1903 | 75.73 | Q | | | | |
| 1+ 0 | 2.7620 | 83.01 | Q | | | | |
| 1+ 5 | 3.3737 | 88.82 | Q | | | | |
| 1+10 | 4.0195 | 93.77 | Q | | | | |
| 1+15 | 4.6953 | 98.13 | Q | | | | |
| 1+20 | 5.3986 | 102.11 | Q | | | | |
| 1+25 | 6.1270 | 105.77 | Q | | | | |
| 1+30 | 6.8780 | 109.04 | Q | | | | |
| 1+35 | 7.6495 | 112.02 | Q | | | | |
| 1+40 | 8.4408 | 114.90 | Q | | | | |
| 1+45 | 9.2501 | 117.51 | Q | | | | |
| 1+50 | 10.0757 | 119.87 | Q | | | | |
| 1+55 | 10.9172 | 122.19 | Q | | | | |
| 2+ 0 | 11.7731 | 124.27 | VQ | | | | |
| 2+ 5 | 12.6430 | 126.32 | VQ | | | | |
| 2+10 | 13.5265 | 128.29 | VQ | | | | |
| 2+15 | 14.4229 | 130.16 | VQ | | | | |
| 2+20 | 15.3322 | 132.03 | VQ | | | | |
| 2+25 | 16.2532 | 133.73 | VQ | | | | |
| 2+30 | 17.1858 | 135.41 | VQ | | | | |
| 2+35 | 18.1291 | 136.97 | VQ | | | | |
| 2+40 | 19.0822 | 138.39 | VQ | | | | |
| 2+45 | 20.0451 | 139.81 | VQ | | | | |
| 2+50 | 21.0175 | 141.19 | VQ | | | | |
| 2+55 | 21.9994 | 142.56 | VQ | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+ 0 | 22.9904 | 143.90 | VQ | | | | |
| 3+ 5 | 23.9902 | 145.17 | VQ | | | | |
| 3+10 | 24.9988 | 146.45 | VQ | | | | |
| 3+15 | 26.0160 | 147.69 | \|Q | | | | |
| 3+20 | 27.0416 | 148.93 | \|Q | | | | |
| 3+25 | 28.0754 | 150.10 | \|Q | | | | |
| 3+30 | 29.1167 | 151.21 | \|Q | | | | |
| 3+35 | 30.1657 | 152.32 | \|Q | | | | |
| 3+40 | 31.2225 | 153.44 | \|Q | | | | |
| 3+45 | 32.2870 | 154.56 | \|Q | | | | |
| 3+50 | 33.3590 | 155.66 | \|Q | | | | |
| 3+55 | 34.4382 | 156.70 | \|Q | | | | |
| 4+ 0 | 35.5246 | 157.75 | \|Q | | | | |
| 4+ 5 | 36.6183 | 158.81 | \|Q | | | | |
| 4+10 | 37.7194 | 159.88 | \|Q | | | | |
| 4+15 | 38.8276 | 160.91 | \|Q | | | | |
| 4+20 | 39.9425 | 161.89 | \|Q | | | | |
| 4+25 | 41.0642 | 162.87 | \|Q | | | | |
| 4+30 | 42.1928 | 163.87 | \|Q | | | | |
| 4+35 | 43.3283 | 164.88 | \|Q | | | | |
| 4+40 | 44.4706 | 165.86 | \|Q | | | | |
| 4+45 | 45.6192 | 166.78 | \|Q | | | | |
| 4+50 | 46.7743 | 167.72 | \|Q | | | | |
| 4+55 | 47.9359 | 168.66 | \|Q | | | | |
| 5+ 0 | 49.1041 | 169.62 | \|Q | | | | |
| 5+ 5 | 50.2790 | 170.60 | \|Q | | | | |
| 5+10 | 51.4608 | 171.60 | \|QV | | | | |
| 5+15 | 52.6495 | 172.60 | \|QV | | | | |
| 5+20 | 53.8453 | 173.62 | \|QV | | | | |
| 5+25 | 55.0481 | 174.65 | \|QV | | | | |
| 5+30 | 56.2581 | 175.69 | \|QV | | | | |
| 5+35 | 57.4753 | 176.74 | \|QV | | | | |
| 5+40 | 58.6998 | 177.80 | \|QV | | | | |
| 5+45 | 59.9317 | 178.87 | \|QV | | | | |
| 5+50 | 61.1711 | 179.96 | \|QV | | | | |
| 5+55 | 62.4179 | 181.03 | \|QV | | | | |
| 6+ 0 | 63.6717 | 182.06 | \|QV | | | | |
| 6+ 5 | 64.9328 | 183.11 | \|QV | | | | |
| 6+10 | 66.2012 | 184.17 | \|QV | | | | |
| 6+15 | 67.4769 | 185.24 | \|QV | | | | |
| 6+20 | 68.7602 | 186.33 | \|QV | | | | |
| 6+25 | 70.0510 | 187.42 | \|QV | | | | |
| 6+30 | 71.3494 | 188.54 | \|QV | | | | |
| 6+35 | 72.6555 | 189.63 | \|QV | | | | |
| 6+40 | 73.9688 | 190.70 | \|QV | | | | |
| 6+45 | 75.2896 | 191.77 | \|QV | | | | |
| 6+50 | 76.6179 | 192.87 | \|Q V | | | | |
| 6+55 | 77.9538 | 193.97 | \|Q V | | | | |
| 7+ 0 | 79.2974 | 195.10 | \|Q V | | | | |
| 7+ 5 | 80.6489 | 196.23 | \|Q V | | | | |
| 7+10 | 82.0083 | 197.39 | \|Q V | | | | |
| 7+15 | 83.3758 | 198.56 | \|Q V | | | | |
| 7+20 | 84.7515 | 199.75 | \|Q V | | | | |
| 7+25 | 86.1355 | 200.96 | \|Q V | | | | |
| 7+30 | 87.5280 | 202.18 | \|Q V | | | | |
| 7+35 | 88.9290 | 203.42 | \|Q V | | | | |
| 7+40 | 90.3387 | 204.69 | \|Q V | | | | |
| 7+45 | 91.7572 | 205.96 | \|Q V | | | | |
| 7+50 | 93.1846 | 207.27 | \|Q V | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 7+55 | 94.6212 | 208.59 | Q V | | | |
| 8+ 0 | 96.0670 | 209.93 | Q V | | | |
| 8+ 5 | 97.5221 | 211.29 | Q V | | | |
| 8+10 | 98.9868 | 212.68 | Q V | | | |
| 8+15 | 100.4612 | 214.08 | Q V | | | |
| 8+20 | 101.9454 | 215.51 | Q V | | | |
| 8+25 | 103.4396 | 216.96 | Q V | | | |
| 8+30 | 104.9441 | 218.44 | Q V | | | |
| 8+35 | 106.4588 | 219.94 | Q V | | | |
| 8+40 | 107.9841 | 221.47 | Q V | | | |
| 8+45 | 109.5200 | 223.02 | Q V | | | |
| 8+50 | 111.0668 | 224.60 | Q V | | | |
| 8+55 | 112.6247 | 226.21 | Q V | | | |
| 9+ 0 | 114.1939 | 227.85 | Q V | | | |
| 9+ 5 | 115.7745 | 229.51 | Q V | | | |
| 9+10 | 117.3669 | 231.21 | Q V | | | |
| 9+15 | 118.9711 | 232.93 | Q V | | | |
| 9+20 | 120.5874 | 234.69 | Q V | | | |
| 9+25 | 122.2160 | 236.48 | Q V | | | |
| 9+30 | 123.8572 | 238.30 | Q V | | | |
| 9+35 | 125.5112 | 240.16 | Q V | | | |
| 9+40 | 127.1782 | 242.06 | Q V | | | |
| 9+45 | 128.8586 | 243.98 | Q V | | | |
| 9+50 | 130.5525 | 245.96 | Q V | | | |
| 9+55 | 132.2603 | 247.96 | Q V | | | |
| 10+ 0 | 133.9821 | 250.02 | Q V | | | |
| 10+ 5 | 135.7184 | 252.10 | Q V | | | |
| 10+10 | 137.4694 | 254.25 | Q V | | | |
| 10+15 | 139.2354 | 256.42 | Q V | | | |
| 10+20 | 141.0167 | 258.65 | Q V | | | |
| 10+25 | 142.8137 | 260.92 | Q V | | | |
| 10+30 | 144.6267 | 263.25 | Q V | | | |
| 10+35 | 146.4560 | 265.62 | Q V | | | |
| 10+40 | 148.3021 | 268.05 | Q V | | | |
| 10+45 | 150.1652 | 270.53 | Q V | | | |
| 10+50 | 152.0459 | 273.08 | Q V | | | |
| 10+55 | 153.9444 | 275.67 | Q V | | | |
| 11+ 0 | 155.8614 | 278.34 | Q V | | | |
| 11+ 5 | 157.7970 | 281.05 | Q V | | | |
| 11+10 | 159.7519 | 283.85 | Q V | | | |
| 11+15 | 161.7264 | 286.71 | Q V | | | |
| 11+20 | 163.7212 | 289.65 | Q V | | | |
| 11+25 | 165.7367 | 292.64 | Q V | | | |
| 11+30 | 167.7735 | 295.74 | Q V | | | |
| 11+35 | 169.8320 | 298.90 | Q V | | | |
| 11+40 | 171.9129 | 302.15 | Q V | | | |
| 11+45 | 174.0168 | 305.48 | Q V | | | |
| 11+50 | 176.1444 | 308.93 | Q V | | | |
| 11+55 | 178.2962 | 312.44 | Q V | | | |
| 12+ 0 | 180.4731 | 316.08 | Q V | | | |
| 12+ 5 | 182.6744 | 319.62 | Q V | | | |
| 12+10 | 184.8991 | 323.03 | Q V | | | |
| 12+15 | 187.1461 | 326.27 | Q V | | | |
| 12+20 | 189.4147 | 329.40 | Q V | | | |
| 12+25 | 191.7037 | 332.35 | Q V | | | |
| 12+30 | 194.0095 | 334.80 | Q V | | | |
| 12+35 | 196.3261 | 336.38 | Q V | | | |
| 12+40 | 198.6483 | 337.18 | Q V | | | |
| 12+45 | 200.9791 | 338.43 | Q V | | | |

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12+50     203.3221    340.20  | Q    V  |          |          |          |
12+55     205.6818    342.62  | Q     V |          |          |          |
13+ 0     208.0632    345.78  | Q     V |          |          |          |
13+ 5     210.4703    349.51  | Q     V |          |          |          |
13+10     212.9062    353.70  | Q     V |          |          |          |
13+15     215.3734    358.23  | Q     V |          |          |          |
13+20     217.8742    363.12  | Q     V |          |          |          |
13+25     220.4108    368.31  |  Q    V |          |          |          |
13+30     222.9859    373.90  |  Q    V |          |          |          |
13+35     225.6016    379.81  |  Q    V |          |          |          |
13+40     228.2605    386.08  |  Q    V |          |          |          |
13+45     230.9650    392.70  |  Q     V|          |          |          |
13+50     233.7183    399.78  |  Q     V|          |          |          |
13+55     236.5226    407.19  |  Q     V|          |          |          |
14+ 0     239.3815    415.11  |  Q     V|          |          |          |
14+ 5     242.3089    425.05  |  Q     V|          |          |          |
14+10     245.3248    437.92  |  Q     V|          |          |          |
14+15     248.4485    453.56  |  Q     V|          |          |          |
14+20     251.6999    472.11  |  Q     V|          |          |          |
14+25     255.1008    493.80  |   Q     V          |          |          |
14+30     258.6967    522.13  |   Q     V          |          |          |
14+35     262.5537    560.04  |   Q     V          |          |          |
14+40     266.7367    607.38  |   Q     V          |          |          |
14+45     271.2338    652.97  |    Q    V          |          |          |
14+50     276.0334    696.91  |    Q    V          |          |          |
14+55     281.1139    737.69  |     Q   |V          |          |          |
15+ 0     286.4546    775.46  |     Q   |V          |          |          |
15+ 5     292.0420    811.30  |     Q   |V          |          |          |
15+10     297.8767    847.19  |     Q   |V          |          |          |
15+15     303.9638    883.85  |      Q  |V          |          |          |
15+20     310.3165    922.42  |      Q  | V         |          |          |
15+25     316.9339    960.85  |      Q  | V         |          |          |
15+30     323.8129    998.83  |       Q | V         |          |          |
15+35     330.9550   1037.03  |       Q | V         |          |          |
15+40     338.3750   1077.39  |       Q |  V        |          |          |
15+45     346.0910   1120.35  |        Q|  V        |          |          |
15+50     354.1100   1164.36  |        Q|  V        |          |          |
15+55     362.4627   1212.81  |        Q|   V       |          |          |
16+ 0     371.2780   1279.99  |         Q   V       |          |          |
16+ 5     381.5602   1492.97  |         | Q V       |          |          |
16+10     393.8218   1780.38  |         |   QV      |          |          |
16+15     408.1201   2076.11  |         |     Q     |          |          |
16+20     424.6358   2398.09  |         |     V  Q  |          |          |
16+25     443.8036   2783.16  |         |      V    | Q        |          |
16+30     467.4632   3435.38  |         |       V   |       Q  |          |
16+35     496.6566   4238.88  |         |        V  |          |   Q      |
16+40     530.1028   4856.39  |         |         V |          |        Q |
16+45     561.5067   4559.85  |         |           | V        |      Q   |
16+50     590.2736   4176.96  |         |           |  V       |   Q      |
16+55     615.6254   3681.07  |         |           |   V      Q          |
17+ 0     637.5679   3186.06  |         |           |    VQ    |          |
17+ 5     656.8238   2795.94  |         |           | Q  V     |          |
17+10     674.2884   2535.86  |         |          Q     V    |          |
17+15     690.4025   2339.77  |         |         Q|      V   |          |
17+20     705.4374   2183.06  |         |       Q  |      V   |          |
17+25     719.4869   2040.00  |         |      Q   |       V  |          |
17+30     732.4771   1886.17  |         |     Q    |       V  |          |
17+35     744.5159   1748.04  |         |    Q     |        V |          |
17+40     755.7948   1637.69  |         |   Q      |        V |          |
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17+45     766.1845   1508.58  |          | Q       |          V          |
17+50     775.7510   1389.06  |          |Q        |          V          |
17+55     784.8324   1318.62  |          Q         |          V          |
18+ 0     793.2433   1221.26  |         Q|         |          |V         |
18+ 5     801.2794   1166.84  |         Q|         |          |V         |
18+10     808.9269   1110.42  |         Q|         |          |V         |
18+15     816.1946   1055.27  |        Q |         |          | V        |
18+20     823.1774   1013.91  |        Q |         |          | V        |
18+25     829.7213    950.17  |       Q  |         |          | V        |
18+30     836.0022    911.99  |       Q  |         |          | V        |
18+35     841.9273    860.32  |       Q  |         |          |  V       |
18+40     847.5032    809.62  |      Q   |         |          |  V       |
18+45     852.9192    786.40  |      Q   |         |          |  V       |
18+50     858.1360    757.48  |      Q   |         |          |  V       |
18+55     863.2036    735.82  |      Q   |         |          |  V       |
19+ 0     868.0752    707.35  |     Q    |         |          |   V      |
19+ 5     872.7449    678.04  |     Q    |         |          |   V      |
19+10     877.2835    659.01  |     Q    |         |          |   V      |
19+15     881.6445    633.22  |     Q    |         |          |   V      |
19+20     885.8717    613.78  |     Q    |         |          |   V      |
19+25     889.9003    584.95  |    Q     |         |          |   V      |
19+30     893.7261    555.50  |    Q     |         |          |    V     |
19+35     897.4630    542.61  |    Q     |         |          |    V     |
19+40     901.1192    530.88  |    Q     |         |          |    V     |
19+45     904.6873    518.08  |    Q     |         |          |    V     |
19+50     908.1095    496.91  |    Q     |         |          |    V     |
19+55     911.3804    474.93  |   Q      |         |          |    V     |
20+ 0     914.5791    464.45  |   Q      |         |          |    V     |
20+ 5     917.7097    454.56  |   Q      |         |          |     V    |
20+10     920.7642    443.52  |   Q      |         |          |     V    |
20+15     923.6843    424.00  |   Q      |         |          |     V    |
20+20     926.4628    403.43  |   Q      |         |          |     V    |
20+25     929.1815    394.76  |   Q      |         |          |     V    |
20+30     931.8438    386.57  |   Q      |         |          |     V    |
20+35     934.4421    377.27  |   Q      |         |          |     V    |
20+40     936.9219    360.07  |  Q       |         |          |     V    |
20+45     939.2760    341.82  |  Q       |         |          |     V    |
20+50     941.5826    334.91  |  Q       |         |          |     V    |
20+55     943.8495    329.15  |  Q       |         |          |      V   |
21+ 0     946.0801    323.89  |  Q       |         |          |      V   |
21+ 5     948.2856    320.23  |  Q       |         |          |      V   |
21+10     950.4695    317.11  |  Q       |         |          |      V   |
21+15     952.6192    312.14  |  Q       |         |          |      V   |
21+20     954.7366    307.43  |  Q       |         |          |      V   |
21+25     956.8215    302.74  |  Q       |         |          |      V   |
21+30     958.8727    297.83  |  Q       |         |          |      V   |
21+35     960.8895    292.84  |  Q       |         |          |      V   |
21+40     962.8738    288.12  |  Q       |         |          |      V   |
21+45     964.8236    283.12  |  Q       |         |          |      V   |
21+50     966.7325    277.16  |  Q       |         |          |      V   |
21+55     968.5609    265.49  |  Q       |         |          |       V  |
22+ 0     970.2996    252.46  |  Q       |         |          |       V  |
22+ 5     972.0079    248.05  |  Q       |         |          |       V  |
22+10     973.6894    244.15  |Q         |         |          |       V  |
22+15     975.3440    240.24  |Q         |         |          |       V  |
22+20     976.9702    236.13  |Q         |         |          |       V  |
22+25     978.5657    231.66  |Q         |         |          |       V  |
22+30     980.1241    226.28  |Q         |         |          |       V  |
22+35     981.6054    215.09  |Q         |         |          |       V  |
```

```
22+40     982.9957    201.88  |Q        |         |         |       V |
22+45     984.3602    198.12  |Q        |         |         |       V |
22+50     985.7030    194.98  |Q        |         |         |       V |
22+55     987.0258    192.07  |Q        |         |         |       V |
23+ 0     988.3295    189.30  |Q        |         |         |       V |
23+ 5     989.6153    186.69  |Q        |         |         |       V |
23+10     990.8839    184.21  |Q        |         |         |       V |
23+15     992.1363    181.84  |Q        |         |         |       V |
23+20     993.3730    179.57  |Q        |         |         |       V |
23+25     994.5946    177.38  |Q        |         |         |        V|
23+30     995.8017    175.27  |Q        |         |         |        V|
23+35     996.9954    173.31  |Q        |         |         |        V|
23+40     998.1767    171.53  |Q        |         |         |        V|
23+45     999.3462    169.81  |Q        |         |         |        V|
23+50    1000.5041    168.14  |Q        |         |         |        V|
23+55    1001.6509    166.50  |Q        |         |         |        V|
24+ 0    1002.7866    164.90  |Q        |         |         |        V|
24+ 5    1003.9070    162.70  |Q        |         |         |        V|
24+10    1005.0061    159.59  |Q        |         |         |        V|
24+15    1006.0779    155.62  |Q        |         |         |        V|
24+20    1007.1167    150.83  |Q        |         |         |        V|
24+25    1008.1162    145.12  |Q        |         |         |        V|
24+30    1009.0609    137.18  |Q        |         |         |        V|
24+35    1009.9275    125.83  |Q        |         |         |        V|
24+40    1010.6940    111.30  Q         |         |         |        V|
24+45    1011.3698     98.13  Q         |         |         |        V|
24+50    1011.9648     86.40  Q         |         |         |        V|
24+55    1012.4927     76.65  Q         |         |         |        V|
25+ 0    1012.9676     68.96  Q         |         |         |        V|
25+ 5    1013.4003     62.83  Q         |         |         |        V|
25+10    1013.7974     57.65  Q         |         |         |        V|
25+15    1014.1632     53.12  Q         |         |         |        V|
25+20    1014.5009     49.03  Q         |         |         |        V|
25+25    1014.8129     45.31  Q         |         |         |        V|
25+30    1015.1024     42.03  Q         |         |         |        V|
25+35    1015.3716     39.09  Q         |         |         |        V|
25+40    1015.6215     36.29  Q         |         |         |        V|
25+45    1015.8543     33.79  Q         |         |         |        V|
25+50    1016.0719     31.59  Q         |         |         |        V|
25+55    1016.2747     29.45  Q         |         |         |        V|
26+ 0    1016.4647     27.59  Q         |         |         |        V|
26+ 5    1016.6423     25.79  Q         |         |         |        V|
26+10    1016.8082     24.09  Q         |         |         |        V|
26+15    1016.9632     22.51  Q         |         |         |        V|
26+20    1017.1076     20.97  Q         |         |         |        V|
26+25    1017.2427     19.61  Q         |         |         |        V|
26+30    1017.3687     18.30  Q         |         |         |        V|
26+35    1017.4867     17.13  Q         |         |         |        V|
26+40    1017.5977     16.12  Q         |         |         |        V|
26+45    1017.7018     15.12  Q         |         |         |        V|
26+50    1017.7996     14.20  Q         |         |         |        V|
26+55    1017.8911     13.29  Q         |         |         |        V|
27+ 0    1017.9767     12.44  Q         |         |         |        V|
27+ 5    1018.0570     11.66  Q         |         |         |        V|
27+10    1018.1320     10.89  Q         |         |         |        V|
27+15    1018.2022     10.19  Q         |         |         |        V|
27+20    1018.2676      9.49  Q         |         |         |        V|
27+25    1018.3287      8.88  Q         |         |         |        V|
27+30    1018.3862      8.35  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 27+35 | 1018.4401 | 7.83 | Q | \| | \| | \| | V\| |
| 27+40 | 1018.4904 | 7.31 | Q | \| | \| | \| | V\| |
| 27+45 | 1018.5372 | 6.79 | Q | \| | \| | \| | V\| |
| 27+50 | 1018.5808 | 6.33 | Q | \| | \| | \| | V\| |
| 27+55 | 1018.6217 | 5.93 | Q | \| | \| | \| | V\| |
| 28+ 0 | 1018.6598 | 5.53 | Q | \| | \| | \| | V\| |
| 28+ 5 | 1018.6952 | 5.14 | Q | \| | \| | \| | V\| |
| 28+10 | 1018.7279 | 4.75 | Q | \| | \| | \| | V\| |
| 28+15 | 1018.7583 | 4.41 | Q | \| | \| | \| | V\| |
| 28+20 | 1018.7868 | 4.14 | Q | \| | \| | \| | V\| |
| 28+25 | 1018.8134 | 3.86 | Q | \| | \| | \| | V\| |
| 28+30 | 1018.8382 | 3.59 | Q | \| | \| | \| | V\| |
| 28+35 | 1018.8611 | 3.33 | Q | \| | \| | \| | V\| |
| 28+40 | 1018.8824 | 3.10 | Q | \| | \| | \| | V\| |
| 28+45 | 1018.9027 | 2.94 | Q | \| | \| | \| | V\| |
| 28+50 | 1018.9218 | 2.77 | Q | \| | \| | \| | V\| |
| 28+55 | 1018.9398 | 2.61 | Q | \| | \| | \| | V\| |
| 29+ 0 | 1018.9567 | 2.45 | Q | \| | \| | \| | V\| |
| 29+ 5 | 1018.9724 | 2.29 | Q | \| | \| | \| | V\| |
| 29+10 | 1018.9870 | 2.11 | Q | \| | \| | \| | V\| |
| 29+15 | 1019.0003 | 1.93 | Q | \| | \| | \| | V\| |
| 29+20 | 1019.0124 | 1.76 | Q | \| | \| | \| | V\| |
| 29+25 | 1019.0233 | 1.59 | Q | \| | \| | \| | V\| |
| 29+30 | 1019.0331 | 1.42 | Q | \| | \| | \| | V\| |
| 29+35 | 1019.0417 | 1.25 | Q | \| | \| | \| | V\| |
| 29+40 | 1019.0492 | 1.09 | Q | \| | \| | \| | V\| |
| 29+45 | 1019.0555 | 0.92 | Q | \| | \| | \| | V\| |
| 29+50 | 1019.0607 | 0.76 | Q | \| | \| | \| | V\| |
| 29+55 | 1019.0651 | 0.63 | Q | \| | \| | \| | V\| |
| 30+ 0 | 1019.0688 | 0.54 | Q | \| | \| | \| | V\| |
| 30+ 5 | 1019.0720 | 0.46 | Q | \| | \| | \| | V\| |
| 30+10 | 1019.0745 | 0.38 | Q | \| | \| | \| | V\| |
| 30+15 | 1019.0766 | 0.29 | Q | \| | \| | \| | V\| |
| 30+20 | 1019.0780 | 0.21 | Q | \| | \| | \| | V\| |
| 30+25 | 1019.0789 | 0.13 | Q | \| | \| | \| | V\| |
| 30+30 | 1019.0792 | 0.05 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 08/10/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREA "G"
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-10-17

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Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 279.11 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 279.11 | 6 | 2.19 |
| Rainfall data for year 100 | | |
| 279.11 | 24 | 3.29 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 73.7 | 90.0 | 279.11 | 1.000 | 0.193 | 1.000 | 0.193 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.193

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 279.11 | 1.000 | 73.7 | 90.0 | 1.12 | 0.683 |

Area-averaged catchment yield fraction, Y = 0.683
Area-averaged low loss fraction, Yb = 0.317
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 12326.00(Ft.)
Length from concentration point to centroid = 8294.00(Ft.)
Elevation difference along watercourse = 1010.00(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 279.11(Ac.)
Catchment Lag time = 0.434 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 19.1851
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.193(In/Hr)
Average low loss rate fraction (Yb) = 0.317 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.400
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.600

Computed peak 5-minute rainfall = 0.659(In)
Computed peak 30-minute rainfall = 1.127(In)
Specified peak 1-hour rainfall = 1.388(In)
Computed peak 3-hour rainfall = 1.836(In)
Specified peak 6-hour rainfall = 2.190(In)
Specified peak 24-hour rainfall = 3.289(In)

Rainfall depth area reduction factors:
Using a total area of 279.11(Ac.) (Ref: fig. E-4)

5-minute factor = 0.987 Adjusted rainfall = 0.650(In)
30-minute factor = 0.987 Adjusted rainfall = 1.113(In)
1-hour factor = 0.987 Adjusted rainfall = 1.370(In)
3-hour factor = 0.998 Adjusted rainfall = 1.833(In)
6-hour factor = 0.999 Adjusted rainfall = 2.188(In)
24-hour factor = 1.000 Adjusted rainfall = 3.288(In)
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U n i t H y d r o g r a p h

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 3375.49 (CFS)) | |
| 1 | 1.060 | 35.779 |
| 2 | 4.396 | 112.619 |
| 3 | 10.097 | 192.412 |
| 4 | 21.178 | 374.048 |
| 5 | 37.017 | 534.645 |
| 6 | 53.024 | 540.309 |

| | | |
|---|---|---|
| 7 | 61.978 | 302.233 |
| 8 | 68.145 | 208.167 |
| 9 | 72.912 | 160.923 |
| 10 | 76.813 | 131.688 |
| 11 | 80.072 | 110.009 |
| 12 | 82.745 | 90.211 |
| 13 | 85.031 | 77.165 |
| 14 | 87.044 | 67.940 |
| 15 | 88.818 | 59.876 |
| 16 | 90.346 | 51.601 |
| 17 | 91.599 | 42.300 |
| 18 | 92.687 | 36.712 |
| 19 | 93.656 | 32.710 |
| 20 | 94.506 | 28.686 |
| 21 | 95.245 | 24.955 |
| 22 | 95.814 | 19.217 |
| 23 | 96.298 | 16.319 |
| 24 | 96.765 | 15.782 |
| 25 | 97.153 | 13.069 |
| 26 | 97.529 | 12.693 |
| 27 | 97.851 | 10.869 |
| 28 | 98.104 | 8.556 |
| 29 | 98.353 | 8.406 |
| 30 | 98.547 | 6.536 |
| 31 | 98.723 | 5.958 |
| 32 | 98.898 | 5.890 |
| 33 | 99.067 | 5.709 |
| 34 | 99.236 | 5.695 |
| 35 | 99.395 | 5.382 |
| 36 | 99.549 | 5.181 |
| 37 | 99.693 | 4.879 |
| 38 | 99.773 | 2.693 |
| 39 | 99.845 | 2.428 |
| 40 | 99.917 | 2.428 |
| 41 | 100.000 | 1.214 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6500 | 0.6500 |
| 2 | 0.8002 | 0.1502 |
| 3 | 0.9038 | 0.1035 |
| 4 | 0.9852 | 0.0815 |
| 5 | 1.0534 | 0.0682 |
| 6 | 1.1127 | 0.0592 |
| 7 | 1.1653 | 0.0527 |
| 8 | 1.2129 | 0.0476 |
| 9 | 1.2566 | 0.0436 |
| 10 | 1.2969 | 0.0404 |
| 11 | 1.3345 | 0.0376 |
| 12 | 1.3698 | 0.0353 |
| 13 | 1.3992 | 0.0294 |
| 14 | 1.4270 | 0.0277 |
| 15 | 1.4533 | 0.0263 |
| 16 | 1.4784 | 0.0251 |
| 17 | 1.5023 | 0.0239 |
| 18 | 1.5252 | 0.0229 |
| 19 | 1.5472 | 0.0220 |
| 20 | 1.5684 | 0.0212 |
| 21 | 1.5888 | 0.0204 |

| | | |
|---|---|---|
| 22 | 1.6085 | 0.0197 |
| 23 | 1.6276 | 0.0191 |
| 24 | 1.6460 | 0.0185 |
| 25 | 1.6639 | 0.0179 |
| 26 | 1.6813 | 0.0174 |
| 27 | 1.6982 | 0.0169 |
| 28 | 1.7147 | 0.0164 |
| 29 | 1.7307 | 0.0160 |
| 30 | 1.7463 | 0.0156 |
| 31 | 1.7616 | 0.0152 |
| 32 | 1.7764 | 0.0149 |
| 33 | 1.7910 | 0.0145 |
| 34 | 1.8052 | 0.0142 |
| 35 | 1.8191 | 0.0139 |
| 36 | 1.8328 | 0.0136 |
| 37 | 1.8456 | 0.0129 |
| 38 | 1.8583 | 0.0126 |
| 39 | 1.8707 | 0.0124 |
| 40 | 1.8828 | 0.0121 |
| 41 | 1.8947 | 0.0119 |
| 42 | 1.9064 | 0.0117 |
| 43 | 1.9179 | 0.0115 |
| 44 | 1.9292 | 0.0113 |
| 45 | 1.9404 | 0.0111 |
| 46 | 1.9513 | 0.0109 |
| 47 | 1.9620 | 0.0108 |
| 48 | 1.9726 | 0.0106 |
| 49 | 1.9831 | 0.0104 |
| 50 | 1.9933 | 0.0103 |
| 51 | 2.0034 | 0.0101 |
| 52 | 2.0134 | 0.0100 |
| 53 | 2.0232 | 0.0098 |
| 54 | 2.0329 | 0.0097 |
| 55 | 2.0425 | 0.0096 |
| 56 | 2.0519 | 0.0094 |
| 57 | 2.0612 | 0.0093 |
| 58 | 2.0704 | 0.0092 |
| 59 | 2.0795 | 0.0091 |
| 60 | 2.0884 | 0.0090 |
| 61 | 2.0973 | 0.0088 |
| 62 | 2.1060 | 0.0087 |
| 63 | 2.1147 | 0.0086 |
| 64 | 2.1232 | 0.0085 |
| 65 | 2.1316 | 0.0084 |
| 66 | 2.1400 | 0.0083 |
| 67 | 2.1482 | 0.0082 |
| 68 | 2.1563 | 0.0082 |
| 69 | 2.1644 | 0.0081 |
| 70 | 2.1724 | 0.0080 |
| 71 | 2.1803 | 0.0079 |
| 72 | 2.1881 | 0.0078 |
| 73 | 2.1970 | 0.0089 |
| 74 | 2.2058 | 0.0088 |
| 75 | 2.2145 | 0.0087 |
| 76 | 2.2231 | 0.0086 |
| 77 | 2.2317 | 0.0086 |
| 78 | 2.2401 | 0.0085 |
| 79 | 2.2485 | 0.0084 |
| 80 | 2.2569 | 0.0083 |

| | | |
|---|---|---|
| 81 | 2.2651 | 0.0083 |
| 82 | 2.2733 | 0.0082 |
| 83 | 2.2814 | 0.0081 |
| 84 | 2.2894 | 0.0080 |
| 85 | 2.2974 | 0.0080 |
| 86 | 2.3053 | 0.0079 |
| 87 | 2.3132 | 0.0078 |
| 88 | 2.3209 | 0.0078 |
| 89 | 2.3287 | 0.0077 |
| 90 | 2.3363 | 0.0077 |
| 91 | 2.3439 | 0.0076 |
| 92 | 2.3514 | 0.0075 |
| 93 | 2.3589 | 0.0075 |
| 94 | 2.3663 | 0.0074 |
| 95 | 2.3737 | 0.0074 |
| 96 | 2.3810 | 0.0073 |
| 97 | 2.3883 | 0.0073 |
| 98 | 2.3955 | 0.0072 |
| 99 | 2.4026 | 0.0072 |
| 100 | 2.4097 | 0.0071 |
| 101 | 2.4168 | 0.0071 |
| 102 | 2.4238 | 0.0070 |
| 103 | 2.4308 | 0.0070 |
| 104 | 2.4377 | 0.0069 |
| 105 | 2.4445 | 0.0069 |
| 106 | 2.4513 | 0.0068 |
| 107 | 2.4581 | 0.0068 |
| 108 | 2.4648 | 0.0067 |
| 109 | 2.4715 | 0.0067 |
| 110 | 2.4782 | 0.0066 |
| 111 | 2.4848 | 0.0066 |
| 112 | 2.4913 | 0.0066 |
| 113 | 2.4978 | 0.0065 |
| 114 | 2.5043 | 0.0065 |
| 115 | 2.5107 | 0.0064 |
| 116 | 2.5171 | 0.0064 |
| 117 | 2.5235 | 0.0064 |
| 118 | 2.5298 | 0.0063 |
| 119 | 2.5361 | 0.0063 |
| 120 | 2.5423 | 0.0062 |
| 121 | 2.5485 | 0.0062 |
| 122 | 2.5547 | 0.0062 |
| 123 | 2.5608 | 0.0061 |
| 124 | 2.5669 | 0.0061 |
| 125 | 2.5730 | 0.0061 |
| 126 | 2.5790 | 0.0060 |
| 127 | 2.5850 | 0.0060 |
| 128 | 2.5910 | 0.0060 |
| 129 | 2.5969 | 0.0059 |
| 130 | 2.6028 | 0.0059 |
| 131 | 2.6087 | 0.0059 |
| 132 | 2.6145 | 0.0058 |
| 133 | 2.6203 | 0.0058 |
| 134 | 2.6261 | 0.0058 |
| 135 | 2.6318 | 0.0057 |
| 136 | 2.6375 | 0.0057 |
| 137 | 2.6432 | 0.0057 |
| 138 | 2.6489 | 0.0057 |
| 139 | 2.6545 | 0.0056 |

| | | |
|---|---|---|
| 140 | 2.6601 | 0.0056 |
| 141 | 2.6656 | 0.0056 |
| 142 | 2.6712 | 0.0055 |
| 143 | 2.6767 | 0.0055 |
| 144 | 2.6822 | 0.0055 |
| 145 | 2.6876 | 0.0055 |
| 146 | 2.6931 | 0.0054 |
| 147 | 2.6985 | 0.0054 |
| 148 | 2.7039 | 0.0054 |
| 149 | 2.7092 | 0.0054 |
| 150 | 2.7145 | 0.0053 |
| 151 | 2.7198 | 0.0053 |
| 152 | 2.7251 | 0.0053 |
| 153 | 2.7304 | 0.0053 |
| 154 | 2.7356 | 0.0052 |
| 155 | 2.7408 | 0.0052 |
| 156 | 2.7460 | 0.0052 |
| 157 | 2.7512 | 0.0052 |
| 158 | 2.7563 | 0.0051 |
| 159 | 2.7614 | 0.0051 |
| 160 | 2.7665 | 0.0051 |
| 161 | 2.7716 | 0.0051 |
| 162 | 2.7766 | 0.0050 |
| 163 | 2.7816 | 0.0050 |
| 164 | 2.7866 | 0.0050 |
| 165 | 2.7916 | 0.0050 |
| 166 | 2.7966 | 0.0050 |
| 167 | 2.8015 | 0.0049 |
| 168 | 2.8064 | 0.0049 |
| 169 | 2.8113 | 0.0049 |
| 170 | 2.8162 | 0.0049 |
| 171 | 2.8211 | 0.0049 |
| 172 | 2.8259 | 0.0048 |
| 173 | 2.8307 | 0.0048 |
| 174 | 2.8355 | 0.0048 |
| 175 | 2.8403 | 0.0048 |
| 176 | 2.8450 | 0.0048 |
| 177 | 2.8498 | 0.0047 |
| 178 | 2.8545 | 0.0047 |
| 179 | 2.8592 | 0.0047 |
| 180 | 2.8639 | 0.0047 |
| 181 | 2.8685 | 0.0047 |
| 182 | 2.8732 | 0.0046 |
| 183 | 2.8778 | 0.0046 |
| 184 | 2.8824 | 0.0046 |
| 185 | 2.8870 | 0.0046 |
| 186 | 2.8916 | 0.0046 |
| 187 | 2.8962 | 0.0046 |
| 188 | 2.9007 | 0.0045 |
| 189 | 2.9052 | 0.0045 |
| 190 | 2.9097 | 0.0045 |
| 191 | 2.9142 | 0.0045 |
| 192 | 2.9187 | 0.0045 |
| 193 | 2.9231 | 0.0045 |
| 194 | 2.9276 | 0.0044 |
| 195 | 2.9320 | 0.0044 |
| 196 | 2.9364 | 0.0044 |
| 197 | 2.9408 | 0.0044 |
| 198 | 2.9452 | 0.0044 |

| | | |
|---|---|---|
| 199 | 2.9496 | 0.0044 |
| 200 | 2.9539 | 0.0043 |
| 201 | 2.9582 | 0.0043 |
| 202 | 2.9625 | 0.0043 |
| 203 | 2.9668 | 0.0043 |
| 204 | 2.9711 | 0.0043 |
| 205 | 2.9754 | 0.0043 |
| 206 | 2.9797 | 0.0043 |
| 207 | 2.9839 | 0.0042 |
| 208 | 2.9881 | 0.0042 |
| 209 | 2.9923 | 0.0042 |
| 210 | 2.9965 | 0.0042 |
| 211 | 3.0007 | 0.0042 |
| 212 | 3.0049 | 0.0042 |
| 213 | 3.0090 | 0.0042 |
| 214 | 3.0132 | 0.0041 |
| 215 | 3.0173 | 0.0041 |
| 216 | 3.0214 | 0.0041 |
| 217 | 3.0255 | 0.0041 |
| 218 | 3.0296 | 0.0041 |
| 219 | 3.0337 | 0.0041 |
| 220 | 3.0378 | 0.0041 |
| 221 | 3.0418 | 0.0040 |
| 222 | 3.0458 | 0.0040 |
| 223 | 3.0499 | 0.0040 |
| 224 | 3.0539 | 0.0040 |
| 225 | 3.0579 | 0.0040 |
| 226 | 3.0619 | 0.0040 |
| 227 | 3.0658 | 0.0040 |
| 228 | 3.0698 | 0.0040 |
| 229 | 3.0738 | 0.0039 |
| 230 | 3.0777 | 0.0039 |
| 231 | 3.0816 | 0.0039 |
| 232 | 3.0855 | 0.0039 |
| 233 | 3.0894 | 0.0039 |
| 234 | 3.0933 | 0.0039 |
| 235 | 3.0972 | 0.0039 |
| 236 | 3.1011 | 0.0039 |
| 237 | 3.1049 | 0.0039 |
| 238 | 3.1088 | 0.0038 |
| 239 | 3.1126 | 0.0038 |
| 240 | 3.1164 | 0.0038 |
| 241 | 3.1202 | 0.0038 |
| 242 | 3.1240 | 0.0038 |
| 243 | 3.1278 | 0.0038 |
| 244 | 3.1316 | 0.0038 |
| 245 | 3.1353 | 0.0038 |
| 246 | 3.1391 | 0.0038 |
| 247 | 3.1428 | 0.0037 |
| 248 | 3.1466 | 0.0037 |
| 249 | 3.1503 | 0.0037 |
| 250 | 3.1540 | 0.0037 |
| 251 | 3.1577 | 0.0037 |
| 252 | 3.1614 | 0.0037 |
| 253 | 3.1651 | 0.0037 |
| 254 | 3.1687 | 0.0037 |
| 255 | 3.1724 | 0.0037 |
| 256 | 3.1760 | 0.0036 |
| 257 | 3.1797 | 0.0036 |

| | | |
|---|---|---|
| 258 | 3.1833 | 0.0036 |
| 259 | 3.1869 | 0.0036 |
| 260 | 3.1905 | 0.0036 |
| 261 | 3.1941 | 0.0036 |
| 262 | 3.1977 | 0.0036 |
| 263 | 3.2013 | 0.0036 |
| 264 | 3.2049 | 0.0036 |
| 265 | 3.2084 | 0.0036 |
| 266 | 3.2120 | 0.0036 |
| 267 | 3.2155 | 0.0035 |
| 268 | 3.2191 | 0.0035 |
| 269 | 3.2226 | 0.0035 |
| 270 | 3.2261 | 0.0035 |
| 271 | 3.2296 | 0.0035 |
| 272 | 3.2331 | 0.0035 |
| 273 | 3.2366 | 0.0035 |
| 274 | 3.2401 | 0.0035 |
| 275 | 3.2435 | 0.0035 |
| 276 | 3.2470 | 0.0035 |
| 277 | 3.2505 | 0.0035 |
| 278 | 3.2539 | 0.0034 |
| 279 | 3.2573 | 0.0034 |
| 280 | 3.2608 | 0.0034 |
| 281 | 3.2642 | 0.0034 |
| 282 | 3.2676 | 0.0034 |
| 283 | 3.2710 | 0.0034 |
| 284 | 3.2744 | 0.0034 |
| 285 | 3.2778 | 0.0034 |
| 286 | 3.2811 | 0.0034 |
| 287 | 3.2845 | 0.0034 |
| 288 | 3.2879 | 0.0034 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0034 | 0.0011 | 0.0023 |
| 2 | 0.0034 | 0.0011 | 0.0023 |
| 3 | 0.0034 | 0.0011 | 0.0023 |
| 4 | 0.0034 | 0.0011 | 0.0023 |
| 5 | 0.0034 | 0.0011 | 0.0023 |
| 6 | 0.0034 | 0.0011 | 0.0023 |
| 7 | 0.0034 | 0.0011 | 0.0023 |
| 8 | 0.0034 | 0.0011 | 0.0024 |
| 9 | 0.0035 | 0.0011 | 0.0024 |
| 10 | 0.0035 | 0.0011 | 0.0024 |
| 11 | 0.0035 | 0.0011 | 0.0024 |
| 12 | 0.0035 | 0.0011 | 0.0024 |
| 13 | 0.0035 | 0.0011 | 0.0024 |
| 14 | 0.0035 | 0.0011 | 0.0024 |
| 15 | 0.0035 | 0.0011 | 0.0024 |
| 16 | 0.0036 | 0.0011 | 0.0024 |
| 17 | 0.0036 | 0.0011 | 0.0024 |
| 18 | 0.0036 | 0.0011 | 0.0024 |
| 19 | 0.0036 | 0.0011 | 0.0025 |
| 20 | 0.0036 | 0.0011 | 0.0025 |
| 21 | 0.0036 | 0.0011 | 0.0025 |
| 22 | 0.0036 | 0.0012 | 0.0025 |
| 23 | 0.0037 | 0.0012 | 0.0025 |

| | | | |
|---|---|---|---|
| 24 | 0.0037 | 0.0012 | 0.0025 |
| 25 | 0.0037 | 0.0012 | 0.0025 |
| 26 | 0.0037 | 0.0012 | 0.0025 |
| 27 | 0.0037 | 0.0012 | 0.0025 |
| 28 | 0.0037 | 0.0012 | 0.0026 |
| 29 | 0.0038 | 0.0012 | 0.0026 |
| 30 | 0.0038 | 0.0012 | 0.0026 |
| 31 | 0.0038 | 0.0012 | 0.0026 |
| 32 | 0.0038 | 0.0012 | 0.0026 |
| 33 | 0.0038 | 0.0012 | 0.0026 |
| 34 | 0.0038 | 0.0012 | 0.0026 |
| 35 | 0.0039 | 0.0012 | 0.0026 |
| 36 | 0.0039 | 0.0012 | 0.0026 |
| 37 | 0.0039 | 0.0012 | 0.0027 |
| 38 | 0.0039 | 0.0012 | 0.0027 |
| 39 | 0.0039 | 0.0012 | 0.0027 |
| 40 | 0.0039 | 0.0012 | 0.0027 |
| 41 | 0.0040 | 0.0013 | 0.0027 |
| 42 | 0.0040 | 0.0013 | 0.0027 |
| 43 | 0.0040 | 0.0013 | 0.0027 |
| 44 | 0.0040 | 0.0013 | 0.0027 |
| 45 | 0.0040 | 0.0013 | 0.0028 |
| 46 | 0.0040 | 0.0013 | 0.0028 |
| 47 | 0.0041 | 0.0013 | 0.0028 |
| 48 | 0.0041 | 0.0013 | 0.0028 |
| 49 | 0.0041 | 0.0013 | 0.0028 |
| 50 | 0.0041 | 0.0013 | 0.0028 |
| 51 | 0.0042 | 0.0013 | 0.0028 |
| 52 | 0.0042 | 0.0013 | 0.0028 |
| 53 | 0.0042 | 0.0013 | 0.0029 |
| 54 | 0.0042 | 0.0013 | 0.0029 |
| 55 | 0.0042 | 0.0013 | 0.0029 |
| 56 | 0.0043 | 0.0013 | 0.0029 |
| 57 | 0.0043 | 0.0014 | 0.0029 |
| 58 | 0.0043 | 0.0014 | 0.0029 |
| 59 | 0.0043 | 0.0014 | 0.0030 |
| 60 | 0.0043 | 0.0014 | 0.0030 |
| 61 | 0.0044 | 0.0014 | 0.0030 |
| 62 | 0.0044 | 0.0014 | 0.0030 |
| 63 | 0.0044 | 0.0014 | 0.0030 |
| 64 | 0.0044 | 0.0014 | 0.0030 |
| 65 | 0.0045 | 0.0014 | 0.0031 |
| 66 | 0.0045 | 0.0014 | 0.0031 |
| 67 | 0.0045 | 0.0014 | 0.0031 |
| 68 | 0.0045 | 0.0014 | 0.0031 |
| 69 | 0.0046 | 0.0014 | 0.0031 |
| 70 | 0.0046 | 0.0015 | 0.0031 |
| 71 | 0.0046 | 0.0015 | 0.0032 |
| 72 | 0.0046 | 0.0015 | 0.0032 |
| 73 | 0.0047 | 0.0015 | 0.0032 |
| 74 | 0.0047 | 0.0015 | 0.0032 |
| 75 | 0.0047 | 0.0015 | 0.0032 |
| 76 | 0.0048 | 0.0015 | 0.0033 |
| 77 | 0.0048 | 0.0015 | 0.0033 |
| 78 | 0.0048 | 0.0015 | 0.0033 |
| 79 | 0.0049 | 0.0015 | 0.0033 |
| 80 | 0.0049 | 0.0015 | 0.0033 |
| 81 | 0.0049 | 0.0016 | 0.0034 |
| 82 | 0.0049 | 0.0016 | 0.0034 |

| | | | |
|---|---|---|---|
| 83 | 0.0050 | 0.0016 | 0.0034 |
| 84 | 0.0050 | 0.0016 | 0.0034 |
| 85 | 0.0050 | 0.0016 | 0.0034 |
| 86 | 0.0051 | 0.0016 | 0.0035 |
| 87 | 0.0051 | 0.0016 | 0.0035 |
| 88 | 0.0051 | 0.0016 | 0.0035 |
| 89 | 0.0052 | 0.0016 | 0.0035 |
| 90 | 0.0052 | 0.0016 | 0.0036 |
| 91 | 0.0053 | 0.0017 | 0.0036 |
| 92 | 0.0053 | 0.0017 | 0.0036 |
| 93 | 0.0053 | 0.0017 | 0.0036 |
| 94 | 0.0054 | 0.0017 | 0.0037 |
| 95 | 0.0054 | 0.0017 | 0.0037 |
| 96 | 0.0054 | 0.0017 | 0.0037 |
| 97 | 0.0055 | 0.0017 | 0.0037 |
| 98 | 0.0055 | 0.0017 | 0.0038 |
| 99 | 0.0056 | 0.0018 | 0.0038 |
| 100 | 0.0056 | 0.0018 | 0.0038 |
| 101 | 0.0057 | 0.0018 | 0.0039 |
| 102 | 0.0057 | 0.0018 | 0.0039 |
| 103 | 0.0057 | 0.0018 | 0.0039 |
| 104 | 0.0058 | 0.0018 | 0.0039 |
| 105 | 0.0058 | 0.0018 | 0.0040 |
| 106 | 0.0059 | 0.0019 | 0.0040 |
| 107 | 0.0059 | 0.0019 | 0.0041 |
| 108 | 0.0060 | 0.0019 | 0.0041 |
| 109 | 0.0060 | 0.0019 | 0.0041 |
| 110 | 0.0061 | 0.0019 | 0.0041 |
| 111 | 0.0061 | 0.0019 | 0.0042 |
| 112 | 0.0062 | 0.0020 | 0.0042 |
| 113 | 0.0062 | 0.0020 | 0.0043 |
| 114 | 0.0063 | 0.0020 | 0.0043 |
| 115 | 0.0064 | 0.0020 | 0.0043 |
| 116 | 0.0064 | 0.0020 | 0.0044 |
| 117 | 0.0065 | 0.0020 | 0.0044 |
| 118 | 0.0065 | 0.0021 | 0.0045 |
| 119 | 0.0066 | 0.0021 | 0.0045 |
| 120 | 0.0066 | 0.0021 | 0.0045 |
| 121 | 0.0067 | 0.0021 | 0.0046 |
| 122 | 0.0068 | 0.0021 | 0.0046 |
| 123 | 0.0069 | 0.0022 | 0.0047 |
| 124 | 0.0069 | 0.0022 | 0.0047 |
| 125 | 0.0070 | 0.0022 | 0.0048 |
| 126 | 0.0071 | 0.0022 | 0.0048 |
| 127 | 0.0072 | 0.0023 | 0.0049 |
| 128 | 0.0072 | 0.0023 | 0.0049 |
| 129 | 0.0073 | 0.0023 | 0.0050 |
| 130 | 0.0074 | 0.0023 | 0.0050 |
| 131 | 0.0075 | 0.0024 | 0.0051 |
| 132 | 0.0075 | 0.0024 | 0.0052 |
| 133 | 0.0077 | 0.0024 | 0.0052 |
| 134 | 0.0077 | 0.0024 | 0.0053 |
| 135 | 0.0078 | 0.0025 | 0.0054 |
| 136 | 0.0079 | 0.0025 | 0.0054 |
| 137 | 0.0080 | 0.0025 | 0.0055 |
| 138 | 0.0081 | 0.0026 | 0.0055 |
| 139 | 0.0083 | 0.0026 | 0.0056 |
| 140 | 0.0083 | 0.0026 | 0.0057 |
| 141 | 0.0085 | 0.0027 | 0.0058 |

| | | | |
|---|---|---|---|
| 142 | 0.0086 | 0.0027 | 0.0058 |
| 143 | 0.0087 | 0.0028 | 0.0060 |
| 144 | 0.0088 | 0.0028 | 0.0060 |
| 145 | 0.0078 | 0.0025 | 0.0053 |
| 146 | 0.0079 | 0.0025 | 0.0054 |
| 147 | 0.0081 | 0.0026 | 0.0055 |
| 148 | 0.0082 | 0.0026 | 0.0056 |
| 149 | 0.0083 | 0.0026 | 0.0057 |
| 150 | 0.0084 | 0.0027 | 0.0058 |
| 151 | 0.0086 | 0.0027 | 0.0059 |
| 152 | 0.0087 | 0.0028 | 0.0060 |
| 153 | 0.0090 | 0.0028 | 0.0061 |
| 154 | 0.0091 | 0.0029 | 0.0062 |
| 155 | 0.0093 | 0.0029 | 0.0064 |
| 156 | 0.0094 | 0.0030 | 0.0064 |
| 157 | 0.0097 | 0.0031 | 0.0066 |
| 158 | 0.0098 | 0.0031 | 0.0067 |
| 159 | 0.0101 | 0.0032 | 0.0069 |
| 160 | 0.0103 | 0.0033 | 0.0070 |
| 161 | 0.0106 | 0.0034 | 0.0072 |
| 162 | 0.0108 | 0.0034 | 0.0074 |
| 163 | 0.0111 | 0.0035 | 0.0076 |
| 164 | 0.0113 | 0.0036 | 0.0077 |
| 165 | 0.0117 | 0.0037 | 0.0080 |
| 166 | 0.0119 | 0.0038 | 0.0081 |
| 167 | 0.0124 | 0.0039 | 0.0085 |
| 168 | 0.0126 | 0.0040 | 0.0086 |
| 169 | 0.0136 | 0.0043 | 0.0093 |
| 170 | 0.0139 | 0.0044 | 0.0095 |
| 171 | 0.0145 | 0.0046 | 0.0099 |
| 172 | 0.0149 | 0.0047 | 0.0102 |
| 173 | 0.0156 | 0.0049 | 0.0107 |
| 174 | 0.0160 | 0.0051 | 0.0109 |
| 175 | 0.0169 | 0.0054 | 0.0115 |
| 176 | 0.0174 | 0.0055 | 0.0119 |
| 177 | 0.0185 | 0.0058 | 0.0126 |
| 178 | 0.0191 | 0.0060 | 0.0130 |
| 179 | 0.0204 | 0.0065 | 0.0139 |
| 180 | 0.0212 | 0.0067 | 0.0145 |
| 181 | 0.0229 | 0.0073 | 0.0157 |
| 182 | 0.0239 | 0.0076 | 0.0164 |
| 183 | 0.0263 | 0.0083 | 0.0180 |
| 184 | 0.0277 | 0.0088 | 0.0190 |
| 185 | 0.0353 | 0.0112 | 0.0241 |
| 186 | 0.0376 | 0.0119 | 0.0257 |
| 187 | 0.0436 | 0.0138 | 0.0298 |
| 188 | 0.0476 | 0.0151 | 0.0325 |
| 189 | 0.0592 | 0.0161 | 0.0431 |
| 190 | 0.0682 | 0.0161 | 0.0521 |
| 191 | 0.1035 | 0.0161 | 0.0874 |
| 192 | 0.1502 | 0.0161 | 0.1342 |
| 193 | 0.6500 | 0.0161 | 0.6339 |
| 194 | 0.0815 | 0.0161 | 0.0654 |
| 195 | 0.0527 | 0.0161 | 0.0366 |
| 196 | 0.0404 | 0.0128 | 0.0276 |
| 197 | 0.0294 | 0.0093 | 0.0201 |
| 198 | 0.0251 | 0.0079 | 0.0171 |
| 199 | 0.0220 | 0.0070 | 0.0150 |
| 200 | 0.0197 | 0.0062 | 0.0135 |

| | | | |
|---|---|---|---|
| 201 | 0.0179 | 0.0057 | 0.0122 |
| 202 | 0.0164 | 0.0052 | 0.0112 |
| 203 | 0.0152 | 0.0048 | 0.0104 |
| 204 | 0.0142 | 0.0045 | 0.0097 |
| 205 | 0.0129 | 0.0041 | 0.0088 |
| 206 | 0.0121 | 0.0038 | 0.0083 |
| 207 | 0.0115 | 0.0036 | 0.0079 |
| 208 | 0.0109 | 0.0035 | 0.0075 |
| 209 | 0.0104 | 0.0033 | 0.0071 |
| 210 | 0.0100 | 0.0032 | 0.0068 |
| 211 | 0.0096 | 0.0030 | 0.0065 |
| 212 | 0.0092 | 0.0029 | 0.0063 |
| 213 | 0.0088 | 0.0028 | 0.0060 |
| 214 | 0.0085 | 0.0027 | 0.0058 |
| 215 | 0.0082 | 0.0026 | 0.0056 |
| 216 | 0.0080 | 0.0025 | 0.0055 |
| 217 | 0.0089 | 0.0028 | 0.0061 |
| 218 | 0.0086 | 0.0027 | 0.0059 |
| 219 | 0.0084 | 0.0027 | 0.0057 |
| 220 | 0.0082 | 0.0026 | 0.0056 |
| 221 | 0.0080 | 0.0025 | 0.0054 |
| 222 | 0.0078 | 0.0025 | 0.0053 |
| 223 | 0.0076 | 0.0024 | 0.0052 |
| 224 | 0.0074 | 0.0024 | 0.0051 |
| 225 | 0.0073 | 0.0023 | 0.0050 |
| 226 | 0.0071 | 0.0022 | 0.0049 |
| 227 | 0.0070 | 0.0022 | 0.0048 |
| 228 | 0.0068 | 0.0022 | 0.0047 |
| 229 | 0.0067 | 0.0021 | 0.0046 |
| 230 | 0.0066 | 0.0021 | 0.0045 |
| 231 | 0.0064 | 0.0020 | 0.0044 |
| 232 | 0.0063 | 0.0020 | 0.0043 |
| 233 | 0.0062 | 0.0020 | 0.0042 |
| 234 | 0.0061 | 0.0019 | 0.0042 |
| 235 | 0.0060 | 0.0019 | 0.0041 |
| 236 | 0.0059 | 0.0019 | 0.0040 |
| 237 | 0.0058 | 0.0018 | 0.0040 |
| 238 | 0.0057 | 0.0018 | 0.0039 |
| 239 | 0.0056 | 0.0018 | 0.0038 |
| 240 | 0.0055 | 0.0018 | 0.0038 |
| 241 | 0.0055 | 0.0017 | 0.0037 |
| 242 | 0.0054 | 0.0017 | 0.0037 |
| 243 | 0.0053 | 0.0017 | 0.0036 |
| 244 | 0.0052 | 0.0017 | 0.0036 |
| 245 | 0.0052 | 0.0016 | 0.0035 |
| 246 | 0.0051 | 0.0016 | 0.0035 |
| 247 | 0.0050 | 0.0016 | 0.0034 |
| 248 | 0.0050 | 0.0016 | 0.0034 |
| 249 | 0.0049 | 0.0016 | 0.0033 |
| 250 | 0.0048 | 0.0015 | 0.0033 |
| 251 | 0.0048 | 0.0015 | 0.0033 |
| 252 | 0.0047 | 0.0015 | 0.0032 |
| 253 | 0.0047 | 0.0015 | 0.0032 |
| 254 | 0.0046 | 0.0015 | 0.0032 |
| 255 | 0.0046 | 0.0014 | 0.0031 |
| 256 | 0.0045 | 0.0014 | 0.0031 |
| 257 | 0.0045 | 0.0014 | 0.0030 |
| 258 | 0.0044 | 0.0014 | 0.0030 |
| 259 | 0.0044 | 0.0014 | 0.0030 |

| | | | |
|---|---|---|---|
| 260 | 0.0043 | 0.0014 | 0.0029 |
| 261 | 0.0043 | 0.0014 | 0.0029 |
| 262 | 0.0042 | 0.0013 | 0.0029 |
| 263 | 0.0042 | 0.0013 | 0.0029 |
| 264 | 0.0041 | 0.0013 | 0.0028 |
| 265 | 0.0041 | 0.0013 | 0.0028 |
| 266 | 0.0041 | 0.0013 | 0.0028 |
| 267 | 0.0040 | 0.0013 | 0.0027 |
| 268 | 0.0040 | 0.0013 | 0.0027 |
| 269 | 0.0039 | 0.0013 | 0.0027 |
| 270 | 0.0039 | 0.0012 | 0.0027 |
| 271 | 0.0039 | 0.0012 | 0.0026 |
| 272 | 0.0038 | 0.0012 | 0.0026 |
| 273 | 0.0038 | 0.0012 | 0.0026 |
| 274 | 0.0038 | 0.0012 | 0.0026 |
| 275 | 0.0037 | 0.0012 | 0.0026 |
| 276 | 0.0037 | 0.0012 | 0.0025 |
| 277 | 0.0037 | 0.0012 | 0.0025 |
| 278 | 0.0036 | 0.0012 | 0.0025 |
| 279 | 0.0036 | 0.0011 | 0.0025 |
| 280 | 0.0036 | 0.0011 | 0.0025 |
| 281 | 0.0036 | 0.0011 | 0.0024 |
| 282 | 0.0035 | 0.0011 | 0.0024 |
| 283 | 0.0035 | 0.0011 | 0.0024 |
| 284 | 0.0035 | 0.0011 | 0.0024 |
| 285 | 0.0035 | 0.0011 | 0.0024 |
| 286 | 0.0034 | 0.0011 | 0.0023 |
| 287 | 0.0034 | 0.0011 | 0.0023 |
| 288 | 0.0034 | 0.0011 | 0.0023 |

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Total soil rain loss = 0.78(In)
Total effective rainfall = 2.50(In)
Peak flow rate in flood hydrograph = 509.77(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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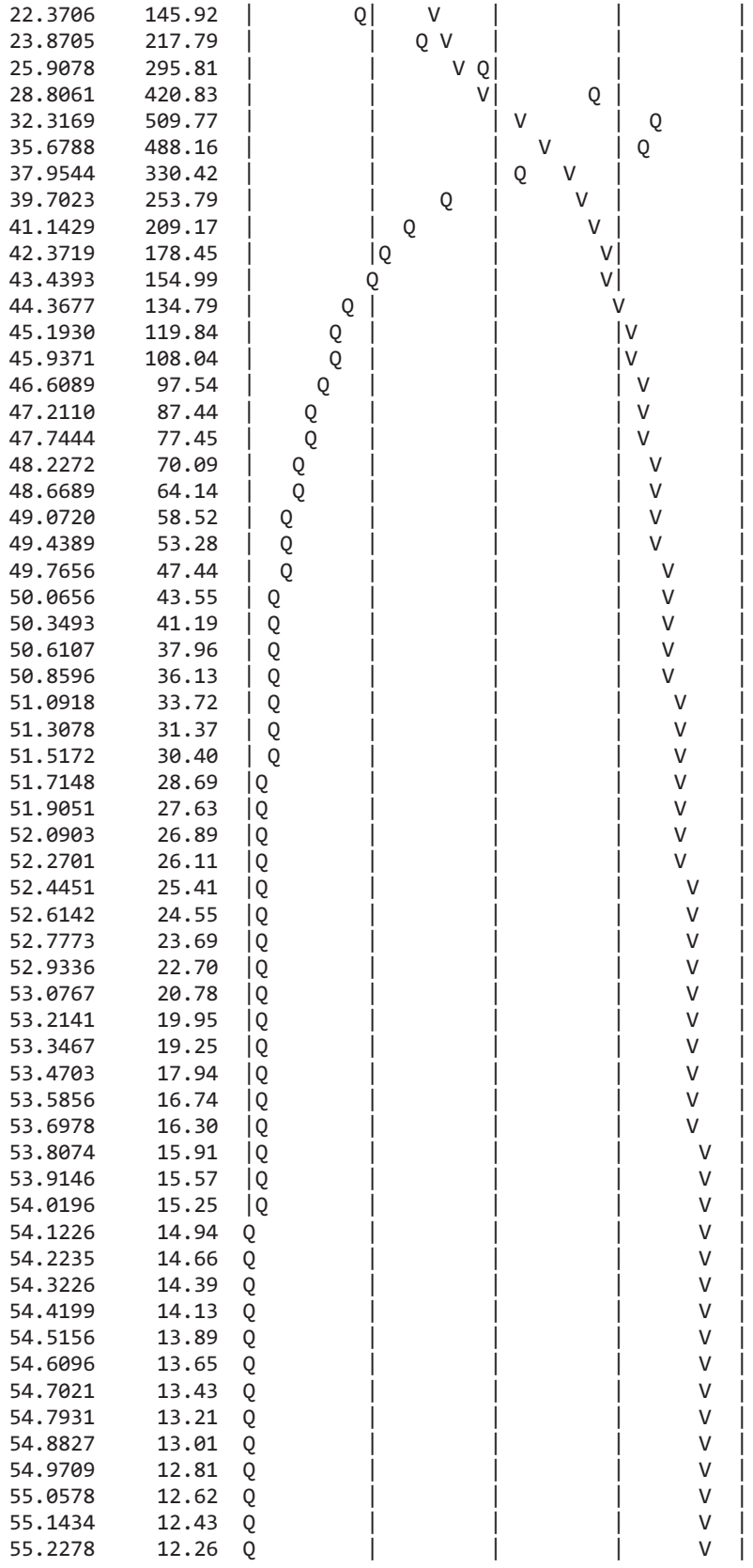
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 150.0 | 300.0 | 450.0 | 600.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0006 | 0.08 | Q | \| | \| | \| | \| |
| 0+10 | 0.0029 | 0.34 | Q | \| | \| | \| | \| |
| 0+15 | 0.0083 | 0.78 | Q | \| | \| | \| | \| |
| 0+20 | 0.0196 | 1.64 | Q | \| | \| | \| | \| |
| 0+25 | 0.0394 | 2.88 | Q | \| | \| | \| | \| |
| 0+30 | 0.0678 | 4.13 | Q | \| | \| | \| | \| |
| 0+35 | 0.1011 | 4.83 | Q | \| | \| | \| | \| |
| 0+40 | 0.1378 | 5.33 | Q | \| | \| | \| | \| |
| 0+45 | 0.1772 | 5.72 | Q | \| | \| | \| | \| |
| 0+50 | 0.2188 | 6.04 | Q | \| | \| | \| | \| |
| 0+55 | 0.2623 | 6.32 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.3074 | 6.55 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.3539 | 6.75 | Q | \| | \| | \| | \| |
| 1+10 | 0.4016 | 6.93 | Q | \| | \| | \| | \| |
| 1+15 | 0.4505 | 7.09 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+20 | 0.5004 | 7.24 | Q | | | | |
| 1+25 | 0.5511 | 7.37 | Q | | | | |
| 1+30 | 0.6026 | 7.48 | Q | | | | |
| 1+35 | 0.6548 | 7.58 | Q | | | | |
| 1+40 | 0.7077 | 7.68 | Q | | | | |
| 1+45 | 0.7612 | 7.77 | Q | | | | |
| 1+50 | 0.8152 | 7.84 | Q | | | | |
| 1+55 | 0.8697 | 7.91 | Q | | | | |
| 2+ 0 | 0.9247 | 7.98 | Q | | | | |
| 2+ 5 | 0.9800 | 8.04 | Q | | | | |
| 2+10 | 1.0358 | 8.10 | Q | | | | |
| 2+15 | 1.0920 | 8.16 | Q | | | | |
| 2+20 | 1.1486 | 8.21 | Q | | | | |
| 2+25 | 1.2055 | 8.27 | Q | | | | |
| 2+30 | 1.2628 | 8.32 | Q | | | | |
| 2+35 | 1.3204 | 8.36 | Q | | | | |
| 2+40 | 1.3784 | 8.41 | Q | | | | |
| 2+45 | 1.4367 | 8.46 | Q | | | | |
| 2+50 | 1.4953 | 8.51 | QV | | | | |
| 2+55 | 1.5542 | 8.56 | QV | | | | |
| 3+ 0 | 1.6135 | 8.61 | QV | | | | |
| 3+ 5 | 1.6731 | 8.66 | QV | | | | |
| 3+10 | 1.7331 | 8.70 | QV | | | | |
| 3+15 | 1.7933 | 8.75 | QV | | | | |
| 3+20 | 1.8538 | 8.79 | QV | | | | |
| 3+25 | 1.9147 | 8.83 | QV | | | | |
| 3+30 | 1.9758 | 8.87 | QV | | | | |
| 3+35 | 2.0371 | 8.91 | QV | | | | |
| 3+40 | 2.0988 | 8.95 | QV | | | | |
| 3+45 | 2.1607 | 8.99 | QV | | | | |
| 3+50 | 2.2229 | 9.03 | QV | | | | |
| 3+55 | 2.2854 | 9.07 | QV | | | | |
| 4+ 0 | 2.3482 | 9.12 | QV | | | | |
| 4+ 5 | 2.4113 | 9.16 | QV | | | | |
| 4+10 | 2.4747 | 9.20 | QV | | | | |
| 4+15 | 2.5383 | 9.25 | QV | | | | |
| 4+20 | 2.6023 | 9.29 | QV | | | | |
| 4+25 | 2.6666 | 9.33 | QV | | | | |
| 4+30 | 2.7312 | 9.38 | QV | | | | |
| 4+35 | 2.7961 | 9.43 | QV | | | | |
| 4+40 | 2.8614 | 9.47 | QV | | | | |
| 4+45 | 2.9269 | 9.52 | Q V | | | | |
| 4+50 | 2.9928 | 9.57 | Q V | | | | |
| 4+55 | 3.0590 | 9.61 | Q V | | | | |
| 5+ 0 | 3.1256 | 9.66 | Q V | | | | |
| 5+ 5 | 3.1924 | 9.71 | Q V | | | | |
| 5+10 | 3.2597 | 9.76 | Q V | | | | |
| 5+15 | 3.3273 | 9.81 | Q V | | | | |
| 5+20 | 3.3952 | 9.86 | Q V | | | | |
| 5+25 | 3.4635 | 9.91 | Q V | | | | |
| 5+30 | 3.5321 | 9.97 | Q V | | | | |
| 5+35 | 3.6011 | 10.02 | Q V | | | | |
| 5+40 | 3.6705 | 10.07 | Q V | | | | |
| 5+45 | 3.7402 | 10.13 | Q V | | | | |
| 5+50 | 3.8104 | 10.18 | Q V | | | | |
| 5+55 | 3.8809 | 10.24 | Q V | | | | |
| 6+ 0 | 3.9518 | 10.30 | Q V | | | | |
| 6+ 5 | 4.0231 | 10.35 | Q V | | | | |
| 6+10 | 4.0948 | 10.41 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+15 | 4.1669 | 10.47 | Q V | \| | \| | \| | \| |
| 6+20 | 4.2394 | 10.53 | Q V | \| | \| | \| | \| |
| 6+25 | 4.3123 | 10.59 | Q V | \| | \| | \| | \| |
| 6+30 | 4.3857 | 10.65 | Q V | \| | \| | \| | \| |
| 6+35 | 4.4594 | 10.71 | Q V | \| | \| | \| | \| |
| 6+40 | 4.5337 | 10.78 | Q V | \| | \| | \| | \| |
| 6+45 | 4.6083 | 10.84 | Q V | \| | \| | \| | \| |
| 6+50 | 4.6834 | 10.91 | Q V | \| | \| | \| | \| |
| 6+55 | 4.7590 | 10.97 | Q V | \| | \| | \| | \| |
| 7+ 0 | 4.8350 | 11.04 | Q V | \| | \| | \| | \| |
| 7+ 5 | 4.9115 | 11.11 | Q V | \| | \| | \| | \| |
| 7+10 | 4.9884 | 11.17 | Q V | \| | \| | \| | \| |
| 7+15 | 5.0659 | 11.24 | Q V | \| | \| | \| | \| |
| 7+20 | 5.1438 | 11.32 | Q V | \| | \| | \| | \| |
| 7+25 | 5.2222 | 11.39 | Q V | \| | \| | \| | \| |
| 7+30 | 5.3012 | 11.46 | Q V | \| | \| | \| | \| |
| 7+35 | 5.3806 | 11.53 | Q V | \| | \| | \| | \| |
| 7+40 | 5.4606 | 11.61 | Q V | \| | \| | \| | \| |
| 7+45 | 5.5410 | 11.69 | Q V | \| | \| | \| | \| |
| 7+50 | 5.6221 | 11.77 | Q V | \| | \| | \| | \| |
| 7+55 | 5.7036 | 11.84 | Q V | \| | \| | \| | \| |
| 8+ 0 | 5.7858 | 11.93 | Q V | \| | \| | \| | \| |
| 8+ 5 | 5.8685 | 12.01 | Q V | \| | \| | \| | \| |
| 8+10 | 5.9517 | 12.09 | Q V | \| | \| | \| | \| |
| 8+15 | 6.0356 | 12.17 | Q V | \| | \| | \| | \| |
| 8+20 | 6.1200 | 12.26 | Q V | \| | \| | \| | \| |
| 8+25 | 6.2051 | 12.35 | Q V | \| | \| | \| | \| |
| 8+30 | 6.2907 | 12.44 | Q V | \| | \| | \| | \| |
| 8+35 | 6.3770 | 12.53 | Q V | \| | \| | \| | \| |
| 8+40 | 6.4639 | 12.62 | Q V | \| | \| | \| | \| |
| 8+45 | 6.5515 | 12.71 | Q V | \| | \| | \| | \| |
| 8+50 | 6.6397 | 12.81 | Q V | \| | \| | \| | \| |
| 8+55 | 6.7286 | 12.91 | Q V | \| | \| | \| | \| |
| 9+ 0 | 6.8182 | 13.01 | Q V | \| | \| | \| | \| |
| 9+ 5 | 6.9085 | 13.11 | Q V | \| | \| | \| | \| |
| 9+10 | 6.9995 | 13.21 | Q V | \| | \| | \| | \| |
| 9+15 | 7.0912 | 13.32 | Q V | \| | \| | \| | \| |
| 9+20 | 7.1836 | 13.42 | Q V | \| | \| | \| | \| |
| 9+25 | 7.2768 | 13.53 | Q V | \| | \| | \| | \| |
| 9+30 | 7.3708 | 13.64 | Q V | \| | \| | \| | \| |
| 9+35 | 7.4655 | 13.76 | Q V | \| | \| | \| | \| |
| 9+40 | 7.5611 | 13.87 | Q V | \| | \| | \| | \| |
| 9+45 | 7.6575 | 13.99 | Q V | \| | \| | \| | \| |
| 9+50 | 7.7547 | 14.11 | Q V | \| | \| | \| | \| |
| 9+55 | 7.8527 | 14.24 | Q V | \| | \| | \| | \| |
| 10+ 0 | 7.9516 | 14.36 | Q V | \| | \| | \| | \| |
| 10+ 5 | 8.0514 | 14.49 | Q V | \| | \| | \| | \| |
| 10+10 | 8.1522 | 14.62 | Q V | \| | \| | \| | \| |
| 10+15 | 8.2538 | 14.76 | Q V | \| | \| | \| | \| |
| 10+20 | 8.3564 | 14.90 | Q V | \| | \| | \| | \| |
| 10+25 | 8.4599 | 15.04 | \|Q V | \| | \| | \| | \| |
| 10+30 | 8.5645 | 15.18 | \|Q V | \| | \| | \| | \| |
| 10+35 | 8.6701 | 15.33 | \|Q V | \| | \| | \| | \| |
| 10+40 | 8.7767 | 15.48 | \|Q V | \| | \| | \| | \| |
| 10+45 | 8.8843 | 15.63 | \|Q V | \| | \| | \| | \| |
| 10+50 | 8.9931 | 15.79 | \|Q V | \| | \| | \| | \| |
| 10+55 | 9.1030 | 15.95 | \|Q V | \| | \| | \| | \| |
| 11+ 0 | 9.2140 | 16.12 | \|Q V | \| | \| | \| | \| |
| 11+ 5 | 9.3262 | 16.29 | \|Q V | \| | \| | \| | \| |

```
11+10       9.4397     16.47  |Q    V   |          |          |          |
11+15       9.5543     16.65  |Q    V   |          |          |          |
11+20       9.6703     16.83  |Q    V   |          |          |          |
11+25       9.7875     17.02  |Q    V   |          |          |          |
11+30       9.9061     17.22  |Q    V   |          |          |          |
11+35      10.0260     17.42  |Q    V   |          |          |          |
11+40      10.1474     17.63  |Q    V   |          |          |          |
11+45      10.2703     17.84  |Q     V  |          |          |          |
11+50      10.3947     18.06  |Q     V  |          |          |          |
11+55      10.5206     18.28  |Q     V  |          |          |          |
12+ 0      10.6481     18.52  |Q     V  |          |          |          |
12+ 5      10.7771     18.73  |Q     V  |          |          |          |
12+10      10.9072     18.89  |Q     V  |          |          |          |
12+15      11.0379     18.99  |Q     V  |          |          |          |
12+20      11.1685     18.95  |Q     V  |          |          |          |
12+25      11.2979     18.80  |Q     V  |          |          |          |
12+30      11.4263     18.64  |Q     V  |          |          |          |
12+35      11.5550     18.68  |Q     V  |          |          |          |
12+40      11.6845     18.81  |Q      V |          |          |          |
12+45      11.8152     18.97  |Q      V |          |          |          |
12+50      11.9472     19.18  |Q      V |          |          |          |
12+55      12.0809     19.40  |Q      V |          |          |          |
13+ 0      12.2163     19.67  |Q      V |          |          |          |
13+ 5      12.3537     19.94  |Q      V |          |          |          |
13+10      12.4931     20.25  |Q      V |          |          |          |
13+15      12.6348     20.57  |Q      V |          |          |          |
13+20      12.7789     20.92  |Q      V |          |          |          |
13+25      12.9255     21.29  |Q      V |          |          |          |
13+30      13.0748     21.69  |Q      V |          |          |          |
13+35      13.2270     22.10  |Q       V|          |          |          |
13+40      13.3824     22.55  |Q       V|          |          |          |
13+45      13.5409     23.02  |Q       V|          |          |          |
13+50      13.7029     23.52  |Q       V|          |          |          |
13+55      13.8685     24.05  |Q       V|          |          |          |
14+ 0      14.0381     24.62  |Q       V|          |          |          |
14+ 5      14.2118     25.23  |Q       V|          |          |          |
14+10      14.3902     25.91  |Q       V|          |          |          |
14+15      14.5737     26.64  |Q        V          |          |          |
14+20      14.7631     27.50  |Q        V          |          |          |
14+25      14.9591     28.45  |Q        V          |          |          |
14+30      15.1621     29.48  |Q        V          |          |          |
14+35      15.3721     30.49  | Q       V          |          |          |
14+40      15.5894     31.55  | Q       V          |          |          |
14+45      15.8143     32.67  | Q       V          |          |          |
14+50      16.0477     33.88  | Q       |V         |          |          |
14+55      16.2900     35.18  | Q       |V         |          |          |
15+ 0      16.5423     36.63  | Q       |V         |          |          |
15+ 5      16.8052     38.18  | Q       |V         |          |          |
15+10      17.0803     39.94  | Q       |V         |          |          |
15+15      17.3687     41.87  | Q       |V         |          |          |
15+20      17.6723     44.08  | Q       | V        |          |          |
15+25      17.9937     46.66  |  Q      | V        |          |          |
15+30      18.3372     49.88  |  Q      | V        |          |          |
15+35      18.7076     53.79  |  Q      | V        |          |          |
15+40      19.1136     58.95  |  Q      |  V       |          |          |
15+45      19.5652     65.56  |   Q     |  V       |          |          |
15+50      20.0751     74.04  |   Q     |  V       |          |          |
15+55      20.6605     84.99  |    Q    |   V      |          |          |
16+ 0      21.3656    102.39  |     Q   |   V      |          |          |
```

| | | | |
|---|---|---|---|
| 16+ 5 | 22.3706 | 145.92 |  |
| 16+10 | 23.8705 | 217.79 | |
| 16+15 | 25.9078 | 295.81 | |
| 16+20 | 28.8061 | 420.83 | |
| 16+25 | 32.3169 | 509.77 | |
| 16+30 | 35.6788 | 488.16 | |
| 16+35 | 37.9544 | 330.42 | |
| 16+40 | 39.7023 | 253.79 | |
| 16+45 | 41.1429 | 209.17 | |
| 16+50 | 42.3719 | 178.45 | |
| 16+55 | 43.4393 | 154.99 | |
| 17+ 0 | 44.3677 | 134.79 | |
| 17+ 5 | 45.1930 | 119.84 | |
| 17+10 | 45.9371 | 108.04 | |
| 17+15 | 46.6089 | 97.54 | |
| 17+20 | 47.2110 | 87.44 | |
| 17+25 | 47.7444 | 77.45 | |
| 17+30 | 48.2272 | 70.09 | |
| 17+35 | 48.6689 | 64.14 | |
| 17+40 | 49.0720 | 58.52 | |
| 17+45 | 49.4389 | 53.28 | |
| 17+50 | 49.7656 | 47.44 | |
| 17+55 | 50.0656 | 43.55 | |
| 18+ 0 | 50.3493 | 41.19 | |
| 18+ 5 | 50.6107 | 37.96 | |
| 18+10 | 50.8596 | 36.13 | |
| 18+15 | 51.0918 | 33.72 | |
| 18+20 | 51.3078 | 31.37 | |
| 18+25 | 51.5172 | 30.40 | |
| 18+30 | 51.7148 | 28.69 | |
| 18+35 | 51.9051 | 27.63 | |
| 18+40 | 52.0903 | 26.89 | |
| 18+45 | 52.2701 | 26.11 | |
| 18+50 | 52.4451 | 25.41 | |
| 18+55 | 52.6142 | 24.55 | |
| 19+ 0 | 52.7773 | 23.69 | |
| 19+ 5 | 52.9336 | 22.70 | |
| 19+10 | 53.0767 | 20.78 | |
| 19+15 | 53.2141 | 19.95 | |
| 19+20 | 53.3467 | 19.25 | |
| 19+25 | 53.4703 | 17.94 | |
| 19+30 | 53.5856 | 16.74 | |
| 19+35 | 53.6978 | 16.30 | |
| 19+40 | 53.8074 | 15.91 | |
| 19+45 | 53.9146 | 15.57 | |
| 19+50 | 54.0196 | 15.25 | |
| 19+55 | 54.1226 | 14.94 | |
| 20+ 0 | 54.2235 | 14.66 | |
| 20+ 5 | 54.3226 | 14.39 | |
| 20+10 | 54.4199 | 14.13 | |
| 20+15 | 54.5156 | 13.89 | |
| 20+20 | 54.6096 | 13.65 | |
| 20+25 | 54.7021 | 13.43 | |
| 20+30 | 54.7931 | 13.21 | |
| 20+35 | 54.8827 | 13.01 | |
| 20+40 | 54.9709 | 12.81 | |
| 20+45 | 55.0578 | 12.62 | |
| 20+50 | 55.1434 | 12.43 | |
| 20+55 | 55.2278 | 12.26 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+ 0 | 55.3110 | 12.09 | Q | \| | \| | \| | V \| |
| 21+ 5 | 55.3931 | 11.92 | Q | \| | \| | \| | V \| |
| 21+10 | 55.4741 | 11.76 | Q | \| | \| | \| | V \| |
| 21+15 | 55.5541 | 11.61 | Q | \| | \| | \| | V \| |
| 21+20 | 55.6330 | 11.45 | Q | \| | \| | \| | V \| |
| 21+25 | 55.7108 | 11.31 | Q | \| | \| | \| | V \| |
| 21+30 | 55.7877 | 11.17 | Q | \| | \| | \| | V \| |
| 21+35 | 55.8637 | 11.03 | Q | \| | \| | \| | V \| |
| 21+40 | 55.9387 | 10.89 | Q | \| | \| | \| | V \| |
| 21+45 | 56.0128 | 10.76 | Q | \| | \| | \| | V \| |
| 21+50 | 56.0861 | 10.64 | Q | \| | \| | \| | V \| |
| 21+55 | 56.1585 | 10.51 | Q | \| | \| | \| | V \| |
| 22+ 0 | 56.2300 | 10.39 | Q | \| | \| | \| | V \| |
| 22+ 5 | 56.3008 | 10.28 | Q | \| | \| | \| | V \| |
| 22+10 | 56.3708 | 10.16 | Q | \| | \| | \| | V \| |
| 22+15 | 56.4401 | 10.05 | Q | \| | \| | \| | V \| |
| 22+20 | 56.5086 | 9.95 | Q | \| | \| | \| | V \| |
| 22+25 | 56.5764 | 9.84 | Q | \| | \| | \| | V \| |
| 22+30 | 56.6435 | 9.74 | Q | \| | \| | \| | V \| |
| 22+35 | 56.7099 | 9.64 | Q | \| | \| | \| | V\| |
| 22+40 | 56.7756 | 9.55 | Q | \| | \| | \| | V\| |
| 22+45 | 56.8407 | 9.45 | Q | \| | \| | \| | V\| |
| 22+50 | 56.9051 | 9.36 | Q | \| | \| | \| | V\| |
| 22+55 | 56.9690 | 9.27 | Q | \| | \| | \| | V\| |
| 23+ 0 | 57.0322 | 9.18 | Q | \| | \| | \| | V\| |
| 23+ 5 | 57.0948 | 9.10 | Q | \| | \| | \| | V\| |
| 23+10 | 57.1569 | 9.01 | Q | \| | \| | \| | V\| |
| 23+15 | 57.2184 | 8.93 | Q | \| | \| | \| | V\| |
| 23+20 | 57.2793 | 8.85 | Q | \| | \| | \| | V\| |
| 23+25 | 57.3397 | 8.77 | Q | \| | \| | \| | V\| |
| 23+30 | 57.3996 | 8.69 | Q | \| | \| | \| | V\| |
| 23+35 | 57.4590 | 8.62 | Q | \| | \| | \| | V\| |
| 23+40 | 57.5178 | 8.54 | Q | \| | \| | \| | V\| |
| 23+45 | 57.5762 | 8.47 | Q | \| | \| | \| | V\| |
| 23+50 | 57.6340 | 8.40 | Q | \| | \| | \| | V\| |
| 23+55 | 57.6914 | 8.33 | Q | \| | \| | \| | V\| |
| 24+ 0 | 57.7483 | 8.26 | Q | \| | \| | \| | V\| |
| 24+ 5 | 57.8042 | 8.12 | Q | \| | \| | \| | V\| |
| 24+10 | 57.8579 | 7.79 | Q | \| | \| | \| | V\| |
| 24+15 | 57.9081 | 7.29 | Q | \| | \| | \| | V\| |
| 24+20 | 57.9521 | 6.38 | Q | \| | \| | \| | V\| |
| 24+25 | 57.9872 | 5.11 | Q | \| | \| | \| | V\| |
| 24+30 | 58.0136 | 3.83 | Q | \| | \| | \| | V\| |
| 24+35 | 58.0350 | 3.11 | Q | \| | \| | \| | V\| |
| 24+40 | 58.0529 | 2.61 | Q | \| | \| | \| | V\| |
| 24+45 | 58.0682 | 2.22 | Q | \| | \| | \| | V\| |
| 24+50 | 58.0813 | 1.90 | Q | \| | \| | \| | V\| |
| 24+55 | 58.0925 | 1.63 | Q | \| | \| | \| | V\| |
| 25+ 0 | 58.1022 | 1.41 | Q | \| | \| | \| | V\| |
| 25+ 5 | 58.1106 | 1.22 | Q | \| | \| | \| | V\| |
| 25+10 | 58.1179 | 1.06 | Q | \| | \| | \| | V\| |
| 25+15 | 58.1242 | 0.91 | Q | \| | \| | \| | V\| |
| 25+20 | 58.1296 | 0.79 | Q | \| | \| | \| | V\| |
| 25+25 | 58.1343 | 0.68 | Q | \| | \| | \| | V\| |
| 25+30 | 58.1384 | 0.59 | Q | \| | \| | \| | V\| |
| 25+35 | 58.1420 | 0.52 | Q | \| | \| | \| | V\| |
| 25+40 | 58.1450 | 0.45 | Q | \| | \| | \| | V\| |
| 25+45 | 58.1477 | 0.38 | Q | \| | \| | \| | V\| |
| 25+50 | 58.1500 | 0.34 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+55 | 58.1521 | 0.30 | Q | \| | \| | \| | V\| |
| 26+ 0 | 58.1538 | 0.26 | Q | \| | \| | \| | V\| |
| 26+ 5 | 58.1554 | 0.23 | Q | \| | \| | \| | V\| |
| 26+10 | 58.1568 | 0.20 | Q | \| | \| | \| | V\| |
| 26+15 | 58.1579 | 0.17 | Q | \| | \| | \| | V\| |
| 26+20 | 58.1590 | 0.15 | Q | \| | \| | \| | V\| |
| 26+25 | 58.1598 | 0.13 | Q | \| | \| | \| | V\| |
| 26+30 | 58.1606 | 0.11 | Q | \| | \| | \| | V\| |
| 26+35 | 58.1613 | 0.10 | Q | \| | \| | \| | V\| |
| 26+40 | 58.1619 | 0.08 | Q | \| | \| | \| | V\| |
| 26+45 | 58.1624 | 0.07 | Q | \| | \| | \| | V\| |
| 26+50 | 58.1628 | 0.06 | Q | \| | \| | \| | V\| |
| 26+55 | 58.1631 | 0.04 | Q | \| | \| | \| | V\| |
| 27+ 0 | 58.1633 | 0.03 | Q | \| | \| | \| | V\| |
| 27+ 5 | 58.1634 | 0.02 | Q | \| | \| | \| | V\| |
| 27+10 | 58.1635 | 0.01 | Q | \| | \| | \| | V\| |
| 27+15 | 58.1636 | 0.01 | Q | \| | \| | \| | V\| |
| 27+20 | 58.1636 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 08/10/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREA "H"
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-10-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 512.19 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 512.19 | 6 | 1.89 |
| Rainfall data for year 100 | | |
| 512.19 | 24 | 2.70 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.3 | 80.8 | 512.19 | 1.000 | 0.356 | 0.816 | 0.290 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.290

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 417.95 | 0.816 | 62.3 | 80.8 | 2.38 | 0.399 |
| 94.24 | 0.184 | 98.0 | 98.0 | 0.20 | 0.915 |

Area-averaged catchment yield fraction, Y = 0.494
Area-averaged low loss fraction, Yb = 0.506
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 14210.00(Ft.)
Length from concentration point to centroid = 5562.00(Ft.)
Elevation difference along watercourse = 473.00(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 512.19(Ac.)
Catchment Lag time = 0.467 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 17.8278
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.290(In/Hr)
Average low loss rate fraction (Yb) = 0.506 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.658(In)
Computed peak 30-minute rainfall = 1.126(In)
Specified peak 1-hour rainfall = 1.386(In)
Computed peak 3-hour rainfall = 1.678(In)
Specified peak 6-hour rainfall = 1.894(In)
Specified peak 24-hour rainfall = 2.704(In)

Rainfall depth area reduction factors:
Using a total area of 512.19(Ac.) (Ref: fig. E-4)

5-minute factor = 0.976 Adjusted rainfall = 0.642(In)
30-minute factor = 0.976 Adjusted rainfall = 1.099(In)
1-hour factor = 0.976 Adjusted rainfall = 1.353(In)
3-hour factor = 0.997 Adjusted rainfall = 1.673(In)
6-hour factor = 0.998 Adjusted rainfall = 1.891(In)
24-hour factor = 0.999 Adjusted rainfall = 2.702(In)
---

U n i t H y d r o g r a p h

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 6194.30 (CFS)) | |
| 1 | 0.848 | 52.535 |
| 2 | 3.747 | 179.589 |
| 3 | 8.787 | 312.185 |
| 4 | 19.271 | 649.366 |
| 5 | 35.692 | 1017.224 |
| 6 | 48.591 | 798.951 |
| 7 | 57.682 | 563.116 |
| 8 | 63.982 | 390.254 |
| 9 | 68.832 | 300.450 |
| 10 | 72.861 | 249.555 |

| | | |
|---|---|---|
| 11 | 76.129 | 202.447 |
| 12 | 78.947 | 174.563 |
| 13 | 81.285 | 144.811 |
| 14 | 83.293 | 124.371 |
| 15 | 85.116 | 112.941 |
| 16 | 86.781 | 103.099 |
| 17 | 88.227 | 89.615 |
| 18 | 89.419 | 73.822 |
| 19 | 90.468 | 64.949 |
| 20 | 91.458 | 61.361 |
| 21 | 92.343 | 54.772 |
| 22 | 93.165 | 50.948 |
| 23 | 93.921 | 46.841 |
| 24 | 94.544 | 38.600 |
| 25 | 95.151 | 37.547 |
| 26 | 95.716 | 35.005 |
| 27 | 96.183 | 28.969 |
| 28 | 96.647 | 28.712 |
| 29 | 97.046 | 24.692 |
| 30 | 97.367 | 19.887 |
| 31 | 97.686 | 19.779 |
| 32 | 97.916 | 14.239 |
| 33 | 98.094 | 11.043 |
| 34 | 98.274 | 11.174 |
| 35 | 98.481 | 12.778 |
| 36 | 98.695 | 13.252 |
| 37 | 98.909 | 13.252 |
| 38 | 99.123 | 13.252 |
| 39 | 99.336 | 13.252 |
| 40 | 99.523 | 11.534 |
| 41 | 99.638 | 7.124 |
| 42 | 99.749 | 6.902 |
| 43 | 99.861 | 6.902 |
| 44 | 100.000 | 3.451 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6419 | 0.6419 |
| 2 | 0.7902 | 0.1484 |
| 3 | 0.8925 | 0.1022 |
| 4 | 0.9729 | 0.0804 |
| 5 | 1.0403 | 0.0674 |
| 6 | 1.0988 | 0.0585 |
| 7 | 1.1508 | 0.0520 |
| 8 | 1.1978 | 0.0470 |
| 9 | 1.2409 | 0.0431 |
| 10 | 1.2807 | 0.0398 |
| 11 | 1.3179 | 0.0371 |
| 12 | 1.3527 | 0.0349 |
| 13 | 1.3739 | 0.0211 |
| 14 | 1.3937 | 0.0199 |
| 15 | 1.4125 | 0.0187 |
| 16 | 1.4302 | 0.0178 |
| 17 | 1.4471 | 0.0169 |
| 18 | 1.4632 | 0.0161 |
| 19 | 1.4786 | 0.0154 |
| 20 | 1.4934 | 0.0148 |
| 21 | 1.5075 | 0.0142 |
| 22 | 1.5212 | 0.0136 |

| | | |
|---|---|---|
| 23 | 1.5343 | 0.0131 |
| 24 | 1.5470 | 0.0127 |
| 25 | 1.5593 | 0.0123 |
| 26 | 1.5712 | 0.0119 |
| 27 | 1.5827 | 0.0115 |
| 28 | 1.5939 | 0.0112 |
| 29 | 1.6048 | 0.0109 |
| 30 | 1.6153 | 0.0106 |
| 31 | 1.6256 | 0.0103 |
| 32 | 1.6356 | 0.0100 |
| 33 | 1.6454 | 0.0098 |
| 34 | 1.6550 | 0.0095 |
| 35 | 1.6643 | 0.0093 |
| 36 | 1.6734 | 0.0091 |
| 37 | 1.6815 | 0.0081 |
| 38 | 1.6894 | 0.0079 |
| 39 | 1.6972 | 0.0078 |
| 40 | 1.7048 | 0.0076 |
| 41 | 1.7122 | 0.0074 |
| 42 | 1.7195 | 0.0073 |
| 43 | 1.7266 | 0.0072 |
| 44 | 1.7337 | 0.0070 |
| 45 | 1.7405 | 0.0069 |
| 46 | 1.7473 | 0.0068 |
| 47 | 1.7539 | 0.0066 |
| 48 | 1.7605 | 0.0065 |
| 49 | 1.7669 | 0.0064 |
| 50 | 1.7732 | 0.0063 |
| 51 | 1.7794 | 0.0062 |
| 52 | 1.7855 | 0.0061 |
| 53 | 1.7915 | 0.0060 |
| 54 | 1.7974 | 0.0059 |
| 55 | 1.8032 | 0.0058 |
| 56 | 1.8090 | 0.0057 |
| 57 | 1.8146 | 0.0057 |
| 58 | 1.8202 | 0.0056 |
| 59 | 1.8257 | 0.0055 |
| 60 | 1.8311 | 0.0054 |
| 61 | 1.8365 | 0.0053 |
| 62 | 1.8418 | 0.0053 |
| 63 | 1.8470 | 0.0052 |
| 64 | 1.8521 | 0.0051 |
| 65 | 1.8572 | 0.0051 |
| 66 | 1.8622 | 0.0050 |
| 67 | 1.8671 | 0.0049 |
| 68 | 1.8720 | 0.0049 |
| 69 | 1.8768 | 0.0048 |
| 70 | 1.8816 | 0.0048 |
| 71 | 1.8863 | 0.0047 |
| 72 | 1.8910 | 0.0047 |
| 73 | 1.8977 | 0.0067 |
| 74 | 1.9044 | 0.0067 |
| 75 | 1.9110 | 0.0066 |
| 76 | 1.9175 | 0.0065 |
| 77 | 1.9239 | 0.0065 |
| 78 | 1.9304 | 0.0064 |
| 79 | 1.9367 | 0.0063 |
| 80 | 1.9430 | 0.0063 |
| 81 | 1.9492 | 0.0062 |

| | | |
|---|---|---|
| 82 | 1.9554 | 0.0062 |
| 83 | 1.9615 | 0.0061 |
| 84 | 1.9675 | 0.0061 |
| 85 | 1.9736 | 0.0060 |
| 86 | 1.9795 | 0.0060 |
| 87 | 1.9854 | 0.0059 |
| 88 | 1.9913 | 0.0059 |
| 89 | 1.9971 | 0.0058 |
| 90 | 2.0028 | 0.0058 |
| 91 | 2.0085 | 0.0057 |
| 92 | 2.0142 | 0.0057 |
| 93 | 2.0198 | 0.0056 |
| 94 | 2.0254 | 0.0056 |
| 95 | 2.0309 | 0.0055 |
| 96 | 2.0364 | 0.0055 |
| 97 | 2.0418 | 0.0054 |
| 98 | 2.0472 | 0.0054 |
| 99 | 2.0526 | 0.0054 |
| 100 | 2.0579 | 0.0053 |
| 101 | 2.0632 | 0.0053 |
| 102 | 2.0684 | 0.0052 |
| 103 | 2.0736 | 0.0052 |
| 104 | 2.0788 | 0.0052 |
| 105 | 2.0839 | 0.0051 |
| 106 | 2.0890 | 0.0051 |
| 107 | 2.0941 | 0.0051 |
| 108 | 2.0991 | 0.0050 |
| 109 | 2.1041 | 0.0050 |
| 110 | 2.1090 | 0.0050 |
| 111 | 2.1140 | 0.0049 |
| 112 | 2.1188 | 0.0049 |
| 113 | 2.1237 | 0.0049 |
| 114 | 2.1285 | 0.0048 |
| 115 | 2.1333 | 0.0048 |
| 116 | 2.1381 | 0.0048 |
| 117 | 2.1428 | 0.0047 |
| 118 | 2.1475 | 0.0047 |
| 119 | 2.1522 | 0.0047 |
| 120 | 2.1568 | 0.0046 |
| 121 | 2.1614 | 0.0046 |
| 122 | 2.1660 | 0.0046 |
| 123 | 2.1706 | 0.0046 |
| 124 | 2.1751 | 0.0045 |
| 125 | 2.1796 | 0.0045 |
| 126 | 2.1841 | 0.0045 |
| 127 | 2.1885 | 0.0045 |
| 128 | 2.1930 | 0.0044 |
| 129 | 2.1974 | 0.0044 |
| 130 | 2.2017 | 0.0044 |
| 131 | 2.2061 | 0.0043 |
| 132 | 2.2104 | 0.0043 |
| 133 | 2.2147 | 0.0043 |
| 134 | 2.2190 | 0.0043 |
| 135 | 2.2233 | 0.0043 |
| 136 | 2.2275 | 0.0042 |
| 137 | 2.2317 | 0.0042 |
| 138 | 2.2359 | 0.0042 |
| 139 | 2.2400 | 0.0042 |
| 140 | 2.2442 | 0.0041 |

| | | |
|---|---|---|
| 141 | 2.2483 | 0.0041 |
| 142 | 2.2524 | 0.0041 |
| 143 | 2.2565 | 0.0041 |
| 144 | 2.2605 | 0.0041 |
| 145 | 2.2645 | 0.0040 |
| 146 | 2.2686 | 0.0040 |
| 147 | 2.2725 | 0.0040 |
| 148 | 2.2765 | 0.0040 |
| 149 | 2.2805 | 0.0040 |
| 150 | 2.2844 | 0.0039 |
| 151 | 2.2883 | 0.0039 |
| 152 | 2.2922 | 0.0039 |
| 153 | 2.2961 | 0.0039 |
| 154 | 2.2999 | 0.0039 |
| 155 | 2.3038 | 0.0038 |
| 156 | 2.3076 | 0.0038 |
| 157 | 2.3114 | 0.0038 |
| 158 | 2.3152 | 0.0038 |
| 159 | 2.3189 | 0.0038 |
| 160 | 2.3227 | 0.0037 |
| 161 | 2.3264 | 0.0037 |
| 162 | 2.3301 | 0.0037 |
| 163 | 2.3338 | 0.0037 |
| 164 | 2.3375 | 0.0037 |
| 165 | 2.3412 | 0.0037 |
| 166 | 2.3448 | 0.0036 |
| 167 | 2.3484 | 0.0036 |
| 168 | 2.3521 | 0.0036 |
| 169 | 2.3556 | 0.0036 |
| 170 | 2.3592 | 0.0036 |
| 171 | 2.3628 | 0.0036 |
| 172 | 2.3663 | 0.0036 |
| 173 | 2.3699 | 0.0035 |
| 174 | 2.3734 | 0.0035 |
| 175 | 2.3769 | 0.0035 |
| 176 | 2.3804 | 0.0035 |
| 177 | 2.3839 | 0.0035 |
| 178 | 2.3873 | 0.0035 |
| 179 | 2.3908 | 0.0034 |
| 180 | 2.3942 | 0.0034 |
| 181 | 2.3976 | 0.0034 |
| 182 | 2.4010 | 0.0034 |
| 183 | 2.4044 | 0.0034 |
| 184 | 2.4078 | 0.0034 |
| 185 | 2.4112 | 0.0034 |
| 186 | 2.4145 | 0.0033 |
| 187 | 2.4179 | 0.0033 |
| 188 | 2.4212 | 0.0033 |
| 189 | 2.4245 | 0.0033 |
| 190 | 2.4278 | 0.0033 |
| 191 | 2.4311 | 0.0033 |
| 192 | 2.4343 | 0.0033 |
| 193 | 2.4376 | 0.0033 |
| 194 | 2.4408 | 0.0032 |
| 195 | 2.4441 | 0.0032 |
| 196 | 2.4473 | 0.0032 |
| 197 | 2.4505 | 0.0032 |
| 198 | 2.4537 | 0.0032 |
| 199 | 2.4569 | 0.0032 |

| | | |
|---|---|---|
| 200 | 2.4601 | 0.0032 |
| 201 | 2.4632 | 0.0032 |
| 202 | 2.4664 | 0.0032 |
| 203 | 2.4695 | 0.0031 |
| 204 | 2.4726 | 0.0031 |
| 205 | 2.4758 | 0.0031 |
| 206 | 2.4789 | 0.0031 |
| 207 | 2.4820 | 0.0031 |
| 208 | 2.4850 | 0.0031 |
| 209 | 2.4881 | 0.0031 |
| 210 | 2.4912 | 0.0031 |
| 211 | 2.4942 | 0.0030 |
| 212 | 2.4973 | 0.0030 |
| 213 | 2.5003 | 0.0030 |
| 214 | 2.5033 | 0.0030 |
| 215 | 2.5063 | 0.0030 |
| 216 | 2.5093 | 0.0030 |
| 217 | 2.5123 | 0.0030 |
| 218 | 2.5153 | 0.0030 |
| 219 | 2.5182 | 0.0030 |
| 220 | 2.5212 | 0.0030 |
| 221 | 2.5241 | 0.0029 |
| 222 | 2.5271 | 0.0029 |
| 223 | 2.5300 | 0.0029 |
| 224 | 2.5329 | 0.0029 |
| 225 | 2.5358 | 0.0029 |
| 226 | 2.5387 | 0.0029 |
| 227 | 2.5416 | 0.0029 |
| 228 | 2.5445 | 0.0029 |
| 229 | 2.5474 | 0.0029 |
| 230 | 2.5502 | 0.0029 |
| 231 | 2.5531 | 0.0029 |
| 232 | 2.5559 | 0.0028 |
| 233 | 2.5587 | 0.0028 |
| 234 | 2.5616 | 0.0028 |
| 235 | 2.5644 | 0.0028 |
| 236 | 2.5672 | 0.0028 |
| 237 | 2.5700 | 0.0028 |
| 238 | 2.5728 | 0.0028 |
| 239 | 2.5756 | 0.0028 |
| 240 | 2.5783 | 0.0028 |
| 241 | 2.5811 | 0.0028 |
| 242 | 2.5838 | 0.0028 |
| 243 | 2.5866 | 0.0027 |
| 244 | 2.5893 | 0.0027 |
| 245 | 2.5921 | 0.0027 |
| 246 | 2.5948 | 0.0027 |
| 247 | 2.5975 | 0.0027 |
| 248 | 2.6002 | 0.0027 |
| 249 | 2.6029 | 0.0027 |
| 250 | 2.6056 | 0.0027 |
| 251 | 2.6083 | 0.0027 |
| 252 | 2.6109 | 0.0027 |
| 253 | 2.6136 | 0.0027 |
| 254 | 2.6162 | 0.0027 |
| 255 | 2.6189 | 0.0026 |
| 256 | 2.6215 | 0.0026 |
| 257 | 2.6242 | 0.0026 |
| 258 | 2.6268 | 0.0026 |

| | | |
|---|---|---|
| 259 | 2.6294 | 0.0026 |
| 260 | 2.6320 | 0.0026 |
| 261 | 2.6346 | 0.0026 |
| 262 | 2.6372 | 0.0026 |
| 263 | 2.6398 | 0.0026 |
| 264 | 2.6424 | 0.0026 |
| 265 | 2.6450 | 0.0026 |
| 266 | 2.6475 | 0.0026 |
| 267 | 2.6501 | 0.0026 |
| 268 | 2.6526 | 0.0026 |
| 269 | 2.6552 | 0.0025 |
| 270 | 2.6577 | 0.0025 |
| 271 | 2.6603 | 0.0025 |
| 272 | 2.6628 | 0.0025 |
| 273 | 2.6653 | 0.0025 |
| 274 | 2.6678 | 0.0025 |
| 275 | 2.6703 | 0.0025 |
| 276 | 2.6728 | 0.0025 |
| 277 | 2.6753 | 0.0025 |
| 278 | 2.6778 | 0.0025 |
| 279 | 2.6803 | 0.0025 |
| 280 | 2.6827 | 0.0025 |
| 281 | 2.6852 | 0.0025 |
| 282 | 2.6877 | 0.0025 |
| 283 | 2.6901 | 0.0025 |
| 284 | 2.6926 | 0.0024 |
| 285 | 2.6950 | 0.0024 |
| 286 | 2.6974 | 0.0024 |
| 287 | 2.6998 | 0.0024 |
| 288 | 2.7023 | 0.0024 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0024 | 0.0012 | 0.0012 |
| 2 | 0.0024 | 0.0012 | 0.0012 |
| 3 | 0.0024 | 0.0012 | 0.0012 |
| 4 | 0.0024 | 0.0012 | 0.0012 |
| 5 | 0.0025 | 0.0012 | 0.0012 |
| 6 | 0.0025 | 0.0012 | 0.0012 |
| 7 | 0.0025 | 0.0013 | 0.0012 |
| 8 | 0.0025 | 0.0013 | 0.0012 |
| 9 | 0.0025 | 0.0013 | 0.0012 |
| 10 | 0.0025 | 0.0013 | 0.0012 |
| 11 | 0.0025 | 0.0013 | 0.0012 |
| 12 | 0.0025 | 0.0013 | 0.0012 |
| 13 | 0.0025 | 0.0013 | 0.0013 |
| 14 | 0.0025 | 0.0013 | 0.0013 |
| 15 | 0.0026 | 0.0013 | 0.0013 |
| 16 | 0.0026 | 0.0013 | 0.0013 |
| 17 | 0.0026 | 0.0013 | 0.0013 |
| 18 | 0.0026 | 0.0013 | 0.0013 |
| 19 | 0.0026 | 0.0013 | 0.0013 |
| 20 | 0.0026 | 0.0013 | 0.0013 |
| 21 | 0.0026 | 0.0013 | 0.0013 |
| 22 | 0.0026 | 0.0013 | 0.0013 |
| 23 | 0.0026 | 0.0013 | 0.0013 |
| 24 | 0.0027 | 0.0013 | 0.0013 |

| | | | |
|---|---|---|---|
| 25 | 0.0027 | 0.0014 | 0.0013 |
| 26 | 0.0027 | 0.0014 | 0.0013 |
| 27 | 0.0027 | 0.0014 | 0.0013 |
| 28 | 0.0027 | 0.0014 | 0.0013 |
| 29 | 0.0027 | 0.0014 | 0.0013 |
| 30 | 0.0027 | 0.0014 | 0.0013 |
| 31 | 0.0027 | 0.0014 | 0.0014 |
| 32 | 0.0028 | 0.0014 | 0.0014 |
| 33 | 0.0028 | 0.0014 | 0.0014 |
| 34 | 0.0028 | 0.0014 | 0.0014 |
| 35 | 0.0028 | 0.0014 | 0.0014 |
| 36 | 0.0028 | 0.0014 | 0.0014 |
| 37 | 0.0028 | 0.0014 | 0.0014 |
| 38 | 0.0028 | 0.0014 | 0.0014 |
| 39 | 0.0029 | 0.0014 | 0.0014 |
| 40 | 0.0029 | 0.0014 | 0.0014 |
| 41 | 0.0029 | 0.0015 | 0.0014 |
| 42 | 0.0029 | 0.0015 | 0.0014 |
| 43 | 0.0029 | 0.0015 | 0.0014 |
| 44 | 0.0029 | 0.0015 | 0.0014 |
| 45 | 0.0029 | 0.0015 | 0.0015 |
| 46 | 0.0029 | 0.0015 | 0.0015 |
| 47 | 0.0030 | 0.0015 | 0.0015 |
| 48 | 0.0030 | 0.0015 | 0.0015 |
| 49 | 0.0030 | 0.0015 | 0.0015 |
| 50 | 0.0030 | 0.0015 | 0.0015 |
| 51 | 0.0030 | 0.0015 | 0.0015 |
| 52 | 0.0030 | 0.0015 | 0.0015 |
| 53 | 0.0031 | 0.0015 | 0.0015 |
| 54 | 0.0031 | 0.0016 | 0.0015 |
| 55 | 0.0031 | 0.0016 | 0.0015 |
| 56 | 0.0031 | 0.0016 | 0.0015 |
| 57 | 0.0031 | 0.0016 | 0.0015 |
| 58 | 0.0031 | 0.0016 | 0.0016 |
| 59 | 0.0032 | 0.0016 | 0.0016 |
| 60 | 0.0032 | 0.0016 | 0.0016 |
| 61 | 0.0032 | 0.0016 | 0.0016 |
| 62 | 0.0032 | 0.0016 | 0.0016 |
| 63 | 0.0032 | 0.0016 | 0.0016 |
| 64 | 0.0032 | 0.0016 | 0.0016 |
| 65 | 0.0033 | 0.0017 | 0.0016 |
| 66 | 0.0033 | 0.0017 | 0.0016 |
| 67 | 0.0033 | 0.0017 | 0.0016 |
| 68 | 0.0033 | 0.0017 | 0.0016 |
| 69 | 0.0033 | 0.0017 | 0.0017 |
| 70 | 0.0034 | 0.0017 | 0.0017 |
| 71 | 0.0034 | 0.0017 | 0.0017 |
| 72 | 0.0034 | 0.0017 | 0.0017 |
| 73 | 0.0034 | 0.0017 | 0.0017 |
| 74 | 0.0034 | 0.0017 | 0.0017 |
| 75 | 0.0035 | 0.0018 | 0.0017 |
| 76 | 0.0035 | 0.0018 | 0.0017 |
| 77 | 0.0035 | 0.0018 | 0.0017 |
| 78 | 0.0035 | 0.0018 | 0.0017 |
| 79 | 0.0036 | 0.0018 | 0.0018 |
| 80 | 0.0036 | 0.0018 | 0.0018 |
| 81 | 0.0036 | 0.0018 | 0.0018 |
| 82 | 0.0036 | 0.0018 | 0.0018 |
| 83 | 0.0037 | 0.0019 | 0.0018 |

| | | | |
|---|---|---|---|
| 84 | 0.0037 | 0.0019 | 0.0018 |
| 85 | 0.0037 | 0.0019 | 0.0018 |
| 86 | 0.0037 | 0.0019 | 0.0018 |
| 87 | 0.0038 | 0.0019 | 0.0019 |
| 88 | 0.0038 | 0.0019 | 0.0019 |
| 89 | 0.0038 | 0.0019 | 0.0019 |
| 90 | 0.0038 | 0.0019 | 0.0019 |
| 91 | 0.0039 | 0.0020 | 0.0019 |
| 92 | 0.0039 | 0.0020 | 0.0019 |
| 93 | 0.0039 | 0.0020 | 0.0019 |
| 94 | 0.0040 | 0.0020 | 0.0020 |
| 95 | 0.0040 | 0.0020 | 0.0020 |
| 96 | 0.0040 | 0.0020 | 0.0020 |
| 97 | 0.0041 | 0.0021 | 0.0020 |
| 98 | 0.0041 | 0.0021 | 0.0020 |
| 99 | 0.0041 | 0.0021 | 0.0020 |
| 100 | 0.0041 | 0.0021 | 0.0020 |
| 101 | 0.0042 | 0.0021 | 0.0021 |
| 102 | 0.0042 | 0.0021 | 0.0021 |
| 103 | 0.0043 | 0.0022 | 0.0021 |
| 104 | 0.0043 | 0.0022 | 0.0021 |
| 105 | 0.0043 | 0.0022 | 0.0021 |
| 106 | 0.0043 | 0.0022 | 0.0021 |
| 107 | 0.0044 | 0.0022 | 0.0022 |
| 108 | 0.0044 | 0.0022 | 0.0022 |
| 109 | 0.0045 | 0.0023 | 0.0022 |
| 110 | 0.0045 | 0.0023 | 0.0022 |
| 111 | 0.0046 | 0.0023 | 0.0023 |
| 112 | 0.0046 | 0.0023 | 0.0023 |
| 113 | 0.0046 | 0.0023 | 0.0023 |
| 114 | 0.0047 | 0.0024 | 0.0023 |
| 115 | 0.0047 | 0.0024 | 0.0023 |
| 116 | 0.0048 | 0.0024 | 0.0024 |
| 117 | 0.0048 | 0.0024 | 0.0024 |
| 118 | 0.0049 | 0.0025 | 0.0024 |
| 119 | 0.0049 | 0.0025 | 0.0024 |
| 120 | 0.0050 | 0.0025 | 0.0024 |
| 121 | 0.0050 | 0.0025 | 0.0025 |
| 122 | 0.0051 | 0.0026 | 0.0025 |
| 123 | 0.0051 | 0.0026 | 0.0025 |
| 124 | 0.0052 | 0.0026 | 0.0026 |
| 125 | 0.0052 | 0.0027 | 0.0026 |
| 126 | 0.0053 | 0.0027 | 0.0026 |
| 127 | 0.0054 | 0.0027 | 0.0026 |
| 128 | 0.0054 | 0.0027 | 0.0027 |
| 129 | 0.0055 | 0.0028 | 0.0027 |
| 130 | 0.0055 | 0.0028 | 0.0027 |
| 131 | 0.0056 | 0.0028 | 0.0028 |
| 132 | 0.0057 | 0.0029 | 0.0028 |
| 133 | 0.0058 | 0.0029 | 0.0028 |
| 134 | 0.0058 | 0.0029 | 0.0029 |
| 135 | 0.0059 | 0.0030 | 0.0029 |
| 136 | 0.0060 | 0.0030 | 0.0029 |
| 137 | 0.0061 | 0.0031 | 0.0030 |
| 138 | 0.0061 | 0.0031 | 0.0030 |
| 139 | 0.0062 | 0.0032 | 0.0031 |
| 140 | 0.0063 | 0.0032 | 0.0031 |
| 141 | 0.0064 | 0.0032 | 0.0032 |
| 142 | 0.0065 | 0.0033 | 0.0032 |

| | | | |
|---|---|---|---|
| 143 | 0.0066 | 0.0033 | 0.0033 |
| 144 | 0.0067 | 0.0034 | 0.0033 |
| 145 | 0.0047 | 0.0024 | 0.0023 |
| 146 | 0.0047 | 0.0024 | 0.0023 |
| 147 | 0.0048 | 0.0024 | 0.0024 |
| 148 | 0.0049 | 0.0025 | 0.0024 |
| 149 | 0.0050 | 0.0025 | 0.0025 |
| 150 | 0.0051 | 0.0026 | 0.0025 |
| 151 | 0.0052 | 0.0026 | 0.0026 |
| 152 | 0.0053 | 0.0027 | 0.0026 |
| 153 | 0.0054 | 0.0027 | 0.0027 |
| 154 | 0.0055 | 0.0028 | 0.0027 |
| 155 | 0.0057 | 0.0029 | 0.0028 |
| 156 | 0.0057 | 0.0029 | 0.0028 |
| 157 | 0.0059 | 0.0030 | 0.0029 |
| 158 | 0.0060 | 0.0030 | 0.0030 |
| 159 | 0.0062 | 0.0031 | 0.0031 |
| 160 | 0.0063 | 0.0032 | 0.0031 |
| 161 | 0.0065 | 0.0033 | 0.0032 |
| 162 | 0.0066 | 0.0034 | 0.0033 |
| 163 | 0.0069 | 0.0035 | 0.0034 |
| 164 | 0.0070 | 0.0035 | 0.0035 |
| 165 | 0.0073 | 0.0037 | 0.0036 |
| 166 | 0.0074 | 0.0038 | 0.0037 |
| 167 | 0.0078 | 0.0039 | 0.0038 |
| 168 | 0.0079 | 0.0040 | 0.0039 |
| 169 | 0.0091 | 0.0046 | 0.0045 |
| 170 | 0.0093 | 0.0047 | 0.0046 |
| 171 | 0.0098 | 0.0049 | 0.0048 |
| 172 | 0.0100 | 0.0051 | 0.0050 |
| 173 | 0.0106 | 0.0053 | 0.0052 |
| 174 | 0.0109 | 0.0055 | 0.0054 |
| 175 | 0.0115 | 0.0058 | 0.0057 |
| 176 | 0.0119 | 0.0060 | 0.0059 |
| 177 | 0.0127 | 0.0064 | 0.0063 |
| 178 | 0.0131 | 0.0067 | 0.0065 |
| 179 | 0.0142 | 0.0072 | 0.0070 |
| 180 | 0.0148 | 0.0075 | 0.0073 |
| 181 | 0.0161 | 0.0081 | 0.0080 |
| 182 | 0.0169 | 0.0085 | 0.0083 |
| 183 | 0.0187 | 0.0095 | 0.0093 |
| 184 | 0.0199 | 0.0100 | 0.0098 |
| 185 | 0.0349 | 0.0176 | 0.0172 |
| 186 | 0.0371 | 0.0188 | 0.0184 |
| 187 | 0.0431 | 0.0218 | 0.0213 |
| 188 | 0.0470 | 0.0238 | 0.0232 |
| 189 | 0.0585 | 0.0242 | 0.0343 |
| 190 | 0.0674 | 0.0242 | 0.0432 |
| 191 | 0.1022 | 0.0242 | 0.0780 |
| 192 | 0.1484 | 0.0242 | 0.1242 |
| 193 | 0.6419 | 0.0242 | 0.6177 |
| 194 | 0.0804 | 0.0242 | 0.0562 |
| 195 | 0.0520 | 0.0242 | 0.0278 |
| 196 | 0.0398 | 0.0202 | 0.0197 |
| 197 | 0.0211 | 0.0107 | 0.0104 |
| 198 | 0.0178 | 0.0090 | 0.0088 |
| 199 | 0.0154 | 0.0078 | 0.0076 |
| 200 | 0.0136 | 0.0069 | 0.0067 |
| 201 | 0.0123 | 0.0062 | 0.0061 |

| | | | |
|---|---|---|---|
| 202 | 0.0112 | 0.0057 | 0.0055 |
| 203 | 0.0103 | 0.0052 | 0.0051 |
| 204 | 0.0095 | 0.0048 | 0.0047 |
| 205 | 0.0081 | 0.0041 | 0.0040 |
| 206 | 0.0076 | 0.0038 | 0.0038 |
| 207 | 0.0072 | 0.0036 | 0.0035 |
| 208 | 0.0068 | 0.0034 | 0.0033 |
| 209 | 0.0064 | 0.0032 | 0.0032 |
| 210 | 0.0061 | 0.0031 | 0.0030 |
| 211 | 0.0058 | 0.0029 | 0.0029 |
| 212 | 0.0056 | 0.0028 | 0.0028 |
| 213 | 0.0053 | 0.0027 | 0.0026 |
| 214 | 0.0051 | 0.0026 | 0.0025 |
| 215 | 0.0049 | 0.0025 | 0.0024 |
| 216 | 0.0048 | 0.0024 | 0.0024 |
| 217 | 0.0067 | 0.0034 | 0.0033 |
| 218 | 0.0065 | 0.0033 | 0.0032 |
| 219 | 0.0063 | 0.0032 | 0.0031 |
| 220 | 0.0062 | 0.0031 | 0.0030 |
| 221 | 0.0060 | 0.0030 | 0.0030 |
| 222 | 0.0059 | 0.0030 | 0.0029 |
| 223 | 0.0057 | 0.0029 | 0.0028 |
| 224 | 0.0056 | 0.0028 | 0.0028 |
| 225 | 0.0054 | 0.0028 | 0.0027 |
| 226 | 0.0053 | 0.0027 | 0.0026 |
| 227 | 0.0052 | 0.0026 | 0.0026 |
| 228 | 0.0051 | 0.0026 | 0.0025 |
| 229 | 0.0050 | 0.0025 | 0.0025 |
| 230 | 0.0049 | 0.0025 | 0.0024 |
| 231 | 0.0048 | 0.0024 | 0.0024 |
| 232 | 0.0047 | 0.0024 | 0.0023 |
| 233 | 0.0046 | 0.0023 | 0.0023 |
| 234 | 0.0045 | 0.0023 | 0.0022 |
| 235 | 0.0045 | 0.0023 | 0.0022 |
| 236 | 0.0044 | 0.0022 | 0.0022 |
| 237 | 0.0043 | 0.0022 | 0.0021 |
| 238 | 0.0042 | 0.0021 | 0.0021 |
| 239 | 0.0042 | 0.0021 | 0.0021 |
| 240 | 0.0041 | 0.0021 | 0.0020 |
| 241 | 0.0040 | 0.0020 | 0.0020 |
| 242 | 0.0040 | 0.0020 | 0.0020 |
| 243 | 0.0039 | 0.0020 | 0.0019 |
| 244 | 0.0039 | 0.0020 | 0.0019 |
| 245 | 0.0038 | 0.0019 | 0.0019 |
| 246 | 0.0037 | 0.0019 | 0.0019 |
| 247 | 0.0037 | 0.0019 | 0.0018 |
| 248 | 0.0036 | 0.0018 | 0.0018 |
| 249 | 0.0036 | 0.0018 | 0.0018 |
| 250 | 0.0036 | 0.0018 | 0.0018 |
| 251 | 0.0035 | 0.0018 | 0.0017 |
| 252 | 0.0035 | 0.0018 | 0.0017 |
| 253 | 0.0034 | 0.0017 | 0.0017 |
| 254 | 0.0034 | 0.0017 | 0.0017 |
| 255 | 0.0033 | 0.0017 | 0.0016 |
| 256 | 0.0033 | 0.0017 | 0.0016 |
| 257 | 0.0033 | 0.0016 | 0.0016 |
| 258 | 0.0032 | 0.0016 | 0.0016 |
| 259 | 0.0032 | 0.0016 | 0.0016 |
| 260 | 0.0032 | 0.0016 | 0.0016 |

| | | | |
|---|---|---|---|
| 261 | 0.0031 | 0.0016 | 0.0015 |
| 262 | 0.0031 | 0.0016 | 0.0015 |
| 263 | 0.0030 | 0.0015 | 0.0015 |
| 264 | 0.0030 | 0.0015 | 0.0015 |
| 265 | 0.0030 | 0.0015 | 0.0015 |
| 266 | 0.0030 | 0.0015 | 0.0015 |
| 267 | 0.0029 | 0.0015 | 0.0014 |
| 268 | 0.0029 | 0.0015 | 0.0014 |
| 269 | 0.0029 | 0.0015 | 0.0014 |
| 270 | 0.0028 | 0.0014 | 0.0014 |
| 271 | 0.0028 | 0.0014 | 0.0014 |
| 272 | 0.0028 | 0.0014 | 0.0014 |
| 273 | 0.0028 | 0.0014 | 0.0014 |
| 274 | 0.0027 | 0.0014 | 0.0014 |
| 275 | 0.0027 | 0.0014 | 0.0013 |
| 276 | 0.0027 | 0.0014 | 0.0013 |
| 277 | 0.0027 | 0.0013 | 0.0013 |
| 278 | 0.0026 | 0.0013 | 0.0013 |
| 279 | 0.0026 | 0.0013 | 0.0013 |
| 280 | 0.0026 | 0.0013 | 0.0013 |
| 281 | 0.0026 | 0.0013 | 0.0013 |
| 282 | 0.0026 | 0.0013 | 0.0013 |
| 283 | 0.0025 | 0.0013 | 0.0013 |
| 284 | 0.0025 | 0.0013 | 0.0012 |
| 285 | 0.0025 | 0.0013 | 0.0012 |
| 286 | 0.0025 | 0.0013 | 0.0012 |
| 287 | 0.0025 | 0.0012 | 0.0012 |
| 288 | 0.0024 | 0.0012 | 0.0012 |

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Total soil rain loss = 0.95(In)
Total effective rainfall = 1.75(In)
Peak flow rate in flood hydrograph = 871.36(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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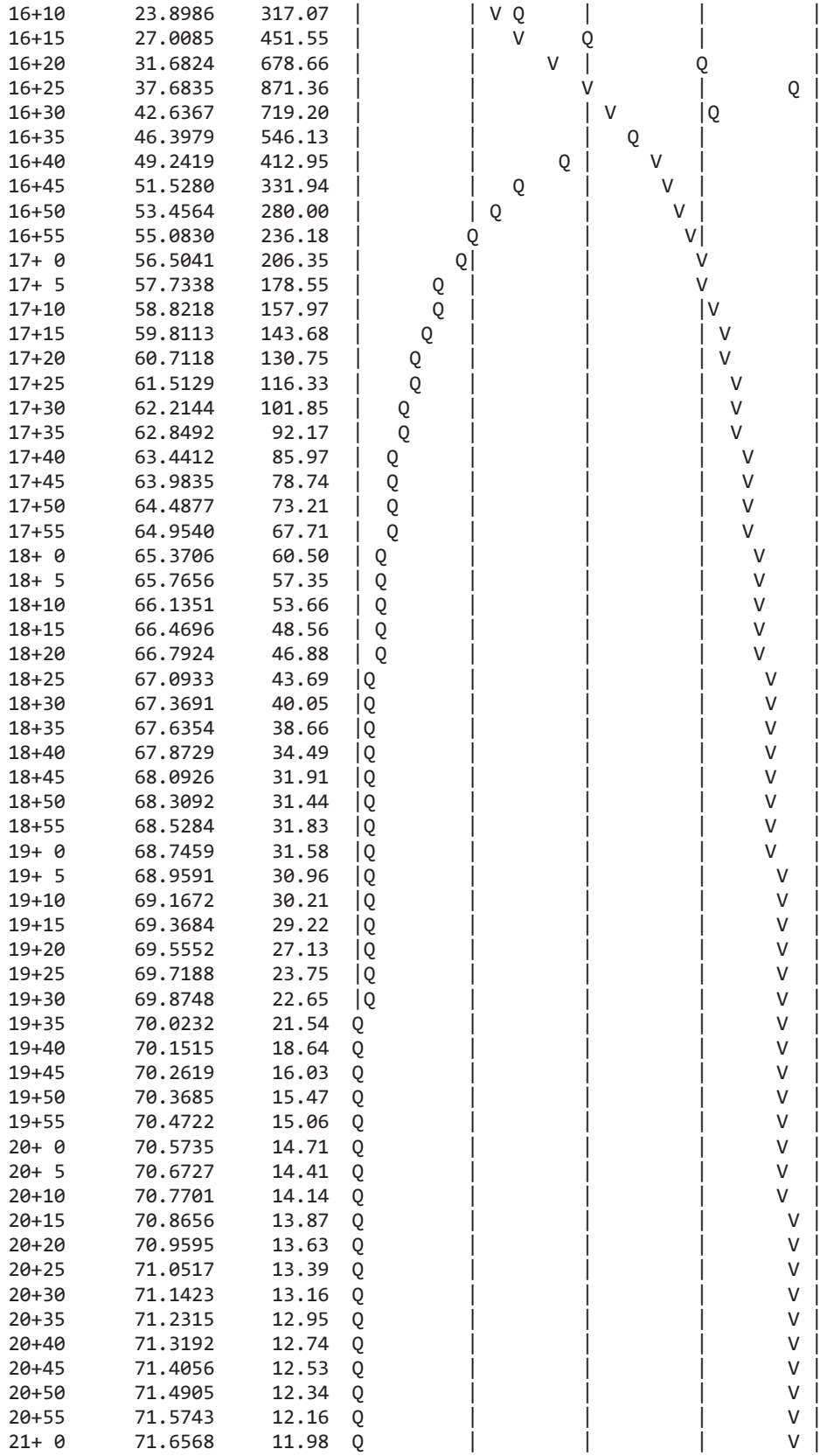
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 225.0 | 450.0 | 675.0 | 900.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0004 | 0.06 | Q | \| | \| | \| | \| |
| 0+10 | 0.0023 | 0.28 | Q | \| | \| | \| | \| |
| 0+15 | 0.0068 | 0.65 | Q | \| | \| | \| | \| |
| 0+20 | 0.0167 | 1.43 | Q | \| | \| | \| | \| |
| 0+25 | 0.0349 | 2.65 | Q | \| | \| | \| | \| |
| 0+30 | 0.0598 | 3.61 | Q | \| | \| | \| | \| |
| 0+35 | 0.0895 | 4.30 | Q | \| | \| | \| | \| |
| 0+40 | 0.1224 | 4.78 | Q | \| | \| | \| | \| |
| 0+45 | 0.1580 | 5.16 | Q | \| | \| | \| | \| |
| 0+50 | 0.1957 | 5.48 | Q | \| | \| | \| | \| |
| 0+55 | 0.2353 | 5.74 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.2764 | 5.98 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.3189 | 6.17 | Q | \| | \| | \| | \| |
| 1+10 | 0.3626 | 6.35 | Q | \| | \| | \| | \| |
| 1+15 | 0.4075 | 6.51 | Q | \| | \| | \| | \| |
| 1+20 | 0.4533 | 6.66 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+25 | 0.5001 | 6.79 | Q | | | | |
| 1+30 | 0.5476 | 6.91 | Q | | | | |
| 1+35 | 0.5959 | 7.01 | Q | | | | |
| 1+40 | 0.6449 | 7.11 | Q | | | | |
| 1+45 | 0.6946 | 7.21 | Q | | | | |
| 1+50 | 0.7449 | 7.30 | Q | | | | |
| 1+55 | 0.7957 | 7.39 | Q | | | | |
| 2+ 0 | 0.8472 | 7.46 | Q | | | | |
| 2+ 5 | 0.8991 | 7.54 | Q | | | | |
| 2+10 | 0.9515 | 7.62 | Q | | | | |
| 2+15 | 1.0045 | 7.68 | Q | | | | |
| 2+20 | 1.0578 | 7.75 | Q | | | | |
| 2+25 | 1.1116 | 7.81 | Q | | | | |
| 2+30 | 1.1659 | 7.87 | Q | | | | |
| 2+35 | 1.2205 | 7.93 | Q | | | | |
| 2+40 | 1.2754 | 7.98 | Q | | | | |
| 2+45 | 1.3307 | 8.03 | Q | | | | |
| 2+50 | 1.3864 | 8.08 | Q | | | | |
| 2+55 | 1.4424 | 8.13 | Q | | | | |
| 3+ 0 | 1.4987 | 8.18 | Q | | | | |
| 3+ 5 | 1.5555 | 8.24 | Q | | | | |
| 3+10 | 1.6126 | 8.29 | Q | | | | |
| 3+15 | 1.6700 | 8.34 | Q | | | | |
| 3+20 | 1.7278 | 8.40 | Q | | | | |
| 3+25 | 1.7860 | 8.44 | Q | | | | |
| 3+30 | 1.8445 | 8.49 | Q | | | | |
| 3+35 | 1.9033 | 8.54 | QV | | | | |
| 3+40 | 1.9624 | 8.58 | QV | | | | |
| 3+45 | 2.0218 | 8.63 | QV | | | | |
| 3+50 | 2.0815 | 8.67 | QV | | | | |
| 3+55 | 2.1415 | 8.71 | QV | | | | |
| 4+ 0 | 2.2017 | 8.75 | QV | | | | |
| 4+ 5 | 2.2623 | 8.79 | QV | | | | |
| 4+10 | 2.3231 | 8.84 | QV | | | | |
| 4+15 | 2.3843 | 8.88 | QV | | | | |
| 4+20 | 2.4458 | 8.92 | QV | | | | |
| 4+25 | 2.5076 | 8.97 | QV | | | | |
| 4+30 | 2.5696 | 9.02 | QV | | | | |
| 4+35 | 2.6320 | 9.06 | QV | | | | |
| 4+40 | 2.6948 | 9.11 | QV | | | | |
| 4+45 | 2.7578 | 9.15 | QV | | | | |
| 4+50 | 2.8212 | 9.20 | QV | | | | |
| 4+55 | 2.8849 | 9.25 | QV | | | | |
| 5+ 0 | 2.9489 | 9.30 | QV | | | | |
| 5+ 5 | 3.0133 | 9.35 | QV | | | | |
| 5+10 | 3.0781 | 9.40 | QV | | | | |
| 5+15 | 3.1431 | 9.45 | QV | | | | |
| 5+20 | 3.2086 | 9.50 | QV | | | | |
| 5+25 | 3.2744 | 9.55 | QV | | | | |
| 5+30 | 3.3405 | 9.61 | QV | | | | |
| 5+35 | 3.4070 | 9.66 | QV | | | | |
| 5+40 | 3.4739 | 9.71 | QV | | | | |
| 5+45 | 3.5412 | 9.77 | QV | | | | |
| 5+50 | 3.6089 | 9.82 | QV | | | | |
| 5+55 | 3.6769 | 9.88 | QV | | | | |
| 6+ 0 | 3.7453 | 9.94 | Q V | | | | |
| 6+ 5 | 3.8142 | 9.99 | Q V | | | | |
| 6+10 | 3.8834 | 10.05 | Q V | | | | |
| 6+15 | 3.9530 | 10.11 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+20 | 4.0231 | 10.17 | Q V | \| | \| | \| | \| |
| 6+25 | 4.0936 | 10.23 | Q V | \| | \| | \| | \| |
| 6+30 | 4.1645 | 10.30 | Q V | \| | \| | \| | \| |
| 6+35 | 4.2358 | 10.36 | Q V | \| | \| | \| | \| |
| 6+40 | 4.3076 | 10.42 | Q V | \| | \| | \| | \| |
| 6+45 | 4.3798 | 10.49 | Q V | \| | \| | \| | \| |
| 6+50 | 4.4525 | 10.55 | Q V | \| | \| | \| | \| |
| 6+55 | 4.5257 | 10.62 | Q V | \| | \| | \| | \| |
| 7+ 0 | 4.5993 | 10.69 | Q V | \| | \| | \| | \| |
| 7+ 5 | 4.6733 | 10.76 | Q V | \| | \| | \| | \| |
| 7+10 | 4.7479 | 10.83 | Q V | \| | \| | \| | \| |
| 7+15 | 4.8229 | 10.90 | Q V | \| | \| | \| | \| |
| 7+20 | 4.8985 | 10.97 | Q V | \| | \| | \| | \| |
| 7+25 | 4.9745 | 11.04 | Q V | \| | \| | \| | \| |
| 7+30 | 5.0511 | 11.11 | Q V | \| | \| | \| | \| |
| 7+35 | 5.1281 | 11.19 | Q V | \| | \| | \| | \| |
| 7+40 | 5.2057 | 11.27 | Q V | \| | \| | \| | \| |
| 7+45 | 5.2838 | 11.34 | Q V | \| | \| | \| | \| |
| 7+50 | 5.3625 | 11.42 | Q V | \| | \| | \| | \| |
| 7+55 | 5.4418 | 11.50 | Q V | \| | \| | \| | \| |
| 8+ 0 | 5.5215 | 11.59 | Q V | \| | \| | \| | \| |
| 8+ 5 | 5.6019 | 11.67 | Q  V | \| | \| | \| | \| |
| 8+10 | 5.6829 | 11.75 | Q  V | \| | \| | \| | \| |
| 8+15 | 5.7644 | 11.84 | Q  V | \| | \| | \| | \| |
| 8+20 | 5.8465 | 11.93 | Q  V | \| | \| | \| | \| |
| 8+25 | 5.9293 | 12.02 | Q  V | \| | \| | \| | \| |
| 8+30 | 6.0127 | 12.11 | Q  V | \| | \| | \| | \| |
| 8+35 | 6.0967 | 12.20 | Q  V | \| | \| | \| | \| |
| 8+40 | 6.1814 | 12.29 | Q  V | \| | \| | \| | \| |
| 8+45 | 6.2667 | 12.39 | Q  V | \| | \| | \| | \| |
| 8+50 | 6.3527 | 12.49 | Q  V | \| | \| | \| | \| |
| 8+55 | 6.4393 | 12.59 | Q  V | \| | \| | \| | \| |
| 9+ 0 | 6.5267 | 12.69 | Q  V | \| | \| | \| | \| |
| 9+ 5 | 6.6148 | 12.79 | Q  V | \| | \| | \| | \| |
| 9+10 | 6.7036 | 12.89 | Q  V | \| | \| | \| | \| |
| 9+15 | 6.7931 | 13.00 | Q  V | \| | \| | \| | \| |
| 9+20 | 6.8834 | 13.11 | Q  V | \| | \| | \| | \| |
| 9+25 | 6.9745 | 13.22 | Q  V | \| | \| | \| | \| |
| 9+30 | 7.0663 | 13.34 | Q  V | \| | \| | \| | \| |
| 9+35 | 7.1590 | 13.45 | Q  V | \| | \| | \| | \| |
| 9+40 | 7.2524 | 13.57 | Q  V | \| | \| | \| | \| |
| 9+45 | 7.3467 | 13.69 | Q  V | \| | \| | \| | \| |
| 9+50 | 7.4418 | 13.81 | Q  V | \| | \| | \| | \| |
| 9+55 | 7.5378 | 13.94 | Q   V | \| | \| | \| | \| |
| 10+ 0 | 7.6347 | 14.07 | Q   V | \| | \| | \| | \| |
| 10+ 5 | 7.7325 | 14.20 | Q   V | \| | \| | \| | \| |
| 10+10 | 7.8313 | 14.33 | Q   V | \| | \| | \| | \| |
| 10+15 | 7.9309 | 14.47 | Q   V | \| | \| | \| | \| |
| 10+20 | 8.0316 | 14.61 | Q   V | \| | \| | \| | \| |
| 10+25 | 8.1332 | 14.76 | Q   V | \| | \| | \| | \| |
| 10+30 | 8.2359 | 14.90 | Q   V | \| | \| | \| | \| |
| 10+35 | 8.3396 | 15.06 | Q   V | \| | \| | \| | \| |
| 10+40 | 8.4443 | 15.21 | Q   V | \| | \| | \| | \| |
| 10+45 | 8.5502 | 15.37 | Q   V | \| | \| | \| | \| |
| 10+50 | 8.6571 | 15.53 | Q   V | \| | \| | \| | \| |
| 10+55 | 8.7653 | 15.70 | Q   V | \| | \| | \| | \| |
| 11+ 0 | 8.8745 | 15.87 | Q   V | \| | \| | \| | \| |
| 11+ 5 | 8.9850 | 16.05 | Q   V | \| | \| | \| | \| |
| 11+10 | 9.0968 | 16.22 | Q   V | \| | \| | \| | \| |

```
11+15       9.2098     16.41  Q   V     |          |          |          |
11+20       9.3241     16.60  Q    V    |          |          |          |
11+25       9.4398     16.79  Q    V    |          |          |          |
11+30       9.5568     16.99  Q    V    |          |          |          |
11+35       9.6753     17.20  Q    V    |          |          |          |
11+40       9.7952     17.41  Q    V    |          |          |          |
11+45       9.9167     17.63  Q    V    |          |          |          |
11+50      10.0397     17.86  Q    V    |          |          |          |
11+55      10.1643     18.09  Q    V    |          |          |          |
12+ 0      10.2905     18.33  Q    V    |          |          |          |
12+ 5      10.4181     18.52  Q    V    |          |          |          |
12+10      10.5461     18.59  Q    V    |          |          |          |
12+15      10.6736     18.52  Q    V    |          |          |          |
12+20      10.7982     18.10  Q    V    |          |          |          |
12+25      10.9173     17.29  Q    V    |          |          |          |
12+30      11.0324     16.71  Q    V    |          |          |          |
12+35      11.1453     16.38  Q    V    |          |          |          |
12+40      11.2571     16.23  Q     V   |          |          |          |
12+45      11.3686     16.19  Q     V   |          |          |          |
12+50      11.4802     16.20  Q     V   |          |          |          |
12+55      11.5923     16.28  Q     V   |          |          |          |
13+ 0      11.7051     16.39  Q     V   |          |          |          |
13+ 5      11.8190     16.54  Q     V   |          |          |          |
13+10      11.9342     16.72  Q     V   |          |          |          |
13+15      12.0508     16.93  Q     V   |          |          |          |
13+20      12.1690     17.17  Q     V   |          |          |          |
13+25      12.2891     17.43  Q     V   |          |          |          |
13+30      12.4112     17.73  Q     V   |          |          |          |
13+35      12.5355     18.05  Q     V   |          |          |          |
13+40      12.6622     18.40  Q     V   |          |          |          |
13+45      12.7915     18.77  Q     V   |          |          |          |
13+50      12.9235     19.17  Q     V   |          |          |          |
13+55      13.0586     19.61  Q      V  |          |          |          |
14+ 0      13.1969     20.08  Q      V  |          |          |          |
14+ 5      13.3387     20.60  Q      V  |          |          |          |
14+10      13.4848     21.21  Q      V  |          |          |          |
14+15      13.6357     21.92  Q      V  |          |          |          |
14+20      13.7927     22.80  |Q     V  |          |          |          |
14+25      13.9573     23.90  |Q     V  |          |          |          |
14+30      14.1293     24.97  |Q     V  |          |          |          |
14+35      14.3085     26.02  |Q     V  |          |          |          |
14+40      14.4949     27.08  |Q     V  |          |          |          |
14+45      14.6891     28.19  |Q     V  |          |          |          |
14+50      14.8914     29.37  |Q     V  |          |          |          |
14+55      15.1025     30.65  |Q      V |          |          |          |
15+ 0      15.3231     32.03  |Q      V |          |          |          |
15+ 5      15.5541     33.55  |Q      V |          |          |          |
15+10      15.7967     35.22  |Q      V |          |          |          |
15+15      16.0522     37.11  |Q      V |          |          |          |
15+20      16.3223     39.22  |Q      V |          |          |          |
15+25      16.6114     41.97  |Q      V |          |          |          |
15+30      16.9273     45.87  | Q      V|          |          |          |
15+35      17.2796     51.16  | Q      V|          |          |          |
15+40      17.6878     59.27  | Q      V|          |          |          |
15+45      18.1779     71.17  |  Q     V|          |          |          |
15+50      18.7603     84.56  |  Q      V          |          |          |
15+55      19.4616    101.84  |   Q     V          |          |          |
16+ 0      20.3516    129.22  |    Q    V          |          |          |
16+ 5      21.7149    197.95  |       Q |V         |          |          |
```



| | | | |
|---|---|---|---|
| 16+10 | 23.8986 | 317.07 | |
| 16+15 | 27.0085 | 451.55 | |
| 16+20 | 31.6824 | 678.66 | |
| 16+25 | 37.6835 | 871.36 | |
| 16+30 | 42.6367 | 719.20 | |
| 16+35 | 46.3979 | 546.13 | |
| 16+40 | 49.2419 | 412.95 | |
| 16+45 | 51.5280 | 331.94 | |
| 16+50 | 53.4564 | 280.00 | |
| 16+55 | 55.0830 | 236.18 | |
| 17+ 0 | 56.5041 | 206.35 | |
| 17+ 5 | 57.7338 | 178.55 | |
| 17+10 | 58.8218 | 157.97 | |
| 17+15 | 59.8113 | 143.68 | |
| 17+20 | 60.7118 | 130.75 | |
| 17+25 | 61.5129 | 116.33 | |
| 17+30 | 62.2144 | 101.85 | |
| 17+35 | 62.8492 | 92.17 | |
| 17+40 | 63.4412 | 85.97 | |
| 17+45 | 63.9835 | 78.74 | |
| 17+50 | 64.4877 | 73.21 | |
| 17+55 | 64.9540 | 67.71 | |
| 18+ 0 | 65.3706 | 60.50 | |
| 18+ 5 | 65.7656 | 57.35 | |
| 18+10 | 66.1351 | 53.66 | |
| 18+15 | 66.4696 | 48.56 | |
| 18+20 | 66.7924 | 46.88 | |
| 18+25 | 67.0933 | 43.69 | |
| 18+30 | 67.3691 | 40.05 | |
| 18+35 | 67.6354 | 38.66 | |
| 18+40 | 67.8729 | 34.49 | |
| 18+45 | 68.0926 | 31.91 | |
| 18+50 | 68.3092 | 31.44 | |
| 18+55 | 68.5284 | 31.83 | |
| 19+ 0 | 68.7459 | 31.58 | |
| 19+ 5 | 68.9591 | 30.96 | |
| 19+10 | 69.1672 | 30.21 | |
| 19+15 | 69.3684 | 29.22 | |
| 19+20 | 69.5552 | 27.13 | |
| 19+25 | 69.7188 | 23.75 | |
| 19+30 | 69.8748 | 22.65 | |
| 19+35 | 70.0232 | 21.54 | |
| 19+40 | 70.1515 | 18.64 | |
| 19+45 | 70.2619 | 16.03 | |
| 19+50 | 70.3685 | 15.47 | |
| 19+55 | 70.4722 | 15.06 | |
| 20+ 0 | 70.5735 | 14.71 | |
| 20+ 5 | 70.6727 | 14.41 | |
| 20+10 | 70.7701 | 14.14 | |
| 20+15 | 70.8656 | 13.87 | |
| 20+20 | 70.9595 | 13.63 | |
| 20+25 | 71.0517 | 13.39 | |
| 20+30 | 71.1423 | 13.16 | |
| 20+35 | 71.2315 | 12.95 | |
| 20+40 | 71.3192 | 12.74 | |
| 20+45 | 71.4056 | 12.53 | |
| 20+50 | 71.4905 | 12.34 | |
| 20+55 | 71.5743 | 12.16 | |
| 21+ 0 | 71.6568 | 11.98 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+ 5 | 71.7382 | 11.81 | Q | \| | \| | \| | V \| |
| 21+10 | 71.8184 | 11.65 | Q | \| | \| | \| | V \| |
| 21+15 | 71.8976 | 11.49 | Q | \| | \| | \| | V \| |
| 21+20 | 71.9757 | 11.34 | Q | \| | \| | \| | V \| |
| 21+25 | 72.0528 | 11.19 | Q | \| | \| | \| | V \| |
| 21+30 | 72.1288 | 11.04 | Q | \| | \| | \| | V \| |
| 21+35 | 72.2039 | 10.90 | Q | \| | \| | \| | V \| |
| 21+40 | 72.2780 | 10.76 | Q | \| | \| | \| | V \| |
| 21+45 | 72.3512 | 10.62 | Q | \| | \| | \| | V \| |
| 21+50 | 72.4234 | 10.49 | Q | \| | \| | \| | V \| |
| 21+55 | 72.4948 | 10.36 | Q | \| | \| | \| | V \| |
| 22+ 0 | 72.5652 | 10.23 | Q | \| | \| | \| | V \| |
| 22+ 5 | 72.6348 | 10.11 | Q | \| | \| | \| | V\| |
| 22+10 | 72.7036 | 9.99 | Q | \| | \| | \| | V\| |
| 22+15 | 72.7716 | 9.87 | Q | \| | \| | \| | V\| |
| 22+20 | 72.8388 | 9.76 | Q | \| | \| | \| | V\| |
| 22+25 | 72.9052 | 9.65 | Q | \| | \| | \| | V\| |
| 22+30 | 72.9709 | 9.54 | Q | \| | \| | \| | V\| |
| 22+35 | 73.0359 | 9.43 | Q | \| | \| | \| | V\| |
| 22+40 | 73.1002 | 9.33 | Q | \| | \| | \| | V\| |
| 22+45 | 73.1638 | 9.23 | Q | \| | \| | \| | V\| |
| 22+50 | 73.2267 | 9.14 | Q | \| | \| | \| | V\| |
| 22+55 | 73.2890 | 9.04 | Q | \| | \| | \| | V\| |
| 23+ 0 | 73.3506 | 8.95 | Q | \| | \| | \| | V\| |
| 23+ 5 | 73.4116 | 8.86 | Q | \| | \| | \| | V\| |
| 23+10 | 73.4721 | 8.77 | Q | \| | \| | \| | V\| |
| 23+15 | 73.5319 | 8.69 | Q | \| | \| | \| | V\| |
| 23+20 | 73.5912 | 8.60 | Q | \| | \| | \| | V\| |
| 23+25 | 73.6499 | 8.52 | Q | \| | \| | \| | V\| |
| 23+30 | 73.7080 | 8.44 | Q | \| | \| | \| | V\| |
| 23+35 | 73.7656 | 8.36 | Q | \| | \| | \| | V\| |
| 23+40 | 73.8227 | 8.29 | Q | \| | \| | \| | V\| |
| 23+45 | 73.8793 | 8.21 | Q | \| | \| | \| | V\| |
| 23+50 | 73.9353 | 8.14 | Q | \| | \| | \| | V\| |
| 23+55 | 73.9909 | 8.07 | Q | \| | \| | \| | V\| |
| 24+ 0 | 74.0460 | 8.00 | Q | \| | \| | \| | V\| |
| 24+ 5 | 74.1002 | 7.87 | Q | \| | \| | \| | V\| |
| 24+10 | 74.1524 | 7.59 | Q | \| | \| | \| | V\| |
| 24+15 | 74.2016 | 7.15 | Q | \| | \| | \| | V\| |
| 24+20 | 74.2451 | 6.32 | Q | \| | \| | \| | V\| |
| 24+25 | 74.2799 | 5.05 | Q | \| | \| | \| | V\| |
| 24+30 | 74.3079 | 4.06 | Q | \| | \| | \| | V\| |
| 24+35 | 74.3309 | 3.35 | Q | \| | \| | \| | V\| |
| 24+40 | 74.3506 | 2.86 | Q | \| | \| | \| | V\| |
| 24+45 | 74.3677 | 2.47 | Q | \| | \| | \| | V\| |
| 24+50 | 74.3825 | 2.16 | Q | \| | \| | \| | V\| |
| 24+55 | 74.3956 | 1.90 | Q | \| | \| | \| | V\| |
| 25+ 0 | 74.4071 | 1.67 | Q | \| | \| | \| | V\| |
| 25+ 5 | 74.4173 | 1.48 | Q | \| | \| | \| | V\| |
| 25+10 | 74.4264 | 1.32 | Q | \| | \| | \| | V\| |
| 25+15 | 74.4345 | 1.18 | Q | \| | \| | \| | V\| |
| 25+20 | 74.4417 | 1.04 | Q | \| | \| | \| | V\| |
| 25+25 | 74.4481 | 0.93 | Q | \| | \| | \| | V\| |
| 25+30 | 74.4539 | 0.83 | Q | \| | \| | \| | V\| |
| 25+35 | 74.4590 | 0.75 | Q | \| | \| | \| | V\| |
| 25+40 | 74.4636 | 0.67 | Q | \| | \| | \| | V\| |
| 25+45 | 74.4678 | 0.60 | Q | \| | \| | \| | V\| |
| 25+50 | 74.4714 | 0.53 | Q | \| | \| | \| | V\| |
| 25+55 | 74.4747 | 0.47 | Q | \| | \| | \| | V\| |

```
   26+ 0      74.4776      0.42  Q         |          |          |         V|
   26+ 5      74.4802      0.37  Q         |          |          |         V|
   26+10      74.4824      0.33  Q         |          |          |         V|
   26+15      74.4844      0.29  Q         |          |          |         V|
   26+20      74.4862      0.26  Q         |          |          |         V|
   26+25      74.4877      0.22  Q         |          |          |         V|
   26+30      74.4891      0.20  Q         |          |          |         V|
   26+35      74.4903      0.17  Q         |          |          |         V|
   26+40      74.4914      0.15  Q         |          |          |         V|
   26+45      74.4923      0.14  Q         |          |          |         V|
   26+50      74.4932      0.13  Q         |          |          |         V|
   26+55      74.4940      0.11  Q         |          |          |         V|
   27+ 0      74.4946      0.09  Q         |          |          |         V|
   27+ 5      74.4951      0.08  Q         |          |          |         V|
   27+10      74.4955      0.06  Q         |          |          |         V|
   27+15      74.4958      0.04  Q         |          |          |         V|
   27+20      74.4960      0.03  Q         |          |          |         V|
   27+25      74.4962      0.02  Q         |          |          |         V|
   27+30      74.4963      0.01  Q         |          |          |         V|
   27+35      74.4963      0.00  Q         |          |          |          V
-------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 08/10/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREA "I"
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-10-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 5065.68 | 1 | 1.41 |
| Rainfall data for year 100 | | |
| 5065.68 | 6 | 2.15 |
| Rainfall data for year 100 | | |
| 5065.68 | 24 | 3.19 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.6 | 93.2 | 5065.68 | 1.000 | 0.133 | 0.988 | 0.131 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.131

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 5004.89 | 0.988 | 78.6 | 93.2 | 0.73 | 0.769 |
| 60.79 | 0.012 | 98.0 | 98.0 | 0.20 | 0.927 |

Area-averaged catchment yield fraction, Y = 0.771
Area-averaged low loss fraction, Yb = 0.229
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 36340.00(Ft.)
Length from concentration point to centroid = 20373.00(Ft.)
Elevation difference along watercourse = 2873.00(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 5065.68(Ac.)
Catchment Lag time = 0.928 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 8.9798
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.131(In/Hr)
Average low loss rate fraction (Yb) = 0.229 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.350
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.650

Computed peak 5-minute rainfall = 0.667(In)
Computed peak 30-minute rainfall = 1.142(In)
Specified peak 1-hour rainfall = 1.406(In)
Computed peak 3-hour rainfall = 1.825(In)
Specified peak 6-hour rainfall = 2.152(In)
Specified peak 24-hour rainfall = 3.190(In)

Rainfall depth area reduction factors:
Using a total area of 5065.68(Ac.) (Ref: fig. E-4)

5-minute factor = 0.789 Adjusted rainfall = 0.526(In)
30-minute factor = 0.789 Adjusted rainfall = 0.901(In)
1-hour factor = 0.789 Adjusted rainfall = 1.109(In)
3-hour factor = 0.971 Adjusted rainfall = 1.773(In)
6-hour factor = 0.985 Adjusted rainfall = 2.120(In)
24-hour factor = 0.993 Adjusted rainfall = 3.168(In)
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U n i t H y d r o g r a p h

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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 61263.07 (CFS)) | |
| 1 | 0.456 | 279.282 |
| 2 | 1.465 | 618.058 |
| 3 | 2.975 | 925.207 |
| 4 | 4.943 | 1205.399 |
| 5 | 7.381 | 1493.866 |

| | | |
|---|---|---|
| 6 | 10.425 | 1864.934 |
| 7 | 15.020 | 2814.736 |
| 8 | 21.472 | 3953.074 |
| 9 | 29.000 | 4611.524 |
| 10 | 36.407 | 4537.777 |
| 11 | 44.692 | 5075.807 |
| 12 | 51.868 | 4396.264 |
| 13 | 56.805 | 3024.801 |
| 14 | 60.623 | 2338.953 |
| 15 | 63.863 | 1984.534 |
| 16 | 66.692 | 1733.406 |
| 17 | 69.176 | 1521.492 |
| 18 | 71.395 | 1359.667 |
| 19 | 73.442 | 1254.192 |
| 20 | 75.313 | 1145.887 |
| 21 | 76.954 | 1005.588 |
| 22 | 78.531 | 966.106 |
| 23 | 80.001 | 900.544 |
| 24 | 81.237 | 756.902 |
| 25 | 82.460 | 749.275 |
| 26 | 83.587 | 690.486 |
| 27 | 84.595 | 617.453 |
| 28 | 85.600 | 616.108 |
| 29 | 86.514 | 559.592 |
| 30 | 87.376 | 528.123 |
| 31 | 88.228 | 521.914 |
| 32 | 88.974 | 457.261 |
| 33 | 89.692 | 440.103 |
| 34 | 90.382 | 422.198 |
| 35 | 90.947 | 346.313 |
| 36 | 91.498 | 337.779 |
| 37 | 92.026 | 323.070 |
| 38 | 92.505 | 293.504 |
| 39 | 92.982 | 292.656 |
| 40 | 93.422 | 269.641 |
| 41 | 93.828 | 248.658 |
| 42 | 94.232 | 247.585 |
| 43 | 94.595 | 222.068 |
| 44 | 94.940 | 211.249 |
| 45 | 95.273 | 204.346 |
| 46 | 95.526 | 154.554 |
| 47 | 95.762 | 144.684 |
| 48 | 95.998 | 144.684 |
| 49 | 96.234 | 144.684 |
| 50 | 96.470 | 144.684 |
| 51 | 96.686 | 131.905 |
| 52 | 96.869 | 112.432 |
| 53 | 97.052 | 112.226 |
| 54 | 97.236 | 112.226 |
| 55 | 97.419 | 112.226 |
| 56 | 97.599 | 110.376 |
| 57 | 97.737 | 84.330 |
| 58 | 97.860 | 75.918 |
| 59 | 97.984 | 75.918 |
| 60 | 98.108 | 75.918 |
| 61 | 98.232 | 75.918 |
| 62 | 98.345 | 68.933 |
| 63 | 98.429 | 51.928 |
| 64 | 98.513 | 51.162 |

| | | |
|---|---|---|
| 65 | 98.597 | 51.162 |
| 66 | 98.680 | 51.162 |
| 67 | 98.764 | 51.153 |
| 68 | 98.846 | 50.795 |
| 69 | 98.929 | 50.612 |
| 70 | 99.012 | 50.612 |
| 71 | 99.094 | 50.612 |
| 72 | 99.177 | 50.612 |
| 73 | 99.258 | 49.883 |
| 74 | 99.335 | 47.046 |
| 75 | 99.411 | 46.761 |
| 76 | 99.488 | 46.761 |
| 77 | 99.564 | 46.761 |
| 78 | 99.643 | 48.483 |
| 79 | 99.695 | 31.686 |
| 80 | 99.731 | 22.349 |
| 81 | 99.768 | 22.349 |
| 82 | 99.804 | 22.349 |
| 83 | 99.841 | 22.349 |
| 84 | 99.877 | 22.349 |
| 85 | 99.914 | 22.349 |
| 86 | 99.950 | 22.349 |
| 87 | 100.000 | 11.174 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5262 | 0.5262 |
| 2 | 0.6479 | 0.1216 |
| 3 | 0.7317 | 0.0838 |
| 4 | 0.7976 | 0.0660 |
| 5 | 0.8529 | 0.0552 |
| 6 | 0.9008 | 0.0479 |
| 7 | 0.9434 | 0.0426 |
| 8 | 0.9820 | 0.0386 |
| 9 | 1.0173 | 0.0353 |
| 10 | 1.0500 | 0.0327 |
| 11 | 1.0805 | 0.0305 |
| 12 | 1.1090 | 0.0286 |
| 13 | 1.1476 | 0.0385 |
| 14 | 1.1845 | 0.0369 |
| 15 | 1.2198 | 0.0354 |
| 16 | 1.2539 | 0.0341 |
| 17 | 1.2868 | 0.0329 |
| 18 | 1.3186 | 0.0318 |
| 19 | 1.3493 | 0.0308 |
| 20 | 1.3792 | 0.0299 |
| 21 | 1.4082 | 0.0290 |
| 22 | 1.4365 | 0.0282 |
| 23 | 1.4640 | 0.0275 |
| 24 | 1.4908 | 0.0268 |
| 25 | 1.5170 | 0.0262 |
| 26 | 1.5426 | 0.0256 |
| 27 | 1.5677 | 0.0251 |
| 28 | 1.5922 | 0.0245 |
| 29 | 1.6162 | 0.0240 |
| 30 | 1.6398 | 0.0236 |
| 31 | 1.6629 | 0.0231 |
| 32 | 1.6856 | 0.0227 |
| 33 | 1.7079 | 0.0223 |

| | | |
|---|---|---|
| 34 | 1.7298 | 0.0219 |
| 35 | 1.7513 | 0.0215 |
| 36 | 1.7725 | 0.0212 |
| 37 | 1.7851 | 0.0126 |
| 38 | 1.7975 | 0.0124 |
| 39 | 1.8096 | 0.0121 |
| 40 | 1.8215 | 0.0119 |
| 41 | 1.8331 | 0.0117 |
| 42 | 1.8446 | 0.0115 |
| 43 | 1.8558 | 0.0113 |
| 44 | 1.8669 | 0.0111 |
| 45 | 1.8778 | 0.0109 |
| 46 | 1.8885 | 0.0107 |
| 47 | 1.8990 | 0.0105 |
| 48 | 1.9094 | 0.0104 |
| 49 | 1.9196 | 0.0102 |
| 50 | 1.9296 | 0.0101 |
| 51 | 1.9396 | 0.0099 |
| 52 | 1.9493 | 0.0098 |
| 53 | 1.9589 | 0.0096 |
| 54 | 1.9684 | 0.0095 |
| 55 | 1.9778 | 0.0094 |
| 56 | 1.9870 | 0.0092 |
| 57 | 1.9961 | 0.0091 |
| 58 | 2.0051 | 0.0090 |
| 59 | 2.0140 | 0.0089 |
| 60 | 2.0228 | 0.0088 |
| 61 | 2.0315 | 0.0087 |
| 62 | 2.0400 | 0.0086 |
| 63 | 2.0485 | 0.0085 |
| 64 | 2.0568 | 0.0084 |
| 65 | 2.0651 | 0.0083 |
| 66 | 2.0733 | 0.0082 |
| 67 | 2.0813 | 0.0081 |
| 68 | 2.0893 | 0.0080 |
| 69 | 2.0972 | 0.0079 |
| 70 | 2.1051 | 0.0078 |
| 71 | 2.1128 | 0.0077 |
| 72 | 2.1204 | 0.0077 |
| 73 | 2.1289 | 0.0085 |
| 74 | 2.1373 | 0.0084 |
| 75 | 2.1457 | 0.0083 |
| 76 | 2.1539 | 0.0082 |
| 77 | 2.1621 | 0.0082 |
| 78 | 2.1702 | 0.0081 |
| 79 | 2.1782 | 0.0080 |
| 80 | 2.1861 | 0.0079 |
| 81 | 2.1940 | 0.0079 |
| 82 | 2.2018 | 0.0078 |
| 83 | 2.2096 | 0.0077 |
| 84 | 2.2172 | 0.0077 |
| 85 | 2.2249 | 0.0076 |
| 86 | 2.2324 | 0.0075 |
| 87 | 2.2399 | 0.0075 |
| 88 | 2.2473 | 0.0074 |
| 89 | 2.2547 | 0.0074 |
| 90 | 2.2620 | 0.0073 |
| 91 | 2.2692 | 0.0072 |
| 92 | 2.2764 | 0.0072 |

| | | |
|---|---|---|
| 93 | 2.2836 | 0.0071 |
| 94 | 2.2907 | 0.0071 |
| 95 | 2.2977 | 0.0070 |
| 96 | 2.3047 | 0.0070 |
| 97 | 2.3116 | 0.0069 |
| 98 | 2.3185 | 0.0069 |
| 99 | 2.3253 | 0.0068 |
| 100 | 2.3321 | 0.0068 |
| 101 | 2.3388 | 0.0067 |
| 102 | 2.3455 | 0.0067 |
| 103 | 2.3521 | 0.0066 |
| 104 | 2.3587 | 0.0066 |
| 105 | 2.3653 | 0.0065 |
| 106 | 2.3718 | 0.0065 |
| 107 | 2.3782 | 0.0065 |
| 108 | 2.3846 | 0.0064 |
| 109 | 2.3910 | 0.0064 |
| 110 | 2.3973 | 0.0063 |
| 111 | 2.4036 | 0.0063 |
| 112 | 2.4099 | 0.0063 |
| 113 | 2.4161 | 0.0062 |
| 114 | 2.4223 | 0.0062 |
| 115 | 2.4284 | 0.0061 |
| 116 | 2.4345 | 0.0061 |
| 117 | 2.4405 | 0.0061 |
| 118 | 2.4466 | 0.0060 |
| 119 | 2.4526 | 0.0060 |
| 120 | 2.4585 | 0.0060 |
| 121 | 2.4644 | 0.0059 |
| 122 | 2.4703 | 0.0059 |
| 123 | 2.4762 | 0.0058 |
| 124 | 2.4820 | 0.0058 |
| 125 | 2.4877 | 0.0058 |
| 126 | 2.4935 | 0.0057 |
| 127 | 2.4992 | 0.0057 |
| 128 | 2.5049 | 0.0057 |
| 129 | 2.5105 | 0.0057 |
| 130 | 2.5162 | 0.0056 |
| 131 | 2.5218 | 0.0056 |
| 132 | 2.5273 | 0.0056 |
| 133 | 2.5328 | 0.0055 |
| 134 | 2.5383 | 0.0055 |
| 135 | 2.5438 | 0.0055 |
| 136 | 2.5493 | 0.0054 |
| 137 | 2.5547 | 0.0054 |
| 138 | 2.5601 | 0.0054 |
| 139 | 2.5654 | 0.0054 |
| 140 | 2.5707 | 0.0053 |
| 141 | 2.5760 | 0.0053 |
| 142 | 2.5813 | 0.0053 |
| 143 | 2.5866 | 0.0053 |
| 144 | 2.5918 | 0.0052 |
| 145 | 2.5970 | 0.0052 |
| 146 | 2.6022 | 0.0052 |
| 147 | 2.6073 | 0.0051 |
| 148 | 2.6124 | 0.0051 |
| 149 | 2.6175 | 0.0051 |
| 150 | 2.6226 | 0.0051 |
| 151 | 2.6277 | 0.0051 |

| | | |
|---|---|---|
| 152 | 2.6327 | 0.0050 |
| 153 | 2.6377 | 0.0050 |
| 154 | 2.6427 | 0.0050 |
| 155 | 2.6476 | 0.0050 |
| 156 | 2.6526 | 0.0049 |
| 157 | 2.6575 | 0.0049 |
| 158 | 2.6624 | 0.0049 |
| 159 | 2.6673 | 0.0049 |
| 160 | 2.6721 | 0.0048 |
| 161 | 2.6769 | 0.0048 |
| 162 | 2.6817 | 0.0048 |
| 163 | 2.6865 | 0.0048 |
| 164 | 2.6913 | 0.0048 |
| 165 | 2.6960 | 0.0047 |
| 166 | 2.7007 | 0.0047 |
| 167 | 2.7054 | 0.0047 |
| 168 | 2.7101 | 0.0047 |
| 169 | 2.7148 | 0.0047 |
| 170 | 2.7194 | 0.0046 |
| 171 | 2.7240 | 0.0046 |
| 172 | 2.7287 | 0.0046 |
| 173 | 2.7332 | 0.0046 |
| 174 | 2.7378 | 0.0046 |
| 175 | 2.7424 | 0.0045 |
| 176 | 2.7469 | 0.0045 |
| 177 | 2.7514 | 0.0045 |
| 178 | 2.7559 | 0.0045 |
| 179 | 2.7604 | 0.0045 |
| 180 | 2.7648 | 0.0045 |
| 181 | 2.7693 | 0.0044 |
| 182 | 2.7737 | 0.0044 |
| 183 | 2.7781 | 0.0044 |
| 184 | 2.7825 | 0.0044 |
| 185 | 2.7868 | 0.0044 |
| 186 | 2.7912 | 0.0044 |
| 187 | 2.7955 | 0.0043 |
| 188 | 2.7999 | 0.0043 |
| 189 | 2.8042 | 0.0043 |
| 190 | 2.8084 | 0.0043 |
| 191 | 2.8127 | 0.0043 |
| 192 | 2.8170 | 0.0043 |
| 193 | 2.8212 | 0.0042 |
| 194 | 2.8254 | 0.0042 |
| 195 | 2.8296 | 0.0042 |
| 196 | 2.8338 | 0.0042 |
| 197 | 2.8380 | 0.0042 |
| 198 | 2.8422 | 0.0042 |
| 199 | 2.8463 | 0.0041 |
| 200 | 2.8505 | 0.0041 |
| 201 | 2.8546 | 0.0041 |
| 202 | 2.8587 | 0.0041 |
| 203 | 2.8628 | 0.0041 |
| 204 | 2.8669 | 0.0041 |
| 205 | 2.8709 | 0.0041 |
| 206 | 2.8750 | 0.0040 |
| 207 | 2.8790 | 0.0040 |
| 208 | 2.8830 | 0.0040 |
| 209 | 2.8870 | 0.0040 |
| 210 | 2.8910 | 0.0040 |

| | | |
|---|---|---|
| 211 | 2.8950 | 0.0040 |
| 212 | 2.8990 | 0.0040 |
| 213 | 2.9029 | 0.0040 |
| 214 | 2.9069 | 0.0039 |
| 215 | 2.9108 | 0.0039 |
| 216 | 2.9147 | 0.0039 |
| 217 | 2.9186 | 0.0039 |
| 218 | 2.9225 | 0.0039 |
| 219 | 2.9264 | 0.0039 |
| 220 | 2.9302 | 0.0039 |
| 221 | 2.9341 | 0.0039 |
| 222 | 2.9379 | 0.0038 |
| 223 | 2.9418 | 0.0038 |
| 224 | 2.9456 | 0.0038 |
| 225 | 2.9494 | 0.0038 |
| 226 | 2.9532 | 0.0038 |
| 227 | 2.9569 | 0.0038 |
| 228 | 2.9607 | 0.0038 |
| 229 | 2.9645 | 0.0038 |
| 230 | 2.9682 | 0.0037 |
| 231 | 2.9719 | 0.0037 |
| 232 | 2.9757 | 0.0037 |
| 233 | 2.9794 | 0.0037 |
| 234 | 2.9831 | 0.0037 |
| 235 | 2.9868 | 0.0037 |
| 236 | 2.9904 | 0.0037 |
| 237 | 2.9941 | 0.0037 |
| 238 | 2.9977 | 0.0037 |
| 239 | 3.0014 | 0.0036 |
| 240 | 3.0050 | 0.0036 |
| 241 | 3.0086 | 0.0036 |
| 242 | 3.0122 | 0.0036 |
| 243 | 3.0158 | 0.0036 |
| 244 | 3.0194 | 0.0036 |
| 245 | 3.0230 | 0.0036 |
| 246 | 3.0266 | 0.0036 |
| 247 | 3.0301 | 0.0036 |
| 248 | 3.0337 | 0.0035 |
| 249 | 3.0372 | 0.0035 |
| 250 | 3.0408 | 0.0035 |
| 251 | 3.0443 | 0.0035 |
| 252 | 3.0478 | 0.0035 |
| 253 | 3.0513 | 0.0035 |
| 254 | 3.0548 | 0.0035 |
| 255 | 3.0582 | 0.0035 |
| 256 | 3.0617 | 0.0035 |
| 257 | 3.0652 | 0.0035 |
| 258 | 3.0686 | 0.0034 |
| 259 | 3.0721 | 0.0034 |
| 260 | 3.0755 | 0.0034 |
| 261 | 3.0789 | 0.0034 |
| 262 | 3.0823 | 0.0034 |
| 263 | 3.0857 | 0.0034 |
| 264 | 3.0891 | 0.0034 |
| 265 | 3.0925 | 0.0034 |
| 266 | 3.0959 | 0.0034 |
| 267 | 3.0992 | 0.0034 |
| 268 | 3.1026 | 0.0034 |
| 269 | 3.1059 | 0.0033 |

| | | |
|---|---|---|
| 270 | 3.1093 | 0.0033 |
| 271 | 3.1126 | 0.0033 |
| 272 | 3.1159 | 0.0033 |
| 273 | 3.1192 | 0.0033 |
| 274 | 3.1226 | 0.0033 |
| 275 | 3.1258 | 0.0033 |
| 276 | 3.1291 | 0.0033 |
| 277 | 3.1324 | 0.0033 |
| 278 | 3.1357 | 0.0033 |
| 279 | 3.1389 | 0.0033 |
| 280 | 3.1422 | 0.0033 |
| 281 | 3.1454 | 0.0032 |
| 282 | 3.1487 | 0.0032 |
| 283 | 3.1519 | 0.0032 |
| 284 | 3.1551 | 0.0032 |
| 285 | 3.1583 | 0.0032 |
| 286 | 3.1616 | 0.0032 |
| 287 | 3.1648 | 0.0032 |
| 288 | 3.1679 | 0.0032 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0032 | 0.0007 | 0.0025 |
| 2 | 0.0032 | 0.0007 | 0.0025 |
| 3 | 0.0032 | 0.0007 | 0.0025 |
| 4 | 0.0032 | 0.0007 | 0.0025 |
| 5 | 0.0032 | 0.0007 | 0.0025 |
| 6 | 0.0032 | 0.0007 | 0.0025 |
| 7 | 0.0033 | 0.0007 | 0.0025 |
| 8 | 0.0033 | 0.0007 | 0.0025 |
| 9 | 0.0033 | 0.0008 | 0.0025 |
| 10 | 0.0033 | 0.0008 | 0.0025 |
| 11 | 0.0033 | 0.0008 | 0.0026 |
| 12 | 0.0033 | 0.0008 | 0.0026 |
| 13 | 0.0033 | 0.0008 | 0.0026 |
| 14 | 0.0033 | 0.0008 | 0.0026 |
| 15 | 0.0034 | 0.0008 | 0.0026 |
| 16 | 0.0034 | 0.0008 | 0.0026 |
| 17 | 0.0034 | 0.0008 | 0.0026 |
| 18 | 0.0034 | 0.0008 | 0.0026 |
| 19 | 0.0034 | 0.0008 | 0.0026 |
| 20 | 0.0034 | 0.0008 | 0.0026 |
| 21 | 0.0034 | 0.0008 | 0.0027 |
| 22 | 0.0035 | 0.0008 | 0.0027 |
| 23 | 0.0035 | 0.0008 | 0.0027 |
| 24 | 0.0035 | 0.0008 | 0.0027 |
| 25 | 0.0035 | 0.0008 | 0.0027 |
| 26 | 0.0035 | 0.0008 | 0.0027 |
| 27 | 0.0035 | 0.0008 | 0.0027 |
| 28 | 0.0035 | 0.0008 | 0.0027 |
| 29 | 0.0036 | 0.0008 | 0.0028 |
| 30 | 0.0036 | 0.0008 | 0.0028 |
| 31 | 0.0036 | 0.0008 | 0.0028 |
| 32 | 0.0036 | 0.0008 | 0.0028 |
| 33 | 0.0036 | 0.0008 | 0.0028 |
| 34 | 0.0036 | 0.0008 | 0.0028 |
| 35 | 0.0037 | 0.0008 | 0.0028 |

| | | | |
|---|---|---|---|
| 36 | 0.0037 | 0.0008 | 0.0028 |
| 37 | 0.0037 | 0.0008 | 0.0029 |
| 38 | 0.0037 | 0.0008 | 0.0029 |
| 39 | 0.0037 | 0.0009 | 0.0029 |
| 40 | 0.0037 | 0.0009 | 0.0029 |
| 41 | 0.0038 | 0.0009 | 0.0029 |
| 42 | 0.0038 | 0.0009 | 0.0029 |
| 43 | 0.0038 | 0.0009 | 0.0029 |
| 44 | 0.0038 | 0.0009 | 0.0029 |
| 45 | 0.0038 | 0.0009 | 0.0030 |
| 46 | 0.0039 | 0.0009 | 0.0030 |
| 47 | 0.0039 | 0.0009 | 0.0030 |
| 48 | 0.0039 | 0.0009 | 0.0030 |
| 49 | 0.0039 | 0.0009 | 0.0030 |
| 50 | 0.0039 | 0.0009 | 0.0030 |
| 51 | 0.0040 | 0.0009 | 0.0030 |
| 52 | 0.0040 | 0.0009 | 0.0031 |
| 53 | 0.0040 | 0.0009 | 0.0031 |
| 54 | 0.0040 | 0.0009 | 0.0031 |
| 55 | 0.0040 | 0.0009 | 0.0031 |
| 56 | 0.0040 | 0.0009 | 0.0031 |
| 57 | 0.0041 | 0.0009 | 0.0031 |
| 58 | 0.0041 | 0.0009 | 0.0032 |
| 59 | 0.0041 | 0.0009 | 0.0032 |
| 60 | 0.0041 | 0.0009 | 0.0032 |
| 61 | 0.0042 | 0.0010 | 0.0032 |
| 62 | 0.0042 | 0.0010 | 0.0032 |
| 63 | 0.0042 | 0.0010 | 0.0032 |
| 64 | 0.0042 | 0.0010 | 0.0033 |
| 65 | 0.0043 | 0.0010 | 0.0033 |
| 66 | 0.0043 | 0.0010 | 0.0033 |
| 67 | 0.0043 | 0.0010 | 0.0033 |
| 68 | 0.0043 | 0.0010 | 0.0033 |
| 69 | 0.0044 | 0.0010 | 0.0034 |
| 70 | 0.0044 | 0.0010 | 0.0034 |
| 71 | 0.0044 | 0.0010 | 0.0034 |
| 72 | 0.0044 | 0.0010 | 0.0034 |
| 73 | 0.0045 | 0.0010 | 0.0034 |
| 74 | 0.0045 | 0.0010 | 0.0035 |
| 75 | 0.0045 | 0.0010 | 0.0035 |
| 76 | 0.0045 | 0.0010 | 0.0035 |
| 77 | 0.0046 | 0.0010 | 0.0035 |
| 78 | 0.0046 | 0.0010 | 0.0035 |
| 79 | 0.0046 | 0.0011 | 0.0036 |
| 80 | 0.0046 | 0.0011 | 0.0036 |
| 81 | 0.0047 | 0.0011 | 0.0036 |
| 82 | 0.0047 | 0.0011 | 0.0036 |
| 83 | 0.0047 | 0.0011 | 0.0037 |
| 84 | 0.0048 | 0.0011 | 0.0037 |
| 85 | 0.0048 | 0.0011 | 0.0037 |
| 86 | 0.0048 | 0.0011 | 0.0037 |
| 87 | 0.0049 | 0.0011 | 0.0038 |
| 88 | 0.0049 | 0.0011 | 0.0038 |
| 89 | 0.0049 | 0.0011 | 0.0038 |
| 90 | 0.0050 | 0.0011 | 0.0038 |
| 91 | 0.0050 | 0.0011 | 0.0039 |
| 92 | 0.0050 | 0.0012 | 0.0039 |
| 93 | 0.0051 | 0.0012 | 0.0039 |
| 94 | 0.0051 | 0.0012 | 0.0039 |

| | | | |
|---|---|---|---|
| 95 | 0.0051 | 0.0012 | 0.0040 |
| 96 | 0.0052 | 0.0012 | 0.0040 |
| 97 | 0.0052 | 0.0012 | 0.0040 |
| 98 | 0.0053 | 0.0012 | 0.0040 |
| 99 | 0.0053 | 0.0012 | 0.0041 |
| 100 | 0.0053 | 0.0012 | 0.0041 |
| 101 | 0.0054 | 0.0012 | 0.0042 |
| 102 | 0.0054 | 0.0012 | 0.0042 |
| 103 | 0.0055 | 0.0013 | 0.0042 |
| 104 | 0.0055 | 0.0013 | 0.0042 |
| 105 | 0.0056 | 0.0013 | 0.0043 |
| 106 | 0.0056 | 0.0013 | 0.0043 |
| 107 | 0.0057 | 0.0013 | 0.0044 |
| 108 | 0.0057 | 0.0013 | 0.0044 |
| 109 | 0.0057 | 0.0013 | 0.0044 |
| 110 | 0.0058 | 0.0013 | 0.0045 |
| 111 | 0.0058 | 0.0013 | 0.0045 |
| 112 | 0.0059 | 0.0013 | 0.0045 |
| 113 | 0.0060 | 0.0014 | 0.0046 |
| 114 | 0.0060 | 0.0014 | 0.0046 |
| 115 | 0.0061 | 0.0014 | 0.0047 |
| 116 | 0.0061 | 0.0014 | 0.0047 |
| 117 | 0.0062 | 0.0014 | 0.0048 |
| 118 | 0.0062 | 0.0014 | 0.0048 |
| 119 | 0.0063 | 0.0014 | 0.0049 |
| 120 | 0.0063 | 0.0014 | 0.0049 |
| 121 | 0.0064 | 0.0015 | 0.0049 |
| 122 | 0.0065 | 0.0015 | 0.0050 |
| 123 | 0.0065 | 0.0015 | 0.0050 |
| 124 | 0.0066 | 0.0015 | 0.0051 |
| 125 | 0.0067 | 0.0015 | 0.0052 |
| 126 | 0.0067 | 0.0015 | 0.0052 |
| 127 | 0.0068 | 0.0016 | 0.0053 |
| 128 | 0.0069 | 0.0016 | 0.0053 |
| 129 | 0.0070 | 0.0016 | 0.0054 |
| 130 | 0.0070 | 0.0016 | 0.0054 |
| 131 | 0.0071 | 0.0016 | 0.0055 |
| 132 | 0.0072 | 0.0016 | 0.0055 |
| 133 | 0.0073 | 0.0017 | 0.0056 |
| 134 | 0.0074 | 0.0017 | 0.0057 |
| 135 | 0.0075 | 0.0017 | 0.0058 |
| 136 | 0.0075 | 0.0017 | 0.0058 |
| 137 | 0.0077 | 0.0018 | 0.0059 |
| 138 | 0.0077 | 0.0018 | 0.0060 |
| 139 | 0.0079 | 0.0018 | 0.0061 |
| 140 | 0.0079 | 0.0018 | 0.0061 |
| 141 | 0.0081 | 0.0019 | 0.0062 |
| 142 | 0.0082 | 0.0019 | 0.0063 |
| 143 | 0.0083 | 0.0019 | 0.0064 |
| 144 | 0.0084 | 0.0019 | 0.0065 |
| 145 | 0.0077 | 0.0018 | 0.0059 |
| 146 | 0.0077 | 0.0018 | 0.0060 |
| 147 | 0.0079 | 0.0018 | 0.0061 |
| 148 | 0.0080 | 0.0018 | 0.0062 |
| 149 | 0.0082 | 0.0019 | 0.0063 |
| 150 | 0.0083 | 0.0019 | 0.0064 |
| 151 | 0.0085 | 0.0019 | 0.0065 |
| 152 | 0.0086 | 0.0020 | 0.0066 |
| 153 | 0.0088 | 0.0020 | 0.0068 |

| | | | |
|---|---|---|---|
| 154 | 0.0089 | 0.0020 | 0.0068 |
| 155 | 0.0091 | 0.0021 | 0.0070 |
| 156 | 0.0092 | 0.0021 | 0.0071 |
| 157 | 0.0095 | 0.0022 | 0.0073 |
| 158 | 0.0096 | 0.0022 | 0.0074 |
| 159 | 0.0099 | 0.0023 | 0.0076 |
| 160 | 0.0101 | 0.0023 | 0.0078 |
| 161 | 0.0104 | 0.0024 | 0.0080 |
| 162 | 0.0105 | 0.0024 | 0.0081 |
| 163 | 0.0109 | 0.0025 | 0.0084 |
| 164 | 0.0111 | 0.0025 | 0.0085 |
| 165 | 0.0115 | 0.0026 | 0.0088 |
| 166 | 0.0117 | 0.0027 | 0.0090 |
| 167 | 0.0121 | 0.0028 | 0.0093 |
| 168 | 0.0124 | 0.0028 | 0.0095 |
| 169 | 0.0212 | 0.0048 | 0.0163 |
| 170 | 0.0215 | 0.0049 | 0.0166 |
| 171 | 0.0223 | 0.0051 | 0.0172 |
| 172 | 0.0227 | 0.0052 | 0.0175 |
| 173 | 0.0236 | 0.0054 | 0.0182 |
| 174 | 0.0240 | 0.0055 | 0.0185 |
| 175 | 0.0251 | 0.0057 | 0.0193 |
| 176 | 0.0256 | 0.0059 | 0.0197 |
| 177 | 0.0268 | 0.0061 | 0.0207 |
| 178 | 0.0275 | 0.0063 | 0.0212 |
| 179 | 0.0290 | 0.0066 | 0.0224 |
| 180 | 0.0299 | 0.0068 | 0.0230 |
| 181 | 0.0318 | 0.0073 | 0.0245 |
| 182 | 0.0329 | 0.0075 | 0.0253 |
| 183 | 0.0354 | 0.0081 | 0.0273 |
| 184 | 0.0369 | 0.0084 | 0.0284 |
| 185 | 0.0286 | 0.0065 | 0.0220 |
| 186 | 0.0305 | 0.0070 | 0.0235 |
| 187 | 0.0353 | 0.0081 | 0.0272 |
| 188 | 0.0386 | 0.0088 | 0.0297 |
| 189 | 0.0479 | 0.0109 | 0.0370 |
| 190 | 0.0552 | 0.0109 | 0.0443 |
| 191 | 0.0838 | 0.0109 | 0.0729 |
| 192 | 0.1216 | 0.0109 | 0.1107 |
| 193 | 0.5262 | 0.0109 | 0.5153 |
| 194 | 0.0660 | 0.0109 | 0.0550 |
| 195 | 0.0426 | 0.0098 | 0.0329 |
| 196 | 0.0327 | 0.0075 | 0.0252 |
| 197 | 0.0385 | 0.0088 | 0.0297 |
| 198 | 0.0341 | 0.0078 | 0.0263 |
| 199 | 0.0308 | 0.0070 | 0.0237 |
| 200 | 0.0282 | 0.0065 | 0.0218 |
| 201 | 0.0262 | 0.0060 | 0.0202 |
| 202 | 0.0245 | 0.0056 | 0.0189 |
| 203 | 0.0231 | 0.0053 | 0.0178 |
| 204 | 0.0219 | 0.0050 | 0.0169 |
| 205 | 0.0126 | 0.0029 | 0.0097 |
| 206 | 0.0119 | 0.0027 | 0.0092 |
| 207 | 0.0113 | 0.0026 | 0.0087 |
| 208 | 0.0107 | 0.0024 | 0.0083 |
| 209 | 0.0102 | 0.0023 | 0.0079 |
| 210 | 0.0098 | 0.0022 | 0.0075 |
| 211 | 0.0094 | 0.0021 | 0.0072 |
| 212 | 0.0090 | 0.0021 | 0.0069 |

| | | | |
|---|---|---|---|
| 213 | 0.0087 | 0.0020 | 0.0067 |
| 214 | 0.0084 | 0.0019 | 0.0064 |
| 215 | 0.0081 | 0.0018 | 0.0062 |
| 216 | 0.0078 | 0.0018 | 0.0060 |
| 217 | 0.0085 | 0.0019 | 0.0065 |
| 218 | 0.0082 | 0.0019 | 0.0064 |
| 219 | 0.0080 | 0.0018 | 0.0062 |
| 220 | 0.0078 | 0.0018 | 0.0060 |
| 221 | 0.0076 | 0.0017 | 0.0059 |
| 222 | 0.0074 | 0.0017 | 0.0057 |
| 223 | 0.0072 | 0.0017 | 0.0056 |
| 224 | 0.0071 | 0.0016 | 0.0055 |
| 225 | 0.0069 | 0.0016 | 0.0053 |
| 226 | 0.0068 | 0.0016 | 0.0052 |
| 227 | 0.0066 | 0.0015 | 0.0051 |
| 228 | 0.0065 | 0.0015 | 0.0050 |
| 229 | 0.0064 | 0.0015 | 0.0049 |
| 230 | 0.0063 | 0.0014 | 0.0048 |
| 231 | 0.0061 | 0.0014 | 0.0047 |
| 232 | 0.0060 | 0.0014 | 0.0046 |
| 233 | 0.0059 | 0.0014 | 0.0046 |
| 234 | 0.0058 | 0.0013 | 0.0045 |
| 235 | 0.0057 | 0.0013 | 0.0044 |
| 236 | 0.0056 | 0.0013 | 0.0043 |
| 237 | 0.0055 | 0.0013 | 0.0043 |
| 238 | 0.0054 | 0.0012 | 0.0042 |
| 239 | 0.0054 | 0.0012 | 0.0041 |
| 240 | 0.0053 | 0.0012 | 0.0041 |
| 241 | 0.0052 | 0.0012 | 0.0040 |
| 242 | 0.0051 | 0.0012 | 0.0040 |
| 243 | 0.0051 | 0.0012 | 0.0039 |
| 244 | 0.0050 | 0.0011 | 0.0038 |
| 245 | 0.0049 | 0.0011 | 0.0038 |
| 246 | 0.0048 | 0.0011 | 0.0037 |
| 247 | 0.0048 | 0.0011 | 0.0037 |
| 248 | 0.0047 | 0.0011 | 0.0036 |
| 249 | 0.0047 | 0.0011 | 0.0036 |
| 250 | 0.0046 | 0.0011 | 0.0036 |
| 251 | 0.0045 | 0.0010 | 0.0035 |
| 252 | 0.0045 | 0.0010 | 0.0035 |
| 253 | 0.0044 | 0.0010 | 0.0034 |
| 254 | 0.0044 | 0.0010 | 0.0034 |
| 255 | 0.0043 | 0.0010 | 0.0033 |
| 256 | 0.0043 | 0.0010 | 0.0033 |
| 257 | 0.0042 | 0.0010 | 0.0033 |
| 258 | 0.0042 | 0.0010 | 0.0032 |
| 259 | 0.0041 | 0.0009 | 0.0032 |
| 260 | 0.0041 | 0.0009 | 0.0032 |
| 261 | 0.0041 | 0.0009 | 0.0031 |
| 262 | 0.0040 | 0.0009 | 0.0031 |
| 263 | 0.0040 | 0.0009 | 0.0031 |
| 264 | 0.0039 | 0.0009 | 0.0030 |
| 265 | 0.0039 | 0.0009 | 0.0030 |
| 266 | 0.0039 | 0.0009 | 0.0030 |
| 267 | 0.0038 | 0.0009 | 0.0030 |
| 268 | 0.0038 | 0.0009 | 0.0029 |
| 269 | 0.0038 | 0.0009 | 0.0029 |
| 270 | 0.0037 | 0.0009 | 0.0029 |
| 271 | 0.0037 | 0.0008 | 0.0028 |

| | | | |
|---|---|---|---|
| 272 | 0.0037 | 0.0008 | 0.0028 |
| 273 | 0.0036 | 0.0008 | 0.0028 |
| 274 | 0.0036 | 0.0008 | 0.0028 |
| 275 | 0.0036 | 0.0008 | 0.0027 |
| 276 | 0.0035 | 0.0008 | 0.0027 |
| 277 | 0.0035 | 0.0008 | 0.0027 |
| 278 | 0.0035 | 0.0008 | 0.0027 |
| 279 | 0.0034 | 0.0008 | 0.0027 |
| 280 | 0.0034 | 0.0008 | 0.0026 |
| 281 | 0.0034 | 0.0008 | 0.0026 |
| 282 | 0.0034 | 0.0008 | 0.0026 |
| 283 | 0.0033 | 0.0008 | 0.0026 |
| 284 | 0.0033 | 0.0008 | 0.0025 |
| 285 | 0.0033 | 0.0008 | 0.0025 |
| 286 | 0.0033 | 0.0007 | 0.0025 |
| 287 | 0.0032 | 0.0007 | 0.0025 |
| 288 | 0.0032 | 0.0007 | 0.0025 |

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Total soil rain loss = 0.58(In)
Total effective rainfall = 2.58(In)
Peak flow rate in flood hydrograph = 4662.63(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 1175.0 | 2350.0 | 3525.0 | 4700.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0047 | 0.69 | Q | | | | |
| 0+10 | 0.0199 | 2.21 | Q | | | | |
| 0+15 | 0.0509 | 4.49 | Q | | | | |
| 0+20 | 0.1023 | 7.47 | Q | | | | |
| 0+25 | 0.1793 | 11.17 | Q | | | | |
| 0+30 | 0.2881 | 15.80 | Q | | | | |
| 0+35 | 0.4449 | 22.78 | Q | | | | |
| 0+40 | 0.6693 | 32.58 | Q | | | | |
| 0+45 | 0.9726 | 44.04 | Q | | | | |
| 0+50 | 1.3538 | 55.36 | Q | | | | |
| 0+55 | 1.8225 | 68.04 | Q | | | | |
| 1+ 0 | 2.3673 | 79.10 | Q | | | | |
| 1+ 5 | 2.9653 | 86.84 | Q | | | | |
| 1+10 | 3.6052 | 92.92 | Q | | | | |
| 1+15 | 4.2812 | 98.15 | Q | | | | |
| 1+20 | 4.9891 | 102.79 | Q | | | | |
| 1+25 | 5.7255 | 106.92 | Q | | | | |
| 1+30 | 6.4877 | 110.68 | Q | | | | |
| 1+35 | 7.2741 | 114.19 | Q | | | | |
| 1+40 | 8.0830 | 117.45 | Q | | | | |
| 1+45 | 8.9120 | 120.38 | VQ | | | | |
| 1+50 | 9.7607 | 123.23 | VQ | | | | |
| 1+55 | 10.6280 | 125.93 | VQ | | | | |
| 2+ 0 | 11.5115 | 128.29 | VQ | | | | |
| 2+ 5 | 12.4112 | 130.64 | VQ | | | | |
| 2+10 | 13.3262 | 132.86 | VQ | | | | |
| 2+15 | 14.2553 | 134.91 | VQ | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+20 | 15.1986 | 136.97 | VQ | | | | |
| 2+25 | 16.1553 | 138.90 | VQ | | | | |
| 2+30 | 17.1247 | 140.76 | VQ | | | | |
| 2+35 | 18.1070 | 142.62 | VQ | | | | |
| 2+40 | 19.1010 | 144.33 | VQ | | | | |
| 2+45 | 20.1066 | 146.01 | VQ | | | | |
| 2+50 | 21.1235 | 147.66 | VQ | | | | |
| 2+55 | 22.1506 | 149.13 | VQ | | | | |
| 3+ 0 | 23.1877 | 150.58 | VQ | | | | |
| 3+ 5 | 24.2346 | 152.02 | VQ | | | | |
| 3+10 | 25.2910 | 153.38 | VQ | | | | |
| 3+15 | 26.3568 | 154.76 | VQ | | | | |
| 3+20 | 27.4317 | 156.08 | \|Q | | | | |
| 3+25 | 28.5155 | 157.37 | \|Q | | | | |
| 3+30 | 29.6082 | 158.66 | \|Q | | | | |
| 3+35 | 30.7095 | 159.90 | \|Q | | | | |
| 3+40 | 31.8191 | 161.12 | \|Q | | | | |
| 3+45 | 32.9371 | 162.33 | \|Q | | | | |
| 3+50 | 34.0627 | 163.43 | \|Q | | | | |
| 3+55 | 35.1957 | 164.52 | \|Q | | | | |
| 4+ 0 | 36.3363 | 165.61 | \|Q | | | | |
| 4+ 5 | 37.4845 | 166.72 | \|Q | | | | |
| 4+10 | 38.6404 | 167.83 | \|Q | | | | |
| 4+15 | 39.8038 | 168.93 | \|Q | | | | |
| 4+20 | 40.9744 | 169.98 | \|Q | | | | |
| 4+25 | 42.1524 | 171.04 | \|Q | | | | |
| 4+30 | 43.3378 | 172.11 | \|Q | | | | |
| 4+35 | 44.5306 | 173.20 | \|Q | | | | |
| 4+40 | 45.7309 | 174.29 | \|Q | | | | |
| 4+45 | 46.9384 | 175.32 | \|Q | | | | |
| 4+50 | 48.1529 | 176.35 | \|Q | | | | |
| 4+55 | 49.3746 | 177.38 | \|Q | | | | |
| 5+ 0 | 50.6034 | 178.43 | \|Q | | | | |
| 5+ 5 | 51.8396 | 179.49 | \|Q | | | | |
| 5+10 | 53.0829 | 180.54 | \|Q | | | | |
| 5+15 | 54.3333 | 181.56 | \|Q | | | | |
| 5+20 | 55.5908 | 182.59 | \|QV | | | | |
| 5+25 | 56.8555 | 183.63 | \|QV | | | | |
| 5+30 | 58.1274 | 184.68 | \|QV | | | | |
| 5+35 | 59.4066 | 185.75 | \|QV | | | | |
| 5+40 | 60.6933 | 186.82 | \|QV | | | | |
| 5+45 | 61.9874 | 187.91 | \|QV | | | | |
| 5+50 | 63.2891 | 189.01 | \|QV | | | | |
| 5+55 | 64.5985 | 190.12 | \|QV | | | | |
| 6+ 0 | 65.9156 | 191.25 | \|QV | | | | |
| 6+ 5 | 67.2406 | 192.39 | \|QV | | | | |
| 6+10 | 68.5734 | 193.53 | \|QV | | | | |
| 6+15 | 69.9142 | 194.69 | \|QV | | | | |
| 6+20 | 71.2631 | 195.86 | \|QV | | | | |
| 6+25 | 72.6202 | 197.04 | \|QV | | | | |
| 6+30 | 73.9855 | 198.25 | \|QV | | | | |
| 6+35 | 75.3590 | 199.43 | \|QV | | | | |
| 6+40 | 76.7405 | 200.60 | \|QV | | | | |
| 6+45 | 78.1302 | 201.79 | \|QV | | | | |
| 6+50 | 79.5282 | 202.98 | \|QV | | | | |
| 6+55 | 80.9345 | 204.21 | \|QV | | | | |
| 7+ 0 | 82.3494 | 205.44 | \|Q V | | | | |
| 7+ 5 | 83.7729 | 206.69 | \|Q V | | | | |
| 7+10 | 85.2051 | 207.96 | \|Q V | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 7+15 | 86.6460 | 209.22 | Q V | | | |
| 7+20 | 88.0955 | 210.47 | Q V | | | |
| 7+25 | 89.5537 | 211.74 | Q V | | | |
| 7+30 | 91.0208 | 213.02 | Q V | | | |
| 7+35 | 92.4969 | 214.33 | Q V | | | |
| 7+40 | 93.9821 | 215.65 | Q V | | | |
| 7+45 | 95.4766 | 217.00 | Q V | | | |
| 7+50 | 96.9805 | 218.36 | Q V | | | |
| 7+55 | 98.4939 | 219.75 | Q V | | | |
| 8+ 0 | 100.0170 | 221.16 | Q V | | | |
| 8+ 5 | 101.5500 | 222.59 | Q V | | | |
| 8+10 | 103.0930 | 224.04 | Q V | | | |
| 8+15 | 104.6461 | 225.52 | Q V | | | |
| 8+20 | 106.2096 | 227.02 | Q V | | | |
| 8+25 | 107.7836 | 228.54 | Q V | | | |
| 8+30 | 109.3682 | 230.09 | Q V | | | |
| 8+35 | 110.9638 | 231.67 | Q V | | | |
| 8+40 | 112.5703 | 233.27 | Q V | | | |
| 8+45 | 114.1881 | 234.90 | Q V | | | |
| 8+50 | 115.8172 | 236.55 | Q V | | | |
| 8+55 | 117.4580 | 238.24 | Q V | | | |
| 9+ 0 | 119.1106 | 239.96 | Q V | | | |
| 9+ 5 | 120.7752 | 241.71 | Q V | | | |
| 9+10 | 122.4521 | 243.48 | Q V | | | |
| 9+15 | 124.1414 | 245.29 | Q V | | | |
| 9+20 | 125.8434 | 247.13 | Q V | | | |
| 9+25 | 127.5583 | 249.01 | Q V | | | |
| 9+30 | 129.2864 | 250.92 | Q V | | | |
| 9+35 | 131.0279 | 252.87 | Q V | | | |
| 9+40 | 132.7831 | 254.85 | Q V | | | |
| 9+45 | 134.5522 | 256.88 | Q V | | | |
| 9+50 | 136.3355 | 258.93 | Q V | | | |
| 9+55 | 138.1333 | 261.04 | Q V | | | |
| 10+ 0 | 139.9459 | 263.18 | Q V | | | |
| 10+ 5 | 141.7735 | 265.38 | Q V | | | |
| 10+10 | 143.6165 | 267.60 | Q V | | | |
| 10+15 | 145.4753 | 269.89 | Q V | | | |
| 10+20 | 147.3500 | 272.21 | Q V | | | |
| 10+25 | 149.2412 | 274.60 | Q V | | | |
| 10+30 | 151.1490 | 277.02 | Q V | | | |
| 10+35 | 153.0740 | 279.51 | Q V | | | |
| 10+40 | 155.0164 | 282.04 | Q V | | | |
| 10+45 | 156.9767 | 284.64 | Q V | | | |
| 10+50 | 158.9553 | 287.29 | Q V | | | |
| 10+55 | 160.9526 | 290.01 | Q V | | | |
| 11+ 0 | 162.9690 | 292.78 | Q V | | | |
| 11+ 5 | 165.0050 | 295.63 | Q V | | | |
| 11+10 | 167.0610 | 298.54 | Q V | | | |
| 11+15 | 169.1376 | 301.53 | Q V | | | |
| 11+20 | 171.2353 | 304.58 | Q V | | | |
| 11+25 | 173.3546 | 307.72 | Q V | | | |
| 11+30 | 175.4959 | 310.93 | Q V | | | |
| 11+35 | 177.6601 | 314.23 | Q V | | | |
| 11+40 | 179.8475 | 317.61 | Q V | | | |
| 11+45 | 182.0589 | 321.10 | Q V | | | |
| 11+50 | 184.2949 | 324.66 | Q V | | | |
| 11+55 | 186.5562 | 328.34 | Q V | | | |
| 12+ 0 | 188.8434 | 332.11 | Q V | | | |
| 12+ 5 | 191.1561 | 335.80 | Q V | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 12+10 | 193.4932 | 339.35 | Q V | | | | |
| 12+15 | 195.8542 | 342.82 | Q V | | | | |
| 12+20 | 198.2383 | 346.18 | Q V | | | | |
| 12+25 | 200.6453 | 349.49 | Q V | | | | |
| 12+30 | 203.0739 | 352.64 | Q V | | | | |
| 12+35 | 205.5207 | 355.27 | Q V | | | | |
| 12+40 | 207.9808 | 357.21 | Q V | | | | |
| 12+45 | 210.4522 | 358.84 | Q V | | | | |
| 12+50 | 212.9359 | 360.64 | Q V | | | | |
| 12+55 | 215.4305 | 362.22 | Q V | | | | |
| 13+ 0 | 217.9402 | 364.41 | Q V | | | | |
| 13+ 5 | 220.4730 | 367.76 | Q V | | | | |
| 13+10 | 223.0332 | 371.75 | Q V | | | | |
| 13+15 | 225.6242 | 376.22 | Q V | | | | |
| 13+20 | 228.2485 | 381.05 | Q V | | | | |
| 13+25 | 230.9090 | 386.30 | Q V | | | | |
| 13+30 | 233.6080 | 391.89 | Q V | | | | |
| 13+35 | 236.3480 | 397.85 | Q V | | | | |
| 13+40 | 239.1314 | 404.15 | Q V | | | | |
| 13+45 | 241.9612 | 410.89 | Q V | | | | |
| 13+50 | 244.8398 | 417.97 | Q V | | | | |
| 13+55 | 247.7702 | 425.49 | Q V | | | | |
| 14+ 0 | 250.7555 | 433.47 | Q V | | | | |
| 14+ 5 | 253.8115 | 443.73 | Q V | | | | |
| 14+10 | 256.9564 | 456.63 | Q V | | | | |
| 14+15 | 260.2083 | 472.18 | Q V | | | | |
| 14+20 | 263.5836 | 490.09 | Q V | | | | |
| 14+25 | 267.1007 | 510.69 | Q V | | | | |
| 14+30 | 270.7812 | 534.42 | Q V | | | | |
| 14+35 | 274.6741 | 565.24 | Q V | | | | |
| 14+40 | 278.8367 | 604.41 | Q V | | | | |
| 14+45 | 283.3077 | 649.19 | Q V | | | | |
| 14+50 | 288.0933 | 694.88 | Q V | | | | |
| 14+55 | 293.2299 | 745.82 | Q V | | | | |
| 15+ 0 | 298.6989 | 794.11 | Q V | | | | |
| 15+ 5 | 304.4551 | 835.79 | Q V | | | | |
| 15+10 | 310.4817 | 875.06 | Q V | | | | |
| 15+15 | 316.7807 | 914.62 | Q V | | | | |
| 15+20 | 323.3584 | 955.08 | Q V | | | | |
| 15+25 | 330.2112 | 995.02 | Q V | | | | |
| 15+30 | 337.3338 | 1034.20 | Q V | | | | |
| 15+35 | 344.7341 | 1074.51 | Q V | | | | |
| 15+40 | 352.4229 | 1116.42 | Q V | | | | |
| 15+45 | 360.4256 | 1161.99 | Q V | | | | |
| 15+50 | 368.7782 | 1212.80 | Q V | | | | |
| 15+55 | 377.5386 | 1272.00 | Q V | | | | |
| 16+ 0 | 386.8249 | 1348.37 | Q V | | | | |
| 16+ 5 | 397.5826 | 1562.02 | Q V | | | | |
| 16+10 | 410.0635 | 1812.22 | Q | | | | |
| 16+15 | 424.1736 | 2048.79 | Q V | | | | |
| 16+20 | 439.9208 | 2286.50 | Q V | | | | |
| 16+25 | 457.5836 | 2564.64 | Q V | | | | |
| 16+30 | 477.7208 | 2923.92 | Q V | | | | |
| 16+35 | 502.1407 | 3545.76 | Q V | | | | |
| 16+40 | 531.0284 | 4194.50 | Q V | | | | |
| 16+45 | 562.3965 | 4554.65 | Q V | | | | |
| 16+50 | 593.6063 | 4531.66 | Q V | | | | |
| 16+55 | 625.7181 | 4662.63 | Q V | | | | |
| 17+ 0 | 654.5689 | 4189.13 | Q V | | | | |

| | | | |
|---|---|---|---|
| 17+ 5 | 678.0839 | 3414.38 | \| V Q\| \| |
| 17+10 | 698.5247 | 2968.00 | \| Q \| \| |
| 17+15 | 717.1521 | 2704.70 | \| Q V \| \| |
| 17+20 | 734.3834 | 2501.99 | \|Q V \| \| |
| 17+25 | 750.3513 | 2318.55 | \| Q\| V \| \| |
| 17+30 | 765.2441 | 2162.43 | \| Q \| V \| \| |
| 17+35 | 779.2301 | 2030.76 | \| Q \| V \| \| |
| 17+40 | 792.2826 | 1895.23 | \| Q \| V\| \| |
| 17+45 | 804.3328 | 1749.69 | \| Q \| V\| \| |
| 17+50 | 815.7048 | 1651.21 | \| Q \| V\| \| |
| 17+55 | 826.3124 | 1540.24 | \| Q \| V \| |
| 18+ 0 | 836.0047 | 1407.32 | \|Q \| V \| |
| 18+ 5 | 845.2669 | 1344.86 | \|Q \| \|V \| |
| 18+10 | 854.0041 | 1268.65 | \| Q \| \|V \| |
| 18+15 | 862.2221 | 1193.25 | \| Q \| \|V \| |
| 18+20 | 870.1492 | 1151.02 | \| Q\| \| \|V \| |
| 18+25 | 877.6527 | 1089.50 | \| Q\| \| \| V \| |
| 18+30 | 884.8270 | 1041.71 | \| Q \| \| \| V \| |
| 18+35 | 891.7523 | 1005.56 | \| Q \| \| \| V \| |
| 18+40 | 898.2818 | 948.07 | \| Q \| \| \| V \| |
| 18+45 | 904.5668 | 912.59 | \| Q \| \| \| V \| |
| 18+50 | 910.6035 | 876.53 | \| Q \| \| \| V \| |
| 18+55 | 916.2475 | 819.50 | \| Q \| \| \| V \| |
| 19+ 0 | 921.7133 | 793.63 | \| Q \| \| \| V \| |
| 19+ 5 | 926.9871 | 765.75 | \| Q \| \| \| V \| |
| 19+10 | 932.0372 | 733.27 | \| Q \| \| \| V \| |
| 19+15 | 936.9486 | 713.13 | \| Q \| \| \| V \| |
| 19+20 | 941.6600 | 684.10 | \| Q \| \| \| V \| |
| 19+25 | 946.1858 | 657.14 | \| Q \| \| \| V \| |
| 19+30 | 950.5847 | 638.72 | \| Q \| \| \| V \| |
| 19+35 | 954.7905 | 610.68 | \| Q \| \| \| V \| |
| 19+40 | 958.8489 | 589.28 | \| Q \| \| \| V \| |
| 19+45 | 962.7661 | 568.78 | \| Q \| \| \| V \| |
| 19+50 | 966.4289 | 531.83 | \| Q \| \| \| V \| |
| 19+55 | 969.9729 | 514.59 | \| Q \| \| \| V \| |
| 20+ 0 | 973.4379 | 503.12 | \| Q \| \| \| V \| |
| 20+ 5 | 976.8287 | 492.35 | \| Q \| \| \| V \| |
| 20+10 | 980.1407 | 480.90 | \| Q \| \| \| V \| |
| 20+15 | 983.3350 | 463.80 | \| Q \| \| \| V \| |
| 20+20 | 986.4007 | 445.15 | \| Q \| \| \| V \| |
| 20+25 | 989.4025 | 435.86 | \| Q \| \| \| V \| |
| 20+30 | 992.3449 | 427.23 | \| Q \| \| \| V \| |
| 20+35 | 995.2254 | 418.25 | \| Q \| \| \| V \| |
| 20+40 | 998.0313 | 407.41 | \| Q \| \| \| V \| |
| 20+45 | 1000.6954 | 386.82 | \| Q \| \| \| V \| |
| 20+50 | 1003.2803 | 375.33 | \| Q \| \| \| V \| |
| 20+55 | 1005.8172 | 368.35 | \| Q \| \| \| V \| |
| 21+ 0 | 1008.3076 | 361.61 | \| Q \| \| \| V \| |
| 21+ 5 | 1010.7472 | 354.22 | \| Q \| \| \| V \| |
| 21+10 | 1013.1130 | 343.53 | \| Q \| \| \| V \| |
| 21+15 | 1015.3814 | 329.37 | \| Q \| \| \| V \| |
| 21+20 | 1017.6067 | 323.11 | \| Q \| \| \| V \| |
| 21+25 | 1019.7952 | 317.77 | \| Q \| \| \| V \| |
| 21+30 | 1021.9488 | 312.69 | \| Q \| \| \| V \| |
| 21+35 | 1024.0675 | 307.63 | \| Q \| \| \| V \| |
| 21+40 | 1026.1515 | 302.60 | \| Q \| \| \| V \| |
| 21+45 | 1028.2033 | 297.93 | \| Q \| \| \| V \| |
| 21+50 | 1030.2244 | 293.45 | \| Q \| \| \| V \| |
| 21+55 | 1032.2158 | 289.16 | \| Q \| \| \| V \| |

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22+ 0    1034.1779    284.90  | Q       |         |         |      V  |
22+ 5    1036.1081    280.27  | Q       |         |         |       V |
22+10    1038.0012    274.87  | Q       |         |         |       V |
22+15    1039.8658    270.73  | Q       |         |         |       V |
22+20    1041.7026    266.71  | Q       |         |         |       V |
22+25    1043.5089    262.28  | Q       |         |         |       V |
22+30    1045.2835    257.68  | Q       |         |         |       V |
22+35    1046.9728    245.28  | Q       |         |         |       V |
22+40    1048.6045    236.93  | Q       |         |         |       V |
22+45    1050.2109    233.24  |Q        |         |         |       V |
22+50    1051.7941    229.88  |Q        |         |         |       V |
22+55    1053.3538    226.47  |Q        |         |         |       V |
23+ 0    1054.8894    222.97  |Q        |         |         |       V |
23+ 5    1056.3991    219.20  |Q        |         |         |       V |
23+10    1057.8785    214.82  |Q        |         |         |       V |
23+15    1059.2943    205.57  |Q        |         |         |       V |
23+20    1060.6512    197.02  |Q        |         |         |       V |
23+25    1061.9869    193.95  |Q        |         |         |       V |
23+30    1063.3041    191.26  |Q        |         |         |        V|
23+35    1064.6043    188.78  |Q        |         |         |        V|
23+40    1065.8880    186.40  |Q        |         |         |        V|
23+45    1067.1562    184.14  |Q        |         |         |        V|
23+50    1068.4095    181.98  |Q        |         |         |        V|
23+55    1069.6486    179.91  |Q        |         |         |        V|
24+ 0    1070.8738    177.91  |Q        |         |         |        V|
24+ 5    1072.0811    175.29  |Q        |         |         |        V|
24+10    1073.2650    171.91  |Q        |         |         |        V|
24+15    1074.4214    167.91  |Q        |         |         |        V|
24+20    1075.5464    163.36  |Q        |         |         |        V|
24+25    1076.6357    158.17  |Q        |         |         |        V|
24+30    1077.6835    152.14  |Q        |         |         |        V|
24+35    1078.6741    143.84  |Q        |         |         |        V|
24+40    1079.5889    132.82  |Q        |         |         |        V|
24+45    1080.4174    120.30  |Q        |         |         |        V|
24+50    1081.1617    108.07  Q         |         |         |        V|
24+55    1081.8134     94.63  Q         |         |         |        V|
25+ 0    1082.3849     82.97  Q         |         |         |        V|
25+ 5    1082.8999     74.78  Q         |         |         |        V|
25+10    1083.3706     68.35  Q         |         |         |        V|
25+15    1083.8033     62.83  Q         |         |         |        V|
25+20    1084.2027     57.98  Q         |         |         |        V|
25+25    1084.5725     53.70  Q         |         |         |        V|
25+30    1084.9158     49.85  Q         |         |         |        V|
25+35    1085.2346     46.30  Q         |         |         |        V|
25+40    1085.5311     43.04  Q         |         |         |        V|
25+45    1085.8077     40.17  Q         |         |         |        V|
25+50    1086.0654     37.42  Q         |         |         |        V|
25+55    1086.3054     34.85  Q         |         |         |        V|
26+ 0    1086.5304     32.66  Q         |         |         |        V|
26+ 5    1086.7405     30.52  Q         |         |         |        V|
26+10    1086.9371     28.54  Q         |         |         |        V|
26+15    1087.1213     26.75  Q         |         |         |        V|
26+20    1087.2935     24.99  Q         |         |         |        V|
26+25    1087.4545     23.39  Q         |         |         |        V|
26+30    1087.6051     21.87  Q         |         |         |        V|
26+35    1087.7456     20.39  Q         |         |         |        V|
26+40    1087.8769     19.08  Q         |         |         |        V|
26+45    1087.9997     17.82  Q         |         |         |        V|
26+50    1088.1141     16.62  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+55 | 1088.2217 | 15.62 | Q | \| | \| | \| | V\| |
| 27+ 0 | 1088.3226 | 14.64 | Q | \| | \| | \| | V\| |
| 27+ 5 | 1088.4170 | 13.72 | Q | \| | \| | \| | V\| |
| 27+10 | 1088.5057 | 12.87 | Q | \| | \| | \| | V\| |
| 27+15 | 1088.5886 | 12.04 | Q | \| | \| | \| | V\| |
| 27+20 | 1088.6662 | 11.27 | Q | \| | \| | \| | V\| |
| 27+25 | 1088.7389 | 10.55 | Q | \| | \| | \| | V\| |
| 27+30 | 1088.8067 | 9.85 | Q | \| | \| | \| | V\| |
| 27+35 | 1088.8702 | 9.22 | Q | \| | \| | \| | V\| |
| 27+40 | 1088.9295 | 8.62 | Q | \| | \| | \| | V\| |
| 27+45 | 1088.9849 | 8.04 | Q | \| | \| | \| | V\| |
| 27+50 | 1089.0371 | 7.59 | Q | \| | \| | \| | V\| |
| 27+55 | 1089.0865 | 7.16 | Q | \| | \| | \| | V\| |
| 28+ 0 | 1089.1329 | 6.75 | Q | \| | \| | \| | V\| |
| 28+ 5 | 1089.1765 | 6.33 | Q | \| | \| | \| | V\| |
| 28+10 | 1089.2173 | 5.92 | Q | \| | \| | \| | V\| |
| 28+15 | 1089.2555 | 5.54 | Q | \| | \| | \| | V\| |
| 28+20 | 1089.2914 | 5.22 | Q | \| | \| | \| | V\| |
| 28+25 | 1089.3252 | 4.90 | Q | \| | \| | \| | V\| |
| 28+30 | 1089.3567 | 4.58 | Q | \| | \| | \| | V\| |
| 28+35 | 1089.3861 | 4.27 | Q | \| | \| | \| | V\| |
| 28+40 | 1089.4134 | 3.96 | Q | \| | \| | \| | V\| |
| 28+45 | 1089.4390 | 3.72 | Q | \| | \| | \| | V\| |
| 28+50 | 1089.4631 | 3.50 | Q | \| | \| | \| | V\| |
| 28+55 | 1089.4857 | 3.29 | Q | \| | \| | \| | V\| |
| 29+ 0 | 1089.5069 | 3.07 | Q | \| | \| | \| | V\| |
| 29+ 5 | 1089.5266 | 2.86 | Q | \| | \| | \| | V\| |
| 29+10 | 1089.5449 | 2.67 | Q | \| | \| | \| | V\| |
| 29+15 | 1089.5623 | 2.52 | Q | \| | \| | \| | V\| |
| 29+20 | 1089.5786 | 2.37 | Q | \| | \| | \| | V\| |
| 29+25 | 1089.5939 | 2.23 | Q | \| | \| | \| | V\| |
| 29+30 | 1089.6083 | 2.08 | Q | \| | \| | \| | V\| |
| 29+35 | 1089.6216 | 1.94 | Q | \| | \| | \| | V\| |
| 29+40 | 1089.6340 | 1.80 | Q | \| | \| | \| | V\| |
| 29+45 | 1089.6454 | 1.66 | Q | \| | \| | \| | V\| |
| 29+50 | 1089.6559 | 1.52 | Q | \| | \| | \| | V\| |
| 29+55 | 1089.6655 | 1.39 | Q | \| | \| | \| | V\| |
| 30+ 0 | 1089.6741 | 1.25 | Q | \| | \| | \| | V\| |
| 30+ 5 | 1089.6818 | 1.12 | Q | \| | \| | \| | V\| |
| 30+10 | 1089.6886 | 0.99 | Q | \| | \| | \| | V\| |
| 30+15 | 1089.6947 | 0.87 | Q | \| | \| | \| | V\| |
| 30+20 | 1089.6998 | 0.75 | Q | \| | \| | \| | V\| |
| 30+25 | 1089.7042 | 0.63 | Q | \| | \| | \| | V\| |
| 30+30 | 1089.7077 | 0.51 | Q | \| | \| | \| | V\| |
| 30+35 | 1089.7106 | 0.42 | Q | \| | \| | \| | V\| |
| 30+40 | 1089.7131 | 0.37 | Q | \| | \| | \| | V\| |
| 30+45 | 1089.7152 | 0.31 | Q | \| | \| | \| | V\| |
| 30+50 | 1089.7170 | 0.25 | Q | \| | \| | \| | V\| |
| 30+55 | 1089.7183 | 0.20 | Q | \| | \| | \| | V\| |
| 31+ 0 | 1089.7193 | 0.14 | Q | \| | \| | \| | V\| |
| 31+ 5 | 1089.7198 | 0.08 | Q | \| | \| | \| | V\| |
| 31+10 | 1089.7200 | 0.03 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 08/10/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREA "J"
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-10-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 603.09 | 1 | 1.42 |
| Rainfall data for year 100 | | |
| 603.09 | 6 | 2.33 |
| Rainfall data for year 100 | | |
| 603.09 | 24 | 3.60 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 87.2 | 97.4 | 603.09 | 1.000 | 0.051 | 1.000 | 0.051 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.051

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 603.09 | 1.000 | 87.2 | 97.4 | 0.26 | 0.918 |

Area-averaged catchment yield fraction, Y = 0.918
Area-averaged low loss fraction, Yb = 0.082
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 16135.00(Ft.)
Length from concentration point to centroid = 10608.00(Ft.)
Elevation difference along watercourse = 2030.00(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 603.09(Ac.)
Catchment Lag time = 0.487 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 17.1118
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.051(In/Hr)
Average low loss rate fraction (Yb) = 0.082 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.750
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.250

Computed peak 5-minute rainfall = 0.673(In)
Computed peak 30-minute rainfall = 1.152(In)
Specified peak 1-hour rainfall = 1.418(In)
Computed peak 3-hour rainfall = 1.921(In)
Specified peak 6-hour rainfall = 2.326(In)
Specified peak 24-hour rainfall = 3.601(In)

Rainfall depth area reduction factors:
Using a total area of 603.09(Ac.) (Ref: fig. E-4)

5-minute factor = 0.972 Adjusted rainfall = 0.654(In)
30-minute factor = 0.972 Adjusted rainfall = 1.119(In)
1-hour factor = 0.972 Adjusted rainfall = 1.378(In)
3-hour factor = 0.996 Adjusted rainfall = 1.914(In)
6-hour factor = 0.998 Adjusted rainfall = 2.322(In)
24-hour factor = 0.999 Adjusted rainfall = 3.598(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 7293.62 (CFS)) | |
| 1 | 1.020 | 74.370 |
| 2 | 3.879 | 208.539 |
| 3 | 8.206 | 315.613 |
| 4 | 15.001 | 495.585 |
| 5 | 25.779 | 786.102 |
| 6 | 42.430 | 1214.465 |

| | | |
|---|---|---|
| 7 | 56.734 | 1043.317 |
| 8 | 64.222 | 546.089 |
| 9 | 69.726 | 401.495 |
| 10 | 74.006 | 312.113 |
| 11 | 77.681 | 268.061 |
| 12 | 80.764 | 224.870 |
| 13 | 83.335 | 187.492 |
| 14 | 85.599 | 165.127 |
| 15 | 87.578 | 144.360 |
| 16 | 89.287 | 124.687 |
| 17 | 90.812 | 111.193 |
| 18 | 92.150 | 97.569 |
| 19 | 93.269 | 81.627 |
| 20 | 94.234 | 70.398 |
| 21 | 95.069 | 60.914 |
| 22 | 95.801 | 53.401 |
| 23 | 96.421 | 45.159 |
| 24 | 96.920 | 36.411 |
| 25 | 97.237 | 23.118 |
| 26 | 97.536 | 21.841 |
| 27 | 97.821 | 20.764 |
| 28 | 98.063 | 17.666 |
| 29 | 98.303 | 17.473 |
| 30 | 98.516 | 15.572 |
| 31 | 98.672 | 11.383 |
| 32 | 98.826 | 11.233 |
| 33 | 98.977 | 11.003 |
| 34 | 99.123 | 10.615 |
| 35 | 99.268 | 10.609 |
| 36 | 99.395 | 9.240 |
| 37 | 99.497 | 7.495 |
| 38 | 99.600 | 7.488 |
| 39 | 99.690 | 6.525 |
| 40 | 99.767 | 5.616 |
| 41 | 99.854 | 6.371 |
| 42 | 99.891 | 2.689 |
| 43 | 99.918 | 1.950 |
| 44 | 99.944 | 1.950 |
| 45 | 99.971 | 1.950 |
| 46 | 100.000 | 0.975 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6538 | 0.6538 |
| 2 | 0.8050 | 0.1511 |
| 3 | 0.9091 | 0.1041 |
| 4 | 0.9910 | 0.0819 |
| 5 | 1.0596 | 0.0686 |
| 6 | 1.1192 | 0.0596 |
| 7 | 1.1722 | 0.0530 |
| 8 | 1.2201 | 0.0479 |
| 9 | 1.2640 | 0.0439 |
| 10 | 1.3046 | 0.0406 |
| 11 | 1.3424 | 0.0378 |
| 12 | 1.3779 | 0.0355 |
| 13 | 1.4113 | 0.0334 |
| 14 | 1.4429 | 0.0316 |
| 15 | 1.4730 | 0.0301 |
| 16 | 1.5017 | 0.0287 |

| | | |
|---|---|---|
| 17 | 1.5292 | 0.0275 |
| 18 | 1.5555 | 0.0264 |
| 19 | 1.5809 | 0.0254 |
| 20 | 1.6053 | 0.0244 |
| 21 | 1.6289 | 0.0236 |
| 22 | 1.6517 | 0.0228 |
| 23 | 1.6739 | 0.0221 |
| 24 | 1.6953 | 0.0214 |
| 25 | 1.7161 | 0.0208 |
| 26 | 1.7364 | 0.0202 |
| 27 | 1.7561 | 0.0197 |
| 28 | 1.7753 | 0.0192 |
| 29 | 1.7940 | 0.0187 |
| 30 | 1.8123 | 0.0183 |
| 31 | 1.8301 | 0.0179 |
| 32 | 1.8476 | 0.0175 |
| 33 | 1.8647 | 0.0171 |
| 34 | 1.8814 | 0.0167 |
| 35 | 1.8978 | 0.0164 |
| 36 | 1.9138 | 0.0161 |
| 37 | 1.9285 | 0.0147 |
| 38 | 1.9429 | 0.0144 |
| 39 | 1.9570 | 0.0141 |
| 40 | 1.9709 | 0.0139 |
| 41 | 1.9845 | 0.0136 |
| 42 | 1.9978 | 0.0134 |
| 43 | 2.0110 | 0.0131 |
| 44 | 2.0239 | 0.0129 |
| 45 | 2.0366 | 0.0127 |
| 46 | 2.0491 | 0.0125 |
| 47 | 2.0614 | 0.0123 |
| 48 | 2.0736 | 0.0121 |
| 49 | 2.0855 | 0.0119 |
| 50 | 2.0973 | 0.0118 |
| 51 | 2.1089 | 0.0116 |
| 52 | 2.1203 | 0.0114 |
| 53 | 2.1316 | 0.0113 |
| 54 | 2.1428 | 0.0111 |
| 55 | 2.1537 | 0.0110 |
| 56 | 2.1646 | 0.0108 |
| 57 | 2.1753 | 0.0107 |
| 58 | 2.1859 | 0.0106 |
| 59 | 2.1963 | 0.0104 |
| 60 | 2.2066 | 0.0103 |
| 61 | 2.2168 | 0.0102 |
| 62 | 2.2269 | 0.0101 |
| 63 | 2.2368 | 0.0100 |
| 64 | 2.2467 | 0.0098 |
| 65 | 2.2564 | 0.0097 |
| 66 | 2.2660 | 0.0096 |
| 67 | 2.2755 | 0.0095 |
| 68 | 2.2849 | 0.0094 |
| 69 | 2.2942 | 0.0093 |
| 70 | 2.3035 | 0.0092 |
| 71 | 2.3126 | 0.0091 |
| 72 | 2.3216 | 0.0090 |
| 73 | 2.3318 | 0.0101 |
| 74 | 2.3418 | 0.0100 |
| 75 | 2.3518 | 0.0100 |

| | | |
|---|---|---|
| 76 | 2.3616 | 0.0099 |
| 77 | 2.3714 | 0.0098 |
| 78 | 2.3811 | 0.0097 |
| 79 | 2.3907 | 0.0096 |
| 80 | 2.4002 | 0.0095 |
| 81 | 2.4097 | 0.0094 |
| 82 | 2.4190 | 0.0094 |
| 83 | 2.4283 | 0.0093 |
| 84 | 2.4375 | 0.0092 |
| 85 | 2.4467 | 0.0091 |
| 86 | 2.4557 | 0.0091 |
| 87 | 2.4647 | 0.0090 |
| 88 | 2.4736 | 0.0089 |
| 89 | 2.4825 | 0.0089 |
| 90 | 2.4913 | 0.0088 |
| 91 | 2.5000 | 0.0087 |
| 92 | 2.5086 | 0.0087 |
| 93 | 2.5172 | 0.0086 |
| 94 | 2.5258 | 0.0085 |
| 95 | 2.5342 | 0.0085 |
| 96 | 2.5426 | 0.0084 |
| 97 | 2.5510 | 0.0083 |
| 98 | 2.5593 | 0.0083 |
| 99 | 2.5675 | 0.0082 |
| 100 | 2.5756 | 0.0082 |
| 101 | 2.5838 | 0.0081 |
| 102 | 2.5918 | 0.0081 |
| 103 | 2.5998 | 0.0080 |
| 104 | 2.6078 | 0.0080 |
| 105 | 2.6157 | 0.0079 |
| 106 | 2.6235 | 0.0078 |
| 107 | 2.6313 | 0.0078 |
| 108 | 2.6391 | 0.0077 |
| 109 | 2.6468 | 0.0077 |
| 110 | 2.6544 | 0.0077 |
| 111 | 2.6620 | 0.0076 |
| 112 | 2.6696 | 0.0076 |
| 113 | 2.6771 | 0.0075 |
| 114 | 2.6846 | 0.0075 |
| 115 | 2.6920 | 0.0074 |
| 116 | 2.6994 | 0.0074 |
| 117 | 2.7067 | 0.0073 |
| 118 | 2.7140 | 0.0073 |
| 119 | 2.7212 | 0.0072 |
| 120 | 2.7284 | 0.0072 |
| 121 | 2.7356 | 0.0072 |
| 122 | 2.7427 | 0.0071 |
| 123 | 2.7498 | 0.0071 |
| 124 | 2.7569 | 0.0070 |
| 125 | 2.7639 | 0.0070 |
| 126 | 2.7708 | 0.0070 |
| 127 | 2.7778 | 0.0069 |
| 128 | 2.7847 | 0.0069 |
| 129 | 2.7915 | 0.0069 |
| 130 | 2.7984 | 0.0068 |
| 131 | 2.8051 | 0.0068 |
| 132 | 2.8119 | 0.0068 |
| 133 | 2.8186 | 0.0067 |
| 134 | 2.8253 | 0.0067 |

| | | |
|---|---|---|
| 135 | 2.8319 | 0.0066 |
| 136 | 2.8385 | 0.0066 |
| 137 | 2.8451 | 0.0066 |
| 138 | 2.8517 | 0.0065 |
| 139 | 2.8582 | 0.0065 |
| 140 | 2.8647 | 0.0065 |
| 141 | 2.8711 | 0.0065 |
| 142 | 2.8776 | 0.0064 |
| 143 | 2.8839 | 0.0064 |
| 144 | 2.8903 | 0.0064 |
| 145 | 2.8966 | 0.0063 |
| 146 | 2.9029 | 0.0063 |
| 147 | 2.9092 | 0.0063 |
| 148 | 2.9154 | 0.0062 |
| 149 | 2.9217 | 0.0062 |
| 150 | 2.9278 | 0.0062 |
| 151 | 2.9340 | 0.0062 |
| 152 | 2.9401 | 0.0061 |
| 153 | 2.9462 | 0.0061 |
| 154 | 2.9523 | 0.0061 |
| 155 | 2.9583 | 0.0060 |
| 156 | 2.9644 | 0.0060 |
| 157 | 2.9704 | 0.0060 |
| 158 | 2.9763 | 0.0060 |
| 159 | 2.9823 | 0.0059 |
| 160 | 2.9882 | 0.0059 |
| 161 | 2.9941 | 0.0059 |
| 162 | 2.9999 | 0.0059 |
| 163 | 3.0058 | 0.0058 |
| 164 | 3.0116 | 0.0058 |
| 165 | 3.0174 | 0.0058 |
| 166 | 3.0232 | 0.0058 |
| 167 | 3.0289 | 0.0057 |
| 168 | 3.0346 | 0.0057 |
| 169 | 3.0403 | 0.0057 |
| 170 | 3.0460 | 0.0057 |
| 171 | 3.0516 | 0.0057 |
| 172 | 3.0573 | 0.0056 |
| 173 | 3.0629 | 0.0056 |
| 174 | 3.0685 | 0.0056 |
| 175 | 3.0740 | 0.0056 |
| 176 | 3.0796 | 0.0055 |
| 177 | 3.0851 | 0.0055 |
| 178 | 3.0906 | 0.0055 |
| 179 | 3.0961 | 0.0055 |
| 180 | 3.1015 | 0.0055 |
| 181 | 3.1070 | 0.0054 |
| 182 | 3.1124 | 0.0054 |
| 183 | 3.1178 | 0.0054 |
| 184 | 3.1231 | 0.0054 |
| 185 | 3.1285 | 0.0054 |
| 186 | 3.1338 | 0.0053 |
| 187 | 3.1392 | 0.0053 |
| 188 | 3.1445 | 0.0053 |
| 189 | 3.1497 | 0.0053 |
| 190 | 3.1550 | 0.0053 |
| 191 | 3.1602 | 0.0052 |
| 192 | 3.1654 | 0.0052 |
| 193 | 3.1706 | 0.0052 |

| | | |
|---|---|---|
| 194 | 3.1758 | 0.0052 |
| 195 | 3.1810 | 0.0052 |
| 196 | 3.1861 | 0.0051 |
| 197 | 3.1913 | 0.0051 |
| 198 | 3.1964 | 0.0051 |
| 199 | 3.2015 | 0.0051 |
| 200 | 3.2066 | 0.0051 |
| 201 | 3.2116 | 0.0051 |
| 202 | 3.2167 | 0.0050 |
| 203 | 3.2217 | 0.0050 |
| 204 | 3.2267 | 0.0050 |
| 205 | 3.2317 | 0.0050 |
| 206 | 3.2367 | 0.0050 |
| 207 | 3.2416 | 0.0050 |
| 208 | 3.2466 | 0.0049 |
| 209 | 3.2515 | 0.0049 |
| 210 | 3.2564 | 0.0049 |
| 211 | 3.2613 | 0.0049 |
| 212 | 3.2662 | 0.0049 |
| 213 | 3.2710 | 0.0049 |
| 214 | 3.2759 | 0.0048 |
| 215 | 3.2807 | 0.0048 |
| 216 | 3.2855 | 0.0048 |
| 217 | 3.2903 | 0.0048 |
| 218 | 3.2951 | 0.0048 |
| 219 | 3.2999 | 0.0048 |
| 220 | 3.3046 | 0.0048 |
| 221 | 3.3094 | 0.0047 |
| 222 | 3.3141 | 0.0047 |
| 223 | 3.3188 | 0.0047 |
| 224 | 3.3235 | 0.0047 |
| 225 | 3.3282 | 0.0047 |
| 226 | 3.3329 | 0.0047 |
| 227 | 3.3375 | 0.0047 |
| 228 | 3.3421 | 0.0046 |
| 229 | 3.3468 | 0.0046 |
| 230 | 3.3514 | 0.0046 |
| 231 | 3.3560 | 0.0046 |
| 232 | 3.3606 | 0.0046 |
| 233 | 3.3651 | 0.0046 |
| 234 | 3.3697 | 0.0046 |
| 235 | 3.3742 | 0.0045 |
| 236 | 3.3788 | 0.0045 |
| 237 | 3.3833 | 0.0045 |
| 238 | 3.3878 | 0.0045 |
| 239 | 3.3923 | 0.0045 |
| 240 | 3.3968 | 0.0045 |
| 241 | 3.4012 | 0.0045 |
| 242 | 3.4057 | 0.0045 |
| 243 | 3.4101 | 0.0044 |
| 244 | 3.4146 | 0.0044 |
| 245 | 3.4190 | 0.0044 |
| 246 | 3.4234 | 0.0044 |
| 247 | 3.4278 | 0.0044 |
| 248 | 3.4322 | 0.0044 |
| 249 | 3.4365 | 0.0044 |
| 250 | 3.4409 | 0.0044 |
| 251 | 3.4452 | 0.0043 |
| 252 | 3.4496 | 0.0043 |

| | | |
|---|---|---|
| 253 | 3.4539 | 0.0043 |
| 254 | 3.4582 | 0.0043 |
| 255 | 3.4625 | 0.0043 |
| 256 | 3.4668 | 0.0043 |
| 257 | 3.4711 | 0.0043 |
| 258 | 3.4753 | 0.0043 |
| 259 | 3.4796 | 0.0043 |
| 260 | 3.4838 | 0.0042 |
| 261 | 3.4880 | 0.0042 |
| 262 | 3.4923 | 0.0042 |
| 263 | 3.4965 | 0.0042 |
| 264 | 3.5007 | 0.0042 |
| 265 | 3.5049 | 0.0042 |
| 266 | 3.5090 | 0.0042 |
| 267 | 3.5132 | 0.0042 |
| 268 | 3.5173 | 0.0042 |
| 269 | 3.5215 | 0.0041 |
| 270 | 3.5256 | 0.0041 |
| 271 | 3.5297 | 0.0041 |
| 272 | 3.5339 | 0.0041 |
| 273 | 3.5380 | 0.0041 |
| 274 | 3.5421 | 0.0041 |
| 275 | 3.5461 | 0.0041 |
| 276 | 3.5502 | 0.0041 |
| 277 | 3.5543 | 0.0041 |
| 278 | 3.5583 | 0.0041 |
| 279 | 3.5624 | 0.0040 |
| 280 | 3.5664 | 0.0040 |
| 281 | 3.5704 | 0.0040 |
| 282 | 3.5744 | 0.0040 |
| 283 | 3.5784 | 0.0040 |
| 284 | 3.5824 | 0.0040 |
| 285 | 3.5864 | 0.0040 |
| 286 | 3.5904 | 0.0040 |
| 287 | 3.5943 | 0.0040 |
| 288 | 3.5983 | 0.0040 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0040 | 0.0003 | 0.0036 |
| 2 | 0.0040 | 0.0003 | 0.0036 |
| 3 | 0.0040 | 0.0003 | 0.0037 |
| 4 | 0.0040 | 0.0003 | 0.0037 |
| 5 | 0.0040 | 0.0003 | 0.0037 |
| 6 | 0.0040 | 0.0003 | 0.0037 |
| 7 | 0.0040 | 0.0003 | 0.0037 |
| 8 | 0.0041 | 0.0003 | 0.0037 |
| 9 | 0.0041 | 0.0003 | 0.0037 |
| 10 | 0.0041 | 0.0003 | 0.0037 |
| 11 | 0.0041 | 0.0003 | 0.0038 |
| 12 | 0.0041 | 0.0003 | 0.0038 |
| 13 | 0.0041 | 0.0003 | 0.0038 |
| 14 | 0.0041 | 0.0003 | 0.0038 |
| 15 | 0.0042 | 0.0003 | 0.0038 |
| 16 | 0.0042 | 0.0003 | 0.0038 |
| 17 | 0.0042 | 0.0003 | 0.0039 |
| 18 | 0.0042 | 0.0003 | 0.0039 |

| | | | |
|---|---|---|---|
| 19 | 0.0042 | 0.0003 | 0.0039 |
| 20 | 0.0042 | 0.0003 | 0.0039 |
| 21 | 0.0043 | 0.0004 | 0.0039 |
| 22 | 0.0043 | 0.0004 | 0.0039 |
| 23 | 0.0043 | 0.0004 | 0.0039 |
| 24 | 0.0043 | 0.0004 | 0.0040 |
| 25 | 0.0043 | 0.0004 | 0.0040 |
| 26 | 0.0043 | 0.0004 | 0.0040 |
| 27 | 0.0044 | 0.0004 | 0.0040 |
| 28 | 0.0044 | 0.0004 | 0.0040 |
| 29 | 0.0044 | 0.0004 | 0.0040 |
| 30 | 0.0044 | 0.0004 | 0.0041 |
| 31 | 0.0044 | 0.0004 | 0.0041 |
| 32 | 0.0045 | 0.0004 | 0.0041 |
| 33 | 0.0045 | 0.0004 | 0.0041 |
| 34 | 0.0045 | 0.0004 | 0.0041 |
| 35 | 0.0045 | 0.0004 | 0.0041 |
| 36 | 0.0045 | 0.0004 | 0.0042 |
| 37 | 0.0046 | 0.0004 | 0.0042 |
| 38 | 0.0046 | 0.0004 | 0.0042 |
| 39 | 0.0046 | 0.0004 | 0.0042 |
| 40 | 0.0046 | 0.0004 | 0.0042 |
| 41 | 0.0046 | 0.0004 | 0.0043 |
| 42 | 0.0047 | 0.0004 | 0.0043 |
| 43 | 0.0047 | 0.0004 | 0.0043 |
| 44 | 0.0047 | 0.0004 | 0.0043 |
| 45 | 0.0047 | 0.0004 | 0.0043 |
| 46 | 0.0047 | 0.0004 | 0.0044 |
| 47 | 0.0048 | 0.0004 | 0.0044 |
| 48 | 0.0048 | 0.0004 | 0.0044 |
| 49 | 0.0048 | 0.0004 | 0.0044 |
| 50 | 0.0048 | 0.0004 | 0.0044 |
| 51 | 0.0049 | 0.0004 | 0.0045 |
| 52 | 0.0049 | 0.0004 | 0.0045 |
| 53 | 0.0049 | 0.0004 | 0.0045 |
| 54 | 0.0049 | 0.0004 | 0.0045 |
| 55 | 0.0050 | 0.0004 | 0.0045 |
| 56 | 0.0050 | 0.0004 | 0.0046 |
| 57 | 0.0050 | 0.0004 | 0.0046 |
| 58 | 0.0050 | 0.0004 | 0.0046 |
| 59 | 0.0051 | 0.0004 | 0.0046 |
| 60 | 0.0051 | 0.0004 | 0.0047 |
| 61 | 0.0051 | 0.0004 | 0.0047 |
| 62 | 0.0051 | 0.0004 | 0.0047 |
| 63 | 0.0052 | 0.0004 | 0.0047 |
| 64 | 0.0052 | 0.0004 | 0.0048 |
| 65 | 0.0052 | 0.0004 | 0.0048 |
| 66 | 0.0052 | 0.0004 | 0.0048 |
| 67 | 0.0053 | 0.0004 | 0.0048 |
| 68 | 0.0053 | 0.0004 | 0.0049 |
| 69 | 0.0053 | 0.0004 | 0.0049 |
| 70 | 0.0054 | 0.0004 | 0.0049 |
| 71 | 0.0054 | 0.0004 | 0.0050 |
| 72 | 0.0054 | 0.0004 | 0.0050 |
| 73 | 0.0055 | 0.0004 | 0.0050 |
| 74 | 0.0055 | 0.0005 | 0.0050 |
| 75 | 0.0055 | 0.0005 | 0.0051 |
| 76 | 0.0055 | 0.0005 | 0.0051 |
| 77 | 0.0056 | 0.0005 | 0.0051 |

| | | | |
|---|---|---|---|
| 78 | 0.0056 | 0.0005 | 0.0051 |
| 79 | 0.0057 | 0.0005 | 0.0052 |
| 80 | 0.0057 | 0.0005 | 0.0052 |
| 81 | 0.0057 | 0.0005 | 0.0052 |
| 82 | 0.0057 | 0.0005 | 0.0053 |
| 83 | 0.0058 | 0.0005 | 0.0053 |
| 84 | 0.0058 | 0.0005 | 0.0053 |
| 85 | 0.0059 | 0.0005 | 0.0054 |
| 86 | 0.0059 | 0.0005 | 0.0054 |
| 87 | 0.0059 | 0.0005 | 0.0055 |
| 88 | 0.0060 | 0.0005 | 0.0055 |
| 89 | 0.0060 | 0.0005 | 0.0055 |
| 90 | 0.0060 | 0.0005 | 0.0055 |
| 91 | 0.0061 | 0.0005 | 0.0056 |
| 92 | 0.0061 | 0.0005 | 0.0056 |
| 93 | 0.0062 | 0.0005 | 0.0057 |
| 94 | 0.0062 | 0.0005 | 0.0057 |
| 95 | 0.0063 | 0.0005 | 0.0058 |
| 96 | 0.0063 | 0.0005 | 0.0058 |
| 97 | 0.0064 | 0.0005 | 0.0058 |
| 98 | 0.0064 | 0.0005 | 0.0059 |
| 99 | 0.0065 | 0.0005 | 0.0059 |
| 100 | 0.0065 | 0.0005 | 0.0059 |
| 101 | 0.0065 | 0.0005 | 0.0060 |
| 102 | 0.0066 | 0.0005 | 0.0060 |
| 103 | 0.0066 | 0.0005 | 0.0061 |
| 104 | 0.0067 | 0.0006 | 0.0061 |
| 105 | 0.0068 | 0.0006 | 0.0062 |
| 106 | 0.0068 | 0.0006 | 0.0062 |
| 107 | 0.0069 | 0.0006 | 0.0063 |
| 108 | 0.0069 | 0.0006 | 0.0063 |
| 109 | 0.0070 | 0.0006 | 0.0064 |
| 110 | 0.0070 | 0.0006 | 0.0064 |
| 111 | 0.0071 | 0.0006 | 0.0065 |
| 112 | 0.0071 | 0.0006 | 0.0065 |
| 113 | 0.0072 | 0.0006 | 0.0066 |
| 114 | 0.0072 | 0.0006 | 0.0067 |
| 115 | 0.0073 | 0.0006 | 0.0067 |
| 116 | 0.0074 | 0.0006 | 0.0068 |
| 117 | 0.0075 | 0.0006 | 0.0069 |
| 118 | 0.0075 | 0.0006 | 0.0069 |
| 119 | 0.0076 | 0.0006 | 0.0070 |
| 120 | 0.0077 | 0.0006 | 0.0070 |
| 121 | 0.0077 | 0.0006 | 0.0071 |
| 122 | 0.0078 | 0.0006 | 0.0072 |
| 123 | 0.0079 | 0.0007 | 0.0072 |
| 124 | 0.0080 | 0.0007 | 0.0073 |
| 125 | 0.0081 | 0.0007 | 0.0074 |
| 126 | 0.0081 | 0.0007 | 0.0074 |
| 127 | 0.0082 | 0.0007 | 0.0075 |
| 128 | 0.0083 | 0.0007 | 0.0076 |
| 129 | 0.0084 | 0.0007 | 0.0077 |
| 130 | 0.0085 | 0.0007 | 0.0078 |
| 131 | 0.0086 | 0.0007 | 0.0079 |
| 132 | 0.0087 | 0.0007 | 0.0079 |
| 133 | 0.0088 | 0.0007 | 0.0081 |
| 134 | 0.0089 | 0.0007 | 0.0081 |
| 135 | 0.0090 | 0.0007 | 0.0082 |
| 136 | 0.0091 | 0.0007 | 0.0083 |

| | | | |
|---|---|---|---|
| 137 | 0.0092 | 0.0008 | 0.0085 |
| 138 | 0.0093 | 0.0008 | 0.0085 |
| 139 | 0.0094 | 0.0008 | 0.0087 |
| 140 | 0.0095 | 0.0008 | 0.0087 |
| 141 | 0.0097 | 0.0008 | 0.0089 |
| 142 | 0.0098 | 0.0008 | 0.0090 |
| 143 | 0.0100 | 0.0008 | 0.0091 |
| 144 | 0.0100 | 0.0008 | 0.0092 |
| 145 | 0.0090 | 0.0007 | 0.0083 |
| 146 | 0.0091 | 0.0008 | 0.0084 |
| 147 | 0.0093 | 0.0008 | 0.0085 |
| 148 | 0.0094 | 0.0008 | 0.0086 |
| 149 | 0.0096 | 0.0008 | 0.0088 |
| 150 | 0.0097 | 0.0008 | 0.0089 |
| 151 | 0.0100 | 0.0008 | 0.0091 |
| 152 | 0.0101 | 0.0008 | 0.0092 |
| 153 | 0.0103 | 0.0008 | 0.0095 |
| 154 | 0.0104 | 0.0009 | 0.0096 |
| 155 | 0.0107 | 0.0009 | 0.0098 |
| 156 | 0.0108 | 0.0009 | 0.0099 |
| 157 | 0.0111 | 0.0009 | 0.0102 |
| 158 | 0.0113 | 0.0009 | 0.0104 |
| 159 | 0.0116 | 0.0010 | 0.0106 |
| 160 | 0.0118 | 0.0010 | 0.0108 |
| 161 | 0.0121 | 0.0010 | 0.0111 |
| 162 | 0.0123 | 0.0010 | 0.0113 |
| 163 | 0.0127 | 0.0010 | 0.0117 |
| 164 | 0.0129 | 0.0011 | 0.0119 |
| 165 | 0.0134 | 0.0011 | 0.0123 |
| 166 | 0.0136 | 0.0011 | 0.0125 |
| 167 | 0.0141 | 0.0012 | 0.0130 |
| 168 | 0.0144 | 0.0012 | 0.0132 |
| 169 | 0.0161 | 0.0013 | 0.0147 |
| 170 | 0.0164 | 0.0013 | 0.0150 |
| 171 | 0.0171 | 0.0014 | 0.0157 |
| 172 | 0.0175 | 0.0014 | 0.0160 |
| 173 | 0.0183 | 0.0015 | 0.0168 |
| 174 | 0.0187 | 0.0015 | 0.0172 |
| 175 | 0.0197 | 0.0016 | 0.0181 |
| 176 | 0.0202 | 0.0017 | 0.0186 |
| 177 | 0.0214 | 0.0018 | 0.0197 |
| 178 | 0.0221 | 0.0018 | 0.0203 |
| 179 | 0.0236 | 0.0019 | 0.0217 |
| 180 | 0.0244 | 0.0020 | 0.0224 |
| 181 | 0.0264 | 0.0022 | 0.0242 |
| 182 | 0.0275 | 0.0023 | 0.0252 |
| 183 | 0.0301 | 0.0025 | 0.0276 |
| 184 | 0.0316 | 0.0026 | 0.0290 |
| 185 | 0.0355 | 0.0029 | 0.0326 |
| 186 | 0.0378 | 0.0031 | 0.0347 |
| 187 | 0.0439 | 0.0036 | 0.0403 |
| 188 | 0.0479 | 0.0039 | 0.0440 |
| 189 | 0.0596 | 0.0042 | 0.0554 |
| 190 | 0.0686 | 0.0042 | 0.0644 |
| 191 | 0.1041 | 0.0042 | 0.0999 |
| 192 | 0.1511 | 0.0042 | 0.1469 |
| 193 | 0.6538 | 0.0042 | 0.6496 |
| 194 | 0.0819 | 0.0042 | 0.0777 |
| 195 | 0.0530 | 0.0042 | 0.0488 |

| | | | |
|---|---|---|---|
| 196 | 0.0406 | 0.0033 | 0.0372 |
| 197 | 0.0334 | 0.0028 | 0.0306 |
| 198 | 0.0287 | 0.0024 | 0.0263 |
| 199 | 0.0254 | 0.0021 | 0.0233 |
| 200 | 0.0228 | 0.0019 | 0.0209 |
| 201 | 0.0208 | 0.0017 | 0.0191 |
| 202 | 0.0192 | 0.0016 | 0.0176 |
| 203 | 0.0179 | 0.0015 | 0.0164 |
| 204 | 0.0167 | 0.0014 | 0.0153 |
| 205 | 0.0147 | 0.0012 | 0.0135 |
| 206 | 0.0139 | 0.0011 | 0.0127 |
| 207 | 0.0131 | 0.0011 | 0.0121 |
| 208 | 0.0125 | 0.0010 | 0.0115 |
| 209 | 0.0119 | 0.0010 | 0.0110 |
| 210 | 0.0114 | 0.0009 | 0.0105 |
| 211 | 0.0110 | 0.0009 | 0.0101 |
| 212 | 0.0106 | 0.0009 | 0.0097 |
| 213 | 0.0102 | 0.0008 | 0.0093 |
| 214 | 0.0098 | 0.0008 | 0.0090 |
| 215 | 0.0095 | 0.0008 | 0.0087 |
| 216 | 0.0092 | 0.0008 | 0.0085 |
| 217 | 0.0101 | 0.0008 | 0.0093 |
| 218 | 0.0099 | 0.0008 | 0.0091 |
| 219 | 0.0096 | 0.0008 | 0.0088 |
| 220 | 0.0094 | 0.0008 | 0.0086 |
| 221 | 0.0091 | 0.0008 | 0.0084 |
| 222 | 0.0089 | 0.0007 | 0.0082 |
| 223 | 0.0087 | 0.0007 | 0.0080 |
| 224 | 0.0085 | 0.0007 | 0.0078 |
| 225 | 0.0083 | 0.0007 | 0.0077 |
| 226 | 0.0082 | 0.0007 | 0.0075 |
| 227 | 0.0080 | 0.0007 | 0.0073 |
| 228 | 0.0078 | 0.0006 | 0.0072 |
| 229 | 0.0077 | 0.0006 | 0.0071 |
| 230 | 0.0076 | 0.0006 | 0.0069 |
| 231 | 0.0074 | 0.0006 | 0.0068 |
| 232 | 0.0073 | 0.0006 | 0.0067 |
| 233 | 0.0072 | 0.0006 | 0.0066 |
| 234 | 0.0070 | 0.0006 | 0.0065 |
| 235 | 0.0069 | 0.0006 | 0.0064 |
| 236 | 0.0068 | 0.0006 | 0.0063 |
| 237 | 0.0067 | 0.0006 | 0.0062 |
| 238 | 0.0066 | 0.0005 | 0.0061 |
| 239 | 0.0065 | 0.0005 | 0.0060 |
| 240 | 0.0064 | 0.0005 | 0.0059 |
| 241 | 0.0063 | 0.0005 | 0.0058 |
| 242 | 0.0062 | 0.0005 | 0.0057 |
| 243 | 0.0062 | 0.0005 | 0.0056 |
| 244 | 0.0061 | 0.0005 | 0.0056 |
| 245 | 0.0060 | 0.0005 | 0.0055 |
| 246 | 0.0059 | 0.0005 | 0.0054 |
| 247 | 0.0058 | 0.0005 | 0.0054 |
| 248 | 0.0058 | 0.0005 | 0.0053 |
| 249 | 0.0057 | 0.0005 | 0.0052 |
| 250 | 0.0056 | 0.0005 | 0.0052 |
| 251 | 0.0056 | 0.0005 | 0.0051 |
| 252 | 0.0055 | 0.0005 | 0.0050 |
| 253 | 0.0054 | 0.0004 | 0.0050 |
| 254 | 0.0054 | 0.0004 | 0.0049 |

| | | | |
|---|---|---|---|
| 255 | 0.0053 | 0.0004 | 0.0049 |
| 256 | 0.0053 | 0.0004 | 0.0048 |
| 257 | 0.0052 | 0.0004 | 0.0048 |
| 258 | 0.0051 | 0.0004 | 0.0047 |
| 259 | 0.0051 | 0.0004 | 0.0047 |
| 260 | 0.0050 | 0.0004 | 0.0046 |
| 261 | 0.0050 | 0.0004 | 0.0046 |
| 262 | 0.0049 | 0.0004 | 0.0045 |
| 263 | 0.0049 | 0.0004 | 0.0045 |
| 264 | 0.0048 | 0.0004 | 0.0044 |
| 265 | 0.0048 | 0.0004 | 0.0044 |
| 266 | 0.0048 | 0.0004 | 0.0044 |
| 267 | 0.0047 | 0.0004 | 0.0043 |
| 268 | 0.0047 | 0.0004 | 0.0043 |
| 269 | 0.0046 | 0.0004 | 0.0042 |
| 270 | 0.0046 | 0.0004 | 0.0042 |
| 271 | 0.0045 | 0.0004 | 0.0042 |
| 272 | 0.0045 | 0.0004 | 0.0041 |
| 273 | 0.0045 | 0.0004 | 0.0041 |
| 274 | 0.0044 | 0.0004 | 0.0041 |
| 275 | 0.0044 | 0.0004 | 0.0040 |
| 276 | 0.0044 | 0.0004 | 0.0040 |
| 277 | 0.0043 | 0.0004 | 0.0040 |
| 278 | 0.0043 | 0.0004 | 0.0039 |
| 279 | 0.0043 | 0.0004 | 0.0039 |
| 280 | 0.0042 | 0.0003 | 0.0039 |
| 281 | 0.0042 | 0.0003 | 0.0038 |
| 282 | 0.0042 | 0.0003 | 0.0038 |
| 283 | 0.0041 | 0.0003 | 0.0038 |
| 284 | 0.0041 | 0.0003 | 0.0038 |
| 285 | 0.0041 | 0.0003 | 0.0037 |
| 286 | 0.0040 | 0.0003 | 0.0037 |
| 287 | 0.0040 | 0.0003 | 0.0037 |
| 288 | 0.0040 | 0.0003 | 0.0036 |

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Total soil rain loss = 0.23(In)
Total effective rainfall = 3.37(In)
Peak flow rate in flood hydrograph = 1201.05(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 325.0 | 650.0 | 975.0 | 1300.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0019 | 0.27 | Q | \| | \| | \| | \| |
| 0+10 | 0.0089 | 1.03 | Q | \| | \| | \| | \| |
| 0+15 | 0.0239 | 2.18 | Q | \| | \| | \| | \| |
| 0+20 | 0.0513 | 3.98 | Q | \| | \| | \| | \| |
| 0+25 | 0.0985 | 6.85 | Q | \| | \| | \| | \| |
| 0+30 | 0.1761 | 11.27 | Q | \| | \| | \| | \| |
| 0+35 | 0.2801 | 15.10 | Q | \| | \| | \| | \| |
| 0+40 | 0.3981 | 17.13 | Q | \| | \| | \| | \| |
| 0+45 | 0.5265 | 18.65 | Q | \| | \| | \| | \| |
| 0+50 | 0.6632 | 19.85 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+55 | 0.8071 | 20.89 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.9571 | 21.79 | Q | \| | \| | \| | \| |
| 1+ 5 | 1.1124 | 22.55 | Q | \| | \| | \| | \| |
| 1+10 | 1.2724 | 23.23 | Q | \| | \| | \| | \| |
| 1+15 | 1.4366 | 23.84 | Q | \| | \| | \| | \| |
| 1+20 | 1.6045 | 24.38 | Q | \| | \| | \| | \| |
| 1+25 | 1.7758 | 24.87 | Q | \| | \| | \| | \| |
| 1+30 | 1.9502 | 25.32 | Q | \| | \| | \| | \| |
| 1+35 | 2.1272 | 25.71 | Q | \| | \| | \| | \| |
| 1+40 | 2.3068 | 26.07 | Q | \| | \| | \| | \| |
| 1+45 | 2.4885 | 26.39 | Q | \| | \| | \| | \| |
| 1+50 | 2.6722 | 26.68 | Q | \| | \| | \| | \| |
| 1+55 | 2.8578 | 26.95 | Q | \| | \| | \| | \| |
| 2+ 0 | 3.0451 | 27.19 | Q | \| | \| | \| | \| |
| 2+ 5 | 3.2336 | 27.38 | Q | \| | \| | \| | \| |
| 2+10 | 3.4234 | 27.56 | Q | \| | \| | \| | \| |
| 2+15 | 3.6145 | 27.75 | Q | \| | \| | \| | \| |
| 2+20 | 3.8068 | 27.92 | Q | \| | \| | \| | \| |
| 2+25 | 4.0003 | 28.10 | Q | \| | \| | \| | \| |
| 2+30 | 4.1950 | 28.26 | Q | \| | \| | \| | \| |
| 2+35 | 4.3907 | 28.42 | QV | \| | \| | \| | \| |
| 2+40 | 4.5875 | 28.58 | QV | \| | \| | \| | \| |
| 2+45 | 4.7854 | 28.73 | QV | \| | \| | \| | \| |
| 2+50 | 4.9844 | 28.89 | QV | \| | \| | \| | \| |
| 2+55 | 5.1844 | 29.05 | QV | \| | \| | \| | \| |
| 3+ 0 | 5.3855 | 29.20 | QV | \| | \| | \| | \| |
| 3+ 5 | 5.5877 | 29.35 | QV | \| | \| | \| | \| |
| 3+10 | 5.7908 | 29.50 | QV | \| | \| | \| | \| |
| 3+15 | 5.9950 | 29.65 | QV | \| | \| | \| | \| |
| 3+20 | 6.2003 | 29.80 | QV | \| | \| | \| | \| |
| 3+25 | 6.4065 | 29.95 | QV | \| | \| | \| | \| |
| 3+30 | 6.6137 | 30.09 | QV | \| | \| | \| | \| |
| 3+35 | 6.8219 | 30.22 | QV | \| | \| | \| | \| |
| 3+40 | 7.0310 | 30.36 | QV | \| | \| | \| | \| |
| 3+45 | 7.2411 | 30.50 | QV | \| | \| | \| | \| |
| 3+50 | 7.4521 | 30.64 | QV | \| | \| | \| | \| |
| 3+55 | 7.6641 | 30.78 | QV | \| | \| | \| | \| |
| 4+ 0 | 7.8770 | 30.92 | QV | \| | \| | \| | \| |
| 4+ 5 | 8.0909 | 31.06 | QV | \| | \| | \| | \| |
| 4+10 | 8.3057 | 31.20 | QV | \| | \| | \| | \| |
| 4+15 | 8.5216 | 31.34 | Q V | \| | \| | \| | \| |
| 4+20 | 8.7384 | 31.48 | Q V | \| | \| | \| | \| |
| 4+25 | 8.9562 | 31.63 | Q V | \| | \| | \| | \| |
| 4+30 | 9.1751 | 31.78 | Q V | \| | \| | \| | \| |
| 4+35 | 9.3950 | 31.93 | Q V | \| | \| | \| | \| |
| 4+40 | 9.6159 | 32.08 | Q V | \| | \| | \| | \| |
| 4+45 | 9.8379 | 32.23 | Q V | \| | \| | \| | \| |
| 4+50 | 10.0609 | 32.39 | Q V | \| | \| | \| | \| |
| 4+55 | 10.2850 | 32.54 | \|QV | \| | \| | \| | \| |
| 5+ 0 | 10.5102 | 32.70 | \|QV | \| | \| | \| | \| |
| 5+ 5 | 10.7365 | 32.86 | \|QV | \| | \| | \| | \| |
| 5+10 | 10.9640 | 33.02 | \|QV | \| | \| | \| | \| |
| 5+15 | 11.1925 | 33.19 | \|QV | \| | \| | \| | \| |
| 5+20 | 11.4222 | 33.35 | \|QV | \| | \| | \| | \| |
| 5+25 | 11.6531 | 33.52 | \|QV | \| | \| | \| | \| |
| 5+30 | 11.8851 | 33.69 | \|QV | \| | \| | \| | \| |
| 5+35 | 12.1183 | 33.86 | \|QV | \| | \| | \| | \| |
| 5+40 | 12.3528 | 34.04 | \|QV | \| | \| | \| | \| |
| 5+45 | 12.5884 | 34.22 | \|QV | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+50 | 12.8253 | 34.39 | \|Q V | \| | \| | \| | \| |
| 5+55 | 13.0634 | 34.58 | \|Q V | \| | \| | \| | \| |
| 6+ 0 | 13.3028 | 34.76 | \|Q V | \| | \| | \| | \| |
| 6+ 5 | 13.5435 | 34.95 | \|Q V | \| | \| | \| | \| |
| 6+10 | 13.7855 | 35.14 | \|Q V | \| | \| | \| | \| |
| 6+15 | 14.0288 | 35.33 | \|Q V | \| | \| | \| | \| |
| 6+20 | 14.2734 | 35.52 | \|Q V | \| | \| | \| | \| |
| 6+25 | 14.5194 | 35.72 | \|Q V | \| | \| | \| | \| |
| 6+30 | 14.7667 | 35.92 | \|Q V | \| | \| | \| | \| |
| 6+35 | 15.0155 | 36.12 | \|Q V | \| | \| | \| | \| |
| 6+40 | 15.2657 | 36.32 | \|Q V | \| | \| | \| | \| |
| 6+45 | 15.5172 | 36.53 | \|Q V | \| | \| | \| | \| |
| 6+50 | 15.7703 | 36.74 | \|Q V | \| | \| | \| | \| |
| 6+55 | 16.0248 | 36.96 | \|Q V | \| | \| | \| | \| |
| 7+ 0 | 16.2808 | 37.17 | \|Q V | \| | \| | \| | \| |
| 7+ 5 | 16.5384 | 37.39 | \|Q V | \| | \| | \| | \| |
| 7+10 | 16.7974 | 37.62 | \|Q V | \| | \| | \| | \| |
| 7+15 | 17.0581 | 37.84 | \|Q  V | \| | \| | \| | \| |
| 7+20 | 17.3203 | 38.07 | \|Q  V | \| | \| | \| | \| |
| 7+25 | 17.5841 | 38.31 | \|Q  V | \| | \| | \| | \| |
| 7+30 | 17.8495 | 38.54 | \|Q  V | \| | \| | \| | \| |
| 7+35 | 18.1167 | 38.78 | \|Q  V | \| | \| | \| | \| |
| 7+40 | 18.3855 | 39.03 | \|Q  V | \| | \| | \| | \| |
| 7+45 | 18.6560 | 39.28 | \|Q  V | \| | \| | \| | \| |
| 7+50 | 18.9282 | 39.53 | \|Q  V | \| | \| | \| | \| |
| 7+55 | 19.2022 | 39.79 | \|Q  V | \| | \| | \| | \| |
| 8+ 0 | 19.4780 | 40.05 | \|Q  V | \| | \| | \| | \| |
| 8+ 5 | 19.7556 | 40.31 | \|Q  V | \| | \| | \| | \| |
| 8+10 | 20.0351 | 40.58 | \|Q  V | \| | \| | \| | \| |
| 8+15 | 20.3165 | 40.85 | \|Q  V | \| | \| | \| | \| |
| 8+20 | 20.5998 | 41.13 | \|Q  V | \| | \| | \| | \| |
| 8+25 | 20.8850 | 41.42 | \|Q  V | \| | \| | \| | \| |
| 8+30 | 21.1722 | 41.70 | \|Q   V | \| | \| | \| | \| |
| 8+35 | 21.4614 | 42.00 | \|Q   V | \| | \| | \| | \| |
| 8+40 | 21.7527 | 42.29 | \|Q   V | \| | \| | \| | \| |
| 8+45 | 22.0461 | 42.60 | \|Q   V | \| | \| | \| | \| |
| 8+50 | 22.3416 | 42.91 | \|Q   V | \| | \| | \| | \| |
| 8+55 | 22.6392 | 43.22 | \|Q   V | \| | \| | \| | \| |
| 9+ 0 | 22.9391 | 43.54 | \|Q   V | \| | \| | \| | \| |
| 9+ 5 | 23.2412 | 43.86 | \|Q   V | \| | \| | \| | \| |
| 9+10 | 23.5456 | 44.20 | \|Q   V | \| | \| | \| | \| |
| 9+15 | 23.8523 | 44.53 | \|Q   V | \| | \| | \| | \| |
| 9+20 | 24.1614 | 44.88 | \|Q   V | \| | \| | \| | \| |
| 9+25 | 24.4729 | 45.23 | \|Q   V | \| | \| | \| | \| |
| 9+30 | 24.7869 | 45.59 | \|Q   V | \| | \| | \| | \| |
| 9+35 | 25.1033 | 45.95 | \|Q   V | \| | \| | \| | \| |
| 9+40 | 25.4224 | 46.33 | \|Q    V | \| | \| | \| | \| |
| 9+45 | 25.7441 | 46.71 | \|Q    V | \| | \| | \| | \| |
| 9+50 | 26.0684 | 47.10 | \|Q    V | \| | \| | \| | \| |
| 9+55 | 26.3955 | 47.49 | \|Q    V | \| | \| | \| | \| |
| 10+ 0 | 26.7253 | 47.90 | \|Q    V | \| | \| | \| | \| |
| 10+ 5 | 27.0580 | 48.31 | \|Q    V | \| | \| | \| | \| |
| 10+10 | 27.3936 | 48.73 | \|Q    V | \| | \| | \| | \| |
| 10+15 | 27.7322 | 49.16 | \|Q    V | \| | \| | \| | \| |
| 10+20 | 28.0738 | 49.60 | \|Q    V | \| | \| | \| | \| |
| 10+25 | 28.4185 | 50.05 | \|Q    V | \| | \| | \| | \| |
| 10+30 | 28.7664 | 50.51 | \|Q    V | \| | \| | \| | \| |
| 10+35 | 29.1176 | 50.98 | \|Q    V | \| | \| | \| | \| |
| 10+40 | 29.4720 | 51.47 | \|Q    V | \| | \| | \| | \| |

```
10+45      29.8299     51.96  |Q     V  |          |          |          |
10+50      30.1912     52.47  |Q     V  |          |          |          |
10+55      30.5561     52.98  |Q     V  |          |          |          |
11+ 0      30.9247     53.52  |Q     V  |          |          |          |
11+ 5      31.2970     54.06  |Q     V  |          |          |          |
11+10      31.6732     54.62  |Q     V  |          |          |          |
11+15      32.0533     55.19  |Q     V  |          |          |          |
11+20      32.4374     55.78  |Q     V  |          |          |          |
11+25      32.8257     56.38  |Q     V  |          |          |          |
11+30      33.2183     57.00  |Q     V  |          |          |          |
11+35      33.6153     57.64  |Q     V  |          |          |          |
11+40      34.0168     58.30  |Q      V |          |          |          |
11+45      34.4229     58.97  |Q      V |          |          |          |
11+50      34.8338     59.66  |Q      V |          |          |          |
11+55      35.2496     60.38  |Q      V |          |          |          |
12+ 0      35.6705     61.11  |Q      V |          |          |          |
12+ 5      36.0961     61.79  |Q      V |          |          |          |
12+10      36.5254     62.34  |Q      V |          |          |          |
12+15      36.9579     62.79  |Q      V |          |          |          |
12+20      37.3923     63.07  |Q      V |          |          |          |
12+25      37.8265     63.05  |Q      V |          |          |          |
12+30      38.2575     62.58  |Q       V|          |          |          |
12+35      38.6866     62.31  |Q       V|          |          |          |
12+40      39.1179     62.62  |Q       V|          |          |          |
12+45      39.5526     63.12  |Q       V|          |          |          |
12+50      39.9916     63.74  |Q       V|          |          |          |
12+55      40.4355     64.45  |Q       V|          |          |          |
13+ 0      40.8849     65.25  | Q      V|          |          |          |
13+ 5      41.3403     66.12  | Q      V|          |          |          |
13+10      41.8022     67.07  | Q      V|          |          |          |
13+15      42.2711     68.08  | Q      V|          |          |          |
13+20      42.7474     69.17  | Q       V          |          |          |
13+25      43.2318     70.32  | Q       V          |          |          |
13+30      43.7245     71.55  | Q       V          |          |          |
13+35      44.2263     72.86  | Q       V          |          |          |
13+40      44.7376     74.25  | Q       V          |          |          |
13+45      45.2591     75.71  | Q       V          |          |          |
13+50      45.7913     77.28  | Q       V          |          |          |
13+55      46.3349     78.93  | Q       V          |          |          |
14+ 0      46.8906     80.69  | Q       |V         |          |          |
14+ 5      47.4596     82.63  | Q       |V         |          |          |
14+10      48.0439     84.83  | Q       |V         |          |          |
14+15      48.6449     87.26  | Q       |V         |          |          |
14+20      49.2649     90.03  | Q       |V         |          |          |
14+25      49.9070     93.24  | Q       |V         |          |          |
14+30      50.5755     97.06  | Q       |V         |          |          |
14+35      51.2706    100.93  |  Q      | V        |          |          |
14+40      51.9906    104.54  |  Q      | V        |          |          |
14+45      52.7361    108.25  |  Q      | V        |          |          |
14+50      53.5086    112.17  |  Q      | V        |          |          |
14+55      54.3100    116.35  |  Q      | V        |          |          |
15+ 0      55.1425    120.88  |  Q      |  V       |          |          |
15+ 5      56.0087    125.78  |  Q      |  V       |          |          |
15+10      56.9122    131.18  |   Q     |  V       |          |          |
15+15      57.8567    137.14  |   Q     |  V       |          |          |
15+20      58.8471    143.81  |   Q     |  V       |          |          |
15+25      59.8892    151.31  |   Q     |   V      |          |          |
15+30      60.9907    159.93  |   Q     |   V      |          |          |
15+35      62.1607    169.89  |    Q    |   V      |          |          |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 15+40 | 63.4120 | 181.69 | Q | V | | | |
| 15+45 | 64.7619 | 195.99 | Q | V | | | |
| 15+50 | 66.2362 | 214.07 | Q | V | | | |
| 15+55 | 67.8781 | 238.40 | Q | V | | | |
| 16+ 0 | 69.7693 | 274.61 | Q | V | | | |
| 16+ 5 | 72.2612 | 361.83 | Q | V | | | |
| 16+10 | 75.6256 | 488.51 | Q | V | | | |
| 16+15 | 79.8098 | 607.54 | Q | | | | |
| 16+20 | 85.1210 | 771.19 | V | Q | | | |
| 16+25 | 91.8685 | 979.73 | V | | Q | | |
| 16+30 | 100.1401 | 1201.05 | V | | Q | | |
| 16+35 | 107.3638 | 1048.87 | V | | Q | | |
| 16+40 | 112.2898 | 715.26 | Q | V | | | |
| 16+45 | 116.3040 | 582.87 | Q | V | | | |
| 16+50 | 119.7117 | 494.80 | Q | V | | | |
| 16+55 | 122.7350 | 438.98 | Q | V | | | |
| 17+ 0 | 125.4138 | 388.96 | Q | V | | | |
| 17+ 5 | 127.7979 | 346.17 | Q | V | | | |
| 17+10 | 129.9629 | 314.36 | Q | V | | | |
| 17+15 | 131.9300 | 285.63 | Q | V | | | |
| 17+20 | 133.7157 | 259.28 | Q | V | | | |
| 17+25 | 135.3504 | 237.36 | Q | V | | | |
| 17+30 | 136.8385 | 216.07 | Q | V | | | |
| 17+35 | 138.1809 | 194.93 | Q | V | | | |
| 17+40 | 139.4069 | 178.01 | Q | V | | | |
| 17+45 | 140.5306 | 163.17 | Q | V | | | |
| 17+50 | 141.5651 | 150.21 | Q | V | | | |
| 17+55 | 142.5115 | 137.41 | Q | V | | | |
| 18+ 0 | 143.3724 | 125.00 | Q | V | | | |
| 18+ 5 | 144.1409 | 111.59 | Q | V | | | |
| 18+10 | 144.8697 | 105.81 | Q | V | | | |
| 18+15 | 145.5650 | 100.95 | Q | V | | | |
| 18+20 | 146.2244 | 95.74 | Q | V | | | |
| 18+25 | 146.8625 | 92.66 | Q | V | | | |
| 18+30 | 147.4779 | 89.35 | Q | V | | | |
| 18+35 | 148.0637 | 85.06 | Q | V | | | |
| 18+40 | 148.6335 | 82.73 | Q | V | | | |
| 18+45 | 149.1877 | 80.47 | Q | V | | | |
| 18+50 | 149.7260 | 78.16 | Q | V | | | |
| 18+55 | 150.2498 | 76.06 | Q | V | | | |
| 19+ 0 | 150.7542 | 73.25 | Q | V | | | |
| 19+ 5 | 151.2390 | 70.38 | Q | V | | | |
| 19+10 | 151.7108 | 68.50 | Q | V | | | |
| 19+15 | 152.1668 | 66.22 | Q | V | | | |
| 19+20 | 152.6076 | 64.00 | Q | V | | | |
| 19+25 | 153.0386 | 62.58 | Q | V | | | |
| 19+30 | 153.4444 | 58.93 | Q | V | | | |
| 19+35 | 153.8372 | 57.03 | Q | V | | | |
| 19+40 | 154.2206 | 55.68 | Q | V | | | |
| 19+45 | 154.5949 | 54.35 | Q | V | | | |
| 19+50 | 154.9569 | 52.55 | Q | V | | | |
| 19+55 | 155.3073 | 50.89 | Q | V | | | |
| 20+ 0 | 155.6507 | 49.86 | Q | V | | | |
| 20+ 5 | 155.9875 | 48.90 | Q | V | | | |
| 20+10 | 156.3181 | 48.01 | Q | V | | | |
| 20+15 | 156.6429 | 47.16 | Q | V | | | |
| 20+20 | 156.9622 | 46.36 | Q | V | | | |
| 20+25 | 157.2762 | 45.60 | Q | V | | | |
| 20+30 | 157.5852 | 44.87 | Q | V | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20+35 | 157.8894 | 44.17 | \|Q | \| | \| | \| | V \| |
| 20+40 | 158.1890 | 43.50 | \|Q | \| | \| | \| | V \| |
| 20+45 | 158.4841 | 42.85 | \|Q | \| | \| | \| | V \| |
| 20+50 | 158.7750 | 42.23 | \|Q | \| | \| | \| | V \| |
| 20+55 | 159.0618 | 41.64 | \|Q | \| | \| | \| | V \| |
| 21+ 0 | 159.3446 | 41.07 | \|Q | \| | \| | \| | V \| |
| 21+ 5 | 159.6236 | 40.51 | \|Q | \| | \| | \| | V \| |
| 21+10 | 159.8989 | 39.98 | \|Q | \| | \| | \| | V \| |
| 21+15 | 160.1707 | 39.46 | \|Q | \| | \| | \| | V \| |
| 21+20 | 160.4390 | 38.96 | \|Q | \| | \| | \| | V \| |
| 21+25 | 160.7039 | 38.47 | \|Q | \| | \| | \| | V \| |
| 21+30 | 160.9656 | 38.00 | \|Q | \| | \| | \| | V \| |
| 21+35 | 161.2242 | 37.54 | \|Q | \| | \| | \| | V \| |
| 21+40 | 161.4796 | 37.09 | \|Q | \| | \| | \| | V \| |
| 21+45 | 161.7321 | 36.66 | \|Q | \| | \| | \| | V \| |
| 21+50 | 161.9817 | 36.24 | \|Q | \| | \| | \| | V \| |
| 21+55 | 162.2285 | 35.83 | \|Q | \| | \| | \| | V \| |
| 22+ 0 | 162.4725 | 35.43 | \|Q | \| | \| | \| | V \| |
| 22+ 5 | 162.7138 | 35.04 | \|Q | \| | \| | \| | V \| |
| 22+10 | 162.9526 | 34.67 | \|Q | \| | \| | \| | V \| |
| 22+15 | 163.1888 | 34.30 | \|Q | \| | \| | \| | V \| |
| 22+20 | 163.4226 | 33.94 | \|Q | \| | \| | \| | V \| |
| 22+25 | 163.6539 | 33.59 | \|Q | \| | \| | \| | V \| |
| 22+30 | 163.8830 | 33.26 | \|Q | \| | \| | \| | V \| |
| 22+35 | 164.1097 | 32.92 | \|Q | \| | \| | \| | V \| |
| 22+40 | 164.3343 | 32.60 | \|Q | \| | \| | \| | V \| |
| 22+45 | 164.5566 | 32.29 | Q | \| | \| | \| | V \| |
| 22+50 | 164.7769 | 31.98 | Q | \| | \| | \| | V \| |
| 22+55 | 164.9950 | 31.68 | Q | \| | \| | \| | V\| |
| 23+ 0 | 165.2112 | 31.39 | Q | \| | \| | \| | V\| |
| 23+ 5 | 165.4254 | 31.10 | Q | \| | \| | \| | V\| |
| 23+10 | 165.6376 | 30.82 | Q | \| | \| | \| | V\| |
| 23+15 | 165.8480 | 30.54 | Q | \| | \| | \| | V\| |
| 23+20 | 166.0565 | 30.28 | Q | \| | \| | \| | V\| |
| 23+25 | 166.2632 | 30.01 | Q | \| | \| | \| | V\| |
| 23+30 | 166.4681 | 29.76 | Q | \| | \| | \| | V\| |
| 23+35 | 166.6713 | 29.51 | Q | \| | \| | \| | V\| |
| 23+40 | 166.8729 | 29.26 | Q | \| | \| | \| | V\| |
| 23+45 | 167.0727 | 29.02 | Q | \| | \| | \| | V\| |
| 23+50 | 167.2709 | 28.78 | Q | \| | \| | \| | V\| |
| 23+55 | 167.4676 | 28.55 | Q | \| | \| | \| | V\| |
| 24+ 0 | 167.6626 | 28.32 | Q | \| | \| | \| | V\| |
| 24+ 5 | 167.8543 | 27.83 | Q | \| | \| | \| | V\| |
| 24+10 | 168.0393 | 26.86 | Q | \| | \| | \| | V\| |
| 24+15 | 168.2150 | 25.51 | Q | \| | \| | \| | V\| |
| 24+20 | 168.3770 | 23.52 | Q | \| | \| | \| | V\| |
| 24+25 | 168.5182 | 20.50 | Q | \| | \| | \| | V\| |
| 24+30 | 168.6281 | 15.95 | Q | \| | \| | \| | V\| |
| 24+35 | 168.7111 | 12.05 | Q | \| | \| | \| | V\| |
| 24+40 | 168.7798 | 9.98 | Q | \| | \| | \| | V\| |
| 24+45 | 168.8380 | 8.45 | Q | \| | \| | \| | V\| |
| 24+50 | 168.8880 | 7.26 | Q | \| | \| | \| | V\| |
| 24+55 | 168.9309 | 6.23 | Q | \| | \| | \| | V\| |
| 25+ 0 | 168.9679 | 5.37 | Q | \| | \| | \| | V\| |
| 25+ 5 | 168.9999 | 4.65 | Q | \| | \| | \| | V\| |
| 25+10 | 169.0276 | 4.02 | Q | \| | \| | \| | V\| |
| 25+15 | 169.0514 | 3.46 | Q | \| | \| | \| | V\| |
| 25+20 | 169.0720 | 2.98 | Q | \| | \| | \| | V\| |
| 25+25 | 169.0896 | 2.56 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+30 | 169.1047 | 2.19 | Q | \| | \| | \| | V\| |
| 25+35 | 169.1176 | 1.87 | Q | \| | \| | \| | V\| |
| 25+40 | 169.1287 | 1.61 | Q | \| | \| | \| | V\| |
| 25+45 | 169.1381 | 1.37 | Q | \| | \| | \| | V\| |
| 25+50 | 169.1462 | 1.17 | Q | \| | \| | \| | V\| |
| 25+55 | 169.1530 | 1.00 | Q | \| | \| | \| | V\| |
| 26+ 0 | 169.1589 | 0.86 | Q | \| | \| | \| | V\| |
| 26+ 5 | 169.1642 | 0.77 | Q | \| | \| | \| | V\| |
| 26+10 | 169.1689 | 0.68 | Q | \| | \| | \| | V\| |
| 26+15 | 169.1730 | 0.60 | Q | \| | \| | \| | V\| |
| 26+20 | 169.1767 | 0.53 | Q | \| | \| | \| | V\| |
| 26+25 | 169.1799 | 0.47 | Q | \| | \| | \| | V\| |
| 26+30 | 169.1827 | 0.41 | Q | \| | \| | \| | V\| |
| 26+35 | 169.1852 | 0.36 | Q | \| | \| | \| | V\| |
| 26+40 | 169.1874 | 0.32 | Q | \| | \| | \| | V\| |
| 26+45 | 169.1893 | 0.28 | Q | \| | \| | \| | V\| |
| 26+50 | 169.1909 | 0.24 | Q | \| | \| | \| | V\| |
| 26+55 | 169.1922 | 0.20 | Q | \| | \| | \| | V\| |
| 27+ 0 | 169.1933 | 0.16 | Q | \| | \| | \| | V\| |
| 27+ 5 | 169.1943 | 0.13 | Q | \| | \| | \| | V\| |
| 27+10 | 169.1950 | 0.10 | Q | \| | \| | \| | V\| |
| 27+15 | 169.1955 | 0.08 | Q | \| | \| | \| | V\| |
| 27+20 | 169.1959 | 0.06 | Q | \| | \| | \| | V\| |
| 27+25 | 169.1962 | 0.04 | Q | \| | \| | \| | V\| |
| 27+30 | 169.1963 | 0.03 | Q | \| | \| | \| | V\| |
| 27+35 | 169.1965 | 0.02 | Q | \| | \| | \| | V\| |
| 27+40 | 169.1965 | 0.01 | Q | \| | \| | \| | V\| |
| 27+45 | 169.1966 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 08/10/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREA "K"
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-10-17

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Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 6161.64 | 1 | 1.44 |
| Rainfall data for year 100 | | |
| 6161.64 | 6 | 2.39 |
| Rainfall data for year 100 | | |
| 6161.64 | 24 | 3.73 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 81.2 | 94.7 | 6161.64 | 1.000 | 0.103 | 0.993 | 0.102 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.102

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 6118.51 | 0.993 | 81.2 | 94.7 | 0.55 | 0.841 |
| 43.13 | 0.007 | 98.0 | 98.0 | 0.20 | 0.937 |

Area-averaged catchment yield fraction, Y = 0.842
Area-averaged low loss fraction, Yb = 0.158
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 39200.00(Ft.)
Length from concentration point to centroid = 25007.00(Ft.)
Elevation difference along watercourse = 2675.00(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 6161.64(Ac.)
Catchment Lag time = 1.062 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 7.8487
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.102(In/Hr)
Average low loss rate fraction (Yb) = 0.158 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.600
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.400

Computed peak 5-minute rainfall = 0.681(In)
Computed peak 30-minute rainfall = 1.166(In)
Specified peak 1-hour rainfall = 1.436(In)
Computed peak 3-hour rainfall = 1.960(In)
Specified peak 6-hour rainfall = 2.386(In)
Specified peak 24-hour rainfall = 3.735(In)

Rainfall depth area reduction factors:
Using a total area of 6161.64(Ac.) (Ref: fig. E-4)

5-minute factor = 0.753 Adjusted rainfall = 0.513(In)
30-minute factor = 0.753 Adjusted rainfall = 0.878(In)
1-hour factor = 0.753 Adjusted rainfall = 1.081(In)
3-hour factor = 0.965 Adjusted rainfall = 1.892(In)
6-hour factor = 0.983 Adjusted rainfall = 2.344(In)
24-hour factor = 0.991 Adjusted rainfall = 3.703(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 74517.33 (CFS)) | |
| 1 | 0.436 | 325.184 |
| 2 | 1.331 | 666.775 |
| 3 | 2.585 | 934.652 |
| 4 | 4.138 | 1156.833 |
| 5 | 5.998 | 1386.456 |

| | | |
|---|---|---|
| 6 | 8.287 | 1705.054 |
| 7 | 10.958 | 1990.876 |
| 8 | 14.661 | 2759.139 |
| 9 | 19.594 | 3675.826 |
| 10 | 25.275 | 4233.221 |
| 11 | 31.345 | 4523.299 |
| 12 | 38.703 | 5483.253 |
| 13 | 47.868 | 6829.032 |
| 14 | 53.705 | 4350.222 |
| 15 | 57.967 | 3175.737 |
| 16 | 61.361 | 2528.829 |
| 17 | 64.299 | 2189.278 |
| 18 | 66.890 | 1930.797 |
| 19 | 69.198 | 1720.112 |
| 20 | 71.262 | 1538.315 |
| 21 | 73.124 | 1387.064 |
| 22 | 74.894 | 1319.253 |
| 23 | 76.554 | 1237.047 |
| 24 | 77.987 | 1067.823 |
| 25 | 79.391 | 1046.118 |
| 26 | 80.745 | 1008.584 |
| 27 | 81.872 | 840.216 |
| 28 | 82.965 | 814.129 |
| 29 | 84.047 | 806.357 |
| 30 | 84.993 | 705.008 |
| 31 | 85.897 | 673.762 |
| 32 | 86.800 | 672.540 |
| 33 | 87.608 | 602.272 |
| 34 | 88.361 | 561.468 |
| 35 | 89.115 | 561.468 |
| 36 | 89.810 | 518.143 |
| 37 | 90.438 | 467.957 |
| 38 | 91.066 | 467.890 |
| 39 | 91.652 | 436.816 |
| 40 | 92.145 | 367.513 |
| 41 | 92.635 | 364.954 |
| 42 | 93.110 | 353.485 |
| 43 | 93.519 | 304.908 |
| 44 | 93.921 | 299.450 |
| 45 | 94.317 | 295.584 |
| 46 | 94.667 | 260.901 |
| 47 | 95.006 | 252.661 |
| 48 | 95.344 | 251.401 |
| 49 | 95.635 | 216.798 |
| 50 | 95.905 | 201.193 |
| 51 | 96.175 | 201.141 |
| 52 | 96.388 | 158.608 |
| 53 | 96.551 | 121.651 |
| 54 | 96.714 | 121.651 |
| 55 | 96.877 | 121.651 |
| 56 | 97.041 | 121.651 |
| 57 | 97.204 | 121.651 |
| 58 | 97.359 | 115.952 |
| 59 | 97.490 | 97.357 |
| 60 | 97.619 | 95.918 |
| 61 | 97.747 | 95.918 |
| 62 | 97.876 | 95.918 |
| 63 | 98.005 | 95.918 |
| 64 | 98.132 | 94.492 |

| | | |
|---|---|---|
| 65 | 98.227 | 71.304 |
| 66 | 98.312 | 63.165 |
| 67 | 98.397 | 63.165 |
| 68 | 98.482 | 63.165 |
| 69 | 98.566 | 63.165 |
| 70 | 98.651 | 63.165 |
| 71 | 98.729 | 58.166 |
| 72 | 98.798 | 51.501 |
| 73 | 98.867 | 51.468 |
| 74 | 98.937 | 51.468 |
| 75 | 99.006 | 51.468 |
| 76 | 99.075 | 51.468 |
| 77 | 99.142 | 50.032 |
| 78 | 99.200 | 43.041 |
| 79 | 99.256 | 42.110 |
| 80 | 99.313 | 42.110 |
| 81 | 99.369 | 42.110 |
| 82 | 99.426 | 42.110 |
| 83 | 99.482 | 41.992 |
| 84 | 99.532 | 37.431 |
| 85 | 99.579 | 35.092 |
| 86 | 99.626 | 35.092 |
| 87 | 99.673 | 35.092 |
| 88 | 99.721 | 35.092 |
| 89 | 99.768 | 35.092 |
| 90 | 99.806 | 28.448 |
| 91 | 99.826 | 14.857 |
| 92 | 99.845 | 14.622 |
| 93 | 99.865 | 14.622 |
| 94 | 99.885 | 14.622 |
| 95 | 99.904 | 14.622 |
| 96 | 99.924 | 14.622 |
| 97 | 99.943 | 14.622 |
| 98 | 99.963 | 14.622 |
| 99 | 99.983 | 14.622 |
| 100 | 100.000 | 12.863 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5130 | 0.5130 |
| 2 | 0.6315 | 0.1186 |
| 3 | 0.7132 | 0.0817 |
| 4 | 0.7775 | 0.0643 |
| 5 | 0.8313 | 0.0538 |
| 6 | 0.8781 | 0.0467 |
| 7 | 0.9196 | 0.0416 |
| 8 | 0.9572 | 0.0376 |
| 9 | 0.9917 | 0.0344 |
| 10 | 1.0235 | 0.0318 |
| 11 | 1.0532 | 0.0297 |
| 12 | 1.0811 | 0.0279 |
| 13 | 1.1261 | 0.0450 |
| 14 | 1.1694 | 0.0433 |
| 15 | 1.2113 | 0.0419 |
| 16 | 1.2518 | 0.0405 |
| 17 | 1.2910 | 0.0393 |
| 18 | 1.3292 | 0.0382 |
| 19 | 1.3663 | 0.0371 |
| 20 | 1.4025 | 0.0362 |

| | | |
|---|---|---|
| 21 | 1.4378 | 0.0353 |
| 22 | 1.4723 | 0.0345 |
| 23 | 1.5061 | 0.0337 |
| 24 | 1.5391 | 0.0330 |
| 25 | 1.5715 | 0.0324 |
| 26 | 1.6032 | 0.0317 |
| 27 | 1.6343 | 0.0311 |
| 28 | 1.6649 | 0.0306 |
| 29 | 1.6949 | 0.0300 |
| 30 | 1.7245 | 0.0295 |
| 31 | 1.7535 | 0.0291 |
| 32 | 1.7821 | 0.0286 |
| 33 | 1.8103 | 0.0282 |
| 34 | 1.8381 | 0.0278 |
| 35 | 1.8654 | 0.0274 |
| 36 | 1.8924 | 0.0270 |
| 37 | 1.9085 | 0.0161 |
| 38 | 1.9243 | 0.0158 |
| 39 | 1.9398 | 0.0155 |
| 40 | 1.9550 | 0.0152 |
| 41 | 1.9700 | 0.0150 |
| 42 | 1.9847 | 0.0147 |
| 43 | 1.9992 | 0.0145 |
| 44 | 2.0135 | 0.0143 |
| 45 | 2.0275 | 0.0140 |
| 46 | 2.0413 | 0.0138 |
| 47 | 2.0549 | 0.0136 |
| 48 | 2.0683 | 0.0134 |
| 49 | 2.0816 | 0.0132 |
| 50 | 2.0946 | 0.0130 |
| 51 | 2.1075 | 0.0129 |
| 52 | 2.1202 | 0.0127 |
| 53 | 2.1327 | 0.0125 |
| 54 | 2.1450 | 0.0124 |
| 55 | 2.1572 | 0.0122 |
| 56 | 2.1693 | 0.0120 |
| 57 | 2.1812 | 0.0119 |
| 58 | 2.1929 | 0.0118 |
| 59 | 2.2045 | 0.0116 |
| 60 | 2.2160 | 0.0115 |
| 61 | 2.2274 | 0.0113 |
| 62 | 2.2386 | 0.0112 |
| 63 | 2.2497 | 0.0111 |
| 64 | 2.2607 | 0.0110 |
| 65 | 2.2715 | 0.0109 |
| 66 | 2.2823 | 0.0107 |
| 67 | 2.2929 | 0.0106 |
| 68 | 2.3034 | 0.0105 |
| 69 | 2.3138 | 0.0104 |
| 70 | 2.3242 | 0.0103 |
| 71 | 2.3344 | 0.0102 |
| 72 | 2.3445 | 0.0101 |
| 73 | 2.3552 | 0.0107 |
| 74 | 2.3657 | 0.0106 |
| 75 | 2.3762 | 0.0105 |
| 76 | 2.3866 | 0.0104 |
| 77 | 2.3969 | 0.0103 |
| 78 | 2.4072 | 0.0102 |
| 79 | 2.4173 | 0.0101 |

| | | |
|---|---|---|
| 80 | 2.4273 | 0.0100 |
| 81 | 2.4373 | 0.0100 |
| 82 | 2.4472 | 0.0099 |
| 83 | 2.4570 | 0.0098 |
| 84 | 2.4667 | 0.0097 |
| 85 | 2.4763 | 0.0096 |
| 86 | 2.4859 | 0.0096 |
| 87 | 2.4954 | 0.0095 |
| 88 | 2.5048 | 0.0094 |
| 89 | 2.5142 | 0.0093 |
| 90 | 2.5234 | 0.0093 |
| 91 | 2.5327 | 0.0092 |
| 92 | 2.5418 | 0.0091 |
| 93 | 2.5509 | 0.0091 |
| 94 | 2.5599 | 0.0090 |
| 95 | 2.5688 | 0.0089 |
| 96 | 2.5777 | 0.0089 |
| 97 | 2.5865 | 0.0088 |
| 98 | 2.5953 | 0.0088 |
| 99 | 2.6040 | 0.0087 |
| 100 | 2.6126 | 0.0086 |
| 101 | 2.6212 | 0.0086 |
| 102 | 2.6297 | 0.0085 |
| 103 | 2.6382 | 0.0085 |
| 104 | 2.6466 | 0.0084 |
| 105 | 2.6550 | 0.0084 |
| 106 | 2.6633 | 0.0083 |
| 107 | 2.6716 | 0.0083 |
| 108 | 2.6798 | 0.0082 |
| 109 | 2.6879 | 0.0082 |
| 110 | 2.6960 | 0.0081 |
| 111 | 2.7041 | 0.0081 |
| 112 | 2.7121 | 0.0080 |
| 113 | 2.7201 | 0.0080 |
| 114 | 2.7280 | 0.0079 |
| 115 | 2.7358 | 0.0079 |
| 116 | 2.7437 | 0.0078 |
| 117 | 2.7514 | 0.0078 |
| 118 | 2.7592 | 0.0077 |
| 119 | 2.7668 | 0.0077 |
| 120 | 2.7745 | 0.0076 |
| 121 | 2.7821 | 0.0076 |
| 122 | 2.7896 | 0.0076 |
| 123 | 2.7972 | 0.0075 |
| 124 | 2.8046 | 0.0075 |
| 125 | 2.8121 | 0.0074 |
| 126 | 2.8195 | 0.0074 |
| 127 | 2.8268 | 0.0074 |
| 128 | 2.8342 | 0.0073 |
| 129 | 2.8414 | 0.0073 |
| 130 | 2.8487 | 0.0072 |
| 131 | 2.8559 | 0.0072 |
| 132 | 2.8630 | 0.0072 |
| 133 | 2.8702 | 0.0071 |
| 134 | 2.8773 | 0.0071 |
| 135 | 2.8843 | 0.0071 |
| 136 | 2.8914 | 0.0070 |
| 137 | 2.8984 | 0.0070 |
| 138 | 2.9053 | 0.0070 |

| | | |
|---|---|---|
| 139 | 2.9122 | 0.0069 |
| 140 | 2.9191 | 0.0069 |
| 141 | 2.9260 | 0.0069 |
| 142 | 2.9328 | 0.0068 |
| 143 | 2.9396 | 0.0068 |
| 144 | 2.9464 | 0.0068 |
| 145 | 2.9531 | 0.0067 |
| 146 | 2.9598 | 0.0067 |
| 147 | 2.9665 | 0.0067 |
| 148 | 2.9731 | 0.0066 |
| 149 | 2.9797 | 0.0066 |
| 150 | 2.9863 | 0.0066 |
| 151 | 2.9928 | 0.0065 |
| 152 | 2.9994 | 0.0065 |
| 153 | 3.0058 | 0.0065 |
| 154 | 3.0123 | 0.0065 |
| 155 | 3.0187 | 0.0064 |
| 156 | 3.0251 | 0.0064 |
| 157 | 3.0315 | 0.0064 |
| 158 | 3.0379 | 0.0064 |
| 159 | 3.0442 | 0.0063 |
| 160 | 3.0505 | 0.0063 |
| 161 | 3.0568 | 0.0063 |
| 162 | 3.0630 | 0.0062 |
| 163 | 3.0692 | 0.0062 |
| 164 | 3.0754 | 0.0062 |
| 165 | 3.0816 | 0.0062 |
| 166 | 3.0878 | 0.0061 |
| 167 | 3.0939 | 0.0061 |
| 168 | 3.1000 | 0.0061 |
| 169 | 3.1060 | 0.0061 |
| 170 | 3.1121 | 0.0060 |
| 171 | 3.1181 | 0.0060 |
| 172 | 3.1241 | 0.0060 |
| 173 | 3.1301 | 0.0060 |
| 174 | 3.1360 | 0.0060 |
| 175 | 3.1420 | 0.0059 |
| 176 | 3.1479 | 0.0059 |
| 177 | 3.1538 | 0.0059 |
| 178 | 3.1596 | 0.0059 |
| 179 | 3.1655 | 0.0058 |
| 180 | 3.1713 | 0.0058 |
| 181 | 3.1771 | 0.0058 |
| 182 | 3.1829 | 0.0058 |
| 183 | 3.1886 | 0.0058 |
| 184 | 3.1943 | 0.0057 |
| 185 | 3.2001 | 0.0057 |
| 186 | 3.2057 | 0.0057 |
| 187 | 3.2114 | 0.0057 |
| 188 | 3.2171 | 0.0057 |
| 189 | 3.2227 | 0.0056 |
| 190 | 3.2283 | 0.0056 |
| 191 | 3.2339 | 0.0056 |
| 192 | 3.2395 | 0.0056 |
| 193 | 3.2450 | 0.0056 |
| 194 | 3.2506 | 0.0055 |
| 195 | 3.2561 | 0.0055 |
| 196 | 3.2616 | 0.0055 |
| 197 | 3.2671 | 0.0055 |

| | | |
|---|---|---|
| 198 | 3.2725 | 0.0055 |
| 199 | 3.2779 | 0.0054 |
| 200 | 3.2834 | 0.0054 |
| 201 | 3.2888 | 0.0054 |
| 202 | 3.2942 | 0.0054 |
| 203 | 3.2995 | 0.0054 |
| 204 | 3.3049 | 0.0053 |
| 205 | 3.3102 | 0.0053 |
| 206 | 3.3155 | 0.0053 |
| 207 | 3.3208 | 0.0053 |
| 208 | 3.3261 | 0.0053 |
| 209 | 3.3314 | 0.0053 |
| 210 | 3.3366 | 0.0052 |
| 211 | 3.3418 | 0.0052 |
| 212 | 3.3471 | 0.0052 |
| 213 | 3.3522 | 0.0052 |
| 214 | 3.3574 | 0.0052 |
| 215 | 3.3626 | 0.0052 |
| 216 | 3.3677 | 0.0051 |
| 217 | 3.3729 | 0.0051 |
| 218 | 3.3780 | 0.0051 |
| 219 | 3.3831 | 0.0051 |
| 220 | 3.3882 | 0.0051 |
| 221 | 3.3932 | 0.0051 |
| 222 | 3.3983 | 0.0051 |
| 223 | 3.4033 | 0.0050 |
| 224 | 3.4084 | 0.0050 |
| 225 | 3.4134 | 0.0050 |
| 226 | 3.4184 | 0.0050 |
| 227 | 3.4233 | 0.0050 |
| 228 | 3.4283 | 0.0050 |
| 229 | 3.4333 | 0.0049 |
| 230 | 3.4382 | 0.0049 |
| 231 | 3.4431 | 0.0049 |
| 232 | 3.4480 | 0.0049 |
| 233 | 3.4529 | 0.0049 |
| 234 | 3.4578 | 0.0049 |
| 235 | 3.4627 | 0.0049 |
| 236 | 3.4675 | 0.0049 |
| 237 | 3.4723 | 0.0048 |
| 238 | 3.4772 | 0.0048 |
| 239 | 3.4820 | 0.0048 |
| 240 | 3.4868 | 0.0048 |
| 241 | 3.4916 | 0.0048 |
| 242 | 3.4963 | 0.0048 |
| 243 | 3.5011 | 0.0048 |
| 244 | 3.5058 | 0.0047 |
| 245 | 3.5106 | 0.0047 |
| 246 | 3.5153 | 0.0047 |
| 247 | 3.5200 | 0.0047 |
| 248 | 3.5247 | 0.0047 |
| 249 | 3.5293 | 0.0047 |
| 250 | 3.5340 | 0.0047 |
| 251 | 3.5387 | 0.0047 |
| 252 | 3.5433 | 0.0046 |
| 253 | 3.5479 | 0.0046 |
| 254 | 3.5526 | 0.0046 |
| 255 | 3.5572 | 0.0046 |
| 256 | 3.5618 | 0.0046 |

| | | |
|---|---|---|
| 257 | 3.5663 | 0.0046 |
| 258 | 3.5709 | 0.0046 |
| 259 | 3.5755 | 0.0046 |
| 260 | 3.5800 | 0.0045 |
| 261 | 3.5845 | 0.0045 |
| 262 | 3.5891 | 0.0045 |
| 263 | 3.5936 | 0.0045 |
| 264 | 3.5981 | 0.0045 |
| 265 | 3.6026 | 0.0045 |
| 266 | 3.6070 | 0.0045 |
| 267 | 3.6115 | 0.0045 |
| 268 | 3.6160 | 0.0045 |
| 269 | 3.6204 | 0.0044 |
| 270 | 3.6248 | 0.0044 |
| 271 | 3.6292 | 0.0044 |
| 272 | 3.6337 | 0.0044 |
| 273 | 3.6381 | 0.0044 |
| 274 | 3.6424 | 0.0044 |
| 275 | 3.6468 | 0.0044 |
| 276 | 3.6512 | 0.0044 |
| 277 | 3.6555 | 0.0044 |
| 278 | 3.6599 | 0.0043 |
| 279 | 3.6642 | 0.0043 |
| 280 | 3.6685 | 0.0043 |
| 281 | 3.6729 | 0.0043 |
| 282 | 3.6772 | 0.0043 |
| 283 | 3.6815 | 0.0043 |
| 284 | 3.6857 | 0.0043 |
| 285 | 3.6900 | 0.0043 |
| 286 | 3.6943 | 0.0043 |
| 287 | 3.6985 | 0.0043 |
| 288 | 3.7028 | 0.0042 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0042 | 0.0007 | 0.0036 |
| 2 | 0.0043 | 0.0007 | 0.0036 |
| 3 | 0.0043 | 0.0007 | 0.0036 |
| 4 | 0.0043 | 0.0007 | 0.0036 |
| 5 | 0.0043 | 0.0007 | 0.0036 |
| 6 | 0.0043 | 0.0007 | 0.0036 |
| 7 | 0.0043 | 0.0007 | 0.0037 |
| 8 | 0.0043 | 0.0007 | 0.0037 |
| 9 | 0.0044 | 0.0007 | 0.0037 |
| 10 | 0.0044 | 0.0007 | 0.0037 |
| 11 | 0.0044 | 0.0007 | 0.0037 |
| 12 | 0.0044 | 0.0007 | 0.0037 |
| 13 | 0.0044 | 0.0007 | 0.0037 |
| 14 | 0.0044 | 0.0007 | 0.0037 |
| 15 | 0.0045 | 0.0007 | 0.0038 |
| 16 | 0.0045 | 0.0007 | 0.0038 |
| 17 | 0.0045 | 0.0007 | 0.0038 |
| 18 | 0.0045 | 0.0007 | 0.0038 |
| 19 | 0.0045 | 0.0007 | 0.0038 |
| 20 | 0.0045 | 0.0007 | 0.0038 |
| 21 | 0.0046 | 0.0007 | 0.0038 |
| 22 | 0.0046 | 0.0007 | 0.0039 |

| | | | |
|---|---|---|---|
| 23 | 0.0046 | 0.0007 | 0.0039 |
| 24 | 0.0046 | 0.0007 | 0.0039 |
| 25 | 0.0046 | 0.0007 | 0.0039 |
| 26 | 0.0047 | 0.0007 | 0.0039 |
| 27 | 0.0047 | 0.0007 | 0.0039 |
| 28 | 0.0047 | 0.0007 | 0.0040 |
| 29 | 0.0047 | 0.0007 | 0.0040 |
| 30 | 0.0047 | 0.0007 | 0.0040 |
| 31 | 0.0048 | 0.0008 | 0.0040 |
| 32 | 0.0048 | 0.0008 | 0.0040 |
| 33 | 0.0048 | 0.0008 | 0.0040 |
| 34 | 0.0048 | 0.0008 | 0.0041 |
| 35 | 0.0048 | 0.0008 | 0.0041 |
| 36 | 0.0049 | 0.0008 | 0.0041 |
| 37 | 0.0049 | 0.0008 | 0.0041 |
| 38 | 0.0049 | 0.0008 | 0.0041 |
| 39 | 0.0049 | 0.0008 | 0.0041 |
| 40 | 0.0049 | 0.0008 | 0.0042 |
| 41 | 0.0050 | 0.0008 | 0.0042 |
| 42 | 0.0050 | 0.0008 | 0.0042 |
| 43 | 0.0050 | 0.0008 | 0.0042 |
| 44 | 0.0050 | 0.0008 | 0.0042 |
| 45 | 0.0051 | 0.0008 | 0.0043 |
| 46 | 0.0051 | 0.0008 | 0.0043 |
| 47 | 0.0051 | 0.0008 | 0.0043 |
| 48 | 0.0051 | 0.0008 | 0.0043 |
| 49 | 0.0051 | 0.0008 | 0.0043 |
| 50 | 0.0052 | 0.0008 | 0.0043 |
| 51 | 0.0052 | 0.0008 | 0.0044 |
| 52 | 0.0052 | 0.0008 | 0.0044 |
| 53 | 0.0052 | 0.0008 | 0.0044 |
| 54 | 0.0053 | 0.0008 | 0.0044 |
| 55 | 0.0053 | 0.0008 | 0.0045 |
| 56 | 0.0053 | 0.0008 | 0.0045 |
| 57 | 0.0053 | 0.0008 | 0.0045 |
| 58 | 0.0054 | 0.0008 | 0.0045 |
| 59 | 0.0054 | 0.0009 | 0.0046 |
| 60 | 0.0054 | 0.0009 | 0.0046 |
| 61 | 0.0055 | 0.0009 | 0.0046 |
| 62 | 0.0055 | 0.0009 | 0.0046 |
| 63 | 0.0055 | 0.0009 | 0.0046 |
| 64 | 0.0055 | 0.0009 | 0.0047 |
| 65 | 0.0056 | 0.0009 | 0.0047 |
| 66 | 0.0056 | 0.0009 | 0.0047 |
| 67 | 0.0056 | 0.0009 | 0.0047 |
| 68 | 0.0057 | 0.0009 | 0.0048 |
| 69 | 0.0057 | 0.0009 | 0.0048 |
| 70 | 0.0057 | 0.0009 | 0.0048 |
| 71 | 0.0058 | 0.0009 | 0.0048 |
| 72 | 0.0058 | 0.0009 | 0.0049 |
| 73 | 0.0058 | 0.0009 | 0.0049 |
| 74 | 0.0058 | 0.0009 | 0.0049 |
| 75 | 0.0059 | 0.0009 | 0.0050 |
| 76 | 0.0059 | 0.0009 | 0.0050 |
| 77 | 0.0060 | 0.0009 | 0.0050 |
| 78 | 0.0060 | 0.0009 | 0.0050 |
| 79 | 0.0060 | 0.0010 | 0.0051 |
| 80 | 0.0060 | 0.0010 | 0.0051 |
| 81 | 0.0061 | 0.0010 | 0.0051 |

| | | | |
|---|---|---|---|
| 82 | 0.0061 | 0.0010 | 0.0052 |
| 83 | 0.0062 | 0.0010 | 0.0052 |
| 84 | 0.0062 | 0.0010 | 0.0052 |
| 85 | 0.0062 | 0.0010 | 0.0053 |
| 86 | 0.0063 | 0.0010 | 0.0053 |
| 87 | 0.0063 | 0.0010 | 0.0053 |
| 88 | 0.0064 | 0.0010 | 0.0053 |
| 89 | 0.0064 | 0.0010 | 0.0054 |
| 90 | 0.0064 | 0.0010 | 0.0054 |
| 91 | 0.0065 | 0.0010 | 0.0055 |
| 92 | 0.0065 | 0.0010 | 0.0055 |
| 93 | 0.0066 | 0.0010 | 0.0055 |
| 94 | 0.0066 | 0.0010 | 0.0056 |
| 95 | 0.0067 | 0.0011 | 0.0056 |
| 96 | 0.0067 | 0.0011 | 0.0056 |
| 97 | 0.0068 | 0.0011 | 0.0057 |
| 98 | 0.0068 | 0.0011 | 0.0057 |
| 99 | 0.0069 | 0.0011 | 0.0058 |
| 100 | 0.0069 | 0.0011 | 0.0058 |
| 101 | 0.0070 | 0.0011 | 0.0059 |
| 102 | 0.0070 | 0.0011 | 0.0059 |
| 103 | 0.0071 | 0.0011 | 0.0059 |
| 104 | 0.0071 | 0.0011 | 0.0060 |
| 105 | 0.0072 | 0.0011 | 0.0060 |
| 106 | 0.0072 | 0.0011 | 0.0061 |
| 107 | 0.0073 | 0.0011 | 0.0061 |
| 108 | 0.0073 | 0.0012 | 0.0062 |
| 109 | 0.0074 | 0.0012 | 0.0062 |
| 110 | 0.0074 | 0.0012 | 0.0063 |
| 111 | 0.0075 | 0.0012 | 0.0063 |
| 112 | 0.0076 | 0.0012 | 0.0064 |
| 113 | 0.0076 | 0.0012 | 0.0064 |
| 114 | 0.0077 | 0.0012 | 0.0065 |
| 115 | 0.0078 | 0.0012 | 0.0065 |
| 116 | 0.0078 | 0.0012 | 0.0066 |
| 117 | 0.0079 | 0.0012 | 0.0067 |
| 118 | 0.0080 | 0.0013 | 0.0067 |
| 119 | 0.0081 | 0.0013 | 0.0068 |
| 120 | 0.0081 | 0.0013 | 0.0068 |
| 121 | 0.0082 | 0.0013 | 0.0069 |
| 122 | 0.0083 | 0.0013 | 0.0070 |
| 123 | 0.0084 | 0.0013 | 0.0070 |
| 124 | 0.0084 | 0.0013 | 0.0071 |
| 125 | 0.0085 | 0.0013 | 0.0072 |
| 126 | 0.0086 | 0.0014 | 0.0072 |
| 127 | 0.0087 | 0.0014 | 0.0073 |
| 128 | 0.0088 | 0.0014 | 0.0074 |
| 129 | 0.0089 | 0.0014 | 0.0075 |
| 130 | 0.0089 | 0.0014 | 0.0075 |
| 131 | 0.0091 | 0.0014 | 0.0076 |
| 132 | 0.0091 | 0.0014 | 0.0077 |
| 133 | 0.0093 | 0.0015 | 0.0078 |
| 134 | 0.0093 | 0.0015 | 0.0079 |
| 135 | 0.0095 | 0.0015 | 0.0080 |
| 136 | 0.0096 | 0.0015 | 0.0081 |
| 137 | 0.0097 | 0.0015 | 0.0082 |
| 138 | 0.0098 | 0.0015 | 0.0083 |
| 139 | 0.0100 | 0.0016 | 0.0084 |
| 140 | 0.0100 | 0.0016 | 0.0085 |

| | | | |
|---|---|---|---|
| 141 | 0.0102 | 0.0016 | 0.0086 |
| 142 | 0.0103 | 0.0016 | 0.0087 |
| 143 | 0.0105 | 0.0017 | 0.0088 |
| 144 | 0.0106 | 0.0017 | 0.0089 |
| 145 | 0.0101 | 0.0016 | 0.0085 |
| 146 | 0.0102 | 0.0016 | 0.0086 |
| 147 | 0.0104 | 0.0016 | 0.0088 |
| 148 | 0.0105 | 0.0017 | 0.0089 |
| 149 | 0.0107 | 0.0017 | 0.0090 |
| 150 | 0.0109 | 0.0017 | 0.0091 |
| 151 | 0.0111 | 0.0018 | 0.0093 |
| 152 | 0.0112 | 0.0018 | 0.0095 |
| 153 | 0.0115 | 0.0018 | 0.0097 |
| 154 | 0.0116 | 0.0018 | 0.0098 |
| 155 | 0.0119 | 0.0019 | 0.0100 |
| 156 | 0.0120 | 0.0019 | 0.0101 |
| 157 | 0.0124 | 0.0020 | 0.0104 |
| 158 | 0.0125 | 0.0020 | 0.0105 |
| 159 | 0.0129 | 0.0020 | 0.0108 |
| 160 | 0.0130 | 0.0021 | 0.0110 |
| 161 | 0.0134 | 0.0021 | 0.0113 |
| 162 | 0.0136 | 0.0021 | 0.0115 |
| 163 | 0.0140 | 0.0022 | 0.0118 |
| 164 | 0.0143 | 0.0023 | 0.0120 |
| 165 | 0.0147 | 0.0023 | 0.0124 |
| 166 | 0.0150 | 0.0024 | 0.0126 |
| 167 | 0.0155 | 0.0024 | 0.0131 |
| 168 | 0.0158 | 0.0025 | 0.0133 |
| 169 | 0.0270 | 0.0043 | 0.0227 |
| 170 | 0.0274 | 0.0043 | 0.0230 |
| 171 | 0.0282 | 0.0044 | 0.0237 |
| 172 | 0.0286 | 0.0045 | 0.0241 |
| 173 | 0.0295 | 0.0047 | 0.0249 |
| 174 | 0.0300 | 0.0047 | 0.0253 |
| 175 | 0.0311 | 0.0049 | 0.0262 |
| 176 | 0.0317 | 0.0050 | 0.0267 |
| 177 | 0.0330 | 0.0052 | 0.0278 |
| 178 | 0.0337 | 0.0053 | 0.0284 |
| 179 | 0.0353 | 0.0056 | 0.0297 |
| 180 | 0.0362 | 0.0057 | 0.0305 |
| 181 | 0.0382 | 0.0060 | 0.0321 |
| 182 | 0.0393 | 0.0062 | 0.0331 |
| 183 | 0.0419 | 0.0066 | 0.0352 |
| 184 | 0.0433 | 0.0068 | 0.0365 |
| 185 | 0.0279 | 0.0044 | 0.0235 |
| 186 | 0.0297 | 0.0047 | 0.0250 |
| 187 | 0.0344 | 0.0054 | 0.0290 |
| 188 | 0.0376 | 0.0059 | 0.0317 |
| 189 | 0.0467 | 0.0074 | 0.0394 |
| 190 | 0.0538 | 0.0085 | 0.0453 |
| 191 | 0.0817 | 0.0085 | 0.0732 |
| 192 | 0.1186 | 0.0085 | 0.1100 |
| 193 | 0.5130 | 0.0085 | 0.5044 |
| 194 | 0.0643 | 0.0085 | 0.0558 |
| 195 | 0.0416 | 0.0066 | 0.0350 |
| 196 | 0.0318 | 0.0050 | 0.0268 |
| 197 | 0.0450 | 0.0071 | 0.0379 |
| 198 | 0.0405 | 0.0064 | 0.0341 |
| 199 | 0.0371 | 0.0059 | 0.0313 |

| | | | |
|---|---|---|---|
| 200 | 0.0345 | 0.0054 | 0.0291 |
| 201 | 0.0324 | 0.0051 | 0.0272 |
| 202 | 0.0306 | 0.0048 | 0.0257 |
| 203 | 0.0291 | 0.0046 | 0.0245 |
| 204 | 0.0278 | 0.0044 | 0.0234 |
| 205 | 0.0161 | 0.0025 | 0.0136 |
| 206 | 0.0152 | 0.0024 | 0.0128 |
| 207 | 0.0145 | 0.0023 | 0.0122 |
| 208 | 0.0138 | 0.0022 | 0.0116 |
| 209 | 0.0132 | 0.0021 | 0.0111 |
| 210 | 0.0127 | 0.0020 | 0.0107 |
| 211 | 0.0122 | 0.0019 | 0.0103 |
| 212 | 0.0118 | 0.0019 | 0.0099 |
| 213 | 0.0113 | 0.0018 | 0.0096 |
| 214 | 0.0110 | 0.0017 | 0.0092 |
| 215 | 0.0106 | 0.0017 | 0.0090 |
| 216 | 0.0103 | 0.0016 | 0.0087 |
| 217 | 0.0107 | 0.0017 | 0.0090 |
| 218 | 0.0104 | 0.0016 | 0.0088 |
| 219 | 0.0101 | 0.0016 | 0.0085 |
| 220 | 0.0099 | 0.0016 | 0.0083 |
| 221 | 0.0096 | 0.0015 | 0.0081 |
| 222 | 0.0094 | 0.0015 | 0.0079 |
| 223 | 0.0092 | 0.0015 | 0.0078 |
| 224 | 0.0090 | 0.0014 | 0.0076 |
| 225 | 0.0088 | 0.0014 | 0.0074 |
| 226 | 0.0086 | 0.0014 | 0.0073 |
| 227 | 0.0085 | 0.0013 | 0.0071 |
| 228 | 0.0083 | 0.0013 | 0.0070 |
| 229 | 0.0082 | 0.0013 | 0.0069 |
| 230 | 0.0080 | 0.0013 | 0.0067 |
| 231 | 0.0079 | 0.0012 | 0.0066 |
| 232 | 0.0077 | 0.0012 | 0.0065 |
| 233 | 0.0076 | 0.0012 | 0.0064 |
| 234 | 0.0075 | 0.0012 | 0.0063 |
| 235 | 0.0074 | 0.0012 | 0.0062 |
| 236 | 0.0072 | 0.0011 | 0.0061 |
| 237 | 0.0071 | 0.0011 | 0.0060 |
| 238 | 0.0070 | 0.0011 | 0.0059 |
| 239 | 0.0069 | 0.0011 | 0.0058 |
| 240 | 0.0068 | 0.0011 | 0.0057 |
| 241 | 0.0067 | 0.0011 | 0.0057 |
| 242 | 0.0066 | 0.0010 | 0.0056 |
| 243 | 0.0065 | 0.0010 | 0.0055 |
| 244 | 0.0065 | 0.0010 | 0.0054 |
| 245 | 0.0064 | 0.0010 | 0.0054 |
| 246 | 0.0063 | 0.0010 | 0.0053 |
| 247 | 0.0062 | 0.0010 | 0.0052 |
| 248 | 0.0061 | 0.0010 | 0.0052 |
| 249 | 0.0061 | 0.0010 | 0.0051 |
| 250 | 0.0060 | 0.0009 | 0.0051 |
| 251 | 0.0059 | 0.0009 | 0.0050 |
| 252 | 0.0059 | 0.0009 | 0.0049 |
| 253 | 0.0058 | 0.0009 | 0.0049 |
| 254 | 0.0057 | 0.0009 | 0.0048 |
| 255 | 0.0057 | 0.0009 | 0.0048 |
| 256 | 0.0056 | 0.0009 | 0.0047 |
| 257 | 0.0056 | 0.0009 | 0.0047 |
| 258 | 0.0055 | 0.0009 | 0.0046 |

| | | | |
|---|---|---|---|
| 259 | 0.0054 | 0.0009 | 0.0046 |
| 260 | 0.0054 | 0.0009 | 0.0045 |
| 261 | 0.0053 | 0.0008 | 0.0045 |
| 262 | 0.0053 | 0.0008 | 0.0044 |
| 263 | 0.0052 | 0.0008 | 0.0044 |
| 264 | 0.0052 | 0.0008 | 0.0044 |
| 265 | 0.0051 | 0.0008 | 0.0043 |
| 266 | 0.0051 | 0.0008 | 0.0043 |
| 267 | 0.0050 | 0.0008 | 0.0042 |
| 268 | 0.0050 | 0.0008 | 0.0042 |
| 269 | 0.0049 | 0.0008 | 0.0042 |
| 270 | 0.0049 | 0.0008 | 0.0041 |
| 271 | 0.0049 | 0.0008 | 0.0041 |
| 272 | 0.0048 | 0.0008 | 0.0041 |
| 273 | 0.0048 | 0.0008 | 0.0040 |
| 274 | 0.0047 | 0.0007 | 0.0040 |
| 275 | 0.0047 | 0.0007 | 0.0040 |
| 276 | 0.0047 | 0.0007 | 0.0039 |
| 277 | 0.0046 | 0.0007 | 0.0039 |
| 278 | 0.0046 | 0.0007 | 0.0039 |
| 279 | 0.0046 | 0.0007 | 0.0038 |
| 280 | 0.0045 | 0.0007 | 0.0038 |
| 281 | 0.0045 | 0.0007 | 0.0038 |
| 282 | 0.0045 | 0.0007 | 0.0038 |
| 283 | 0.0044 | 0.0007 | 0.0037 |
| 284 | 0.0044 | 0.0007 | 0.0037 |
| 285 | 0.0044 | 0.0007 | 0.0037 |
| 286 | 0.0043 | 0.0007 | 0.0036 |
| 287 | 0.0043 | 0.0007 | 0.0036 |
| 288 | 0.0043 | 0.0007 | 0.0036 |

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Total soil rain loss = 0.50(In)
Total effective rainfall = 3.21(In)
Peak flow rate in flood hydrograph = 6025.95(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 1525.0 | 3050.0 | 4575.0 | 6100.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0080 | 1.16 | Q | \| | \| | \| | \| |
| 0+10 | 0.0324 | 3.55 | Q | \| | \| | \| | \| |
| 0+15 | 0.0799 | 6.90 | Q | \| | \| | \| | \| |
| 0+20 | 0.1561 | 11.05 | Q | \| | \| | \| | \| |
| 0+25 | 0.2666 | 16.05 | Q | \| | \| | \| | \| |
| 0+30 | 0.4194 | 22.19 | Q | \| | \| | \| | \| |
| 0+35 | 0.6218 | 29.38 | Q | \| | \| | \| | \| |
| 0+40 | 0.8927 | 39.34 | Q | \| | \| | \| | \| |
| 0+45 | 1.2551 | 52.61 | Q | \| | \| | \| | \| |
| 0+50 | 1.7228 | 67.92 | Q | \| | \| | \| | \| |
| 0+55 | 2.3035 | 84.32 | Q | \| | \| | \| | \| |
| 1+ 0 | 3.0212 | 104.20 | Q | \| | \| | \| | \| |
| 1+ 5 | 3.9094 | 128.97 | Q | \| | \| | \| | \| |
| 1+10 | 4.9077 | 144.96 | Q | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 1+15 | 5.9877 | 156.82 | VQ | \| | \| | \| | \| |
| 1+20 | 7.1338 | 166.41 | VQ | \| | \| | \| | \| |
| 1+25 | 8.3380 | 174.84 | VQ | \| | \| | \| | \| |
| 1+30 | 9.5939 | 182.36 | VQ | \| | \| | \| | \| |
| 1+35 | 10.8968 | 189.18 | VQ | \| | \| | \| | \| |
| 1+40 | 12.2422 | 195.36 | VQ | \| | \| | \| | \| |
| 1+45 | 13.6267 | 201.03 | VQ | \| | \| | \| | \| |
| 1+50 | 15.0488 | 206.48 | VQ | \| | \| | \| | \| |
| 1+55 | 16.5065 | 211.67 | VQ | \| | \| | \| | \| |
| 2+ 0 | 17.9960 | 216.26 | VQ | \| | \| | \| | \| |
| 2+ 5 | 19.5167 | 220.81 | VQ | \| | \| | \| | \| |
| 2+10 | 21.0679 | 225.24 | VQ | \| | \| | \| | \| |
| 2+15 | 22.6457 | 229.09 | VQ | \| | \| | \| | \| |
| 2+20 | 24.2494 | 232.86 | VQ | \| | \| | \| | \| |
| 2+25 | 25.8791 | 236.63 | VQ | \| | \| | \| | \| |
| 2+30 | 27.5324 | 240.05 | VQ | \| | \| | \| | \| |
| 2+35 | 29.2086 | 243.38 | VQ | \| | \| | \| | \| |
| 2+40 | 30.9077 | 246.72 | VQ | \| | \| | \| | \| |
| 2+45 | 32.6284 | 249.83 | VQ | \| | \| | \| | \| |
| 2+50 | 34.3694 | 252.81 | VQ | \| | \| | \| | \| |
| 2+55 | 36.1312 | 255.81 | VQ | \| | \| | \| | \| |
| 3+ 0 | 37.9126 | 258.66 | VQ | \| | \| | \| | \| |
| 3+ 5 | 39.7126 | 261.36 | VQ | \| | \| | \| | \| |
| 3+10 | 41.5312 | 264.06 | \|Q | \| | \| | \| | \| |
| 3+15 | 43.3679 | 266.69 | \|Q | \| | \| | \| | \| |
| 3+20 | 45.2210 | 269.06 | \|Q | \| | \| | \| | \| |
| 3+25 | 47.0905 | 271.46 | \|Q | \| | \| | \| | \| |
| 3+30 | 48.9764 | 273.82 | \|Q | \| | \| | \| | \| |
| 3+35 | 50.8774 | 276.03 | \|Q | \| | \| | \| | \| |
| 3+40 | 52.7936 | 278.23 | \|Q | \| | \| | \| | \| |
| 3+45 | 54.7250 | 280.44 | \|Q | \| | \| | \| | \| |
| 3+50 | 56.6709 | 282.53 | \|Q | \| | \| | \| | \| |
| 3+55 | 58.6311 | 284.62 | \|Q | \| | \| | \| | \| |
| 4+ 0 | 60.6056 | 286.71 | \|Q | \| | \| | \| | \| |
| 4+ 5 | 62.5940 | 288.70 | \|Q | \| | \| | \| | \| |
| 4+10 | 64.5956 | 290.64 | \|Q | \| | \| | \| | \| |
| 4+15 | 66.6108 | 292.61 | \|Q | \| | \| | \| | \| |
| 4+20 | 68.6386 | 294.43 | \|Q | \| | \| | \| | \| |
| 4+25 | 70.6781 | 296.14 | \|Q | \| | \| | \| | \| |
| 4+30 | 72.7295 | 297.86 | \|Q | \| | \| | \| | \| |
| 4+35 | 74.7929 | 299.61 | \|Q | \| | \| | \| | \| |
| 4+40 | 76.8684 | 301.36 | \|Q | \| | \| | \| | \| |
| 4+45 | 78.9561 | 303.14 | \|Q | \| | \| | \| | \| |
| 4+50 | 81.0559 | 304.90 | \|Q | \| | \| | \| | \| |
| 4+55 | 83.1677 | 306.62 | \| Q | \| | \| | \| | \| |
| 5+ 0 | 85.2913 | 308.35 | \| Q | \| | \| | \| | \| |
| 5+ 5 | 87.4269 | 310.10 | \| Q | \| | \| | \| | \| |
| 5+10 | 89.5747 | 311.86 | \| Q | \| | \| | \| | \| |
| 5+15 | 91.7348 | 313.65 | \| Q | \| | \| | \| | \| |
| 5+20 | 93.9072 | 315.43 | \| Q | \| | \| | \| | \| |
| 5+25 | 96.0916 | 317.17 | \| Q | \| | \| | \| | \| |
| 5+30 | 98.2878 | 318.88 | \| Q | \| | \| | \| | \| |
| 5+35 | 100.4960 | 320.63 | \| Q | \| | \| | \| | \| |
| 5+40 | 102.7162 | 322.38 | \| Q | \| | \| | \| | \| |
| 5+45 | 104.9488 | 324.16 | \| Q | \| | \| | \| | \| |
| 5+50 | 107.1936 | 325.95 | \| Q | \| | \| | \| | \| |
| 5+55 | 109.4509 | 327.76 | \| Q | \| | \| | \| | \| |
| 6+ 0 | 111.7205 | 329.54 | \| Q | \| | \| | \| | \| |
| 6+ 5 | 114.0027 | 331.37 | \| Q | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 6+10 | 116.2974 | 333.20 | Q | | | | |
| 6+15 | 118.6050 | 335.06 | Q | | | | |
| 6+20 | 120.9255 | 336.93 | Q | | | | |
| 6+25 | 123.2591 | 338.84 | Q | | | | |
| 6+30 | 125.6056 | 340.72 | QV | | | | |
| 6+35 | 127.9655 | 342.65 | QV | | | | |
| 6+40 | 130.3386 | 344.58 | QV | | | | |
| 6+45 | 132.7253 | 346.55 | QV | | | | |
| 6+50 | 135.1256 | 348.52 | QV | | | | |
| 6+55 | 137.5398 | 350.55 | QV | | | | |
| 7+ 0 | 139.9679 | 352.56 | QV | | | | |
| 7+ 5 | 142.4101 | 354.61 | QV | | | | |
| 7+10 | 144.8664 | 356.66 | QV | | | | |
| 7+15 | 147.3372 | 358.76 | QV | | | | |
| 7+20 | 149.8226 | 360.87 | QV | | | | |
| 7+25 | 152.3228 | 363.03 | QV | | | | |
| 7+30 | 154.8378 | 365.18 | QV | | | | |
| 7+35 | 157.3676 | 367.32 | QV | | | | |
| 7+40 | 159.9122 | 369.48 | QV | | | | |
| 7+45 | 162.4720 | 371.69 | QV | | | | |
| 7+50 | 165.0471 | 373.90 | Q V | | | | |
| 7+55 | 167.6378 | 376.17 | Q V | | | | |
| 8+ 0 | 170.2443 | 378.46 | Q V | | | | |
| 8+ 5 | 172.8668 | 380.80 | Q V | | | | |
| 8+10 | 175.5056 | 383.15 | Q V | | | | |
| 8+15 | 178.1609 | 385.56 | Q V | | | | |
| 8+20 | 180.8329 | 387.97 | Q V | | | | |
| 8+25 | 183.5217 | 390.41 | Q V | | | | |
| 8+30 | 186.2273 | 392.85 | Q V | | | | |
| 8+35 | 188.9502 | 395.36 | Q V | | | | |
| 8+40 | 191.6905 | 397.89 | Q V | | | | |
| 8+45 | 194.4486 | 400.48 | Q V | | | | |
| 8+50 | 197.2247 | 403.09 | Q V | | | | |
| 8+55 | 200.0193 | 405.77 | Q V | | | | |
| 9+ 0 | 202.8324 | 408.47 | Q V | | | | |
| 9+ 5 | 205.6647 | 411.24 | Q V | | | | |
| 9+10 | 208.5161 | 414.03 | Q V | | | | |
| 9+15 | 211.3873 | 416.90 | Q V | | | | |
| 9+20 | 214.2784 | 419.79 | Q V | | | | |
| 9+25 | 217.1899 | 422.76 | Q V | | | | |
| 9+30 | 220.1221 | 425.75 | Q V | | | | |
| 9+35 | 223.0754 | 428.83 | Q V | | | | |
| 9+40 | 226.0502 | 431.93 | Q V | | | | |
| 9+45 | 229.0469 | 435.12 | Q V | | | | |
| 9+50 | 232.0658 | 438.34 | Q V | | | | |
| 9+55 | 235.1075 | 441.66 | Q V | | | | |
| 10+ 0 | 238.1722 | 445.00 | Q V | | | | |
| 10+ 5 | 241.2607 | 448.44 | Q V | | | | |
| 10+10 | 244.3731 | 451.92 | Q V | | | | |
| 10+15 | 247.5102 | 455.50 | Q V | | | | |
| 10+20 | 250.6721 | 459.12 | Q V | | | | |
| 10+25 | 253.8598 | 462.85 | Q V | | | | |
| 10+30 | 257.0734 | 466.61 | Q V | | | | |
| 10+35 | 260.3137 | 470.50 | Q V | | | | |
| 10+40 | 263.5811 | 474.43 | Q V | | | | |
| 10+45 | 266.8764 | 478.48 | Q V | | | | |
| 10+50 | 270.2000 | 482.58 | Q V | | | | |
| 10+55 | 273.5527 | 486.81 | Q V | | | | |
| 11+ 0 | 276.9349 | 491.10 | Q V | | | | |

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|---|---|---|---|---|---|---|
| 11+ 5 | 280.3476 | 495.52 | Q V | | | |
| 11+10 | 283.7912 | 500.00 | Q V | | | |
| 11+15 | 287.2666 | 504.64 | Q V | | | |
| 11+20 | 290.7745 | 509.33 | Q V | | | |
| 11+25 | 294.3157 | 514.19 | Q V | | | |
| 11+30 | 297.8909 | 519.12 | Q V | | | |
| 11+35 | 301.5013 | 524.22 | Q V | | | |
| 11+40 | 305.1473 | 529.40 | Q V | | | |
| 11+45 | 308.8302 | 534.76 | Q V | | | |
| 11+50 | 312.5507 | 540.21 | Q V | | | |
| 11+55 | 316.3100 | 545.86 | Q V | | | |
| 12+ 0 | 320.1089 | 551.60 | Q V | | | |
| 12+ 5 | 323.9476 | 557.38 | Q V | | | |
| 12+10 | 327.8254 | 563.06 | Q V | | | |
| 12+15 | 331.7429 | 568.83 | Q V | | | |
| 12+20 | 335.7001 | 574.58 | Q V | | | |
| 12+25 | 339.6977 | 580.45 | Q V | | | |
| 12+30 | 343.7353 | 586.27 | Q V | | | |
| 12+35 | 347.8138 | 592.20 | Q V | | | |
| 12+40 | 351.9311 | 597.82 | Q V | | | |
| 12+45 | 356.0855 | 603.23 | Q V | | | |
| 12+50 | 360.2761 | 608.46 | Q V | | | |
| 12+55 | 364.5037 | 613.86 | Q V | | | |
| 13+ 0 | 368.7659 | 618.86 | Q V | | | |
| 13+ 5 | 373.0597 | 623.46 | Q V | | | |
| 13+10 | 377.3960 | 629.64 | Q V | | | |
| 13+15 | 381.7822 | 636.87 | Q V | | | |
| 13+20 | 386.2222 | 644.70 | Q V | | | |
| 13+25 | 390.7206 | 653.16 | Q V | | | |
| 13+30 | 395.2800 | 662.03 | Q V | | | |
| 13+35 | 399.9048 | 671.52 | Q V | | | |
| 13+40 | 404.5978 | 681.43 | Q V | | | |
| 13+45 | 409.3636 | 691.99 | Q V | | | |
| 13+50 | 414.2049 | 702.96 | Q V | | | |
| 13+55 | 419.1266 | 714.62 | Q V | | | |
| 14+ 0 | 424.1321 | 726.81 | Q V | | | |
| 14+ 5 | 429.2469 | 742.66 | Q V | | | |
| 14+10 | 434.4954 | 762.09 | Q V | | | |
| 14+15 | 439.9012 | 784.92 | Q V | | | |
| 14+20 | 445.4826 | 810.42 | Q V | | | |
| 14+25 | 451.2613 | 839.07 | Q V | | | |
| 14+30 | 457.2631 | 871.45 | Q V | | | |
| 14+35 | 463.5146 | 907.72 | Q V | | | |
| 14+40 | 470.0703 | 951.89 | Q V | | | |
| 14+45 | 476.9980 | 1005.90 | Q V | | | |
| 14+50 | 484.3416 | 1066.29 | Q V | | | |
| 14+55 | 492.1333 | 1131.36 | Q V | | | |
| 15+ 0 | 500.4443 | 1206.76 | Q V | | | |
| 15+ 5 | 509.3753 | 1296.78 | Q V | | | |
| 15+10 | 518.7906 | 1367.09 | Q V | | | |
| 15+15 | 528.6407 | 1430.23 | Q V | | | |
| 15+20 | 538.9050 | 1490.38 | Q V | | | |
| 15+25 | 549.5550 | 1546.38 | Q V | | | |
| 15+30 | 560.5618 | 1598.18 | Q V | | | |
| 15+35 | 571.9197 | 1649.17 | Q V | | | |
| 15+40 | 583.6280 | 1700.05 | Q V | | | |
| 15+45 | 595.7079 | 1754.00 | Q V | | | |
| 15+50 | 608.1807 | 1811.05 | Q V | | | |
| 15+55 | 621.1358 | 1881.08 | Q V | | | |

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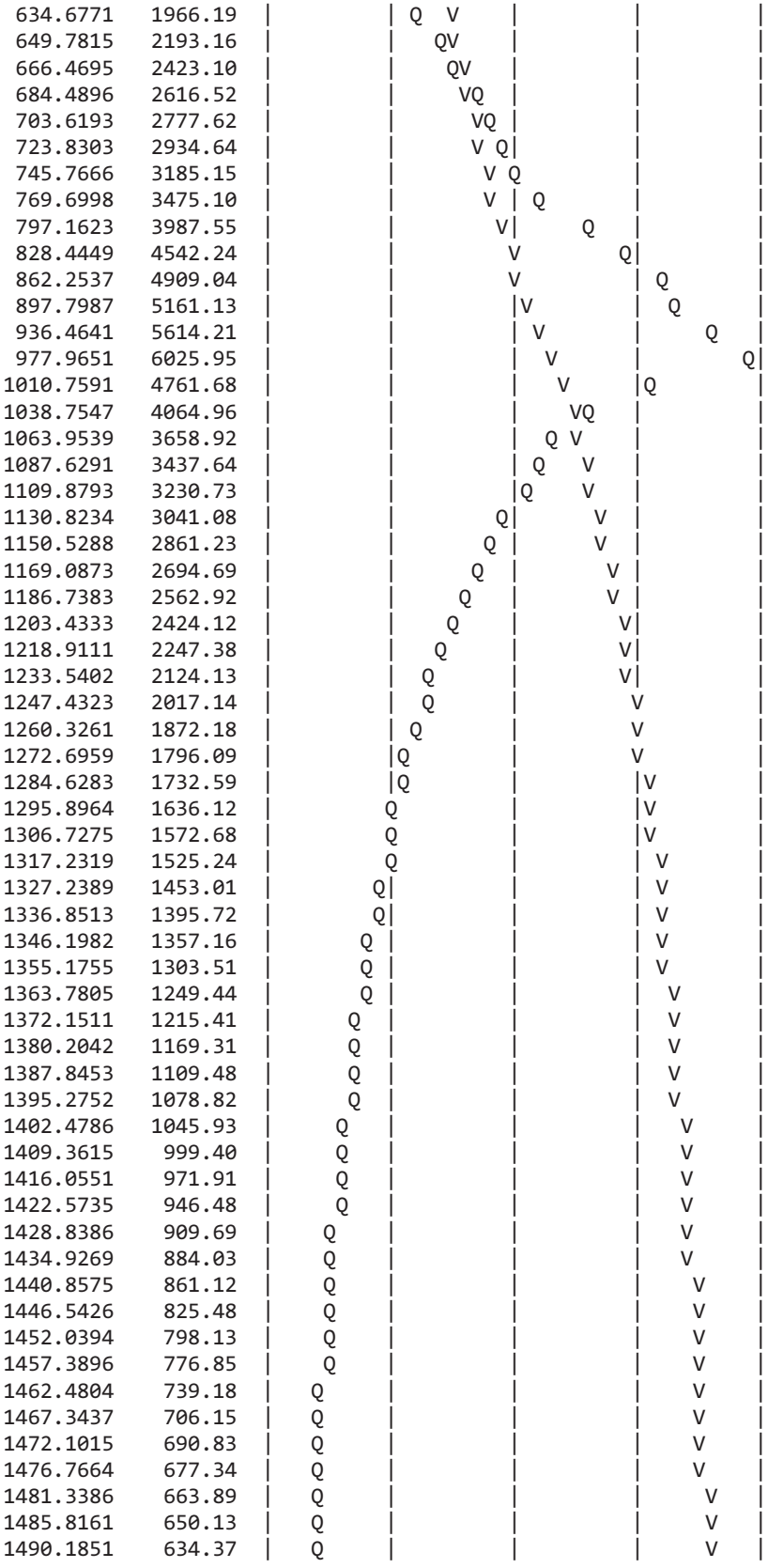
|---|---|---|---|
| 16+ 0 | 634.6771 | 1966.19 |  |
| 16+ 5 | 649.7815 | 2193.16 | |
| 16+10 | 666.4695 | 2423.10 | |
| 16+15 | 684.4896 | 2616.52 | |
| 16+20 | 703.6193 | 2777.62 | |
| 16+25 | 723.8303 | 2934.64 | |
| 16+30 | 745.7666 | 3185.15 | |
| 16+35 | 769.6998 | 3475.10 | |
| 16+40 | 797.1623 | 3987.55 | |
| 16+45 | 828.4449 | 4542.24 | |
| 16+50 | 862.2537 | 4909.04 | |
| 16+55 | 897.7987 | 5161.13 | |
| 17+ 0 | 936.4641 | 5614.21 | |
| 17+ 5 | 977.9651 | 6025.95 | |
| 17+10 | 1010.7591 | 4761.68 | |
| 17+15 | 1038.7547 | 4064.96 | |
| 17+20 | 1063.9539 | 3658.92 | |
| 17+25 | 1087.6291 | 3437.64 | |
| 17+30 | 1109.8793 | 3230.73 | |
| 17+35 | 1130.8234 | 3041.08 | |
| 17+40 | 1150.5288 | 2861.23 | |
| 17+45 | 1169.0873 | 2694.69 | |
| 17+50 | 1186.7383 | 2562.92 | |
| 17+55 | 1203.4333 | 2424.12 | |
| 18+ 0 | 1218.9111 | 2247.38 | |
| 18+ 5 | 1233.5402 | 2124.13 | |
| 18+10 | 1247.4323 | 2017.14 | |
| 18+15 | 1260.3261 | 1872.18 | |
| 18+20 | 1272.6959 | 1796.09 | |
| 18+25 | 1284.6283 | 1732.59 | |
| 18+30 | 1295.8964 | 1636.12 | |
| 18+35 | 1306.7275 | 1572.68 | |
| 18+40 | 1317.2319 | 1525.24 | |
| 18+45 | 1327.2389 | 1453.01 | |
| 18+50 | 1336.8513 | 1395.72 | |
| 18+55 | 1346.1982 | 1357.16 | |
| 19+ 0 | 1355.1755 | 1303.51 | |
| 19+ 5 | 1363.7805 | 1249.44 | |
| 19+10 | 1372.1511 | 1215.41 | |
| 19+15 | 1380.2042 | 1169.31 | |
| 19+20 | 1387.8453 | 1109.48 | |
| 19+25 | 1395.2752 | 1078.82 | |
| 19+30 | 1402.4786 | 1045.93 | |
| 19+35 | 1409.3615 | 999.40 | |
| 19+40 | 1416.0551 | 971.91 | |
| 19+45 | 1422.5735 | 946.48 | |
| 19+50 | 1428.8386 | 909.69 | |
| 19+55 | 1434.9269 | 884.03 | |
| 20+ 0 | 1440.8575 | 861.12 | |
| 20+ 5 | 1446.5426 | 825.48 | |
| 20+10 | 1452.0394 | 798.13 | |
| 20+15 | 1457.3896 | 776.85 | |
| 20+20 | 1462.4804 | 739.18 | |
| 20+25 | 1467.3437 | 706.15 | |
| 20+30 | 1472.1015 | 690.83 | |
| 20+35 | 1476.7664 | 677.34 | |
| 20+40 | 1481.3386 | 663.89 | |
| 20+45 | 1485.8161 | 650.13 | |
| 20+50 | 1490.1851 | 634.37 | |

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|---|---|---|---|---|---|---|
| 20+55 | 1494.4154 | 614.25 | Q | | | V |
| 21+ 0 | 1498.5634 | 602.29 | Q | | | V |
| 21+ 5 | 1502.6394 | 591.84 | Q | | | V |
| 21+10 | 1506.6457 | 581.72 | Q | | | V |
| 21+15 | 1510.5784 | 571.02 | Q | | | V |
| 21+20 | 1514.4313 | 559.44 | Q | | | V |
| 21+25 | 1518.1479 | 539.65 | Q | | | V |
| 21+30 | 1521.7791 | 527.25 | Q | | | V |
| 21+35 | 1525.3537 | 519.03 | Q | | | V |
| 21+40 | 1528.8747 | 511.26 | Q | | | V |
| 21+45 | 1532.3412 | 503.34 | Q | | | V |
| 21+50 | 1535.7527 | 495.34 | Q | | | V |
| 21+55 | 1539.0967 | 485.55 | Q | | | V |
| 22+ 0 | 1542.3720 | 475.57 | Q | | | V |
| 22+ 5 | 1545.6007 | 468.81 | Q | | | V |
| 22+10 | 1548.7849 | 462.35 | Q | | | V |
| 22+15 | 1551.9250 | 455.94 | Q | | | V |
| 22+20 | 1555.0201 | 449.41 | Q | | | V |
| 22+25 | 1558.0662 | 442.28 | Q | | | V |
| 22+30 | 1561.0497 | 433.21 | Q | | | V |
| 22+35 | 1563.9907 | 427.03 | Q | | | V |
| 22+40 | 1566.8935 | 421.49 | Q | | | V |
| 22+45 | 1569.7589 | 416.05 | Q | | | V |
| 22+50 | 1572.5866 | 410.59 | Q | | | V |
| 22+55 | 1575.3771 | 405.17 | Q | | | V |
| 23+ 0 | 1578.1185 | 398.06 | Q | | | V |
| 23+ 5 | 1580.8190 | 392.11 | Q | | | V |
| 23+10 | 1583.4866 | 387.33 | Q | | | V |
| 23+15 | 1586.1213 | 382.56 | Q | | | V |
| 23+20 | 1588.7218 | 377.59 | Q | | | V |
| 23+25 | 1591.2841 | 372.05 | Q | | | V |
| 23+30 | 1593.7879 | 363.54 | Q | | | V |
| 23+35 | 1596.2170 | 352.71 | Q | | | V |
| 23+40 | 1598.6146 | 348.13 | Q | | | V |
| 23+45 | 1600.9854 | 344.24 | Q | | | V |
| 23+50 | 1603.3300 | 340.44 | Q | | | V |
| 23+55 | 1605.6478 | 336.54 | Q | | | V |
| 24+ 0 | 1607.9396 | 332.77 | Q | | | V |
| 24+ 5 | 1610.1977 | 327.87 | Q | | | V |
| 24+10 | 1612.4135 | 321.74 | Q | | | V |
| 24+15 | 1614.5784 | 314.34 | Q | | | V |
| 24+20 | 1616.6796 | 305.10 | Q | | | V |
| 24+25 | 1618.6828 | 290.86 | Q | | | V |
| 24+30 | 1620.6211 | 281.45 | Q | | | V |
| 24+35 | 1622.4912 | 271.54 | Q | | | V |
| 24+40 | 1624.2755 | 259.08 | Q | | | V |
| 24+45 | 1625.9515 | 243.35 | Q | | | V |
| 24+50 | 1627.5067 | 225.82 | Q | | | V |
| 24+55 | 1628.9354 | 207.45 | Q | | | V |
| 25+ 0 | 1630.2154 | 185.85 | Q | | | V |
| 25+ 5 | 1631.3148 | 159.64 | Q | | | V |
| 25+10 | 1632.2963 | 142.50 | Q | | | V |
| 25+15 | 1633.1896 | 129.71 | Q | | | V |
| 25+20 | 1634.0116 | 119.35 | Q | | | V |
| 25+25 | 1634.7721 | 110.43 | Q | | | V |
| 25+30 | 1635.4780 | 102.51 | Q | | | V |
| 25+35 | 1636.1351 | 95.41 | Q | | | V |
| 25+40 | 1636.7482 | 89.03 | Q | | | V |
| 25+45 | 1637.3216 | 83.25 | Q | | | V |

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|---|---|---|---|---|---|---|---|
| 25+50 | 1637.8572 | 77.77 | Q | \| | \| | \| | V\| |
| 25+55 | 1638.3574 | 72.63 | Q | \| | \| | \| | V\| |
| 26+ 0 | 1638.8268 | 68.16 | Q | \| | \| | \| | V\| |
| 26+ 5 | 1639.2662 | 63.80 | Q | \| | \| | \| | V\| |
| 26+10 | 1639.6767 | 59.62 | Q | \| | \| | \| | V\| |
| 26+15 | 1640.0629 | 56.07 | Q | \| | \| | \| | V\| |
| 26+20 | 1640.4256 | 52.66 | Q | \| | \| | \| | V\| |
| 26+25 | 1640.7651 | 49.30 | Q | \| | \| | \| | V\| |
| 26+30 | 1641.0842 | 46.33 | Q | \| | \| | \| | V\| |
| 26+35 | 1641.3839 | 43.51 | Q | \| | \| | \| | V\| |
| 26+40 | 1641.6643 | 40.71 | Q | \| | \| | \| | V\| |
| 26+45 | 1641.9273 | 38.19 | Q | \| | \| | \| | V\| |
| 26+50 | 1642.1742 | 35.84 | Q | \| | \| | \| | V\| |
| 26+55 | 1642.4050 | 33.52 | Q | \| | \| | \| | V\| |
| 27+ 0 | 1642.6210 | 31.37 | Q | \| | \| | \| | V\| |
| 27+ 5 | 1642.8236 | 29.42 | Q | \| | \| | \| | V\| |
| 27+10 | 1643.0129 | 27.48 | Q | \| | \| | \| | V\| |
| 27+15 | 1643.1897 | 25.68 | Q | \| | \| | \| | V\| |
| 27+20 | 1643.3560 | 24.14 | Q | \| | \| | \| | V\| |
| 27+25 | 1643.5118 | 22.62 | Q | \| | \| | \| | V\| |
| 27+30 | 1643.6575 | 21.16 | Q | \| | \| | \| | V\| |
| 27+35 | 1643.7944 | 19.88 | Q | \| | \| | \| | V\| |
| 27+40 | 1643.9228 | 18.64 | Q | \| | \| | \| | V\| |
| 27+45 | 1644.0428 | 17.42 | Q | \| | \| | \| | V\| |
| 27+50 | 1644.1553 | 16.34 | Q | \| | \| | \| | V\| |
| 27+55 | 1644.2606 | 15.29 | Q | \| | \| | \| | V\| |
| 28+ 0 | 1644.3588 | 14.26 | Q | \| | \| | \| | V\| |
| 28+ 5 | 1644.4508 | 13.36 | Q | \| | \| | \| | V\| |
| 28+10 | 1644.5371 | 12.53 | Q | \| | \| | \| | V\| |
| 28+15 | 1644.6177 | 11.70 | Q | \| | \| | \| | V\| |
| 28+20 | 1644.6936 | 11.03 | Q | \| | \| | \| | V\| |
| 28+25 | 1644.7660 | 10.50 | Q | \| | \| | \| | V\| |
| 28+30 | 1644.8347 | 9.98 | Q | \| | \| | \| | V\| |
| 28+35 | 1644.8998 | 9.46 | Q | \| | \| | \| | V\| |
| 28+40 | 1644.9614 | 8.94 | Q | \| | \| | \| | V\| |
| 28+45 | 1645.0195 | 8.43 | Q | \| | \| | \| | V\| |
| 28+50 | 1645.0743 | 7.95 | Q | \| | \| | \| | V\| |
| 28+55 | 1645.1262 | 7.53 | Q | \| | \| | \| | V\| |
| 29+ 0 | 1645.1753 | 7.13 | Q | \| | \| | \| | V\| |
| 29+ 5 | 1645.2216 | 6.73 | Q | \| | \| | \| | V\| |
| 29+10 | 1645.2652 | 6.33 | Q | \| | \| | \| | V\| |
| 29+15 | 1645.3061 | 5.94 | Q | \| | \| | \| | V\| |
| 29+20 | 1645.3443 | 5.55 | Q | \| | \| | \| | V\| |
| 29+25 | 1645.3804 | 5.25 | Q | \| | \| | \| | V\| |
| 29+30 | 1645.4147 | 4.98 | Q | \| | \| | \| | V\| |
| 29+35 | 1645.4472 | 4.71 | Q | \| | \| | \| | V\| |
| 29+40 | 1645.4779 | 4.45 | Q | \| | \| | \| | V\| |
| 29+45 | 1645.5067 | 4.19 | Q | \| | \| | \| | V\| |
| 29+50 | 1645.5338 | 3.93 | Q | \| | \| | \| | V\| |
| 29+55 | 1645.5592 | 3.69 | Q | \| | \| | \| | V\| |
| 30+ 0 | 1645.5832 | 3.48 | Q | \| | \| | \| | V\| |
| 30+ 5 | 1645.6057 | 3.27 | Q | \| | \| | \| | V\| |
| 30+10 | 1645.6268 | 3.06 | Q | \| | \| | \| | V\| |
| 30+15 | 1645.6464 | 2.85 | Q | \| | \| | \| | V\| |
| 30+20 | 1645.6647 | 2.65 | Q | \| | \| | \| | V\| |
| 30+25 | 1645.6815 | 2.45 | Q | \| | \| | \| | V\| |
| 30+30 | 1645.6972 | 2.28 | Q | \| | \| | \| | V\| |
| 30+35 | 1645.7117 | 2.11 | Q | \| | \| | \| | V\| |
| 30+40 | 1645.7251 | 1.94 | Q | \| | \| | \| | V\| |

```
   30+45    1645.7373      1.78  Q         |          |          |         V|
   30+50    1645.7484      1.61  Q         |          |          |         V|
   30+55    1645.7584      1.45  Q         |          |          |         V|
   31+ 0    1645.7674      1.31  Q         |          |          |         V|
   31+ 5    1645.7755      1.17  Q         |          |          |         V|
   31+10    1645.7826      1.04  Q         |          |          |         V|
   31+15    1645.7889      0.91  Q         |          |          |         V|
   31+20    1645.7942      0.77  Q         |          |          |         V|
   31+25    1645.7986      0.64  Q         |          |          |         V|
   31+30    1645.8023      0.54  Q         |          |          |         V|
   31+35    1645.8056      0.48  Q         |          |          |         V|
   31+40    1645.8085      0.42  Q         |          |          |         V|
   31+45    1645.8111      0.37  Q         |          |          |         V|
   31+50    1645.8133      0.31  Q         |          |          |         V|
   31+55    1645.8150      0.26  Q         |          |          |         V|
   32+ 0    1645.8165      0.21  Q         |          |          |         V|
   32+ 5    1645.8175      0.15  Q         |          |          |         V|
   32+10    1645.8182      0.10  Q         |          |          |         V|
   32+15    1645.8185      0.05  Q         |          |          |          V
-----------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 08/10/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREA "L"
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-10-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 1834.31 | 1 | 1.41 |
| Rainfall data for year 100 | | |
| 1834.31 | 6 | 2.19 |
| Rainfall data for year 100 | | |
| 1834.31 | 24 | 3.29 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 76.8 | 92.1 | 1834.31 | 1.000 | 0.153 | 0.999 | 0.153 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.153

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 1832.48 | 0.999 | 76.8 | 92.1 | 0.86 | 0.743 |
| 1.83 | 0.001 | 98.0 | 98.0 | 0.20 | 0.929 |

Area-averaged catchment yield fraction, Y = 0.743
Area-averaged low loss fraction, Yb = 0.257
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 20676.00(Ft.)
Length from concentration point to centroid = 10935.00(Ft.)
Elevation difference along watercourse = 2355.00(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 1834.31(Ac.)
Catchment Lag time = 0.552 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 15.1061
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.153(In/Hr)
Average low loss rate fraction (Yb) = 0.257 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.250
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.750

Computed peak 5-minute rainfall = 0.668(In)
Computed peak 30-minute rainfall = 1.143(In)
Specified peak 1-hour rainfall = 1.407(In)
Computed peak 3-hour rainfall = 1.845(In)
Specified peak 6-hour rainfall = 2.190(In)
Specified peak 24-hour rainfall = 3.287(In)

Rainfall depth area reduction factors:
Using a total area of 1834.31(Ac.) (Ref: fig. E-4)

5-minute factor = 0.914 Adjusted rainfall = 0.610(In)
30-minute factor = 0.914 Adjusted rainfall = 1.045(In)
1-hour factor = 0.914 Adjusted rainfall = 1.286(In)
3-hour factor = 0.989 Adjusted rainfall = 1.825(In)
6-hour factor = 0.994 Adjusted rainfall = 2.177(In)
24-hour factor = 0.998 Adjusted rainfall = 3.279(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 22183.69 (CFS)) | |
| 1 | 0.751 | 166.639 |
| 2 | 3.005 | 499.885 |
| 3 | 6.619 | 801.749 |
| 4 | 12.275 | 1254.690 |
| 5 | 22.646 | 2300.739 |

| | | |
|---|---|---|
| 6 | 35.596 | 2872.878 |
| 7 | 48.173 | 2790.060 |
| 8 | 57.020 | 1962.410 |
| 9 | 62.969 | 1319.786 |
| 10 | 67.582 | 1023.401 |
| 11 | 71.395 | 845.907 |
| 12 | 74.642 | 720.243 |
| 13 | 77.395 | 610.779 |
| 14 | 79.840 | 542.256 |
| 15 | 81.893 | 455.512 |
| 16 | 83.715 | 404.156 |
| 17 | 85.369 | 366.873 |
| 18 | 86.853 | 329.296 |
| 19 | 88.227 | 304.742 |
| 20 | 89.438 | 268.581 |
| 21 | 90.465 | 227.935 |
| 22 | 91.374 | 201.652 |
| 23 | 92.204 | 184.063 |
| 24 | 92.978 | 171.712 |
| 25 | 93.673 | 154.225 |
| 26 | 94.308 | 140.876 |
| 27 | 94.889 | 128.820 |
| 28 | 95.339 | 99.933 |
| 29 | 95.770 | 95.506 |
| 30 | 96.198 | 95.022 |
| 31 | 96.561 | 80.508 |
| 32 | 96.894 | 73.724 |
| 33 | 97.226 | 73.724 |
| 34 | 97.515 | 64.206 |
| 35 | 97.742 | 50.382 |
| 36 | 97.969 | 50.266 |
| 37 | 98.181 | 47.049 |
| 38 | 98.332 | 33.378 |
| 39 | 98.475 | 31.835 |
| 40 | 98.619 | 31.902 |
| 41 | 98.768 | 33.078 |
| 42 | 98.919 | 33.511 |
| 43 | 99.070 | 33.511 |
| 44 | 99.218 | 32.721 |
| 45 | 99.361 | 31.836 |
| 46 | 99.505 | 31.835 |
| 47 | 99.633 | 28.407 |
| 48 | 99.707 | 16.538 |
| 49 | 99.778 | 15.708 |
| 50 | 99.849 | 15.708 |
| 51 | 99.920 | 15.708 |
| 52 | 100.000 | 7.854 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6102 | 0.6102 |
| 2 | 0.7513 | 0.1411 |
| 3 | 0.8485 | 0.0972 |
| 4 | 0.9249 | 0.0765 |
| 5 | 0.9890 | 0.0640 |
| 6 | 1.0446 | 0.0556 |
| 7 | 1.0940 | 0.0494 |
| 8 | 1.1387 | 0.0447 |
| 9 | 1.1797 | 0.0410 |

| | | |
|---|---|---|
| 10 | 1.2176 | 0.0379 |
| 11 | 1.2529 | 0.0353 |
| 12 | 1.2860 | 0.0331 |
| 13 | 1.3193 | 0.0332 |
| 14 | 1.3508 | 0.0315 |
| 15 | 1.3808 | 0.0300 |
| 16 | 1.4095 | 0.0287 |
| 17 | 1.4371 | 0.0275 |
| 18 | 1.4635 | 0.0264 |
| 19 | 1.4889 | 0.0254 |
| 20 | 1.5135 | 0.0245 |
| 21 | 1.5372 | 0.0237 |
| 22 | 1.5602 | 0.0230 |
| 23 | 1.5824 | 0.0223 |
| 24 | 1.6040 | 0.0216 |
| 25 | 1.6251 | 0.0210 |
| 26 | 1.6455 | 0.0204 |
| 27 | 1.6654 | 0.0199 |
| 28 | 1.6848 | 0.0194 |
| 29 | 1.7038 | 0.0190 |
| 30 | 1.7223 | 0.0185 |
| 31 | 1.7404 | 0.0181 |
| 32 | 1.7581 | 0.0177 |
| 33 | 1.7754 | 0.0173 |
| 34 | 1.7924 | 0.0170 |
| 35 | 1.8091 | 0.0166 |
| 36 | 1.8254 | 0.0163 |
| 37 | 1.8382 | 0.0128 |
| 38 | 1.8507 | 0.0125 |
| 39 | 1.8629 | 0.0123 |
| 40 | 1.8750 | 0.0120 |
| 41 | 1.8868 | 0.0118 |
| 42 | 1.8984 | 0.0116 |
| 43 | 1.9098 | 0.0114 |
| 44 | 1.9210 | 0.0112 |
| 45 | 1.9320 | 0.0110 |
| 46 | 1.9429 | 0.0108 |
| 47 | 1.9535 | 0.0107 |
| 48 | 1.9640 | 0.0105 |
| 49 | 1.9743 | 0.0103 |
| 50 | 1.9845 | 0.0102 |
| 51 | 1.9945 | 0.0100 |
| 52 | 2.0044 | 0.0099 |
| 53 | 2.0142 | 0.0097 |
| 54 | 2.0238 | 0.0096 |
| 55 | 2.0332 | 0.0095 |
| 56 | 2.0426 | 0.0093 |
| 57 | 2.0518 | 0.0092 |
| 58 | 2.0609 | 0.0091 |
| 59 | 2.0699 | 0.0090 |
| 60 | 2.0787 | 0.0089 |
| 61 | 2.0875 | 0.0088 |
| 62 | 2.0962 | 0.0087 |
| 63 | 2.1047 | 0.0086 |
| 64 | 2.1132 | 0.0085 |
| 65 | 2.1215 | 0.0084 |
| 66 | 2.1298 | 0.0083 |
| 67 | 2.1379 | 0.0082 |
| 68 | 2.1460 | 0.0081 |

| | | |
|---|---|---|
| 69 | 2.1540 | 0.0080 |
| 70 | 2.1619 | 0.0079 |
| 71 | 2.1697 | 0.0078 |
| 72 | 2.1774 | 0.0077 |
| 73 | 2.1863 | 0.0089 |
| 74 | 2.1951 | 0.0088 |
| 75 | 2.2039 | 0.0087 |
| 76 | 2.2125 | 0.0086 |
| 77 | 2.2211 | 0.0086 |
| 78 | 2.2295 | 0.0085 |
| 79 | 2.2380 | 0.0084 |
| 80 | 2.2463 | 0.0083 |
| 81 | 2.2545 | 0.0083 |
| 82 | 2.2627 | 0.0082 |
| 83 | 2.2708 | 0.0081 |
| 84 | 2.2789 | 0.0080 |
| 85 | 2.2869 | 0.0080 |
| 86 | 2.2948 | 0.0079 |
| 87 | 2.3026 | 0.0079 |
| 88 | 2.3104 | 0.0078 |
| 89 | 2.3182 | 0.0077 |
| 90 | 2.3258 | 0.0077 |
| 91 | 2.3334 | 0.0076 |
| 92 | 2.3410 | 0.0075 |
| 93 | 2.3485 | 0.0075 |
| 94 | 2.3559 | 0.0074 |
| 95 | 2.3633 | 0.0074 |
| 96 | 2.3706 | 0.0073 |
| 97 | 2.3779 | 0.0073 |
| 98 | 2.3851 | 0.0072 |
| 99 | 2.3922 | 0.0072 |
| 100 | 2.3993 | 0.0071 |
| 101 | 2.4064 | 0.0071 |
| 102 | 2.4134 | 0.0070 |
| 103 | 2.4204 | 0.0070 |
| 104 | 2.4273 | 0.0069 |
| 105 | 2.4342 | 0.0069 |
| 106 | 2.4410 | 0.0068 |
| 107 | 2.4478 | 0.0068 |
| 108 | 2.4545 | 0.0067 |
| 109 | 2.4612 | 0.0067 |
| 110 | 2.4679 | 0.0066 |
| 111 | 2.4745 | 0.0066 |
| 112 | 2.4810 | 0.0066 |
| 113 | 2.4876 | 0.0065 |
| 114 | 2.4940 | 0.0065 |
| 115 | 2.5005 | 0.0064 |
| 116 | 2.5069 | 0.0064 |
| 117 | 2.5133 | 0.0064 |
| 118 | 2.5196 | 0.0063 |
| 119 | 2.5259 | 0.0063 |
| 120 | 2.5321 | 0.0063 |
| 121 | 2.5383 | 0.0062 |
| 122 | 2.5445 | 0.0062 |
| 123 | 2.5507 | 0.0061 |
| 124 | 2.5568 | 0.0061 |
| 125 | 2.5628 | 0.0061 |
| 126 | 2.5689 | 0.0060 |
| 127 | 2.5749 | 0.0060 |

| | | |
|---|---|---|
| 128 | 2.5809 | 0.0060 |
| 129 | 2.5868 | 0.0059 |
| 130 | 2.5927 | 0.0059 |
| 131 | 2.5986 | 0.0059 |
| 132 | 2.6044 | 0.0058 |
| 133 | 2.6102 | 0.0058 |
| 134 | 2.6160 | 0.0058 |
| 135 | 2.6218 | 0.0058 |
| 136 | 2.6275 | 0.0057 |
| 137 | 2.6332 | 0.0057 |
| 138 | 2.6389 | 0.0057 |
| 139 | 2.6445 | 0.0056 |
| 140 | 2.6501 | 0.0056 |
| 141 | 2.6557 | 0.0056 |
| 142 | 2.6612 | 0.0056 |
| 143 | 2.6667 | 0.0055 |
| 144 | 2.6722 | 0.0055 |
| 145 | 2.6777 | 0.0055 |
| 146 | 2.6831 | 0.0054 |
| 147 | 2.6886 | 0.0054 |
| 148 | 2.6940 | 0.0054 |
| 149 | 2.6993 | 0.0054 |
| 150 | 2.7047 | 0.0053 |
| 151 | 2.7100 | 0.0053 |
| 152 | 2.7153 | 0.0053 |
| 153 | 2.7205 | 0.0053 |
| 154 | 2.7258 | 0.0052 |
| 155 | 2.7310 | 0.0052 |
| 156 | 2.7362 | 0.0052 |
| 157 | 2.7413 | 0.0052 |
| 158 | 2.7465 | 0.0051 |
| 159 | 2.7516 | 0.0051 |
| 160 | 2.7567 | 0.0051 |
| 161 | 2.7618 | 0.0051 |
| 162 | 2.7669 | 0.0051 |
| 163 | 2.7719 | 0.0050 |
| 164 | 2.7769 | 0.0050 |
| 165 | 2.7819 | 0.0050 |
| 166 | 2.7869 | 0.0050 |
| 167 | 2.7918 | 0.0049 |
| 168 | 2.7967 | 0.0049 |
| 169 | 2.8016 | 0.0049 |
| 170 | 2.8065 | 0.0049 |
| 171 | 2.8114 | 0.0049 |
| 172 | 2.8162 | 0.0048 |
| 173 | 2.8211 | 0.0048 |
| 174 | 2.8259 | 0.0048 |
| 175 | 2.8307 | 0.0048 |
| 176 | 2.8354 | 0.0048 |
| 177 | 2.8402 | 0.0047 |
| 178 | 2.8449 | 0.0047 |
| 179 | 2.8496 | 0.0047 |
| 180 | 2.8543 | 0.0047 |
| 181 | 2.8590 | 0.0047 |
| 182 | 2.8637 | 0.0047 |
| 183 | 2.8683 | 0.0046 |
| 184 | 2.8729 | 0.0046 |
| 185 | 2.8775 | 0.0046 |
| 186 | 2.8821 | 0.0046 |

| | | |
|---|---|---|
| 187 | 2.8867 | 0.0046 |
| 188 | 2.8912 | 0.0046 |
| 189 | 2.8958 | 0.0045 |
| 190 | 2.9003 | 0.0045 |
| 191 | 2.9048 | 0.0045 |
| 192 | 2.9093 | 0.0045 |
| 193 | 2.9137 | 0.0045 |
| 194 | 2.9182 | 0.0045 |
| 195 | 2.9226 | 0.0044 |
| 196 | 2.9270 | 0.0044 |
| 197 | 2.9314 | 0.0044 |
| 198 | 2.9358 | 0.0044 |
| 199 | 2.9402 | 0.0044 |
| 200 | 2.9446 | 0.0044 |
| 201 | 2.9489 | 0.0043 |
| 202 | 2.9532 | 0.0043 |
| 203 | 2.9575 | 0.0043 |
| 204 | 2.9618 | 0.0043 |
| 205 | 2.9661 | 0.0043 |
| 206 | 2.9704 | 0.0043 |
| 207 | 2.9746 | 0.0043 |
| 208 | 2.9789 | 0.0042 |
| 209 | 2.9831 | 0.0042 |
| 210 | 2.9873 | 0.0042 |
| 211 | 2.9915 | 0.0042 |
| 212 | 2.9957 | 0.0042 |
| 213 | 2.9999 | 0.0042 |
| 214 | 3.0040 | 0.0042 |
| 215 | 3.0081 | 0.0041 |
| 216 | 3.0123 | 0.0041 |
| 217 | 3.0164 | 0.0041 |
| 218 | 3.0205 | 0.0041 |
| 219 | 3.0246 | 0.0041 |
| 220 | 3.0286 | 0.0041 |
| 221 | 3.0327 | 0.0041 |
| 222 | 3.0368 | 0.0040 |
| 223 | 3.0408 | 0.0040 |
| 224 | 3.0448 | 0.0040 |
| 225 | 3.0488 | 0.0040 |
| 226 | 3.0528 | 0.0040 |
| 227 | 3.0568 | 0.0040 |
| 228 | 3.0608 | 0.0040 |
| 229 | 3.0647 | 0.0040 |
| 230 | 3.0687 | 0.0039 |
| 231 | 3.0726 | 0.0039 |
| 232 | 3.0765 | 0.0039 |
| 233 | 3.0804 | 0.0039 |
| 234 | 3.0843 | 0.0039 |
| 235 | 3.0882 | 0.0039 |
| 236 | 3.0921 | 0.0039 |
| 237 | 3.0960 | 0.0039 |
| 238 | 3.0998 | 0.0039 |
| 239 | 3.1037 | 0.0038 |
| 240 | 3.1075 | 0.0038 |
| 241 | 3.1113 | 0.0038 |
| 242 | 3.1151 | 0.0038 |
| 243 | 3.1189 | 0.0038 |
| 244 | 3.1227 | 0.0038 |
| 245 | 3.1265 | 0.0038 |

| | | |
|---|---|---|
| 246 | 3.1303 | 0.0038 |
| 247 | 3.1340 | 0.0038 |
| 248 | 3.1378 | 0.0037 |
| 249 | 3.1415 | 0.0037 |
| 250 | 3.1452 | 0.0037 |
| 251 | 3.1489 | 0.0037 |
| 252 | 3.1526 | 0.0037 |
| 253 | 3.1563 | 0.0037 |
| 254 | 3.1600 | 0.0037 |
| 255 | 3.1637 | 0.0037 |
| 256 | 3.1673 | 0.0037 |
| 257 | 3.1710 | 0.0036 |
| 258 | 3.1746 | 0.0036 |
| 259 | 3.1782 | 0.0036 |
| 260 | 3.1819 | 0.0036 |
| 261 | 3.1855 | 0.0036 |
| 262 | 3.1891 | 0.0036 |
| 263 | 3.1927 | 0.0036 |
| 264 | 3.1962 | 0.0036 |
| 265 | 3.1998 | 0.0036 |
| 266 | 3.2034 | 0.0036 |
| 267 | 3.2069 | 0.0036 |
| 268 | 3.2105 | 0.0035 |
| 269 | 3.2140 | 0.0035 |
| 270 | 3.2175 | 0.0035 |
| 271 | 3.2210 | 0.0035 |
| 272 | 3.2246 | 0.0035 |
| 273 | 3.2281 | 0.0035 |
| 274 | 3.2315 | 0.0035 |
| 275 | 3.2350 | 0.0035 |
| 276 | 3.2385 | 0.0035 |
| 277 | 3.2420 | 0.0035 |
| 278 | 3.2454 | 0.0035 |
| 279 | 3.2488 | 0.0034 |
| 280 | 3.2523 | 0.0034 |
| 281 | 3.2557 | 0.0034 |
| 282 | 3.2591 | 0.0034 |
| 283 | 3.2625 | 0.0034 |
| 284 | 3.2659 | 0.0034 |
| 285 | 3.2693 | 0.0034 |
| 286 | 3.2727 | 0.0034 |
| 287 | 3.2761 | 0.0034 |
| 288 | 3.2795 | 0.0034 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0034 | 0.0009 | 0.0025 |
| 2 | 0.0034 | 0.0009 | 0.0025 |
| 3 | 0.0034 | 0.0009 | 0.0025 |
| 4 | 0.0034 | 0.0009 | 0.0025 |
| 5 | 0.0034 | 0.0009 | 0.0025 |
| 6 | 0.0034 | 0.0009 | 0.0025 |
| 7 | 0.0034 | 0.0009 | 0.0026 |
| 8 | 0.0035 | 0.0009 | 0.0026 |
| 9 | 0.0035 | 0.0009 | 0.0026 |
| 10 | 0.0035 | 0.0009 | 0.0026 |
| 11 | 0.0035 | 0.0009 | 0.0026 |

| | | | |
|---|---|---|---|
| 12 | 0.0035 | 0.0009 | 0.0026 |
| 13 | 0.0035 | 0.0009 | 0.0026 |
| 14 | 0.0035 | 0.0009 | 0.0026 |
| 15 | 0.0036 | 0.0009 | 0.0026 |
| 16 | 0.0036 | 0.0009 | 0.0026 |
| 17 | 0.0036 | 0.0009 | 0.0027 |
| 18 | 0.0036 | 0.0009 | 0.0027 |
| 19 | 0.0036 | 0.0009 | 0.0027 |
| 20 | 0.0036 | 0.0009 | 0.0027 |
| 21 | 0.0036 | 0.0009 | 0.0027 |
| 22 | 0.0036 | 0.0009 | 0.0027 |
| 23 | 0.0037 | 0.0009 | 0.0027 |
| 24 | 0.0037 | 0.0009 | 0.0027 |
| 25 | 0.0037 | 0.0010 | 0.0028 |
| 26 | 0.0037 | 0.0010 | 0.0028 |
| 27 | 0.0037 | 0.0010 | 0.0028 |
| 28 | 0.0037 | 0.0010 | 0.0028 |
| 29 | 0.0038 | 0.0010 | 0.0028 |
| 30 | 0.0038 | 0.0010 | 0.0028 |
| 31 | 0.0038 | 0.0010 | 0.0028 |
| 32 | 0.0038 | 0.0010 | 0.0028 |
| 33 | 0.0038 | 0.0010 | 0.0028 |
| 34 | 0.0038 | 0.0010 | 0.0029 |
| 35 | 0.0039 | 0.0010 | 0.0029 |
| 36 | 0.0039 | 0.0010 | 0.0029 |
| 37 | 0.0039 | 0.0010 | 0.0029 |
| 38 | 0.0039 | 0.0010 | 0.0029 |
| 39 | 0.0039 | 0.0010 | 0.0029 |
| 40 | 0.0039 | 0.0010 | 0.0029 |
| 41 | 0.0040 | 0.0010 | 0.0030 |
| 42 | 0.0040 | 0.0010 | 0.0030 |
| 43 | 0.0040 | 0.0010 | 0.0030 |
| 44 | 0.0040 | 0.0010 | 0.0030 |
| 45 | 0.0040 | 0.0010 | 0.0030 |
| 46 | 0.0041 | 0.0010 | 0.0030 |
| 47 | 0.0041 | 0.0010 | 0.0030 |
| 48 | 0.0041 | 0.0011 | 0.0030 |
| 49 | 0.0041 | 0.0011 | 0.0031 |
| 50 | 0.0041 | 0.0011 | 0.0031 |
| 51 | 0.0042 | 0.0011 | 0.0031 |
| 52 | 0.0042 | 0.0011 | 0.0031 |
| 53 | 0.0042 | 0.0011 | 0.0031 |
| 54 | 0.0042 | 0.0011 | 0.0031 |
| 55 | 0.0043 | 0.0011 | 0.0032 |
| 56 | 0.0043 | 0.0011 | 0.0032 |
| 57 | 0.0043 | 0.0011 | 0.0032 |
| 58 | 0.0043 | 0.0011 | 0.0032 |
| 59 | 0.0043 | 0.0011 | 0.0032 |
| 60 | 0.0044 | 0.0011 | 0.0032 |
| 61 | 0.0044 | 0.0011 | 0.0033 |
| 62 | 0.0044 | 0.0011 | 0.0033 |
| 63 | 0.0044 | 0.0011 | 0.0033 |
| 64 | 0.0045 | 0.0011 | 0.0033 |
| 65 | 0.0045 | 0.0012 | 0.0033 |
| 66 | 0.0045 | 0.0012 | 0.0033 |
| 67 | 0.0045 | 0.0012 | 0.0034 |
| 68 | 0.0046 | 0.0012 | 0.0034 |
| 69 | 0.0046 | 0.0012 | 0.0034 |
| 70 | 0.0046 | 0.0012 | 0.0034 |

| | | | |
|---|---|---|---|
| 71 | 0.0046 | 0.0012 | 0.0034 |
| 72 | 0.0047 | 0.0012 | 0.0035 |
| 73 | 0.0047 | 0.0012 | 0.0035 |
| 74 | 0.0047 | 0.0012 | 0.0035 |
| 75 | 0.0047 | 0.0012 | 0.0035 |
| 76 | 0.0048 | 0.0012 | 0.0035 |
| 77 | 0.0048 | 0.0012 | 0.0036 |
| 78 | 0.0048 | 0.0012 | 0.0036 |
| 79 | 0.0049 | 0.0013 | 0.0036 |
| 80 | 0.0049 | 0.0013 | 0.0036 |
| 81 | 0.0049 | 0.0013 | 0.0037 |
| 82 | 0.0049 | 0.0013 | 0.0037 |
| 83 | 0.0050 | 0.0013 | 0.0037 |
| 84 | 0.0050 | 0.0013 | 0.0037 |
| 85 | 0.0051 | 0.0013 | 0.0038 |
| 86 | 0.0051 | 0.0013 | 0.0038 |
| 87 | 0.0051 | 0.0013 | 0.0038 |
| 88 | 0.0051 | 0.0013 | 0.0038 |
| 89 | 0.0052 | 0.0013 | 0.0039 |
| 90 | 0.0052 | 0.0013 | 0.0039 |
| 91 | 0.0053 | 0.0014 | 0.0039 |
| 92 | 0.0053 | 0.0014 | 0.0039 |
| 93 | 0.0053 | 0.0014 | 0.0040 |
| 94 | 0.0054 | 0.0014 | 0.0040 |
| 95 | 0.0054 | 0.0014 | 0.0040 |
| 96 | 0.0054 | 0.0014 | 0.0040 |
| 97 | 0.0055 | 0.0014 | 0.0041 |
| 98 | 0.0055 | 0.0014 | 0.0041 |
| 99 | 0.0056 | 0.0014 | 0.0041 |
| 100 | 0.0056 | 0.0014 | 0.0042 |
| 101 | 0.0057 | 0.0015 | 0.0042 |
| 102 | 0.0057 | 0.0015 | 0.0042 |
| 103 | 0.0058 | 0.0015 | 0.0043 |
| 104 | 0.0058 | 0.0015 | 0.0043 |
| 105 | 0.0058 | 0.0015 | 0.0043 |
| 106 | 0.0059 | 0.0015 | 0.0044 |
| 107 | 0.0059 | 0.0015 | 0.0044 |
| 108 | 0.0060 | 0.0015 | 0.0044 |
| 109 | 0.0060 | 0.0016 | 0.0045 |
| 110 | 0.0061 | 0.0016 | 0.0045 |
| 111 | 0.0061 | 0.0016 | 0.0046 |
| 112 | 0.0062 | 0.0016 | 0.0046 |
| 113 | 0.0063 | 0.0016 | 0.0046 |
| 114 | 0.0063 | 0.0016 | 0.0047 |
| 115 | 0.0064 | 0.0016 | 0.0047 |
| 116 | 0.0064 | 0.0016 | 0.0048 |
| 117 | 0.0065 | 0.0017 | 0.0048 |
| 118 | 0.0065 | 0.0017 | 0.0048 |
| 119 | 0.0066 | 0.0017 | 0.0049 |
| 120 | 0.0066 | 0.0017 | 0.0049 |
| 121 | 0.0067 | 0.0017 | 0.0050 |
| 122 | 0.0068 | 0.0017 | 0.0050 |
| 123 | 0.0069 | 0.0018 | 0.0051 |
| 124 | 0.0069 | 0.0018 | 0.0051 |
| 125 | 0.0070 | 0.0018 | 0.0052 |
| 126 | 0.0071 | 0.0018 | 0.0052 |
| 127 | 0.0072 | 0.0018 | 0.0053 |
| 128 | 0.0072 | 0.0019 | 0.0054 |
| 129 | 0.0073 | 0.0019 | 0.0054 |

| | | | |
|---|---|---|---|
| 130 | 0.0074 | 0.0019 | 0.0055 |
| 131 | 0.0075 | 0.0019 | 0.0056 |
| 132 | 0.0075 | 0.0019 | 0.0056 |
| 133 | 0.0077 | 0.0020 | 0.0057 |
| 134 | 0.0077 | 0.0020 | 0.0057 |
| 135 | 0.0079 | 0.0020 | 0.0058 |
| 136 | 0.0079 | 0.0020 | 0.0059 |
| 137 | 0.0080 | 0.0021 | 0.0060 |
| 138 | 0.0081 | 0.0021 | 0.0060 |
| 139 | 0.0083 | 0.0021 | 0.0061 |
| 140 | 0.0083 | 0.0021 | 0.0062 |
| 141 | 0.0085 | 0.0022 | 0.0063 |
| 142 | 0.0086 | 0.0022 | 0.0064 |
| 143 | 0.0087 | 0.0022 | 0.0065 |
| 144 | 0.0088 | 0.0023 | 0.0065 |
| 145 | 0.0077 | 0.0020 | 0.0057 |
| 146 | 0.0078 | 0.0020 | 0.0058 |
| 147 | 0.0080 | 0.0021 | 0.0059 |
| 148 | 0.0081 | 0.0021 | 0.0060 |
| 149 | 0.0083 | 0.0021 | 0.0061 |
| 150 | 0.0084 | 0.0021 | 0.0062 |
| 151 | 0.0086 | 0.0022 | 0.0064 |
| 152 | 0.0087 | 0.0022 | 0.0064 |
| 153 | 0.0089 | 0.0023 | 0.0066 |
| 154 | 0.0090 | 0.0023 | 0.0067 |
| 155 | 0.0092 | 0.0024 | 0.0069 |
| 156 | 0.0093 | 0.0024 | 0.0069 |
| 157 | 0.0096 | 0.0025 | 0.0071 |
| 158 | 0.0097 | 0.0025 | 0.0072 |
| 159 | 0.0100 | 0.0026 | 0.0074 |
| 160 | 0.0102 | 0.0026 | 0.0076 |
| 161 | 0.0105 | 0.0027 | 0.0078 |
| 162 | 0.0107 | 0.0027 | 0.0079 |
| 163 | 0.0110 | 0.0028 | 0.0082 |
| 164 | 0.0112 | 0.0029 | 0.0083 |
| 165 | 0.0116 | 0.0030 | 0.0086 |
| 166 | 0.0118 | 0.0030 | 0.0088 |
| 167 | 0.0123 | 0.0032 | 0.0091 |
| 168 | 0.0125 | 0.0032 | 0.0093 |
| 169 | 0.0163 | 0.0042 | 0.0121 |
| 170 | 0.0166 | 0.0043 | 0.0124 |
| 171 | 0.0173 | 0.0045 | 0.0129 |
| 172 | 0.0177 | 0.0045 | 0.0132 |
| 173 | 0.0185 | 0.0048 | 0.0138 |
| 174 | 0.0190 | 0.0049 | 0.0141 |
| 175 | 0.0199 | 0.0051 | 0.0148 |
| 176 | 0.0204 | 0.0053 | 0.0152 |
| 177 | 0.0216 | 0.0056 | 0.0161 |
| 178 | 0.0223 | 0.0057 | 0.0165 |
| 179 | 0.0237 | 0.0061 | 0.0176 |
| 180 | 0.0245 | 0.0063 | 0.0182 |
| 181 | 0.0264 | 0.0068 | 0.0196 |
| 182 | 0.0275 | 0.0071 | 0.0204 |
| 183 | 0.0300 | 0.0077 | 0.0223 |
| 184 | 0.0315 | 0.0081 | 0.0234 |
| 185 | 0.0331 | 0.0085 | 0.0246 |
| 186 | 0.0353 | 0.0091 | 0.0262 |
| 187 | 0.0410 | 0.0105 | 0.0304 |
| 188 | 0.0447 | 0.0115 | 0.0332 |

| | | | |
|---|---|---|---|
| 189 | 0.0556 | 0.0128 | 0.0428 |
| 190 | 0.0640 | 0.0128 | 0.0513 |
| 191 | 0.0972 | 0.0128 | 0.0844 |
| 192 | 0.1411 | 0.0128 | 0.1283 |
| 193 | 0.6102 | 0.0128 | 0.5975 |
| 194 | 0.0765 | 0.0128 | 0.0637 |
| 195 | 0.0494 | 0.0127 | 0.0367 |
| 196 | 0.0379 | 0.0097 | 0.0282 |
| 197 | 0.0332 | 0.0085 | 0.0247 |
| 198 | 0.0287 | 0.0074 | 0.0213 |
| 199 | 0.0254 | 0.0065 | 0.0189 |
| 200 | 0.0230 | 0.0059 | 0.0171 |
| 201 | 0.0210 | 0.0054 | 0.0156 |
| 202 | 0.0194 | 0.0050 | 0.0144 |
| 203 | 0.0181 | 0.0046 | 0.0134 |
| 204 | 0.0170 | 0.0044 | 0.0126 |
| 205 | 0.0128 | 0.0033 | 0.0095 |
| 206 | 0.0120 | 0.0031 | 0.0089 |
| 207 | 0.0114 | 0.0029 | 0.0085 |
| 208 | 0.0108 | 0.0028 | 0.0081 |
| 209 | 0.0103 | 0.0027 | 0.0077 |
| 210 | 0.0099 | 0.0025 | 0.0073 |
| 211 | 0.0095 | 0.0024 | 0.0070 |
| 212 | 0.0091 | 0.0023 | 0.0068 |
| 213 | 0.0088 | 0.0023 | 0.0065 |
| 214 | 0.0085 | 0.0022 | 0.0063 |
| 215 | 0.0082 | 0.0021 | 0.0061 |
| 216 | 0.0079 | 0.0020 | 0.0059 |
| 217 | 0.0089 | 0.0023 | 0.0066 |
| 218 | 0.0086 | 0.0022 | 0.0064 |
| 219 | 0.0084 | 0.0022 | 0.0062 |
| 220 | 0.0082 | 0.0021 | 0.0061 |
| 221 | 0.0080 | 0.0020 | 0.0059 |
| 222 | 0.0078 | 0.0020 | 0.0058 |
| 223 | 0.0076 | 0.0020 | 0.0057 |
| 224 | 0.0074 | 0.0019 | 0.0055 |
| 225 | 0.0073 | 0.0019 | 0.0054 |
| 226 | 0.0071 | 0.0018 | 0.0053 |
| 227 | 0.0070 | 0.0018 | 0.0052 |
| 228 | 0.0068 | 0.0018 | 0.0051 |
| 229 | 0.0067 | 0.0017 | 0.0050 |
| 230 | 0.0066 | 0.0017 | 0.0049 |
| 231 | 0.0064 | 0.0017 | 0.0048 |
| 232 | 0.0063 | 0.0016 | 0.0047 |
| 233 | 0.0062 | 0.0016 | 0.0046 |
| 234 | 0.0061 | 0.0016 | 0.0045 |
| 235 | 0.0060 | 0.0015 | 0.0045 |
| 236 | 0.0059 | 0.0015 | 0.0044 |
| 237 | 0.0058 | 0.0015 | 0.0043 |
| 238 | 0.0057 | 0.0015 | 0.0043 |
| 239 | 0.0056 | 0.0014 | 0.0042 |
| 240 | 0.0056 | 0.0014 | 0.0041 |
| 241 | 0.0055 | 0.0014 | 0.0041 |
| 242 | 0.0054 | 0.0014 | 0.0040 |
| 243 | 0.0053 | 0.0014 | 0.0039 |
| 244 | 0.0052 | 0.0013 | 0.0039 |
| 245 | 0.0052 | 0.0013 | 0.0038 |
| 246 | 0.0051 | 0.0013 | 0.0038 |
| 247 | 0.0050 | 0.0013 | 0.0037 |

| | | | |
|---|---|---|---|
| 248 | 0.0050 | 0.0013 | 0.0037 |
| 249 | 0.0049 | 0.0013 | 0.0036 |
| 250 | 0.0048 | 0.0012 | 0.0036 |
| 251 | 0.0048 | 0.0012 | 0.0036 |
| 252 | 0.0047 | 0.0012 | 0.0035 |
| 253 | 0.0047 | 0.0012 | 0.0035 |
| 254 | 0.0046 | 0.0012 | 0.0034 |
| 255 | 0.0046 | 0.0012 | 0.0034 |
| 256 | 0.0045 | 0.0012 | 0.0034 |
| 257 | 0.0045 | 0.0011 | 0.0033 |
| 258 | 0.0044 | 0.0011 | 0.0033 |
| 259 | 0.0044 | 0.0011 | 0.0032 |
| 260 | 0.0043 | 0.0011 | 0.0032 |
| 261 | 0.0043 | 0.0011 | 0.0032 |
| 262 | 0.0042 | 0.0011 | 0.0031 |
| 263 | 0.0042 | 0.0011 | 0.0031 |
| 264 | 0.0042 | 0.0011 | 0.0031 |
| 265 | 0.0041 | 0.0011 | 0.0031 |
| 266 | 0.0041 | 0.0010 | 0.0030 |
| 267 | 0.0040 | 0.0010 | 0.0030 |
| 268 | 0.0040 | 0.0010 | 0.0030 |
| 269 | 0.0040 | 0.0010 | 0.0029 |
| 270 | 0.0039 | 0.0010 | 0.0029 |
| 271 | 0.0039 | 0.0010 | 0.0029 |
| 272 | 0.0039 | 0.0010 | 0.0029 |
| 273 | 0.0038 | 0.0010 | 0.0028 |
| 274 | 0.0038 | 0.0010 | 0.0028 |
| 275 | 0.0038 | 0.0010 | 0.0028 |
| 276 | 0.0037 | 0.0010 | 0.0028 |
| 277 | 0.0037 | 0.0009 | 0.0027 |
| 278 | 0.0037 | 0.0009 | 0.0027 |
| 279 | 0.0036 | 0.0009 | 0.0027 |
| 280 | 0.0036 | 0.0009 | 0.0027 |
| 281 | 0.0036 | 0.0009 | 0.0027 |
| 282 | 0.0035 | 0.0009 | 0.0026 |
| 283 | 0.0035 | 0.0009 | 0.0026 |
| 284 | 0.0035 | 0.0009 | 0.0026 |
| 285 | 0.0035 | 0.0009 | 0.0026 |
| 286 | 0.0034 | 0.0009 | 0.0026 |
| 287 | 0.0034 | 0.0009 | 0.0025 |
| 288 | 0.0034 | 0.0009 | 0.0025 |

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Total soil rain loss = 0.65(In)
Total effective rainfall = 2.63(In)
Peak flow rate in flood hydrograph = 2734.35(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 700.0 | 1400.0 | 2100.0 | 2800.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0029 | 0.42 | Q | \| | \| | \| | \| |
| 0+10 | 0.0144 | 1.67 | Q | \| | \| | \| | \| |
| 0+15 | 0.0397 | 3.68 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+20 | 0.0868 | 6.83 | Q | | | | |
| 0+25 | 0.1737 | 12.62 | Q | | | | |
| 0+30 | 0.3104 | 19.85 | Q | | | | |
| 0+35 | 0.4956 | 26.90 | Q | | | | |
| 0+40 | 0.7154 | 31.91 | Q | | | | |
| 0+45 | 0.9587 | 35.33 | Q | | | | |
| 0+50 | 1.2205 | 38.02 | Q | | | | |
| 0+55 | 1.4979 | 40.28 | Q | | | | |
| 1+ 0 | 1.7888 | 42.23 | Q | | | | |
| 1+ 5 | 2.0913 | 43.92 | Q | | | | |
| 1+10 | 2.4043 | 45.44 | Q | | | | |
| 1+15 | 2.7263 | 46.76 | Q | | | | |
| 1+20 | 3.0565 | 47.95 | Q | | | | |
| 1+25 | 3.3943 | 49.05 | Q | | | | |
| 1+30 | 3.7391 | 50.06 | Q | | | | |
| 1+35 | 4.0905 | 51.02 | Q | | | | |
| 1+40 | 4.4479 | 51.89 | Q | | | | |
| 1+45 | 4.8107 | 52.67 | Q | | | | |
| 1+50 | 5.1783 | 53.38 | Q | | | | |
| 1+55 | 5.5506 | 54.05 | Q | | | | |
| 2+ 0 | 5.9273 | 54.70 | Q | | | | |
| 2+ 5 | 6.3082 | 55.30 | Q | | | | |
| 2+10 | 6.6930 | 55.88 | Q | | | | |
| 2+15 | 7.0816 | 56.43 | Q | | | | |
| 2+20 | 7.4736 | 56.91 | Q | | | | |
| 2+25 | 7.8687 | 57.38 | Q | | | | |
| 2+30 | 8.2672 | 57.85 | Q | | | | |
| 2+35 | 8.6687 | 58.30 | Q | | | | |
| 2+40 | 9.0731 | 58.72 | Q | | | | |
| 2+45 | 9.4805 | 59.15 | Q | | | | |
| 2+50 | 9.8907 | 59.56 | Q | | | | |
| 2+55 | 10.3035 | 59.94 | QV | | | | |
| 3+ 0 | 10.7189 | 60.32 | QV | | | | |
| 3+ 5 | 11.1370 | 60.70 | QV | | | | |
| 3+10 | 11.5574 | 61.04 | QV | | | | |
| 3+15 | 11.9801 | 61.39 | QV | | | | |
| 3+20 | 12.4053 | 61.73 | QV | | | | |
| 3+25 | 12.8329 | 62.09 | QV | | | | |
| 3+30 | 13.2630 | 62.45 | QV | | | | |
| 3+35 | 13.6955 | 62.81 | QV | | | | |
| 3+40 | 14.1306 | 63.17 | QV | | | | |
| 3+45 | 14.5682 | 63.53 | QV | | | | |
| 3+50 | 15.0082 | 63.90 | QV | | | | |
| 3+55 | 15.4508 | 64.26 | QV | | | | |
| 4+ 0 | 15.8957 | 64.60 | QV | | | | |
| 4+ 5 | 16.3429 | 64.94 | QV | | | | |
| 4+10 | 16.7925 | 65.28 | QV | | | | |
| 4+15 | 17.2444 | 65.62 | QV | | | | |
| 4+20 | 17.6986 | 65.95 | QV | | | | |
| 4+25 | 18.1549 | 66.26 | QV | | | | |
| 4+30 | 18.6134 | 66.58 | QV | | | | |
| 4+35 | 19.0742 | 66.90 | QV | | | | |
| 4+40 | 19.5371 | 67.22 | QV | | | | |
| 4+45 | 20.0023 | 67.55 | QV | | | | |
| 4+50 | 20.4698 | 67.88 | Q V | | | | |
| 4+55 | 20.9395 | 68.21 | Q V | | | | |
| 5+ 0 | 21.4116 | 68.55 | Q V | | | | |
| 5+ 5 | 21.8861 | 68.89 | Q V | | | | |
| 5+10 | 22.3630 | 69.24 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+15 | 22.8422 | 69.59 | Q V | \| | \| | \| | \| |
| 5+20 | 23.3240 | 69.95 | Q V | \| | \| | \| | \| |
| 5+25 | 23.8082 | 70.31 | \|QV | \| | \| | \| | \| |
| 5+30 | 24.2949 | 70.67 | \|QV | \| | \| | \| | \| |
| 5+35 | 24.7842 | 71.04 | \|QV | \| | \| | \| | \| |
| 5+40 | 25.2760 | 71.41 | \|QV | \| | \| | \| | \| |
| 5+45 | 25.7705 | 71.79 | \|QV | \| | \| | \| | \| |
| 5+50 | 26.2675 | 72.18 | \|QV | \| | \| | \| | \| |
| 5+55 | 26.7673 | 72.57 | \|QV | \| | \| | \| | \| |
| 6+ 0 | 27.2698 | 72.96 | \|QV | \| | \| | \| | \| |
| 6+ 5 | 27.7750 | 73.36 | \|QV | \| | \| | \| | \| |
| 6+10 | 28.2831 | 73.76 | \|QV | \| | \| | \| | \| |
| 6+15 | 28.7939 | 74.17 | \|QV | \| | \| | \| | \| |
| 6+20 | 29.3076 | 74.59 | \|QV | \| | \| | \| | \| |
| 6+25 | 29.8242 | 75.01 | \|QV | \| | \| | \| | \| |
| 6+30 | 30.3437 | 75.44 | \|Q V | \| | \| | \| | \| |
| 6+35 | 30.8663 | 75.87 | \|Q V | \| | \| | \| | \| |
| 6+40 | 31.3918 | 76.31 | \|Q V | \| | \| | \| | \| |
| 6+45 | 31.9204 | 76.76 | \|Q V | \| | \| | \| | \| |
| 6+50 | 32.4522 | 77.21 | \|Q V | \| | \| | \| | \| |
| 6+55 | 32.9870 | 77.67 | \|Q V | \| | \| | \| | \| |
| 7+ 0 | 33.5251 | 78.13 | \|Q V | \| | \| | \| | \| |
| 7+ 5 | 34.0665 | 78.60 | \|Q V | \| | \| | \| | \| |
| 7+10 | 34.6111 | 79.08 | \|Q V | \| | \| | \| | \| |
| 7+15 | 35.1591 | 79.57 | \|Q V | \| | \| | \| | \| |
| 7+20 | 35.7104 | 80.06 | \|Q V | \| | \| | \| | \| |
| 7+25 | 36.2652 | 80.56 | \|Q V | \| | \| | \| | \| |
| 7+30 | 36.8235 | 81.07 | \|Q V | \| | \| | \| | \| |
| 7+35 | 37.3854 | 81.58 | \|Q V | \| | \| | \| | \| |
| 7+40 | 37.9509 | 82.11 | \|Q V | \| | \| | \| | \| |
| 7+45 | 38.5200 | 82.64 | \|Q V | \| | \| | \| | \| |
| 7+50 | 39.0929 | 83.18 | \|Q V | \| | \| | \| | \| |
| 7+55 | 39.6696 | 83.73 | \|Q V | \| | \| | \| | \| |
| 8+ 0 | 40.2500 | 84.29 | \|Q  V | \| | \| | \| | \| |
| 8+ 5 | 40.8345 | 84.86 | \|Q  V | \| | \| | \| | \| |
| 8+10 | 41.4228 | 85.43 | \|Q  V | \| | \| | \| | \| |
| 8+15 | 42.0153 | 86.02 | \|Q  V | \| | \| | \| | \| |
| 8+20 | 42.6118 | 86.61 | \|Q  V | \| | \| | \| | \| |
| 8+25 | 43.2125 | 87.22 | \|Q  V | \| | \| | \| | \| |
| 8+30 | 43.8174 | 87.84 | \|Q  V | \| | \| | \| | \| |
| 8+35 | 44.4267 | 88.47 | \|Q  V | \| | \| | \| | \| |
| 8+40 | 45.0404 | 89.10 | \|Q  V | \| | \| | \| | \| |
| 8+45 | 45.6585 | 89.76 | \|Q  V | \| | \| | \| | \| |
| 8+50 | 46.2812 | 90.42 | \|Q  V | \| | \| | \| | \| |
| 8+55 | 46.9085 | 91.09 | \|Q  V | \| | \| | \| | \| |
| 9+ 0 | 47.5406 | 91.77 | \|Q  V | \| | \| | \| | \| |
| 9+ 5 | 48.1775 | 92.48 | \|Q  V | \| | \| | \| | \| |
| 9+10 | 48.8193 | 93.18 | \|Q  V | \| | \| | \| | \| |
| 9+15 | 49.4660 | 93.91 | \|Q  V | \| | \| | \| | \| |
| 9+20 | 50.1179 | 94.65 | \|Q  V | \| | \| | \| | \| |
| 9+25 | 50.7749 | 95.40 | \|Q   V | \| | \| | \| | \| |
| 9+30 | 51.4373 | 96.17 | \|Q   V | \| | \| | \| | \| |
| 9+35 | 52.1050 | 96.96 | \|Q   V | \| | \| | \| | \| |
| 9+40 | 52.7782 | 97.75 | \|Q   V | \| | \| | \| | \| |
| 9+45 | 53.4571 | 98.57 | \|Q   V | \| | \| | \| | \| |
| 9+50 | 54.1417 | 99.40 | \|Q   V | \| | \| | \| | \| |
| 9+55 | 54.8321 | 100.25 | \|Q   V | \| | \| | \| | \| |
| 10+ 0 | 55.5285 | 101.12 | \|Q   V | \| | \| | \| | \| |
| 10+ 5 | 56.2310 | 102.00 | \|Q   V | \| | \| | \| | \| |

```
10+10      56.9397    102.91  |Q   V    |          |          |          |
10+15      57.6548    103.83  |Q   V    |          |          |          |
10+20      58.3764    104.78  |Q   V    |          |          |          |
10+25      59.1047    105.74  |Q   V    |          |          |          |
10+30      59.8397    106.73  |Q   V    |          |          |          |
10+35      60.5818    107.74  |Q    V   |          |          |          |
10+40      61.3309    108.78  |Q    V   |          |          |          |
10+45      62.0874    109.84  |Q    V   |          |          |          |
10+50      62.8513    110.92  |Q    V   |          |          |          |
10+55      63.6229    112.03  |Q    V   |          |          |          |
11+ 0      64.4023    113.17  |Q    V   |          |          |          |
11+ 5      65.1897    114.34  |Q    V   |          |          |          |
11+10      65.9854    115.53  |Q    V   |          |          |          |
11+15      66.7896    116.77  |Q    V   |          |          |          |
11+20      67.6024    118.02  |Q    V   |          |          |          |
11+25      68.4242    119.32  |Q    V   |          |          |          |
11+30      69.2551    120.65  |Q    V   |          |          |          |
11+35      70.0955    122.02  |Q    V   |          |          |          |
11+40      70.9454    123.42  |Q     V  |          |          |          |
11+45      71.8054    124.87  |Q     V  |          |          |          |
11+50      72.6756    126.35  |Q     V  |          |          |          |
11+55      73.5563    127.89  |Q     V  |          |          |          |
12+ 0      74.4479    129.46  |Q     V  |          |          |          |
12+ 5      75.3497    130.94  |Q     V  |          |          |          |
12+10      76.2598    132.14  |Q     V  |          |          |          |
12+15      77.1767    133.13  |Q     V  |          |          |          |
12+20      78.0978    133.74  |Q     V  |          |          |          |
12+25      79.0168    133.45  |Q     V  |          |          |          |
12+30      79.9304    132.65  |Q     V  |          |          |          |
12+35      80.8394    131.99  |Q      V |          |          |          |
12+40      81.7493    132.12  |Q      V |          |          |          |
12+45      82.6647    132.91  |Q      V |          |          |          |
12+50      83.5877    134.02  |Q      V |          |          |          |
12+55      84.5200    135.38  |Q      V |          |          |          |
13+ 0      85.4629    136.91  |Q      V |          |          |          |
13+ 5      86.4178    138.65  |Q      V |          |          |          |
13+10      87.3855    140.52  | Q     V |          |          |          |
13+15      88.3675    142.58  | Q     V |          |          |          |
13+20      89.3646    144.78  | Q     V |          |          |          |
13+25      90.3779    147.14  | Q      V|          |          |          |
13+30      91.4084    149.63  | Q      V|          |          |          |
13+35      92.4573    152.30  | Q      V|          |          |          |
13+40      93.5257    155.12  | Q      V|          |          |          |
13+45      94.6149    158.15  | Q      V|          |          |          |
13+50      95.7261    161.35  | Q      V|          |          |          |
13+55      96.8609    164.77  | Q      V|          |          |          |
14+ 0      98.0204    168.36  | Q      V|          |          |          |
14+ 5      99.2093    172.63  | Q      V|          |          |          |
14+10     100.4346    177.92  | Q       V          |          |          |
14+15     101.7037    184.27  | Q       V          |          |          |
14+20     103.0263    192.04  | Q       V          |          |          |
14+25     104.4228    202.77  | Q       V          |          |          |
14+30     105.9057    215.31  |  Q      V          |          |          |
14+35     107.4775    228.23  |  Q      V          |          |          |
14+40     109.1282    239.68  |  Q      V          |          |          |
14+45     110.8516    250.23  |  Q      |V         |          |          |
14+50     112.6468    260.67  |  Q      |V         |          |          |
14+55     114.5166    271.49  |  Q      |V         |          |          |
15+ 0     116.4639    282.76  |   Q     |V         |          |          |
```

| | | | |
|---|---|---|---|
| 15+ 5 | 118.4942 | 294.80 | |
| 15+10 | 120.6132 | 307.68 | |
| 15+15 | 122.8292 | 321.76 | |
| 15+20 | 125.1511 | 337.13 | |
| 15+25 | 127.5902 | 354.16 | |
| 15+30 | 130.1571 | 372.71 | |
| 15+35 | 132.8693 | 393.81 | |
| 15+40 | 135.7451 | 417.56 | |
| 15+45 | 138.8110 | 445.17 | |
| 15+50 | 142.1120 | 479.31 | |
| 15+55 | 145.7487 | 528.05 | |
| 16+ 0 | 149.9103 | 604.27 | |
| 16+ 5 | 155.3857 | 795.03 | |
| 16+10 | 162.8910 | 1089.77 | |
| 16+15 | 172.5044 | 1395.87 | |
| 16+20 | 184.8669 | 1795.03 | |
| 16+25 | 201.6605 | 2438.42 | |
| 16+30 | 220.4921 | 2734.35 | |
| 16+35 | 238.3169 | 2588.16 | |
| 16+40 | 252.2831 | 2027.89 | |
| 16+45 | 263.1407 | 1576.52 | |
| 16+50 | 272.2999 | 1329.92 | |
| 16+55 | 280.3264 | 1165.44 | |
| 17+ 0 | 287.4871 | 1039.75 | |
| 17+ 5 | 293.8986 | 930.94 | |
| 17+10 | 299.7394 | 848.09 | |
| 17+15 | 304.9885 | 762.16 | |
| 17+20 | 309.7983 | 698.38 | |
| 17+25 | 314.2295 | 643.42 | |
| 17+30 | 318.2940 | 590.16 | |
| 17+35 | 322.0492 | 545.26 | |
| 17+40 | 325.4807 | 498.25 | |
| 17+45 | 328.6011 | 453.09 | |
| 17+50 | 331.4842 | 418.62 | |
| 17+55 | 334.1785 | 391.20 | |
| 18+ 0 | 336.7123 | 367.91 | |
| 18+ 5 | 339.0785 | 343.57 | |
| 18+10 | 341.2989 | 322.40 | |
| 18+15 | 343.3844 | 302.82 | |
| 18+20 | 345.2939 | 277.26 | |
| 18+25 | 347.1284 | 266.37 | |
| 18+30 | 348.9091 | 258.56 | |
| 18+35 | 350.5925 | 244.42 | |
| 18+40 | 352.2052 | 234.16 | |
| 18+45 | 353.7676 | 226.87 | |
| 18+50 | 355.2467 | 214.76 | |
| 18+55 | 356.6327 | 201.26 | |
| 19+ 0 | 357.9753 | 194.94 | |
| 19+ 5 | 359.2645 | 187.18 | |
| 19+10 | 360.4696 | 174.99 | |
| 19+15 | 361.6383 | 169.69 | |
| 19+20 | 362.7810 | 165.93 | |
| 19+25 | 363.9035 | 162.98 | |
| 19+30 | 365.0034 | 159.72 | |
| 19+35 | 366.0796 | 156.25 | |
| 19+40 | 367.1289 | 152.36 | |
| 19+45 | 368.1505 | 148.34 | |
| 19+50 | 369.1446 | 144.34 | |
| 19+55 | 370.0971 | 138.30 | |

```
20+ 0     370.9821    128.50  |Q        |         |         |     V   |
20+ 5     371.8407    124.68  |Q        |         |         |      V  |
20+10     372.6771    121.44  |Q        |         |         |      V  |
20+15     373.4884    117.81  |Q        |         |         |      V  |
20+20     374.2477    110.25  |Q        |         |         |      V  |
20+25     374.9593    103.32  |Q        |         |         |      V  |
20+30     375.6541    100.89  |Q        |         |         |      V  |
20+35     376.3347     98.82  |Q        |         |         |      V  |
20+40     377.0022     96.92  |Q        |         |         |      V  |
20+45     377.6574     95.14  |Q        |         |         |      V  |
20+50     378.3011     93.46  |Q        |         |         |      V  |
20+55     378.9338     91.88  |Q        |         |         |      V  |
21+ 0     379.5564     90.40  |Q        |         |         |      V  |
21+ 5     380.1693     88.99  |Q        |         |         |      V  |
21+10     380.7728     87.63  |Q        |         |         |      V  |
21+15     381.3673     86.33  |Q        |         |         |      V  |
21+20     381.9534     85.09  |Q        |         |         |       V |
21+25     382.5314     83.93  |Q        |         |         |       V |
21+30     383.1017     82.81  |Q        |         |         |       V |
21+35     383.6646     81.73  |Q        |         |         |       V |
21+40     384.2203     80.69  |Q        |         |         |       V |
21+45     384.7691     79.68  |Q        |         |         |       V |
21+50     385.3112     78.71  |Q        |         |         |       V |
21+55     385.8467     77.76  |Q        |         |         |       V |
22+ 0     386.3759     76.84  |Q        |         |         |       V |
22+ 5     386.8989     75.94  |Q        |         |         |       V |
22+10     387.4159     75.07  |Q        |         |         |       V |
22+15     387.9271     74.22  |Q        |         |         |       V |
22+20     388.4326     73.39  |Q        |         |         |       V |
22+25     388.9325     72.58  |Q        |         |         |       V |
22+30     389.4269     71.79  |Q        |         |         |       V |
22+35     389.9160     71.02  |Q        |         |         |       V |
22+40     390.4000     70.27  |Q        |         |         |       V |
22+45     390.8790     69.55  Q        |         |         |       V |
22+50     391.3531     68.84  Q        |         |         |       V |
22+55     391.8224     68.14  Q        |         |         |        V|
23+ 0     392.2870     67.47  Q        |         |         |        V|
23+ 5     392.7472     66.81  Q        |         |         |        V|
23+10     393.2028     66.17  Q        |         |         |        V|
23+15     393.6542     65.54  Q        |         |         |        V|
23+20     394.1014     64.93  Q        |         |         |        V|
23+25     394.5444     64.33  Q        |         |         |        V|
23+30     394.9834     63.74  Q        |         |         |        V|
23+35     395.4184     63.17  Q        |         |         |        V|
23+40     395.8496     62.61  Q        |         |         |        V|
23+45     396.2770     62.06  Q        |         |         |        V|
23+50     396.7007     61.52  Q        |         |         |        V|
23+55     397.1208     61.00  Q        |         |         |        V|
24+ 0     397.5374     60.49  Q        |         |         |        V|
24+ 5     397.9477     59.57  Q        |         |         |        V|
24+10     398.3459     57.83  Q        |         |         |        V|
24+15     398.7271     55.35  Q        |         |         |        V|
24+20     399.0837     51.77  Q        |         |         |        V|
24+25     399.3979     45.61  Q        |         |         |        V|
24+30     399.6601     38.08  Q        |         |         |        V|
24+35     399.8722     30.80  Q        |         |         |        V|
24+40     400.0489     25.65  Q        |         |         |        V|
24+45     400.2014     22.15  Q        |         |         |        V|
24+50     400.3351     19.41  Q        |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24+55 | 400.4531 | 17.14 | Q | \| | \| | \| | V\| |
| 25+ 0 | 400.5578 | 15.20 | Q | \| | \| | \| | V\| |
| 25+ 5 | 400.6511 | 13.55 | Q | \| | \| | \| | V\| |
| 25+10 | 400.7344 | 12.08 | Q | \| | \| | \| | V\| |
| 25+15 | 400.8091 | 10.85 | Q | \| | \| | \| | V\| |
| 25+20 | 400.8762 | 9.75 | Q | \| | \| | \| | V\| |
| 25+25 | 400.9365 | 8.75 | Q | \| | \| | \| | V\| |
| 25+30 | 400.9906 | 7.86 | Q | \| | \| | \| | V\| |
| 25+35 | 401.0391 | 7.03 | Q | \| | \| | \| | V\| |
| 25+40 | 401.0825 | 6.31 | Q | \| | \| | \| | V\| |
| 25+45 | 401.1217 | 5.69 | Q | \| | \| | \| | V\| |
| 25+50 | 401.1570 | 5.14 | Q | \| | \| | \| | V\| |
| 25+55 | 401.1889 | 4.63 | Q | \| | \| | \| | V\| |
| 26+ 0 | 401.2176 | 4.17 | Q | \| | \| | \| | V\| |
| 26+ 5 | 401.2434 | 3.75 | Q | \| | \| | \| | V\| |
| 26+10 | 401.2666 | 3.37 | Q | \| | \| | \| | V\| |
| 26+15 | 401.2874 | 3.02 | Q | \| | \| | \| | V\| |
| 26+20 | 401.3063 | 2.74 | Q | \| | \| | \| | V\| |
| 26+25 | 401.3234 | 2.48 | Q | \| | \| | \| | V\| |
| 26+30 | 401.3387 | 2.23 | Q | \| | \| | \| | V\| |
| 26+35 | 401.3525 | 2.01 | Q | \| | \| | \| | V\| |
| 26+40 | 401.3650 | 1.81 | Q | \| | \| | \| | V\| |
| 26+45 | 401.3761 | 1.61 | Q | \| | \| | \| | V\| |
| 26+50 | 401.3859 | 1.44 | Q | \| | \| | \| | V\| |
| 26+55 | 401.3949 | 1.30 | Q | \| | \| | \| | V\| |
| 27+ 0 | 401.4029 | 1.16 | Q | \| | \| | \| | V\| |
| 27+ 5 | 401.4100 | 1.04 | Q | \| | \| | \| | V\| |
| 27+10 | 401.4165 | 0.94 | Q | \| | \| | \| | V\| |
| 27+15 | 401.4224 | 0.86 | Q | \| | \| | \| | V\| |
| 27+20 | 401.4277 | 0.77 | Q | \| | \| | \| | V\| |
| 27+25 | 401.4324 | 0.68 | Q | \| | \| | \| | V\| |
| 27+30 | 401.4365 | 0.59 | Q | \| | \| | \| | V\| |
| 27+35 | 401.4400 | 0.51 | Q | \| | \| | \| | V\| |
| 27+40 | 401.4429 | 0.42 | Q | \| | \| | \| | V\| |
| 27+45 | 401.4452 | 0.34 | Q | \| | \| | \| | V\| |
| 27+50 | 401.4470 | 0.26 | Q | \| | \| | \| | V\| |
| 27+55 | 401.4482 | 0.18 | Q | \| | \| | \| | V\| |
| 28+ 0 | 401.4492 | 0.14 | Q | \| | \| | \| | V\| |
| 28+ 5 | 401.4499 | 0.10 | Q | \| | \| | \| | V\| |
| 28+10 | 401.4503 | 0.06 | Q | \| | \| | \| | V\| |
| 28+15 | 401.4504 | 0.02 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 08/10/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREA "M"
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-10-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 108.85 | 1 | 1.40 |
| Rainfall data for year 100 | | |
| 108.85 | 6 | 1.93 |
| Rainfall data for year 100 | | |
| 108.85 | 24 | 2.72 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 63.0 | 81.4 | 108.85 | 1.000 | 0.345 | 0.987 | 0.341 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.341

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 107.43 | 0.987 | 63.0 | 81.4 | 2.28 | 0.415 |
| 1.42 | 0.013 | 98.0 | 98.0 | 0.20 | 0.915 |

Area-averaged catchment yield fraction, Y = 0.422
Area-averaged low loss fraction, Yb = 0.578
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 4940.00(Ft.)
Length from concentration point to centroid = 2687.00(Ft.)
Elevation difference along watercourse = 164.00(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 108.85(Ac.)
Catchment Lag time = 0.237 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 35.1007
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.341(In/Hr)
Average low loss rate fraction (Yb) = 0.578 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.662(In)
Computed peak 30-minute rainfall = 1.133(In)
Specified peak 1-hour rainfall = 1.395(In)
Computed peak 3-hour rainfall = 1.704(In)
Specified peak 6-hour rainfall = 1.933(In)
Specified peak 24-hour rainfall = 2.724(In)

Rainfall depth area reduction factors:
Using a total area of 108.85(Ac.) (Ref: fig. E-4)

5-minute factor = 0.995 Adjusted rainfall = 0.659(In)
30-minute factor = 0.995 Adjusted rainfall = 1.127(In)
1-hour factor = 0.995 Adjusted rainfall = 1.388(In)
3-hour factor = 0.999 Adjusted rainfall = 1.703(In)
6-hour factor = 1.000 Adjusted rainfall = 1.932(In)
24-hour factor = 1.000 Adjusted rainfall = 2.724(In)
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U n i t H y d r o g r a p h

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 1316.40 (CFS)) | |
| 1 | 2.243 | 29.524 |
| 2 | 13.490 | 148.054 |
| 3 | 41.137 | 363.955 |
| 4 | 60.126 | 249.967 |
| 5 | 70.281 | 133.680 |
| 6 | 77.059 | 89.228 |
| 7 | 81.870 | 63.330 |
| 8 | 85.562 | 48.599 |
| 9 | 88.496 | 38.633 |
| 10 | 90.669 | 28.597 |

| | | |
|---|---|---|
| 11 | 92.484 | 23.892 |
| 12 | 93.997 | 19.919 |
| 13 | 95.213 | 16.012 |
| 14 | 96.220 | 13.257 |
| 15 | 97.053 | 10.959 |
| 16 | 97.678 | 8.226 |
| 17 | 98.092 | 5.448 |
| 18 | 98.471 | 5.000 |
| 19 | 98.892 | 5.541 |
| 20 | 99.313 | 5.540 |
| 21 | 99.622 | 4.068 |
| 22 | 99.842 | 2.888 |
| 23 | 100.000 | 2.084 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6586 | 0.6586 |
| 2 | 0.8108 | 0.1522 |
| 3 | 0.9157 | 0.1049 |
| 4 | 0.9982 | 0.0825 |
| 5 | 1.0673 | 0.0691 |
| 6 | 1.1273 | 0.0600 |
| 7 | 1.1807 | 0.0534 |
| 8 | 1.2289 | 0.0483 |
| 9 | 1.2731 | 0.0442 |
| 10 | 1.3140 | 0.0409 |
| 11 | 1.3521 | 0.0381 |
| 12 | 1.3879 | 0.0358 |
| 13 | 1.4087 | 0.0208 |
| 14 | 1.4283 | 0.0196 |
| 15 | 1.4467 | 0.0185 |
| 16 | 1.4642 | 0.0175 |
| 17 | 1.4808 | 0.0166 |
| 18 | 1.4967 | 0.0158 |
| 19 | 1.5118 | 0.0151 |
| 20 | 1.5263 | 0.0145 |
| 21 | 1.5402 | 0.0139 |
| 22 | 1.5536 | 0.0134 |
| 23 | 1.5665 | 0.0129 |
| 24 | 1.5790 | 0.0125 |
| 25 | 1.5910 | 0.0120 |
| 26 | 1.6027 | 0.0117 |
| 27 | 1.6140 | 0.0113 |
| 28 | 1.6249 | 0.0110 |
| 29 | 1.6356 | 0.0106 |
| 30 | 1.6459 | 0.0104 |
| 31 | 1.6560 | 0.0101 |
| 32 | 1.6658 | 0.0098 |
| 33 | 1.6754 | 0.0096 |
| 34 | 1.6847 | 0.0093 |
| 35 | 1.6938 | 0.0091 |
| 36 | 1.7027 | 0.0089 |
| 37 | 1.7113 | 0.0085 |
| 38 | 1.7196 | 0.0083 |
| 39 | 1.7278 | 0.0082 |
| 40 | 1.7358 | 0.0080 |
| 41 | 1.7436 | 0.0078 |
| 42 | 1.7513 | 0.0077 |
| 43 | 1.7589 | 0.0075 |

| | | |
|---|---|---|
| 44 | 1.7663 | 0.0074 |
| 45 | 1.7735 | 0.0073 |
| 46 | 1.7806 | 0.0071 |
| 47 | 1.7876 | 0.0070 |
| 48 | 1.7945 | 0.0069 |
| 49 | 1.8013 | 0.0068 |
| 50 | 1.8079 | 0.0067 |
| 51 | 1.8145 | 0.0065 |
| 52 | 1.8209 | 0.0064 |
| 53 | 1.8273 | 0.0063 |
| 54 | 1.8335 | 0.0062 |
| 55 | 1.8397 | 0.0061 |
| 56 | 1.8457 | 0.0061 |
| 57 | 1.8517 | 0.0060 |
| 58 | 1.8576 | 0.0059 |
| 59 | 1.8634 | 0.0058 |
| 60 | 1.8691 | 0.0057 |
| 61 | 1.8748 | 0.0056 |
| 62 | 1.8803 | 0.0056 |
| 63 | 1.8858 | 0.0055 |
| 64 | 1.8913 | 0.0054 |
| 65 | 1.8966 | 0.0054 |
| 66 | 1.9019 | 0.0053 |
| 67 | 1.9071 | 0.0052 |
| 68 | 1.9123 | 0.0052 |
| 69 | 1.9174 | 0.0051 |
| 70 | 1.9224 | 0.0050 |
| 71 | 1.9274 | 0.0050 |
| 72 | 1.9323 | 0.0049 |
| 73 | 1.9390 | 0.0066 |
| 74 | 1.9455 | 0.0065 |
| 75 | 1.9520 | 0.0065 |
| 76 | 1.9584 | 0.0064 |
| 77 | 1.9647 | 0.0063 |
| 78 | 1.9710 | 0.0063 |
| 79 | 1.9772 | 0.0062 |
| 80 | 1.9834 | 0.0062 |
| 81 | 1.9895 | 0.0061 |
| 82 | 1.9956 | 0.0061 |
| 83 | 2.0016 | 0.0060 |
| 84 | 2.0075 | 0.0059 |
| 85 | 2.0134 | 0.0059 |
| 86 | 2.0192 | 0.0058 |
| 87 | 2.0250 | 0.0058 |
| 88 | 2.0308 | 0.0057 |
| 89 | 2.0365 | 0.0057 |
| 90 | 2.0421 | 0.0056 |
| 91 | 2.0477 | 0.0056 |
| 92 | 2.0532 | 0.0055 |
| 93 | 2.0588 | 0.0055 |
| 94 | 2.0642 | 0.0055 |
| 95 | 2.0696 | 0.0054 |
| 96 | 2.0750 | 0.0054 |
| 97 | 2.0803 | 0.0053 |
| 98 | 2.0856 | 0.0053 |
| 99 | 2.0909 | 0.0052 |
| 100 | 2.0961 | 0.0052 |
| 101 | 2.1012 | 0.0052 |
| 102 | 2.1064 | 0.0051 |

| | | |
|---|---|---|
| 103 | 2.1115 | 0.0051 |
| 104 | 2.1165 | 0.0051 |
| 105 | 2.1216 | 0.0050 |
| 106 | 2.1265 | 0.0050 |
| 107 | 2.1315 | 0.0049 |
| 108 | 2.1364 | 0.0049 |
| 109 | 2.1413 | 0.0049 |
| 110 | 2.1461 | 0.0048 |
| 111 | 2.1509 | 0.0048 |
| 112 | 2.1557 | 0.0048 |
| 113 | 2.1605 | 0.0047 |
| 114 | 2.1652 | 0.0047 |
| 115 | 2.1699 | 0.0047 |
| 116 | 2.1745 | 0.0047 |
| 117 | 2.1792 | 0.0046 |
| 118 | 2.1838 | 0.0046 |
| 119 | 2.1883 | 0.0046 |
| 120 | 2.1929 | 0.0045 |
| 121 | 2.1974 | 0.0045 |
| 122 | 2.2019 | 0.0045 |
| 123 | 2.2063 | 0.0045 |
| 124 | 2.2107 | 0.0044 |
| 125 | 2.2151 | 0.0044 |
| 126 | 2.2195 | 0.0044 |
| 127 | 2.2239 | 0.0043 |
| 128 | 2.2282 | 0.0043 |
| 129 | 2.2325 | 0.0043 |
| 130 | 2.2368 | 0.0043 |
| 131 | 2.2410 | 0.0042 |
| 132 | 2.2452 | 0.0042 |
| 133 | 2.2494 | 0.0042 |
| 134 | 2.2536 | 0.0042 |
| 135 | 2.2578 | 0.0042 |
| 136 | 2.2619 | 0.0041 |
| 137 | 2.2660 | 0.0041 |
| 138 | 2.2701 | 0.0041 |
| 139 | 2.2741 | 0.0041 |
| 140 | 2.2782 | 0.0040 |
| 141 | 2.2822 | 0.0040 |
| 142 | 2.2862 | 0.0040 |
| 143 | 2.2902 | 0.0040 |
| 144 | 2.2941 | 0.0040 |
| 145 | 2.2981 | 0.0039 |
| 146 | 2.3020 | 0.0039 |
| 147 | 2.3059 | 0.0039 |
| 148 | 2.3097 | 0.0039 |
| 149 | 2.3136 | 0.0039 |
| 150 | 2.3174 | 0.0038 |
| 151 | 2.3212 | 0.0038 |
| 152 | 2.3250 | 0.0038 |
| 153 | 2.3288 | 0.0038 |
| 154 | 2.3326 | 0.0038 |
| 155 | 2.3363 | 0.0037 |
| 156 | 2.3400 | 0.0037 |
| 157 | 2.3437 | 0.0037 |
| 158 | 2.3474 | 0.0037 |
| 159 | 2.3511 | 0.0037 |
| 160 | 2.3548 | 0.0037 |
| 161 | 2.3584 | 0.0036 |

| | | |
|---|---|---|
| 162 | 2.3620 | 0.0036 |
| 163 | 2.3656 | 0.0036 |
| 164 | 2.3692 | 0.0036 |
| 165 | 2.3728 | 0.0036 |
| 166 | 2.3763 | 0.0036 |
| 167 | 2.3798 | 0.0035 |
| 168 | 2.3834 | 0.0035 |
| 169 | 2.3869 | 0.0035 |
| 170 | 2.3904 | 0.0035 |
| 171 | 2.3938 | 0.0035 |
| 172 | 2.3973 | 0.0035 |
| 173 | 2.4007 | 0.0034 |
| 174 | 2.4042 | 0.0034 |
| 175 | 2.4076 | 0.0034 |
| 176 | 2.4110 | 0.0034 |
| 177 | 2.4144 | 0.0034 |
| 178 | 2.4177 | 0.0034 |
| 179 | 2.4211 | 0.0034 |
| 180 | 2.4244 | 0.0033 |
| 181 | 2.4278 | 0.0033 |
| 182 | 2.4311 | 0.0033 |
| 183 | 2.4344 | 0.0033 |
| 184 | 2.4377 | 0.0033 |
| 185 | 2.4409 | 0.0033 |
| 186 | 2.4442 | 0.0033 |
| 187 | 2.4474 | 0.0032 |
| 188 | 2.4507 | 0.0032 |
| 189 | 2.4539 | 0.0032 |
| 190 | 2.4571 | 0.0032 |
| 191 | 2.4603 | 0.0032 |
| 192 | 2.4635 | 0.0032 |
| 193 | 2.4667 | 0.0032 |
| 194 | 2.4698 | 0.0032 |
| 195 | 2.4730 | 0.0031 |
| 196 | 2.4761 | 0.0031 |
| 197 | 2.4792 | 0.0031 |
| 198 | 2.4823 | 0.0031 |
| 199 | 2.4854 | 0.0031 |
| 200 | 2.4885 | 0.0031 |
| 201 | 2.4916 | 0.0031 |
| 202 | 2.4946 | 0.0031 |
| 203 | 2.4977 | 0.0031 |
| 204 | 2.5007 | 0.0030 |
| 205 | 2.5038 | 0.0030 |
| 206 | 2.5068 | 0.0030 |
| 207 | 2.5098 | 0.0030 |
| 208 | 2.5128 | 0.0030 |
| 209 | 2.5158 | 0.0030 |
| 210 | 2.5188 | 0.0030 |
| 211 | 2.5217 | 0.0030 |
| 212 | 2.5247 | 0.0030 |
| 213 | 2.5276 | 0.0029 |
| 214 | 2.5305 | 0.0029 |
| 215 | 2.5335 | 0.0029 |
| 216 | 2.5364 | 0.0029 |
| 217 | 2.5393 | 0.0029 |
| 218 | 2.5422 | 0.0029 |
| 219 | 2.5451 | 0.0029 |
| 220 | 2.5479 | 0.0029 |

| | | |
|---|---|---|
| 221 | 2.5508 | 0.0029 |
| 222 | 2.5536 | 0.0029 |
| 223 | 2.5565 | 0.0028 |
| 224 | 2.5593 | 0.0028 |
| 225 | 2.5621 | 0.0028 |
| 226 | 2.5650 | 0.0028 |
| 227 | 2.5678 | 0.0028 |
| 228 | 2.5706 | 0.0028 |
| 229 | 2.5733 | 0.0028 |
| 230 | 2.5761 | 0.0028 |
| 231 | 2.5789 | 0.0028 |
| 232 | 2.5817 | 0.0028 |
| 233 | 2.5844 | 0.0028 |
| 234 | 2.5871 | 0.0027 |
| 235 | 2.5899 | 0.0027 |
| 236 | 2.5926 | 0.0027 |
| 237 | 2.5953 | 0.0027 |
| 238 | 2.5980 | 0.0027 |
| 239 | 2.6007 | 0.0027 |
| 240 | 2.6034 | 0.0027 |
| 241 | 2.6061 | 0.0027 |
| 242 | 2.6088 | 0.0027 |
| 243 | 2.6114 | 0.0027 |
| 244 | 2.6141 | 0.0027 |
| 245 | 2.6167 | 0.0026 |
| 246 | 2.6194 | 0.0026 |
| 247 | 2.6220 | 0.0026 |
| 248 | 2.6246 | 0.0026 |
| 249 | 2.6273 | 0.0026 |
| 250 | 2.6299 | 0.0026 |
| 251 | 2.6325 | 0.0026 |
| 252 | 2.6351 | 0.0026 |
| 253 | 2.6376 | 0.0026 |
| 254 | 2.6402 | 0.0026 |
| 255 | 2.6428 | 0.0026 |
| 256 | 2.6454 | 0.0026 |
| 257 | 2.6479 | 0.0026 |
| 258 | 2.6505 | 0.0025 |
| 259 | 2.6530 | 0.0025 |
| 260 | 2.6555 | 0.0025 |
| 261 | 2.6580 | 0.0025 |
| 262 | 2.6606 | 0.0025 |
| 263 | 2.6631 | 0.0025 |
| 264 | 2.6656 | 0.0025 |
| 265 | 2.6681 | 0.0025 |
| 266 | 2.6706 | 0.0025 |
| 267 | 2.6730 | 0.0025 |
| 268 | 2.6755 | 0.0025 |
| 269 | 2.6780 | 0.0025 |
| 270 | 2.6805 | 0.0025 |
| 271 | 2.6829 | 0.0025 |
| 272 | 2.6854 | 0.0024 |
| 273 | 2.6878 | 0.0024 |
| 274 | 2.6902 | 0.0024 |
| 275 | 2.6927 | 0.0024 |
| 276 | 2.6951 | 0.0024 |
| 277 | 2.6975 | 0.0024 |
| 278 | 2.6999 | 0.0024 |
| 279 | 2.7023 | 0.0024 |

| | | |
|---|---|---|
| 280 | 2.7047 | 0.0024 |
| 281 | 2.7071 | 0.0024 |
| 282 | 2.7095 | 0.0024 |
| 283 | 2.7118 | 0.0024 |
| 284 | 2.7142 | 0.0024 |
| 285 | 2.7166 | 0.0024 |
| 286 | 2.7189 | 0.0024 |
| 287 | 2.7213 | 0.0024 |
| 288 | 2.7236 | 0.0023 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0023 | 0.0014 | 0.0010 |
| 2 | 0.0024 | 0.0014 | 0.0010 |
| 3 | 0.0024 | 0.0014 | 0.0010 |
| 4 | 0.0024 | 0.0014 | 0.0010 |
| 5 | 0.0024 | 0.0014 | 0.0010 |
| 6 | 0.0024 | 0.0014 | 0.0010 |
| 7 | 0.0024 | 0.0014 | 0.0010 |
| 8 | 0.0024 | 0.0014 | 0.0010 |
| 9 | 0.0024 | 0.0014 | 0.0010 |
| 10 | 0.0024 | 0.0014 | 0.0010 |
| 11 | 0.0024 | 0.0014 | 0.0010 |
| 12 | 0.0024 | 0.0014 | 0.0010 |
| 13 | 0.0025 | 0.0014 | 0.0010 |
| 14 | 0.0025 | 0.0014 | 0.0010 |
| 15 | 0.0025 | 0.0014 | 0.0010 |
| 16 | 0.0025 | 0.0014 | 0.0010 |
| 17 | 0.0025 | 0.0014 | 0.0011 |
| 18 | 0.0025 | 0.0015 | 0.0011 |
| 19 | 0.0025 | 0.0015 | 0.0011 |
| 20 | 0.0025 | 0.0015 | 0.0011 |
| 21 | 0.0025 | 0.0015 | 0.0011 |
| 22 | 0.0026 | 0.0015 | 0.0011 |
| 23 | 0.0026 | 0.0015 | 0.0011 |
| 24 | 0.0026 | 0.0015 | 0.0011 |
| 25 | 0.0026 | 0.0015 | 0.0011 |
| 26 | 0.0026 | 0.0015 | 0.0011 |
| 27 | 0.0026 | 0.0015 | 0.0011 |
| 28 | 0.0026 | 0.0015 | 0.0011 |
| 29 | 0.0026 | 0.0015 | 0.0011 |
| 30 | 0.0026 | 0.0015 | 0.0011 |
| 31 | 0.0027 | 0.0015 | 0.0011 |
| 32 | 0.0027 | 0.0015 | 0.0011 |
| 33 | 0.0027 | 0.0016 | 0.0011 |
| 34 | 0.0027 | 0.0016 | 0.0011 |
| 35 | 0.0027 | 0.0016 | 0.0011 |
| 36 | 0.0027 | 0.0016 | 0.0011 |
| 37 | 0.0027 | 0.0016 | 0.0012 |
| 38 | 0.0028 | 0.0016 | 0.0012 |
| 39 | 0.0028 | 0.0016 | 0.0012 |
| 40 | 0.0028 | 0.0016 | 0.0012 |
| 41 | 0.0028 | 0.0016 | 0.0012 |
| 42 | 0.0028 | 0.0016 | 0.0012 |
| 43 | 0.0028 | 0.0016 | 0.0012 |
| 44 | 0.0028 | 0.0016 | 0.0012 |
| 45 | 0.0029 | 0.0016 | 0.0012 |

| | | | |
|---|---|---|---|
| 46 | 0.0029 | 0.0017 | 0.0012 |
| 47 | 0.0029 | 0.0017 | 0.0012 |
| 48 | 0.0029 | 0.0017 | 0.0012 |
| 49 | 0.0029 | 0.0017 | 0.0012 |
| 50 | 0.0029 | 0.0017 | 0.0012 |
| 51 | 0.0029 | 0.0017 | 0.0012 |
| 52 | 0.0030 | 0.0017 | 0.0012 |
| 53 | 0.0030 | 0.0017 | 0.0013 |
| 54 | 0.0030 | 0.0017 | 0.0013 |
| 55 | 0.0030 | 0.0017 | 0.0013 |
| 56 | 0.0030 | 0.0017 | 0.0013 |
| 57 | 0.0030 | 0.0018 | 0.0013 |
| 58 | 0.0031 | 0.0018 | 0.0013 |
| 59 | 0.0031 | 0.0018 | 0.0013 |
| 60 | 0.0031 | 0.0018 | 0.0013 |
| 61 | 0.0031 | 0.0018 | 0.0013 |
| 62 | 0.0031 | 0.0018 | 0.0013 |
| 63 | 0.0031 | 0.0018 | 0.0013 |
| 64 | 0.0032 | 0.0018 | 0.0013 |
| 65 | 0.0032 | 0.0018 | 0.0013 |
| 66 | 0.0032 | 0.0018 | 0.0013 |
| 67 | 0.0032 | 0.0019 | 0.0014 |
| 68 | 0.0032 | 0.0019 | 0.0014 |
| 69 | 0.0033 | 0.0019 | 0.0014 |
| 70 | 0.0033 | 0.0019 | 0.0014 |
| 71 | 0.0033 | 0.0019 | 0.0014 |
| 72 | 0.0033 | 0.0019 | 0.0014 |
| 73 | 0.0033 | 0.0019 | 0.0014 |
| 74 | 0.0034 | 0.0019 | 0.0014 |
| 75 | 0.0034 | 0.0020 | 0.0014 |
| 76 | 0.0034 | 0.0020 | 0.0014 |
| 77 | 0.0034 | 0.0020 | 0.0014 |
| 78 | 0.0034 | 0.0020 | 0.0015 |
| 79 | 0.0035 | 0.0020 | 0.0015 |
| 80 | 0.0035 | 0.0020 | 0.0015 |
| 81 | 0.0035 | 0.0020 | 0.0015 |
| 82 | 0.0035 | 0.0020 | 0.0015 |
| 83 | 0.0036 | 0.0021 | 0.0015 |
| 84 | 0.0036 | 0.0021 | 0.0015 |
| 85 | 0.0036 | 0.0021 | 0.0015 |
| 86 | 0.0036 | 0.0021 | 0.0015 |
| 87 | 0.0037 | 0.0021 | 0.0015 |
| 88 | 0.0037 | 0.0021 | 0.0016 |
| 89 | 0.0037 | 0.0022 | 0.0016 |
| 90 | 0.0037 | 0.0022 | 0.0016 |
| 91 | 0.0038 | 0.0022 | 0.0016 |
| 92 | 0.0038 | 0.0022 | 0.0016 |
| 93 | 0.0038 | 0.0022 | 0.0016 |
| 94 | 0.0039 | 0.0022 | 0.0016 |
| 95 | 0.0039 | 0.0023 | 0.0016 |
| 96 | 0.0039 | 0.0023 | 0.0017 |
| 97 | 0.0040 | 0.0023 | 0.0017 |
| 98 | 0.0040 | 0.0023 | 0.0017 |
| 99 | 0.0040 | 0.0023 | 0.0017 |
| 100 | 0.0040 | 0.0023 | 0.0017 |
| 101 | 0.0041 | 0.0024 | 0.0017 |
| 102 | 0.0041 | 0.0024 | 0.0017 |
| 103 | 0.0042 | 0.0024 | 0.0018 |
| 104 | 0.0042 | 0.0024 | 0.0018 |

| | | | |
|---|---|---|---|
| 105 | 0.0042 | 0.0024 | 0.0018 |
| 106 | 0.0042 | 0.0025 | 0.0018 |
| 107 | 0.0043 | 0.0025 | 0.0018 |
| 108 | 0.0043 | 0.0025 | 0.0018 |
| 109 | 0.0044 | 0.0025 | 0.0018 |
| 110 | 0.0044 | 0.0025 | 0.0019 |
| 111 | 0.0045 | 0.0026 | 0.0019 |
| 112 | 0.0045 | 0.0026 | 0.0019 |
| 113 | 0.0045 | 0.0026 | 0.0019 |
| 114 | 0.0046 | 0.0026 | 0.0019 |
| 115 | 0.0046 | 0.0027 | 0.0020 |
| 116 | 0.0047 | 0.0027 | 0.0020 |
| 117 | 0.0047 | 0.0027 | 0.0020 |
| 118 | 0.0047 | 0.0027 | 0.0020 |
| 119 | 0.0048 | 0.0028 | 0.0020 |
| 120 | 0.0048 | 0.0028 | 0.0020 |
| 121 | 0.0049 | 0.0028 | 0.0021 |
| 122 | 0.0049 | 0.0029 | 0.0021 |
| 123 | 0.0050 | 0.0029 | 0.0021 |
| 124 | 0.0051 | 0.0029 | 0.0021 |
| 125 | 0.0051 | 0.0030 | 0.0022 |
| 126 | 0.0052 | 0.0030 | 0.0022 |
| 127 | 0.0052 | 0.0030 | 0.0022 |
| 128 | 0.0053 | 0.0031 | 0.0022 |
| 129 | 0.0054 | 0.0031 | 0.0023 |
| 130 | 0.0054 | 0.0031 | 0.0023 |
| 131 | 0.0055 | 0.0032 | 0.0023 |
| 132 | 0.0055 | 0.0032 | 0.0023 |
| 133 | 0.0056 | 0.0033 | 0.0024 |
| 134 | 0.0057 | 0.0033 | 0.0024 |
| 135 | 0.0058 | 0.0033 | 0.0024 |
| 136 | 0.0058 | 0.0034 | 0.0025 |
| 137 | 0.0059 | 0.0034 | 0.0025 |
| 138 | 0.0060 | 0.0035 | 0.0025 |
| 139 | 0.0061 | 0.0035 | 0.0026 |
| 140 | 0.0062 | 0.0036 | 0.0026 |
| 141 | 0.0063 | 0.0036 | 0.0027 |
| 142 | 0.0063 | 0.0037 | 0.0027 |
| 143 | 0.0065 | 0.0037 | 0.0027 |
| 144 | 0.0065 | 0.0038 | 0.0028 |
| 145 | 0.0049 | 0.0028 | 0.0021 |
| 146 | 0.0050 | 0.0029 | 0.0021 |
| 147 | 0.0051 | 0.0030 | 0.0022 |
| 148 | 0.0052 | 0.0030 | 0.0022 |
| 149 | 0.0053 | 0.0031 | 0.0022 |
| 150 | 0.0054 | 0.0031 | 0.0023 |
| 151 | 0.0055 | 0.0032 | 0.0023 |
| 152 | 0.0056 | 0.0032 | 0.0023 |
| 153 | 0.0057 | 0.0033 | 0.0024 |
| 154 | 0.0058 | 0.0034 | 0.0024 |
| 155 | 0.0060 | 0.0035 | 0.0025 |
| 156 | 0.0061 | 0.0035 | 0.0026 |
| 157 | 0.0062 | 0.0036 | 0.0026 |
| 158 | 0.0063 | 0.0037 | 0.0027 |
| 159 | 0.0065 | 0.0038 | 0.0028 |
| 160 | 0.0067 | 0.0038 | 0.0028 |
| 161 | 0.0069 | 0.0040 | 0.0029 |
| 162 | 0.0070 | 0.0040 | 0.0030 |
| 163 | 0.0073 | 0.0042 | 0.0031 |

| | | | |
|---|---|---|---|
| 164 | 0.0074 | 0.0043 | 0.0031 |
| 165 | 0.0077 | 0.0044 | 0.0032 |
| 166 | 0.0078 | 0.0045 | 0.0033 |
| 167 | 0.0082 | 0.0047 | 0.0034 |
| 168 | 0.0083 | 0.0048 | 0.0035 |
| 169 | 0.0089 | 0.0051 | 0.0038 |
| 170 | 0.0091 | 0.0053 | 0.0038 |
| 171 | 0.0096 | 0.0055 | 0.0040 |
| 172 | 0.0098 | 0.0057 | 0.0041 |
| 173 | 0.0104 | 0.0060 | 0.0044 |
| 174 | 0.0106 | 0.0062 | 0.0045 |
| 175 | 0.0113 | 0.0065 | 0.0048 |
| 176 | 0.0117 | 0.0067 | 0.0049 |
| 177 | 0.0125 | 0.0072 | 0.0053 |
| 178 | 0.0129 | 0.0075 | 0.0054 |
| 179 | 0.0139 | 0.0081 | 0.0059 |
| 180 | 0.0145 | 0.0084 | 0.0061 |
| 181 | 0.0158 | 0.0092 | 0.0067 |
| 182 | 0.0166 | 0.0096 | 0.0070 |
| 183 | 0.0185 | 0.0107 | 0.0078 |
| 184 | 0.0196 | 0.0113 | 0.0082 |
| 185 | 0.0358 | 0.0207 | 0.0151 |
| 186 | 0.0381 | 0.0220 | 0.0161 |
| 187 | 0.0442 | 0.0256 | 0.0186 |
| 188 | 0.0483 | 0.0279 | 0.0203 |
| 189 | 0.0600 | 0.0284 | 0.0316 |
| 190 | 0.0691 | 0.0284 | 0.0407 |
| 191 | 0.1049 | 0.0284 | 0.0765 |
| 192 | 0.1522 | 0.0284 | 0.1238 |
| 193 | 0.6586 | 0.0284 | 0.6302 |
| 194 | 0.0825 | 0.0284 | 0.0541 |
| 195 | 0.0534 | 0.0284 | 0.0250 |
| 196 | 0.0409 | 0.0236 | 0.0172 |
| 197 | 0.0208 | 0.0120 | 0.0088 |
| 198 | 0.0175 | 0.0101 | 0.0074 |
| 199 | 0.0151 | 0.0088 | 0.0064 |
| 200 | 0.0134 | 0.0077 | 0.0056 |
| 201 | 0.0120 | 0.0070 | 0.0051 |
| 202 | 0.0110 | 0.0063 | 0.0046 |
| 203 | 0.0101 | 0.0058 | 0.0042 |
| 204 | 0.0093 | 0.0054 | 0.0039 |
| 205 | 0.0085 | 0.0049 | 0.0036 |
| 206 | 0.0080 | 0.0046 | 0.0034 |
| 207 | 0.0075 | 0.0044 | 0.0032 |
| 208 | 0.0071 | 0.0041 | 0.0030 |
| 209 | 0.0068 | 0.0039 | 0.0029 |
| 210 | 0.0064 | 0.0037 | 0.0027 |
| 211 | 0.0061 | 0.0036 | 0.0026 |
| 212 | 0.0059 | 0.0034 | 0.0025 |
| 213 | 0.0056 | 0.0033 | 0.0024 |
| 214 | 0.0054 | 0.0031 | 0.0023 |
| 215 | 0.0052 | 0.0030 | 0.0022 |
| 216 | 0.0050 | 0.0029 | 0.0021 |
| 217 | 0.0066 | 0.0038 | 0.0028 |
| 218 | 0.0064 | 0.0037 | 0.0027 |
| 219 | 0.0062 | 0.0036 | 0.0026 |
| 220 | 0.0061 | 0.0035 | 0.0026 |
| 221 | 0.0059 | 0.0034 | 0.0025 |
| 222 | 0.0057 | 0.0033 | 0.0024 |

| | | | |
|---|---|---|---|
| 223 | 0.0056 | 0.0032 | 0.0024 |
| 224 | 0.0055 | 0.0032 | 0.0023 |
| 225 | 0.0053 | 0.0031 | 0.0022 |
| 226 | 0.0052 | 0.0030 | 0.0022 |
| 227 | 0.0051 | 0.0029 | 0.0021 |
| 228 | 0.0050 | 0.0029 | 0.0021 |
| 229 | 0.0049 | 0.0028 | 0.0021 |
| 230 | 0.0048 | 0.0028 | 0.0020 |
| 231 | 0.0047 | 0.0027 | 0.0020 |
| 232 | 0.0046 | 0.0027 | 0.0019 |
| 233 | 0.0045 | 0.0026 | 0.0019 |
| 234 | 0.0044 | 0.0026 | 0.0019 |
| 235 | 0.0043 | 0.0025 | 0.0018 |
| 236 | 0.0043 | 0.0025 | 0.0018 |
| 237 | 0.0042 | 0.0024 | 0.0018 |
| 238 | 0.0041 | 0.0024 | 0.0017 |
| 239 | 0.0041 | 0.0023 | 0.0017 |
| 240 | 0.0040 | 0.0023 | 0.0017 |
| 241 | 0.0039 | 0.0023 | 0.0017 |
| 242 | 0.0039 | 0.0022 | 0.0016 |
| 243 | 0.0038 | 0.0022 | 0.0016 |
| 244 | 0.0038 | 0.0022 | 0.0016 |
| 245 | 0.0037 | 0.0021 | 0.0016 |
| 246 | 0.0037 | 0.0021 | 0.0015 |
| 247 | 0.0036 | 0.0021 | 0.0015 |
| 248 | 0.0036 | 0.0021 | 0.0015 |
| 249 | 0.0035 | 0.0020 | 0.0015 |
| 250 | 0.0035 | 0.0020 | 0.0015 |
| 251 | 0.0034 | 0.0020 | 0.0014 |
| 252 | 0.0034 | 0.0019 | 0.0014 |
| 253 | 0.0033 | 0.0019 | 0.0014 |
| 254 | 0.0033 | 0.0019 | 0.0014 |
| 255 | 0.0032 | 0.0019 | 0.0014 |
| 256 | 0.0032 | 0.0019 | 0.0014 |
| 257 | 0.0032 | 0.0018 | 0.0013 |
| 258 | 0.0031 | 0.0018 | 0.0013 |
| 259 | 0.0031 | 0.0018 | 0.0013 |
| 260 | 0.0031 | 0.0018 | 0.0013 |
| 261 | 0.0030 | 0.0018 | 0.0013 |
| 262 | 0.0030 | 0.0017 | 0.0013 |
| 263 | 0.0030 | 0.0017 | 0.0012 |
| 264 | 0.0029 | 0.0017 | 0.0012 |
| 265 | 0.0029 | 0.0017 | 0.0012 |
| 266 | 0.0029 | 0.0017 | 0.0012 |
| 267 | 0.0028 | 0.0016 | 0.0012 |
| 268 | 0.0028 | 0.0016 | 0.0012 |
| 269 | 0.0028 | 0.0016 | 0.0012 |
| 270 | 0.0028 | 0.0016 | 0.0012 |
| 271 | 0.0027 | 0.0016 | 0.0012 |
| 272 | 0.0027 | 0.0016 | 0.0011 |
| 273 | 0.0027 | 0.0016 | 0.0011 |
| 274 | 0.0027 | 0.0015 | 0.0011 |
| 275 | 0.0026 | 0.0015 | 0.0011 |
| 276 | 0.0026 | 0.0015 | 0.0011 |
| 277 | 0.0026 | 0.0015 | 0.0011 |
| 278 | 0.0026 | 0.0015 | 0.0011 |
| 279 | 0.0025 | 0.0015 | 0.0011 |
| 280 | 0.0025 | 0.0015 | 0.0011 |
| 281 | 0.0025 | 0.0014 | 0.0011 |

| | | | |
|---|---|---|---|
| 282 | 0.0025 | 0.0014 | 0.0010 |
| 283 | 0.0025 | 0.0014 | 0.0010 |
| 284 | 0.0024 | 0.0014 | 0.0010 |
| 285 | 0.0024 | 0.0014 | 0.0010 |
| 286 | 0.0024 | 0.0014 | 0.0010 |
| 287 | 0.0024 | 0.0014 | 0.0010 |
| 288 | 0.0024 | 0.0014 | 0.0010 |

Total soil rain loss = 1.09(In)
Total effective rainfall = 1.63(In)
Peak flow rate in flood hydrograph = 288.10(CFS)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 75.0 | 150.0 | 225.0 | 300.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0002 | 0.03 | Q | | | | |
| 0+10 | 0.0014 | 0.18 | Q | | | | |
| 0+15 | 0.0051 | 0.54 | Q | | | | |
| 0+20 | 0.0105 | 0.78 | Q | | | | |
| 0+25 | 0.0168 | 0.92 | Q | | | | |
| 0+30 | 0.0238 | 1.01 | Q | | | | |
| 0+35 | 0.0312 | 1.08 | Q | | | | |
| 0+40 | 0.0390 | 1.13 | Q | | | | |
| 0+45 | 0.0471 | 1.17 | Q | | | | |
| 0+50 | 0.0554 | 1.21 | Q | | | | |
| 0+55 | 0.0639 | 1.24 | Q | | | | |
| 1+ 0 | 0.0726 | 1.26 | Q | | | | |
| 1+ 5 | 0.0814 | 1.28 | Q | | | | |
| 1+10 | 0.0904 | 1.30 | Q | | | | |
| 1+15 | 0.0994 | 1.32 | Q | | | | |
| 1+20 | 0.1086 | 1.33 | Q | | | | |
| 1+25 | 0.1178 | 1.34 | Q | | | | |
| 1+30 | 0.1271 | 1.35 | Q | | | | |
| 1+35 | 0.1365 | 1.36 | Q | | | | |
| 1+40 | 0.1459 | 1.37 | Q | | | | |
| 1+45 | 0.1555 | 1.38 | Q | | | | |
| 1+50 | 0.1651 | 1.39 | Q | | | | |
| 1+55 | 0.1747 | 1.40 | Q | | | | |
| 2+ 0 | 0.1844 | 1.41 | Q | | | | |
| 2+ 5 | 0.1941 | 1.41 | Q | | | | |
| 2+10 | 0.2039 | 1.42 | Q | | | | |
| 2+15 | 0.2137 | 1.42 | Q | | | | |
| 2+20 | 0.2235 | 1.43 | Q | | | | |
| 2+25 | 0.2334 | 1.44 | Q | | | | |
| 2+30 | 0.2434 | 1.44 | Q | | | | |
| 2+35 | 0.2534 | 1.45 | Q | | | | |
| 2+40 | 0.2634 | 1.46 | Q | | | | |
| 2+45 | 0.2735 | 1.46 | Q | | | | |
| 2+50 | 0.2836 | 1.47 | Q | | | | |
| 2+55 | 0.2938 | 1.48 | Q | | | | |
| 3+ 0 | 0.3040 | 1.48 | Q | | | | |
| 3+ 5 | 0.3143 | 1.49 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+10 | 0.3246 | 1.50 | Q | | | | |
| 3+15 | 0.3349 | 1.51 | Q | | | | |
| 3+20 | 0.3454 | 1.51 | Q | | | | |
| 3+25 | 0.3558 | 1.52 | Q | | | | |
| 3+30 | 0.3663 | 1.53 | Q | | | | |
| 3+35 | 0.3769 | 1.53 | QV | | | | |
| 3+40 | 0.3875 | 1.54 | QV | | | | |
| 3+45 | 0.3982 | 1.55 | QV | | | | |
| 3+50 | 0.4089 | 1.56 | QV | | | | |
| 3+55 | 0.4197 | 1.57 | QV | | | | |
| 4+ 0 | 0.4305 | 1.57 | QV | | | | |
| 4+ 5 | 0.4414 | 1.58 | QV | | | | |
| 4+10 | 0.4524 | 1.59 | QV | | | | |
| 4+15 | 0.4634 | 1.60 | QV | | | | |
| 4+20 | 0.4744 | 1.61 | QV | | | | |
| 4+25 | 0.4856 | 1.61 | QV | | | | |
| 4+30 | 0.4967 | 1.62 | QV | | | | |
| 4+35 | 0.5080 | 1.63 | QV | | | | |
| 4+40 | 0.5193 | 1.64 | QV | | | | |
| 4+45 | 0.5306 | 1.65 | QV | | | | |
| 4+50 | 0.5420 | 1.66 | QV | | | | |
| 4+55 | 0.5535 | 1.67 | QV | | | | |
| 5+ 0 | 0.5650 | 1.68 | QV | | | | |
| 5+ 5 | 0.5767 | 1.69 | QV | | | | |
| 5+10 | 0.5883 | 1.69 | QV | | | | |
| 5+15 | 0.6001 | 1.70 | QV | | | | |
| 5+20 | 0.6119 | 1.71 | QV | | | | |
| 5+25 | 0.6237 | 1.72 | QV | | | | |
| 5+30 | 0.6357 | 1.73 | QV | | | | |
| 5+35 | 0.6477 | 1.74 | QV | | | | |
| 5+40 | 0.6597 | 1.75 | QV | | | | |
| 5+45 | 0.6719 | 1.76 | QV | | | | |
| 5+50 | 0.6841 | 1.77 | QV | | | | |
| 5+55 | 0.6964 | 1.78 | QV | | | | |
| 6+ 0 | 0.7088 | 1.80 | QV | | | | |
| 6+ 5 | 0.7212 | 1.81 | QV | | | | |
| 6+10 | 0.7337 | 1.82 | QV | | | | |
| 6+15 | 0.7463 | 1.83 | Q V | | | | |
| 6+20 | 0.7590 | 1.84 | Q V | | | | |
| 6+25 | 0.7717 | 1.85 | Q V | | | | |
| 6+30 | 0.7846 | 1.86 | Q V | | | | |
| 6+35 | 0.7975 | 1.88 | Q V | | | | |
| 6+40 | 0.8105 | 1.89 | Q V | | | | |
| 6+45 | 0.8236 | 1.90 | Q V | | | | |
| 6+50 | 0.8367 | 1.91 | Q V | | | | |
| 6+55 | 0.8500 | 1.92 | Q V | | | | |
| 7+ 0 | 0.8633 | 1.94 | Q V | | | | |
| 7+ 5 | 0.8768 | 1.95 | Q V | | | | |
| 7+10 | 0.8903 | 1.96 | Q V | | | | |
| 7+15 | 0.9039 | 1.98 | Q V | | | | |
| 7+20 | 0.9176 | 1.99 | Q V | | | | |
| 7+25 | 0.9314 | 2.00 | Q V | | | | |
| 7+30 | 0.9453 | 2.02 | Q V | | | | |
| 7+35 | 0.9593 | 2.03 | Q V | | | | |
| 7+40 | 0.9734 | 2.05 | Q V | | | | |
| 7+45 | 0.9876 | 2.06 | Q V | | | | |
| 7+50 | 1.0019 | 2.08 | Q V | | | | |
| 7+55 | 1.0164 | 2.09 | Q V | | | | |
| 8+ 0 | 1.0309 | 2.11 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8+ 5 | 1.0455 | 2.12 | Q V | \| | \| | \| | \| |
| 8+10 | 1.0602 | 2.14 | Q V | \| | \| | \| | \| |
| 8+15 | 1.0751 | 2.16 | Q V | \| | \| | \| | \| |
| 8+20 | 1.0901 | 2.17 | Q V | \| | \| | \| | \| |
| 8+25 | 1.1052 | 2.19 | Q V | \| | \| | \| | \| |
| 8+30 | 1.1204 | 2.21 | Q V | \| | \| | \| | \| |
| 8+35 | 1.1357 | 2.23 | Q V | \| | \| | \| | \| |
| 8+40 | 1.1511 | 2.24 | Q V | \| | \| | \| | \| |
| 8+45 | 1.1667 | 2.26 | Q V | \| | \| | \| | \| |
| 8+50 | 1.1824 | 2.28 | Q V | \| | \| | \| | \| |
| 8+55 | 1.1983 | 2.30 | Q V | \| | \| | \| | \| |
| 9+ 0 | 1.2142 | 2.32 | Q V | \| | \| | \| | \| |
| 9+ 5 | 1.2304 | 2.34 | Q V | \| | \| | \| | \| |
| 9+10 | 1.2466 | 2.36 | Q V | \| | \| | \| | \| |
| 9+15 | 1.2630 | 2.38 | Q V | \| | \| | \| | \| |
| 9+20 | 1.2795 | 2.40 | Q V | \| | \| | \| | \| |
| 9+25 | 1.2962 | 2.42 | Q V | \| | \| | \| | \| |
| 9+30 | 1.3131 | 2.44 | Q V | \| | \| | \| | \| |
| 9+35 | 1.3300 | 2.47 | Q V | \| | \| | \| | \| |
| 9+40 | 1.3472 | 2.49 | Q V | \| | \| | \| | \| |
| 9+45 | 1.3645 | 2.51 | Q V | \| | \| | \| | \| |
| 9+50 | 1.3820 | 2.54 | Q V | \| | \| | \| | \| |
| 9+55 | 1.3996 | 2.56 | Q V | \| | \| | \| | \| |
| 10+ 0 | 1.4174 | 2.59 | Q V | \| | \| | \| | \| |
| 10+ 5 | 1.4354 | 2.61 | Q V | \| | \| | \| | \| |
| 10+10 | 1.4536 | 2.64 | Q V | \| | \| | \| | \| |
| 10+15 | 1.4720 | 2.67 | Q V | \| | \| | \| | \| |
| 10+20 | 1.4905 | 2.69 | Q V | \| | \| | \| | \| |
| 10+25 | 1.5093 | 2.72 | Q V | \| | \| | \| | \| |
| 10+30 | 1.5282 | 2.75 | Q V | \| | \| | \| | \| |
| 10+35 | 1.5474 | 2.78 | Q V | \| | \| | \| | \| |
| 10+40 | 1.5667 | 2.81 | Q V | \| | \| | \| | \| |
| 10+45 | 1.5863 | 2.84 | Q V | \| | \| | \| | \| |
| 10+50 | 1.6061 | 2.87 | Q V | \| | \| | \| | \| |
| 10+55 | 1.6261 | 2.91 | Q V | \| | \| | \| | \| |
| 11+ 0 | 1.6463 | 2.94 | Q V | \| | \| | \| | \| |
| 11+ 5 | 1.6668 | 2.98 | Q V | \| | \| | \| | \| |
| 11+10 | 1.6875 | 3.01 | Q V | \| | \| | \| | \| |
| 11+15 | 1.7085 | 3.05 | Q V | \| | \| | \| | \| |
| 11+20 | 1.7298 | 3.08 | Q V | \| | \| | \| | \| |
| 11+25 | 1.7513 | 3.12 | Q V | \| | \| | \| | \| |
| 11+30 | 1.7731 | 3.16 | Q V | \| | \| | \| | \| |
| 11+35 | 1.7951 | 3.20 | Q V | \| | \| | \| | \| |
| 11+40 | 1.8175 | 3.25 | Q V | \| | \| | \| | \| |
| 11+45 | 1.8402 | 3.29 | Q V | \| | \| | \| | \| |
| 11+50 | 1.8631 | 3.34 | Q V | \| | \| | \| | \| |
| 11+55 | 1.8864 | 3.38 | Q V | \| | \| | \| | \| |
| 12+ 0 | 1.9101 | 3.43 | Q V | \| | \| | \| | \| |
| 12+ 5 | 1.9339 | 3.46 | Q V | \| | \| | \| | \| |
| 12+10 | 1.9573 | 3.40 | Q V | \| | \| | \| | \| |
| 12+15 | 1.9792 | 3.18 | Q V | \| | \| | \| | \| |
| 12+20 | 2.0002 | 3.05 | Q V | \| | \| | \| | \| |
| 12+25 | 2.0209 | 3.00 | Q V | \| | \| | \| | \| |
| 12+30 | 2.0415 | 2.99 | Q V | \| | \| | \| | \| |
| 12+35 | 2.0621 | 2.99 | Q V | \| | \| | \| | \| |
| 12+40 | 2.0828 | 3.01 | Q V | \| | \| | \| | \| |
| 12+45 | 2.1037 | 3.04 | Q V | \| | \| | \| | \| |
| 12+50 | 2.1249 | 3.07 | Q V | \| | \| | \| | \| |
| 12+55 | 2.1463 | 3.11 | Q V | \| | \| | \| | \| |

```
13+ 0       2.1681      3.16  Q    V    |          |          |          |
13+ 5       2.1902      3.21  Q    V    |          |          |          |
13+10       2.2127      3.27  Q    V    |          |          |          |
13+15       2.2357      3.34  Q     V   |          |          |          |
13+20       2.2591      3.40  Q     V   |          |          |          |
13+25       2.2831      3.48  Q     V   |          |          |          |
13+30       2.3076      3.55  Q     V   |          |          |          |
13+35       2.3326      3.64  Q     V   |          |          |          |
13+40       2.3583      3.72  Q     V   |          |          |          |
13+45       2.3846      3.82  Q     V   |          |          |          |
13+50       2.4115      3.92  Q     V   |          |          |          |
13+55       2.4392      4.03  Q     V   |          |          |          |
14+ 0       2.4677      4.14  Q     V   |          |          |          |
14+ 5       2.4971      4.27  Q     V   |          |          |          |
14+10       2.5275      4.41  Q     V   |          |          |          |
14+15       2.5590      4.58  Q     V   |          |          |          |
14+20       2.5917      4.74  Q      V  |          |          |          |
14+25       2.6256      4.92  Q      V  |          |          |          |
14+30       2.6607      5.11  Q      V  |          |          |          |
14+35       2.6973      5.31  Q      V  |          |          |          |
14+40       2.7353      5.52  Q      V  |          |          |          |
14+45       2.7750      5.76  Q      V  |          |          |          |
14+50       2.8164      6.01  Q      V  |          |          |          |
14+55       2.8599      6.31  Q      V  |          |          |          |
15+ 0       2.9055      6.62  Q      V  |          |          |          |
15+ 5       2.9536      6.98  Q      V  |          |          |          |
15+10       3.0044      7.38  Q       V |          |          |          |
15+15       3.0584      7.85  |Q      V |          |          |          |
15+20       3.1161      8.37  |Q      V |          |          |          |
15+25       3.1793      9.18  |Q      V |          |          |          |
15+30       3.2533     10.75  |Q      V |          |          |          |
15+35       3.3484     13.80  |Q       V|          |          |          |
15+40       3.4622     16.53  | Q      V|          |          |          |
15+45       3.5956     19.37  | Q      V|          |          |          |
15+50       3.7570     23.44  |  Q      V          |          |          |
15+55       3.9728     31.33  |   Q     V          |          |          |
16+ 0       4.2833     45.09  |     Q   |V         |          |          |
16+ 5       4.8655     84.53  |         |Q V       |          |          |
16+10       6.0460    171.40  |         |     V    | Q        |          |
16+15       8.0302    288.10  |         |          |V         |        Q |
16+20       9.4865    211.45  |         |          |    V  Q  |          |
16+25      10.3871    130.78  |         |      Q   |       V  |          |
16+30      11.0289     93.19  |         | Q        |        V |          |
16+35      11.5048     69.10  |        Q|          |          |V         |
16+40      11.8783     54.23  |      Q  |          |          | V        |
16+45      12.1812     43.97  |    Q    |          |          | V        |
16+50      12.4220     34.97  |   Q     |          |          |  V       |
16+55      12.6263     29.66  |  Q      |          |          |   V      |
17+ 0      12.8005     25.29  |  Q      |          |          |   V      |
17+ 5      12.9473     21.32  | Q       |          |          |   V      |
17+10      13.0729     18.24  | Q       |          |          |    V     |
17+15      13.1802     15.58  | Q       |          |          |    V     |
17+20      13.2690     12.89  |Q        |          |          |    V     |
17+25      13.3415     10.53  |Q        |          |          |     V    |
17+30      13.4082      9.69  |Q        |          |          |     V    |
17+35      13.4734      9.46  |Q        |          |          |     V    |
17+40      13.5344      8.87  |Q        |          |          |     V    |
17+45      13.5858      7.46  Q         |          |          |     V    |
17+50      13.6286      6.22  Q         |          |          |     V    |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17+55 | 13.6645 | 5.21 | Q | | | | V |
| 18+ 0 | 13.6898 | 3.67 | Q | | | | V |
| 18+ 5 | 13.7133 | 3.41 | Q | | | | V |
| 18+10 | 13.7362 | 3.33 | Q | | | | V |
| 18+15 | 13.7599 | 3.44 | Q | | | | V |
| 18+20 | 13.7839 | 3.49 | Q | | | | V |
| 18+25 | 13.8077 | 3.46 | Q | | | | V |
| 18+30 | 13.8312 | 3.41 | Q | | | | V |
| 18+35 | 13.8543 | 3.35 | Q | | | | V |
| 18+40 | 13.8769 | 3.28 | Q | | | | V |
| 18+45 | 13.8991 | 3.22 | Q | | | | V |
| 18+50 | 13.9208 | 3.15 | Q | | | | V |
| 18+55 | 13.9420 | 3.08 | Q | | | | V |
| 19+ 0 | 13.9628 | 3.02 | Q | | | | V |
| 19+ 5 | 13.9832 | 2.96 | Q | | | | V |
| 19+10 | 14.0032 | 2.90 | Q | | | | V |
| 19+15 | 14.0227 | 2.84 | Q | | | | V |
| 19+20 | 14.0419 | 2.78 | Q | | | | V |
| 19+25 | 14.0607 | 2.73 | Q | | | | V |
| 19+30 | 14.0791 | 2.67 | Q | | | | V |
| 19+35 | 14.0971 | 2.62 | Q | | | | V |
| 19+40 | 14.1149 | 2.57 | Q | | | | V |
| 19+45 | 14.1323 | 2.53 | Q | | | | V |
| 19+50 | 14.1494 | 2.48 | Q | | | | V |
| 19+55 | 14.1662 | 2.44 | Q | | | | V |
| 20+ 0 | 14.1827 | 2.40 | Q | | | | V |
| 20+ 5 | 14.1989 | 2.35 | Q | | | | V |
| 20+10 | 14.2148 | 2.31 | Q | | | | V |
| 20+15 | 14.2305 | 2.27 | Q | | | | V |
| 20+20 | 14.2459 | 2.24 | Q | | | | V |
| 20+25 | 14.2611 | 2.20 | Q | | | | V |
| 20+30 | 14.2760 | 2.17 | Q | | | | V |
| 20+35 | 14.2907 | 2.13 | Q | | | | V |
| 20+40 | 14.3052 | 2.10 | Q | | | | V |
| 20+45 | 14.3194 | 2.07 | Q | | | | V |
| 20+50 | 14.3335 | 2.04 | Q | | | | V |
| 20+55 | 14.3474 | 2.01 | Q | | | | V |
| 21+ 0 | 14.3610 | 1.98 | Q | | | | V |
| 21+ 5 | 14.3745 | 1.96 | Q | | | | V |
| 21+10 | 14.3878 | 1.93 | Q | | | | V |
| 21+15 | 14.4009 | 1.91 | Q | | | | V |
| 21+20 | 14.4139 | 1.88 | Q | | | | V |
| 21+25 | 14.4267 | 1.86 | Q | | | | V |
| 21+30 | 14.4393 | 1.83 | Q | | | | V |
| 21+35 | 14.4518 | 1.81 | Q | | | | V |
| 21+40 | 14.4641 | 1.79 | Q | | | | V |
| 21+45 | 14.4763 | 1.77 | Q | | | | V |
| 21+50 | 14.4884 | 1.75 | Q | | | | V |
| 21+55 | 14.5003 | 1.73 | Q | | | | V |
| 22+ 0 | 14.5120 | 1.71 | Q | | | | V |
| 22+ 5 | 14.5237 | 1.69 | Q | | | | V |
| 22+10 | 14.5352 | 1.67 | Q | | | | V |
| 22+15 | 14.5466 | 1.65 | Q | | | | V |
| 22+20 | 14.5578 | 1.64 | Q | | | | V |
| 22+25 | 14.5690 | 1.62 | Q | | | | V |
| 22+30 | 14.5800 | 1.60 | Q | | | | V |
| 22+35 | 14.5909 | 1.58 | Q | | | | V |
| 22+40 | 14.6017 | 1.57 | Q | | | | V |
| 22+45 | 14.6124 | 1.55 | Q | | | | V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+50 | 14.6230 | 1.54 | Q | \| | \| | \| | V\| |
| 22+55 | 14.6335 | 1.52 | Q | \| | \| | \| | V\| |
| 23+ 0 | 14.6439 | 1.51 | Q | \| | \| | \| | V\| |
| 23+ 5 | 14.6542 | 1.49 | Q | \| | \| | \| | V\| |
| 23+10 | 14.6643 | 1.48 | Q | \| | \| | \| | V\| |
| 23+15 | 14.6744 | 1.47 | Q | \| | \| | \| | V\| |
| 23+20 | 14.6845 | 1.45 | Q | \| | \| | \| | V\| |
| 23+25 | 14.6944 | 1.44 | Q | \| | \| | \| | V\| |
| 23+30 | 14.7042 | 1.43 | Q | \| | \| | \| | V\| |
| 23+35 | 14.7139 | 1.41 | Q | \| | \| | \| | V\| |
| 23+40 | 14.7236 | 1.40 | Q | \| | \| | \| | V\| |
| 23+45 | 14.7332 | 1.39 | Q | \| | \| | \| | V\| |
| 23+50 | 14.7427 | 1.38 | Q | \| | \| | \| | V\| |
| 23+55 | 14.7521 | 1.37 | Q | \| | \| | \| | V\| |
| 24+ 0 | 14.7614 | 1.36 | Q | \| | \| | \| | V\| |
| 24+ 5 | 14.7705 | 1.32 | Q | \| | \| | \| | V\| |
| 24+10 | 14.7784 | 1.16 | Q | \| | \| | \| | V\| |
| 24+15 | 14.7839 | 0.79 | Q | \| | \| | \| | V\| |
| 24+20 | 14.7876 | 0.54 | Q | \| | \| | \| | V\| |
| 24+25 | 14.7903 | 0.40 | Q | \| | \| | \| | V\| |
| 24+30 | 14.7925 | 0.31 | Q | \| | \| | \| | V\| |
| 24+35 | 14.7942 | 0.24 | Q | \| | \| | \| | V\| |
| 24+40 | 14.7955 | 0.19 | Q | \| | \| | \| | V\| |
| 24+45 | 14.7966 | 0.16 | Q | \| | \| | \| | V\| |
| 24+50 | 14.7974 | 0.13 | Q | \| | \| | \| | V\| |
| 24+55 | 14.7981 | 0.10 | Q | \| | \| | \| | V\| |
| 25+ 0 | 14.7987 | 0.08 | Q | \| | \| | \| | V\| |
| 25+ 5 | 14.7991 | 0.06 | Q | \| | \| | \| | V\| |
| 25+10 | 14.7995 | 0.05 | Q | \| | \| | \| | V\| |
| 25+15 | 14.7998 | 0.04 | Q | \| | \| | \| | V\| |
| 25+20 | 14.8000 | 0.03 | Q | \| | \| | \| | V\| |
| 25+25 | 14.8001 | 0.03 | Q | \| | \| | \| | V\| |
| 25+30 | 14.8003 | 0.02 | Q | \| | \| | \| | V\| |
| 25+35 | 14.8004 | 0.01 | Q | \| | \| | \| | V\| |
| 25+40 | 14.8004 | 0.01 | Q | \| | \| | \| | V\| |
| 25+45 | 14.8005 | 0.00 | Q | \| | \| | \| | V\| |
| 25+50 | 14.8005 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 08/10/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREA "N"
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-10-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 1657.38 | 1 | 1.40 |
| Rainfall data for year 100 | | |
| 1657.38 | 6 | 2.08 |
| Rainfall data for year 100 | | |
| 1657.38 | 24 | 3.00 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 73.9 | 90.1 | 1657.38 | 1.000 | 0.190 | 0.989 | 0.188 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.188

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 1639.15 | 0.989 | 73.9 | 90.1 | 1.10 | 0.664 |
| 18.23 | 0.011 | 98.0 | 98.0 | 0.20 | 0.923 |

Area-averaged catchment yield fraction, Y = 0.667
Area-averaged low loss fraction, Yb = 0.333
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 14260.00(Ft.)
Length from concentration point to centroid = 7479.00(Ft.)
Elevation difference along watercourse = 1690.00(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 1657.38(Ac.)
Catchment Lag time = 0.412 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 20.2503
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.188(In/Hr)
Average low loss rate fraction (Yb) = 0.333 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.050
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.950

Computed peak 5-minute rainfall = 0.662(In)
Computed peak 30-minute rainfall = 1.133(In)
Specified peak 1-hour rainfall = 1.395(In)
Computed peak 3-hour rainfall = 1.784(In)
Specified peak 6-hour rainfall = 2.083(In)
Specified peak 24-hour rainfall = 2.996(In)

Rainfall depth area reduction factors:
Using a total area of 1657.38(Ac.) (Ref: fig. E-4)

5-minute factor = 0.922 Adjusted rainfall = 0.611(In)
30-minute factor = 0.922 Adjusted rainfall = 1.045(In)
1-hour factor = 0.922 Adjusted rainfall = 1.287(In)
3-hour factor = 0.990 Adjusted rainfall = 1.766(In)
6-hour factor = 0.995 Adjusted rainfall = 2.072(In)
24-hour factor = 0.998 Adjusted rainfall = 2.990(In)
---

U n i t H y d r o g r a p h

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 20043.94 (CFS)) | |
| 1 | 1.025 | 205.543 |
| 2 | 4.620 | 720.453 |
| 3 | 11.535 | 1386.050 |
| 4 | 26.598 | 3019.170 |
| 5 | 43.759 | 3439.734 |

| | | |
|---|---|---|
| 6 | 55.717 | 2396.832 |
| 7 | 63.461 | 1552.332 |
| 8 | 69.077 | 1125.705 |
| 9 | 73.577 | 901.934 |
| 10 | 77.208 | 727.694 |
| 11 | 80.179 | 595.681 |
| 12 | 82.673 | 499.719 |
| 13 | 84.820 | 430.448 |
| 14 | 86.751 | 386.986 |
| 15 | 88.418 | 334.260 |
| 16 | 89.771 | 271.014 |
| 17 | 90.948 | 235.909 |
| 18 | 92.032 | 217.370 |
| 19 | 92.992 | 192.441 |
| 20 | 93.872 | 176.468 |
| 21 | 94.598 | 145.386 |
| 22 | 95.264 | 133.540 |
| 23 | 95.883 | 124.078 |
| 24 | 96.397 | 103.055 |
| 25 | 96.900 | 100.774 |
| 26 | 97.290 | 78.184 |
| 27 | 97.642 | 70.626 |
| 28 | 97.941 | 59.888 |
| 29 | 98.144 | 40.574 |
| 30 | 98.346 | 40.658 |
| 31 | 98.575 | 45.718 |
| 32 | 98.809 | 47.084 |
| 33 | 99.044 | 46.919 |
| 34 | 99.276 | 46.680 |
| 35 | 99.499 | 44.631 |
| 36 | 99.637 | 27.669 |
| 37 | 99.757 | 24.100 |
| 38 | 99.878 | 24.100 |
| 39 | 100.000 | 12.050 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6105 | 0.6105 |
| 2 | 0.7516 | 0.1411 |
| 3 | 0.8489 | 0.0972 |
| 4 | 0.9254 | 0.0765 |
| 5 | 0.9894 | 0.0641 |
| 6 | 1.0451 | 0.0556 |
| 7 | 1.0945 | 0.0495 |
| 8 | 1.1393 | 0.0447 |
| 9 | 1.1802 | 0.0410 |
| 10 | 1.2181 | 0.0379 |
| 11 | 1.2535 | 0.0353 |
| 12 | 1.2866 | 0.0332 |
| 13 | 1.3167 | 0.0300 |
| 14 | 1.3451 | 0.0284 |
| 15 | 1.3721 | 0.0270 |
| 16 | 1.3979 | 0.0258 |
| 17 | 1.4226 | 0.0247 |
| 18 | 1.4462 | 0.0236 |
| 19 | 1.4689 | 0.0227 |
| 20 | 1.4908 | 0.0219 |
| 21 | 1.5119 | 0.0211 |
| 22 | 1.5324 | 0.0204 |

| | | |
|---|---|---|
| 23 | 1.5521 | 0.0198 |
| 24 | 1.5713 | 0.0192 |
| 25 | 1.5899 | 0.0186 |
| 26 | 1.6080 | 0.0181 |
| 27 | 1.6256 | 0.0176 |
| 28 | 1.6427 | 0.0171 |
| 29 | 1.6594 | 0.0167 |
| 30 | 1.6757 | 0.0163 |
| 31 | 1.6917 | 0.0159 |
| 32 | 1.7072 | 0.0156 |
| 33 | 1.7224 | 0.0152 |
| 34 | 1.7373 | 0.0149 |
| 35 | 1.7519 | 0.0146 |
| 36 | 1.7662 | 0.0143 |
| 37 | 1.7774 | 0.0112 |
| 38 | 1.7883 | 0.0110 |
| 39 | 1.7991 | 0.0107 |
| 40 | 1.8096 | 0.0105 |
| 41 | 1.8199 | 0.0103 |
| 42 | 1.8301 | 0.0101 |
| 43 | 1.8400 | 0.0100 |
| 44 | 1.8498 | 0.0098 |
| 45 | 1.8594 | 0.0096 |
| 46 | 1.8689 | 0.0094 |
| 47 | 1.8782 | 0.0093 |
| 48 | 1.8873 | 0.0091 |
| 49 | 1.8963 | 0.0090 |
| 50 | 1.9051 | 0.0089 |
| 51 | 1.9139 | 0.0087 |
| 52 | 1.9224 | 0.0086 |
| 53 | 1.9309 | 0.0085 |
| 54 | 1.9392 | 0.0083 |
| 55 | 1.9475 | 0.0082 |
| 56 | 1.9556 | 0.0081 |
| 57 | 1.9636 | 0.0080 |
| 58 | 1.9715 | 0.0079 |
| 59 | 1.9792 | 0.0078 |
| 60 | 1.9869 | 0.0077 |
| 61 | 1.9945 | 0.0076 |
| 62 | 2.0020 | 0.0075 |
| 63 | 2.0094 | 0.0074 |
| 64 | 2.0167 | 0.0073 |
| 65 | 2.0239 | 0.0072 |
| 66 | 2.0311 | 0.0071 |
| 67 | 2.0381 | 0.0071 |
| 68 | 2.0451 | 0.0070 |
| 69 | 2.0520 | 0.0069 |
| 70 | 2.0588 | 0.0068 |
| 71 | 2.0655 | 0.0067 |
| 72 | 2.0722 | 0.0067 |
| 73 | 2.0798 | 0.0076 |
| 74 | 2.0873 | 0.0075 |
| 75 | 2.0947 | 0.0074 |
| 76 | 2.1021 | 0.0073 |
| 77 | 2.1093 | 0.0073 |
| 78 | 2.1165 | 0.0072 |
| 79 | 2.1237 | 0.0071 |
| 80 | 2.1308 | 0.0071 |
| 81 | 2.1378 | 0.0070 |

| | | |
|---|---|---|
| 82 | 2.1447 | 0.0069 |
| 83 | 2.1516 | 0.0069 |
| 84 | 2.1584 | 0.0068 |
| 85 | 2.1652 | 0.0068 |
| 86 | 2.1719 | 0.0067 |
| 87 | 2.1785 | 0.0066 |
| 88 | 2.1851 | 0.0066 |
| 89 | 2.1917 | 0.0065 |
| 90 | 2.1982 | 0.0065 |
| 91 | 2.2046 | 0.0064 |
| 92 | 2.2110 | 0.0064 |
| 93 | 2.2173 | 0.0063 |
| 94 | 2.2236 | 0.0063 |
| 95 | 2.2298 | 0.0062 |
| 96 | 2.2360 | 0.0062 |
| 97 | 2.2421 | 0.0061 |
| 98 | 2.2482 | 0.0061 |
| 99 | 2.2543 | 0.0060 |
| 100 | 2.2603 | 0.0060 |
| 101 | 2.2662 | 0.0060 |
| 102 | 2.2721 | 0.0059 |
| 103 | 2.2780 | 0.0059 |
| 104 | 2.2838 | 0.0058 |
| 105 | 2.2896 | 0.0058 |
| 106 | 2.2954 | 0.0057 |
| 107 | 2.3011 | 0.0057 |
| 108 | 2.3067 | 0.0057 |
| 109 | 2.3124 | 0.0056 |
| 110 | 2.3180 | 0.0056 |
| 111 | 2.3235 | 0.0056 |
| 112 | 2.3290 | 0.0055 |
| 113 | 2.3345 | 0.0055 |
| 114 | 2.3400 | 0.0054 |
| 115 | 2.3454 | 0.0054 |
| 116 | 2.3507 | 0.0054 |
| 117 | 2.3561 | 0.0053 |
| 118 | 2.3614 | 0.0053 |
| 119 | 2.3667 | 0.0053 |
| 120 | 2.3719 | 0.0052 |
| 121 | 2.3771 | 0.0052 |
| 122 | 2.3823 | 0.0052 |
| 123 | 2.3875 | 0.0051 |
| 124 | 2.3926 | 0.0051 |
| 125 | 2.3977 | 0.0051 |
| 126 | 2.4027 | 0.0051 |
| 127 | 2.4077 | 0.0050 |
| 128 | 2.4127 | 0.0050 |
| 129 | 2.4177 | 0.0050 |
| 130 | 2.4227 | 0.0049 |
| 131 | 2.4276 | 0.0049 |
| 132 | 2.4325 | 0.0049 |
| 133 | 2.4373 | 0.0049 |
| 134 | 2.4421 | 0.0048 |
| 135 | 2.4470 | 0.0048 |
| 136 | 2.4517 | 0.0048 |
| 137 | 2.4565 | 0.0048 |
| 138 | 2.4612 | 0.0047 |
| 139 | 2.4659 | 0.0047 |
| 140 | 2.4706 | 0.0047 |

| | | |
|---|---|---|
| 141 | 2.4753 | 0.0047 |
| 142 | 2.4799 | 0.0046 |
| 143 | 2.4845 | 0.0046 |
| 144 | 2.4891 | 0.0046 |
| 145 | 2.4936 | 0.0046 |
| 146 | 2.4982 | 0.0045 |
| 147 | 2.5027 | 0.0045 |
| 148 | 2.5072 | 0.0045 |
| 149 | 2.5116 | 0.0045 |
| 150 | 2.5161 | 0.0044 |
| 151 | 2.5205 | 0.0044 |
| 152 | 2.5249 | 0.0044 |
| 153 | 2.5293 | 0.0044 |
| 154 | 2.5337 | 0.0044 |
| 155 | 2.5380 | 0.0043 |
| 156 | 2.5423 | 0.0043 |
| 157 | 2.5466 | 0.0043 |
| 158 | 2.5509 | 0.0043 |
| 159 | 2.5552 | 0.0043 |
| 160 | 2.5594 | 0.0042 |
| 161 | 2.5636 | 0.0042 |
| 162 | 2.5678 | 0.0042 |
| 163 | 2.5720 | 0.0042 |
| 164 | 2.5762 | 0.0042 |
| 165 | 2.5803 | 0.0041 |
| 166 | 2.5844 | 0.0041 |
| 167 | 2.5885 | 0.0041 |
| 168 | 2.5926 | 0.0041 |
| 169 | 2.5967 | 0.0041 |
| 170 | 2.6008 | 0.0041 |
| 171 | 2.6048 | 0.0040 |
| 172 | 2.6088 | 0.0040 |
| 173 | 2.6128 | 0.0040 |
| 174 | 2.6168 | 0.0040 |
| 175 | 2.6208 | 0.0040 |
| 176 | 2.6247 | 0.0040 |
| 177 | 2.6287 | 0.0039 |
| 178 | 2.6326 | 0.0039 |
| 179 | 2.6365 | 0.0039 |
| 180 | 2.6404 | 0.0039 |
| 181 | 2.6442 | 0.0039 |
| 182 | 2.6481 | 0.0039 |
| 183 | 2.6519 | 0.0038 |
| 184 | 2.6558 | 0.0038 |
| 185 | 2.6596 | 0.0038 |
| 186 | 2.6634 | 0.0038 |
| 187 | 2.6671 | 0.0038 |
| 188 | 2.6709 | 0.0038 |
| 189 | 2.6747 | 0.0037 |
| 190 | 2.6784 | 0.0037 |
| 191 | 2.6821 | 0.0037 |
| 192 | 2.6858 | 0.0037 |
| 193 | 2.6895 | 0.0037 |
| 194 | 2.6932 | 0.0037 |
| 195 | 2.6968 | 0.0037 |
| 196 | 2.7005 | 0.0037 |
| 197 | 2.7041 | 0.0036 |
| 198 | 2.7078 | 0.0036 |
| 199 | 2.7114 | 0.0036 |

| | | |
|---|---|---|
| 200 | 2.7150 | 0.0036 |
| 201 | 2.7185 | 0.0036 |
| 202 | 2.7221 | 0.0036 |
| 203 | 2.7257 | 0.0036 |
| 204 | 2.7292 | 0.0035 |
| 205 | 2.7328 | 0.0035 |
| 206 | 2.7363 | 0.0035 |
| 207 | 2.7398 | 0.0035 |
| 208 | 2.7433 | 0.0035 |
| 209 | 2.7468 | 0.0035 |
| 210 | 2.7502 | 0.0035 |
| 211 | 2.7537 | 0.0035 |
| 212 | 2.7571 | 0.0034 |
| 213 | 2.7606 | 0.0034 |
| 214 | 2.7640 | 0.0034 |
| 215 | 2.7674 | 0.0034 |
| 216 | 2.7708 | 0.0034 |
| 217 | 2.7742 | 0.0034 |
| 218 | 2.7775 | 0.0034 |
| 219 | 2.7809 | 0.0034 |
| 220 | 2.7843 | 0.0034 |
| 221 | 2.7876 | 0.0033 |
| 222 | 2.7909 | 0.0033 |
| 223 | 2.7943 | 0.0033 |
| 224 | 2.7976 | 0.0033 |
| 225 | 2.8009 | 0.0033 |
| 226 | 2.8041 | 0.0033 |
| 227 | 2.8074 | 0.0033 |
| 228 | 2.8107 | 0.0033 |
| 229 | 2.8139 | 0.0033 |
| 230 | 2.8172 | 0.0032 |
| 231 | 2.8204 | 0.0032 |
| 232 | 2.8236 | 0.0032 |
| 233 | 2.8269 | 0.0032 |
| 234 | 2.8301 | 0.0032 |
| 235 | 2.8332 | 0.0032 |
| 236 | 2.8364 | 0.0032 |
| 237 | 2.8396 | 0.0032 |
| 238 | 2.8428 | 0.0032 |
| 239 | 2.8459 | 0.0032 |
| 240 | 2.8491 | 0.0031 |
| 241 | 2.8522 | 0.0031 |
| 242 | 2.8553 | 0.0031 |
| 243 | 2.8584 | 0.0031 |
| 244 | 2.8615 | 0.0031 |
| 245 | 2.8646 | 0.0031 |
| 246 | 2.8677 | 0.0031 |
| 247 | 2.8708 | 0.0031 |
| 248 | 2.8739 | 0.0031 |
| 249 | 2.8769 | 0.0031 |
| 250 | 2.8800 | 0.0031 |
| 251 | 2.8830 | 0.0030 |
| 252 | 2.8861 | 0.0030 |
| 253 | 2.8891 | 0.0030 |
| 254 | 2.8921 | 0.0030 |
| 255 | 2.8951 | 0.0030 |
| 256 | 2.8981 | 0.0030 |
| 257 | 2.9011 | 0.0030 |
| 258 | 2.9041 | 0.0030 |

| | | |
|---|---|---|
| 259 | 2.9071 | 0.0030 |
| 260 | 2.9100 | 0.0030 |
| 261 | 2.9130 | 0.0030 |
| 262 | 2.9159 | 0.0029 |
| 263 | 2.9189 | 0.0029 |
| 264 | 2.9218 | 0.0029 |
| 265 | 2.9247 | 0.0029 |
| 266 | 2.9276 | 0.0029 |
| 267 | 2.9305 | 0.0029 |
| 268 | 2.9334 | 0.0029 |
| 269 | 2.9363 | 0.0029 |
| 270 | 2.9392 | 0.0029 |
| 271 | 2.9421 | 0.0029 |
| 272 | 2.9449 | 0.0029 |
| 273 | 2.9478 | 0.0029 |
| 274 | 2.9507 | 0.0029 |
| 275 | 2.9535 | 0.0028 |
| 276 | 2.9563 | 0.0028 |
| 277 | 2.9592 | 0.0028 |
| 278 | 2.9620 | 0.0028 |
| 279 | 2.9648 | 0.0028 |
| 280 | 2.9676 | 0.0028 |
| 281 | 2.9704 | 0.0028 |
| 282 | 2.9732 | 0.0028 |
| 283 | 2.9760 | 0.0028 |
| 284 | 2.9788 | 0.0028 |
| 285 | 2.9815 | 0.0028 |
| 286 | 2.9843 | 0.0028 |
| 287 | 2.9870 | 0.0028 |
| 288 | 2.9898 | 0.0027 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0027 | 0.0009 | 0.0018 |
| 2 | 0.0028 | 0.0009 | 0.0018 |
| 3 | 0.0028 | 0.0009 | 0.0018 |
| 4 | 0.0028 | 0.0009 | 0.0019 |
| 5 | 0.0028 | 0.0009 | 0.0019 |
| 6 | 0.0028 | 0.0009 | 0.0019 |
| 7 | 0.0028 | 0.0009 | 0.0019 |
| 8 | 0.0028 | 0.0009 | 0.0019 |
| 9 | 0.0028 | 0.0009 | 0.0019 |
| 10 | 0.0028 | 0.0009 | 0.0019 |
| 11 | 0.0029 | 0.0010 | 0.0019 |
| 12 | 0.0029 | 0.0010 | 0.0019 |
| 13 | 0.0029 | 0.0010 | 0.0019 |
| 14 | 0.0029 | 0.0010 | 0.0019 |
| 15 | 0.0029 | 0.0010 | 0.0019 |
| 16 | 0.0029 | 0.0010 | 0.0019 |
| 17 | 0.0029 | 0.0010 | 0.0020 |
| 18 | 0.0029 | 0.0010 | 0.0020 |
| 19 | 0.0030 | 0.0010 | 0.0020 |
| 20 | 0.0030 | 0.0010 | 0.0020 |
| 21 | 0.0030 | 0.0010 | 0.0020 |
| 22 | 0.0030 | 0.0010 | 0.0020 |
| 23 | 0.0030 | 0.0010 | 0.0020 |
| 24 | 0.0030 | 0.0010 | 0.0020 |

| | | | |
|---|---|---|---|
| 25 | 0.0030 | 0.0010 | 0.0020 |
| 26 | 0.0030 | 0.0010 | 0.0020 |
| 27 | 0.0031 | 0.0010 | 0.0020 |
| 28 | 0.0031 | 0.0010 | 0.0020 |
| 29 | 0.0031 | 0.0010 | 0.0021 |
| 30 | 0.0031 | 0.0010 | 0.0021 |
| 31 | 0.0031 | 0.0010 | 0.0021 |
| 32 | 0.0031 | 0.0010 | 0.0021 |
| 33 | 0.0031 | 0.0010 | 0.0021 |
| 34 | 0.0032 | 0.0011 | 0.0021 |
| 35 | 0.0032 | 0.0011 | 0.0021 |
| 36 | 0.0032 | 0.0011 | 0.0021 |
| 37 | 0.0032 | 0.0011 | 0.0021 |
| 38 | 0.0032 | 0.0011 | 0.0021 |
| 39 | 0.0032 | 0.0011 | 0.0022 |
| 40 | 0.0032 | 0.0011 | 0.0022 |
| 41 | 0.0033 | 0.0011 | 0.0022 |
| 42 | 0.0033 | 0.0011 | 0.0022 |
| 43 | 0.0033 | 0.0011 | 0.0022 |
| 44 | 0.0033 | 0.0011 | 0.0022 |
| 45 | 0.0033 | 0.0011 | 0.0022 |
| 46 | 0.0033 | 0.0011 | 0.0022 |
| 47 | 0.0034 | 0.0011 | 0.0022 |
| 48 | 0.0034 | 0.0011 | 0.0023 |
| 49 | 0.0034 | 0.0011 | 0.0023 |
| 50 | 0.0034 | 0.0011 | 0.0023 |
| 51 | 0.0034 | 0.0011 | 0.0023 |
| 52 | 0.0034 | 0.0011 | 0.0023 |
| 53 | 0.0035 | 0.0012 | 0.0023 |
| 54 | 0.0035 | 0.0012 | 0.0023 |
| 55 | 0.0035 | 0.0012 | 0.0023 |
| 56 | 0.0035 | 0.0012 | 0.0023 |
| 57 | 0.0035 | 0.0012 | 0.0024 |
| 58 | 0.0036 | 0.0012 | 0.0024 |
| 59 | 0.0036 | 0.0012 | 0.0024 |
| 60 | 0.0036 | 0.0012 | 0.0024 |
| 61 | 0.0036 | 0.0012 | 0.0024 |
| 62 | 0.0036 | 0.0012 | 0.0024 |
| 63 | 0.0037 | 0.0012 | 0.0024 |
| 64 | 0.0037 | 0.0012 | 0.0025 |
| 65 | 0.0037 | 0.0012 | 0.0025 |
| 66 | 0.0037 | 0.0012 | 0.0025 |
| 67 | 0.0037 | 0.0012 | 0.0025 |
| 68 | 0.0038 | 0.0013 | 0.0025 |
| 69 | 0.0038 | 0.0013 | 0.0025 |
| 70 | 0.0038 | 0.0013 | 0.0025 |
| 71 | 0.0038 | 0.0013 | 0.0026 |
| 72 | 0.0039 | 0.0013 | 0.0026 |
| 73 | 0.0039 | 0.0013 | 0.0026 |
| 74 | 0.0039 | 0.0013 | 0.0026 |
| 75 | 0.0039 | 0.0013 | 0.0026 |
| 76 | 0.0040 | 0.0013 | 0.0026 |
| 77 | 0.0040 | 0.0013 | 0.0027 |
| 78 | 0.0040 | 0.0013 | 0.0027 |
| 79 | 0.0040 | 0.0013 | 0.0027 |
| 80 | 0.0041 | 0.0014 | 0.0027 |
| 81 | 0.0041 | 0.0014 | 0.0027 |
| 82 | 0.0041 | 0.0014 | 0.0027 |
| 83 | 0.0041 | 0.0014 | 0.0028 |

| | | | |
|---|---|---|---|
| 84 | 0.0042 | 0.0014 | 0.0028 |
| 85 | 0.0042 | 0.0014 | 0.0028 |
| 86 | 0.0042 | 0.0014 | 0.0028 |
| 87 | 0.0043 | 0.0014 | 0.0028 |
| 88 | 0.0043 | 0.0014 | 0.0029 |
| 89 | 0.0043 | 0.0014 | 0.0029 |
| 90 | 0.0043 | 0.0014 | 0.0029 |
| 91 | 0.0044 | 0.0015 | 0.0029 |
| 92 | 0.0044 | 0.0015 | 0.0029 |
| 93 | 0.0044 | 0.0015 | 0.0030 |
| 94 | 0.0045 | 0.0015 | 0.0030 |
| 95 | 0.0045 | 0.0015 | 0.0030 |
| 96 | 0.0045 | 0.0015 | 0.0030 |
| 97 | 0.0046 | 0.0015 | 0.0031 |
| 98 | 0.0046 | 0.0015 | 0.0031 |
| 99 | 0.0047 | 0.0016 | 0.0031 |
| 100 | 0.0047 | 0.0016 | 0.0031 |
| 101 | 0.0047 | 0.0016 | 0.0032 |
| 102 | 0.0048 | 0.0016 | 0.0032 |
| 103 | 0.0048 | 0.0016 | 0.0032 |
| 104 | 0.0048 | 0.0016 | 0.0032 |
| 105 | 0.0049 | 0.0016 | 0.0033 |
| 106 | 0.0049 | 0.0016 | 0.0033 |
| 107 | 0.0050 | 0.0017 | 0.0033 |
| 108 | 0.0050 | 0.0017 | 0.0033 |
| 109 | 0.0051 | 0.0017 | 0.0034 |
| 110 | 0.0051 | 0.0017 | 0.0034 |
| 111 | 0.0051 | 0.0017 | 0.0034 |
| 112 | 0.0052 | 0.0017 | 0.0035 |
| 113 | 0.0052 | 0.0017 | 0.0035 |
| 114 | 0.0053 | 0.0018 | 0.0035 |
| 115 | 0.0053 | 0.0018 | 0.0036 |
| 116 | 0.0054 | 0.0018 | 0.0036 |
| 117 | 0.0054 | 0.0018 | 0.0036 |
| 118 | 0.0055 | 0.0018 | 0.0037 |
| 119 | 0.0056 | 0.0019 | 0.0037 |
| 120 | 0.0056 | 0.0019 | 0.0037 |
| 121 | 0.0057 | 0.0019 | 0.0038 |
| 122 | 0.0057 | 0.0019 | 0.0038 |
| 123 | 0.0058 | 0.0019 | 0.0039 |
| 124 | 0.0058 | 0.0019 | 0.0039 |
| 125 | 0.0059 | 0.0020 | 0.0039 |
| 126 | 0.0060 | 0.0020 | 0.0040 |
| 127 | 0.0060 | 0.0020 | 0.0040 |
| 128 | 0.0061 | 0.0020 | 0.0041 |
| 129 | 0.0062 | 0.0021 | 0.0041 |
| 130 | 0.0062 | 0.0021 | 0.0042 |
| 131 | 0.0063 | 0.0021 | 0.0042 |
| 132 | 0.0064 | 0.0021 | 0.0043 |
| 133 | 0.0065 | 0.0022 | 0.0043 |
| 134 | 0.0065 | 0.0022 | 0.0044 |
| 135 | 0.0066 | 0.0022 | 0.0044 |
| 136 | 0.0067 | 0.0022 | 0.0045 |
| 137 | 0.0068 | 0.0023 | 0.0046 |
| 138 | 0.0069 | 0.0023 | 0.0046 |
| 139 | 0.0070 | 0.0023 | 0.0047 |
| 140 | 0.0071 | 0.0024 | 0.0047 |
| 141 | 0.0072 | 0.0024 | 0.0048 |
| 142 | 0.0073 | 0.0024 | 0.0049 |

| | | | |
|---|---|---|---|
| 143 | 0.0074 | 0.0025 | 0.0049 |
| 144 | 0.0075 | 0.0025 | 0.0050 |
| 145 | 0.0067 | 0.0022 | 0.0044 |
| 146 | 0.0067 | 0.0022 | 0.0045 |
| 147 | 0.0069 | 0.0023 | 0.0046 |
| 148 | 0.0070 | 0.0023 | 0.0046 |
| 149 | 0.0071 | 0.0024 | 0.0048 |
| 150 | 0.0072 | 0.0024 | 0.0048 |
| 151 | 0.0074 | 0.0025 | 0.0049 |
| 152 | 0.0075 | 0.0025 | 0.0050 |
| 153 | 0.0077 | 0.0026 | 0.0051 |
| 154 | 0.0078 | 0.0026 | 0.0052 |
| 155 | 0.0080 | 0.0027 | 0.0053 |
| 156 | 0.0081 | 0.0027 | 0.0054 |
| 157 | 0.0083 | 0.0028 | 0.0056 |
| 158 | 0.0085 | 0.0028 | 0.0056 |
| 159 | 0.0087 | 0.0029 | 0.0058 |
| 160 | 0.0089 | 0.0029 | 0.0059 |
| 161 | 0.0091 | 0.0030 | 0.0061 |
| 162 | 0.0093 | 0.0031 | 0.0062 |
| 163 | 0.0096 | 0.0032 | 0.0064 |
| 164 | 0.0098 | 0.0033 | 0.0065 |
| 165 | 0.0101 | 0.0034 | 0.0068 |
| 166 | 0.0103 | 0.0034 | 0.0069 |
| 167 | 0.0107 | 0.0036 | 0.0072 |
| 168 | 0.0110 | 0.0037 | 0.0073 |
| 169 | 0.0143 | 0.0048 | 0.0095 |
| 170 | 0.0146 | 0.0049 | 0.0097 |
| 171 | 0.0152 | 0.0051 | 0.0101 |
| 172 | 0.0156 | 0.0052 | 0.0104 |
| 173 | 0.0163 | 0.0054 | 0.0109 |
| 174 | 0.0167 | 0.0056 | 0.0111 |
| 175 | 0.0176 | 0.0059 | 0.0117 |
| 176 | 0.0181 | 0.0060 | 0.0121 |
| 177 | 0.0192 | 0.0064 | 0.0128 |
| 178 | 0.0198 | 0.0066 | 0.0132 |
| 179 | 0.0211 | 0.0070 | 0.0141 |
| 180 | 0.0219 | 0.0073 | 0.0146 |
| 181 | 0.0236 | 0.0079 | 0.0158 |
| 182 | 0.0247 | 0.0082 | 0.0164 |
| 183 | 0.0270 | 0.0090 | 0.0180 |
| 184 | 0.0284 | 0.0095 | 0.0190 |
| 185 | 0.0332 | 0.0110 | 0.0221 |
| 186 | 0.0353 | 0.0118 | 0.0236 |
| 187 | 0.0410 | 0.0137 | 0.0273 |
| 188 | 0.0447 | 0.0149 | 0.0298 |
| 189 | 0.0556 | 0.0157 | 0.0399 |
| 190 | 0.0641 | 0.0157 | 0.0484 |
| 191 | 0.0972 | 0.0157 | 0.0815 |
| 192 | 0.1411 | 0.0157 | 0.1254 |
| 193 | 0.6105 | 0.0157 | 0.5948 |
| 194 | 0.0765 | 0.0157 | 0.0608 |
| 195 | 0.0495 | 0.0157 | 0.0338 |
| 196 | 0.0379 | 0.0126 | 0.0253 |
| 197 | 0.0300 | 0.0100 | 0.0200 |
| 198 | 0.0258 | 0.0086 | 0.0172 |
| 199 | 0.0227 | 0.0076 | 0.0152 |
| 200 | 0.0204 | 0.0068 | 0.0136 |
| 201 | 0.0186 | 0.0062 | 0.0124 |

| | | | |
|---|---|---|---|
| 202 | 0.0171 | 0.0057 | 0.0114 |
| 203 | 0.0159 | 0.0053 | 0.0106 |
| 204 | 0.0149 | 0.0050 | 0.0099 |
| 205 | 0.0112 | 0.0037 | 0.0075 |
| 206 | 0.0105 | 0.0035 | 0.0070 |
| 207 | 0.0100 | 0.0033 | 0.0066 |
| 208 | 0.0094 | 0.0031 | 0.0063 |
| 209 | 0.0090 | 0.0030 | 0.0060 |
| 210 | 0.0086 | 0.0029 | 0.0057 |
| 211 | 0.0082 | 0.0027 | 0.0055 |
| 212 | 0.0079 | 0.0026 | 0.0053 |
| 213 | 0.0076 | 0.0025 | 0.0051 |
| 214 | 0.0073 | 0.0024 | 0.0049 |
| 215 | 0.0071 | 0.0023 | 0.0047 |
| 216 | 0.0068 | 0.0023 | 0.0045 |
| 217 | 0.0076 | 0.0025 | 0.0050 |
| 218 | 0.0073 | 0.0024 | 0.0049 |
| 219 | 0.0071 | 0.0024 | 0.0048 |
| 220 | 0.0069 | 0.0023 | 0.0046 |
| 221 | 0.0068 | 0.0023 | 0.0045 |
| 222 | 0.0066 | 0.0022 | 0.0044 |
| 223 | 0.0064 | 0.0021 | 0.0043 |
| 224 | 0.0063 | 0.0021 | 0.0042 |
| 225 | 0.0061 | 0.0020 | 0.0041 |
| 226 | 0.0060 | 0.0020 | 0.0040 |
| 227 | 0.0059 | 0.0020 | 0.0039 |
| 228 | 0.0057 | 0.0019 | 0.0038 |
| 229 | 0.0056 | 0.0019 | 0.0038 |
| 230 | 0.0055 | 0.0018 | 0.0037 |
| 231 | 0.0054 | 0.0018 | 0.0036 |
| 232 | 0.0053 | 0.0018 | 0.0035 |
| 233 | 0.0052 | 0.0017 | 0.0035 |
| 234 | 0.0051 | 0.0017 | 0.0034 |
| 235 | 0.0050 | 0.0017 | 0.0034 |
| 236 | 0.0049 | 0.0016 | 0.0033 |
| 237 | 0.0049 | 0.0016 | 0.0032 |
| 238 | 0.0048 | 0.0016 | 0.0032 |
| 239 | 0.0047 | 0.0016 | 0.0031 |
| 240 | 0.0046 | 0.0015 | 0.0031 |
| 241 | 0.0046 | 0.0015 | 0.0030 |
| 242 | 0.0045 | 0.0015 | 0.0030 |
| 243 | 0.0044 | 0.0015 | 0.0030 |
| 244 | 0.0044 | 0.0015 | 0.0029 |
| 245 | 0.0043 | 0.0014 | 0.0029 |
| 246 | 0.0042 | 0.0014 | 0.0028 |
| 247 | 0.0042 | 0.0014 | 0.0028 |
| 248 | 0.0041 | 0.0014 | 0.0028 |
| 249 | 0.0041 | 0.0014 | 0.0027 |
| 250 | 0.0040 | 0.0013 | 0.0027 |
| 251 | 0.0040 | 0.0013 | 0.0026 |
| 252 | 0.0039 | 0.0013 | 0.0026 |
| 253 | 0.0039 | 0.0013 | 0.0026 |
| 254 | 0.0038 | 0.0013 | 0.0026 |
| 255 | 0.0038 | 0.0013 | 0.0025 |
| 256 | 0.0037 | 0.0012 | 0.0025 |
| 257 | 0.0037 | 0.0012 | 0.0025 |
| 258 | 0.0037 | 0.0012 | 0.0024 |
| 259 | 0.0036 | 0.0012 | 0.0024 |
| 260 | 0.0036 | 0.0012 | 0.0024 |

| | | | |
|---|---|---|---|
| 261 | 0.0035 | 0.0012 | 0.0024 |
| 262 | 0.0035 | 0.0012 | 0.0023 |
| 263 | 0.0035 | 0.0012 | 0.0023 |
| 264 | 0.0034 | 0.0011 | 0.0023 |
| 265 | 0.0034 | 0.0011 | 0.0023 |
| 266 | 0.0034 | 0.0011 | 0.0022 |
| 267 | 0.0033 | 0.0011 | 0.0022 |
| 268 | 0.0033 | 0.0011 | 0.0022 |
| 269 | 0.0033 | 0.0011 | 0.0022 |
| 270 | 0.0032 | 0.0011 | 0.0021 |
| 271 | 0.0032 | 0.0011 | 0.0021 |
| 272 | 0.0032 | 0.0011 | 0.0021 |
| 273 | 0.0031 | 0.0010 | 0.0021 |
| 274 | 0.0031 | 0.0010 | 0.0021 |
| 275 | 0.0031 | 0.0010 | 0.0021 |
| 276 | 0.0031 | 0.0010 | 0.0020 |
| 277 | 0.0030 | 0.0010 | 0.0020 |
| 278 | 0.0030 | 0.0010 | 0.0020 |
| 279 | 0.0030 | 0.0010 | 0.0020 |
| 280 | 0.0029 | 0.0010 | 0.0020 |
| 281 | 0.0029 | 0.0010 | 0.0019 |
| 282 | 0.0029 | 0.0010 | 0.0019 |
| 283 | 0.0029 | 0.0010 | 0.0019 |
| 284 | 0.0029 | 0.0009 | 0.0019 |
| 285 | 0.0028 | 0.0009 | 0.0019 |
| 286 | 0.0028 | 0.0009 | 0.0019 |
| 287 | 0.0028 | 0.0009 | 0.0019 |
| 288 | 0.0028 | 0.0009 | 0.0018 |

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Total soil rain loss = 0.74(In)
Total effective rainfall = 2.25(In)
Peak flow rate in flood hydrograph = 2917.50(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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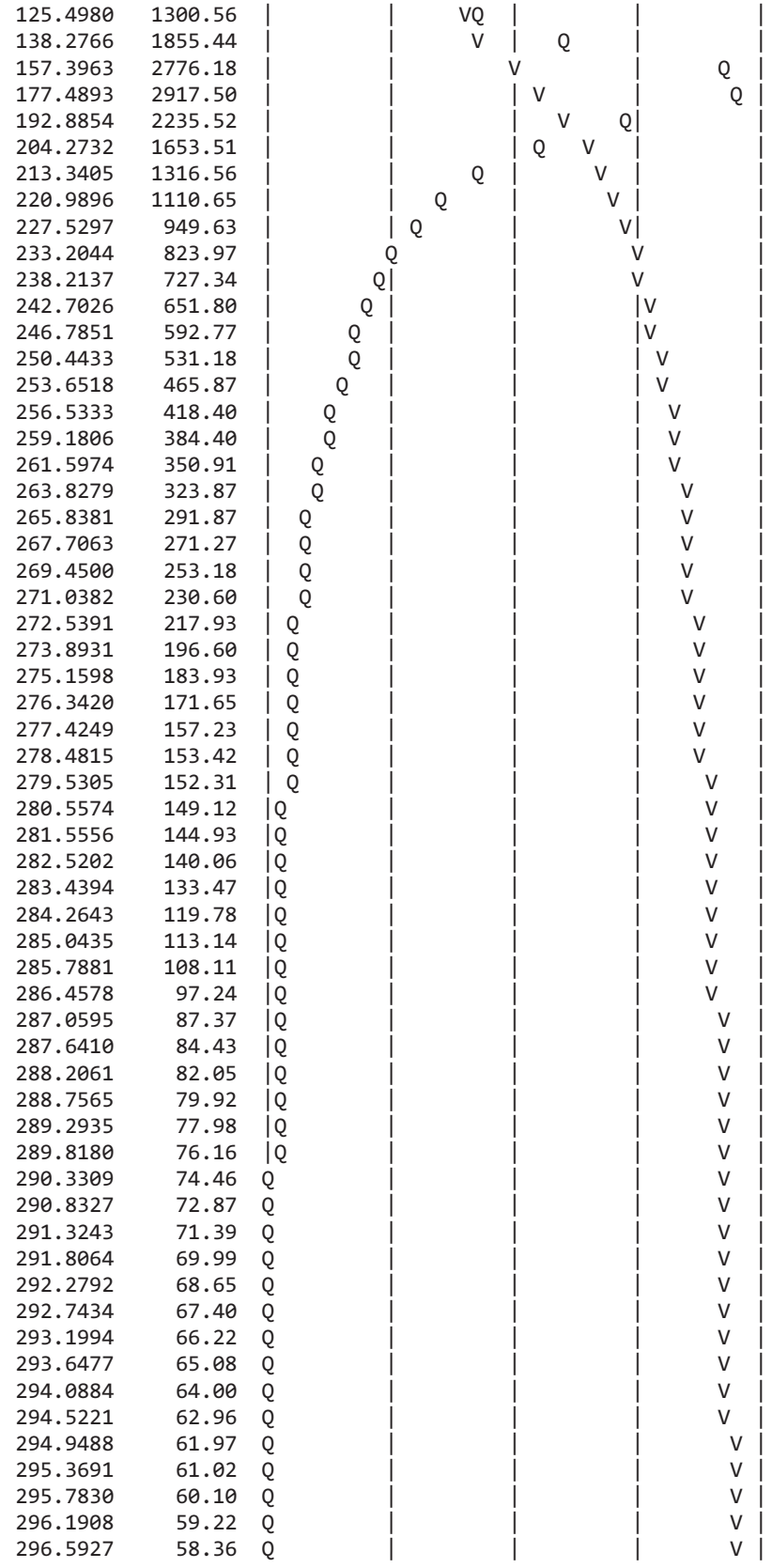
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 750.0 | 1500.0 | 2250.0 | 3000.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0026 | 0.38 | Q | \| | \| | \| | \| |
| 0+10 | 0.0143 | 1.70 | Q | \| | \| | \| | \| |
| 0+15 | 0.0435 | 4.24 | Q | \| | \| | \| | \| |
| 0+20 | 0.1110 | 9.79 | Q | \| | \| | \| | \| |
| 0+25 | 0.2221 | 16.13 | Q | \| | \| | \| | \| |
| 0+30 | 0.3638 | 20.58 | Q | \| | \| | \| | \| |
| 0+35 | 0.5257 | 23.51 | Q | \| | \| | \| | \| |
| 0+40 | 0.7024 | 25.66 | Q | \| | \| | \| | \| |
| 0+45 | 0.8912 | 27.41 | Q | \| | \| | \| | \| |
| 0+50 | 1.0899 | 28.85 | Q | \| | \| | \| | \| |
| 0+55 | 1.2969 | 30.06 | Q | \| | \| | \| | \| |
| 1+ 0 | 1.5111 | 31.09 | Q | \| | \| | \| | \| |
| 1+ 5 | 1.7315 | 32.00 | Q | \| | \| | \| | \| |
| 1+10 | 1.9577 | 32.84 | Q | \| | \| | \| | \| |
| 1+15 | 2.1890 | 33.59 | Q | \| | \| | \| | \| |
| 1+20 | 2.4246 | 34.22 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+25 | 2.6642 | 34.79 | Q | | | | |
| 1+30 | 2.9075 | 35.33 | Q | | | | |
| 1+35 | 3.1543 | 35.83 | Q | | | | |
| 1+40 | 3.4042 | 36.30 | Q | | | | |
| 1+45 | 3.6571 | 36.71 | Q | | | | |
| 1+50 | 3.9126 | 37.11 | Q | | | | |
| 1+55 | 4.1709 | 37.49 | Q | | | | |
| 2+ 0 | 4.4314 | 37.84 | Q | | | | |
| 2+ 5 | 4.6944 | 38.18 | Q | | | | |
| 2+10 | 4.9595 | 38.49 | Q | | | | |
| 2+15 | 5.2266 | 38.78 | Q | | | | |
| 2+20 | 5.4956 | 39.06 | Q | | | | |
| 2+25 | 5.7662 | 39.30 | Q | | | | |
| 2+30 | 6.0386 | 39.55 | Q | | | | |
| 2+35 | 6.3127 | 39.80 | Q | | | | |
| 2+40 | 6.5886 | 40.06 | Q | | | | |
| 2+45 | 6.8663 | 40.33 | Q | | | | |
| 2+50 | 7.1459 | 40.59 | Q | | | | |
| 2+55 | 7.4272 | 40.85 | Q | | | | |
| 3+ 0 | 7.7102 | 41.09 | Q | | | | |
| 3+ 5 | 7.9948 | 41.32 | QV | | | | |
| 3+10 | 8.2809 | 41.55 | QV | | | | |
| 3+15 | 8.5685 | 41.76 | QV | | | | |
| 3+20 | 8.8575 | 41.95 | QV | | | | |
| 3+25 | 9.1477 | 42.15 | QV | | | | |
| 3+30 | 9.4394 | 42.34 | QV | | | | |
| 3+35 | 9.7324 | 42.54 | QV | | | | |
| 3+40 | 10.0267 | 42.74 | QV | | | | |
| 3+45 | 10.3225 | 42.95 | QV | | | | |
| 3+50 | 10.6197 | 43.15 | QV | | | | |
| 3+55 | 10.9183 | 43.36 | QV | | | | |
| 4+ 0 | 11.2184 | 43.57 | QV | | | | |
| 4+ 5 | 11.5199 | 43.78 | QV | | | | |
| 4+10 | 11.8229 | 44.00 | QV | | | | |
| 4+15 | 12.1274 | 44.21 | QV | | | | |
| 4+20 | 12.4335 | 44.44 | QV | | | | |
| 4+25 | 12.7410 | 44.66 | QV | | | | |
| 4+30 | 13.0501 | 44.88 | QV | | | | |
| 4+35 | 13.3608 | 45.11 | QV | | | | |
| 4+40 | 13.6731 | 45.34 | QV | | | | |
| 4+45 | 13.9870 | 45.57 | QV | | | | |
| 4+50 | 14.3025 | 45.81 | QV | | | | |
| 4+55 | 14.6196 | 46.05 | QV | | | | |
| 5+ 0 | 14.9384 | 46.29 | QV | | | | |
| 5+ 5 | 15.2590 | 46.54 | QV | | | | |
| 5+10 | 15.5812 | 46.79 | Q V | | | | |
| 5+15 | 15.9051 | 47.04 | Q V | | | | |
| 5+20 | 16.2309 | 47.29 | Q V | | | | |
| 5+25 | 16.5583 | 47.55 | Q V | | | | |
| 5+30 | 16.8876 | 47.81 | Q V | | | | |
| 5+35 | 17.2187 | 48.08 | Q V | | | | |
| 5+40 | 17.5517 | 48.35 | Q V | | | | |
| 5+45 | 17.8865 | 48.62 | Q V | | | | |
| 5+50 | 18.2233 | 48.89 | Q V | | | | |
| 5+55 | 18.5619 | 49.17 | Q V | | | | |
| 6+ 0 | 18.9025 | 49.46 | Q V | | | | |
| 6+ 5 | 19.2451 | 49.74 | Q V | | | | |
| 6+10 | 19.5897 | 50.03 | Q V | | | | |
| 6+15 | 19.9363 | 50.33 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+20 | 20.2850 | 50.63 | Q V | \| | \| | \| | \| |
| 6+25 | 20.6358 | 50.93 | Q V | \| | \| | \| | \| |
| 6+30 | 20.9887 | 51.24 | Q V | \| | \| | \| | \| |
| 6+35 | 21.3437 | 51.55 | Q V | \| | \| | \| | \| |
| 6+40 | 21.7009 | 51.87 | Q V | \| | \| | \| | \| |
| 6+45 | 22.0604 | 52.19 | Q V | \| | \| | \| | \| |
| 6+50 | 22.4220 | 52.52 | Q V | \| | \| | \| | \| |
| 6+55 | 22.7860 | 52.85 | Q V | \| | \| | \| | \| |
| 7+ 0 | 23.1523 | 53.18 | Q V | \| | \| | \| | \| |
| 7+ 5 | 23.5209 | 53.52 | Q V | \| | \| | \| | \| |
| 7+10 | 23.8919 | 53.87 | Q V | \| | \| | \| | \| |
| 7+15 | 24.2653 | 54.22 | Q V | \| | \| | \| | \| |
| 7+20 | 24.6412 | 54.58 | Q V | \| | \| | \| | \| |
| 7+25 | 25.0196 | 54.94 | Q V | \| | \| | \| | \| |
| 7+30 | 25.4005 | 55.31 | Q V | \| | \| | \| | \| |
| 7+35 | 25.7840 | 55.68 | Q V | \| | \| | \| | \| |
| 7+40 | 26.1701 | 56.07 | Q V | \| | \| | \| | \| |
| 7+45 | 26.5589 | 56.45 | Q V | \| | \| | \| | \| |
| 7+50 | 26.9504 | 56.84 | Q V | \| | \| | \| | \| |
| 7+55 | 27.3446 | 57.24 | Q V | \| | \| | \| | \| |
| 8+ 0 | 27.7417 | 57.65 | Q V | \| | \| | \| | \| |
| 8+ 5 | 28.1416 | 58.06 | Q V | \| | \| | \| | \| |
| 8+10 | 28.5443 | 58.48 | Q V | \| | \| | \| | \| |
| 8+15 | 28.9500 | 58.91 | Q V | \| | \| | \| | \| |
| 8+20 | 29.3588 | 59.35 | Q V | \| | \| | \| | \| |
| 8+25 | 29.7705 | 59.79 | Q V | \| | \| | \| | \| |
| 8+30 | 30.1854 | 60.24 | Q V | \| | \| | \| | \| |
| 8+35 | 30.6034 | 60.70 | Q V | \| | \| | \| | \| |
| 8+40 | 31.0246 | 61.16 | Q V | \| | \| | \| | \| |
| 8+45 | 31.4492 | 61.64 | Q V | \| | \| | \| | \| |
| 8+50 | 31.8770 | 62.12 | Q V | \| | \| | \| | \| |
| 8+55 | 32.3083 | 62.62 | Q V | \| | \| | \| | \| |
| 9+ 0 | 32.7430 | 63.12 | Q V | \| | \| | \| | \| |
| 9+ 5 | 33.1812 | 63.63 | Q V | \| | \| | \| | \| |
| 9+10 | 33.6230 | 64.16 | Q V | \| | \| | \| | \| |
| 9+15 | 34.0685 | 64.69 | Q V | \| | \| | \| | \| |
| 9+20 | 34.5178 | 65.23 | Q V | \| | \| | \| | \| |
| 9+25 | 34.9709 | 65.78 | Q V | \| | \| | \| | \| |
| 9+30 | 35.4278 | 66.35 | Q V | \| | \| | \| | \| |
| 9+35 | 35.8888 | 66.93 | Q V | \| | \| | \| | \| |
| 9+40 | 36.3538 | 67.52 | Q V | \| | \| | \| | \| |
| 9+45 | 36.8229 | 68.12 | Q V | \| | \| | \| | \| |
| 9+50 | 37.2963 | 68.73 | Q V | \| | \| | \| | \| |
| 9+55 | 37.7740 | 69.36 | Q V | \| | \| | \| | \| |
| 10+ 0 | 38.2561 | 70.00 | Q V | \| | \| | \| | \| |
| 10+ 5 | 38.7427 | 70.66 | Q V | \| | \| | \| | \| |
| 10+10 | 39.2340 | 71.33 | Q V | \| | \| | \| | \| |
| 10+15 | 39.7299 | 72.01 | Q V | \| | \| | \| | \| |
| 10+20 | 40.2307 | 72.72 | Q V | \| | \| | \| | \| |
| 10+25 | 40.7365 | 73.43 | Q V | \| | \| | \| | \| |
| 10+30 | 41.2473 | 74.17 | Q V | \| | \| | \| | \| |
| 10+35 | 41.7633 | 74.92 | Q V | \| | \| | \| | \| |
| 10+40 | 42.2846 | 75.70 | \|Q V | \| | \| | \| | \| |
| 10+45 | 42.8114 | 76.48 | \|Q V | \| | \| | \| | \| |
| 10+50 | 43.3437 | 77.30 | \|Q V | \| | \| | \| | \| |
| 10+55 | 43.8818 | 78.12 | \|Q V | \| | \| | \| | \| |
| 11+ 0 | 44.4257 | 78.98 | \|Q V | \| | \| | \| | \| |
| 11+ 5 | 44.9756 | 79.85 | \|Q V | \| | \| | \| | \| |
| 11+10 | 45.5318 | 80.75 | \|Q V | \| | \| | \| | \| |

```
11+15      46.0943     81.67  |Q   V    |          |          |          |
11+20      46.6633     82.62  |Q    V   |          |          |          |
11+25      47.2390     83.59  |Q    V   |          |          |          |
11+30      47.8217     84.60  |Q    V   |          |          |          |
11+35      48.4114     85.63  |Q    V   |          |          |          |
11+40      49.0085     86.69  |Q    V   |          |          |          |
11+45      49.6130     87.78  |Q    V   |          |          |          |
11+50      50.2254     88.91  |Q    V   |          |          |          |
11+55      50.8457     90.07  |Q    V   |          |          |          |
12+ 0      51.4743     91.27  |Q    V   |          |          |          |
12+ 5      52.1105     92.37  |Q    V   |          |          |          |
12+10      52.7523     93.18  |Q    V   |          |          |          |
12+15      53.3968     93.59  |Q    V   |          |          |          |
12+20      54.0371     92.97  |Q    V   |          |          |          |
12+25      54.6714     92.10  |Q     V  |          |          |          |
12+30      55.3047     91.95  |Q     V  |          |          |          |
12+35      55.9408     92.36  |Q     V  |          |          |          |
12+40      56.5821     93.11  |Q     V  |          |          |          |
12+45      57.2298     94.05  |Q     V  |          |          |          |
12+50      57.8852     95.16  |Q     V  |          |          |          |
12+55      58.5491     96.41  |Q     V  |          |          |          |
13+ 0      59.2226     97.79  |Q     V  |          |          |          |
13+ 5      59.9063     99.27  |Q     V  |          |          |          |
13+10      60.6010    100.87  |Q     V  |          |          |          |
13+15      61.3075    102.57  |Q     V  |          |          |          |
13+20      62.0266    104.42  |Q     V  |          |          |          |
13+25      62.7591    106.36  |Q      V |          |          |          |
13+30      63.5059    108.43  |Q      V |          |          |          |
13+35      64.2676    110.61  |Q      V |          |          |          |
13+40      65.0454    112.94  |Q      V |          |          |          |
13+45      65.8401    115.39  |Q      V |          |          |          |
13+50      66.6529    118.01  |Q      V |          |          |          |
13+55      67.4846    120.77  |Q      V |          |          |          |
14+ 0      68.3367    123.73  |Q      V |          |          |          |
14+ 5      69.2130    127.24  |Q      V |          |          |          |
14+10      70.1219    131.98  |Q       V|          |          |          |
14+15      71.0737    138.20  |Q       V|          |          |          |
14+20      72.0922    147.88  |Q       V|          |          |          |
14+25      73.1853    158.72  | Q      V|          |          |          |
14+30      74.3428    168.07  | Q      V|          |          |          |
14+35      75.5565    176.23  | Q      V|          |          |          |
14+40      76.8246    184.12  | Q      V|          |          |          |
14+45      78.1472    192.05  | Q       V          |          |          |
14+50      79.5266    200.29  | Q       V          |          |          |
14+55      80.9652    208.88  | Q       V          |          |          |
15+ 0      82.4675    218.14  | Q       V          |          |          |
15+ 5      84.0382    228.06  |  Q      V          |          |          |
15+10      85.6845    239.04  |  Q      |V         |          |          |
15+15      87.4136    251.06  |  Q      |V         |          |          |
15+20      89.2358    264.59  |  Q      |V         |          |          |
15+25      91.1636    279.92  |  Q      |V         |          |          |
15+30      93.2170    298.15  |  Q      | V        |          |          |
15+35      95.4187    319.69  |   Q     | V        |          |          |
15+40      97.8078    346.89  |   Q     | V        |          |          |
15+45     100.4270    380.31  |    Q    | V        |          |          |
15+50     103.3445    423.63  |    Q    |  V       |          |          |
15+55     106.6850    485.03  |     Q   |  V       |          |          |
16+ 0     110.7364    588.26  |      Q  |   V      |          |          |
16+ 5     116.5411    842.84  |         |Q   V     |          |          |
```

| | | | |
|---|---|---|---|
| 16+10 | 125.4980 | 1300.56 |  |
| 16+15 | 138.2766 | 1855.44 | |
| 16+20 | 157.3963 | 2776.18 | |
| 16+25 | 177.4893 | 2917.50 | |
| 16+30 | 192.8854 | 2235.52 | |
| 16+35 | 204.2732 | 1653.51 | |
| 16+40 | 213.3405 | 1316.56 | |
| 16+45 | 220.9896 | 1110.65 | |
| 16+50 | 227.5297 | 949.63 | |
| 16+55 | 233.2044 | 823.97 | |
| 17+ 0 | 238.2137 | 727.34 | |
| 17+ 5 | 242.7026 | 651.80 | |
| 17+10 | 246.7851 | 592.77 | |
| 17+15 | 250.4433 | 531.18 | |
| 17+20 | 253.6518 | 465.87 | |
| 17+25 | 256.5333 | 418.40 | |
| 17+30 | 259.1806 | 384.40 | |
| 17+35 | 261.5974 | 350.91 | |
| 17+40 | 263.8279 | 323.87 | |
| 17+45 | 265.8381 | 291.87 | |
| 17+50 | 267.7063 | 271.27 | |
| 17+55 | 269.4500 | 253.18 | |
| 18+ 0 | 271.0382 | 230.60 | |
| 18+ 5 | 272.5391 | 217.93 | |
| 18+10 | 273.8931 | 196.60 | |
| 18+15 | 275.1598 | 183.93 | |
| 18+20 | 276.3420 | 171.65 | |
| 18+25 | 277.4249 | 157.23 | |
| 18+30 | 278.4815 | 153.42 | |
| 18+35 | 279.5305 | 152.31 | |
| 18+40 | 280.5574 | 149.12 | |
| 18+45 | 281.5556 | 144.93 | |
| 18+50 | 282.5202 | 140.06 | |
| 18+55 | 283.4394 | 133.47 | |
| 19+ 0 | 284.2643 | 119.78 | |
| 19+ 5 | 285.0435 | 113.14 | |
| 19+10 | 285.7881 | 108.11 | |
| 19+15 | 286.4578 | 97.24 | |
| 19+20 | 287.0595 | 87.37 | |
| 19+25 | 287.6410 | 84.43 | |
| 19+30 | 288.2061 | 82.05 | |
| 19+35 | 288.7565 | 79.92 | |
| 19+40 | 289.2935 | 77.98 | |
| 19+45 | 289.8180 | 76.16 | |
| 19+50 | 290.3309 | 74.46 | |
| 19+55 | 290.8327 | 72.87 | |
| 20+ 0 | 291.3243 | 71.39 | |
| 20+ 5 | 291.8064 | 69.99 | |
| 20+10 | 292.2792 | 68.65 | |
| 20+15 | 292.7434 | 67.40 | |
| 20+20 | 293.1994 | 66.22 | |
| 20+25 | 293.6477 | 65.08 | |
| 20+30 | 294.0884 | 64.00 | |
| 20+35 | 294.5221 | 62.96 | |
| 20+40 | 294.9488 | 61.97 | |
| 20+45 | 295.3691 | 61.02 | |
| 20+50 | 295.7830 | 60.10 | |
| 20+55 | 296.1908 | 59.22 | |
| 21+ 0 | 296.5927 | 58.36 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+ 5 | 296.9889 | 57.52 | Q | \| | \| | \| | V \| |
| 21+10 | 297.3795 | 56.72 | Q | \| | \| | \| | V \| |
| 21+15 | 297.7648 | 55.94 | Q | \| | \| | \| | V \| |
| 21+20 | 298.1447 | 55.17 | Q | \| | \| | \| | V \| |
| 21+25 | 298.5196 | 54.43 | Q | \| | \| | \| | V \| |
| 21+30 | 298.8896 | 53.72 | Q | \| | \| | \| | V \| |
| 21+35 | 299.2548 | 53.03 | Q | \| | \| | \| | V \| |
| 21+40 | 299.6153 | 52.35 | Q | \| | \| | \| | V \| |
| 21+45 | 299.9714 | 51.70 | Q | \| | \| | \| | V \| |
| 21+50 | 300.3231 | 51.07 | Q | \| | \| | \| | V \| |
| 21+55 | 300.6706 | 50.45 | Q | \| | \| | \| | V \| |
| 22+ 0 | 301.0140 | 49.86 | Q | \| | \| | \| | V \| |
| 22+ 5 | 301.3534 | 49.28 | Q | \| | \| | \| | V \| |
| 22+10 | 301.6889 | 48.71 | Q | \| | \| | \| | V \| |
| 22+15 | 302.0206 | 48.17 | Q | \| | \| | \| | V \| |
| 22+20 | 302.3486 | 47.63 | Q | \| | \| | \| | V \| |
| 22+25 | 302.6731 | 47.11 | Q | \| | \| | \| | V\| |
| 22+30 | 302.9940 | 46.60 | Q | \| | \| | \| | V\| |
| 22+35 | 303.3116 | 46.11 | Q | \| | \| | \| | V\| |
| 22+40 | 303.6259 | 45.63 | Q | \| | \| | \| | V\| |
| 22+45 | 303.9369 | 45.16 | Q | \| | \| | \| | V\| |
| 22+50 | 304.2447 | 44.70 | Q | \| | \| | \| | V\| |
| 22+55 | 304.5495 | 44.25 | Q | \| | \| | \| | V\| |
| 23+ 0 | 304.8513 | 43.82 | Q | \| | \| | \| | V\| |
| 23+ 5 | 305.1501 | 43.39 | Q | \| | \| | \| | V\| |
| 23+10 | 305.4461 | 42.97 | Q | \| | \| | \| | V\| |
| 23+15 | 305.7393 | 42.57 | Q | \| | \| | \| | V\| |
| 23+20 | 306.0297 | 42.17 | Q | \| | \| | \| | V\| |
| 23+25 | 306.3174 | 41.78 | Q | \| | \| | \| | V\| |
| 23+30 | 306.6025 | 41.40 | Q | \| | \| | \| | V\| |
| 23+35 | 306.8851 | 41.03 | Q | \| | \| | \| | V\| |
| 23+40 | 307.1651 | 40.66 | Q | \| | \| | \| | V\| |
| 23+45 | 307.4427 | 40.30 | Q | \| | \| | \| | V\| |
| 23+50 | 307.7179 | 39.95 | Q | \| | \| | \| | V\| |
| 23+55 | 307.9907 | 39.61 | Q | \| | \| | \| | V\| |
| 24+ 0 | 308.2612 | 39.28 | Q | \| | \| | \| | V\| |
| 24+ 5 | 308.5268 | 38.57 | Q | \| | \| | \| | V\| |
| 24+10 | 308.7812 | 36.93 | Q | \| | \| | \| | V\| |
| 24+15 | 309.0160 | 34.10 | Q | \| | \| | \| | V\| |
| 24+20 | 309.2109 | 28.30 | Q | \| | \| | \| | V\| |
| 24+25 | 309.3608 | 21.78 | Q | \| | \| | \| | V\| |
| 24+30 | 309.4794 | 17.22 | Q | \| | \| | \| | V\| |
| 24+35 | 309.5775 | 14.24 | Q | \| | \| | \| | V\| |
| 24+40 | 309.6605 | 12.06 | Q | \| | \| | \| | V\| |
| 24+45 | 309.7315 | 10.31 | Q | \| | \| | \| | V\| |
| 24+50 | 309.7928 | 8.89 | Q | \| | \| | \| | V\| |
| 24+55 | 309.8460 | 7.73 | Q | \| | \| | \| | V\| |
| 25+ 0 | 309.8925 | 6.75 | Q | \| | \| | \| | V\| |
| 25+ 5 | 309.9332 | 5.91 | Q | \| | \| | \| | V\| |
| 25+10 | 309.9687 | 5.15 | Q | \| | \| | \| | V\| |
| 25+15 | 309.9997 | 4.50 | Q | \| | \| | \| | V\| |
| 25+20 | 310.0270 | 3.97 | Q | \| | \| | \| | V\| |
| 25+25 | 310.0511 | 3.50 | Q | \| | \| | \| | V\| |
| 25+30 | 310.0723 | 3.08 | Q | \| | \| | \| | V\| |
| 25+35 | 310.0909 | 2.70 | Q | \| | \| | \| | V\| |
| 25+40 | 310.1071 | 2.35 | Q | \| | \| | \| | V\| |
| 25+45 | 310.1213 | 2.07 | Q | \| | \| | \| | V\| |
| 25+50 | 310.1338 | 1.81 | Q | \| | \| | \| | V\| |
| 25+55 | 310.1445 | 1.57 | Q | \| | \| | \| | V\| |

```
   26+ 0     310.1539      1.36  Q         |          |          |         V|
   26+ 5     310.1620      1.17  Q         |          |          |         V|
   26+10     310.1690      1.02  Q         |          |          |         V|
   26+15     310.1751      0.88  Q         |          |          |         V|
   26+20     310.1803      0.76  Q         |          |          |         V|
   26+25     310.1850      0.68  Q         |          |          |         V|
   26+30     310.1892      0.60  Q         |          |          |         V|
   26+35     310.1927      0.51  Q         |          |          |         V|
   26+40     310.1956      0.42  Q         |          |          |         V|
   26+45     310.1979      0.34  Q         |          |          |         V|
   26+50     310.1996      0.25  Q         |          |          |         V|
   26+55     310.2008      0.16  Q         |          |          |         V|
   27+ 0     310.2015      0.11  Q         |          |          |         V|
   27+ 5     310.2020      0.07  Q         |          |          |         V|
   27+10     310.2021      0.02  Q         |          |          |          V
-------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 08/10/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREA "O"
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-10-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 155.66 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 155.66 | 6 | 1.95 |
| Rainfall data for year 100 | | |
| 155.66 | 24 | 2.71 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 64.2 | 82.4 | 155.66 | 1.000 | 0.329 | 0.900 | 0.296 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.296

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 140.09 | 0.900 | 64.2 | 82.4 | 2.14 | 0.435 |
| 15.57 | 0.100 | 98.0 | 98.0 | 0.20 | 0.915 |

Area-averaged catchment yield fraction, Y = 0.483
Area-averaged low loss fraction, Yb = 0.517
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 4860.00(Ft.)
Length from concentration point to centroid = 2228.00(Ft.)
Elevation difference along watercourse = 170.00(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 155.66(Ac.)
Catchment Lag time = 0.218 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 38.3033
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.296(In/Hr)
Average low loss rate fraction (Yb) = 0.517 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.712(In)
Specified peak 6-hour rainfall = 1.952(In)
Specified peak 24-hour rainfall = 2.712(In)

Rainfall depth area reduction factors:
Using a total area of 155.66(Ac.) (Ref: fig. E-4)

5-minute factor = 0.993 Adjusted rainfall = 0.655(In)
30-minute factor = 0.993 Adjusted rainfall = 1.121(In)
1-hour factor = 0.993 Adjusted rainfall = 1.380(In)
3-hour factor = 0.999 Adjusted rainfall = 1.710(In)
6-hour factor = 1.000 Adjusted rainfall = 1.951(In)
24-hour factor = 1.000 Adjusted rainfall = 2.711(In)
---

U n i t H y d r o g r a p h

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 1882.51 (CFS)) | |
| 1 | 2.566 | 48.309 |
| 2 | 16.806 | 268.065 |
| 3 | 46.592 | 560.730 |
| 4 | 63.874 | 325.325 |
| 5 | 73.341 | 178.221 |
| 6 | 79.667 | 119.093 |
| 7 | 84.137 | 84.155 |
| 8 | 87.661 | 66.337 |
| 9 | 90.214 | 48.061 |
| 10 | 92.260 | 38.510 |

| | | |
|---|---|---|
| 11 | 93.937 | 31.563 |
| 12 | 95.267 | 25.041 |
| 13 | 96.349 | 20.363 |
| 14 | 97.207 | 16.165 |
| 15 | 97.834 | 11.803 |
| 16 | 98.241 | 7.664 |
| 17 | 98.684 | 8.334 |
| 18 | 99.144 | 8.653 |
| 19 | 99.545 | 7.564 |
| 20 | 99.793 | 4.664 |
| 21 | 100.000 | 3.893 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6548 | 0.6548 |
| 2 | 0.8061 | 0.1513 |
| 3 | 0.9104 | 0.1043 |
| 4 | 0.9924 | 0.0821 |
| 5 | 1.0611 | 0.0687 |
| 6 | 1.1208 | 0.0597 |
| 7 | 1.1738 | 0.0530 |
| 8 | 1.2218 | 0.0480 |
| 9 | 1.2658 | 0.0439 |
| 10 | 1.3064 | 0.0406 |
| 11 | 1.3443 | 0.0379 |
| 12 | 1.3799 | 0.0356 |
| 13 | 1.4016 | 0.0217 |
| 14 | 1.4220 | 0.0204 |
| 15 | 1.4413 | 0.0193 |
| 16 | 1.4596 | 0.0183 |
| 17 | 1.4770 | 0.0174 |
| 18 | 1.4936 | 0.0166 |
| 19 | 1.5094 | 0.0159 |
| 20 | 1.5246 | 0.0152 |
| 21 | 1.5392 | 0.0146 |
| 22 | 1.5533 | 0.0141 |
| 23 | 1.5668 | 0.0135 |
| 24 | 1.5799 | 0.0131 |
| 25 | 1.5926 | 0.0126 |
| 26 | 1.6048 | 0.0122 |
| 27 | 1.6167 | 0.0119 |
| 28 | 1.6282 | 0.0115 |
| 29 | 1.6394 | 0.0112 |
| 30 | 1.6503 | 0.0109 |
| 31 | 1.6609 | 0.0106 |
| 32 | 1.6712 | 0.0103 |
| 33 | 1.6813 | 0.0101 |
| 34 | 1.6912 | 0.0098 |
| 35 | 1.7008 | 0.0096 |
| 36 | 1.7101 | 0.0094 |
| 37 | 1.7191 | 0.0089 |
| 38 | 1.7278 | 0.0087 |
| 39 | 1.7364 | 0.0086 |
| 40 | 1.7447 | 0.0084 |
| 41 | 1.7530 | 0.0082 |
| 42 | 1.7610 | 0.0081 |
| 43 | 1.7689 | 0.0079 |
| 44 | 1.7766 | 0.0077 |
| 45 | 1.7843 | 0.0076 |

| | | |
|---|---|---|
| 46 | 1.7917 | 0.0075 |
| 47 | 1.7991 | 0.0073 |
| 48 | 1.8063 | 0.0072 |
| 49 | 1.8134 | 0.0071 |
| 50 | 1.8204 | 0.0070 |
| 51 | 1.8272 | 0.0069 |
| 52 | 1.8340 | 0.0068 |
| 53 | 1.8406 | 0.0067 |
| 54 | 1.8472 | 0.0066 |
| 55 | 1.8537 | 0.0065 |
| 56 | 1.8600 | 0.0064 |
| 57 | 1.8663 | 0.0063 |
| 58 | 1.8725 | 0.0062 |
| 59 | 1.8786 | 0.0061 |
| 60 | 1.8846 | 0.0060 |
| 61 | 1.8905 | 0.0059 |
| 62 | 1.8964 | 0.0059 |
| 63 | 1.9021 | 0.0058 |
| 64 | 1.9078 | 0.0057 |
| 65 | 1.9135 | 0.0056 |
| 66 | 1.9190 | 0.0056 |
| 67 | 1.9245 | 0.0055 |
| 68 | 1.9300 | 0.0054 |
| 69 | 1.9353 | 0.0054 |
| 70 | 1.9406 | 0.0053 |
| 71 | 1.9459 | 0.0052 |
| 72 | 1.9511 | 0.0052 |
| 73 | 1.9575 | 0.0064 |
| 74 | 1.9638 | 0.0063 |
| 75 | 1.9701 | 0.0063 |
| 76 | 1.9763 | 0.0062 |
| 77 | 1.9824 | 0.0061 |
| 78 | 1.9885 | 0.0061 |
| 79 | 1.9945 | 0.0060 |
| 80 | 2.0005 | 0.0060 |
| 81 | 2.0064 | 0.0059 |
| 82 | 2.0122 | 0.0059 |
| 83 | 2.0180 | 0.0058 |
| 84 | 2.0238 | 0.0057 |
| 85 | 2.0295 | 0.0057 |
| 86 | 2.0351 | 0.0056 |
| 87 | 2.0407 | 0.0056 |
| 88 | 2.0463 | 0.0055 |
| 89 | 2.0517 | 0.0055 |
| 90 | 2.0572 | 0.0054 |
| 91 | 2.0626 | 0.0054 |
| 92 | 2.0680 | 0.0054 |
| 93 | 2.0733 | 0.0053 |
| 94 | 2.0785 | 0.0053 |
| 95 | 2.0838 | 0.0052 |
| 96 | 2.0890 | 0.0052 |
| 97 | 2.0941 | 0.0051 |
| 98 | 2.0992 | 0.0051 |
| 99 | 2.1043 | 0.0051 |
| 100 | 2.1093 | 0.0050 |
| 101 | 2.1143 | 0.0050 |
| 102 | 2.1192 | 0.0050 |
| 103 | 2.1242 | 0.0049 |
| 104 | 2.1290 | 0.0049 |

| | | |
|---|---|---|
| 105 | 2.1339 | 0.0048 |
| 106 | 2.1387 | 0.0048 |
| 107 | 2.1435 | 0.0048 |
| 108 | 2.1482 | 0.0047 |
| 109 | 2.1529 | 0.0047 |
| 110 | 2.1576 | 0.0047 |
| 111 | 2.1622 | 0.0046 |
| 112 | 2.1668 | 0.0046 |
| 113 | 2.1714 | 0.0046 |
| 114 | 2.1760 | 0.0045 |
| 115 | 2.1805 | 0.0045 |
| 116 | 2.1850 | 0.0045 |
| 117 | 2.1894 | 0.0045 |
| 118 | 2.1938 | 0.0044 |
| 119 | 2.1982 | 0.0044 |
| 120 | 2.2026 | 0.0044 |
| 121 | 2.2070 | 0.0043 |
| 122 | 2.2113 | 0.0043 |
| 123 | 2.2156 | 0.0043 |
| 124 | 2.2198 | 0.0043 |
| 125 | 2.2241 | 0.0042 |
| 126 | 2.2283 | 0.0042 |
| 127 | 2.2325 | 0.0042 |
| 128 | 2.2366 | 0.0042 |
| 129 | 2.2408 | 0.0041 |
| 130 | 2.2449 | 0.0041 |
| 131 | 2.2490 | 0.0041 |
| 132 | 2.2530 | 0.0041 |
| 133 | 2.2571 | 0.0040 |
| 134 | 2.2611 | 0.0040 |
| 135 | 2.2651 | 0.0040 |
| 136 | 2.2690 | 0.0040 |
| 137 | 2.2730 | 0.0039 |
| 138 | 2.2769 | 0.0039 |
| 139 | 2.2808 | 0.0039 |
| 140 | 2.2847 | 0.0039 |
| 141 | 2.2886 | 0.0039 |
| 142 | 2.2924 | 0.0038 |
| 143 | 2.2962 | 0.0038 |
| 144 | 2.3000 | 0.0038 |
| 145 | 2.3038 | 0.0038 |
| 146 | 2.3076 | 0.0038 |
| 147 | 2.3113 | 0.0037 |
| 148 | 2.3151 | 0.0037 |
| 149 | 2.3188 | 0.0037 |
| 150 | 2.3224 | 0.0037 |
| 151 | 2.3261 | 0.0037 |
| 152 | 2.3298 | 0.0036 |
| 153 | 2.3334 | 0.0036 |
| 154 | 2.3370 | 0.0036 |
| 155 | 2.3406 | 0.0036 |
| 156 | 2.3442 | 0.0036 |
| 157 | 2.3477 | 0.0036 |
| 158 | 2.3513 | 0.0035 |
| 159 | 2.3548 | 0.0035 |
| 160 | 2.3583 | 0.0035 |
| 161 | 2.3618 | 0.0035 |
| 162 | 2.3653 | 0.0035 |
| 163 | 2.3687 | 0.0035 |

| | | |
|---|---|---|
| 164 | 2.3722 | 0.0034 |
| 165 | 2.3756 | 0.0034 |
| 166 | 2.3790 | 0.0034 |
| 167 | 2.3824 | 0.0034 |
| 168 | 2.3858 | 0.0034 |
| 169 | 2.3891 | 0.0034 |
| 170 | 2.3925 | 0.0033 |
| 171 | 2.3958 | 0.0033 |
| 172 | 2.3991 | 0.0033 |
| 173 | 2.4025 | 0.0033 |
| 174 | 2.4057 | 0.0033 |
| 175 | 2.4090 | 0.0033 |
| 176 | 2.4123 | 0.0033 |
| 177 | 2.4155 | 0.0032 |
| 178 | 2.4188 | 0.0032 |
| 179 | 2.4220 | 0.0032 |
| 180 | 2.4252 | 0.0032 |
| 181 | 2.4284 | 0.0032 |
| 182 | 2.4316 | 0.0032 |
| 183 | 2.4347 | 0.0032 |
| 184 | 2.4379 | 0.0032 |
| 185 | 2.4410 | 0.0031 |
| 186 | 2.4441 | 0.0031 |
| 187 | 2.4472 | 0.0031 |
| 188 | 2.4504 | 0.0031 |
| 189 | 2.4534 | 0.0031 |
| 190 | 2.4565 | 0.0031 |
| 191 | 2.4596 | 0.0031 |
| 192 | 2.4626 | 0.0031 |
| 193 | 2.4657 | 0.0030 |
| 194 | 2.4687 | 0.0030 |
| 195 | 2.4717 | 0.0030 |
| 196 | 2.4747 | 0.0030 |
| 197 | 2.4777 | 0.0030 |
| 198 | 2.4807 | 0.0030 |
| 199 | 2.4837 | 0.0030 |
| 200 | 2.4866 | 0.0030 |
| 201 | 2.4896 | 0.0029 |
| 202 | 2.4925 | 0.0029 |
| 203 | 2.4954 | 0.0029 |
| 204 | 2.4983 | 0.0029 |
| 205 | 2.5012 | 0.0029 |
| 206 | 2.5041 | 0.0029 |
| 207 | 2.5070 | 0.0029 |
| 208 | 2.5099 | 0.0029 |
| 209 | 2.5127 | 0.0029 |
| 210 | 2.5156 | 0.0028 |
| 211 | 2.5184 | 0.0028 |
| 212 | 2.5212 | 0.0028 |
| 213 | 2.5241 | 0.0028 |
| 214 | 2.5269 | 0.0028 |
| 215 | 2.5297 | 0.0028 |
| 216 | 2.5325 | 0.0028 |
| 217 | 2.5352 | 0.0028 |
| 218 | 2.5380 | 0.0028 |
| 219 | 2.5408 | 0.0028 |
| 220 | 2.5435 | 0.0027 |
| 221 | 2.5463 | 0.0027 |
| 222 | 2.5490 | 0.0027 |

| | | |
|---|---|---|
| 223 | 2.5517 | 0.0027 |
| 224 | 2.5544 | 0.0027 |
| 225 | 2.5571 | 0.0027 |
| 226 | 2.5598 | 0.0027 |
| 227 | 2.5625 | 0.0027 |
| 228 | 2.5652 | 0.0027 |
| 229 | 2.5678 | 0.0027 |
| 230 | 2.5705 | 0.0027 |
| 231 | 2.5732 | 0.0026 |
| 232 | 2.5758 | 0.0026 |
| 233 | 2.5784 | 0.0026 |
| 234 | 2.5810 | 0.0026 |
| 235 | 2.5837 | 0.0026 |
| 236 | 2.5863 | 0.0026 |
| 237 | 2.5889 | 0.0026 |
| 238 | 2.5915 | 0.0026 |
| 239 | 2.5940 | 0.0026 |
| 240 | 2.5966 | 0.0026 |
| 241 | 2.5992 | 0.0026 |
| 242 | 2.6017 | 0.0026 |
| 243 | 2.6043 | 0.0025 |
| 244 | 2.6068 | 0.0025 |
| 245 | 2.6094 | 0.0025 |
| 246 | 2.6119 | 0.0025 |
| 247 | 2.6144 | 0.0025 |
| 248 | 2.6169 | 0.0025 |
| 249 | 2.6194 | 0.0025 |
| 250 | 2.6219 | 0.0025 |
| 251 | 2.6244 | 0.0025 |
| 252 | 2.6269 | 0.0025 |
| 253 | 2.6293 | 0.0025 |
| 254 | 2.6318 | 0.0025 |
| 255 | 2.6343 | 0.0025 |
| 256 | 2.6367 | 0.0024 |
| 257 | 2.6391 | 0.0024 |
| 258 | 2.6416 | 0.0024 |
| 259 | 2.6440 | 0.0024 |
| 260 | 2.6464 | 0.0024 |
| 261 | 2.6488 | 0.0024 |
| 262 | 2.6512 | 0.0024 |
| 263 | 2.6536 | 0.0024 |
| 264 | 2.6560 | 0.0024 |
| 265 | 2.6584 | 0.0024 |
| 266 | 2.6608 | 0.0024 |
| 267 | 2.6632 | 0.0024 |
| 268 | 2.6655 | 0.0024 |
| 269 | 2.6679 | 0.0024 |
| 270 | 2.6702 | 0.0024 |
| 271 | 2.6726 | 0.0023 |
| 272 | 2.6749 | 0.0023 |
| 273 | 2.6773 | 0.0023 |
| 274 | 2.6796 | 0.0023 |
| 275 | 2.6819 | 0.0023 |
| 276 | 2.6842 | 0.0023 |
| 277 | 2.6865 | 0.0023 |
| 278 | 2.6888 | 0.0023 |
| 279 | 2.6911 | 0.0023 |
| 280 | 2.6934 | 0.0023 |
| 281 | 2.6957 | 0.0023 |

| | | |
|---|---|---|
| 282 | 2.6980 | 0.0023 |
| 283 | 2.7002 | 0.0023 |
| 284 | 2.7025 | 0.0023 |
| 285 | 2.7047 | 0.0023 |
| 286 | 2.7070 | 0.0023 |
| 287 | 2.7092 | 0.0022 |
| 288 | 2.7115 | 0.0022 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0022 | 0.0012 | 0.0011 |
| 2 | 0.0022 | 0.0012 | 0.0011 |
| 3 | 0.0023 | 0.0012 | 0.0011 |
| 4 | 0.0023 | 0.0012 | 0.0011 |
| 5 | 0.0023 | 0.0012 | 0.0011 |
| 6 | 0.0023 | 0.0012 | 0.0011 |
| 7 | 0.0023 | 0.0012 | 0.0011 |
| 8 | 0.0023 | 0.0012 | 0.0011 |
| 9 | 0.0023 | 0.0012 | 0.0011 |
| 10 | 0.0023 | 0.0012 | 0.0011 |
| 11 | 0.0023 | 0.0012 | 0.0011 |
| 12 | 0.0023 | 0.0012 | 0.0011 |
| 13 | 0.0024 | 0.0012 | 0.0011 |
| 14 | 0.0024 | 0.0012 | 0.0011 |
| 15 | 0.0024 | 0.0012 | 0.0011 |
| 16 | 0.0024 | 0.0012 | 0.0011 |
| 17 | 0.0024 | 0.0012 | 0.0012 |
| 18 | 0.0024 | 0.0012 | 0.0012 |
| 19 | 0.0024 | 0.0012 | 0.0012 |
| 20 | 0.0024 | 0.0013 | 0.0012 |
| 21 | 0.0024 | 0.0013 | 0.0012 |
| 22 | 0.0024 | 0.0013 | 0.0012 |
| 23 | 0.0025 | 0.0013 | 0.0012 |
| 24 | 0.0025 | 0.0013 | 0.0012 |
| 25 | 0.0025 | 0.0013 | 0.0012 |
| 26 | 0.0025 | 0.0013 | 0.0012 |
| 27 | 0.0025 | 0.0013 | 0.0012 |
| 28 | 0.0025 | 0.0013 | 0.0012 |
| 29 | 0.0025 | 0.0013 | 0.0012 |
| 30 | 0.0025 | 0.0013 | 0.0012 |
| 31 | 0.0025 | 0.0013 | 0.0012 |
| 32 | 0.0026 | 0.0013 | 0.0012 |
| 33 | 0.0026 | 0.0013 | 0.0012 |
| 34 | 0.0026 | 0.0013 | 0.0012 |
| 35 | 0.0026 | 0.0013 | 0.0013 |
| 36 | 0.0026 | 0.0013 | 0.0013 |
| 37 | 0.0026 | 0.0014 | 0.0013 |
| 38 | 0.0026 | 0.0014 | 0.0013 |
| 39 | 0.0026 | 0.0014 | 0.0013 |
| 40 | 0.0027 | 0.0014 | 0.0013 |
| 41 | 0.0027 | 0.0014 | 0.0013 |
| 42 | 0.0027 | 0.0014 | 0.0013 |
| 43 | 0.0027 | 0.0014 | 0.0013 |
| 44 | 0.0027 | 0.0014 | 0.0013 |
| 45 | 0.0027 | 0.0014 | 0.0013 |
| 46 | 0.0027 | 0.0014 | 0.0013 |
| 47 | 0.0028 | 0.0014 | 0.0013 |

| | | | |
|---|---|---|---|
| 48 | 0.0028 | 0.0014 | 0.0013 |
| 49 | 0.0028 | 0.0014 | 0.0013 |
| 50 | 0.0028 | 0.0014 | 0.0014 |
| 51 | 0.0028 | 0.0015 | 0.0014 |
| 52 | 0.0028 | 0.0015 | 0.0014 |
| 53 | 0.0028 | 0.0015 | 0.0014 |
| 54 | 0.0029 | 0.0015 | 0.0014 |
| 55 | 0.0029 | 0.0015 | 0.0014 |
| 56 | 0.0029 | 0.0015 | 0.0014 |
| 57 | 0.0029 | 0.0015 | 0.0014 |
| 58 | 0.0029 | 0.0015 | 0.0014 |
| 59 | 0.0029 | 0.0015 | 0.0014 |
| 60 | 0.0030 | 0.0015 | 0.0014 |
| 61 | 0.0030 | 0.0015 | 0.0014 |
| 62 | 0.0030 | 0.0015 | 0.0014 |
| 63 | 0.0030 | 0.0016 | 0.0015 |
| 64 | 0.0030 | 0.0016 | 0.0015 |
| 65 | 0.0031 | 0.0016 | 0.0015 |
| 66 | 0.0031 | 0.0016 | 0.0015 |
| 67 | 0.0031 | 0.0016 | 0.0015 |
| 68 | 0.0031 | 0.0016 | 0.0015 |
| 69 | 0.0031 | 0.0016 | 0.0015 |
| 70 | 0.0031 | 0.0016 | 0.0015 |
| 71 | 0.0032 | 0.0016 | 0.0015 |
| 72 | 0.0032 | 0.0016 | 0.0015 |
| 73 | 0.0032 | 0.0017 | 0.0015 |
| 74 | 0.0032 | 0.0017 | 0.0016 |
| 75 | 0.0032 | 0.0017 | 0.0016 |
| 76 | 0.0033 | 0.0017 | 0.0016 |
| 77 | 0.0033 | 0.0017 | 0.0016 |
| 78 | 0.0033 | 0.0017 | 0.0016 |
| 79 | 0.0033 | 0.0017 | 0.0016 |
| 80 | 0.0033 | 0.0017 | 0.0016 |
| 81 | 0.0034 | 0.0017 | 0.0016 |
| 82 | 0.0034 | 0.0018 | 0.0016 |
| 83 | 0.0034 | 0.0018 | 0.0017 |
| 84 | 0.0034 | 0.0018 | 0.0017 |
| 85 | 0.0035 | 0.0018 | 0.0017 |
| 86 | 0.0035 | 0.0018 | 0.0017 |
| 87 | 0.0035 | 0.0018 | 0.0017 |
| 88 | 0.0035 | 0.0018 | 0.0017 |
| 89 | 0.0036 | 0.0019 | 0.0017 |
| 90 | 0.0036 | 0.0019 | 0.0017 |
| 91 | 0.0036 | 0.0019 | 0.0018 |
| 92 | 0.0036 | 0.0019 | 0.0018 |
| 93 | 0.0037 | 0.0019 | 0.0018 |
| 94 | 0.0037 | 0.0019 | 0.0018 |
| 95 | 0.0037 | 0.0019 | 0.0018 |
| 96 | 0.0038 | 0.0019 | 0.0018 |
| 97 | 0.0038 | 0.0020 | 0.0018 |
| 98 | 0.0038 | 0.0020 | 0.0018 |
| 99 | 0.0039 | 0.0020 | 0.0019 |
| 100 | 0.0039 | 0.0020 | 0.0019 |
| 101 | 0.0039 | 0.0020 | 0.0019 |
| 102 | 0.0039 | 0.0020 | 0.0019 |
| 103 | 0.0040 | 0.0021 | 0.0019 |
| 104 | 0.0040 | 0.0021 | 0.0019 |
| 105 | 0.0041 | 0.0021 | 0.0020 |
| 106 | 0.0041 | 0.0021 | 0.0020 |

| | | | |
|---|---|---|---|
| 107 | 0.0041 | 0.0021 | 0.0020 |
| 108 | 0.0042 | 0.0022 | 0.0020 |
| 109 | 0.0042 | 0.0022 | 0.0020 |
| 110 | 0.0042 | 0.0022 | 0.0020 |
| 111 | 0.0043 | 0.0022 | 0.0021 |
| 112 | 0.0043 | 0.0022 | 0.0021 |
| 113 | 0.0044 | 0.0023 | 0.0021 |
| 114 | 0.0044 | 0.0023 | 0.0021 |
| 115 | 0.0045 | 0.0023 | 0.0022 |
| 116 | 0.0045 | 0.0023 | 0.0022 |
| 117 | 0.0045 | 0.0024 | 0.0022 |
| 118 | 0.0046 | 0.0024 | 0.0022 |
| 119 | 0.0046 | 0.0024 | 0.0022 |
| 120 | 0.0047 | 0.0024 | 0.0023 |
| 121 | 0.0047 | 0.0025 | 0.0023 |
| 122 | 0.0048 | 0.0025 | 0.0023 |
| 123 | 0.0048 | 0.0025 | 0.0023 |
| 124 | 0.0049 | 0.0025 | 0.0024 |
| 125 | 0.0050 | 0.0026 | 0.0024 |
| 126 | 0.0050 | 0.0026 | 0.0024 |
| 127 | 0.0051 | 0.0026 | 0.0024 |
| 128 | 0.0051 | 0.0026 | 0.0025 |
| 129 | 0.0052 | 0.0027 | 0.0025 |
| 130 | 0.0052 | 0.0027 | 0.0025 |
| 131 | 0.0053 | 0.0027 | 0.0026 |
| 132 | 0.0054 | 0.0028 | 0.0026 |
| 133 | 0.0054 | 0.0028 | 0.0026 |
| 134 | 0.0055 | 0.0028 | 0.0027 |
| 135 | 0.0056 | 0.0029 | 0.0027 |
| 136 | 0.0056 | 0.0029 | 0.0027 |
| 137 | 0.0057 | 0.0030 | 0.0028 |
| 138 | 0.0058 | 0.0030 | 0.0028 |
| 139 | 0.0059 | 0.0031 | 0.0029 |
| 140 | 0.0060 | 0.0031 | 0.0029 |
| 141 | 0.0061 | 0.0031 | 0.0029 |
| 142 | 0.0061 | 0.0032 | 0.0030 |
| 143 | 0.0063 | 0.0032 | 0.0030 |
| 144 | 0.0063 | 0.0033 | 0.0031 |
| 145 | 0.0052 | 0.0027 | 0.0025 |
| 146 | 0.0052 | 0.0027 | 0.0025 |
| 147 | 0.0054 | 0.0028 | 0.0026 |
| 148 | 0.0054 | 0.0028 | 0.0026 |
| 149 | 0.0056 | 0.0029 | 0.0027 |
| 150 | 0.0056 | 0.0029 | 0.0027 |
| 151 | 0.0058 | 0.0030 | 0.0028 |
| 152 | 0.0059 | 0.0030 | 0.0028 |
| 153 | 0.0060 | 0.0031 | 0.0029 |
| 154 | 0.0061 | 0.0032 | 0.0029 |
| 155 | 0.0063 | 0.0032 | 0.0030 |
| 156 | 0.0064 | 0.0033 | 0.0031 |
| 157 | 0.0066 | 0.0034 | 0.0032 |
| 158 | 0.0067 | 0.0034 | 0.0032 |
| 159 | 0.0069 | 0.0036 | 0.0033 |
| 160 | 0.0070 | 0.0036 | 0.0034 |
| 161 | 0.0072 | 0.0037 | 0.0035 |
| 162 | 0.0073 | 0.0038 | 0.0035 |
| 163 | 0.0076 | 0.0039 | 0.0037 |
| 164 | 0.0077 | 0.0040 | 0.0037 |
| 165 | 0.0081 | 0.0042 | 0.0039 |

| | | | |
|---|---|---|---|
| 166 | 0.0082 | 0.0042 | 0.0040 |
| 167 | 0.0086 | 0.0044 | 0.0041 |
| 168 | 0.0087 | 0.0045 | 0.0042 |
| 169 | 0.0094 | 0.0049 | 0.0045 |
| 170 | 0.0096 | 0.0050 | 0.0046 |
| 171 | 0.0101 | 0.0052 | 0.0049 |
| 172 | 0.0103 | 0.0053 | 0.0050 |
| 173 | 0.0109 | 0.0056 | 0.0053 |
| 174 | 0.0112 | 0.0058 | 0.0054 |
| 175 | 0.0119 | 0.0061 | 0.0057 |
| 176 | 0.0122 | 0.0063 | 0.0059 |
| 177 | 0.0131 | 0.0068 | 0.0063 |
| 178 | 0.0135 | 0.0070 | 0.0065 |
| 179 | 0.0146 | 0.0076 | 0.0070 |
| 180 | 0.0152 | 0.0079 | 0.0073 |
| 181 | 0.0166 | 0.0086 | 0.0080 |
| 182 | 0.0174 | 0.0090 | 0.0084 |
| 183 | 0.0193 | 0.0100 | 0.0093 |
| 184 | 0.0204 | 0.0106 | 0.0099 |
| 185 | 0.0356 | 0.0184 | 0.0172 |
| 186 | 0.0379 | 0.0196 | 0.0183 |
| 187 | 0.0439 | 0.0227 | 0.0212 |
| 188 | 0.0480 | 0.0247 | 0.0233 |
| 189 | 0.0597 | 0.0247 | 0.0350 |
| 190 | 0.0687 | 0.0247 | 0.0440 |
| 191 | 0.1043 | 0.0247 | 0.0796 |
| 192 | 0.1513 | 0.0247 | 0.1267 |
| 193 | 0.6548 | 0.0247 | 0.6301 |
| 194 | 0.0821 | 0.0247 | 0.0574 |
| 195 | 0.0530 | 0.0247 | 0.0284 |
| 196 | 0.0406 | 0.0210 | 0.0196 |
| 197 | 0.0217 | 0.0113 | 0.0105 |
| 198 | 0.0183 | 0.0095 | 0.0088 |
| 199 | 0.0159 | 0.0082 | 0.0077 |
| 200 | 0.0141 | 0.0073 | 0.0068 |
| 201 | 0.0126 | 0.0065 | 0.0061 |
| 202 | 0.0115 | 0.0060 | 0.0056 |
| 203 | 0.0106 | 0.0055 | 0.0051 |
| 204 | 0.0098 | 0.0051 | 0.0047 |
| 205 | 0.0089 | 0.0046 | 0.0043 |
| 206 | 0.0084 | 0.0043 | 0.0040 |
| 207 | 0.0079 | 0.0041 | 0.0038 |
| 208 | 0.0075 | 0.0039 | 0.0036 |
| 209 | 0.0071 | 0.0037 | 0.0034 |
| 210 | 0.0068 | 0.0035 | 0.0033 |
| 211 | 0.0065 | 0.0033 | 0.0031 |
| 212 | 0.0062 | 0.0032 | 0.0030 |
| 213 | 0.0059 | 0.0031 | 0.0029 |
| 214 | 0.0057 | 0.0030 | 0.0028 |
| 215 | 0.0055 | 0.0028 | 0.0027 |
| 216 | 0.0053 | 0.0027 | 0.0026 |
| 217 | 0.0064 | 0.0033 | 0.0031 |
| 218 | 0.0062 | 0.0032 | 0.0030 |
| 219 | 0.0060 | 0.0031 | 0.0029 |
| 220 | 0.0059 | 0.0030 | 0.0028 |
| 221 | 0.0057 | 0.0029 | 0.0027 |
| 222 | 0.0055 | 0.0029 | 0.0027 |
| 223 | 0.0054 | 0.0028 | 0.0026 |
| 224 | 0.0053 | 0.0027 | 0.0025 |

| | | | |
|---|---|---|---|
| 225 | 0.0051 | 0.0027 | 0.0025 |
| 226 | 0.0050 | 0.0026 | 0.0024 |
| 227 | 0.0049 | 0.0025 | 0.0024 |
| 228 | 0.0048 | 0.0025 | 0.0023 |
| 229 | 0.0047 | 0.0024 | 0.0023 |
| 230 | 0.0046 | 0.0024 | 0.0022 |
| 231 | 0.0045 | 0.0023 | 0.0022 |
| 232 | 0.0044 | 0.0023 | 0.0021 |
| 233 | 0.0043 | 0.0022 | 0.0021 |
| 234 | 0.0043 | 0.0022 | 0.0021 |
| 235 | 0.0042 | 0.0022 | 0.0020 |
| 236 | 0.0041 | 0.0021 | 0.0020 |
| 237 | 0.0040 | 0.0021 | 0.0019 |
| 238 | 0.0040 | 0.0021 | 0.0019 |
| 239 | 0.0039 | 0.0020 | 0.0019 |
| 240 | 0.0038 | 0.0020 | 0.0019 |
| 241 | 0.0038 | 0.0020 | 0.0018 |
| 242 | 0.0037 | 0.0019 | 0.0018 |
| 243 | 0.0037 | 0.0019 | 0.0018 |
| 244 | 0.0036 | 0.0019 | 0.0017 |
| 245 | 0.0036 | 0.0018 | 0.0017 |
| 246 | 0.0035 | 0.0018 | 0.0017 |
| 247 | 0.0035 | 0.0018 | 0.0017 |
| 248 | 0.0034 | 0.0018 | 0.0016 |
| 249 | 0.0034 | 0.0017 | 0.0016 |
| 250 | 0.0033 | 0.0017 | 0.0016 |
| 251 | 0.0033 | 0.0017 | 0.0016 |
| 252 | 0.0032 | 0.0017 | 0.0016 |
| 253 | 0.0032 | 0.0017 | 0.0015 |
| 254 | 0.0032 | 0.0016 | 0.0015 |
| 255 | 0.0031 | 0.0016 | 0.0015 |
| 256 | 0.0031 | 0.0016 | 0.0015 |
| 257 | 0.0030 | 0.0016 | 0.0015 |
| 258 | 0.0030 | 0.0016 | 0.0014 |
| 259 | 0.0030 | 0.0015 | 0.0014 |
| 260 | 0.0029 | 0.0015 | 0.0014 |
| 261 | 0.0029 | 0.0015 | 0.0014 |
| 262 | 0.0029 | 0.0015 | 0.0014 |
| 263 | 0.0028 | 0.0015 | 0.0014 |
| 264 | 0.0028 | 0.0015 | 0.0014 |
| 265 | 0.0028 | 0.0014 | 0.0013 |
| 266 | 0.0027 | 0.0014 | 0.0013 |
| 267 | 0.0027 | 0.0014 | 0.0013 |
| 268 | 0.0027 | 0.0014 | 0.0013 |
| 269 | 0.0027 | 0.0014 | 0.0013 |
| 270 | 0.0026 | 0.0014 | 0.0013 |
| 271 | 0.0026 | 0.0014 | 0.0013 |
| 272 | 0.0026 | 0.0013 | 0.0012 |
| 273 | 0.0026 | 0.0013 | 0.0012 |
| 274 | 0.0025 | 0.0013 | 0.0012 |
| 275 | 0.0025 | 0.0013 | 0.0012 |
| 276 | 0.0025 | 0.0013 | 0.0012 |
| 277 | 0.0025 | 0.0013 | 0.0012 |
| 278 | 0.0024 | 0.0013 | 0.0012 |
| 279 | 0.0024 | 0.0013 | 0.0012 |
| 280 | 0.0024 | 0.0012 | 0.0012 |
| 281 | 0.0024 | 0.0012 | 0.0012 |
| 282 | 0.0024 | 0.0012 | 0.0011 |
| 283 | 0.0023 | 0.0012 | 0.0011 |

| | | | |
|---|---|---|---|
| 284 | 0.0023 | 0.0012 | 0.0011 |
| 285 | 0.0023 | 0.0012 | 0.0011 |
| 286 | 0.0023 | 0.0012 | 0.0011 |
| 287 | 0.0023 | 0.0012 | 0.0011 |
| 288 | 0.0023 | 0.0012 | 0.0011 |

Total soil rain loss = 0.97(In)
Total effective rainfall = 1.74(In)
Peak flow rate in flood hydrograph = 438.36(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 125.0 | 250.0 | 375.0 | 500.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0004 | 0.05 | Q | | | | |
| 0+10 | 0.0027 | 0.34 | Q | | | | |
| 0+15 | 0.0092 | 0.95 | Q | | | | |
| 0+20 | 0.0182 | 1.30 | Q | | | | |
| 0+25 | 0.0286 | 1.50 | Q | | | | |
| 0+30 | 0.0398 | 1.64 | Q | | | | |
| 0+35 | 0.0518 | 1.73 | Q | | | | |
| 0+40 | 0.0642 | 1.81 | Q | | | | |
| 0+45 | 0.0771 | 1.87 | Q | | | | |
| 0+50 | 0.0903 | 1.92 | Q | | | | |
| 0+55 | 0.1039 | 1.96 | Q | | | | |
| 1+ 0 | 0.1176 | 2.00 | Q | | | | |
| 1+ 5 | 0.1316 | 2.03 | Q | | | | |
| 1+10 | 0.1457 | 2.05 | Q | | | | |
| 1+15 | 0.1600 | 2.07 | Q | | | | |
| 1+20 | 0.1744 | 2.09 | Q | | | | |
| 1+25 | 0.1889 | 2.11 | Q | | | | |
| 1+30 | 0.2036 | 2.13 | Q | | | | |
| 1+35 | 0.2184 | 2.15 | Q | | | | |
| 1+40 | 0.2332 | 2.16 | Q | | | | |
| 1+45 | 0.2482 | 2.17 | Q | | | | |
| 1+50 | 0.2632 | 2.18 | Q | | | | |
| 1+55 | 0.2783 | 2.19 | Q | | | | |
| 2+ 0 | 0.2935 | 2.20 | Q | | | | |
| 2+ 5 | 0.3087 | 2.21 | Q | | | | |
| 2+10 | 0.3240 | 2.22 | Q | | | | |
| 2+15 | 0.3394 | 2.23 | Q | | | | |
| 2+20 | 0.3548 | 2.24 | Q | | | | |
| 2+25 | 0.3704 | 2.25 | Q | | | | |
| 2+30 | 0.3859 | 2.26 | Q | | | | |
| 2+35 | 0.4016 | 2.27 | Q | | | | |
| 2+40 | 0.4173 | 2.28 | Q | | | | |
| 2+45 | 0.4331 | 2.29 | Q | | | | |
| 2+50 | 0.4490 | 2.30 | Q | | | | |
| 2+55 | 0.4649 | 2.32 | Q | | | | |
| 3+ 0 | 0.4809 | 2.33 | Q | | | | |
| 3+ 5 | 0.4970 | 2.34 | Q | | | | |
| 3+10 | 0.5132 | 2.35 | Q | | | | |
| 3+15 | 0.5295 | 2.36 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+20 | 0.5458 | 2.37 | Q | | | | |
| 3+25 | 0.5622 | 2.38 | Q | | | | |
| 3+30 | 0.5787 | 2.39 | QV | | | | |
| 3+35 | 0.5953 | 2.41 | QV | | | | |
| 3+40 | 0.6119 | 2.42 | QV | | | | |
| 3+45 | 0.6287 | 2.43 | QV | | | | |
| 3+50 | 0.6455 | 2.44 | QV | | | | |
| 3+55 | 0.6624 | 2.46 | QV | | | | |
| 4+ 0 | 0.6794 | 2.47 | QV | | | | |
| 4+ 5 | 0.6965 | 2.48 | QV | | | | |
| 4+10 | 0.7137 | 2.49 | QV | | | | |
| 4+15 | 0.7310 | 2.51 | QV | | | | |
| 4+20 | 0.7483 | 2.52 | QV | | | | |
| 4+25 | 0.7658 | 2.53 | QV | | | | |
| 4+30 | 0.7833 | 2.55 | QV | | | | |
| 4+35 | 0.8009 | 2.56 | QV | | | | |
| 4+40 | 0.8187 | 2.57 | QV | | | | |
| 4+45 | 0.8365 | 2.59 | QV | | | | |
| 4+50 | 0.8544 | 2.60 | QV | | | | |
| 4+55 | 0.8725 | 2.62 | QV | | | | |
| 5+ 0 | 0.8906 | 2.63 | QV | | | | |
| 5+ 5 | 0.9088 | 2.65 | QV | | | | |
| 5+10 | 0.9271 | 2.66 | QV | | | | |
| 5+15 | 0.9456 | 2.68 | QV | | | | |
| 5+20 | 0.9641 | 2.69 | QV | | | | |
| 5+25 | 0.9828 | 2.71 | QV | | | | |
| 5+30 | 1.0015 | 2.72 | QV | | | | |
| 5+35 | 1.0204 | 2.74 | QV | | | | |
| 5+40 | 1.0394 | 2.76 | QV | | | | |
| 5+45 | 1.0585 | 2.77 | QV | | | | |
| 5+50 | 1.0777 | 2.79 | QV | | | | |
| 5+55 | 1.0970 | 2.81 | QV | | | | |
| 6+ 0 | 1.1164 | 2.82 | QV | | | | |
| 6+ 5 | 1.1360 | 2.84 | Q V | | | | |
| 6+10 | 1.1557 | 2.86 | Q V | | | | |
| 6+15 | 1.1755 | 2.88 | Q V | | | | |
| 6+20 | 1.1954 | 2.89 | Q V | | | | |
| 6+25 | 1.2155 | 2.91 | Q V | | | | |
| 6+30 | 1.2357 | 2.93 | Q V | | | | |
| 6+35 | 1.2560 | 2.95 | Q V | | | | |
| 6+40 | 1.2765 | 2.97 | Q V | | | | |
| 6+45 | 1.2971 | 2.99 | Q V | | | | |
| 6+50 | 1.3178 | 3.01 | Q V | | | | |
| 6+55 | 1.3386 | 3.03 | Q V | | | | |
| 7+ 0 | 1.3597 | 3.05 | Q V | | | | |
| 7+ 5 | 1.3808 | 3.07 | Q V | | | | |
| 7+10 | 1.4021 | 3.09 | Q V | | | | |
| 7+15 | 1.4235 | 3.11 | Q V | | | | |
| 7+20 | 1.4451 | 3.14 | Q V | | | | |
| 7+25 | 1.4669 | 3.16 | Q V | | | | |
| 7+30 | 1.4888 | 3.18 | Q V | | | | |
| 7+35 | 1.5108 | 3.20 | Q V | | | | |
| 7+40 | 1.5331 | 3.23 | Q V | | | | |
| 7+45 | 1.5554 | 3.25 | Q V | | | | |
| 7+50 | 1.5780 | 3.27 | Q V | | | | |
| 7+55 | 1.6007 | 3.30 | Q V | | | | |
| 8+ 0 | 1.6236 | 3.32 | Q V | | | | |
| 8+ 5 | 1.6467 | 3.35 | Q V | | | | |
| 8+10 | 1.6699 | 3.37 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8+15 | 1.6934 | 3.40 | Q V | \| | \| | \| | \| |
| 8+20 | 1.7170 | 3.43 | Q V | \| | \| | \| | \| |
| 8+25 | 1.7408 | 3.46 | Q V | \| | \| | \| | \| |
| 8+30 | 1.7648 | 3.48 | Q V | \| | \| | \| | \| |
| 8+35 | 1.7889 | 3.51 | Q V | \| | \| | \| | \| |
| 8+40 | 1.8133 | 3.54 | Q V | \| | \| | \| | \| |
| 8+45 | 1.8379 | 3.57 | Q V | \| | \| | \| | \| |
| 8+50 | 1.8627 | 3.60 | Q V | \| | \| | \| | \| |
| 8+55 | 1.8877 | 3.63 | Q V | \| | \| | \| | \| |
| 9+ 0 | 1.9129 | 3.66 | Q V | \| | \| | \| | \| |
| 9+ 5 | 1.9384 | 3.69 | Q V | \| | \| | \| | \| |
| 9+10 | 1.9641 | 3.73 | Q V | \| | \| | \| | \| |
| 9+15 | 1.9900 | 3.76 | Q V | \| | \| | \| | \| |
| 9+20 | 2.0161 | 3.79 | Q V | \| | \| | \| | \| |
| 9+25 | 2.0425 | 3.83 | Q V | \| | \| | \| | \| |
| 9+30 | 2.0691 | 3.86 | Q V | \| | \| | \| | \| |
| 9+35 | 2.0959 | 3.90 | Q V | \| | \| | \| | \| |
| 9+40 | 2.1230 | 3.94 | Q V | \| | \| | \| | \| |
| 9+45 | 2.1504 | 3.98 | Q V | \| | \| | \| | \| |
| 9+50 | 2.1780 | 4.01 | Q V | \| | \| | \| | \| |
| 9+55 | 2.2060 | 4.05 | Q V | \| | \| | \| | \| |
| 10+ 0 | 2.2341 | 4.09 | Q V | \| | \| | \| | \| |
| 10+ 5 | 2.2626 | 4.13 | Q V | \| | \| | \| | \| |
| 10+10 | 2.2914 | 4.18 | Q V | \| | \| | \| | \| |
| 10+15 | 2.3204 | 4.22 | Q V | \| | \| | \| | \| |
| 10+20 | 2.3498 | 4.26 | Q V | \| | \| | \| | \| |
| 10+25 | 2.3795 | 4.31 | Q V | \| | \| | \| | \| |
| 10+30 | 2.4095 | 4.36 | Q V | \| | \| | \| | \| |
| 10+35 | 2.4398 | 4.40 | Q V | \| | \| | \| | \| |
| 10+40 | 2.4705 | 4.45 | Q V | \| | \| | \| | \| |
| 10+45 | 2.5015 | 4.50 | Q V | \| | \| | \| | \| |
| 10+50 | 2.5329 | 4.55 | Q V | \| | \| | \| | \| |
| 10+55 | 2.5646 | 4.61 | Q V | \| | \| | \| | \| |
| 11+ 0 | 2.5967 | 4.66 | Q V | \| | \| | \| | \| |
| 11+ 5 | 2.6292 | 4.72 | Q V | \| | \| | \| | \| |
| 11+10 | 2.6621 | 4.78 | Q V | \| | \| | \| | \| |
| 11+15 | 2.6954 | 4.84 | Q V | \| | \| | \| | \| |
| 11+20 | 2.7291 | 4.90 | Q V | \| | \| | \| | \| |
| 11+25 | 2.7633 | 4.96 | Q V | \| | \| | \| | \| |
| 11+30 | 2.7979 | 5.02 | Q V | \| | \| | \| | \| |
| 11+35 | 2.8329 | 5.09 | Q V | \| | \| | \| | \| |
| 11+40 | 2.8684 | 5.16 | Q V | \| | \| | \| | \| |
| 11+45 | 2.9045 | 5.23 | Q V | \| | \| | \| | \| |
| 11+50 | 2.9410 | 5.30 | Q V | \| | \| | \| | \| |
| 11+55 | 2.9780 | 5.38 | Q V | \| | \| | \| | \| |
| 12+ 0 | 3.0156 | 5.46 | Q V | \| | \| | \| | \| |
| 12+ 5 | 3.0535 | 5.51 | Q V | \| | \| | \| | \| |
| 12+10 | 3.0909 | 5.42 | Q V | \| | \| | \| | \| |
| 12+15 | 3.1264 | 5.16 | Q V | \| | \| | \| | \| |
| 12+20 | 3.1611 | 5.04 | Q V | \| | \| | \| | \| |
| 12+25 | 3.1957 | 5.02 | Q V | \| | \| | \| | \| |
| 12+30 | 3.2303 | 5.03 | Q V | \| | \| | \| | \| |
| 12+35 | 3.2652 | 5.07 | Q V | \| | \| | \| | \| |
| 12+40 | 3.3004 | 5.11 | Q V | \| | \| | \| | \| |
| 12+45 | 3.3361 | 5.18 | Q V | \| | \| | \| | \| |
| 12+50 | 3.3723 | 5.25 | Q V | \| | \| | \| | \| |
| 12+55 | 3.4090 | 5.34 | Q V | \| | \| | \| | \| |
| 13+ 0 | 3.4464 | 5.43 | Q V | \| | \| | \| | \| |
| 13+ 5 | 3.4844 | 5.53 | Q V | \| | \| | \| | \| |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 13+10 | 3.5232 | 5.63 | Q | V | \| | \| | \| | \| |
| 13+15 | 3.5628 | 5.75 | Q | V | \| | \| | \| | \| |
| 13+20 | 3.6032 | 5.87 | Q | V | \| | \| | \| | \| |
| 13+25 | 3.6445 | 6.00 | Q | V | \| | \| | \| | \| |
| 13+30 | 3.6868 | 6.13 | Q | V | \| | \| | \| | \| |
| 13+35 | 3.7300 | 6.28 | Q | V | \| | \| | \| | \| |
| 13+40 | 3.7743 | 6.43 | Q | V | \| | \| | \| | \| |
| 13+45 | 3.8197 | 6.60 | Q | V | \| | \| | \| | \| |
| 13+50 | 3.8664 | 6.77 | Q | V | \| | \| | \| | \| |
| 13+55 | 3.9143 | 6.96 | Q | V | \| | \| | \| | \| |
| 14+ 0 | 3.9636 | 7.16 | Q | V | \| | \| | \| | \| |
| 14+ 5 | 4.0145 | 7.38 | Q | V | \| | \| | \| | \| |
| 14+10 | 4.0671 | 7.64 | Q | V | \| | \| | \| | \| |
| 14+15 | 4.1219 | 7.96 | Q | V | \| | \| | \| | \| |
| 14+20 | 4.1787 | 8.25 | Q | V | \| | \| | \| | \| |
| 14+25 | 4.2377 | 8.57 | Q | V | \| | \| | \| | \| |
| 14+30 | 4.2989 | 8.89 | Q | V | \| | \| | \| | \| |
| 14+35 | 4.3626 | 9.25 | Q | V | \| | \| | \| | \| |
| 14+40 | 4.4288 | 9.62 | Q | V | \| | \| | \| | \| |
| 14+45 | 4.4980 | 10.04 | Q | V | \| | \| | \| | \| |
| 14+50 | 4.5701 | 10.48 | Q | V | \| | \| | \| | \| |
| 14+55 | 4.6458 | 10.99 | Q | V | \| | \| | \| | \| |
| 15+ 0 | 4.7253 | 11.54 | Q | V | \| | \| | \| | \| |
| 15+ 5 | 4.8091 | 12.18 | Q | V | \| | \| | \| | \| |
| 15+10 | 4.8977 | 12.87 | \|Q | V | \| | \| | \| | \| |
| 15+15 | 4.9920 | 13.69 | \|Q | V | \| | \| | \| | \| |
| 15+20 | 5.0926 | 14.61 | \|Q | V | \| | \| | \| | \| |
| 15+25 | 5.2029 | 16.02 | \|Q | V | \| | \| | \| | \| |
| 15+30 | 5.3331 | 18.90 | \|Q | V | \| | \| | \| | \| |
| 15+35 | 5.4981 | 23.97 | \|Q | V | \| | \| | \| | \| |
| 15+40 | 5.6924 | 28.21 | \| Q | V | \| | \| | \| | \| |
| 15+45 | 5.9190 | 32.89 | \| Q | V | \| | \| | \| | \| |
| 15+50 | 6.1933 | 39.84 | \| Q | V | \| | \| | \| | \| |
| 15+55 | 6.5558 | 52.63 | \| Q | \|V | \| | \| | \| | \| |
| 16+ 0 | 7.0705 | 74.73 | \| Q | \| V | \| | \| | \| | \| |
| 16+ 5 | 8.0184 | 137.65 | \| | \|Q V | \| | \| | \| | \| |
| 16+10 | 9.9928 | 286.67 | \| | \| V | \| Q | \| | \| | \| |
| 16+15 | 13.0118 | 438.36 | \| | \| | \| V | \| | Q | \| |
| 16+20 | 14.9914 | 287.44 | \| | \| | \| Q V | \| | \| | \| |
| 16+25 | 16.2444 | 181.94 | \| | \| Q | \| | V | \| | \| |
| 16+30 | 17.1431 | 130.48 | \| | Q | \| | \| | V | \| | \| |
| 16+35 | 17.8097 | 96.79 | \| | Q | \| | \| | \| | V | \| |
| 16+40 | 18.3407 | 77.11 | \| | Q | \| | \| | \| | V | \| |
| 16+45 | 18.7560 | 60.29 | \| Q | \| | \| | \| | \| | V | \| |
| 16+50 | 19.0997 | 49.91 | \| Q | \| | \| | \| | \| | V | \| |
| 16+55 | 19.3894 | 42.07 | \| Q | \| | \| | \| | \| | V | \| |
| 17+ 0 | 19.6317 | 35.17 | \| Q | \| | \| | \| | \| | V | \| |
| 17+ 5 | 19.8371 | 29.83 | \| Q | \| | \| | \| | \| | V | \| |
| 17+10 | 20.0100 | 25.10 | \| Q | \| | \| | \| | \| | V | \| |
| 17+15 | 20.1526 | 20.71 | \|Q | \| | \| | \| | \| | V | \| |
| 17+20 | 20.2701 | 17.05 | \|Q | \| | \| | \| | \| | V | \| |
| 17+25 | 20.3825 | 16.33 | \|Q | \| | \| | \| | \| | V | \| |
| 17+30 | 20.4889 | 15.45 | \|Q | \| | \| | \| | \| | V | \| |
| 17+35 | 20.5836 | 13.75 | \|Q | \| | \| | \| | \| | V | \| |
| 17+40 | 20.6602 | 11.12 | Q | \| | \| | \| | \| | V | \| |
| 17+45 | 20.7266 | 9.65 | Q | \| | \| | \| | \| | V | \| |
| 17+50 | 20.7734 | 6.79 | Q | \| | \| | \| | \| | V | \| |
| 17+55 | 20.8164 | 6.25 | Q | \| | \| | \| | \| | V | \| |
| 18+ 0 | 20.8569 | 5.88 | Q | \| | \| | \| | \| | V | \| |

```
18+ 5      20.8955      5.60  Q        |          |          |     V    |
18+10      20.9335      5.52  Q        |          |          |      V   |
18+15      20.9724      5.65  Q        |          |          |      V   |
18+20      21.0113      5.64  Q        |          |          |      V   |
18+25      21.0495      5.56  Q        |          |          |      V   |
18+30      21.0870      5.45  Q        |          |          |      V   |
18+35      21.1238      5.33  Q        |          |          |      V   |
18+40      21.1597      5.21  Q        |          |          |      V   |
18+45      21.1948      5.10  Q        |          |          |      V   |
18+50      21.2291      4.98  Q        |          |          |      V   |
18+55      21.2626      4.87  Q        |          |          |      V   |
19+ 0      21.2954      4.76  Q        |          |          |      V   |
19+ 5      21.3275      4.66  Q        |          |          |      V   |
19+10      21.3589      4.56  Q        |          |          |      V   |
19+15      21.3896      4.46  Q        |          |          |      V   |
19+20      21.4197      4.37  Q        |          |          |      V   |
19+25      21.4492      4.28  Q        |          |          |      V   |
19+30      21.4781      4.19  Q        |          |          |       V  |
19+35      21.5064      4.11  Q        |          |          |       V  |
19+40      21.5342      4.04  Q        |          |          |       V  |
19+45      21.5615      3.96  Q        |          |          |       V  |
19+50      21.5882      3.88  Q        |          |          |       V  |
19+55      21.6145      3.81  Q        |          |          |       V  |
20+ 0      21.6403      3.75  Q        |          |          |       V  |
20+ 5      21.6656      3.68  Q        |          |          |       V  |
20+10      21.6905      3.62  Q        |          |          |       V  |
20+15      21.7150      3.56  Q        |          |          |       V  |
20+20      21.7391      3.50  Q        |          |          |       V  |
20+25      21.7628      3.44  Q        |          |          |       V  |
20+30      21.7861      3.39  Q        |          |          |       V  |
20+35      21.8091      3.34  Q        |          |          |       V  |
20+40      21.8317      3.29  Q        |          |          |       V  |
20+45      21.8540      3.24  Q        |          |          |       V  |
20+50      21.8760      3.19  Q        |          |          |       V  |
20+55      21.8977      3.15  Q        |          |          |       V  |
21+ 0      21.9190      3.10  Q        |          |          |       V  |
21+ 5      21.9401      3.06  Q        |          |          |       V  |
21+10      21.9609      3.02  Q        |          |          |       V  |
21+15      21.9814      2.98  Q        |          |          |       V  |
21+20      22.0016      2.94  Q        |          |          |       V  |
21+25      22.0216      2.90  Q        |          |          |       V  |
21+30      22.0414      2.87  Q        |          |          |        V|
21+35      22.0609      2.83  Q        |          |          |        V|
21+40      22.0801      2.80  Q        |          |          |        V|
21+45      22.0991      2.76  Q        |          |          |        V|
21+50      22.1179      2.73  Q        |          |          |        V|
21+55      22.1365      2.70  Q        |          |          |        V|
22+ 0      22.1549      2.67  Q        |          |          |        V|
22+ 5      22.1731      2.64  Q        |          |          |        V|
22+10      22.1910      2.61  Q        |          |          |        V|
22+15      22.2088      2.58  Q        |          |          |        V|
22+20      22.2264      2.55  Q        |          |          |        V|
22+25      22.2437      2.52  Q        |          |          |        V|
22+30      22.2610      2.50  Q        |          |          |        V|
22+35      22.2780      2.47  Q        |          |          |        V|
22+40      22.2948      2.45  Q        |          |          |        V|
22+45      22.3115      2.42  Q        |          |          |        V|
22+50      22.3280      2.40  Q        |          |          |        V|
22+55      22.3444      2.38  Q        |          |          |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+ 0 | 22.3606 | 2.35 | Q | \| | \| | \| | V\| |
| 23+ 5 | 22.3767 | 2.33 | Q | \| | \| | \| | V\| |
| 23+10 | 22.3925 | 2.31 | Q | \| | \| | \| | V\| |
| 23+15 | 22.4083 | 2.29 | Q | \| | \| | \| | V\| |
| 23+20 | 22.4239 | 2.27 | Q | \| | \| | \| | V\| |
| 23+25 | 22.4394 | 2.24 | Q | \| | \| | \| | V\| |
| 23+30 | 22.4547 | 2.22 | Q | \| | \| | \| | V\| |
| 23+35 | 22.4699 | 2.20 | Q | \| | \| | \| | V\| |
| 23+40 | 22.4849 | 2.19 | Q | \| | \| | \| | V\| |
| 23+45 | 22.4998 | 2.17 | Q | \| | \| | \| | V\| |
| 23+50 | 22.5146 | 2.15 | Q | \| | \| | \| | V\| |
| 23+55 | 22.5293 | 2.13 | Q | \| | \| | \| | V\| |
| 24+ 0 | 22.5438 | 2.11 | Q | \| | \| | \| | V\| |
| 24+ 5 | 22.5579 | 2.04 | Q | \| | \| | \| | V\| |
| 24+10 | 22.5699 | 1.74 | Q | \| | \| | \| | V\| |
| 24+15 | 22.5776 | 1.12 | Q | \| | \| | \| | V\| |
| 24+20 | 22.5828 | 0.76 | Q | \| | \| | \| | V\| |
| 24+25 | 22.5867 | 0.56 | Q | \| | \| | \| | V\| |
| 24+30 | 22.5896 | 0.43 | Q | \| | \| | \| | V\| |
| 24+35 | 22.5919 | 0.33 | Q | \| | \| | \| | V\| |
| 24+40 | 22.5937 | 0.26 | Q | \| | \| | \| | V\| |
| 24+45 | 22.5951 | 0.21 | Q | \| | \| | \| | V\| |
| 24+50 | 22.5962 | 0.16 | Q | \| | \| | \| | V\| |
| 24+55 | 22.5971 | 0.13 | Q | \| | \| | \| | V\| |
| 25+ 0 | 22.5978 | 0.10 | Q | \| | \| | \| | V\| |
| 25+ 5 | 22.5983 | 0.08 | Q | \| | \| | \| | V\| |
| 25+10 | 22.5987 | 0.06 | Q | \| | \| | \| | V\| |
| 25+15 | 22.5990 | 0.05 | Q | \| | \| | \| | V\| |
| 25+20 | 22.5993 | 0.04 | Q | \| | \| | \| | V\| |
| 25+25 | 22.5995 | 0.03 | Q | \| | \| | \| | V\| |
| 25+30 | 22.5996 | 0.02 | Q | \| | \| | \| | V\| |
| 25+35 | 22.5996 | 0.01 | Q | \| | \| | \| | V\| |
| 25+40 | 22.5997 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/06/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREA "P"
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-16-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 3782.66 | 1 | 1.29 |
| Rainfall data for year 100 | | |
| 3782.66 | 6 | 2.16 |
| Rainfall data for year 100 | | |
| 3782.66 | 24 | 3.27 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 87.0 | 97.4 | 3782.66 | 1.000 | 0.051 | 0.981 | 0.050 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.050

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 3709.28 | 0.981 | 87.0 | 97.4 | 0.27 | 0.908 |
| 73.38 | 0.019 | 98.0 | 98.0 | 0.20 | 0.929 |

Area-averaged catchment yield fraction, Y = 0.909
Area-averaged low loss fraction, Yb = 0.091
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 35115.00(Ft.)
Length from concentration point to centroid = 20362.00(Ft.)
Elevation difference along watercourse = 2044.90(Ft.)
Mannings friction factor along watercourse = 0.030
Watershed area = 3782.66(Ac.)
Catchment Lag time = 0.832 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 10.0169
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.050(In/Hr)
Average low loss rate fraction (Yb) = 0.091 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.170
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.830

Computed peak 5-minute rainfall = 0.612(In)
Computed peak 30-minute rainfall = 1.048(In)
Specified peak 1-hour rainfall = 1.290(In)
Computed peak 3-hour rainfall = 1.770(In)
Specified peak 6-hour rainfall = 2.160(In)
Specified peak 24-hour rainfall = 3.270(In)

Rainfall depth area reduction factors:
Using a total area of 3782.66(Ac.) (Ref: fig. E-4)

5-minute factor = 0.831 Adjusted rainfall = 0.509(In)
30-minute factor = 0.831 Adjusted rainfall = 0.871(In)
1-hour factor = 0.831 Adjusted rainfall = 1.072(In)
3-hour factor = 0.978 Adjusted rainfall = 1.730(In)
6-hour factor = 0.989 Adjusted rainfall = 2.135(In)
24-hour factor = 0.995 Adjusted rainfall = 3.254(In)
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U n i t H y d r o g r a p h

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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 45746.54 (CFS)) | |
| 1 | 0.474 | 216.686 |
| 2 | 1.623 | 525.660 |
| 3 | 3.400 | 813.175 |
| 4 | 5.787 | 1091.995 |
| 5 | 8.853 | 1402.404 |

| | | |
|---|---|---|
| 6 | 13.492 | 2122.091 |
| 7 | 20.491 | 3201.751 |
| 8 | 29.652 | 4190.896 |
| 9 | 38.141 | 3883.423 |
| 10 | 46.231 | 3700.946 |
| 11 | 52.842 | 3024.301 |
| 12 | 57.803 | 2269.453 |
| 13 | 61.701 | 1783.477 |
| 14 | 64.962 | 1491.412 |
| 15 | 67.802 | 1299.220 |
| 16 | 70.337 | 1159.998 |
| 17 | 72.634 | 1050.683 |
| 18 | 74.667 | 929.813 |
| 19 | 76.472 | 826.111 |
| 20 | 78.199 | 790.060 |
| 21 | 79.714 | 692.687 |
| 22 | 81.056 | 614.223 |
| 23 | 82.364 | 598.309 |
| 24 | 83.492 | 515.984 |
| 25 | 84.594 | 504.189 |
| 26 | 85.620 | 469.420 |
| 27 | 86.582 | 439.909 |
| 28 | 87.520 | 428.964 |
| 29 | 88.338 | 374.133 |
| 30 | 89.139 | 366.478 |
| 31 | 89.834 | 317.956 |
| 32 | 90.442 | 278.059 |
| 33 | 91.040 | 273.799 |
| 34 | 91.593 | 253.124 |
| 35 | 92.141 | 250.318 |
| 36 | 92.643 | 229.951 |
| 37 | 93.110 | 213.723 |
| 38 | 93.569 | 209.826 |
| 39 | 93.988 | 191.503 |
| 40 | 94.401 | 189.046 |
| 41 | 94.752 | 160.618 |
| 42 | 95.055 | 138.663 |
| 43 | 95.358 | 138.663 |
| 44 | 95.661 | 138.663 |
| 45 | 95.964 | 138.571 |
| 46 | 96.227 | 120.334 |
| 47 | 96.461 | 106.678 |
| 48 | 96.694 | 106.678 |
| 49 | 96.927 | 106.678 |
| 50 | 97.160 | 106.559 |
| 51 | 97.350 | 87.195 |
| 52 | 97.510 | 73.135 |
| 53 | 97.670 | 73.135 |
| 54 | 97.830 | 73.135 |
| 55 | 97.990 | 73.011 |
| 56 | 98.112 | 56.145 |
| 57 | 98.209 | 44.266 |
| 58 | 98.306 | 44.266 |
| 59 | 98.403 | 44.266 |
| 60 | 98.499 | 44.289 |
| 61 | 98.602 | 46.943 |
| 62 | 98.709 | 48.757 |
| 63 | 98.815 | 48.757 |
| 64 | 98.922 | 48.757 |

| | | |
|---|---|---|
| 65 | 99.028 | 48.747 |
| 66 | 99.133 | 47.816 |
| 67 | 99.236 | 47.199 |
| 68 | 99.339 | 47.199 |
| 69 | 99.442 | 47.199 |
| 70 | 99.547 | 47.641 |
| 71 | 99.617 | 32.275 |
| 72 | 99.669 | 23.771 |
| 73 | 99.721 | 23.771 |
| 74 | 99.773 | 23.771 |
| 75 | 99.825 | 23.771 |
| 76 | 99.877 | 23.771 |
| 77 | 99.929 | 23.771 |
| 78 | 100.000 | 11.886 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5086 | 0.5086 |
| 2 | 0.6262 | 0.1176 |
| 3 | 0.7071 | 0.0810 |
| 4 | 0.7709 | 0.0637 |
| 5 | 0.8243 | 0.0534 |
| 6 | 0.8706 | 0.0463 |
| 7 | 0.9118 | 0.0412 |
| 8 | 0.9491 | 0.0373 |
| 9 | 0.9832 | 0.0341 |
| 10 | 1.0148 | 0.0316 |
| 11 | 1.0442 | 0.0294 |
| 12 | 1.0718 | 0.0276 |
| 13 | 1.1099 | 0.0381 |
| 14 | 1.1463 | 0.0364 |
| 15 | 1.1814 | 0.0350 |
| 16 | 1.2151 | 0.0337 |
| 17 | 1.2476 | 0.0325 |
| 18 | 1.2791 | 0.0315 |
| 19 | 1.3096 | 0.0305 |
| 20 | 1.3392 | 0.0296 |
| 21 | 1.3680 | 0.0288 |
| 22 | 1.3960 | 0.0280 |
| 23 | 1.4234 | 0.0273 |
| 24 | 1.4500 | 0.0267 |
| 25 | 1.4761 | 0.0260 |
| 26 | 1.5015 | 0.0255 |
| 27 | 1.5264 | 0.0249 |
| 28 | 1.5508 | 0.0244 |
| 29 | 1.5747 | 0.0239 |
| 30 | 1.5982 | 0.0234 |
| 31 | 1.6212 | 0.0230 |
| 32 | 1.6438 | 0.0226 |
| 33 | 1.6660 | 0.0222 |
| 34 | 1.6878 | 0.0218 |
| 35 | 1.7093 | 0.0215 |
| 36 | 1.7304 | 0.0211 |
| 37 | 1.7448 | 0.0144 |
| 38 | 1.7590 | 0.0142 |
| 39 | 1.7729 | 0.0139 |
| 40 | 1.7866 | 0.0137 |
| 41 | 1.8000 | 0.0134 |
| 42 | 1.8132 | 0.0132 |

| | | |
|---|---|---|
| 43 | 1.8262 | 0.0130 |
| 44 | 1.8390 | 0.0128 |
| 45 | 1.8516 | 0.0126 |
| 46 | 1.8640 | 0.0124 |
| 47 | 1.8762 | 0.0122 |
| 48 | 1.8882 | 0.0120 |
| 49 | 1.9000 | 0.0118 |
| 50 | 1.9117 | 0.0117 |
| 51 | 1.9232 | 0.0115 |
| 52 | 1.9346 | 0.0114 |
| 53 | 1.9458 | 0.0112 |
| 54 | 1.9568 | 0.0111 |
| 55 | 1.9678 | 0.0109 |
| 56 | 1.9785 | 0.0108 |
| 57 | 1.9892 | 0.0106 |
| 58 | 1.9997 | 0.0105 |
| 59 | 2.0101 | 0.0104 |
| 60 | 2.0204 | 0.0103 |
| 61 | 2.0305 | 0.0102 |
| 62 | 2.0406 | 0.0100 |
| 63 | 2.0505 | 0.0099 |
| 64 | 2.0603 | 0.0098 |
| 65 | 2.0700 | 0.0097 |
| 66 | 2.0796 | 0.0096 |
| 67 | 2.0891 | 0.0095 |
| 68 | 2.0986 | 0.0094 |
| 69 | 2.1079 | 0.0093 |
| 70 | 2.1171 | 0.0092 |
| 71 | 2.1262 | 0.0091 |
| 72 | 2.1353 | 0.0090 |
| 73 | 2.1442 | 0.0090 |
| 74 | 2.1531 | 0.0089 |
| 75 | 2.1619 | 0.0088 |
| 76 | 2.1706 | 0.0087 |
| 77 | 2.1793 | 0.0086 |
| 78 | 2.1878 | 0.0086 |
| 79 | 2.1963 | 0.0085 |
| 80 | 2.2047 | 0.0084 |
| 81 | 2.2131 | 0.0083 |
| 82 | 2.2213 | 0.0083 |
| 83 | 2.2295 | 0.0082 |
| 84 | 2.2377 | 0.0081 |
| 85 | 2.2457 | 0.0081 |
| 86 | 2.2537 | 0.0080 |
| 87 | 2.2616 | 0.0079 |
| 88 | 2.2695 | 0.0079 |
| 89 | 2.2773 | 0.0078 |
| 90 | 2.2851 | 0.0077 |
| 91 | 2.2928 | 0.0077 |
| 92 | 2.3004 | 0.0076 |
| 93 | 2.3080 | 0.0076 |
| 94 | 2.3155 | 0.0075 |
| 95 | 2.3229 | 0.0075 |
| 96 | 2.3303 | 0.0074 |
| 97 | 2.3377 | 0.0074 |
| 98 | 2.3450 | 0.0073 |
| 99 | 2.3522 | 0.0072 |
| 100 | 2.3594 | 0.0072 |
| 101 | 2.3666 | 0.0071 |

| | | |
|---|---|---|
| 102 | 2.3737 | 0.0071 |
| 103 | 2.3807 | 0.0070 |
| 104 | 2.3877 | 0.0070 |
| 105 | 2.3947 | 0.0070 |
| 106 | 2.4016 | 0.0069 |
| 107 | 2.4084 | 0.0069 |
| 108 | 2.4152 | 0.0068 |
| 109 | 2.4220 | 0.0068 |
| 110 | 2.4288 | 0.0067 |
| 111 | 2.4354 | 0.0067 |
| 112 | 2.4421 | 0.0066 |
| 113 | 2.4487 | 0.0066 |
| 114 | 2.4553 | 0.0066 |
| 115 | 2.4618 | 0.0065 |
| 116 | 2.4683 | 0.0065 |
| 117 | 2.4747 | 0.0064 |
| 118 | 2.4811 | 0.0064 |
| 119 | 2.4875 | 0.0064 |
| 120 | 2.4938 | 0.0063 |
| 121 | 2.5001 | 0.0063 |
| 122 | 2.5064 | 0.0063 |
| 123 | 2.5126 | 0.0062 |
| 124 | 2.5188 | 0.0062 |
| 125 | 2.5250 | 0.0062 |
| 126 | 2.5311 | 0.0061 |
| 127 | 2.5372 | 0.0061 |
| 128 | 2.5432 | 0.0061 |
| 129 | 2.5492 | 0.0060 |
| 130 | 2.5552 | 0.0060 |
| 131 | 2.5612 | 0.0060 |
| 132 | 2.5671 | 0.0059 |
| 133 | 2.5730 | 0.0059 |
| 134 | 2.5789 | 0.0059 |
| 135 | 2.5847 | 0.0058 |
| 136 | 2.5905 | 0.0058 |
| 137 | 2.5963 | 0.0058 |
| 138 | 2.6020 | 0.0057 |
| 139 | 2.6077 | 0.0057 |
| 140 | 2.6134 | 0.0057 |
| 141 | 2.6191 | 0.0057 |
| 142 | 2.6247 | 0.0056 |
| 143 | 2.6303 | 0.0056 |
| 144 | 2.6359 | 0.0056 |
| 145 | 2.6415 | 0.0055 |
| 146 | 2.6470 | 0.0055 |
| 147 | 2.6525 | 0.0055 |
| 148 | 2.6579 | 0.0055 |
| 149 | 2.6634 | 0.0054 |
| 150 | 2.6688 | 0.0054 |
| 151 | 2.6742 | 0.0054 |
| 152 | 2.6796 | 0.0054 |
| 153 | 2.6849 | 0.0053 |
| 154 | 2.6902 | 0.0053 |
| 155 | 2.6955 | 0.0053 |
| 156 | 2.7008 | 0.0053 |
| 157 | 2.7061 | 0.0052 |
| 158 | 2.7113 | 0.0052 |
| 159 | 2.7165 | 0.0052 |
| 160 | 2.7217 | 0.0052 |

| | | |
|---|---|---|
| 161 | 2.7268 | 0.0052 |
| 162 | 2.7320 | 0.0051 |
| 163 | 2.7371 | 0.0051 |
| 164 | 2.7422 | 0.0051 |
| 165 | 2.7472 | 0.0051 |
| 166 | 2.7523 | 0.0050 |
| 167 | 2.7573 | 0.0050 |
| 168 | 2.7623 | 0.0050 |
| 169 | 2.7673 | 0.0050 |
| 170 | 2.7723 | 0.0050 |
| 171 | 2.7772 | 0.0049 |
| 172 | 2.7821 | 0.0049 |
| 173 | 2.7871 | 0.0049 |
| 174 | 2.7919 | 0.0049 |
| 175 | 2.7968 | 0.0049 |
| 176 | 2.8016 | 0.0048 |
| 177 | 2.8065 | 0.0048 |
| 178 | 2.8113 | 0.0048 |
| 179 | 2.8161 | 0.0048 |
| 180 | 2.8208 | 0.0048 |
| 181 | 2.8256 | 0.0048 |
| 182 | 2.8303 | 0.0047 |
| 183 | 2.8351 | 0.0047 |
| 184 | 2.8398 | 0.0047 |
| 185 | 2.8444 | 0.0047 |
| 186 | 2.8491 | 0.0047 |
| 187 | 2.8537 | 0.0046 |
| 188 | 2.8584 | 0.0046 |
| 189 | 2.8630 | 0.0046 |
| 190 | 2.8676 | 0.0046 |
| 191 | 2.8722 | 0.0046 |
| 192 | 2.8767 | 0.0046 |
| 193 | 2.8813 | 0.0045 |
| 194 | 2.8858 | 0.0045 |
| 195 | 2.8903 | 0.0045 |
| 196 | 2.8948 | 0.0045 |
| 197 | 2.8993 | 0.0045 |
| 198 | 2.9037 | 0.0045 |
| 199 | 2.9082 | 0.0044 |
| 200 | 2.9126 | 0.0044 |
| 201 | 2.9170 | 0.0044 |
| 202 | 2.9214 | 0.0044 |
| 203 | 2.9258 | 0.0044 |
| 204 | 2.9302 | 0.0044 |
| 205 | 2.9346 | 0.0044 |
| 206 | 2.9389 | 0.0043 |
| 207 | 2.9432 | 0.0043 |
| 208 | 2.9476 | 0.0043 |
| 209 | 2.9519 | 0.0043 |
| 210 | 2.9561 | 0.0043 |
| 211 | 2.9604 | 0.0043 |
| 212 | 2.9647 | 0.0043 |
| 213 | 2.9689 | 0.0042 |
| 214 | 2.9731 | 0.0042 |
| 215 | 2.9773 | 0.0042 |
| 216 | 2.9816 | 0.0042 |
| 217 | 2.9857 | 0.0042 |
| 218 | 2.9899 | 0.0042 |
| 219 | 2.9941 | 0.0042 |

| | | |
|---|---|---|
| 220 | 2.9982 | 0.0041 |
| 221 | 3.0024 | 0.0041 |
| 222 | 3.0065 | 0.0041 |
| 223 | 3.0106 | 0.0041 |
| 224 | 3.0147 | 0.0041 |
| 225 | 3.0188 | 0.0041 |
| 226 | 3.0228 | 0.0041 |
| 227 | 3.0269 | 0.0041 |
| 228 | 3.0309 | 0.0040 |
| 229 | 3.0350 | 0.0040 |
| 230 | 3.0390 | 0.0040 |
| 231 | 3.0430 | 0.0040 |
| 232 | 3.0470 | 0.0040 |
| 233 | 3.0510 | 0.0040 |
| 234 | 3.0550 | 0.0040 |
| 235 | 3.0589 | 0.0040 |
| 236 | 3.0629 | 0.0039 |
| 237 | 3.0668 | 0.0039 |
| 238 | 3.0707 | 0.0039 |
| 239 | 3.0747 | 0.0039 |
| 240 | 3.0786 | 0.0039 |
| 241 | 3.0825 | 0.0039 |
| 242 | 3.0863 | 0.0039 |
| 243 | 3.0902 | 0.0039 |
| 244 | 3.0941 | 0.0039 |
| 245 | 3.0979 | 0.0038 |
| 246 | 3.1017 | 0.0038 |
| 247 | 3.1056 | 0.0038 |
| 248 | 3.1094 | 0.0038 |
| 249 | 3.1132 | 0.0038 |
| 250 | 3.1170 | 0.0038 |
| 251 | 3.1208 | 0.0038 |
| 252 | 3.1245 | 0.0038 |
| 253 | 3.1283 | 0.0038 |
| 254 | 3.1321 | 0.0038 |
| 255 | 3.1358 | 0.0037 |
| 256 | 3.1395 | 0.0037 |
| 257 | 3.1433 | 0.0037 |
| 258 | 3.1470 | 0.0037 |
| 259 | 3.1507 | 0.0037 |
| 260 | 3.1544 | 0.0037 |
| 261 | 3.1580 | 0.0037 |
| 262 | 3.1617 | 0.0037 |
| 263 | 3.1654 | 0.0037 |
| 264 | 3.1690 | 0.0037 |
| 265 | 3.1727 | 0.0036 |
| 266 | 3.1763 | 0.0036 |
| 267 | 3.1799 | 0.0036 |
| 268 | 3.1835 | 0.0036 |
| 269 | 3.1872 | 0.0036 |
| 270 | 3.1907 | 0.0036 |
| 271 | 3.1943 | 0.0036 |
| 272 | 3.1979 | 0.0036 |
| 273 | 3.2015 | 0.0036 |
| 274 | 3.2050 | 0.0036 |
| 275 | 3.2086 | 0.0036 |
| 276 | 3.2121 | 0.0035 |
| 277 | 3.2157 | 0.0035 |
| 278 | 3.2192 | 0.0035 |

| | | |
|---|---|---|
| 279 | 3.2227 | 0.0035 |
| 280 | 3.2262 | 0.0035 |
| 281 | 3.2297 | 0.0035 |
| 282 | 3.2332 | 0.0035 |
| 283 | 3.2367 | 0.0035 |
| 284 | 3.2401 | 0.0035 |
| 285 | 3.2436 | 0.0035 |
| 286 | 3.2471 | 0.0035 |
| 287 | 3.2505 | 0.0034 |
| 288 | 3.2539 | 0.0034 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0034 | 0.0003 | 0.0031 |
| 2 | 0.0034 | 0.0003 | 0.0031 |
| 3 | 0.0035 | 0.0003 | 0.0031 |
| 4 | 0.0035 | 0.0003 | 0.0032 |
| 5 | 0.0035 | 0.0003 | 0.0032 |
| 6 | 0.0035 | 0.0003 | 0.0032 |
| 7 | 0.0035 | 0.0003 | 0.0032 |
| 8 | 0.0035 | 0.0003 | 0.0032 |
| 9 | 0.0035 | 0.0003 | 0.0032 |
| 10 | 0.0036 | 0.0003 | 0.0032 |
| 11 | 0.0036 | 0.0003 | 0.0032 |
| 12 | 0.0036 | 0.0003 | 0.0033 |
| 13 | 0.0036 | 0.0003 | 0.0033 |
| 14 | 0.0036 | 0.0003 | 0.0033 |
| 15 | 0.0036 | 0.0003 | 0.0033 |
| 16 | 0.0036 | 0.0003 | 0.0033 |
| 17 | 0.0037 | 0.0003 | 0.0033 |
| 18 | 0.0037 | 0.0003 | 0.0033 |
| 19 | 0.0037 | 0.0003 | 0.0033 |
| 20 | 0.0037 | 0.0003 | 0.0034 |
| 21 | 0.0037 | 0.0003 | 0.0034 |
| 22 | 0.0037 | 0.0003 | 0.0034 |
| 23 | 0.0037 | 0.0003 | 0.0034 |
| 24 | 0.0038 | 0.0003 | 0.0034 |
| 25 | 0.0038 | 0.0003 | 0.0034 |
| 26 | 0.0038 | 0.0003 | 0.0034 |
| 27 | 0.0038 | 0.0003 | 0.0035 |
| 28 | 0.0038 | 0.0003 | 0.0035 |
| 29 | 0.0038 | 0.0004 | 0.0035 |
| 30 | 0.0038 | 0.0004 | 0.0035 |
| 31 | 0.0039 | 0.0004 | 0.0035 |
| 32 | 0.0039 | 0.0004 | 0.0035 |
| 33 | 0.0039 | 0.0004 | 0.0035 |
| 34 | 0.0039 | 0.0004 | 0.0036 |
| 35 | 0.0039 | 0.0004 | 0.0036 |
| 36 | 0.0039 | 0.0004 | 0.0036 |
| 37 | 0.0040 | 0.0004 | 0.0036 |
| 38 | 0.0040 | 0.0004 | 0.0036 |
| 39 | 0.0040 | 0.0004 | 0.0036 |
| 40 | 0.0040 | 0.0004 | 0.0037 |
| 41 | 0.0040 | 0.0004 | 0.0037 |
| 42 | 0.0041 | 0.0004 | 0.0037 |
| 43 | 0.0041 | 0.0004 | 0.0037 |
| 44 | 0.0041 | 0.0004 | 0.0037 |

| | | | |
|---|---|---|---|
| 45 | 0.0041 | 0.0004 | 0.0037 |
| 46 | 0.0041 | 0.0004 | 0.0038 |
| 47 | 0.0042 | 0.0004 | 0.0038 |
| 48 | 0.0042 | 0.0004 | 0.0038 |
| 49 | 0.0042 | 0.0004 | 0.0038 |
| 50 | 0.0042 | 0.0004 | 0.0038 |
| 51 | 0.0042 | 0.0004 | 0.0039 |
| 52 | 0.0043 | 0.0004 | 0.0039 |
| 53 | 0.0043 | 0.0004 | 0.0039 |
| 54 | 0.0043 | 0.0004 | 0.0039 |
| 55 | 0.0043 | 0.0004 | 0.0039 |
| 56 | 0.0043 | 0.0004 | 0.0039 |
| 57 | 0.0044 | 0.0004 | 0.0040 |
| 58 | 0.0044 | 0.0004 | 0.0040 |
| 59 | 0.0044 | 0.0004 | 0.0040 |
| 60 | 0.0044 | 0.0004 | 0.0040 |
| 61 | 0.0045 | 0.0004 | 0.0041 |
| 62 | 0.0045 | 0.0004 | 0.0041 |
| 63 | 0.0045 | 0.0004 | 0.0041 |
| 64 | 0.0045 | 0.0004 | 0.0041 |
| 65 | 0.0046 | 0.0004 | 0.0041 |
| 66 | 0.0046 | 0.0004 | 0.0042 |
| 67 | 0.0046 | 0.0004 | 0.0042 |
| 68 | 0.0046 | 0.0004 | 0.0042 |
| 69 | 0.0047 | 0.0004 | 0.0042 |
| 70 | 0.0047 | 0.0004 | 0.0043 |
| 71 | 0.0047 | 0.0004 | 0.0043 |
| 72 | 0.0047 | 0.0004 | 0.0043 |
| 73 | 0.0048 | 0.0004 | 0.0043 |
| 74 | 0.0048 | 0.0004 | 0.0044 |
| 75 | 0.0048 | 0.0004 | 0.0044 |
| 76 | 0.0048 | 0.0004 | 0.0044 |
| 77 | 0.0049 | 0.0004 | 0.0044 |
| 78 | 0.0049 | 0.0004 | 0.0045 |
| 79 | 0.0049 | 0.0005 | 0.0045 |
| 80 | 0.0050 | 0.0005 | 0.0045 |
| 81 | 0.0050 | 0.0005 | 0.0045 |
| 82 | 0.0050 | 0.0005 | 0.0046 |
| 83 | 0.0051 | 0.0005 | 0.0046 |
| 84 | 0.0051 | 0.0005 | 0.0046 |
| 85 | 0.0051 | 0.0005 | 0.0047 |
| 86 | 0.0052 | 0.0005 | 0.0047 |
| 87 | 0.0052 | 0.0005 | 0.0047 |
| 88 | 0.0052 | 0.0005 | 0.0047 |
| 89 | 0.0053 | 0.0005 | 0.0048 |
| 90 | 0.0053 | 0.0005 | 0.0048 |
| 91 | 0.0053 | 0.0005 | 0.0049 |
| 92 | 0.0054 | 0.0005 | 0.0049 |
| 93 | 0.0054 | 0.0005 | 0.0049 |
| 94 | 0.0054 | 0.0005 | 0.0049 |
| 95 | 0.0055 | 0.0005 | 0.0050 |
| 96 | 0.0055 | 0.0005 | 0.0050 |
| 97 | 0.0056 | 0.0005 | 0.0051 |
| 98 | 0.0056 | 0.0005 | 0.0051 |
| 99 | 0.0057 | 0.0005 | 0.0051 |
| 100 | 0.0057 | 0.0005 | 0.0052 |
| 101 | 0.0057 | 0.0005 | 0.0052 |
| 102 | 0.0058 | 0.0005 | 0.0052 |
| 103 | 0.0058 | 0.0005 | 0.0053 |

| | | | |
|---|---|---|---|
| 104 | 0.0059 | 0.0005 | 0.0053 |
| 105 | 0.0059 | 0.0005 | 0.0054 |
| 106 | 0.0060 | 0.0005 | 0.0054 |
| 107 | 0.0060 | 0.0005 | 0.0055 |
| 108 | 0.0061 | 0.0006 | 0.0055 |
| 109 | 0.0061 | 0.0006 | 0.0056 |
| 110 | 0.0062 | 0.0006 | 0.0056 |
| 111 | 0.0062 | 0.0006 | 0.0057 |
| 112 | 0.0063 | 0.0006 | 0.0057 |
| 113 | 0.0063 | 0.0006 | 0.0058 |
| 114 | 0.0064 | 0.0006 | 0.0058 |
| 115 | 0.0064 | 0.0006 | 0.0059 |
| 116 | 0.0065 | 0.0006 | 0.0059 |
| 117 | 0.0066 | 0.0006 | 0.0060 |
| 118 | 0.0066 | 0.0006 | 0.0060 |
| 119 | 0.0067 | 0.0006 | 0.0061 |
| 120 | 0.0067 | 0.0006 | 0.0061 |
| 121 | 0.0068 | 0.0006 | 0.0062 |
| 122 | 0.0069 | 0.0006 | 0.0062 |
| 123 | 0.0070 | 0.0006 | 0.0063 |
| 124 | 0.0070 | 0.0006 | 0.0064 |
| 125 | 0.0071 | 0.0006 | 0.0064 |
| 126 | 0.0071 | 0.0007 | 0.0065 |
| 127 | 0.0072 | 0.0007 | 0.0066 |
| 128 | 0.0073 | 0.0007 | 0.0066 |
| 129 | 0.0074 | 0.0007 | 0.0067 |
| 130 | 0.0075 | 0.0007 | 0.0068 |
| 131 | 0.0076 | 0.0007 | 0.0069 |
| 132 | 0.0076 | 0.0007 | 0.0069 |
| 133 | 0.0077 | 0.0007 | 0.0070 |
| 134 | 0.0078 | 0.0007 | 0.0071 |
| 135 | 0.0079 | 0.0007 | 0.0072 |
| 136 | 0.0080 | 0.0007 | 0.0073 |
| 137 | 0.0081 | 0.0007 | 0.0074 |
| 138 | 0.0082 | 0.0007 | 0.0074 |
| 139 | 0.0083 | 0.0008 | 0.0076 |
| 140 | 0.0084 | 0.0008 | 0.0076 |
| 141 | 0.0086 | 0.0008 | 0.0078 |
| 142 | 0.0086 | 0.0008 | 0.0079 |
| 143 | 0.0088 | 0.0008 | 0.0080 |
| 144 | 0.0089 | 0.0008 | 0.0081 |
| 145 | 0.0090 | 0.0008 | 0.0082 |
| 146 | 0.0091 | 0.0008 | 0.0083 |
| 147 | 0.0093 | 0.0009 | 0.0085 |
| 148 | 0.0094 | 0.0009 | 0.0085 |
| 149 | 0.0096 | 0.0009 | 0.0087 |
| 150 | 0.0097 | 0.0009 | 0.0088 |
| 151 | 0.0099 | 0.0009 | 0.0090 |
| 152 | 0.0100 | 0.0009 | 0.0091 |
| 153 | 0.0103 | 0.0009 | 0.0093 |
| 154 | 0.0104 | 0.0009 | 0.0094 |
| 155 | 0.0106 | 0.0010 | 0.0097 |
| 156 | 0.0108 | 0.0010 | 0.0098 |
| 157 | 0.0111 | 0.0010 | 0.0101 |
| 158 | 0.0112 | 0.0010 | 0.0102 |
| 159 | 0.0115 | 0.0011 | 0.0105 |
| 160 | 0.0117 | 0.0011 | 0.0106 |
| 161 | 0.0120 | 0.0011 | 0.0109 |
| 162 | 0.0122 | 0.0011 | 0.0111 |

| | | | |
|---|---|---|---|
| 163 | 0.0126 | 0.0011 | 0.0114 |
| 164 | 0.0128 | 0.0012 | 0.0116 |
| 165 | 0.0132 | 0.0012 | 0.0120 |
| 166 | 0.0134 | 0.0012 | 0.0122 |
| 167 | 0.0139 | 0.0013 | 0.0126 |
| 168 | 0.0142 | 0.0013 | 0.0129 |
| 169 | 0.0211 | 0.0019 | 0.0192 |
| 170 | 0.0215 | 0.0020 | 0.0195 |
| 171 | 0.0222 | 0.0020 | 0.0202 |
| 172 | 0.0226 | 0.0021 | 0.0205 |
| 173 | 0.0234 | 0.0021 | 0.0213 |
| 174 | 0.0239 | 0.0022 | 0.0217 |
| 175 | 0.0249 | 0.0023 | 0.0226 |
| 176 | 0.0255 | 0.0023 | 0.0231 |
| 177 | 0.0267 | 0.0024 | 0.0242 |
| 178 | 0.0273 | 0.0025 | 0.0248 |
| 179 | 0.0288 | 0.0026 | 0.0262 |
| 180 | 0.0296 | 0.0027 | 0.0269 |
| 181 | 0.0315 | 0.0029 | 0.0286 |
| 182 | 0.0325 | 0.0030 | 0.0296 |
| 183 | 0.0350 | 0.0032 | 0.0318 |
| 184 | 0.0364 | 0.0033 | 0.0331 |
| 185 | 0.0276 | 0.0025 | 0.0251 |
| 186 | 0.0294 | 0.0027 | 0.0267 |
| 187 | 0.0341 | 0.0031 | 0.0310 |
| 188 | 0.0373 | 0.0034 | 0.0339 |
| 189 | 0.0463 | 0.0042 | 0.0421 |
| 190 | 0.0534 | 0.0042 | 0.0492 |
| 191 | 0.0810 | 0.0042 | 0.0768 |
| 192 | 0.1176 | 0.0042 | 0.1134 |
| 193 | 0.5086 | 0.0042 | 0.5044 |
| 194 | 0.0637 | 0.0042 | 0.0595 |
| 195 | 0.0412 | 0.0038 | 0.0374 |
| 196 | 0.0316 | 0.0029 | 0.0287 |
| 197 | 0.0381 | 0.0035 | 0.0346 |
| 198 | 0.0337 | 0.0031 | 0.0306 |
| 199 | 0.0305 | 0.0028 | 0.0277 |
| 200 | 0.0280 | 0.0026 | 0.0255 |
| 201 | 0.0260 | 0.0024 | 0.0237 |
| 202 | 0.0244 | 0.0022 | 0.0222 |
| 203 | 0.0230 | 0.0021 | 0.0209 |
| 204 | 0.0218 | 0.0020 | 0.0198 |
| 205 | 0.0144 | 0.0013 | 0.0131 |
| 206 | 0.0137 | 0.0012 | 0.0124 |
| 207 | 0.0130 | 0.0012 | 0.0118 |
| 208 | 0.0124 | 0.0011 | 0.0113 |
| 209 | 0.0118 | 0.0011 | 0.0108 |
| 210 | 0.0114 | 0.0010 | 0.0103 |
| 211 | 0.0109 | 0.0010 | 0.0099 |
| 212 | 0.0105 | 0.0010 | 0.0096 |
| 213 | 0.0102 | 0.0009 | 0.0092 |
| 214 | 0.0098 | 0.0009 | 0.0089 |
| 215 | 0.0095 | 0.0009 | 0.0086 |
| 216 | 0.0092 | 0.0008 | 0.0084 |
| 217 | 0.0090 | 0.0008 | 0.0082 |
| 218 | 0.0087 | 0.0008 | 0.0079 |
| 219 | 0.0085 | 0.0008 | 0.0077 |
| 220 | 0.0083 | 0.0008 | 0.0075 |
| 221 | 0.0081 | 0.0007 | 0.0073 |

| | | | |
|---|---|---|---|
| 222 | 0.0079 | 0.0007 | 0.0072 |
| 223 | 0.0077 | 0.0007 | 0.0070 |
| 224 | 0.0075 | 0.0007 | 0.0068 |
| 225 | 0.0074 | 0.0007 | 0.0067 |
| 226 | 0.0072 | 0.0007 | 0.0065 |
| 227 | 0.0070 | 0.0006 | 0.0064 |
| 228 | 0.0069 | 0.0006 | 0.0063 |
| 229 | 0.0068 | 0.0006 | 0.0062 |
| 230 | 0.0066 | 0.0006 | 0.0060 |
| 231 | 0.0065 | 0.0006 | 0.0059 |
| 232 | 0.0064 | 0.0006 | 0.0058 |
| 233 | 0.0063 | 0.0006 | 0.0057 |
| 234 | 0.0062 | 0.0006 | 0.0056 |
| 235 | 0.0061 | 0.0006 | 0.0055 |
| 236 | 0.0060 | 0.0005 | 0.0054 |
| 237 | 0.0059 | 0.0005 | 0.0054 |
| 238 | 0.0058 | 0.0005 | 0.0053 |
| 239 | 0.0057 | 0.0005 | 0.0052 |
| 240 | 0.0056 | 0.0005 | 0.0051 |
| 241 | 0.0055 | 0.0005 | 0.0050 |
| 242 | 0.0055 | 0.0005 | 0.0050 |
| 243 | 0.0054 | 0.0005 | 0.0049 |
| 244 | 0.0053 | 0.0005 | 0.0048 |
| 245 | 0.0052 | 0.0005 | 0.0048 |
| 246 | 0.0052 | 0.0005 | 0.0047 |
| 247 | 0.0051 | 0.0005 | 0.0046 |
| 248 | 0.0050 | 0.0005 | 0.0046 |
| 249 | 0.0050 | 0.0005 | 0.0045 |
| 250 | 0.0049 | 0.0004 | 0.0045 |
| 251 | 0.0049 | 0.0004 | 0.0044 |
| 252 | 0.0048 | 0.0004 | 0.0044 |
| 253 | 0.0048 | 0.0004 | 0.0043 |
| 254 | 0.0047 | 0.0004 | 0.0043 |
| 255 | 0.0046 | 0.0004 | 0.0042 |
| 256 | 0.0046 | 0.0004 | 0.0042 |
| 257 | 0.0045 | 0.0004 | 0.0041 |
| 258 | 0.0045 | 0.0004 | 0.0041 |
| 259 | 0.0044 | 0.0004 | 0.0040 |
| 260 | 0.0044 | 0.0004 | 0.0040 |
| 261 | 0.0044 | 0.0004 | 0.0040 |
| 262 | 0.0043 | 0.0004 | 0.0039 |
| 263 | 0.0043 | 0.0004 | 0.0039 |
| 264 | 0.0042 | 0.0004 | 0.0038 |
| 265 | 0.0042 | 0.0004 | 0.0038 |
| 266 | 0.0041 | 0.0004 | 0.0038 |
| 267 | 0.0041 | 0.0004 | 0.0037 |
| 268 | 0.0041 | 0.0004 | 0.0037 |
| 269 | 0.0040 | 0.0004 | 0.0037 |
| 270 | 0.0040 | 0.0004 | 0.0036 |
| 271 | 0.0040 | 0.0004 | 0.0036 |
| 272 | 0.0039 | 0.0004 | 0.0036 |
| 273 | 0.0039 | 0.0004 | 0.0035 |
| 274 | 0.0039 | 0.0004 | 0.0035 |
| 275 | 0.0038 | 0.0003 | 0.0035 |
| 276 | 0.0038 | 0.0003 | 0.0034 |
| 277 | 0.0038 | 0.0003 | 0.0034 |
| 278 | 0.0037 | 0.0003 | 0.0034 |
| 279 | 0.0037 | 0.0003 | 0.0034 |
| 280 | 0.0037 | 0.0003 | 0.0033 |

| | | | |
|---|---|---|---|
| 281 | 0.0036 | 0.0003 | 0.0033 |
| 282 | 0.0036 | 0.0003 | 0.0033 |
| 283 | 0.0036 | 0.0003 | 0.0033 |
| 284 | 0.0036 | 0.0003 | 0.0032 |
| 285 | 0.0035 | 0.0003 | 0.0032 |
| 286 | 0.0035 | 0.0003 | 0.0032 |
| 287 | 0.0035 | 0.0003 | 0.0032 |
| 288 | 0.0035 | 0.0003 | 0.0031 |

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Total soil rain loss = 0.24(In)
Total effective rainfall = 3.01(In)
Peak flow rate in flood hydrograph = 3931.07(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 1000.0 | 2000.0 | 3000.0 | 4000.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0047 | 0.68 | Q | | | | |
| 0+10 | 0.0206 | 2.32 | Q | | | | |
| 0+15 | 0.0542 | 4.87 | Q | | | | |
| 0+20 | 0.1113 | 8.30 | Q | | | | |
| 0+25 | 0.1988 | 12.70 | Q | | | | |
| 0+30 | 0.3322 | 19.38 | Q | | | | |
| 0+35 | 0.5350 | 29.44 | Q | | | | |
| 0+40 | 0.8287 | 42.64 | Q | | | | |
| 0+45 | 1.2069 | 54.92 | Q | | | | |
| 0+50 | 1.6661 | 66.67 | Q | | | | |
| 0+55 | 2.1919 | 76.36 | Q | | | | |
| 1+ 0 | 2.7686 | 83.73 | Q | | | | |
| 1+ 5 | 3.3857 | 89.61 | Q | | | | |
| 1+10 | 4.0372 | 94.60 | Q | | | | |
| 1+15 | 4.7190 | 99.01 | Q | | | | |
| 1+20 | 5.4284 | 103.00 | VQ | | | | |
| 1+25 | 6.1631 | 106.67 | VQ | | | | |
| 1+30 | 6.9205 | 109.98 | VQ | | | | |
| 1+35 | 7.6986 | 112.98 | VQ | | | | |
| 1+40 | 8.4966 | 115.88 | VQ | | | | |
| 1+45 | 9.3126 | 118.48 | VQ | | | | |
| 1+50 | 10.1450 | 120.86 | VQ | | | | |
| 1+55 | 10.9934 | 123.19 | VQ | | | | |
| 2+ 0 | 11.8563 | 125.29 | VQ | | | | |
| 2+ 5 | 12.7333 | 127.35 | VQ | | | | |
| 2+10 | 13.6239 | 129.32 | VQ | | | | |
| 2+15 | 14.5275 | 131.20 | VQ | | | | |
| 2+20 | 15.4440 | 133.06 | VQ | | | | |
| 2+25 | 16.3721 | 134.76 | VQ | | | | |
| 2+30 | 17.3118 | 136.45 | VQ | | | | |
| 2+35 | 18.2621 | 137.99 | VQ | | | | |
| 2+40 | 19.2223 | 139.42 | VQ | | | | |
| 2+45 | 20.1923 | 140.84 | VQ | | | | |
| 2+50 | 21.1717 | 142.21 | VQ | | | | |
| 2+55 | 22.1605 | 143.57 | VQ | | | | |
| 3+ 0 | 23.1583 | 144.89 | VQ | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+ 5 | 24.1649 | 146.16 | Q | | | | |
| 3+10 | 25.1802 | 147.42 | Q | | | | |
| 3+15 | 26.2039 | 148.64 | Q | | | | |
| 3+20 | 27.2360 | 149.86 | Q | | | | |
| 3+25 | 28.2759 | 151.00 | Q | | | | |
| 3+30 | 29.3233 | 152.08 | Q | | | | |
| 3+35 | 30.3781 | 153.16 | Q | | | | |
| 3+40 | 31.4406 | 154.26 | Q | | | | |
| 3+45 | 32.5106 | 155.36 | Q | | | | |
| 3+50 | 33.5878 | 156.42 | Q | | | | |
| 3+55 | 34.6721 | 157.44 | Q | | | | |
| 4+ 0 | 35.7636 | 158.47 | Q | | | | |
| 4+ 5 | 36.8621 | 159.51 | Q | | | | |
| 4+10 | 37.9679 | 160.56 | Q | | | | |
| 4+15 | 39.0806 | 161.56 | Q | | | | |
| 4+20 | 40.1999 | 162.52 | Q | | | | |
| 4+25 | 41.3258 | 163.49 | Q | | | | |
| 4+30 | 42.4586 | 164.47 | Q | | | | |
| 4+35 | 43.5981 | 165.46 | Q | | | | |
| 4+40 | 44.7441 | 166.41 | Q | | | | |
| 4+45 | 45.8965 | 167.32 | Q | | | | |
| 4+50 | 47.0552 | 168.25 | Q | | | | |
| 4+55 | 48.2204 | 169.19 | QV | | | | |
| 5+ 0 | 49.3922 | 170.14 | QV | | | | |
| 5+ 5 | 50.5706 | 171.10 | QV | | | | |
| 5+10 | 51.7557 | 172.08 | QV | | | | |
| 5+15 | 52.9477 | 173.07 | QV | | | | |
| 5+20 | 54.1466 | 174.08 | QV | | | | |
| 5+25 | 55.3524 | 175.09 | QV | | | | |
| 5+30 | 56.5653 | 176.11 | QV | | | | |
| 5+35 | 57.7853 | 177.14 | QV | | | | |
| 5+40 | 59.0125 | 178.19 | QV | | | | |
| 5+45 | 60.2470 | 179.24 | QV | | | | |
| 5+50 | 61.4888 | 180.31 | QV | | | | |
| 5+55 | 62.7377 | 181.34 | QV | | | | |
| 6+ 0 | 63.9936 | 182.36 | QV | | | | |
| 6+ 5 | 65.2566 | 183.39 | QV | | | | |
| 6+10 | 66.5267 | 184.43 | QV | | | | |
| 6+15 | 67.8042 | 185.48 | QV | | | | |
| 6+20 | 69.0890 | 186.55 | QV | | | | |
| 6+25 | 70.3812 | 187.63 | QV | | | | |
| 6+30 | 71.6808 | 188.69 | Q V | | | | |
| 6+35 | 72.9874 | 189.73 | Q V | | | | |
| 6+40 | 74.3013 | 190.78 | Q V | | | | |
| 6+45 | 75.6226 | 191.84 | Q V | | | | |
| 6+50 | 76.9512 | 192.92 | Q V | | | | |
| 6+55 | 78.2874 | 194.01 | Q V | | | | |
| 7+ 0 | 79.6312 | 195.12 | Q V | | | | |
| 7+ 5 | 80.9827 | 196.24 | Q V | | | | |
| 7+10 | 82.3422 | 197.39 | Q V | | | | |
| 7+15 | 83.7095 | 198.54 | Q V | | | | |
| 7+20 | 85.0850 | 199.72 | Q V | | | | |
| 7+25 | 86.4686 | 200.90 | QV | | | | |
| 7+30 | 87.8606 | 202.12 | QV | | | | |
| 7+35 | 89.2610 | 203.34 | QV | | | | |
| 7+40 | 90.6700 | 204.59 | QV | | | | |
| 7+45 | 92.0877 | 205.85 | QV | | | | |
| 7+50 | 93.5142 | 207.13 | QV | | | | |
| 7+55 | 94.9497 | 208.43 | Q V | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 8+ 0 | 96.3943 | 209.76 | Q V | | | |
| 8+ 5 | 97.8482 | 211.10 | Q V | | | |
| 8+10 | 99.3114 | 212.47 | Q V | | | |
| 8+15 | 100.7842 | 213.85 | Q V | | | |
| 8+20 | 102.2668 | 215.26 | Q V | | | |
| 8+25 | 103.7591 | 216.69 | Q V | | | |
| 8+30 | 105.2615 | 218.15 | Q V | | | |
| 8+35 | 106.7741 | 219.63 | Q V | | | |
| 8+40 | 108.2971 | 221.14 | Q V | | | |
| 8+45 | 109.8306 | 222.66 | Q V | | | |
| 8+50 | 111.3748 | 224.22 | Q V | | | |
| 8+55 | 112.9300 | 225.80 | Q V | | | |
| 9+ 0 | 114.4962 | 227.42 | Q V | | | |
| 9+ 5 | 116.0737 | 229.06 | Q V | | | |
| 9+10 | 117.6628 | 230.73 | Q V | | | |
| 9+15 | 119.2635 | 232.43 | Q V | | | |
| 9+20 | 120.8762 | 234.16 | Q V | | | |
| 9+25 | 122.5010 | 235.92 | Q V | | | |
| 9+30 | 124.1382 | 237.72 | Q V | | | |
| 9+35 | 125.7880 | 239.55 | Q V | | | |
| 9+40 | 127.4507 | 241.42 | Q V | | | |
| 9+45 | 129.1264 | 243.31 | Q V | | | |
| 9+50 | 130.8155 | 245.26 | Q V | | | |
| 9+55 | 132.5182 | 247.23 | Q V | | | |
| 10+ 0 | 134.2348 | 249.25 | Q V | | | |
| 10+ 5 | 135.9656 | 251.31 | Q V | | | |
| 10+10 | 137.7109 | 253.41 | Q V | | | |
| 10+15 | 139.4709 | 255.55 | Q V | | | |
| 10+20 | 141.2460 | 257.75 | Q V | | | |
| 10+25 | 143.0365 | 259.98 | Q V | | | |
| 10+30 | 144.8427 | 262.27 | Q V | | | |
| 10+35 | 146.6651 | 264.60 | Q V | | | |
| 10+40 | 148.5039 | 266.99 | Q V | | | |
| 10+45 | 150.3594 | 269.43 | Q V | | | |
| 10+50 | 152.2323 | 271.93 | Q V | | | |
| 10+55 | 154.1226 | 274.48 | Q V | | | |
| 11+ 0 | 156.0311 | 277.10 | Q V | | | |
| 11+ 5 | 157.9579 | 279.77 | Q V | | | |
| 11+10 | 159.9037 | 282.53 | Q V | | | |
| 11+15 | 161.8687 | 285.33 | Q V | | | |
| 11+20 | 163.8537 | 288.22 | Q V | | | |
| 11+25 | 165.8589 | 291.16 | Q V | | | |
| 11+30 | 167.8851 | 294.20 | Q V | | | |
| 11+35 | 169.9326 | 297.30 | Q V | | | |
| 11+40 | 172.0022 | 300.50 | Q V | | | |
| 11+45 | 174.0943 | 303.77 | Q V | | | |
| 11+50 | 176.2097 | 307.15 | Q V | | | |
| 11+55 | 178.3488 | 310.60 | Q V | | | |
| 12+ 0 | 180.5125 | 314.17 | Q V | | | |
| 12+ 5 | 182.7014 | 317.82 | Q V | | | |
| 12+10 | 184.9162 | 321.60 | Q V | | | |
| 12+15 | 187.1577 | 325.46 | Q V | | | |
| 12+20 | 189.4266 | 329.46 | Q V | | | |
| 12+25 | 191.7238 | 333.55 | Q V | | | |
| 12+30 | 194.0502 | 337.79 | Q V | | | |
| 12+35 | 196.4064 | 342.12 | Q V | | | |
| 12+40 | 198.7935 | 346.61 | Q V | | | |
| 12+45 | 201.2124 | 351.23 | Q V | | | |
| 12+50 | 203.6645 | 356.04 | Q V | | | |

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12+55     206.1508    361.01  |  Q    V |          |          |          |
13+ 0     208.6728    366.19  |  Q    V |          |          |          |
13+ 5     211.2317    371.55  |  Q    V |          |          |          |
13+10     213.8291    377.15  |  Q     V|          |          |          |
13+15     216.4663    382.93  |  Q     V|          |          |          |
13+20     219.1452    388.98  |  Q     V|          |          |          |
13+25     221.8673    395.24  |  Q     V|          |          |          |
13+30     224.6345    401.80  |   Q    V|          |          |          |
13+35     227.4486    408.60  |   Q    V|          |          |          |
13+40     230.3119    415.75  |   Q    V|          |          |          |
13+45     233.2264    423.18  |   Q    V|          |          |          |
13+50     236.1947    431.00  |   Q    V|          |          |          |
13+55     239.2192    439.15  |   Q     V          |          |          |
14+ 0     242.3029    447.76  |   Q     V          |          |          |
14+ 5     245.4573    458.01  |   Q     V          |          |          |
14+10     248.6983    470.60  |   Q     V          |          |          |
14+15     252.0410    485.36  |   Q     V          |          |          |
14+20     255.5012    502.42  |    Q    V          |          |          |
14+25     259.0957    521.91  |    Q    V          |          |          |
14+30     262.8590    546.44  |    Q    |V         |          |          |
14+35     266.8402    578.06  |    Q    |V         |          |          |
14+40     271.0865    616.57  |     Q   |V         |          |          |
14+45     275.5935    654.42  |     Q   |V         |          |          |
14+50     280.3638    692.64  |     Q   |V         |          |          |
14+55     285.3794    728.27  |      Q  | V        |          |          |
15+ 0     290.6221    761.23  |      Q  | V        |          |          |
15+ 5     296.0832    792.96  |      Q  | V        |          |          |
15+10     301.7655    825.07  |       Q | V        |          |          |
15+15     307.6754    858.11  |       Q | V        |          |          |
15+20     313.8258    893.05  |       Q |  V       |          |          |
15+25     320.2153    927.74  |        Q|  V       |          |          |
15+30     326.8404    961.97  |        Q|  V       |          |          |
15+35     333.7021    996.32  |        Q|   V      |          |          |
15+40     340.8139   1032.62  |         Q   V      |          |          |
15+45     348.1914   1071.23  |         Q   V      |          |          |
15+50     355.8393   1110.47  |         |Q   V     |          |          |
15+55     363.7728   1151.95  |         |Q   V     |          |          |
16+ 0     372.0876   1207.31  |         | Q  V     |          |          |
16+ 5     381.5742   1377.45  |         |  Q  V    |          |          |
16+10     392.6073   1602.00  |         |     Q    |          |          |
16+15     405.2281   1832.53  |         |      VQ  |          |          |
16+20     419.5759   2083.31  |         |      V  Q|          |          |
16+25     435.9768   2381.41  |         |       V |  Q       |          |
16+30     455.7650   2873.24  |         |        V|       Q  |          |
16+35     479.6894   3473.83  |         |         V          |   Q      |
16+40     506.7629   3931.07  |         |         |V         |        Q |
16+45     532.6586   3760.05  |         |         | V        |      Q   |
16+50     557.2534   3571.17  |         |         |  V       |    Q     |
16+55     578.9624   3152.15  |         |         |   V      |Q         |
17+ 0     597.6472   2713.04  |         |         |    V Q   |          |
17+ 5     614.2043   2404.08  |         |         |   QV     |          |
17+10     629.3334   2196.74  |         |         |Q    V    |          |
17+15     643.3830   2040.01  |         |         Q      V   |          |
17+20     656.5287   1908.75  |         |        Q|      V   |          |
17+25     668.8631   1790.95  |         |      Q  |       V  |          |
17+30     680.3592   1669.24  |         |     Q   |       V  |          |
17+35     691.0666   1554.70  |         |    Q    |        V |          |
17+40     701.1574   1465.18  |         |   Q     |        V |          |
17+45     710.5017   1356.80  |         |  Q      |        V |          |
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17+50     719.1918   1261.81  |          | Q       |          V         |
17+55     727.4539   1199.66  |          |Q        |          V         |
18+ 0     735.1641   1119.52  |          |Q        |          |V        |
18+ 5     742.5566   1073.40  |          Q         |          |V        |
18+10     749.5933   1021.72  |          Q         |          |V        |
18+15     756.3070    974.84  |         Q|         |          |V        |
18+20     762.7554    936.31  |         Q|         |          | V       |
18+25     768.8304    882.09  |        Q |         |          | V       |
18+30     774.6716    848.14  |        Q |         |          | V       |
18+35     780.1784    799.58  |       Q  |         |          | V       |
18+40     785.3960    757.60  |       Q  |         |          |  V      |
18+45     790.4427    732.79  |       Q  |         |          |  V      |
18+50     795.2886    703.62  |       Q  |         |          |  V      |
18+55     799.9852    681.95  |      Q   |         |          |  V      |
19+ 0     804.4894    654.02  |      Q   |         |          |  V      |
19+ 5     808.8205    628.87  |      Q   |         |          |   V     |
19+10     813.0192    609.66  |      Q   |         |          |   V     |
19+15     817.0507    585.37  |     Q    |         |          |   V     |
19+20     820.9570    567.20  |     Q    |         |          |   V     |
19+25     824.6709    539.25  |     Q    |         |          |   V     |
19+30     828.2237    515.87  |     Q    |         |          |   V     |
19+35     831.6907    503.40  |     Q    |         |          |    V    |
19+40     835.0778    491.81  |    Q     |         |          |    V    |
19+45     838.3798    479.45  |    Q     |         |          |    V    |
19+50     841.5465    459.80  |    Q     |         |          |    V    |
19+55     844.5979    443.08  |    Q     |         |          |    V    |
20+ 0     847.5812    433.16  |    Q     |         |          |    V    |
20+ 5     850.4983    423.57  |    Q     |         |          |    V    |
20+10     853.3432    413.07  |    Q     |         |          |    V    |
20+15     856.0622    394.80  |  Q       |         |          |     V   |
20+20     858.6780    379.82  |  Q       |         |          |     V   |
20+25     861.2380    371.72  |  Q       |         |          |     V   |
20+30     863.7437    363.82  |  Q       |         |          |     V   |
20+35     866.1891    355.08  |  Q       |         |          |     V   |
20+40     868.5276    339.55  |  Q       |         |          |     V   |
20+45     870.7808    327.16  |  Q       |         |          |     V   |
20+50     872.9902    320.80  |  Q       |         |          |     V   |
20+55     875.1609    315.19  |  Q       |         |          |     V   |
21+ 0     877.2950    309.88  |  Q       |         |          |      V  |
21+ 5     879.4009    305.77  |  Q       |         |          |      V  |
21+10     881.4765    301.38  |  Q       |         |          |      V  |
21+15     883.5187    296.53  | Q        |         |          |      V  |
21+20     885.5288    291.87  | Q        |         |          |      V  |
21+25     887.5069    287.22  | Q        |         |          |      V  |
21+30     889.4507    282.24  | Q        |         |          |      V  |
21+35     891.3609    277.36  | Q        |         |          |      V  |
21+40     893.2397    272.79  | Q        |         |          |      V  |
21+45     895.0848    267.91  | Q        |         |          |      V  |
21+50     896.8931    262.57  | Q        |         |          |      V  |
21+55     898.6210    250.88  | Q        |         |          |      V  |
22+ 0     900.2926    242.72  | Q        |         |          |      V  |
22+ 5     901.9362    238.65  | Q        |         |          |       V |
22+10     903.5535    234.84  | Q        |         |          |       V |
22+15     905.1438    230.91  | Q        |         |          |       V |
22+20     906.7048    226.65  | Q        |         |          |       V |
22+25     908.2320    221.76  | Q        |         |          |       V |
22+30     909.6915    211.92  | Q        |         |          |       V |
22+35     911.0884    202.82  | Q        |         |          |       V |
22+40     912.4614    199.37  |Q         |         |          |       V |
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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+45 | 913.8139 | 196.37 | \|Q | \| | \| | \| | V \| |
| 22+50 | 915.1463 | 193.48 | \|Q | \| | \| | \| | V \| |
| 22+55 | 916.4598 | 190.72 | \|Q | \| | \| | \| | V \| |
| 23+ 0 | 917.7557 | 188.16 | \|Q | \| | \| | \| | V \| |
| 23+ 5 | 919.0347 | 185.72 | \|Q | \| | \| | \| | V \| |
| 23+10 | 920.2977 | 183.38 | \|Q | \| | \| | \| | V \| |
| 23+15 | 921.5452 | 181.13 | \|Q | \| | \| | \| | V \| |
| 23+20 | 922.7777 | 178.97 | \|Q | \| | \| | \| | V \| |
| 23+25 | 923.9959 | 176.88 | \|Q | \| | \| | \| | V \| |
| 23+30 | 925.2006 | 174.92 | \|Q | \| | \| | \| | V\| |
| 23+35 | 926.3927 | 173.10 | \|Q | \| | \| | \| | V\| |
| 23+40 | 927.5727 | 171.33 | \|Q | \| | \| | \| | V\| |
| 23+45 | 928.7408 | 169.61 | \|Q | \| | \| | \| | V\| |
| 23+50 | 929.8975 | 167.95 | \|Q | \| | \| | \| | V\| |
| 23+55 | 931.0430 | 166.32 | \|Q | \| | \| | \| | V\| |
| 24+ 0 | 932.1776 | 164.74 | \|Q | \| | \| | \| | V\| |
| 24+ 5 | 933.2969 | 162.53 | \|Q | \| | \| | \| | V\| |
| 24+10 | 934.3947 | 159.40 | \|Q | \| | \| | \| | V\| |
| 24+15 | 935.4651 | 155.42 | \|Q | \| | \| | \| | V\| |
| 24+20 | 936.5024 | 150.62 | \|Q | \| | \| | \| | V\| |
| 24+25 | 937.5005 | 144.92 | \|Q | \| | \| | \| | V\| |
| 24+30 | 938.4442 | 137.03 | \|Q | \| | \| | \| | V\| |
| 24+35 | 939.3110 | 125.86 | \|Q | \| | \| | \| | V\| |
| 24+40 | 940.0803 | 111.70 | \|Q | \| | \| | \| | V\| |
| 24+45 | 940.7595 | 98.62 | Q | \| | \| | \| | V\| |
| 24+50 | 941.3533 | 86.22 | Q | \| | \| | \| | V\| |
| 24+55 | 941.8770 | 76.03 | Q | \| | \| | \| | V\| |
| 25+ 0 | 942.3472 | 68.28 | Q | \| | \| | \| | V\| |
| 25+ 5 | 942.7749 | 62.10 | Q | \| | \| | \| | V\| |
| 25+10 | 943.1668 | 56.90 | Q | \| | \| | \| | V\| |
| 25+15 | 943.5272 | 52.33 | Q | \| | \| | \| | V\| |
| 25+20 | 943.8595 | 48.25 | Q | \| | \| | \| | V\| |
| 25+25 | 944.1662 | 44.54 | Q | \| | \| | \| | V\| |
| 25+30 | 944.4502 | 41.24 | Q | \| | \| | \| | V\| |
| 25+35 | 944.7139 | 38.29 | Q | \| | \| | \| | V\| |
| 25+40 | 944.9583 | 35.48 | Q | \| | \| | \| | V\| |
| 25+45 | 945.1856 | 33.01 | Q | \| | \| | \| | V\| |
| 25+50 | 945.3977 | 30.79 | Q | \| | \| | \| | V\| |
| 25+55 | 945.5950 | 28.65 | Q | \| | \| | \| | V\| |
| 26+ 0 | 945.7795 | 26.79 | Q | \| | \| | \| | V\| |
| 26+ 5 | 945.9516 | 24.98 | Q | \| | \| | \| | V\| |
| 26+10 | 946.1120 | 23.29 | Q | \| | \| | \| | V\| |
| 26+15 | 946.2615 | 21.71 | Q | \| | \| | \| | V\| |
| 26+20 | 946.4005 | 20.19 | Q | \| | \| | \| | V\| |
| 26+25 | 946.5303 | 18.84 | Q | \| | \| | \| | V\| |
| 26+30 | 946.6510 | 17.53 | Q | \| | \| | \| | V\| |
| 26+35 | 946.7639 | 16.39 | Q | \| | \| | \| | V\| |
| 26+40 | 946.8698 | 15.38 | Q | \| | \| | \| | V\| |
| 26+45 | 946.9689 | 14.39 | Q | \| | \| | \| | V\| |
| 26+50 | 947.0616 | 13.47 | Q | \| | \| | \| | V\| |
| 26+55 | 947.1483 | 12.58 | Q | \| | \| | \| | V\| |
| 27+ 0 | 947.2292 | 11.75 | Q | \| | \| | \| | V\| |
| 27+ 5 | 947.3048 | 10.98 | Q | \| | \| | \| | V\| |
| 27+10 | 947.3753 | 10.23 | Q | \| | \| | \| | V\| |
| 27+15 | 947.4410 | 9.55 | Q | \| | \| | \| | V\| |
| 27+20 | 947.5022 | 8.88 | Q | \| | \| | \| | V\| |
| 27+25 | 947.5593 | 8.30 | Q | \| | \| | \| | V\| |
| 27+30 | 947.6130 | 7.80 | Q | \| | \| | \| | V\| |
| 27+35 | 947.6633 | 7.30 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 27+40 | 947.7101 | 6.80 | Q | \| | \| | \| | V\| |
| 27+45 | 947.7536 | 6.32 | Q | \| | \| | \| | V\| |
| 27+50 | 947.7942 | 5.89 | Q | \| | \| | \| | V\| |
| 27+55 | 947.8321 | 5.51 | Q | \| | \| | \| | V\| |
| 28+ 0 | 947.8674 | 5.13 | Q | \| | \| | \| | V\| |
| 28+ 5 | 947.9001 | 4.75 | Q | \| | \| | \| | V\| |
| 28+10 | 947.9303 | 4.38 | Q | \| | \| | \| | V\| |
| 28+15 | 947.9584 | 4.07 | Q | \| | \| | \| | V\| |
| 28+20 | 947.9846 | 3.81 | Q | \| | \| | \| | V\| |
| 28+25 | 948.0091 | 3.55 | Q | \| | \| | \| | V\| |
| 28+30 | 948.0318 | 3.30 | Q | \| | \| | \| | V\| |
| 28+35 | 948.0527 | 3.04 | Q | \| | \| | \| | V\| |
| 28+40 | 948.0723 | 2.84 | Q | \| | \| | \| | V\| |
| 28+45 | 948.0907 | 2.68 | Q | \| | \| | \| | V\| |
| 28+50 | 948.1081 | 2.52 | Q | \| | \| | \| | V\| |
| 28+55 | 948.1244 | 2.36 | Q | \| | \| | \| | V\| |
| 29+ 0 | 948.1396 | 2.21 | Q | \| | \| | \| | V\| |
| 29+ 5 | 948.1536 | 2.04 | Q | \| | \| | \| | V\| |
| 29+10 | 948.1665 | 1.87 | Q | \| | \| | \| | V\| |
| 29+15 | 948.1783 | 1.71 | Q | \| | \| | \| | V\| |
| 29+20 | 948.1889 | 1.54 | Q | \| | \| | \| | V\| |
| 29+25 | 948.1984 | 1.38 | Q | \| | \| | \| | V\| |
| 29+30 | 948.2068 | 1.22 | Q | \| | \| | \| | V\| |
| 29+35 | 948.2142 | 1.06 | Q | \| | \| | \| | V\| |
| 29+40 | 948.2204 | 0.91 | Q | \| | \| | \| | V\| |
| 29+45 | 948.2256 | 0.75 | Q | \| | \| | \| | V\| |
| 29+50 | 948.2297 | 0.60 | Q | \| | \| | \| | V\| |
| 29+55 | 948.2331 | 0.50 | Q | \| | \| | \| | V\| |
| 30+ 0 | 948.2360 | 0.42 | Q | \| | \| | \| | V\| |
| 30+ 5 | 948.2384 | 0.34 | Q | \| | \| | \| | V\| |
| 30+10 | 948.2402 | 0.26 | Q | \| | \| | \| | V\| |
| 30+15 | 948.2415 | 0.19 | Q | \| | \| | \| | V\| |
| 30+20 | 948.2422 | 0.11 | Q | \| | \| | \| | V\| |
| 30+25 | 948.2425 | 0.04 | Q | \| | \| | \| | V\| |

# TECHNICAL APPENDIX NO. 2

Tributary Watershed
Hydrograph Routing Calculations
100-Year, 24-Hour Storm Event

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014
Study date: 08/10/17

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREAS "E" & "F" ROUTING
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-10-17

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Program License Serial Number 6320

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********** HYDROGRAPH INFORMATION **********

From study/file name: OFFE10024.rte
**********HYDROGRAPH DATA**********
Number of intervals = 353
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 5599.015 (CFS)
Total volume = 1141.359 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 1.000 to Point/Station 1.000
**** FLOWBY BASIN ROUTING OR SPLIT FLOW ****

A constant split flow fraction of 0.5000 is
being diverted from the main stream into stream number 1
Total volume of excess flow diverted into flowby
basin (stream number 1 ) is 570.68(Ac.Ft)

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P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals (CFS)

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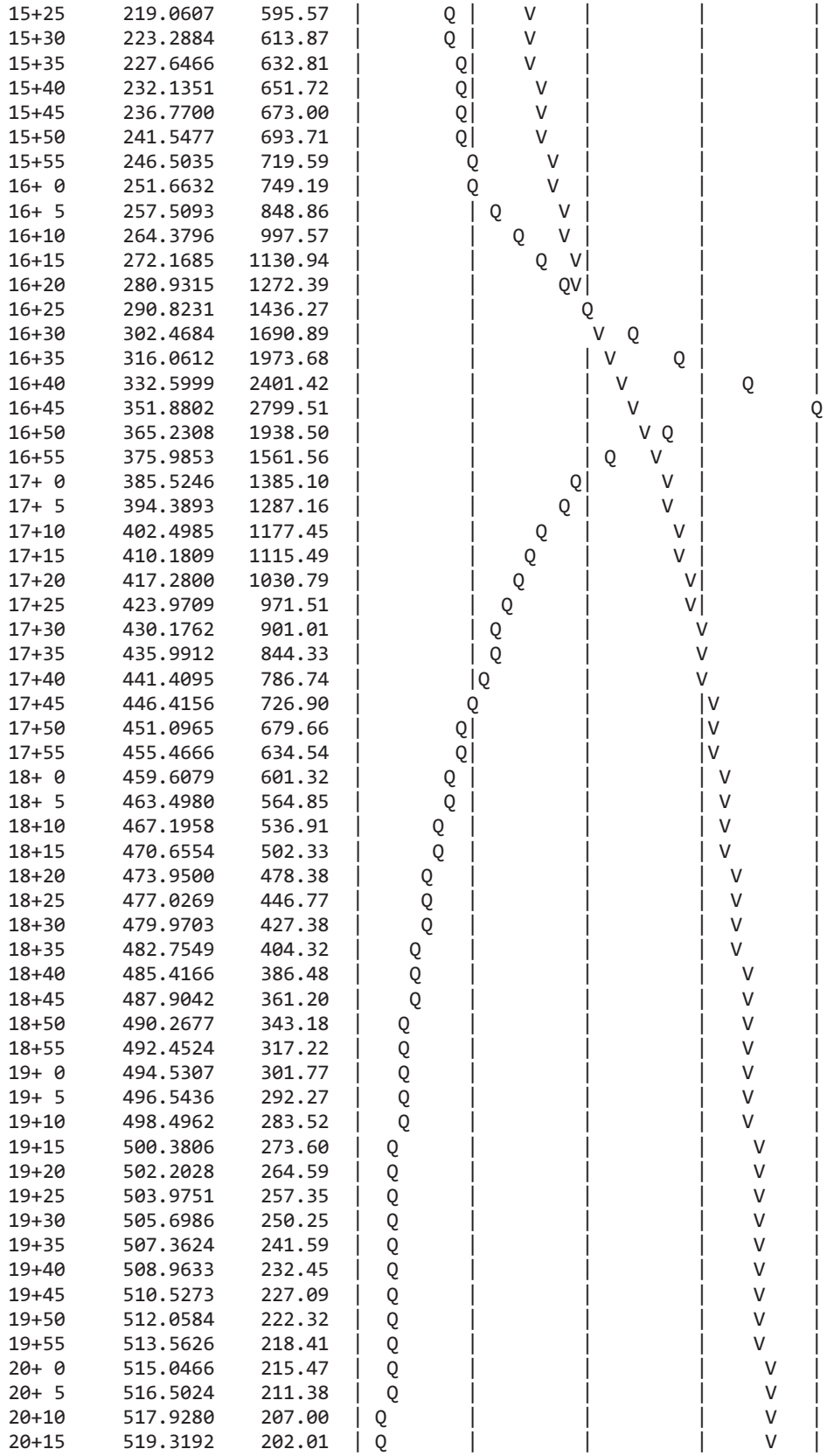
| Time(h+m) | Volume(Ac.Ft) | Q(CFS) | 0 | 699.9 | 1399.8 | 2099.6 | 2799.5 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0050 | 0.73 | Q | \| | \| | \| | \| |
| 0+10 | 0.0216 | 2.41 | Q | \| | \| | \| | \| |
| 0+15 | 0.0544 | 4.76 | Q | \| | \| | \| | \| |
| 0+20 | 0.1080 | 7.79 | Q | \| | \| | \| | \| |
| 0+25 | 0.1875 | 11.54 | Q | \| | \| | \| | \| |
| 0+30 | 0.3033 | 16.82 | Q | \| | \| | \| | \| |
| 0+35 | 0.4666 | 23.71 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+40 | 0.7024 | 34.24 | Q | \| | \| | \| | \| |
| 0+45 | 1.0442 | 49.62 | Q | \| | \| | \| | \| |
| 0+50 | 1.4418 | 57.74 | Q | \| | \| | \| | \| |
| 0+55 | 1.8774 | 63.25 | Q | \| | \| | \| | \| |
| 1+ 0 | 2.3435 | 67.68 | Q | \| | \| | \| | \| |
| 1+ 5 | 2.8357 | 71.46 | VQ | \| | \| | \| | \| |
| 1+10 | 3.3495 | 74.60 | VQ | \| | \| | \| | \| |
| 1+15 | 3.8839 | 77.60 | VQ | \| | \| | \| | \| |
| 1+20 | 4.4361 | 80.18 | VQ | \| | \| | \| | \| |
| 1+25 | 5.0051 | 82.61 | VQ | \| | \| | \| | \| |
| 1+30 | 5.5888 | 84.75 | VQ | \| | \| | \| | \| |
| 1+35 | 6.1862 | 86.74 | VQ | \| | \| | \| | \| |
| 1+40 | 6.7962 | 88.58 | VQ | \| | \| | \| | \| |
| 1+45 | 7.4181 | 90.30 | VQ | \| | \| | \| | \| |
| 1+50 | 8.0511 | 91.90 | VQ | \| | \| | \| | \| |
| 1+55 | 8.6941 | 93.37 | VQ | \| | \| | \| | \| |
| 2+ 0 | 9.3468 | 94.77 | VQ | \| | \| | \| | \| |
| 2+ 5 | 10.0084 | 96.06 | VQ | \| | \| | \| | \| |
| 2+10 | 10.6785 | 97.30 | VQ | \| | \| | \| | \| |
| 2+15 | 11.3564 | 98.42 | VQ | \| | \| | \| | \| |
| 2+20 | 12.0417 | 99.50 | VQ | \| | \| | \| | \| |
| 2+25 | 12.7335 | 100.46 | VQ | \| | \| | \| | \| |
| 2+30 | 13.4318 | 101.39 | VQ | \| | \| | \| | \| |
| 2+35 | 14.1361 | 102.27 | VQ | \| | \| | \| | \| |
| 2+40 | 14.8463 | 103.11 | \|Q | \| | \| | \| | \| |
| 2+45 | 15.5617 | 103.88 | \|Q | \| | \| | \| | \| |
| 2+50 | 16.2821 | 104.60 | \|Q | \| | \| | \| | \| |
| 2+55 | 17.0067 | 105.21 | \|Q | \| | \| | \| | \| |
| 3+ 0 | 17.7352 | 105.77 | \|Q | \| | \| | \| | \| |
| 3+ 5 | 18.4676 | 106.35 | \|Q | \| | \| | \| | \| |
| 3+10 | 19.2039 | 106.92 | \|Q | \| | \| | \| | \| |
| 3+15 | 19.9442 | 107.49 | \|Q | \| | \| | \| | \| |
| 3+20 | 20.6883 | 108.04 | \|Q | \| | \| | \| | \| |
| 3+25 | 21.4362 | 108.60 | \|Q | \| | \| | \| | \| |
| 3+30 | 22.1880 | 109.16 | \|Q | \| | \| | \| | \| |
| 3+35 | 22.9437 | 109.72 | \|Q | \| | \| | \| | \| |
| 3+40 | 23.7030 | 110.24 | \|Q | \| | \| | \| | \| |
| 3+45 | 24.4659 | 110.78 | \|Q | \| | \| | \| | \| |
| 3+50 | 25.2326 | 111.31 | \|Q | \| | \| | \| | \| |
| 3+55 | 26.0030 | 111.87 | \|Q | \| | \| | \| | \| |
| 4+ 0 | 26.7773 | 112.42 | \|Q | \| | \| | \| | \| |
| 4+ 5 | 27.5555 | 113.00 | \|Q | \| | \| | \| | \| |
| 4+10 | 28.3377 | 113.57 | \|Q | \| | \| | \| | \| |
| 4+15 | 29.1239 | 114.15 | \|QV | \| | \| | \| | \| |
| 4+20 | 29.9138 | 114.70 | \|QV | \| | \| | \| | \| |
| 4+25 | 30.7076 | 115.25 | \|QV | \| | \| | \| | \| |
| 4+30 | 31.5051 | 115.80 | \|QV | \| | \| | \| | \| |
| 4+35 | 32.3065 | 116.37 | \|QV | \| | \| | \| | \| |
| 4+40 | 33.1117 | 116.91 | \|QV | \| | \| | \| | \| |
| 4+45 | 33.9208 | 117.47 | \|QV | \| | \| | \| | \| |
| 4+50 | 34.7336 | 118.02 | \|QV | \| | \| | \| | \| |
| 4+55 | 35.5504 | 118.60 | \|QV | \| | \| | \| | \| |
| 5+ 0 | 36.3709 | 119.14 | \|QV | \| | \| | \| | \| |
| 5+ 5 | 37.1953 | 119.70 | \|QV | \| | \| | \| | \| |
| 5+10 | 38.0234 | 120.25 | \|QV | \| | \| | \| | \| |
| 5+15 | 38.8555 | 120.81 | \|QV | \| | \| | \| | \| |
| 5+20 | 39.6914 | 121.38 | \|QV | \| | \| | \| | \| |
| 5+25 | 40.5313 | 121.96 | \|QV | \| | \| | \| | \| |
| 5+30 | 41.3752 | 122.53 | \|QV | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+35 | 42.2232 | 123.13 | QV | | | | |
| 5+40 | 43.0752 | 123.71 | Q V | | | | |
| 5+45 | 43.9315 | 124.32 | Q V | | | | |
| 5+50 | 44.7918 | 124.92 | Q V | | | | |
| 5+55 | 45.6564 | 125.55 | Q V | | | | |
| 6+ 0 | 46.5253 | 126.16 | Q V | | | | |
| 6+ 5 | 47.3986 | 126.80 | Q V | | | | |
| 6+10 | 48.2762 | 127.43 | Q V | | | | |
| 6+15 | 49.1584 | 128.09 | Q V | | | | |
| 6+20 | 50.0450 | 128.74 | Q V | | | | |
| 6+25 | 50.9363 | 129.41 | Q V | | | | |
| 6+30 | 51.8321 | 130.07 | Q V | | | | |
| 6+35 | 52.7327 | 130.77 | Q V | | | | |
| 6+40 | 53.6380 | 131.45 | Q V | | | | |
| 6+45 | 54.5482 | 132.16 | Q V | | | | |
| 6+50 | 55.4632 | 132.86 | Q V | | | | |
| 6+55 | 56.3832 | 133.59 | Q V | | | | |
| 7+ 0 | 57.3082 | 134.31 | Q  V | | | | |
| 7+ 5 | 58.2384 | 135.06 | Q  V | | | | |
| 7+10 | 59.1737 | 135.80 | Q  V | | | | |
| 7+15 | 60.1143 | 136.58 | Q  V | | | | |
| 7+20 | 61.0602 | 137.34 | Q  V | | | | |
| 7+25 | 62.0115 | 138.13 | Q  V | | | | |
| 7+30 | 62.9682 | 138.92 | Q  V | | | | |
| 7+35 | 63.9306 | 139.74 | Q  V | | | | |
| 7+40 | 64.8985 | 140.54 | Q V | | | | |
| 7+45 | 65.8722 | 141.39 | Q V | | | | |
| 7+50 | 66.8517 | 142.22 | Q V | | | | |
| 7+55 | 67.8372 | 143.09 | Q V | | | | |
| 8+ 0 | 68.8285 | 143.95 | Q V | | | | |
| 8+ 5 | 69.8261 | 144.84 | Q V | | | | |
| 8+10 | 70.8297 | 145.73 | Q V | | | | |
| 8+15 | 71.8397 | 146.65 | Q  V | | | | |
| 8+20 | 72.8560 | 147.57 | Q  V | | | | |
| 8+25 | 73.8789 | 148.52 | Q  V | | | | |
| 8+30 | 74.9083 | 149.47 | Q  V | | | | |
| 8+35 | 75.9445 | 150.45 | Q  V | | | | |
| 8+40 | 76.9874 | 151.43 | Q  V | | | | |
| 8+45 | 78.0373 | 152.45 | Q  V | | | | |
| 8+50 | 79.0941 | 153.46 | Q  V | | | | |
| 8+55 | 80.1583 | 154.51 | Q  V | | | | |
| 9+ 0 | 81.2296 | 155.56 | Q  V | | | | |
| 9+ 5 | 82.3085 | 156.65 | Q  V | | | | |
| 9+10 | 83.3948 | 157.73 | Q  V | | | | |
| 9+15 | 84.4889 | 158.86 | Q  V | | | | |
| 9+20 | 85.5907 | 159.99 | Q  V | | | | |
| 9+25 | 86.7006 | 161.16 | Q   V | | | | |
| 9+30 | 87.8185 | 162.32 | Q   V | | | | |
| 9+35 | 88.9448 | 163.54 | Q   V | | | | |
| 9+40 | 90.0795 | 164.75 | Q   V | | | | |
| 9+45 | 91.2228 | 166.01 | Q   V | | | | |
| 9+50 | 92.3748 | 167.27 | Q   V | | | | |
| 9+55 | 93.5359 | 168.58 | Q   V | | | | |
| 10+ 0 | 94.7059 | 169.89 | Q   V | | | | |
| 10+ 5 | 95.8854 | 171.26 | Q   V | | | | |
| 10+10 | 97.0742 | 172.62 | Q   V | | | | |
| 10+15 | 98.2729 | 174.04 | Q   V | | | | |
| 10+20 | 99.4813 | 175.46 | Q   V | | | | |
| 10+25 | 100.6999 | 176.95 | Q    V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10+30 | 101.9288 | 178.43 | Q V | | | | |
| 10+35 | 103.1683 | 179.98 | Q V | | | | |
| 10+40 | 104.4185 | 181.52 | Q V | | | | |
| 10+45 | 105.6798 | 183.15 | Q V | | | | |
| 10+50 | 106.9523 | 184.76 | Q V | | | | |
| 10+55 | 108.2364 | 186.46 | Q V | | | | |
| 11+ 0 | 109.5322 | 188.15 | Q V | | | | |
| 11+ 5 | 110.8402 | 189.93 | Q V | | | | |
| 11+10 | 112.1605 | 191.70 | Q V | | | | |
| 11+15 | 113.4936 | 193.57 | Q V | | | | |
| 11+20 | 114.8396 | 195.43 | Q V | | | | |
| 11+25 | 116.1990 | 197.39 | Q V | | | | |
| 11+30 | 117.5719 | 199.35 | Q V | | | | |
| 11+35 | 118.9591 | 201.41 | Q V | | | | |
| 11+40 | 120.3604 | 203.48 | Q V | | | | |
| 11+45 | 121.7768 | 205.65 | Q V | | | | |
| 11+50 | 123.2081 | 207.83 | Q V | | | | |
| 11+55 | 124.6552 | 210.13 | Q V | | | | |
| 12+ 0 | 126.1182 | 212.43 | Q V | | | | |
| 12+ 5 | 127.5980 | 214.86 | Q V | | | | |
| 12+10 | 129.0946 | 217.31 | Q V | | | | |
| 12+15 | 130.6091 | 219.90 | Q V | | | | |
| 12+20 | 132.1416 | 222.51 | Q V | | | | |
| 12+25 | 133.6930 | 225.27 | Q V | | | | |
| 12+30 | 135.2636 | 228.06 | Q V | | | | |
| 12+35 | 136.8547 | 231.02 | Q V | | | | |
| 12+40 | 138.4663 | 234.02 | Q V | | | | |
| 12+45 | 140.1002 | 237.23 | Q V | | | | |
| 12+50 | 141.7559 | 240.42 | Q V | | | | |
| 12+55 | 143.4349 | 243.79 | Q V | | | | |
| 13+ 0 | 145.1373 | 247.19 | Q V | | | | |
| 13+ 5 | 146.8646 | 250.80 | Q V | | | | |
| 13+10 | 148.6169 | 254.44 | Q V | | | | |
| 13+15 | 150.3960 | 258.33 | Q V | | | | |
| 13+20 | 152.2022 | 262.25 | Q V | | | | |
| 13+25 | 154.0372 | 266.45 | Q V | | | | |
| 13+30 | 155.9016 | 270.71 | Q V | | | | |
| 13+35 | 157.7974 | 275.27 | Q V | | | | |
| 13+40 | 159.7251 | 279.90 | Q V | | | | |
| 13+45 | 161.6870 | 284.87 | Q V | | | | |
| 13+50 | 163.6838 | 289.93 | Q V | | | | |
| 13+55 | 165.7181 | 295.38 | Q V | | | | |
| 14+ 0 | 167.7908 | 300.95 | Q V | | | | |
| 14+ 5 | 169.9119 | 307.98 | Q V | | | | |
| 14+10 | 172.0914 | 316.48 | Q V | | | | |
| 14+15 | 174.3396 | 326.43 | Q V | | | | |
| 14+20 | 176.6643 | 337.54 | Q V | | | | |
| 14+25 | 179.0766 | 350.28 | Q V | | | | |
| 14+30 | 181.5931 | 365.40 | Q V | | | | |
| 14+35 | 184.2343 | 383.51 | Q V | | | | |
| 14+40 | 187.0375 | 407.02 | Q V | | | | |
| 14+45 | 190.0556 | 438.22 | Q V | | | | |
| 14+50 | 193.2225 | 459.84 | Q V | | | | |
| 14+55 | 196.5210 | 478.94 | Q V | | | | |
| 15+ 0 | 199.9449 | 497.14 | Q V | | | | |
| 15+ 5 | 203.4974 | 515.83 | Q V | | | | |
| 15+10 | 207.1779 | 534.41 | Q V | | | | |
| 15+15 | 210.9971 | 554.55 | Q V | | | | |
| 15+20 | 214.9590 | 575.26 | Q V | | | | |



| | | | |
|---|---|---|---|
| 15+25 | 219.0607 | 595.57 | |
| 15+30 | 223.2884 | 613.87 | |
| 15+35 | 227.6466 | 632.81 | |
| 15+40 | 232.1351 | 651.72 | |
| 15+45 | 236.7700 | 673.00 | |
| 15+50 | 241.5477 | 693.71 | |
| 15+55 | 246.5035 | 719.59 | |
| 16+ 0 | 251.6632 | 749.19 | |
| 16+ 5 | 257.5093 | 848.86 | |
| 16+10 | 264.3796 | 997.57 | |
| 16+15 | 272.1685 | 1130.94 | |
| 16+20 | 280.9315 | 1272.39 | |
| 16+25 | 290.8231 | 1436.27 | |
| 16+30 | 302.4684 | 1690.89 | |
| 16+35 | 316.0612 | 1973.68 | |
| 16+40 | 332.5999 | 2401.42 | |
| 16+45 | 351.8802 | 2799.51 | |
| 16+50 | 365.2308 | 1938.50 | |
| 16+55 | 375.9853 | 1561.56 | |
| 17+ 0 | 385.5246 | 1385.10 | |
| 17+ 5 | 394.3893 | 1287.16 | |
| 17+10 | 402.4985 | 1177.45 | |
| 17+15 | 410.1809 | 1115.49 | |
| 17+20 | 417.2800 | 1030.79 | |
| 17+25 | 423.9709 | 971.51 | |
| 17+30 | 430.1762 | 901.01 | |
| 17+35 | 435.9912 | 844.33 | |
| 17+40 | 441.4095 | 786.74 | |
| 17+45 | 446.4156 | 726.90 | |
| 17+50 | 451.0965 | 679.66 | |
| 17+55 | 455.4666 | 634.54 | |
| 18+ 0 | 459.6079 | 601.32 | |
| 18+ 5 | 463.4980 | 564.85 | |
| 18+10 | 467.1958 | 536.91 | |
| 18+15 | 470.6554 | 502.33 | |
| 18+20 | 473.9500 | 478.38 | |
| 18+25 | 477.0269 | 446.77 | |
| 18+30 | 479.9703 | 427.38 | |
| 18+35 | 482.7549 | 404.32 | |
| 18+40 | 485.4166 | 386.48 | |
| 18+45 | 487.9042 | 361.20 | |
| 18+50 | 490.2677 | 343.18 | |
| 18+55 | 492.4524 | 317.22 | |
| 19+ 0 | 494.5307 | 301.77 | |
| 19+ 5 | 496.5436 | 292.27 | |
| 19+10 | 498.4962 | 283.52 | |
| 19+15 | 500.3806 | 273.60 | |
| 19+20 | 502.2028 | 264.59 | |
| 19+25 | 503.9751 | 257.35 | |
| 19+30 | 505.6986 | 250.25 | |
| 19+35 | 507.3624 | 241.59 | |
| 19+40 | 508.9633 | 232.45 | |
| 19+45 | 510.5273 | 227.09 | |
| 19+50 | 512.0584 | 222.32 | |
| 19+55 | 513.5626 | 218.41 | |
| 20+ 0 | 515.0466 | 215.47 | |
| 20+ 5 | 516.5024 | 211.38 | |
| 20+10 | 517.9280 | 207.00 | |
| 20+15 | 519.3192 | 202.01 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20+20 | 520.6595 | 194.61 | Q | | | | V |
| 20+25 | 521.9690 | 190.14 | Q | | | | V |
| 20+30 | 523.2539 | 186.56 | Q | | | | V |
| 20+35 | 524.5140 | 182.97 | Q | | | | V |
| 20+40 | 525.7400 | 178.01 | Q | | | | V |
| 20+45 | 526.9395 | 174.16 | Q | | | | V |
| 20+50 | 528.1178 | 171.09 | Q | | | | V |
| 20+55 | 529.2811 | 168.91 | Q | | | | V |
| 21+ 0 | 530.3990 | 162.32 | Q | | | | V |
| 21+ 5 | 531.4964 | 159.34 | Q | | | | V |
| 21+10 | 532.5763 | 156.80 | Q | | | | V |
| 21+15 | 533.6400 | 154.45 | Q | | | | V |
| 21+20 | 534.6877 | 152.13 | Q | | | | V |
| 21+25 | 535.7200 | 149.89 | Q | | | | V |
| 21+30 | 536.7362 | 147.56 | Q | | | | V |
| 21+35 | 537.7371 | 145.33 | Q | | | | V |
| 21+40 | 538.7247 | 143.40 | Q | | | | V |
| 21+45 | 539.6996 | 141.56 | Q | | | | V |
| 21+50 | 540.6623 | 139.79 | Q | | | | V |
| 21+55 | 541.6131 | 138.05 | Q | | | | V |
| 22+ 0 | 542.5527 | 136.42 | Q | | | | V |
| 22+ 5 | 543.4814 | 134.85 | Q | | | | V |
| 22+10 | 544.3996 | 133.33 | Q | | | | V |
| 22+15 | 545.3076 | 131.85 | Q | | | | V |
| 22+20 | 546.2058 | 130.42 | Q | | | | V |
| 22+25 | 547.0944 | 129.02 | Q | | | | V |
| 22+30 | 547.9737 | 127.67 | Q | | | | V |
| 22+35 | 548.8440 | 126.36 | Q | | | | V |
| 22+40 | 549.7055 | 125.09 | Q | | | | V |
| 22+45 | 550.5584 | 123.85 | Q | | | | V |
| 22+50 | 551.4031 | 122.64 | Q | | | | V |
| 22+55 | 552.2396 | 121.46 | Q | | | | V |
| 23+ 0 | 553.0682 | 120.31 | Q | | | | V |
| 23+ 5 | 553.8891 | 119.19 | Q | | | | V |
| 23+10 | 554.7024 | 118.10 | Q | | | | V |
| 23+15 | 555.5084 | 117.03 | Q | | | | V |
| 23+20 | 556.3073 | 115.99 | Q | | | | V |
| 23+25 | 557.0991 | 114.97 | Q | | | | V |
| 23+30 | 557.8840 | 113.98 | Q | | | | V |
| 23+35 | 558.6623 | 113.00 | Q | | | | V |
| 23+40 | 559.4340 | 112.05 | Q | | | | V |
| 23+45 | 560.1993 | 111.12 | Q | | | | V |
| 23+50 | 560.9583 | 110.21 | Q | | | | V |
| 23+55 | 561.7111 | 109.32 | Q | | | | V |
| 24+ 0 | 562.4580 | 108.44 | Q | | | | V |
| 24+ 5 | 563.1939 | 106.86 | Q | | | | V |
| 24+10 | 563.9126 | 104.35 | Q | | | | V |
| 24+15 | 564.6096 | 101.21 | Q | | | | V |
| 24+20 | 565.2806 | 97.42 | Q | | | | V |
| 24+25 | 565.9208 | 92.96 | Q | | | | V |
| 24+30 | 566.5203 | 87.04 | Q | | | | V |
| 24+35 | 567.0682 | 79.56 | Q | | | | V |
| 24+40 | 567.5403 | 68.55 | Q | | | | V |
| 24+45 | 567.9039 | 52.80 | Q | | | | V |
| 24+50 | 568.2101 | 44.46 | Q | | | | V |
| 24+55 | 568.4775 | 38.82 | Q | | | | V |
| 25+ 0 | 568.7139 | 34.33 | Q | | | | V |
| 25+ 5 | 568.9241 | 30.52 | Q | | | | V |
| 25+10 | 569.1128 | 27.41 | Q | | | | V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+15 | 569.2814 | 24.47 | Q | \| | \| | \| | V\| |
| 25+20 | 569.4327 | 21.97 | Q | \| | \| | \| | V\| |
| 25+25 | 569.5682 | 19.67 | Q | \| | \| | \| | V\| |
| 25+30 | 569.6899 | 17.67 | Q | \| | \| | \| | V\| |
| 25+35 | 569.7991 | 15.86 | Q | \| | \| | \| | V\| |
| 25+40 | 569.8970 | 14.22 | Q | \| | \| | \| | V\| |
| 25+45 | 569.9846 | 12.71 | Q | \| | \| | \| | V\| |
| 25+50 | 570.0627 | 11.34 | Q | \| | \| | \| | V\| |
| 25+55 | 570.1325 | 10.13 | Q | \| | \| | \| | V\| |
| 26+ 0 | 570.1944 | 9.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 570.2494 | 7.99 | Q | \| | \| | \| | V\| |
| 26+10 | 570.2980 | 7.04 | Q | \| | \| | \| | V\| |
| 26+15 | 570.3409 | 6.24 | Q | \| | \| | \| | V\| |
| 26+20 | 570.3786 | 5.48 | Q | \| | \| | \| | V\| |
| 26+25 | 570.4121 | 4.86 | Q | \| | \| | \| | V\| |
| 26+30 | 570.4415 | 4.27 | Q | \| | \| | \| | V\| |
| 26+35 | 570.4673 | 3.75 | Q | \| | \| | \| | V\| |
| 26+40 | 570.4897 | 3.26 | Q | \| | \| | \| | V\| |
| 26+45 | 570.5095 | 2.87 | Q | \| | \| | \| | V\| |
| 26+50 | 570.5269 | 2.52 | Q | \| | \| | \| | V\| |
| 26+55 | 570.5428 | 2.31 | Q | \| | \| | \| | V\| |
| 27+ 0 | 570.5575 | 2.13 | Q | \| | \| | \| | V\| |
| 27+ 5 | 570.5710 | 1.97 | Q | \| | \| | \| | V\| |
| 27+10 | 570.5834 | 1.80 | Q | \| | \| | \| | V\| |
| 27+15 | 570.5948 | 1.65 | Q | \| | \| | \| | V\| |
| 27+20 | 570.6051 | 1.51 | Q | \| | \| | \| | V\| |
| 27+25 | 570.6146 | 1.37 | Q | \| | \| | \| | V\| |
| 27+30 | 570.6231 | 1.23 | Q | \| | \| | \| | V\| |
| 27+35 | 570.6308 | 1.12 | Q | \| | \| | \| | V\| |
| 27+40 | 570.6379 | 1.03 | Q | \| | \| | \| | V\| |
| 27+45 | 570.6444 | 0.95 | Q | \| | \| | \| | V\| |
| 27+50 | 570.6503 | 0.86 | Q | \| | \| | \| | V\| |
| 27+55 | 570.6557 | 0.78 | Q | \| | \| | \| | V\| |
| 28+ 0 | 570.6603 | 0.68 | Q | \| | \| | \| | V\| |
| 28+ 5 | 570.6643 | 0.58 | Q | \| | \| | \| | V\| |
| 28+10 | 570.6676 | 0.48 | Q | \| | \| | \| | V\| |
| 28+15 | 570.6702 | 0.38 | Q | \| | \| | \| | V\| |
| 28+20 | 570.6725 | 0.32 | Q | \| | \| | \| | V\| |
| 28+25 | 570.6743 | 0.27 | Q | \| | \| | \| | V\| |
| 28+30 | 570.6758 | 0.22 | Q | \| | \| | \| | V\| |
| 28+35 | 570.6769 | 0.16 | Q | \| | \| | \| | V\| |
| 28+40 | 570.6778 | 0.13 | Q | \| | \| | \| | V\| |
| 28+45 | 570.6785 | 0.10 | Q | \| | \| | \| | V\| |
| 28+50 | 570.6789 | 0.07 | Q | \| | \| | \| | V\| |
| 28+55 | 570.6791 | 0.03 | Q | \| | \| | \| | V\| |
| 29+ 0 | 570.6793 | 0.02 | Q | \| | \| | \| | V\| |
| 29+ 5 | 570.6794 | 0.02 | Q | \| | \| | \| | V\| |
| 29+10 | 570.6795 | 0.01 | Q | \| | \| | \| | V\| |
| 29+15 | 570.6795 | 0.01 | Q | \| | \| | \| | V\| |
| 29+20 | 570.6796 | 0.01 | Q | \| | \| | \| | V\| |
| 29+25 | 570.6796 | 0.00 | Q | \| | \| | \| | V\| |

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**********HYDROGRAPH DATA**********

Number of intervals = 353
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2799.507 (CFS)
Total volume = 570.680 (Ac.Ft)

Status of hydrographs being held in storage

| Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|

```
        Peak (CFS)   2799.507     0.000     0.000     0.000     0.000
        Vol (Ac.Ft)    570.680     0.000     0.000     0.000     0.000
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Process from Point/Station        1.000 to Point/Station        1.100
**** STREAM ROUTING SCS CONVEX METHOD ****
______________________________________________________________________________
HYDROGRAPH STREAM ROUTING DATA:
Length of stream =  14544.00 (Ft.)
Elevation difference =  800.00 (Ft.)
Slope of channel =  0.055006 (Vert/Horiz)
Channel type - Improved Channel


Channel length = 14544.00(Ft.)     Elevation difference = 800.00(Ft.)
Channel evaluation using mean flow rate of hydrograph
Channel base width  =  350.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Manning's 'N'    = 0.035
Maximum depth of channel  =    4.000(Ft.)
Flow(q) thru subarea =    268.931(CFS)
Depth of flow =     0.215(Ft.)
Average velocity =     3.570(Ft/s)
Total flow rate =   268.931(CFS)
Channel flow top width =  350.860(Ft.)
Depth of flow in channel =   0.21(Ft.)
Total number of channels (same dimensions) = 1
Flow Velocity =    3.57(Ft/s)
Travel time  =   55.85 min.
Individual channel flow =  268.931(CFS)
Total capacity of improved channels =    268.931(CFS)
Critical Depth in Channel =    0.26(Ft.)


Channel evaluation using maximum flow rate of hydrograph
Flow(q) thru subarea =   2799.507(CFS)
Depth of flow =     0.876(Ft.)
Average velocity =     9.082(Ft/s)
Total flow rate =  2799.507(CFS)
Channel flow top width =  353.505(Ft.)
Depth of flow in channel =   0.88(Ft.)
Total number of channels (same dimensions) = 1
Flow Velocity =    9.08(Ft/s)
Travel time  =   55.85 min.
Individual channel flow = 2799.507(CFS)
Total capacity of improved channels =   2799.507(CFS)
Critical Depth in Channel =    1.25(Ft.)


********************** SCS CONVEX CHANNEL ROUTING ********************
Convex method of stream routing  data items:
Using equation: Outflow =
O(t+dt) = (1-c*)O(t+dt-dt*) + Input(c*)
          where c* = 1 - (1-c)^e and dt = c(length)/velocity
```

c(v/v+1.7) = 0.8423 Travel time = 26.69 (min.)
dt*(unit time interval) = 5.00(min.), e= 0.4816
dt(routing time-step) = 22.48 (min.), c* = 0.5892

Output hydrograph delayed by 0 unit time increments

P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals (CFS)

| Time(h+m) | Out = O(CFS) | In = I | 0 | 699.9 | 1399.8 | 2099.6 | 2799.5 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.3348 | 0.73 | O | | | | |
| 0+10 | 1.3357 | 2.41 | O | | | | |
| 0+15 | 3.0426 | 4.76 | O | | | | |
| 0+20 | 5.4411 | 7.79 | O | | | | |
| 0+25 | 8.5440 | 11.54 | O | | | | |
| 0+30 | 12.7286 | 16.82 | O | | | | |
| 0+35 | 18.2973 | 23.71 | O | | | | |
| 0+40 | 26.3090 | 34.24 | O | | | | |
| 0+45 | 38.0282 | 49.62 | O | | | | |
| 0+50 | 48.5791 | 57.74 | O | | | | |
| 0+55 | 56.5009 | 63.25 | O | | | | |
| 1+ 0 | 62.5047 | 67.68 | O | | | | |
| 1+ 5 | 67.2864 | 71.46 | OI | | | | |
| 1+10 | 71.1846 | 74.60 | \|O | | | | |
| 1+15 | 74.5703 | 77.60 | \|O | | | | |
| 1+20 | 77.5385 | 80.18 | \|O | | | | |
| 1+25 | 80.2108 | 82.61 | \|O | | | | |
| 1+30 | 82.6075 | 84.75 | \|O | | | | |
| 1+35 | 84.7833 | 86.74 | \|O | | | | |
| 1+40 | 86.7787 | 88.58 | \|O | | | | |
| 1+45 | 88.6288 | 90.30 | \|O | | | | |
| 1+50 | 90.3489 | 91.90 | \|O | | | | |
| 1+55 | 91.9370 | 93.37 | \|O | | | | |
| 2+ 0 | 93.4221 | 94.77 | \|O | | | | |
| 2+ 5 | 94.8084 | 96.06 | \|O | | | | |
| 2+10 | 96.1151 | 97.30 | \|O | | | | |
| 2+15 | 97.3284 | 98.42 | \|O | | | | |
| 2+20 | 98.4672 | 99.50 | \|O | | | | |
| 2+25 | 99.5159 | 100.46 | \|O | | | | |
| 2+30 | 100.4985 | 101.39 | \|O | | | | |
| 2+35 | 101.4251 | 102.27 | \|O | | | | |
| 2+40 | 102.3090 | 103.11 | \|O | | | | |
| 2+45 | 103.1330 | 103.88 | \|O | | | | |
| 2+50 | 103.9040 | 104.60 | \|O | | | | |
| 2+55 | 104.5959 | 105.21 | \|O | | | | |
| 3+ 0 | 105.2165 | 105.77 | \|O | | | | |
| 3+ 5 | 105.8081 | 106.35 | \|O | | | | |
| 3+10 | 106.3869 | 106.92 | \|O | | | | |
| 3+15 | 106.9598 | 107.49 | \|O | | | | |
| 3+20 | 107.5221 | 108.04 | \|O | | | | |
| 3+25 | 108.0851 | 108.60 | \|O | | | | |
| 3+30 | 108.6476 | 109.16 | \|O | | | | |
| 3+35 | 109.2081 | 109.72 | \|O | | | | |

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|---|---|---|---|---|---|---|---|
| 3+40 | 109.7507 | 110.24 | O | | | | |
| 3+45 | 110.2884 | 110.78 | O | | | | |
| 3+50 | 110.8232 | 111.31 | O | | | | |
| 3+55 | 111.3654 | 111.87 | O | | | | |
| 4+ 0 | 111.9161 | 112.42 | O | | | | |
| 4+ 5 | 112.4797 | 113.00 | O | | | | |
| 4+10 | 113.0478 | 113.57 | O | | | | |
| 4+15 | 113.6232 | 114.15 | O | | | | |
| 4+20 | 114.1854 | 114.70 | O | | | | |
| 4+25 | 114.7423 | 115.25 | O | | | | |
| 4+30 | 115.2953 | 115.80 | O | | | | |
| 4+35 | 115.8540 | 116.37 | O | | | | |
| 4+40 | 116.4074 | 116.91 | O | | | | |
| 4+45 | 116.9613 | 117.47 | O | | | | |
| 4+50 | 117.5137 | 118.02 | O | | | | |
| 4+55 | 118.0786 | 118.60 | O | | | | |
| 5+ 0 | 118.6332 | 119.14 | O | | | | |
| 5+ 5 | 119.1866 | 119.70 | O | | | | |
| 5+10 | 119.7383 | 120.25 | O | | | | |
| 5+15 | 120.2980 | 120.81 | O | | | | |
| 5+20 | 120.8600 | 121.38 | O | | | | |
| 5+25 | 121.4317 | 121.96 | O | | | | |
| 5+30 | 122.0059 | 122.53 | O | | | | |
| 5+35 | 122.5889 | 123.13 | O | | | | |
| 5+40 | 123.1747 | 123.71 | O | | | | |
| 5+45 | 123.7708 | 124.32 | O | | | | |
| 5+50 | 124.3705 | 124.92 | O | | | | |
| 5+55 | 124.9813 | 125.55 | O | | | | |
| 6+ 0 | 125.5960 | 126.16 | O | | | | |
| 6+ 5 | 126.2222 | 126.80 | O | | | | |
| 6+10 | 126.8525 | 127.43 | O | | | | |
| 6+15 | 127.4948 | 128.09 | O | | | | |
| 6+20 | 128.1414 | 128.74 | O | | | | |
| 6+25 | 128.8005 | 129.41 | O | | | | |
| 6+30 | 129.4641 | 130.07 | O | | | | |
| 6+35 | 130.1407 | 130.77 | O | | | | |
| 6+40 | 130.8220 | 131.45 | O | | | | |
| 6+45 | 131.5168 | 132.16 | O | | | | |
| 6+50 | 132.2167 | 132.86 | O | | | | |
| 6+55 | 132.9305 | 133.59 | O | | | | |
| 7+ 0 | 133.6498 | 134.31 | O | | | | |
| 7+ 5 | 134.3835 | 135.06 | O | | | | |
| 7+10 | 135.1229 | 135.80 | O | | | | |
| 7+15 | 135.8774 | 136.58 | O | | | | |
| 7+20 | 136.6380 | 137.34 | O | | | | |
| 7+25 | 137.4143 | 138.13 | O | | | | |
| 7+30 | 138.1970 | 138.92 | O | | | | |
| 7+35 | 138.9961 | 139.74 | O | | | | |
| 7+40 | 139.8020 | 140.54 | OI | | | | |
| 7+45 | 140.6250 | 141.39 | O | | | | |
| 7+50 | 141.4553 | 142.22 | O | | | | |
| 7+55 | 142.3033 | 143.09 | O | | | | |
| 8+ 0 | 143.1591 | 143.95 | O | | | | |
| 8+ 5 | 144.0335 | 144.84 | O | | | | |
| 8+10 | 144.9160 | 145.73 | O | | | | |
| 8+15 | 145.8181 | 146.65 | O | | | | |
| 8+20 | 146.7288 | 147.57 | O | | | | |
| 8+25 | 147.6600 | 148.52 | O | | | | |
| 8+30 | 148.6004 | 149.47 | O | | | | |

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|---|---|---|---|---|---|---|---|
| 8+35 | 149.5622 | 150.45 | O | | | | |
| 8+40 | 150.5339 | 151.43 | O | | | | |
| 8+45 | 151.5280 | 152.45 | O | | | | |
| 8+50 | 152.5327 | 153.46 | O | | | | |
| 8+55 | 153.5609 | 154.51 | O | | | | |
| 9+ 0 | 154.6003 | 155.56 | O | | | | |
| 9+ 5 | 155.6646 | 156.65 | O | | | | |
| 9+10 | 156.7408 | 157.73 | O | | | | |
| 9+15 | 157.8431 | 158.86 | O | | | | |
| 9+20 | 158.9583 | 159.99 | O | | | | |
| 9+25 | 160.1010 | 161.16 | O | | | | |
| 9+30 | 161.2575 | 162.32 | O | | | | |
| 9+35 | 162.4429 | 163.54 | O | | | | |
| 9+40 | 163.6432 | 164.75 | O | | | | |
| 9+45 | 164.8741 | 166.01 | O | | | | |
| 9+50 | 166.1209 | 167.27 | O | | | | |
| 9+55 | 167.4000 | 168.58 | O | | | | |
| 10+ 0 | 168.6963 | 169.89 | O | | | | |
| 10+ 5 | 170.0269 | 171.26 | O | | | | |
| 10+10 | 171.3760 | 172.62 | O | | | | |
| 10+15 | 172.7615 | 174.04 | O | | | | |
| 10+20 | 174.1669 | 175.46 | O | | | | |
| 10+25 | 175.6109 | 176.95 | O | | | | |
| 10+30 | 177.0765 | 178.43 | O | | | | |
| 10+35 | 178.5833 | 179.98 | O | | | | |
| 10+40 | 180.1134 | 181.52 | O | | | | |
| 10+45 | 181.6874 | 183.15 | O | | | | |
| 10+50 | 183.2867 | 184.76 | O | | | | |
| 10+55 | 184.9329 | 186.46 | O | | | | |
| 11+ 0 | 186.6067 | 188.15 | O | | | | |
| 11+ 5 | 188.3306 | 189.93 | O | | | | |
| 11+10 | 190.0845 | 191.70 | O | | | | |
| 11+15 | 191.8923 | 193.57 | O | | | | |
| 11+20 | 193.7328 | 195.43 | O | | | | |
| 11+25 | 195.6313 | 197.39 | O | | | | |
| 11+30 | 197.5654 | 199.35 | O | | | | |
| 11+35 | 199.5621 | 201.41 | O | | | | |
| 11+40 | 201.5980 | 203.48 | O | | | | |
| 11+45 | 203.7014 | 205.65 | O | | | | |
| 11+50 | 205.8479 | 207.83 | O | | | | |
| 11+55 | 208.0676 | 210.13 | OI | | | | |
| 12+ 0 | 210.3347 | 212.43 | O | | | | |
| 12+ 5 | 212.6836 | 214.86 | O | | | | |
| 12+10 | 215.0890 | 217.31 | O | | | | |
| 12+15 | 217.5855 | 219.90 | O | | | | |
| 12+20 | 220.1446 | 222.51 | O | | | | |
| 12+25 | 222.8031 | 225.27 | O | | | | |
| 12+30 | 225.5331 | 228.06 | O | | | | |
| 12+35 | 228.3759 | 231.02 | O | | | | |
| 12+40 | 231.3064 | 234.02 | O | | | | |
| 12+45 | 234.3747 | 237.23 | O | | | | |
| 12+50 | 237.5175 | 240.42 | O | | | | |
| 12+55 | 240.7717 | 243.79 | O | | | | |
| 13+ 0 | 244.1061 | 247.19 | O | | | | |
| 13+ 5 | 247.5749 | 250.80 | O | | | | |
| 13+10 | 251.1423 | 254.44 | O | | | | |
| 13+15 | 254.8652 | 258.33 | O | | | | |
| 13+20 | 258.7041 | 262.25 | O | | | | |
| 13+25 | 262.7196 | 266.45 | O | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 13+30 | 266.8694 | 270.71 | O | | | | |
| 13+35 | 271.2197 | 275.27 | O | | | | |
| 13+40 | 275.7258 | 279.90 | O | | | | |
| 13+45 | 280.4613 | 284.87 | O | | | | |
| 13+50 | 285.3784 | 289.93 | O | | | | |
| 13+55 | 290.5593 | 295.38 | O | | | | |
| 14+ 0 | 295.9535 | 300.95 | O | | | | |
| 14+ 5 | 302.1194 | 307.98 | O | | | | |
| 14+10 | 309.4654 | 316.48 | O | | | | |
| 14+15 | 318.1571 | 326.43 | O | | | | |
| 14+20 | 328.1225 | 337.54 | O | | | | |
| 14+25 | 339.5061 | 350.28 | OI | | | | |
| 14+30 | 352.7783 | 365.40 | O | | | | |
| 14+35 | 368.5094 | 383.51 | O | | | | |
| 14+40 | 388.1202 | 407.02 | O | | | | |
| 14+45 | 413.5524 | 438.22 | OI | | | | |
| 14+50 | 437.9907 | 459.84 | O | | | | |
| 14+55 | 459.6158 | 478.94 | O | | | | |
| 15+ 0 | 479.3410 | 497.14 | OI | | | | |
| 15+ 5 | 498.3890 | 515.83 | O | | | | |
| 15+10 | 517.1764 | 534.41 | O | | | | |
| 15+15 | 536.5581 | 554.55 | O | | | | |
| 15+20 | 556.6469 | 575.26 | OI | | | | |
| 15+25 | 576.9196 | 595.57 | O | | | | |
| 15+30 | 596.2904 | 613.87 | O | | | | |
| 15+35 | 615.3245 | 632.81 | OI | | | | |
| 15+40 | 634.2907 | 651.72 | O | | | | |
| 15+45 | 654.3074 | 673.00 | O | | | | |
| 15+50 | 674.8099 | 693.71 | O | | | | |
| 15+55 | 697.8019 | 719.59 | OI | | | | |
| 16+ 0 | 724.1992 | 749.19 | O | | | | |
| 16+ 5 | 784.5857 | 848.86 | OI | | | | |
| 16+10 | 890.5870 | 997.57 | O I | | | | |
| 16+15 | 1014.7255 | 1130.94 | O I | | | | |
| 16+20 | 1148.0017 | 1272.39 | O I | | | | |
| 16+25 | 1296.3703 | 1436.27 | O I | | | | |
| 16+30 | 1495.4506 | 1690.89 | O I | | | | |
| 16+35 | 1740.1607 | 1973.68 | O I | | | | |
| 16+40 | 2073.7155 | 2401.42 | O | I | | | |
| 16+45 | 2449.1786 | 2799.51 | O | I | | | |
| 16+50 | 2261.1126 | 1938.50 | O | I | | | |
| 16+55 | 1898.3386 | 1561.56 | I O | I | | | |
| 17+ 0 | 1619.0663 | 1385.10 | I O | | | | |
| 17+ 5 | 1436.3466 | 1287.16 | I O | | | | |
| 17+10 | 1298.1841 | 1177.45 | I O | | | | |
| 17+15 | 1198.6615 | 1115.49 | I O | | | | |
| 17+20 | 1110.8526 | 1030.79 | IO | | | | |
| 17+25 | 1036.5235 | 971.51 | IO | | | | |
| 17+30 | 965.9214 | 901.01 | IO | | | | |
| 17+35 | 901.7101 | 844.33 | O | | | | |
| 17+40 | 841.5158 | 786.74 | IO | | | | |
| 17+45 | 781.8248 | 726.90 | IO | | | | |
| 17+50 | 727.8181 | 679.66 | IO | | | | |
| 17+55 | 678.7734 | 634.54 | O | | | | |
| 18+ 0 | 637.4906 | 601.32 | IO | | | | |
| 18+ 5 | 599.4696 | 564.85 | O | | | | |
| 18+10 | 566.2727 | 536.91 | IO | | | | |
| 18+15 | 533.1305 | 502.33 | O | | | | |
| 18+20 | 504.0097 | 478.38 | IO | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 18+25 | 474.4255 | 446.77 | O | | | |
| 18+30 | 449.2470 | 427.38 | O | | | |
| 18+35 | 425.7997 | 404.32 | IO | | | |
| 18+40 | 404.9730 | 386.48 | O | | | |
| 18+45 | 382.4947 | 361.20 | O | | | |
| 18+50 | 361.6929 | 343.18 | IO | | | |
| 18+55 | 338.8925 | 317.22 | O | | | |
| 19+ 0 | 319.0462 | 301.77 | O | | | |
| 19+ 5 | 304.5150 | 292.27 | O | | | |
| 19+10 | 293.2910 | 283.52 | O | | | |
| 19+15 | 282.9907 | 273.60 | IO | | | |
| 19+20 | 273.3287 | 264.59 | O | | | |
| 19+25 | 264.8608 | 257.35 | O | | | |
| 19+30 | 257.1816 | 250.25 | O | | | |
| 19+35 | 249.1276 | 241.59 | O | | | |
| 19+40 | 240.5004 | 232.45 | O | | | |
| 19+45 | 233.3009 | 227.09 | O | | | |
| 19+50 | 227.4564 | 222.32 | O | | | |
| 19+55 | 222.6383 | 218.41 | O | | | |
| 20+ 0 | 218.7996 | 215.47 | O | | | |
| 20+ 5 | 214.9639 | 211.38 | O | | | |
| 20+10 | 210.8448 | 207.00 | IO | | | |
| 20+15 | 206.2910 | 202.01 | O | | | |
| 20+20 | 200.3782 | 194.61 | O | | | |
| 20+25 | 194.9340 | 190.14 | O | | | |
| 20+30 | 190.4698 | 186.56 | O | | | |
| 20+35 | 186.5228 | 182.97 | O | | | |
| 20+40 | 182.1591 | 178.01 | O | | | |
| 20+45 | 177.9520 | 174.16 | O | | | |
| 20+50 | 174.3132 | 171.09 | O | | | |
| 20+55 | 171.4136 | 168.91 | O | | | |
| 21+ 0 | 166.9199 | 162.32 | O | | | |
| 21+ 5 | 162.8464 | 159.34 | O | | | |
| 21+10 | 159.6157 | 156.80 | O | | | |
| 21+15 | 156.8785 | 154.45 | O | | | |
| 21+20 | 154.3841 | 152.13 | O | | | |
| 21+25 | 152.0301 | 149.89 | O | | | |
| 21+30 | 149.7000 | 147.56 | O | | | |
| 21+35 | 147.4157 | 145.33 | O | | | |
| 21+40 | 145.3017 | 143.40 | O | | | |
| 21+45 | 143.3386 | 141.56 | O | | | |
| 21+50 | 141.4779 | 139.79 | IO | | | |
| 21+55 | 139.6863 | 138.05 | O | | | |
| 22+ 0 | 137.9770 | 136.42 | O | | | |
| 22+ 5 | 136.3407 | 134.85 | O | | | |
| 22+10 | 134.7642 | 133.33 | O | | | |
| 22+15 | 133.2402 | 131.85 | O | | | |
| 22+20 | 131.7639 | 130.42 | O | | | |
| 22+25 | 130.3320 | 129.02 | O | | | |
| 22+30 | 128.9429 | 127.67 | O | | | |
| 22+35 | 127.5951 | 126.36 | O | | | |
| 22+40 | 126.2857 | 125.09 | O | | | |
| 22+45 | 125.0122 | 123.85 | O | | | |
| 22+50 | 123.7727 | 122.64 | O | | | |
| 22+55 | 122.5653 | 121.46 | O | | | |
| 23+ 0 | 121.3888 | 120.31 | O | | | |
| 23+ 5 | 120.2418 | 119.19 | O | | | |
| 23+10 | 119.1229 | 118.10 | O | | | |
| 23+15 | 118.0311 | 117.03 | O | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+20 | 116.9651 | 115.99 | \|O | \| | \| | \| | \| |
| 23+25 | 115.9239 | 114.97 | \|O | \| | \| | \| | \| |
| 23+30 | 114.9067 | 113.98 | \|O | \| | \| | \| | \| |
| 23+35 | 113.9125 | 113.00 | \|O | \| | \| | \| | \| |
| 23+40 | 112.9403 | 112.05 | \|O | \| | \| | \| | \| |
| 23+45 | 111.9895 | 111.12 | \|O | \| | \| | \| | \| |
| 23+50 | 111.0592 | 110.21 | \|O | \| | \| | \| | \| |
| 23+55 | 110.1487 | 109.32 | \|O | \| | \| | \| | \| |
| 24+ 0 | 109.2573 | 108.44 | \|O | \| | \| | \| | \| |
| 24+ 5 | 108.0503 | 106.86 | \|O | \| | \| | \| | \| |
| 24+10 | 106.1996 | 104.35 | \|O | \| | \| | \| | \| |
| 24+15 | 103.6715 | 101.21 | \|O | \| | \| | \| | \| |
| 24+20 | 100.4866 | 97.42 | \|O | \| | \| | \| | \| |
| 24+25 | 96.6388 | 92.96 | \|O | \| | \| | \| | \| |
| 24+30 | 91.7577 | 87.04 | \|O | \| | \| | \| | \| |
| 24+35 | 85.5514 | 79.56 | \|O | \| | \| | \| | \| |
| 24+40 | 76.9765 | 68.55 | IO | \| | \| | \| | \| |
| 24+45 | 64.7938 | 52.80 | O | \| | \| | \| | \| |
| 24+50 | 53.9043 | 44.46 | O | \| | \| | \| | \| |
| 24+55 | 45.7577 | 38.82 | O | \| | \| | \| | \| |
| 25+ 0 | 39.6120 | 34.33 | O | \| | \| | \| | \| |
| 25+ 5 | 34.7557 | 30.52 | O | \| | \| | \| | \| |
| 25+10 | 30.8335 | 27.41 | O | \| | \| | \| | \| |
| 25+15 | 27.4696 | 24.47 | O | \| | \| | \| | \| |
| 25+20 | 24.5588 | 21.97 | O | \| | \| | \| | \| |
| 25+25 | 21.9795 | 19.67 | O | \| | \| | \| | \| |
| 25+30 | 19.7034 | 17.67 | O | \| | \| | \| | \| |
| 25+35 | 17.6774 | 15.86 | O | \| | \| | \| | \| |
| 25+40 | 15.8539 | 14.22 | O | \| | \| | \| | \| |
| 25+45 | 14.2003 | 12.71 | O | \| | \| | \| | \| |
| 25+50 | 12.6948 | 11.34 | O | \| | \| | \| | \| |
| 25+55 | 11.3427 | 10.13 | O | \| | \| | \| | \| |
| 26+ 0 | 10.1087 | 9.00 | O | \| | \| | \| | \| |
| 26+ 5 | 8.9922 | 7.99 | O | \| | \| | \| | \| |
| 26+10 | 7.9679 | 7.04 | O | \| | \| | \| | \| |
| 26+15 | 7.0536 | 6.24 | O | \| | \| | \| | \| |
| 26+20 | 6.2245 | 5.48 | O | \| | \| | \| | \| |
| 26+25 | 5.5000 | 4.86 | O | \| | \| | \| | \| |
| 26+30 | 4.8504 | 4.27 | O | \| | \| | \| | \| |
| 26+35 | 4.2698 | 3.75 | O | \| | \| | \| | \| |
| 26+40 | 3.7392 | 3.26 | O | \| | \| | \| | \| |
| 26+45 | 3.2802 | 2.87 | O | \| | \| | \| | \| |
| 26+50 | 2.8804 | 2.52 | O | \| | \| | \| | \| |
| 26+55 | 2.5702 | 2.31 | O | \| | \| | \| | \| |
| 27+ 0 | 2.3360 | 2.13 | O | \| | \| | \| | \| |
| 27+ 5 | 2.1399 | 1.97 | O | \| | \| | \| | \| |
| 27+10 | 1.9602 | 1.80 | O | \| | \| | \| | \| |
| 27+15 | 1.7952 | 1.65 | O | \| | \| | \| | \| |
| 27+20 | 1.6441 | 1.51 | O | \| | \| | \| | \| |
| 27+25 | 1.5009 | 1.37 | O | \| | \| | \| | \| |
| 27+30 | 1.3616 | 1.23 | O | \| | \| | \| | \| |
| 27+35 | 1.2329 | 1.12 | O | \| | \| | \| | \| |
| 27+40 | 1.1254 | 1.03 | O | \| | \| | \| | \| |
| 27+45 | 1.0312 | 0.95 | O | \| | \| | \| | \| |
| 27+50 | 0.9429 | 0.86 | O | \| | \| | \| | \| |
| 27+55 | 0.8557 | 0.78 | O | \| | \| | \| | \| |
| 28+ 0 | 0.7630 | 0.68 | O | \| | \| | \| | \| |
| 28+ 5 | 0.6664 | 0.58 | O | \| | \| | \| | \| |
| 28+10 | 0.5683 | 0.48 | O | \| | \| | \| | \| |

```
   28+15       0.4721      0.38  O         |          |          |          |
   28+20       0.3923      0.32  O         |          |          |          |
   28+25       0.3269      0.27  O         |          |          |          |
   28+30       0.2686      0.22  O         |          |          |          |
   28+35       0.2136      0.16  O         |          |          |          |
   28+40       0.1672      0.13  O         |          |          |          |
   28+45       0.1295      0.10  O         |          |          |          |
   28+50       0.0963      0.07  O         |          |          |          |
   28+55       0.0602      0.03  O         |          |          |          |
   29+ 0       0.0376      0.02  O         |          |          |          |
   29+ 5       0.0258      0.02  O         |          |          |          |
   29+10       0.0188      0.01  O         |          |          |          |
   29+15       0.0136      0.01  O         |          |          |          |
   29+20       0.0094      0.01  O         |          |          |          |
   29+25       0.0054      0.00  O         |          |          |          |
   29+30       0.0025      0.00  O         |          |          |          |
   29+35       0.0010      0.00  O         |          |          |          |
   29+40       0.0000      0.00  O         |          |          |          |
--------------------------------------------------------------------
       ***************************HYDROGRAPH DATA****************************
                      Number of intervals =   356
                      Time interval =    5.0 (Min.)
                      Maximum/Peak flow rate =     2449.179 (CFS)
                      Total volume =     570.680 (Ac.Ft)
              Status of hydrographs being held in storage
                         Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
              Peak (CFS)   2799.507     0.000     0.000     0.000     0.000
              Vol (Ac.Ft)    570.680     0.000     0.000     0.000     0.000
       **********************************************************************

       ----------------------------------------------------------------


       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
       Process from Point/Station        1.100 to Point/Station        1.200
       **** STREAM ROUTING SCS CONVEX METHOD ****
       ______________________________________________________________________
       HYDROGRAPH STREAM ROUTING DATA:
       Length of stream =   6475.00 (Ft.)
       Elevation difference =  178.00 (Ft.)
       Slope of channel =  0.027490 (Vert/Horiz)
       Channel type - Improved Channel


       Channel length =  6475.00(Ft.)     Elevation difference = 178.00(Ft.)
       Channel evaluation using mean flow rate of hydrograph
       Channel base width  = 1000.000(Ft.)
       Slope or 'Z' of left channel bank =   2.000
       Slope or 'Z' of right channel bank =   2.000
       Manning's 'N'    = 0.035
       Maximum depth of channel  =    1.000(Ft.)
       Flow(q) thru subarea =    278.038(CFS)
       Depth of flow =     0.144(Ft.)
       Average velocity =     1.932(Ft/s)
       Total flow rate =   278.038(CFS)
       Channel flow top width = 1000.575(Ft.)
       Depth of flow in channel =   0.14(Ft.)
       Total number of channels (same dimensions) = 1
       Flow Velocity =    1.93(Ft/s)
```

```
      Travel time  =   55.85 min.
      Individual channel flow =  278.038(CFS)
      Total capacity of improved channels =    278.038(CFS)
      Critical Depth in Channel =    0.13(Ft.)


      Channel evaluation using maximum flow rate of hydrograph
      Flow(q) thru subarea =   2449.179(CFS)
      Depth of flow =     0.531(Ft.)
      Average velocity =     4.610(Ft/s)
      Total flow rate =  2449.179(CFS)
      Channel flow top width = 1002.123(Ft.)
      Depth of flow in channel =   0.53(Ft.)
      Total number of channels (same dimensions) = 1
      Flow Velocity =    4.61(Ft/s)
      Travel time  =   55.85 min.
      Individual channel flow = 2449.179(CFS)
      Total capacity of improved channels =   2449.179(CFS)
      Critical Depth in Channel =    0.57(Ft.)


      ********************** SCS CONVEX CHANNEL ROUTING *********************
      Convex method of stream routing  data items:
      Using equation: Outflow =
      O(t+dt) = (1-c*)O(t+dt-dt*) + Input(c*)
                where c* = 1 - (1-c)^e and dt = c(length)/velocity
                c(v/v+1.7) =   0.7306   Travel time =  23.41 (min.)
               dt*(unit time interval) =   5.00(min.),  e=   0.5282
               dt(routing time-step) =  17.10 (min.),   c* =   0.4998

      Output hydrograph delayed by 0  unit time increments


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                        P R I N T  O F  S T O R M
                     R u n o f f     H y d r o g r a p h
      ----------------------------------------------------------------------
                  Hydrograph in   5   Minute intervals (CFS)

      ----------------------------------------------------------------------
Time(h+m) Out = O(CFS) In = I  0      612.3    1224.6    1836.9    2449.2
----------------------------------------------------------------------
  0+ 5       0.1184      0.33  O         |         |         |         |
  0+10       0.5806      1.34  O         |         |         |         |
  0+15       1.5617      3.04  O         |         |         |         |
  0+20       3.1503      5.44  O         |         |         |         |
  0+25       5.3928      8.54  O         |         |         |         |
  0+30       8.4480     12.73  O         |         |         |         |
  0+35      12.5572     18.30  O         |         |         |         |
  0+40      18.2600     26.31  O         |         |         |         |
  0+45      26.4282     38.03  O         |         |         |         |
  0+50      35.9581     48.58  O         |         |         |         |
  0+55      45.0685     56.50  O         |         |         |         |
  1+ 0      52.9063     62.50  OI        |         |         |         |
  1+ 5      59.3952     67.29  OI        |         |         |         |
  1+10      64.7183     71.18  |O        |         |         |         |
  1+15      69.1479     74.57  |O        |         |         |         |
  1+20      72.9080     77.54  |O        |         |         |         |
  1+25      76.1677     80.21  |O        |         |         |         |
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| | | | | | | |
|---|---|---|---|---|---|---|
| 1+30 | 79.0363 | 82.61 | O | | | |
| 1+35 | 81.5909 | 84.78 | O | | | |
| 1+40 | 83.8923 | 86.78 | O | | | |
| 1+45 | 85.9894 | 88.63 | O | | | |
| 1+50 | 87.9171 | 90.35 | O | | | |
| 1+55 | 89.6943 | 91.94 | O | | | |
| 2+ 0 | 91.3406 | 93.42 | O | | | |
| 2+ 5 | 92.8713 | 94.81 | O | | | |
| 2+10 | 94.3017 | 96.12 | O | | | |
| 2+15 | 95.6372 | 97.33 | O | | | |
| 2+20 | 96.8853 | 98.47 | O | | | |
| 2+25 | 98.0469 | 99.52 | O | | | |
| 2+30 | 99.1287 | 100.50 | O | | | |
| 2+35 | 100.1411 | 101.43 | O | | | |
| 2+40 | 101.0955 | 102.31 | O | | | |
| 2+45 | 101.9935 | 103.13 | O | | | |
| 2+50 | 102.8357 | 103.90 | O | | | |
| 2+55 | 103.6144 | 104.60 | O | | | |
| 3+ 0 | 104.3245 | 105.22 | O | | | |
| 3+ 5 | 104.9796 | 105.81 | O | | | |
| 3+10 | 105.5984 | 106.39 | O | | | |
| 3+15 | 106.1951 | 106.96 | O | | | |
| 3+20 | 106.7762 | 107.52 | O | | | |
| 3+25 | 107.3482 | 108.09 | O | | | |
| 3+30 | 107.9155 | 108.65 | O | | | |
| 3+35 | 108.4797 | 109.21 | O | | | |
| 3+40 | 109.0357 | 109.75 | O | | | |
| 3+45 | 109.5833 | 110.29 | O | | | |
| 3+50 | 110.1249 | 110.82 | O | | | |
| 3+55 | 110.6657 | 111.37 | O | | | |
| 4+ 0 | 111.2102 | 111.92 | O | | | |
| 4+ 5 | 111.7624 | 112.48 | O | | | |
| 4+10 | 112.3218 | 113.05 | O | | | |
| 4+15 | 112.8882 | 113.62 | O | | | |
| 4+20 | 113.4544 | 114.19 | O | | | |
| 4+25 | 114.0167 | 114.74 | O | | | |
| 4+30 | 114.5750 | 115.30 | O | | | |
| 4+35 | 115.1326 | 115.85 | O | | | |
| 4+40 | 115.6889 | 116.41 | O | | | |
| 4+45 | 116.2439 | 116.96 | O | | | |
| 4+50 | 116.7979 | 117.51 | O | | | |
| 4+55 | 117.3555 | 118.08 | O | | | |
| 5+ 0 | 117.9131 | 118.63 | O | | | |
| 5+ 5 | 118.4688 | 119.19 | O | | | |
| 5+10 | 119.0227 | 119.74 | O | | | |
| 5+15 | 119.5784 | 120.30 | O | | | |
| 5+20 | 120.1368 | 120.86 | O | | | |
| 5+25 | 120.7005 | 121.43 | O | | | |
| 5+30 | 121.2691 | 122.01 | O | | | |
| 5+35 | 121.8436 | 122.59 | OI | | | |
| 5+40 | 122.4233 | 123.17 | OI | | | |
| 5+45 | 123.0097 | 123.77 | O | | | |
| 5+50 | 123.6022 | 124.37 | O | | | |
| 5+55 | 124.2023 | 124.98 | O | | | |
| 6+ 0 | 124.8091 | 125.60 | O | | | |
| 6+ 5 | 125.4239 | 126.22 | O | | | |
| 6+10 | 126.0459 | 126.85 | O | | | |
| 6+15 | 126.6762 | 127.49 | O | | | |
| 6+20 | 127.3141 | 128.14 | O | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+25 | 127.9607 | 128.80 | O | | | | |
| 6+30 | 128.6152 | 129.46 | O | | | | |
| 6+35 | 129.2788 | 130.14 | O | | | | |
| 6+40 | 129.9506 | 130.82 | O | | | | |
| 6+45 | 130.6319 | 131.52 | O | | | | |
| 6+50 | 131.3218 | 132.22 | O | | | | |
| 6+55 | 132.0216 | 132.93 | O | | | | |
| 7+ 0 | 132.7303 | 133.65 | O | | | | |
| 7+ 5 | 133.4494 | 134.38 | O | | | | |
| 7+10 | 134.1778 | 135.12 | O | | | | |
| 7+15 | 134.9171 | 135.88 | O | | | | |
| 7+20 | 135.6661 | 136.64 | O | | | | |
| 7+25 | 136.4265 | 137.41 | O | | | | |
| 7+30 | 137.1971 | 138.20 | O | | | | |
| 7+35 | 137.9795 | 139.00 | O | | | | |
| 7+40 | 138.7727 | 139.80 | O | | | | |
| 7+45 | 139.5783 | 140.63 | O | | | | |
| 7+50 | 140.3951 | 141.46 | O | | | | |
| 7+55 | 141.2250 | 142.30 | O | | | | |
| 8+ 0 | 142.0666 | 143.16 | O | | | | |
| 8+ 5 | 142.9219 | 144.03 | O | | | | |
| 8+10 | 143.7897 | 144.92 | O | | | | |
| 8+15 | 144.6717 | 145.82 | O | | | | |
| 8+20 | 145.5668 | 146.73 | O | | | | |
| 8+25 | 146.4770 | 147.66 | O | | | | |
| 8+30 | 147.4009 | 148.60 | O | | | | |
| 8+35 | 148.3407 | 149.56 | O | | | | |
| 8+40 | 149.2949 | 150.53 | O | | | | |
| 8+45 | 150.2658 | 151.53 | O | | | | |
| 8+50 | 151.2520 | 152.53 | O | | | | |
| 8+55 | 152.2558 | 153.56 | O | | | | |
| 9+ 0 | 153.2758 | 154.60 | O | | | | |
| 9+ 5 | 154.3142 | 155.66 | O | | | | |
| 9+10 | 155.3698 | 156.74 | O | | | | |
| 9+15 | 156.4450 | 157.84 | O | | | | |
| 9+20 | 157.5383 | 158.96 | O | | | | |
| 9+25 | 158.6522 | 160.10 | O | | | | |
| 9+30 | 159.7854 | 161.26 | O | | | | |
| 9+35 | 160.9405 | 162.44 | O | | | | |
| 9+40 | 162.1160 | 163.64 | O | | | | |
| 9+45 | 163.3147 | 164.87 | O | | | | |
| 9+50 | 164.5351 | 166.12 | O | | | | |
| 9+55 | 165.7802 | 167.40 | O | | | | |
| 10+ 0 | 167.0483 | 168.70 | O | | | | |
| 10+ 5 | 168.3427 | 170.03 | O | | | | |
| 10+10 | 169.6617 | 171.38 | O | | | | |
| 10+15 | 171.0086 | 172.76 | O | | | | |
| 10+20 | 172.3818 | 174.17 | O | | | | |
| 10+25 | 173.7848 | 175.61 | O | | | | |
| 10+30 | 175.2159 | 177.08 | O | | | | |
| 10+35 | 176.6789 | 178.58 | O | | | | |
| 10+40 | 178.1720 | 180.11 | O | | | | |
| 10+45 | 179.6991 | 181.69 | O | | | | |
| 10+50 | 181.2586 | 183.29 | O | | | | |
| 10+55 | 182.8546 | 184.93 | OI | | | | |
| 11+ 0 | 184.4854 | 186.61 | O | | | | |
| 11+ 5 | 186.1555 | 188.33 | O | | | | |
| 11+10 | 187.8630 | 190.08 | O | | | | |
| 11+15 | 189.6128 | 191.89 | O | | | | |

```
11+20     191.4032    193.73  |  O      |          |          |          |
11+25     193.2391    195.63  |  O      |          |          |          |
11+30     195.1189    197.57  |  O      |          |          |          |
11+35     197.0480    199.56  |  O      |          |          |          |
11+40     199.0247    201.60  |  O      |          |          |          |
11+45     201.0549    203.70  |  O      |          |          |          |
11+50     203.1369    205.85  |  O      |          |          |          |
11+55     205.2770    208.07  |  O      |          |          |          |
12+ 0     207.4737    210.33  |  O      |          |          |          |
12+ 5     209.7345    212.68  |  O      |          |          |          |
12+10     212.0594    215.09  |  O      |          |          |          |
12+15     214.4567    217.59  |  O      |          |          |          |
12+20     216.9257    220.14  |  O      |          |          |          |
12+25     219.4749    222.80  |  O      |          |          |          |
12+30     222.1040    225.53  |  O      |          |          |          |
12+35     224.8235    228.38  |  O      |          |          |          |
12+40     227.6356    231.31  |  O      |          |          |          |
12+45     230.5556    234.37  |  O      |          |          |          |
12+50     233.5762    237.52  |  O      |          |          |          |
12+55     236.6972    240.77  |  O      |          |          |          |
13+ 0     239.9132    244.11  |  O      |          |          |          |
13+ 5     243.2358    247.57  |  OI     |          |          |          |
13+10     246.6664    251.14  |   O     |          |          |          |
13+15     250.2204    254.87  |   O     |          |          |          |
13+20     253.8999    258.70  |   O     |          |          |          |
13+25     257.7215    262.72  |   O     |          |          |          |
13+30     261.6875    266.87  |   O     |          |          |          |
13+35     265.8163    271.22  |   O     |          |          |          |
13+40     270.1109    275.73  |   O     |          |          |          |
13+45     274.5924    280.46  |   O     |          |          |          |
13+50     279.2650    285.38  |   O     |          |          |          |
13+55     284.1531    290.56  |   O     |          |          |          |
14+ 0     289.2631    295.95  |   O     |          |          |          |
14+ 5     294.7880    302.12  |   O     |          |          |          |
14+10     301.0508    309.47  |   OI    |          |          |          |
14+15     308.3309    318.16  |    O    |          |          |          |
14+20     316.7671    328.12  |    O    |          |          |          |
14+25     326.4693    339.51  |    O    |          |          |          |
14+30     337.6799    352.78  |    O    |          |          |          |
14+35     350.7906    368.51  |    OI   |          |          |          |
14+40     366.5834    388.12  |    OI   |          |          |          |
14+45     386.3436    413.55  |     O   |          |          |          |
14+50     408.5872    437.99  |     OI  |          |          |          |
14+55     430.9328    459.62  |      O  |          |          |          |
15+ 0     452.2463    479.34  |      O  |          |          |          |
15+ 5     472.5264    498.39  |      OI |          |          |          |
15+10     492.0984    517.18  |       O |          |          |          |
15+15     511.4885    536.56  |       O |          |          |          |
15+20     531.1245    556.65  |       OI|          |          |          |
15+25     551.0519    576.92  |       OI|          |          |          |
15+30     570.8329    596.29  |        O|          |          |          |
15+35     590.2897    615.32  |        OI          |          |          |
15+40     609.5113    634.29  |        OI          |          |          |
15+45     628.9767    654.31  |         O          |          |          |
15+50     648.8895    674.81  |         OI         |          |          |
15+55     669.9776    697.80  |         OI         |          |          |
16+ 0     693.2218    724.20  |         |O         |          |          |
16+ 5     730.0640    784.59  |         |OI        |          |          |
16+10     794.8083    890.59  |         | O I      |          |          |
```

```
16+15     886.5893   1014.73  |         |   O I   |         |         |
16+20     997.7757   1148.00  |         |     O I |         |         |
16+25    1125.3415   1296.37  |         |       O |I        |         |
16+30    1281.2418   1495.45  |         |         O   I     |         |
16+35    1474.8642   1740.16  |         |         |   O   I |         |
16+40    1725.4462   2073.72  |         |         |       O |  I      |
16+45    2032.3236   2449.18  |         |         |         |  O      I
16+50    2174.1627   2261.11  |         |         |         |    OI   |
16+55    2089.3102   1898.34  |         |         |         |I  O     |
17+ 0    1895.0779   1619.07  |         |         |     I   O         |
17+ 5    1692.4904   1436.35  |         |         |  I   O  |         |
17+10    1515.5933   1298.18  |         |         |I  O     |         |
17+15    1371.7240   1198.66  |         |        I| O       |         |
17+20    1254.1637   1110.85  |         |       I O         |         |
17+25    1156.2420   1036.52  |         |     I O |         |         |
17+30    1071.4308    965.92  |         |    I O  |         |         |
17+35     995.9823    901.71  |         |   I O   |         |         |
17+40     927.5713    841.52  |         |  I O    |         |         |
17+45     863.4453    781.82  |         | I O     |         |         |
17+50     803.5465    727.82  |         |I O      |         |         |
17+55     748.3479    678.77  |         |IO       |         |         |
18+ 0     698.9706    637.49  |         IO        |         |         |
18+ 5     654.7929    599.47  |        IO         |         |         |
18+10     615.3988    566.27  |        IO         |         |         |
18+15     579.1216    533.13  |       IO|         |         |         |
18+20     545.8337    504.01  |       O |         |         |         |
18+25     514.4648    474.43  |      IO |         |         |         |
18+30     485.5462    449.25  |      O  |         |         |         |
18+35     459.1094    425.80  |     IO  |         |         |         |
18+40     435.0937    404.97  |     IO  |         |         |         |
18+45     412.0878    382.49  |     O   |         |         |         |
18+50     389.9386    361.69  |    IO   |         |         |         |
18+55     367.7560    338.89  |    IO   |         |         |         |
19+ 0     346.3094    319.05  |    O    |         |         |         |
19+ 5     327.5427    304.52  |   IO    |         |         |         |
19+10     312.0628    293.29  |   IO    |         |         |         |
19+15     299.0368    282.99  |   O     |         |         |         |
19+20     287.5990    273.33  |   O     |         |         |         |
19+25     277.4711    264.86  |   O     |         |         |         |
19+30     268.4520    257.18  |   O     |         |         |         |
19+35     259.9700    249.13  |   O     |         |         |         |
19+40     251.4992    240.50  |  IO     |         |         |         |
19+45     243.4552    233.30  |  O      |         |         |         |
19+50     236.3125    227.46  |  O      |         |         |         |
19+55     230.1818    222.64  |  O      |         |         |         |
20+ 0     225.0536    218.80  |  O      |         |         |         |
20+ 5     220.5709    214.96  |  O      |         |         |         |
20+10     216.3114    210.84  |  O      |         |         |         |
20+15     211.9684    206.29  |  O      |         |         |         |
20+20     207.0393    200.38  |  O      |         |         |         |
20+25     201.7842    194.93  |  O      |         |         |         |
20+30     196.7813    190.47  |  O      |         |         |         |
20+35     192.2305    186.52  |  O      |         |         |         |
20+40     187.8342    182.16  | IO      |         |         |         |
20+45     183.5095    177.95  | O       |         |         |         |
20+50     179.4447    174.31  | O       |         |         |         |
20+55     175.8542    171.41  | O       |         |         |         |
21+ 0     172.0452    166.92  | O       |         |         |         |
21+ 5     168.0426    162.85  | O       |         |         |         |
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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+10 | 164.3027 | 159.62 | O | | | | |
| 21+15 | 160.9918 | 156.88 | O | | | | |
| 21+20 | 158.0536 | 154.38 | O | | | | |
| 21+25 | 155.3868 | 152.03 | O | | | | |
| 21+30 | 152.8849 | 149.70 | O | | | | |
| 21+35 | 150.4850 | 147.42 | O | | | | |
| 21+40 | 148.2032 | 145.30 | O | | | | |
| 21+45 | 146.0586 | 143.34 | O | | | | |
| 21+50 | 144.0409 | 141.48 | O | | | | |
| 21+55 | 142.1262 | 139.69 | O | | | | |
| 22+ 0 | 140.3021 | 137.98 | O | | | | |
| 22+ 5 | 138.5612 | 136.34 | O | | | | |
| 22+10 | 136.8937 | 134.76 | O | | | | |
| 22+15 | 135.2902 | 133.24 | O | | | | |
| 22+20 | 133.7434 | 131.76 | O | | | | |
| 22+25 | 132.2475 | 130.33 | O | | | | |
| 22+30 | 130.7987 | 128.94 | O | | | | |
| 22+35 | 129.3944 | 127.60 | O | | | | |
| 22+40 | 128.0319 | 126.29 | O | | | | |
| 22+45 | 126.7087 | 125.01 | O | | | | |
| 22+50 | 125.4223 | 123.77 | O | | | | |
| 22+55 | 124.1707 | 122.57 | O | | | | |
| 23+ 0 | 122.9522 | 121.39 | IO | | | | |
| 23+ 5 | 121.7651 | 120.24 | O | | | | |
| 23+10 | 120.6079 | 119.12 | O | | | | |
| 23+15 | 119.4795 | 118.03 | O | | | | |
| 23+20 | 118.3785 | 116.97 | O | | | | |
| 23+25 | 117.3038 | 115.92 | O | | | | |
| 23+30 | 116.2543 | 114.91 | O | | | | |
| 23+35 | 115.2291 | 113.91 | O | | | | |
| 23+40 | 114.2271 | 112.94 | O | | | | |
| 23+45 | 113.2476 | 111.99 | O | | | | |
| 23+50 | 112.2897 | 111.06 | O | | | | |
| 23+55 | 111.3526 | 110.15 | O | | | | |
| 24+ 0 | 110.4356 | 109.26 | O | | | | |
| 24+ 5 | 109.4197 | 108.05 | O | | | | |
| 24+10 | 108.0807 | 106.20 | O | | | | |
| 24+15 | 106.2463 | 103.67 | O | | | | |
| 24+20 | 103.8328 | 100.49 | O | | | | |
| 24+25 | 100.7993 | 96.64 | O | | | | |
| 24+30 | 96.9933 | 91.76 | O | | | | |
| 24+35 | 92.1812 | 85.55 | O | | | | |
| 24+40 | 85.8345 | 76.98 | O | | | | |
| 24+45 | 77.0980 | 64.79 | O | | | | |
| 24+50 | 67.0964 | 53.90 | IO | | | | |
| 24+55 | 57.6211 | 45.76 | O | | | | |
| 25+ 0 | 49.5176 | 39.61 | O | | | | |
| 25+ 5 | 42.8488 | 34.76 | O | | | | |
| 25+10 | 37.4163 | 30.83 | O | | | | |
| 25+15 | 32.9362 | 27.47 | O | | | | |
| 25+20 | 29.1743 | 24.56 | O | | | | |
| 25+25 | 25.9550 | 21.98 | O | | | | |
| 25+30 | 23.1629 | 19.70 | O | | | | |
| 25+35 | 20.7171 | 17.68 | O | | | | |
| 25+40 | 18.5528 | 15.85 | O | | | | |
| 25+45 | 16.6189 | 14.20 | O | | | | |
| 25+50 | 14.8775 | 12.69 | O | | | | |
| 25+55 | 13.3083 | 11.34 | O | | | | |
| 26+ 0 | 11.8894 | 10.11 | O | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+ 5 | 10.6044 | 8.99 | O | \| | \| | \| | \| |
| 26+10 | 9.4363 | 7.97 | O | \| | \| | \| | \| |
| 26+15 | 8.3790 | 7.05 | O | \| | \| | \| | \| |
| 26+20 | 7.4232 | 6.22 | O | \| | \| | \| | \| |
| 26+25 | 6.5678 | 5.50 | O | \| | \| | \| | \| |
| 26+30 | 5.8043 | 4.85 | O | \| | \| | \| | \| |
| 26+35 | 5.1221 | 4.27 | O | \| | \| | \| | \| |
| 26+40 | 4.5084 | 3.74 | O | \| | \| | \| | \| |
| 26+45 | 3.9616 | 3.28 | O | \| | \| | \| | \| |
| 26+50 | 3.4796 | 2.88 | O | \| | \| | \| | \| |
| 26+55 | 3.0704 | 2.57 | O | \| | \| | \| | \| |
| 27+ 0 | 2.7375 | 2.34 | O | \| | \| | \| | \| |
| 27+ 5 | 2.4674 | 2.14 | O | \| | \| | \| | \| |
| 27+10 | 2.2402 | 1.96 | O | \| | \| | \| | \| |
| 27+15 | 2.0419 | 1.80 | O | \| | \| | \| | \| |
| 27+20 | 1.8651 | 1.64 | O | \| | \| | \| | \| |
| 27+25 | 1.7040 | 1.50 | O | \| | \| | \| | \| |
| 27+30 | 1.5532 | 1.36 | O | \| | \| | \| | \| |
| 27+35 | 1.4119 | 1.23 | O | \| | \| | \| | \| |
| 27+40 | 1.2844 | 1.13 | O | \| | \| | \| | \| |
| 27+45 | 1.1716 | 1.03 | O | \| | \| | \| | \| |
| 27+50 | 1.0702 | 0.94 | O | \| | \| | \| | \| |
| 27+55 | 0.9757 | 0.86 | O | \| | \| | \| | \| |
| 28+ 0 | 0.8830 | 0.76 | O | \| | \| | \| | \| |
| 28+ 5 | 0.7888 | 0.67 | O | \| | \| | \| | \| |
| 28+10 | 0.6929 | 0.57 | O | \| | \| | \| | \| |
| 28+15 | 0.5966 | 0.47 | O | \| | \| | \| | \| |
| 28+20 | 0.5061 | 0.39 | O | \| | \| | \| | \| |
| 28+25 | 0.4261 | 0.33 | O | \| | \| | \| | \| |
| 28+30 | 0.3559 | 0.27 | O | \| | \| | \| | \| |
| 28+35 | 0.2928 | 0.21 | O | \| | \| | \| | \| |
| 28+40 | 0.2368 | 0.17 | O | \| | \| | \| | \| |
| 28+45 | 0.1887 | 0.13 | O | \| | \| | \| | \| |
| 28+50 | 0.1474 | 0.10 | O | \| | \| | \| | \| |
| 28+55 | 0.1091 | 0.06 | O | \| | \| | \| | \| |
| 29+ 0 | 0.0767 | 0.04 | O | \| | \| | \| | \| |
| 29+ 5 | 0.0530 | 0.03 | O | \| | \| | \| | \| |
| 29+10 | 0.0369 | 0.02 | O | \| | \| | \| | \| |
| 29+15 | 0.0260 | 0.01 | O | \| | \| | \| | \| |
| 29+20 | 0.0183 | 0.01 | O | \| | \| | \| | \| |
| 29+25 | 0.0124 | 0.01 | O | \| | \| | \| | \| |
| 29+30 | 0.0079 | 0.00 | O | \| | \| | \| | \| |
| 29+35 | 0.0047 | 0.00 | O | \| | \| | \| | \| |
| 29+40 | 0.0025 | 0.00 | O | \| | \| | \| | \| |
| 29+45 | 0.0012 | 0.00 | O | \| | \| | \| | \| |
| 29+50 | 0.0000 | 0.00 | O | \| | \| | \| | \| |

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**********HYDROGRAPH DATA**********

Number of intervals = 358
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2174.163 (CFS)
Total volume = 570.680 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 1.200 to Point/Station 1.200
**** ADD/COMBINE/RECOVER HYDROGRAPHS ****

********** HYDROGRAPH INFORMATION **********

From study/file name: OFFF10024.rte

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P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals (CFS)

---

| Time(h+m) | Add q(CFS) | Tot. Q | 0 | 1648.0 | 3296.1 | 4944.1 | 6592.2 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.6528 | 0.77 | Q | | | | |
| 0+10 | 2.2576 | 2.84 | Q | | | | |
| 0+15 | 4.7713 | 6.33 | Q | | | | |
| 0+20 | 8.1820 | 11.33 | Q | | | | |
| 0+25 | 12.5822 | 17.98 | Q | | | | |
| 0+30 | 19.3069 | 27.75 | Q | | | | |
| 0+35 | 29.5357 | 42.09 | Q | | | | |
| 0+40 | 43.0804 | 61.34 | Q | | | | |
| 0+45 | 55.4320 | 81.86 | Q | | | | |
| 0+50 | 66.5015 | 102.46 | Q | | | | |
| 0+55 | 75.7273 | 120.80 | Q | | | | |
| 1+ 0 | 83.0125 | 135.92 | Q | | | | |
| 1+ 5 | 88.8210 | 148.22 | Q | | | | |
| 1+10 | 93.7673 | 158.49 | Q | | | | |
| 1+15 | 98.1318 | 167.28 | qQ | | | | |
| 1+20 | 102.1103 | 175.02 | qQ | | | | |
| 1+25 | 105.7678 | 181.94 | qQ | | | | |
| 1+30 | 109.0438 | 188.08 | qQ | | | | |
| 1+35 | 112.0245 | 193.62 | qQ | | | | |
| 1+40 | 114.9005 | 198.79 | qQ | | | | |
| 1+45 | 117.5112 | 203.50 | qQ | | | | |
| 1+50 | 119.8650 | 207.78 | qQ | | | | |
| 1+55 | 122.1895 | 211.88 | qQ | | | | |
| 2+ 0 | 124.2729 | 215.61 | qQ | | | | |
| 2+ 5 | 126.3160 | 219.19 | qQ | | | | |
| 2+10 | 128.2850 | 222.59 | qQ | | | | |
| 2+15 | 130.1616 | 225.80 | qQ | | | | |
| 2+20 | 132.0267 | 228.91 | qQ | | | | |
| 2+25 | 133.7287 | 231.78 | qQ | | | | |
| 2+30 | 135.4107 | 234.54 | qQ | | | | |
| 2+35 | 136.9710 | 237.11 | qQ | | | | |
| 2+40 | 138.3936 | 239.49 | qQ | | | | |
| 2+45 | 139.8140 | 241.81 | qQ | | | | |
| 2+50 | 141.1912 | 244.03 | qQ | | | | |
| 2+55 | 142.5631 | 246.18 | qQ | | | | |
| 3+ 0 | 143.8955 | 248.22 | qQ | | | | |
| 3+ 5 | 145.1716 | 250.15 | qQ | | | | |
| 3+10 | 146.4527 | 252.05 | qQ | | | | |
| 3+15 | 147.6882 | 253.88 | qQ | | | | |
| 3+20 | 148.9257 | 255.70 | qQ | | | | |
| 3+25 | 150.1011 | 257.45 | qQ | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+30 | 151.2058 | 259.12 | qQ | \| | \| | \| | \| |
| 3+35 | 152.3153 | 260.79 | qQ | \| | \| | \| | \| |
| 3+40 | 153.4371 | 262.47 | qQ | \| | \| | \| | \| |
| 3+45 | 154.5640 | 264.15 | qQ | \| | \| | \| | \| |
| 3+50 | 155.6572 | 265.78 | qQ | \| | \| | \| | \| |
| 3+55 | 156.6971 | 267.36 | qQ | \| | \| | \| | \| |
| 4+ 0 | 157.7494 | 268.96 | qQ | \| | \| | \| | \| |
| 4+ 5 | 158.8069 | 270.57 | qQ | \| | \| | \| | \| |
| 4+10 | 159.8773 | 272.20 | qQ | \| | \| | \| | \| |
| 4+15 | 160.9063 | 273.79 | qQ | \| | \| | \| | \| |
| 4+20 | 161.8877 | 275.34 | qQ | \| | \| | \| | \| |
| 4+25 | 162.8740 | 276.89 | qQ | \| | \| | \| | \| |
| 4+30 | 163.8737 | 278.45 | qQ | \| | \| | \| | \| |
| 4+35 | 164.8789 | 280.01 | \|Q | \| | \| | \| | \| |
| 4+40 | 165.8553 | 281.54 | \|Q | \| | \| | \| | \| |
| 4+45 | 166.7807 | 283.02 | \|Q | \| | \| | \| | \| |
| 4+50 | 167.7196 | 284.52 | \|Q | \| | \| | \| | \| |
| 4+55 | 168.6642 | 286.02 | \|Q | \| | \| | \| | \| |
| 5+ 0 | 169.6230 | 287.54 | \|Q | \| | \| | \| | \| |
| 5+ 5 | 170.5961 | 289.06 | \|Q | \| | \| | \| | \| |
| 5+10 | 171.5954 | 290.62 | \|Q | \| | \| | \| | \| |
| 5+15 | 172.6010 | 292.18 | \|Q | \| | \| | \| | \| |
| 5+20 | 173.6220 | 293.76 | \|Q | \| | \| | \| | \| |
| 5+25 | 174.6494 | 295.35 | \|Q | \| | \| | \| | \| |
| 5+30 | 175.6915 | 296.96 | \|Q | \| | \| | \| | \| |
| 5+35 | 176.7388 | 298.58 | \|Q | \| | \| | \| | \| |
| 5+40 | 177.8026 | 300.23 | \|Q | \| | \| | \| | \| |
| 5+45 | 178.8734 | 301.88 | \|Q | \| | \| | \| | \| |
| 5+50 | 179.9612 | 303.56 | \|Q | \| | \| | \| | \| |
| 5+55 | 181.0253 | 305.23 | \|Q | \| | \| | \| | \| |
| 6+ 0 | 182.0621 | 306.87 | \|Q | \| | \| | \| | \| |
| 6+ 5 | 183.1061 | 308.53 | \|Q | \| | \| | \| | \| |
| 6+10 | 184.1682 | 310.21 | \|Q | \| | \| | \| | \| |
| 6+15 | 185.2381 | 311.91 | \|Q | \| | \| | \| | \| |
| 6+20 | 186.3268 | 313.64 | \|Q | \| | \| | \| | \| |
| 6+25 | 187.4237 | 315.38 | \|Q | \| | \| | \| | \| |
| 6+30 | 188.5401 | 317.16 | \|Q | \| | \| | \| | \| |
| 6+35 | 189.6338 | 318.91 | \|Q | \| | \| | \| | \| |
| 6+40 | 190.6991 | 320.65 | \|Q | \| | \| | \| | \| |
| 6+45 | 191.7733 | 322.41 | \|Q | \| | \| | \| | \| |
| 6+50 | 192.8682 | 324.19 | \|Q | \| | \| | \| | \| |
| 6+55 | 193.9725 | 325.99 | \|Q | \| | \| | \| | \| |
| 7+ 0 | 195.0983 | 327.83 | \|Q | \| | \| | \| | \| |
| 7+ 5 | 196.2341 | 329.68 | \|qQ | \| | \| | \| | \| |
| 7+10 | 197.3922 | 331.57 | \|qQ | \| | \| | \| | \| |
| 7+15 | 198.5609 | 333.48 | \|qQ | \| | \| | \| | \| |
| 7+20 | 199.7529 | 335.42 | \|qQ | \| | \| | \| | \| |
| 7+25 | 200.9560 | 337.38 | \|qQ | \| | \| | \| | \| |
| 7+30 | 202.1835 | 339.38 | \|qQ | \| | \| | \| | \| |
| 7+35 | 203.4228 | 341.40 | \|qQ | \| | \| | \| | \| |
| 7+40 | 204.6874 | 343.46 | \|qQ | \| | \| | \| | \| |
| 7+45 | 205.9645 | 345.54 | \|qQ | \| | \| | \| | \| |
| 7+50 | 207.2682 | 347.66 | \|qQ | \| | \| | \| | \| |
| 7+55 | 208.5850 | 349.81 | \|qQ | \| | \| | \| | \| |
| 8+ 0 | 209.9297 | 352.00 | \|qQ | \| | \| | \| | \| |
| 8+ 5 | 211.2883 | 354.21 | \|qQ | \| | \| | \| | \| |
| 8+10 | 212.6760 | 356.47 | \|qQ | \| | \| | \| | \| |
| 8+15 | 214.0785 | 358.75 | \|qQ | \| | \| | \| | \| |
| 8+20 | 215.5115 | 361.08 | \|qQ | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8+25 | 216.9603 | 363.44 | \|qQ | \| | \| | \| | \| |
| 8+30 | 218.4410 | 365.84 | \|qQ | \| | \| | \| | \| |
| 8+35 | 219.9385 | 368.28 | \|qQ | \| | \| | \| | \| |
| 8+40 | 221.4695 | 370.76 | \|qQ | \| | \| | \| | \| |
| 8+45 | 223.0184 | 373.28 | \|qQ | \| | \| | \| | \| |
| 8+50 | 224.6025 | 375.85 | \|qQ | \| | \| | \| | \| |
| 8+55 | 226.2056 | 378.46 | \|qQ | \| | \| | \| | \| |
| 9+ 0 | 227.8458 | 381.12 | \|qQ | \| | \| | \| | \| |
| 9+ 5 | 229.5063 | 383.82 | \|qQ | \| | \| | \| | \| |
| 9+10 | 231.2059 | 386.58 | \|qQ | \| | \| | \| | \| |
| 9+15 | 232.9271 | 389.37 | \|qQ | \| | \| | \| | \| |
| 9+20 | 234.6895 | 392.23 | \|qQ | \| | \| | \| | \| |
| 9+25 | 236.4751 | 395.13 | \|qQ | \| | \| | \| | \| |
| 9+30 | 238.3042 | 398.09 | \|qQ | \| | \| | \| | \| |
| 9+35 | 240.1580 | 401.10 | \|qQ | \| | \| | \| | \| |
| 9+40 | 242.0579 | 404.17 | \|qQ | \| | \| | \| | \| |
| 9+45 | 243.9842 | 407.30 | \|qQ | \| | \| | \| | \| |
| 9+50 | 245.9594 | 410.49 | \|qQ | \| | \| | \| | \| |
| 9+55 | 247.9630 | 413.74 | \|qQ | \| | \| | \| | \| |
| 10+ 0 | 250.0183 | 417.07 | \|qQ | \| | \| | \| | \| |
| 10+ 5 | 252.1042 | 420.45 | \|qQ | \| | \| | \| | \| |
| 10+10 | 254.2451 | 423.91 | \|qQ | \| | \| | \| | \| |
| 10+15 | 256.4188 | 427.43 | \|qQ | \| | \| | \| | \| |
| 10+20 | 258.6510 | 431.03 | \|qQ | \| | \| | \| | \| |
| 10+25 | 260.9187 | 434.70 | \|qQ | \| | \| | \| | \| |
| 10+30 | 263.2486 | 438.46 | \|qQ | \| | \| | \| | \| |
| 10+35 | 265.6169 | 442.30 | \|qQ | \| | \| | \| | \| |
| 10+40 | 268.0516 | 446.22 | \|qQ | \| | \| | \| | \| |
| 10+45 | 270.5279 | 450.23 | \|qQ | \| | \| | \| | \| |
| 10+50 | 273.0752 | 454.33 | \|qQ | \| | \| | \| | \| |
| 10+55 | 275.6676 | 458.52 | \|qQ | \| | \| | \| | \| |
| 11+ 0 | 278.3361 | 462.82 | \|qQ | \| | \| | \| | \| |
| 11+ 5 | 281.0535 | 467.21 | \|qQ | \| | \| | \| | \| |
| 11+10 | 283.8527 | 471.72 | \|qQ | \| | \| | \| | \| |
| 11+15 | 286.7051 | 476.32 | \|qQ | \| | \| | \| | \| |
| 11+20 | 289.6456 | 481.05 | \|qQ | \| | \| | \| | \| |
| 11+25 | 292.6443 | 485.88 | \|qQ | \| | \| | \| | \| |
| 11+30 | 295.7378 | 490.86 | \|qQ | \| | \| | \| | \| |
| 11+35 | 298.8950 | 495.94 | \|q Q | \| | \| | \| | \| |
| 11+40 | 302.1549 | 501.18 | \|q Q | \| | \| | \| | \| |
| 11+45 | 305.4847 | 506.54 | \|q Q | \| | \| | \| | \| |
| 11+50 | 308.9258 | 512.06 | \|q Q | \| | \| | \| | \| |
| 11+55 | 312.4438 | 517.72 | \|q Q | \| | \| | \| | \| |
| 12+ 0 | 316.0828 | 523.56 | \|q Q | \| | \| | \| | \| |
| 12+ 5 | 319.6236 | 529.36 | \|q Q | \| | \| | \| | \| |
| 12+10 | 323.0287 | 535.09 | \|q Q | \| | \| | \| | \| |
| 12+15 | 326.2703 | 540.73 | \|q Q | \| | \| | \| | \| |
| 12+20 | 329.4012 | 546.33 | \|q Q | \| | \| | \| | \| |
| 12+25 | 332.3532 | 551.83 | \| qQ | \| | \| | \| | \| |
| 12+30 | 334.8050 | 556.91 | \| qQ | \| | \| | \| | \| |
| 12+35 | 336.3795 | 561.20 | \| qQ | \| | \| | \| | \| |
| 12+40 | 337.1826 | 564.82 | \| qQ | \| | \| | \| | \| |
| 12+45 | 338.4283 | 568.98 | \| qQ | \| | \| | \| | \| |
| 12+50 | 340.2042 | 573.78 | \| qQ | \| | \| | \| | \| |
| 12+55 | 342.6239 | 579.32 | \| qQ | \| | \| | \| | \| |
| 13+ 0 | 345.7834 | 585.70 | \| qQ | \| | \| | \| | \| |
| 13+ 5 | 349.5073 | 592.74 | \| qQ | \| | \| | \| | \| |
| 13+10 | 353.6984 | 600.36 | \| qQ | \| | \| | \| | \| |
| 13+15 | 358.2285 | 608.45 | \| qQ | \| | \| | \| | \| |

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|---|---|---|---|
| 13+20 | 363.1233 | 617.02 | qQ \| \| \| \| |
| 13+25 | 368.3116 | 626.03 | qQ \| \| \| \| |
| 13+30 | 373.8992 | 635.59 | qQ \| \| \| \| |
| 13+35 | 379.8056 | 645.62 | qQ \| \| \| \| |
| 13+40 | 386.0763 | 656.19 | qQ \| \| \| \| |
| 13+45 | 392.6966 | 667.29 | q Q \| \| \| \| |
| 13+50 | 399.7751 | 679.04 | q Q \| \| \| \| |
| 13+55 | 407.1854 | 691.34 | q Q \| \| \| \| |
| 14+ 0 | 415.1122 | 704.38 | q Q \| \| \| \| |
| 14+ 5 | 425.0538 | 719.84 | q Q \| \| \| \| |
| 14+10 | 437.9160 | 738.97 | q Q \| \| \| \| |
| 14+15 | 453.5554 | 761.89 | q Q \| \| \| \| |
| 14+20 | 472.1067 | 788.87 | q Q \| \| \| \| |
| 14+25 | 493.8005 | 820.27 | q Q \| \| \| \| |
| 14+30 | 522.1290 | 859.81 | q Q \| \| \| \| |
| 14+35 | 560.0355 | 910.83 | q Q \| \| \| \| |
| 14+40 | 607.3801 | 973.96 | q Q \| \| \| \| |
| 14+45 | 652.9712 | 1039.31 | q Q \| \| \| \| |
| 14+50 | 696.9052 | 1105.49 | q Q \| \| \| \| |
| 14+55 | 737.6894 | 1168.62 | q Q \| \| \| \| |
| 15+ 0 | 775.4626 | 1227.71 | q Q \| \| \| \| |
| 15+ 5 | 811.2995 | 1283.83 | q Q \| \| \| \| |
| 15+10 | 847.1903 | 1339.29 | q Q \| \| \| \| |
| 15+15 | 883.8465 | 1395.33 | q Q \| \| \| \| |
| 15+20 | 922.4170 | 1453.54 | q Q \| \| \| \| |
| 15+25 | 960.8502 | 1511.90 | q Q\| \| \| \| |
| 15+30 | 998.8316 | 1569.66 | q Q\| \| \| \| |
| 15+35 | 1037.0312 | 1627.32 | q Q\| \| \| \| |
| 15+40 | 1077.3878 | 1686.90 | q Q \| \| \| \| |
| 15+45 | 1120.3492 | 1749.33 | q Q \| \| \| \| |
| 15+50 | 1164.3587 | 1813.25 | q \|Q \| \| \| \| |
| 15+55 | 1212.8123 | 1882.79 | q \|Q \| \| \| \| |
| 16+ 0 | 1279.9895 | 1973.21 | q \|Q \| \| \| \| |
| 16+ 5 | 1492.9747 | 2223.04 | q\| Q \| \| \| \| |
| 16+10 | 1780.3818 | 2575.19 | q Q \| \| \| \| |
| 16+15 | 2076.1086 | 2962.70 | \| q Q \| \| \| \| |
| 16+20 | 2398.0872 | 3395.86 | \| q Q \| \| \| |
| 16+25 | 2783.1578 | 3908.50 | \| q \| Q \| \| \| |
| 16+30 | 3435.3812 | 4716.62 | \| \| q Q \| \| \| |
| 16+35 | 4238.8756 | 5713.74 | \| \| \| q \| Q \| \| |
| 16+40 | 4856.3895 | 6581.84 | \| \| \| q\| Q\| \| |
| 16+45 | 4559.8482 | 6592.17 | \| \| \| q \| Q \| |
| 16+50 | 4176.9593 | 6351.12 | \| \| \| q \| Q \| \| |
| 16+55 | 3681.0741 | 5770.38 | \| \| \| q \| Q \| \| |
| 17+ 0 | 3186.0612 | 5081.14 | \| \| q\| Q \| \| |
| 17+ 5 | 2795.9445 | 4488.43 | \| \| q \| Q \| \| |
| 17+10 | 2535.8614 | 4051.45 | \| \| q \| Q \| \| |
| 17+15 | 2339.7683 | 3711.49 | \| \| q \| Q \| \| |
| 17+20 | 2183.0644 | 3437.23 | \| \| q \| Q \| \| |
| 17+25 | 2040.0006 | 3196.24 | \| \| q \| Q\| \| \| |
| 17+30 | 1886.1686 | 2957.60 | \| \|q \| Q \| \| \| |
| 17+35 | 1748.0402 | 2744.02 | \| q \| Q \| \| \| |
| 17+40 | 1637.6906 | 2565.26 | \| q\| \| Q \| \| \| |
| 17+45 | 1508.5785 | 2372.02 | \| q\| \| Q \| \| \| |
| 17+50 | 1389.0642 | 2192.61 | \| q \| \| Q \| \| \| |
| 17+55 | 1318.6197 | 2066.97 | \| q \| Q \| \| \| |
| 18+ 0 | 1221.2561 | 1920.23 | \| q \|Q \| \| \| |
| 18+ 5 | 1166.8446 | 1821.64 | \| q \|Q \| \| \| |
| 18+10 | 1110.4165 | 1725.82 | \| q Q \| \| \| |

| | | | | | | |
|---|---|---|---|---|---|---|
| 18+15 | 1055.2670 | 1634.39 | q Q | | | |
| 18+20 | 1013.9115 | 1559.75 | q Q | | | |
| 18+25 | 950.1654 | 1464.63 | q Q | | | |
| 18+30 | 911.9859 | 1397.53 | q Q | | | |
| 18+35 | 860.3250 | 1319.43 | q Q | | | |
| 18+40 | 809.6209 | 1244.71 | q Q | | | |
| 18+45 | 786.4039 | 1198.49 | q Q | | | |
| 18+50 | 757.4808 | 1147.42 | q Q | | | |
| 18+55 | 735.8217 | 1103.58 | q Q | | | |
| 19+ 0 | 707.3517 | 1053.66 | q Q | | | |
| 19+ 5 | 678.0390 | 1005.58 | q Q | | | |
| 19+10 | 659.0134 | 971.08 | q Q | | | |
| 19+15 | 633.2183 | 932.26 | q Q | | | |
| 19+20 | 613.7823 | 901.38 | q Q | | | |
| 19+25 | 584.9492 | 862.42 | q Q | | | |
| 19+30 | 555.5044 | 823.96 | qQ | | | |
| 19+35 | 542.6102 | 802.58 | qQ | | | |
| 19+40 | 530.8758 | 782.38 | qQ | | | |
| 19+45 | 518.0814 | 761.54 | qQ | | | |
| 19+50 | 496.9144 | 733.23 | qQ | | | |
| 19+55 | 474.9308 | 705.11 | q Q | | | |
| 20+ 0 | 464.4525 | 689.51 | q Q | | | |
| 20+ 5 | 454.5562 | 675.13 | q Q | | | |
| 20+10 | 443.5180 | 659.83 | q Q | | | |
| 20+15 | 424.0019 | 635.97 | qQ | | | |
| 20+20 | 403.4302 | 610.47 | qQ | | | |
| 20+25 | 394.7573 | 596.54 | qQ | | | |
| 20+30 | 386.5655 | 583.35 | qQ | | | |
| 20+35 | 377.2687 | 569.50 | qQ | | | |
| 20+40 | 360.0720 | 547.91 | qQ | | | |
| 20+45 | 341.8216 | 525.33 | qQ | | | |
| 20+50 | 334.9138 | 514.36 | qQ | | | |
| 20+55 | 329.1541 | 505.01 | q Q | | | |
| 21+ 0 | 323.8851 | 495.93 | q Q | | | |
| 21+ 5 | 320.2345 | 488.28 | qQ | | | |
| 21+10 | 317.1062 | 481.41 | qQ | | | |
| 21+15 | 312.1382 | 473.13 | qQ | | | |
| 21+20 | 307.4349 | 465.49 | qQ | | | |
| 21+25 | 302.7366 | 458.12 | qQ | | | |
| 21+30 | 297.8344 | 450.72 | qQ | | | |
| 21+35 | 292.8356 | 443.32 | qQ | | | |
| 21+40 | 288.1150 | 436.32 | qQ | | | |
| 21+45 | 283.1237 | 429.18 | qQ | | | |
| 21+50 | 277.1610 | 421.20 | qQ | | | |
| 21+55 | 265.4857 | 407.61 | qQ | | | |
| 22+ 0 | 252.4610 | 392.76 | qQ | | | |
| 22+ 5 | 248.0531 | 386.61 | qQ | | | |
| 22+10 | 244.1469 | 381.04 | qQ | | | |
| 22+15 | 240.2450 | 375.54 | qQ | | | |
| 22+20 | 236.1277 | 369.87 | qQ | | | |
| 22+25 | 231.6618 | 363.91 | qQ | | | |
| 22+30 | 226.2809 | 357.08 | qQ | | | |
| 22+35 | 215.0860 | 344.48 | qQ | | | |
| 22+40 | 201.8800 | 329.91 | qQ | | | |
| 22+45 | 198.1238 | 324.83 | Q | | | |
| 22+50 | 194.9758 | 320.40 | Q | | | |
| 22+55 | 192.0704 | 316.24 | Q | | | |
| 23+ 0 | 189.2982 | 312.25 | Q | | | |
| 23+ 5 | 186.6873 | 308.45 | Q | | | |

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|---|---|---|---|---|---|---|---|
| 23+10 | 184.2091 | 304.82 | \|Q | \| | \| | \| | \| |
| 23+15 | 181.8411 | 301.32 | \|Q | \| | \| | \| | \| |
| 23+20 | 179.5692 | 297.95 | \|Q | \| | \| | \| | \| |
| 23+25 | 177.3830 | 294.69 | \|Q | \| | \| | \| | \| |
| 23+30 | 175.2738 | 291.53 | \|Q | \| | \| | \| | \| |
| 23+35 | 173.3119 | 288.54 | \|Q | \| | \| | \| | \| |
| 23+40 | 171.5324 | 285.76 | \|Q | \| | \| | \| | \| |
| 23+45 | 169.8083 | 283.06 | \|Q | \| | \| | \| | \| |
| 23+50 | 168.1358 | 280.43 | \|Q | \| | \| | \| | \| |
| 23+55 | 166.5029 | 277.86 | \|Q | \| | \| | \| | \| |
| 24+ 0 | 164.9031 | 275.34 | \|Q | \| | \| | \| | \| |
| 24+ 5 | 162.6953 | 272.12 | qQ | \| | \| | \| | \| |
| 24+10 | 159.5851 | 267.67 | qQ | \| | \| | \| | \| |
| 24+15 | 155.6242 | 261.87 | qQ | \| | \| | \| | \| |
| 24+20 | 150.8317 | 254.66 | qQ | \| | \| | \| | \| |
| 24+25 | 145.1239 | 245.92 | qQ | \| | \| | \| | \| |
| 24+30 | 137.1769 | 234.17 | qQ | \| | \| | \| | \| |
| 24+35 | 125.8279 | 218.01 | qQ | \| | \| | \| | \| |
| 24+40 | 111.2955 | 197.13 | qQ | \| | \| | \| | \| |
| 24+45 | 98.1259 | 175.22 | qQ | \| | \| | \| | \| |
| 24+50 | 86.3970 | 153.49 | Q | \| | \| | \| | \| |
| 24+55 | 76.6473 | 134.27 | Q | \| | \| | \| | \| |
| 25+ 0 | 68.9567 | 118.47 | Q | \| | \| | \| | \| |
| 25+ 5 | 62.8336 | 105.68 | Q | \| | \| | \| | \| |
| 25+10 | 57.6523 | 95.07 | Q | \| | \| | \| | \| |
| 25+15 | 53.1163 | 86.05 | Q | \| | \| | \| | \| |
| 25+20 | 49.0285 | 78.20 | Q | \| | \| | \| | \| |
| 25+25 | 45.3127 | 71.27 | Q | \| | \| | \| | \| |
| 25+30 | 42.0308 | 65.19 | Q | \| | \| | \| | \| |
| 25+35 | 39.0859 | 59.80 | Q | \| | \| | \| | \| |
| 25+40 | 36.2896 | 54.84 | Q | \| | \| | \| | \| |
| 25+45 | 33.7944 | 50.41 | Q | \| | \| | \| | \| |
| 25+50 | 31.5943 | 46.47 | Q | \| | \| | \| | \| |
| 25+55 | 29.4530 | 42.76 | Q | \| | \| | \| | \| |
| 26+ 0 | 27.5866 | 39.48 | Q | \| | \| | \| | \| |
| 26+ 5 | 25.7860 | 36.39 | Q | \| | \| | \| | \| |
| 26+10 | 24.0897 | 33.53 | Q | \| | \| | \| | \| |
| 26+15 | 22.5092 | 30.89 | Q | \| | \| | \| | \| |
| 26+20 | 20.9679 | 28.39 | Q | \| | \| | \| | \| |
| 26+25 | 19.6108 | 26.18 | Q | \| | \| | \| | \| |
| 26+30 | 18.2992 | 24.10 | Q | \| | \| | \| | \| |
| 26+35 | 17.1276 | 22.25 | Q | \| | \| | \| | \| |
| 26+40 | 16.1169 | 20.63 | Q | \| | \| | \| | \| |
| 26+45 | 15.1237 | 19.09 | Q | \| | \| | \| | \| |
| 26+50 | 14.1950 | 17.67 | Q | \| | \| | \| | \| |
| 26+55 | 13.2860 | 16.36 | Q | \| | \| | \| | \| |
| 27+ 0 | 12.4369 | 15.17 | Q | \| | \| | \| | \| |
| 27+ 5 | 11.6575 | 14.12 | Q | \| | \| | \| | \| |
| 27+10 | 10.8924 | 13.13 | Q | \| | \| | \| | \| |
| 27+15 | 10.1851 | 12.23 | Q | \| | \| | \| | \| |
| 27+20 | 9.4947 | 11.36 | Q | \| | \| | \| | \| |
| 27+25 | 8.8777 | 10.58 | Q | \| | \| | \| | \| |
| 27+30 | 8.3493 | 9.90 | Q | \| | \| | \| | \| |
| 27+35 | 7.8261 | 9.24 | Q | \| | \| | \| | \| |
| 27+40 | 7.3076 | 8.59 | Q | \| | \| | \| | \| |
| 27+45 | 6.7938 | 7.97 | Q | \| | \| | \| | \| |
| 27+50 | 6.3309 | 7.40 | Q | \| | \| | \| | \| |
| 27+55 | 5.9306 | 6.91 | Q | \| | \| | \| | \| |
| 28+ 0 | 5.5341 | 6.42 | Q | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 28+ 5 | 5.1412 | 5.93 | Q | \| | \| | \| | \| |
| 28+10 | 4.7518 | 5.44 | Q | \| | \| | \| | \| |
| 28+15 | 4.4125 | 5.01 | Q | \| | \| | \| | \| |
| 28+20 | 4.1370 | 4.64 | Q | \| | \| | \| | \| |
| 28+25 | 3.8642 | 4.29 | Q | \| | \| | \| | \| |
| 28+30 | 3.5938 | 3.95 | Q | \| | \| | \| | \| |
| 28+35 | 3.3259 | 3.62 | Q | \| | \| | \| | \| |
| 28+40 | 3.1026 | 3.34 | Q | \| | \| | \| | \| |
| 28+45 | 2.9379 | 3.13 | Q | \| | \| | \| | \| |
| 28+50 | 2.7750 | 2.92 | Q | \| | \| | \| | \| |
| 28+55 | 2.6135 | 2.72 | Q | \| | \| | \| | \| |
| 29+ 0 | 2.4535 | 2.53 | Q | \| | \| | \| | \| |
| 29+ 5 | 2.2866 | 2.34 | Q | \| | \| | \| | \| |
| 29+10 | 2.1096 | 2.15 | Q | \| | \| | \| | \| |
| 29+15 | 1.9342 | 1.96 | Q | \| | \| | \| | \| |
| 29+20 | 1.7601 | 1.78 | Q | \| | \| | \| | \| |
| 29+25 | 1.5876 | 1.60 | Q | \| | \| | \| | \| |
| 29+30 | 1.4176 | 1.43 | Q | \| | \| | \| | \| |
| 29+35 | 1.2506 | 1.26 | Q | \| | \| | \| | \| |
| 29+40 | 1.0850 | 1.09 | Q | \| | \| | \| | \| |
| 29+45 | 0.9207 | 0.92 | Q | \| | \| | \| | \| |
| 29+50 | 0.7577 | 0.76 | Q | \| | \| | \| | \| |
| 29+55 | 0.6271 | 0.63 | Q | \| | \| | \| | \| |
| 30+ 0 | 0.5423 | 0.54 | Q | \| | \| | \| | \| |
| 30+ 5 | 0.4584 | 0.46 | Q | \| | \| | \| | \| |
| 30+10 | 0.3752 | 0.38 | Q | \| | \| | \| | \| |
| 30+15 | 0.2927 | 0.29 | Q | \| | \| | \| | \| |
| 30+20 | 0.2107 | 0.21 | Q | \| | \| | \| | \| |
| 30+25 | 0.1294 | 0.13 | Q | \| | \| | \| | \| |
| 30+30 | 0.0487 | 0.05 | Q | \| | \| | \| | \| |

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**********HYDROGRAPH DATA**********

Number of intervals = 366
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 6592.172 (CFS)
Total volume = 1589.759 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 0.000 | 0.000 | 0.000 | 0.000 |

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FLOOD HYDROGRAPH ROUTING PROGRAM
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Study date: 08/10/17

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREAS "E", "G", & "H" ROUTING
100-YEAR, 24-HOUR EVENT
BY: JDN, DATE: 08-10-17

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Program License Serial Number 6320

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********** HYDROGRAPH INFORMATION **********

From study/file name: OFFE10024.rte
**********HYDROGRAPH DATA**********
Number of intervals = 353
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 5599.015 (CFS)
Total volume = 1141.359 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 2.000 to Point/Station 2.000
**** FLOWBY BASIN ROUTING OR SPLIT FLOW ****

A constant split flow fraction of 0.5000 is
being diverted from the main stream into stream number 1
Total volume of excess flow diverted into flowby
basin (stream number 1 ) is 570.68(Ac.Ft)

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P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals (CFS)

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| Time(h+m) | Volume(Ac.Ft) | Q(CFS) | 0 | 699.9 | 1399.8 | 2099.6 | 2799.5 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0050 | 0.73 | Q | \| | \| | \| | \| |
| 0+10 | 0.0216 | 2.41 | Q | \| | \| | \| | \| |
| 0+15 | 0.0544 | 4.76 | Q | \| | \| | \| | \| |
| 0+20 | 0.1080 | 7.79 | Q | \| | \| | \| | \| |
| 0+25 | 0.1875 | 11.54 | Q | \| | \| | \| | \| |
| 0+30 | 0.3033 | 16.82 | Q | \| | \| | \| | \| |
| 0+35 | 0.4666 | 23.71 | Q | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 0+40 | 0.7024 | 34.24 | Q | \| | \| | \| | \| |
| 0+45 | 1.0442 | 49.62 | Q | \| | \| | \| | \| |
| 0+50 | 1.4418 | 57.74 | Q | \| | \| | \| | \| |
| 0+55 | 1.8774 | 63.25 | Q | \| | \| | \| | \| |
| 1+ 0 | 2.3435 | 67.68 | Q | \| | \| | \| | \| |
| 1+ 5 | 2.8357 | 71.46 | VQ | \| | \| | \| | \| |
| 1+10 | 3.3495 | 74.60 | VQ | \| | \| | \| | \| |
| 1+15 | 3.8839 | 77.60 | VQ | \| | \| | \| | \| |
| 1+20 | 4.4361 | 80.18 | VQ | \| | \| | \| | \| |
| 1+25 | 5.0051 | 82.61 | VQ | \| | \| | \| | \| |
| 1+30 | 5.5888 | 84.75 | VQ | \| | \| | \| | \| |
| 1+35 | 6.1862 | 86.74 | VQ | \| | \| | \| | \| |
| 1+40 | 6.7962 | 88.58 | VQ | \| | \| | \| | \| |
| 1+45 | 7.4181 | 90.30 | VQ | \| | \| | \| | \| |
| 1+50 | 8.0511 | 91.90 | VQ | \| | \| | \| | \| |
| 1+55 | 8.6941 | 93.37 | VQ | \| | \| | \| | \| |
| 2+ 0 | 9.3468 | 94.77 | VQ | \| | \| | \| | \| |
| 2+ 5 | 10.0084 | 96.06 | VQ | \| | \| | \| | \| |
| 2+10 | 10.6785 | 97.30 | VQ | \| | \| | \| | \| |
| 2+15 | 11.3564 | 98.42 | VQ | \| | \| | \| | \| |
| 2+20 | 12.0417 | 99.50 | VQ | \| | \| | \| | \| |
| 2+25 | 12.7335 | 100.46 | VQ | \| | \| | \| | \| |
| 2+30 | 13.4318 | 101.39 | VQ | \| | \| | \| | \| |
| 2+35 | 14.1361 | 102.27 | VQ | \| | \| | \| | \| |
| 2+40 | 14.8463 | 103.11 | \|Q | \| | \| | \| | \| |
| 2+45 | 15.5617 | 103.88 | \|Q | \| | \| | \| | \| |
| 2+50 | 16.2821 | 104.60 | \|Q | \| | \| | \| | \| |
| 2+55 | 17.0067 | 105.21 | \|Q | \| | \| | \| | \| |
| 3+ 0 | 17.7352 | 105.77 | \|Q | \| | \| | \| | \| |
| 3+ 5 | 18.4676 | 106.35 | \|Q | \| | \| | \| | \| |
| 3+10 | 19.2039 | 106.92 | \|Q | \| | \| | \| | \| |
| 3+15 | 19.9442 | 107.49 | \|Q | \| | \| | \| | \| |
| 3+20 | 20.6883 | 108.04 | \|Q | \| | \| | \| | \| |
| 3+25 | 21.4362 | 108.60 | \|Q | \| | \| | \| | \| |
| 3+30 | 22.1880 | 109.16 | \|Q | \| | \| | \| | \| |
| 3+35 | 22.9437 | 109.72 | \|Q | \| | \| | \| | \| |
| 3+40 | 23.7030 | 110.24 | \|Q | \| | \| | \| | \| |
| 3+45 | 24.4659 | 110.78 | \|Q | \| | \| | \| | \| |
| 3+50 | 25.2326 | 111.31 | \|Q | \| | \| | \| | \| |
| 3+55 | 26.0030 | 111.87 | \|Q | \| | \| | \| | \| |
| 4+ 0 | 26.7773 | 112.42 | \|Q | \| | \| | \| | \| |
| 4+ 5 | 27.5555 | 113.00 | \|Q | \| | \| | \| | \| |
| 4+10 | 28.3377 | 113.57 | \|Q | \| | \| | \| | \| |
| 4+15 | 29.1239 | 114.15 | \|QV | \| | \| | \| | \| |
| 4+20 | 29.9138 | 114.70 | \|QV | \| | \| | \| | \| |
| 4+25 | 30.7076 | 115.25 | \|QV | \| | \| | \| | \| |
| 4+30 | 31.5051 | 115.80 | \|QV | \| | \| | \| | \| |
| 4+35 | 32.3065 | 116.37 | \|QV | \| | \| | \| | \| |
| 4+40 | 33.1117 | 116.91 | \|QV | \| | \| | \| | \| |
| 4+45 | 33.9208 | 117.47 | \|QV | \| | \| | \| | \| |
| 4+50 | 34.7336 | 118.02 | \|QV | \| | \| | \| | \| |
| 4+55 | 35.5504 | 118.60 | \|QV | \| | \| | \| | \| |
| 5+ 0 | 36.3709 | 119.14 | \|QV | \| | \| | \| | \| |
| 5+ 5 | 37.1953 | 119.70 | \|QV | \| | \| | \| | \| |
| 5+10 | 38.0234 | 120.25 | \|QV | \| | \| | \| | \| |
| 5+15 | 38.8555 | 120.81 | \|QV | \| | \| | \| | \| |
| 5+20 | 39.6914 | 121.38 | \|QV | \| | \| | \| | \| |
| 5+25 | 40.5313 | 121.96 | \|QV | \| | \| | \| | \| |
| 5+30 | 41.3752 | 122.53 | \|QV | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 5+35 | 42.2232 | 123.13 | QV | | | | |
| 5+40 | 43.0752 | 123.71 | Q V | | | | |
| 5+45 | 43.9315 | 124.32 | Q V | | | | |
| 5+50 | 44.7918 | 124.92 | Q V | | | | |
| 5+55 | 45.6564 | 125.55 | Q V | | | | |
| 6+ 0 | 46.5253 | 126.16 | Q V | | | | |
| 6+ 5 | 47.3986 | 126.80 | Q V | | | | |
| 6+10 | 48.2762 | 127.43 | Q V | | | | |
| 6+15 | 49.1584 | 128.09 | Q V | | | | |
| 6+20 | 50.0450 | 128.74 | Q V | | | | |
| 6+25 | 50.9363 | 129.41 | Q V | | | | |
| 6+30 | 51.8321 | 130.07 | Q V | | | | |
| 6+35 | 52.7327 | 130.77 | Q V | | | | |
| 6+40 | 53.6380 | 131.45 | Q V | | | | |
| 6+45 | 54.5482 | 132.16 | Q V | | | | |
| 6+50 | 55.4632 | 132.86 | Q V | | | | |
| 6+55 | 56.3832 | 133.59 | Q V | | | | |
| 7+ 0 | 57.3082 | 134.31 | Q  V | | | | |
| 7+ 5 | 58.2384 | 135.06 | Q  V | | | | |
| 7+10 | 59.1737 | 135.80 | Q  V | | | | |
| 7+15 | 60.1143 | 136.58 | Q  V | | | | |
| 7+20 | 61.0602 | 137.34 | Q  V | | | | |
| 7+25 | 62.0115 | 138.13 | Q  V | | | | |
| 7+30 | 62.9682 | 138.92 | Q  V | | | | |
| 7+35 | 63.9306 | 139.74 | Q  V | | | | |
| 7+40 | 64.8985 | 140.54 | Q V | | | | |
| 7+45 | 65.8722 | 141.39 | Q V | | | | |
| 7+50 | 66.8517 | 142.22 | Q V | | | | |
| 7+55 | 67.8372 | 143.09 | Q V | | | | |
| 8+ 0 | 68.8285 | 143.95 | Q V | | | | |
| 8+ 5 | 69.8261 | 144.84 | Q V | | | | |
| 8+10 | 70.8297 | 145.73 | Q V | | | | |
| 8+15 | 71.8397 | 146.65 | Q  V | | | | |
| 8+20 | 72.8560 | 147.57 | Q  V | | | | |
| 8+25 | 73.8789 | 148.52 | Q  V | | | | |
| 8+30 | 74.9083 | 149.47 | Q  V | | | | |
| 8+35 | 75.9445 | 150.45 | Q  V | | | | |
| 8+40 | 76.9874 | 151.43 | Q  V | | | | |
| 8+45 | 78.0373 | 152.45 | Q  V | | | | |
| 8+50 | 79.0941 | 153.46 | Q  V | | | | |
| 8+55 | 80.1583 | 154.51 | Q  V | | | | |
| 9+ 0 | 81.2296 | 155.56 | Q  V | | | | |
| 9+ 5 | 82.3085 | 156.65 | Q  V | | | | |
| 9+10 | 83.3948 | 157.73 | Q  V | | | | |
| 9+15 | 84.4889 | 158.86 | Q  V | | | | |
| 9+20 | 85.5907 | 159.99 | Q  V | | | | |
| 9+25 | 86.7006 | 161.16 | Q   V | | | | |
| 9+30 | 87.8185 | 162.32 | Q   V | | | | |
| 9+35 | 88.9448 | 163.54 | Q   V | | | | |
| 9+40 | 90.0795 | 164.75 | Q   V | | | | |
| 9+45 | 91.2228 | 166.01 | Q   V | | | | |
| 9+50 | 92.3748 | 167.27 | Q   V | | | | |
| 9+55 | 93.5359 | 168.58 | Q   V | | | | |
| 10+ 0 | 94.7059 | 169.89 | Q   V | | | | |
| 10+ 5 | 95.8854 | 171.26 | Q   V | | | | |
| 10+10 | 97.0742 | 172.62 | Q   V | | | | |
| 10+15 | 98.2729 | 174.04 | Q   V | | | | |
| 10+20 | 99.4813 | 175.46 | Q   V | | | | |
| 10+25 | 100.6999 | 176.95 | Q    V | | | | |

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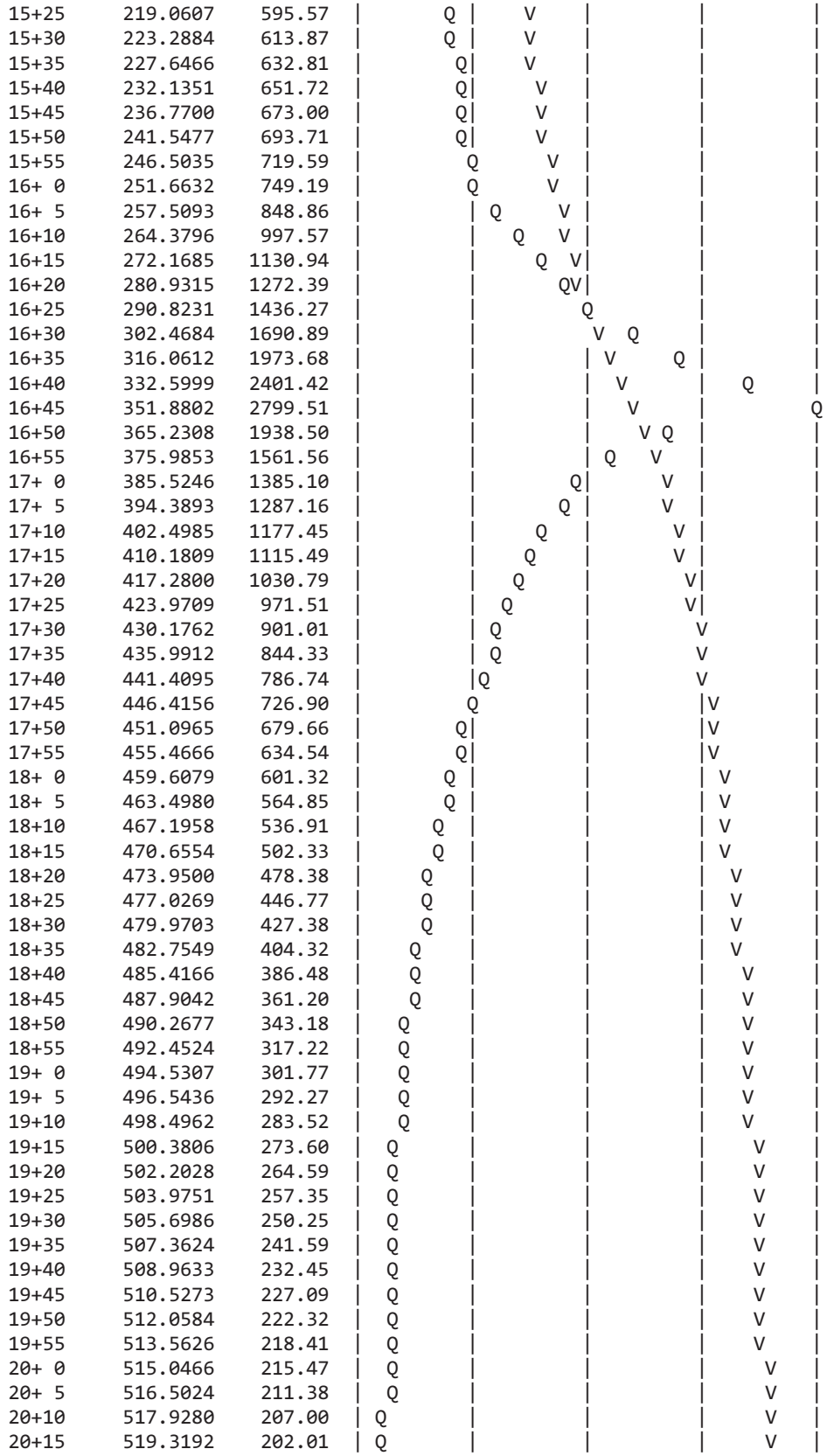
|---|---|---|---|---|---|---|---|
| 10+30 | 101.9288 | 178.43 | Q V | | | | |
| 10+35 | 103.1683 | 179.98 | Q V | | | | |
| 10+40 | 104.4185 | 181.52 | Q V | | | | |
| 10+45 | 105.6798 | 183.15 | Q V | | | | |
| 10+50 | 106.9523 | 184.76 | Q V | | | | |
| 10+55 | 108.2364 | 186.46 | Q V | | | | |
| 11+ 0 | 109.5322 | 188.15 | Q V | | | | |
| 11+ 5 | 110.8402 | 189.93 | Q V | | | | |
| 11+10 | 112.1605 | 191.70 | Q V | | | | |
| 11+15 | 113.4936 | 193.57 | Q V | | | | |
| 11+20 | 114.8396 | 195.43 | Q V | | | | |
| 11+25 | 116.1990 | 197.39 | Q V | | | | |
| 11+30 | 117.5719 | 199.35 | Q V | | | | |
| 11+35 | 118.9591 | 201.41 | Q V | | | | |
| 11+40 | 120.3604 | 203.48 | Q V | | | | |
| 11+45 | 121.7768 | 205.65 | Q V | | | | |
| 11+50 | 123.2081 | 207.83 | Q V | | | | |
| 11+55 | 124.6552 | 210.13 | Q V | | | | |
| 12+ 0 | 126.1182 | 212.43 | Q V | | | | |
| 12+ 5 | 127.5980 | 214.86 | Q V | | | | |
| 12+10 | 129.0946 | 217.31 | Q V | | | | |
| 12+15 | 130.6091 | 219.90 | Q V | | | | |
| 12+20 | 132.1416 | 222.51 | Q V | | | | |
| 12+25 | 133.6930 | 225.27 | Q V | | | | |
| 12+30 | 135.2636 | 228.06 | Q V | | | | |
| 12+35 | 136.8547 | 231.02 | Q V | | | | |
| 12+40 | 138.4663 | 234.02 | Q V | | | | |
| 12+45 | 140.1002 | 237.23 | Q V | | | | |
| 12+50 | 141.7559 | 240.42 | Q V | | | | |
| 12+55 | 143.4349 | 243.79 | Q V | | | | |
| 13+ 0 | 145.1373 | 247.19 | Q V | | | | |
| 13+ 5 | 146.8646 | 250.80 | Q V | | | | |
| 13+10 | 148.6169 | 254.44 | Q V | | | | |
| 13+15 | 150.3960 | 258.33 | Q V | | | | |
| 13+20 | 152.2022 | 262.25 | Q V | | | | |
| 13+25 | 154.0372 | 266.45 | Q V | | | | |
| 13+30 | 155.9016 | 270.71 | Q V | | | | |
| 13+35 | 157.7974 | 275.27 | Q V | | | | |
| 13+40 | 159.7251 | 279.90 | Q V | | | | |
| 13+45 | 161.6870 | 284.87 | Q V | | | | |
| 13+50 | 163.6838 | 289.93 | Q V | | | | |
| 13+55 | 165.7181 | 295.38 | Q V | | | | |
| 14+ 0 | 167.7908 | 300.95 | Q V | | | | |
| 14+ 5 | 169.9119 | 307.98 | Q V | | | | |
| 14+10 | 172.0914 | 316.48 | Q V | | | | |
| 14+15 | 174.3396 | 326.43 | Q V | | | | |
| 14+20 | 176.6643 | 337.54 | Q V | | | | |
| 14+25 | 179.0766 | 350.28 | Q V | | | | |
| 14+30 | 181.5931 | 365.40 | Q V | | | | |
| 14+35 | 184.2343 | 383.51 | Q V | | | | |
| 14+40 | 187.0375 | 407.02 | Q V | | | | |
| 14+45 | 190.0556 | 438.22 | Q V | | | | |
| 14+50 | 193.2225 | 459.84 | Q V | | | | |
| 14+55 | 196.5210 | 478.94 | Q V | | | | |
| 15+ 0 | 199.9449 | 497.14 | Q V | | | | |
| 15+ 5 | 203.4974 | 515.83 | Q V | | | | |
| 15+10 | 207.1779 | 534.41 | Q V | | | | |
| 15+15 | 210.9971 | 554.55 | Q V | | | | |
| 15+20 | 214.9590 | 575.26 | Q V | | | | |



| | | | |
|---|---|---|---|
| 15+25 | 219.0607 | 595.57 | |
| 15+30 | 223.2884 | 613.87 | |
| 15+35 | 227.6466 | 632.81 | |
| 15+40 | 232.1351 | 651.72 | |
| 15+45 | 236.7700 | 673.00 | |
| 15+50 | 241.5477 | 693.71 | |
| 15+55 | 246.5035 | 719.59 | |
| 16+ 0 | 251.6632 | 749.19 | |
| 16+ 5 | 257.5093 | 848.86 | |
| 16+10 | 264.3796 | 997.57 | |
| 16+15 | 272.1685 | 1130.94 | |
| 16+20 | 280.9315 | 1272.39 | |
| 16+25 | 290.8231 | 1436.27 | |
| 16+30 | 302.4684 | 1690.89 | |
| 16+35 | 316.0612 | 1973.68 | |
| 16+40 | 332.5999 | 2401.42 | |
| 16+45 | 351.8802 | 2799.51 | |
| 16+50 | 365.2308 | 1938.50 | |
| 16+55 | 375.9853 | 1561.56 | |
| 17+ 0 | 385.5246 | 1385.10 | |
| 17+ 5 | 394.3893 | 1287.16 | |
| 17+10 | 402.4985 | 1177.45 | |
| 17+15 | 410.1809 | 1115.49 | |
| 17+20 | 417.2800 | 1030.79 | |
| 17+25 | 423.9709 | 971.51 | |
| 17+30 | 430.1762 | 901.01 | |
| 17+35 | 435.9912 | 844.33 | |
| 17+40 | 441.4095 | 786.74 | |
| 17+45 | 446.4156 | 726.90 | |
| 17+50 | 451.0965 | 679.66 | |
| 17+55 | 455.4666 | 634.54 | |
| 18+ 0 | 459.6079 | 601.32 | |
| 18+ 5 | 463.4980 | 564.85 | |
| 18+10 | 467.1958 | 536.91 | |
| 18+15 | 470.6554 | 502.33 | |
| 18+20 | 473.9500 | 478.38 | |
| 18+25 | 477.0269 | 446.77 | |
| 18+30 | 479.9703 | 427.38 | |
| 18+35 | 482.7549 | 404.32 | |
| 18+40 | 485.4166 | 386.48 | |
| 18+45 | 487.9042 | 361.20 | |
| 18+50 | 490.2677 | 343.18 | |
| 18+55 | 492.4524 | 317.22 | |
| 19+ 0 | 494.5307 | 301.77 | |
| 19+ 5 | 496.5436 | 292.27 | |
| 19+10 | 498.4962 | 283.52 | |
| 19+15 | 500.3806 | 273.60 | |
| 19+20 | 502.2028 | 264.59 | |
| 19+25 | 503.9751 | 257.35 | |
| 19+30 | 505.6986 | 250.25 | |
| 19+35 | 507.3624 | 241.59 | |
| 19+40 | 508.9633 | 232.45 | |
| 19+45 | 510.5273 | 227.09 | |
| 19+50 | 512.0584 | 222.32 | |
| 19+55 | 513.5626 | 218.41 | |
| 20+ 0 | 515.0466 | 215.47 | |
| 20+ 5 | 516.5024 | 211.38 | |
| 20+10 | 517.9280 | 207.00 | |
| 20+15 | 519.3192 | 202.01 | |

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|---|---|---|---|---|---|---|---|
| 20+20 | 520.6595 | 194.61 | Q | | | | V |
| 20+25 | 521.9690 | 190.14 | Q | | | | V |
| 20+30 | 523.2539 | 186.56 | Q | | | | V |
| 20+35 | 524.5140 | 182.97 | Q | | | | V |
| 20+40 | 525.7400 | 178.01 | Q | | | | V |
| 20+45 | 526.9395 | 174.16 | Q | | | | V |
| 20+50 | 528.1178 | 171.09 | Q | | | | V |
| 20+55 | 529.2811 | 168.91 | Q | | | | V |
| 21+ 0 | 530.3990 | 162.32 | Q | | | | V |
| 21+ 5 | 531.4964 | 159.34 | Q | | | | V |
| 21+10 | 532.5763 | 156.80 | Q | | | | V |
| 21+15 | 533.6400 | 154.45 | Q | | | | V |
| 21+20 | 534.6877 | 152.13 | Q | | | | V |
| 21+25 | 535.7200 | 149.89 | Q | | | | V |
| 21+30 | 536.7362 | 147.56 | Q | | | | V |
| 21+35 | 537.7371 | 145.33 | Q | | | | V |
| 21+40 | 538.7247 | 143.40 | Q | | | | V |
| 21+45 | 539.6996 | 141.56 | Q | | | | V |
| 21+50 | 540.6623 | 139.79 | Q | | | | V |
| 21+55 | 541.6131 | 138.05 | Q | | | | V |
| 22+ 0 | 542.5527 | 136.42 | Q | | | | V |
| 22+ 5 | 543.4814 | 134.85 | Q | | | | V |
| 22+10 | 544.3996 | 133.33 | Q | | | | V |
| 22+15 | 545.3076 | 131.85 | Q | | | | V |
| 22+20 | 546.2058 | 130.42 | Q | | | | V |
| 22+25 | 547.0944 | 129.02 | Q | | | | V |
| 22+30 | 547.9737 | 127.67 | Q | | | | V |
| 22+35 | 548.8440 | 126.36 | Q | | | | V |
| 22+40 | 549.7055 | 125.09 | Q | | | | V |
| 22+45 | 550.5584 | 123.85 | Q | | | | V |
| 22+50 | 551.4031 | 122.64 | Q | | | | V |
| 22+55 | 552.2396 | 121.46 | Q | | | | V |
| 23+ 0 | 553.0682 | 120.31 | Q | | | | V |
| 23+ 5 | 553.8891 | 119.19 | Q | | | | V |
| 23+10 | 554.7024 | 118.10 | Q | | | | V |
| 23+15 | 555.5084 | 117.03 | Q | | | | V |
| 23+20 | 556.3073 | 115.99 | Q | | | | V |
| 23+25 | 557.0991 | 114.97 | Q | | | | V |
| 23+30 | 557.8840 | 113.98 | Q | | | | V |
| 23+35 | 558.6623 | 113.00 | Q | | | | V |
| 23+40 | 559.4340 | 112.05 | Q | | | | V |
| 23+45 | 560.1993 | 111.12 | Q | | | | V |
| 23+50 | 560.9583 | 110.21 | Q | | | | V |
| 23+55 | 561.7111 | 109.32 | Q | | | | V |
| 24+ 0 | 562.4580 | 108.44 | Q | | | | V |
| 24+ 5 | 563.1939 | 106.86 | Q | | | | V |
| 24+10 | 563.9126 | 104.35 | Q | | | | V |
| 24+15 | 564.6096 | 101.21 | Q | | | | V |
| 24+20 | 565.2806 | 97.42 | Q | | | | V |
| 24+25 | 565.9208 | 92.96 | Q | | | | V |
| 24+30 | 566.5203 | 87.04 | Q | | | | V |
| 24+35 | 567.0682 | 79.56 | Q | | | | V |
| 24+40 | 567.5403 | 68.55 | Q | | | | V |
| 24+45 | 567.9039 | 52.80 | Q | | | | V |
| 24+50 | 568.2101 | 44.46 | Q | | | | V |
| 24+55 | 568.4775 | 38.82 | Q | | | | V |
| 25+ 0 | 568.7139 | 34.33 | Q | | | | V |
| 25+ 5 | 568.9241 | 30.52 | Q | | | | V |
| 25+10 | 569.1128 | 27.41 | Q | | | | V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+15 | 569.2814 | 24.47 | Q | \| | \| | \| | V\| |
| 25+20 | 569.4327 | 21.97 | Q | \| | \| | \| | V\| |
| 25+25 | 569.5682 | 19.67 | Q | \| | \| | \| | V\| |
| 25+30 | 569.6899 | 17.67 | Q | \| | \| | \| | V\| |
| 25+35 | 569.7991 | 15.86 | Q | \| | \| | \| | V\| |
| 25+40 | 569.8970 | 14.22 | Q | \| | \| | \| | V\| |
| 25+45 | 569.9846 | 12.71 | Q | \| | \| | \| | V\| |
| 25+50 | 570.0627 | 11.34 | Q | \| | \| | \| | V\| |
| 25+55 | 570.1325 | 10.13 | Q | \| | \| | \| | V\| |
| 26+ 0 | 570.1944 | 9.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 570.2494 | 7.99 | Q | \| | \| | \| | V\| |
| 26+10 | 570.2980 | 7.04 | Q | \| | \| | \| | V\| |
| 26+15 | 570.3409 | 6.24 | Q | \| | \| | \| | V\| |
| 26+20 | 570.3786 | 5.48 | Q | \| | \| | \| | V\| |
| 26+25 | 570.4121 | 4.86 | Q | \| | \| | \| | V\| |
| 26+30 | 570.4415 | 4.27 | Q | \| | \| | \| | V\| |
| 26+35 | 570.4673 | 3.75 | Q | \| | \| | \| | V\| |
| 26+40 | 570.4897 | 3.26 | Q | \| | \| | \| | V\| |
| 26+45 | 570.5095 | 2.87 | Q | \| | \| | \| | V\| |
| 26+50 | 570.5269 | 2.52 | Q | \| | \| | \| | V\| |
| 26+55 | 570.5428 | 2.31 | Q | \| | \| | \| | V\| |
| 27+ 0 | 570.5575 | 2.13 | Q | \| | \| | \| | V\| |
| 27+ 5 | 570.5710 | 1.97 | Q | \| | \| | \| | V\| |
| 27+10 | 570.5834 | 1.80 | Q | \| | \| | \| | V\| |
| 27+15 | 570.5948 | 1.65 | Q | \| | \| | \| | V\| |
| 27+20 | 570.6051 | 1.51 | Q | \| | \| | \| | V\| |
| 27+25 | 570.6146 | 1.37 | Q | \| | \| | \| | V\| |
| 27+30 | 570.6231 | 1.23 | Q | \| | \| | \| | V\| |
| 27+35 | 570.6308 | 1.12 | Q | \| | \| | \| | V\| |
| 27+40 | 570.6379 | 1.03 | Q | \| | \| | \| | V\| |
| 27+45 | 570.6444 | 0.95 | Q | \| | \| | \| | V\| |
| 27+50 | 570.6503 | 0.86 | Q | \| | \| | \| | V\| |
| 27+55 | 570.6557 | 0.78 | Q | \| | \| | \| | V\| |
| 28+ 0 | 570.6603 | 0.68 | Q | \| | \| | \| | V\| |
| 28+ 5 | 570.6643 | 0.58 | Q | \| | \| | \| | V\| |
| 28+10 | 570.6676 | 0.48 | Q | \| | \| | \| | V\| |
| 28+15 | 570.6702 | 0.38 | Q | \| | \| | \| | V\| |
| 28+20 | 570.6725 | 0.32 | Q | \| | \| | \| | V\| |
| 28+25 | 570.6743 | 0.27 | Q | \| | \| | \| | V\| |
| 28+30 | 570.6758 | 0.22 | Q | \| | \| | \| | V\| |
| 28+35 | 570.6769 | 0.16 | Q | \| | \| | \| | V\| |
| 28+40 | 570.6778 | 0.13 | Q | \| | \| | \| | V\| |
| 28+45 | 570.6785 | 0.10 | Q | \| | \| | \| | V\| |
| 28+50 | 570.6789 | 0.07 | Q | \| | \| | \| | V\| |
| 28+55 | 570.6791 | 0.03 | Q | \| | \| | \| | V\| |
| 29+ 0 | 570.6793 | 0.02 | Q | \| | \| | \| | V\| |
| 29+ 5 | 570.6794 | 0.02 | Q | \| | \| | \| | V\| |
| 29+10 | 570.6795 | 0.01 | Q | \| | \| | \| | V\| |
| 29+15 | 570.6795 | 0.01 | Q | \| | \| | \| | V\| |
| 29+20 | 570.6796 | 0.01 | Q | \| | \| | \| | V\| |
| 29+25 | 570.6796 | 0.00 | Q | \| | \| | \| | V\| |

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**********HYDROGRAPH DATA**********

Number of intervals = 353
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2799.507 (CFS)
Total volume = 570.680 (Ac.Ft)

Status of hydrographs being held in storage

| Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|

```
        Peak (CFS)   2799.507     0.000     0.000     0.000     0.000
        Vol (Ac.Ft)    570.680     0.000     0.000     0.000     0.000
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Process from Point/Station        2.000 to Point/Station        2.100
**** STREAM ROUTING SCS CONVEX METHOD ****
______________________________________________________________________________
HYDROGRAPH STREAM ROUTING DATA:
Length of stream =   9603.00 (Ft.)
Elevation difference =  530.00 (Ft.)
Slope of channel =  0.055191 (Vert/Horiz)
Channel type - Improved Channel


Channel length =  9603.00(Ft.)     Elevation difference = 530.00(Ft.)
Channel evaluation using mean flow rate of hydrograph
Channel base width  =  300.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =    268.931(CFS)
Depth of flow =     0.236(Ft.)
Average velocity =     3.800(Ft/s)
Total flow rate =   268.931(CFS)
Channel flow top width =  300.942(Ft.)
Depth of flow in channel =   0.24(Ft.)
Total number of channels (same dimensions) = 1
Flow Velocity =    3.80(Ft/s)
Travel time  =   76.87 min.
Individual channel flow =  268.931(CFS)
Total capacity of improved channels =    268.931(CFS)
Critical Depth in Channel =    0.29(Ft.)


Channel evaluation using maximum flow rate of hydrograph
Flow(q) thru subarea =   2799.507(CFS)
Depth of flow =     0.960(Ft.)
Average velocity =     9.657(Ft/s)
Total flow rate =  2799.507(CFS)
Channel flow top width =  303.841(Ft.)
Depth of flow in channel =   0.96(Ft.)
Total number of channels (same dimensions) = 1
Flow Velocity =    9.66(Ft/s)
Travel time  =   76.87 min.
Individual channel flow = 2799.507(CFS)
Total capacity of improved channels =   2799.507(CFS)
Critical Depth in Channel =    1.39(Ft.)


********************** SCS CONVEX CHANNEL ROUTING ********************
Convex method of stream routing  data items:
Using equation: Outflow =
O(t+dt) = (1-c*)O(t+dt-dt*) + Input(c*)
          where c* = 1 - (1-c)^e and dt = c(length)/velocity
```

c(v/v+1.7) = 0.8503 Travel time = 16.57 (min.)
dt*(unit time interval) = 5.00(min.), e= 0.5699
dt(routing time-step) = 14.09 (min.), c* = 0.6612

Output hydrograph delayed by 0 unit time increments

P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals (CFS)

| Time(h+m) | Out = O(CFS) | In = I | 0 | 699.9 | 1399.8 | 2099.6 | 2799.5 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.3118 | 0.73 | O | | | | |
| 0+10 | 1.3035 | 2.41 | O | | | | |
| 0+15 | 3.0346 | 4.76 | O | | | | |
| 0+20 | 5.4660 | 7.79 | O | | | | |
| 0+25 | 8.6030 | 11.54 | O | | | | |
| 0+30 | 12.7979 | 16.82 | O | | | | |
| 0+35 | 18.3978 | 23.71 | O | | | | |
| 0+40 | 26.4009 | 34.24 | O | | | | |
| 0+45 | 38.1445 | 49.62 | O | | | | |
| 0+50 | 49.1970 | 57.74 | O | | | | |
| 0+55 | 57.1962 | 63.25 | O | | | | |
| 1+ 0 | 63.0865 | 67.68 | O | | | | |
| 1+ 5 | 67.7363 | 71.46 | OI | | | | |
| 1+10 | 71.5387 | 74.60 | \|O | | | | |
| 1+15 | 74.8416 | 77.60 | \|O | | | | |
| 1+20 | 77.7668 | 80.18 | \|O | | | | |
| 1+25 | 80.4018 | 82.61 | \|O | | | | |
| 1+30 | 82.7778 | 84.75 | \|O | | | | |
| 1+35 | 84.9329 | 86.74 | \|O | | | | |
| 1+40 | 86.9125 | 88.58 | \|O | | | | |
| 1+45 | 88.7493 | 90.30 | \|O | | | | |
| 1+50 | 90.4596 | 91.90 | \|O | | | | |
| 1+55 | 92.0403 | 93.37 | \|O | | | | |
| 2+ 0 | 93.5162 | 94.77 | \|O | | | | |
| 2+ 5 | 94.8964 | 96.06 | \|O | | | | |
| 2+10 | 96.1961 | 97.30 | \|O | | | | |
| 2+15 | 97.4059 | 98.42 | \|O | | | | |
| 2+20 | 98.5384 | 99.50 | \|O | | | | |
| 2+25 | 99.5842 | 100.46 | \|O | | | | |
| 2+30 | 100.5603 | 101.39 | \|O | | | | |
| 2+35 | 101.4826 | 102.27 | \|O | | | | |
| 2+40 | 102.3622 | 103.11 | \|O | | | | |
| 2+45 | 103.1849 | 103.88 | \|O | | | | |
| 2+50 | 103.9523 | 104.60 | \|O | | | | |
| 2+55 | 104.6433 | 105.21 | \|O | | | | |
| 3+ 0 | 105.2594 | 105.77 | \|O | | | | |
| 3+ 5 | 105.8446 | 106.35 | \|O | | | | |
| 3+10 | 106.4202 | 106.92 | \|O | | | | |
| 3+15 | 106.9913 | 107.49 | \|O | | | | |
| 3+20 | 107.5533 | 108.04 | \|O | | | | |
| 3+25 | 108.1149 | 108.60 | \|O | | | | |
| 3+30 | 108.6774 | 109.16 | \|O | | | | |
| 3+35 | 109.2378 | 109.72 | \|O | | | | |

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|---|---|---|---|---|---|---|---|
| 3+40 | 109.7813 | 110.24 | O | | | | |
| 3+45 | 110.3174 | 110.78 | O | | | | |
| 3+50 | 110.8519 | 111.31 | O | | | | |
| 3+55 | 111.3931 | 111.87 | O | | | | |
| 4+ 0 | 111.9440 | 112.42 | O | | | | |
| 4+ 5 | 112.5075 | 113.00 | O | | | | |
| 4+10 | 113.0767 | 113.57 | O | | | | |
| 4+15 | 113.6522 | 114.15 | O | | | | |
| 4+20 | 114.2163 | 114.70 | O | | | | |
| 4+25 | 114.7722 | 115.25 | O | | | | |
| 4+30 | 115.3249 | 115.80 | O | | | | |
| 4+35 | 115.8827 | 116.37 | O | | | | |
| 4+40 | 116.4370 | 116.91 | O | | | | |
| 4+45 | 116.9903 | 117.47 | O | | | | |
| 4+50 | 117.5429 | 118.02 | O | | | | |
| 4+55 | 118.1067 | 118.60 | O | | | | |
| 5+ 0 | 118.6634 | 119.14 | O | | | | |
| 5+ 5 | 119.2157 | 119.70 | O | | | | |
| 5+10 | 119.7676 | 120.25 | O | | | | |
| 5+15 | 120.3264 | 120.81 | O | | | | |
| 5+20 | 120.8891 | 121.38 | O | | | | |
| 5+25 | 121.4604 | 121.96 | O | | | | |
| 5+30 | 122.0355 | 122.53 | O | | | | |
| 5+35 | 122.6183 | 123.13 | O | | | | |
| 5+40 | 123.2049 | 123.71 | O | | | | |
| 5+45 | 123.8006 | 124.32 | O | | | | |
| 5+50 | 124.4013 | 124.92 | O | | | | |
| 5+55 | 125.0118 | 125.55 | O | | | | |
| 6+ 0 | 125.6275 | 126.16 | O | | | | |
| 6+ 5 | 126.2534 | 126.80 | O | | | | |
| 6+10 | 126.8848 | 127.43 | O | | | | |
| 6+15 | 127.5268 | 128.09 | O | | | | |
| 6+20 | 128.1746 | 128.74 | O | | | | |
| 6+25 | 128.8333 | 129.41 | O | | | | |
| 6+30 | 129.4981 | 130.07 | O | | | | |
| 6+35 | 130.1743 | 130.77 | O | | | | |
| 6+40 | 130.8569 | 131.45 | O | | | | |
| 6+45 | 131.5514 | 132.16 | O | | | | |
| 6+50 | 132.2525 | 132.86 | O | | | | |
| 6+55 | 132.9660 | 133.59 | O | | | | |
| 7+ 0 | 133.6865 | 134.31 | O | | | | |
| 7+ 5 | 134.4199 | 135.06 | O | | | | |
| 7+10 | 135.1607 | 135.80 | O | | | | |
| 7+15 | 135.9149 | 136.58 | O | | | | |
| 7+20 | 136.6769 | 137.34 | O | | | | |
| 7+25 | 137.4528 | 138.13 | O | | | | |
| 7+30 | 138.2370 | 138.92 | O | | | | |
| 7+35 | 139.0357 | 139.74 | O | | | | |
| 7+40 | 139.8431 | 140.54 | OI | | | | |
| 7+45 | 140.6658 | 141.39 | O | | | | |
| 7+50 | 141.4976 | 142.22 | O | | | | |
| 7+55 | 142.3453 | 143.09 | O | | | | |
| 8+ 0 | 143.2027 | 143.95 | O | | | | |
| 8+ 5 | 144.0767 | 144.84 | O | | | | |
| 8+10 | 144.9609 | 145.73 | O | | | | |
| 8+15 | 145.8626 | 146.65 | O | | | | |
| 8+20 | 146.7751 | 147.57 | O | | | | |
| 8+25 | 147.7059 | 148.52 | O | | | | |
| 8+30 | 148.6482 | 149.47 | O | | | | |

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|---|---|---|---|---|---|---|---|
| 8+35 | 149.6096 | 150.45 | O | | | | |
| 8+40 | 150.5832 | 151.43 | O | | | | |
| 8+45 | 151.5770 | 152.45 | O | | | | |
| 8+50 | 152.5836 | 153.46 | O | | | | |
| 8+55 | 153.6115 | 154.51 | O | | | | |
| 9+ 0 | 154.6530 | 155.56 | O | | | | |
| 9+ 5 | 155.7169 | 156.65 | O | | | | |
| 9+10 | 156.7953 | 157.73 | O | | | | |
| 9+15 | 157.8973 | 158.86 | O | | | | |
| 9+20 | 159.0147 | 159.99 | O | | | | |
| 9+25 | 160.1570 | 161.16 | O | | | | |
| 9+30 | 161.3159 | 162.32 | O | | | | |
| 9+35 | 162.5010 | 163.54 | O | | | | |
| 9+40 | 163.7037 | 164.75 | O | | | | |
| 9+45 | 164.9343 | 166.01 | O | | | | |
| 9+50 | 166.1837 | 167.27 | O | | | | |
| 9+55 | 167.4625 | 168.58 | O | | | | |
| 10+ 0 | 168.7615 | 169.89 | O | | | | |
| 10+ 5 | 170.0918 | 171.26 | O | | | | |
| 10+10 | 171.4438 | 172.62 | O | | | | |
| 10+15 | 172.8289 | 174.04 | O | | | | |
| 10+20 | 174.2374 | 175.46 | O | | | | |
| 10+25 | 175.6811 | 176.95 | O | | | | |
| 10+30 | 177.1499 | 178.43 | O | | | | |
| 10+35 | 178.6565 | 179.98 | O | | | | |
| 10+40 | 180.1899 | 181.52 | O | | | | |
| 10+45 | 181.7637 | 183.15 | O | | | | |
| 10+50 | 183.3666 | 184.76 | O | | | | |
| 10+55 | 185.0126 | 186.46 | O | | | | |
| 11+ 0 | 186.6901 | 188.15 | O | | | | |
| 11+ 5 | 188.4139 | 189.93 | O | | | | |
| 11+10 | 190.1718 | 191.70 | O | | | | |
| 11+15 | 191.9795 | 193.57 | O | | | | |
| 11+20 | 193.8242 | 195.43 | O | | | | |
| 11+25 | 195.7226 | 197.39 | O | | | | |
| 11+30 | 197.6613 | 199.35 | O | | | | |
| 11+35 | 199.6579 | 201.41 | O | | | | |
| 11+40 | 201.6986 | 203.48 | O | | | | |
| 11+45 | 203.8021 | 205.65 | O | | | | |
| 11+50 | 205.9537 | 207.83 | O | | | | |
| 11+55 | 208.1735 | 210.13 | OI | | | | |
| 12+ 0 | 210.4463 | 212.43 | O | | | | |
| 12+ 5 | 212.7951 | 214.86 | O | | | | |
| 12+10 | 215.2065 | 217.31 | O | | | | |
| 12+15 | 217.7035 | 219.90 | O | | | | |
| 12+20 | 220.2692 | 222.51 | O | | | | |
| 12+25 | 222.9283 | 225.27 | O | | | | |
| 12+30 | 225.6653 | 228.06 | O | | | | |
| 12+35 | 228.5089 | 231.02 | O | | | | |
| 12+40 | 231.4469 | 234.02 | O | | | | |
| 12+45 | 234.5161 | 237.23 | O | | | | |
| 12+50 | 237.6702 | 240.42 | O | | | | |
| 12+55 | 240.9259 | 243.79 | O | | | | |
| 13+ 0 | 244.2686 | 247.19 | O | | | | |
| 13+ 5 | 247.7378 | 250.80 | O | | | | |
| 13+10 | 251.3145 | 254.44 | O | | | | |
| 13+15 | 255.0384 | 258.33 | O | | | | |
| 13+20 | 258.8879 | 262.25 | O | | | | |
| 13+25 | 262.9051 | 266.45 | O | | | | |

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|---|---|---|---|---|---|---|---|
| 13+30 | 267.0667 | 270.71 | O | | | | |
| 13+35 | 271.4192 | 275.27 | O | | | | |
| 13+40 | 275.9386 | 279.90 | O | | | | |
| 13+45 | 280.6769 | 284.87 | O | | | | |
| 13+50 | 285.6089 | 289.93 | O | | | | |
| 13+55 | 290.7933 | 295.38 | O | | | | |
| 14+ 0 | 296.2044 | 300.95 | O | | | | |
| 14+ 5 | 302.3426 | 307.98 | O | | | | |
| 14+10 | 309.6951 | 316.48 | O | | | | |
| 14+15 | 318.4256 | 326.43 | O | | | | |
| 14+20 | 328.4586 | 337.54 | O | | | | |
| 14+25 | 339.8963 | 350.28 | OI | | | | |
| 14+30 | 353.2088 | 365.40 | O | | | | |
| 14+35 | 368.9921 | 383.51 | O | | | | |
| 14+40 | 388.6213 | 407.02 | O | | | | |
| 14+45 | 414.0988 | 438.22 | OI | | | | |
| 14+50 | 439.2700 | 459.84 | O | | | | |
| 14+55 | 461.0192 | 478.94 | O | | | | |
| 15+ 0 | 480.6337 | 497.14 | OI | | | | |
| 15+ 5 | 499.5191 | 515.83 | O | | | | |
| 15+10 | 518.2282 | 534.41 | O | | | | |
| 15+15 | 537.5196 | 554.55 | O | | | | |
| 15+20 | 557.6148 | 575.26 | OI | | | | |
| 15+25 | 577.9466 | 595.57 | O | | | | |
| 15+30 | 597.4041 | 613.87 | O | | | | |
| 15+35 | 616.3694 | 632.81 | OI | | | | |
| 15+40 | 635.3068 | 651.72 | O | | | | |
| 15+45 | 655.2353 | 673.00 | O | | | | |
| 15+50 | 675.8160 | 693.71 | O | | | | |
| 15+55 | 698.6873 | 719.59 | OI | | | | |
| 16+ 0 | 725.1337 | 749.19 | O | | | | |
| 16+ 5 | 783.5562 | 848.86 | OI | | | | |
| 16+10 | 890.1727 | 997.57 | O I | | | | |
| 16+15 | 1018.0790 | 1130.94 | O I | | | | |
| 16+20 | 1153.0421 | 1272.39 | O I | | | | |
| 16+25 | 1301.8620 | 1436.27 | O I | | | | |
| 16+30 | 1499.3488 | 1690.89 | O I | | | | |
| 16+35 | 1746.6287 | 1973.68 | O I | | | | |
| 16+40 | 2079.2219 | 2401.42 | O | I | | | |
| 16+45 | 2462.0759 | 2799.51 | O | I | | | |
| 16+50 | 2317.8765 | 1938.50 | O | I | | | |
| 16+55 | 1906.2382 | 1561.56 | I O | I | | | |
| 17+ 0 | 1603.0639 | 1385.10 | I O | | | | |
| 17+ 5 | 1417.1695 | 1287.16 | I O | | | | |
| 17+10 | 1284.4078 | 1177.45 | I O | | | | |
| 17+15 | 1187.2563 | 1115.49 | IO | | | | |
| 17+20 | 1103.6728 | 1030.79 | IO | | | | |
| 17+25 | 1030.1970 | 971.51 | IO | | | | |
| 17+30 | 961.3220 | 901.01 | IO | | | | |
| 17+35 | 897.2673 | 844.33 | O | | | | |
| 17+40 | 837.6969 | 786.74 | O | | | | |
| 17+45 | 778.4751 | 726.90 | IO | | | | |
| 17+50 | 724.2192 | 679.66 | IO | | | | |
| 17+55 | 675.5099 | 634.54 | O | | | | |
| 18+ 0 | 634.2490 | 601.32 | IO | | | | |
| 18+ 5 | 596.9175 | 564.85 | O | | | | |
| 18+10 | 563.7970 | 536.91 | IO | | | | |
| 18+15 | 531.2691 | 502.33 | O | | | | |
| 18+20 | 501.9174 | 478.38 | IO | | | | |

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|---|---|---|---|---|---|---|
| 18+25 | 472.8686 | 446.77 | O | | | |
| 18+30 | 447.3400 | 427.38 | O | | | |
| 18+35 | 424.3066 | 404.32 | IO | | | |
| 18+40 | 403.4838 | 386.48 | O | | | |
| 18+45 | 381.4569 | 361.20 | O | | | |
| 18+50 | 360.3764 | 343.18 | IO | | | |
| 18+55 | 337.9329 | 317.22 | O | | | |
| 19+ 0 | 317.6483 | 301.77 | O | | | |
| 19+ 5 | 303.0976 | 292.27 | O | | | |
| 19+10 | 292.2052 | 283.52 | O | | | |
| 19+15 | 282.2322 | 273.60 | IO | | | |
| 19+20 | 272.6803 | 264.59 | O | | | |
| 19+25 | 264.2402 | 257.35 | O | | | |
| 19+30 | 256.6543 | 250.25 | O | | | |
| 19+35 | 248.7232 | 241.59 | O | | | |
| 19+40 | 240.1084 | 232.45 | O | | | |
| 19+45 | 232.7581 | 227.09 | O | | | |
| 19+50 | 226.9756 | 222.32 | O | | | |
| 19+55 | 222.2291 | 218.41 | O | | | |
| 20+ 0 | 218.4492 | 215.47 | O | | | |
| 20+ 5 | 214.7345 | 211.38 | O | | | |
| 20+10 | 210.6473 | 207.00 | IO | | | |
| 20+15 | 206.1047 | 202.01 | O | | | |
| 20+20 | 200.2398 | 194.61 | O | | | |
| 20+25 | 194.6128 | 190.14 | O | | | |
| 20+30 | 190.1293 | 186.56 | O | | | |
| 20+35 | 186.2391 | 182.97 | O | | | |
| 20+40 | 181.9639 | 178.01 | O | | | |
| 20+45 | 177.7089 | 174.16 | O | | | |
| 20+50 | 174.0548 | 171.09 | O | | | |
| 20+55 | 171.1633 | 168.91 | O | | | |
| 21+ 0 | 166.8622 | 162.32 | O | | | |
| 21+ 5 | 162.5899 | 159.34 | O | | | |
| 21+10 | 159.3569 | 156.80 | O | | | |
| 21+15 | 156.6620 | 154.45 | O | | | |
| 21+20 | 154.2088 | 152.13 | O | | | |
| 21+25 | 151.8790 | 149.89 | O | | | |
| 21+30 | 149.5685 | 147.56 | O | | | |
| 21+35 | 147.2871 | 145.33 | O | | | |
| 21+40 | 145.1687 | 143.40 | O | | | |
| 21+45 | 143.2145 | 141.56 | O | | | |
| 21+50 | 141.3639 | 139.79 | IO | | | |
| 21+55 | 139.5806 | 138.05 | O | | | |
| 22+ 0 | 137.8749 | 136.42 | O | | | |
| 22+ 5 | 136.2438 | 134.85 | O | | | |
| 22+10 | 134.6721 | 133.33 | O | | | |
| 22+15 | 133.1520 | 131.85 | O | | | |
| 22+20 | 131.6791 | 130.42 | O | | | |
| 22+25 | 130.2501 | 129.02 | O | | | |
| 22+30 | 128.8636 | 127.67 | O | | | |
| 22+35 | 127.5182 | 126.36 | O | | | |
| 22+40 | 126.2112 | 125.09 | O | | | |
| 22+45 | 124.9400 | 123.85 | O | | | |
| 22+50 | 123.7025 | 122.64 | O | | | |
| 22+55 | 122.4972 | 121.46 | O | | | |
| 23+ 0 | 121.3225 | 120.31 | O | | | |
| 23+ 5 | 120.1772 | 119.19 | O | | | |
| 23+10 | 119.0600 | 118.10 | O | | | |
| 23+15 | 117.9698 | 117.03 | O | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+20 | 116.9053 | 115.99 | \|O | \| | \| | \| | \| |
| 23+25 | 115.8656 | 114.97 | \|O | \| | \| | \| | \| |
| 23+30 | 114.8498 | 113.98 | \|O | \| | \| | \| | \| |
| 23+35 | 113.8569 | 113.00 | \|O | \| | \| | \| | \| |
| 23+40 | 112.8860 | 112.05 | \|O | \| | \| | \| | \| |
| 23+45 | 111.9364 | 111.12 | \|O | \| | \| | \| | \| |
| 23+50 | 111.0073 | 110.21 | \|O | \| | \| | \| | \| |
| 23+55 | 110.0980 | 109.32 | \|O | \| | \| | \| | \| |
| 24+ 0 | 109.2077 | 108.44 | \|O | \| | \| | \| | \| |
| 24+ 5 | 108.0248 | 106.86 | \|O | \| | \| | \| | \| |
| 24+10 | 106.1840 | 104.35 | \|O | \| | \| | \| | \| |
| 24+15 | 103.6324 | 101.21 | \|O | \| | \| | \| | \| |
| 24+20 | 100.4156 | 97.42 | \|O | \| | \| | \| | \| |
| 24+25 | 96.5349 | 92.96 | \|O | \| | \| | \| | \| |
| 24+30 | 91.6450 | 87.04 | \|O | \| | \| | \| | \| |
| 24+35 | 85.4091 | 79.56 | \|O | \| | \| | \| | \| |
| 24+40 | 76.8446 | 68.55 | IO | \| | \| | \| | \| |
| 24+45 | 64.6394 | 52.80 | O | \| | \| | \| | \| |
| 24+50 | 53.2513 | 44.46 | O | \| | \| | \| | \| |
| 24+55 | 45.0340 | 38.82 | O | \| | \| | \| | \| |
| 25+ 0 | 39.0095 | 34.33 | O | \| | \| | \| | \| |
| 25+ 5 | 34.2911 | 30.52 | O | \| | \| | \| | \| |
| 25+10 | 30.4698 | 27.41 | O | \| | \| | \| | \| |
| 25+15 | 27.1921 | 24.47 | O | \| | \| | \| | \| |
| 25+20 | 24.3278 | 21.97 | O | \| | \| | \| | \| |
| 25+25 | 21.7878 | 19.67 | O | \| | \| | \| | \| |
| 25+30 | 19.5351 | 17.67 | O | \| | \| | \| | \| |
| 25+35 | 17.5313 | 15.86 | O | \| | \| | \| | \| |
| 25+40 | 15.7257 | 14.22 | O | \| | \| | \| | \| |
| 25+45 | 14.0864 | 12.71 | O | \| | \| | \| | \| |
| 25+50 | 12.5925 | 11.34 | O | \| | \| | \| | \| |
| 25+55 | 11.2486 | 10.13 | O | \| | \| | \| | \| |
| 26+ 0 | 10.0254 | 9.00 | O | \| | \| | \| | \| |
| 26+ 5 | 8.9156 | 7.99 | O | \| | \| | \| | \| |
| 26+10 | 7.8997 | 7.04 | O | \| | \| | \| | \| |
| 26+15 | 6.9894 | 6.24 | O | \| | \| | \| | \| |
| 26+20 | 6.1678 | 5.48 | O | \| | \| | \| | \| |
| 26+25 | 5.4466 | 4.86 | O | \| | \| | \| | \| |
| 26+30 | 4.8046 | 4.27 | O | \| | \| | \| | \| |
| 26+35 | 4.2285 | 3.75 | O | \| | \| | \| | \| |
| 26+40 | 3.7032 | 3.26 | O | \| | \| | \| | \| |
| 26+45 | 3.2457 | 2.87 | O | \| | \| | \| | \| |
| 26+50 | 2.8506 | 2.52 | O | \| | \| | \| | \| |
| 26+55 | 2.5413 | 2.31 | O | \| | \| | \| | \| |
| 27+ 0 | 2.3125 | 2.13 | O | \| | \| | \| | \| |
| 27+ 5 | 2.1228 | 1.97 | O | \| | \| | \| | \| |
| 27+10 | 1.9472 | 1.80 | O | \| | \| | \| | \| |
| 27+15 | 1.7838 | 1.65 | O | \| | \| | \| | \| |
| 27+20 | 1.6339 | 1.51 | O | \| | \| | \| | \| |
| 27+25 | 1.4920 | 1.37 | O | \| | \| | \| | \| |
| 27+30 | 1.3535 | 1.23 | O | \| | \| | \| | \| |
| 27+35 | 1.2247 | 1.12 | O | \| | \| | \| | \| |
| 27+40 | 1.1170 | 1.03 | O | \| | \| | \| | \| |
| 27+45 | 1.0242 | 0.95 | O | \| | \| | \| | \| |
| 27+50 | 0.9371 | 0.86 | O | \| | \| | \| | \| |
| 27+55 | 0.8507 | 0.78 | O | \| | \| | \| | \| |
| 28+ 0 | 0.7587 | 0.68 | O | \| | \| | \| | \| |
| 28+ 5 | 0.6618 | 0.58 | O | \| | \| | \| | \| |
| 28+10 | 0.5635 | 0.48 | O | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 28+15 | 0.4669 | 0.38 | O | \| | \| | \| | \| |
| 28+20 | 0.3861 | 0.32 | O | \| | \| | \| | \| |
| 28+25 | 0.3215 | 0.27 | O | \| | \| | \| | \| |
| 28+30 | 0.2643 | 0.22 | O | \| | \| | \| | \| |
| 28+35 | 0.2100 | 0.16 | O | \| | \| | \| | \| |
| 28+40 | 0.1636 | 0.13 | O | \| | \| | \| | \| |
| 28+45 | 0.1263 | 0.10 | O | \| | \| | \| | \| |
| 28+50 | 0.0938 | 0.07 | O | \| | \| | \| | \| |
| 28+55 | 0.0585 | 0.03 | O | \| | \| | \| | \| |
| 29+ 0 | 0.0347 | 0.02 | O | \| | \| | \| | \| |
| 29+ 5 | 0.0237 | 0.02 | O | \| | \| | \| | \| |
| 29+10 | 0.0175 | 0.01 | O | \| | \| | \| | \| |
| 29+15 | 0.0129 | 0.01 | O | \| | \| | \| | \| |
| 29+20 | 0.0089 | 0.01 | O | \| | \| | \| | \| |
| 29+25 | 0.0051 | 0.00 | O | \| | \| | \| | \| |
| 29+30 | 0.0022 | 0.00 | O | \| | \| | \| | \| |
| 29+35 | 0.0000 | 0.00 | O | \| | \| | \| | \| |

**********HYDROGRAPH DATA**********

Number of intervals = 355
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2462.076 (CFS)
Total volume = 570.680 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 2.100 to Point/Station 2.100
**** ADD/COMBINE/RECOVER HYDROGRAPHS ****

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********** HYDROGRAPH INFORMATION **********

From study/file name: OFFG10024.rte

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P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals (CFS)

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| Time(h+m) | Add q(CFS) | Tot. Q | 0 | 667.8 | 1335.6 | 2003.4 | 2671.2 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0821 | 0.39 | Q | \| | \| | \| | \| |
| 0+10 | 0.3407 | 1.64 | Q | \| | \| | \| | \| |
| 0+15 | 0.7832 | 3.82 | Q | \| | \| | \| | \| |
| 0+20 | 1.6440 | 7.11 | Q | \| | \| | \| | \| |
| 0+25 | 2.8760 | 11.48 | Q | \| | \| | \| | \| |
| 0+30 | 4.1256 | 16.92 | Q | \| | \| | \| | \| |
| 0+35 | 4.8337 | 23.23 | Q | \| | \| | \| | \| |
| 0+40 | 5.3293 | 31.73 | Q | \| | \| | \| | \| |
| 0+45 | 5.7180 | 43.86 | Q | \| | \| | \| | \| |
| 0+50 | 6.0417 | 55.24 | Q | \| | \| | \| | \| |
| 0+55 | 6.3166 | 63.51 | Q | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 1+ 0 | 6.5477 | 69.63 | qQ | \| | \| | \| | \| |
| 1+ 5 | 6.7493 | 74.49 | qQ | \| | \| | \| | \| |
| 1+10 | 6.9312 | 78.47 | qQ | \| | \| | \| | \| |
| 1+15 | 7.0950 | 81.94 | qQ | \| | \| | \| | \| |
| 1+20 | 7.2410 | 85.01 | qQ | \| | \| | \| | \| |
| 1+25 | 7.3659 | 87.77 | qQ | \| | \| | \| | \| |
| 1+30 | 7.4791 | 90.26 | qQ | \| | \| | \| | \| |
| 1+35 | 7.5832 | 92.52 | qQ | \| | \| | \| | \| |
| 1+40 | 7.6791 | 94.59 | qQ | \| | \| | \| | \| |
| 1+45 | 7.7665 | 96.52 | qQ | \| | \| | \| | \| |
| 1+50 | 7.8418 | 98.30 | qQ | \| | \| | \| | \| |
| 1+55 | 7.9103 | 99.95 | qQ | \| | \| | \| | \| |
| 2+ 0 | 7.9787 | 101.49 | qQ | \| | \| | \| | \| |
| 2+ 5 | 8.0406 | 102.94 | qQ | \| | \| | \| | \| |
| 2+10 | 8.1028 | 104.30 | qQ | \| | \| | \| | \| |
| 2+15 | 8.1606 | 105.57 | qQ | \| | \| | \| | \| |
| 2+20 | 8.2140 | 106.75 | qQ | \| | \| | \| | \| |
| 2+25 | 8.2670 | 107.85 | qQ | \| | \| | \| | \| |
| 2+30 | 8.3167 | 108.88 | qQ | \| | \| | \| | \| |
| 2+35 | 8.3649 | 109.85 | qQ | \| | \| | \| | \| |
| 2+40 | 8.4139 | 110.78 | qQ | \| | \| | \| | \| |
| 2+45 | 8.4623 | 111.65 | qQ | \| | \| | \| | \| |
| 2+50 | 8.5117 | 112.46 | qQ | \| | \| | \| | \| |
| 2+55 | 8.5602 | 113.20 | qQ | \| | \| | \| | \| |
| 3+ 0 | 8.6093 | 113.87 | qQ | \| | \| | \| | \| |
| 3+ 5 | 8.6575 | 114.50 | qQ | \| | \| | \| | \| |
| 3+10 | 8.7017 | 115.12 | qQ | \| | \| | \| | \| |
| 3+15 | 8.7451 | 115.74 | qQ | \| | \| | \| | \| |
| 3+20 | 8.7896 | 116.34 | qQ | \| | \| | \| | \| |
| 3+25 | 8.8311 | 116.95 | qQ | \| | \| | \| | \| |
| 3+30 | 8.8709 | 117.55 | qQ | \| | \| | \| | \| |
| 3+35 | 8.9105 | 118.15 | qQ | \| | \| | \| | \| |
| 3+40 | 8.9512 | 118.73 | qQ | \| | \| | \| | \| |
| 3+45 | 8.9916 | 119.31 | qQ | \| | \| | \| | \| |
| 3+50 | 9.0332 | 119.89 | qQ | \| | \| | \| | \| |
| 3+55 | 9.0746 | 120.47 | qQ | \| | \| | \| | \| |
| 4+ 0 | 9.1171 | 121.06 | qQ | \| | \| | \| | \| |
| 4+ 5 | 9.1594 | 121.67 | qQ | \| | \| | \| | \| |
| 4+10 | 9.2028 | 122.28 | qQ | \| | \| | \| | \| |
| 4+15 | 9.2461 | 122.90 | qQ | \| | \| | \| | \| |
| 4+20 | 9.2906 | 123.51 | qQ | \| | \| | \| | \| |
| 4+25 | 9.3349 | 124.11 | qQ | \| | \| | \| | \| |
| 4+30 | 9.3804 | 124.71 | qQ | \| | \| | \| | \| |
| 4+35 | 9.4257 | 125.31 | qQ | \| | \| | \| | \| |
| 4+40 | 9.4723 | 125.91 | qQ | \| | \| | \| | \| |
| 4+45 | 9.5187 | 126.51 | qQ | \| | \| | \| | \| |
| 4+50 | 9.5665 | 127.11 | qQ | \| | \| | \| | \| |
| 4+55 | 9.6140 | 127.72 | qQ | \| | \| | \| | \| |
| 5+ 0 | 9.6629 | 128.33 | qQ | \| | \| | \| | \| |
| 5+ 5 | 9.7116 | 128.93 | qQ | \| | \| | \| | \| |
| 5+10 | 9.7617 | 129.53 | qQ | \| | \| | \| | \| |
| 5+15 | 9.8117 | 130.14 | qQ | \| | \| | \| | \| |
| 5+20 | 9.8630 | 130.75 | qQ | \| | \| | \| | \| |
| 5+25 | 9.9142 | 131.37 | qQ | \| | \| | \| | \| |
| 5+30 | 9.9669 | 132.00 | qQ | \| | \| | \| | \| |
| 5+35 | 10.0194 | 132.64 | qQ | \| | \| | \| | \| |
| 5+40 | 10.0735 | 133.28 | qQ | \| | \| | \| | \| |
| 5+45 | 10.1274 | 133.93 | q Q | \| | \| | \| | \| |
| 5+50 | 10.1829 | 134.58 | q Q | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 5+55 | 10.2382 | 135.25 | q Q | \| | \| | \| | \| |
| 6+ 0 | 10.2952 | 135.92 | q Q | \| | \| | \| | \| |
| 6+ 5 | 10.3520 | 136.61 | q Q | \| | \| | \| | \| |
| 6+10 | 10.4105 | 137.30 | q Q | \| | \| | \| | \| |
| 6+15 | 10.4689 | 138.00 | q Q | \| | \| | \| | \| |
| 6+20 | 10.5291 | 138.70 | q Q | \| | \| | \| | \| |
| 6+25 | 10.5891 | 139.42 | q Q | \| | \| | \| | \| |
| 6+30 | 10.6509 | 140.15 | q Q | \| | \| | \| | \| |
| 6+35 | 10.7126 | 140.89 | q Q | \| | \| | \| | \| |
| 6+40 | 10.7762 | 141.63 | q Q | \| | \| | \| | \| |
| 6+45 | 10.8397 | 142.39 | q Q | \| | \| | \| | \| |
| 6+50 | 10.9051 | 143.16 | q Q | \| | \| | \| | \| |
| 6+55 | 10.9705 | 143.94 | q Q | \| | \| | \| | \| |
| 7+ 0 | 11.0379 | 144.72 | q Q | \| | \| | \| | \| |
| 7+ 5 | 11.1052 | 145.53 | q Q | \| | \| | \| | \| |
| 7+10 | 11.1746 | 146.34 | q Q | \| | \| | \| | \| |
| 7+15 | 11.2439 | 147.16 | q Q | \| | \| | \| | \| |
| 7+20 | 11.3155 | 147.99 | q Q | \| | \| | \| | \| |
| 7+25 | 11.3870 | 148.84 | q Q | \| | \| | \| | \| |
| 7+30 | 11.4608 | 149.70 | q Q | \| | \| | \| | \| |
| 7+35 | 11.5345 | 150.57 | q Q | \| | \| | \| | \| |
| 7+40 | 11.6107 | 151.45 | q Q | \| | \| | \| | \| |
| 7+45 | 11.6868 | 152.35 | q Q | \| | \| | \| | \| |
| 7+50 | 11.7654 | 153.26 | q Q | \| | \| | \| | \| |
| 7+55 | 11.8440 | 154.19 | q Q | \| | \| | \| | \| |
| 8+ 0 | 11.9252 | 155.13 | q Q | \| | \| | \| | \| |
| 8+ 5 | 12.0064 | 156.08 | q Q | \| | \| | \| | \| |
| 8+10 | 12.0903 | 157.05 | q Q | \| | \| | \| | \| |
| 8+15 | 12.1743 | 158.04 | q Q | \| | \| | \| | \| |
| 8+20 | 12.2611 | 159.04 | q Q | \| | \| | \| | \| |
| 8+25 | 12.3480 | 160.05 | q Q | \| | \| | \| | \| |
| 8+30 | 12.4379 | 161.09 | q Q | \| | \| | \| | \| |
| 8+35 | 12.5279 | 162.14 | q Q | \| | \| | \| | \| |
| 8+40 | 12.6210 | 163.20 | q Q | \| | \| | \| | \| |
| 8+45 | 12.7143 | 164.29 | q Q | \| | \| | \| | \| |
| 8+50 | 12.8108 | 165.39 | q Q | \| | \| | \| | \| |
| 8+55 | 12.9075 | 166.52 | q Q | \| | \| | \| | \| |
| 9+ 0 | 13.0076 | 167.66 | q Q | \| | \| | \| | \| |
| 9+ 5 | 13.1079 | 168.82 | q Q | \| | \| | \| | \| |
| 9+10 | 13.2119 | 170.01 | q Q | \| | \| | \| | \| |
| 9+15 | 13.3161 | 171.21 | q Q | \| | \| | \| | \| |
| 9+20 | 13.4242 | 172.44 | q Q | \| | \| | \| | \| |
| 9+25 | 13.5325 | 173.69 | q Q | \| | \| | \| | \| |
| 9+30 | 13.6449 | 174.96 | q Q | \| | \| | \| | \| |
| 9+35 | 13.7577 | 176.26 | q Q | \| | \| | \| | \| |
| 9+40 | 13.8747 | 177.58 | q Q | \| | \| | \| | \| |
| 9+45 | 13.9921 | 178.93 | q Q | \| | \| | \| | \| |
| 9+50 | 14.1140 | 180.30 | q Q | \| | \| | \| | \| |
| 9+55 | 14.2365 | 181.70 | q Q | \| | \| | \| | \| |
| 10+ 0 | 14.3636 | 183.13 | q Q | \| | \| | \| | \| |
| 10+ 5 | 14.4914 | 184.58 | q Q | \| | \| | \| | \| |
| 10+10 | 14.6242 | 186.07 | q Q | \| | \| | \| | \| |
| 10+15 | 14.7578 | 187.59 | q Q | \| | \| | \| | \| |
| 10+20 | 14.8966 | 189.13 | q Q | \| | \| | \| | \| |
| 10+25 | 15.0363 | 190.72 | q Q | \| | \| | \| | \| |
| 10+30 | 15.1817 | 192.33 | q Q | \| | \| | \| | \| |
| 10+35 | 15.3280 | 193.98 | q Q | \| | \| | \| | \| |
| 10+40 | 15.4803 | 195.67 | q Q | \| | \| | \| | \| |
| 10+45 | 15.6338 | 197.40 | q Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10+50 | 15.7936 | 199.16 | q Q | \| | \| | \| | \| |
| 10+55 | 15.9548 | 200.97 | q Q | \| | \| | \| | \| |
| 11+ 0 | 16.1228 | 202.81 | q Q | \| | \| | \| | \| |
| 11+ 5 | 16.2923 | 204.71 | q Q | \| | \| | \| | \| |
| 11+10 | 16.4691 | 206.64 | q Q | \| | \| | \| | \| |
| 11+15 | 16.6477 | 208.63 | q Q | \| | \| | \| | \| |
| 11+20 | 16.8341 | 210.66 | q Q | \| | \| | \| | \| |
| 11+25 | 17.0225 | 212.75 | q Q | \| | \| | \| | \| |
| 11+30 | 17.2194 | 214.88 | q Q | \| | \| | \| | \| |
| 11+35 | 17.4186 | 217.08 | q Q | \| | \| | \| | \| |
| 11+40 | 17.6269 | 219.33 | q Q | \| | \| | \| | \| |
| 11+45 | 17.8378 | 221.64 | q Q | \| | \| | \| | \| |
| 11+50 | 18.0587 | 224.01 | q Q | \| | \| | \| | \| |
| 11+55 | 18.2824 | 226.46 | q Q | \| | \| | \| | \| |
| 12+ 0 | 18.5171 | 228.96 | q Q | \| | \| | \| | \| |
| 12+ 5 | 18.7267 | 231.52 | q Q | \| | \| | \| | \| |
| 12+10 | 18.8869 | 234.09 | q Q | \| | \| | \| | \| |
| 12+15 | 18.9870 | 236.69 | q Q | \| | \| | \| | \| |
| 12+20 | 18.9546 | 239.22 | q Q | \| | \| | \| | \| |
| 12+25 | 18.7966 | 241.72 | q Q | \| | \| | \| | \| |
| 12+30 | 18.6442 | 244.31 | q Q | \| | \| | \| | \| |
| 12+35 | 18.6816 | 247.19 | q Q | \| | \| | \| | \| |
| 12+40 | 18.8059 | 250.25 | q Q | \| | \| | \| | \| |
| 12+45 | 18.9722 | 253.49 | q Q | \| | \| | \| | \| |
| 12+50 | 19.1767 | 256.85 | q Q | \| | \| | \| | \| |
| 12+55 | 19.4043 | 260.33 | q Q | \| | \| | \| | \| |
| 13+ 0 | 19.6651 | 263.93 | q Q | \| | \| | \| | \| |
| 13+ 5 | 19.9435 | 267.68 | q Q | \| | \| | \| | \| |
| 13+10 | 20.2492 | 271.56 | q Q | \| | \| | \| | \| |
| 13+15 | 20.5701 | 275.61 | q Q | \| | \| | \| | \| |
| 13+20 | 20.9202 | 279.81 | q Q | \| | \| | \| | \| |
| 13+25 | 21.2885 | 284.19 | q Q | \| | \| | \| | \| |
| 13+30 | 21.6871 | 288.75 | q Q | \| | \| | \| | \| |
| 13+35 | 22.1020 | 293.52 | q Q | \| | \| | \| | \| |
| 13+40 | 22.5500 | 298.49 | q Q | \| | \| | \| | \| |
| 13+45 | 23.0167 | 303.69 | q Q | \| | \| | \| | \| |
| 13+50 | 23.5227 | 309.13 | q Q | \| | \| | \| | \| |
| 13+55 | 24.0502 | 314.84 | q Q | \| | \| | \| | \| |
| 14+ 0 | 24.6190 | 320.82 | q Q | \| | \| | \| | \| |
| 14+ 5 | 25.2254 | 327.57 | q Q | \| | \| | \| | \| |
| 14+10 | 25.9056 | 335.60 | q Q | \| | \| | \| | \| |
| 14+15 | 26.6437 | 345.07 | q Q | \| | \| | \| | \| |
| 14+20 | 27.5024 | 355.96 | q Q | \| | \| | \| | \| |
| 14+25 | 28.4534 | 368.35 | q Q | \| | \| | \| | \| |
| 14+30 | 29.4825 | 382.69 | q Q | \| | \| | \| | \| |
| 14+35 | 30.4863 | 399.48 | q Q | \| | \| | \| | \| |
| 14+40 | 31.5508 | 420.17 | q Q | \| | \| | \| | \| |
| 14+45 | 32.6652 | 446.76 | q Q | \| | \| | \| | \| |
| 14+50 | 33.8846 | 473.15 | q Q | \| | \| | \| | \| |
| 14+55 | 35.1839 | 496.20 | q Q | \| | \| | \| | \| |
| 15+ 0 | 36.6261 | 517.26 | q Q | \| | \| | \| | \| |
| 15+ 5 | 38.1843 | 537.70 | q Q | \| | \| | \| | \| |
| 15+10 | 39.9427 | 558.17 | q Q | \| | \| | \| | \| |
| 15+15 | 41.8721 | 579.39 | q Q | \| | \| | \| | \| |
| 15+20 | 44.0844 | 601.70 | q Q | \| | \| | \| | \| |
| 15+25 | 46.6596 | 624.61 | q Q | \| | \| | \| | \| |
| 15+30 | 49.8835 | 647.29 | q Q | \| | \| | \| | \| |
| 15+35 | 53.7875 | 670.16 | q Q | \| | \| | \| | \| |
| 15+40 | 58.9510 | 694.26 | q Q | \| | \| | \| | \| |

```
15+45      65.5643    720.80  q         Q          |          |          |
15+50      74.0430    749.86  |q        |Q         |          |          |
15+55      84.9906    783.68  |q        |Q         |          |          |
16+ 0     102.3883    827.52  |q        | Q        |          |          |
16+ 5     145.9227    929.48  | q       |  Q       |          |          |
16+10     217.7918   1107.96  |  q      |     Q    |          |          |
16+15     295.8148   1313.89  |   q     |        Q |          |          |
16+20     420.8284   1573.87  |     q   |          |  Q       |          |
16+25     509.7660   1811.63  |      q  |          |     Q    |          |
16+30     488.1557   1987.50  |      q  |          |       Q  |          |
16+35     330.4192   2077.05  |   q     |          |         Q|          |
16+40     253.7924   2333.01  |  q      |          |          |   Q      |
16+45     209.1718   2671.25  |  q      |          |          |         Q|
16+50     178.4480   2496.32  | q       |          |          |      Q   |
16+55     154.9942   2061.23  | q       |          |        Q |          |
17+ 0     134.7944   1737.86  | q       |          |     Q    |          |
17+ 5     119.8413   1537.01  |q        |          |  Q       |          |
17+10     108.0417   1392.45  |q        |          Q          |          |
17+15      97.5388   1284.80  |q        |         Q|          |          |
17+20      87.4352   1191.11  |q        |       Q  |          |          |
17+25      77.4496   1107.65  |q        |      Q   |          |          |
17+30      70.0937   1031.42  |q        |     Q    |          |          |
17+35      64.1443    961.41  q         |    Q     |          |          |
17+40      58.5161    896.21  q         |   Q      |          |          |
17+45      53.2840    831.76  q         |  Q       |          |          |
17+50      47.4374    771.66  q         |Q         |          |          |
17+55      43.5503    719.06  q         Q          |          |          |
18+ 0      41.1932    675.44  q         Q          |          |          |
18+ 5      37.9642    634.88  q        Q|          |          |          |
18+10      36.1327    599.93  q       Q |          |          |          |
18+15      33.7201    564.99  q       Q |          |          |          |
18+20      31.3656    533.28  q      Q  |          |          |          |
18+25      30.4015    503.27  q      Q  |          |          |          |
18+30      28.6910    476.03  q      Q  |          |          |          |
18+35      27.6322    451.94  q     Q   |          |          |          |
18+40      26.8887    430.37  q     Q   |          |          |          |
18+45      26.1094    407.57  q     Q   |          |          |          |
18+50      25.4115    385.79  q    Q    |          |          |          |
18+55      24.5503    362.48  q    Q    |          |          |          |
19+ 0      23.6891    341.34  q    Q    |          |          |          |
19+ 5      22.6970    325.79  q   Q     |          |          |          |
19+10      20.7775    312.98  q   Q     |          |          |          |
19+15      19.9474    302.18  q   Q     |          |          |          |
19+20      19.2530    291.93  q   Q     |          |          |          |
19+25      17.9388    282.18  q   Q     |          |          |          |
19+30      16.7433    273.40  q   Q     |          |          |          |
19+35      16.2966    265.02  q  Q      |          |          |          |
19+40      15.9142    256.02  q  Q      |          |          |          |
19+45      15.5679    248.33  q  Q      |          |          |          |
19+50      15.2465    242.22  q  Q      |          |          |          |
19+55      14.9441    237.17  q  Q      |          |          |          |
20+ 0      14.6594    233.11  q  Q      |          |          |          |
20+ 5      14.3886    229.12  q  Q      |          |          |          |
20+10      14.1324    224.78  q  Q      |          |          |          |
20+15      13.8875    219.99  q  Q      |          |          |          |
20+20      13.6525    213.89  q  Q      |          |          |          |
20+25      13.4283    208.04  q  Q      |          |          |          |
20+30      13.2129    203.34  q  Q      |          |          |          |
20+35      13.0061    199.25  q Q       |          |          |          |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20+40 | 12.8076 | 194.77 | q Q | \| | \| | \| | \| |
| 20+45 | 12.6168 | 190.33 | q Q | \| | \| | \| | \| |
| 20+50 | 12.4334 | 186.49 | q Q | \| | \| | \| | \| |
| 20+55 | 12.2566 | 183.42 | q Q | \| | \| | \| | \| |
| 21+ 0 | 12.0860 | 178.95 | q Q | \| | \| | \| | \| |
| 21+ 5 | 11.9213 | 174.51 | q Q | \| | \| | \| | \| |
| 21+10 | 11.7606 | 171.12 | q Q | \| | \| | \| | \| |
| 21+15 | 11.6050 | 168.27 | q Q | \| | \| | \| | \| |
| 21+20 | 11.4546 | 165.66 | q Q | \| | \| | \| | \| |
| 21+25 | 11.3081 | 163.19 | q Q | \| | \| | \| | \| |
| 21+30 | 11.1653 | 160.73 | q Q | \| | \| | \| | \| |
| 21+35 | 11.0269 | 158.31 | q Q | \| | \| | \| | \| |
| 21+40 | 10.8926 | 156.06 | q Q | \| | \| | \| | \| |
| 21+45 | 10.7623 | 153.98 | q Q | \| | \| | \| | \| |
| 21+50 | 10.6358 | 152.00 | q Q | \| | \| | \| | \| |
| 21+55 | 10.5130 | 150.09 | q Q | \| | \| | \| | \| |
| 22+ 0 | 10.3935 | 148.27 | q Q | \| | \| | \| | \| |
| 22+ 5 | 10.2774 | 146.52 | q Q | \| | \| | \| | \| |
| 22+10 | 10.1644 | 144.84 | q Q | \| | \| | \| | \| |
| 22+15 | 10.0544 | 143.21 | q Q | \| | \| | \| | \| |
| 22+20 | 9.9473 | 141.63 | q Q | \| | \| | \| | \| |
| 22+25 | 9.8429 | 140.09 | q Q | \| | \| | \| | \| |
| 22+30 | 9.7412 | 138.60 | q Q | \| | \| | \| | \| |
| 22+35 | 9.6421 | 137.16 | q Q | \| | \| | \| | \| |
| 22+40 | 9.5453 | 135.76 | q Q | \| | \| | \| | \| |
| 22+45 | 9.4509 | 134.39 | q Q | \| | \| | \| | \| |
| 22+50 | 9.3588 | 133.06 | qQ | \| | \| | \| | \| |
| 22+55 | 9.2689 | 131.77 | qQ | \| | \| | \| | \| |
| 23+ 0 | 9.1810 | 130.50 | qQ | \| | \| | \| | \| |
| 23+ 5 | 9.0951 | 129.27 | qQ | \| | \| | \| | \| |
| 23+10 | 9.0112 | 128.07 | qQ | \| | \| | \| | \| |
| 23+15 | 8.9291 | 126.90 | qQ | \| | \| | \| | \| |
| 23+20 | 8.8489 | 125.75 | qQ | \| | \| | \| | \| |
| 23+25 | 8.7703 | 124.64 | qQ | \| | \| | \| | \| |
| 23+30 | 8.6935 | 123.54 | qQ | \| | \| | \| | \| |
| 23+35 | 8.6183 | 122.48 | qQ | \| | \| | \| | \| |
| 23+40 | 8.5446 | 121.43 | qQ | \| | \| | \| | \| |
| 23+45 | 8.4725 | 120.41 | qQ | \| | \| | \| | \| |
| 23+50 | 8.4018 | 119.41 | qQ | \| | \| | \| | \| |
| 23+55 | 8.3326 | 118.43 | qQ | \| | \| | \| | \| |
| 24+ 0 | 8.2647 | 117.47 | qQ | \| | \| | \| | \| |
| 24+ 5 | 8.1162 | 116.14 | qQ | \| | \| | \| | \| |
| 24+10 | 7.7938 | 113.98 | qQ | \| | \| | \| | \| |
| 24+15 | 7.2919 | 110.92 | qQ | \| | \| | \| | \| |
| 24+20 | 6.3786 | 106.79 | qQ | \| | \| | \| | \| |
| 24+25 | 5.1051 | 101.64 | qQ | \| | \| | \| | \| |
| 24+30 | 3.8284 | 95.47 | qQ | \| | \| | \| | \| |
| 24+35 | 3.1064 | 88.52 | qQ | \| | \| | \| | \| |
| 24+40 | 2.6053 | 79.45 | qQ | \| | \| | \| | \| |
| 24+45 | 2.2163 | 66.86 | qQ | \| | \| | \| | \| |
| 24+50 | 1.8973 | 55.15 | Q | \| | \| | \| | \| |
| 24+55 | 1.6304 | 46.66 | Q | \| | \| | \| | \| |
| 25+ 0 | 1.4110 | 40.42 | Q | \| | \| | \| | \| |
| 25+ 5 | 1.2231 | 35.51 | Q | \| | \| | \| | \| |
| 25+10 | 1.0579 | 31.53 | Q | \| | \| | \| | \| |
| 25+15 | 0.9125 | 28.10 | Q | \| | \| | \| | \| |
| 25+20 | 0.7871 | 25.11 | Q | \| | \| | \| | \| |
| 25+25 | 0.6840 | 22.47 | Q | \| | \| | \| | \| |
| 25+30 | 0.5946 | 20.13 | Q | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 25+35 | 0.5150 | 18.05 | Q | \| | \| | \| | \| |
| 25+40 | 0.4453 | 16.17 | Q | \| | \| | \| | \| |
| 25+45 | 0.3847 | 14.47 | Q | \| | \| | \| | \| |
| 25+50 | 0.3376 | 12.93 | Q | \| | \| | \| | \| |
| 25+55 | 0.2976 | 11.55 | Q | \| | \| | \| | \| |
| 26+ 0 | 0.2592 | 10.28 | Q | \| | \| | \| | \| |
| 26+ 5 | 0.2272 | 9.14 | Q | \| | \| | \| | \| |
| 26+10 | 0.1964 | 8.10 | Q | \| | \| | \| | \| |
| 26+15 | 0.1700 | 7.16 | Q | \| | \| | \| | \| |
| 26+20 | 0.1491 | 6.32 | Q | \| | \| | \| | \| |
| 26+25 | 0.1287 | 5.58 | Q | \| | \| | \| | \| |
| 26+30 | 0.1127 | 4.92 | Q | \| | \| | \| | \| |
| 26+35 | 0.0982 | 4.33 | Q | \| | \| | \| | \| |
| 26+40 | 0.0840 | 3.79 | Q | \| | \| | \| | \| |
| 26+45 | 0.0703 | 3.32 | Q | \| | \| | \| | \| |
| 26+50 | 0.0567 | 2.91 | Q | \| | \| | \| | \| |
| 26+55 | 0.0440 | 2.59 | Q | \| | \| | \| | \| |
| 27+ 0 | 0.0318 | 2.34 | Q | \| | \| | \| | \| |
| 27+ 5 | 0.0204 | 2.14 | Q | \| | \| | \| | \| |
| 27+10 | 0.0141 | 1.96 | Q | \| | \| | \| | \| |
| 27+15 | 0.0084 | 1.79 | Q | \| | \| | \| | \| |
| 27+20 | 0.0028 | 1.64 | Q | \| | \| | \| | \| |
| 27+25 | 0.0000 | 1.49 | Q | \| | \| | \| | \| |
| 27+30 | 0.0000 | 1.35 | Q | \| | \| | \| | \| |
| 27+35 | 0.0000 | 1.22 | Q | \| | \| | \| | \| |
| 27+40 | 0.0000 | 1.12 | Q | \| | \| | \| | \| |
| 27+45 | 0.0000 | 1.02 | Q | \| | \| | \| | \| |
| 27+50 | 0.0000 | 0.94 | Q | \| | \| | \| | \| |
| 27+55 | 0.0000 | 0.85 | Q | \| | \| | \| | \| |
| 28+ 0 | 0.0000 | 0.76 | Q | \| | \| | \| | \| |
| 28+ 5 | 0.0000 | 0.66 | Q | \| | \| | \| | \| |
| 28+10 | 0.0000 | 0.56 | Q | \| | \| | \| | \| |
| 28+15 | 0.0000 | 0.47 | Q | \| | \| | \| | \| |
| 28+20 | 0.0000 | 0.39 | Q | \| | \| | \| | \| |
| 28+25 | 0.0000 | 0.32 | Q | \| | \| | \| | \| |
| 28+30 | 0.0000 | 0.26 | Q | \| | \| | \| | \| |
| 28+35 | 0.0000 | 0.21 | Q | \| | \| | \| | \| |
| 28+40 | 0.0000 | 0.16 | Q | \| | \| | \| | \| |
| 28+45 | 0.0000 | 0.13 | Q | \| | \| | \| | \| |
| 28+50 | 0.0000 | 0.09 | Q | \| | \| | \| | \| |
| 28+55 | 0.0000 | 0.06 | Q | \| | \| | \| | \| |
| 29+ 0 | 0.0000 | 0.03 | Q | \| | \| | \| | \| |
| 29+ 5 | 0.0000 | 0.02 | Q | \| | \| | \| | \| |
| 29+10 | 0.0000 | 0.02 | Q | \| | \| | \| | \| |
| 29+15 | 0.0000 | 0.01 | Q | \| | \| | \| | \| |
| 29+20 | 0.0000 | 0.01 | Q | \| | \| | \| | \| |
| 29+25 | 0.0000 | 0.01 | Q | \| | \| | \| | \| |
| 29+30 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 29+35 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |

**********HYDROGRAPH DATA**********

Number of intervals = 355
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2671.248 (CFS)
Total volume = 628.843 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 2.100 to Point/Station 2.100

**** FLOWBY BASIN ROUTING OR SPLIT FLOW ****

A constant split flow fraction of 0.5000 is
being diverted from the main stream into stream number 2
Total volume of excess flow diverted into flowby
basin (stream number 2 ) is 314.42(Ac.Ft)

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P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals (CFS)

---

| Time(h+m) | Volume(Ac.Ft) | Q(CFS) | 0 | 333.9 | 667.8 | 1001.7 | 1335.6 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0014 | 0.20 | Q | | | | |
| 0+10 | 0.0070 | 0.82 | Q | | | | |
| 0+15 | 0.0202 | 1.91 | Q | | | | |
| 0+20 | 0.0446 | 3.56 | Q | | | | |
| 0+25 | 0.0842 | 5.74 | Q | | | | |
| 0+30 | 0.1425 | 8.46 | Q | | | | |
| 0+35 | 0.2225 | 11.62 | Q | | | | |
| 0+40 | 0.3317 | 15.87 | Q | | | | |
| 0+45 | 0.4828 | 21.93 | Q | | | | |
| 0+50 | 0.6730 | 27.62 | Q | | | | |
| 0+55 | 0.8917 | 31.76 | Q | | | | |
| 1+ 0 | 1.1315 | 34.82 | VQ | | | | |
| 1+ 5 | 1.3880 | 37.24 | VQ | | | | |
| 1+10 | 1.6582 | 39.23 | VQ | | | | |
| 1+15 | 1.9403 | 40.97 | VQ | | | | |
| 1+20 | 2.2331 | 42.50 | VQ | | | | |
| 1+25 | 2.5353 | 43.88 | VQ | | | | |
| 1+30 | 2.8461 | 45.13 | VQ | | | | |
| 1+35 | 3.1647 | 46.26 | VQ | | | | |
| 1+40 | 3.4904 | 47.30 | VQ | | | | |
| 1+45 | 3.8227 | 48.26 | VQ | | | | |
| 1+50 | 4.1613 | 49.15 | VQ | | | | |
| 1+55 | 4.5054 | 49.98 | VQ | | | | |
| 2+ 0 | 4.8549 | 50.75 | VQ | | | | |
| 2+ 5 | 5.2094 | 51.47 | VQ | | | | |
| 2+10 | 5.5686 | 52.15 | VQ | | | | |
| 2+15 | 5.9321 | 52.78 | VQ | | | | |
| 2+20 | 6.2997 | 53.38 | VQ | | | | |
| 2+25 | 6.6711 | 53.93 | VQ | | | | |
| 2+30 | 7.0460 | 54.44 | VQ | | | | |
| 2+35 | 7.4243 | 54.92 | VQ | | | | |
| 2+40 | 7.8057 | 55.39 | VQ | | | | |
| 2+45 | 8.1902 | 55.82 | \|Q | | | | |
| 2+50 | 8.5774 | 56.23 | \|Q | | | | |
| 2+55 | 8.9673 | 56.60 | \|Q | | | | |
| 3+ 0 | 9.3594 | 56.93 | \|Q | | | | |
| 3+ 5 | 9.7537 | 57.25 | \|Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+10 | 10.1501 | 57.56 | Q | | | | |
| 3+15 | 10.5486 | 57.87 | Q | | | | |
| 3+20 | 10.9493 | 58.17 | Q | | | | |
| 3+25 | 11.3520 | 58.47 | Q | | | | |
| 3+30 | 11.7568 | 58.77 | Q | | | | |
| 3+35 | 12.1636 | 59.07 | Q | | | | |
| 3+40 | 12.5725 | 59.37 | Q | | | | |
| 3+45 | 12.9833 | 59.65 | Q | | | | |
| 3+50 | 13.3961 | 59.94 | Q | | | | |
| 3+55 | 13.8110 | 60.23 | Q | | | | |
| 4+ 0 | 14.2278 | 60.53 | Q | | | | |
| 4+ 5 | 14.6468 | 60.83 | Q | | | | |
| 4+10 | 15.0679 | 61.14 | Q | | | | |
| 4+15 | 15.4911 | 61.45 | Q | | | | |
| 4+20 | 15.9164 | 61.75 | QV | | | | |
| 4+25 | 16.3437 | 62.05 | QV | | | | |
| 4+30 | 16.7732 | 62.35 | QV | | | | |
| 4+35 | 17.2047 | 62.65 | QV | | | | |
| 4+40 | 17.6382 | 62.95 | QV | | | | |
| 4+45 | 18.0739 | 63.25 | QV | | | | |
| 4+50 | 18.5116 | 63.55 | QV | | | | |
| 4+55 | 18.9514 | 63.86 | QV | | | | |
| 5+ 0 | 19.3933 | 64.16 | QV | | | | |
| 5+ 5 | 19.8373 | 64.46 | QV | | | | |
| 5+10 | 20.2833 | 64.76 | QV | | | | |
| 5+15 | 20.7314 | 65.07 | QV | | | | |
| 5+20 | 21.1817 | 65.38 | QV | | | | |
| 5+25 | 21.6341 | 65.69 | QV | | | | |
| 5+30 | 22.0886 | 66.00 | QV | | | | |
| 5+35 | 22.5454 | 66.32 | QV | | | | |
| 5+40 | 23.0043 | 66.64 | QV | | | | |
| 5+45 | 23.4655 | 66.96 | Q | | | | |
| 5+50 | 23.9289 | 67.29 | QV | | | | |
| 5+55 | 24.3947 | 67.63 | QV | | | | |
| 6+ 0 | 24.8627 | 67.96 | QV | | | | |
| 6+ 5 | 25.3331 | 68.30 | QV | | | | |
| 6+10 | 25.8059 | 68.65 | QV | | | | |
| 6+15 | 26.2811 | 69.00 | QV | | | | |
| 6+20 | 26.7587 | 69.35 | QV | | | | |
| 6+25 | 27.2388 | 69.71 | QV | | | | |
| 6+30 | 27.7214 | 70.07 | QV | | | | |
| 6+35 | 28.2066 | 70.44 | QV | | | | |
| 6+40 | 28.6943 | 70.82 | QV | | | | |
| 6+45 | 29.1846 | 71.20 | QV | | | | |
| 6+50 | 29.6776 | 71.58 | QV | | | | |
| 6+55 | 30.1733 | 71.97 | QV | | | | |
| 7+ 0 | 30.6716 | 72.36 | QV | | | | |
| 7+ 5 | 31.1727 | 72.76 | QV | | | | |
| 7+10 | 31.6766 | 73.17 | Q V | | | | |
| 7+15 | 32.1834 | 73.58 | Q V | | | | |
| 7+20 | 32.6930 | 74.00 | Q V | | | | |
| 7+25 | 33.2055 | 74.42 | Q V | | | | |
| 7+30 | 33.7210 | 74.85 | Q V | | | | |
| 7+35 | 34.2395 | 75.29 | Q V | | | | |
| 7+40 | 34.7611 | 75.73 | Q V | | | | |
| 7+45 | 35.2857 | 76.18 | Q V | | | | |
| 7+50 | 35.8135 | 76.63 | Q V | | | | |
| 7+55 | 36.3444 | 77.09 | Q V | | | | |
| 8+ 0 | 36.8786 | 77.56 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8+ 5 | 37.4161 | 78.04 | Q V | \| | \| | \| | \| |
| 8+10 | 37.9569 | 78.53 | Q V | \| | \| | \| | \| |
| 8+15 | 38.5011 | 79.02 | Q V | \| | \| | \| | \| |
| 8+20 | 39.0487 | 79.52 | Q V | \| | \| | \| | \| |
| 8+25 | 39.5999 | 80.03 | Q V | \| | \| | \| | \| |
| 8+30 | 40.1546 | 80.54 | Q V | \| | \| | \| | \| |
| 8+35 | 40.7129 | 81.07 | Q V | \| | \| | \| | \| |
| 8+40 | 41.2749 | 81.60 | Q V | \| | \| | \| | \| |
| 8+45 | 41.8406 | 82.15 | Q V | \| | \| | \| | \| |
| 8+50 | 42.4102 | 82.70 | Q V | \| | \| | \| | \| |
| 8+55 | 42.9836 | 83.26 | Q V | \| | \| | \| | \| |
| 9+ 0 | 43.5609 | 83.83 | Q V | \| | \| | \| | \| |
| 9+ 5 | 44.1423 | 84.41 | Q V | \| | \| | \| | \| |
| 9+10 | 44.7277 | 85.00 | Q V | \| | \| | \| | \| |
| 9+15 | 45.3173 | 85.61 | Q V | \| | \| | \| | \| |
| 9+20 | 45.9111 | 86.22 | Q V | \| | \| | \| | \| |
| 9+25 | 46.5092 | 86.84 | Q V | \| | \| | \| | \| |
| 9+30 | 47.1117 | 87.48 | Q V | \| | \| | \| | \| |
| 9+35 | 47.7186 | 88.13 | Q V | \| | \| | \| | \| |
| 9+40 | 48.3301 | 88.79 | Q V | \| | \| | \| | \| |
| 9+45 | 48.9463 | 89.46 | Q V | \| | \| | \| | \| |
| 9+50 | 49.5671 | 90.15 | Q V | \| | \| | \| | \| |
| 9+55 | 50.1928 | 90.85 | Q V | \| | \| | \| | \| |
| 10+ 0 | 50.8234 | 91.56 | Q V | \| | \| | \| | \| |
| 10+ 5 | 51.4590 | 92.29 | Q V | \| | \| | \| | \| |
| 10+10 | 52.0998 | 93.03 | Q V | \| | \| | \| | \| |
| 10+15 | 52.7457 | 93.79 | Q V | \| | \| | \| | \| |
| 10+20 | 53.3970 | 94.57 | Q V | \| | \| | \| | \| |
| 10+25 | 54.0537 | 95.36 | Q V | \| | \| | \| | \| |
| 10+30 | 54.7160 | 96.17 | Q V | \| | \| | \| | \| |
| 10+35 | 55.3840 | 96.99 | Q V | \| | \| | \| | \| |
| 10+40 | 56.0578 | 97.84 | Q V | \| | \| | \| | \| |
| 10+45 | 56.7376 | 98.70 | Q V | \| | \| | \| | \| |
| 10+50 | 57.4234 | 99.58 | Q V | \| | \| | \| | \| |
| 10+55 | 58.1154 | 100.48 | Q V | \| | \| | \| | \| |
| 11+ 0 | 58.8138 | 101.41 | Q V | \| | \| | \| | \| |
| 11+ 5 | 59.5187 | 102.35 | Q V | \| | \| | \| | \| |
| 11+10 | 60.2303 | 103.32 | Q V | \| | \| | \| | \| |
| 11+15 | 60.9487 | 104.31 | Q V | \| | \| | \| | \| |
| 11+20 | 61.6741 | 105.33 | Q V | \| | \| | \| | \| |
| 11+25 | 62.4067 | 106.37 | Q V | \| | \| | \| | \| |
| 11+30 | 63.1467 | 107.44 | Q V | \| | \| | \| | \| |
| 11+35 | 63.8942 | 108.54 | Q V | \| | \| | \| | \| |
| 11+40 | 64.6494 | 109.66 | Q V | \| | \| | \| | \| |
| 11+45 | 65.4126 | 110.82 | Q V | \| | \| | \| | \| |
| 11+50 | 66.1840 | 112.01 | Q V | \| | \| | \| | \| |
| 11+55 | 66.9638 | 113.23 | Q V | \| | \| | \| | \| |
| 12+ 0 | 67.7523 | 114.48 | Q V | \| | \| | \| | \| |
| 12+ 5 | 68.5495 | 115.76 | Q V | \| | \| | \| | \| |
| 12+10 | 69.3556 | 117.05 | Q V | \| | \| | \| | \| |
| 12+15 | 70.1707 | 118.35 | Q V | \| | \| | \| | \| |
| 12+20 | 70.9945 | 119.61 | Q V | \| | \| | \| | \| |
| 12+25 | 71.8269 | 120.86 | Q V | \| | \| | \| | \| |
| 12+30 | 72.6681 | 122.15 | Q V | \| | \| | \| | \| |
| 12+35 | 73.5193 | 123.60 | Q V | \| | \| | \| | \| |
| 12+40 | 74.3811 | 125.13 | Q V | \| | \| | \| | \| |
| 12+45 | 75.2540 | 126.74 | Q V | \| | \| | \| | \| |
| 12+50 | 76.1385 | 128.42 | Q V | \| | \| | \| | \| |
| 12+55 | 77.0349 | 130.17 | Q V | \| | \| | \| | \| |

```
13+ 0      77.9438    131.97  |  Q     V|          |          |          |
13+ 5      78.8655    133.84  |   Q     V          |          |          |
13+10      79.8007    135.78  |   Q     V          |          |          |
13+15      80.7497    137.80  |   Q     V          |          |          |
13+20      81.7133    139.90  |   Q     V          |          |          |
13+25      82.6919    142.10  |   Q     V          |          |          |
13+30      83.6862    144.38  |   Q     V          |          |          |
13+35      84.6970    146.76  |   Q     V          |          |          |
13+40      85.7248    149.24  |   Q     V          |          |          |
13+45      86.7706    151.85  |   Q      V         |          |          |
13+50      87.8351    154.57  |   Q     |V         |          |          |
13+55      88.9193    157.42  |   Q     |V         |          |          |
14+ 0      90.0240    160.41  |   Q     |V         |          |          |
14+ 5      91.1520    163.78  |   Q     |V         |          |          |
14+10      92.3077    167.80  |    Q    |V         |          |          |
14+15      93.4959    172.53  |    Q    |V         |          |          |
14+20      94.7217    177.98  |    Q    | V        |          |          |
14+25      95.9901    184.17  |    Q    | V        |          |          |
14+30      97.3079    191.35  |    Q    | V        |          |          |
14+35      98.6835    199.74  |    Q    | V        |          |          |
14+40     100.1304    210.09  |     Q   | V        |          |          |
14+45     101.6689    223.38  |     Q   | V        |          |          |
14+50     103.2982    236.58  |      Q  |  V       |          |          |
14+55     105.0069    248.10  |      Q  |  V       |          |          |
15+ 0     106.7881    258.63  |      Q  |  V       |          |          |
15+ 5     108.6397    268.85  |       Q |  V       |          |          |
15+10     110.5617    279.09  |       Q |   V      |          |          |
15+15     112.5569    289.70  |       Q |   V      |          |          |
15+20     114.6288    300.85  |        Q|   V      |          |          |
15+25     116.7797    312.30  |        Q|   V      |          |          |
15+30     119.0086    323.64  |        Q|    V     |          |          |
15+35     121.3164    335.08  |         Q    V     |          |          |
15+40     123.7070    347.13  |         Q    V     |          |          |
15+45     126.1891    360.40  |         Q     V    |          |          |
15+50     128.7713    374.93  |         |Q    V    |          |          |
15+55     131.4699    391.84  |         |Q    V    |          |          |
16+ 0     134.3195    413.76  |         | Q    V   |          |          |
16+ 5     137.5202    464.74  |         |  Q   V   |          |          |
16+10     141.3355    553.98  |         |     QV   |          |          |
16+15     145.8599    656.95  |         |       VQ|          |          |
16+20     151.2796    786.94  |         |        V|  Q       |          |
16+25     157.5180    905.81  |         |         V      Q  |          |
16+30     164.3620    993.75  |         |         V        Q|          |
16+35     171.5144   1038.52  |         |         |V         |Q         |
16+40     179.5482   1166.51  |         |         | V        |   Q      |
16+45     188.7467   1335.62  |         |         |   V      |          Q
16+50     197.3428   1248.16  |         |         |    V     |      Q   |
16+55     204.4407   1030.62  |         |         |     V    Q          |
17+ 0     210.4251    868.93  |         |         |     Q    |          |
17+ 5     215.7178    768.51  |         |         |  Q   V   |          |
17+10     220.5128    696.22  |         |         Q       V  |          |
17+15     224.9370    642.40  |         |        Q|       V  |          |
17+20     229.0386    595.55  |         |      Q  |        V|          |
17+25     232.8528    553.82  |         |     Q   |        V|          |
17+30     236.4045    515.71  |         |    Q    |         V          |
17+35     239.7152    480.71  |         |   Q     |         V          |
17+40     242.8013    448.11  |         |  Q      |         V          |
17+45     245.6655    415.88  |         | Q       |          V         |
17+50     248.3227    385.83  |         |Q        |          |V        |
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|---|---|---|---|---|---|---|
| 17+55 | 250.7988 | 359.53 | | Q | | V |
| 18+ 0 | 253.1247 | 337.72 | | Q | | V |
| 18+ 5 | 255.3110 | 317.44 | | Q | | V |
| 18+10 | 257.3768 | 299.96 | | Q | | V |
| 18+15 | 259.3224 | 282.49 | | Q | | V |
| 18+20 | 261.1588 | 266.64 | | Q | | V |
| 18+25 | 262.8918 | 251.64 | | Q | | V |
| 18+30 | 264.5310 | 238.02 | | Q | | V |
| 18+35 | 266.0873 | 225.97 | | Q | | V |
| 18+40 | 267.5693 | 215.19 | | Q | | V |
| 18+45 | 268.9727 | 203.78 | | Q | | V |
| 18+50 | 270.3012 | 192.89 | | Q | | V |
| 18+55 | 271.5494 | 181.24 | | Q | | V |
| 19+ 0 | 272.7248 | 170.67 | | Q | | V |
| 19+ 5 | 273.8467 | 162.90 | | Q | | V |
| 19+10 | 274.9245 | 156.49 | | Q | | V |
| 19+15 | 275.9650 | 151.09 | | Q | | V |
| 19+20 | 276.9703 | 145.97 | | Q | | V |
| 19+25 | 277.9420 | 141.09 | | Q | | V |
| 19+30 | 278.8835 | 136.70 | | Q | | V |
| 19+35 | 279.7961 | 132.51 | | Q | | V |
| 19+40 | 280.6777 | 128.01 | | Q | | V |
| 19+45 | 281.5328 | 124.16 | | Q | | V |
| 19+50 | 282.3669 | 121.11 | | Q | | V |
| 19+55 | 283.1836 | 118.59 | | Q | | V |
| 20+ 0 | 283.9863 | 116.55 | | Q | | V |
| 20+ 5 | 284.7753 | 114.56 | | Q | | V |
| 20+10 | 285.5494 | 112.39 | | Q | | V |
| 20+15 | 286.3069 | 110.00 | | Q | | V |
| 20+20 | 287.0434 | 106.95 | | Q | | V |
| 20+25 | 287.7598 | 104.02 | | Q | | V |
| 20+30 | 288.4601 | 101.67 | | Q | | V |
| 20+35 | 289.1462 | 99.62 | Q | | | V |
| 20+40 | 289.8169 | 97.39 | Q | | | V |
| 20+45 | 290.4723 | 95.16 | Q | | | V |
| 20+50 | 291.1144 | 93.24 | Q | | | V |
| 20+55 | 291.7460 | 91.71 | Q | | | V |
| 21+ 0 | 292.3623 | 89.47 | Q | | | V |
| 21+ 5 | 292.9632 | 87.26 | Q | | | V |
| 21+10 | 293.5524 | 85.56 | Q | | | V |
| 21+15 | 294.1319 | 84.13 | Q | | | V |
| 21+20 | 294.7023 | 82.83 | Q | | | V |
| 21+25 | 295.2643 | 81.59 | Q | | | V |
| 21+30 | 295.8178 | 80.37 | Q | | | V |
| 21+35 | 296.3629 | 79.16 | Q | | | V |
| 21+40 | 296.9003 | 78.03 | Q | | | V |
| 21+45 | 297.4305 | 76.99 | Q | | | V |
| 21+50 | 297.9540 | 76.00 | Q | | | V |
| 21+55 | 298.4708 | 75.05 | Q | | | V |
| 22+ 0 | 298.9814 | 74.13 | Q | | | V |
| 22+ 5 | 299.4859 | 73.26 | Q | | | V |
| 22+10 | 299.9847 | 72.42 | Q | | | V |
| 22+15 | 300.4778 | 71.60 | Q | | | V |
| 22+20 | 300.9655 | 70.81 | Q | | | V |
| 22+25 | 301.4479 | 70.05 | Q | | | V |
| 22+30 | 301.9252 | 69.30 | Q | | | V |
| 22+35 | 302.3975 | 68.58 | Q | | | V |
| 22+40 | 302.8650 | 67.88 | Q | | | V |
| 22+45 | 303.3278 | 67.20 | Q | | | V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+50 | 303.7860 | 66.53 | \|Q | \| | \| | \| | V \| |
| 22+55 | 304.2397 | 65.88 | \|Q | \| | \| | \| | V \| |
| 23+ 0 | 304.6891 | 65.25 | \|Q | \| | \| | \| | V \| |
| 23+ 5 | 305.1343 | 64.64 | \|Q | \| | \| | \| | V \| |
| 23+10 | 305.5753 | 64.04 | \|Q | \| | \| | \| | V \| |
| 23+15 | 306.0123 | 63.45 | \|Q | \| | \| | \| | V \| |
| 23+20 | 306.4453 | 62.88 | \|Q | \| | \| | \| | V \| |
| 23+25 | 306.8745 | 62.32 | \|Q | \| | \| | \| | V\| |
| 23+30 | 307.2999 | 61.77 | \|Q | \| | \| | \| | V\| |
| 23+35 | 307.7217 | 61.24 | \|Q | \| | \| | \| | V\| |
| 23+40 | 308.1398 | 60.72 | \|Q | \| | \| | \| | V\| |
| 23+45 | 308.5544 | 60.20 | \|Q | \| | \| | \| | V\| |
| 23+50 | 308.9656 | 59.70 | \|Q | \| | \| | \| | V\| |
| 23+55 | 309.3734 | 59.22 | \|Q | \| | \| | \| | V\| |
| 24+ 0 | 309.7780 | 58.74 | \|Q | \| | \| | \| | V\| |
| 24+ 5 | 310.1779 | 58.07 | \|Q | \| | \| | \| | V\| |
| 24+10 | 310.5704 | 56.99 | \|Q | \| | \| | \| | V\| |
| 24+15 | 310.9524 | 55.46 | \|Q | \| | \| | \| | V\| |
| 24+20 | 311.3201 | 53.40 | \|Q | \| | \| | \| | V\| |
| 24+25 | 311.6701 | 50.82 | \|Q | \| | \| | \| | V\| |
| 24+30 | 311.9989 | 47.74 | \|Q | \| | \| | \| | V\| |
| 24+35 | 312.3037 | 44.26 | \|Q | \| | \| | \| | V\| |
| 24+40 | 312.5773 | 39.72 | \|Q | \| | \| | \| | V\| |
| 24+45 | 312.8075 | 33.43 | \|Q | \| | \| | \| | V\| |
| 24+50 | 312.9974 | 27.57 | Q | \| | \| | \| | V\| |
| 24+55 | 313.1581 | 23.33 | Q | \| | \| | \| | V\| |
| 25+ 0 | 313.2973 | 20.21 | Q | \| | \| | \| | V\| |
| 25+ 5 | 313.4196 | 17.76 | Q | \| | \| | \| | V\| |
| 25+10 | 313.5281 | 15.76 | Q | \| | \| | \| | V\| |
| 25+15 | 313.6249 | 14.05 | Q | \| | \| | \| | V\| |
| 25+20 | 313.7114 | 12.56 | Q | \| | \| | \| | V\| |
| 25+25 | 313.7888 | 11.24 | Q | \| | \| | \| | V\| |
| 25+30 | 313.8581 | 10.06 | Q | \| | \| | \| | V\| |
| 25+35 | 313.9202 | 9.02 | Q | \| | \| | \| | V\| |
| 25+40 | 313.9759 | 8.09 | Q | \| | \| | \| | V\| |
| 25+45 | 314.0258 | 7.24 | Q | \| | \| | \| | V\| |
| 25+50 | 314.0703 | 6.47 | Q | \| | \| | \| | V\| |
| 25+55 | 314.1100 | 5.77 | Q | \| | \| | \| | V\| |
| 26+ 0 | 314.1455 | 5.14 | Q | \| | \| | \| | V\| |
| 26+ 5 | 314.1769 | 4.57 | Q | \| | \| | \| | V\| |
| 26+10 | 314.2048 | 4.05 | Q | \| | \| | \| | V\| |
| 26+15 | 314.2295 | 3.58 | Q | \| | \| | \| | V\| |
| 26+20 | 314.2512 | 3.16 | Q | \| | \| | \| | V\| |
| 26+25 | 314.2704 | 2.79 | Q | \| | \| | \| | V\| |
| 26+30 | 314.2874 | 2.46 | Q | \| | \| | \| | V\| |
| 26+35 | 314.3023 | 2.16 | Q | \| | \| | \| | V\| |
| 26+40 | 314.3153 | 1.89 | Q | \| | \| | \| | V\| |
| 26+45 | 314.3267 | 1.66 | Q | \| | \| | \| | V\| |
| 26+50 | 314.3367 | 1.45 | Q | \| | \| | \| | V\| |
| 26+55 | 314.3456 | 1.29 | Q | \| | \| | \| | V\| |
| 27+ 0 | 314.3537 | 1.17 | Q | \| | \| | \| | V\| |
| 27+ 5 | 314.3611 | 1.07 | Q | \| | \| | \| | V\| |
| 27+10 | 314.3678 | 0.98 | Q | \| | \| | \| | V\| |
| 27+15 | 314.3740 | 0.90 | Q | \| | \| | \| | V\| |
| 27+20 | 314.3796 | 0.82 | Q | \| | \| | \| | V\| |
| 27+25 | 314.3848 | 0.75 | Q | \| | \| | \| | V\| |
| 27+30 | 314.3894 | 0.68 | Q | \| | \| | \| | V\| |
| 27+35 | 314.3937 | 0.61 | Q | \| | \| | \| | V\| |
| 27+40 | 314.3975 | 0.56 | Q | \| | \| | \| | V\| |

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   27+45     314.4010      0.51  Q         |          |          |        V|
   27+50     314.4043      0.47  Q         |          |          |        V|
   27+55     314.4072      0.43  Q         |          |          |        V|
   28+ 0     314.4098      0.38  Q         |          |          |        V|
   28+ 5     314.4121      0.33  Q         |          |          |        V|
   28+10     314.4140      0.28  Q         |          |          |        V|
   28+15     314.4156      0.23  Q         |          |          |        V|
   28+20     314.4170      0.19  Q         |          |          |        V|
   28+25     314.4181      0.16  Q         |          |          |        V|
   28+30     314.4190      0.13  Q         |          |          |        V|
   28+35     314.4197      0.11  Q         |          |          |        V|
   28+40     314.4203      0.08  Q         |          |          |        V|
   28+45     314.4207      0.06  Q         |          |          |        V|
   28+50     314.4210      0.05  Q         |          |          |        V|
   28+55     314.4212      0.03  Q         |          |          |        V|
   29+ 0     314.4213      0.02  Q         |          |          |        V|
   29+ 5     314.4214      0.01  Q         |          |          |        V|
   29+10     314.4215      0.01  Q         |          |          |        V|
   29+15     314.4215      0.01  Q         |          |          |        V|
   29+20     314.4216      0.00  Q         |          |          |        V|
   29+25     314.4216      0.00  Q         |          |          |        V|
   29+30     314.4216      0.00  Q         |          |          |         V
   29+35     314.4216      0.00  Q         |          |          |         V
----------------------------------------------------------------------
       ****************************HYDROGRAPH DATA****************************
                     Number of intervals =   355
                     Time interval =    5.0 (Min.)
                     Maximum/Peak flow rate =     1335.624 (CFS)
                     Total volume =     314.422 (Ac.Ft)
              Status of hydrographs being held in storage
                         Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
              Peak (CFS)   2799.507  1335.624     0.000     0.000     0.000
              Vol (Ac.Ft)    570.680   314.422     0.000     0.000     0.000
       **********************************************************************

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       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
       Process from Point/Station        2.100 to Point/Station        2.200
       **** STREAM ROUTING SCS CONVEX METHOD ****
       ________________________________________________________________________
       HYDROGRAPH STREAM ROUTING DATA:
       Length of stream =  14210.00 (Ft.)
       Elevation difference =  473.00 (Ft.)
       Slope of channel =  0.033286 (Vert/Horiz)
       Channel type - Improved Channel


       Channel length = 14210.00(Ft.)     Elevation difference = 473.00(Ft.)
       Channel evaluation using mean flow rate of hydrograph
       Channel base width  =  200.000(Ft.)
       Slope or 'Z' of left channel bank =   2.000
       Slope or 'Z' of right channel bank =   2.000
       Manning's 'N'    = 0.035
       Maximum depth of channel  =    1.000(Ft.)
       Flow(q) thru subarea =    155.429(CFS)
       Depth of flow =     0.252(Ft.)
       Average velocity =     3.081(Ft/s)
```

```
      Total flow rate =   155.429(CFS)
      Channel flow top width =  201.006(Ft.)
      Depth of flow in channel =   0.25(Ft.)
      Total number of channels (same dimensions) = 1
      Flow Velocity =    3.08(Ft/s)
      Travel time  =   76.87 min.
      Individual channel flow =  155.429(CFS)
      Total capacity of improved channels =    155.429(CFS)
      Critical Depth in Channel =    0.27(Ft.)


      Channel evaluation using maximum flow rate of hydrograph
      Flow(q) thru subarea =   1335.624(CFS)
      Depth of flow =     0.914(Ft.)
      Average velocity =     7.241(Ft/s)
      Total flow rate =  1335.624(CFS)
      Channel flow top width =  203.656(Ft.)
      Depth of flow in channel =   0.91(Ft.)
      Total number of channels (same dimensions) = 1
      Flow Velocity =    7.24(Ft/s)
      Travel time  =   76.87 min.
      Individual channel flow = 1335.624(CFS)
      Total capacity of improved channels =   1335.624(CFS)
      Critical Depth in Channel =    1.11(Ft.)


      ********************** SCS CONVEX CHANNEL ROUTING *********************
      Convex method of stream routing  data items:
      Using equation: Outflow =
      O(t+dt) = (1-c*)O(t+dt-dt*) + Input(c*)
                where c* = 1 - (1-c)^e and dt = c(length)/velocity
                c(v/v+1.7) =   0.8099   Travel time =  32.71 (min.)
               dt*(unit time interval) =   5.00(min.),  e=   0.4592
               dt(routing time-step) =  26.49 (min.),   c* =   0.5334

      Output hydrograph delayed by 0  unit time increments


      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        P R I N T  O F  S T O R M
                     R u n o f f     H y d r o g r a p h
      ----------------------------------------------------------------------
                  Hydrograph in   5   Minute intervals (CFS)

      ----------------------------------------------------------------------
Time(h+m) Out = O(CFS) In = I  0      333.9     667.8    1001.7    1335.6
----------------------------------------------------------------------------
  0+ 5       0.0852      0.20  O         |         |         |         |
  0+10       0.4153      0.82  O         |         |         |         |
  0+15       1.1025      1.91  O         |         |         |         |
  0+20       2.2449      3.56  O         |         |         |         |
  0+25       3.8889      5.74  O         |         |         |         |
  0+30       6.0539      8.46  O         |         |         |         |
  0+35       8.7029     11.62  O         |         |         |         |
  0+40      12.0952     15.87  O         |         |         |         |
  0+45      16.7308     21.93  O         |         |         |         |
  0+50      21.9658     27.62  O         |         |         |         |
  0+55      26.7714     31.76  O         |         |         |         |
  1+ 0      30.7546     34.82  OI        |         |         |         |
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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+ 5 | 33.9711 | 37.24 | O | | | | |
| 1+10 | 36.5781 | 39.23 | O | | | | |
| 1+15 | 38.7452 | 40.97 | O | | | | |
| 1+20 | 40.5954 | 42.50 | O | | | | |
| 1+25 | 42.2105 | 43.88 | O | | | | |
| 1+30 | 43.6415 | 45.13 | O | | | | |
| 1+35 | 44.9234 | 46.26 | O | | | | |
| 1+40 | 46.0843 | 47.30 | O | | | | |
| 1+45 | 47.1468 | 48.26 | O | | | | |
| 1+50 | 48.1257 | 49.15 | O | | | | |
| 1+55 | 49.0293 | 49.98 | O | | | | |
| 2+ 0 | 49.8679 | 50.75 | O | | | | |
| 2+ 5 | 50.6491 | 51.47 | O | | | | |
| 2+10 | 51.3808 | 52.15 | O | | | | |
| 2+15 | 52.0650 | 52.78 | O | | | | |
| 2+20 | 52.7047 | 53.38 | O | | | | |
| 2+25 | 53.3006 | 53.93 | O | | | | |
| 2+30 | 53.8559 | 54.44 | O | | | | |
| 2+35 | 54.3766 | 54.92 | O | | | | |
| 2+40 | 54.8693 | 55.39 | O | | | | |
| 2+45 | 55.3345 | 55.82 | O | | | | |
| 2+50 | 55.7721 | 56.23 | O | | | | |
| 2+55 | 56.1774 | 56.60 | O | | | | |
| 3+ 0 | 56.5476 | 56.93 | O | | | | |
| 3+ 5 | 56.8909 | 57.25 | O | | | | |
| 3+10 | 57.2171 | 57.56 | O | | | | |
| 3+15 | 57.5335 | 57.87 | O | | | | |
| 3+20 | 57.8432 | 58.17 | O | | | | |
| 3+25 | 58.1488 | 58.47 | O | | | | |
| 3+30 | 58.4520 | 58.77 | O | | | | |
| 3+35 | 58.7536 | 59.07 | O | | | | |
| 3+40 | 59.0510 | 59.37 | O | | | | |
| 3+45 | 59.3439 | 59.65 | O | | | | |
| 3+50 | 59.6342 | 59.94 | O | | | | |
| 3+55 | 59.9247 | 60.23 | O | | | | |
| 4+ 0 | 60.2179 | 60.53 | O | | | | |
| 4+ 5 | 60.5157 | 60.83 | O | | | | |
| 4+10 | 60.8177 | 61.14 | O | | | | |
| 4+15 | 61.1234 | 61.45 | O | | | | |
| 4+20 | 61.4288 | 61.75 | O | | | | |
| 4+25 | 61.7318 | 62.05 | O | | | | |
| 4+30 | 62.0328 | 62.35 | O | | | | |
| 4+35 | 62.3339 | 62.65 | O | | | | |
| 4+40 | 62.6348 | 62.95 | O | | | | |
| 4+45 | 62.9351 | 63.25 | O | | | | |
| 4+50 | 63.2354 | 63.55 | O | | | | |
| 4+55 | 63.5380 | 63.86 | O | | | | |
| 5+ 0 | 63.8409 | 64.16 | O | | | | |
| 5+ 5 | 64.1428 | 64.46 | O | | | | |
| 5+10 | 64.4442 | 64.76 | O | | | | |
| 5+15 | 64.7468 | 65.07 | O | | | | |
| 5+20 | 65.0515 | 65.38 | O | | | | |
| 5+25 | 65.3593 | 65.69 | O | | | | |
| 5+30 | 65.6701 | 66.00 | O | | | | |
| 5+35 | 65.9841 | 66.32 | O | | | | |
| 5+40 | 66.3013 | 66.64 | O | | | | |
| 5+45 | 66.6221 | 66.96 | OI | | | | |
| 5+50 | 66.9464 | 67.29 | O | | | | |
| 5+55 | 67.2748 | 67.63 | O | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+ 0 | 67.6072 | 67.96 | O | | | | |
| 6+ 5 | 67.9438 | 68.30 | O | | | | |
| 6+10 | 68.2845 | 68.65 | O | | | | |
| 6+15 | 68.6297 | 69.00 | O | | | | |
| 6+20 | 68.9792 | 69.35 | O | | | | |
| 6+25 | 69.3335 | 69.71 | O | | | | |
| 6+30 | 69.6921 | 70.07 | O | | | | |
| 6+35 | 70.0557 | 70.44 | O | | | | |
| 6+40 | 70.4240 | 70.82 | O | | | | |
| 6+45 | 70.7974 | 71.20 | O | | | | |
| 6+50 | 71.1756 | 71.58 | O | | | | |
| 6+55 | 71.5592 | 71.97 | O | | | | |
| 7+ 0 | 71.9478 | 72.36 | O | | | | |
| 7+ 5 | 72.3421 | 72.76 | O | | | | |
| 7+10 | 72.7416 | 73.17 | O | | | | |
| 7+15 | 73.1470 | 73.58 | O | | | | |
| 7+20 | 73.5580 | 74.00 | O | | | | |
| 7+25 | 73.9751 | 74.42 | O | | | | |
| 7+30 | 74.3979 | 74.85 | O | | | | |
| 7+35 | 74.8272 | 75.29 | O | | | | |
| 7+40 | 75.2626 | 75.73 | O | | | | |
| 7+45 | 75.7047 | 76.18 | O | | | | |
| 7+50 | 76.1532 | 76.63 | O | | | | |
| 7+55 | 76.6087 | 77.09 | O | | | | |
| 8+ 0 | 77.0709 | 77.56 | O | | | | |
| 8+ 5 | 77.5405 | 78.04 | O | | | | |
| 8+10 | 78.0172 | 78.53 | O | | | | |
| 8+15 | 78.5017 | 79.02 | O | | | | |
| 8+20 | 78.9935 | 79.52 | O | | | | |
| 8+25 | 79.4935 | 80.03 | O | | | | |
| 8+30 | 80.0014 | 80.54 | O | | | | |
| 8+35 | 80.5178 | 81.07 | O | | | | |
| 8+40 | 81.0424 | 81.60 | O | | | | |
| 8+45 | 81.5761 | 82.15 | O | | | | |
| 8+50 | 82.1185 | 82.70 | O | | | | |
| 8+55 | 82.6705 | 83.26 | O | | | | |
| 9+ 0 | 83.2316 | 83.83 | O | | | | |
| 9+ 5 | 83.8028 | 84.41 | O | | | | |
| 9+10 | 84.3838 | 85.00 | O | | | | |
| 9+15 | 84.9753 | 85.61 | O | | | | |
| 9+20 | 85.5772 | 86.22 | O | | | | |
| 9+25 | 86.1904 | 86.84 | O | | | | |
| 9+30 | 86.8144 | 87.48 | O | | | | |
| 9+35 | 87.4504 | 88.13 | O | | | | |
| 9+40 | 88.0981 | 88.79 | O | | | | |
| 9+45 | 88.7583 | 89.46 | O | | | | |
| 9+50 | 89.4310 | 90.15 | O | | | | |
| 9+55 | 90.1170 | 90.85 | O | | | | |
| 10+ 0 | 90.8163 | 91.56 | O | | | | |
| 10+ 5 | 91.5298 | 92.29 | O | | | | |
| 10+10 | 92.2574 | 93.03 | O | | | | |
| 10+15 | 93.0002 | 93.79 | O | | | | |
| 10+20 | 93.7580 | 94.57 | O | | | | |
| 10+25 | 94.5321 | 95.36 | O | | | | |
| 10+30 | 95.3222 | 96.17 | O | | | | |
| 10+35 | 96.1298 | 96.99 | O | | | | |
| 10+40 | 96.9545 | 97.84 | O | | | | |
| 10+45 | 97.7979 | 98.70 | O | | | | |
| 10+50 | 98.6597 | 99.58 | O | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10+55 | 99.5416 | 100.48 | OI | | | | |
| 11+ 0 | 100.4434 | 101.41 | O | | | | |
| 11+ 5 | 101.3667 | 102.35 | O | | | | |
| 11+10 | 102.3114 | 103.32 | O | | | | |
| 11+15 | 103.2793 | 104.31 | O | | | | |
| 11+20 | 104.2704 | 105.33 | O | | | | |
| 11+25 | 105.2866 | 106.37 | O | | | | |
| 11+30 | 106.3279 | 107.44 | O | | | | |
| 11+35 | 107.3963 | 108.54 | O | | | | |
| 11+40 | 108.4920 | 109.66 | O | | | | |
| 11+45 | 109.6171 | 110.82 | O | | | | |
| 11+50 | 110.7720 | 112.01 | O | | | | |
| 11+55 | 111.9589 | 113.23 | O | | | | |
| 12+ 0 | 113.1783 | 114.48 | O | | | | |
| 12+ 5 | 114.4270 | 115.76 | O | | | | |
| 12+10 | 115.6948 | 117.05 | O | | | | |
| 12+15 | 116.9778 | 118.35 | O | | | | |
| 12+20 | 118.2552 | 119.61 | O | | | | |
| 12+25 | 119.5200 | 120.86 | O | | | | |
| 12+30 | 120.7952 | 122.15 | O | | | | |
| 12+35 | 122.1437 | 123.60 | O | | | | |
| 12+40 | 123.5804 | 125.13 | O | | | | |
| 12+45 | 125.1050 | 126.74 | O | | | | |
| 12+50 | 126.7059 | 128.42 | O | | | | |
| 12+55 | 128.3756 | 130.17 | O | | | | |
| 13+ 0 | 130.1097 | 131.97 | O | | | | |
| 13+ 5 | 131.9111 | 133.84 | OI | | | | |
| 13+10 | 133.7802 | 135.78 | O | | | | |
| 13+15 | 135.7229 | 137.80 | O | | | | |
| 13+20 | 137.7416 | 139.90 | O | | | | |
| 13+25 | 139.8438 | 142.10 | O | | | | |
| 13+30 | 142.0321 | 144.38 | O | | | | |
| 13+35 | 144.3142 | 146.76 | O | | | | |
| 13+40 | 146.6938 | 149.24 | O | | | | |
| 13+45 | 149.1802 | 151.85 | O | | | | |
| 13+50 | 151.7790 | 154.57 | O | | | | |
| 13+55 | 154.5012 | 157.42 | O | | | | |
| 14+ 0 | 157.3527 | 160.41 | O | | | | |
| 14+ 5 | 160.4435 | 163.78 | O | | | | |
| 14+10 | 163.9631 | 167.80 | OI | | | | |
| 14+15 | 168.0583 | 172.53 | O | | | | |
| 14+20 | 172.8023 | 177.98 | O | | | | |
| 14+25 | 178.2445 | 184.17 | O | | | | |
| 14+30 | 184.5104 | 191.35 | O | | | | |
| 14+35 | 191.7881 | 199.74 | O | | | | |
| 14+40 | 200.5061 | 210.09 | O | | | | |
| 14+45 | 211.3689 | 223.38 | O | | | | |
| 14+50 | 223.4860 | 236.58 | OI | | | | |
| 14+55 | 235.4552 | 248.10 | O | | | | |
| 15+ 0 | 246.7561 | 258.63 | O | | | | |
| 15+ 5 | 257.5123 | 268.85 | OI | | | | |
| 15+10 | 267.9886 | 279.09 | O | | | | |
| 15+15 | 278.4985 | 289.70 | O | | | | |
| 15+20 | 289.2971 | 300.85 | OI | | | | |
| 15+25 | 300.4149 | 312.30 | OI | | | | |
| 15+30 | 311.6629 | 323.64 | O | | | | |
| 15+35 | 323.0010 | 335.08 | OI | | | | |
| 15+40 | 334.6571 | 347.13 | O | | | | |
| 15+45 | 347.0515 | 360.40 | O | | | | |

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|---|---|---|---|
| 15+50 | 360.4582 | 374.93 | OI |
| 15+55 | 375.4936 | 391.84 | O |
| 16+ 0 | 393.6974 | 413.76 | OI |
| 16+ 5 | 426.4572 | 464.74 | OI |
| 16+10 | 485.4913 | 553.98 | O I |
| 16+15 | 566.5754 | 656.95 | O I |
| 16+20 | 671.0233 | 786.94 | O I |
| 16+25 | 784.2868 | 905.81 | O I |
| 16+30 | 887.1575 | 993.75 | O I |
| 16+35 | 963.3855 | 1038.52 | O I |
| 16+40 | 1058.8408 | 1166.51 | O I |
| 16+45 | 1189.4441 | 1335.62 | O I |
| 16+50 | 1229.5689 | 1248.16 | OI |
| 16+55 | 1145.3546 | 1030.62 | I O |
| 17+ 0 | 1014.1940 | 868.93 | I O |
| 17+ 5 | 893.2597 | 768.51 | I O |
| 17+10 | 795.4428 | 696.22 | I O |
| 17+15 | 719.2311 | 642.40 | I O |
| 17+20 | 657.9806 | 595.55 | I O |
| 17+25 | 606.6268 | 553.82 | I O |
| 17+30 | 561.9701 | 515.71 | IO |
| 17+35 | 522.1495 | 480.71 | IO |
| 17+40 | 485.9387 | 448.11 | IO |
| 17+45 | 451.8153 | 415.88 | IO |
| 17+50 | 419.6448 | 385.83 | IO |
| 17+55 | 390.2286 | 359.53 | IO |
| 18+ 0 | 364.4180 | 337.72 | O |
| 18+ 5 | 341.4032 | 317.44 | IO |
| 18+10 | 321.0604 | 299.96 | IO |
| 18+15 | 302.2491 | 282.49 | IO |
| 18+20 | 284.8529 | 266.64 | IO |
| 18+25 | 268.6461 | 251.64 | IO |
| 18+30 | 253.6796 | 238.02 | O |
| 18+35 | 240.1124 | 225.97 | IO |
| 18+40 | 227.9030 | 215.19 | O |
| 18+45 | 216.1861 | 203.78 | O |
| 18+50 | 204.8589 | 192.89 | IO |
| 18+55 | 193.4351 | 181.24 | O |
| 19+ 0 | 182.3565 | 170.67 | O |
| 19+ 5 | 172.7598 | 162.90 | IO |
| 19+10 | 164.7275 | 156.49 | O |
| 19+15 | 157.9973 | 151.09 | O |
| 19+20 | 152.0962 | 145.97 | O |
| 19+25 | 146.7165 | 141.09 | O |
| 19+30 | 141.8153 | 136.70 | O |
| 19+35 | 137.2737 | 132.51 | IO |
| 19+40 | 132.7863 | 128.01 | O |
| 19+45 | 128.5743 | 124.16 | O |
| 19+50 | 124.9008 | 121.11 | O |
| 19+55 | 121.7871 | 118.59 | O |
| 20+ 0 | 119.2007 | 116.55 | O |
| 20+ 5 | 116.9269 | 114.56 | O |
| 20+10 | 114.7256 | 112.39 | O |
| 20+15 | 112.4440 | 110.00 | O |
| 20+20 | 109.8186 | 106.95 | O |
| 20+25 | 107.0206 | 104.02 | O |
| 20+30 | 104.4038 | 101.67 | O |
| 20+35 | 102.0598 | 99.62 | IO |
| 20+40 | 99.7920 | 97.39 | O |

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|---|---|---|---|---|---|---|---|
| 20+45 | 97.5467 | 95.16 | O | | | | |
| 20+50 | 95.4450 | 93.24 | O | | | | |
| 20+55 | 93.6073 | 91.71 | O | | | | |
| 21+ 0 | 91.6278 | 89.47 | O | | | | |
| 21+ 5 | 89.5191 | 87.26 | O | | | | |
| 21+10 | 87.5776 | 85.56 | O | | | | |
| 21+15 | 85.8841 | 84.13 | O | | | | |
| 21+20 | 84.3871 | 82.83 | O | | | | |
| 21+25 | 83.0218 | 81.59 | O | | | | |
| 21+30 | 81.7292 | 80.37 | O | | | | |
| 21+35 | 80.4791 | 79.16 | O | | | | |
| 21+40 | 79.2865 | 78.03 | O | | | | |
| 21+45 | 78.1657 | 76.99 | O | | | | |
| 21+50 | 77.1100 | 76.00 | O | | | | |
| 21+55 | 76.1055 | 75.05 | O | | | | |
| 22+ 0 | 75.1459 | 74.13 | O | | | | |
| 22+ 5 | 74.2283 | 73.26 | O | | | | |
| 22+10 | 73.3477 | 72.42 | O | | | | |
| 22+15 | 72.4993 | 71.60 | O | | | | |
| 22+20 | 71.6795 | 70.81 | O | | | | |
| 22+25 | 70.8857 | 70.05 | O | | | | |
| 22+30 | 70.1161 | 69.30 | O | | | | |
| 22+35 | 69.3696 | 68.58 | O | | | | |
| 22+40 | 68.6448 | 67.88 | O | | | | |
| 22+45 | 67.9405 | 67.20 | O | | | | |
| 22+50 | 67.2555 | 66.53 | IO | | | | |
| 22+55 | 66.5886 | 65.88 | O | | | | |
| 23+ 0 | 65.9391 | 65.25 | O | | | | |
| 23+ 5 | 65.3061 | 64.64 | O | | | | |
| 23+10 | 64.6889 | 64.04 | O | | | | |
| 23+15 | 64.0868 | 63.45 | O | | | | |
| 23+20 | 63.4992 | 62.88 | O | | | | |
| 23+25 | 62.9255 | 62.32 | O | | | | |
| 23+30 | 62.3650 | 61.77 | O | | | | |
| 23+35 | 61.8174 | 61.24 | O | | | | |
| 23+40 | 61.2822 | 60.72 | O | | | | |
| 23+45 | 60.7588 | 60.20 | O | | | | |
| 23+50 | 60.2468 | 59.70 | O | | | | |
| 23+55 | 59.7459 | 59.22 | O | | | | |
| 24+ 0 | 59.2556 | 58.74 | O | | | | |
| 24+ 5 | 58.6905 | 58.07 | O | | | | |
| 24+10 | 57.8918 | 56.99 | O | | | | |
| 24+15 | 56.7496 | 55.46 | O | | | | |
| 24+20 | 55.1694 | 53.40 | O | | | | |
| 24+25 | 53.1090 | 50.82 | O | | | | |
| 24+30 | 50.5540 | 47.74 | O | | | | |
| 24+35 | 47.5460 | 44.26 | O | | | | |
| 24+40 | 43.8308 | 39.72 | O | | | | |
| 24+45 | 38.9161 | 33.43 | O | | | | |
| 24+50 | 33.4560 | 27.57 | IO | | | | |
| 24+55 | 28.4833 | 23.33 | O | | | | |
| 25+ 0 | 24.3849 | 20.21 | O | | | | |
| 25+ 5 | 21.0968 | 17.76 | O | | | | |
| 25+10 | 18.4530 | 15.76 | O | | | | |
| 25+15 | 16.2781 | 14.05 | O | | | | |
| 25+20 | 14.4441 | 12.56 | O | | | | |
| 25+25 | 12.8660 | 11.24 | O | | | | |
| 25+30 | 11.4898 | 10.06 | O | | | | |
| 25+35 | 10.2790 | 9.02 | O | | | | |

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|---|---|---|---|---|---|---|---|
| 25+40 | 9.2034 | 8.09 | O | \| | \| | \| | \| |
| 25+45 | 8.2394 | 7.24 | O | \| | \| | \| | \| |
| 25+50 | 7.3706 | 6.47 | O | \| | \| | \| | \| |
| 25+55 | 6.5882 | 5.77 | O | \| | \| | \| | \| |
| 26+ 0 | 5.8805 | 5.14 | O | \| | \| | \| | \| |
| 26+ 5 | 5.2397 | 4.57 | O | \| | \| | \| | \| |
| 26+10 | 4.6568 | 4.05 | O | \| | \| | \| | \| |
| 26+15 | 4.1294 | 3.58 | O | \| | \| | \| | \| |
| 26+20 | 3.6539 | 3.16 | O | \| | \| | \| | \| |
| 26+25 | 3.2292 | 2.79 | O | \| | \| | \| | \| |
| 26+30 | 2.8514 | 2.46 | O | \| | \| | \| | \| |
| 26+35 | 2.5141 | 2.16 | O | \| | \| | \| | \| |
| 26+40 | 2.2103 | 1.89 | O | \| | \| | \| | \| |
| 26+45 | 1.9394 | 1.66 | O | \| | \| | \| | \| |
| 26+50 | 1.7009 | 1.45 | O | \| | \| | \| | \| |
| 26+55 | 1.4994 | 1.29 | O | \| | \| | \| | \| |
| 27+ 0 | 1.3370 | 1.17 | O | \| | \| | \| | \| |
| 27+ 5 | 1.2055 | 1.07 | O | \| | \| | \| | \| |
| 27+10 | 1.0947 | 0.98 | O | \| | \| | \| | \| |
| 27+15 | 0.9973 | 0.90 | O | \| | \| | \| | \| |
| 27+20 | 0.9097 | 0.82 | O | \| | \| | \| | \| |
| 27+25 | 0.8297 | 0.75 | O | \| | \| | \| | \| |
| 27+30 | 0.7551 | 0.68 | O | \| | \| | \| | \| |
| 27+35 | 0.6854 | 0.61 | O | \| | \| | \| | \| |
| 27+40 | 0.6231 | 0.56 | O | \| | \| | \| | \| |
| 27+45 | 0.5686 | 0.51 | O | \| | \| | \| | \| |
| 27+50 | 0.5196 | 0.47 | O | \| | \| | \| | \| |
| 27+55 | 0.4737 | 0.43 | O | \| | \| | \| | \| |
| 28+ 0 | 0.4280 | 0.38 | O | \| | \| | \| | \| |
| 28+ 5 | 0.3811 | 0.33 | O | \| | \| | \| | \| |
| 28+10 | 0.3330 | 0.28 | O | \| | \| | \| | \| |
| 28+15 | 0.2848 | 0.23 | O | \| | \| | \| | \| |
| 28+20 | 0.2399 | 0.19 | O | \| | \| | \| | \| |
| 28+25 | 0.2010 | 0.16 | O | \| | \| | \| | \| |
| 28+30 | 0.1671 | 0.13 | O | \| | \| | \| | \| |
| 28+35 | 0.1367 | 0.11 | O | \| | \| | \| | \| |
| 28+40 | 0.1098 | 0.08 | O | \| | \| | \| | \| |
| 28+45 | 0.0868 | 0.06 | O | \| | \| | \| | \| |
| 28+50 | 0.0671 | 0.05 | O | \| | \| | \| | \| |
| 28+55 | 0.0487 | 0.03 | O | \| | \| | \| | \| |
| 29+ 0 | 0.0332 | 0.02 | O | \| | \| | \| | \| |
| 29+ 5 | 0.0224 | 0.01 | O | \| | \| | \| | \| |
| 29+10 | 0.0154 | 0.01 | O | \| | \| | \| | \| |
| 29+15 | 0.0109 | 0.01 | O | \| | \| | \| | \| |
| 29+20 | 0.0077 | 0.00 | O | \| | \| | \| | \| |
| 29+25 | 0.0051 | 0.00 | O | \| | \| | \| | \| |
| 29+30 | 0.0031 | 0.00 | O | \| | \| | \| | \| |
| 29+35 | 0.0016 | 0.00 | O | \| | \| | \| | \| |
| 29+40 | 0.0000 | 0.00 | O | \| | \| | \| | \| |

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**********HYDROGRAPH DATA**********

Number of intervals = 356
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 1229.569 (CFS)
Total volume = 314.422 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 1335.624 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 314.422 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 2.200 to Point/Station 2.200

**** ADD/COMBINE/RECOVER HYDROGRAPHS ****

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********** HYDROGRAPH INFORMATION **********

From study/file name: OFFH10024.rte

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P R I N T O F S T O R M

R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals (CFS)

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| Time(h+m) | Add q(CFS) | Tot. Q | 0 | 413.9 | 827.8 | 1241.7 | 1655.6 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0628 | 0.15 | Q | | | | |
| 0+10 | 0.2776 | 0.69 | Q | | | | |
| 0+15 | 0.6516 | 1.75 | Q | | | | |
| 0+20 | 1.4299 | 3.67 | Q | | | | |
| 0+25 | 2.6505 | 6.54 | Q | | | | |
| 0+30 | 3.6149 | 9.67 | Q | | | | |
| 0+35 | 4.3017 | 13.00 | Q | | | | |
| 0+40 | 4.7846 | 16.88 | Q | | | | |
| 0+45 | 5.1624 | 21.89 | Q | | | | |
| 0+50 | 5.4808 | 27.45 | Q | | | | |
| 0+55 | 5.7445 | 32.52 | Q | | | | |
| 1+ 0 | 5.9758 | 36.73 | Q | | | | |
| 1+ 5 | 6.1728 | 40.14 | Q | | | | |
| 1+10 | 6.3461 | 42.92 | qQ | | | | |
| 1+15 | 6.5068 | 45.25 | qQ | | | | |
| 1+20 | 6.6562 | 47.25 | qQ | | | | |
| 1+25 | 6.7906 | 49.00 | qQ | | | | |
| 1+30 | 6.9065 | 50.55 | qQ | | | | |
| 1+35 | 7.0127 | 51.94 | qQ | | | | |
| 1+40 | 7.1149 | 53.20 | qQ | | | | |
| 1+45 | 7.2101 | 54.36 | qQ | | | | |
| 1+50 | 7.3009 | 55.43 | qQ | | | | |
| 1+55 | 7.3877 | 56.42 | qQ | | | | |
| 2+ 0 | 7.4649 | 57.33 | qQ | | | | |
| 2+ 5 | 7.5416 | 58.19 | qQ | | | | |
| 2+10 | 7.6155 | 59.00 | qQ | | | | |
| 2+15 | 7.6829 | 59.75 | qQ | | | | |
| 2+20 | 7.7502 | 60.45 | qQ | | | | |
| 2+25 | 7.8135 | 61.11 | qQ | | | | |
| 2+30 | 7.8712 | 61.73 | qQ | | | | |
| 2+35 | 7.9295 | 62.31 | qQ | | | | |
| 2+40 | 7.9813 | 62.85 | qQ | | | | |
| 2+45 | 8.0301 | 63.36 | qQ | | | | |
| 2+50 | 8.0791 | 63.85 | qQ | | | | |
| 2+55 | 8.1308 | 64.31 | qQ | | | | |
| 3+ 0 | 8.1832 | 64.73 | qQ | | | | |
| 3+ 5 | 8.2364 | 65.13 | qQ | | | | |
| 3+10 | 8.2896 | 65.51 | qQ | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+15 | 8.3438 | 65.88 | qQ | \| | \| | \| | \| |
| 3+20 | 8.3959 | 66.24 | qQ | \| | \| | \| | \| |
| 3+25 | 8.4437 | 66.59 | qQ | \| | \| | \| | \| |
| 3+30 | 8.4912 | 66.94 | qQ | \| | \| | \| | \| |
| 3+35 | 8.5396 | 67.29 | qQ | \| | \| | \| | \| |
| 3+40 | 8.5840 | 67.64 | qQ | \| | \| | \| | \| |
| 3+45 | 8.6251 | 67.97 | qQ | \| | \| | \| | \| |
| 3+50 | 8.6663 | 68.30 | qQ | \| | \| | \| | \| |
| 3+55 | 8.7084 | 68.63 | qQ | \| | \| | \| | \| |
| 4+ 0 | 8.7505 | 68.97 | qQ | \| | \| | \| | \| |
| 4+ 5 | 8.7936 | 69.31 | qQ | \| | \| | \| | \| |
| 4+10 | 8.8367 | 69.65 | qQ | \| | \| | \| | \| |
| 4+15 | 8.8807 | 70.00 | qQ | \| | \| | \| | \| |
| 4+20 | 8.9248 | 70.35 | qQ | \| | \| | \| | \| |
| 4+25 | 8.9699 | 70.70 | qQ | \| | \| | \| | \| |
| 4+30 | 9.0151 | 71.05 | qQ | \| | \| | \| | \| |
| 4+35 | 9.0612 | 71.40 | qQ | \| | \| | \| | \| |
| 4+40 | 9.1075 | 71.74 | qQ | \| | \| | \| | \| |
| 4+45 | 9.1548 | 72.09 | qQ | \| | \| | \| | \| |
| 4+50 | 9.2022 | 72.44 | qQ | \| | \| | \| | \| |
| 4+55 | 9.2507 | 72.79 | qQ | \| | \| | \| | \| |
| 5+ 0 | 9.2993 | 73.14 | qQ | \| | \| | \| | \| |
| 5+ 5 | 9.3489 | 73.49 | qQ | \| | \| | \| | \| |
| 5+10 | 9.3987 | 73.84 | qQ | \| | \| | \| | \| |
| 5+15 | 9.4497 | 74.20 | qQ | \| | \| | \| | \| |
| 5+20 | 9.5008 | 74.55 | qQ | \| | \| | \| | \| |
| 5+25 | 9.5530 | 74.91 | qQ | \| | \| | \| | \| |
| 5+30 | 9.6054 | 75.28 | qQ | \| | \| | \| | \| |
| 5+35 | 9.6590 | 75.64 | qQ | \| | \| | \| | \| |
| 5+40 | 9.7128 | 76.01 | qQ | \| | \| | \| | \| |
| 5+45 | 9.7679 | 76.39 | qQ | \| | \| | \| | \| |
| 5+50 | 9.8231 | 76.77 | qQ | \| | \| | \| | \| |
| 5+55 | 9.8797 | 77.15 | qQ | \| | \| | \| | \| |
| 6+ 0 | 9.9364 | 77.54 | qQ | \| | \| | \| | \| |
| 6+ 5 | 9.9945 | 77.94 | qQ | \| | \| | \| | \| |
| 6+10 | 10.0528 | 78.34 | qQ | \| | \| | \| | \| |
| 6+15 | 10.1125 | 78.74 | qQ | \| | \| | \| | \| |
| 6+20 | 10.1725 | 79.15 | qQ | \| | \| | \| | \| |
| 6+25 | 10.2339 | 79.57 | qQ | \| | \| | \| | \| |
| 6+30 | 10.2955 | 79.99 | qQ | \| | \| | \| | \| |
| 6+35 | 10.3587 | 80.41 | qQ | \| | \| | \| | \| |
| 6+40 | 10.4222 | 80.85 | qQ | \| | \| | \| | \| |
| 6+45 | 10.4872 | 81.28 | qQ | \| | \| | \| | \| |
| 6+50 | 10.5525 | 81.73 | qQ | \| | \| | \| | \| |
| 6+55 | 10.6195 | 82.18 | qQ | \| | \| | \| | \| |
| 7+ 0 | 10.6868 | 82.63 | qQ | \| | \| | \| | \| |
| 7+ 5 | 10.7558 | 83.10 | q Q | \| | \| | \| | \| |
| 7+10 | 10.8251 | 83.57 | q Q | \| | \| | \| | \| |
| 7+15 | 10.8963 | 84.04 | q Q | \| | \| | \| | \| |
| 7+20 | 10.9678 | 84.53 | q Q | \| | \| | \| | \| |
| 7+25 | 11.0411 | 85.02 | q Q | \| | \| | \| | \| |
| 7+30 | 11.1149 | 85.51 | q Q | \| | \| | \| | \| |
| 7+35 | 11.1906 | 86.02 | q Q | \| | \| | \| | \| |
| 7+40 | 11.2668 | 86.53 | q Q | \| | \| | \| | \| |
| 7+45 | 11.3450 | 87.05 | q Q | \| | \| | \| | \| |
| 7+50 | 11.4237 | 87.58 | q Q | \| | \| | \| | \| |
| 7+55 | 11.5044 | 88.11 | q Q | \| | \| | \| | \| |
| 8+ 0 | 11.5858 | 88.66 | q Q | \| | \| | \| | \| |
| 8+ 5 | 11.6693 | 89.21 | q Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8+10 | 11.7534 | 89.77 | q Q | \| | \| | \| | \| |
| 8+15 | 11.8398 | 90.34 | q Q | \| | \| | \| | \| |
| 8+20 | 11.9268 | 90.92 | q Q | \| | \| | \| | \| |
| 8+25 | 12.0163 | 91.51 | q Q | \| | \| | \| | \| |
| 8+30 | 12.1064 | 92.11 | q Q | \| | \| | \| | \| |
| 8+35 | 12.1991 | 92.72 | q Q | \| | \| | \| | \| |
| 8+40 | 12.2925 | 93.33 | q Q | \| | \| | \| | \| |
| 8+45 | 12.3886 | 93.96 | q Q | \| | \| | \| | \| |
| 8+50 | 12.4855 | 94.60 | q Q | \| | \| | \| | \| |
| 8+55 | 12.5852 | 95.26 | q Q | \| | \| | \| | \| |
| 9+ 0 | 12.6858 | 95.92 | q Q | \| | \| | \| | \| |
| 9+ 5 | 12.7893 | 96.59 | q Q | \| | \| | \| | \| |
| 9+10 | 12.8938 | 97.28 | q Q | \| | \| | \| | \| |
| 9+15 | 13.0014 | 97.98 | q Q | \| | \| | \| | \| |
| 9+20 | 13.1100 | 98.69 | q Q | \| | \| | \| | \| |
| 9+25 | 13.2219 | 99.41 | q Q | \| | \| | \| | \| |
| 9+30 | 13.3350 | 100.15 | q Q | \| | \| | \| | \| |
| 9+35 | 13.4515 | 100.90 | q Q | \| | \| | \| | \| |
| 9+40 | 13.5693 | 101.67 | q Q | \| | \| | \| | \| |
| 9+45 | 13.6908 | 102.45 | q Q | \| | \| | \| | \| |
| 9+50 | 13.8136 | 103.24 | q Q | \| | \| | \| | \| |
| 9+55 | 13.9403 | 104.06 | q Q | \| | \| | \| | \| |
| 10+ 0 | 14.0685 | 104.88 | q Q | \| | \| | \| | \| |
| 10+ 5 | 14.2008 | 105.73 | q Q | \| | \| | \| | \| |
| 10+10 | 14.3348 | 106.59 | q Q | \| | \| | \| | \| |
| 10+15 | 14.4731 | 107.47 | q Q | \| | \| | \| | \| |
| 10+20 | 14.6132 | 108.37 | q Q | \| | \| | \| | \| |
| 10+25 | 14.7580 | 109.29 | q Q | \| | \| | \| | \| |
| 10+30 | 14.9048 | 110.23 | q Q | \| | \| | \| | \| |
| 10+35 | 15.0566 | 111.19 | q Q | \| | \| | \| | \| |
| 10+40 | 15.2105 | 112.17 | q Q | \| | \| | \| | \| |
| 10+45 | 15.3698 | 113.17 | q Q | \| | \| | \| | \| |
| 10+50 | 15.5315 | 114.19 | q Q | \| | \| | \| | \| |
| 10+55 | 15.6989 | 115.24 | q Q | \| | \| | \| | \| |
| 11+ 0 | 15.8689 | 116.31 | q Q | \| | \| | \| | \| |
| 11+ 5 | 16.0451 | 117.41 | q Q | \| | \| | \| | \| |
| 11+10 | 16.2242 | 118.54 | q Q | \| | \| | \| | \| |
| 11+15 | 16.4099 | 119.69 | q Q | \| | \| | \| | \| |
| 11+20 | 16.5989 | 120.87 | q Q | \| | \| | \| | \| |
| 11+25 | 16.7950 | 122.08 | q Q | \| | \| | \| | \| |
| 11+30 | 16.9947 | 123.32 | q Q | \| | \| | \| | \| |
| 11+35 | 17.2021 | 124.60 | q  Q | \| | \| | \| | \| |
| 11+40 | 17.4135 | 125.91 | q  Q | \| | \| | \| | \| |
| 11+45 | 17.6334 | 127.25 | q  Q | \| | \| | \| | \| |
| 11+50 | 17.8577 | 128.63 | q  Q | \| | \| | \| | \| |
| 11+55 | 18.0912 | 130.05 | q  Q | \| | \| | \| | \| |
| 12+ 0 | 18.3297 | 131.51 | q  Q | \| | \| | \| | \| |
| 12+ 5 | 18.5227 | 132.95 | q  Q | \| | \| | \| | \| |
| 12+10 | 18.5865 | 134.28 | q  Q | \| | \| | \| | \| |
| 12+15 | 18.5192 | 135.50 | q  Q | \| | \| | \| | \| |
| 12+20 | 18.0979 | 136.35 | q  Q | \| | \| | \| | \| |
| 12+25 | 17.2927 | 136.81 | q  Q | \| | \| | \| | \| |
| 12+30 | 16.7122 | 137.51 | q  Q | \| | \| | \| | \| |
| 12+35 | 16.3822 | 138.53 | q  Q | \| | \| | \| | \| |
| 12+40 | 16.2348 | 139.82 | q  Q | \| | \| | \| | \| |
| 12+45 | 16.1897 | 141.29 | q  Q | \| | \| | \| | \| |
| 12+50 | 16.2026 | 142.91 | q  Q | \| | \| | \| | \| |
| 12+55 | 16.2759 | 144.65 | q  Q | \| | \| | \| | \| |
| 13+ 0 | 16.3850 | 146.49 | q  Q | \| | \| | \| | \| |

```
13+ 5      16.5388    148.45  q  Q      |          |          |          |
13+10      16.7226    150.50  q  Q      |          |          |          |
13+15      16.9343    152.66  q  Q      |          |          |          |
13+20      17.1668    154.91  q  Q      |          |          |          |
13+25      17.4319    157.28  q  Q      |          |          |          |
13+30      17.7264    159.76  q  Q      |          |          |          |
13+35      18.0520    162.37  q  Q      |          |          |          |
13+40      18.3969    165.09  q  Q      |          |          |          |
13+45      18.7743    167.95  q   Q     |          |          |          |
13+50      19.1744    170.95  q   Q     |          |          |          |
13+55      19.6090    174.11  q   Q     |          |          |          |
14+ 0      20.0751    177.43  q   Q     |          |          |          |
14+ 5      20.5994    181.04  q   Q     |          |          |          |
14+10      21.2057    185.17  q   Q     |          |          |          |
14+15      21.9167    189.98  q   Q     |          |          |          |
14+20      22.8012    195.60  q   Q     |          |          |          |
14+25      23.8970    202.14  q   Q     |          |          |          |
14+30      24.9667    209.48  q    Q    |          |          |          |
14+35      26.0202    217.81  q    Q    |          |          |          |
14+40      27.0765    227.58  q    Q    |          |          |          |
14+45      28.1934    239.56  q    Q    |          |          |          |
14+50      29.3725    252.86  q     Q   |          |          |          |
14+55      30.6501    266.11  q     Q   |          |          |          |
15+ 0      32.0265    278.78  q     Q   |          |          |          |
15+ 5      33.5497    291.06  q      Q  |          |          |          |
15+10      35.2190    303.21  q      Q  |          |          |          |
15+15      37.1052    315.60  q      Q  |          |          |          |
15+20      39.2165    328.51  q      Q  |          |          |          |
15+25      41.9732    342.39  |q      Q |          |          |          |
15+30      45.8665    357.53  |q      Q |          |          |          |
15+35      51.1589    374.16  |q       Q|          |          |          |
15+40      59.2711    393.93  |q       Q|          |          |          |
15+45      71.1668    418.22  |q        Q          |          |          |
15+50      84.5587    445.02  | q       Q          |          |          |
15+55     101.8355    477.33  | q       |Q         |          |          |
16+ 0     129.2184    522.92  |  q      | Q        |          |          |
16+ 5     197.9538    624.41  |   q     |    Q     |          |          |
16+10     317.0730    802.56  |      q  |       Q  |          |          |
16+15     451.5518   1018.13  |         q          |   Q      |          |
16+20     678.6621   1349.69  |          |     q   |          | Q        |
16+25     871.3563   1655.64  |          |         |q         |         Q
16+30     719.1982   1606.36  |          |      q  |          |       Q  |
16+35     546.1290   1509.51  |          |  q      |          |     Q    |
16+40     412.9549   1471.80  |        q|          |          |    Q     |
16+45     331.9409   1521.39  |       q  |          |          |     Q    |
16+50     279.9977   1509.57  |     q    |          |          |     Q    |
16+55     236.1813   1381.54  |    q     |          |          |  Q       |
17+ 0     206.3526   1220.55  |   q      |          |        Q |          |
17+ 5     178.5523   1071.81  |   q      |          |    Q     |          |
17+10     157.9695    953.41  |  q       |          |  Q       |          |
17+15     143.6803    862.91  |  q       |         Q|          |          |
17+20     130.7471    788.73  |  q       |        Q |          |          |
17+25     116.3309    722.96  | q        |      Q   |          |          |
17+30     101.8547    663.82  | q        |     Q    |          |          |
17+35      92.1659    614.32  | q        |   Q      |          |          |
17+40      85.9663    571.90  | q        |  Q       |          |          |
17+45      78.7369    530.55  |q         | Q        |          |          |
17+50      73.2083    492.85  |q         |Q         |          |          |
17+55      67.7061    457.93  |q         |Q         |          |          |
```

```
18+ 0      60.4974    424.92  |q        Q          |          |          |
18+ 5      57.3458    398.75  |q       Q|          |          |          |
18+10      53.6597    374.72  |q       Q|          |          |          |
18+15      48.5610    350.81  |q      Q |          |          |          |
18+20      46.8765    331.73  |q      Q |          |          |          |
18+25      43.6877    312.33  |q     Q  |          |          |          |
18+30      40.0483    293.73  q      Q  |          |          |          |
18+35      38.6603    278.77  q     Q   |          |          |          |
18+40      34.4901    262.39  q     Q   |          |          |          |
18+45      31.9055    248.09  q    Q    |          |          |          |
18+50      31.4446    236.30  q    Q    |          |          |          |
18+55      31.8318    225.27  q    Q    |          |          |          |
19+ 0      31.5795    213.94  q    Q    |          |          |          |
19+ 5      30.9583    203.72  q   Q     |          |          |          |
19+10      30.2115    194.94  q   Q     |          |          |          |
19+15      29.2161    187.21  q   Q     |          |          |          |
19+20      27.1265    179.22  q   Q     |          |          |          |
19+25      23.7545    170.47  q   Q     |          |          |          |
19+30      22.6512    164.47  q  Q      |          |          |          |
19+35      21.5404    158.81  q  Q      |          |          |          |
19+40      18.6395    151.43  q  Q      |          |          |          |
19+45      16.0273    144.60  q  Q      |          |          |          |
19+50      15.4714    140.37  q  Q      |          |          |          |
19+55      15.0560    136.84  q  Q      |          |          |          |
20+ 0      14.7082    133.91  q  Q      |          |          |          |
20+ 5      14.4118    131.34  q  Q      |          |          |          |
20+10      14.1357    128.86  q  Q      |          |          |          |
20+15      13.8723    126.32  q  Q      |          |          |          |
20+20      13.6255    123.44  q Q       |          |          |          |
20+25      13.3906    120.41  q Q       |          |          |          |
20+30      13.1633    117.57  q Q       |          |          |          |
20+35      12.9473    115.01  q Q       |          |          |          |
20+40      12.7373    112.53  q Q       |          |          |          |
20+45      12.5349    110.08  q Q       |          |          |          |
20+50      12.3414    107.79  q Q       |          |          |          |
20+55      12.1577    105.76  q Q       |          |          |          |
21+ 0      11.9820    103.61  q Q       |          |          |          |
21+ 5      11.8132    101.33  q Q       |          |          |          |
21+10      11.6510     99.23  q Q       |          |          |          |
21+15      11.4949     97.38  q Q       |          |          |          |
21+20      11.3427     95.73  q Q       |          |          |          |
21+25      11.1913     94.21  q Q       |          |          |          |
21+30      11.0449     92.77  q Q       |          |          |          |
21+35      10.9034     91.38  q Q       |          |          |          |
21+40      10.7630     90.05  q Q       |          |          |          |
21+45      10.6234     88.79  q Q       |          |          |          |
21+50      10.4882     87.60  q Q       |          |          |          |
21+55      10.3571     86.46  q Q       |          |          |          |
22+ 0      10.2299     85.38  q Q       |          |          |          |
22+ 5      10.1064     84.33  q Q       |          |          |          |
22+10       9.9865     83.33  q Q       |          |          |          |
22+15       9.8700     82.37  qQ        |          |          |          |
22+20       9.7567     81.44  qQ        |          |          |          |
22+25       9.6465     80.53  qQ        |          |          |          |
22+30       9.5392     79.66  qQ        |          |          |          |
22+35       9.4348     78.80  qQ        |          |          |          |
22+40       9.3331     77.98  qQ        |          |          |          |
22+45       9.2339     77.17  qQ        |          |          |          |
22+50       9.1373     76.39  qQ        |          |          |          |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+55 | 9.0431 | 75.63 | qQ | \| | \| | \| | \| |
| 23+ 0 | 8.9511 | 74.89 | qQ | \| | \| | \| | \| |
| 23+ 5 | 8.8613 | 74.17 | qQ | \| | \| | \| | \| |
| 23+10 | 8.7737 | 73.46 | qQ | \| | \| | \| | \| |
| 23+15 | 8.6881 | 72.77 | qQ | \| | \| | \| | \| |
| 23+20 | 8.6045 | 72.10 | qQ | \| | \| | \| | \| |
| 23+25 | 8.5228 | 71.45 | qQ | \| | \| | \| | \| |
| 23+30 | 8.4429 | 70.81 | qQ | \| | \| | \| | \| |
| 23+35 | 8.3648 | 70.18 | qQ | \| | \| | \| | \| |
| 23+40 | 8.2883 | 69.57 | qQ | \| | \| | \| | \| |
| 23+45 | 8.2135 | 68.97 | qQ | \| | \| | \| | \| |
| 23+50 | 8.1403 | 68.39 | qQ | \| | \| | \| | \| |
| 23+55 | 8.0687 | 67.81 | qQ | \| | \| | \| | \| |
| 24+ 0 | 7.9985 | 67.25 | qQ | \| | \| | \| | \| |
| 24+ 5 | 7.8671 | 66.56 | qQ | \| | \| | \| | \| |
| 24+10 | 7.5861 | 65.48 | qQ | \| | \| | \| | \| |
| 24+15 | 7.1501 | 63.90 | qQ | \| | \| | \| | \| |
| 24+20 | 6.3162 | 61.49 | qQ | \| | \| | \| | \| |
| 24+25 | 5.0508 | 58.16 | qQ | \| | \| | \| | \| |
| 24+30 | 4.0560 | 54.61 | qQ | \| | \| | \| | \| |
| 24+35 | 3.3505 | 50.90 | qQ | \| | \| | \| | \| |
| 24+40 | 2.8568 | 46.69 | qQ | \| | \| | \| | \| |
| 24+45 | 2.4743 | 41.39 | Q | \| | \| | \| | \| |
| 24+50 | 2.1557 | 35.61 | Q | \| | \| | \| | \| |
| 24+55 | 1.8960 | 30.38 | Q | \| | \| | \| | \| |
| 25+ 0 | 1.6717 | 26.06 | Q | \| | \| | \| | \| |
| 25+ 5 | 1.4848 | 22.58 | Q | \| | \| | \| | \| |
| 25+10 | 1.3238 | 19.78 | Q | \| | \| | \| | \| |
| 25+15 | 1.1779 | 17.46 | Q | \| | \| | \| | \| |
| 25+20 | 1.0450 | 15.49 | Q | \| | \| | \| | \| |
| 25+25 | 0.9293 | 13.80 | Q | \| | \| | \| | \| |
| 25+30 | 0.8334 | 12.32 | Q | \| | \| | \| | \| |
| 25+35 | 0.7489 | 11.03 | Q | \| | \| | \| | \| |
| 25+40 | 0.6694 | 9.87 | Q | \| | \| | \| | \| |
| 25+45 | 0.5985 | 8.84 | Q | \| | \| | \| | \| |
| 25+50 | 0.5327 | 7.90 | Q | \| | \| | \| | \| |
| 25+55 | 0.4724 | 7.06 | Q | \| | \| | \| | \| |
| 26+ 0 | 0.4224 | 6.30 | Q | \| | \| | \| | \| |
| 26+ 5 | 0.3741 | 5.61 | Q | \| | \| | \| | \| |
| 26+10 | 0.3293 | 4.99 | Q | \| | \| | \| | \| |
| 26+15 | 0.2920 | 4.42 | Q | \| | \| | \| | \| |
| 26+20 | 0.2554 | 3.91 | Q | \| | \| | \| | \| |
| 26+25 | 0.2238 | 3.45 | Q | \| | \| | \| | \| |
| 26+30 | 0.1983 | 3.05 | Q | \| | \| | \| | \| |
| 26+35 | 0.1731 | 2.69 | Q | \| | \| | \| | \| |
| 26+40 | 0.1547 | 2.37 | Q | \| | \| | \| | \| |
| 26+45 | 0.1403 | 2.08 | Q | \| | \| | \| | \| |
| 26+50 | 0.1258 | 1.83 | Q | \| | \| | \| | \| |
| 26+55 | 0.1096 | 1.61 | Q | \| | \| | \| | \| |
| 27+ 0 | 0.0929 | 1.43 | Q | \| | \| | \| | \| |
| 27+ 5 | 0.0763 | 1.28 | Q | \| | \| | \| | \| |
| 27+10 | 0.0599 | 1.15 | Q | \| | \| | \| | \| |
| 27+15 | 0.0437 | 1.04 | Q | \| | \| | \| | \| |
| 27+20 | 0.0296 | 0.94 | Q | \| | \| | \| | \| |
| 27+25 | 0.0209 | 0.85 | Q | \| | \| | \| | \| |
| 27+30 | 0.0125 | 0.77 | Q | \| | \| | \| | \| |
| 27+35 | 0.0041 | 0.69 | Q | \| | \| | \| | \| |
| 27+40 | 0.0000 | 0.62 | Q | \| | \| | \| | \| |
| 27+45 | 0.0000 | 0.57 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 27+50 | 0.0000 | 0.52 | Q | \| | \| | \| | \| |
| 27+55 | 0.0000 | 0.47 | Q | \| | \| | \| | \| |
| 28+ 0 | 0.0000 | 0.43 | Q | \| | \| | \| | \| |
| 28+ 5 | 0.0000 | 0.38 | Q | \| | \| | \| | \| |
| 28+10 | 0.0000 | 0.33 | Q | \| | \| | \| | \| |
| 28+15 | 0.0000 | 0.28 | Q | \| | \| | \| | \| |
| 28+20 | 0.0000 | 0.24 | Q | \| | \| | \| | \| |
| 28+25 | 0.0000 | 0.20 | Q | \| | \| | \| | \| |
| 28+30 | 0.0000 | 0.17 | Q | \| | \| | \| | \| |
| 28+35 | 0.0000 | 0.14 | Q | \| | \| | \| | \| |
| 28+40 | 0.0000 | 0.11 | Q | \| | \| | \| | \| |
| 28+45 | 0.0000 | 0.09 | Q | \| | \| | \| | \| |
| 28+50 | 0.0000 | 0.07 | Q | \| | \| | \| | \| |
| 28+55 | 0.0000 | 0.05 | Q | \| | \| | \| | \| |
| 29+ 0 | 0.0000 | 0.03 | Q | \| | \| | \| | \| |
| 29+ 5 | 0.0000 | 0.02 | Q | \| | \| | \| | \| |
| 29+10 | 0.0000 | 0.02 | Q | \| | \| | \| | \| |
| 29+15 | 0.0000 | 0.01 | Q | \| | \| | \| | \| |
| 29+20 | 0.0000 | 0.01 | Q | \| | \| | \| | \| |
| 29+25 | 0.0000 | 0.01 | Q | \| | \| | \| | \| |
| 29+30 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 29+35 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 29+40 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |

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**********HYDROGRAPH DATA**********

Number of intervals = 356
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 1655.643 (CFS)
Total volume = 388.918 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 1335.624 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 314.422 | 0.000 | 0.000 | 0.000 |

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FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014
Study date: 08/10/17

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREAS "E", "G" & "I" ROUTING
100-YEAR, 24-HOUR EVENT
BY: JDN, DATE: 08-10-17

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Program License Serial Number 6320

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********** HYDROGRAPH INFORMATION **********

From study/file name: OFFE10024.rte
**********HYDROGRAPH DATA**********
Number of intervals = 353
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 5599.015 (CFS)
Total volume = 1141.359 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

**********

++++++++++

Process from Point/Station 2.000 to Point/Station 2.000
**** FLOWBY BASIN ROUTING OR SPLIT FLOW ****

A constant split flow fraction of 0.5000 is
being diverted from the main stream into stream number 1
Total volume of excess flow diverted into flowby
basin (stream number 1 ) is 570.68(Ac.Ft)

++++++++++

P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals (CFS)

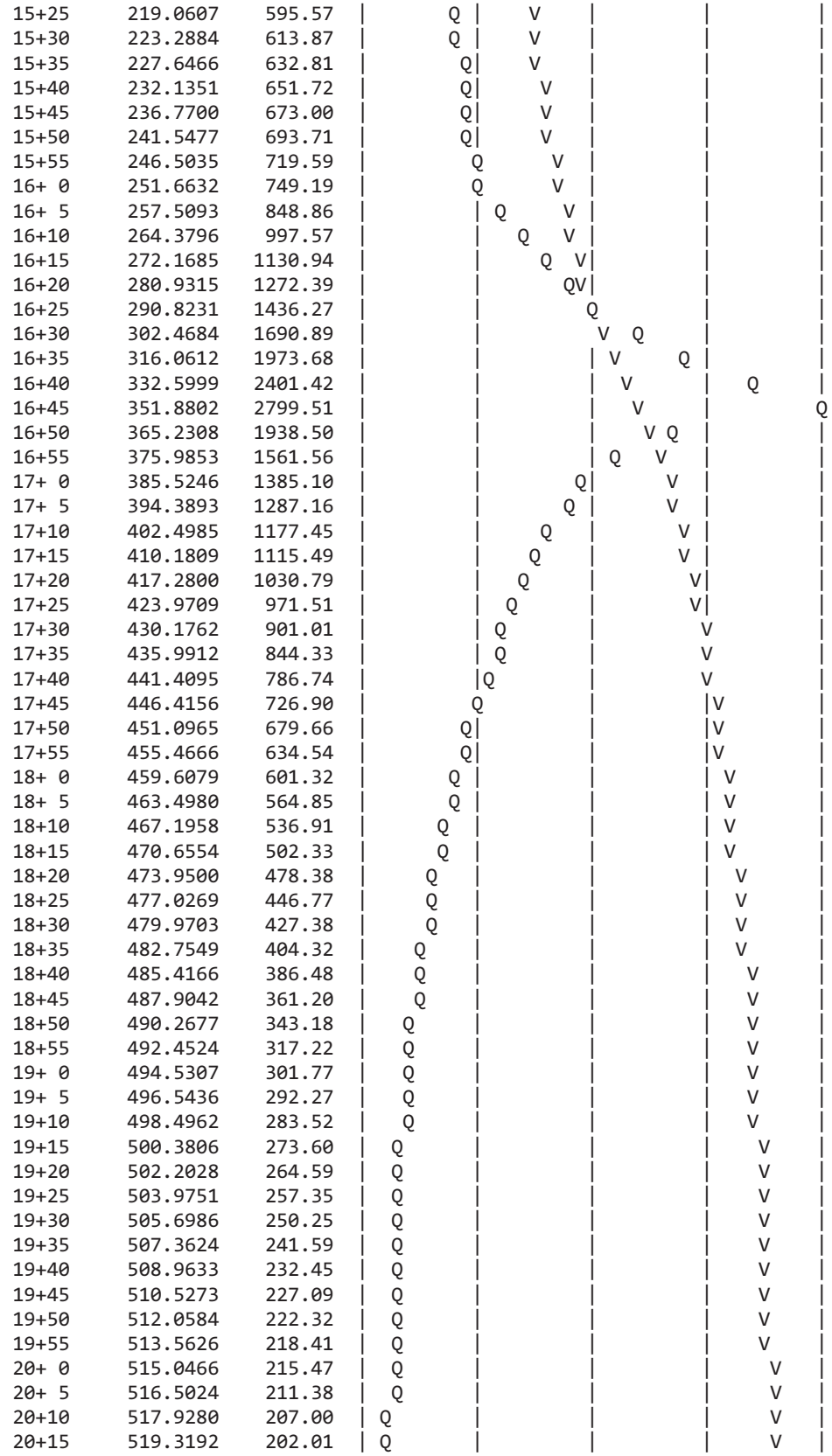
---

| Time(h+m) | Volume(Ac.Ft) | Q(CFS) | 0 | 699.9 | 1399.8 | 2099.6 | 2799.5 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0050 | 0.73 | Q | \| | \| | \| | \| |
| 0+10 | 0.0216 | 2.41 | Q | \| | \| | \| | \| |
| 0+15 | 0.0544 | 4.76 | Q | \| | \| | \| | \| |
| 0+20 | 0.1080 | 7.79 | Q | \| | \| | \| | \| |
| 0+25 | 0.1875 | 11.54 | Q | \| | \| | \| | \| |
| 0+30 | 0.3033 | 16.82 | Q | \| | \| | \| | \| |
| 0+35 | 0.4666 | 23.71 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+40 | 0.7024 | 34.24 | Q | \| | \| | \| | \| |
| 0+45 | 1.0442 | 49.62 | Q | \| | \| | \| | \| |
| 0+50 | 1.4418 | 57.74 | Q | \| | \| | \| | \| |
| 0+55 | 1.8774 | 63.25 | Q | \| | \| | \| | \| |
| 1+ 0 | 2.3435 | 67.68 | Q | \| | \| | \| | \| |
| 1+ 5 | 2.8357 | 71.46 | VQ | \| | \| | \| | \| |
| 1+10 | 3.3495 | 74.60 | VQ | \| | \| | \| | \| |
| 1+15 | 3.8839 | 77.60 | VQ | \| | \| | \| | \| |
| 1+20 | 4.4361 | 80.18 | VQ | \| | \| | \| | \| |
| 1+25 | 5.0051 | 82.61 | VQ | \| | \| | \| | \| |
| 1+30 | 5.5888 | 84.75 | VQ | \| | \| | \| | \| |
| 1+35 | 6.1862 | 86.74 | VQ | \| | \| | \| | \| |
| 1+40 | 6.7962 | 88.58 | VQ | \| | \| | \| | \| |
| 1+45 | 7.4181 | 90.30 | VQ | \| | \| | \| | \| |
| 1+50 | 8.0511 | 91.90 | VQ | \| | \| | \| | \| |
| 1+55 | 8.6941 | 93.37 | VQ | \| | \| | \| | \| |
| 2+ 0 | 9.3468 | 94.77 | VQ | \| | \| | \| | \| |
| 2+ 5 | 10.0084 | 96.06 | VQ | \| | \| | \| | \| |
| 2+10 | 10.6785 | 97.30 | VQ | \| | \| | \| | \| |
| 2+15 | 11.3564 | 98.42 | VQ | \| | \| | \| | \| |
| 2+20 | 12.0417 | 99.50 | VQ | \| | \| | \| | \| |
| 2+25 | 12.7335 | 100.46 | VQ | \| | \| | \| | \| |
| 2+30 | 13.4318 | 101.39 | VQ | \| | \| | \| | \| |
| 2+35 | 14.1361 | 102.27 | VQ | \| | \| | \| | \| |
| 2+40 | 14.8463 | 103.11 | \|Q | \| | \| | \| | \| |
| 2+45 | 15.5617 | 103.88 | \|Q | \| | \| | \| | \| |
| 2+50 | 16.2821 | 104.60 | \|Q | \| | \| | \| | \| |
| 2+55 | 17.0067 | 105.21 | \|Q | \| | \| | \| | \| |
| 3+ 0 | 17.7352 | 105.77 | \|Q | \| | \| | \| | \| |
| 3+ 5 | 18.4676 | 106.35 | \|Q | \| | \| | \| | \| |
| 3+10 | 19.2039 | 106.92 | \|Q | \| | \| | \| | \| |
| 3+15 | 19.9442 | 107.49 | \|Q | \| | \| | \| | \| |
| 3+20 | 20.6883 | 108.04 | \|Q | \| | \| | \| | \| |
| 3+25 | 21.4362 | 108.60 | \|Q | \| | \| | \| | \| |
| 3+30 | 22.1880 | 109.16 | \|Q | \| | \| | \| | \| |
| 3+35 | 22.9437 | 109.72 | \|Q | \| | \| | \| | \| |
| 3+40 | 23.7030 | 110.24 | \|Q | \| | \| | \| | \| |
| 3+45 | 24.4659 | 110.78 | \|Q | \| | \| | \| | \| |
| 3+50 | 25.2326 | 111.31 | \|Q | \| | \| | \| | \| |
| 3+55 | 26.0030 | 111.87 | \|Q | \| | \| | \| | \| |
| 4+ 0 | 26.7773 | 112.42 | \|Q | \| | \| | \| | \| |
| 4+ 5 | 27.5555 | 113.00 | \|Q | \| | \| | \| | \| |
| 4+10 | 28.3377 | 113.57 | \|Q | \| | \| | \| | \| |
| 4+15 | 29.1239 | 114.15 | \|QV | \| | \| | \| | \| |
| 4+20 | 29.9138 | 114.70 | \|QV | \| | \| | \| | \| |
| 4+25 | 30.7076 | 115.25 | \|QV | \| | \| | \| | \| |
| 4+30 | 31.5051 | 115.80 | \|QV | \| | \| | \| | \| |
| 4+35 | 32.3065 | 116.37 | \|QV | \| | \| | \| | \| |
| 4+40 | 33.1117 | 116.91 | \|QV | \| | \| | \| | \| |
| 4+45 | 33.9208 | 117.47 | \|QV | \| | \| | \| | \| |
| 4+50 | 34.7336 | 118.02 | \|QV | \| | \| | \| | \| |
| 4+55 | 35.5504 | 118.60 | \|QV | \| | \| | \| | \| |
| 5+ 0 | 36.3709 | 119.14 | \|QV | \| | \| | \| | \| |
| 5+ 5 | 37.1953 | 119.70 | \|QV | \| | \| | \| | \| |
| 5+10 | 38.0234 | 120.25 | \|QV | \| | \| | \| | \| |
| 5+15 | 38.8555 | 120.81 | \|QV | \| | \| | \| | \| |
| 5+20 | 39.6914 | 121.38 | \|QV | \| | \| | \| | \| |
| 5+25 | 40.5313 | 121.96 | \|QV | \| | \| | \| | \| |
| 5+30 | 41.3752 | 122.53 | \|QV | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+35 | 42.2232 | 123.13 | QV | | | | |
| 5+40 | 43.0752 | 123.71 | Q V | | | | |
| 5+45 | 43.9315 | 124.32 | Q V | | | | |
| 5+50 | 44.7918 | 124.92 | Q V | | | | |
| 5+55 | 45.6564 | 125.55 | Q V | | | | |
| 6+ 0 | 46.5253 | 126.16 | Q V | | | | |
| 6+ 5 | 47.3986 | 126.80 | Q V | | | | |
| 6+10 | 48.2762 | 127.43 | Q V | | | | |
| 6+15 | 49.1584 | 128.09 | Q V | | | | |
| 6+20 | 50.0450 | 128.74 | Q V | | | | |
| 6+25 | 50.9363 | 129.41 | Q V | | | | |
| 6+30 | 51.8321 | 130.07 | Q V | | | | |
| 6+35 | 52.7327 | 130.77 | Q V | | | | |
| 6+40 | 53.6380 | 131.45 | Q V | | | | |
| 6+45 | 54.5482 | 132.16 | Q V | | | | |
| 6+50 | 55.4632 | 132.86 | Q V | | | | |
| 6+55 | 56.3832 | 133.59 | Q V | | | | |
| 7+ 0 | 57.3082 | 134.31 | Q V | | | | |
| 7+ 5 | 58.2384 | 135.06 | Q V | | | | |
| 7+10 | 59.1737 | 135.80 | Q V | | | | |
| 7+15 | 60.1143 | 136.58 | Q V | | | | |
| 7+20 | 61.0602 | 137.34 | Q V | | | | |
| 7+25 | 62.0115 | 138.13 | Q V | | | | |
| 7+30 | 62.9682 | 138.92 | Q V | | | | |
| 7+35 | 63.9306 | 139.74 | Q V | | | | |
| 7+40 | 64.8985 | 140.54 | Q V | | | | |
| 7+45 | 65.8722 | 141.39 | Q V | | | | |
| 7+50 | 66.8517 | 142.22 | Q V | | | | |
| 7+55 | 67.8372 | 143.09 | Q V | | | | |
| 8+ 0 | 68.8285 | 143.95 | Q V | | | | |
| 8+ 5 | 69.8261 | 144.84 | Q V | | | | |
| 8+10 | 70.8297 | 145.73 | Q V | | | | |
| 8+15 | 71.8397 | 146.65 | Q V | | | | |
| 8+20 | 72.8560 | 147.57 | Q V | | | | |
| 8+25 | 73.8789 | 148.52 | Q V | | | | |
| 8+30 | 74.9083 | 149.47 | Q V | | | | |
| 8+35 | 75.9445 | 150.45 | Q V | | | | |
| 8+40 | 76.9874 | 151.43 | Q V | | | | |
| 8+45 | 78.0373 | 152.45 | Q V | | | | |
| 8+50 | 79.0941 | 153.46 | Q V | | | | |
| 8+55 | 80.1583 | 154.51 | Q V | | | | |
| 9+ 0 | 81.2296 | 155.56 | Q V | | | | |
| 9+ 5 | 82.3085 | 156.65 | Q V | | | | |
| 9+10 | 83.3948 | 157.73 | Q V | | | | |
| 9+15 | 84.4889 | 158.86 | Q V | | | | |
| 9+20 | 85.5907 | 159.99 | Q V | | | | |
| 9+25 | 86.7006 | 161.16 | Q V | | | | |
| 9+30 | 87.8185 | 162.32 | Q V | | | | |
| 9+35 | 88.9448 | 163.54 | Q V | | | | |
| 9+40 | 90.0795 | 164.75 | Q V | | | | |
| 9+45 | 91.2228 | 166.01 | Q V | | | | |
| 9+50 | 92.3748 | 167.27 | Q V | | | | |
| 9+55 | 93.5359 | 168.58 | Q V | | | | |
| 10+ 0 | 94.7059 | 169.89 | Q V | | | | |
| 10+ 5 | 95.8854 | 171.26 | Q V | | | | |
| 10+10 | 97.0742 | 172.62 | Q V | | | | |
| 10+15 | 98.2729 | 174.04 | Q V | | | | |
| 10+20 | 99.4813 | 175.46 | Q V | | | | |
| 10+25 | 100.6999 | 176.95 | Q V | | | | |

```
10+30     101.9288    178.43  | Q    V  |          |          |          |
10+35     103.1683    179.98  | Q    V  |          |          |          |
10+40     104.4185    181.52  | Q    V  |          |          |          |
10+45     105.6798    183.15  | Q    V  |          |          |          |
10+50     106.9523    184.76  | Q    V  |          |          |          |
10+55     108.2364    186.46  | Q    V  |          |          |          |
11+ 0     109.5322    188.15  | Q    V  |          |          |          |
11+ 5     110.8402    189.93  | Q    V  |          |          |          |
11+10     112.1605    191.70  | Q    V  |          |          |          |
11+15     113.4936    193.57  | Q    V  |          |          |          |
11+20     114.8396    195.43  | Q     V |          |          |          |
11+25     116.1990    197.39  | Q     V |          |          |          |
11+30     117.5719    199.35  | Q     V |          |          |          |
11+35     118.9591    201.41  | Q     V |          |          |          |
11+40     120.3604    203.48  | Q     V |          |          |          |
11+45     121.7768    205.65  | Q     V |          |          |          |
11+50     123.2081    207.83  | Q     V |          |          |          |
11+55     124.6552    210.13  |  Q    V |          |          |          |
12+ 0     126.1182    212.43  |  Q    V |          |          |          |
12+ 5     127.5980    214.86  |  Q    V |          |          |          |
12+10     129.0946    217.31  |  Q     V|          |          |          |
12+15     130.6091    219.90  |  Q     V|          |          |          |
12+20     132.1416    222.51  |  Q     V|          |          |          |
12+25     133.6930    225.27  |  Q     V|          |          |          |
12+30     135.2636    228.06  |  Q     V|          |          |          |
12+35     136.8547    231.02  |  Q     V|          |          |          |
12+40     138.4663    234.02  |  Q     V|          |          |          |
12+45     140.1002    237.23  |  Q     V|          |          |          |
12+50     141.7559    240.42  |  Q     V|          |          |          |
12+55     143.4349    243.79  |  Q      V          |          |          |
13+ 0     145.1373    247.19  |  Q      V          |          |          |
13+ 5     146.8646    250.80  |  Q      V          |          |          |
13+10     148.6169    254.44  |  Q      V          |          |          |
13+15     150.3960    258.33  |  Q      V          |          |          |
13+20     152.2022    262.25  |  Q      V          |          |          |
13+25     154.0372    266.45  |  Q      V          |          |          |
13+30     155.9016    270.71  |  Q      V          |          |          |
13+35     157.7974    275.27  |  Q       V         |          |          |
13+40     159.7251    279.90  |  Q      |V         |          |          |
13+45     161.6870    284.87  |   Q     |V         |          |          |
13+50     163.6838    289.93  |   Q     |V         |          |          |
13+55     165.7181    295.38  |   Q     |V         |          |          |
14+ 0     167.7908    300.95  |   Q     |V         |          |          |
14+ 5     169.9119    307.98  |   Q     |V         |          |          |
14+10     172.0914    316.48  |   Q     | V        |          |          |
14+15     174.3396    326.43  |   Q     | V        |          |          |
14+20     176.6643    337.54  |   Q     | V        |          |          |
14+25     179.0766    350.28  |    Q    | V        |          |          |
14+30     181.5931    365.40  |    Q    | V        |          |          |
14+35     184.2343    383.51  |    Q    | V        |          |          |
14+40     187.0375    407.02  |    Q    |  V       |          |          |
14+45     190.0556    438.22  |     Q   |  V       |          |          |
14+50     193.2225    459.84  |     Q   |  V       |          |          |
14+55     196.5210    478.94  |     Q   |  V       |          |          |
15+ 0     199.9449    497.14  |      Q  |   V      |          |          |
15+ 5     203.4974    515.83  |      Q  |   V      |          |          |
15+10     207.1779    534.41  |      Q  |   V      |          |          |
15+15     210.9971    554.55  |      Q  |   V      |          |          |
15+20     214.9590    575.26  |       Q |    V     |          |          |
```



| | | | |
|---|---|---|---|
| 15+25 | 219.0607 | 595.57 | |
| 15+30 | 223.2884 | 613.87 | |
| 15+35 | 227.6466 | 632.81 | |
| 15+40 | 232.1351 | 651.72 | |
| 15+45 | 236.7700 | 673.00 | |
| 15+50 | 241.5477 | 693.71 | |
| 15+55 | 246.5035 | 719.59 | |
| 16+ 0 | 251.6632 | 749.19 | |
| 16+ 5 | 257.5093 | 848.86 | |
| 16+10 | 264.3796 | 997.57 | |
| 16+15 | 272.1685 | 1130.94 | |
| 16+20 | 280.9315 | 1272.39 | |
| 16+25 | 290.8231 | 1436.27 | |
| 16+30 | 302.4684 | 1690.89 | |
| 16+35 | 316.0612 | 1973.68 | |
| 16+40 | 332.5999 | 2401.42 | |
| 16+45 | 351.8802 | 2799.51 | |
| 16+50 | 365.2308 | 1938.50 | |
| 16+55 | 375.9853 | 1561.56 | |
| 17+ 0 | 385.5246 | 1385.10 | |
| 17+ 5 | 394.3893 | 1287.16 | |
| 17+10 | 402.4985 | 1177.45 | |
| 17+15 | 410.1809 | 1115.49 | |
| 17+20 | 417.2800 | 1030.79 | |
| 17+25 | 423.9709 | 971.51 | |
| 17+30 | 430.1762 | 901.01 | |
| 17+35 | 435.9912 | 844.33 | |
| 17+40 | 441.4095 | 786.74 | |
| 17+45 | 446.4156 | 726.90 | |
| 17+50 | 451.0965 | 679.66 | |
| 17+55 | 455.4666 | 634.54 | |
| 18+ 0 | 459.6079 | 601.32 | |
| 18+ 5 | 463.4980 | 564.85 | |
| 18+10 | 467.1958 | 536.91 | |
| 18+15 | 470.6554 | 502.33 | |
| 18+20 | 473.9500 | 478.38 | |
| 18+25 | 477.0269 | 446.77 | |
| 18+30 | 479.9703 | 427.38 | |
| 18+35 | 482.7549 | 404.32 | |
| 18+40 | 485.4166 | 386.48 | |
| 18+45 | 487.9042 | 361.20 | |
| 18+50 | 490.2677 | 343.18 | |
| 18+55 | 492.4524 | 317.22 | |
| 19+ 0 | 494.5307 | 301.77 | |
| 19+ 5 | 496.5436 | 292.27 | |
| 19+10 | 498.4962 | 283.52 | |
| 19+15 | 500.3806 | 273.60 | |
| 19+20 | 502.2028 | 264.59 | |
| 19+25 | 503.9751 | 257.35 | |
| 19+30 | 505.6986 | 250.25 | |
| 19+35 | 507.3624 | 241.59 | |
| 19+40 | 508.9633 | 232.45 | |
| 19+45 | 510.5273 | 227.09 | |
| 19+50 | 512.0584 | 222.32 | |
| 19+55 | 513.5626 | 218.41 | |
| 20+ 0 | 515.0466 | 215.47 | |
| 20+ 5 | 516.5024 | 211.38 | |
| 20+10 | 517.9280 | 207.00 | |
| 20+15 | 519.3192 | 202.01 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20+20 | 520.6595 | 194.61 | Q | | | | V |
| 20+25 | 521.9690 | 190.14 | Q | | | | V |
| 20+30 | 523.2539 | 186.56 | Q | | | | V |
| 20+35 | 524.5140 | 182.97 | Q | | | | V |
| 20+40 | 525.7400 | 178.01 | Q | | | | V |
| 20+45 | 526.9395 | 174.16 | Q | | | | V |
| 20+50 | 528.1178 | 171.09 | Q | | | | V |
| 20+55 | 529.2811 | 168.91 | Q | | | | V |
| 21+ 0 | 530.3990 | 162.32 | Q | | | | V |
| 21+ 5 | 531.4964 | 159.34 | Q | | | | V |
| 21+10 | 532.5763 | 156.80 | Q | | | | V |
| 21+15 | 533.6400 | 154.45 | Q | | | | V |
| 21+20 | 534.6877 | 152.13 | Q | | | | V |
| 21+25 | 535.7200 | 149.89 | Q | | | | V |
| 21+30 | 536.7362 | 147.56 | Q | | | | V |
| 21+35 | 537.7371 | 145.33 | Q | | | | V |
| 21+40 | 538.7247 | 143.40 | Q | | | | V |
| 21+45 | 539.6996 | 141.56 | Q | | | | V |
| 21+50 | 540.6623 | 139.79 | Q | | | | V |
| 21+55 | 541.6131 | 138.05 | Q | | | | V |
| 22+ 0 | 542.5527 | 136.42 | Q | | | | V |
| 22+ 5 | 543.4814 | 134.85 | Q | | | | V |
| 22+10 | 544.3996 | 133.33 | Q | | | | V |
| 22+15 | 545.3076 | 131.85 | Q | | | | V |
| 22+20 | 546.2058 | 130.42 | Q | | | | V |
| 22+25 | 547.0944 | 129.02 | Q | | | | V |
| 22+30 | 547.9737 | 127.67 | Q | | | | V |
| 22+35 | 548.8440 | 126.36 | Q | | | | V |
| 22+40 | 549.7055 | 125.09 | Q | | | | V |
| 22+45 | 550.5584 | 123.85 | Q | | | | V |
| 22+50 | 551.4031 | 122.64 | Q | | | | V |
| 22+55 | 552.2396 | 121.46 | Q | | | | V |
| 23+ 0 | 553.0682 | 120.31 | Q | | | | V |
| 23+ 5 | 553.8891 | 119.19 | Q | | | | V |
| 23+10 | 554.7024 | 118.10 | Q | | | | V |
| 23+15 | 555.5084 | 117.03 | Q | | | | V |
| 23+20 | 556.3073 | 115.99 | Q | | | | V |
| 23+25 | 557.0991 | 114.97 | Q | | | | V |
| 23+30 | 557.8840 | 113.98 | Q | | | | V |
| 23+35 | 558.6623 | 113.00 | Q | | | | V |
| 23+40 | 559.4340 | 112.05 | Q | | | | V |
| 23+45 | 560.1993 | 111.12 | Q | | | | V |
| 23+50 | 560.9583 | 110.21 | Q | | | | V |
| 23+55 | 561.7111 | 109.32 | Q | | | | V |
| 24+ 0 | 562.4580 | 108.44 | Q | | | | V |
| 24+ 5 | 563.1939 | 106.86 | Q | | | | V |
| 24+10 | 563.9126 | 104.35 | Q | | | | V |
| 24+15 | 564.6096 | 101.21 | Q | | | | V |
| 24+20 | 565.2806 | 97.42 | Q | | | | V |
| 24+25 | 565.9208 | 92.96 | Q | | | | V |
| 24+30 | 566.5203 | 87.04 | Q | | | | V |
| 24+35 | 567.0682 | 79.56 | Q | | | | V |
| 24+40 | 567.5403 | 68.55 | Q | | | | V |
| 24+45 | 567.9039 | 52.80 | Q | | | | V |
| 24+50 | 568.2101 | 44.46 | Q | | | | V |
| 24+55 | 568.4775 | 38.82 | Q | | | | V |
| 25+ 0 | 568.7139 | 34.33 | Q | | | | V |
| 25+ 5 | 568.9241 | 30.52 | Q | | | | V |
| 25+10 | 569.1128 | 27.41 | Q | | | | V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+15 | 569.2814 | 24.47 | Q | \| | \| | \| | V\| |
| 25+20 | 569.4327 | 21.97 | Q | \| | \| | \| | V\| |
| 25+25 | 569.5682 | 19.67 | Q | \| | \| | \| | V\| |
| 25+30 | 569.6899 | 17.67 | Q | \| | \| | \| | V\| |
| 25+35 | 569.7991 | 15.86 | Q | \| | \| | \| | V\| |
| 25+40 | 569.8970 | 14.22 | Q | \| | \| | \| | V\| |
| 25+45 | 569.9846 | 12.71 | Q | \| | \| | \| | V\| |
| 25+50 | 570.0627 | 11.34 | Q | \| | \| | \| | V\| |
| 25+55 | 570.1325 | 10.13 | Q | \| | \| | \| | V\| |
| 26+ 0 | 570.1944 | 9.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 570.2494 | 7.99 | Q | \| | \| | \| | V\| |
| 26+10 | 570.2980 | 7.04 | Q | \| | \| | \| | V\| |
| 26+15 | 570.3409 | 6.24 | Q | \| | \| | \| | V\| |
| 26+20 | 570.3786 | 5.48 | Q | \| | \| | \| | V\| |
| 26+25 | 570.4121 | 4.86 | Q | \| | \| | \| | V\| |
| 26+30 | 570.4415 | 4.27 | Q | \| | \| | \| | V\| |
| 26+35 | 570.4673 | 3.75 | Q | \| | \| | \| | V\| |
| 26+40 | 570.4897 | 3.26 | Q | \| | \| | \| | V\| |
| 26+45 | 570.5095 | 2.87 | Q | \| | \| | \| | V\| |
| 26+50 | 570.5269 | 2.52 | Q | \| | \| | \| | V\| |
| 26+55 | 570.5428 | 2.31 | Q | \| | \| | \| | V\| |
| 27+ 0 | 570.5575 | 2.13 | Q | \| | \| | \| | V\| |
| 27+ 5 | 570.5710 | 1.97 | Q | \| | \| | \| | V\| |
| 27+10 | 570.5834 | 1.80 | Q | \| | \| | \| | V\| |
| 27+15 | 570.5948 | 1.65 | Q | \| | \| | \| | V\| |
| 27+20 | 570.6051 | 1.51 | Q | \| | \| | \| | V\| |
| 27+25 | 570.6146 | 1.37 | Q | \| | \| | \| | V\| |
| 27+30 | 570.6231 | 1.23 | Q | \| | \| | \| | V\| |
| 27+35 | 570.6308 | 1.12 | Q | \| | \| | \| | V\| |
| 27+40 | 570.6379 | 1.03 | Q | \| | \| | \| | V\| |
| 27+45 | 570.6444 | 0.95 | Q | \| | \| | \| | V\| |
| 27+50 | 570.6503 | 0.86 | Q | \| | \| | \| | V\| |
| 27+55 | 570.6557 | 0.78 | Q | \| | \| | \| | V\| |
| 28+ 0 | 570.6603 | 0.68 | Q | \| | \| | \| | V\| |
| 28+ 5 | 570.6643 | 0.58 | Q | \| | \| | \| | V\| |
| 28+10 | 570.6676 | 0.48 | Q | \| | \| | \| | V\| |
| 28+15 | 570.6702 | 0.38 | Q | \| | \| | \| | V\| |
| 28+20 | 570.6725 | 0.32 | Q | \| | \| | \| | V\| |
| 28+25 | 570.6743 | 0.27 | Q | \| | \| | \| | V\| |
| 28+30 | 570.6758 | 0.22 | Q | \| | \| | \| | V\| |
| 28+35 | 570.6769 | 0.16 | Q | \| | \| | \| | V\| |
| 28+40 | 570.6778 | 0.13 | Q | \| | \| | \| | V\| |
| 28+45 | 570.6785 | 0.10 | Q | \| | \| | \| | V\| |
| 28+50 | 570.6789 | 0.07 | Q | \| | \| | \| | V\| |
| 28+55 | 570.6791 | 0.03 | Q | \| | \| | \| | V\| |
| 29+ 0 | 570.6793 | 0.02 | Q | \| | \| | \| | V\| |
| 29+ 5 | 570.6794 | 0.02 | Q | \| | \| | \| | V\| |
| 29+10 | 570.6795 | 0.01 | Q | \| | \| | \| | V\| |
| 29+15 | 570.6795 | 0.01 | Q | \| | \| | \| | V\| |
| 29+20 | 570.6796 | 0.01 | Q | \| | \| | \| | V\| |
| 29+25 | 570.6796 | 0.00 | Q | \| | \| | \| | V\| |

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**********HYDROGRAPH DATA**********

Number of intervals = 353
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2799.507 (CFS)
Total volume = 570.680 (Ac.Ft)

Status of hydrographs being held in storage

| Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|

```
        Peak (CFS)   2799.507     0.000     0.000     0.000     0.000
        Vol (Ac.Ft)    570.680     0.000     0.000     0.000     0.000
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Process from Point/Station        2.000 to Point/Station        2.100
**** STREAM ROUTING SCS CONVEX METHOD ****
______________________________________________________________________________
HYDROGRAPH STREAM ROUTING DATA:
Length of stream =   9603.00 (Ft.)
Elevation difference =  530.00 (Ft.)
Slope of channel =  0.055191 (Vert/Horiz)
Channel type - Improved Channel


Channel length =  9603.00(Ft.)     Elevation difference = 530.00(Ft.)
Channel evaluation using mean flow rate of hydrograph
Channel base width  =  300.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =    268.931(CFS)
Depth of flow =     0.236(Ft.)
Average velocity =     3.800(Ft/s)
Total flow rate =   268.931(CFS)
Channel flow top width =  300.942(Ft.)
Depth of flow in channel =   0.24(Ft.)
Total number of channels (same dimensions) = 1
Flow Velocity =    3.80(Ft/s)
Travel time  =    0.00 min.
Individual channel flow =  268.931(CFS)
Total capacity of improved channels =    268.931(CFS)
Critical Depth in Channel =    0.29(Ft.)


Channel evaluation using maximum flow rate of hydrograph
Flow(q) thru subarea =   2799.507(CFS)
Depth of flow =     0.960(Ft.)
Average velocity =     9.657(Ft/s)
Total flow rate =  2799.507(CFS)
Channel flow top width =  303.841(Ft.)
Depth of flow in channel =   0.96(Ft.)
Total number of channels (same dimensions) = 1
Flow Velocity =    9.66(Ft/s)
Travel time  =    0.00 min.
Individual channel flow = 2799.507(CFS)
Total capacity of improved channels =   2799.507(CFS)
Critical Depth in Channel =    1.39(Ft.)


********************** SCS CONVEX CHANNEL ROUTING ********************
Convex method of stream routing  data items:
Using equation: Outflow =
O(t+dt) = (1-c*)O(t+dt-dt*) + Input(c*)
          where c* = 1 - (1-c)^e and dt = c(length)/velocity
```

c(v/v+1.7) = 0.8503 Travel time = 16.57 (min.)
dt*(unit time interval) = 5.00(min.), e= 0.5699
dt(routing time-step) = 14.09 (min.), c* = 0.6612

Output hydrograph delayed by 0 unit time increments

P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals (CFS)

| Time(h+m) | Out = O(CFS) | In = I | 0 | 699.9 | 1399.8 | 2099.6 | 2799.5 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.3118 | 0.73 | O | | | | |
| 0+10 | 1.3035 | 2.41 | O | | | | |
| 0+15 | 3.0346 | 4.76 | O | | | | |
| 0+20 | 5.4660 | 7.79 | O | | | | |
| 0+25 | 8.6030 | 11.54 | O | | | | |
| 0+30 | 12.7979 | 16.82 | O | | | | |
| 0+35 | 18.3978 | 23.71 | O | | | | |
| 0+40 | 26.4009 | 34.24 | O | | | | |
| 0+45 | 38.1445 | 49.62 | O | | | | |
| 0+50 | 49.1970 | 57.74 | O | | | | |
| 0+55 | 57.1962 | 63.25 | O | | | | |
| 1+ 0 | 63.0865 | 67.68 | O | | | | |
| 1+ 5 | 67.7363 | 71.46 | OI | | | | |
| 1+10 | 71.5387 | 74.60 | \|O | | | | |
| 1+15 | 74.8416 | 77.60 | \|O | | | | |
| 1+20 | 77.7668 | 80.18 | \|O | | | | |
| 1+25 | 80.4018 | 82.61 | \|O | | | | |
| 1+30 | 82.7778 | 84.75 | \|O | | | | |
| 1+35 | 84.9329 | 86.74 | \|O | | | | |
| 1+40 | 86.9125 | 88.58 | \|O | | | | |
| 1+45 | 88.7493 | 90.30 | \|O | | | | |
| 1+50 | 90.4596 | 91.90 | \|O | | | | |
| 1+55 | 92.0403 | 93.37 | \|O | | | | |
| 2+ 0 | 93.5162 | 94.77 | \|O | | | | |
| 2+ 5 | 94.8964 | 96.06 | \|O | | | | |
| 2+10 | 96.1961 | 97.30 | \|O | | | | |
| 2+15 | 97.4059 | 98.42 | \|O | | | | |
| 2+20 | 98.5384 | 99.50 | \|O | | | | |
| 2+25 | 99.5842 | 100.46 | \|O | | | | |
| 2+30 | 100.5603 | 101.39 | \|O | | | | |
| 2+35 | 101.4826 | 102.27 | \|O | | | | |
| 2+40 | 102.3622 | 103.11 | \|O | | | | |
| 2+45 | 103.1849 | 103.88 | \|O | | | | |
| 2+50 | 103.9523 | 104.60 | \|O | | | | |
| 2+55 | 104.6433 | 105.21 | \|O | | | | |
| 3+ 0 | 105.2594 | 105.77 | \|O | | | | |
| 3+ 5 | 105.8446 | 106.35 | \|O | | | | |
| 3+10 | 106.4202 | 106.92 | \|O | | | | |
| 3+15 | 106.9913 | 107.49 | \|O | | | | |
| 3+20 | 107.5533 | 108.04 | \|O | | | | |
| 3+25 | 108.1149 | 108.60 | \|O | | | | |
| 3+30 | 108.6774 | 109.16 | \|O | | | | |
| 3+35 | 109.2378 | 109.72 | \|O | | | | |

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|---|---|---|---|---|---|---|---|
| 3+40 | 109.7813 | 110.24 | O | | | | |
| 3+45 | 110.3174 | 110.78 | O | | | | |
| 3+50 | 110.8519 | 111.31 | O | | | | |
| 3+55 | 111.3931 | 111.87 | O | | | | |
| 4+ 0 | 111.9440 | 112.42 | O | | | | |
| 4+ 5 | 112.5075 | 113.00 | O | | | | |
| 4+10 | 113.0767 | 113.57 | O | | | | |
| 4+15 | 113.6522 | 114.15 | O | | | | |
| 4+20 | 114.2163 | 114.70 | O | | | | |
| 4+25 | 114.7722 | 115.25 | O | | | | |
| 4+30 | 115.3249 | 115.80 | O | | | | |
| 4+35 | 115.8827 | 116.37 | O | | | | |
| 4+40 | 116.4370 | 116.91 | O | | | | |
| 4+45 | 116.9903 | 117.47 | O | | | | |
| 4+50 | 117.5429 | 118.02 | O | | | | |
| 4+55 | 118.1067 | 118.60 | O | | | | |
| 5+ 0 | 118.6634 | 119.14 | O | | | | |
| 5+ 5 | 119.2157 | 119.70 | O | | | | |
| 5+10 | 119.7676 | 120.25 | O | | | | |
| 5+15 | 120.3264 | 120.81 | O | | | | |
| 5+20 | 120.8891 | 121.38 | O | | | | |
| 5+25 | 121.4604 | 121.96 | O | | | | |
| 5+30 | 122.0355 | 122.53 | O | | | | |
| 5+35 | 122.6183 | 123.13 | O | | | | |
| 5+40 | 123.2049 | 123.71 | O | | | | |
| 5+45 | 123.8006 | 124.32 | O | | | | |
| 5+50 | 124.4013 | 124.92 | O | | | | |
| 5+55 | 125.0118 | 125.55 | O | | | | |
| 6+ 0 | 125.6275 | 126.16 | O | | | | |
| 6+ 5 | 126.2534 | 126.80 | O | | | | |
| 6+10 | 126.8848 | 127.43 | O | | | | |
| 6+15 | 127.5268 | 128.09 | O | | | | |
| 6+20 | 128.1746 | 128.74 | O | | | | |
| 6+25 | 128.8333 | 129.41 | O | | | | |
| 6+30 | 129.4981 | 130.07 | O | | | | |
| 6+35 | 130.1743 | 130.77 | O | | | | |
| 6+40 | 130.8569 | 131.45 | O | | | | |
| 6+45 | 131.5514 | 132.16 | O | | | | |
| 6+50 | 132.2525 | 132.86 | O | | | | |
| 6+55 | 132.9660 | 133.59 | O | | | | |
| 7+ 0 | 133.6865 | 134.31 | O | | | | |
| 7+ 5 | 134.4199 | 135.06 | O | | | | |
| 7+10 | 135.1607 | 135.80 | O | | | | |
| 7+15 | 135.9149 | 136.58 | O | | | | |
| 7+20 | 136.6769 | 137.34 | O | | | | |
| 7+25 | 137.4528 | 138.13 | O | | | | |
| 7+30 | 138.2370 | 138.92 | O | | | | |
| 7+35 | 139.0357 | 139.74 | O | | | | |
| 7+40 | 139.8431 | 140.54 | OI | | | | |
| 7+45 | 140.6658 | 141.39 | O | | | | |
| 7+50 | 141.4976 | 142.22 | O | | | | |
| 7+55 | 142.3453 | 143.09 | O | | | | |
| 8+ 0 | 143.2027 | 143.95 | O | | | | |
| 8+ 5 | 144.0767 | 144.84 | O | | | | |
| 8+10 | 144.9609 | 145.73 | O | | | | |
| 8+15 | 145.8626 | 146.65 | O | | | | |
| 8+20 | 146.7751 | 147.57 | O | | | | |
| 8+25 | 147.7059 | 148.52 | O | | | | |
| 8+30 | 148.6482 | 149.47 | O | | | | |

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|---|---|---|---|---|---|---|---|
| 8+35 | 149.6096 | 150.45 | O | | | | |
| 8+40 | 150.5832 | 151.43 | O | | | | |
| 8+45 | 151.5770 | 152.45 | O | | | | |
| 8+50 | 152.5836 | 153.46 | O | | | | |
| 8+55 | 153.6115 | 154.51 | O | | | | |
| 9+ 0 | 154.6530 | 155.56 | O | | | | |
| 9+ 5 | 155.7169 | 156.65 | O | | | | |
| 9+10 | 156.7953 | 157.73 | O | | | | |
| 9+15 | 157.8973 | 158.86 | O | | | | |
| 9+20 | 159.0147 | 159.99 | O | | | | |
| 9+25 | 160.1570 | 161.16 | O | | | | |
| 9+30 | 161.3159 | 162.32 | O | | | | |
| 9+35 | 162.5010 | 163.54 | O | | | | |
| 9+40 | 163.7037 | 164.75 | O | | | | |
| 9+45 | 164.9343 | 166.01 | O | | | | |
| 9+50 | 166.1837 | 167.27 | O | | | | |
| 9+55 | 167.4625 | 168.58 | O | | | | |
| 10+ 0 | 168.7615 | 169.89 | O | | | | |
| 10+ 5 | 170.0918 | 171.26 | O | | | | |
| 10+10 | 171.4438 | 172.62 | O | | | | |
| 10+15 | 172.8289 | 174.04 | O | | | | |
| 10+20 | 174.2374 | 175.46 | O | | | | |
| 10+25 | 175.6811 | 176.95 | O | | | | |
| 10+30 | 177.1499 | 178.43 | O | | | | |
| 10+35 | 178.6565 | 179.98 | O | | | | |
| 10+40 | 180.1899 | 181.52 | O | | | | |
| 10+45 | 181.7637 | 183.15 | O | | | | |
| 10+50 | 183.3666 | 184.76 | O | | | | |
| 10+55 | 185.0126 | 186.46 | O | | | | |
| 11+ 0 | 186.6901 | 188.15 | O | | | | |
| 11+ 5 | 188.4139 | 189.93 | O | | | | |
| 11+10 | 190.1718 | 191.70 | O | | | | |
| 11+15 | 191.9795 | 193.57 | O | | | | |
| 11+20 | 193.8242 | 195.43 | O | | | | |
| 11+25 | 195.7226 | 197.39 | O | | | | |
| 11+30 | 197.6613 | 199.35 | O | | | | |
| 11+35 | 199.6579 | 201.41 | O | | | | |
| 11+40 | 201.6986 | 203.48 | O | | | | |
| 11+45 | 203.8021 | 205.65 | O | | | | |
| 11+50 | 205.9537 | 207.83 | O | | | | |
| 11+55 | 208.1735 | 210.13 | OI | | | | |
| 12+ 0 | 210.4463 | 212.43 | O | | | | |
| 12+ 5 | 212.7951 | 214.86 | O | | | | |
| 12+10 | 215.2065 | 217.31 | O | | | | |
| 12+15 | 217.7035 | 219.90 | O | | | | |
| 12+20 | 220.2692 | 222.51 | O | | | | |
| 12+25 | 222.9283 | 225.27 | O | | | | |
| 12+30 | 225.6653 | 228.06 | O | | | | |
| 12+35 | 228.5089 | 231.02 | O | | | | |
| 12+40 | 231.4469 | 234.02 | O | | | | |
| 12+45 | 234.5161 | 237.23 | O | | | | |
| 12+50 | 237.6702 | 240.42 | O | | | | |
| 12+55 | 240.9259 | 243.79 | O | | | | |
| 13+ 0 | 244.2686 | 247.19 | O | | | | |
| 13+ 5 | 247.7378 | 250.80 | O | | | | |
| 13+10 | 251.3145 | 254.44 | O | | | | |
| 13+15 | 255.0384 | 258.33 | O | | | | |
| 13+20 | 258.8879 | 262.25 | O | | | | |
| 13+25 | 262.9051 | 266.45 | O | | | | |

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|---|---|---|---|---|---|---|---|
| 13+30 | 267.0667 | 270.71 | O | | | | |
| 13+35 | 271.4192 | 275.27 | O | | | | |
| 13+40 | 275.9386 | 279.90 | O | | | | |
| 13+45 | 280.6769 | 284.87 | O | | | | |
| 13+50 | 285.6089 | 289.93 | O | | | | |
| 13+55 | 290.7933 | 295.38 | O | | | | |
| 14+ 0 | 296.2044 | 300.95 | O | | | | |
| 14+ 5 | 302.3426 | 307.98 | O | | | | |
| 14+10 | 309.6951 | 316.48 | O | | | | |
| 14+15 | 318.4256 | 326.43 | O | | | | |
| 14+20 | 328.4586 | 337.54 | O | | | | |
| 14+25 | 339.8963 | 350.28 | OI | | | | |
| 14+30 | 353.2088 | 365.40 | O | | | | |
| 14+35 | 368.9921 | 383.51 | O | | | | |
| 14+40 | 388.6213 | 407.02 | O | | | | |
| 14+45 | 414.0988 | 438.22 | OI | | | | |
| 14+50 | 439.2700 | 459.84 | O | | | | |
| 14+55 | 461.0192 | 478.94 | O | | | | |
| 15+ 0 | 480.6337 | 497.14 | OI | | | | |
| 15+ 5 | 499.5191 | 515.83 | O | | | | |
| 15+10 | 518.2282 | 534.41 | O | | | | |
| 15+15 | 537.5196 | 554.55 | O | | | | |
| 15+20 | 557.6148 | 575.26 | OI | | | | |
| 15+25 | 577.9466 | 595.57 | O | | | | |
| 15+30 | 597.4041 | 613.87 | O | | | | |
| 15+35 | 616.3694 | 632.81 | OI | | | | |
| 15+40 | 635.3068 | 651.72 | O | | | | |
| 15+45 | 655.2353 | 673.00 | O | | | | |
| 15+50 | 675.8160 | 693.71 | O | | | | |
| 15+55 | 698.6873 | 719.59 | OI | | | | |
| 16+ 0 | 725.1337 | 749.19 | O | | | | |
| 16+ 5 | 783.5562 | 848.86 | OI | | | | |
| 16+10 | 890.1727 | 997.57 | O I | | | | |
| 16+15 | 1018.0790 | 1130.94 | O I | | | | |
| 16+20 | 1153.0421 | 1272.39 | O I | | | | |
| 16+25 | 1301.8620 | 1436.27 | O I | | | | |
| 16+30 | 1499.3488 | 1690.89 | O I | | | | |
| 16+35 | 1746.6287 | 1973.68 | O I | | | | |
| 16+40 | 2079.2219 | 2401.42 | O | I | | | |
| 16+45 | 2462.0759 | 2799.51 | O | I | | | |
| 16+50 | 2317.8765 | 1938.50 | O | I | | | |
| 16+55 | 1906.2382 | 1561.56 | I O | I | | | |
| 17+ 0 | 1603.0639 | 1385.10 | I O | | | | |
| 17+ 5 | 1417.1695 | 1287.16 | I O | | | | |
| 17+10 | 1284.4078 | 1177.45 | I O | | | | |
| 17+15 | 1187.2563 | 1115.49 | IO | | | | |
| 17+20 | 1103.6728 | 1030.79 | IO | | | | |
| 17+25 | 1030.1970 | 971.51 | IO | | | | |
| 17+30 | 961.3220 | 901.01 | IO | | | | |
| 17+35 | 897.2673 | 844.33 | O | | | | |
| 17+40 | 837.6969 | 786.74 | O | | | | |
| 17+45 | 778.4751 | 726.90 | IO | | | | |
| 17+50 | 724.2192 | 679.66 | IO | | | | |
| 17+55 | 675.5099 | 634.54 | O | | | | |
| 18+ 0 | 634.2490 | 601.32 | IO | | | | |
| 18+ 5 | 596.9175 | 564.85 | O | | | | |
| 18+10 | 563.7970 | 536.91 | IO | | | | |
| 18+15 | 531.2691 | 502.33 | O | | | | |
| 18+20 | 501.9174 | 478.38 | IO | | | | |

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|---|---|---|---|---|---|---|
| 18+25 | 472.8686 | 446.77 | O | | | |
| 18+30 | 447.3400 | 427.38 | O | | | |
| 18+35 | 424.3066 | 404.32 | IO | | | |
| 18+40 | 403.4838 | 386.48 | O | | | |
| 18+45 | 381.4569 | 361.20 | O | | | |
| 18+50 | 360.3764 | 343.18 | IO | | | |
| 18+55 | 337.9329 | 317.22 | O | | | |
| 19+ 0 | 317.6483 | 301.77 | O | | | |
| 19+ 5 | 303.0976 | 292.27 | O | | | |
| 19+10 | 292.2052 | 283.52 | O | | | |
| 19+15 | 282.2322 | 273.60 | IO | | | |
| 19+20 | 272.6803 | 264.59 | O | | | |
| 19+25 | 264.2402 | 257.35 | O | | | |
| 19+30 | 256.6543 | 250.25 | O | | | |
| 19+35 | 248.7232 | 241.59 | O | | | |
| 19+40 | 240.1084 | 232.45 | O | | | |
| 19+45 | 232.7581 | 227.09 | O | | | |
| 19+50 | 226.9756 | 222.32 | O | | | |
| 19+55 | 222.2291 | 218.41 | O | | | |
| 20+ 0 | 218.4492 | 215.47 | O | | | |
| 20+ 5 | 214.7345 | 211.38 | O | | | |
| 20+10 | 210.6473 | 207.00 | IO | | | |
| 20+15 | 206.1047 | 202.01 | O | | | |
| 20+20 | 200.2398 | 194.61 | O | | | |
| 20+25 | 194.6128 | 190.14 | O | | | |
| 20+30 | 190.1293 | 186.56 | O | | | |
| 20+35 | 186.2391 | 182.97 | O | | | |
| 20+40 | 181.9639 | 178.01 | O | | | |
| 20+45 | 177.7089 | 174.16 | O | | | |
| 20+50 | 174.0548 | 171.09 | O | | | |
| 20+55 | 171.1633 | 168.91 | O | | | |
| 21+ 0 | 166.8622 | 162.32 | O | | | |
| 21+ 5 | 162.5899 | 159.34 | O | | | |
| 21+10 | 159.3569 | 156.80 | O | | | |
| 21+15 | 156.6620 | 154.45 | O | | | |
| 21+20 | 154.2088 | 152.13 | O | | | |
| 21+25 | 151.8790 | 149.89 | O | | | |
| 21+30 | 149.5685 | 147.56 | O | | | |
| 21+35 | 147.2871 | 145.33 | O | | | |
| 21+40 | 145.1687 | 143.40 | O | | | |
| 21+45 | 143.2145 | 141.56 | O | | | |
| 21+50 | 141.3639 | 139.79 | IO | | | |
| 21+55 | 139.5806 | 138.05 | O | | | |
| 22+ 0 | 137.8749 | 136.42 | O | | | |
| 22+ 5 | 136.2438 | 134.85 | O | | | |
| 22+10 | 134.6721 | 133.33 | O | | | |
| 22+15 | 133.1520 | 131.85 | O | | | |
| 22+20 | 131.6791 | 130.42 | O | | | |
| 22+25 | 130.2501 | 129.02 | O | | | |
| 22+30 | 128.8636 | 127.67 | O | | | |
| 22+35 | 127.5182 | 126.36 | O | | | |
| 22+40 | 126.2112 | 125.09 | O | | | |
| 22+45 | 124.9400 | 123.85 | O | | | |
| 22+50 | 123.7025 | 122.64 | O | | | |
| 22+55 | 122.4972 | 121.46 | O | | | |
| 23+ 0 | 121.3225 | 120.31 | O | | | |
| 23+ 5 | 120.1772 | 119.19 | O | | | |
| 23+10 | 119.0600 | 118.10 | O | | | |
| 23+15 | 117.9698 | 117.03 | O | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+20 | 116.9053 | 115.99 | \|O | \| | \| | \| | \| |
| 23+25 | 115.8656 | 114.97 | \|O | \| | \| | \| | \| |
| 23+30 | 114.8498 | 113.98 | \|O | \| | \| | \| | \| |
| 23+35 | 113.8569 | 113.00 | \|O | \| | \| | \| | \| |
| 23+40 | 112.8860 | 112.05 | \|O | \| | \| | \| | \| |
| 23+45 | 111.9364 | 111.12 | \|O | \| | \| | \| | \| |
| 23+50 | 111.0073 | 110.21 | \|O | \| | \| | \| | \| |
| 23+55 | 110.0980 | 109.32 | \|O | \| | \| | \| | \| |
| 24+ 0 | 109.2077 | 108.44 | \|O | \| | \| | \| | \| |
| 24+ 5 | 108.0248 | 106.86 | \|O | \| | \| | \| | \| |
| 24+10 | 106.1840 | 104.35 | \|O | \| | \| | \| | \| |
| 24+15 | 103.6324 | 101.21 | \|O | \| | \| | \| | \| |
| 24+20 | 100.4156 | 97.42 | \|O | \| | \| | \| | \| |
| 24+25 | 96.5349 | 92.96 | \|O | \| | \| | \| | \| |
| 24+30 | 91.6450 | 87.04 | \|O | \| | \| | \| | \| |
| 24+35 | 85.4091 | 79.56 | \|O | \| | \| | \| | \| |
| 24+40 | 76.8446 | 68.55 | IO | \| | \| | \| | \| |
| 24+45 | 64.6394 | 52.80 | O | \| | \| | \| | \| |
| 24+50 | 53.2513 | 44.46 | O | \| | \| | \| | \| |
| 24+55 | 45.0340 | 38.82 | O | \| | \| | \| | \| |
| 25+ 0 | 39.0095 | 34.33 | O | \| | \| | \| | \| |
| 25+ 5 | 34.2911 | 30.52 | O | \| | \| | \| | \| |
| 25+10 | 30.4698 | 27.41 | O | \| | \| | \| | \| |
| 25+15 | 27.1921 | 24.47 | O | \| | \| | \| | \| |
| 25+20 | 24.3278 | 21.97 | O | \| | \| | \| | \| |
| 25+25 | 21.7878 | 19.67 | O | \| | \| | \| | \| |
| 25+30 | 19.5351 | 17.67 | O | \| | \| | \| | \| |
| 25+35 | 17.5313 | 15.86 | O | \| | \| | \| | \| |
| 25+40 | 15.7257 | 14.22 | O | \| | \| | \| | \| |
| 25+45 | 14.0864 | 12.71 | O | \| | \| | \| | \| |
| 25+50 | 12.5925 | 11.34 | O | \| | \| | \| | \| |
| 25+55 | 11.2486 | 10.13 | O | \| | \| | \| | \| |
| 26+ 0 | 10.0254 | 9.00 | O | \| | \| | \| | \| |
| 26+ 5 | 8.9156 | 7.99 | O | \| | \| | \| | \| |
| 26+10 | 7.8997 | 7.04 | O | \| | \| | \| | \| |
| 26+15 | 6.9894 | 6.24 | O | \| | \| | \| | \| |
| 26+20 | 6.1678 | 5.48 | O | \| | \| | \| | \| |
| 26+25 | 5.4466 | 4.86 | O | \| | \| | \| | \| |
| 26+30 | 4.8046 | 4.27 | O | \| | \| | \| | \| |
| 26+35 | 4.2285 | 3.75 | O | \| | \| | \| | \| |
| 26+40 | 3.7032 | 3.26 | O | \| | \| | \| | \| |
| 26+45 | 3.2457 | 2.87 | O | \| | \| | \| | \| |
| 26+50 | 2.8506 | 2.52 | O | \| | \| | \| | \| |
| 26+55 | 2.5413 | 2.31 | O | \| | \| | \| | \| |
| 27+ 0 | 2.3125 | 2.13 | O | \| | \| | \| | \| |
| 27+ 5 | 2.1228 | 1.97 | O | \| | \| | \| | \| |
| 27+10 | 1.9472 | 1.80 | O | \| | \| | \| | \| |
| 27+15 | 1.7838 | 1.65 | O | \| | \| | \| | \| |
| 27+20 | 1.6339 | 1.51 | O | \| | \| | \| | \| |
| 27+25 | 1.4920 | 1.37 | O | \| | \| | \| | \| |
| 27+30 | 1.3535 | 1.23 | O | \| | \| | \| | \| |
| 27+35 | 1.2247 | 1.12 | O | \| | \| | \| | \| |
| 27+40 | 1.1170 | 1.03 | O | \| | \| | \| | \| |
| 27+45 | 1.0242 | 0.95 | O | \| | \| | \| | \| |
| 27+50 | 0.9371 | 0.86 | O | \| | \| | \| | \| |
| 27+55 | 0.8507 | 0.78 | O | \| | \| | \| | \| |
| 28+ 0 | 0.7587 | 0.68 | O | \| | \| | \| | \| |
| 28+ 5 | 0.6618 | 0.58 | O | \| | \| | \| | \| |
| 28+10 | 0.5635 | 0.48 | O | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 28+15 | 0.4669 | 0.38 | O | \| | \| | \| | \| |
| 28+20 | 0.3861 | 0.32 | O | \| | \| | \| | \| |
| 28+25 | 0.3215 | 0.27 | O | \| | \| | \| | \| |
| 28+30 | 0.2643 | 0.22 | O | \| | \| | \| | \| |
| 28+35 | 0.2100 | 0.16 | O | \| | \| | \| | \| |
| 28+40 | 0.1636 | 0.13 | O | \| | \| | \| | \| |
| 28+45 | 0.1263 | 0.10 | O | \| | \| | \| | \| |
| 28+50 | 0.0938 | 0.07 | O | \| | \| | \| | \| |
| 28+55 | 0.0585 | 0.03 | O | \| | \| | \| | \| |
| 29+ 0 | 0.0347 | 0.02 | O | \| | \| | \| | \| |
| 29+ 5 | 0.0237 | 0.02 | O | \| | \| | \| | \| |
| 29+10 | 0.0175 | 0.01 | O | \| | \| | \| | \| |
| 29+15 | 0.0129 | 0.01 | O | \| | \| | \| | \| |
| 29+20 | 0.0089 | 0.01 | O | \| | \| | \| | \| |
| 29+25 | 0.0051 | 0.00 | O | \| | \| | \| | \| |
| 29+30 | 0.0022 | 0.00 | O | \| | \| | \| | \| |
| 29+35 | 0.0000 | 0.00 | O | \| | \| | \| | \| |

**********HYDROGRAPH DATA**********

Number of intervals = 355
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2462.076 (CFS)
Total volume = 570.680 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 2.100 to Point/Station 2.100
**** ADD/COMBINE/RECOVER HYDROGRAPHS ****

********** HYDROGRAPH INFORMATION **********

From study/file name: OFFG10024.rte

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P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals (CFS)

| Time(h+m) | Add q(CFS) | Tot. Q | 0 | 667.8 | 1335.6 | 2003.4 | 2671.2 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0821 | 0.39 | Q | \| | \| | \| | \| |
| 0+10 | 0.3407 | 1.64 | Q | \| | \| | \| | \| |
| 0+15 | 0.7832 | 3.82 | Q | \| | \| | \| | \| |
| 0+20 | 1.6440 | 7.11 | Q | \| | \| | \| | \| |
| 0+25 | 2.8760 | 11.48 | Q | \| | \| | \| | \| |
| 0+30 | 4.1256 | 16.92 | Q | \| | \| | \| | \| |
| 0+35 | 4.8337 | 23.23 | Q | \| | \| | \| | \| |
| 0+40 | 5.3293 | 31.73 | Q | \| | \| | \| | \| |
| 0+45 | 5.7180 | 43.86 | Q | \| | \| | \| | \| |
| 0+50 | 6.0417 | 55.24 | Q | \| | \| | \| | \| |
| 0+55 | 6.3166 | 63.51 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+ 0 | 6.5477 | 69.63 | qQ | \| | \| | \| | \| |
| 1+ 5 | 6.7493 | 74.49 | qQ | \| | \| | \| | \| |
| 1+10 | 6.9312 | 78.47 | qQ | \| | \| | \| | \| |
| 1+15 | 7.0950 | 81.94 | qQ | \| | \| | \| | \| |
| 1+20 | 7.2410 | 85.01 | qQ | \| | \| | \| | \| |
| 1+25 | 7.3659 | 87.77 | qQ | \| | \| | \| | \| |
| 1+30 | 7.4791 | 90.26 | qQ | \| | \| | \| | \| |
| 1+35 | 7.5832 | 92.52 | qQ | \| | \| | \| | \| |
| 1+40 | 7.6791 | 94.59 | qQ | \| | \| | \| | \| |
| 1+45 | 7.7665 | 96.52 | qQ | \| | \| | \| | \| |
| 1+50 | 7.8418 | 98.30 | qQ | \| | \| | \| | \| |
| 1+55 | 7.9103 | 99.95 | qQ | \| | \| | \| | \| |
| 2+ 0 | 7.9787 | 101.49 | qQ | \| | \| | \| | \| |
| 2+ 5 | 8.0406 | 102.94 | qQ | \| | \| | \| | \| |
| 2+10 | 8.1028 | 104.30 | qQ | \| | \| | \| | \| |
| 2+15 | 8.1606 | 105.57 | qQ | \| | \| | \| | \| |
| 2+20 | 8.2140 | 106.75 | qQ | \| | \| | \| | \| |
| 2+25 | 8.2670 | 107.85 | qQ | \| | \| | \| | \| |
| 2+30 | 8.3167 | 108.88 | qQ | \| | \| | \| | \| |
| 2+35 | 8.3649 | 109.85 | qQ | \| | \| | \| | \| |
| 2+40 | 8.4139 | 110.78 | qQ | \| | \| | \| | \| |
| 2+45 | 8.4623 | 111.65 | qQ | \| | \| | \| | \| |
| 2+50 | 8.5117 | 112.46 | qQ | \| | \| | \| | \| |
| 2+55 | 8.5602 | 113.20 | qQ | \| | \| | \| | \| |
| 3+ 0 | 8.6093 | 113.87 | qQ | \| | \| | \| | \| |
| 3+ 5 | 8.6575 | 114.50 | qQ | \| | \| | \| | \| |
| 3+10 | 8.7017 | 115.12 | qQ | \| | \| | \| | \| |
| 3+15 | 8.7451 | 115.74 | qQ | \| | \| | \| | \| |
| 3+20 | 8.7896 | 116.34 | qQ | \| | \| | \| | \| |
| 3+25 | 8.8311 | 116.95 | qQ | \| | \| | \| | \| |
| 3+30 | 8.8709 | 117.55 | qQ | \| | \| | \| | \| |
| 3+35 | 8.9105 | 118.15 | qQ | \| | \| | \| | \| |
| 3+40 | 8.9512 | 118.73 | qQ | \| | \| | \| | \| |
| 3+45 | 8.9916 | 119.31 | qQ | \| | \| | \| | \| |
| 3+50 | 9.0332 | 119.89 | qQ | \| | \| | \| | \| |
| 3+55 | 9.0746 | 120.47 | qQ | \| | \| | \| | \| |
| 4+ 0 | 9.1171 | 121.06 | qQ | \| | \| | \| | \| |
| 4+ 5 | 9.1594 | 121.67 | qQ | \| | \| | \| | \| |
| 4+10 | 9.2028 | 122.28 | qQ | \| | \| | \| | \| |
| 4+15 | 9.2461 | 122.90 | qQ | \| | \| | \| | \| |
| 4+20 | 9.2906 | 123.51 | qQ | \| | \| | \| | \| |
| 4+25 | 9.3349 | 124.11 | qQ | \| | \| | \| | \| |
| 4+30 | 9.3804 | 124.71 | qQ | \| | \| | \| | \| |
| 4+35 | 9.4257 | 125.31 | qQ | \| | \| | \| | \| |
| 4+40 | 9.4723 | 125.91 | qQ | \| | \| | \| | \| |
| 4+45 | 9.5187 | 126.51 | qQ | \| | \| | \| | \| |
| 4+50 | 9.5665 | 127.11 | qQ | \| | \| | \| | \| |
| 4+55 | 9.6140 | 127.72 | qQ | \| | \| | \| | \| |
| 5+ 0 | 9.6629 | 128.33 | qQ | \| | \| | \| | \| |
| 5+ 5 | 9.7116 | 128.93 | qQ | \| | \| | \| | \| |
| 5+10 | 9.7617 | 129.53 | qQ | \| | \| | \| | \| |
| 5+15 | 9.8117 | 130.14 | qQ | \| | \| | \| | \| |
| 5+20 | 9.8630 | 130.75 | qQ | \| | \| | \| | \| |
| 5+25 | 9.9142 | 131.37 | qQ | \| | \| | \| | \| |
| 5+30 | 9.9669 | 132.00 | qQ | \| | \| | \| | \| |
| 5+35 | 10.0194 | 132.64 | qQ | \| | \| | \| | \| |
| 5+40 | 10.0735 | 133.28 | qQ | \| | \| | \| | \| |
| 5+45 | 10.1274 | 133.93 | q Q | \| | \| | \| | \| |
| 5+50 | 10.1829 | 134.58 | q Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+55 | 10.2382 | 135.25 | q | Q | | | |
| 6+ 0 | 10.2952 | 135.92 | q | Q | | | |
| 6+ 5 | 10.3520 | 136.61 | q | Q | | | |
| 6+10 | 10.4105 | 137.30 | q | Q | | | |
| 6+15 | 10.4689 | 138.00 | q | Q | | | |
| 6+20 | 10.5291 | 138.70 | q | Q | | | |
| 6+25 | 10.5891 | 139.42 | q | Q | | | |
| 6+30 | 10.6509 | 140.15 | q | Q | | | |
| 6+35 | 10.7126 | 140.89 | q | Q | | | |
| 6+40 | 10.7762 | 141.63 | q | Q | | | |
| 6+45 | 10.8397 | 142.39 | q | Q | | | |
| 6+50 | 10.9051 | 143.16 | q | Q | | | |
| 6+55 | 10.9705 | 143.94 | q | Q | | | |
| 7+ 0 | 11.0379 | 144.72 | q | Q | | | |
| 7+ 5 | 11.1052 | 145.53 | q | Q | | | |
| 7+10 | 11.1746 | 146.34 | q | Q | | | |
| 7+15 | 11.2439 | 147.16 | q | Q | | | |
| 7+20 | 11.3155 | 147.99 | q | Q | | | |
| 7+25 | 11.3870 | 148.84 | q | Q | | | |
| 7+30 | 11.4608 | 149.70 | q | Q | | | |
| 7+35 | 11.5345 | 150.57 | q | Q | | | |
| 7+40 | 11.6107 | 151.45 | q | Q | | | |
| 7+45 | 11.6868 | 152.35 | q | Q | | | |
| 7+50 | 11.7654 | 153.26 | q | Q | | | |
| 7+55 | 11.8440 | 154.19 | q | Q | | | |
| 8+ 0 | 11.9252 | 155.13 | q | Q | | | |
| 8+ 5 | 12.0064 | 156.08 | q | Q | | | |
| 8+10 | 12.0903 | 157.05 | q | Q | | | |
| 8+15 | 12.1743 | 158.04 | q | Q | | | |
| 8+20 | 12.2611 | 159.04 | q | Q | | | |
| 8+25 | 12.3480 | 160.05 | q | Q | | | |
| 8+30 | 12.4379 | 161.09 | q | Q | | | |
| 8+35 | 12.5279 | 162.14 | q | Q | | | |
| 8+40 | 12.6210 | 163.20 | q | Q | | | |
| 8+45 | 12.7143 | 164.29 | q | Q | | | |
| 8+50 | 12.8108 | 165.39 | q | Q | | | |
| 8+55 | 12.9075 | 166.52 | q | Q | | | |
| 9+ 0 | 13.0076 | 167.66 | q | Q | | | |
| 9+ 5 | 13.1079 | 168.82 | q | Q | | | |
| 9+10 | 13.2119 | 170.01 | q | Q | | | |
| 9+15 | 13.3161 | 171.21 | q | Q | | | |
| 9+20 | 13.4242 | 172.44 | q | Q | | | |
| 9+25 | 13.5325 | 173.69 | q | Q | | | |
| 9+30 | 13.6449 | 174.96 | q | Q | | | |
| 9+35 | 13.7577 | 176.26 | q | Q | | | |
| 9+40 | 13.8747 | 177.58 | q | Q | | | |
| 9+45 | 13.9921 | 178.93 | q | Q | | | |
| 9+50 | 14.1140 | 180.30 | q | Q | | | |
| 9+55 | 14.2365 | 181.70 | q | Q | | | |
| 10+ 0 | 14.3636 | 183.13 | q | Q | | | |
| 10+ 5 | 14.4914 | 184.58 | q | Q | | | |
| 10+10 | 14.6242 | 186.07 | q | Q | | | |
| 10+15 | 14.7578 | 187.59 | q | Q | | | |
| 10+20 | 14.8966 | 189.13 | q | Q | | | |
| 10+25 | 15.0363 | 190.72 | q | Q | | | |
| 10+30 | 15.1817 | 192.33 | q | Q | | | |
| 10+35 | 15.3280 | 193.98 | q | Q | | | |
| 10+40 | 15.4803 | 195.67 | q | Q | | | |
| 10+45 | 15.6338 | 197.40 | q | Q | | | |

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10+50      15.7936    199.16  q Q       |          |          |          |
10+55      15.9548    200.97  q  Q      |          |          |          |
11+ 0      16.1228    202.81  q  Q      |          |          |          |
11+ 5      16.2923    204.71  q  Q      |          |          |          |
11+10      16.4691    206.64  q  Q      |          |          |          |
11+15      16.6477    208.63  q  Q      |          |          |          |
11+20      16.8341    210.66  q  Q      |          |          |          |
11+25      17.0225    212.75  q  Q      |          |          |          |
11+30      17.2194    214.88  q  Q      |          |          |          |
11+35      17.4186    217.08  q  Q      |          |          |          |
11+40      17.6269    219.33  q  Q      |          |          |          |
11+45      17.8378    221.64  q  Q      |          |          |          |
11+50      18.0587    224.01  q  Q      |          |          |          |
11+55      18.2824    226.46  q  Q      |          |          |          |
12+ 0      18.5171    228.96  q  Q      |          |          |          |
12+ 5      18.7267    231.52  q  Q      |          |          |          |
12+10      18.8869    234.09  q  Q      |          |          |          |
12+15      18.9870    236.69  q  Q      |          |          |          |
12+20      18.9546    239.22  q  Q      |          |          |          |
12+25      18.7966    241.72  q  Q      |          |          |          |
12+30      18.6442    244.31  q  Q      |          |          |          |
12+35      18.6816    247.19  q  Q      |          |          |          |
12+40      18.8059    250.25  q  Q      |          |          |          |
12+45      18.9722    253.49  q  Q      |          |          |          |
12+50      19.1767    256.85  q  Q      |          |          |          |
12+55      19.4043    260.33  q  Q      |          |          |          |
13+ 0      19.6651    263.93  q  Q      |          |          |          |
13+ 5      19.9435    267.68  q   Q     |          |          |          |
13+10      20.2492    271.56  q   Q     |          |          |          |
13+15      20.5701    275.61  q   Q     |          |          |          |
13+20      20.9202    279.81  q   Q     |          |          |          |
13+25      21.2885    284.19  q   Q     |          |          |          |
13+30      21.6871    288.75  q   Q     |          |          |          |
13+35      22.1020    293.52  q   Q     |          |          |          |
13+40      22.5500    298.49  q   Q     |          |          |          |
13+45      23.0167    303.69  q   Q     |          |          |          |
13+50      23.5227    309.13  q   Q     |          |          |          |
13+55      24.0502    314.84  q   Q     |          |          |          |
14+ 0      24.6190    320.82  q   Q     |          |          |          |
14+ 5      25.2254    327.57  q   Q     |          |          |          |
14+10      25.9056    335.60  q    Q    |          |          |          |
14+15      26.6437    345.07  q    Q    |          |          |          |
14+20      27.5024    355.96  q    Q    |          |          |          |
14+25      28.4534    368.35  q    Q    |          |          |          |
14+30      29.4825    382.69  q    Q    |          |          |          |
14+35      30.4863    399.48  q    Q    |          |          |          |
14+40      31.5508    420.17  q     Q   |          |          |          |
14+45      32.6652    446.76  q     Q   |          |          |          |
14+50      33.8846    473.15  q      Q  |          |          |          |
14+55      35.1839    496.20  q      Q  |          |          |          |
15+ 0      36.6261    517.26  q      Q  |          |          |          |
15+ 5      38.1843    537.70  q       Q |          |          |          |
15+10      39.9427    558.17  q       Q |          |          |          |
15+15      41.8721    579.39  q       Q |          |          |          |
15+20      44.0844    601.70  q        Q|          |          |          |
15+25      46.6596    624.61  q        Q|          |          |          |
15+30      49.8835    647.29  q        Q|          |          |          |
15+35      53.7875    670.16  q         Q          |          |          |
15+40      58.9510    694.26  q         Q          |          |          |
```

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15+45      65.5643    720.80  q         Q          |          |          |
15+50      74.0430    749.86  |q        |Q         |          |          |
15+55      84.9906    783.68  |q        |Q         |          |          |
16+ 0     102.3883    827.52  |q        | Q        |          |          |
16+ 5     145.9227    929.48  | q       |  Q       |          |          |
16+10     217.7918   1107.96  |  q      |     Q    |          |          |
16+15     295.8148   1313.89  |   q     |        Q |          |          |
16+20     420.8284   1573.87  |     q   |          |  Q       |          |
16+25     509.7660   1811.63  |      q  |          |     Q    |          |
16+30     488.1557   1987.50  |      q  |          |       Q  |          |
16+35     330.4192   2077.05  |   q     |          |         Q|          |
16+40     253.7924   2333.01  |  q      |          |          |   Q      |
16+45     209.1718   2671.25  |  q      |          |          |         Q|
16+50     178.4480   2496.32  | q       |          |          |      Q   |
16+55     154.9942   2061.23  | q       |          |        Q |          |
17+ 0     134.7944   1737.86  | q       |          |     Q    |          |
17+ 5     119.8413   1537.01  |q        |          |  Q       |          |
17+10     108.0417   1392.45  |q        |          Q          |          |
17+15      97.5388   1284.80  |q        |         Q|          |          |
17+20      87.4352   1191.11  |q        |       Q  |          |          |
17+25      77.4496   1107.65  |q        |     Q    |          |          |
17+30      70.0937   1031.42  |q        |    Q     |          |          |
17+35      64.1443    961.41  q         |   Q      |          |          |
17+40      58.5161    896.21  q         |  Q       |          |          |
17+45      53.2840    831.76  q         | Q        |          |          |
17+50      47.4374    771.66  q         |Q         |          |          |
17+55      43.5503    719.06  q         Q          |          |          |
18+ 0      41.1932    675.44  q         Q          |          |          |
18+ 5      37.9642    634.88  q        Q|          |          |          |
18+10      36.1327    599.93  q       Q |          |          |          |
18+15      33.7201    564.99  q       Q |          |          |          |
18+20      31.3656    533.28  q      Q  |          |          |          |
18+25      30.4015    503.27  q      Q  |          |          |          |
18+30      28.6910    476.03  q      Q  |          |          |          |
18+35      27.6322    451.94  q     Q   |          |          |          |
18+40      26.8887    430.37  q     Q   |          |          |          |
18+45      26.1094    407.57  q     Q   |          |          |          |
18+50      25.4115    385.79  q    Q    |          |          |          |
18+55      24.5503    362.48  q    Q    |          |          |          |
19+ 0      23.6891    341.34  q    Q    |          |          |          |
19+ 5      22.6970    325.79  q   Q     |          |          |          |
19+10      20.7775    312.98  q   Q     |          |          |          |
19+15      19.9474    302.18  q   Q     |          |          |          |
19+20      19.2530    291.93  q   Q     |          |          |          |
19+25      17.9388    282.18  q   Q     |          |          |          |
19+30      16.7433    273.40  q   Q     |          |          |          |
19+35      16.2966    265.02  q  Q      |          |          |          |
19+40      15.9142    256.02  q  Q      |          |          |          |
19+45      15.5679    248.33  q  Q      |          |          |          |
19+50      15.2465    242.22  q  Q      |          |          |          |
19+55      14.9441    237.17  q  Q      |          |          |          |
20+ 0      14.6594    233.11  q  Q      |          |          |          |
20+ 5      14.3886    229.12  q  Q      |          |          |          |
20+10      14.1324    224.78  q  Q      |          |          |          |
20+15      13.8875    219.99  q  Q      |          |          |          |
20+20      13.6525    213.89  q  Q      |          |          |          |
20+25      13.4283    208.04  q  Q      |          |          |          |
20+30      13.2129    203.34  q  Q      |          |          |          |
20+35      13.0061    199.25  q Q       |          |          |          |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20+40 | 12.8076 | 194.77 | q Q | \| | \| | \| | \| |
| 20+45 | 12.6168 | 190.33 | q Q | \| | \| | \| | \| |
| 20+50 | 12.4334 | 186.49 | q Q | \| | \| | \| | \| |
| 20+55 | 12.2566 | 183.42 | q Q | \| | \| | \| | \| |
| 21+ 0 | 12.0860 | 178.95 | q Q | \| | \| | \| | \| |
| 21+ 5 | 11.9213 | 174.51 | q Q | \| | \| | \| | \| |
| 21+10 | 11.7606 | 171.12 | q Q | \| | \| | \| | \| |
| 21+15 | 11.6050 | 168.27 | q Q | \| | \| | \| | \| |
| 21+20 | 11.4546 | 165.66 | q Q | \| | \| | \| | \| |
| 21+25 | 11.3081 | 163.19 | q Q | \| | \| | \| | \| |
| 21+30 | 11.1653 | 160.73 | q Q | \| | \| | \| | \| |
| 21+35 | 11.0269 | 158.31 | q Q | \| | \| | \| | \| |
| 21+40 | 10.8926 | 156.06 | q Q | \| | \| | \| | \| |
| 21+45 | 10.7623 | 153.98 | q Q | \| | \| | \| | \| |
| 21+50 | 10.6358 | 152.00 | q Q | \| | \| | \| | \| |
| 21+55 | 10.5130 | 150.09 | q Q | \| | \| | \| | \| |
| 22+ 0 | 10.3935 | 148.27 | q Q | \| | \| | \| | \| |
| 22+ 5 | 10.2774 | 146.52 | q Q | \| | \| | \| | \| |
| 22+10 | 10.1644 | 144.84 | q Q | \| | \| | \| | \| |
| 22+15 | 10.0544 | 143.21 | q Q | \| | \| | \| | \| |
| 22+20 | 9.9473 | 141.63 | q Q | \| | \| | \| | \| |
| 22+25 | 9.8429 | 140.09 | q Q | \| | \| | \| | \| |
| 22+30 | 9.7412 | 138.60 | q Q | \| | \| | \| | \| |
| 22+35 | 9.6421 | 137.16 | q Q | \| | \| | \| | \| |
| 22+40 | 9.5453 | 135.76 | q Q | \| | \| | \| | \| |
| 22+45 | 9.4509 | 134.39 | q Q | \| | \| | \| | \| |
| 22+50 | 9.3588 | 133.06 | qQ | \| | \| | \| | \| |
| 22+55 | 9.2689 | 131.77 | qQ | \| | \| | \| | \| |
| 23+ 0 | 9.1810 | 130.50 | qQ | \| | \| | \| | \| |
| 23+ 5 | 9.0951 | 129.27 | qQ | \| | \| | \| | \| |
| 23+10 | 9.0112 | 128.07 | qQ | \| | \| | \| | \| |
| 23+15 | 8.9291 | 126.90 | qQ | \| | \| | \| | \| |
| 23+20 | 8.8489 | 125.75 | qQ | \| | \| | \| | \| |
| 23+25 | 8.7703 | 124.64 | qQ | \| | \| | \| | \| |
| 23+30 | 8.6935 | 123.54 | qQ | \| | \| | \| | \| |
| 23+35 | 8.6183 | 122.48 | qQ | \| | \| | \| | \| |
| 23+40 | 8.5446 | 121.43 | qQ | \| | \| | \| | \| |
| 23+45 | 8.4725 | 120.41 | qQ | \| | \| | \| | \| |
| 23+50 | 8.4018 | 119.41 | qQ | \| | \| | \| | \| |
| 23+55 | 8.3326 | 118.43 | qQ | \| | \| | \| | \| |
| 24+ 0 | 8.2647 | 117.47 | qQ | \| | \| | \| | \| |
| 24+ 5 | 8.1162 | 116.14 | qQ | \| | \| | \| | \| |
| 24+10 | 7.7938 | 113.98 | qQ | \| | \| | \| | \| |
| 24+15 | 7.2919 | 110.92 | qQ | \| | \| | \| | \| |
| 24+20 | 6.3786 | 106.79 | qQ | \| | \| | \| | \| |
| 24+25 | 5.1051 | 101.64 | qQ | \| | \| | \| | \| |
| 24+30 | 3.8284 | 95.47 | qQ | \| | \| | \| | \| |
| 24+35 | 3.1064 | 88.52 | qQ | \| | \| | \| | \| |
| 24+40 | 2.6053 | 79.45 | qQ | \| | \| | \| | \| |
| 24+45 | 2.2163 | 66.86 | qQ | \| | \| | \| | \| |
| 24+50 | 1.8973 | 55.15 | Q | \| | \| | \| | \| |
| 24+55 | 1.6304 | 46.66 | Q | \| | \| | \| | \| |
| 25+ 0 | 1.4110 | 40.42 | Q | \| | \| | \| | \| |
| 25+ 5 | 1.2231 | 35.51 | Q | \| | \| | \| | \| |
| 25+10 | 1.0579 | 31.53 | Q | \| | \| | \| | \| |
| 25+15 | 0.9125 | 28.10 | Q | \| | \| | \| | \| |
| 25+20 | 0.7871 | 25.11 | Q | \| | \| | \| | \| |
| 25+25 | 0.6840 | 22.47 | Q | \| | \| | \| | \| |
| 25+30 | 0.5946 | 20.13 | Q | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 25+35 | 0.5150 | 18.05 | Q | \| | \| | \| | \| |
| 25+40 | 0.4453 | 16.17 | Q | \| | \| | \| | \| |
| 25+45 | 0.3847 | 14.47 | Q | \| | \| | \| | \| |
| 25+50 | 0.3376 | 12.93 | Q | \| | \| | \| | \| |
| 25+55 | 0.2976 | 11.55 | Q | \| | \| | \| | \| |
| 26+ 0 | 0.2592 | 10.28 | Q | \| | \| | \| | \| |
| 26+ 5 | 0.2272 | 9.14 | Q | \| | \| | \| | \| |
| 26+10 | 0.1964 | 8.10 | Q | \| | \| | \| | \| |
| 26+15 | 0.1700 | 7.16 | Q | \| | \| | \| | \| |
| 26+20 | 0.1491 | 6.32 | Q | \| | \| | \| | \| |
| 26+25 | 0.1287 | 5.58 | Q | \| | \| | \| | \| |
| 26+30 | 0.1127 | 4.92 | Q | \| | \| | \| | \| |
| 26+35 | 0.0982 | 4.33 | Q | \| | \| | \| | \| |
| 26+40 | 0.0840 | 3.79 | Q | \| | \| | \| | \| |
| 26+45 | 0.0703 | 3.32 | Q | \| | \| | \| | \| |
| 26+50 | 0.0567 | 2.91 | Q | \| | \| | \| | \| |
| 26+55 | 0.0440 | 2.59 | Q | \| | \| | \| | \| |
| 27+ 0 | 0.0318 | 2.34 | Q | \| | \| | \| | \| |
| 27+ 5 | 0.0204 | 2.14 | Q | \| | \| | \| | \| |
| 27+10 | 0.0141 | 1.96 | Q | \| | \| | \| | \| |
| 27+15 | 0.0084 | 1.79 | Q | \| | \| | \| | \| |
| 27+20 | 0.0028 | 1.64 | Q | \| | \| | \| | \| |
| 27+25 | 0.0000 | 1.49 | Q | \| | \| | \| | \| |
| 27+30 | 0.0000 | 1.35 | Q | \| | \| | \| | \| |
| 27+35 | 0.0000 | 1.22 | Q | \| | \| | \| | \| |
| 27+40 | 0.0000 | 1.12 | Q | \| | \| | \| | \| |
| 27+45 | 0.0000 | 1.02 | Q | \| | \| | \| | \| |
| 27+50 | 0.0000 | 0.94 | Q | \| | \| | \| | \| |
| 27+55 | 0.0000 | 0.85 | Q | \| | \| | \| | \| |
| 28+ 0 | 0.0000 | 0.76 | Q | \| | \| | \| | \| |
| 28+ 5 | 0.0000 | 0.66 | Q | \| | \| | \| | \| |
| 28+10 | 0.0000 | 0.56 | Q | \| | \| | \| | \| |
| 28+15 | 0.0000 | 0.47 | Q | \| | \| | \| | \| |
| 28+20 | 0.0000 | 0.39 | Q | \| | \| | \| | \| |
| 28+25 | 0.0000 | 0.32 | Q | \| | \| | \| | \| |
| 28+30 | 0.0000 | 0.26 | Q | \| | \| | \| | \| |
| 28+35 | 0.0000 | 0.21 | Q | \| | \| | \| | \| |
| 28+40 | 0.0000 | 0.16 | Q | \| | \| | \| | \| |
| 28+45 | 0.0000 | 0.13 | Q | \| | \| | \| | \| |
| 28+50 | 0.0000 | 0.09 | Q | \| | \| | \| | \| |
| 28+55 | 0.0000 | 0.06 | Q | \| | \| | \| | \| |
| 29+ 0 | 0.0000 | 0.03 | Q | \| | \| | \| | \| |
| 29+ 5 | 0.0000 | 0.02 | Q | \| | \| | \| | \| |
| 29+10 | 0.0000 | 0.02 | Q | \| | \| | \| | \| |
| 29+15 | 0.0000 | 0.01 | Q | \| | \| | \| | \| |
| 29+20 | 0.0000 | 0.01 | Q | \| | \| | \| | \| |
| 29+25 | 0.0000 | 0.01 | Q | \| | \| | \| | \| |
| 29+30 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 29+35 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |

**********HYDROGRAPH DATA**********

Number of intervals = 355
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2671.248 (CFS)
Total volume = 628.843 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 2.100 to Point/Station 2.100

**** FLOWBY BASIN ROUTING OR SPLIT FLOW ****

A constant split flow fraction of 0.5000 is
being diverted from the main stream into stream number 2
Total volume of excess flow diverted into flowby
basin (stream number 2 ) is 314.42(Ac.Ft)

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P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals (CFS)

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| Time(h+m) | Volume(Ac.Ft) | Q(CFS) | 0 | 333.9 | 667.8 | 1001.7 | 1335.6 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0014 | 0.20 | Q | | | | |
| 0+10 | 0.0070 | 0.82 | Q | | | | |
| 0+15 | 0.0202 | 1.91 | Q | | | | |
| 0+20 | 0.0446 | 3.56 | Q | | | | |
| 0+25 | 0.0842 | 5.74 | Q | | | | |
| 0+30 | 0.1425 | 8.46 | Q | | | | |
| 0+35 | 0.2225 | 11.62 | Q | | | | |
| 0+40 | 0.3317 | 15.87 | Q | | | | |
| 0+45 | 0.4828 | 21.93 | Q | | | | |
| 0+50 | 0.6730 | 27.62 | Q | | | | |
| 0+55 | 0.8917 | 31.76 | Q | | | | |
| 1+ 0 | 1.1315 | 34.82 | VQ | | | | |
| 1+ 5 | 1.3880 | 37.24 | VQ | | | | |
| 1+10 | 1.6582 | 39.23 | VQ | | | | |
| 1+15 | 1.9403 | 40.97 | VQ | | | | |
| 1+20 | 2.2331 | 42.50 | VQ | | | | |
| 1+25 | 2.5353 | 43.88 | VQ | | | | |
| 1+30 | 2.8461 | 45.13 | VQ | | | | |
| 1+35 | 3.1647 | 46.26 | VQ | | | | |
| 1+40 | 3.4904 | 47.30 | VQ | | | | |
| 1+45 | 3.8227 | 48.26 | VQ | | | | |
| 1+50 | 4.1613 | 49.15 | VQ | | | | |
| 1+55 | 4.5054 | 49.98 | VQ | | | | |
| 2+ 0 | 4.8549 | 50.75 | VQ | | | | |
| 2+ 5 | 5.2094 | 51.47 | VQ | | | | |
| 2+10 | 5.5686 | 52.15 | VQ | | | | |
| 2+15 | 5.9321 | 52.78 | VQ | | | | |
| 2+20 | 6.2997 | 53.38 | VQ | | | | |
| 2+25 | 6.6711 | 53.93 | VQ | | | | |
| 2+30 | 7.0460 | 54.44 | VQ | | | | |
| 2+35 | 7.4243 | 54.92 | VQ | | | | |
| 2+40 | 7.8057 | 55.39 | VQ | | | | |
| 2+45 | 8.1902 | 55.82 | \|Q | | | | |
| 2+50 | 8.5774 | 56.23 | \|Q | | | | |
| 2+55 | 8.9673 | 56.60 | \|Q | | | | |
| 3+ 0 | 9.3594 | 56.93 | \|Q | | | | |
| 3+ 5 | 9.7537 | 57.25 | \|Q | | | | |

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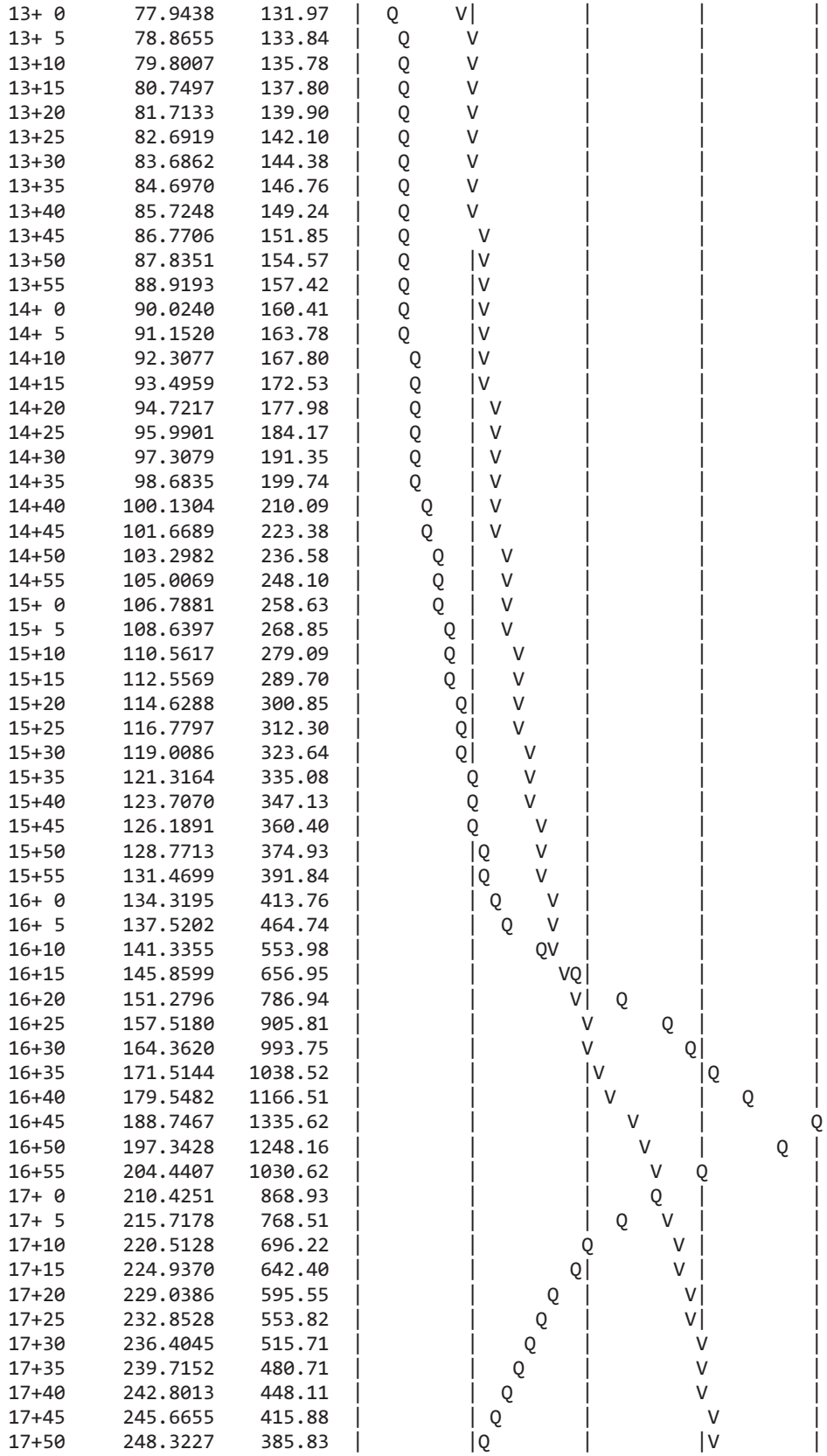
|---|---|---|---|---|---|---|---|
| 3+10 | 10.1501 | 57.56 | Q | | | | |
| 3+15 | 10.5486 | 57.87 | Q | | | | |
| 3+20 | 10.9493 | 58.17 | Q | | | | |
| 3+25 | 11.3520 | 58.47 | Q | | | | |
| 3+30 | 11.7568 | 58.77 | Q | | | | |
| 3+35 | 12.1636 | 59.07 | Q | | | | |
| 3+40 | 12.5725 | 59.37 | Q | | | | |
| 3+45 | 12.9833 | 59.65 | Q | | | | |
| 3+50 | 13.3961 | 59.94 | Q | | | | |
| 3+55 | 13.8110 | 60.23 | Q | | | | |
| 4+ 0 | 14.2278 | 60.53 | Q | | | | |
| 4+ 5 | 14.6468 | 60.83 | Q | | | | |
| 4+10 | 15.0679 | 61.14 | Q | | | | |
| 4+15 | 15.4911 | 61.45 | Q | | | | |
| 4+20 | 15.9164 | 61.75 | QV | | | | |
| 4+25 | 16.3437 | 62.05 | QV | | | | |
| 4+30 | 16.7732 | 62.35 | QV | | | | |
| 4+35 | 17.2047 | 62.65 | QV | | | | |
| 4+40 | 17.6382 | 62.95 | QV | | | | |
| 4+45 | 18.0739 | 63.25 | QV | | | | |
| 4+50 | 18.5116 | 63.55 | QV | | | | |
| 4+55 | 18.9514 | 63.86 | QV | | | | |
| 5+ 0 | 19.3933 | 64.16 | QV | | | | |
| 5+ 5 | 19.8373 | 64.46 | QV | | | | |
| 5+10 | 20.2833 | 64.76 | QV | | | | |
| 5+15 | 20.7314 | 65.07 | QV | | | | |
| 5+20 | 21.1817 | 65.38 | QV | | | | |
| 5+25 | 21.6341 | 65.69 | QV | | | | |
| 5+30 | 22.0886 | 66.00 | QV | | | | |
| 5+35 | 22.5454 | 66.32 | QV | | | | |
| 5+40 | 23.0043 | 66.64 | QV | | | | |
| 5+45 | 23.4655 | 66.96 | Q | | | | |
| 5+50 | 23.9289 | 67.29 | QV | | | | |
| 5+55 | 24.3947 | 67.63 | QV | | | | |
| 6+ 0 | 24.8627 | 67.96 | QV | | | | |
| 6+ 5 | 25.3331 | 68.30 | QV | | | | |
| 6+10 | 25.8059 | 68.65 | QV | | | | |
| 6+15 | 26.2811 | 69.00 | QV | | | | |
| 6+20 | 26.7587 | 69.35 | QV | | | | |
| 6+25 | 27.2388 | 69.71 | QV | | | | |
| 6+30 | 27.7214 | 70.07 | QV | | | | |
| 6+35 | 28.2066 | 70.44 | QV | | | | |
| 6+40 | 28.6943 | 70.82 | QV | | | | |
| 6+45 | 29.1846 | 71.20 | QV | | | | |
| 6+50 | 29.6776 | 71.58 | QV | | | | |
| 6+55 | 30.1733 | 71.97 | QV | | | | |
| 7+ 0 | 30.6716 | 72.36 | QV | | | | |
| 7+ 5 | 31.1727 | 72.76 | QV | | | | |
| 7+10 | 31.6766 | 73.17 | Q V | | | | |
| 7+15 | 32.1834 | 73.58 | Q V | | | | |
| 7+20 | 32.6930 | 74.00 | Q V | | | | |
| 7+25 | 33.2055 | 74.42 | Q V | | | | |
| 7+30 | 33.7210 | 74.85 | Q V | | | | |
| 7+35 | 34.2395 | 75.29 | Q V | | | | |
| 7+40 | 34.7611 | 75.73 | Q V | | | | |
| 7+45 | 35.2857 | 76.18 | Q V | | | | |
| 7+50 | 35.8135 | 76.63 | Q V | | | | |
| 7+55 | 36.3444 | 77.09 | Q V | | | | |
| 8+ 0 | 36.8786 | 77.56 | Q V | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 8+ 5 | 37.4161 | 78.04 | Q V | | | |
| 8+10 | 37.9569 | 78.53 | Q V | | | |
| 8+15 | 38.5011 | 79.02 | Q V | | | |
| 8+20 | 39.0487 | 79.52 | Q V | | | |
| 8+25 | 39.5999 | 80.03 | Q V | | | |
| 8+30 | 40.1546 | 80.54 | Q V | | | |
| 8+35 | 40.7129 | 81.07 | Q V | | | |
| 8+40 | 41.2749 | 81.60 | Q V | | | |
| 8+45 | 41.8406 | 82.15 | Q V | | | |
| 8+50 | 42.4102 | 82.70 | Q V | | | |
| 8+55 | 42.9836 | 83.26 | Q V | | | |
| 9+ 0 | 43.5609 | 83.83 | Q V | | | |
| 9+ 5 | 44.1423 | 84.41 | Q V | | | |
| 9+10 | 44.7277 | 85.00 | Q V | | | |
| 9+15 | 45.3173 | 85.61 | Q V | | | |
| 9+20 | 45.9111 | 86.22 | Q V | | | |
| 9+25 | 46.5092 | 86.84 | Q V | | | |
| 9+30 | 47.1117 | 87.48 | Q V | | | |
| 9+35 | 47.7186 | 88.13 | Q V | | | |
| 9+40 | 48.3301 | 88.79 | Q V | | | |
| 9+45 | 48.9463 | 89.46 | Q V | | | |
| 9+50 | 49.5671 | 90.15 | Q V | | | |
| 9+55 | 50.1928 | 90.85 | Q V | | | |
| 10+ 0 | 50.8234 | 91.56 | Q V | | | |
| 10+ 5 | 51.4590 | 92.29 | Q V | | | |
| 10+10 | 52.0998 | 93.03 | Q V | | | |
| 10+15 | 52.7457 | 93.79 | Q V | | | |
| 10+20 | 53.3970 | 94.57 | Q V | | | |
| 10+25 | 54.0537 | 95.36 | Q V | | | |
| 10+30 | 54.7160 | 96.17 | Q V | | | |
| 10+35 | 55.3840 | 96.99 | Q V | | | |
| 10+40 | 56.0578 | 97.84 | Q V | | | |
| 10+45 | 56.7376 | 98.70 | Q V | | | |
| 10+50 | 57.4234 | 99.58 | Q V | | | |
| 10+55 | 58.1154 | 100.48 | Q V | | | |
| 11+ 0 | 58.8138 | 101.41 | Q V | | | |
| 11+ 5 | 59.5187 | 102.35 | Q V | | | |
| 11+10 | 60.2303 | 103.32 | Q V | | | |
| 11+15 | 60.9487 | 104.31 | Q V | | | |
| 11+20 | 61.6741 | 105.33 | Q V | | | |
| 11+25 | 62.4067 | 106.37 | Q V | | | |
| 11+30 | 63.1467 | 107.44 | Q V | | | |
| 11+35 | 63.8942 | 108.54 | Q V | | | |
| 11+40 | 64.6494 | 109.66 | Q V | | | |
| 11+45 | 65.4126 | 110.82 | Q V | | | |
| 11+50 | 66.1840 | 112.01 | Q V | | | |
| 11+55 | 66.9638 | 113.23 | Q V | | | |
| 12+ 0 | 67.7523 | 114.48 | Q V | | | |
| 12+ 5 | 68.5495 | 115.76 | Q V | | | |
| 12+10 | 69.3556 | 117.05 | Q V | | | |
| 12+15 | 70.1707 | 118.35 | Q V | | | |
| 12+20 | 70.9945 | 119.61 | Q V | | | |
| 12+25 | 71.8269 | 120.86 | Q V | | | |
| 12+30 | 72.6681 | 122.15 | Q V | | | |
| 12+35 | 73.5193 | 123.60 | Q V | | | |
| 12+40 | 74.3811 | 125.13 | Q V | | | |
| 12+45 | 75.2540 | 126.74 | Q V | | | |
| 12+50 | 76.1385 | 128.42 | Q V | | | |
| 12+55 | 77.0349 | 130.17 | Q V | | | |



| | | | |
|---|---|---|---|
| 13+ 0 | 77.9438 | 131.97 | Q V |
| 13+ 5 | 78.8655 | 133.84 | Q V |
| 13+10 | 79.8007 | 135.78 | Q V |
| 13+15 | 80.7497 | 137.80 | Q V |
| 13+20 | 81.7133 | 139.90 | Q V |
| 13+25 | 82.6919 | 142.10 | Q V |
| 13+30 | 83.6862 | 144.38 | Q V |
| 13+35 | 84.6970 | 146.76 | Q V |
| 13+40 | 85.7248 | 149.24 | Q V |
| 13+45 | 86.7706 | 151.85 | Q V |
| 13+50 | 87.8351 | 154.57 | Q V |
| 13+55 | 88.9193 | 157.42 | Q V |
| 14+ 0 | 90.0240 | 160.41 | Q V |
| 14+ 5 | 91.1520 | 163.78 | Q V |
| 14+10 | 92.3077 | 167.80 | Q V |
| 14+15 | 93.4959 | 172.53 | Q V |
| 14+20 | 94.7217 | 177.98 | Q V |
| 14+25 | 95.9901 | 184.17 | Q V |
| 14+30 | 97.3079 | 191.35 | Q V |
| 14+35 | 98.6835 | 199.74 | Q V |
| 14+40 | 100.1304 | 210.09 | Q V |
| 14+45 | 101.6689 | 223.38 | Q V |
| 14+50 | 103.2982 | 236.58 | Q V |
| 14+55 | 105.0069 | 248.10 | Q V |
| 15+ 0 | 106.7881 | 258.63 | Q V |
| 15+ 5 | 108.6397 | 268.85 | Q V |
| 15+10 | 110.5617 | 279.09 | Q V |
| 15+15 | 112.5569 | 289.70 | Q V |
| 15+20 | 114.6288 | 300.85 | Q V |
| 15+25 | 116.7797 | 312.30 | Q V |
| 15+30 | 119.0086 | 323.64 | Q V |
| 15+35 | 121.3164 | 335.08 | Q V |
| 15+40 | 123.7070 | 347.13 | Q V |
| 15+45 | 126.1891 | 360.40 | Q V |
| 15+50 | 128.7713 | 374.93 | Q V |
| 15+55 | 131.4699 | 391.84 | Q V |
| 16+ 0 | 134.3195 | 413.76 | Q V |
| 16+ 5 | 137.5202 | 464.74 | Q V |
| 16+10 | 141.3355 | 553.98 | QV |
| 16+15 | 145.8599 | 656.95 | VQ |
| 16+20 | 151.2796 | 786.94 | V Q |
| 16+25 | 157.5180 | 905.81 | V Q |
| 16+30 | 164.3620 | 993.75 | V Q |
| 16+35 | 171.5144 | 1038.52 | V Q |
| 16+40 | 179.5482 | 1166.51 | V Q |
| 16+45 | 188.7467 | 1335.62 | V Q |
| 16+50 | 197.3428 | 1248.16 | V Q |
| 16+55 | 204.4407 | 1030.62 | V Q |
| 17+ 0 | 210.4251 | 868.93 | Q |
| 17+ 5 | 215.7178 | 768.51 | Q V |
| 17+10 | 220.5128 | 696.22 | Q V |
| 17+15 | 224.9370 | 642.40 | Q V |
| 17+20 | 229.0386 | 595.55 | Q V |
| 17+25 | 232.8528 | 553.82 | Q V |
| 17+30 | 236.4045 | 515.71 | Q V |
| 17+35 | 239.7152 | 480.71 | Q V |
| 17+40 | 242.8013 | 448.11 | Q V |
| 17+45 | 245.6655 | 415.88 | Q V |
| 17+50 | 248.3227 | 385.83 | Q V |

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|---|---|---|---|---|---|---|
| 17+55 | 250.7988 | 359.53 | | Q | | V |
| 18+ 0 | 253.1247 | 337.72 | | Q | | V |
| 18+ 5 | 255.3110 | 317.44 | | Q | | V |
| 18+10 | 257.3768 | 299.96 | | Q | | V |
| 18+15 | 259.3224 | 282.49 | | Q | | V |
| 18+20 | 261.1588 | 266.64 | | Q | | V |
| 18+25 | 262.8918 | 251.64 | | Q | | V |
| 18+30 | 264.5310 | 238.02 | | Q | | V |
| 18+35 | 266.0873 | 225.97 | | Q | | V |
| 18+40 | 267.5693 | 215.19 | | Q | | V |
| 18+45 | 268.9727 | 203.78 | | Q | | V |
| 18+50 | 270.3012 | 192.89 | | Q | | V |
| 18+55 | 271.5494 | 181.24 | | Q | | V |
| 19+ 0 | 272.7248 | 170.67 | | Q | | V |
| 19+ 5 | 273.8467 | 162.90 | | Q | | V |
| 19+10 | 274.9245 | 156.49 | | Q | | V |
| 19+15 | 275.9650 | 151.09 | | Q | | V |
| 19+20 | 276.9703 | 145.97 | | Q | | V |
| 19+25 | 277.9420 | 141.09 | | Q | | V |
| 19+30 | 278.8835 | 136.70 | | Q | | V |
| 19+35 | 279.7961 | 132.51 | | Q | | V |
| 19+40 | 280.6777 | 128.01 | | Q | | V |
| 19+45 | 281.5328 | 124.16 | | Q | | V |
| 19+50 | 282.3669 | 121.11 | | Q | | V |
| 19+55 | 283.1836 | 118.59 | | Q | | V |
| 20+ 0 | 283.9863 | 116.55 | | Q | | V |
| 20+ 5 | 284.7753 | 114.56 | | Q | | V |
| 20+10 | 285.5494 | 112.39 | | Q | | V |
| 20+15 | 286.3069 | 110.00 | | Q | | V |
| 20+20 | 287.0434 | 106.95 | | Q | | V |
| 20+25 | 287.7598 | 104.02 | | Q | | V |
| 20+30 | 288.4601 | 101.67 | | Q | | V |
| 20+35 | 289.1462 | 99.62 | Q | | | V |
| 20+40 | 289.8169 | 97.39 | Q | | | V |
| 20+45 | 290.4723 | 95.16 | Q | | | V |
| 20+50 | 291.1144 | 93.24 | Q | | | V |
| 20+55 | 291.7460 | 91.71 | Q | | | V |
| 21+ 0 | 292.3623 | 89.47 | Q | | | V |
| 21+ 5 | 292.9632 | 87.26 | Q | | | V |
| 21+10 | 293.5524 | 85.56 | Q | | | V |
| 21+15 | 294.1319 | 84.13 | Q | | | V |
| 21+20 | 294.7023 | 82.83 | Q | | | V |
| 21+25 | 295.2643 | 81.59 | Q | | | V |
| 21+30 | 295.8178 | 80.37 | Q | | | V |
| 21+35 | 296.3629 | 79.16 | Q | | | V |
| 21+40 | 296.9003 | 78.03 | Q | | | V |
| 21+45 | 297.4305 | 76.99 | Q | | | V |
| 21+50 | 297.9540 | 76.00 | Q | | | V |
| 21+55 | 298.4708 | 75.05 | Q | | | V |
| 22+ 0 | 298.9814 | 74.13 | Q | | | V |
| 22+ 5 | 299.4859 | 73.26 | Q | | | V |
| 22+10 | 299.9847 | 72.42 | Q | | | V |
| 22+15 | 300.4778 | 71.60 | Q | | | V |
| 22+20 | 300.9655 | 70.81 | Q | | | V |
| 22+25 | 301.4479 | 70.05 | Q | | | V |
| 22+30 | 301.9252 | 69.30 | Q | | | V |
| 22+35 | 302.3975 | 68.58 | Q | | | V |
| 22+40 | 302.8650 | 67.88 | Q | | | V |
| 22+45 | 303.3278 | 67.20 | Q | | | V |

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|---|---|---|---|---|---|---|---|
| 22+50 | 303.7860 | 66.53 | \|Q | \| | \| | \| | V \| |
| 22+55 | 304.2397 | 65.88 | \|Q | \| | \| | \| | V \| |
| 23+ 0 | 304.6891 | 65.25 | \|Q | \| | \| | \| | V \| |
| 23+ 5 | 305.1343 | 64.64 | \|Q | \| | \| | \| | V \| |
| 23+10 | 305.5753 | 64.04 | \|Q | \| | \| | \| | V \| |
| 23+15 | 306.0123 | 63.45 | \|Q | \| | \| | \| | V \| |
| 23+20 | 306.4453 | 62.88 | \|Q | \| | \| | \| | V \| |
| 23+25 | 306.8745 | 62.32 | \|Q | \| | \| | \| | V\| |
| 23+30 | 307.2999 | 61.77 | \|Q | \| | \| | \| | V\| |
| 23+35 | 307.7217 | 61.24 | \|Q | \| | \| | \| | V\| |
| 23+40 | 308.1398 | 60.72 | \|Q | \| | \| | \| | V\| |
| 23+45 | 308.5544 | 60.20 | \|Q | \| | \| | \| | V\| |
| 23+50 | 308.9656 | 59.70 | \|Q | \| | \| | \| | V\| |
| 23+55 | 309.3734 | 59.22 | \|Q | \| | \| | \| | V\| |
| 24+ 0 | 309.7780 | 58.74 | \|Q | \| | \| | \| | V\| |
| 24+ 5 | 310.1779 | 58.07 | \|Q | \| | \| | \| | V\| |
| 24+10 | 310.5704 | 56.99 | \|Q | \| | \| | \| | V\| |
| 24+15 | 310.9524 | 55.46 | \|Q | \| | \| | \| | V\| |
| 24+20 | 311.3201 | 53.40 | \|Q | \| | \| | \| | V\| |
| 24+25 | 311.6701 | 50.82 | \|Q | \| | \| | \| | V\| |
| 24+30 | 311.9989 | 47.74 | \|Q | \| | \| | \| | V\| |
| 24+35 | 312.3037 | 44.26 | \|Q | \| | \| | \| | V\| |
| 24+40 | 312.5773 | 39.72 | \|Q | \| | \| | \| | V\| |
| 24+45 | 312.8075 | 33.43 | \|Q | \| | \| | \| | V\| |
| 24+50 | 312.9974 | 27.57 | Q | \| | \| | \| | V\| |
| 24+55 | 313.1581 | 23.33 | Q | \| | \| | \| | V\| |
| 25+ 0 | 313.2973 | 20.21 | Q | \| | \| | \| | V\| |
| 25+ 5 | 313.4196 | 17.76 | Q | \| | \| | \| | V\| |
| 25+10 | 313.5281 | 15.76 | Q | \| | \| | \| | V\| |
| 25+15 | 313.6249 | 14.05 | Q | \| | \| | \| | V\| |
| 25+20 | 313.7114 | 12.56 | Q | \| | \| | \| | V\| |
| 25+25 | 313.7888 | 11.24 | Q | \| | \| | \| | V\| |
| 25+30 | 313.8581 | 10.06 | Q | \| | \| | \| | V\| |
| 25+35 | 313.9202 | 9.02 | Q | \| | \| | \| | V\| |
| 25+40 | 313.9759 | 8.09 | Q | \| | \| | \| | V\| |
| 25+45 | 314.0258 | 7.24 | Q | \| | \| | \| | V\| |
| 25+50 | 314.0703 | 6.47 | Q | \| | \| | \| | V\| |
| 25+55 | 314.1100 | 5.77 | Q | \| | \| | \| | V\| |
| 26+ 0 | 314.1455 | 5.14 | Q | \| | \| | \| | V\| |
| 26+ 5 | 314.1769 | 4.57 | Q | \| | \| | \| | V\| |
| 26+10 | 314.2048 | 4.05 | Q | \| | \| | \| | V\| |
| 26+15 | 314.2295 | 3.58 | Q | \| | \| | \| | V\| |
| 26+20 | 314.2512 | 3.16 | Q | \| | \| | \| | V\| |
| 26+25 | 314.2704 | 2.79 | Q | \| | \| | \| | V\| |
| 26+30 | 314.2874 | 2.46 | Q | \| | \| | \| | V\| |
| 26+35 | 314.3023 | 2.16 | Q | \| | \| | \| | V\| |
| 26+40 | 314.3153 | 1.89 | Q | \| | \| | \| | V\| |
| 26+45 | 314.3267 | 1.66 | Q | \| | \| | \| | V\| |
| 26+50 | 314.3367 | 1.45 | Q | \| | \| | \| | V\| |
| 26+55 | 314.3456 | 1.29 | Q | \| | \| | \| | V\| |
| 27+ 0 | 314.3537 | 1.17 | Q | \| | \| | \| | V\| |
| 27+ 5 | 314.3611 | 1.07 | Q | \| | \| | \| | V\| |
| 27+10 | 314.3678 | 0.98 | Q | \| | \| | \| | V\| |
| 27+15 | 314.3740 | 0.90 | Q | \| | \| | \| | V\| |
| 27+20 | 314.3796 | 0.82 | Q | \| | \| | \| | V\| |
| 27+25 | 314.3848 | 0.75 | Q | \| | \| | \| | V\| |
| 27+30 | 314.3894 | 0.68 | Q | \| | \| | \| | V\| |
| 27+35 | 314.3937 | 0.61 | Q | \| | \| | \| | V\| |
| 27+40 | 314.3975 | 0.56 | Q | \| | \| | \| | V\| |

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   27+45     314.4010      0.51  Q         |          |          |        V|
   27+50     314.4043      0.47  Q         |          |          |        V|
   27+55     314.4072      0.43  Q         |          |          |        V|
   28+ 0     314.4098      0.38  Q         |          |          |        V|
   28+ 5     314.4121      0.33  Q         |          |          |        V|
   28+10     314.4140      0.28  Q         |          |          |        V|
   28+15     314.4156      0.23  Q         |          |          |        V|
   28+20     314.4170      0.19  Q         |          |          |        V|
   28+25     314.4181      0.16  Q         |          |          |        V|
   28+30     314.4190      0.13  Q         |          |          |        V|
   28+35     314.4197      0.11  Q         |          |          |        V|
   28+40     314.4203      0.08  Q         |          |          |        V|
   28+45     314.4207      0.06  Q         |          |          |        V|
   28+50     314.4210      0.05  Q         |          |          |        V|
   28+55     314.4212      0.03  Q         |          |          |        V|
   29+ 0     314.4213      0.02  Q         |          |          |        V|
   29+ 5     314.4214      0.01  Q         |          |          |        V|
   29+10     314.4215      0.01  Q         |          |          |        V|
   29+15     314.4215      0.01  Q         |          |          |        V|
   29+20     314.4216      0.00  Q         |          |          |        V|
   29+25     314.4216      0.00  Q         |          |          |        V|
   29+30     314.4216      0.00  Q         |          |          |         V
   29+35     314.4216      0.00  Q         |          |          |         V
------------------------------------------------------------------------
       ****************************HYDROGRAPH DATA****************************
                     Number of intervals =   355
                     Time interval =    5.0 (Min.)
                     Maximum/Peak flow rate =     1335.624 (CFS)
                     Total volume =     314.422 (Ac.Ft)
              Status of hydrographs being held in storage
                         Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
              Peak (CFS)   2799.507  1335.624     0.000     0.000     0.000
              Vol (Ac.Ft)    570.680   314.422     0.000     0.000     0.000
       ***********************************************************************

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       Process from Point/Station        2.100 to Point/Station        3.000
       **** STREAM ROUTING SCS CONVEX METHOD ****
       ________________________________________________________________________
       HYDROGRAPH STREAM ROUTING DATA:
       Length of stream =  14708.00 (Ft.)
       Elevation difference =  483.00 (Ft.)
       Slope of channel =  0.032839 (Vert/Horiz)
       Channel type - Improved Channel


       Channel length = 14708.00(Ft.)     Elevation difference = 483.00(Ft.)
       Channel evaluation using mean flow rate of hydrograph
       Channel base width  =  200.000(Ft.)
       Slope or 'Z' of left channel bank =   2.000
       Slope or 'Z' of right channel bank =   2.000
       Manning's 'N'    = 0.035
       Maximum depth of channel  =    1.000(Ft.)
       Flow(q) thru subarea =    155.429(CFS)
       Depth of flow =     0.253(Ft.)
       Average velocity =     3.068(Ft/s)
```

Total flow rate = 155.429(CFS)
Channel flow top width = 201.011(Ft.)
Depth of flow in channel = 0.25(Ft.)
Total number of channels (same dimensions) = 1
Flow Velocity = 3.07(Ft/s)
Travel time = 0.00 min.
Individual channel flow = 155.429(CFS)
Total capacity of improved channels = 155.429(CFS)
Critical Depth in Channel = 0.27(Ft.)

Channel evaluation using maximum flow rate of hydrograph
Flow(q) thru subarea = 1335.624(CFS)
Depth of flow = 0.918(Ft.)
Average velocity = 7.211(Ft/s)
Total flow rate = 1335.624(CFS)
Channel flow top width = 203.671(Ft.)
Depth of flow in channel = 0.92(Ft.)
Total number of channels (same dimensions) = 1
Flow Velocity = 7.21(Ft/s)
Travel time = 0.00 min.
Individual channel flow = 1335.624(CFS)
Total capacity of improved channels = 1335.624(CFS)
Critical Depth in Channel = 1.11(Ft.)

********** SCS CONVEX CHANNEL ROUTING **********
Convex method of stream routing data items:
Using equation: Outflow =
O(t+dt) = (1-c*)O(t+dt-dt*) + Input(c*)
where c* = 1 - (1-c)^e and dt = c(length)/velocity
c(v/v+1.7) = 0.8092 Travel time = 33.99 (min.)
dt*(unit time interval) = 5.00(min.), e= 0.4545
dt(routing time-step) = 27.51 (min.), c* = 0.5290

Output hydrograph delayed by 0 unit time increments

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P R I N T O F S T O R M
R u n o f f H y d r o g r a p h
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Hydrograph in 5 Minute intervals (CFS)

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| Time(h+m) | Out = O(CFS) | In = I | 0 | 333.9 | 667.8 | 1001.7 | 1335.6 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0852 | 0.20 | O | | | | |
| 0+10 | 0.4150 | 0.82 | O | | | | |
| 0+15 | 1.1008 | 1.91 | O | | | | |
| 0+20 | 2.2409 | 3.56 | O | | | | |
| 0+25 | 3.8817 | 5.74 | O | | | | |
| 0+30 | 6.0430 | 8.46 | O | | | | |
| 0+35 | 8.6879 | 11.62 | O | | | | |
| 0+40 | 12.0763 | 15.87 | O | | | | |
| 0+45 | 16.7067 | 21.93 | O | | | | |
| 0+50 | 21.9330 | 27.62 | O | | | | |
| 0+55 | 26.7322 | 31.76 | O | | | | |
| 1+ 0 | 30.7151 | 34.82 | OI | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+ 5 | 33.9353 | 37.24 | O | | | | |
| 1+10 | 36.5475 | 39.23 | O | | | | |
| 1+15 | 38.7196 | 40.97 | O | | | | |
| 1+20 | 40.5740 | 42.50 | O | | | | |
| 1+25 | 42.1924 | 43.88 | O | | | | |
| 1+30 | 43.6260 | 45.13 | O | | | | |
| 1+35 | 44.9098 | 46.26 | O | | | | |
| 1+40 | 46.0723 | 47.30 | O | | | | |
| 1+45 | 47.1361 | 48.26 | O | | | | |
| 1+50 | 48.1160 | 49.15 | O | | | | |
| 1+55 | 49.0204 | 49.98 | O | | | | |
| 2+ 0 | 49.8598 | 50.75 | O | | | | |
| 2+ 5 | 50.6415 | 51.47 | O | | | | |
| 2+10 | 51.3738 | 52.15 | O | | | | |
| 2+15 | 52.0585 | 52.78 | O | | | | |
| 2+20 | 52.6986 | 53.38 | O | | | | |
| 2+25 | 53.2949 | 53.93 | O | | | | |
| 2+30 | 53.8506 | 54.44 | O | | | | |
| 2+35 | 54.3717 | 54.92 | O | | | | |
| 2+40 | 54.8647 | 55.39 | O | | | | |
| 2+45 | 55.3301 | 55.82 | O | | | | |
| 2+50 | 55.7680 | 56.23 | O | | | | |
| 2+55 | 56.1735 | 56.60 | O | | | | |
| 3+ 0 | 56.5441 | 56.93 | O | | | | |
| 3+ 5 | 56.8876 | 57.25 | O | | | | |
| 3+10 | 57.2141 | 57.56 | O | | | | |
| 3+15 | 57.5306 | 57.87 | O | | | | |
| 3+20 | 57.8405 | 58.17 | O | | | | |
| 3+25 | 58.1461 | 58.47 | O | | | | |
| 3+30 | 58.4494 | 58.77 | O | | | | |
| 3+35 | 58.7511 | 59.07 | O | | | | |
| 3+40 | 59.0484 | 59.37 | O | | | | |
| 3+45 | 59.3414 | 59.65 | O | | | | |
| 3+50 | 59.6317 | 59.94 | O | | | | |
| 3+55 | 59.9222 | 60.23 | O | | | | |
| 4+ 0 | 60.2155 | 60.53 | O | | | | |
| 4+ 5 | 60.5133 | 60.83 | O | | | | |
| 4+10 | 60.8153 | 61.14 | O | | | | |
| 4+15 | 61.1209 | 61.45 | O | | | | |
| 4+20 | 61.4263 | 61.75 | O | | | | |
| 4+25 | 61.7292 | 62.05 | O | | | | |
| 4+30 | 62.0303 | 62.35 | O | | | | |
| 4+35 | 62.3314 | 62.65 | O | | | | |
| 4+40 | 62.6322 | 62.95 | O | | | | |
| 4+45 | 62.9326 | 63.25 | O | | | | |
| 4+50 | 63.2329 | 63.55 | O | | | | |
| 4+55 | 63.5354 | 63.86 | O | | | | |
| 5+ 0 | 63.8384 | 64.16 | O | | | | |
| 5+ 5 | 64.1403 | 64.46 | O | | | | |
| 5+10 | 64.4417 | 64.76 | O | | | | |
| 5+15 | 64.7443 | 65.07 | O | | | | |
| 5+20 | 65.0490 | 65.38 | O | | | | |
| 5+25 | 65.3568 | 65.69 | O | | | | |
| 5+30 | 65.6675 | 66.00 | O | | | | |
| 5+35 | 65.9816 | 66.32 | O | | | | |
| 5+40 | 66.2987 | 66.64 | O | | | | |
| 5+45 | 66.6194 | 66.96 | OI | | | | |
| 5+50 | 66.9438 | 67.29 | O | | | | |
| 5+55 | 67.2722 | 67.63 | O | | | | |

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|---|---|---|---|---|---|---|---|
| 6+ 0 | 67.6044 | 67.96 | O | | | | |
| 6+ 5 | 67.9410 | 68.30 | O | | | | |
| 6+10 | 68.2817 | 68.65 | O | | | | |
| 6+15 | 68.6269 | 69.00 | O | | | | |
| 6+20 | 68.9764 | 69.35 | O | | | | |
| 6+25 | 69.3306 | 69.71 | O | | | | |
| 6+30 | 69.6892 | 70.07 | O | | | | |
| 6+35 | 70.0528 | 70.44 | O | | | | |
| 6+40 | 70.4210 | 70.82 | O | | | | |
| 6+45 | 70.7943 | 71.20 | O | | | | |
| 6+50 | 71.1725 | 71.58 | O | | | | |
| 6+55 | 71.5560 | 71.97 | O | | | | |
| 7+ 0 | 71.9447 | 72.36 | O | | | | |
| 7+ 5 | 72.3389 | 72.76 | O | | | | |
| 7+10 | 72.7384 | 73.17 | O | | | | |
| 7+15 | 73.1437 | 73.58 | O | | | | |
| 7+20 | 73.5546 | 74.00 | O | | | | |
| 7+25 | 73.9717 | 74.42 | O | | | | |
| 7+30 | 74.3945 | 74.85 | O | | | | |
| 7+35 | 74.8237 | 75.29 | O | | | | |
| 7+40 | 75.2591 | 75.73 | O | | | | |
| 7+45 | 75.7011 | 76.18 | O | | | | |
| 7+50 | 76.1495 | 76.63 | O | | | | |
| 7+55 | 76.6050 | 77.09 | O | | | | |
| 8+ 0 | 77.0672 | 77.56 | O | | | | |
| 8+ 5 | 77.5367 | 78.04 | O | | | | |
| 8+10 | 78.0134 | 78.53 | O | | | | |
| 8+15 | 78.4977 | 79.02 | O | | | | |
| 8+20 | 78.9895 | 79.52 | O | | | | |
| 8+25 | 79.4895 | 80.03 | O | | | | |
| 8+30 | 79.9972 | 80.54 | O | | | | |
| 8+35 | 80.5136 | 81.07 | O | | | | |
| 8+40 | 81.0382 | 81.60 | O | | | | |
| 8+45 | 81.5718 | 82.15 | O | | | | |
| 8+50 | 82.1141 | 82.70 | O | | | | |
| 8+55 | 82.6660 | 83.26 | O | | | | |
| 9+ 0 | 83.2271 | 83.83 | O | | | | |
| 9+ 5 | 83.7982 | 84.41 | O | | | | |
| 9+10 | 84.3791 | 85.00 | O | | | | |
| 9+15 | 84.9705 | 85.61 | O | | | | |
| 9+20 | 85.5723 | 86.22 | O | | | | |
| 9+25 | 86.1854 | 86.84 | O | | | | |
| 9+30 | 86.8094 | 87.48 | O | | | | |
| 9+35 | 87.4453 | 88.13 | O | | | | |
| 9+40 | 88.0928 | 88.79 | O | | | | |
| 9+45 | 88.7530 | 89.46 | O | | | | |
| 9+50 | 89.4255 | 90.15 | O | | | | |
| 9+55 | 90.1115 | 90.85 | O | | | | |
| 10+ 0 | 90.8106 | 91.56 | O | | | | |
| 10+ 5 | 91.5240 | 92.29 | O | | | | |
| 10+10 | 92.2515 | 93.03 | O | | | | |
| 10+15 | 92.9942 | 93.79 | O | | | | |
| 10+20 | 93.7519 | 94.57 | O | | | | |
| 10+25 | 94.5258 | 95.36 | O | | | | |
| 10+30 | 95.3158 | 96.17 | O | | | | |
| 10+35 | 96.1233 | 96.99 | O | | | | |
| 10+40 | 96.9478 | 97.84 | O | | | | |
| 10+45 | 97.7911 | 98.70 | O | | | | |
| 10+50 | 98.6528 | 99.58 | O | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10+55 | 99.5345 | 100.48 | OI | | | | |
| 11+ 0 | 100.4361 | 101.41 | O | | | | |
| 11+ 5 | 101.3593 | 102.35 | O | | | | |
| 11+10 | 102.3038 | 103.32 | O | | | | |
| 11+15 | 103.2716 | 104.31 | O | | | | |
| 11+20 | 104.2625 | 105.33 | O | | | | |
| 11+25 | 105.2785 | 106.37 | O | | | | |
| 11+30 | 106.3195 | 107.44 | O | | | | |
| 11+35 | 107.3878 | 108.54 | O | | | | |
| 11+40 | 108.4832 | 109.66 | O | | | | |
| 11+45 | 109.6082 | 110.82 | O | | | | |
| 11+50 | 110.7627 | 112.01 | O | | | | |
| 11+55 | 111.9495 | 113.23 | O | | | | |
| 12+ 0 | 113.1686 | 114.48 | O | | | | |
| 12+ 5 | 114.4170 | 115.76 | O | | | | |
| 12+10 | 115.6846 | 117.05 | O | | | | |
| 12+15 | 116.9673 | 118.35 | O | | | | |
| 12+20 | 118.2446 | 119.61 | O | | | | |
| 12+25 | 119.5093 | 120.86 | O | | | | |
| 12+30 | 120.7846 | 122.15 | O | | | | |
| 12+35 | 122.1330 | 123.60 | O | | | | |
| 12+40 | 123.5694 | 125.13 | O | | | | |
| 12+45 | 125.0934 | 126.74 | O | | | | |
| 12+50 | 126.6937 | 128.42 | O | | | | |
| 12+55 | 128.3627 | 130.17 | O | | | | |
| 13+ 0 | 130.0962 | 131.97 | O | | | | |
| 13+ 5 | 131.8970 | 133.84 | OI | | | | |
| 13+10 | 133.7656 | 135.78 | O | | | | |
| 13+15 | 135.7077 | 137.80 | O | | | | |
| 13+20 | 137.7258 | 139.90 | O | | | | |
| 13+25 | 139.8274 | 142.10 | O | | | | |
| 13+30 | 142.0150 | 144.38 | O | | | | |
| 13+35 | 144.2964 | 146.76 | O | | | | |
| 13+40 | 146.6752 | 149.24 | O | | | | |
| 13+45 | 149.1610 | 151.85 | O | | | | |
| 13+50 | 151.7589 | 154.57 | O | | | | |
| 13+55 | 154.4802 | 157.42 | O | | | | |
| 14+ 0 | 157.3307 | 160.41 | O | | | | |
| 14+ 5 | 160.4205 | 163.78 | O | | | | |
| 14+10 | 163.9385 | 167.80 | OI | | | | |
| 14+15 | 168.0310 | 172.53 | O | | | | |
| 14+20 | 172.7710 | 177.98 | O | | | | |
| 14+25 | 178.2085 | 184.17 | O | | | | |
| 14+30 | 184.4691 | 191.35 | O | | | | |
| 14+35 | 191.7405 | 199.74 | O | | | | |
| 14+40 | 200.4512 | 210.09 | O | | | | |
| 14+45 | 211.3040 | 223.38 | O | | | | |
| 14+50 | 223.4058 | 236.58 | OI | | | | |
| 14+55 | 235.3628 | 248.10 | O | | | | |
| 15+ 0 | 246.6597 | 258.63 | O | | | | |
| 15+ 5 | 257.4173 | 268.85 | OI | | | | |
| 15+10 | 267.8966 | 279.09 | O | | | | |
| 15+15 | 278.4091 | 289.70 | O | | | | |
| 15+20 | 289.2085 | 300.85 | OI | | | | |
| 15+25 | 300.3252 | 312.30 | OI | | | | |
| 15+30 | 311.5712 | 323.64 | O | | | | |
| 15+35 | 322.9080 | 335.08 | OI | | | | |
| 15+40 | 334.5631 | 347.13 | O | | | | |
| 15+45 | 346.9557 | 360.40 | O | | | | |

| | | | |
|---|---|---|---|
| 15+50 | 360.3579 | 374.93 | OI |
| 15+55 | 375.3867 | 391.84 | O |
| 16+ 0 | 393.5803 | 413.76 | OI |
| 16+ 5 | 426.3245 | 464.74 | OI |
| 16+10 | 485.2793 | 553.98 | O I |
| 16+15 | 566.1978 | 656.95 | O I |
| 16+20 | 670.4777 | 786.94 | O I |
| 16+25 | 783.5494 | 905.81 | O I |
| 16+30 | 886.2997 | 993.75 | O I |
| 16+35 | 962.5278 | 1038.52 | O I |
| 16+40 | 1058.1348 | 1166.51 | O I |
| 16+45 | 1188.6762 | 1335.62 | O I |
| 16+50 | 1228.5576 | 1248.16 | OI |
| 16+55 | 1144.7576 | 1030.62 | I O |
| 17+ 0 | 1014.3803 | 868.93 | I O |
| 17+ 5 | 893.9585 | 768.51 | I O |
| 17+10 | 796.2992 | 696.22 | I O |
| 17+15 | 720.0545 | 642.40 | I O |
| 17+20 | 658.6928 | 595.55 | I O |
| 17+25 | 607.2251 | 553.82 | I O |
| 17+30 | 562.4736 | 515.71 | IO |
| 17+35 | 522.5807 | 480.71 | IO |
| 17+40 | 486.3154 | 448.11 | IO |
| 17+45 | 452.1507 | 415.88 | IO |
| 17+50 | 419.9530 | 385.83 | IO |
| 17+55 | 390.5155 | 359.53 | IO |
| 18+ 0 | 364.6821 | 337.72 | O |
| 18+ 5 | 341.6396 | 317.44 | IO |
| 18+10 | 321.2723 | 299.96 | IO |
| 18+15 | 302.4372 | 282.49 | IO |
| 18+20 | 285.0241 | 266.64 | IO |
| 18+25 | 268.8029 | 251.64 | IO |
| 18+30 | 253.8247 | 238.02 | O |
| 18+35 | 240.2464 | 225.97 | IO |
| 18+40 | 228.0254 | 215.19 | O |
| 18+45 | 216.2967 | 203.78 | O |
| 18+50 | 204.9627 | 192.89 | IO |
| 18+55 | 193.5337 | 181.24 | O |
| 19+ 0 | 182.4538 | 170.67 | O |
| 19+ 5 | 172.8549 | 162.90 | IO |
| 19+10 | 164.8138 | 156.49 | O |
| 19+15 | 158.0726 | 151.09 | O |
| 19+20 | 152.1607 | 145.97 | O |
| 19+25 | 146.7725 | 141.09 | O |
| 19+30 | 141.8653 | 136.70 | O |
| 19+35 | 137.3187 | 132.51 | IO |
| 19+40 | 132.8273 | 128.01 | O |
| 19+45 | 128.6136 | 124.16 | O |
| 19+50 | 124.9379 | 121.11 | O |
| 19+55 | 121.8205 | 118.59 | O |
| 20+ 0 | 119.2299 | 116.55 | O |
| 20+ 5 | 116.9518 | 114.56 | O |
| 20+10 | 114.7471 | 112.39 | O |
| 20+15 | 112.4638 | 110.00 | O |
| 20+20 | 109.8380 | 106.95 | O |
| 20+25 | 107.0417 | 104.02 | O |
| 20+30 | 104.4263 | 101.67 | O |
| 20+35 | 102.0819 | 99.62 | IO |
| 20+40 | 99.8125 | 97.39 | O |

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|---|---|---|---|---|---|---|---|
| 20+45 | 97.5664 | 95.16 | O | | | | |
| 20+50 | 95.4642 | 93.24 | O | | | | |
| 20+55 | 93.6256 | 91.71 | O | | | | |
| 21+ 0 | 91.6443 | 89.47 | O | | | | |
| 21+ 5 | 89.5358 | 87.26 | O | | | | |
| 21+10 | 87.5949 | 85.56 | O | | | | |
| 21+15 | 85.9007 | 84.13 | O | | | | |
| 21+20 | 84.4023 | 82.83 | O | | | | |
| 21+25 | 83.0354 | 81.59 | O | | | | |
| 21+30 | 81.7416 | 80.37 | O | | | | |
| 21+35 | 80.4906 | 79.16 | O | | | | |
| 21+40 | 79.2975 | 78.03 | O | | | | |
| 21+45 | 78.1761 | 76.99 | O | | | | |
| 21+50 | 77.1199 | 76.00 | O | | | | |
| 21+55 | 76.1148 | 75.05 | O | | | | |
| 22+ 0 | 75.1547 | 74.13 | O | | | | |
| 22+ 5 | 74.2366 | 73.26 | O | | | | |
| 22+10 | 73.3556 | 72.42 | O | | | | |
| 22+15 | 72.5069 | 71.60 | O | | | | |
| 22+20 | 71.6868 | 70.81 | O | | | | |
| 22+25 | 70.8927 | 70.05 | O | | | | |
| 22+30 | 70.1229 | 69.30 | O | | | | |
| 22+35 | 69.3762 | 68.58 | O | | | | |
| 22+40 | 68.6512 | 67.88 | O | | | | |
| 22+45 | 67.9467 | 67.20 | O | | | | |
| 22+50 | 67.2615 | 66.53 | IO | | | | |
| 22+55 | 66.5945 | 65.88 | O | | | | |
| 23+ 0 | 65.9448 | 65.25 | O | | | | |
| 23+ 5 | 65.3117 | 64.64 | O | | | | |
| 23+10 | 64.6943 | 64.04 | O | | | | |
| 23+15 | 64.0921 | 63.45 | O | | | | |
| 23+20 | 63.5043 | 62.88 | O | | | | |
| 23+25 | 62.9305 | 62.32 | O | | | | |
| 23+30 | 62.3699 | 61.77 | O | | | | |
| 23+35 | 61.8222 | 61.24 | O | | | | |
| 23+40 | 61.2868 | 60.72 | O | | | | |
| 23+45 | 60.7633 | 60.20 | O | | | | |
| 23+50 | 60.2513 | 59.70 | O | | | | |
| 23+55 | 59.7502 | 59.22 | O | | | | |
| 24+ 0 | 59.2598 | 58.74 | O | | | | |
| 24+ 5 | 58.6946 | 58.07 | O | | | | |
| 24+10 | 57.8963 | 56.99 | O | | | | |
| 24+15 | 56.7553 | 55.46 | O | | | | |
| 24+20 | 55.1773 | 53.40 | O | | | | |
| 24+25 | 53.1199 | 50.82 | O | | | | |
| 24+30 | 50.5685 | 47.74 | O | | | | |
| 24+35 | 47.5644 | 44.26 | O | | | | |
| 24+40 | 43.8529 | 39.72 | O | | | | |
| 24+45 | 38.9431 | 33.43 | O | | | | |
| 24+50 | 33.4914 | 27.57 | IO | | | | |
| 24+55 | 28.5247 | 23.33 | O | | | | |
| 25+ 0 | 24.4262 | 20.21 | O | | | | |
| 25+ 5 | 21.1338 | 17.76 | O | | | | |
| 25+10 | 18.4846 | 15.76 | O | | | | |
| 25+15 | 16.3043 | 14.05 | O | | | | |
| 25+20 | 14.4658 | 12.56 | O | | | | |
| 25+25 | 12.8841 | 11.24 | O | | | | |
| 25+30 | 11.5052 | 10.06 | O | | | | |
| 25+35 | 10.2923 | 9.02 | O | | | | |

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|---|---|---|---|---|---|---|---|
| 25+40 | 9.2149 | 8.09 | O | \| | \| | \| | \| |
| 25+45 | 8.2495 | 7.24 | O | \| | \| | \| | \| |
| 25+50 | 7.3795 | 6.47 | O | \| | \| | \| | \| |
| 25+55 | 6.5962 | 5.77 | O | \| | \| | \| | \| |
| 26+ 0 | 5.8877 | 5.14 | O | \| | \| | \| | \| |
| 26+ 5 | 5.2462 | 4.57 | O | \| | \| | \| | \| |
| 26+10 | 4.6627 | 4.05 | O | \| | \| | \| | \| |
| 26+15 | 4.1347 | 3.58 | O | \| | \| | \| | \| |
| 26+20 | 3.6588 | 3.16 | O | \| | \| | \| | \| |
| 26+25 | 3.2336 | 2.79 | O | \| | \| | \| | \| |
| 26+30 | 2.8552 | 2.46 | O | \| | \| | \| | \| |
| 26+35 | 2.5176 | 2.16 | O | \| | \| | \| | \| |
| 26+40 | 2.2134 | 1.89 | O | \| | \| | \| | \| |
| 26+45 | 1.9422 | 1.66 | O | \| | \| | \| | \| |
| 26+50 | 1.7034 | 1.45 | O | \| | \| | \| | \| |
| 26+55 | 1.5016 | 1.29 | O | \| | \| | \| | \| |
| 27+ 0 | 1.3389 | 1.17 | O | \| | \| | \| | \| |
| 27+ 5 | 1.2071 | 1.07 | O | \| | \| | \| | \| |
| 27+10 | 1.0960 | 0.98 | O | \| | \| | \| | \| |
| 27+15 | 0.9984 | 0.90 | O | \| | \| | \| | \| |
| 27+20 | 0.9106 | 0.82 | O | \| | \| | \| | \| |
| 27+25 | 0.8305 | 0.75 | O | \| | \| | \| | \| |
| 27+30 | 0.7558 | 0.68 | O | \| | \| | \| | \| |
| 27+35 | 0.6861 | 0.61 | O | \| | \| | \| | \| |
| 27+40 | 0.6238 | 0.56 | O | \| | \| | \| | \| |
| 27+45 | 0.5692 | 0.51 | O | \| | \| | \| | \| |
| 27+50 | 0.5201 | 0.47 | O | \| | \| | \| | \| |
| 27+55 | 0.4741 | 0.43 | O | \| | \| | \| | \| |
| 28+ 0 | 0.4284 | 0.38 | O | \| | \| | \| | \| |
| 28+ 5 | 0.3815 | 0.33 | O | \| | \| | \| | \| |
| 28+10 | 0.3334 | 0.28 | O | \| | \| | \| | \| |
| 28+15 | 0.2852 | 0.23 | O | \| | \| | \| | \| |
| 28+20 | 0.2403 | 0.19 | O | \| | \| | \| | \| |
| 28+25 | 0.2013 | 0.16 | O | \| | \| | \| | \| |
| 28+30 | 0.1675 | 0.13 | O | \| | \| | \| | \| |
| 28+35 | 0.1370 | 0.11 | O | \| | \| | \| | \| |
| 28+40 | 0.1100 | 0.08 | O | \| | \| | \| | \| |
| 28+45 | 0.0870 | 0.06 | O | \| | \| | \| | \| |
| 28+50 | 0.0674 | 0.05 | O | \| | \| | \| | \| |
| 28+55 | 0.0489 | 0.03 | O | \| | \| | \| | \| |
| 29+ 0 | 0.0334 | 0.02 | O | \| | \| | \| | \| |
| 29+ 5 | 0.0225 | 0.01 | O | \| | \| | \| | \| |
| 29+10 | 0.0155 | 0.01 | O | \| | \| | \| | \| |
| 29+15 | 0.0110 | 0.01 | O | \| | \| | \| | \| |
| 29+20 | 0.0077 | 0.00 | O | \| | \| | \| | \| |
| 29+25 | 0.0052 | 0.00 | O | \| | \| | \| | \| |
| 29+30 | 0.0031 | 0.00 | O | \| | \| | \| | \| |
| 29+35 | 0.0016 | 0.00 | O | \| | \| | \| | \| |
| 29+40 | 0.0000 | 0.00 | O | \| | \| | \| | \| |

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**********HYDROGRAPH DATA**********

Number of intervals = 356
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 1228.558 (CFS)
Total volume = 314.422 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 1335.624 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 314.422 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 3.000 to Point/Station 3.000

**** ADD/COMBINE/RECOVER HYDROGRAPHS ****

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********** HYDROGRAPH INFORMATION **********

From study/file name: OFFI10024.rte

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P R I N T O F S T O R M

R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals (CFS)

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| Time(h+m) | Add q(CFS) | Tot. Q | 0 | 1451.8 | 2903.7 | 4355.5 | 5807.4 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.6869 | 0.77 | Q | | | | |
| 0+10 | 2.2087 | 2.62 | Q | | | | |
| 0+15 | 4.4915 | 5.59 | Q | | | | |
| 0+20 | 7.4712 | 9.71 | Q | | | | |
| 0+25 | 11.1715 | 15.05 | Q | | | | |
| 0+30 | 15.7975 | 21.84 | Q | | | | |
| 0+35 | 22.7767 | 31.46 | Q | | | | |
| 0+40 | 32.5794 | 44.66 | Q | | | | |
| 0+45 | 44.0376 | 60.74 | Q | | | | |
| 0+50 | 55.3566 | 77.29 | Q | | | | |
| 0+55 | 68.0433 | 94.78 | Q | | | | |
| 1+ 0 | 79.1039 | 109.82 | Q | | | | |
| 1+ 5 | 86.8390 | 120.77 | Q | | | | |
| 1+10 | 92.9167 | 129.46 | Q | | | | |
| 1+15 | 98.1501 | 136.87 | Q | | | | |
| 1+20 | 102.7854 | 143.36 | Q | | | | |
| 1+25 | 106.9215 | 149.11 | qQ | | | | |
| 1+30 | 110.6750 | 154.30 | qQ | | | | |
| 1+35 | 114.1881 | 159.10 | qQ | | | | |
| 1+40 | 117.4479 | 163.52 | qQ | | | | |
| 1+45 | 120.3801 | 167.52 | qQ | | | | |
| 1+50 | 123.2264 | 171.34 | qQ | | | | |
| 1+55 | 125.9272 | 174.95 | qQ | | | | |
| 2+ 0 | 128.2853 | 178.15 | qQ | | | | |
| 2+ 5 | 130.6391 | 181.28 | qQ | | | | |
| 2+10 | 132.8574 | 184.23 | qQ | | | | |
| 2+15 | 134.9104 | 186.97 | qQ | | | | |
| 2+20 | 136.9681 | 189.67 | qQ | | | | |
| 2+25 | 138.9006 | 192.20 | qQ | | | | |
| 2+30 | 140.7636 | 194.61 | qQ | | | | |
| 2+35 | 142.6246 | 197.00 | qQ | | | | |
| 2+40 | 144.3342 | 199.20 | qQ | | | | |
| 2+45 | 146.0147 | 201.34 | \|Q | | | | |
| 2+50 | 147.6582 | 203.43 | \|Q | | | | |
| 2+55 | 149.1281 | 205.30 | \|Q | | | | |
| 3+ 0 | 150.5836 | 207.13 | \|Q | | | | |
| 3+ 5 | 152.0153 | 208.90 | \|Q | | | | |
| 3+10 | 153.3808 | 210.59 | \|Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+15 | 154.7567 | 212.29 | \|Q | \| | \| | \| | \| |
| 3+20 | 156.0823 | 213.92 | \|Q | \| | \| | \| | \| |
| 3+25 | 157.3689 | 215.51 | \|Q | \| | \| | \| | \| |
| 3+30 | 158.6590 | 217.11 | \|Q | \| | \| | \| | \| |
| 3+35 | 159.8990 | 218.65 | \|Q | \| | \| | \| | \| |
| 3+40 | 161.1187 | 220.17 | \|Q | \| | \| | \| | \| |
| 3+45 | 162.3340 | 221.68 | \|Q | \| | \| | \| | \| |
| 3+50 | 163.4330 | 223.06 | \|Q | \| | \| | \| | \| |
| 3+55 | 164.5205 | 224.44 | \|Q | \| | \| | \| | \| |
| 4+ 0 | 165.6137 | 225.83 | \|Q | \| | \| | \| | \| |
| 4+ 5 | 166.7198 | 227.23 | \|Q | \| | \| | \| | \| |
| 4+10 | 167.8320 | 228.65 | \|Q | \| | \| | \| | \| |
| 4+15 | 168.9259 | 230.05 | \|Q | \| | \| | \| | \| |
| 4+20 | 169.9782 | 231.40 | \|Q | \| | \| | \| | \| |
| 4+25 | 171.0434 | 232.77 | \|Q | \| | \| | \| | \| |
| 4+30 | 172.1147 | 234.15 | \|Q | \| | \| | \| | \| |
| 4+35 | 173.1999 | 235.53 | \|Q | \| | \| | \| | \| |
| 4+40 | 174.2870 | 236.92 | \|Q | \| | \| | \| | \| |
| 4+45 | 175.3242 | 238.26 | \|Q | \| | \| | \| | \| |
| 4+50 | 176.3473 | 239.58 | \|Q | \| | \| | \| | \| |
| 4+55 | 177.3847 | 240.92 | \|Q | \| | \| | \| | \| |
| 5+ 0 | 178.4289 | 242.27 | \|Q | \| | \| | \| | \| |
| 5+ 5 | 179.4878 | 243.63 | \|Q | \| | \| | \| | \| |
| 5+10 | 180.5366 | 244.98 | \|Q | \| | \| | \| | \| |
| 5+15 | 181.5588 | 246.30 | \|Q | \| | \| | \| | \| |
| 5+20 | 182.5862 | 247.64 | \|Q | \| | \| | \| | \| |
| 5+25 | 183.6293 | 248.99 | \|Q | \| | \| | \| | \| |
| 5+30 | 184.6797 | 250.35 | \|Q | \| | \| | \| | \| |
| 5+35 | 185.7463 | 251.73 | \|Q | \| | \| | \| | \| |
| 5+40 | 186.8198 | 253.12 | \|Q | \| | \| | \| | \| |
| 5+45 | 187.9095 | 254.53 | \|Q | \| | \| | \| | \| |
| 5+50 | 189.0073 | 255.95 | \|Q | \| | \| | \| | \| |
| 5+55 | 190.1225 | 257.39 | \|Q | \| | \| | \| | \| |
| 6+ 0 | 191.2461 | 258.85 | \|Q | \| | \| | \| | \| |
| 6+ 5 | 192.3860 | 260.33 | \|Q | \| | \| | \| | \| |
| 6+10 | 193.5277 | 261.81 | \|Q | \| | \| | \| | \| |
| 6+15 | 194.6874 | 263.31 | \|Q | \| | \| | \| | \| |
| 6+20 | 195.8564 | 264.83 | \|Q | \| | \| | \| | \| |
| 6+25 | 197.0446 | 266.38 | \|Q | \| | \| | \| | \| |
| 6+30 | 198.2469 | 267.94 | \|Q | \| | \| | \| | \| |
| 6+35 | 199.4279 | 269.48 | \|Q | \| | \| | \| | \| |
| 6+40 | 200.5962 | 271.02 | \|Q | \| | \| | \| | \| |
| 6+45 | 201.7850 | 272.58 | \|Q | \| | \| | \| | \| |
| 6+50 | 202.9844 | 274.16 | \|Q | \| | \| | \| | \| |
| 6+55 | 204.2053 | 275.76 | \|Q | \| | \| | \| | \| |
| 7+ 0 | 205.4372 | 277.38 | \|Q | \| | \| | \| | \| |
| 7+ 5 | 206.6915 | 279.03 | \|Q | \| | \| | \| | \| |
| 7+10 | 207.9575 | 280.70 | \|Q | \| | \| | \| | \| |
| 7+15 | 209.2193 | 282.36 | \|Q | \| | \| | \| | \| |
| 7+20 | 210.4658 | 284.02 | \|Q | \| | \| | \| | \| |
| 7+25 | 211.7364 | 285.71 | \|Q | \| | \| | \| | \| |
| 7+30 | 213.0198 | 287.41 | \|Q | \| | \| | \| | \| |
| 7+35 | 214.3283 | 289.15 | \|Q | \| | \| | \| | \| |
| 7+40 | 215.6503 | 290.91 | \|qQ | \| | \| | \| | \| |
| 7+45 | 216.9986 | 292.70 | \|qQ | \| | \| | \| | \| |
| 7+50 | 218.3611 | 294.51 | \|qQ | \| | \| | \| | \| |
| 7+55 | 219.7510 | 296.36 | \|qQ | \| | \| | \| | \| |
| 8+ 0 | 221.1560 | 298.22 | \|qQ | \| | \| | \| | \| |
| 8+ 5 | 222.5898 | 300.13 | \|qQ | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 8+10 | 224.0395 | 302.05 | \|qQ | \| | \| | \| | \| |
| 8+15 | 225.5192 | 304.02 | \|qQ | \| | \| | \| | \| |
| 8+20 | 227.0159 | 306.01 | \|qQ | \| | \| | \| | \| |
| 8+25 | 228.5441 | 308.03 | \|qQ | \| | \| | \| | \| |
| 8+30 | 230.0903 | 310.09 | \|qQ | \| | \| | \| | \| |
| 8+35 | 231.6695 | 312.18 | \|qQ | \| | \| | \| | \| |
| 8+40 | 233.2678 | 314.31 | \|qQ | \| | \| | \| | \| |
| 8+45 | 234.9009 | 316.47 | \|qQ | \| | \| | \| | \| |
| 8+50 | 236.5541 | 318.67 | \|qQ | \| | \| | \| | \| |
| 8+55 | 238.2440 | 320.91 | \|qQ | \| | \| | \| | \| |
| 9+ 0 | 239.9553 | 323.18 | \|qQ | \| | \| | \| | \| |
| 9+ 5 | 241.7052 | 325.50 | \|qQ | \| | \| | \| | \| |
| 9+10 | 243.4779 | 327.86 | \|qQ | \| | \| | \| | \| |
| 9+15 | 245.2913 | 330.26 | \|qQ | \| | \| | \| | \| |
| 9+20 | 247.1291 | 332.70 | \|qQ | \| | \| | \| | \| |
| 9+25 | 249.0097 | 335.20 | \|qQ | \| | \| | \| | \| |
| 9+30 | 250.9163 | 337.73 | \|qQ | \| | \| | \| | \| |
| 9+35 | 252.8683 | 340.31 | \|qQ | \| | \| | \| | \| |
| 9+40 | 254.8481 | 342.94 | \|qQ | \| | \| | \| | \| |
| 9+45 | 256.8758 | 345.63 | \|qQ | \| | \| | \| | \| |
| 9+50 | 258.9333 | 348.36 | \|qQ | \| | \| | \| | \| |
| 9+55 | 261.0416 | 351.15 | \|qQ | \| | \| | \| | \| |
| 10+ 0 | 263.1818 | 353.99 | \|qQ | \| | \| | \| | \| |
| 10+ 5 | 265.3760 | 356.90 | \|qQ | \| | \| | \| | \| |
| 10+10 | 267.6044 | 359.86 | \|qQ | \| | \| | \| | \| |
| 10+15 | 269.8901 | 362.88 | \|qQ | \| | \| | \| | \| |
| 10+20 | 272.2126 | 365.96 | \|qQ | \| | \| | \| | \| |
| 10+25 | 274.5962 | 369.12 | \|qQ | \| | \| | \| | \| |
| 10+30 | 277.0194 | 372.34 | \|qQ | \| | \| | \| | \| |
| 10+35 | 279.5077 | 375.63 | \|qQ | \| | \| | \| | \| |
| 10+40 | 282.0387 | 378.99 | \|qQ | \| | \| | \| | \| |
| 10+45 | 284.6393 | 382.43 | \|qQ | \| | \| | \| | \| |
| 10+50 | 287.2861 | 385.94 | \|qQ | \| | \| | \| | \| |
| 10+55 | 290.0074 | 389.54 | \|qQ | \| | \| | \| | \| |
| 11+ 0 | 292.7787 | 393.21 | \| Q | \| | \| | \| | \| |
| 11+ 5 | 295.6299 | 396.99 | \| Q | \| | \| | \| | \| |
| 11+10 | 298.5353 | 400.84 | \| Q | \| | \| | \| | \| |
| 11+15 | 301.5266 | 404.80 | \| Q | \| | \| | \| | \| |
| 11+20 | 304.5770 | 408.84 | \| Q | \| | \| | \| | \| |
| 11+25 | 307.7199 | 413.00 | \| Q | \| | \| | \| | \| |
| 11+30 | 310.9271 | 417.25 | \| Q | \| | \| | \| | \| |
| 11+35 | 314.2342 | 421.62 | \| Q | \| | \| | \| | \| |
| 11+40 | 317.6117 | 426.09 | \| Q | \| | \| | \| | \| |
| 11+45 | 321.0973 | 430.71 | \| Q | \| | \| | \| | \| |
| 11+50 | 324.6600 | 435.42 | \| Q | \| | \| | \| | \| |
| 11+55 | 328.3402 | 440.29 | \| qQ | \| | \| | \| | \| |
| 12+ 0 | 332.1051 | 445.27 | \| qQ | \| | \| | \| | \| |
| 12+ 5 | 335.8006 | 450.22 | \| qQ | \| | \| | \| | \| |
| 12+10 | 339.3487 | 455.03 | \| qQ | \| | \| | \| | \| |
| 12+15 | 342.8155 | 459.78 | \| qQ | \| | \| | \| | \| |
| 12+20 | 346.1816 | 464.43 | \| qQ | \| | \| | \| | \| |
| 12+25 | 349.4887 | 469.00 | \| qQ | \| | \| | \| | \| |
| 12+30 | 352.6382 | 473.42 | \| qQ | \| | \| | \| | \| |
| 12+35 | 355.2717 | 477.40 | \| qQ | \| | \| | \| | \| |
| 12+40 | 357.2101 | 480.78 | \| qQ | \| | \| | \| | \| |
| 12+45 | 358.8415 | 483.93 | \| qQ | \| | \| | \| | \| |
| 12+50 | 360.6350 | 487.33 | \| qQ | \| | \| | \| | \| |
| 12+55 | 362.2195 | 490.58 | \| qQ | \| | \| | \| | \| |
| 13+ 0 | 364.4083 | 494.50 | \| qQ | \| | \| | \| | \| |

```
13+ 5     367.7572    499.65  | qQ      |         |         |         |
13+10     371.7457    505.51  | qQ      |         |         |         |
13+15     376.2168    511.92  | qQ      |         |         |         |
13+20     381.0512    518.78  | qQ      |         |         |         |
13+25     386.3028    526.13  | qQ      |         |         |         |
13+30     391.8858    533.90  | qQ      |         |         |         |
13+35     397.8508    542.15  | qQ      |         |         |         |
13+40     404.1453    550.82  | qQ      |         |         |         |
13+45     410.8932    560.05  | qQ      |         |         |         |
13+50     417.9651    569.72  | qQ      |         |         |         |
13+55     425.4943    579.97  | qQ      |         |         |         |
14+ 0     433.4733    590.80  | q Q     |         |         |         |
14+ 5     443.7302    604.15  |  qQ     |         |         |         |
14+10     456.6327    620.57  |  qQ     |         |         |         |
14+15     472.1769    640.21  |  qQ     |         |         |         |
14+20     490.0927    662.86  |  qQ     |         |         |         |
14+25     510.6860    688.89  |  qQ     |         |         |         |
14+30     534.4185    718.89  |  qQ     |         |         |         |
14+35     565.2444    756.98  |  q Q    |         |         |         |
14+40     604.4078    804.86  |   qQ    |         |         |         |
14+45     649.1865    860.49  |   qQ    |         |         |         |
14+50     694.8790    918.28  |   q Q   |         |         |         |
14+55     745.8212    981.18  |    qQ   |         |         |         |
15+ 0     794.1117   1040.77  |    q Q  |         |         |         |
15+ 5     835.7897   1093.21  |    q Q  |         |         |         |
15+10     875.0621   1142.96  |     qQ  |         |         |         |
15+15     914.6224   1193.03  |     q Q |         |         |         |
15+20     955.0822   1244.29  |     q Q |         |         |         |
15+25     995.0238   1295.35  |     q Q |         |         |         |
15+30    1034.2039   1345.78  |      q Q|         |         |         |
15+35    1074.5141   1397.42  |      q Q|         |         |         |
15+40    1116.4211   1450.98  |      q Q|         |         |         |
15+45    1161.9929   1508.95  |       q Q         |         |         |
15+50    1212.7998   1573.16  |       q Q         |         |         |
15+55    1272.0020   1647.39  |       q |Q        |         |         |
16+ 0    1348.3678   1741.95  |        q|Q        |         |         |
16+ 5    1562.0234   1988.35  |         q  Q      |         |         |
16+10    1812.2216   2297.50  |         | q  Q    |         |         |
16+15    2048.7897   2614.99  |         |   q   Q |         |         |
16+20    2286.5018   2956.98  |         |    q    Q         |         |
16+25    2564.6388   3348.19  |         |      q  |  Q      |         |
16+30    2923.9222   3810.22  |         |         q     Q   |         |
16+35    3545.7618   4508.29  |         |         |   q     |Q        |
16+40    4194.4952   5252.63  |         |         |       q |     Q   |
16+45    4554.6544   5743.33  |         |         |         |q       Q|
16+50    4531.6570   5760.21  |         |         |         |q       Q|
16+55    4662.6330   5807.39  |         |         |         | q       Q
17+ 0    4189.1334   5203.51  |         |         |       q |    Q    |
17+ 5    3414.3803   4308.34  |         |         |  q     Q|         |
17+10    2967.9992   3764.30  |         |         q    Q    |         |
17+15    2704.6977   3424.75  |         |       q |  Q      |         |
17+20    2501.9886   3160.68  |         |      q  |Q        |         |
17+25    2318.5479   2925.77  |         |    q    Q         |         |
17+30    2162.4278   2724.90  |         |   q   Q |         |         |
17+35    2030.7641   2553.34  |         |  q   Q  |         |         |
17+40    1895.2315   2381.55  |         |  q  Q   |         |         |
17+45    1749.6855   2201.84  |         | q  Q    |         |         |
17+50    1651.2066   2071.16  |         |q  Q     |         |         |
17+55    1540.2373   1930.75  |         q  Q      |         |         |
```

```
18+ 0    1407.3183   1772.00  |         q| Q       |          |          |
18+ 5    1344.8641   1686.50  |         q|Q       |          |          |
18+10    1268.6473   1589.92  |        q Q         |          |          |
18+15    1193.2536   1495.69  |        q Q         |          |          |
18+20    1151.0195   1436.04  |       q Q|         |          |          |
18+25    1089.4995   1358.30  |       q Q|         |          |          |
18+30    1041.7081   1295.53  |       qQ |         |          |          |
18+35    1005.5616   1245.81  |      q Q |         |          |          |
18+40     948.0742   1176.10  |      q Q |         |          |          |
18+45     912.5918   1128.89  |      qQ  |         |          |          |
18+50     876.5280   1081.49  |      qQ  |         |          |          |
18+55     819.5035   1013.04  |     qQ   |         |          |          |
19+ 0     793.6344    976.09  |     qQ   |         |          |          |
19+ 5     765.7529    938.61  |     qQ   |         |          |          |
19+10     733.2748    898.09  |     qQ   |         |          |          |
19+15     713.1336    871.21  |    q Q   |         |          |          |
19+20     684.1017    836.26  |    qQ    |         |          |          |
19+25     657.1400    803.91  |    qQ    |         |          |          |
19+30     638.7192    780.58  |    qQ    |         |          |          |
19+35     610.6826    748.00  |    qQ    |         |          |          |
19+40     589.2799    722.11  |    Q     |         |          |          |
19+45     568.7842    697.40  |   qQ     |         |          |          |
19+50     531.8321    656.77  |   qQ     |         |          |          |
19+55     514.5861    636.41  |   qQ     |         |          |          |
20+ 0     503.1187    622.35  |   qQ     |         |          |          |
20+ 5     492.3548    609.31  |   qQ     |         |          |          |
20+10     480.9033    595.65  |   qQ     |         |          |          |
20+15     463.8012    576.27  |   Q      |         |          |          |
20+20     445.1496    554.99  |   Q      |         |          |          |
20+25     435.8621    542.90  |   Q      |         |          |          |
20+30     427.2337    531.66  |  qQ      |         |          |          |
20+35     418.2515    520.33  |  qQ      |         |          |          |
20+40     407.4104    507.22  |  qQ      |         |          |          |
20+45     386.8225    484.39  |  qQ      |         |          |          |
20+50     375.3314    470.80  |  qQ      |         |          |          |
20+55     368.3532    461.98  |  qQ      |         |          |          |
21+ 0     361.6119    453.26  |  qQ      |         |          |          |
21+ 5     354.2237    443.76  |  qQ      |         |          |          |
21+10     343.5273    431.12  |  Q       |         |          |          |
21+15     329.3717    415.27  |  Q       |         |          |          |
21+20     323.1099    407.51  |  Q       |         |          |          |
21+25     317.7711    400.81  |  Q       |         |          |          |
21+30     312.6927    394.43  |  Q       |         |          |          |
21+35     307.6347    388.13  |  Q       |         |          |          |
21+40     302.5973    381.89  |  Q       |         |          |          |
21+45     297.9340    376.11  |  Q       |         |          |          |
21+50     293.4535    370.57  |  Q       |         |          |          |
21+55     289.1560    365.27  | qQ       |         |          |          |
22+ 0     284.9022    360.06  | qQ       |         |          |          |
22+ 5     280.2653    354.50  | qQ       |         |          |          |
22+10     274.8747    348.23  | qQ       |         |          |          |
22+15     270.7335    343.24  | qQ       |         |          |          |
22+20     266.7070    338.39  | qQ       |         |          |          |
22+25     262.2759    333.17  | qQ       |         |          |          |
22+30     257.6757    327.80  | qQ       |         |          |          |
22+35     245.2773    314.65  | qQ       |         |          |          |
22+40     236.9305    305.58  | qQ       |         |          |          |
22+45     233.2385    301.19  | qQ       |         |          |          |
22+50     229.8833    297.14  | qQ       |         |          |          |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+55 | 226.4731 | 293.07 | \|qQ | \| | \| | \| | \| |
| 23+ 0 | 222.9725 | 288.92 | \|Q | \| | \| | \| | \| |
| 23+ 5 | 219.2047 | 284.52 | \|Q | \| | \| | \| | \| |
| 23+10 | 214.8161 | 279.51 | \|Q | \| | \| | \| | \| |
| 23+15 | 205.5670 | 269.66 | \|Q | \| | \| | \| | \| |
| 23+20 | 197.0229 | 260.53 | \|Q | \| | \| | \| | \| |
| 23+25 | 193.9453 | 256.88 | \|Q | \| | \| | \| | \| |
| 23+30 | 191.2588 | 253.63 | \|Q | \| | \| | \| | \| |
| 23+35 | 188.7784 | 250.60 | \|Q | \| | \| | \| | \| |
| 23+40 | 186.4016 | 247.69 | \|Q | \| | \| | \| | \| |
| 23+45 | 184.1431 | 244.91 | \|Q | \| | \| | \| | \| |
| 23+50 | 181.9831 | 242.23 | \|Q | \| | \| | \| | \| |
| 23+55 | 179.9082 | 239.66 | \|Q | \| | \| | \| | \| |
| 24+ 0 | 177.9084 | 237.17 | \|Q | \| | \| | \| | \| |
| 24+ 5 | 175.2905 | 233.99 | \|Q | \| | \| | \| | \| |
| 24+10 | 171.9061 | 229.80 | \|Q | \| | \| | \| | \| |
| 24+15 | 167.9065 | 224.66 | \|Q | \| | \| | \| | \| |
| 24+20 | 163.3577 | 218.53 | \|Q | \| | \| | \| | \| |
| 24+25 | 158.1677 | 211.29 | \|Q | \| | \| | \| | \| |
| 24+30 | 152.1371 | 202.71 | \|Q | \| | \| | \| | \| |
| 24+35 | 143.8368 | 191.40 | qQ | \| | \| | \| | \| |
| 24+40 | 132.8238 | 176.68 | qQ | \| | \| | \| | \| |
| 24+45 | 120.2999 | 159.24 | qQ | \| | \| | \| | \| |
| 24+50 | 108.0705 | 141.56 | Q | \| | \| | \| | \| |
| 24+55 | 94.6301 | 123.15 | Q | \| | \| | \| | \| |
| 25+ 0 | 82.9731 | 107.40 | Q | \| | \| | \| | \| |
| 25+ 5 | 74.7820 | 95.92 | Q | \| | \| | \| | \| |
| 25+10 | 68.3476 | 86.83 | Q | \| | \| | \| | \| |
| 25+15 | 62.8347 | 79.14 | Q | \| | \| | \| | \| |
| 25+20 | 57.9821 | 72.45 | Q | \| | \| | \| | \| |
| 25+25 | 53.6957 | 66.58 | Q | \| | \| | \| | \| |
| 25+30 | 49.8475 | 61.35 | Q | \| | \| | \| | \| |
| 25+35 | 46.2954 | 56.59 | Q | \| | \| | \| | \| |
| 25+40 | 43.0433 | 52.26 | Q | \| | \| | \| | \| |
| 25+45 | 40.1668 | 48.42 | Q | \| | \| | \| | \| |
| 25+50 | 37.4154 | 44.79 | Q | \| | \| | \| | \| |
| 25+55 | 34.8515 | 41.45 | Q | \| | \| | \| | \| |
| 26+ 0 | 32.6648 | 38.55 | Q | \| | \| | \| | \| |
| 26+ 5 | 30.5183 | 35.76 | Q | \| | \| | \| | \| |
| 26+10 | 28.5370 | 33.20 | Q | \| | \| | \| | \| |
| 26+15 | 26.7541 | 30.89 | Q | \| | \| | \| | \| |
| 26+20 | 24.9920 | 28.65 | Q | \| | \| | \| | \| |
| 26+25 | 23.3856 | 26.62 | Q | \| | \| | \| | \| |
| 26+30 | 21.8719 | 24.73 | Q | \| | \| | \| | \| |
| 26+35 | 20.3880 | 22.91 | Q | \| | \| | \| | \| |
| 26+40 | 19.0769 | 21.29 | Q | \| | \| | \| | \| |
| 26+45 | 17.8204 | 19.76 | Q | \| | \| | \| | \| |
| 26+50 | 16.6199 | 18.32 | Q | \| | \| | \| | \| |
| 26+55 | 15.6169 | 17.12 | Q | \| | \| | \| | \| |
| 27+ 0 | 14.6446 | 15.98 | Q | \| | \| | \| | \| |
| 27+ 5 | 13.7178 | 14.92 | Q | \| | \| | \| | \| |
| 27+10 | 12.8723 | 13.97 | Q | \| | \| | \| | \| |
| 27+15 | 12.0369 | 13.04 | Q | \| | \| | \| | \| |
| 27+20 | 11.2660 | 12.18 | Q | \| | \| | \| | \| |
| 27+25 | 10.5538 | 11.38 | Q | \| | \| | \| | \| |
| 27+30 | 9.8510 | 10.61 | Q | \| | \| | \| | \| |
| 27+35 | 9.2173 | 9.90 | Q | \| | \| | \| | \| |
| 27+40 | 8.6162 | 9.24 | Q | \| | \| | \| | \| |
| 27+45 | 8.0376 | 8.61 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 27+50 | 7.5865 | 8.11 | Q | \| | \| | \| | \| |
| 27+55 | 7.1639 | 7.64 | Q | \| | \| | \| | \| |
| 28+ 0 | 6.7455 | 7.17 | Q | \| | \| | \| | \| |
| 28+ 5 | 6.3310 | 6.71 | Q | \| | \| | \| | \| |
| 28+10 | 5.9203 | 6.25 | Q | \| | \| | \| | \| |
| 28+15 | 5.5449 | 5.83 | Q | \| | \| | \| | \| |
| 28+20 | 5.2206 | 5.46 | Q | \| | \| | \| | \| |
| 28+25 | 4.8999 | 5.10 | Q | \| | \| | \| | \| |
| 28+30 | 4.5822 | 4.75 | Q | \| | \| | \| | \| |
| 28+35 | 4.2673 | 4.40 | Q | \| | \| | \| | \| |
| 28+40 | 3.9599 | 4.07 | Q | \| | \| | \| | \| |
| 28+45 | 3.7191 | 3.81 | Q | \| | \| | \| | \| |
| 28+50 | 3.5011 | 3.57 | Q | \| | \| | \| | \| |
| 28+55 | 3.2851 | 3.33 | Q | \| | \| | \| | \| |
| 29+ 0 | 3.0712 | 3.10 | Q | \| | \| | \| | \| |
| 29+ 5 | 2.8591 | 2.88 | Q | \| | \| | \| | \| |
| 29+10 | 2.6661 | 2.68 | Q | \| | \| | \| | \| |
| 29+15 | 2.5165 | 2.53 | Q | \| | \| | \| | \| |
| 29+20 | 2.3701 | 2.38 | Q | \| | \| | \| | \| |
| 29+25 | 2.2251 | 2.23 | Q | \| | \| | \| | \| |
| 29+30 | 2.0814 | 2.08 | Q | \| | \| | \| | \| |
| 29+35 | 1.9390 | 1.94 | Q | \| | \| | \| | \| |
| 29+40 | 1.7987 | 1.80 | Q | \| | \| | \| | \| |
| 29+45 | 1.6601 | 1.66 | Q | \| | \| | \| | \| |
| 29+50 | 1.5227 | 1.52 | Q | \| | \| | \| | \| |
| 29+55 | 1.3864 | 1.39 | Q | \| | \| | \| | \| |
| 30+ 0 | 1.2512 | 1.25 | Q | \| | \| | \| | \| |
| 30+ 5 | 1.1190 | 1.12 | Q | \| | \| | \| | \| |
| 30+10 | 0.9948 | 0.99 | Q | \| | \| | \| | \| |
| 30+15 | 0.8723 | 0.87 | Q | \| | \| | \| | \| |
| 30+20 | 0.7508 | 0.75 | Q | \| | \| | \| | \| |
| 30+25 | 0.6303 | 0.63 | Q | \| | \| | \| | \| |
| 30+30 | 0.5065 | 0.51 | Q | \| | \| | \| | \| |
| 30+35 | 0.4249 | 0.42 | Q | \| | \| | \| | \| |
| 30+40 | 0.3668 | 0.37 | Q | \| | \| | \| | \| |
| 30+45 | 0.3091 | 0.31 | Q | \| | \| | \| | \| |
| 30+50 | 0.2520 | 0.25 | Q | \| | \| | \| | \| |
| 30+55 | 0.1952 | 0.20 | Q | \| | \| | \| | \| |
| 31+ 0 | 0.1389 | 0.14 | Q | \| | \| | \| | \| |
| 31+ 5 | 0.0831 | 0.08 | Q | \| | \| | \| | \| |
| 31+10 | 0.0276 | 0.03 | Q | \| | \| | \| | \| |

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**********HYDROGRAPH DATA**********

Number of intervals = 374
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 5807.391 (CFS)
Total volume = 1404.142 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 1335.624 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 314.422 | 0.000 | 0.000 | 0.000 |

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FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014
Study date: 08/10/17

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREAS "J" & "K" ROUTING
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-10-24
---

Program License Serial Number 6320

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********** HYDROGRAPH INFORMATION **********

From study/file name: OFFJ10024.rte
**********HYDROGRAPH DATA**********
Number of intervals = 333
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 1201.045 (CFS)
Total volume = 169.197 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 4.000 to Point/Station 4.000
**** FLOWBY BASIN ROUTING OR SPLIT FLOW ****
---
A constant split flow fraction of 0.5000 is
being diverted from the main stream into stream number 1
Total volume of excess flow diverted into flowby
basin (stream number 1 ) is 84.60(Ac.Ft)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

P R I N T O F S T O R M
R u n o f f H y d r o g r a p h
---
Hydrograph in 5 Minute intervals (CFS)

---

| Time(h+m) | Volume(Ac.Ft) | Q(CFS) | 0 | 150.1 | 300.3 | 450.4 | 600.5 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0009 | 0.13 | Q | | | | |
| 0+10 | 0.0045 | 0.51 | Q | | | | |
| 0+15 | 0.0120 | 1.09 | Q | | | | |
| 0+20 | 0.0257 | 1.99 | Q | | | | |
| 0+25 | 0.0492 | 3.42 | Q | | | | |
| 0+30 | 0.0881 | 5.64 | Q | | | | |
| 0+35 | 0.1400 | 7.55 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+40 | 0.1990 | 8.57 | Q | \| | \| | \| | \| |
| 0+45 | 0.2633 | 9.32 | Q | \| | \| | \| | \| |
| 0+50 | 0.3316 | 9.92 | Q | \| | \| | \| | \| |
| 0+55 | 0.4036 | 10.45 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.4786 | 10.89 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.5562 | 11.27 | Q | \| | \| | \| | \| |
| 1+10 | 0.6362 | 11.61 | Q | \| | \| | \| | \| |
| 1+15 | 0.7183 | 11.92 | Q | \| | \| | \| | \| |
| 1+20 | 0.8022 | 12.19 | Q | \| | \| | \| | \| |
| 1+25 | 0.8879 | 12.44 | Q | \| | \| | \| | \| |
| 1+30 | 0.9751 | 12.66 | Q | \| | \| | \| | \| |
| 1+35 | 1.0636 | 12.86 | Q | \| | \| | \| | \| |
| 1+40 | 1.1534 | 13.03 | Q | \| | \| | \| | \| |
| 1+45 | 1.2442 | 13.19 | Q | \| | \| | \| | \| |
| 1+50 | 1.3361 | 13.34 | Q | \| | \| | \| | \| |
| 1+55 | 1.4289 | 13.47 | Q | \| | \| | \| | \| |
| 2+ 0 | 1.5225 | 13.59 | Q | \| | \| | \| | \| |
| 2+ 5 | 1.6168 | 13.69 | Q | \| | \| | \| | \| |
| 2+10 | 1.7117 | 13.78 | Q | \| | \| | \| | \| |
| 2+15 | 1.8073 | 13.87 | Q | \| | \| | \| | \| |
| 2+20 | 1.9034 | 13.96 | Q | \| | \| | \| | \| |
| 2+25 | 2.0002 | 14.05 | Q | \| | \| | \| | \| |
| 2+30 | 2.0975 | 14.13 | Q | \| | \| | \| | \| |
| 2+35 | 2.1953 | 14.21 | QV | \| | \| | \| | \| |
| 2+40 | 2.2938 | 14.29 | QV | \| | \| | \| | \| |
| 2+45 | 2.3927 | 14.37 | QV | \| | \| | \| | \| |
| 2+50 | 2.4922 | 14.44 | QV | \| | \| | \| | \| |
| 2+55 | 2.5922 | 14.52 | QV | \| | \| | \| | \| |
| 3+ 0 | 2.6928 | 14.60 | QV | \| | \| | \| | \| |
| 3+ 5 | 2.7938 | 14.68 | QV | \| | \| | \| | \| |
| 3+10 | 2.8954 | 14.75 | QV | \| | \| | \| | \| |
| 3+15 | 2.9975 | 14.83 | QV | \| | \| | \| | \| |
| 3+20 | 3.1001 | 14.90 | QV | \| | \| | \| | \| |
| 3+25 | 3.2033 | 14.97 | QV | \| | \| | \| | \| |
| 3+30 | 3.3069 | 15.04 | \|Q | \| | \| | \| | \| |
| 3+35 | 3.4109 | 15.11 | \|Q | \| | \| | \| | \| |
| 3+40 | 3.5155 | 15.18 | \|Q | \| | \| | \| | \| |
| 3+45 | 3.6205 | 15.25 | \|Q | \| | \| | \| | \| |
| 3+50 | 3.7260 | 15.32 | \|Q | \| | \| | \| | \| |
| 3+55 | 3.8320 | 15.39 | \|Q | \| | \| | \| | \| |
| 4+ 0 | 3.9385 | 15.46 | \|Q | \| | \| | \| | \| |
| 4+ 5 | 4.0454 | 15.53 | \|Q | \| | \| | \| | \| |
| 4+10 | 4.1529 | 15.60 | \|Q | \| | \| | \| | \| |
| 4+15 | 4.2608 | 15.67 | \|QV | \| | \| | \| | \| |
| 4+20 | 4.3692 | 15.74 | \|QV | \| | \| | \| | \| |
| 4+25 | 4.4781 | 15.81 | \|QV | \| | \| | \| | \| |
| 4+30 | 4.5875 | 15.89 | \|QV | \| | \| | \| | \| |
| 4+35 | 4.6975 | 15.96 | \|QV | \| | \| | \| | \| |
| 4+40 | 4.8080 | 16.04 | \|QV | \| | \| | \| | \| |
| 4+45 | 4.9189 | 16.12 | \|QV | \| | \| | \| | \| |
| 4+50 | 5.0305 | 16.19 | \|QV | \| | \| | \| | \| |
| 4+55 | 5.1425 | 16.27 | \|QV | \| | \| | \| | \| |
| 5+ 0 | 5.2551 | 16.35 | \|QV | \| | \| | \| | \| |
| 5+ 5 | 5.3683 | 16.43 | \|QV | \| | \| | \| | \| |
| 5+10 | 5.4820 | 16.51 | \|QV | \| | \| | \| | \| |
| 5+15 | 5.5963 | 16.59 | \|QV | \| | \| | \| | \| |
| 5+20 | 5.7111 | 16.68 | \|QV | \| | \| | \| | \| |
| 5+25 | 5.8265 | 16.76 | \|QV | \| | \| | \| | \| |
| 5+30 | 5.9426 | 16.85 | \|QV | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+35 | 6.0592 | 16.93 | QV | | | | |
| 5+40 | 6.1764 | 17.02 | QV | | | | |
| 5+45 | 6.2942 | 17.11 | QV | | | | |
| 5+50 | 6.4126 | 17.20 | Q V | | | | |
| 5+55 | 6.5317 | 17.29 | Q V | | | | |
| 6+ 0 | 6.6514 | 17.38 | Q V | | | | |
| 6+ 5 | 6.7717 | 17.47 | Q V | | | | |
| 6+10 | 6.8927 | 17.57 | Q V | | | | |
| 6+15 | 7.0144 | 17.66 | Q V | | | | |
| 6+20 | 7.1367 | 17.76 | Q V | | | | |
| 6+25 | 7.2597 | 17.86 | Q V | | | | |
| 6+30 | 7.3834 | 17.96 | Q V | | | | |
| 6+35 | 7.5077 | 18.06 | Q V | | | | |
| 6+40 | 7.6328 | 18.16 | Q V | | | | |
| 6+45 | 7.7586 | 18.27 | Q V | | | | |
| 6+50 | 7.8851 | 18.37 | Q V | | | | |
| 6+55 | 8.0124 | 18.48 | Q V | | | | |
| 7+ 0 | 8.1404 | 18.59 | Q V | | | | |
| 7+ 5 | 8.2692 | 18.70 | Q V | | | | |
| 7+10 | 8.3987 | 18.81 | Q V | | | | |
| 7+15 | 8.5290 | 18.92 | Q  V | | | | |
| 7+20 | 8.6601 | 19.04 | Q  V | | | | |
| 7+25 | 8.7920 | 19.15 | Q  V | | | | |
| 7+30 | 8.9248 | 19.27 | Q  V | | | | |
| 7+35 | 9.0583 | 19.39 | Q  V | | | | |
| 7+40 | 9.1927 | 19.51 | Q  V | | | | |
| 7+45 | 9.3280 | 19.64 | Q  V | | | | |
| 7+50 | 9.4641 | 19.77 | Q  V | | | | |
| 7+55 | 9.6011 | 19.89 | Q  V | | | | |
| 8+ 0 | 9.7390 | 20.02 | Q  V | | | | |
| 8+ 5 | 9.8778 | 20.16 | Q  V | | | | |
| 8+10 | 10.0176 | 20.29 | Q  V | | | | |
| 8+15 | 10.1582 | 20.43 | Q  V | | | | |
| 8+20 | 10.2999 | 20.57 | Q  V | | | | |
| 8+25 | 10.4425 | 20.71 | Q  V | | | | |
| 8+30 | 10.5861 | 20.85 | Q   V | | | | |
| 8+35 | 10.7307 | 21.00 | Q   V | | | | |
| 8+40 | 10.8764 | 21.15 | Q   V | | | | |
| 8+45 | 11.0230 | 21.30 | Q   V | | | | |
| 8+50 | 11.1708 | 21.45 | Q   V | | | | |
| 8+55 | 11.3196 | 21.61 | Q   V | | | | |
| 9+ 0 | 11.4695 | 21.77 | Q   V | | | | |
| 9+ 5 | 11.6206 | 21.93 | Q   V | | | | |
| 9+10 | 11.7728 | 22.10 | Q   V | | | | |
| 9+15 | 11.9261 | 22.27 | Q   V | | | | |
| 9+20 | 12.0807 | 22.44 | Q   V | | | | |
| 9+25 | 12.2364 | 22.62 | Q   V | | | | |
| 9+30 | 12.3934 | 22.79 | Q   V | | | | |
| 9+35 | 12.5517 | 22.98 | Q   V | | | | |
| 9+40 | 12.7112 | 23.16 | Q    V | | | | |
| 9+45 | 12.8720 | 23.35 | Q    V | | | | |
| 9+50 | 13.0342 | 23.55 | Q    V | | | | |
| 9+55 | 13.1977 | 23.75 | Q    V | | | | |
| 10+ 0 | 13.3627 | 23.95 | Q    V | | | | |
| 10+ 5 | 13.5290 | 24.15 | Q    V | | | | |
| 10+10 | 13.6968 | 24.37 | Q    V | | | | |
| 10+15 | 13.8661 | 24.58 | Q    V | | | | |
| 10+20 | 14.0369 | 24.80 | Q    V | | | | |
| 10+25 | 14.2093 | 25.03 | Q    V | | | | |

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10+30      14.3832     25.26  |Q    V   |          |          |          |
10+35      14.5588     25.49  |Q    V   |          |          |          |
10+40      14.7360     25.73  |Q    V   |          |          |          |
10+45      14.9149     25.98  |Q     V  |          |          |          |
10+50      15.0956     26.23  |Q     V  |          |          |          |
10+55      15.2781     26.49  |Q     V  |          |          |          |
11+ 0      15.4623     26.76  |Q     V  |          |          |          |
11+ 5      15.6485     27.03  |Q     V  |          |          |          |
11+10      15.8366     27.31  |Q     V  |          |          |          |
11+15      16.0266     27.60  |Q     V  |          |          |          |
11+20      16.2187     27.89  |Q     V  |          |          |          |
11+25      16.4129     28.19  |Q     V  |          |          |          |
11+30      16.6092     28.50  |Q     V  |          |          |          |
11+35      16.8076     28.82  |Q     V  |          |          |          |
11+40      17.0084     29.15  |Q      V |          |          |          |
11+45      17.2115     29.48  |Q      V |          |          |          |
11+50      17.4169     29.83  |Q      V |          |          |          |
11+55      17.6248     30.19  | Q     V |          |          |          |
12+ 0      17.8353     30.56  | Q     V |          |          |          |
12+ 5      18.0480     30.89  | Q     V |          |          |          |
12+10      18.2627     31.17  | Q     V |          |          |          |
12+15      18.4789     31.40  | Q     V |          |          |          |
12+20      18.6961     31.54  | Q     V |          |          |          |
12+25      18.9133     31.53  | Q     V |          |          |          |
12+30      19.1288     31.29  | Q      V|          |          |          |
12+35      19.3433     31.16  | Q      V|          |          |          |
12+40      19.5590     31.31  | Q      V|          |          |          |
12+45      19.7763     31.56  | Q      V|          |          |          |
12+50      19.9958     31.87  | Q      V|          |          |          |
12+55      20.2177     32.23  | Q      V|          |          |          |
13+ 0      20.4424     32.62  | Q      V|          |          |          |
13+ 5      20.6701     33.06  | Q      V|          |          |          |
13+10      20.9011     33.54  | Q      V|          |          |          |
13+15      21.1355     34.04  | Q      V|          |          |          |
13+20      21.3737     34.58  | Q       V          |          |          |
13+25      21.6159     35.16  | Q       V          |          |          |
13+30      21.8623     35.78  | Q       V          |          |          |
13+35      22.1132     36.43  | Q       V          |          |          |
13+40      22.3688     37.12  | Q       V          |          |          |
13+45      22.6295     37.86  | Q       V          |          |          |
13+50      22.8956     38.64  | Q       V          |          |          |
13+55      23.1674     39.46  | Q       V          |          |          |
14+ 0      23.4453     40.34  | Q        V         |          |          |
14+ 5      23.7298     41.32  | Q       |V         |          |          |
14+10      24.0220     42.42  | Q       |V         |          |          |
14+15      24.3225     43.63  | Q       |V         |          |          |
14+20      24.6325     45.01  | Q       |V         |          |          |
14+25      24.9535     46.62  |  Q      |V         |          |          |
14+30      25.2878     48.53  |  Q      |V         |          |          |
14+35      25.6353     50.46  |  Q      | V        |          |          |
14+40      25.9953     52.27  |  Q      | V        |          |          |
14+45      26.3681     54.13  |  Q      | V        |          |          |
14+50      26.7543     56.08  |  Q      | V        |          |          |
14+55      27.1550     58.18  |  Q      | V        |          |          |
15+ 0      27.5712     60.44  |   Q     |  V       |          |          |
15+ 5      28.0044     62.89  |   Q     |  V       |          |          |
15+10      28.4561     65.59  |   Q     |  V       |          |          |
15+15      28.9283     68.57  |   Q     |  V       |          |          |
15+20      29.4235     71.90  |   Q     |  V       |          |          |
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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 15+25 | 29.9446 | 75.66 | Q | V | | | |
| 15+30 | 30.4953 | 79.97 | Q | V | | | |
| 15+35 | 31.0804 | 84.94 | Q | V | | | |
| 15+40 | 31.7060 | 90.85 | Q | V | | | |
| 15+45 | 32.3809 | 98.00 | Q | V | | | |
| 15+50 | 33.1181 | 107.04 | Q | V | | | |
| 15+55 | 33.9390 | 119.20 | Q | V | | | |
| 16+ 0 | 34.8847 | 137.31 | Q | V | | | |
| 16+ 5 | 36.1306 | 180.91 | Q | V | | | |
| 16+10 | 37.8128 | 244.26 | QV | | | | |
| 16+15 | 39.9049 | 303.77 | V Q | | | | |
| 16+20 | 42.5605 | 385.59 | V | Q | | | |
| 16+25 | 45.9342 | 489.87 | V | | Q | | |
| 16+30 | 50.0701 | 600.52 | V | | | | Q |
| 16+35 | 53.6819 | 524.44 | V | | Q | | |
| 16+40 | 56.1449 | 357.63 | Q V | | | | |
| 16+45 | 58.1520 | 291.43 | Q | V | | | |
| 16+50 | 59.8558 | 247.40 | Q | V | | | |
| 16+55 | 61.3675 | 219.49 | Q | V | | | |
| 17+ 0 | 62.7069 | 194.48 | Q | V | | | |
| 17+ 5 | 63.8989 | 173.08 | Q | V | | | |
| 17+10 | 64.9814 | 157.18 | Q | V | | | |
| 17+15 | 65.9650 | 142.82 | Q | V | | | |
| 17+20 | 66.8578 | 129.64 | Q | V | | | |
| 17+25 | 67.6752 | 118.68 | Q | V | | | |
| 17+30 | 68.4192 | 108.03 | Q | V | | | |
| 17+35 | 69.0905 | 97.46 | Q | V | | | |
| 17+40 | 69.7034 | 89.00 | Q | V | | | |
| 17+45 | 70.2653 | 81.58 | Q | V | | | |
| 17+50 | 70.7826 | 75.11 | Q | V | | | |
| 17+55 | 71.2558 | 68.71 | Q | V | | | |
| 18+ 0 | 71.6862 | 62.50 | Q | V | | | |
| 18+ 5 | 72.0705 | 55.80 | Q | V | | | |
| 18+10 | 72.4348 | 52.91 | Q | V | | | |
| 18+15 | 72.7825 | 50.48 | Q | V | | | |
| 18+20 | 73.1122 | 47.87 | Q | V | | | |
| 18+25 | 73.4313 | 46.33 | Q | V | | | |
| 18+30 | 73.7390 | 44.68 | Q | V | | | |
| 18+35 | 74.0319 | 42.53 | Q | V | | | |
| 18+40 | 74.3167 | 41.36 | Q | V | | | |
| 18+45 | 74.5938 | 40.23 | Q | V | | | |
| 18+50 | 74.8630 | 39.08 | Q | V | | | |
| 18+55 | 75.1249 | 38.03 | Q | V | | | |
| 19+ 0 | 75.3771 | 36.62 | Q | V | | | |
| 19+ 5 | 75.6195 | 35.19 | Q | V | | | |
| 19+10 | 75.8554 | 34.25 | Q | V | | | |
| 19+15 | 76.0834 | 33.11 | Q | V | | | |
| 19+20 | 76.3038 | 32.00 | Q | V | | | |
| 19+25 | 76.5193 | 31.29 | Q | V | | | |
| 19+30 | 76.7222 | 29.46 | Q | V | | | |
| 19+35 | 76.9186 | 28.52 | Q | V | | | |
| 19+40 | 77.1103 | 27.84 | Q | V | | | |
| 19+45 | 77.2975 | 27.17 | Q | V | | | |
| 19+50 | 77.4784 | 26.28 | Q | V | | | |
| 19+55 | 77.6537 | 25.44 | Q | V | | | |
| 20+ 0 | 77.8254 | 24.93 | Q | V | | | |
| 20+ 5 | 77.9937 | 24.45 | Q | V | | | |
| 20+10 | 78.1591 | 24.00 | Q | V | | | |
| 20+15 | 78.3215 | 23.58 | Q | V | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20+20 | 78.4811 | 23.18 | \|Q | \| | \| | \| | V \| |
| 20+25 | 78.6381 | 22.80 | \|Q | \| | \| | \| | V \| |
| 20+30 | 78.7926 | 22.43 | \|Q | \| | \| | \| | V \| |
| 20+35 | 78.9447 | 22.08 | \|Q | \| | \| | \| | V \| |
| 20+40 | 79.0945 | 21.75 | \|Q | \| | \| | \| | V \| |
| 20+45 | 79.2421 | 21.43 | \|Q | \| | \| | \| | V \| |
| 20+50 | 79.3875 | 21.12 | \|Q | \| | \| | \| | V \| |
| 20+55 | 79.5309 | 20.82 | \|Q | \| | \| | \| | V \| |
| 21+ 0 | 79.6723 | 20.53 | \|Q | \| | \| | \| | V \| |
| 21+ 5 | 79.8118 | 20.26 | \|Q | \| | \| | \| | V \| |
| 21+10 | 79.9495 | 19.99 | \|Q | \| | \| | \| | V \| |
| 21+15 | 80.0853 | 19.73 | \|Q | \| | \| | \| | V \| |
| 21+20 | 80.2195 | 19.48 | \|Q | \| | \| | \| | V \| |
| 21+25 | 80.3520 | 19.24 | \|Q | \| | \| | \| | V \| |
| 21+30 | 80.4828 | 19.00 | \|Q | \| | \| | \| | V \| |
| 21+35 | 80.6121 | 18.77 | \|Q | \| | \| | \| | V \| |
| 21+40 | 80.7398 | 18.55 | \|Q | \| | \| | \| | V \| |
| 21+45 | 80.8661 | 18.33 | \|Q | \| | \| | \| | V \| |
| 21+50 | 80.9909 | 18.12 | \|Q | \| | \| | \| | V \| |
| 21+55 | 81.1142 | 17.92 | \|Q | \| | \| | \| | V \| |
| 22+ 0 | 81.2362 | 17.72 | \|Q | \| | \| | \| | V \| |
| 22+ 5 | 81.3569 | 17.52 | \|Q | \| | \| | \| | V \| |
| 22+10 | 81.4763 | 17.33 | \|Q | \| | \| | \| | V \| |
| 22+15 | 81.5944 | 17.15 | \|Q | \| | \| | \| | V \| |
| 22+20 | 81.7113 | 16.97 | \|Q | \| | \| | \| | V \| |
| 22+25 | 81.8270 | 16.80 | \|Q | \| | \| | \| | V \| |
| 22+30 | 81.9415 | 16.63 | \|Q | \| | \| | \| | V \| |
| 22+35 | 82.0549 | 16.46 | \|Q | \| | \| | \| | V \| |
| 22+40 | 82.1671 | 16.30 | \|Q | \| | \| | \| | V \| |
| 22+45 | 82.2783 | 16.14 | \|Q | \| | \| | \| | V \| |
| 22+50 | 82.3884 | 15.99 | \|Q | \| | \| | \| | V \| |
| 22+55 | 82.4975 | 15.84 | \|Q | \| | \| | \| | V\| |
| 23+ 0 | 82.6056 | 15.69 | \|Q | \| | \| | \| | V\| |
| 23+ 5 | 82.7127 | 15.55 | \|Q | \| | \| | \| | V\| |
| 23+10 | 82.8188 | 15.41 | \|Q | \| | \| | \| | V\| |
| 23+15 | 82.9240 | 15.27 | \|Q | \| | \| | \| | V\| |
| 23+20 | 83.0282 | 15.14 | \|Q | \| | \| | \| | V\| |
| 23+25 | 83.1316 | 15.01 | Q | \| | \| | \| | V\| |
| 23+30 | 83.2341 | 14.88 | Q | \| | \| | \| | V\| |
| 23+35 | 83.3357 | 14.75 | Q | \| | \| | \| | V\| |
| 23+40 | 83.4364 | 14.63 | Q | \| | \| | \| | V\| |
| 23+45 | 83.5364 | 14.51 | Q | \| | \| | \| | V\| |
| 23+50 | 83.6355 | 14.39 | Q | \| | \| | \| | V\| |
| 23+55 | 83.7338 | 14.28 | Q | \| | \| | \| | V\| |
| 24+ 0 | 83.8313 | 14.16 | Q | \| | \| | \| | V\| |
| 24+ 5 | 83.9272 | 13.92 | Q | \| | \| | \| | V\| |
| 24+10 | 84.0197 | 13.43 | Q | \| | \| | \| | V\| |
| 24+15 | 84.1075 | 12.76 | Q | \| | \| | \| | V\| |
| 24+20 | 84.1885 | 11.76 | Q | \| | \| | \| | V\| |
| 24+25 | 84.2591 | 10.25 | Q | \| | \| | \| | V\| |
| 24+30 | 84.3140 | 7.97 | Q | \| | \| | \| | V\| |
| 24+35 | 84.3555 | 6.03 | Q | \| | \| | \| | V\| |
| 24+40 | 84.3899 | 4.99 | Q | \| | \| | \| | V\| |
| 24+45 | 84.4190 | 4.23 | Q | \| | \| | \| | V\| |
| 24+50 | 84.4440 | 3.63 | Q | \| | \| | \| | V\| |
| 24+55 | 84.4655 | 3.12 | Q | \| | \| | \| | V\| |
| 25+ 0 | 84.4840 | 2.68 | Q | \| | \| | \| | V\| |
| 25+ 5 | 84.5000 | 2.32 | Q | \| | \| | \| | V\| |
| 25+10 | 84.5138 | 2.01 | Q | \| | \| | \| | V\| |

```
   25+15      84.5257      1.73  Q         |         |         |        V|
   25+20      84.5360      1.49  Q         |         |         |        V|
   25+25      84.5448      1.28  Q         |         |         |        V|
   25+30      84.5523      1.09  Q         |         |         |        V|
   25+35      84.5588      0.94  Q         |         |         |        V|
   25+40      84.5643      0.80  Q         |         |         |        V|
   25+45      84.5691      0.69  Q         |         |         |        V|
   25+50      84.5731      0.58  Q         |         |         |        V|
   25+55      84.5765      0.50  Q         |         |         |        V|
   26+ 0      84.5795      0.43  Q         |         |         |        V|
   26+ 5      84.5821      0.38  Q         |         |         |        V|
   26+10      84.5844      0.34  Q         |         |         |        V|
   26+15      84.5865      0.30  Q         |         |         |        V|
   26+20      84.5884      0.27  Q         |         |         |        V|
   26+25      84.5900      0.23  Q         |         |         |        V|
   26+30      84.5914      0.20  Q         |         |         |        V|
   26+35      84.5926      0.18  Q         |         |         |        V|
   26+40      84.5937      0.16  Q         |         |         |        V|
   26+45      84.5946      0.14  Q         |         |         |        V|
   26+50      84.5955      0.12  Q         |         |         |        V|
   26+55      84.5961      0.10  Q         |         |         |        V|
   27+ 0      84.5967      0.08  Q         |         |         |        V|
   27+ 5      84.5971      0.07  Q         |         |         |        V|
   27+10      84.5975      0.05  Q         |         |         |        V|
   27+15      84.5978      0.04  Q         |         |         |        V|
   27+20      84.5980      0.03  Q         |         |         |        V|
   27+25      84.5981      0.02  Q         |         |         |        V|
   27+30      84.5982      0.01  Q         |         |         |        V|
   27+35      84.5982      0.01  Q         |         |         |        V|
   27+40      84.5983      0.01  Q         |         |         |        V|
   27+45      84.5983      0.00  Q         |         |         |         V
-----------------------------------------------------------------------
        ****************************HYDROGRAPH DATA****************************
                        Number of intervals =   333
                        Time interval =    5.0 (Min.)
                        Maximum/Peak flow rate =      600.523 (CFS)
                        Total volume =      84.598 (Ac.Ft)
                Status of hydrographs being held in storage
                           Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
                Peak (CFS)    600.523     0.000     0.000     0.000     0.000
                Vol (Ac.Ft)     84.598     0.000     0.000     0.000     0.000
        ***********************************************************************

        ---------------------------------------------------------------------


        ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
        Process from Point/Station        4.000 to Point/Station        4.100
        **** STREAM ROUTING SCS CONVEX METHOD ****
        ______________________________________________________________________
        HYDROGRAPH STREAM ROUTING DATA:
        Length of stream =   1768.00 (Ft.)
        Elevation difference =   50.00 (Ft.)
        Slope of channel =  0.028281 (Vert/Horiz)
        Channel type - Improved Channel


        Channel length =  1768.00(Ft.)     Elevation difference =  50.00(Ft.)
        Channel evaluation using mean flow rate of hydrograph
```

```
      Channel base width  =   60.000(Ft.)
      Slope or 'Z' of left channel bank =   2.000
      Slope or 'Z' of right channel bank =   2.000
      Manning's 'N'    = 0.035
      Maximum depth of channel  =    5.000(Ft.)
      Flow(q) thru subarea =     40.761(CFS)
      Depth of flow =     0.244(Ft.)
      Average velocity =     2.766(Ft/s)
      Total flow rate =    40.761(CFS)
      Channel flow top width =   60.974(Ft.)
      Depth of flow in channel =   0.24(Ft.)
      Total number of channels (same dimensions) = 1
      Flow Velocity =    2.77(Ft/s)
      Travel time  =   46.49 min.
      Individual channel flow =   40.761(CFS)
      Total capacity of improved channels =     40.761(CFS)
      Critical Depth in Channel =    0.24(Ft.)


      Channel evaluation using maximum flow rate of hydrograph
      Flow(q) thru subarea =    600.523(CFS)
      Depth of flow =     1.218(Ft.)
      Average velocity =     7.893(Ft/s)
      Total flow rate =   600.523(CFS)
      Channel flow top width =   64.874(Ft.)
      Depth of flow in channel =   1.22(Ft.)
      Total number of channels (same dimensions) = 1
      Flow Velocity =    7.89(Ft/s)
      Travel time  =   46.49 min.
      Individual channel flow =  600.523(CFS)
      Total capacity of improved channels =    600.523(CFS)
      Critical Depth in Channel =    1.44(Ft.)


      ********************** SCS CONVEX CHANNEL ROUTING **********************
      Convex method of stream routing  data items:
      Using equation: Outflow =
      O(t+dt) = (1-c*)O(t+dt-dt*) + Input(c*)
                where c* = 1 - (1-c)^e and dt = c(length)/velocity
                c(v/v+1.7) =   0.8228   Travel time =   3.73 (min.)
               dt*(unit time interval) =   5.00(min.),  e=   1.4186
               dt(routing time-step) =   3.07 (min.),   c* =   0.9141

      Output hydrograph delayed by 0  unit time increments


      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        P R I N T  O F  S T O R M
                     R u n o f f     H y d r o g r a p h
      ----------------------------------------------------------------------
                  Hydrograph in   5   Minute intervals (CFS)

      ----------------------------------------------------------------------
Time(h+m) Out = O(CFS) In = I  0      150.1     300.3     450.4     600.5
----------------------------------------------------------------------
  0+ 5       0.0476      0.13  O         |         |         |         |
  0+10       0.2609      0.51  O         |         |         |         |
  0+15       0.6943      1.09  O         |         |         |         |
  0+20       1.3721      1.99  O         |         |         |         |
```

```
0+25       2.4422      3.42  O         |          |          |          |
0+30       4.1192      5.64  O         |          |          |          |
0+35       6.1807      7.55  O         |          |          |          |
0+40       7.7897      8.57  O         |          |          |          |
0+45       8.7667      9.32  O         |          |          |          |
0+50       9.4882      9.92  O         |          |          |          |
0+55      10.0711     10.45  O         |          |          |          |
1+ 0      10.5717     10.89  O         |          |          |          |
1+ 5      10.9992     11.27  O         |          |          |          |
1+10      11.3696     11.61  O         |          |          |          |
1+15      11.7004     11.92  O         |          |          |          |
1+20      11.9955     12.19  O         |          |          |          |
1+25      12.2600     12.44  O         |          |          |          |
1+30      12.5005     12.66  O         |          |          |          |
1+35      12.7159     12.86  O         |          |          |          |
1+40      12.9067     13.03  O         |          |          |          |
1+45      13.0787     13.19  O         |          |          |          |
1+50      13.2355     13.34  O         |          |          |          |
1+55      13.3789     13.47  O         |          |          |          |
2+ 0      13.5079     13.59  O         |          |          |          |
2+ 5      13.6189     13.69  O         |          |          |          |
2+10      13.7147     13.78  O         |          |          |          |
2+15      13.8078     13.87  O         |          |          |          |
2+20      13.8983     13.96  O         |          |          |          |
2+25      13.9858     14.05  O         |          |          |          |
2+30      14.0722     14.13  O         |          |          |          |
2+35      14.1546     14.21  O         |          |          |          |
2+40      14.2328     14.29  O         |          |          |          |
2+45      14.3110     14.37  O         |          |          |          |
2+50      14.3893     14.44  O         |          |          |          |
2+55      14.4678     14.52  O         |          |          |          |
3+ 0      14.5461     14.60  O         |          |          |          |
3+ 5      14.6225     14.68  O         |          |          |          |
3+10      14.6975     14.75  O         |          |          |          |
3+15      14.7725     14.83  O         |          |          |          |
3+20      14.8465     14.90  O         |          |          |          |
3+25      14.9206     14.97  O         |          |          |          |
3+30      14.9938     15.04  OI        |          |          |          |
3+35      15.0633     15.11  |O        |          |          |          |
3+40      15.1324     15.18  |O        |          |          |          |
3+45      15.2022     15.25  |O        |          |          |          |
3+50      15.2720     15.32  |O        |          |          |          |
3+55      15.3410     15.39  |O        |          |          |          |
4+ 0      15.4095     15.46  |O        |          |          |          |
4+ 5      15.4787     15.53  |O        |          |          |          |
4+10      15.5487     15.60  |O        |          |          |          |
4+15      15.6194     15.67  |O        |          |          |          |
4+20      15.6910     15.74  |O        |          |          |          |
4+25      15.7633     15.81  |O        |          |          |          |
4+30      15.8365     15.89  |O        |          |          |          |
4+35      15.9105     15.96  |O        |          |          |          |
4+40      15.9854     16.04  |O        |          |          |          |
4+45      16.0612     16.12  |O        |          |          |          |
4+50      16.1378     16.19  |O        |          |          |          |
4+55      16.2154     16.27  |O        |          |          |          |
5+ 0      16.2939     16.35  |O        |          |          |          |
5+ 5      16.3733     16.43  |O        |          |          |          |
5+10      16.4537     16.51  |O        |          |          |          |
5+15      16.5351     16.59  |O        |          |          |          |
```

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|---|---|---|---|---|---|---|---|
| 5+20 | 16.6175 | 16.68 | O | | | | |
| 5+25 | 16.7009 | 16.76 | O | | | | |
| 5+30 | 16.7853 | 16.85 | O | | | | |
| 5+35 | 16.8708 | 16.93 | O | | | | |
| 5+40 | 16.9574 | 17.02 | O | | | | |
| 5+45 | 17.0451 | 17.11 | O | | | | |
| 5+50 | 17.1339 | 17.20 | O | | | | |
| 5+55 | 17.2238 | 17.29 | O | | | | |
| 6+ 0 | 17.3150 | 17.38 | O | | | | |
| 6+ 5 | 17.4073 | 17.47 | O | | | | |
| 6+10 | 17.5008 | 17.57 | O | | | | |
| 6+15 | 17.5957 | 17.66 | O | | | | |
| 6+20 | 17.6917 | 17.76 | O | | | | |
| 6+25 | 17.7891 | 17.86 | O | | | | |
| 6+30 | 17.8878 | 17.96 | O | | | | |
| 6+35 | 17.9879 | 18.06 | O | | | | |
| 6+40 | 18.0894 | 18.16 | O | | | | |
| 6+45 | 18.1923 | 18.27 | O | | | | |
| 6+50 | 18.2967 | 18.37 | O | | | | |
| 6+55 | 18.4025 | 18.48 | O | | | | |
| 7+ 0 | 18.5099 | 18.59 | O | | | | |
| 7+ 5 | 18.6188 | 18.70 | O | | | | |
| 7+10 | 18.7293 | 18.81 | O | | | | |
| 7+15 | 18.8415 | 18.92 | O | | | | |
| 7+20 | 18.9553 | 19.04 | O | | | | |
| 7+25 | 19.0709 | 19.15 | O | | | | |
| 7+30 | 19.1881 | 19.27 | O | | | | |
| 7+35 | 19.3073 | 19.39 | O | | | | |
| 7+40 | 19.4282 | 19.51 | O | | | | |
| 7+45 | 19.5510 | 19.64 | O | | | | |
| 7+50 | 19.6758 | 19.77 | O | | | | |
| 7+55 | 19.8025 | 19.89 | O | | | | |
| 8+ 0 | 19.9313 | 20.02 | O | | | | |
| 8+ 5 | 20.0621 | 20.16 | O | | | | |
| 8+10 | 20.1951 | 20.29 | O | | | | |
| 8+15 | 20.3304 | 20.43 | O | | | | |
| 8+20 | 20.4678 | 20.57 | O | | | | |
| 8+25 | 20.6076 | 20.71 | O | | | | |
| 8+30 | 20.7497 | 20.85 | O | | | | |
| 8+35 | 20.8943 | 21.00 | O | | | | |
| 8+40 | 21.0414 | 21.15 | O | | | | |
| 8+45 | 21.1912 | 21.30 | O | | | | |
| 8+50 | 21.3435 | 21.45 | O | | | | |
| 8+55 | 21.4986 | 21.61 | O | | | | |
| 9+ 0 | 21.6565 | 21.77 | O | | | | |
| 9+ 5 | 21.8173 | 21.93 | O | | | | |
| 9+10 | 21.9811 | 22.10 | O | | | | |
| 9+15 | 22.1480 | 22.27 | O | | | | |
| 9+20 | 22.3180 | 22.44 | O | | | | |
| 9+25 | 22.4913 | 22.62 | O | | | | |
| 9+30 | 22.6679 | 22.79 | O | | | | |
| 9+35 | 22.8481 | 22.98 | O | | | | |
| 9+40 | 23.0317 | 23.16 | O | | | | |
| 9+45 | 23.2191 | 23.35 | O | | | | |
| 9+50 | 23.4103 | 23.55 | O | | | | |
| 9+55 | 23.6055 | 23.75 | O | | | | |
| 10+ 0 | 23.8047 | 23.95 | O | | | | |
| 10+ 5 | 24.0081 | 24.15 | O | | | | |
| 10+10 | 24.2159 | 24.37 | O | | | | |

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|---|---|---|---|---|---|---|---|
| 10+15 | 24.4282 | 24.58 | O | | | | |
| 10+20 | 24.6451 | 24.80 | O | | | | |
| 10+25 | 24.8669 | 25.03 | O | | | | |
| 10+30 | 25.0936 | 25.26 | O | | | | |
| 10+35 | 25.3256 | 25.49 | O | | | | |
| 10+40 | 25.5629 | 25.73 | O | | | | |
| 10+45 | 25.8059 | 25.98 | O | | | | |
| 10+50 | 26.0545 | 26.23 | O | | | | |
| 10+55 | 26.3093 | 26.49 | O | | | | |
| 11+ 0 | 26.5702 | 26.76 | O | | | | |
| 11+ 5 | 26.8378 | 27.03 | O | | | | |
| 11+10 | 27.1120 | 27.31 | O | | | | |
| 11+15 | 27.3933 | 27.60 | O | | | | |
| 11+20 | 27.6819 | 27.89 | O | | | | |
| 11+25 | 27.9783 | 28.19 | O | | | | |
| 11+30 | 28.2825 | 28.50 | O | | | | |
| 11+35 | 28.5952 | 28.82 | O | | | | |
| 11+40 | 28.9164 | 29.15 | O | | | | |
| 11+45 | 29.2469 | 29.48 | O | | | | |
| 11+50 | 29.5868 | 29.83 | O | | | | |
| 11+55 | 29.9367 | 30.19 | OI | | | | |
| 12+ 0 | 30.2970 | 30.56 | O | | | | |
| 12+ 5 | 30.6538 | 30.89 | O | | | | |
| 12+10 | 30.9712 | 31.17 | O | | | | |
| 12+15 | 31.2332 | 31.40 | O | | | | |
| 12+20 | 31.4323 | 31.54 | O | | | | |
| 12+25 | 31.5239 | 31.53 | O | | | | |
| 12+30 | 31.4421 | 31.29 | O | | | | |
| 12+35 | 31.2551 | 31.16 | O | | | | |
| 12+40 | 31.2188 | 31.31 | O | | | | |
| 12+45 | 31.3896 | 31.56 | O | | | | |
| 12+50 | 31.6540 | 31.87 | O | | | | |
| 12+55 | 31.9781 | 32.23 | O | | | | |
| 13+ 0 | 32.3453 | 32.62 | O | | | | |
| 13+ 5 | 32.7548 | 33.06 | O | | | | |
| 13+10 | 33.2025 | 33.54 | O | | | | |
| 13+15 | 33.6850 | 34.04 | O | | | | |
| 13+20 | 34.2024 | 34.58 | O | | | | |
| 13+25 | 34.7552 | 35.16 | O | | | | |
| 13+30 | 35.3430 | 35.78 | O | | | | |
| 13+35 | 35.9686 | 36.43 | O | | | | |
| 13+40 | 36.6338 | 37.12 | O | | | | |
| 13+45 | 37.3398 | 37.86 | O | | | | |
| 13+50 | 38.0879 | 38.64 | O | | | | |
| 13+55 | 38.8815 | 39.46 | O | | | | |
| 14+ 0 | 39.7235 | 40.34 | O | | | | |
| 14+ 5 | 40.6331 | 41.32 | O | | | | |
| 14+10 | 41.6458 | 42.42 | O | | | | |
| 14+15 | 42.7793 | 43.63 | O | | | | |
| 14+20 | 44.0463 | 45.01 | O | | | | |
| 14+25 | 45.4964 | 46.62 | O | | | | |
| 14+30 | 47.1963 | 48.53 | O | | | | |
| 14+35 | 49.0983 | 50.46 | O | | | | |
| 14+40 | 50.9833 | 52.27 | O | | | | |
| 14+45 | 52.8136 | 54.13 | O | | | | |
| 14+50 | 54.7034 | 56.08 | O | | | | |
| 14+55 | 56.7034 | 58.18 | O | | | | |
| 15+ 0 | 58.8478 | 60.44 | OI | | | | |
| 15+ 5 | 61.1673 | 62.89 | O | | | | |

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|---|---|---|---|---|---|---|---|
| 15+10 | 63.6953 | 65.59 | O | | | | |
| 15+15 | 66.4784 | 68.57 | O | | | | |
| 15+20 | 69.5650 | 71.90 | O | | | | |
| 15+25 | 73.0264 | 75.66 | OI | | | | |
| 15+30 | 76.9508 | 79.97 | O | | | | |
| 15+35 | 81.4632 | 84.94 | O | | | | |
| 15+40 | 86.7267 | 90.85 | OI | | | | |
| 15+45 | 93.0138 | 98.00 | O | | | | |
| 15+50 | 100.7564 | 107.04 | OI | | | | |
| 15+55 | 110.7856 | 119.20 | O | | | | |
| 16+ 0 | 124.8599 | 137.31 | OI | | | | |
| 16+ 5 | 151.6110 | 180.91 | O I | | | | |
| 16+10 | 200.7288 | 244.26 | O I | | | | |
| 16+15 | 261.4999 | 303.77 | O I | | | | |
| 16+20 | 328.9879 | 385.59 | O I | | | | |
| 16+25 | 417.4953 | 489.87 | O | I | | | |
| 16+30 | 522.6642 | 600.52 | O | | I | | |
| 16+35 | 567.0103 | 524.44 | I O | | | | |
| 16+40 | 469.2816 | 357.63 | I | O | | | |
| 16+45 | 343.8789 | 291.43 | I O | | | | |
| 16+50 | 280.4121 | 247.40 | I O | | | | |
| 16+55 | 240.3953 | 219.49 | I O | | | | |
| 17+ 0 | 212.4690 | 194.48 | I O | | | | |
| 17+ 5 | 188.4811 | 173.08 | IO | | | | |
| 17+10 | 168.7981 | 157.18 | IO | | | | |
| 17+15 | 153.1127 | 142.82 | IO | | | | |
| 17+20 | 139.0545 | 129.64 | IO | | | | |
| 17+25 | 126.5847 | 118.68 | IO | | | | |
| 17+30 | 115.6053 | 108.03 | O | | | | |
| 17+35 | 104.9572 | 97.46 | O | | | | |
| 17+40 | 95.1246 | 89.00 | IO | | | | |
| 17+45 | 86.9129 | 81.58 | O | | | | |
| 17+50 | 79.7574 | 75.11 | O | | | | |
| 17+55 | 73.2495 | 68.71 | O | | | | |
| 18+ 0 | 66.9084 | 62.50 | O | | | | |
| 18+ 5 | 60.5155 | 55.80 | IO | | | | |
| 18+10 | 55.1832 | 52.91 | O | | | | |
| 18+15 | 52.2458 | 50.48 | O | | | | |
| 18+20 | 49.7103 | 47.87 | O | | | | |
| 18+25 | 47.4867 | 46.33 | O | | | | |
| 18+30 | 45.8475 | 44.68 | IO | | | | |
| 18+35 | 44.0204 | 42.53 | O | | | | |
| 18+40 | 42.2467 | 41.36 | O | | | | |
| 18+45 | 41.0414 | 40.23 | O | | | | |
| 18+50 | 39.8963 | 39.08 | O | | | | |
| 18+55 | 38.7804 | 38.03 | O | | | | |
| 19+ 0 | 37.5980 | 36.62 | O | | | | |
| 19+ 5 | 36.2023 | 35.19 | O | | | | |
| 19+10 | 34.9463 | 34.25 | O | | | | |
| 19+15 | 33.9083 | 33.11 | O | | | | |
| 19+20 | 32.7868 | 32.00 | O | | | | |
| 19+25 | 31.8183 | 31.29 | O | | | | |
| 19+30 | 30.6917 | 29.46 | IO | | | | |
| 19+35 | 29.2352 | 28.52 | O | | | | |
| 19+40 | 28.3393 | 27.84 | O | | | | |
| 19+45 | 27.6464 | 27.17 | O | | | | |
| 19+50 | 26.8976 | 26.28 | O | | | | |
| 19+55 | 26.0368 | 25.44 | O | | | | |
| 20+ 0 | 25.3132 | 24.93 | O | | | | |

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|---|---|---|---|---|---|---|---|
| 20+ 5 | 24.7929 | 24.45 | \|O | \| | \| | \| | \| |
| 20+10 | 24.3223 | 24.00 | \|O | \| | \| | \| | \| |
| 20+15 | 23.8819 | 23.58 | \|O | \| | \| | \| | \| |
| 20+20 | 23.4656 | 23.18 | \|O | \| | \| | \| | \| |
| 20+25 | 23.0697 | 22.80 | \|O | \| | \| | \| | \| |
| 20+30 | 22.6926 | 22.43 | \|O | \| | \| | \| | \| |
| 20+35 | 22.3324 | 22.08 | \|O | \| | \| | \| | \| |
| 20+40 | 21.9867 | 21.75 | \|O | \| | \| | \| | \| |
| 20+45 | 21.6552 | 21.43 | \|O | \| | \| | \| | \| |
| 20+50 | 21.3369 | 21.12 | \|O | \| | \| | \| | \| |
| 20+55 | 21.0314 | 20.82 | \|O | \| | \| | \| | \| |
| 21+ 0 | 20.7374 | 20.53 | \|O | \| | \| | \| | \| |
| 21+ 5 | 20.4533 | 20.26 | \|O | \| | \| | \| | \| |
| 21+10 | 20.1788 | 19.99 | \|O | \| | \| | \| | \| |
| 21+15 | 19.9136 | 19.73 | \|O | \| | \| | \| | \| |
| 21+20 | 19.6568 | 19.48 | \|O | \| | \| | \| | \| |
| 21+25 | 19.4084 | 19.24 | \|O | \| | \| | \| | \| |
| 21+30 | 19.1674 | 19.00 | \|O | \| | \| | \| | \| |
| 21+35 | 18.9327 | 18.77 | \|O | \| | \| | \| | \| |
| 21+40 | 18.7050 | 18.55 | \|O | \| | \| | \| | \| |
| 21+45 | 18.4840 | 18.33 | \|O | \| | \| | \| | \| |
| 21+50 | 18.2694 | 18.12 | \|O | \| | \| | \| | \| |
| 21+55 | 18.0605 | 17.92 | \|O | \| | \| | \| | \| |
| 22+ 0 | 17.8573 | 17.72 | \|O | \| | \| | \| | \| |
| 22+ 5 | 17.6596 | 17.52 | \|O | \| | \| | \| | \| |
| 22+10 | 17.4674 | 17.33 | \|O | \| | \| | \| | \| |
| 22+15 | 17.2803 | 17.15 | \|O | \| | \| | \| | \| |
| 22+20 | 17.0982 | 16.97 | \|O | \| | \| | \| | \| |
| 22+25 | 16.9209 | 16.80 | \|O | \| | \| | \| | \| |
| 22+30 | 16.7481 | 16.63 | \|O | \| | \| | \| | \| |
| 22+35 | 16.5796 | 16.46 | \|O | \| | \| | \| | \| |
| 22+40 | 16.4153 | 16.30 | \|O | \| | \| | \| | \| |
| 22+45 | 16.2550 | 16.14 | \|O | \| | \| | \| | \| |
| 22+50 | 16.0986 | 15.99 | \|O | \| | \| | \| | \| |
| 22+55 | 15.9459 | 15.84 | \|O | \| | \| | \| | \| |
| 23+ 0 | 15.7967 | 15.69 | \|O | \| | \| | \| | \| |
| 23+ 5 | 15.6510 | 15.55 | \|O | \| | \| | \| | \| |
| 23+10 | 15.5086 | 15.41 | \|O | \| | \| | \| | \| |
| 23+15 | 15.3694 | 15.27 | \|O | \| | \| | \| | \| |
| 23+20 | 15.2333 | 15.14 | \|O | \| | \| | \| | \| |
| 23+25 | 15.1001 | 15.01 | IO | \| | \| | \| | \| |
| 23+30 | 14.9698 | 14.88 | O | \| | \| | \| | \| |
| 23+35 | 14.8422 | 14.75 | O | \| | \| | \| | \| |
| 23+40 | 14.7173 | 14.63 | O | \| | \| | \| | \| |
| 23+45 | 14.5950 | 14.51 | O | \| | \| | \| | \| |
| 23+50 | 14.4752 | 14.39 | O | \| | \| | \| | \| |
| 23+55 | 14.3578 | 14.28 | O | \| | \| | \| | \| |
| 24+ 0 | 14.2427 | 14.16 | O | \| | \| | \| | \| |
| 24+ 5 | 14.0825 | 13.92 | O | \| | \| | \| | \| |
| 24+10 | 13.7595 | 13.43 | O | \| | \| | \| | \| |
| 24+15 | 13.2213 | 12.76 | O | \| | \| | \| | \| |
| 24+20 | 12.4457 | 11.76 | O | \| | \| | \| | \| |
| 24+25 | 11.2876 | 10.25 | O | \| | \| | \| | \| |
| 24+30 | 9.5369 | 7.97 | O | \| | \| | \| | \| |
| 24+35 | 7.4216 | 6.03 | O | \| | \| | \| | \| |
| 24+40 | 5.7809 | 4.99 | O | \| | \| | \| | \| |
| 24+45 | 4.7893 | 4.23 | O | \| | \| | \| | \| |
| 24+50 | 4.0640 | 3.63 | O | \| | \| | \| | \| |
| 24+55 | 3.4853 | 3.12 | O | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+ 0 | 2.9956 | 2.68 | O | \| | \| | \| | \| |
| 25+ 5 | 2.5846 | 2.32 | O | \| | \| | \| | \| |
| 25+10 | 2.2355 | 2.01 | O | \| | \| | \| | \| |
| 25+15 | 1.9301 | 1.73 | O | \| | \| | \| | \| |
| 25+20 | 1.6643 | 1.49 | O | \| | \| | \| | \| |
| 25+25 | 1.4322 | 1.28 | O | \| | \| | \| | \| |
| 25+30 | 1.2272 | 1.09 | O | \| | \| | \| | \| |
| 25+35 | 1.0498 | 0.94 | O | \| | \| | \| | \| |
| 25+40 | 0.8995 | 0.80 | O | \| | \| | \| | \| |
| 25+45 | 0.7699 | 0.69 | O | \| | \| | \| | \| |
| 25+50 | 0.6575 | 0.58 | O | \| | \| | \| | \| |
| 25+55 | 0.5602 | 0.50 | O | \| | \| | \| | \| |
| 26+ 0 | 0.4789 | 0.43 | O | \| | \| | \| | \| |
| 26+ 5 | 0.4168 | 0.38 | O | \| | \| | \| | \| |
| 26+10 | 0.3712 | 0.34 | O | \| | \| | \| | \| |
| 26+15 | 0.3293 | 0.30 | O | \| | \| | \| | \| |
| 26+20 | 0.2910 | 0.27 | O | \| | \| | \| | \| |
| 26+25 | 0.2566 | 0.23 | O | \| | \| | \| | \| |
| 26+30 | 0.2242 | 0.20 | O | \| | \| | \| | \| |
| 26+35 | 0.1968 | 0.18 | O | \| | \| | \| | \| |
| 26+40 | 0.1744 | 0.16 | O | \| | \| | \| | \| |
| 26+45 | 0.1529 | 0.14 | O | \| | \| | \| | \| |
| 26+50 | 0.1320 | 0.12 | O | \| | \| | \| | \| |
| 26+55 | 0.1118 | 0.10 | O | \| | \| | \| | \| |
| 27+ 0 | 0.0926 | 0.08 | O | \| | \| | \| | \| |
| 27+ 5 | 0.0762 | 0.07 | O | \| | \| | \| | \| |
| 27+10 | 0.0619 | 0.05 | O | \| | \| | \| | \| |
| 27+15 | 0.0485 | 0.04 | O | \| | \| | \| | \| |
| 27+20 | 0.0368 | 0.03 | O | \| | \| | \| | \| |
| 27+25 | 0.0258 | 0.02 | O | \| | \| | \| | \| |
| 27+30 | 0.0165 | 0.01 | O | \| | \| | \| | \| |
| 27+35 | 0.0116 | 0.01 | O | \| | \| | \| | \| |
| 27+40 | 0.0079 | 0.01 | O | \| | \| | \| | \| |
| 27+45 | 0.0043 | 0.00 | O | \| | \| | \| | \| |
| 27+50 | 0.0014 | 0.00 | O | \| | \| | \| | \| |
| 27+55 | 0.0000 | 0.00 | O | \| | \| | \| | \| |

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**********HYDROGRAPH DATA**********

Number of intervals = 335
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 567.010 (CFS)
Total volume = 84.598 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 600.523 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 84.598 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 4.100 to Point/Station 4.200
**** STREAM ROUTING SCS CONVEX METHOD ****

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HYDROGRAPH STREAM ROUTING DATA:
Length of stream = 4189.00 (Ft.)
Elevation difference = 75.00 (Ft.)
Slope of channel = 0.017904 (Vert/Horiz)

```
 Channel type - Improved Channel


 Channel length =  4189.00(Ft.)     Elevation difference =  75.00(Ft.)
 Channel evaluation using mean flow rate of hydrograph
 Channel base width  =  200.000(Ft.)
 Slope or 'Z' of left channel bank =   2.000
 Slope or 'Z' of right channel bank =   2.000
 Manning's 'N'    = 0.035
 Maximum depth of channel  =    1.000(Ft.)
 Flow(q) thru subarea =     40.957(CFS)
 Depth of flow =     0.136(Ft.)
 Average velocity =     1.502(Ft/s)
 Total flow rate =    40.957(CFS)
 Channel flow top width =  200.545(Ft.)
 Depth of flow in channel =   0.14(Ft.)
 Total number of channels (same dimensions) = 1
 Flow Velocity =    1.50(Ft/s)
 Travel time  =   46.49 min.
 Individual channel flow =   40.957(CFS)
 Total capacity of improved channels =     40.957(CFS)
 Critical Depth in Channel =    0.11(Ft.)


 Channel evaluation using maximum flow rate of hydrograph
 Flow(q) thru subarea =    567.010(CFS)
 Depth of flow =     0.659(Ft.)
 Average velocity =     4.277(Ft/s)
 Total flow rate =   567.010(CFS)
 Channel flow top width =  202.634(Ft.)
 Depth of flow in channel =   0.66(Ft.)
 Total number of channels (same dimensions) = 1
 Flow Velocity =    4.28(Ft/s)
 Travel time  =   46.49 min.
 Individual channel flow =  567.010(CFS)
 Total capacity of improved channels =    567.010(CFS)
 Critical Depth in Channel =    0.63(Ft.)


 ********************** SCS CONVEX CHANNEL ROUTING **********************
 Convex method of stream routing  data items:
 Using equation: Outflow =
 O(t+dt) = (1-c*)O(t+dt-dt*) + Input(c*)
           where c* = 1 - (1-c)^e and dt = c(length)/velocity
           c(v/v+1.7) =   0.7156   Travel time =  16.32 (min.)
         dt*(unit time interval) =   5.00(min.),  e=   0.6187
         dt(routing time-step) =  11.68 (min.),   c* =   0.5406

 Output hydrograph delayed by 0  unit time increments


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                   P R I N T  O F  S T O R M
                R u n o f f     H y d r o g r a p h
 ------------------------------------------------------------------------
             Hydrograph in   5   Minute intervals (CFS)

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Time(h+m) Out = O(CFS) In = I  0      141.8     283.5     425.3     567.0
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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0147 | 0.05 | O | | | | |
| 0+10 | 0.0984 | 0.26 | O | | | | |
| 0+15 | 0.3203 | 0.69 | O | | | | |
| 0+20 | 0.7320 | 1.37 | O | | | | |
| 0+25 | 1.4089 | 2.44 | O | | | | |
| 0+30 | 2.4861 | 4.12 | O | | | | |
| 0+35 | 4.0064 | 6.18 | O | | | | |
| 0+40 | 5.6794 | 7.79 | O | | | | |
| 0+45 | 7.1224 | 8.77 | O | | | | |
| 0+50 | 8.2344 | 9.49 | O | | | | |
| 0+55 | 9.0925 | 10.07 | O | | | | |
| 1+ 0 | 9.7764 | 10.57 | O | | | | |
| 1+ 5 | 10.3385 | 11.00 | O | | | | |
| 1+10 | 10.8102 | 11.37 | O | | | | |
| 1+15 | 11.2149 | 11.70 | O | | | | |
| 1+20 | 11.5686 | 12.00 | O | | | | |
| 1+25 | 11.8812 | 12.26 | O | | | | |
| 1+30 | 12.1603 | 12.50 | O | | | | |
| 1+35 | 12.4108 | 12.72 | O | | | | |
| 1+40 | 12.6347 | 12.91 | O | | | | |
| 1+45 | 12.8349 | 13.08 | O | | | | |
| 1+50 | 13.0152 | 13.24 | O | | | | |
| 1+55 | 13.1787 | 13.38 | O | | | | |
| 2+ 0 | 13.3268 | 13.51 | O | | | | |
| 2+ 5 | 13.4590 | 13.62 | O | | | | |
| 2+10 | 13.5751 | 13.71 | O | | | | |
| 2+15 | 13.6794 | 13.81 | O | | | | |
| 2+20 | 13.7768 | 13.90 | O | | | | |
| 2+25 | 13.8695 | 13.99 | O | | | | |
| 2+30 | 13.9591 | 14.07 | O | | | | |
| 2+35 | 14.0457 | 14.15 | O | | | | |
| 2+40 | 14.1288 | 14.23 | OI | | | | |
| 2+45 | 14.2092 | 14.31 | \|O | | | | |
| 2+50 | 14.2885 | 14.39 | \|O | | | | |
| 2+55 | 14.3673 | 14.47 | \|O | | | | |
| 3+ 0 | 14.4458 | 14.55 | \|O | | | | |
| 3+ 5 | 14.5237 | 14.62 | \|O | | | | |
| 3+10 | 14.6003 | 14.70 | \|O | | | | |
| 3+15 | 14.6760 | 14.77 | \|O | | | | |
| 3+20 | 14.7510 | 14.85 | \|O | | | | |
| 3+25 | 14.8255 | 14.92 | \|O | | | | |
| 3+30 | 14.8996 | 14.99 | \|O | | | | |
| 3+35 | 14.9720 | 15.06 | \|O | | | | |
| 3+40 | 15.0427 | 15.13 | \|O | | | | |
| 3+45 | 15.1128 | 15.20 | \|O | | | | |
| 3+50 | 15.1827 | 15.27 | \|O | | | | |
| 3+55 | 15.2523 | 15.34 | \|O | | | | |
| 4+ 0 | 15.3214 | 15.41 | \|O | | | | |
| 4+ 5 | 15.3905 | 15.48 | \|O | | | | |
| 4+10 | 15.4598 | 15.55 | \|O | | | | |
| 4+15 | 15.5297 | 15.62 | \|O | | | | |
| 4+20 | 15.6003 | 15.69 | \|O | | | | |
| 4+25 | 15.6717 | 15.76 | \|O | | | | |
| 4+30 | 15.7439 | 15.84 | \|O | | | | |
| 4+35 | 15.8168 | 15.91 | \|O | | | | |
| 4+40 | 15.8907 | 15.99 | \|O | | | | |
| 4+45 | 15.9653 | 16.06 | \|O | | | | |
| 4+50 | 16.0408 | 16.14 | \|O | | | | |

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|---|---|---|---|---|---|---|---|
| 4+55 | 16.1173 | 16.22 | O | | | | |
| 5+ 0 | 16.1946 | 16.29 | O | | | | |
| 5+ 5 | 16.2728 | 16.37 | O | | | | |
| 5+10 | 16.3520 | 16.45 | O | | | | |
| 5+15 | 16.4322 | 16.54 | O | | | | |
| 5+20 | 16.5133 | 16.62 | O | | | | |
| 5+25 | 16.5954 | 16.70 | O | | | | |
| 5+30 | 16.6785 | 16.79 | O | | | | |
| 5+35 | 16.7627 | 16.87 | O | | | | |
| 5+40 | 16.8479 | 16.96 | O | | | | |
| 5+45 | 16.9342 | 17.05 | O | | | | |
| 5+50 | 17.0216 | 17.13 | O | | | | |
| 5+55 | 17.1101 | 17.22 | O | | | | |
| 6+ 0 | 17.1998 | 17.31 | O | | | | |
| 6+ 5 | 17.2906 | 17.41 | O | | | | |
| 6+10 | 17.3826 | 17.50 | O | | | | |
| 6+15 | 17.4758 | 17.60 | O | | | | |
| 6+20 | 17.5703 | 17.69 | O | | | | |
| 6+25 | 17.6661 | 17.79 | O | | | | |
| 6+30 | 17.7631 | 17.89 | O | | | | |
| 6+35 | 17.8615 | 17.99 | O | | | | |
| 6+40 | 17.9612 | 18.09 | O | | | | |
| 6+45 | 18.0623 | 18.19 | O | | | | |
| 6+50 | 18.1649 | 18.30 | O | | | | |
| 6+55 | 18.2688 | 18.40 | O | | | | |
| 7+ 0 | 18.3743 | 18.51 | O | | | | |
| 7+ 5 | 18.4813 | 18.62 | O | | | | |
| 7+10 | 18.5898 | 18.73 | O | | | | |
| 7+15 | 18.6999 | 18.84 | O | | | | |
| 7+20 | 18.8117 | 18.96 | O | | | | |
| 7+25 | 18.9251 | 19.07 | O | | | | |
| 7+30 | 19.0401 | 19.19 | O | | | | |
| 7+35 | 19.1570 | 19.31 | O | | | | |
| 7+40 | 19.2756 | 19.43 | O | | | | |
| 7+45 | 19.3961 | 19.55 | O | | | | |
| 7+50 | 19.5184 | 19.68 | O | | | | |
| 7+55 | 19.6427 | 19.80 | O | | | | |
| 8+ 0 | 19.7689 | 19.93 | O | | | | |
| 8+ 5 | 19.8971 | 20.06 | O | | | | |
| 8+10 | 20.0275 | 20.20 | O | | | | |
| 8+15 | 20.1599 | 20.33 | O | | | | |
| 8+20 | 20.2946 | 20.47 | O | | | | |
| 8+25 | 20.4314 | 20.61 | O | | | | |
| 8+30 | 20.5706 | 20.75 | O | | | | |
| 8+35 | 20.7122 | 20.89 | O | | | | |
| 8+40 | 20.8561 | 21.04 | O | | | | |
| 8+45 | 21.0026 | 21.19 | O | | | | |
| 8+50 | 21.1517 | 21.34 | O | | | | |
| 8+55 | 21.3033 | 21.50 | O | | | | |
| 9+ 0 | 21.4577 | 21.66 | O | | | | |
| 9+ 5 | 21.6149 | 21.82 | O | | | | |
| 9+10 | 21.7750 | 21.98 | O | | | | |
| 9+15 | 21.9380 | 22.15 | O | | | | |
| 9+20 | 22.1041 | 22.32 | O | | | | |
| 9+25 | 22.2733 | 22.49 | O | | | | |
| 9+30 | 22.4458 | 22.67 | O | | | | |
| 9+35 | 22.6216 | 22.85 | O | | | | |
| 9+40 | 22.8008 | 23.03 | O | | | | |
| 9+45 | 22.9836 | 23.22 | O | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 9+50 | 23.1700 | 23.41 | O | | | | |
| 9+55 | 23.3603 | 23.61 | O | | | | |
| 10+ 0 | 23.5544 | 23.80 | O | | | | |
| 10+ 5 | 23.7526 | 24.01 | O | | | | |
| 10+10 | 23.9550 | 24.22 | O | | | | |
| 10+15 | 24.1617 | 24.43 | O | | | | |
| 10+20 | 24.3728 | 24.65 | O | | | | |
| 10+25 | 24.5886 | 24.87 | O | | | | |
| 10+30 | 24.8092 | 25.09 | O | | | | |
| 10+35 | 25.0347 | 25.33 | O | | | | |
| 10+40 | 25.2653 | 25.56 | O | | | | |
| 10+45 | 25.5013 | 25.81 | O | | | | |
| 10+50 | 25.7429 | 26.05 | O | | | | |
| 10+55 | 25.9901 | 26.31 | O | | | | |
| 11+ 0 | 26.2434 | 26.57 | O | | | | |
| 11+ 5 | 26.5028 | 26.84 | O | | | | |
| 11+10 | 26.7687 | 27.11 | O | | | | |
| 11+15 | 27.0413 | 27.39 | O | | | | |
| 11+20 | 27.3208 | 27.68 | O | | | | |
| 11+25 | 27.6077 | 27.98 | O | | | | |
| 11+30 | 27.9021 | 28.28 | O | | | | |
| 11+35 | 28.2044 | 28.60 | OI | | | | |
| 11+40 | 28.5150 | 28.92 | O | | | | |
| 11+45 | 28.8342 | 29.25 | O | | | | |
| 11+50 | 29.1624 | 29.59 | O | | | | |
| 11+55 | 29.5000 | 29.94 | O | | | | |
| 12+ 0 | 29.8475 | 30.30 | O | | | | |
| 12+ 5 | 30.2009 | 30.65 | O | | | | |
| 12+10 | 30.5439 | 30.97 | O | | | | |
| 12+15 | 30.8559 | 31.23 | O | | | | |
| 12+20 | 31.1215 | 31.43 | O | | | | |
| 12+25 | 31.3179 | 31.52 | O | | | | |
| 12+30 | 31.4040 | 31.44 | O | | | | |
| 12+35 | 31.3668 | 31.26 | O | | | | |
| 12+40 | 31.2952 | 31.22 | O | | | | |
| 12+45 | 31.3067 | 31.39 | O | | | | |
| 12+50 | 31.4333 | 31.65 | O | | | | |
| 12+55 | 31.6528 | 31.98 | O | | | | |
| 13+ 0 | 31.9422 | 32.35 | O | | | | |
| 13+ 5 | 32.2868 | 32.75 | O | | | | |
| 13+10 | 32.6782 | 33.20 | O | | | | |
| 13+15 | 33.1108 | 33.69 | O | | | | |
| 13+20 | 33.5812 | 34.20 | O | | | | |
| 13+25 | 34.0880 | 34.76 | O | | | | |
| 13+30 | 34.6304 | 35.34 | O | | | | |
| 13+35 | 35.2091 | 35.97 | O | | | | |
| 13+40 | 35.8254 | 36.63 | O | | | | |
| 13+45 | 36.4807 | 37.34 | O | | | | |
| 13+50 | 37.1765 | 38.09 | O | | | | |
| 13+55 | 37.9146 | 38.88 | O | | | | |
| 14+ 0 | 38.6977 | 39.72 | O | | | | |
| 14+ 5 | 39.5335 | 40.63 | O | | | | |
| 14+10 | 40.4411 | 41.65 | O | | | | |
| 14+15 | 41.4429 | 42.78 | OI | | | | |
| 14+20 | 42.5572 | 44.05 | O | | | | |
| 14+25 | 43.8106 | 45.50 | O | | | | |
| 14+30 | 45.2476 | 47.20 | O | | | | |
| 14+35 | 46.8892 | 49.10 | O | | | | |
| 14+40 | 48.6664 | 50.98 | O | | | | |

| | | | |
|---|---|---|---|
| 14+45 | 50.4849 | 52.81 | O |
| 14+50 | 52.3282 | 54.70 | O |
| 14+55 | 54.2307 | 56.70 | OI |
| 15+ 0 | 56.2306 | 58.85 | OI |
| 15+ 5 | 58.3627 | 61.17 | O |
| 15+10 | 60.6606 | 63.70 | O |
| 15+15 | 63.1618 | 66.48 | O |
| 15+20 | 65.9093 | 69.57 | O |
| 15+25 | 68.9559 | 73.03 | OI |
| 15+30 | 72.3700 | 76.95 | O |
| 15+35 | 76.2418 | 81.46 | O |
| 15+40 | 80.6921 | 86.73 | OI |
| 15+45 | 85.8986 | 93.01 | O |
| 15+50 | 92.1393 | 100.76 | OI |
| 15+55 | 99.8991 | 110.79 | O |
| 16+ 0 | 110.1365 | 124.86 | OI |
| 16+ 5 | 126.3680 | 151.61 | O I |
| 16+10 | 155.2027 | 200.73 | O I |
| 16+15 | 198.6062 | 261.50 | O I |
| 16+20 | 253.4760 | 328.99 | O I |
| 16+25 | 321.6670 | 417.50 | O I |
| 16+30 | 405.9934 | 522.66 | O I |
| 16+35 | 482.7807 | 567.01 | O I |
| 16+40 | 498.0986 | 469.28 | I O |
| 16+45 | 443.7437 | 343.88 | I O |
| 16+50 | 370.1298 | 280.41 | I O |
| 16+55 | 309.2526 | 240.40 | I O |
| 17+ 0 | 263.3916 | 212.47 | I O |
| 17+ 5 | 228.4443 | 188.48 | I O |
| 17+10 | 200.7530 | 168.80 | I O |
| 17+15 | 178.6273 | 153.11 | I O |
| 17+20 | 160.4866 | 139.05 | I O |
| 17+25 | 145.0441 | 126.58 | I O |
| 17+30 | 131.6695 | 115.61 | IO |
| 17+35 | 119.6923 | 104.96 | IO |
| 17+40 | 108.6858 | 95.12 | IO |
| 17+45 | 98.8152 | 86.91 | O |
| 17+50 | 90.1680 | 79.76 | IO |
| 17+55 | 82.5275 | 73.25 | O |
| 18+ 0 | 75.5509 | 66.91 | IO |
| 18+ 5 | 68.9018 | 60.52 | O |
| 18+10 | 62.7192 | 55.18 | IO |
| 18+15 | 57.7368 | 52.25 | IO |
| 18+20 | 53.9842 | 49.71 | O |
| 18+25 | 50.9861 | 47.49 | O |
| 18+30 | 48.5874 | 45.85 | O |
| 18+35 | 46.5412 | 44.02 | O |
| 18+40 | 44.6299 | 42.25 | IO |
| 18+45 | 42.9688 | 41.04 | IO |
| 18+50 | 41.5727 | 39.90 | O |
| 18+55 | 40.3214 | 38.78 | O |
| 19+ 0 | 39.1227 | 37.60 | O |
| 19+ 5 | 37.8669 | 36.20 | O |
| 19+10 | 36.5786 | 34.95 | O |
| 19+15 | 35.3752 | 33.91 | O |
| 19+20 | 34.2354 | 32.79 | O |
| 19+25 | 33.1528 | 31.82 | O |
| 19+30 | 32.0830 | 30.69 | O |
| 19+35 | 30.8804 | 29.24 | O |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 19+40 | 29.7139 | 28.34 | IO | | | | |
| 19+45 | 28.7565 | 27.65 | IO | | | | |
| 19+50 | 27.9248 | 26.90 | O | | | | |
| 19+55 | 27.1033 | 26.04 | O | | | | |
| 20+ 0 | 26.3030 | 25.31 | O | | | | |
| 20+ 5 | 25.6070 | 24.79 | O | | | | |
| 20+10 | 25.0214 | 24.32 | O | | | | |
| 20+15 | 24.5073 | 23.88 | O | | | | |
| 20+20 | 24.0404 | 23.47 | O | | | | |
| 20+25 | 23.6072 | 23.07 | O | | | | |
| 20+30 | 23.2000 | 22.69 | O | | | | |
| 20+35 | 22.8143 | 22.33 | O | | | | |
| 20+40 | 22.4469 | 21.99 | O | | | | |
| 20+45 | 22.0956 | 21.66 | O | | | | |
| 20+50 | 21.7591 | 21.34 | O | | | | |
| 20+55 | 21.4364 | 21.03 | O | | | | |
| 21+ 0 | 21.1265 | 20.74 | O | | | | |
| 21+ 5 | 20.8283 | 20.45 | O | | | | |
| 21+10 | 20.5407 | 20.18 | O | | | | |
| 21+15 | 20.2630 | 19.91 | O | | | | |
| 21+20 | 19.9947 | 19.66 | O | | | | |
| 21+25 | 19.7352 | 19.41 | O | | | | |
| 21+30 | 19.4840 | 19.17 | O | | | | |
| 21+35 | 19.2403 | 18.93 | O | | | | |
| 21+40 | 19.0036 | 18.70 | O | | | | |
| 21+45 | 18.7738 | 18.48 | O | | | | |
| 21+50 | 18.5508 | 18.27 | O | | | | |
| 21+55 | 18.3341 | 18.06 | O | | | | |
| 22+ 0 | 18.1234 | 17.86 | O | | | | |
| 22+ 5 | 17.9184 | 17.66 | O | | | | |
| 22+10 | 17.7190 | 17.47 | O | | | | |
| 22+15 | 17.5252 | 17.28 | O | | | | |
| 22+20 | 17.3365 | 17.10 | O | | | | |
| 22+25 | 17.1528 | 16.92 | O | | | | |
| 22+30 | 16.9740 | 16.75 | O | | | | |
| 22+35 | 16.7998 | 16.58 | O | | | | |
| 22+40 | 16.6299 | 16.42 | O | | | | |
| 22+45 | 16.4643 | 16.26 | O | | | | |
| 22+50 | 16.3028 | 16.10 | O | | | | |
| 22+55 | 16.1452 | 15.95 | O | | | | |
| 23+ 0 | 15.9913 | 15.80 | O | | | | |
| 23+ 5 | 15.8411 | 15.65 | O | | | | |
| 23+10 | 15.6943 | 15.51 | O | | | | |
| 23+15 | 15.5509 | 15.37 | O | | | | |
| 23+20 | 15.4107 | 15.23 | O | | | | |
| 23+25 | 15.2736 | 15.10 | O | | | | |
| 23+30 | 15.1395 | 14.97 | O | | | | |
| 23+35 | 15.0083 | 14.84 | O | | | | |
| 23+40 | 14.8799 | 14.72 | O | | | | |
| 23+45 | 14.7542 | 14.60 | O | | | | |
| 23+50 | 14.6311 | 14.48 | O | | | | |
| 23+55 | 14.5105 | 14.36 | O | | | | |
| 24+ 0 | 14.3924 | 14.24 | O | | | | |
| 24+ 5 | 14.2619 | 14.08 | IO | | | | |
| 24+10 | 14.0650 | 13.76 | O | | | | |
| 24+15 | 13.7334 | 13.22 | O | | | | |
| 24+20 | 13.2167 | 12.45 | O | | | | |
| 24+25 | 12.4418 | 11.29 | O | | | | |
| 24+30 | 11.2765 | 9.54 | O | | | | |

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|---|---|---|---|---|---|---|---|
| 24+35 | 9.6819 | 7.42 | O | \| | \| | \| | \| |
| 24+40 | 7.9526 | 5.78 | O | \| | \| | \| | \| |
| 24+45 | 6.4719 | 4.79 | O | \| | \| | \| | \| |
| 24+50 | 5.3380 | 4.06 | O | \| | \| | \| | \| |
| 24+55 | 4.4703 | 3.49 | O | \| | \| | \| | \| |
| 25+ 0 | 3.7864 | 3.00 | O | \| | \| | \| | \| |
| 25+ 5 | 3.2318 | 2.58 | O | \| | \| | \| | \| |
| 25+10 | 2.7739 | 2.24 | O | \| | \| | \| | \| |
| 25+15 | 2.3884 | 1.93 | O | \| | \| | \| | \| |
| 25+20 | 2.0584 | 1.66 | O | \| | \| | \| | \| |
| 25+25 | 1.7736 | 1.43 | O | \| | \| | \| | \| |
| 25+30 | 1.5256 | 1.23 | O | \| | \| | \| | \| |
| 25+35 | 1.3094 | 1.05 | O | \| | \| | \| | \| |
| 25+40 | 1.1226 | 0.90 | O | \| | \| | \| | \| |
| 25+45 | 0.9619 | 0.77 | O | \| | \| | \| | \| |
| 25+50 | 0.8234 | 0.66 | O | \| | \| | \| | \| |
| 25+55 | 0.7036 | 0.56 | O | \| | \| | \| | \| |
| 26+ 0 | 0.6009 | 0.48 | O | \| | \| | \| | \| |
| 26+ 5 | 0.5158 | 0.42 | O | \| | \| | \| | \| |
| 26+10 | 0.4482 | 0.37 | O | \| | \| | \| | \| |
| 26+15 | 0.3936 | 0.33 | O | \| | \| | \| | \| |
| 26+20 | 0.3470 | 0.29 | O | \| | \| | \| | \| |
| 26+25 | 0.3061 | 0.26 | O | \| | \| | \| | \| |
| 26+30 | 0.2693 | 0.22 | O | \| | \| | \| | \| |
| 26+35 | 0.2365 | 0.20 | O | \| | \| | \| | \| |
| 26+40 | 0.2081 | 0.17 | O | \| | \| | \| | \| |
| 26+45 | 0.1832 | 0.15 | O | \| | \| | \| | \| |
| 26+50 | 0.1604 | 0.13 | O | \| | \| | \| | \| |
| 26+55 | 0.1388 | 0.11 | O | \| | \| | \| | \| |
| 27+ 0 | 0.1183 | 0.09 | O | \| | \| | \| | \| |
| 27+ 5 | 0.0993 | 0.08 | O | \| | \| | \| | \| |
| 27+10 | 0.0824 | 0.06 | O | \| | \| | \| | \| |
| 27+15 | 0.0672 | 0.05 | O | \| | \| | \| | \| |
| 27+20 | 0.0535 | 0.04 | O | \| | \| | \| | \| |
| 27+25 | 0.0411 | 0.03 | O | \| | \| | \| | \| |
| 27+30 | 0.0299 | 0.02 | O | \| | \| | \| | \| |
| 27+35 | 0.0212 | 0.01 | O | \| | \| | \| | \| |
| 27+40 | 0.0149 | 0.01 | O | \| | \| | \| | \| |
| 27+45 | 0.0100 | 0.00 | O | \| | \| | \| | \| |
| 27+50 | 0.0060 | 0.00 | O | \| | \| | \| | \| |
| 27+55 | 0.0031 | 0.00 | O | \| | \| | \| | \| |
| 28+ 0 | 0.0014 | 0.00 | O | \| | \| | \| | \| |
| 28+ 5 | 0.0000 | 0.00 | O | \| | \| | \| | \| |

**********HYDROGRAPH DATA**********

Number of intervals = 337
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 498.099 (CFS)
Total volume = 84.598 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 600.523 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 84.598 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 4.200 to Point/Station 4.200
**** ADD/COMBINE/RECOVER HYDROGRAPHS ****

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********** HYDROGRAPH INFORMATION **********

From study/file name: OFFK10024.rte

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P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals (CFS)

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| Time(h+m) | Add q(CFS) | Tot. Q | 0 | 1563.6 | 3127.2 | 4690.8 | 6254.4 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 1.1621 | 1.18 | Q | | | | |
| 0+10 | 3.5476 | 3.65 | Q | | | | |
| 0+15 | 6.8988 | 7.22 | Q | | | | |
| 0+20 | 11.0548 | 11.79 | Q | | | | |
| 0+25 | 16.0462 | 17.46 | Q | | | | |
| 0+30 | 22.1928 | 24.68 | Q | | | | |
| 0+35 | 29.3824 | 33.39 | Q | | | | |
| 0+40 | 39.3423 | 45.02 | Q | | | | |
| 0+45 | 52.6114 | 59.73 | Q | | | | |
| 0+50 | 67.9182 | 76.15 | Q | | | | |
| 0+55 | 84.3156 | 93.41 | Q | | | | |
| 1+ 0 | 104.2019 | 113.98 | Q | | | | |
| 1+ 5 | 128.9655 | 139.30 | Q | | | | |
| 1+10 | 144.9575 | 155.77 | Q | | | | |
| 1+15 | 156.8234 | 168.04 | \|Q | | | | |
| 1+20 | 166.4143 | 177.98 | \|Q | | | | |
| 1+25 | 174.8390 | 186.72 | \|Q | | | | |
| 1+30 | 182.3637 | 194.52 | \|Q | | | | |
| 1+35 | 189.1758 | 201.59 | \|Q | | | | |
| 1+40 | 195.3563 | 207.99 | \|Q | | | | |
| 1+45 | 201.0322 | 213.87 | \|Q | | | | |
| 1+50 | 206.4800 | 219.50 | \|Q | | | | |
| 1+55 | 211.6675 | 224.85 | \|Q | | | | |
| 2+ 0 | 216.2630 | 229.59 | \|Q | | | | |
| 2+ 5 | 220.8124 | 234.27 | \|Q | | | | |
| 2+10 | 225.2375 | 238.81 | \|Q | | | | |
| 2+15 | 229.0924 | 242.77 | \|Q | | | | |
| 2+20 | 232.8623 | 246.64 | \|Q | | | | |
| 2+25 | 236.6334 | 250.50 | \|Q | | | | |
| 2+30 | 240.0503 | 254.01 | \|Q | | | | |
| 2+35 | 243.3841 | 257.43 | \|Q | | | | |
| 2+40 | 246.7198 | 260.85 | \|Q | | | | |
| 2+45 | 249.8331 | 264.04 | \|Q | | | | |
| 2+50 | 252.8064 | 267.09 | \|Q | | | | |
| 2+55 | 255.8077 | 270.17 | \|Q | | | | |
| 3+ 0 | 258.6594 | 273.11 | \|Q | | | | |
| 3+ 5 | 261.3599 | 275.88 | \|Q | | | | |
| 3+10 | 264.0646 | 278.66 | \|Q | | | | |
| 3+15 | 266.6863 | 281.36 | \|Q | | | | |
| 3+20 | 269.0646 | 283.82 | \|Q | | | | |
| 3+25 | 271.4614 | 286.29 | \|Q | | | | |
| 3+30 | 273.8205 | 288.72 | \|Q | | | | |
| 3+35 | 276.0342 | 291.01 | \|Q | | | | |
| 3+40 | 278.2313 | 293.27 | \|Q | | | | |

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|---|---|---|---|---|---|---|
| 3+45 | 280.4425 | 295.56 | \|Q | \| | \| | \| |
| 3+50 | 282.5328 | 297.72 | \|Q | \| | \| | \| |
| 3+55 | 284.6220 | 299.87 | \|Q | \| | \| | \| |
| 4+ 0 | 286.7093 | 302.03 | \|Q | \| | \| | \| |
| 4+ 5 | 288.7019 | 304.09 | \|Q | \| | \| | \| |
| 4+10 | 290.6411 | 306.10 | \|Q | \| | \| | \| |
| 4+15 | 292.6091 | 308.14 | \|Q | \| | \| | \| |
| 4+20 | 294.4276 | 310.03 | \|Q | \| | \| | \| |
| 4+25 | 296.1434 | 311.82 | \|Q | \| | \| | \| |
| 4+30 | 297.8608 | 313.60 | \|qQ | \| | \| | \| |
| 4+35 | 299.6079 | 315.42 | \|qQ | \| | \| | \| |
| 4+40 | 301.3567 | 317.25 | \|qQ | \| | \| | \| |
| 4+45 | 303.1361 | 319.10 | \|qQ | \| | \| | \| |
| 4+50 | 304.8971 | 320.94 | \|qQ | \| | \| | \| |
| 4+55 | 306.6230 | 322.74 | \|qQ | \| | \| | \| |
| 5+ 0 | 308.3457 | 324.54 | \|qQ | \| | \| | \| |
| 5+ 5 | 310.1004 | 326.37 | \|qQ | \| | \| | \| |
| 5+10 | 311.8573 | 328.21 | \|qQ | \| | \| | \| |
| 5+15 | 313.6471 | 330.08 | \| Q | \| | \| | \| |
| 5+20 | 315.4344 | 331.95 | \| Q | \| | \| | \| |
| 5+25 | 317.1727 | 333.77 | \| Q | \| | \| | \| |
| 5+30 | 318.8844 | 335.56 | \| Q | \| | \| | \| |
| 5+35 | 320.6307 | 337.39 | \| Q | \| | \| | \| |
| 5+40 | 322.3797 | 339.23 | \| Q | \| | \| | \| |
| 5+45 | 324.1643 | 341.10 | \| Q | \| | \| | \| |
| 5+50 | 325.9520 | 342.97 | \| Q | \| | \| | \| |
| 5+55 | 327.7585 | 344.87 | \| Q | \| | \| | \| |
| 6+ 0 | 329.5446 | 346.74 | \| Q | \| | \| | \| |
| 6+ 5 | 331.3684 | 348.66 | \| Q | \| | \| | \| |
| 6+10 | 333.1958 | 350.58 | \| Q | \| | \| | \| |
| 6+15 | 335.0623 | 352.54 | \| Q | \| | \| | \| |
| 6+20 | 336.9329 | 354.50 | \| Q | \| | \| | \| |
| 6+25 | 338.8387 | 356.50 | \| Q | \| | \| | \| |
| 6+30 | 340.7240 | 358.49 | \| Q | \| | \| | \| |
| 6+35 | 342.6477 | 360.51 | \| Q | \| | \| | \| |
| 6+40 | 344.5761 | 362.54 | \| Q | \| | \| | \| |
| 6+45 | 346.5478 | 364.61 | \| Q | \| | \| | \| |
| 6+50 | 348.5247 | 366.69 | \| Q | \| | \| | \| |
| 6+55 | 350.5460 | 368.81 | \| Q | \| | \| | \| |
| 7+ 0 | 352.5568 | 370.93 | \| Q | \| | \| | \| |
| 7+ 5 | 354.6055 | 373.09 | \| Q | \| | \| | \| |
| 7+10 | 356.6605 | 375.25 | \| Q | \| | \| | \| |
| 7+15 | 358.7636 | 377.46 | \| Q | \| | \| | \| |
| 7+20 | 360.8736 | 379.69 | \| Q | \| | \| | \| |
| 7+25 | 363.0334 | 381.96 | \| Q | \| | \| | \| |
| 7+30 | 365.1770 | 384.22 | \| Q | \| | \| | \| |
| 7+35 | 367.3239 | 386.48 | \| Q | \| | \| | \| |
| 7+40 | 369.4779 | 388.75 | \| Q | \| | \| | \| |
| 7+45 | 371.6855 | 391.08 | \| Q | \| | \| | \| |
| 7+50 | 373.9019 | 393.42 | \| Q | \| | \| | \| |
| 7+55 | 376.1741 | 395.82 | \| Q | \| | \| | \| |
| 8+ 0 | 378.4558 | 398.22 | \| Q | \| | \| | \| |
| 8+ 5 | 380.7957 | 400.69 | \| Q | \| | \| | \| |
| 8+10 | 383.1461 | 403.17 | \| Q | \| | \| | \| |
| 8+15 | 385.5571 | 405.72 | \| Q | \| | \| | \| |
| 8+20 | 387.9732 | 408.27 | \| Q | \| | \| | \| |
| 8+25 | 390.4065 | 410.84 | \| Q | \| | \| | \| |
| 8+30 | 392.8523 | 413.42 | \| Q | \| | \| | \| |
| 8+35 | 395.3638 | 416.08 | \| Q | \| | \| | \| |

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|---|---|---|---|---|---|---|
| 8+40 | 397.8888 | 418.74 | Q | | | |
| 8+45 | 400.4825 | 421.49 | Q | | | |
| 8+50 | 403.0911 | 424.24 | Q | | | |
| 8+55 | 405.7716 | 427.07 | Q | | | |
| 9+ 0 | 408.4682 | 429.93 | Q | | | |
| 9+ 5 | 411.2401 | 432.86 | Q | | | |
| 9+10 | 414.0297 | 435.80 | Q | | | |
| 9+15 | 416.8983 | 438.84 | Q | | | |
| 9+20 | 419.7861 | 441.89 | Q | | | |
| 9+25 | 422.7568 | 445.03 | Q | | | |
| 9+30 | 425.7487 | 448.19 | Q | | | |
| 9+35 | 428.8275 | 451.45 | Q | | | |
| 9+40 | 431.9295 | 454.73 | Q | | | |
| 9+45 | 435.1231 | 458.11 | Q | | | |
| 9+50 | 438.3419 | 461.51 | Q | | | |
| 9+55 | 441.6572 | 465.02 | Q | | | |
| 10+ 0 | 445.0002 | 468.55 | Q | | | |
| 10+ 5 | 448.4449 | 472.20 | qQ | | | |
| 10+10 | 451.9199 | 475.87 | qQ | | | |
| 10+15 | 455.5025 | 479.66 | qQ | | | |
| 10+20 | 459.1182 | 483.49 | qQ | | | |
| 10+25 | 462.8477 | 487.44 | qQ | | | |
| 10+30 | 466.6135 | 491.42 | qQ | | | |
| 10+35 | 470.4999 | 495.53 | Q | | | |
| 10+40 | 474.4263 | 499.69 | Q | | | |
| 10+45 | 478.4806 | 503.98 | Q | | | |
| 10+50 | 482.5789 | 508.32 | Q | | | |
| 10+55 | 486.8132 | 512.80 | Q | | | |
| 11+ 0 | 491.0960 | 517.34 | Q | | | |
| 11+ 5 | 495.5235 | 522.03 | Q | | | |
| 11+10 | 500.0045 | 526.77 | Q | | | |
| 11+15 | 504.6401 | 531.68 | Q | | | |
| 11+20 | 509.3347 | 536.66 | Q | | | |
| 11+25 | 514.1946 | 541.80 | Q | | | |
| 11+30 | 519.1197 | 547.02 | Q | | | |
| 11+35 | 524.2222 | 552.43 | Q | | | |
| 11+40 | 529.3969 | 557.91 | Q | | | |
| 11+45 | 534.7621 | 563.60 | Q | | | |
| 11+50 | 540.2077 | 569.37 | Q | | | |
| 11+55 | 545.8584 | 575.36 | Q | | | |
| 12+ 0 | 551.5985 | 581.45 | Q | | | |
| 12+ 5 | 557.3760 | 587.58 | Q | | | |
| 12+10 | 563.0587 | 593.60 | Q | | | |
| 12+15 | 568.8269 | 599.68 | Q | | | |
| 12+20 | 574.5771 | 605.70 | Q | | | |
| 12+25 | 580.4528 | 611.77 | Q | | | |
| 12+30 | 586.2675 | 617.67 | Q | | | |
| 12+35 | 592.1970 | 623.56 | Q | | | |
| 12+40 | 597.8234 | 629.12 | qQ | | | |
| 12+45 | 603.2297 | 634.54 | qQ | | | |
| 12+50 | 608.4633 | 639.90 | qQ | | | |
| 12+55 | 613.8551 | 645.51 | qQ | | | |
| 13+ 0 | 618.8628 | 650.80 | qQ | | | |
| 13+ 5 | 623.4604 | 655.75 | qQ | | | |
| 13+10 | 629.6376 | 662.32 | Q | | | |
| 13+15 | 636.8724 | 669.98 | Q | | | |
| 13+20 | 644.6951 | 678.28 | Q | | | |
| 13+25 | 653.1577 | 687.25 | Q | | | |
| 13+30 | 662.0279 | 696.66 | Q | | | |

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|---|---|---|---|---|---|---|---|
| 13+35 | 671.5237 | 706.73 | Q | | | | |
| 13+40 | 681.4285 | 717.25 | Q | | | | |
| 13+45 | 691.9934 | 728.47 | Q | | | | |
| 13+50 | 702.9568 | 740.13 | Q | | | | |
| 13+55 | 714.6224 | 752.54 | Q | | | | |
| 14+ 0 | 726.8092 | 765.51 | Q | | | | |
| 14+ 5 | 742.6577 | 782.19 | qQ | | | | |
| 14+10 | 762.0904 | 802.53 | qQ | | | | |
| 14+15 | 784.9239 | 826.37 | Q | | | | |
| 14+20 | 810.4186 | 852.98 | Q | | | | |
| 14+25 | 839.0702 | 882.88 | Q | | | | |
| 14+30 | 871.4476 | 916.70 | Q | | | | |
| 14+35 | 907.7246 | 954.61 | qQ | | | | |
| 14+40 | 951.8896 | 1000.56 | Q | | | | |
| 14+45 | 1005.9039 | 1056.39 | Q | | | | |
| 14+50 | 1066.2936 | 1118.62 | qQ | | | | |
| 14+55 | 1131.3554 | 1185.59 | Q | | | | |
| 15+ 0 | 1206.7570 | 1262.99 | qQ | | | | |
| 15+ 5 | 1296.7796 | 1355.14 | Q | | | | |
| 15+10 | 1367.0948 | 1427.76 | qQ | | | | |
| 15+15 | 1430.2336 | 1493.40 | Q | | | | |
| 15+20 | 1490.3837 | 1556.29 | Q | | | | |
| 15+25 | 1546.3761 | 1615.33 | qQ | | | | |
| 15+30 | 1598.1816 | 1670.55 | Q | | | | |
| 15+35 | 1649.1671 | 1725.41 | qQ | | | | |
| 15+40 | 1700.0470 | 1780.74 | qQ | | | | |
| 15+45 | 1754.0037 | 1839.90 | Q | | | | |
| 15+50 | 1811.0531 | 1903.19 | qQ | | | | |
| 15+55 | 1881.0845 | 1980.98 | Q | | | | |
| 16+ 0 | 1966.1854 | 2076.32 | qQ | | | | |
| 16+ 5 | 2193.1600 | 2319.53 | Q | | | | |
| 16+10 | 2423.1050 | 2578.31 | qQ | | | | |
| 16+15 | 2616.5226 | 2815.13 | q Q | | | | |
| 16+20 | 2777.6206 | 3031.10 | q Q | | | | |
| 16+25 | 2934.6396 | 3256.31 | q Q | | | | |
| 16+30 | 3185.1534 | 3591.15 | q Q | | | | |
| 16+35 | 3475.1045 | 3957.89 | q Q | | | | |
| 16+40 | 3987.5469 | 4485.65 | q Q | | | | |
| 16+45 | 4542.2444 | 4985.99 | q | Q | | | |
| 16+50 | 4909.0376 | 5279.17 | q | Q | | | |
| 16+55 | 5161.1287 | 5470.38 | qQ | | | | |
| 17+ 0 | 5614.2135 | 5877.61 | q Q | | | | |
| 17+ 5 | 6025.9518 | 6254.40 | q Q | | | | |
| 17+10 | 4761.6847 | 4962.44 | qQ | | | | |
| 17+15 | 4064.9636 | 4243.59 | q Q | | | | |
| 17+20 | 3658.9170 | 3819.40 | qQ | | | | |
| 17+25 | 3437.6436 | 3582.69 | qQ | | | | |
| 17+30 | 3230.7329 | 3362.40 | qQ | | | | |
| 17+35 | 3041.0774 | 3160.77 | qQ | | | | |
| 17+40 | 2861.2284 | 2969.91 | Q | | | | |
| 17+45 | 2694.6857 | 2793.50 | Q | | | | |
| 17+50 | 2562.9244 | 2653.09 | Q | | | | |
| 17+55 | 2424.1184 | 2506.65 | qQ | | | | |
| 18+ 0 | 2247.3829 | 2322.93 | Q | | | | |
| 18+ 5 | 2124.1333 | 2193.04 | qQ | | | | |
| 18+10 | 2017.1430 | 2079.86 | qQ | | | | |
| 18+15 | 1872.1830 | 1929.92 | qQ | | | | |
| 18+20 | 1796.0901 | 1850.07 | Q | | | | |
| 18+25 | 1732.5854 | 1783.57 | Q | | | | |

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|---|---|---|---|---|---|---|
| 18+30 | 1636.1214 | 1684.71 | Q | \| | \| | \| |
| 18+35 | 1572.6843 | 1619.23 | Q | \| | \| | \| |
| 18+40 | 1525.2388 | 1569.87 | qQ | \| | \| | \| |
| 18+45 | 1453.0122 | 1495.98 | Q\| | \| | \| | \| |
| 18+50 | 1395.7239 | 1437.30 | qQ\| | \| | \| | \| |
| 18+55 | 1357.1646 | 1397.49 | Q \| | \| | \| | \| |
| 19+ 0 | 1303.5119 | 1342.63 | Q \| | \| | \| | \| |
| 19+ 5 | 1249.4448 | 1287.31 | qQ \| | \| | \| | \| |
| 19+10 | 1215.4109 | 1251.99 | qQ \| | \| | \| | \| |
| 19+15 | 1169.3073 | 1204.68 | Q \| | \| | \| | \| |
| 19+20 | 1109.4806 | 1143.72 | Q \| | \| | \| | \| |
| 19+25 | 1078.8239 | 1111.98 | qQ \| | \| | \| | \| |
| 19+30 | 1045.9314 | 1078.01 | Q \| | \| | \| | \| |
| 19+35 | 999.3999 | 1030.28 | Q \| | \| | \| | \| |
| 19+40 | 971.9077 | 1001.62 | Q \| | \| | \| | \| |
| 19+45 | 946.4752 | 975.23 | Q \| | \| | \| | \| |
| 19+50 | 909.6919 | 937.62 | Q \| | \| | \| | \| |
| 19+55 | 884.0286 | 911.13 | Q \| | \| | \| | \| |
| 20+ 0 | 861.1160 | 887.42 | Q \| | \| | \| | \| |
| 20+ 5 | 825.4785 | 851.09 | Q \| | \| | \| | \| |
| 20+10 | 798.1327 | 823.15 | Q \| | \| | \| | \| |
| 20+15 | 776.8505 | 801.36 | qQ \| | \| | \| | \| |
| 20+20 | 739.1805 | 763.22 | Q \| | \| | \| | \| |
| 20+25 | 706.1500 | 729.76 | Q \| | \| | \| | \| |
| 20+30 | 690.8330 | 714.03 | Q \| | \| | \| | \| |
| 20+35 | 677.3442 | 700.16 | Q \| | \| | \| | \| |
| 20+40 | 663.8882 | 686.34 | Q \| | \| | \| | \| |
| 20+45 | 650.1348 | 672.23 | Q \| | \| | \| | \| |
| 20+50 | 634.3704 | 656.13 | Q \| | \| | \| | \| |
| 20+55 | 614.2477 | 635.68 | qQ \| | \| | \| | \| |
| 21+ 0 | 602.2912 | 623.42 | Q \| | \| | \| | \| |
| 21+ 5 | 591.8358 | 612.66 | Q \| | \| | \| | \| |
| 21+10 | 581.7165 | 602.26 | Q \| | \| | \| | \| |
| 21+15 | 571.0198 | 591.28 | Q \| | \| | \| | \| |
| 21+20 | 559.4368 | 579.43 | Q \| | \| | \| | \| |
| 21+25 | 539.6537 | 559.39 | Q \| | \| | \| | \| |
| 21+30 | 527.2532 | 546.74 | Q \| | \| | \| | \| |
| 21+35 | 519.0270 | 538.27 | Q \| | \| | \| | \| |
| 21+40 | 511.2615 | 530.27 | Q \| | \| | \| | \| |
| 21+45 | 503.3357 | 522.11 | Q \| | \| | \| | \| |
| 21+50 | 495.3424 | 513.89 | Q \| | \| | \| | \| |
| 21+55 | 485.5483 | 503.88 | Q \| | \| | \| | \| |
| 22+ 0 | 475.5707 | 493.69 | Q \| | \| | \| | \| |
| 22+ 5 | 468.8135 | 486.73 | qQ \| | \| | \| | \| |
| 22+10 | 462.3481 | 480.07 | qQ \| | \| | \| | \| |
| 22+15 | 455.9434 | 473.47 | qQ \| | \| | \| | \| |
| 22+20 | 449.4087 | 466.75 | Q \| | \| | \| | \| |
| 22+25 | 442.2833 | 459.44 | Q \| | \| | \| | \| |
| 22+30 | 433.2080 | 450.18 | Q \| | \| | \| | \| |
| 22+35 | 427.0287 | 443.83 | Q \| | \| | \| | \| |
| 22+40 | 421.4928 | 438.12 | Q \| | \| | \| | \| |
| 22+45 | 416.0542 | 432.52 | Q \| | \| | \| | \| |
| 22+50 | 410.5895 | 426.89 | Q \| | \| | \| | \| |
| 22+55 | 405.1701 | 421.32 | Q \| | \| | \| | \| |
| 23+ 0 | 398.0601 | 414.05 | Q \| | \| | \| | \| |
| 23+ 5 | 392.1123 | 407.95 | Q \| | \| | \| | \| |
| 23+10 | 387.3250 | 403.02 | Q \| | \| | \| | \| |
| 23+15 | 382.5644 | 398.12 | Q \| | \| | \| | \| |
| 23+20 | 377.5906 | 393.00 | Q \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+25 | 372.0532 | 387.33 | \| Q | \| | \| | \| | \| |
| 23+30 | 363.5391 | 378.68 | \| Q | \| | \| | \| | \| |
| 23+35 | 352.7138 | 367.72 | \| Q | \| | \| | \| | \| |
| 23+40 | 348.1303 | 363.01 | \| Q | \| | \| | \| | \| |
| 23+45 | 344.2392 | 358.99 | \| Q | \| | \| | \| | \| |
| 23+50 | 340.4436 | 355.07 | \| Q | \| | \| | \| | \| |
| 23+55 | 336.5420 | 351.05 | \| Q | \| | \| | \| | \| |
| 24+ 0 | 332.7685 | 347.16 | \| Q | \| | \| | \| | \| |
| 24+ 5 | 327.8681 | 342.13 | \| Q | \| | \| | \| | \| |
| 24+10 | 321.7387 | 335.80 | \| Q | \| | \| | \| | \| |
| 24+15 | 314.3434 | 328.08 | \| Q | \| | \| | \| | \| |
| 24+20 | 305.0980 | 318.31 | \|qQ | \| | \| | \| | \| |
| 24+25 | 290.8570 | 303.30 | \|Q | \| | \| | \| | \| |
| 24+30 | 281.4509 | 292.73 | \|Q | \| | \| | \| | \| |
| 24+35 | 271.5366 | 281.22 | \|Q | \| | \| | \| | \| |
| 24+40 | 259.0810 | 267.03 | \|Q | \| | \| | \| | \| |
| 24+45 | 243.3457 | 249.82 | \|Q | \| | \| | \| | \| |
| 24+50 | 225.8198 | 231.16 | \|Q | \| | \| | \| | \| |
| 24+55 | 207.4525 | 211.92 | \|Q | \| | \| | \| | \| |
| 25+ 0 | 185.8471 | 189.63 | \|Q | \| | \| | \| | \| |
| 25+ 5 | 159.6431 | 162.87 | \|Q | \| | \| | \| | \| |
| 25+10 | 142.5025 | 145.28 | Q | \| | \| | \| | \| |
| 25+15 | 129.7062 | 132.09 | Q | \| | \| | \| | \| |
| 25+20 | 119.3540 | 121.41 | Q | \| | \| | \| | \| |
| 25+25 | 110.4278 | 112.20 | Q | \| | \| | \| | \| |
| 25+30 | 102.5068 | 104.03 | Q | \| | \| | \| | \| |
| 25+35 | 95.4073 | 96.72 | Q | \| | \| | \| | \| |
| 25+40 | 89.0259 | 90.15 | Q | \| | \| | \| | \| |
| 25+45 | 83.2471 | 84.21 | Q | \| | \| | \| | \| |
| 25+50 | 77.7674 | 78.59 | Q | \| | \| | \| | \| |
| 25+55 | 72.6345 | 73.34 | Q | \| | \| | \| | \| |
| 26+ 0 | 68.1551 | 68.76 | Q | \| | \| | \| | \| |
| 26+ 5 | 63.7974 | 64.31 | Q | \| | \| | \| | \| |
| 26+10 | 59.6159 | 60.06 | Q | \| | \| | \| | \| |
| 26+15 | 56.0749 | 56.47 | Q | \| | \| | \| | \| |
| 26+20 | 52.6607 | 53.01 | Q | \| | \| | \| | \| |
| 26+25 | 49.3003 | 49.61 | Q | \| | \| | \| | \| |
| 26+30 | 46.3334 | 46.60 | Q | \| | \| | \| | \| |
| 26+35 | 43.5066 | 43.74 | Q | \| | \| | \| | \| |
| 26+40 | 40.7113 | 40.92 | Q | \| | \| | \| | \| |
| 26+45 | 38.1930 | 38.38 | Q | \| | \| | \| | \| |
| 26+50 | 35.8441 | 36.00 | Q | \| | \| | \| | \| |
| 26+55 | 33.5175 | 33.66 | Q | \| | \| | \| | \| |
| 27+ 0 | 31.3670 | 31.49 | Q | \| | \| | \| | \| |
| 27+ 5 | 29.4156 | 29.51 | Q | \| | \| | \| | \| |
| 27+10 | 27.4827 | 27.57 | Q | \| | \| | \| | \| |
| 27+15 | 25.6783 | 25.75 | Q | \| | \| | \| | \| |
| 27+20 | 24.1377 | 24.19 | Q | \| | \| | \| | \| |
| 27+25 | 22.6207 | 22.66 | Q | \| | \| | \| | \| |
| 27+30 | 21.1586 | 21.19 | Q | \| | \| | \| | \| |
| 27+35 | 19.8831 | 19.90 | Q | \| | \| | \| | \| |
| 27+40 | 18.6390 | 18.65 | Q | \| | \| | \| | \| |
| 27+45 | 17.4200 | 17.43 | Q | \| | \| | \| | \| |
| 27+50 | 16.3358 | 16.34 | Q | \| | \| | \| | \| |
| 27+55 | 15.2909 | 15.29 | Q | \| | \| | \| | \| |
| 28+ 0 | 14.2600 | 14.26 | Q | \| | \| | \| | \| |
| 28+ 5 | 13.3617 | 13.36 | Q | \| | \| | \| | \| |
| 28+10 | 12.5273 | 12.53 | Q | \| | \| | \| | \| |
| 28+15 | 11.7005 | 11.70 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 28+20 | 11.0329 | 11.03 | Q | \| | \| | \| | \| |
| 28+25 | 10.5031 | 10.50 | Q | \| | \| | \| | \| |
| 28+30 | 9.9785 | 9.98 | Q | \| | \| | \| | \| |
| 28+35 | 9.4589 | 9.46 | Q | \| | \| | \| | \| |
| 28+40 | 8.9441 | 8.94 | Q | \| | \| | \| | \| |
| 28+45 | 8.4341 | 8.43 | Q | \| | \| | \| | \| |
| 28+50 | 7.9491 | 7.95 | Q | \| | \| | \| | \| |
| 28+55 | 7.5347 | 7.53 | Q | \| | \| | \| | \| |
| 29+ 0 | 7.1293 | 7.13 | Q | \| | \| | \| | \| |
| 29+ 5 | 6.7276 | 6.73 | Q | \| | \| | \| | \| |
| 29+10 | 6.3296 | 6.33 | Q | \| | \| | \| | \| |
| 29+15 | 5.9350 | 5.94 | Q | \| | \| | \| | \| |
| 29+20 | 5.5490 | 5.55 | Q | \| | \| | \| | \| |
| 29+25 | 5.2491 | 5.25 | Q | \| | \| | \| | \| |
| 29+30 | 4.9808 | 4.98 | Q | \| | \| | \| | \| |
| 29+35 | 4.7150 | 4.71 | Q | \| | \| | \| | \| |
| 29+40 | 4.4515 | 4.45 | Q | \| | \| | \| | \| |
| 29+45 | 4.1904 | 4.19 | Q | \| | \| | \| | \| |
| 29+50 | 3.9316 | 3.93 | Q | \| | \| | \| | \| |
| 29+55 | 3.6928 | 3.69 | Q | \| | \| | \| | \| |
| 30+ 0 | 3.4798 | 3.48 | Q | \| | \| | \| | \| |
| 30+ 5 | 3.2688 | 3.27 | Q | \| | \| | \| | \| |
| 30+10 | 3.0596 | 3.06 | Q | \| | \| | \| | \| |
| 30+15 | 2.8522 | 2.85 | Q | \| | \| | \| | \| |
| 30+20 | 2.6465 | 2.65 | Q | \| | \| | \| | \| |
| 30+25 | 2.4477 | 2.45 | Q | \| | \| | \| | \| |
| 30+30 | 2.2753 | 2.28 | Q | \| | \| | \| | \| |
| 30+35 | 2.1078 | 2.11 | Q | \| | \| | \| | \| |
| 30+40 | 1.9415 | 1.94 | Q | \| | \| | \| | \| |
| 30+45 | 1.7767 | 1.78 | Q | \| | \| | \| | \| |
| 30+50 | 1.6131 | 1.61 | Q | \| | \| | \| | \| |
| 30+55 | 1.4513 | 1.45 | Q | \| | \| | \| | \| |
| 31+ 0 | 1.3069 | 1.31 | Q | \| | \| | \| | \| |
| 31+ 5 | 1.1721 | 1.17 | Q | \| | \| | \| | \| |
| 31+10 | 1.0382 | 1.04 | Q | \| | \| | \| | \| |
| 31+15 | 0.9055 | 0.91 | Q | \| | \| | \| | \| |
| 31+20 | 0.7737 | 0.77 | Q | \| | \| | \| | \| |
| 31+25 | 0.6429 | 0.64 | Q | \| | \| | \| | \| |
| 31+30 | 0.5367 | 0.54 | Q | \| | \| | \| | \| |
| 31+35 | 0.4798 | 0.48 | Q | \| | \| | \| | \| |
| 31+40 | 0.4242 | 0.42 | Q | \| | \| | \| | \| |
| 31+45 | 0.3690 | 0.37 | Q | \| | \| | \| | \| |
| 31+50 | 0.3142 | 0.31 | Q | \| | \| | \| | \| |
| 31+55 | 0.2598 | 0.26 | Q | \| | \| | \| | \| |
| 32+ 0 | 0.2058 | 0.21 | Q | \| | \| | \| | \| |
| 32+ 5 | 0.1522 | 0.15 | Q | \| | \| | \| | \| |
| 32+10 | 0.0990 | 0.10 | Q | \| | \| | \| | \| |
| 32+15 | 0.0462 | 0.05 | Q | \| | \| | \| | \| |

**********HYDROGRAPH DATA**********

Number of intervals = 387
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 6254.396 (CFS)
Total volume = 1730.417 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 600.523 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 84.598 | 0.000 | 0.000 | 0.000 | 0.000 |

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FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014
Study date: 08/10/17

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164309 - NRG COOLWATER SOLAR FACILITY - DAGGETT, CA
OFFSITE AREAS "J" & "L" ROUTING
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-10-17

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Program License Serial Number 6320

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********** HYDROGRAPH INFORMATION **********

From study/file name: OFFJ10024.rte
**********HYDROGRAPH DATA**********
Number of intervals = 333
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 1201.045 (CFS)
Total volume = 169.197 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 5.000 to Point/Station 5.000
**** FLOWBY BASIN ROUTING OR SPLIT FLOW ****

A constant split flow fraction of 0.5000 is
being diverted from the main stream into stream number 1
Total volume of excess flow diverted into flowby
basin (stream number 1 ) is 84.60(Ac.Ft)

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P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals (CFS)

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| Time(h+m) | Volume(Ac.Ft) | Q(CFS) | 0 | 150.1 | 300.3 | 450.4 | 600.5 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0009 | 0.13 | Q | \| | \| | \| | \| |
| 0+10 | 0.0045 | 0.51 | Q | \| | \| | \| | \| |
| 0+15 | 0.0120 | 1.09 | Q | \| | \| | \| | \| |
| 0+20 | 0.0257 | 1.99 | Q | \| | \| | \| | \| |
| 0+25 | 0.0492 | 3.42 | Q | \| | \| | \| | \| |
| 0+30 | 0.0881 | 5.64 | Q | \| | \| | \| | \| |
| 0+35 | 0.1400 | 7.55 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+40 | 0.1990 | 8.57 | Q | \| | \| | \| | \| |
| 0+45 | 0.2633 | 9.32 | Q | \| | \| | \| | \| |
| 0+50 | 0.3316 | 9.92 | Q | \| | \| | \| | \| |
| 0+55 | 0.4036 | 10.45 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.4786 | 10.89 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.5562 | 11.27 | Q | \| | \| | \| | \| |
| 1+10 | 0.6362 | 11.61 | Q | \| | \| | \| | \| |
| 1+15 | 0.7183 | 11.92 | Q | \| | \| | \| | \| |
| 1+20 | 0.8022 | 12.19 | Q | \| | \| | \| | \| |
| 1+25 | 0.8879 | 12.44 | Q | \| | \| | \| | \| |
| 1+30 | 0.9751 | 12.66 | Q | \| | \| | \| | \| |
| 1+35 | 1.0636 | 12.86 | Q | \| | \| | \| | \| |
| 1+40 | 1.1534 | 13.03 | Q | \| | \| | \| | \| |
| 1+45 | 1.2442 | 13.19 | Q | \| | \| | \| | \| |
| 1+50 | 1.3361 | 13.34 | Q | \| | \| | \| | \| |
| 1+55 | 1.4289 | 13.47 | Q | \| | \| | \| | \| |
| 2+ 0 | 1.5225 | 13.59 | Q | \| | \| | \| | \| |
| 2+ 5 | 1.6168 | 13.69 | Q | \| | \| | \| | \| |
| 2+10 | 1.7117 | 13.78 | Q | \| | \| | \| | \| |
| 2+15 | 1.8073 | 13.87 | Q | \| | \| | \| | \| |
| 2+20 | 1.9034 | 13.96 | Q | \| | \| | \| | \| |
| 2+25 | 2.0002 | 14.05 | Q | \| | \| | \| | \| |
| 2+30 | 2.0975 | 14.13 | Q | \| | \| | \| | \| |
| 2+35 | 2.1953 | 14.21 | QV | \| | \| | \| | \| |
| 2+40 | 2.2938 | 14.29 | QV | \| | \| | \| | \| |
| 2+45 | 2.3927 | 14.37 | QV | \| | \| | \| | \| |
| 2+50 | 2.4922 | 14.44 | QV | \| | \| | \| | \| |
| 2+55 | 2.5922 | 14.52 | QV | \| | \| | \| | \| |
| 3+ 0 | 2.6928 | 14.60 | QV | \| | \| | \| | \| |
| 3+ 5 | 2.7938 | 14.68 | QV | \| | \| | \| | \| |
| 3+10 | 2.8954 | 14.75 | QV | \| | \| | \| | \| |
| 3+15 | 2.9975 | 14.83 | QV | \| | \| | \| | \| |
| 3+20 | 3.1001 | 14.90 | QV | \| | \| | \| | \| |
| 3+25 | 3.2033 | 14.97 | QV | \| | \| | \| | \| |
| 3+30 | 3.3069 | 15.04 | \|Q | \| | \| | \| | \| |
| 3+35 | 3.4109 | 15.11 | \|Q | \| | \| | \| | \| |
| 3+40 | 3.5155 | 15.18 | \|Q | \| | \| | \| | \| |
| 3+45 | 3.6205 | 15.25 | \|Q | \| | \| | \| | \| |
| 3+50 | 3.7260 | 15.32 | \|Q | \| | \| | \| | \| |
| 3+55 | 3.8320 | 15.39 | \|Q | \| | \| | \| | \| |
| 4+ 0 | 3.9385 | 15.46 | \|Q | \| | \| | \| | \| |
| 4+ 5 | 4.0454 | 15.53 | \|Q | \| | \| | \| | \| |
| 4+10 | 4.1529 | 15.60 | \|Q | \| | \| | \| | \| |
| 4+15 | 4.2608 | 15.67 | \|QV | \| | \| | \| | \| |
| 4+20 | 4.3692 | 15.74 | \|QV | \| | \| | \| | \| |
| 4+25 | 4.4781 | 15.81 | \|QV | \| | \| | \| | \| |
| 4+30 | 4.5875 | 15.89 | \|QV | \| | \| | \| | \| |
| 4+35 | 4.6975 | 15.96 | \|QV | \| | \| | \| | \| |
| 4+40 | 4.8080 | 16.04 | \|QV | \| | \| | \| | \| |
| 4+45 | 4.9189 | 16.12 | \|QV | \| | \| | \| | \| |
| 4+50 | 5.0305 | 16.19 | \|QV | \| | \| | \| | \| |
| 4+55 | 5.1425 | 16.27 | \|QV | \| | \| | \| | \| |
| 5+ 0 | 5.2551 | 16.35 | \|QV | \| | \| | \| | \| |
| 5+ 5 | 5.3683 | 16.43 | \|QV | \| | \| | \| | \| |
| 5+10 | 5.4820 | 16.51 | \|QV | \| | \| | \| | \| |
| 5+15 | 5.5963 | 16.59 | \|QV | \| | \| | \| | \| |
| 5+20 | 5.7111 | 16.68 | \|QV | \| | \| | \| | \| |
| 5+25 | 5.8265 | 16.76 | \|QV | \| | \| | \| | \| |
| 5+30 | 5.9426 | 16.85 | \|QV | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+35 | 6.0592 | 16.93 | QV | | | | |
| 5+40 | 6.1764 | 17.02 | QV | | | | |
| 5+45 | 6.2942 | 17.11 | QV | | | | |
| 5+50 | 6.4126 | 17.20 | Q V | | | | |
| 5+55 | 6.5317 | 17.29 | Q V | | | | |
| 6+ 0 | 6.6514 | 17.38 | Q V | | | | |
| 6+ 5 | 6.7717 | 17.47 | Q V | | | | |
| 6+10 | 6.8927 | 17.57 | Q V | | | | |
| 6+15 | 7.0144 | 17.66 | Q V | | | | |
| 6+20 | 7.1367 | 17.76 | Q V | | | | |
| 6+25 | 7.2597 | 17.86 | Q V | | | | |
| 6+30 | 7.3834 | 17.96 | Q V | | | | |
| 6+35 | 7.5077 | 18.06 | Q V | | | | |
| 6+40 | 7.6328 | 18.16 | Q V | | | | |
| 6+45 | 7.7586 | 18.27 | Q V | | | | |
| 6+50 | 7.8851 | 18.37 | Q V | | | | |
| 6+55 | 8.0124 | 18.48 | Q V | | | | |
| 7+ 0 | 8.1404 | 18.59 | Q V | | | | |
| 7+ 5 | 8.2692 | 18.70 | Q V | | | | |
| 7+10 | 8.3987 | 18.81 | Q V | | | | |
| 7+15 | 8.5290 | 18.92 | Q  V | | | | |
| 7+20 | 8.6601 | 19.04 | Q  V | | | | |
| 7+25 | 8.7920 | 19.15 | Q  V | | | | |
| 7+30 | 8.9248 | 19.27 | Q  V | | | | |
| 7+35 | 9.0583 | 19.39 | Q  V | | | | |
| 7+40 | 9.1927 | 19.51 | Q  V | | | | |
| 7+45 | 9.3280 | 19.64 | Q  V | | | | |
| 7+50 | 9.4641 | 19.77 | Q  V | | | | |
| 7+55 | 9.6011 | 19.89 | Q  V | | | | |
| 8+ 0 | 9.7390 | 20.02 | Q  V | | | | |
| 8+ 5 | 9.8778 | 20.16 | Q  V | | | | |
| 8+10 | 10.0176 | 20.29 | Q  V | | | | |
| 8+15 | 10.1582 | 20.43 | Q  V | | | | |
| 8+20 | 10.2999 | 20.57 | Q  V | | | | |
| 8+25 | 10.4425 | 20.71 | Q  V | | | | |
| 8+30 | 10.5861 | 20.85 | Q   V | | | | |
| 8+35 | 10.7307 | 21.00 | Q   V | | | | |
| 8+40 | 10.8764 | 21.15 | Q   V | | | | |
| 8+45 | 11.0230 | 21.30 | Q   V | | | | |
| 8+50 | 11.1708 | 21.45 | Q   V | | | | |
| 8+55 | 11.3196 | 21.61 | Q   V | | | | |
| 9+ 0 | 11.4695 | 21.77 | Q   V | | | | |
| 9+ 5 | 11.6206 | 21.93 | Q   V | | | | |
| 9+10 | 11.7728 | 22.10 | Q   V | | | | |
| 9+15 | 11.9261 | 22.27 | Q   V | | | | |
| 9+20 | 12.0807 | 22.44 | Q   V | | | | |
| 9+25 | 12.2364 | 22.62 | Q   V | | | | |
| 9+30 | 12.3934 | 22.79 | Q   V | | | | |
| 9+35 | 12.5517 | 22.98 | Q   V | | | | |
| 9+40 | 12.7112 | 23.16 | Q    V | | | | |
| 9+45 | 12.8720 | 23.35 | Q    V | | | | |
| 9+50 | 13.0342 | 23.55 | Q    V | | | | |
| 9+55 | 13.1977 | 23.75 | Q    V | | | | |
| 10+ 0 | 13.3627 | 23.95 | Q    V | | | | |
| 10+ 5 | 13.5290 | 24.15 | Q    V | | | | |
| 10+10 | 13.6968 | 24.37 | Q    V | | | | |
| 10+15 | 13.8661 | 24.58 | Q    V | | | | |
| 10+20 | 14.0369 | 24.80 | Q    V | | | | |
| 10+25 | 14.2093 | 25.03 | Q    V | | | | |

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10+30      14.3832     25.26  |Q    V   |          |          |          |
10+35      14.5588     25.49  |Q    V   |          |          |          |
10+40      14.7360     25.73  |Q    V   |          |          |          |
10+45      14.9149     25.98  |Q     V  |          |          |          |
10+50      15.0956     26.23  |Q     V  |          |          |          |
10+55      15.2781     26.49  |Q     V  |          |          |          |
11+ 0      15.4623     26.76  |Q     V  |          |          |          |
11+ 5      15.6485     27.03  |Q     V  |          |          |          |
11+10      15.8366     27.31  |Q     V  |          |          |          |
11+15      16.0266     27.60  |Q     V  |          |          |          |
11+20      16.2187     27.89  |Q     V  |          |          |          |
11+25      16.4129     28.19  |Q     V  |          |          |          |
11+30      16.6092     28.50  |Q     V  |          |          |          |
11+35      16.8076     28.82  |Q     V  |          |          |          |
11+40      17.0084     29.15  |Q      V |          |          |          |
11+45      17.2115     29.48  |Q      V |          |          |          |
11+50      17.4169     29.83  |Q      V |          |          |          |
11+55      17.6248     30.19  | Q     V |          |          |          |
12+ 0      17.8353     30.56  | Q     V |          |          |          |
12+ 5      18.0480     30.89  | Q     V |          |          |          |
12+10      18.2627     31.17  | Q     V |          |          |          |
12+15      18.4789     31.40  | Q     V |          |          |          |
12+20      18.6961     31.54  | Q     V |          |          |          |
12+25      18.9133     31.53  | Q     V |          |          |          |
12+30      19.1288     31.29  | Q      V|          |          |          |
12+35      19.3433     31.16  | Q      V|          |          |          |
12+40      19.5590     31.31  | Q      V|          |          |          |
12+45      19.7763     31.56  | Q      V|          |          |          |
12+50      19.9958     31.87  | Q      V|          |          |          |
12+55      20.2177     32.23  | Q      V|          |          |          |
13+ 0      20.4424     32.62  | Q      V|          |          |          |
13+ 5      20.6701     33.06  | Q      V|          |          |          |
13+10      20.9011     33.54  | Q      V|          |          |          |
13+15      21.1355     34.04  | Q      V|          |          |          |
13+20      21.3737     34.58  | Q       V          |          |          |
13+25      21.6159     35.16  | Q       V          |          |          |
13+30      21.8623     35.78  | Q       V          |          |          |
13+35      22.1132     36.43  | Q       V          |          |          |
13+40      22.3688     37.12  | Q       V          |          |          |
13+45      22.6295     37.86  | Q       V          |          |          |
13+50      22.8956     38.64  | Q       V          |          |          |
13+55      23.1674     39.46  | Q       V          |          |          |
14+ 0      23.4453     40.34  | Q        V         |          |          |
14+ 5      23.7298     41.32  | Q       |V         |          |          |
14+10      24.0220     42.42  | Q       |V         |          |          |
14+15      24.3225     43.63  | Q       |V         |          |          |
14+20      24.6325     45.01  | Q       |V         |          |          |
14+25      24.9535     46.62  |  Q      |V         |          |          |
14+30      25.2878     48.53  |  Q      |V         |          |          |
14+35      25.6353     50.46  |  Q      | V        |          |          |
14+40      25.9953     52.27  |  Q      | V        |          |          |
14+45      26.3681     54.13  |  Q      | V        |          |          |
14+50      26.7543     56.08  |  Q      | V        |          |          |
14+55      27.1550     58.18  |  Q      | V        |          |          |
15+ 0      27.5712     60.44  |   Q     |  V       |          |          |
15+ 5      28.0044     62.89  |   Q     |  V       |          |          |
15+10      28.4561     65.59  |   Q     |  V       |          |          |
15+15      28.9283     68.57  |   Q     |  V       |          |          |
15+20      29.4235     71.90  |   Q     |  V       |          |          |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 15+25 | 29.9446 | 75.66 | Q | V | | | |
| 15+30 | 30.4953 | 79.97 | Q | V | | | |
| 15+35 | 31.0804 | 84.94 | Q | V | | | |
| 15+40 | 31.7060 | 90.85 | Q | V | | | |
| 15+45 | 32.3809 | 98.00 | Q | V | | | |
| 15+50 | 33.1181 | 107.04 | Q | V | | | |
| 15+55 | 33.9390 | 119.20 | Q | V | | | |
| 16+ 0 | 34.8847 | 137.31 | Q | V | | | |
| 16+ 5 | 36.1306 | 180.91 | Q | V | | | |
| 16+10 | 37.8128 | 244.26 | QV | | | | |
| 16+15 | 39.9049 | 303.77 | V Q | | | | |
| 16+20 | 42.5605 | 385.59 | V | Q | | | |
| 16+25 | 45.9342 | 489.87 | V | | Q | | |
| 16+30 | 50.0701 | 600.52 | V | | | | Q |
| 16+35 | 53.6819 | 524.44 | V | | Q | | |
| 16+40 | 56.1449 | 357.63 | Q V | | | | |
| 16+45 | 58.1520 | 291.43 | Q | V | | | |
| 16+50 | 59.8558 | 247.40 | Q | V | | | |
| 16+55 | 61.3675 | 219.49 | Q | V | | | |
| 17+ 0 | 62.7069 | 194.48 | Q | V | | | |
| 17+ 5 | 63.8989 | 173.08 | Q | V | | | |
| 17+10 | 64.9814 | 157.18 | Q | V | | | |
| 17+15 | 65.9650 | 142.82 | Q | V | | | |
| 17+20 | 66.8578 | 129.64 | Q | V | | | |
| 17+25 | 67.6752 | 118.68 | Q | V | | | |
| 17+30 | 68.4192 | 108.03 | Q | V | | | |
| 17+35 | 69.0905 | 97.46 | Q | V | | | |
| 17+40 | 69.7034 | 89.00 | Q | V | | | |
| 17+45 | 70.2653 | 81.58 | Q | V | | | |
| 17+50 | 70.7826 | 75.11 | Q | V | | | |
| 17+55 | 71.2558 | 68.71 | Q | V | | | |
| 18+ 0 | 71.6862 | 62.50 | Q | V | | | |
| 18+ 5 | 72.0705 | 55.80 | Q | V | | | |
| 18+10 | 72.4348 | 52.91 | Q | V | | | |
| 18+15 | 72.7825 | 50.48 | Q | V | | | |
| 18+20 | 73.1122 | 47.87 | Q | V | | | |
| 18+25 | 73.4313 | 46.33 | Q | V | | | |
| 18+30 | 73.7390 | 44.68 | Q | V | | | |
| 18+35 | 74.0319 | 42.53 | Q | V | | | |
| 18+40 | 74.3167 | 41.36 | Q | V | | | |
| 18+45 | 74.5938 | 40.23 | Q | V | | | |
| 18+50 | 74.8630 | 39.08 | Q | V | | | |
| 18+55 | 75.1249 | 38.03 | Q | V | | | |
| 19+ 0 | 75.3771 | 36.62 | Q | V | | | |
| 19+ 5 | 75.6195 | 35.19 | Q | V | | | |
| 19+10 | 75.8554 | 34.25 | Q | V | | | |
| 19+15 | 76.0834 | 33.11 | Q | V | | | |
| 19+20 | 76.3038 | 32.00 | Q | V | | | |
| 19+25 | 76.5193 | 31.29 | Q | V | | | |
| 19+30 | 76.7222 | 29.46 | Q | V | | | |
| 19+35 | 76.9186 | 28.52 | Q | V | | | |
| 19+40 | 77.1103 | 27.84 | Q | V | | | |
| 19+45 | 77.2975 | 27.17 | Q | V | | | |
| 19+50 | 77.4784 | 26.28 | Q | V | | | |
| 19+55 | 77.6537 | 25.44 | Q | V | | | |
| 20+ 0 | 77.8254 | 24.93 | Q | V | | | |
| 20+ 5 | 77.9937 | 24.45 | Q | V | | | |
| 20+10 | 78.1591 | 24.00 | Q | V | | | |
| 20+15 | 78.3215 | 23.58 | Q | V | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20+20 | 78.4811 | 23.18 | \|Q | \| | \| | \| | V \| |
| 20+25 | 78.6381 | 22.80 | \|Q | \| | \| | \| | V \| |
| 20+30 | 78.7926 | 22.43 | \|Q | \| | \| | \| | V \| |
| 20+35 | 78.9447 | 22.08 | \|Q | \| | \| | \| | V \| |
| 20+40 | 79.0945 | 21.75 | \|Q | \| | \| | \| | V \| |
| 20+45 | 79.2421 | 21.43 | \|Q | \| | \| | \| | V \| |
| 20+50 | 79.3875 | 21.12 | \|Q | \| | \| | \| | V \| |
| 20+55 | 79.5309 | 20.82 | \|Q | \| | \| | \| | V \| |
| 21+ 0 | 79.6723 | 20.53 | \|Q | \| | \| | \| | V \| |
| 21+ 5 | 79.8118 | 20.26 | \|Q | \| | \| | \| | V \| |
| 21+10 | 79.9495 | 19.99 | \|Q | \| | \| | \| | V \| |
| 21+15 | 80.0853 | 19.73 | \|Q | \| | \| | \| | V \| |
| 21+20 | 80.2195 | 19.48 | \|Q | \| | \| | \| | V \| |
| 21+25 | 80.3520 | 19.24 | \|Q | \| | \| | \| | V \| |
| 21+30 | 80.4828 | 19.00 | \|Q | \| | \| | \| | V \| |
| 21+35 | 80.6121 | 18.77 | \|Q | \| | \| | \| | V \| |
| 21+40 | 80.7398 | 18.55 | \|Q | \| | \| | \| | V \| |
| 21+45 | 80.8661 | 18.33 | \|Q | \| | \| | \| | V \| |
| 21+50 | 80.9909 | 18.12 | \|Q | \| | \| | \| | V \| |
| 21+55 | 81.1142 | 17.92 | \|Q | \| | \| | \| | V \| |
| 22+ 0 | 81.2362 | 17.72 | \|Q | \| | \| | \| | V \| |
| 22+ 5 | 81.3569 | 17.52 | \|Q | \| | \| | \| | V \| |
| 22+10 | 81.4763 | 17.33 | \|Q | \| | \| | \| | V \| |
| 22+15 | 81.5944 | 17.15 | \|Q | \| | \| | \| | V \| |
| 22+20 | 81.7113 | 16.97 | \|Q | \| | \| | \| | V \| |
| 22+25 | 81.8270 | 16.80 | \|Q | \| | \| | \| | V \| |
| 22+30 | 81.9415 | 16.63 | \|Q | \| | \| | \| | V \| |
| 22+35 | 82.0549 | 16.46 | \|Q | \| | \| | \| | V \| |
| 22+40 | 82.1671 | 16.30 | \|Q | \| | \| | \| | V \| |
| 22+45 | 82.2783 | 16.14 | \|Q | \| | \| | \| | V \| |
| 22+50 | 82.3884 | 15.99 | \|Q | \| | \| | \| | V \| |
| 22+55 | 82.4975 | 15.84 | \|Q | \| | \| | \| | V\| |
| 23+ 0 | 82.6056 | 15.69 | \|Q | \| | \| | \| | V\| |
| 23+ 5 | 82.7127 | 15.55 | \|Q | \| | \| | \| | V\| |
| 23+10 | 82.8188 | 15.41 | \|Q | \| | \| | \| | V\| |
| 23+15 | 82.9240 | 15.27 | \|Q | \| | \| | \| | V\| |
| 23+20 | 83.0282 | 15.14 | \|Q | \| | \| | \| | V\| |
| 23+25 | 83.1316 | 15.01 | Q | \| | \| | \| | V\| |
| 23+30 | 83.2341 | 14.88 | Q | \| | \| | \| | V\| |
| 23+35 | 83.3357 | 14.75 | Q | \| | \| | \| | V\| |
| 23+40 | 83.4364 | 14.63 | Q | \| | \| | \| | V\| |
| 23+45 | 83.5364 | 14.51 | Q | \| | \| | \| | V\| |
| 23+50 | 83.6355 | 14.39 | Q | \| | \| | \| | V\| |
| 23+55 | 83.7338 | 14.28 | Q | \| | \| | \| | V\| |
| 24+ 0 | 83.8313 | 14.16 | Q | \| | \| | \| | V\| |
| 24+ 5 | 83.9272 | 13.92 | Q | \| | \| | \| | V\| |
| 24+10 | 84.0197 | 13.43 | Q | \| | \| | \| | V\| |
| 24+15 | 84.1075 | 12.76 | Q | \| | \| | \| | V\| |
| 24+20 | 84.1885 | 11.76 | Q | \| | \| | \| | V\| |
| 24+25 | 84.2591 | 10.25 | Q | \| | \| | \| | V\| |
| 24+30 | 84.3140 | 7.97 | Q | \| | \| | \| | V\| |
| 24+35 | 84.3555 | 6.03 | Q | \| | \| | \| | V\| |
| 24+40 | 84.3899 | 4.99 | Q | \| | \| | \| | V\| |
| 24+45 | 84.4190 | 4.23 | Q | \| | \| | \| | V\| |
| 24+50 | 84.4440 | 3.63 | Q | \| | \| | \| | V\| |
| 24+55 | 84.4655 | 3.12 | Q | \| | \| | \| | V\| |
| 25+ 0 | 84.4840 | 2.68 | Q | \| | \| | \| | V\| |
| 25+ 5 | 84.5000 | 2.32 | Q | \| | \| | \| | V\| |
| 25+10 | 84.5138 | 2.01 | Q | \| | \| | \| | V\| |

```
   25+15      84.5257      1.73  Q         |         |         |        V|
   25+20      84.5360      1.49  Q         |         |         |        V|
   25+25      84.5448      1.28  Q         |         |         |        V|
   25+30      84.5523      1.09  Q         |         |         |        V|
   25+35      84.5588      0.94  Q         |         |         |        V|
   25+40      84.5643      0.80  Q         |         |         |        V|
   25+45      84.5691      0.69  Q         |         |         |        V|
   25+50      84.5731      0.58  Q         |         |         |        V|
   25+55      84.5765      0.50  Q         |         |         |        V|
   26+ 0      84.5795      0.43  Q         |         |         |        V|
   26+ 5      84.5821      0.38  Q         |         |         |        V|
   26+10      84.5844      0.34  Q         |         |         |        V|
   26+15      84.5865      0.30  Q         |         |         |        V|
   26+20      84.5884      0.27  Q         |         |         |        V|
   26+25      84.5900      0.23  Q         |         |         |        V|
   26+30      84.5914      0.20  Q         |         |         |        V|
   26+35      84.5926      0.18  Q         |         |         |        V|
   26+40      84.5937      0.16  Q         |         |         |        V|
   26+45      84.5946      0.14  Q         |         |         |        V|
   26+50      84.5955      0.12  Q         |         |         |        V|
   26+55      84.5961      0.10  Q         |         |         |        V|
   27+ 0      84.5967      0.08  Q         |         |         |        V|
   27+ 5      84.5971      0.07  Q         |         |         |        V|
   27+10      84.5975      0.05  Q         |         |         |        V|
   27+15      84.5978      0.04  Q         |         |         |        V|
   27+20      84.5980      0.03  Q         |         |         |        V|
   27+25      84.5981      0.02  Q         |         |         |        V|
   27+30      84.5982      0.01  Q         |         |         |        V|
   27+35      84.5982      0.01  Q         |         |         |        V|
   27+40      84.5983      0.01  Q         |         |         |        V|
   27+45      84.5983      0.00  Q         |         |         |         V
-----------------------------------------------------------------------
        ****************************HYDROGRAPH DATA****************************
                        Number of intervals =   333
                        Time interval =    5.0 (Min.)
                        Maximum/Peak flow rate =      600.523 (CFS)
                        Total volume =      84.598 (Ac.Ft)
                Status of hydrographs being held in storage
                           Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
                Peak (CFS)    600.523     0.000     0.000     0.000     0.000
                Vol (Ac.Ft)     84.598     0.000     0.000     0.000     0.000
        ***********************************************************************

        ---------------------------------------------------------------------


        ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
        Process from Point/Station        5.000 to Point/Station        5.100
        **** STREAM ROUTING SCS CONVEX METHOD ****
        ______________________________________________________________________
        HYDROGRAPH STREAM ROUTING DATA:
        Length of stream =   2289.00 (Ft.)
        Elevation difference =   50.00 (Ft.)
        Slope of channel =  0.021844 (Vert/Horiz)
        Channel type - Improved Channel


        Channel length =  2289.00(Ft.)     Elevation difference =  50.00(Ft.)
        Channel evaluation using mean flow rate of hydrograph
```

```
      Channel base width  =   60.000(Ft.)
      Slope or 'Z' of left channel bank =   2.000
      Slope or 'Z' of right channel bank =   2.000
      Manning's 'N'    = 0.035
      Maximum depth of channel  =    5.000(Ft.)
      Flow(q) thru subarea =     40.761(CFS)
      Depth of flow =     0.263(Ft.)
      Average velocity =     2.559(Ft/s)
      Total flow rate =    40.761(CFS)
      Channel flow top width =   61.053(Ft.)
      Depth of flow in channel =   0.26(Ft.)
      Total number of channels (same dimensions) = 1
      Flow Velocity =    2.56(Ft/s)
      Travel time  =   23.43 min.
      Individual channel flow =   40.761(CFS)
      Total capacity of improved channels =     40.761(CFS)
      Critical Depth in Channel =    0.24(Ft.)


      Channel evaluation using maximum flow rate of hydrograph
      Flow(q) thru subarea =    600.523(CFS)
      Depth of flow =     1.316(Ft.)
      Average velocity =     7.286(Ft/s)
      Total flow rate =   600.523(CFS)
      Channel flow top width =   65.264(Ft.)
      Depth of flow in channel =   1.32(Ft.)
      Total number of channels (same dimensions) = 1
      Flow Velocity =    7.29(Ft/s)
      Travel time  =   23.43 min.
      Individual channel flow =  600.523(CFS)
      Total capacity of improved channels =    600.523(CFS)
      Critical Depth in Channel =    1.44(Ft.)


      ********************** SCS CONVEX CHANNEL ROUTING *********************
      Convex method of stream routing  data items:
      Using equation: Outflow =
      O(t+dt) = (1-c*)O(t+dt-dt*) + Input(c*)
                where c* = 1 - (1-c)^e and dt = c(length)/velocity
                c(v/v+1.7) =   0.8108   Travel time =   5.24 (min.)
               dt*(unit time interval) =   5.00(min.),  e=   1.1184
               dt(routing time-step) =   4.25 (min.),   c* =   0.8447

      Output hydrograph delayed by 0  unit time increments


      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        P R I N T  O F  S T O R M
                     R u n o f f     H y d r o g r a p h
      ----------------------------------------------------------------------
                  Hydrograph in   5   Minute intervals (CFS)

      ----------------------------------------------------------------------
Time(h+m) Out = O(CFS) In = I  0      150.1     300.3     450.4     600.5
----------------------------------------------------------------------
  0+ 5       0.0172      0.13  O         |         |         |         |
  0+10       0.1649      0.51  O         |         |         |         |
  0+15       0.5325      1.09  O         |         |         |         |
  0+20       1.1164      1.99  O         |         |         |         |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+25 | 2.0370 | 3.42 | O | \| | \| | \| | \| |
| 0+30 | 3.4896 | 5.64 | O | \| | \| | \| | \| |
| 0+35 | 5.5471 | 7.55 | O | \| | \| | \| | \| |
| 0+40 | 7.3673 | 8.57 | O | \| | \| | \| | \| |
| 0+45 | 8.4763 | 9.32 | O | \| | \| | \| | \| |
| 0+50 | 9.2693 | 9.92 | O | \| | \| | \| | \| |
| 0+55 | 9.8893 | 10.45 | O | \| | \| | \| | \| |
| 1+ 0 | 10.4170 | 10.89 | O | \| | \| | \| | \| |
| 1+ 5 | 10.8673 | 11.27 | O | \| | \| | \| | \| |
| 1+10 | 11.2533 | 11.61 | O | \| | \| | \| | \| |
| 1+15 | 11.5968 | 11.92 | O | \| | \| | \| | \| |
| 1+20 | 11.9033 | 12.19 | O | \| | \| | \| | \| |
| 1+25 | 12.1765 | 12.44 | O | \| | \| | \| | \| |
| 1+30 | 12.4248 | 12.66 | O | \| | \| | \| | \| |
| 1+35 | 12.6489 | 12.86 | O | \| | \| | \| | \| |
| 1+40 | 12.8467 | 13.03 | O | \| | \| | \| | \| |
| 1+45 | 13.0246 | 13.19 | O | \| | \| | \| | \| |
| 1+50 | 13.1859 | 13.34 | O | \| | \| | \| | \| |
| 1+55 | 13.3339 | 13.47 | O | \| | \| | \| | \| |
| 2+ 0 | 13.4676 | 13.59 | O | \| | \| | \| | \| |
| 2+ 5 | 13.5854 | 13.69 | O | \| | \| | \| | \| |
| 2+10 | 13.6837 | 13.78 | O | \| | \| | \| | \| |
| 2+15 | 13.7777 | 13.87 | O | \| | \| | \| | \| |
| 2+20 | 13.8694 | 13.96 | O | \| | \| | \| | \| |
| 2+25 | 13.9573 | 14.05 | O | \| | \| | \| | \| |
| 2+30 | 14.0444 | 14.13 | O | \| | \| | \| | \| |
| 2+35 | 14.1286 | 14.21 | O | \| | \| | \| | \| |
| 2+40 | 14.2073 | 14.29 | O | \| | \| | \| | \| |
| 2+45 | 14.2856 | 14.37 | O | \| | \| | \| | \| |
| 2+50 | 14.3639 | 14.44 | O | \| | \| | \| | \| |
| 2+55 | 14.4423 | 14.52 | O | \| | \| | \| | \| |
| 3+ 0 | 14.5209 | 14.60 | O | \| | \| | \| | \| |
| 3+ 5 | 14.5980 | 14.68 | O | \| | \| | \| | \| |
| 3+10 | 14.6731 | 14.75 | O | \| | \| | \| | \| |
| 3+15 | 14.7482 | 14.83 | O | \| | \| | \| | \| |
| 3+20 | 14.8225 | 14.90 | O | \| | \| | \| | \| |
| 3+25 | 14.8963 | 14.97 | O | \| | \| | \| | \| |
| 3+30 | 14.9706 | 15.04 | OI | \| | \| | \| | \| |
| 3+35 | 15.0408 | 15.11 | \|O | \| | \| | \| | \| |
| 3+40 | 15.1099 | 15.18 | \|O | \| | \| | \| | \| |
| 3+45 | 15.1795 | 15.25 | \|O | \| | \| | \| | \| |
| 3+50 | 15.2495 | 15.32 | \|O | \| | \| | \| | \| |
| 3+55 | 15.3187 | 15.39 | \|O | \| | \| | \| | \| |
| 4+ 0 | 15.3872 | 15.46 | \|O | \| | \| | \| | \| |
| 4+ 5 | 15.4562 | 15.53 | \|O | \| | \| | \| | \| |
| 4+10 | 15.5259 | 15.60 | \|O | \| | \| | \| | \| |
| 4+15 | 15.5964 | 15.67 | \|O | \| | \| | \| | \| |
| 4+20 | 15.6676 | 15.74 | \|O | \| | \| | \| | \| |
| 4+25 | 15.7397 | 15.81 | \|O | \| | \| | \| | \| |
| 4+30 | 15.8126 | 15.89 | \|O | \| | \| | \| | \| |
| 4+35 | 15.8864 | 15.96 | \|O | \| | \| | \| | \| |
| 4+40 | 15.9610 | 16.04 | \|O | \| | \| | \| | \| |
| 4+45 | 16.0365 | 16.12 | \|O | \| | \| | \| | \| |
| 4+50 | 16.1128 | 16.19 | \|O | \| | \| | \| | \| |
| 4+55 | 16.1901 | 16.27 | \|O | \| | \| | \| | \| |
| 5+ 0 | 16.2683 | 16.35 | \|O | \| | \| | \| | \| |
| 5+ 5 | 16.3474 | 16.43 | \|O | \| | \| | \| | \| |
| 5+10 | 16.4275 | 16.51 | \|O | \| | \| | \| | \| |
| 5+15 | 16.5086 | 16.59 | \|O | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+20 | 16.5906 | 16.68 | O | | | | |
| 5+25 | 16.6737 | 16.76 | O | | | | |
| 5+30 | 16.7578 | 16.85 | O | | | | |
| 5+35 | 16.8429 | 16.93 | O | | | | |
| 5+40 | 16.9291 | 17.02 | O | | | | |
| 5+45 | 17.0165 | 17.11 | O | | | | |
| 5+50 | 17.1049 | 17.20 | O | | | | |
| 5+55 | 17.1945 | 17.29 | O | | | | |
| 6+ 0 | 17.2852 | 17.38 | O | | | | |
| 6+ 5 | 17.3772 | 17.47 | O | | | | |
| 6+10 | 17.4703 | 17.57 | O | | | | |
| 6+15 | 17.5648 | 17.66 | O | | | | |
| 6+20 | 17.6604 | 17.76 | O | | | | |
| 6+25 | 17.7574 | 17.86 | O | | | | |
| 6+30 | 17.8556 | 17.96 | O | | | | |
| 6+35 | 17.9553 | 18.06 | O | | | | |
| 6+40 | 18.0563 | 18.16 | O | | | | |
| 6+45 | 18.1588 | 18.27 | O | | | | |
| 6+50 | 18.2626 | 18.37 | O | | | | |
| 6+55 | 18.3680 | 18.48 | O | | | | |
| 7+ 0 | 18.4748 | 18.59 | O | | | | |
| 7+ 5 | 18.5833 | 18.70 | O | | | | |
| 7+10 | 18.6932 | 18.81 | O | | | | |
| 7+15 | 18.8049 | 18.92 | O | | | | |
| 7+20 | 18.9181 | 19.04 | O | | | | |
| 7+25 | 19.0332 | 19.15 | O | | | | |
| 7+30 | 19.1498 | 19.27 | O | | | | |
| 7+35 | 19.2684 | 19.39 | O | | | | |
| 7+40 | 19.3887 | 19.51 | O | | | | |
| 7+45 | 19.5109 | 19.64 | O | | | | |
| 7+50 | 19.6350 | 19.77 | O | | | | |
| 7+55 | 19.7612 | 19.89 | O | | | | |
| 8+ 0 | 19.8892 | 20.02 | O | | | | |
| 8+ 5 | 20.0194 | 20.16 | O | | | | |
| 8+10 | 20.1517 | 20.29 | O | | | | |
| 8+15 | 20.2862 | 20.43 | O | | | | |
| 8+20 | 20.4229 | 20.57 | O | | | | |
| 8+25 | 20.5620 | 20.71 | O | | | | |
| 8+30 | 20.7033 | 20.85 | O | | | | |
| 8+35 | 20.8471 | 21.00 | O | | | | |
| 8+40 | 20.9934 | 21.15 | O | | | | |
| 8+45 | 21.1423 | 21.30 | O | | | | |
| 8+50 | 21.2937 | 21.45 | O | | | | |
| 8+55 | 21.4480 | 21.61 | O | | | | |
| 9+ 0 | 21.6049 | 21.77 | O | | | | |
| 9+ 5 | 21.7648 | 21.93 | O | | | | |
| 9+10 | 21.9275 | 22.10 | O | | | | |
| 9+15 | 22.0935 | 22.27 | O | | | | |
| 9+20 | 22.2624 | 22.44 | O | | | | |
| 9+25 | 22.4347 | 22.62 | O | | | | |
| 9+30 | 22.6101 | 22.79 | O | | | | |
| 9+35 | 22.7892 | 22.98 | O | | | | |
| 9+40 | 22.9716 | 23.16 | O | | | | |
| 9+45 | 23.1579 | 23.35 | O | | | | |
| 9+50 | 23.3478 | 23.55 | O | | | | |
| 9+55 | 23.5417 | 23.75 | O | | | | |
| 10+ 0 | 23.7395 | 23.95 | O | | | | |
| 10+ 5 | 23.9416 | 24.15 | O | | | | |
| 10+10 | 24.1479 | 24.37 | O | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10+15 | 24.3588 | 24.58 | O | | | | |
| 10+20 | 24.5741 | 24.80 | O | | | | |
| 10+25 | 24.7944 | 25.03 | O | | | | |
| 10+30 | 25.0194 | 25.26 | O | | | | |
| 10+35 | 25.2498 | 25.49 | O | | | | |
| 10+40 | 25.4852 | 25.73 | O | | | | |
| 10+45 | 25.7264 | 25.98 | O | | | | |
| 10+50 | 25.9731 | 26.23 | O | | | | |
| 10+55 | 26.2260 | 26.49 | O | | | | |
| 11+ 0 | 26.4848 | 26.76 | O | | | | |
| 11+ 5 | 26.7502 | 27.03 | O | | | | |
| 11+10 | 27.0221 | 27.31 | O | | | | |
| 11+15 | 27.3013 | 27.60 | O | | | | |
| 11+20 | 27.5873 | 27.89 | O | | | | |
| 11+25 | 27.8813 | 28.19 | O | | | | |
| 11+30 | 28.1827 | 28.50 | O | | | | |
| 11+35 | 28.4928 | 28.82 | O | | | | |
| 11+40 | 28.8110 | 29.15 | O | | | | |
| 11+45 | 29.1386 | 29.48 | O | | | | |
| 11+50 | 29.4752 | 29.83 | O | | | | |
| 11+55 | 29.8221 | 30.19 | OI | | | | |
| 12+ 0 | 30.1788 | 30.56 | O | | | | |
| 12+ 5 | 30.5414 | 30.89 | O | | | | |
| 12+10 | 30.8750 | 31.17 | O | | | | |
| 12+15 | 31.1534 | 31.40 | O | | | | |
| 12+20 | 31.3771 | 31.54 | O | | | | |
| 12+25 | 31.5106 | 31.53 | O | | | | |
| 12+30 | 31.4932 | 31.29 | O | | | | |
| 12+35 | 31.3037 | 31.16 | O | | | | |
| 12+40 | 31.1984 | 31.31 | O | | | | |
| 12+45 | 31.3244 | 31.56 | O | | | | |
| 12+50 | 31.5615 | 31.87 | O | | | | |
| 12+55 | 31.8688 | 32.23 | O | | | | |
| 13+ 0 | 32.2215 | 32.62 | O | | | | |
| 13+ 5 | 32.6176 | 33.06 | O | | | | |
| 13+10 | 33.0533 | 33.54 | O | | | | |
| 13+15 | 33.5248 | 34.04 | O | | | | |
| 13+20 | 34.0303 | 34.58 | O | | | | |
| 13+25 | 34.5722 | 35.16 | O | | | | |
| 13+30 | 35.1480 | 35.78 | O | | | | |
| 13+35 | 35.7614 | 36.43 | O | | | | |
| 13+40 | 36.4133 | 37.12 | O | | | | |
| 13+45 | 37.1063 | 37.86 | O | | | | |
| 13+50 | 37.8401 | 38.64 | O | | | | |
| 13+55 | 38.6189 | 39.46 | O | | | | |
| 14+ 0 | 39.4442 | 40.34 | O | | | | |
| 14+ 5 | 40.3276 | 41.32 | O | | | | |
| 14+10 | 41.3031 | 42.42 | O | | | | |
| 14+15 | 42.3989 | 43.63 | O | | | | |
| 14+20 | 43.6169 | 45.01 | O | | | | |
| 14+25 | 45.0015 | 46.62 | OI | | | | |
| 14+30 | 46.6106 | 48.53 | O | | | | |
| 14+35 | 48.4796 | 50.46 | O | | | | |
| 14+40 | 50.3857 | 52.27 | O | | | | |
| 14+45 | 52.2137 | 54.13 | O | | | | |
| 14+50 | 54.0781 | 56.08 | O | | | | |
| 14+55 | 56.0394 | 58.18 | O | | | | |
| 15+ 0 | 58.1328 | 60.44 | OI | | | | |
| 15+ 5 | 60.3938 | 62.89 | O | | | | |

```
15+10      62.8475     65.59  |   O     |          |          |          |
15+15      65.5448     68.57  |   O     |          |          |          |
15+20      68.5239     71.90  |   O     |          |          |          |
15+25      71.8573     75.66  |   OI    |          |          |          |
15+30      75.6161     79.97  |    O    |          |          |          |
15+35      79.9257     84.94  |    O    |          |          |          |
15+40      84.9173     90.85  |    OI   |          |          |          |
15+45      90.8368     98.00  |     O   |          |          |          |
15+50      98.0368    107.04  |     OI  |          |          |          |
15+55     107.1890    119.20  |      O  |          |          |          |
16+ 0     119.6405    137.31  |      O I|          |          |          |
16+ 5     140.1181    180.91  |        O| I        |          |          |
16+10     182.6477    244.26  |         | O   I    |          |          |
16+15     242.2696    303.77  |         |     O   I|          |          |
16+20     304.6433    385.59  |         |          O    I     |          |
16+25     386.3070    489.87  |         |          |    O     | I        |
16+30     487.8805    600.52  |         |          |          | O       I|
16+35     573.3303    524.44  |         |          |          |   I   O  |
16+40     510.7751    357.63  |         |          |  I       |   O      |
16+45     372.9814    291.43  |         |        I|   O      |          |
16+50     298.4886    247.40  |         |     I  O|          |          |
16+55     251.7788    219.49  |         |   I O   |          |          |
17+ 0     221.3200    194.48  |         | I O     |          |          |
17+ 5     195.9227    173.08  |         |I O      |          |          |
17+10     174.6039    157.18  |         IO        |          |          |
17+15     158.0553    142.82  |        IO         |          |          |
17+20     143.5035    129.64  |       IO|         |          |          |
17+25     130.3972    118.68  |      IO |         |          |          |
17+30     119.1434    108.03  |      O  |         |          |          |
17+35     108.4123     97.46  |     IO  |         |          |          |
17+40      98.0864     89.00  |    IO   |         |          |          |
17+45      89.4687     81.58  |    O    |         |          |          |
17+50      81.9826     75.11  |    O    |         |          |          |
17+55      75.3592     68.71  |   IO    |         |          |          |
18+ 0      68.9488     62.50  |   O     |         |          |          |
18+ 5      62.6479     55.80  |  IO     |         |          |          |
18+10      56.4927     52.91  |  O      |         |          |          |
18+15      53.1544     50.48  |  O      |         |          |          |
18+20      50.5607     47.87  |  O      |         |          |          |
18+25      48.0933     46.33  |  O      |         |          |          |
18+30      46.3944     44.68  | IO      |         |          |          |
18+35      44.6702     42.53  | O       |         |          |          |
18+40      42.7133     41.36  | O       |         |          |          |
18+45      41.4300     40.23  | O       |         |          |          |
18+50      40.2720     39.08  | O       |         |          |          |
18+55      39.1325     38.03  | O       |         |          |          |
19+ 0      38.0211     36.62  | O       |         |          |          |
19+ 5      36.6585     35.19  | O       |         |          |          |
19+10      35.2986     34.25  | O       |         |          |          |
19+15      34.2688     33.11  | O       |         |          |          |
19+20      33.1475     32.00  | O       |         |          |          |
19+25      32.0890     31.29  | O       |         |          |          |
19+30      31.1818     29.46  |IO       |         |          |          |
19+35      29.6096     28.52  |O        |         |          |          |
19+40      28.6002     27.84  |O        |         |          |          |
19+45      27.8715     27.17  |O        |         |          |          |
19+50      27.1671     26.28  |O        |         |          |          |
19+55      26.3093     25.44  |O        |         |          |          |
20+ 0      25.5128     24.93  |O        |         |          |          |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20+ 5 | 24.9582 | 24.45 | \|O | \| | \| | \| | \| |
| 20+10 | 24.4724 | 24.00 | \|O | \| | \| | \| | \| |
| 20+15 | 24.0224 | 23.58 | \|O | \| | \| | \| | \| |
| 20+20 | 23.5987 | 23.18 | \|O | \| | \| | \| | \| |
| 20+25 | 23.1963 | 22.80 | \|O | \| | \| | \| | \| |
| 20+30 | 22.8131 | 22.43 | \|O | \| | \| | \| | \| |
| 20+35 | 22.4479 | 22.08 | \|O | \| | \| | \| | \| |
| 20+40 | 22.0974 | 21.75 | \|O | \| | \| | \| | \| |
| 20+45 | 21.7614 | 21.43 | \|O | \| | \| | \| | \| |
| 20+50 | 21.4389 | 21.12 | \|O | \| | \| | \| | \| |
| 20+55 | 21.1293 | 20.82 | \|O | \| | \| | \| | \| |
| 21+ 0 | 20.8318 | 20.53 | \|O | \| | \| | \| | \| |
| 21+ 5 | 20.5446 | 20.26 | \|O | \| | \| | \| | \| |
| 21+10 | 20.2670 | 19.99 | \|O | \| | \| | \| | \| |
| 21+15 | 19.9988 | 19.73 | \|O | \| | \| | \| | \| |
| 21+20 | 19.7394 | 19.48 | \|O | \| | \| | \| | \| |
| 21+25 | 19.4881 | 19.24 | \|O | \| | \| | \| | \| |
| 21+30 | 19.2451 | 19.00 | \|O | \| | \| | \| | \| |
| 21+35 | 19.0082 | 18.77 | \|O | \| | \| | \| | \| |
| 21+40 | 18.7782 | 18.55 | \|O | \| | \| | \| | \| |
| 21+45 | 18.5551 | 18.33 | \|O | \| | \| | \| | \| |
| 21+50 | 18.3385 | 18.12 | \|O | \| | \| | \| | \| |
| 21+55 | 18.1278 | 17.92 | \|O | \| | \| | \| | \| |
| 22+ 0 | 17.9227 | 17.72 | \|O | \| | \| | \| | \| |
| 22+ 5 | 17.7232 | 17.52 | \|O | \| | \| | \| | \| |
| 22+10 | 17.5293 | 17.33 | \|O | \| | \| | \| | \| |
| 22+15 | 17.3406 | 17.15 | \|O | \| | \| | \| | \| |
| 22+20 | 17.1569 | 16.97 | \|O | \| | \| | \| | \| |
| 22+25 | 16.9780 | 16.80 | \|O | \| | \| | \| | \| |
| 22+30 | 16.8037 | 16.63 | \|O | \| | \| | \| | \| |
| 22+35 | 16.6338 | 16.46 | \|O | \| | \| | \| | \| |
| 22+40 | 16.4682 | 16.30 | \|O | \| | \| | \| | \| |
| 22+45 | 16.3067 | 16.14 | \|O | \| | \| | \| | \| |
| 22+50 | 16.1490 | 15.99 | \|O | \| | \| | \| | \| |
| 22+55 | 15.9951 | 15.84 | \|O | \| | \| | \| | \| |
| 23+ 0 | 15.8448 | 15.69 | \|O | \| | \| | \| | \| |
| 23+ 5 | 15.6980 | 15.55 | \|O | \| | \| | \| | \| |
| 23+10 | 15.5545 | 15.41 | \|O | \| | \| | \| | \| |
| 23+15 | 15.4143 | 15.27 | \|O | \| | \| | \| | \| |
| 23+20 | 15.2772 | 15.14 | \|O | \| | \| | \| | \| |
| 23+25 | 15.1430 | 15.01 | IO | \| | \| | \| | \| |
| 23+30 | 15.0118 | 14.88 | O | \| | \| | \| | \| |
| 23+35 | 14.8833 | 14.75 | O | \| | \| | \| | \| |
| 23+40 | 14.7576 | 14.63 | O | \| | \| | \| | \| |
| 23+45 | 14.6345 | 14.51 | O | \| | \| | \| | \| |
| 23+50 | 14.5138 | 14.39 | O | \| | \| | \| | \| |
| 23+55 | 14.3957 | 14.28 | O | \| | \| | \| | \| |
| 24+ 0 | 14.2799 | 14.16 | O | \| | \| | \| | \| |
| 24+ 5 | 14.1492 | 13.92 | O | \| | \| | \| | \| |
| 24+10 | 13.8907 | 13.43 | O | \| | \| | \| | \| |
| 24+15 | 13.4163 | 12.76 | O | \| | \| | \| | \| |
| 24+20 | 12.7321 | 11.76 | O | \| | \| | \| | \| |
| 24+25 | 11.7200 | 10.25 | O | \| | \| | \| | \| |
| 24+30 | 10.1884 | 7.97 | O | \| | \| | \| | \| |
| 24+35 | 8.0701 | 6.03 | O | \| | \| | \| | \| |
| 24+40 | 6.2114 | 4.99 | O | \| | \| | \| | \| |
| 24+45 | 5.0833 | 4.23 | O | \| | \| | \| | \| |
| 24+50 | 4.2832 | 3.63 | O | \| | \| | \| | \| |
| 24+55 | 3.6651 | 3.12 | O | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+ 0 | 3.1462 | 2.68 | O | \| | \| | \| | \| |
| 25+ 5 | 2.7106 | 2.32 | O | \| | \| | \| | \| |
| 25+10 | 2.3444 | 2.01 | O | \| | \| | \| | \| |
| 25+15 | 2.0251 | 1.73 | O | \| | \| | \| | \| |
| 25+20 | 1.7466 | 1.49 | O | \| | \| | \| | \| |
| 25+25 | 1.5049 | 1.28 | O | \| | \| | \| | \| |
| 25+30 | 1.2910 | 1.09 | O | \| | \| | \| | \| |
| 25+35 | 1.1042 | 0.94 | O | \| | \| | \| | \| |
| 25+40 | 0.9460 | 0.80 | O | \| | \| | \| | \| |
| 25+45 | 0.8101 | 0.69 | O | \| | \| | \| | \| |
| 25+50 | 0.6925 | 0.58 | O | \| | \| | \| | \| |
| 25+55 | 0.5902 | 0.50 | O | \| | \| | \| | \| |
| 26+ 0 | 0.5035 | 0.43 | O | \| | \| | \| | \| |
| 26+ 5 | 0.4343 | 0.38 | O | \| | \| | \| | \| |
| 26+10 | 0.3858 | 0.34 | O | \| | \| | \| | \| |
| 26+15 | 0.3427 | 0.30 | O | \| | \| | \| | \| |
| 26+20 | 0.3028 | 0.27 | O | \| | \| | \| | \| |
| 26+25 | 0.2677 | 0.23 | O | \| | \| | \| | \| |
| 26+30 | 0.2344 | 0.20 | O | \| | \| | \| | \| |
| 26+35 | 0.2049 | 0.18 | O | \| | \| | \| | \| |
| 26+40 | 0.1817 | 0.16 | O | \| | \| | \| | \| |
| 26+45 | 0.1598 | 0.14 | O | \| | \| | \| | \| |
| 26+50 | 0.1387 | 0.12 | O | \| | \| | \| | \| |
| 26+55 | 0.1184 | 0.10 | O | \| | \| | \| | \| |
| 27+ 0 | 0.0986 | 0.08 | O | \| | \| | \| | \| |
| 27+ 5 | 0.0812 | 0.07 | O | \| | \| | \| | \| |
| 27+10 | 0.0665 | 0.05 | O | \| | \| | \| | \| |
| 27+15 | 0.0527 | 0.04 | O | \| | \| | \| | \| |
| 27+20 | 0.0404 | 0.03 | O | \| | \| | \| | \| |
| 27+25 | 0.0295 | 0.02 | O | \| | \| | \| | \| |
| 27+30 | 0.0188 | 0.01 | O | \| | \| | \| | \| |
| 27+35 | 0.0131 | 0.01 | O | \| | \| | \| | \| |
| 27+40 | 0.0091 | 0.01 | O | \| | \| | \| | \| |
| 27+45 | 0.0055 | 0.00 | O | \| | \| | \| | \| |
| 27+50 | 0.0021 | 0.00 | O | \| | \| | \| | \| |
| 27+55 | 0.0000 | 0.00 | O | \| | \| | \| | \| |

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**********HYDROGRAPH DATA**********

Number of intervals = 335
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 573.330 (CFS)
Total volume = 84.598 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 600.523 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 84.598 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 5.100 to Point/Station 5.200
**** STREAM ROUTING SCS CONVEX METHOD ****

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HYDROGRAPH STREAM ROUTING DATA:
Length of stream = 2487.00 (Ft.)
Elevation difference = 75.00 (Ft.)
Slope of channel = 0.030157 (Vert/Horiz)

```
      Channel type - Improved Channel


      Channel length =  2487.00(Ft.)     Elevation difference =  75.00(Ft.)
      Channel evaluation using mean flow rate of hydrograph
      Channel base width  =  200.000(Ft.)
      Slope or 'Z' of left channel bank =   2.000
      Slope or 'Z' of right channel bank =   2.000
      Manning's 'N'    = 0.035
      Maximum depth of channel  =    1.000(Ft.)
      Flow(q) thru subarea =     41.713(CFS)
      Depth of flow =     0.118(Ft.)
      Average velocity =     1.769(Ft/s)
      Total flow rate =    41.713(CFS)
      Channel flow top width =  200.471(Ft.)
      Depth of flow in channel =   0.12(Ft.)
      Total number of channels (same dimensions) = 1
      Flow Velocity =    1.77(Ft/s)
      Travel time  =   23.43 min.
      Individual channel flow =   41.713(CFS)
      Total capacity of improved channels =     41.713(CFS)
      Critical Depth in Channel =    0.11(Ft.)


      Channel evaluation using maximum flow rate of hydrograph
      Flow(q) thru subarea =    573.330(CFS)
      Depth of flow =     0.567(Ft.)
      Average velocity =     5.027(Ft/s)
      Total flow rate =   573.330(CFS)
      Channel flow top width =  202.268(Ft.)
      Depth of flow in channel =   0.57(Ft.)
      Total number of channels (same dimensions) = 1
      Flow Velocity =    5.03(Ft/s)
      Travel time  =   23.43 min.
      Individual channel flow =  573.330(CFS)
      Total capacity of improved channels =    573.330(CFS)
      Critical Depth in Channel =    0.63(Ft.)


      ********************** SCS CONVEX CHANNEL ROUTING **********************
      Convex method of stream routing  data items:
      Using equation: Outflow =
      O(t+dt) = (1-c*)O(t+dt-dt*) + Input(c*)
                where c* = 1 - (1-c)^e and dt = c(length)/velocity
                c(v/v+1.7) =   0.7473   Travel time =   8.24 (min.)
               dt*(unit time interval) =   5.00(min.),  e=   0.8743
               dt(routing time-step) =   6.16 (min.),   c* =   0.6996

      Output hydrograph delayed by 0  unit time increments


      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        P R I N T  O F  S T O R M
                     R u n o f f     H y d r o g r a p h
      ----------------------------------------------------------------------
                  Hydrograph in   5   Minute intervals (CFS)

      ----------------------------------------------------------------------
Time(h+m) Out = O(CFS) In = I  0      143.3     286.7     430.0     573.3
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0023 | 0.02 | O | | | | |
| 0+10 | 0.0322 | 0.16 | O | | | | |
| 0+15 | 0.1735 | 0.53 | O | | | | |
| 0+20 | 0.5017 | 1.12 | O | | | | |
| 0+25 | 1.0532 | 2.04 | O | | | | |
| 0+30 | 1.9330 | 3.49 | O | | | | |
| 0+35 | 3.2934 | 5.55 | O | | | | |
| 0+40 | 5.1102 | 7.37 | O | | | | |
| 0+45 | 6.8355 | 8.48 | O | | | | |
| 0+50 | 8.0881 | 9.27 | O | | | | |
| 0+55 | 8.9963 | 9.89 | O | | | | |
| 1+ 0 | 9.6906 | 10.42 | O | | | | |
| 1+ 5 | 10.2582 | 10.87 | O | | | | |
| 1+10 | 10.7352 | 11.25 | O | | | | |
| 1+15 | 11.1430 | 11.60 | O | | | | |
| 1+20 | 11.5009 | 11.90 | O | | | | |
| 1+25 | 11.8184 | 12.18 | O | | | | |
| 1+30 | 12.1017 | 12.42 | O | | | | |
| 1+35 | 12.3573 | 12.65 | O | | | | |
| 1+40 | 12.5874 | 12.85 | O | | | | |
| 1+45 | 12.7923 | 13.02 | O | | | | |
| 1+50 | 12.9761 | 13.19 | O | | | | |
| 1+55 | 13.1424 | 13.33 | O | | | | |
| 2+ 0 | 13.2940 | 13.47 | O | | | | |
| 2+ 5 | 13.4310 | 13.59 | O | | | | |
| 2+10 | 13.5520 | 13.68 | O | | | | |
| 2+15 | 13.6565 | 13.78 | O | | | | |
| 2+20 | 13.7534 | 13.87 | O | | | | |
| 2+25 | 13.8462 | 13.96 | O | | | | |
| 2+30 | 13.9354 | 14.04 | O | | | | |
| 2+35 | 14.0228 | 14.13 | O | | | | |
| 2+40 | 14.1072 | 14.21 | O | | | | |
| 2+45 | 14.1876 | 14.29 | O | | | | |
| 2+50 | 14.2665 | 14.36 | OI | | | | |
| 2+55 | 14.3450 | 14.44 | \|O | | | | |
| 3+ 0 | 14.4234 | 14.52 | \|O | | | | |
| 3+ 5 | 14.5018 | 14.60 | \|O | | | | |
| 3+10 | 14.5790 | 14.67 | \|O | | | | |
| 3+15 | 14.6547 | 14.75 | \|O | | | | |
| 3+20 | 14.7299 | 14.82 | \|O | | | | |
| 3+25 | 14.8044 | 14.90 | \|O | | | | |
| 3+30 | 14.8785 | 14.97 | \|O | | | | |
| 3+35 | 14.9522 | 15.04 | \|O | | | | |
| 3+40 | 15.0233 | 15.11 | \|O | | | | |
| 3+45 | 15.0931 | 15.18 | \|O | | | | |
| 3+50 | 15.1627 | 15.25 | \|O | | | | |
| 3+55 | 15.2326 | 15.32 | \|O | | | | |
| 4+ 0 | 15.3019 | 15.39 | \|O | | | | |
| 4+ 5 | 15.3706 | 15.46 | \|O | | | | |
| 4+10 | 15.4397 | 15.53 | \|O | | | | |
| 4+15 | 15.5093 | 15.60 | \|O | | | | |
| 4+20 | 15.5796 | 15.67 | \|O | | | | |
| 4+25 | 15.6507 | 15.74 | \|O | | | | |
| 4+30 | 15.7226 | 15.81 | \|O | | | | |
| 4+35 | 15.7953 | 15.89 | \|O | | | | |
| 4+40 | 15.8689 | 15.96 | \|O | | | | |
| 4+45 | 15.9433 | 16.04 | \|O | | | | |
| 4+50 | 16.0186 | 16.11 | \|O | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4+55 | 16.0947 | 16.19 | O | | | | |
| 5+ 0 | 16.1718 | 16.27 | O | | | | |
| 5+ 5 | 16.2497 | 16.35 | O | | | | |
| 5+10 | 16.3287 | 16.43 | O | | | | |
| 5+15 | 16.4085 | 16.51 | O | | | | |
| 5+20 | 16.4893 | 16.59 | O | | | | |
| 5+25 | 16.5711 | 16.67 | O | | | | |
| 5+30 | 16.6540 | 16.76 | O | | | | |
| 5+35 | 16.7378 | 16.84 | O | | | | |
| 5+40 | 16.8227 | 16.93 | O | | | | |
| 5+45 | 16.9087 | 17.02 | O | | | | |
| 5+50 | 16.9958 | 17.10 | O | | | | |
| 5+55 | 17.0839 | 17.19 | O | | | | |
| 6+ 0 | 17.1733 | 17.29 | O | | | | |
| 6+ 5 | 17.2637 | 17.38 | O | | | | |
| 6+10 | 17.3554 | 17.47 | O | | | | |
| 6+15 | 17.4482 | 17.56 | O | | | | |
| 6+20 | 17.5424 | 17.66 | O | | | | |
| 6+25 | 17.6377 | 17.76 | O | | | | |
| 6+30 | 17.7344 | 17.86 | O | | | | |
| 6+35 | 17.8323 | 17.96 | O | | | | |
| 6+40 | 17.9317 | 18.06 | O | | | | |
| 6+45 | 18.0324 | 18.16 | O | | | | |
| 6+50 | 18.1345 | 18.26 | O | | | | |
| 6+55 | 18.2380 | 18.37 | O | | | | |
| 7+ 0 | 18.3430 | 18.47 | O | | | | |
| 7+ 5 | 18.4495 | 18.58 | O | | | | |
| 7+10 | 18.5576 | 18.69 | O | | | | |
| 7+15 | 18.6672 | 18.80 | O | | | | |
| 7+20 | 18.7785 | 18.92 | O | | | | |
| 7+25 | 18.8914 | 19.03 | O | | | | |
| 7+30 | 19.0060 | 19.15 | O | | | | |
| 7+35 | 19.1223 | 19.27 | O | | | | |
| 7+40 | 19.2404 | 19.39 | O | | | | |
| 7+45 | 19.3603 | 19.51 | O | | | | |
| 7+50 | 19.4820 | 19.64 | O | | | | |
| 7+55 | 19.6057 | 19.76 | O | | | | |
| 8+ 0 | 19.7313 | 19.89 | O | | | | |
| 8+ 5 | 19.8590 | 20.02 | O | | | | |
| 8+10 | 19.9887 | 20.15 | O | | | | |
| 8+15 | 20.1205 | 20.29 | O | | | | |
| 8+20 | 20.2545 | 20.42 | O | | | | |
| 8+25 | 20.3906 | 20.56 | O | | | | |
| 8+30 | 20.5291 | 20.70 | O | | | | |
| 8+35 | 20.6699 | 20.85 | O | | | | |
| 8+40 | 20.8132 | 20.99 | O | | | | |
| 8+45 | 20.9589 | 21.14 | O | | | | |
| 8+50 | 21.1072 | 21.29 | O | | | | |
| 8+55 | 21.2580 | 21.45 | O | | | | |
| 9+ 0 | 21.4116 | 21.60 | O | | | | |
| 9+ 5 | 21.5679 | 21.76 | O | | | | |
| 9+10 | 21.7271 | 21.93 | O | | | | |
| 9+15 | 21.8892 | 22.09 | O | | | | |
| 9+20 | 22.0544 | 22.26 | O | | | | |
| 9+25 | 22.2226 | 22.43 | O | | | | |
| 9+30 | 22.3941 | 22.61 | O | | | | |
| 9+35 | 22.5689 | 22.79 | O | | | | |
| 9+40 | 22.7471 | 22.97 | O | | | | |
| 9+45 | 22.9287 | 23.16 | O | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 9+50 | 23.1141 | 23.35 | O | | | | |
| 9+55 | 23.3032 | 23.54 | O | | | | |
| 10+ 0 | 23.4961 | 23.74 | O | | | | |
| 10+ 5 | 23.6930 | 23.94 | O | | | | |
| 10+10 | 23.8942 | 24.15 | O | | | | |
| 10+15 | 24.0995 | 24.36 | O | | | | |
| 10+20 | 24.3093 | 24.57 | O | | | | |
| 10+25 | 24.5236 | 24.79 | O | | | | |
| 10+30 | 24.7427 | 25.02 | O | | | | |
| 10+35 | 24.9667 | 25.25 | O | | | | |
| 10+40 | 25.1958 | 25.49 | O | | | | |
| 10+45 | 25.4301 | 25.73 | O | | | | |
| 10+50 | 25.6699 | 25.97 | O | | | | |
| 10+55 | 25.9154 | 26.23 | O | | | | |
| 11+ 0 | 26.1668 | 26.48 | O | | | | |
| 11+ 5 | 26.4243 | 26.75 | O | | | | |
| 11+10 | 26.6882 | 27.02 | O | | | | |
| 11+15 | 26.9586 | 27.30 | O | | | | |
| 11+20 | 27.2361 | 27.59 | O | | | | |
| 11+25 | 27.5206 | 27.88 | O | | | | |
| 11+30 | 27.8127 | 28.18 | O | | | | |
| 11+35 | 28.1125 | 28.49 | O | | | | |
| 11+40 | 28.4205 | 28.81 | OI | | | | |
| 11+45 | 28.7369 | 29.14 | O | | | | |
| 11+50 | 29.0624 | 29.48 | O | | | | |
| 11+55 | 29.3970 | 29.82 | O | | | | |
| 12+ 0 | 29.7414 | 30.18 | O | | | | |
| 12+ 5 | 30.0952 | 30.54 | O | | | | |
| 12+10 | 30.4514 | 30.87 | O | | | | |
| 12+15 | 30.7844 | 31.15 | O | | | | |
| 12+20 | 31.0721 | 31.38 | O | | | | |
| 12+25 | 31.3031 | 31.51 | O | | | | |
| 12+30 | 31.4460 | 31.49 | O | | | | |
| 12+35 | 31.4540 | 31.30 | O | | | | |
| 12+40 | 31.3349 | 31.20 | O | | | | |
| 12+45 | 31.2561 | 31.32 | O | | | | |
| 12+50 | 31.3351 | 31.56 | O | | | | |
| 12+55 | 31.5340 | 31.87 | O | | | | |
| 13+ 0 | 31.8147 | 32.22 | O | | | | |
| 13+ 5 | 32.1515 | 32.62 | O | | | | |
| 13+10 | 32.5351 | 33.05 | O | | | | |
| 13+15 | 32.9598 | 33.52 | O | | | | |
| 13+20 | 33.4217 | 34.03 | O | | | | |
| 13+25 | 33.9190 | 34.57 | O | | | | |
| 13+30 | 34.4519 | 35.15 | O | | | | |
| 13+35 | 35.0198 | 35.76 | O | | | | |
| 13+40 | 35.6246 | 36.41 | O | | | | |
| 13+45 | 36.2677 | 37.11 | O | | | | |
| 13+50 | 36.9512 | 37.84 | O | | | | |
| 13+55 | 37.6758 | 38.62 | O | | | | |
| 14+ 0 | 38.4444 | 39.44 | O | | | | |
| 14+ 5 | 39.2604 | 40.33 | O | | | | |
| 14+10 | 40.1356 | 41.30 | O | | | | |
| 14+15 | 41.0969 | 42.40 | O | | | | |
| 14+20 | 42.1684 | 43.62 | OI | | | | |
| 14+25 | 43.3644 | 45.00 | O | | | | |
| 14+30 | 44.7219 | 46.61 | O | | | | |
| 14+35 | 46.2897 | 48.48 | O | | | | |
| 14+40 | 48.0732 | 50.39 | O | | | | |

```
14+45      49.9321     52.21  |  O      |          |          |          |
14+50      51.7742     54.08  |  O      |          |          |          |
14+55      53.6447     56.04  |  O      |          |          |          |
15+ 0      55.5961     58.13  |  OI     |          |          |          |
15+ 5      57.6690     60.39  |   O     |          |          |          |
15+10      59.8989     62.85  |   O     |          |          |          |
15+15      62.3175     65.54  |   O     |          |          |          |
15+20      64.9682     68.52  |   O     |          |          |          |
15+25      67.8954     71.86  |   OI    |          |          |          |
15+30      71.1629     75.62  |   OI    |          |          |          |
15+35      74.8467     79.93  |    O    |          |          |          |
15+40      79.0584     84.92  |    O    |          |          |          |
15+45      83.9380     90.84  |    OI   |          |          |          |
15+50      89.7140     98.04  |     O   |          |          |          |
15+55      96.7437    107.19  |     OI  |          |          |          |
16+ 0     105.6935    119.64  |      OI |          |          |          |
16+ 5     118.1515    140.12  |       OI|          |          |          |
16+10     139.1282    182.65  |        O| I        |          |          |
16+15     177.4377    242.27  |         | O   I    |          |          |
16+20     231.0208    304.64  |         |     O    |I         |          |
16+25     293.2977    386.31  |         |          O     I   |          |
16+30     371.7636    487.88  |         |          |    O     |   I      |
16+35     464.2699    573.33  |         |          |          | O       I
16+40     532.3219    510.78  |         |          |          |    I O   |
16+45     499.0764    372.98  |         |          |     I    |   O      |
16+50     401.0341    298.49  |         |          I      O  |          |
16+55     323.1313    251.78  |         |       I  | O       |          |
17+ 0     269.1949    221.32  |         |     I  O |         |          |
17+ 5     232.3514    195.92  |         |   I  O   |         |          |
17+10     204.0538    174.60  |         | I O      |         |          |
17+15     181.2677    158.06  |         |IO        |         |          |
17+20     163.1088    143.50  |         IO         |         |          |
17+25     147.6642    130.40  |        IO          |         |          |
17+30     134.0998    119.14  |       IO|          |         |          |
17+35     122.2208    108.41  |      IO |          |         |          |
17+40     111.1984     98.09  |     IO  |          |         |          |
17+45     100.8885     89.47  |     IO  |          |         |          |
17+50      91.9118     81.98  |    IO   |          |         |          |
17+55      84.0917     75.36  |    O    |          |         |          |
18+ 0      77.1369     68.95  |   IO    |          |         |          |
18+ 5      70.5774     62.65  |   O     |          |         |          |
18+10      64.2180     56.49  |  IO     |          |         |          |
18+15      58.3730     53.15  |  IO     |          |         |          |
18+20      54.3799     50.56  |  O      |          |         |          |
18+25      51.3825     48.09  |  O      |          |         |          |
18+30      48.8573     46.39  |  O      |          |         |          |
18+35      46.9068     44.67  |  O      |          |         |          |
18+40      45.0840     42.71  | IO      |          |         |          |
18+45      43.2562     41.43  | IO      |          |         |     I O  |
18+50      41.8259     40.27  | O       |          |         |          |
18+55      40.5884     39.13  | O       |          |         |          |
19+ 0      39.4233     38.02  | O       |          |         |          |
19+ 5      38.2626     36.66  | O       |          |         |          |
19+10      36.9610     35.30  | O       |          |         |          |
19+15      35.6622     34.27  | O       |          |         |          |
19+20      34.5395     33.15  | O       |          |         |          |
19+25      33.4260     32.09  | O       |          |         |          |
19+30      32.3710     31.18  | O       |          |         |          |
19+35      31.3317     29.61  | O       |          |         |          |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 19+40 | 29.9938 | 28.60 | IO | | | | |
| 19+45 | 28.9227 | 27.87 | IO | | | | |
| 19+50 | 28.0944 | 27.17 | O | | | | |
| 19+55 | 27.3325 | 26.31 | O | | | | |
| 20+ 0 | 26.5116 | 25.51 | O | | | | |
| 20+ 5 | 25.7397 | 24.96 | O | | | | |
| 20+10 | 25.1289 | 24.47 | O | | | | |
| 20+15 | 24.6103 | 24.02 | O | | | | |
| 20+20 | 24.1431 | 23.60 | O | | | | |
| 20+25 | 23.7091 | 23.20 | O | | | | |
| 20+30 | 23.2998 | 22.81 | O | | | | |
| 20+35 | 22.9112 | 22.45 | O | | | | |
| 20+40 | 22.5409 | 22.10 | O | | | | |
| 20+45 | 22.1863 | 21.76 | O | | | | |
| 20+50 | 21.8465 | 21.44 | O | | | | |
| 20+55 | 21.5205 | 21.13 | O | | | | |
| 21+ 0 | 21.2076 | 20.83 | O | | | | |
| 21+ 5 | 20.9068 | 20.54 | O | | | | |
| 21+10 | 20.6168 | 20.27 | O | | | | |
| 21+15 | 20.3367 | 20.00 | O | | | | |
| 21+20 | 20.0661 | 19.74 | O | | | | |
| 21+25 | 19.8044 | 19.49 | O | | | | |
| 21+30 | 19.5511 | 19.25 | O | | | | |
| 21+35 | 19.3058 | 19.01 | O | | | | |
| 21+40 | 19.0673 | 18.78 | O | | | | |
| 21+45 | 18.8356 | 18.56 | O | | | | |
| 21+50 | 18.6108 | 18.34 | O | | | | |
| 21+55 | 18.3925 | 18.13 | O | | | | |
| 22+ 0 | 18.1803 | 17.92 | O | | | | |
| 22+ 5 | 17.9737 | 17.72 | O | | | | |
| 22+10 | 17.7729 | 17.53 | O | | | | |
| 22+15 | 17.5776 | 17.34 | O | | | | |
| 22+20 | 17.3875 | 17.16 | O | | | | |
| 22+25 | 17.2026 | 16.98 | O | | | | |
| 22+30 | 17.0225 | 16.80 | O | | | | |
| 22+35 | 16.8470 | 16.63 | O | | | | |
| 22+40 | 16.6760 | 16.47 | O | | | | |
| 22+45 | 16.5093 | 16.31 | O | | | | |
| 22+50 | 16.3468 | 16.15 | O | | | | |
| 22+55 | 16.1881 | 16.00 | O | | | | |
| 23+ 0 | 16.0333 | 15.84 | O | | | | |
| 23+ 5 | 15.8821 | 15.70 | O | | | | |
| 23+10 | 15.7344 | 15.55 | O | | | | |
| 23+15 | 15.5901 | 15.41 | O | | | | |
| 23+20 | 15.4490 | 15.28 | O | | | | |
| 23+25 | 15.3111 | 15.14 | O | | | | |
| 23+30 | 15.1762 | 15.01 | O | | | | |
| 23+35 | 15.0442 | 14.88 | O | | | | |
| 23+40 | 14.9151 | 14.76 | O | | | | |
| 23+45 | 14.7887 | 14.63 | O | | | | |
| 23+50 | 14.6649 | 14.51 | O | | | | |
| 23+55 | 14.5436 | 14.40 | O | | | | |
| 24+ 0 | 14.4248 | 14.28 | IO | | | | |
| 24+ 5 | 14.3062 | 14.15 | O | | | | |
| 24+10 | 14.1623 | 13.89 | O | | | | |
| 24+15 | 13.9097 | 13.42 | O | | | | |
| 24+20 | 13.4743 | 12.73 | O | | | | |
| 24+25 | 12.8216 | 11.72 | O | | | | |
| 24+30 | 11.8489 | 10.19 | O | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24+35 | 10.4078 | 8.07 | O | \| | \| | \| | \| |
| 24+40 | 8.5272 | 6.21 | O | \| | \| | \| | \| |
| 24+45 | 6.7583 | 5.08 | O | \| | \| | \| | \| |
| 24+50 | 5.4809 | 4.28 | O | \| | \| | \| | \| |
| 24+55 | 4.5615 | 3.67 | O | \| | \| | \| | \| |
| 25+ 0 | 3.8659 | 3.15 | O | \| | \| | \| | \| |
| 25+ 5 | 3.3049 | 2.71 | O | \| | \| | \| | \| |
| 25+10 | 2.8408 | 2.34 | O | \| | \| | \| | \| |
| 25+15 | 2.4514 | 2.03 | O | \| | \| | \| | \| |
| 25+20 | 2.1164 | 1.75 | O | \| | \| | \| | \| |
| 25+25 | 1.8258 | 1.50 | O | \| | \| | \| | \| |
| 25+30 | 1.5731 | 1.29 | O | \| | \| | \| | \| |
| 25+35 | 1.3511 | 1.10 | O | \| | \| | \| | \| |
| 25+40 | 1.1575 | 0.95 | O | \| | \| | \| | \| |
| 25+45 | 0.9916 | 0.81 | O | \| | \| | \| | \| |
| 25+50 | 0.8491 | 0.69 | O | \| | \| | \| | \| |
| 25+55 | 0.7261 | 0.59 | O | \| | \| | \| | \| |
| 26+ 0 | 0.6196 | 0.50 | O | \| | \| | \| | \| |
| 26+ 5 | 0.5293 | 0.43 | O | \| | \| | \| | \| |
| 26+10 | 0.4564 | 0.39 | O | \| | \| | \| | \| |
| 26+15 | 0.4013 | 0.34 | O | \| | \| | \| | \| |
| 26+20 | 0.3550 | 0.30 | O | \| | \| | \| | \| |
| 26+25 | 0.3139 | 0.27 | O | \| | \| | \| | \| |
| 26+30 | 0.2772 | 0.23 | O | \| | \| | \| | \| |
| 26+35 | 0.2433 | 0.20 | O | \| | \| | \| | \| |
| 26+40 | 0.2134 | 0.18 | O | \| | \| | \| | \| |
| 26+45 | 0.1883 | 0.16 | O | \| | \| | \| | \| |
| 26+50 | 0.1656 | 0.14 | O | \| | \| | \| | \| |
| 26+55 | 0.1441 | 0.12 | O | \| | \| | \| | \| |
| 27+ 0 | 0.1235 | 0.10 | O | \| | \| | \| | \| |
| 27+ 5 | 0.1038 | 0.08 | O | \| | \| | \| | \| |
| 27+10 | 0.0860 | 0.07 | O | \| | \| | \| | \| |
| 27+15 | 0.0706 | 0.05 | O | \| | \| | \| | \| |
| 27+20 | 0.0564 | 0.04 | O | \| | \| | \| | \| |
| 27+25 | 0.0438 | 0.03 | O | \| | \| | \| | \| |
| 27+30 | 0.0324 | 0.02 | O | \| | \| | \| | \| |
| 27+35 | 0.0221 | 0.01 | O | \| | \| | \| | \| |
| 27+40 | 0.0153 | 0.01 | O | \| | \| | \| | \| |
| 27+45 | 0.0105 | 0.01 | O | \| | \| | \| | \| |
| 27+50 | 0.0065 | 0.00 | O | \| | \| | \| | \| |
| 27+55 | 0.0032 | 0.00 | O | \| | \| | \| | \| |
| 28+ 0 | 0.0000 | 0.00 | O | \| | \| | \| | \| |

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**********HYDROGRAPH DATA**********

Number of intervals = 336
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 532.322 (CFS)
Total volume = 84.598 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 600.523 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 84.598 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 5.200 to Point/Station 5.200

**** ADD/COMBINE/RECOVER HYDROGRAPHS ****

********** HYDROGRAPH INFORMATION **********

From study/file name: OFFL10024.rte

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P R I N T  O F  S T O R M
R u n o f f  H y d r o g r a p h

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Hydrograph in 5 Minute intervals (CFS)

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| Time(h+m) | Add q(CFS) | Tot. Q | 0 | 776.5 | 1553.1 | 2329.6 | 3106.1 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.4171 | 0.42 | Q | | | | |
| 0+10 | 1.6693 | 1.70 | Q | | | | |
| 0+15 | 3.6811 | 3.85 | Q | | | | |
| 0+20 | 6.8336 | 7.34 | Q | | | | |
| 0+25 | 12.6151 | 13.67 | Q | | | | |
| 0+30 | 19.8477 | 21.78 | Q | | | | |
| 0+35 | 26.9005 | 30.19 | Q | | | | |
| 0+40 | 31.9079 | 37.02 | Q | | | | |
| 0+45 | 35.3288 | 42.16 | Q | | | | |
| 0+50 | 38.0202 | 46.11 | Q | | | | |
| 0+55 | 40.2798 | 49.28 | Q | | | | |
| 1+ 0 | 42.2327 | 51.92 | Q | | | | |
| 1+ 5 | 43.9214 | 54.18 | Q | | | | |
| 1+10 | 45.4443 | 56.18 | Q | | | | |
| 1+15 | 46.7583 | 57.90 | Q | | | | |
| 1+20 | 47.9482 | 59.45 | Q | | | | |
| 1+25 | 49.0517 | 60.87 | Q | | | | |
| 1+30 | 50.0649 | 62.17 | Q | | | | |
| 1+35 | 51.0229 | 63.38 | Q | | | | |
| 1+40 | 51.8937 | 64.48 | Q | | | | |
| 1+45 | 52.6687 | 65.46 | Q | | | | |
| 1+50 | 53.3805 | 66.36 | Q | | | | |
| 1+55 | 54.0537 | 67.20 | Q | | | | |
| 2+ 0 | 54.6983 | 67.99 | Q | | | | |
| 2+ 5 | 55.3043 | 68.74 | Q | | | | |
| 2+10 | 55.8789 | 69.43 | Q | | | | |
| 2+15 | 56.4284 | 70.08 | Q | | | | |
| 2+20 | 56.9076 | 70.66 | Q | | | | |
| 2+25 | 57.3804 | 71.23 | Q | | | | |
| 2+30 | 57.8537 | 71.79 | Q | | | | |
| 2+35 | 58.2955 | 72.32 | Q | | | | |
| 2+40 | 58.7219 | 72.83 | Q | | | | |
| 2+45 | 59.1530 | 73.34 | Q | | | | |
| 2+50 | 59.5619 | 73.83 | Q | | | | |
| 2+55 | 59.9410 | 74.29 | Q | | | | |
| 3+ 0 | 60.3212 | 74.74 | Q | | | | |
| 3+ 5 | 60.6982 | 75.20 | Q | | | | |
| 3+10 | 61.0424 | 75.62 | Q | | | | |
| 3+15 | 61.3876 | 76.04 | Q | | | | |
| 3+20 | 61.7342 | 76.46 | Q | | | | |
| 3+25 | 62.0888 | 76.89 | Q | | | | |
| 3+30 | 62.4457 | 77.32 | Q | | | | |
| 3+35 | 62.8078 | 77.76 | qQ | | | | |
| 3+40 | 63.1694 | 78.19 | qQ | | | | |
| 3+45 | 63.5340 | 78.63 | qQ | | | | |

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|---|---|---|---|---|---|---|---|
| 3+50 | 63.9000 | 79.06 | qQ | \| | \| | \| | \| |
| 3+55 | 64.2630 | 79.50 | qQ | \| | \| | \| | \| |
| 4+ 0 | 64.5977 | 79.90 | qQ | \| | \| | \| | \| |
| 4+ 5 | 64.9358 | 80.31 | qQ | \| | \| | \| | \| |
| 4+10 | 65.2754 | 80.72 | qQ | \| | \| | \| | \| |
| 4+15 | 65.6206 | 81.13 | qQ | \| | \| | \| | \| |
| 4+20 | 65.9477 | 81.53 | qQ | \| | \| | \| | \| |
| 4+25 | 66.2608 | 81.91 | qQ | \| | \| | \| | \| |
| 4+30 | 66.5755 | 82.30 | qQ | \| | \| | \| | \| |
| 4+35 | 66.8960 | 82.69 | qQ | \| | \| | \| | \| |
| 4+40 | 67.2180 | 83.09 | qQ | \| | \| | \| | \| |
| 4+45 | 67.5460 | 83.49 | qQ | \| | \| | \| | \| |
| 4+50 | 67.8757 | 83.89 | qQ | \| | \| | \| | \| |
| 4+55 | 68.2116 | 84.31 | qQ | \| | \| | \| | \| |
| 5+ 0 | 68.5493 | 84.72 | qQ | \| | \| | \| | \| |
| 5+ 5 | 68.8934 | 85.14 | qQ | \| | \| | \| | \| |
| 5+10 | 69.2393 | 85.57 | qQ | \| | \| | \| | \| |
| 5+15 | 69.5919 | 86.00 | qQ | \| | \| | \| | \| |
| 5+20 | 69.9464 | 86.44 | qQ | \| | \| | \| | \| |
| 5+25 | 70.3078 | 86.88 | qQ | \| | \| | \| | \| |
| 5+30 | 70.6712 | 87.33 | qQ | \| | \| | \| | \| |
| 5+35 | 71.0418 | 87.78 | qQ | \| | \| | \| | \| |
| 5+40 | 71.4146 | 88.24 | qQ | \| | \| | \| | \| |
| 5+45 | 71.7948 | 88.70 | qQ | \| | \| | \| | \| |
| 5+50 | 72.1772 | 89.17 | qQ | \| | \| | \| | \| |
| 5+55 | 72.5674 | 89.65 | qQ | \| | \| | \| | \| |
| 6+ 0 | 72.9599 | 90.13 | qQ | \| | \| | \| | \| |
| 6+ 5 | 73.3604 | 90.62 | qQ | \| | \| | \| | \| |
| 6+10 | 73.7635 | 91.12 | qQ | \| | \| | \| | \| |
| 6+15 | 74.1749 | 91.62 | qQ | \| | \| | \| | \| |
| 6+20 | 74.5889 | 92.13 | qQ | \| | \| | \| | \| |
| 6+25 | 75.0116 | 92.65 | qQ | \| | \| | \| | \| |
| 6+30 | 75.4371 | 93.17 | qQ | \| | \| | \| | \| |
| 6+35 | 75.8716 | 93.70 | qQ | \| | \| | \| | \| |
| 6+40 | 76.3091 | 94.24 | qQ | \| | \| | \| | \| |
| 6+45 | 76.7559 | 94.79 | qQ | \| | \| | \| | \| |
| 6+50 | 77.2060 | 95.34 | qQ | \| | \| | \| | \| |
| 6+55 | 77.6657 | 95.90 | \|Q | \| | \| | \| | \| |
| 7+ 0 | 78.1288 | 96.47 | \|Q | \| | \| | \| | \| |
| 7+ 5 | 78.6021 | 97.05 | \|Q | \| | \| | \| | \| |
| 7+10 | 79.0789 | 97.64 | \|Q | \| | \| | \| | \| |
| 7+15 | 79.5663 | 98.23 | \|Q | \| | \| | \| | \| |
| 7+20 | 80.0576 | 98.84 | \|Q | \| | \| | \| | \| |
| 7+25 | 80.5598 | 99.45 | \|Q | \| | \| | \| | \| |
| 7+30 | 81.0662 | 100.07 | \|Q | \| | \| | \| | \| |
| 7+35 | 81.5840 | 100.71 | \|Q | \| | \| | \| | \| |
| 7+40 | 82.1062 | 101.35 | \|Q | \| | \| | \| | \| |
| 7+45 | 82.6404 | 102.00 | \|Q | \| | \| | \| | \| |
| 7+50 | 83.1793 | 102.66 | \|Q | \| | \| | \| | \| |
| 7+55 | 83.7306 | 103.34 | \|Q | \| | \| | \| | \| |
| 8+ 0 | 84.2870 | 104.02 | \|Q | \| | \| | \| | \| |
| 8+ 5 | 84.8564 | 104.72 | \|Q | \| | \| | \| | \| |
| 8+10 | 85.4313 | 105.42 | \|Q | \| | \| | \| | \| |
| 8+15 | 86.0198 | 106.14 | \|Q | \| | \| | \| | \| |
| 8+20 | 86.6140 | 106.87 | \|Q | \| | \| | \| | \| |
| 8+25 | 87.2226 | 107.61 | \|Q | \| | \| | \| | \| |
| 8+30 | 87.8373 | 108.37 | \|Q | \| | \| | \| | \| |
| 8+35 | 88.4671 | 109.14 | \|Q | \| | \| | \| | \| |
| 8+40 | 89.1035 | 109.92 | \|Q | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 8+45 | 89.7557 | 110.71 | \|Q | \| | \| | \| | \| |
| 8+50 | 90.4150 | 111.52 | \|Q | \| | \| | \| | \| |
| 8+55 | 91.0909 | 112.35 | \|Q | \| | \| | \| | \| |
| 9+ 0 | 91.7744 | 113.19 | \|Q | \| | \| | \| | \| |
| 9+ 5 | 92.4755 | 114.04 | \|Q | \| | \| | \| | \| |
| 9+10 | 93.1846 | 114.91 | \|Q | \| | \| | \| | \| |
| 9+15 | 93.9123 | 115.80 | \|Q | \| | \| | \| | \| |
| 9+20 | 94.6487 | 116.70 | \|Q | \| | \| | \| | \| |
| 9+25 | 95.4047 | 117.63 | \|Q | \| | \| | \| | \| |
| 9+30 | 96.1700 | 118.56 | \|Q | \| | \| | \| | \| |
| 9+35 | 96.9561 | 119.52 | \|Q | \| | \| | \| | \| |
| 9+40 | 97.7522 | 120.50 | \|Q | \| | \| | \| | \| |
| 9+45 | 98.5703 | 121.50 | \|Q | \| | \| | \| | \| |
| 9+50 | 99.3993 | 122.51 | \|Q | \| | \| | \| | \| |
| 9+55 | 100.2515 | 123.55 | \|Q | \| | \| | \| | \| |
| 10+ 0 | 101.1156 | 124.61 | \|Q | \| | \| | \| | \| |
| 10+ 5 | 102.0043 | 125.70 | \|Q | \| | \| | \| | \| |
| 10+10 | 102.9058 | 126.80 | \|Q | \| | \| | \| | \| |
| 10+15 | 103.8336 | 127.93 | \|Q | \| | \| | \| | \| |
| 10+20 | 104.7753 | 129.08 | \|Q | \| | \| | \| | \| |
| 10+25 | 105.7450 | 130.27 | \|Q | \| | \| | \| | \| |
| 10+30 | 106.7296 | 131.47 | \|Q | \| | \| | \| | \| |
| 10+35 | 107.7443 | 132.71 | \|Q | \| | \| | \| | \| |
| 10+40 | 108.7753 | 133.97 | \|Q | \| | \| | \| | \| |
| 10+45 | 109.8383 | 135.27 | \|Q | \| | \| | \| | \| |
| 10+50 | 110.9192 | 136.59 | \|Q | \| | \| | \| | \| |
| 10+55 | 112.0344 | 137.95 | \|Q | \| | \| | \| | \| |
| 11+ 0 | 113.1691 | 139.34 | \|Q | \| | \| | \| | \| |
| 11+ 5 | 114.3408 | 140.77 | \|Q | \| | \| | \| | \| |
| 11+10 | 115.5337 | 142.22 | \|Q | \| | \| | \| | \| |
| 11+15 | 116.7665 | 143.73 | \|Q | \| | \| | \| | \| |
| 11+20 | 118.0225 | 145.26 | \|Q | \| | \| | \| | \| |
| 11+25 | 119.3217 | 146.84 | \|Q | \| | \| | \| | \| |
| 11+30 | 120.6464 | 148.46 | \|Q | \| | \| | \| | \| |
| 11+35 | 122.0178 | 150.13 | \|Q | \| | \| | \| | \| |
| 11+40 | 123.4175 | 151.84 | \|Q | \| | \| | \| | \| |
| 11+45 | 124.8678 | 153.60 | \|Q | \| | \| | \| | \| |
| 11+50 | 126.3494 | 155.41 | \|qQ | \| | \| | \| | \| |
| 11+55 | 127.8862 | 157.28 | \|qQ | \| | \| | \| | \| |
| 12+ 0 | 129.4576 | 159.20 | \|qQ | \| | \| | \| | \| |
| 12+ 5 | 130.9354 | 161.03 | \|qQ | \| | \| | \| | \| |
| 12+10 | 132.1431 | 162.59 | \|qQ | \| | \| | \| | \| |
| 12+15 | 133.1340 | 163.92 | \|qQ | \| | \| | \| | \| |
| 12+20 | 133.7428 | 164.81 | \|qQ | \| | \| | \| | \| |
| 12+25 | 133.4477 | 164.75 | \|qQ | \| | \| | \| | \| |
| 12+30 | 132.6536 | 164.10 | \|qQ | \| | \| | \| | \| |
| 12+35 | 131.9895 | 163.44 | \|qQ | \| | \| | \| | \| |
| 12+40 | 132.1182 | 163.45 | \|qQ | \| | \| | \| | \| |
| 12+45 | 132.9071 | 164.16 | \|qQ | \| | \| | \| | \| |
| 12+50 | 134.0174 | 165.35 | \|qQ | \| | \| | \| | \| |
| 12+55 | 135.3766 | 166.91 | \|qQ | \| | \| | \| | \| |
| 13+ 0 | 136.9117 | 168.73 | \|qQ | \| | \| | \| | \| |
| 13+ 5 | 138.6469 | 170.80 | \|qQ | \| | \| | \| | \| |
| 13+10 | 140.5166 | 173.05 | \|qQ | \| | \| | \| | \| |
| 13+15 | 142.5805 | 175.54 | \|qQ | \| | \| | \| | \| |
| 13+20 | 144.7758 | 178.20 | \|qQ | \| | \| | \| | \| |
| 13+25 | 147.1372 | 181.06 | \|qQ | \| | \| | \| | \| |
| 13+30 | 149.6319 | 184.08 | \|qQ | \| | \| | \| | \| |
| 13+35 | 152.3013 | 187.32 | \|qQ | \| | \| | \| | \| |

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|---|---|---|---|
| 13+40 | 155.1204 | 190.74 | qQ |
| 13+45 | 158.1534 | 194.42 | Q |
| 13+50 | 161.3492 | 198.30 | Q |
| 13+55 | 164.7679 | 202.44 | Q |
| 14+ 0 | 168.3638 | 206.81 | Q |
| 14+ 5 | 172.6268 | 211.89 | Q |
| 14+10 | 177.9205 | 218.06 | Q |
| 14+15 | 184.2745 | 225.37 | Q |
| 14+20 | 192.0411 | 234.21 | qQ |
| 14+25 | 202.7737 | 246.14 | qQ |
| 14+30 | 215.3069 | 260.03 | qQ |
| 14+35 | 228.2330 | 274.52 | qQ |
| 14+40 | 239.6768 | 287.75 | Q |
| 14+45 | 250.2345 | 300.17 | Q |
| 14+50 | 260.6693 | 312.44 | qQ |
| 14+55 | 271.4926 | 325.14 | qQ |
| 15+ 0 | 282.7555 | 338.35 | qQ |
| 15+ 5 | 294.7961 | 352.47 | qQ |
| 15+10 | 307.6810 | 367.58 | qQ |
| 15+15 | 321.7638 | 384.08 | Q |
| 15+20 | 337.1312 | 402.10 | qQ |
| 15+25 | 354.1643 | 422.06 | qQ |
| 15+30 | 372.7125 | 443.88 | qQ |
| 15+35 | 393.8060 | 468.65 | qQ |
| 15+40 | 417.5628 | 496.62 | qQ |
| 15+45 | 445.1680 | 529.11 | qQ |
| 15+50 | 479.3069 | 569.02 | qQ |
| 15+55 | 528.0465 | 624.79 | q Q |
| 16+ 0 | 604.2657 | 709.96 | q Q |
| 16+ 5 | 795.0332 | 913.18 | qQ |
| 16+10 | 1089.7684 | 1228.90 | qQ |
| 16+15 | 1395.8733 | 1573.31 | q Q |
| 16+20 | 1795.0314 | 2026.05 | q Q |
| 16+25 | 2438.4242 | 2731.72 | q Q |
| 16+30 | 2734.3532 | 3106.12 | q Q |
| 16+35 | 2588.1577 | 3052.43 | q Q |
| 16+40 | 2027.8948 | 2560.22 | q Q |
| 16+45 | 1576.5232 | 2075.60 | q Q |
| 16+50 | 1329.9168 | 1730.95 | q Q |
| 16+55 | 1165.4410 | 1488.57 | q Q |
| 17+ 0 | 1039.7456 | 1308.94 | q Q |
| 17+ 5 | 930.9396 | 1163.29 | q Q |
| 17+10 | 848.0912 | 1052.14 | q Q |
| 17+15 | 762.1627 | 943.43 | q Q |
| 17+20 | 698.3803 | 861.49 | q Q |
| 17+25 | 643.4216 | 791.09 | q Q |
| 17+30 | 590.1600 | 724.26 | q Q |
| 17+35 | 545.2597 | 667.48 | qQ |
| 17+40 | 498.2486 | 609.45 | qQ |
| 17+45 | 453.0894 | 553.98 | q Q |
| 17+50 | 418.6227 | 510.53 | qQ |
| 17+55 | 391.2043 | 475.30 | qQ |
| 18+ 0 | 367.9088 | 445.05 | qQ |
| 18+ 5 | 343.5745 | 414.15 | qQ |
| 18+10 | 322.4013 | 386.62 | Q |
| 18+15 | 302.8227 | 361.20 | qQ |
| 18+20 | 277.2556 | 331.64 | qQ |
| 18+25 | 266.3680 | 317.75 | qQ |
| 18+30 | 258.5641 | 307.42 | Q |

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|---|---|---|---|---|---|---|---|
| 18+35 | 244.4249 | 291.33 | Q | | | | |
| 18+40 | 234.1613 | 279.25 | Q | | | | |
| 18+45 | 226.8665 | 270.12 | qQ | | | | |
| 18+50 | 214.7557 | 256.58 | qQ | | | | |
| 18+55 | 201.2579 | 241.85 | qQ | | | | |
| 19+ 0 | 194.9437 | 234.37 | qQ | | | | |
| 19+ 5 | 187.1831 | 225.45 | Q | | | | |
| 19+10 | 174.9864 | 211.95 | Q | | | | |
| 19+15 | 169.6872 | 205.35 | Q | | | | |
| 19+20 | 165.9258 | 200.47 | Q | | | | |
| 19+25 | 162.9842 | 196.41 | Q | | | | |
| 19+30 | 159.7152 | 192.09 | Q | | | | |
| 19+35 | 156.2523 | 187.58 | Q | | | | |
| 19+40 | 152.3586 | 182.35 | qQ | | | | |
| 19+45 | 148.3379 | 177.26 | qQ | | | | |
| 19+50 | 144.3446 | 172.44 | qQ | | | | |
| 19+55 | 138.3048 | 165.64 | qQ | | | | |
| 20+ 0 | 128.4969 | 155.01 | Q | | | | |
| 20+ 5 | 124.6786 | 150.42 | Q | | | | |
| 20+10 | 121.4389 | 146.57 | Q | | | | |
| 20+15 | 117.8058 | 142.42 | Q | | | | |
| 20+20 | 110.2517 | 134.39 | Q | | | | |
| 20+25 | 103.3190 | 127.03 | Q | | | | |
| 20+30 | 100.8916 | 124.19 | Q | | | | |
| 20+35 | 98.8190 | 121.73 | Q | | | | |
| 20+40 | 96.9157 | 119.46 | Q | | | | |
| 20+45 | 95.1391 | 117.33 | Q | | | | |
| 20+50 | 93.4635 | 115.31 | Q | | | | |
| 20+55 | 91.8762 | 113.40 | Q | | | | |
| 21+ 0 | 90.3975 | 111.61 | Q | | | | |
| 21+ 5 | 88.9881 | 109.89 | Q | | | | |
| 21+10 | 87.6290 | 108.25 | Q | | | | |
| 21+15 | 86.3258 | 106.66 | Q | | | | |
| 21+20 | 85.0942 | 105.16 | Q | | | | |
| 21+25 | 83.9305 | 103.73 | Q | | | | |
| 21+30 | 82.8107 | 102.36 | Q | | | | |
| 21+35 | 81.7317 | 101.04 | Q | | | | |
| 21+40 | 80.6899 | 99.76 | Q | | | | |
| 21+45 | 79.6829 | 98.52 | Q | | | | |
| 21+50 | 78.7094 | 97.32 | Q | | | | |
| 21+55 | 77.7643 | 96.16 | Q | | | | |
| 22+ 0 | 76.8383 | 95.02 | qQ | | | | |
| 22+ 5 | 75.9399 | 93.91 | qQ | | | | |
| 22+10 | 75.0686 | 92.84 | qQ | | | | |
| 22+15 | 74.2229 | 91.80 | qQ | | | | |
| 22+20 | 73.3943 | 90.78 | qQ | | | | |
| 22+25 | 72.5819 | 89.78 | qQ | | | | |
| 22+30 | 71.7918 | 88.81 | qQ | | | | |
| 22+35 | 71.0231 | 87.87 | qQ | | | | |
| 22+40 | 70.2748 | 86.95 | qQ | | | | |
| 22+45 | 69.5459 | 86.06 | qQ | | | | |
| 22+50 | 68.8358 | 85.18 | qQ | | | | |
| 22+55 | 68.1435 | 84.33 | qQ | | | | |
| 23+ 0 | 67.4683 | 83.50 | qQ | | | | |
| 23+ 5 | 66.8096 | 82.69 | qQ | | | | |
| 23+10 | 66.1667 | 81.90 | qQ | | | | |
| 23+15 | 65.5389 | 81.13 | qQ | | | | |
| 23+20 | 64.9258 | 80.37 | qQ | | | | |
| 23+25 | 64.3267 | 79.64 | qQ | | | | |

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|---|---|---|---|---|---|---|---|
| 23+30 | 63.7411 | 78.92 | qQ | | | | |
| 23+35 | 63.1685 | 78.21 | qQ | | | | |
| 23+40 | 62.6085 | 77.52 | Q | | | | |
| 23+45 | 62.0607 | 76.85 | Q | | | | |
| 23+50 | 61.5245 | 76.19 | Q | | | | |
| 23+55 | 60.9996 | 75.54 | Q | | | | |
| 24+ 0 | 60.4856 | 74.91 | Q | | | | |
| 24+ 5 | 59.5661 | 73.87 | Q | | | | |
| 24+10 | 57.8278 | 71.99 | Q | | | | |
| 24+15 | 55.3546 | 69.26 | Q | | | | |
| 24+20 | 51.7745 | 65.25 | Q | | | | |
| 24+25 | 45.6141 | 58.44 | Q | | | | |
| 24+30 | 38.0751 | 49.92 | Q | | | | |
| 24+35 | 30.8021 | 41.21 | Q | | | | |
| 24+40 | 25.6522 | 34.18 | Q | | | | |
| 24+45 | 22.1472 | 28.91 | Q | | | | |
| 24+50 | 19.4104 | 24.89 | Q | | | | |
| 24+55 | 17.1389 | 21.70 | Q | | | | |
| 25+ 0 | 15.1997 | 19.07 | Q | | | | |
| 25+ 5 | 13.5497 | 16.85 | Q | | | | |
| 25+10 | 12.0843 | 14.93 | Q | | | | |
| 25+15 | 10.8476 | 13.30 | Q | | | | |
| 25+20 | 9.7493 | 11.87 | Q | | | | |
| 25+25 | 8.7533 | 10.58 | Q | | | | |
| 25+30 | 7.8592 | 9.43 | Q | | | | |
| 25+35 | 7.0339 | 8.39 | Q | | | | |
| 25+40 | 6.3057 | 7.46 | Q | | | | |
| 25+45 | 5.6850 | 6.68 | Q | | | | |
| 25+50 | 5.1351 | 5.98 | Q | | | | |
| 25+55 | 4.6336 | 5.36 | Q | | | | |
| 26+ 0 | 4.1672 | 4.79 | Q | | | | |
| 26+ 5 | 3.7482 | 4.28 | Q | | | | |
| 26+10 | 3.3661 | 3.82 | Q | | | | |
| 26+15 | 3.0172 | 3.42 | Q | | | | |
| 26+20 | 2.7433 | 3.10 | Q | | | | |
| 26+25 | 2.4827 | 2.80 | Q | | | | |
| 26+30 | 2.2255 | 2.50 | Q | | | | |
| 26+35 | 2.0067 | 2.25 | Q | | | | |
| 26+40 | 1.8066 | 2.02 | Q | | | | |
| 26+45 | 1.6081 | 1.80 | Q | | | | |
| 26+50 | 1.4350 | 1.60 | Q | | | | |
| 26+55 | 1.2979 | 1.44 | Q | | | | |
| 27+ 0 | 1.1621 | 1.29 | Q | | | | |
| 27+ 5 | 1.0355 | 1.14 | Q | | | | |
| 27+10 | 0.9441 | 1.03 | Q | | | | |
| 27+15 | 0.8572 | 0.93 | Q | | | | |
| 27+20 | 0.7709 | 0.83 | Q | | | | |
| 27+25 | 0.6824 | 0.73 | Q | | | | |
| 27+30 | 0.5935 | 0.63 | Q | | | | |
| 27+35 | 0.5053 | 0.53 | Q | | | | |
| 27+40 | 0.4198 | 0.44 | Q | | | | |
| 27+45 | 0.3371 | 0.35 | Q | | | | |
| 27+50 | 0.2551 | 0.26 | Q | | | | |
| 27+55 | 0.1823 | 0.19 | Q | | | | |
| 28+ 0 | 0.1396 | 0.14 | Q | | | | |
| 28+ 5 | 0.0994 | 0.10 | Q | | | | |
| 28+10 | 0.0594 | 0.06 | Q | | | | |
| 28+15 | 0.0198 | 0.02 | Q | | | | |

```
**************************HYDROGRAPH DATA**************************
               Number of intervals =   339
               Time interval =    5.0 (Min.)
               Maximum/Peak flow rate =     3106.117 (CFS)
               Total volume =     486.049 (Ac.Ft)
        Status of hydrographs being held in storage
                  Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
        Peak (CFS)    600.523     0.000     0.000     0.000     0.000
        Vol (Ac.Ft)     84.598     0.000     0.000     0.000     0.000
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# TECHNICAL APPENDIX NO. 3

Existing Conditions
Rational Method Calculations
100-Year, 1-Hour Storm Event

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 1
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.260 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 1.000 to Point/Station 1.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 357.000(Ft.)
Top (of initial area) elevation = 1965.400(Ft.)
Bottom (of initial area) elevation = 1956.100(Ft.)
Difference in elevation = 9.300(Ft.)
Slope = 0.02605 s(%)= 2.61
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 18.888 min.
Rainfall intensity = 2.830(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.786
Subarea runoff = 2.223(CFS)
Total initial stream area = 1.000(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)
End of computations, Total Study Area = 1.00 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 62.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY
EXISTING CONDTIIONS AREA 2
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 2.000 to Point/Station 2.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 285.000(Ft.)
Top (of initial area) elevation = 1965.100(Ft.)
Bottom (of initial area) elevation = 1955.600(Ft.)
Difference in elevation = 9.500(Ft.)
Slope = 0.03333 s(%)= 3.33
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 16.430 min.
Rainfall intensity = 3.145(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.797
Subarea runoff = 3.885(CFS)
Total initial stream area = 1.550(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)
End of computations, Total Study Area = 1.55 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 62.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 3
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 3.000 to Point/Station 3.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 600.000(Ft.)
Top (of initial area) elevation = 1963.000(Ft.)
Bottom (of initial area) elevation = 1955.000(Ft.)
Difference in elevation = 8.000(Ft.)
Slope = 0.01333 s(%)= 1.33
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 26.580 min.
Rainfall intensity = 2.246(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.756
Subarea runoff = 8.351(CFS)
Total initial stream area = 4.920(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)
End of computations, Total Study Area = 4.92 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 62.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 4
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 4.000 to Point/Station 4.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1971.300(Ft.)
Bottom (of initial area) elevation = 1953.900(Ft.)
Difference in elevation = 17.400(Ft.)
Slope = 0.01740 s(%)= 1.74
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 30.915 min.
Rainfall intensity = 2.020(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.740
Subarea runoff = 13.376(CFS)
Total initial stream area = 8.950(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)
End of computations, Total Study Area = 8.95 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 62.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 5
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 5.000 to Point/Station 5.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 931.000(Ft.)
Top (of initial area) elevation = 1971.200(Ft.)
Bottom (of initial area) elevation = 1954.800(Ft.)
Difference in elevation = 16.400(Ft.)
Slope = 0.01762 s(%)= 1.76
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 29.970 min.
Rainfall intensity = 2.065(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.743
Subarea runoff = 15.345(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)

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Process from Point/Station 5.100 to Point/Station 5.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1954.800(Ft.)
Downstream point elevation = 1950.600(Ft.)

```
Channel length thru subarea  =   146.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     17.870(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     17.870(CFS)
Depth of flow =   0.165(Ft.), Average velocity =   2.154(Ft/s)
Channel flow top width =   50.659(Ft.)
Flow Velocity =    2.15(Ft/s)
Travel time  =    1.13 min.
Time of concentration =   31.10 min.
Critical depth =      0.158(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      2.012(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.739
Subarea runoff =      4.967(CFS) for    3.660(Ac.)
Total runoff =     20.312(CFS)
Effective area this stream =       13.66(Ac.)
Total Study Area (Main Stream No. 1) =       13.66(Ac.)
Area averaged Fm value =    0.360(In/Hr)
Depth of flow =   0.178(Ft.), Average velocity =   2.266(Ft/s)
Critical depth =      0.172(Ft.)
End of computations, Total Study Area =           13.66 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  62.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 6
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 6.000 to Point/Station 6.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1970.700(Ft.)
Bottom (of initial area) elevation = 1962.800(Ft.)
Difference in elevation = 7.900(Ft.)
Slope = 0.00790 s(%)= 0.79
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 36.204 min.
Rainfall intensity = 1.809(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.721
Subarea runoff = 12.352(CFS)
Total initial stream area = 9.470(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)

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Process from Point/Station 6.100 to Point/Station 6.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1962.800(Ft.)
Downstream point elevation = 1948.800(Ft.)

```
Channel length thru subarea  =   474.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     14.414(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     14.414(CFS)
Depth of flow =   0.144(Ft.), Average velocity =   1.993(Ft/s)
Channel flow top width =   50.575(Ft.)
Flow Velocity =    1.99(Ft/s)
Travel time  =    3.96 min.
Time of concentration =   40.17 min.
Critical depth =      0.137(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      1.682(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.708
Subarea runoff =      4.072(CFS) for    4.330(Ac.)
Total runoff =     16.423(CFS)
Effective area this stream =       13.80(Ac.)
Total Study Area (Main Stream No. 1) =       13.80(Ac.)
Area averaged Fm value =    0.360(In/Hr)
Depth of flow =   0.155(Ft.), Average velocity =   2.099(Ft/s)
Critical depth =      0.148(Ft.)
End of computations, Total Study Area =           13.80 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  62.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

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Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 7
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 7.000 to Point/Station 7.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1970.400(Ft.)
Bottom (of initial area) elevation = 1966.600(Ft.)
Difference in elevation = 3.800(Ft.)
Slope = 0.00380 s(%)= 0.38
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 41.911 min.
Rainfall intensity = 1.633(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.702
Subarea runoff = 10.690(CFS)
Total initial stream area = 9.330(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)

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Process from Point/Station 7.100 to Point/Station 7.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1966.600(Ft.)
Downstream point elevation = 1949.600(Ft.)

```
Channel length thru subarea  =   716.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     12.886(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     12.886(CFS)
Depth of flow =   0.144(Ft.), Average velocity =   1.785(Ft/s)
Channel flow top width =   50.574(Ft.)
Flow Velocity =    1.79(Ft/s)
Travel time  =    6.68 min.
Time of concentration =   48.60 min.
Critical depth =      0.127(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      1.472(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.680
Subarea runoff =      4.317(CFS) for    5.660(Ac.)
Total runoff =     15.007(CFS)
Effective area this stream =       14.99(Ac.)
Total Study Area (Main Stream No. 1) =       14.99(Ac.)
Area averaged Fm value =    0.360(In/Hr)
Depth of flow =   0.157(Ft.), Average velocity =   1.896(Ft/s)
Critical depth =      0.141(Ft.)
End of computations, Total Study Area =           14.99 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  62.0
```

San Bernardino County Rational Hydrology Program

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Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 8
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 8.000 to Point/Station 8.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1966.700(Ft.)
Bottom (of initial area) elevation = 1950.300(Ft.)
Difference in elevation = 16.400(Ft.)
Slope = 0.01640 s(%)= 1.64
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 31.283 min.
Rainfall intensity = 2.004(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.738
Subarea runoff = 13.272(CFS)
Total initial stream area = 8.970(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)
End of computations, Total Study Area = 8.97 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 62.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

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Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXITING CONDITIONS AREA 9
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 9.000 to Point/Station 9.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 776.000(Ft.)
Top (of initial area) elevation = 1967.200(Ft.)
Bottom (of initial area) elevation = 1965.200(Ft.)
Difference in elevation = 2.000(Ft.)
Slope = 0.00258 s(%)= 0.26
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 40.925 min.
Rainfall intensity = 1.660(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.705
Subarea runoff = 11.704(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)

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Process from Point/Station 9.100 to Point/Station 9.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1965.200(Ft.)
Downstream point elevation = 1960.400(Ft.)

```
Channel length thru subarea  =   780.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     13.502(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     13.502(CFS)
Depth of flow =   0.221(Ft.), Average velocity =   1.210(Ft/s)
Channel flow top width =   50.885(Ft.)
Flow Velocity =    1.21(Ft/s)
Travel time  =   10.75 min.
Time of concentration =   51.67 min.
Critical depth =      0.131(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      1.410(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.671
Subarea runoff =      3.527(CFS) for    6.110(Ac.)
Total runoff =     15.231(CFS)
Effective area this stream =       16.11(Ac.)
Total Study Area (Main Stream No. 1) =       16.11(Ac.)
Area averaged Fm value =    0.360(In/Hr)
Depth of flow =   0.238(Ft.), Average velocity =   1.269(Ft/s)
Critical depth =      0.143(Ft.)


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Process from Point/Station        9.100 to Point/Station        9.200
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     16.110(Ac.)
Runoff from this stream =     15.231(CFS)
Time of concentration =   51.67 min.
Rainfall intensity =     1.410(In/Hr)
Area averaged loss rate (Fm) =    0.3596(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000


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Process from Point/Station        9.300 to Point/Station        9.200
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Initial subarea data:
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1967.900(Ft.)
Bottom (of initial area) elevation =  1960.400(Ft.)
Difference in elevation =     7.500(Ft.)
```

```
Slope =    0.00750  s(%)=       0.75
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   36.582 min.
Rainfall intensity =      1.796(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.720
Subarea runoff =     11.658(CFS)
Total initial stream area =        9.020(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.360(In/Hr)


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Process from Point/Station        9.300 to Point/Station        9.200
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      9.020(Ac.)
Runoff from this stream =     11.658(CFS)
Time of concentration =   36.58 min.
Rainfall intensity =     1.796(In/Hr)
Area averaged loss rate (Fm) =    0.3596(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     15.23    16.110     51.67    0.360      1.410
2     11.66     9.020     36.58    0.360      1.796
Qmax(1) =
           1.000 *    1.000 *    15.231) +
           0.731 *    1.000 *    11.658) + =      23.759
Qmax(2) =
           1.367 *    0.708 *    15.231) +
           1.000 *    1.000 *    11.658) + =      26.399

Total of 2 streams to confluence:
Flow rates before confluence point:
      15.231      11.658
Maximum flow rates at confluence using above data:
       23.759       26.399
Area of streams before confluence:
       16.110        9.020
Effective area values after confluence:
       25.130       20.425
Results of confluence:
Total flow rate =     26.399(CFS)
Time of concentration =    36.582 min.
Effective stream area after confluence =     20.425(Ac.)
Study area average Pervious fraction(Ap) =  1.000
Study area average soil loss rate(Fm) =    0.360(In/Hr)
Study area total (this main stream) =      25.13(Ac.)


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Process from Point/Station        9.200 to Point/Station        9.500
**** IMPROVED CHANNEL TRAVEL TIME ****
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Upstream point elevation =  1960.400(Ft.)
Downstream point elevation =  1946.500(Ft.)
Channel length thru subarea  =   495.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     28.398(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     28.398(CFS)
Depth of flow =   0.219(Ft.), Average velocity =   2.568(Ft/s)
Channel flow top width =   50.877(Ft.)
Flow Velocity =    2.57(Ft/s)
Travel time  =    3.21 min.
Time of concentration =   39.79 min.
Critical depth =      0.215(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      1.693(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.709
Subarea runoff =      3.919(CFS) for    4.840(Ac.)
Total runoff =     30.319(CFS)
Effective area this stream =       25.27(Ac.)
Total Study Area (Main Stream No. 1) =       29.97(Ac.)
Area averaged Fm value =    0.360(In/Hr)
Depth of flow =   0.228(Ft.), Average velocity =   2.636(Ft/s)
Critical depth =      0.225(Ft.)
End of computations, Total Study Area =           29.97 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  62.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164307 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 10A
100-YEAR, 1-HOURS STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 10.000 to Point/Station 10.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1967.300(Ft.)
Bottom (of initial area) elevation = 1957.800(Ft.)
Difference in elevation = 9.500(Ft.)
Slope = 0.00950 s(%)= 0.95
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 34.893 min.
Rainfall intensity = 1.856(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.726
Subarea runoff = 8.418(CFS)
Total initial stream area = 6.250(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)

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Process from Point/Station 10.100 to Point/Station 10.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1957.800(Ft.)
Downstream point elevation = 1957.300(Ft.)

```
Channel length thru subarea  =  1280.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =      8.458(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =      8.458(CFS)
Depth of flow =   0.382(Ft.), Average velocity =   0.436(Ft/s)
Channel flow top width =   51.528(Ft.)
Flow Velocity =    0.44(Ft/s)
Travel time  =   48.90 min.
Time of concentration =   83.79 min.
Critical depth =      0.096(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =      7.886(CFS)
therefore the upstream flow rate of Q =      8.418(CFS) is being used
Rainfall intensity =      1.005(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.578
Subarea runoff =      0.000(CFS) for    7.320(Ac.)
Total runoff =      8.418(CFS)
Effective area this stream =       13.57(Ac.)
Total Study Area (Main Stream No. 1) =       13.57(Ac.)
Area averaged Fm value =    0.360(In/Hr)
Depth of flow =   0.381(Ft.), Average velocity =   0.435(Ft/s)
Critical depth =      0.096(Ft.)
End of computations, Total Study Area =           13.57 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  62.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 11
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 11.000 to Point/Station 11.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 841.000(Ft.)
Top (of initial area) elevation = 1957.600(Ft.)
Bottom (of initial area) elevation = 1947.600(Ft.)
Difference in elevation = 10.000(Ft.)
Slope = 0.01189 s(%)= 1.19
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 31.129 min.
Rainfall intensity = 2.010(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.739
Subarea runoff = 13.670(CFS)
Total initial stream area = 9.200(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)
End of computations, Total Study Area = 9.20 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 62.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 12
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.280 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 12.000 to Point/Station 12.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 225.000(Ft.)
Top (of initial area) elevation = 1955.300(Ft.)
Bottom (of initial area) elevation = 1948.800(Ft.)
Difference in elevation = 6.500(Ft.)
Slope = 0.02889 s(%)= 2.89
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 15.382 min.
Rainfall intensity = 3.319(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.803
Subarea runoff = 2.317(CFS)
Total initial stream area = 0.870(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)
End of computations, Total Study Area = 0.87 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 62.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 13
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.280 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 13.000 to Point/Station 13.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1959.000(Ft.)
Bottom (of initial area) elevation = 1955.600(Ft.)
Difference in elevation = 3.400(Ft.)
Slope = 0.00340 s(%)= 0.34
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 42.853 min.
Rainfall intensity = 1.620(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.700
Subarea runoff = 9.484(CFS)
Total initial stream area = 8.360(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)

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Process from Point/Station 13.100 to Point/Station 13.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1955.600(Ft.)
Downstream point elevation = 1951.600(Ft.)

```
Channel length thru subarea  =   808.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     12.348(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     12.348(CFS)
Depth of flow =   0.224(Ft.), Average velocity =   1.093(Ft/s)
Channel flow top width =   50.895(Ft.)
Flow Velocity =    1.09(Ft/s)
Travel time  =   12.32 min.
Time of concentration =   55.17 min.
Critical depth =      0.123(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      1.357(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.662
Subarea runoff =      5.649(CFS) for    8.490(Ac.)
Total runoff =     15.133(CFS)
Effective area this stream =       16.85(Ac.)
Total Study Area (Main Stream No. 1) =       16.85(Ac.)
Area averaged Fm value =    0.360(In/Hr)
Depth of flow =   0.253(Ft.), Average velocity =   1.185(Ft/s)
Critical depth =      0.141(Ft.)
End of computations, Total Study Area =           16.85 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  62.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 19
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.350 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 19.000 to Point/Station 19.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 756.000(Ft.)
Top (of initial area) elevation = 1933.900(Ft.)
Bottom (of initial area) elevation = 1929.600(Ft.)
Difference in elevation = 4.300(Ft.)
Slope = 0.00569 s(%)= 0.57
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 34.570 min.
Rainfall intensity = 1.986(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.737
Subarea runoff = 11.519(CFS)
Total initial stream area = 7.870(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)
End of computations, Total Study Area = 7.87 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 62.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXITING CONDITIONS AREA 14
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.290 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 14.000 to Point/Station 14.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1955.000(Ft.)
Bottom (of initial area) elevation = 1951.800(Ft.)
Difference in elevation = 3.200(Ft.)
Slope = 0.00320 s(%)= 0.32
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 43.376 min.
Rainfall intensity = 1.619(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.700
Subarea runoff = 11.334(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)

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Process from Point/Station 14.100 to Point/Station 14.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1951.800(Ft.)
Downstream point elevation = 1947.400(Ft.)

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Channel length thru subarea  =   627.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     14.491(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     14.491(CFS)
Depth of flow =   0.222(Ft.), Average velocity =   1.294(Ft/s)
Channel flow top width =   50.888(Ft.)
Flow Velocity =    1.29(Ft/s)
Travel time  =    8.07 min.
Time of concentration =   51.45 min.
Critical depth =      0.137(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      1.437(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.675
Subarea runoff =      6.259(CFS) for    8.150(Ac.)
Total runoff =     17.593(CFS)
Effective area this stream =       18.15(Ac.)
Total Study Area (Main Stream No. 1) =       18.15(Ac.)
Area averaged Fm value =    0.360(In/Hr)
Depth of flow =   0.249(Ft.), Average velocity =   1.397(Ft/s)
Critical depth =      0.156(Ft.)
End of computations, Total Study Area =           18.15 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  62.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITONS AREA 15
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 15.000 to Point/Station 15.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 0.7180 Max loss rate(Fm)= 0.258(In/Hr)
Initial subarea data:
Initial area flow distance = 588.000(Ft.)
Top (of initial area) elevation = 1983.200(Ft.)
Bottom (of initial area) elevation = 1970.000(Ft.)
Difference in elevation = 13.200(Ft.)
Slope = 0.02245 s(%)= 2.24
TC = k(0.452)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 12.366 min.
Rainfall intensity = 3.837(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.839
Subarea runoff = 32.206(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 0.718
Initial area Fm value = 0.258(In/Hr)

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Process from Point/Station 15.100 to Point/Station 15.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1970.000(Ft.)
Downstream point elevation = 1964.600(Ft.)

Channel length thru subarea  =   891.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     55.915(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     55.915(CFS)
Depth of flow =   0.521(Ft.), Average velocity =   2.104(Ft/s)
Channel flow top width =   52.083(Ft.)
Flow Velocity =    2.10(Ft/s)
Travel time  =    7.06 min.
Time of concentration =   19.42 min.
Critical depth =      0.336(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 0.4540     Max loss rate(Fm)=     0.163(In/Hr)
Rainfall intensity =      2.797(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.838
Subarea runoff =     47.363(CFS) for   23.930(Ac.)
Total runoff =     79.569(CFS)
Effective area this stream =       33.93(Ac.)
Total Study Area (Main Stream No. 1) =       33.93(Ac.)
Area averaged Fm value =    0.191(In/Hr)
Depth of flow =   0.643(Ft.), Average velocity =   2.413(Ft/s)
Critical depth =      0.426(Ft.)


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Process from Point/Station       15.200 to Point/Station       15.300
**** IMPROVED CHANNEL TRAVEL TIME ****
____________________________________________________________________________
Upstream point elevation =  1964.600(Ft.)
Downstream point elevation =  1963.800(Ft.)
Channel length thru subarea  =  1336.000(Ft.)
Channel base width      =  100.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    104.671(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    104.671(CFS)
Depth of flow =   1.002(Ft.), Average velocity =   1.024(Ft/s)
Channel flow top width =  104.009(Ft.)
Flow Velocity =    1.02(Ft/s)
Travel time  =   21.75 min.
Time of concentration =   41.17 min.
Critical depth =      0.324(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 0.5120     Max loss rate(Fm)=     0.184(In/Hr)
Rainfall intensity =      1.653(In/Hr) for a   100.0 year storm

```
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.798
Subarea runoff =     50.137(CFS) for   64.340(Ac.)
Total runoff =    129.706(CFS)
Effective area this stream =       98.27(Ac.)
Total Study Area (Main Stream No. 1) =       98.27(Ac.)
Area averaged Fm value =    0.187(In/Hr)
Depth of flow =   1.139(Ft.), Average velocity =   1.113(Ft/s)
Critical depth =      0.375(Ft.)


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Process from Point/Station       15.300 to Point/Station       15.400
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1963.800(Ft.)
Downstream point elevation =  1949.300(Ft.)
Channel length thru subarea  =  6809.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    129.738(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    129.738(CFS)
Depth of flow =   1.177(Ft.), Average velocity =   2.106(Ft/s)
Channel flow top width =   54.706(Ft.)
Flow Velocity =    2.11(Ft/s)
Travel time  =   53.88 min.
Time of concentration =   95.05 min.
Critical depth =      0.586(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 0.9660     Max loss rate(Fm)=     0.347(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =    115.854(CFS)
therefore the upstream flow rate of Q =    129.706(CFS) is being used
Rainfall intensity =      0.920(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.639
Subarea runoff =      0.000(CFS) for   98.810(Ac.)
Total runoff =    129.706(CFS)
Effective area this stream =      197.08(Ac.)
Total Study Area (Main Stream No. 1) =      197.08(Ac.)
Area averaged Fm value =    0.267(In/Hr)
Depth of flow =   1.176(Ft.), Average velocity =   2.106(Ft/s)
Critical depth =      0.586(Ft.)
End of computations, Total Study Area =          197.08 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.743
Area averaged SCS curve number =  62.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXITING CONDITIONS AREA 20
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.360 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 20.000 to Point/Station 20.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 58.61
Adjusted SCS curve number for AMC 3 = 77.89
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.405(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1932.900(Ft.)
Bottom (of initial area) elevation = 1925.300(Ft.)
Difference in elevation = 7.600(Ft.)
Slope = 0.00760 s(%)= 0.76
TC = k(0.933)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 39.244 min.
Rainfall intensity = 1.831(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.701
Subarea runoff = 12.827(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.405(In/Hr)

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Process from Point/Station 20.100 to Point/Station 20.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1925.300(Ft.)
Downstream point elevation = 1920.500(Ft.)

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Channel length thru subarea  =   801.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     19.189(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     19.189(CFS)
Depth of flow =   0.275(Ft.), Average velocity =   1.379(Ft/s)
Channel flow top width =   51.101(Ft.)
Flow Velocity =    1.38(Ft/s)
Travel time  =    9.68 min.
Time of concentration =   48.93 min.
Critical depth =      0.166(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 58.22
Adjusted SCS curve number for AMC 3 = 77.58
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.411(In/Hr)
Rainfall intensity =      1.569(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.666
Subarea runoff =     12.664(CFS) for   14.410(Ac.)
Total runoff =     25.491(CFS)
Effective area this stream =       24.41(Ac.)
Total Study Area (Main Stream No. 1) =       24.41(Ac.)
Area averaged Fm value =    0.408(In/Hr)
Depth of flow =   0.326(Ft.), Average velocity =   1.542(Ft/s)
Critical depth =      0.199(Ft.)
End of computations, Total Study Area =           24.41 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  58.4
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San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXITING CONDITIONS AREA 17
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.300 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 17.000 to Point/Station 17.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.140(In/Hr)
Initial subarea data:
Initial area flow distance = 805.000(Ft.)
Top (of initial area) elevation = 1951.200(Ft.)
Bottom (of initial area) elevation = 1947.600(Ft.)
Difference in elevation = 3.600(Ft.)
Slope = 0.00447 s(%)= 0.45
TC = k(0.615)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 26.369 min.
Rainfall intensity = 2.311(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.845
Subarea runoff = 19.543(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.140(In/Hr)

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Process from Point/Station 17.100 to Point/Station 17.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1947.600(Ft.)
Downstream point elevation = 1940.500(Ft.)

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Channel length thru subarea  =  1959.000(Ft.)
Channel base width      =  100.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    103.701(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =    103.701(CFS)
Depth of flow =   0.581(Ft.), Average velocity =   1.764(Ft/s)
Channel flow top width =  102.325(Ft.)
Flow Velocity =    1.76(Ft/s)
Travel time  =   18.51 min.
Time of concentration =   44.88 min.
Critical depth =      0.320(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 73.74
Adjusted SCS curve number for AMC 3 = 89.99
Pervious ratio(Ap) = 0.9930     Max loss rate(Fm)=     0.191(In/Hr)
Rainfall intensity =      1.593(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.794
Subarea runoff =    168.237(CFS) for  138.480(Ac.)
Total runoff =    187.780(CFS)
Effective area this stream =      148.48(Ac.)
Total Study Area (Main Stream No. 1) =      148.48(Ac.)
Area averaged Fm value =    0.188(In/Hr)
Depth of flow =   0.830(Ft.), Average velocity =   2.227(Ft/s)
Critical depth =      0.477(Ft.)
End of computations, Total Study Area =          148.48 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.993
Area averaged SCS curve number =  74.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

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Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 18
100-YEAR, 1-HOUR STORM
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.330 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 18.000 to Point/Station 18.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 404.000(Ft.)
Top (of initial area) elevation = 1944.900(Ft.)
Bottom (of initial area) elevation = 1938.100(Ft.)
Difference in elevation = 6.800(Ft.)
Slope = 0.01683 s(%)= 1.68
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 21.658 min.
Rainfall intensity = 2.714(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.781
Subarea runoff = 21.191(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)

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Process from Point/Station 18.100 to Point/Station 18.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1938.100(Ft.)
Downstream point elevation = 1932.700(Ft.)

Channel length thru subarea  =   830.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     36.369(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     36.369(CFS)
Depth of flow =   0.394(Ft.), Average velocity =   1.817(Ft/s)
Channel flow top width =   51.576(Ft.)
Flow Velocity =    1.82(Ft/s)
Travel time  =    7.61 min.
Time of concentration =   29.27 min.
Critical depth =      0.254(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      2.198(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.753
Subarea runoff =     30.273(CFS) for   21.100(Ac.)
Total runoff =     51.464(CFS)
Effective area this stream =       31.10(Ac.)
Total Study Area (Main Stream No. 1) =       31.10(Ac.)
Area averaged Fm value =    0.360(In/Hr)
Depth of flow =   0.485(Ft.), Average velocity =   2.082(Ft/s)
Critical depth =      0.320(Ft.)


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Process from Point/Station       18.200 to Point/Station       18.300
**** IMPROVED CHANNEL TRAVEL TIME ****
_____________________________________________________________________________
Upstream point elevation =  1932.700(Ft.)
Downstream point elevation =  1926.100(Ft.)
Channel length thru subarea  =   590.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     61.701(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     61.701(CFS)
Depth of flow =   0.460(Ft.), Average velocity =   2.636(Ft/s)
Channel flow top width =   51.839(Ft.)
Flow Velocity =    2.64(Ft/s)
Travel time  =    3.73 min.
Time of concentration =   33.00 min.
Critical depth =      0.359(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      2.021(In/Hr) for a   100.0 year storm

Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.740
Subarea runoff = 20.407(CFS) for 16.960(Ac.)
Total runoff = 71.871(CFS)
Effective area this stream = 48.06(Ac.)
Total Study Area (Main Stream No. 1) = 48.06(Ac.)
Area averaged Fm value = 0.360(In/Hr)
Depth of flow = 0.504(Ft.), Average velocity = 2.797(Ft/s)
Critical depth = 0.398(Ft.)
End of computations, Total Study Area = 48.06 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 62.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

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Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 21
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.360 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 21.000 to Point/Station 21.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 61.58
Adjusted SCS curve number for AMC 3 = 80.26
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.365(In/Hr)
Initial subarea data:
Initial area flow distance = 947.000(Ft.)
Top (of initial area) elevation = 1926.400(Ft.)
Bottom (of initial area) elevation = 1924.800(Ft.)
Difference in elevation = 1.600(Ft.)
Slope = 0.00169 s(%)= 0.17
TC = k(0.875)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 48.662 min.
Rainfall intensity = 1.575(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.691
Subarea runoff = 10.765(CFS)
Total initial stream area = 9.890(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.365(In/Hr)
End of computations, Total Study Area = 9.89 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 61.6

San Bernardino County Rational Hydrology Program

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Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 22
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.360 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 22.000 to Point/Station 22.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 392.000(Ft.)
Top (of initial area) elevation = 1928.100(Ft.)
Bottom (of initial area) elevation = 1924.000(Ft.)
Difference in elevation = 4.100(Ft.)
Slope = 0.01046 s(%)= 1.05
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 23.534 min.
Rainfall intensity = 2.619(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.776
Subarea runoff = 7.583(CFS)
Total initial stream area = 3.730(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)
End of computations, Total Study Area = 3.73 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 62.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 27
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.380 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 27.000 to Point/Station 27.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 424.000(Ft.)
Top (of initial area) elevation = 1908.100(Ft.)
Bottom (of initial area) elevation = 1906.000(Ft.)
Difference in elevation = 2.100(Ft.)
Slope = 0.00495 s(%)= 0.50
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 28.201 min.
Rainfall intensity = 2.341(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.762
Subarea runoff = 10.967(CFS)
Total initial stream area = 6.150(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)
End of computations, Total Study Area = 6.15 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 62.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

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Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 23
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.360 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 23.000 to Point/Station 23.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 770.000(Ft.)
Top (of initial area) elevation = 1926.000(Ft.)
Bottom (of initial area) elevation = 1922.200(Ft.)
Difference in elevation = 3.800(Ft.)
Slope = 0.00494 s(%)= 0.49
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 35.828 min.
Rainfall intensity = 1.951(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.734
Subarea runoff = 14.324(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)

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Process from Point/Station 23.100 to Point/Station 23.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1922.200(Ft.)
Downstream point elevation = 1917.200(Ft.)

Channel length thru subarea  =  1058.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     24.034(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     24.034(CFS)
Depth of flow =   0.338(Ft.), Average velocity =   1.402(Ft/s)
Channel flow top width =   51.353(Ft.)
Flow Velocity =    1.40(Ft/s)
Travel time  =   12.58 min.
Time of concentration =   48.41 min.
Critical depth =      0.191(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 61.57
Adjusted SCS curve number for AMC 3 = 80.26
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.365(In/Hr)
Rainfall intensity =      1.581(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.693
Subarea runoff =     19.357(CFS) for   20.750(Ac.)
Total runoff =     33.681(CFS)
Effective area this stream =       30.75(Ac.)
Total Study Area (Main Stream No. 1) =       30.75(Ac.)
Area averaged Fm value =    0.364(In/Hr)
Depth of flow =   0.414(Ft.), Average velocity =   1.600(Ft/s)
Critical depth =      0.242(Ft.)


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Process from Point/Station       23.200 to Point/Station       23.300
**** IMPROVED CHANNEL TRAVEL TIME ****
_____________________________________________________________________________
Upstream point elevation =  1917.200(Ft.)
Downstream point elevation =  1910.200(Ft.)
Channel length thru subarea  =  2495.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     40.629(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     40.629(CFS)
Depth of flow =   0.542(Ft.), Average velocity =   1.469(Ft/s)
Channel flow top width =   52.166(Ft.)
Flow Velocity =    1.47(Ft/s)
Travel time  =   28.31 min.
Time of concentration =   76.72 min.
Critical depth =      0.273(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 58.95
Adjusted SCS curve number for AMC 3 = 78.16
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.401(In/Hr)
Rainfall intensity =      1.145(In/Hr) for a   100.0 year storm

Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.598
Subarea runoff = 13.838(CFS) for 38.660(Ac.)
Total runoff = 47.519(CFS)
Effective area this stream = 69.41(Ac.)
Total Study Area (Main Stream No. 1) = 69.41(Ac.)
Area averaged Fm value = 0.384(In/Hr)
Depth of flow = 0.595(Ft.), Average velocity = 1.561(Ft/s)
Critical depth = 0.301(Ft.)
End of computations, Total Study Area = 69.41 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 60.2

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 24
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.350 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 24.000 to Point/Station 24.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 807.000(Ft.)
Top (of initial area) elevation = 1941.900(Ft.)
Bottom (of initial area) elevation = 1938.400(Ft.)
Difference in elevation = 3.500(Ft.)
Slope = 0.00434 s(%)= 0.43
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 37.462 min.
Rainfall intensity = 1.877(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.728
Subarea runoff = 13.659(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)

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Process from Point/Station 24.100 to Point/Station 24.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1938.400(Ft.)
Downstream point elevation = 1936.300(Ft.)

Channel length thru subarea  =  1074.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     21.046(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     21.046(CFS)
Depth of flow =   0.407(Ft.), Average velocity =   1.018(Ft/s)
Channel flow top width =   51.628(Ft.)
Flow Velocity =    1.02(Ft/s)
Travel time  =   17.59 min.
Time of concentration =   55.05 min.
Critical depth =      0.176(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      1.434(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.674
Subarea runoff =     14.699(CFS) for   19.330(Ac.)
Total runoff =     28.358(CFS)
Effective area this stream =       29.33(Ac.)
Total Study Area (Main Stream No. 1) =       29.33(Ac.)
Area averaged Fm value =    0.360(In/Hr)
Depth of flow =   0.487(Ft.), Average velocity =   1.143(Ft/s)
Critical depth =      0.215(Ft.)


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Process from Point/Station       24.200 to Point/Station       24.300
**** IMPROVED CHANNEL TRAVEL TIME ****
_____________________________________________________________________________
Upstream point elevation =  1936.300(Ft.)
Downstream point elevation =  1929.100(Ft.)
Channel length thru subarea  =  1697.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     41.644(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     41.644(CFS)
Depth of flow =   0.486(Ft.), Average velocity =   1.682(Ft/s)
Channel flow top width =   51.943(Ft.)
Flow Velocity =    1.68(Ft/s)
Travel time  =   16.81 min.
Time of concentration =   71.86 min.
Critical depth =      0.277(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 61.06
Adjusted SCS curve number for AMC 3 = 79.85
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.372(In/Hr)
Rainfall intensity =      1.190(In/Hr) for a   100.0 year storm

```
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.622
Subarea runoff =     26.474(CFS) for   44.740(Ac.)
Total runoff =     54.832(CFS)
Effective area this stream =       74.07(Ac.)
Total Study Area (Main Stream No. 1) =       74.07(Ac.)
Area averaged Fm value =    0.367(In/Hr)
Depth of flow =   0.573(Ft.), Average velocity =   1.872(Ft/s)
Critical depth =      0.332(Ft.)


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Process from Point/Station       24.300 to Point/Station       24.400
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1929.100(Ft.)
Downstream point elevation =  1921.900(Ft.)
Channel length thru subarea  =  1554.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     59.050(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     59.050(CFS)
Depth of flow =   0.583(Ft.), Average velocity =   1.980(Ft/s)
Channel flow top width =   52.332(Ft.)
Flow Velocity =    1.98(Ft/s)
Travel time  =   13.08 min.
Time of concentration =   84.95 min.
Critical depth =      0.352(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 59.81
Adjusted SCS curve number for AMC 3 = 78.85
Pervious ratio(Ap) = 0.9960     Max loss rate(Fm)=     0.388(In/Hr)
Rainfall intensity =      1.058(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.583
Subarea runoff =      8.373(CFS) for   28.390(Ac.)
Total runoff =     63.205(CFS)
Effective area this stream =      102.46(Ac.)
Total Study Area (Main Stream No. 1) =      102.46(Ac.)
Area averaged Fm value =    0.373(In/Hr)
Depth of flow =   0.607(Ft.), Average velocity =   2.033(Ft/s)
Critical depth =      0.367(Ft.)


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Process from Point/Station       24.300 to Point/Station       24.400
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =    102.460(Ac.)
Runoff from this stream =     63.205(CFS)
Time of concentration =   84.95 min.
Rainfall intensity =     1.058(In/Hr)
Area averaged loss rate (Fm) =    0.3730(In/Hr)
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Area averaged Pervious ratio (Ap) = 0.9989


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Process from Point/Station       24.500 to Point/Station       24.600
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 60.62
Adjusted SCS curve number for AMC 3 = 79.50
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.378(In/Hr)
Initial subarea data:
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1940.000(Ft.)
Bottom (of initial area) elevation =  1932.200(Ft.)
Difference in elevation =     7.800(Ft.)
Slope =    0.00780  s(%)=       0.78
TC = k(0.894)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   37.389 min.
Rainfall intensity =      1.880(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.719
Subarea runoff =      8.784(CFS)
Total initial stream area =        6.500(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.378(In/Hr)


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Process from Point/Station       24.600 to Point/Station       24.700
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1932.200(Ft.)
Downstream point elevation =  1928.300(Ft.)
Channel length thru subarea  =   755.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     15.363(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     15.363(CFS)
Depth of flow =   0.252(Ft.), Average velocity =   1.207(Ft/s)
Channel flow top width =   51.008(Ft.)
Flow Velocity =    1.21(Ft/s)
Travel time  =   10.42 min.
Time of concentration =   47.81 min.
Critical depth =      0.143(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 58.11
Adjusted SCS curve number for AMC 3 = 77.49
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.412(In/Hr)
Rainfall intensity =      1.583(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.672
Subarea runoff =     13.094(CFS) for   14.080(Ac.)
Total runoff =     21.878(CFS)
```

Effective area this stream =  20.58(Ac.)
Total Study Area (Main Stream No. 1) =  123.04(Ac.)
Area averaged Fm value =  0.401(In/Hr)
Depth of flow =  0.311(Ft.), Average velocity =  1.388(Ft/s)
Critical depth =  0.180(Ft.)

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Process from Point/Station  24.700 to Point/Station  24.800
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1928.300(Ft.)
Downstream point elevation =  1927.300(Ft.)
Channel length thru subarea  =  1059.000(Ft.)
Channel base width  =  50.000(Ft.)
Slope or 'Z' of left channel bank =  2.000
Slope or 'Z' of right channel bank =  2.000
Estimated mean flow rate at midpoint of channel =  29.962(CFS)
Manning's 'N'  = 0.035
Maximum depth of channel  =  1.000(Ft.)
Flow(q) thru subarea =  29.962(CFS)
Depth of flow =  0.625(Ft.), Average velocity =  0.935(Ft/s)
Channel flow top width =  52.501(Ft.)
Flow Velocity =  0.94(Ft/s)
Travel time  =  18.87 min.
Time of concentration =  66.69 min.
Critical depth =  0.223(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 59.72
Adjusted SCS curve number for AMC 3 = 78.78
Pervious ratio(Ap) = 0.9940  Max loss rate(Fm)=  0.388(In/Hr)
Rainfall intensity =  1.254(In/Hr) for a  100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.617
Subarea runoff =  16.082(CFS) for  28.460(Ac.)
Total runoff =  37.959(CFS)
Effective area this stream =  49.04(Ac.)
Total Study Area (Main Stream No. 1) =  151.50(Ac.)
Area averaged Fm value =  0.394(In/Hr)
Depth of flow =  0.720(Ft.), Average velocity =  1.025(Ft/s)
Critical depth =  0.262(Ft.)

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Process from Point/Station  24.800 to Point/Station  24.400
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1927.300(Ft.)
Downstream point elevation =  1921.900(Ft.)
Channel length thru subarea  =  1788.000(Ft.)
Channel base width  =  50.000(Ft.)
Slope or 'Z' of left channel bank =  2.000
Slope or 'Z' of right channel bank =  2.000
Estimated mean flow rate at midpoint of channel =  39.933(CFS)
Manning's 'N'  = 0.035
Maximum depth of channel  =  1.000(Ft.)
Flow(q) thru subarea =  39.933(CFS)

```
Depth of flow =   0.524(Ft.), Average velocity =   1.492(Ft/s)
Channel flow top width =   52.097(Ft.)
Flow Velocity =    1.49(Ft/s)
Travel time  =   19.97 min.
Time of concentration =   86.66 min.
Critical depth =      0.270(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 61.09
Adjusted SCS curve number for AMC 3 = 79.87
Pervious ratio(Ap) = 0.9950     Max loss rate(Fm)=     0.370(In/Hr)
Rainfall intensity =      1.044(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.567
Subarea runoff =      3.877(CFS) for   21.690(Ac.)
Total runoff =     41.836(CFS)
Effective area this stream =       70.73(Ac.)
Total Study Area (Main Stream No. 1) =      173.19(Ac.)
Area averaged Fm value =    0.386(In/Hr)
Depth of flow =   0.539(Ft.), Average velocity =   1.519(Ft/s)
Critical depth =      0.277(Ft.)


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Process from Point/Station       24.800 to Point/Station       24.400
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     70.730(Ac.)
Runoff from this stream =     41.836(CFS)
Time of concentration =   86.66 min.
Rainfall intensity =     1.044(In/Hr)
Area averaged loss rate (Fm) =    0.3865(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9961
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     63.20   102.460     84.95    0.373      1.058
2     41.84    70.730     86.66    0.386      1.044
Qmax(1) =
           1.000 *    1.000 *    63.205) +
           1.022 *    0.980 *    41.836) + =     105.130
Qmax(2) =
           0.979 *    1.000 *    63.205) +
           1.000 *    1.000 *    41.836) + =     103.687

Total of 2 streams to confluence:
Flow rates before confluence point:
      63.205      41.836
Maximum flow rates at confluence using above data:
      105.130      103.687
Area of streams before confluence:
      102.460       70.730
Effective area values after confluence:
      171.792      173.190
```

```
Results of confluence:
Total flow rate =    105.130(CFS)
Time of concentration =    84.946 min.
Effective stream area after confluence =    171.792(Ac.)
Study area average Pervious fraction(Ap) =  0.998
Study area average soil loss rate(Fm) =    0.378(In/Hr)
Study area total (this main stream) =     173.19(Ac.)


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Process from Point/Station       24.400 to Point/Station       24.900
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1921.900(Ft.)
Downstream point elevation =  1914.200(Ft.)
Channel length thru subarea  =  4942.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    105.169(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    105.169(CFS)
Depth of flow =   1.139(Ft.), Average velocity =   1.765(Ft/s)
Channel flow top width =   54.558(Ft.)
Flow Velocity =    1.77(Ft/s)
Travel time  =   46.65 min.
Time of concentration =  131.60 min.
Critical depth =      0.516(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 59.21
Adjusted SCS curve number for AMC 3 = 78.37
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.397(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =    103.108(CFS)
therefore the upstream flow rate of Q =    105.130(CFS) is being used
Rainfall intensity =      0.779(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.454
Subarea runoff =      0.000(CFS) for  119.870(Ac.)
Total runoff =    105.130(CFS)
Effective area this stream =      291.66(Ac.)
Total Study Area (Main Stream No. 1) =      293.06(Ac.)
Area averaged Fm value =    0.386(In/Hr)
Depth of flow =   1.139(Ft.), Average velocity =   1.765(Ft/s)
Critical depth =      0.516(Ft.)
End of computations, Total Study Area =          293.06 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.999
Area averaged SCS curve number =  60.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXITING CONDITIONS AREA 28
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 28.000 to Point/Station 28.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 58.00
Adjusted SCS curve number for AMC 3 = 77.40
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.414(In/Hr)
Initial subarea data:
Initial area flow distance = 752.000(Ft.)
Top (of initial area) elevation = 1892.100(Ft.)
Bottom (of initial area) elevation = 1890.100(Ft.)
Difference in elevation = 2.000(Ft.)
Slope = 0.00266 s(%)= 0.27
TC = k(0.945)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 43.768 min.
Rainfall intensity = 1.733(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.685
Subarea runoff = 11.879(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.414(In/Hr)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Process from Point/Station 28.100 to Point/Station 28.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1890.100(Ft.)
Downstream point elevation = 1887.500(Ft.)

```
Channel length thru subarea  =  1206.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     12.845(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     12.845(CFS)
Depth of flow =   0.294(Ft.), Average velocity =   0.863(Ft/s)
Channel flow top width =   51.176(Ft.)
Flow Velocity =    0.86(Ft/s)
Travel time  =   23.28 min.
Time of concentration =   67.05 min.
Critical depth =      0.127(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 58.00
Adjusted SCS curve number for AMC 3 = 77.40
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.414(In/Hr)
Rainfall intensity =      1.286(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.611
Subarea runoff =      1.847(CFS) for    7.480(Ac.)
Total runoff =     13.727(CFS)
Effective area this stream =       17.48(Ac.)
Total Study Area (Main Stream No. 1) =       17.48(Ac.)
Area averaged Fm value =    0.414(In/Hr)
Depth of flow =   0.306(Ft.), Average velocity =   0.886(Ft/s)
Critical depth =      0.133(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       28.100 to Point/Station       28.200
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     17.480(Ac.)
Runoff from this stream =     13.727(CFS)
Time of concentration =   67.05 min.
Rainfall intensity =     1.286(In/Hr)
Area averaged loss rate (Fm) =    0.4135(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000


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Process from Point/Station       28.300 to Point/Station       28.400
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 58.00
Adjusted SCS curve number for AMC 3 = 77.40
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.414(In/Hr)
Initial subarea data:
Initial area flow distance =   752.000(Ft.)
Top (of initial area) elevation =  1890.900(Ft.)
Bottom (of initial area) elevation =  1887.600(Ft.)
Difference in elevation =     3.300(Ft.)
```

```
Slope =    0.00439  s(%)=       0.44
TC = k(0.945)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   39.597 min.
Rainfall intensity =      1.859(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.700
Subarea runoff =     13.012(CFS)
Total initial stream area =       10.000(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.414(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       28.400 to Point/Station       28.200
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1887.600(Ft.)
Downstream point elevation =  1887.500(Ft.)
Channel length thru subarea  =   578.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     14.367(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     14.367(CFS)
Depth of flow =   0.669(Ft.), Average velocity =   0.418(Ft/s)
Channel flow top width =   52.676(Ft.)
Flow Velocity =    0.42(Ft/s)
Travel time  =   23.03 min.
Time of concentration =   62.63 min.
Critical depth =      0.137(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 58.00
Adjusted SCS curve number for AMC 3 = 77.40
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.414(In/Hr)
Rainfall intensity =      1.349(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.624
Subarea runoff =      2.654(CFS) for    8.610(Ac.)
Total runoff =     15.667(CFS)
Effective area this stream =       18.61(Ac.)
Total Study Area (Main Stream No. 1) =       36.09(Ac.)
Area averaged Fm value =    0.414(In/Hr)
Depth of flow =   0.705(Ft.), Average velocity =   0.432(Ft/s)
Critical depth =      0.145(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       28.400 to Point/Station       28.200
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     18.610(Ac.)
Runoff from this stream =     15.667(CFS)
Time of concentration =   62.63 min.
Rainfall intensity =     1.349(In/Hr)
Area averaged loss rate (Fm) =    0.4135(In/Hr)
```

```
Area averaged Pervious ratio (Ap) = 1.0000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     13.73    17.480     67.05    0.414      1.286
2     15.67    18.610     62.63    0.414      1.349
Qmax(1) =
           1.000 *    1.000 *    13.727) +
           0.933 *    1.000 *    15.667) + =      28.341
Qmax(2) =
           1.072 *    0.934 *    13.727) +
           1.000 *    1.000 *    15.667) + =      29.413

Total of 2 streams to confluence:
Flow rates before confluence point:
      13.727      15.667
Maximum flow rates at confluence using above data:
       28.341       29.413
Area of streams before confluence:
       17.480       18.610
Effective area values after confluence:
       36.090       34.938
Results of confluence:
Total flow rate =     29.413(CFS)
Time of concentration =    62.628 min.
Effective stream area after confluence =     34.938(Ac.)
Study area average Pervious fraction(Ap) =  1.000
Study area average soil loss rate(Fm) =    0.414(In/Hr)
Study area total (this main stream) =      36.09(Ac.)


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Process from Point/Station       28.200 to Point/Station       28.500
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1887.500(Ft.)
Downstream point elevation =  1884.400(Ft.)
Channel length thru subarea  =  1132.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     35.617(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     35.617(CFS)
Depth of flow =   0.504(Ft.), Average velocity =   1.385(Ft/s)
Channel flow top width =   52.017(Ft.)
Flow Velocity =    1.38(Ft/s)
Travel time  =   13.62 min.
Time of concentration =   76.25 min.
Critical depth =      0.250(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 59.30
Adjusted SCS curve number for AMC 3 = 78.44
```

```
Pervious ratio(Ap) = 0.9960     Max loss rate(Fm)=     0.395(In/Hr)
Rainfall intensity =      1.175(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.589
Subarea runoff =     12.319(CFS) for   25.300(Ac.)
Total runoff =     41.731(CFS)
Effective area this stream =       60.24(Ac.)
Total Study Area (Main Stream No. 1) =       61.39(Ac.)
Area averaged Fm value =    0.406(In/Hr)
Depth of flow =   0.554(Ft.), Average velocity =   1.473(Ft/s)
Critical depth =      0.277(Ft.)
End of computations, Total Study Area =           61.39 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.998
Area averaged SCS curve number =  58.5
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 25
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.360 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Process from Point/Station 25.000 to Point/Station 25.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 61.51
Adjusted SCS curve number for AMC 3 = 80.21
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.366(In/Hr)
Initial subarea data:
Initial area flow distance = 879.000(Ft.)
Top (of initial area) elevation = 1935.000(Ft.)
Bottom (of initial area) elevation = 1925.300(Ft.)
Difference in elevation = 9.700(Ft.)
Slope = 0.01104 s(%)= 1.10
TC = k(0.877)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 32.501 min.
Rainfall intensity = 2.089(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.742
Subarea runoff = 15.504(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.366(In/Hr)

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Process from Point/Station 25.100 to Point/Station 25.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1925.300(Ft.)
Downstream point elevation = 1923.000(Ft.)

Channel length thru subarea  =  1574.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     21.485(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     21.485(CFS)
Depth of flow =   0.450(Ft.), Average velocity =   0.939(Ft/s)
Channel flow top width =   51.798(Ft.)
Flow Velocity =    0.94(Ft/s)
Travel time  =   27.94 min.
Time of concentration =   60.44 min.
Critical depth =      0.180(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      1.353(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.659
Subarea runoff =     11.876(CFS) for   20.690(Ac.)
Total runoff =     27.380(CFS)
Effective area this stream =       30.69(Ac.)
Total Study Area (Main Stream No. 1) =       30.69(Ac.)
Area averaged Fm value =    0.362(In/Hr)
Depth of flow =   0.520(Ft.), Average velocity =   1.032(Ft/s)
Critical depth =      0.211(Ft.)


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Process from Point/Station       25.200 to Point/Station       25.300
**** IMPROVED CHANNEL TRAVEL TIME ****
_____________________________________________________________________________
Upstream point elevation =  1923.000(Ft.)
Downstream point elevation =  1922.900(Ft.)
Channel length thru subarea  =  1306.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     30.106(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =     30.106(CFS)
Depth of flow =   1.327(Ft.), Average velocity =   0.431(Ft/s)
Channel flow top width =   55.308(Ft.)
Flow Velocity =    0.43(Ft/s)
Travel time  =   50.51 min.
Time of concentration =  110.96 min.
Critical depth =      0.223(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      0.884(In/Hr) for a   100.0 year storm

```
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.533
Subarea runoff =      5.382(CFS) for   38.800(Ac.)
Total runoff =     32.762(CFS)
Effective area this stream =       69.49(Ac.)
Total Study Area (Main Stream No. 1) =       69.49(Ac.)
Area averaged Fm value =    0.361(In/Hr)
Depth of flow =   1.395(Ft.), Average velocity =   0.445(Ft/s)
Critical depth =      0.236(Ft.)


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Process from Point/Station       25.300 to Point/Station       25.400
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1922.900(Ft.)
Downstream point elevation =  1916.700(Ft.)
Channel length thru subarea  =  1863.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     46.033(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     46.033(CFS)
Depth of flow =   0.555(Ft.), Average velocity =   1.624(Ft/s)
Channel flow top width =   52.218(Ft.)
Flow Velocity =    1.62(Ft/s)
Travel time  =   19.12 min.
Time of concentration =  130.07 min.
Critical depth =      0.297(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 61.41
Adjusted SCS curve number for AMC 3 = 80.13
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.368(In/Hr)
Rainfall intensity =      0.791(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.485
Subarea runoff =     26.469(CFS) for   84.700(Ac.)
Total runoff =     59.232(CFS)
Effective area this stream =      154.19(Ac.)
Total Study Area (Main Stream No. 1) =      154.19(Ac.)
Area averaged Fm value =    0.364(In/Hr)
Depth of flow =   0.645(Ft.), Average velocity =   1.791(Ft/s)
Critical depth =      0.352(Ft.)


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Process from Point/Station       25.400 to Point/Station       25.500
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1916.700(Ft.)
Downstream point elevation =  1906.400(Ft.)
Channel length thru subarea  =   125.720(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
```

```
Estimated mean flow rate at midpoint of channel =     83.070(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     83.070(CFS)
Depth of flow =   0.303(Ft.), Average velocity =   5.424(Ft/s)
Channel flow top width =   51.210(Ft.)
Flow Velocity =    5.42(Ft/s)
Travel time  =    0.39 min.
Time of concentration =  130.46 min.
Critical depth =      0.438(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 61.40
Adjusted SCS curve number for AMC 3 = 80.12
Pervious ratio(Ap) = 0.9980     Max loss rate(Fm)=     0.367(In/Hr)
Rainfall intensity =      0.790(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.483
Subarea runoff =     47.588(CFS) for  125.720(Ac.)
Total runoff =    106.820(CFS)
Effective area this stream =      279.91(Ac.)
Total Study Area (Main Stream No. 1) =      279.91(Ac.)
Area averaged Fm value =    0.366(In/Hr)
Depth of flow =   0.352(Ft.), Average velocity =   5.988(Ft/s)
Critical depth =      0.516(Ft.)
End of computations, Total Study Area =          279.91 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.999
Area averaged SCS curve number =  61.5
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 26
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 26.000 to Point/Station 26.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1912.600(Ft.)
Bottom (of initial area) elevation = 1905.800(Ft.)
Difference in elevation = 6.800(Ft.)
Slope = 0.00680 s(%)= 0.68
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 37.306 min.
Rainfall intensity = 1.939(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.733
Subarea runoff = 6.807(CFS)
Total initial stream area = 4.790(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)

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Process from Point/Station 26.000 to Point/Station 26.100
**** CONFLUENCE OF MINOR STREAMS ****

---

Along Main Stream number: 1 in normal stream number 1
Stream flow area = 4.790(Ac.)

```
Runoff from this stream =      6.807(CFS)
Time of concentration =   37.31 min.
Rainfall intensity =     1.939(In/Hr)
Area averaged loss rate (Fm) =    0.3596(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       26.200 to Point/Station       26.100
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Initial subarea data:
Initial area flow distance =   694.000(Ft.)
Top (of initial area) elevation =  1906.900(Ft.)
Bottom (of initial area) elevation =  1905.800(Ft.)
Difference in elevation =     1.100(Ft.)
Slope =    0.00159  s(%)=       0.16
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   43.134 min.
Rainfall intensity =      1.751(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.715
Subarea runoff =      6.413(CFS)
Total initial stream area =        5.120(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.360(In/Hr)


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Process from Point/Station       26.200 to Point/Station       26.100
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      5.120(Ac.)
Runoff from this stream =      6.413(CFS)
Time of concentration =   43.13 min.
Rainfall intensity =     1.751(In/Hr)
Area averaged loss rate (Fm) =    0.3596(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1      6.81     4.790     37.31    0.360      1.939
2      6.41     5.120     43.13    0.360      1.751
Qmax(1) =
           1.000 *    1.000 *     6.807) +
           1.135 *    0.865 *     6.413) + =      13.100
Qmax(2) =
           0.881 *    1.000 *     6.807) +
           1.000 *    1.000 *     6.413) + =      12.412

Total of 2 streams to confluence:
```

```
Flow rates before confluence point:
       6.807       6.413
Maximum flow rates at confluence using above data:
       13.100       12.412
Area of streams before confluence:
        4.790        5.120
Effective area values after confluence:
        9.218        9.910
Results of confluence:
Total flow rate =     13.100(CFS)
Time of concentration =    37.306 min.
Effective stream area after confluence =      9.218(Ac.)
Study area average Pervious fraction(Ap) =  1.000
Study area average soil loss rate(Fm) =    0.360(In/Hr)
Study area total (this main stream) =       9.91(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       26.100 to Point/Station       26.300
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1905.800(Ft.)
Downstream point elevation =  1904.600(Ft.)
Channel length thru subarea  =   403.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     14.513(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     14.513(CFS)
Depth of flow =   0.287(Ft.), Average velocity =   0.999(Ft/s)
Channel flow top width =   51.149(Ft.)
Flow Velocity =    1.00(Ft/s)
Travel time  =    6.72 min.
Time of concentration =   44.03 min.
Critical depth =      0.137(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      1.726(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.713
Subarea runoff =      2.741(CFS) for    3.660(Ac.)
Total runoff =     15.841(CFS)
Effective area this stream =       12.88(Ac.)
Total Study Area (Main Stream No. 1) =       13.57(Ac.)
Area averaged Fm value =    0.360(In/Hr)
Depth of flow =   0.303(Ft.), Average velocity =   1.034(Ft/s)
Critical depth =      0.146(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       26.100 to Point/Station       26.300
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
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```
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     12.878(Ac.)
Runoff from this stream =     15.841(CFS)
Time of concentration =   44.03 min.
Rainfall intensity =     1.726(In/Hr)
Area averaged loss rate (Fm) =    0.3596(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000


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Process from Point/Station       26.400 to Point/Station       26.300
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Initial subarea data:
Initial area flow distance =   792.000(Ft.)
Top (of initial area) elevation =  1913.200(Ft.)
Bottom (of initial area) elevation =  1904.600(Ft.)
Difference in elevation =     8.600(Ft.)
Slope =    0.01086  s(%)=       1.09
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   30.947 min.
Rainfall intensity =      2.209(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.754
Subarea runoff =      7.276(CFS)
Total initial stream area =        4.370(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.360(In/Hr)


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Process from Point/Station       26.400 to Point/Station       26.300
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      4.370(Ac.)
Runoff from this stream =      7.276(CFS)
Time of concentration =   30.95 min.
Rainfall intensity =     2.209(In/Hr)
Area averaged loss rate (Fm) =    0.3596(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     15.84    12.878     44.03    0.360      1.726
2      7.28     4.370     30.95    0.360      2.209
Qmax(1) =
           1.000 *    1.000 *    15.841) +
           0.739 *    1.000 *     7.276) + =      21.216
Qmax(2) =
           1.354 *    0.703 *    15.841) +
           1.000 *    1.000 *     7.276) + =      22.346
```

```
Total of 2 streams to confluence:
Flow rates before confluence point:
      15.841       7.276
Maximum flow rates at confluence using above data:
       21.216       22.346
Area of streams before confluence:
       12.878        4.370
Effective area values after confluence:
       17.248       13.422
Results of confluence:
Total flow rate =     22.346(CFS)
Time of concentration =    30.947 min.
Effective stream area after confluence =     13.422(Ac.)
Study area average Pervious fraction(Ap) =  1.000
Study area average soil loss rate(Fm) =    0.360(In/Hr)
Study area total (this main stream) =      17.25(Ac.)


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Process from Point/Station       26.300 to Point/Station       26.500
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1904.600(Ft.)
Downstream point elevation =  1904.500(Ft.)
Channel length thru subarea  =   391.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     22.375(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     22.375(CFS)
Depth of flow =   0.776(Ft.), Average velocity =   0.559(Ft/s)
Channel flow top width =   53.103(Ft.)
Flow Velocity =    0.56(Ft/s)
Travel time  =   11.65 min.
Time of concentration =   42.59 min.
Critical depth =      0.184(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =     22.241(CFS)
therefore the upstream flow rate of Q =     22.346(CFS) is being used
Rainfall intensity =      1.767(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.717
Subarea runoff =      0.000(CFS) for    4.140(Ac.)
Total runoff =     22.346(CFS)
Effective area this stream =       17.56(Ac.)
Total Study Area (Main Stream No. 1) =       22.08(Ac.)
Area averaged Fm value =    0.360(In/Hr)
Depth of flow =   0.775(Ft.), Average velocity =   0.559(Ft/s)
Critical depth =      0.184(Ft.)
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Process from Point/Station       26.300 to Point/Station       26.500
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     17.562(Ac.)
Runoff from this stream =     22.346(CFS)
Time of concentration =   42.59 min.
Rainfall intensity =     1.767(In/Hr)
Area averaged loss rate (Fm) =    0.3596(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       26.600 to Point/Station       26.700
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 60.53
Adjusted SCS curve number for AMC 3 = 79.42
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.380(In/Hr)
Initial subarea data:
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1912.700(Ft.)
Bottom (of initial area) elevation =  1908.000(Ft.)
Difference in elevation =     4.700(Ft.)
Slope =    0.00470  s(%)=       0.47
TC = k(0.895)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   41.456 min.
Rainfall intensity =      1.801(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.710
Subarea runoff =     12.060(CFS)
Total initial stream area =        9.430(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.380(In/Hr)


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Process from Point/Station       26.700 to Point/Station       26.500
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1908.000(Ft.)
Downstream point elevation =  1904.500(Ft.)
Channel length thru subarea  =   534.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     12.325(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     12.325(CFS)
Depth of flow =   0.206(Ft.), Average velocity =   1.189(Ft/s)
Channel flow top width =   50.822(Ft.)
Flow Velocity =    1.19(Ft/s)
Travel time  =    7.48 min.
Time of concentration =   48.94 min.
Critical depth =      0.123(Ft.)
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 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      1.603(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.689
Subarea runoff =      0.462(CFS) for    1.910(Ac.)
Total runoff =     12.522(CFS)
Effective area this stream =       11.34(Ac.)
Total Study Area (Main Stream No. 1) =       33.42(Ac.)
Area averaged Fm value =    0.376(In/Hr)
Depth of flow =   0.208(Ft.), Average velocity =   1.197(Ft/s)
Critical depth =      0.125(Ft.)


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Process from Point/Station       26.700 to Point/Station       26.500
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     11.340(Ac.)
Runoff from this stream =     12.522(CFS)
Time of concentration =   48.94 min.
Rainfall intensity =     1.603(In/Hr)
Area averaged loss rate (Fm) =    0.3762(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     22.35    17.562     42.59    0.360      1.767
2     12.52    11.340     48.94    0.376      1.603
Qmax(1) =
           1.000 *    1.000 *    22.346) +
           1.133 *    0.870 *    12.522) + =      34.698
Qmax(2) =
           0.884 *    1.000 *    22.346) +
           1.000 *    1.000 *    12.522) + =      32.270

Total of 2 streams to confluence:
Flow rates before confluence point:
      22.346      12.522
Maximum flow rates at confluence using above data:
       34.698       32.270
Area of streams before confluence:
       17.562       11.340
Effective area values after confluence:
       27.432       28.902
Results of confluence:
Total flow rate =     34.698(CFS)
Time of concentration =    42.595 min.
Effective stream area after confluence =     27.432(Ac.)
Study area average Pervious fraction(Ap) =  1.000
Study area average soil loss rate(Fm) =    0.366(In/Hr)
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Study area total (this main stream) =      28.90(Ac.)

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Process from Point/Station       26.500 to Point/Station       26.800
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1904.500(Ft.)
Downstream point elevation =  1904.100(Ft.)
Channel length thru subarea  =   369.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     34.748(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     34.748(CFS)
Depth of flow =   0.655(Ft.), Average velocity =   1.033(Ft/s)
Channel flow top width =   52.622(Ft.)
Flow Velocity =    1.03(Ft/s)
Travel time  =    5.95 min.
Time of concentration =   48.55 min.
Critical depth =      0.246(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =     33.593(CFS)
therefore the upstream flow rate of Q =     34.698(CFS) is being used
Rainfall intensity =      1.612(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.696
Subarea runoff =      0.000(CFS) for    2.510(Ac.)
Total runoff =     34.698(CFS)
Effective area this stream =       29.94(Ac.)
Total Study Area (Main Stream No. 1) =       35.93(Ac.)
Area averaged Fm value =    0.366(In/Hr)
Depth of flow =   0.655(Ft.), Average velocity =   1.033(Ft/s)
Critical depth =      0.246(Ft.)

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Process from Point/Station       26.500 to Point/Station       26.800
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     29.942(Ac.)
Runoff from this stream =     34.698(CFS)
Time of concentration =   48.55 min.
Rainfall intensity =     1.612(In/Hr)
Area averaged loss rate (Fm) =    0.3655(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000

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Process from Point/Station       26.900 to Point/Station       26.100

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**** INITIAL AREA EVALUATION ****
_____________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 61.95
Adjusted SCS curve number for AMC 3 = 80.56
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Initial subarea data:
Initial area flow distance =   755.000(Ft.)
Top (of initial area) elevation =  1911.000(Ft.)
Bottom (of initial area) elevation =  1905.600(Ft.)
Difference in elevation =     5.400(Ft.)
Slope =    0.00715  s(%)=       0.72
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   33.040 min.
Rainfall intensity =      2.111(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.746
Subarea runoff =     15.753(CFS)
Total initial stream area =       10.000(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.360(In/Hr)


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Process from Point/Station       26.100 to Point/Station       26.800
**** IMPROVED CHANNEL TRAVEL TIME ****
_____________________________________________________________________
Upstream point elevation =  1905.600(Ft.)
Downstream point elevation =  1904.100(Ft.)
Channel length thru subarea  =   690.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     18.709(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     18.709(CFS)
Depth of flow =   0.367(Ft.), Average velocity =   1.004(Ft/s)
Channel flow top width =   51.470(Ft.)
Flow Velocity =    1.00(Ft/s)
Travel time  =   11.46 min.
Time of concentration =   44.50 min.
Critical depth =      0.162(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      1.713(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.711
Subarea runoff =      5.846(CFS) for    7.730(Ac.)
Total runoff =     21.598(CFS)
Effective area this stream =       17.73(Ac.)
Total Study Area (Main Stream No. 1) =       53.66(Ac.)
Area averaged Fm value =    0.360(In/Hr)
Depth of flow =   0.400(Ft.), Average velocity =   1.062(Ft/s)
Critical depth =      0.180(Ft.)
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Process from Point/Station       26.100 to Point/Station       26.800
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     17.730(Ac.)
Runoff from this stream =     21.598(CFS)
Time of concentration =   44.50 min.
Rainfall intensity =     1.713(In/Hr)
Area averaged loss rate (Fm) =    0.3599(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     34.70    29.942     48.55    0.366      1.612
2     21.60    17.730     44.50    0.360      1.713
Qmax(1) =
           1.000 *    1.000 *    34.698) +
           0.925 *    1.000 *    21.598) + =      54.680
Qmax(2) =
           1.081 *    0.917 *    34.698) +
           1.000 *    1.000 *    21.598) + =      55.988

Total of 2 streams to confluence:
Flow rates before confluence point:
      34.698      21.598
Maximum flow rates at confluence using above data:
       54.680       55.988
Area of streams before confluence:
       29.942       17.730
Effective area values after confluence:
       47.672       45.175
Results of confluence:
Total flow rate =     55.988(CFS)
Time of concentration =    44.499 min.
Effective stream area after confluence =     45.175(Ac.)
Study area average Pervious fraction(Ap) =  1.000
Study area average soil loss rate(Fm) =    0.363(In/Hr)
Study area total (this main stream) =      47.67(Ac.)


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Process from Point/Station       26.800 to Point/Station       26.110
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1904.100(Ft.)
Downstream point elevation =  1902.500(Ft.)
Channel length thru subarea  =  1377.000(Ft.)
Channel base width      =   75.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     59.913(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
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Flow(q) thru subarea =     59.913(CFS)
Depth of flow =   0.699(Ft.), Average velocity =   1.123(Ft/s)
Channel flow top width =   77.794(Ft.)
Flow Velocity =    1.12(Ft/s)
Travel time  =   20.44 min.
Time of concentration =   64.94 min.
Critical depth =      0.270(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      1.315(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.652
Subarea runoff =      7.761(CFS) for   29.140(Ac.)
Total runoff =     63.749(CFS)
Effective area this stream =       74.31(Ac.)
Total Study Area (Main Stream No. 1) =       82.80(Ac.)
Area averaged Fm value =    0.362(In/Hr)
Depth of flow =   0.725(Ft.), Average velocity =   1.150(Ft/s)
Critical depth =      0.281(Ft.)


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Process from Point/Station       26.110 to Point/Station       26.120
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1902.500(Ft.)
Downstream point elevation =  1897.100(Ft.)
Channel length thru subarea  =  2640.000(Ft.)
Channel base width      =   75.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     66.881(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     66.881(CFS)
Depth of flow =   0.630(Ft.), Average velocity =   1.392(Ft/s)
Channel flow top width =   77.520(Ft.)
Flow Velocity =    1.39(Ft/s)
Travel time  =   31.60 min.
Time of concentration =   96.55 min.
Critical depth =      0.289(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      0.996(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.574
Subarea runoff =      6.201(CFS) for   48.020(Ac.)
Total runoff =     69.950(CFS)
Effective area this stream =      122.33(Ac.)
Total Study Area (Main Stream No. 1) =      130.82(Ac.)
Area averaged Fm value =    0.361(In/Hr)
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Depth of flow =   0.647(Ft.), Average velocity =   1.417(Ft/s)
Critical depth =      0.301(Ft.)


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Process from Point/Station       26.120 to Point/Station       26.130
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1897.100(Ft.)
Downstream point elevation =  1893.100(Ft.)
Channel length thru subarea  =  1785.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     70.632(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     70.632(CFS)
Depth of flow =   0.806(Ft.), Average velocity =   1.698(Ft/s)
Channel flow top width =   53.225(Ft.)
Flow Velocity =    1.70(Ft/s)
Travel time  =   17.53 min.
Time of concentration =  114.07 min.
Critical depth =      0.395(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      0.887(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.534
Subarea runoff =      1.290(CFS) for   28.210(Ac.)
Total runoff =     71.241(CFS)
Effective area this stream =      150.54(Ac.)
Total Study Area (Main Stream No. 1) =      159.03(Ac.)
Area averaged Fm value =    0.361(In/Hr)
Depth of flow =   0.810(Ft.), Average velocity =   1.703(Ft/s)
Critical depth =      0.398(Ft.)


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Process from Point/Station       26.120 to Point/Station       26.130
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =    150.545(Ac.)
Runoff from this stream =     71.241(CFS)
Time of concentration =  114.07 min.
Rainfall intensity =     0.887(In/Hr)
Area averaged loss rate (Fm) =    0.3607(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000


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Process from Point/Station       26.140 to Point/Station       26.150
**** INITIAL AREA EVALUATION ****
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Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Initial subarea data:
Initial area flow distance =   707.000(Ft.)
Top (of initial area) elevation =  1908.100(Ft.)
Bottom (of initial area) elevation =  1905.800(Ft.)
Difference in elevation =     2.300(Ft.)
Slope =    0.00325  s(%)=       0.33
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   37.635 min.
Rainfall intensity =      1.927(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.732
Subarea runoff =     12.073(CFS)
Total initial stream area =        8.560(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.360(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       26.150 to Point/Station       26.160
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1905.800(Ft.)
Downstream point elevation =  1901.600(Ft.)
Channel length thru subarea  =  1141.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     19.856(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     19.856(CFS)
Depth of flow =   0.325(Ft.), Average velocity =   1.205(Ft/s)
Channel flow top width =   51.301(Ft.)
Flow Velocity =    1.21(Ft/s)
Travel time  =   15.78 min.
Time of concentration =   53.41 min.
Critical depth =      0.170(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      1.508(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.685
Subarea runoff =     15.502(CFS) for   18.120(Ac.)
Total runoff =     27.575(CFS)
Effective area this stream =       26.68(Ac.)
Total Study Area (Main Stream No. 1) =      185.71(Ac.)
Area averaged Fm value =    0.360(In/Hr)
Depth of flow =   0.396(Ft.), Average velocity =   1.371(Ft/s)
Critical depth =      0.211(Ft.)
```

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++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       26.160 to Point/Station       26.170
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1901.600(Ft.)
Downstream point elevation =  1896.100(Ft.)
Channel length thru subarea  =  1868.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     40.200(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     40.200(CFS)
Depth of flow =   0.530(Ft.), Average velocity =   1.484(Ft/s)
Channel flow top width =   52.122(Ft.)
Flow Velocity =    1.48(Ft/s)
Travel time  =   20.98 min.
Time of concentration =   74.39 min.
Critical depth =      0.270(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 0.9860     Max loss rate(Fm)=     0.355(In/Hr)
Rainfall intensity =      1.196(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.632
Subarea runoff =     25.187(CFS) for   43.160(Ac.)
Total runoff =     52.762(CFS)
Effective area this stream =       69.84(Ac.)
Total Study Area (Main Stream No. 1) =      228.87(Ac.)
Area averaged Fm value =    0.356(In/Hr)
Depth of flow =   0.624(Ft.), Average velocity =   1.650(Ft/s)
Critical depth =      0.324(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       26.170 to Point/Station       26.130
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1896.100(Ft.)
Downstream point elevation =  1893.100(Ft.)
Channel length thru subarea  =  1118.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     54.006(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     54.006(CFS)
Depth of flow =   0.651(Ft.), Average velocity =   1.618(Ft/s)
Channel flow top width =   52.603(Ft.)
Flow Velocity =    1.62(Ft/s)
Travel time  =   11.52 min.
Time of concentration =   85.90 min.
Critical depth =      0.328(Ft.)
 Adding area flow to channel
```

```
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 0.9930     Max loss rate(Fm)=     0.357(In/Hr)
Rainfall intensity =      1.081(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.603
Subarea runoff =      2.408(CFS) for   14.750(Ac.)
Total runoff =     55.170(CFS)
Effective area this stream =       84.59(Ac.)
Total Study Area (Main Stream No. 1) =      243.62(Ac.)
Area averaged Fm value =    0.357(In/Hr)
Depth of flow =   0.659(Ft.), Average velocity =   1.631(Ft/s)
Critical depth =      0.336(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       26.170 to Point/Station       26.130
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     84.590(Ac.)
Runoff from this stream =     55.170(CFS)
Time of concentration =   85.90 min.
Rainfall intensity =     1.081(In/Hr)
Area averaged loss rate (Fm) =    0.3566(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9916
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     71.24   150.545    114.07    0.361      0.887
2     55.17    84.590     85.90    0.357      1.081
Qmax(1) =
           1.000 *    1.000 *    71.241) +
           0.731 *    1.000 *    55.170) + =     111.588
Qmax(2) =
           1.370 *    0.753 *    71.241) +
           1.000 *    1.000 *    55.170) + =     128.682

Total of 2 streams to confluence:
Flow rates before confluence point:
      71.241      55.170
Maximum flow rates at confluence using above data:
      111.588      128.682
Area of streams before confluence:
      150.545       84.590
Effective area values after confluence:
      235.135      197.958
Results of confluence:
Total flow rate =    128.682(CFS)
Time of concentration =    85.903 min.
Effective stream area after confluence =    197.958(Ac.)
Study area average Pervious fraction(Ap) =  0.997
Study area average soil loss rate(Fm) =    0.359(In/Hr)
Study area total (this main stream) =     235.13(Ac.)
```

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Process from Point/Station       26.130 to Point/Station       26.180
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1893.100(Ft.)
Downstream point elevation =  1890.700(Ft.)
Channel length thru subarea  =  2434.000(Ft.)
Channel base width      =   75.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    128.716(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    128.716(CFS)
Depth of flow =   1.159(Ft.), Average velocity =   1.436(Ft/s)
Channel flow top width =   79.637(Ft.)
Flow Velocity =    1.44(Ft/s)
Travel time  =   28.25 min.
Time of concentration =  114.15 min.
Critical depth =      0.449(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.81
Adjusted SCS curve number for AMC 3 = 81.25
Pervious ratio(Ap) = 0.9950     Max loss rate(Fm)=     0.347(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =    106.897(CFS)
therefore the upstream flow rate of Q =    128.682(CFS) is being used
Rainfall intensity =      0.886(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.537
Subarea runoff =      0.000(CFS) for   26.840(Ac.)
Total runoff =    128.682(CFS)
Effective area this stream =      224.80(Ac.)
Total Study Area (Main Stream No. 1) =      270.46(Ac.)
Area averaged Fm value =    0.358(In/Hr)
Depth of flow =   1.159(Ft.), Average velocity =   1.436(Ft/s)
Critical depth =      0.449(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       26.130 to Point/Station       26.180
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =    224.798(Ac.)
Runoff from this stream =    128.682(CFS)
Time of concentration =  114.15 min.
Rainfall intensity =     0.886(In/Hr)
Area averaged loss rate (Fm) =    0.3577(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9968


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Process from Point/Station       26.190 to Point/Station       26.200
**** INITIAL AREA EVALUATION ****
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------------------------------------------------------------------------
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Initial subarea data:
Initial area flow distance =   967.000(Ft.)
Top (of initial area) elevation =  1900.300(Ft.)
Bottom (of initial area) elevation =  1894.200(Ft.)
Difference in elevation =     6.100(Ft.)
Slope =    0.00631  s(%)=       0.63
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   37.366 min.
Rainfall intensity =      1.936(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.733
Subarea runoff =     10.899(CFS)
Total initial stream area =        7.680(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.360(In/Hr)


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Process from Point/Station       26.200 to Point/Station       26.210
**** IMPROVED CHANNEL TRAVEL TIME ****
------------------------------------------------------------------------
Upstream point elevation =  1894.200(Ft.)
Downstream point elevation =  1890.800(Ft.)
Channel length thru subarea  =  1041.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     19.843(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     19.843(CFS)
Depth of flow =   0.337(Ft.), Average velocity =   1.162(Ft/s)
Channel flow top width =   51.348(Ft.)
Flow Velocity =    1.16(Ft/s)
Travel time  =   14.93 min.
Time of concentration =   52.29 min.
Critical depth =      0.170(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.360(In/Hr)
Rainfall intensity =      1.530(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.689
Subarea runoff =     17.826(CFS) for   19.580(Ac.)
Total runoff =     28.725(CFS)
Effective area this stream =       27.26(Ac.)
Total Study Area (Main Stream No. 1) =      297.72(Ac.)
Area averaged Fm value =    0.360(In/Hr)
Depth of flow =   0.420(Ft.), Average velocity =   1.344(Ft/s)
Critical depth =      0.217(Ft.)
```

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Process from Point/Station       26.210 to Point/Station       26.180
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1890.800(Ft.)
Downstream point elevation =  1890.700(Ft.)
Channel length thru subarea  =  1444.000(Ft.)
Channel base width      =   75.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     28.752(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =     28.752(CFS)
Depth of flow =   1.047(Ft.), Average velocity =   0.356(Ft/s)
Channel flow top width =   79.187(Ft.)
Flow Velocity =    0.36(Ft/s)
Travel time  =   67.55 min.
Time of concentration =  119.84 min.
Critical depth =      0.166(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.79
Adjusted SCS curve number for AMC 3 = 81.23
Pervious ratio(Ap) = 0.9870     Max loss rate(Fm)=     0.344(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =     23.961(CFS)
therefore the upstream flow rate of Q =     28.725(CFS) is being used
Rainfall intensity =      0.856(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.530
Subarea runoff =      0.000(CFS) for   25.530(Ac.)
Total runoff =     28.725(CFS)
Effective area this stream =       52.79(Ac.)
Total Study Area (Main Stream No. 1) =      323.25(Ac.)
Area averaged Fm value =    0.352(In/Hr)
Depth of flow =   1.046(Ft.), Average velocity =   0.356(Ft/s)
Critical depth =      0.166(Ft.)


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Process from Point/Station       26.210 to Point/Station       26.180
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     52.790(Ac.)
Runoff from this stream =     28.725(CFS)
Time of concentration =  119.84 min.
Rainfall intensity =     0.856(In/Hr)
Area averaged loss rate (Fm) =    0.3521(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9937
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)
```

```
1    128.68   224.798    114.15    0.358      0.886
2     28.73    52.790    119.84    0.352      0.856
Qmax(1) =
           1.000 *    1.000 *   128.682) +
           1.059 *    0.953 *    28.725) + =     157.653
Qmax(2) =
           0.944 *    1.000 *   128.682) +
           1.000 *    1.000 *    28.725) + =     150.188

Total of 2 streams to confluence:
Flow rates before confluence point:
     128.682      28.725
Maximum flow rates at confluence using above data:
      157.653      150.188
Area of streams before confluence:
      224.798       52.790
Effective area values after confluence:
      275.083      277.588
Results of confluence:
Total flow rate =    157.653(CFS)
Time of concentration =   114.153 min.
Effective stream area after confluence =    275.083(Ac.)
Study area average Pervious fraction(Ap) =  0.996
Study area average soil loss rate(Fm) =    0.357(In/Hr)
Study area total (this main stream) =     277.59(Ac.)


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Process from Point/Station       26.180 to Point/Station       26.220
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1890.700(Ft.)
Downstream point elevation =  1887.200(Ft.)
Channel length thru subarea  =  1942.000(Ft.)
Channel base width      =   75.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    157.695(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    157.695(CFS)
Depth of flow =   1.093(Ft.), Average velocity =   1.869(Ft/s)
Channel flow top width =   79.372(Ft.)
Flow Velocity =    1.87(Ft/s)
Travel time  =   17.32 min.
Time of concentration =  131.47 min.
Critical depth =      0.516(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 59.04
Adjusted SCS curve number for AMC 3 = 78.23
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.400(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =    117.246(CFS)
therefore the upstream flow rate of Q =    157.653(CFS) is being used
Rainfall intensity =      0.803(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.497
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```
Subarea runoff =      0.000(CFS) for   18.810(Ac.)
Total runoff =    157.653(CFS)
Effective area this stream =      293.89(Ac.)
Total Study Area (Main Stream No. 1) =      342.06(Ac.)
Area averaged Fm value =    0.359(In/Hr)
Depth of flow =   1.093(Ft.), Average velocity =   1.869(Ft/s)
Critical depth =      0.516(Ft.)
End of computations, Total Study Area =          342.06 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.997
Area averaged SCS curve number =  61.9
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 29
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 29.000 to Point/Station 29.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 58.00
Adjusted SCS curve number for AMC 3 = 77.40
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.414(In/Hr)
Initial subarea data:
Initial area flow distance = 776.000(Ft.)
Top (of initial area) elevation = 1889.000(Ft.)
Bottom (of initial area) elevation = 1887.500(Ft.)
Difference in elevation = 1.500(Ft.)
Slope = 0.00193 s(%)= 0.19
TC = k(0.945)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 47.242 min.
Rainfall intensity = 1.643(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.674
Subarea runoff = 11.067(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.414(In/Hr)

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Process from Point/Station 29.100 to Point/Station 29.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1887.500(Ft.)
Downstream point elevation = 1886.400(Ft.)

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Channel length thru subarea  =   413.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     12.949(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     12.949(CFS)
Depth of flow =   0.277(Ft.), Average velocity =   0.924(Ft/s)
Channel flow top width =   51.109(Ft.)
Flow Velocity =    0.92(Ft/s)
Travel time  =    7.45 min.
Time of concentration =   54.70 min.
Critical depth =      0.127(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 59.40
Adjusted SCS curve number for AMC 3 = 78.52
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.395(In/Hr)
Rainfall intensity =      1.483(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.653
Subarea runoff =      3.691(CFS) for    5.240(Ac.)
Total runoff =     14.758(CFS)
Effective area this stream =       15.24(Ac.)
Total Study Area (Main Stream No. 1) =       15.24(Ac.)
Area averaged Fm value =    0.407(In/Hr)
Depth of flow =   0.300(Ft.), Average velocity =   0.972(Ft/s)
Critical depth =      0.139(Ft.)
End of computations, Total Study Area =           15.24 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  58.5
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/04/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 30
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.400 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 30.000 to Point/Station 30.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 73.93
Adjusted SCS curve number for AMC 3 = 90.14
Pervious ratio(Ap) = 0.8580 Max loss rate(Fm)= 0.163(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1902.900(Ft.)
Bottom (of initial area) elevation = 1896.400(Ft.)
Difference in elevation = 6.500(Ft.)
Slope = 0.00650 s(%)= 0.65
TC = k(0.486)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 21.092 min.
Rainfall intensity = 2.910(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.850
Subarea runoff = 18.027(CFS)
Total initial stream area = 7.290(Ac.)
Pervious area fraction = 0.858
Initial area Fm value = 0.163(In/Hr)

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Process from Point/Station 30.100 to Point/Station 30.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1896.400(Ft.)
Downstream point elevation = 1893.000(Ft.)

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Channel length thru subarea  =  1043.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     27.827(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     27.827(CFS)
Depth of flow =   0.413(Ft.), Average velocity =   1.326(Ft/s)
Channel flow top width =   51.651(Ft.)
Flow Velocity =    1.33(Ft/s)
Travel time  =   13.11 min.
Time of concentration =   34.20 min.
Critical depth =      0.211(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.85
Adjusted SCS curve number for AMC 3 = 93.31
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.130(In/Hr)
Rainfall intensity =      2.075(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.839
Subarea runoff =     19.547(CFS) for   14.300(Ac.)
Total runoff =     37.574(CFS)
Effective area this stream =       21.59(Ac.)
Total Study Area (Main Stream No. 1) =       21.59(Ac.)
Area averaged Fm value =    0.141(In/Hr)
Depth of flow =   0.494(Ft.), Average velocity =   1.491(Ft/s)
Critical depth =      0.258(Ft.)


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Process from Point/Station       30.200 to Point/Station       30.300
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1893.000(Ft.)
Downstream point elevation =  1891.100(Ft.)
Channel length thru subarea  =  1163.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     53.632(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     53.632(CFS)
Depth of flow =   0.752(Ft.), Average velocity =   1.385(Ft/s)
Channel flow top width =   53.006(Ft.)
Flow Velocity =    1.39(Ft/s)
Travel time  =   13.99 min.
Time of concentration =   48.19 min.
Critical depth =      0.328(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 77.80
Adjusted SCS curve number for AMC 3 = 92.68
Pervious ratio(Ap) = 0.9920     Max loss rate(Fm)=     0.141(In/Hr)
Rainfall intensity =      1.632(In/Hr) for a   100.0 year storm
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Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.822
Subarea runoff =     32.055(CFS) for   30.300(Ac.)
Total runoff =     69.629(CFS)
Effective area this stream =       51.89(Ac.)
Total Study Area (Main Stream No. 1) =       51.89(Ac.)
Area averaged Fm value =    0.141(In/Hr)
Depth of flow =   0.878(Ft.), Average velocity =   1.531(Ft/s)
Critical depth =      0.391(Ft.)


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Process from Point/Station       30.300 to Point/Station       30.400
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1891.100(Ft.)
Downstream point elevation =  1886.000(Ft.)
Channel length thru subarea  =  2235.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    104.196(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    104.196(CFS)
Depth of flow =   1.011(Ft.), Average velocity =   1.980(Ft/s)
Channel flow top width =   54.045(Ft.)
Flow Velocity =    1.98(Ft/s)
Travel time  =   18.81 min.
Time of concentration =   67.00 min.
Critical depth =      0.508(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 75.86
Adjusted SCS curve number for AMC 3 = 91.52
Pervious ratio(Ap) = 0.9910     Max loss rate(Fm)=     0.163(In/Hr)
Rainfall intensity =      1.296(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.793
Subarea runoff =     69.065(CFS) for   83.110(Ac.)
Total runoff =    138.695(CFS)
Effective area this stream =      135.00(Ac.)
Total Study Area (Main Stream No. 1) =      135.00(Ac.)
Area averaged Fm value =    0.154(In/Hr)
Depth of flow =   1.199(Ft.), Average velocity =   2.207(Ft/s)
Critical depth =      0.617(Ft.)
End of computations, Total Study Area =          135.00 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.985
Area averaged SCS curve number =  76.5
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 31
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.400 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 31.000 to Point/Station 31.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 0.6700 Max loss rate(Fm)= 0.241(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1924.300(Ft.)
Bottom (of initial area) elevation = 1920.600(Ft.)
Difference in elevation = 3.700(Ft.)
Slope = 0.00370 s(%)= 0.37
TC = k(0.440)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 21.357 min.
Rainfall intensity = 2.885(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.825
Subarea runoff = 12.470(CFS)
Total initial stream area = 5.240(Ac.)
Pervious area fraction = 0.670
Initial area Fm value = 0.241(In/Hr)

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Process from Point/Station 31.100 to Point/Station 31.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1920.600(Ft.)
Downstream point elevation = 1917.400(Ft.)

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Channel length thru subarea  =   991.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     18.806(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     18.806(CFS)
Depth of flow =   0.327(Ft.), Average velocity =   1.134(Ft/s)
Channel flow top width =   51.310(Ft.)
Flow Velocity =    1.13(Ft/s)
Travel time  =   14.57 min.
Time of concentration =   35.92 min.
Critical depth =      0.164(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 0.8450     Max loss rate(Fm)=     0.304(In/Hr)
Rainfall intensity =      2.005(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.773
Subarea runoff =     12.582(CFS) for   10.930(Ac.)
Total runoff =     25.052(CFS)
Effective area this stream =       16.17(Ac.)
Total Study Area (Main Stream No. 1) =       16.17(Ac.)
Area averaged Fm value =    0.283(In/Hr)
Depth of flow =   0.389(Ft.), Average velocity =   1.269(Ft/s)
Critical depth =      0.197(Ft.)


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Process from Point/Station       31.200 to Point/Station       31.300
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1917.400(Ft.)
Downstream point elevation =  1915.800(Ft.)
Channel length thru subarea  =   862.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     34.622(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     34.622(CFS)
Depth of flow =   0.557(Ft.), Average velocity =   1.216(Ft/s)
Channel flow top width =   52.227(Ft.)
Flow Velocity =    1.22(Ft/s)
Travel time  =   11.81 min.
Time of concentration =   47.73 min.
Critical depth =      0.246(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 0.9670     Max loss rate(Fm)=     0.348(In/Hr)
Rainfall intensity =      1.643(In/Hr) for a   100.0 year storm
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Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.725
Subarea runoff =     19.067(CFS) for   20.870(Ac.)
Total runoff =     44.118(CFS)
Effective area this stream =       37.04(Ac.)
Total Study Area (Main Stream No. 1) =       37.04(Ac.)
Area averaged Fm value =    0.320(In/Hr)
Depth of flow =   0.644(Ft.), Average velocity =   1.336(Ft/s)
Critical depth =      0.289(Ft.)


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Process from Point/Station       31.300 to Point/Station       31.400
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1915.800(Ft.)
Downstream point elevation =  1914.700(Ft.)
Channel length thru subarea  =  1062.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     58.278(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =     58.278(CFS)
Depth of flow =   0.905(Ft.), Average velocity =   1.243(Ft/s)
Channel flow top width =   53.620(Ft.)
Flow Velocity =    1.24(Ft/s)
Travel time  =   14.24 min.
Time of concentration =   61.97 min.
Critical depth =      0.348(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 0.9750     Max loss rate(Fm)=     0.351(In/Hr)
Rainfall intensity =      1.369(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.679
Subarea runoff =     28.262(CFS) for   40.830(Ac.)
Total runoff =     72.380(CFS)
Effective area this stream =       77.87(Ac.)
Total Study Area (Main Stream No. 1) =       77.87(Ac.)
Area averaged Fm value =    0.336(In/Hr)
Depth of flow =   1.030(Ft.), Average velocity =   1.350(Ft/s)
Critical depth =      0.398(Ft.)


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Process from Point/Station       31.400 to Point/Station       31.500
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1914.700(Ft.)
Downstream point elevation =  1905.300(Ft.)
Channel length thru subarea  =  3431.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
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Estimated mean flow rate at midpoint of channel =     85.684(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     85.684(CFS)
Depth of flow =   0.852(Ft.), Average velocity =   1.945(Ft/s)
Channel flow top width =   53.408(Ft.)
Flow Velocity =    1.94(Ft/s)
Travel time  =   29.40 min.
Time of concentration =   91.38 min.
Critical depth =      0.445(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 63.18
Adjusted SCS curve number for AMC 3 = 81.54
Pervious ratio(Ap) = 0.9600     Max loss rate(Fm)=     0.330(In/Hr)
Rainfall intensity =      1.043(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.613
Subarea runoff =     26.528(CFS) for   76.880(Ac.)
Total runoff =     98.908(CFS)
Effective area this stream =      154.75(Ac.)
Total Study Area (Main Stream No. 1) =      154.75(Ac.)
Area averaged Fm value =    0.333(In/Hr)
Depth of flow =   0.928(Ft.), Average velocity =   2.055(Ft/s)
Critical depth =      0.492(Ft.)


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Process from Point/Station       31.500 to Point/Station       31.600
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1905.300(Ft.)
Downstream point elevation =  1892.300(Ft.)
Channel length thru subarea  =  5186.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    126.263(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    126.263(CFS)
Depth of flow =   1.103(Ft.), Average velocity =   2.193(Ft/s)
Channel flow top width =   54.411(Ft.)
Flow Velocity =    2.19(Ft/s)
Travel time  =   39.41 min.
Time of concentration =  130.78 min.
Critical depth =      0.578(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 72.77
Adjusted SCS curve number for AMC 3 = 89.22
Pervious ratio(Ap) = 0.9500     Max loss rate(Fm)=     0.196(In/Hr)
Rainfall intensity =      0.811(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.607
Subarea runoff =     54.628(CFS) for  156.960(Ac.)
Total runoff =    153.537(CFS)
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Effective area this stream =      311.71(Ac.)
Total Study Area (Main Stream No. 1) =      311.71(Ac.)
Area averaged Fm value =    0.264(In/Hr)
Depth of flow =   1.239(Ft.), Average velocity =   2.361(Ft/s)
Critical depth =      0.656(Ft.)


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Process from Point/Station       31.600 to Point/Station       31.700
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1892.300(Ft.)
Downstream point elevation =  1886.800(Ft.)
Channel length thru subarea  =  2516.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    154.923(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    154.923(CFS)
Depth of flow =   1.298(Ft.), Average velocity =   2.270(Ft/s)
Channel flow top width =   55.190(Ft.)
Flow Velocity =    2.27(Ft/s)
Travel time  =   18.47 min.
Time of concentration =  149.26 min.
Critical depth =      0.664(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 69.92
Adjusted SCS curve number for AMC 3 = 86.94
Pervious ratio(Ap) = 0.9500     Max loss rate(Fm)=     0.236(In/Hr)
Rainfall intensity =      0.740(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.583
Subarea runoff =      2.721(CFS) for   50.340(Ac.)
Total runoff =    156.257(CFS)
Effective area this stream =      362.05(Ac.)
Total Study Area (Main Stream No. 1) =      362.05(Ac.)
Area averaged Fm value =    0.260(In/Hr)
Depth of flow =   1.304(Ft.), Average velocity =   2.277(Ft/s)
Critical depth =      0.664(Ft.)


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Process from Point/Station       31.600 to Point/Station       31.700
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =    362.050(Ac.)
Runoff from this stream =    156.257(CFS)
Time of concentration =  149.26 min.
Rainfall intensity =     0.740(In/Hr)
Area averaged loss rate (Fm) =    0.2602(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9487


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Process from Point/Station       31.800 to Point/Station       31.900
**** INITIAL AREA EVALUATION ****
----------------------------------------------------------------------------
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 83.81
Adjusted SCS curve number for AMC 3 = 96.29
Pervious ratio(Ap) = 0.9590     Max loss rate(Fm)=     0.070(In/Hr)
Initial subarea data:
Initial area flow distance =   548.000(Ft.)
Top (of initial area) elevation =  1911.900(Ft.)
Bottom (of initial area) elevation =  1909.900(Ft.)
Difference in elevation =     2.000(Ft.)
Slope =    0.00365  s(%)=       0.36
TC = k(0.511)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   19.565 min.
Rainfall intensity =      3.068(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.879
Subarea runoff =     26.977(CFS)
Total initial stream area =       10.000(Ac.)
Pervious area fraction = 0.959
Initial area Fm value =    0.070(In/Hr)


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Process from Point/Station       31.900 to Point/Station       31.100
**** IMPROVED CHANNEL TRAVEL TIME ****
----------------------------------------------------------------------------
Upstream point elevation =  1909.900(Ft.)
Downstream point elevation =  1906.600(Ft.)
Channel length thru subarea  =  1333.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     40.609(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     40.609(CFS)
Depth of flow =   0.562(Ft.), Average velocity =   1.413(Ft/s)
Channel flow top width =   52.248(Ft.)
Flow Velocity =    1.41(Ft/s)
Travel time  =   15.72 min.
Time of concentration =   35.29 min.
Critical depth =      0.273(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 79.18
Adjusted SCS curve number for AMC 3 = 93.51
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.127(In/Hr)
Rainfall intensity =      2.030(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.852
Subarea runoff =     27.204(CFS) for   21.330(Ac.)
Total runoff =     54.181(CFS)
Effective area this stream =       31.33(Ac.)
Total Study Area (Main Stream No. 1) =      393.38(Ac.)
Area averaged Fm value =    0.109(In/Hr)
Depth of flow =   0.668(Ft.), Average velocity =   1.580(Ft/s)
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Critical depth =      0.328(Ft.)


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Process from Point/Station       31.100 to Point/Station       31.110
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1906.600(Ft.)
Downstream point elevation =  1902.700(Ft.)
Channel length thru subarea  =  1835.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     66.393(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     66.393(CFS)
Depth of flow =   0.789(Ft.), Average velocity =   1.631(Ft/s)
Channel flow top width =   53.157(Ft.)
Flow Velocity =    1.63(Ft/s)
Travel time  =   18.75 min.
Time of concentration =   54.04 min.
Critical depth =      0.379(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 60.03
Adjusted SCS curve number for AMC 3 = 79.02
Pervious ratio(Ap) = 0.9800     Max loss rate(Fm)=     0.379(In/Hr)
Rainfall intensity =      1.506(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.746
Subarea runoff =     24.352(CFS) for   38.540(Ac.)
Total runoff =     78.533(CFS)
Effective area this stream =       69.87(Ac.)
Total Study Area (Main Stream No. 1) =      431.92(Ac.)
Area averaged Fm value =    0.258(In/Hr)
Depth of flow =   0.873(Ft.), Average velocity =   1.739(Ft/s)
Critical depth =      0.422(Ft.)


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Process from Point/Station       31.110 to Point/Station       31.120
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1902.700(Ft.)
Downstream point elevation =  1893.600(Ft.)
Channel length thru subarea  =  3382.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    101.503(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    101.503(CFS)
Depth of flow =   0.948(Ft.), Average velocity =   2.063(Ft/s)
Channel flow top width =   53.791(Ft.)
Flow Velocity =    2.06(Ft/s)
Travel time  =   27.32 min.
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Time of concentration =   81.35 min.
Critical depth =      0.500(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.02
Adjusted SCS curve number for AMC 3 = 80.62
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.323(In/Hr)
Rainfall intensity =      1.131(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.665
Subarea runoff =     45.879(CFS) for   95.540(Ac.)
Total runoff =    124.412(CFS)
Effective area this stream =      165.41(Ac.)
Total Study Area (Main Stream No. 1) =      527.46(Ac.)
Area averaged Fm value =    0.296(In/Hr)
Depth of flow =   1.070(Ft.), Average velocity =   2.229(Ft/s)
Critical depth =      0.570(Ft.)


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Process from Point/Station       31.120 to Point/Station       31.700
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1893.600(Ft.)
Downstream point elevation =  1886.800(Ft.)
Channel length thru subarea  =  2737.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    134.818(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    134.818(CFS)
Depth of flow =   1.150(Ft.), Average velocity =   2.242(Ft/s)
Channel flow top width =   54.599(Ft.)
Flow Velocity =    2.24(Ft/s)
Travel time  =   20.35 min.
Time of concentration =  101.70 min.
Critical depth =      0.602(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 76.19
Adjusted SCS curve number for AMC 3 = 91.71
Pervious ratio(Ap) = 0.9500     Max loss rate(Fm)=     0.152(In/Hr)
Rainfall intensity =      0.968(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.661
Subarea runoff =     20.745(CFS) for   61.480(Ac.)
Total runoff =    145.157(CFS)
Effective area this stream =      226.89(Ac.)
Total Study Area (Main Stream No. 1) =      588.94(Ac.)
Area averaged Fm value =    0.257(In/Hr)
Depth of flow =   1.202(Ft.), Average velocity =   2.305(Ft/s)
Critical depth =      0.633(Ft.)


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Process from Point/Station       31.120 to Point/Station       31.700
**** CONFLUENCE OF MINOR STREAMS ****
____________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =    226.890(Ac.)
Runoff from this stream =    145.157(CFS)
Time of concentration =  101.70 min.
Rainfall intensity =     0.968(In/Hr)
Area averaged loss rate (Fm) =    0.2568(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9391
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1    156.26   362.050    149.26    0.260      0.740
2    145.16   226.890    101.70    0.257      0.968
Qmax(1) =
           1.000 *    1.000 *   156.257) +
           0.679 *    1.000 *   145.157) + =     254.881
Qmax(2) =
           1.475 *    0.681 *   156.257) +
           1.000 *    1.000 *   145.157) + =     302.224

Total of 2 streams to confluence:
Flow rates before confluence point:
     156.257     145.157
Maximum flow rates at confluence using above data:
      254.881      302.224
Area of streams before confluence:
      362.050      226.890
Effective area values after confluence:
      588.940      473.585
Results of confluence:
Total flow rate =    302.224(CFS)
Time of concentration =   101.701 min.
Effective stream area after confluence =    473.585(Ac.)
Study area average Pervious fraction(Ap) =  0.945
Study area average soil loss rate(Fm) =    0.259(In/Hr)
Study area total (this main stream) =     588.94(Ac.)


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Process from Point/Station       31.700 to Point/Station       31.130
**** IMPROVED CHANNEL TRAVEL TIME ****
____________________________________________________________________________
Upstream point elevation =  1886.800(Ft.)
Downstream point elevation =  1880.800(Ft.)
Channel length thru subarea  =  3029.000(Ft.)
Channel base width      =   75.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    302.252(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    302.252(CFS)
Depth of flow =   1.567(Ft.), Average velocity =   2.468(Ft/s)
Channel flow top width =   81.268(Ft.)
```

```
Flow Velocity =    2.47(Ft/s)
Travel time  =   20.45 min.
Time of concentration =  122.15 min.
Critical depth =      0.789(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 81.39
Adjusted SCS curve number for AMC 3 = 94.83
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.101(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =    283.438(CFS)
therefore the upstream flow rate of Q =    302.224(CFS) is being used
Rainfall intensity =      0.851(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.641
Subarea runoff =      0.000(CFS) for   45.930(Ac.)
Total runoff =    302.224(CFS)
Effective area this stream =      519.51(Ac.)
Total Study Area (Main Stream No. 1) =      634.87(Ac.)
Area averaged Fm value =    0.245(In/Hr)
Depth of flow =   1.567(Ft.), Average velocity =   2.468(Ft/s)
Critical depth =      0.789(Ft.)
End of computations, Total Study Area =          634.87 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.949
Area averaged SCS curve number =  69.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 36
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 36.000 to Point/Station 36.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.071(In/Hr)
Initial subarea data:
Initial area flow distance = 628.000(Ft.)
Top (of initial area) elevation = 1883.300(Ft.)
Bottom (of initial area) elevation = 1876.400(Ft.)
Difference in elevation = 6.900(Ft.)
Slope = 0.01099 s(%)= 1.10
TC = k(0.541)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 17.533 min.
Rainfall intensity = 3.289(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.881
Subarea runoff = 10.338(CFS)
Total initial stream area = 3.570(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.071(In/Hr)
End of computations, Total Study Area = 3.57 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 84.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 32
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 32.000 to Point/Station 32.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 81.00
Adjusted SCS curve number for AMC 3 = 94.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.106(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1891.900(Ft.)
Bottom (of initial area) elevation = 1884.700(Ft.)
Difference in elevation = 7.200(Ft.)
Slope = 0.00720 s(%)= 0.72
TC = k(0.577)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 24.514 min.
Rainfall intensity = 2.601(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.863
Subarea runoff = 20.750(CFS)
Total initial stream area = 9.240(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.106(In/Hr)

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Process from Point/Station 32.100 to Point/Station 32.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1884.700(Ft.)
Downstream point elevation = 1879.600(Ft.)

```
Channel length thru subarea  =  1520.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     28.428(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     28.428(CFS)
Depth of flow =   0.415(Ft.), Average velocity =   1.349(Ft/s)
Channel flow top width =   51.658(Ft.)
Flow Velocity =    1.35(Ft/s)
Travel time  =   18.78 min.
Time of concentration =   43.29 min.
Critical depth =      0.215(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 81.39
Adjusted SCS curve number for AMC 3 = 94.83
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.101(In/Hr)
Rainfall intensity =      1.747(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.847
Subarea runoff =     15.290(CFS) for   15.120(Ac.)
Total runoff =     36.040(CFS)
Effective area this stream =       24.36(Ac.)
Total Study Area (Main Stream No. 1) =       24.36(Ac.)
Area averaged Fm value =    0.103(In/Hr)
Depth of flow =   0.478(Ft.), Average velocity =   1.480(Ft/s)
Critical depth =      0.252(Ft.)
End of computations, Total Study Area =           24.36 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  81.2
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 33
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 33.000 to Point/Station 33.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 81.00
Adjusted SCS curve number for AMC 3 = 94.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.106(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1892.300(Ft.)
Bottom (of initial area) elevation = 1885.700(Ft.)
Difference in elevation = 6.600(Ft.)
Slope = 0.00660 s(%)= 0.66
TC = k(0.577)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 24.944 min.
Rainfall intensity = 2.569(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.863
Subarea runoff = 12.861(CFS)
Total initial stream area = 5.800(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.106(In/Hr)

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Process from Point/Station 33.100 to Point/Station 33.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1885.700(Ft.)
Downstream point elevation = 1883.700(Ft.)

```
Channel length thru subarea  =   819.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     21.068(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     21.068(CFS)
Depth of flow =   0.381(Ft.), Average velocity =   1.089(Ft/s)
Channel flow top width =   51.524(Ft.)
Flow Velocity =    1.09(Ft/s)
Travel time  =   12.53 min.
Time of concentration =   37.48 min.
Critical depth =      0.176(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 81.00
Adjusted SCS curve number for AMC 3 = 94.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.106(In/Hr)
Rainfall intensity =      1.932(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.851
Subarea runoff =     16.353(CFS) for   11.970(Ac.)
Total runoff =     29.214(CFS)
Effective area this stream =       17.77(Ac.)
Total Study Area (Main Stream No. 1) =       17.77(Ac.)
Area averaged Fm value =    0.106(In/Hr)
Depth of flow =   0.463(Ft.), Average velocity =   1.238(Ft/s)
Critical depth =      0.219(Ft.)


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Process from Point/Station       33.200 to Point/Station       33.300
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1883.700(Ft.)
Downstream point elevation =  1881.400(Ft.)
Channel length thru subarea  =   871.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     35.737(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     35.737(CFS)
Depth of flow =   0.511(Ft.), Average velocity =   1.371(Ft/s)
Channel flow top width =   52.043(Ft.)
Flow Velocity =    1.37(Ft/s)
Travel time  =   10.58 min.
Time of concentration =   48.06 min.
Critical depth =      0.250(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 81.16
Adjusted SCS curve number for AMC 3 = 94.70
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.104(In/Hr)
Rainfall intensity =      1.624(In/Hr) for a   100.0 year storm
```

```
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.842
Subarea runoff =     12.964(CFS) for   13.090(Ac.)
Total runoff =     42.178(CFS)
Effective area this stream =       30.86(Ac.)
Total Study Area (Main Stream No. 1) =       30.86(Ac.)
Area averaged Fm value =    0.105(In/Hr)
Depth of flow =   0.564(Ft.), Average velocity =   1.463(Ft/s)
Critical depth =      0.281(Ft.)
End of computations, Total Study Area =           30.86 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  81.1
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 37
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 37.000 to Point/Station 37.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.071(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1883.000(Ft.)
Bottom (of initial area) elevation = 1878.400(Ft.)
Difference in elevation = 4.600(Ft.)
Slope = 0.00460 s(%)= 0.46
TC = k(0.541)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 25.137 min.
Rainfall intensity = 2.556(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.875
Subarea runoff = 20.349(CFS)
Total initial stream area = 9.100(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.071(In/Hr)

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Process from Point/Station 37.100 to Point/Station 37.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1878.400(Ft.)
Downstream point elevation = 1877.300(Ft.)

```
Channel length thru subarea  =   203.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     21.123(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     21.123(CFS)
Depth of flow =   0.301(Ft.), Average velocity =   1.389(Ft/s)
Channel flow top width =   51.202(Ft.)
Flow Velocity =    1.39(Ft/s)
Travel time  =    2.44 min.
Time of concentration =   27.57 min.
Critical depth =      0.176(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.071(In/Hr)
Rainfall intensity =      2.395(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.873
Subarea runoff =      1.449(CFS) for    1.320(Ac.)
Total runoff =     21.799(CFS)
Effective area this stream =       10.42(Ac.)
Total Study Area (Main Stream No. 1) =       10.42(Ac.)
Area averaged Fm value =    0.071(In/Hr)
Depth of flow =   0.306(Ft.), Average velocity =   1.406(Ft/s)
Critical depth =      0.180(Ft.)
End of computations, Total Study Area =           10.42 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  84.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

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Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 34
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.400 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 34.000 to Point/Station 34.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 81.58
Adjusted SCS curve number for AMC 3 = 94.95
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.089(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1897.600(Ft.)
Bottom (of initial area) elevation = 1894.200(Ft.)
Difference in elevation = 3.400(Ft.)
Slope = 0.00340 s(%)= 0.34
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 24.523 min.
Rainfall intensity = 2.619(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.869
Subarea runoff = 11.840(CFS)
Total initial stream area = 5.200(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.089(In/Hr)

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Process from Point/Station 34.100 to Point/Station 34.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1894.200(Ft.)
Downstream point elevation = 1893.300(Ft.)

Channel length thru subarea  =   570.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     19.163(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     19.163(CFS)
Depth of flow =   0.410(Ft.), Average velocity =   0.919(Ft/s)
Channel flow top width =   51.641(Ft.)
Flow Velocity =    0.92(Ft/s)
Travel time  =   10.33 min.
Time of concentration =   34.86 min.
Critical depth =      0.166(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 81.19
Adjusted SCS curve number for AMC 3 = 94.71
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.093(In/Hr)
Rainfall intensity =      2.047(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.860
Subarea runoff =     14.562(CFS) for    9.800(Ac.)
Total runoff =     26.402(CFS)
Effective area this stream =       15.00(Ac.)
Total Study Area (Main Stream No. 1) =       15.00(Ac.)
Area averaged Fm value =    0.092(In/Hr)
Depth of flow =   0.497(Ft.), Average velocity =   1.042(Ft/s)
Critical depth =      0.205(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       34.200 to Point/Station       34.300
**** IMPROVED CHANNEL TRAVEL TIME ****
____________________________________________________________________________
Upstream point elevation =  1893.300(Ft.)
Downstream point elevation =  1888.500(Ft.)
Channel length thru subarea  =  1115.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     37.103(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     37.103(CFS)
Depth of flow =   0.451(Ft.), Average velocity =   1.615(Ft/s)
Channel flow top width =   51.805(Ft.)
Flow Velocity =    1.62(Ft/s)
Travel time  =   11.50 min.
Time of concentration =   46.36 min.
Critical depth =      0.258(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 81.05
Adjusted SCS curve number for AMC 3 = 94.63
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.095(In/Hr)
Rainfall intensity =      1.677(In/Hr) for a   100.0 year storm

```
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.850
Subarea runoff =     21.343(CFS) for   18.500(Ac.)
Total runoff =     47.744(CFS)
Effective area this stream =       33.50(Ac.)
Total Study Area (Main Stream No. 1) =       33.50(Ac.)
Area averaged Fm value =    0.093(In/Hr)
Depth of flow =   0.525(Ft.), Average velocity =   1.782(Ft/s)
Critical depth =      0.305(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       34.300 to Point/Station       34.400
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1888.500(Ft.)
Downstream point elevation =  1885.500(Ft.)
Channel length thru subarea  =  1198.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     66.520(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     66.520(CFS)
Depth of flow =   0.752(Ft.), Average velocity =   1.717(Ft/s)
Channel flow top width =   53.010(Ft.)
Flow Velocity =    1.72(Ft/s)
Travel time  =   11.63 min.
Time of concentration =   57.99 min.
Critical depth =      0.379(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 83.00
Adjusted SCS curve number for AMC 3 = 95.80
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.083(In/Hr)
Rainfall intensity =      1.434(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.845
Subarea runoff =     37.475(CFS) for   36.850(Ac.)
Total runoff =     85.220(CFS)
Effective area this stream =       70.35(Ac.)
Total Study Area (Main Stream No. 1) =       70.35(Ac.)
Area averaged Fm value =    0.088(In/Hr)
Depth of flow =   0.872(Ft.), Average velocity =   1.888(Ft/s)
Critical depth =      0.445(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       34.400 to Point/Station       34.500
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1885.500(Ft.)
Downstream point elevation =  1881.800(Ft.)
Channel length thru subarea  =  1714.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
```

```
Estimated mean flow rate at midpoint of channel =     97.074(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =     97.074(CFS)
Depth of flow =   0.986(Ft.), Average velocity =   1.895(Ft/s)
Channel flow top width =   53.943(Ft.)
Flow Velocity =    1.89(Ft/s)
Travel time  =   15.07 min.
Time of concentration =   73.07 min.
Critical depth =      0.484(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 81.63
Adjusted SCS curve number for AMC 3 = 94.98
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.098(In/Hr)
Rainfall intensity =      1.220(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.833
Subarea runoff =     23.655(CFS) for   36.880(Ac.)
Total runoff =    108.875(CFS)
Effective area this stream =      107.23(Ac.)
Total Study Area (Main Stream No. 1) =      107.23(Ac.)
Area averaged Fm value =    0.091(In/Hr)
Depth of flow =   1.056(Ft.), Average velocity =   1.979(Ft/s)
Critical depth =      0.523(Ft.)
End of computations, Total Study Area =          107.23 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.969
Area averaged SCS curve number =  82.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 35
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Process from Point/Station 35.000 to Point/Station 35.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 83.33
Adjusted SCS curve number for AMC 3 = 96.00
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.079(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1886.900(Ft.)
Bottom (of initial area) elevation = 1882.600(Ft.)
Difference in elevation = 4.300(Ft.)
Slope = 0.00430 s(%)= 0.43
TC = k(0.548)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 25.848 min.
Rainfall intensity = 2.506(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.872
Subarea runoff = 13.676(CFS)
Total initial stream area = 6.260(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.079(In/Hr)

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Process from Point/Station 35.100 to Point/Station 35.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1882.600(Ft.)
Downstream point elevation = 1880.800(Ft.)

Channel length thru subarea  =   378.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     14.802(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     14.802(CFS)
Depth of flow =   0.252(Ft.), Average velocity =   1.161(Ft/s)
Channel flow top width =   51.010(Ft.)
Flow Velocity =    1.16(Ft/s)
Travel time  =    5.43 min.
Time of concentration =   31.27 min.
Critical depth =      0.139(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.071(In/Hr)
Rainfall intensity =      2.193(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.868
Subarea runoff =      2.171(CFS) for    2.060(Ac.)
Total runoff =     15.847(CFS)
Effective area this stream =        8.32(Ac.)
Total Study Area (Main Stream No. 1) =        8.32(Ac.)
Area averaged Fm value =    0.077(In/Hr)
Depth of flow =   0.263(Ft.), Average velocity =   1.192(Ft/s)
Critical depth =      0.146(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       35.100 to Point/Station       35.200
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =      8.320(Ac.)
Runoff from this stream =     15.847(CFS)
Time of concentration =   31.27 min.
Rainfall intensity =     2.193(In/Hr)
Area averaged loss rate (Fm) =    0.0769(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       35.300 to Point/Station       35.400
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 81.19
Adjusted SCS curve number for AMC 3 = 94.71
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.104(In/Hr)
Initial subarea data:
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1887.000(Ft.)
Bottom (of initial area) elevation =  1881.700(Ft.)
Difference in elevation =     5.300(Ft.)

```
Slope =    0.00530  s(%)=       0.53
TC = k(0.574)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   25.956 min.
Rainfall intensity =      2.499(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.863
Subarea runoff =     21.558(CFS)
Total initial stream area =       10.000(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.104(In/Hr)


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Process from Point/Station       35.400 to Point/Station       35.200
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1881.700(Ft.)
Downstream point elevation =  1880.800(Ft.)
Channel length thru subarea  =   288.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     25.250(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     25.250(CFS)
Depth of flow =   0.394(Ft.), Average velocity =   1.260(Ft/s)
Channel flow top width =   51.578(Ft.)
Flow Velocity =    1.26(Ft/s)
Travel time  =    3.81 min.
Time of concentration =   29.76 min.
Critical depth =      0.199(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 83.13
Adjusted SCS curve number for AMC 3 = 95.88
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.081(In/Hr)
Rainfall intensity =      2.271(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.862
Subarea runoff =      7.285(CFS) for    4.740(Ac.)
Total runoff =     28.843(CFS)
Effective area this stream =       14.74(Ac.)
Total Study Area (Main Stream No. 1) =       23.06(Ac.)
Area averaged Fm value =    0.096(In/Hr)
Depth of flow =   0.427(Ft.), Average velocity =   1.328(Ft/s)
Critical depth =      0.217(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       35.400 to Point/Station       35.200
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     14.740(Ac.)
Runoff from this stream =     28.843(CFS)
Time of concentration =   29.76 min.
Rainfall intensity =     2.271(In/Hr)
Area averaged loss rate (Fm) =    0.0964(In/Hr)
```

```
Area averaged Pervious ratio (Ap) = 1.0000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     15.85     8.320     31.27    0.077      2.193
2     28.84    14.740     29.76    0.096      2.271
Qmax(1) =
           1.000 *    1.000 *    15.847) +
           0.964 *    1.000 *    28.843) + =      43.664
Qmax(2) =
           1.037 *    0.952 *    15.847) +
           1.000 *    1.000 *    28.843) + =      44.476

Total of 2 streams to confluence:
Flow rates before confluence point:
      15.847      28.843
Maximum flow rates at confluence using above data:
       43.664       44.476
Area of streams before confluence:
        8.320       14.740
Effective area values after confluence:
       23.060       22.658
Results of confluence:
Total flow rate =     44.476(CFS)
Time of concentration =    29.765 min.
Effective stream area after confluence =     22.658(Ac.)
Study area average Pervious fraction(Ap) =  1.000
Study area average soil loss rate(Fm) =    0.089(In/Hr)
Study area total (this main stream) =      23.06(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       35.200 to Point/Station       35.500
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1880.800(Ft.)
Downstream point elevation =  1879.800(Ft.)
Channel length thru subarea  =   686.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     48.874(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     48.874(CFS)
Depth of flow =   0.736(Ft.), Average velocity =   1.291(Ft/s)
Channel flow top width =   52.943(Ft.)
Flow Velocity =    1.29(Ft/s)
Travel time  =    8.86 min.
Time of concentration =   38.62 min.
Critical depth =      0.309(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
```

Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.071(In/Hr)
Rainfall intensity = 1.892(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.860
Subarea runoff = 8.741(CFS) for 10.040(Ac.)
Total runoff = 53.217(CFS)
Effective area this stream = 32.70(Ac.)
Total Study Area (Main Stream No. 1) = 33.10(Ac.)
Area averaged Fm value = 0.084(In/Hr)
Depth of flow = 0.774(Ft.), Average velocity = 1.334(Ft/s)
Critical depth = 0.328(Ft.)
End of computations, Total Study Area = 33.10 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 82.9

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 38
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Process from Point/Station 38.000 to Point/Station 38.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.071(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1882.000(Ft.)
Bottom (of initial area) elevation = 1879.100(Ft.)
Difference in elevation = 2.900(Ft.)
Slope = 0.00290 s(%)= 0.29
TC = k(0.541)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 27.566 min.
Rainfall intensity = 2.396(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.873
Subarea runoff = 16.090(CFS)
Total initial stream area = 7.690(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.071(In/Hr)

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Process from Point/Station 38.100 to Point/Station 38.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1879.100(Ft.)
Downstream point elevation = 1877.700(Ft.)

```
Channel length thru subarea  =   276.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     19.895(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     19.895(CFS)
Depth of flow =   0.296(Ft.), Average velocity =   1.330(Ft/s)
Channel flow top width =   51.183(Ft.)
Flow Velocity =    1.33(Ft/s)
Travel time  =    3.46 min.
Time of concentration =   31.03 min.
Critical depth =      0.170(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.071(In/Hr)
Rainfall intensity =      2.206(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.871
Subarea runoff =      7.539(CFS) for    4.610(Ac.)
Total runoff =     23.629(CFS)
Effective area this stream =       12.30(Ac.)
Total Study Area (Main Stream No. 1) =       12.30(Ac.)
Area averaged Fm value =    0.071(In/Hr)
Depth of flow =   0.328(Ft.), Average velocity =   1.423(Ft/s)
Critical depth =      0.191(Ft.)
End of computations, Total Study Area =           12.30 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  84.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 39
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.400 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Process from Point/Station 39.000 to Point/Station 39.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.324(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1903.000(Ft.)
Bottom (of initial area) elevation = 1897.800(Ft.)
Difference in elevation = 5.200(Ft.)
Slope = 0.00520 s(%)= 0.52
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 22.525 min.
Rainfall intensity = 2.780(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.795
Subarea runoff = 5.990(CFS)
Total initial stream area = 2.710(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.324(In/Hr)

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Process from Point/Station 39.100 to Point/Station 39.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1897.800(Ft.)
Downstream point elevation = 1895.200(Ft.)

Channel length thru subarea = 947.000(Ft.)
Channel base width = 50.000(Ft.)
Slope or 'Z' of left channel bank = 2.000
Slope or 'Z' of right channel bank = 2.000
Estimated mean flow rate at midpoint of channel = 8.921(CFS)
Manning's 'N' = 0.035
Maximum depth of channel = 1.000(Ft.)
Flow(q) thru subarea = 8.921(CFS)
Depth of flow = 0.220(Ft.), Average velocity = 0.805(Ft/s)
Channel flow top width = 50.879(Ft.)
Flow Velocity = 0.80(Ft/s)
Travel time = 19.62 min.
Time of concentration = 42.14 min.
Critical depth = 0.100(Ft.)
Adding area flow to channel
Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 66.10
Adjusted SCS curve number for AMC 3 = 83.88
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.272(In/Hr)
Rainfall intensity = 1.793(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area,(total area with modified rational method)(Q=KCIA) is C = 0.755
Subarea runoff = 5.762(CFS) for 5.970(Ac.)
Total runoff = 11.752(CFS)
Effective area this stream = 8.68(Ac.)
Total Study Area (Main Stream No. 1) = 8.68(Ac.)
Area averaged Fm value = 0.288(In/Hr)
Depth of flow = 0.259(Ft.), Average velocity = 0.897(Ft/s)
Critical depth = 0.119(Ft.)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station 39.200 to Point/Station 39.300
**** IMPROVED CHANNEL TRAVEL TIME ****
_____

Upstream point elevation = 1895.200(Ft.)
Downstream point elevation = 1893.000(Ft.)
Channel length thru subarea = 1225.000(Ft.)
Channel base width = 50.000(Ft.)
Slope or 'Z' of left channel bank = 2.000
Slope or 'Z' of right channel bank = 2.000
Estimated mean flow rate at midpoint of channel = 14.890(CFS)
Manning's 'N' = 0.035
Maximum depth of channel = 1.000(Ft.)
Flow(q) thru subarea = 14.890(CFS)
Depth of flow = 0.339(Ft.), Average velocity = 0.866(Ft/s)
Channel flow top width = 51.357(Ft.)
Flow Velocity = 0.87(Ft/s)
Travel time = 23.58 min.
Time of concentration = 65.72 min.
Critical depth = 0.141(Ft.)
Adding area flow to channel
Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.064(In/Hr)
Rainfall intensity = 1.313(In/Hr) for a 100.0 year storm

```
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.780
Subarea runoff =      6.209(CFS) for    8.850(Ac.)
Total runoff =     17.961(CFS)
Effective area this stream =       17.53(Ac.)
Total Study Area (Main Stream No. 1) =       17.53(Ac.)
Area averaged Fm value =    0.175(In/Hr)
Depth of flow =   0.380(Ft.), Average velocity =   0.932(Ft/s)
Critical depth =      0.158(Ft.)


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Process from Point/Station       39.300 to Point/Station       39.400
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1893.000(Ft.)
Downstream point elevation =  1889.200(Ft.)
Channel length thru subarea  =  1060.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     25.112(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     25.112(CFS)
Depth of flow =   0.377(Ft.), Average velocity =   1.311(Ft/s)
Channel flow top width =   51.509(Ft.)
Flow Velocity =    1.31(Ft/s)
Travel time  =   13.47 min.
Time of concentration =   79.20 min.
Critical depth =      0.199(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.064(In/Hr)
Rainfall intensity =      1.153(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.806
Subarea runoff =     14.241(CFS) for   17.120(Ac.)
Total runoff =     32.202(CFS)
Effective area this stream =       34.65(Ac.)
Total Study Area (Main Stream No. 1) =       34.65(Ac.)
Area averaged Fm value =    0.120(In/Hr)
Depth of flow =   0.438(Ft.), Average velocity =   1.445(Ft/s)
Critical depth =      0.234(Ft.)


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Process from Point/Station       39.300 to Point/Station       39.400
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     34.650(Ac.)
Runoff from this stream =     32.202(CFS)
Time of concentration =   79.20 min.
Rainfall intensity =     1.153(In/Hr)
```

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Area averaged loss rate (Fm) =    0.1201(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000
Program is now starting with Main Stream No. 2


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Process from Point/Station       39.500 to Point/Station       39.600
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.064(In/Hr)
Initial subarea data:
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1897.300(Ft.)
Bottom (of initial area) elevation =  1893.300(Ft.)
Difference in elevation =     4.000(Ft.)
Slope =    0.00400  s(%)=       0.40
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   23.739 min.
Rainfall intensity =      2.679(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.879
Subarea runoff =     23.044(CFS)
Total initial stream area =        9.790(Ac.)
Pervious area fraction = 0.900
Initial area Fm value =    0.064(In/Hr)


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Process from Point/Station       39.600 to Point/Station       39.700
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1893.300(Ft.)
Downstream point elevation =  1890.400(Ft.)
Channel length thru subarea  =  1661.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     34.587(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     34.587(CFS)
Depth of flow =   0.567(Ft.), Average velocity =   1.193(Ft/s)
Channel flow top width =   52.267(Ft.)
Flow Velocity =    1.19(Ft/s)
Travel time  =   23.20 min.
Time of concentration =   46.94 min.
Critical depth =      0.246(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.064(In/Hr)
Rainfall intensity =      1.663(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.865
```

```
Subarea runoff =     23.026(CFS) for   22.230(Ac.)
Total runoff =     46.070(CFS)
Effective area this stream =       32.02(Ac.)
Total Study Area (Main Stream No. 2) =       66.67(Ac.)
Area averaged Fm value =    0.064(In/Hr)
Depth of flow =   0.673(Ft.), Average velocity =   1.334(Ft/s)
Critical depth =      0.297(Ft.)


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Process from Point/Station       39.600 to Point/Station       39.700
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 2 in normal stream number 1
Stream flow area =     32.020(Ac.)
Runoff from this stream =     46.070(CFS)
Time of concentration =   46.94 min.
Rainfall intensity =     1.663(In/Hr)
Area averaged loss rate (Fm) =    0.0639(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000


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Process from Point/Station       39.800 to Point/Station       39.900
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.064(In/Hr)
Initial subarea data:
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1893.000(Ft.)
Bottom (of initial area) elevation =  1891.000(Ft.)
Difference in elevation =     2.000(Ft.)
Slope =    0.00200  s(%)=       0.20
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   27.268 min.
Rainfall intensity =      2.431(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.876
Subarea runoff =     21.266(CFS)
Total initial stream area =        9.980(Ac.)
Pervious area fraction = 0.900
Initial area Fm value =    0.064(In/Hr)


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Process from Point/Station       39.900 to Point/Station       39.700
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1891.000(Ft.)
Downstream point elevation =  1890.400(Ft.)
Channel length thru subarea  =   384.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     24.303(CFS)
Manning's 'N'    = 0.035
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```
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     24.303(CFS)
Depth of flow =   0.474(Ft.), Average velocity =   1.005(Ft/s)
Channel flow top width =   51.898(Ft.)
Flow Velocity =    1.01(Ft/s)
Travel time  =    6.37 min.
Time of concentration =   33.63 min.
Critical depth =      0.193(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.064(In/Hr)
Rainfall intensity =      2.099(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.873
Subarea runoff =      5.994(CFS) for    4.900(Ac.)
Total runoff =     27.259(CFS)
Effective area this stream =       14.88(Ac.)
Total Study Area (Main Stream No. 2) =       81.55(Ac.)
Area averaged Fm value =    0.064(In/Hr)
Depth of flow =   0.508(Ft.), Average velocity =   1.052(Ft/s)
Critical depth =      0.209(Ft.)


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Process from Point/Station       39.900 to Point/Station       39.700
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 2 in normal stream number 2
Stream flow area =     14.880(Ac.)
Runoff from this stream =     27.259(CFS)
Time of concentration =   33.63 min.
Rainfall intensity =     2.099(In/Hr)
Area averaged loss rate (Fm) =    0.0639(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     46.07    32.020     46.94    0.064      1.663
2     27.26    14.880     33.63    0.064      2.099
Qmax(1) =
           1.000 *    1.000 *    46.070) +
           0.785 *    1.000 *    27.259) + =      67.479
Qmax(2) =
           1.273 *    0.717 *    46.070) +
           1.000 *    1.000 *    27.259) + =      69.293

Total of 2 streams to confluence:
Flow rates before confluence point:
      46.070      27.259
Maximum flow rates at confluence using above data:
       67.479       69.293
Area of streams before confluence:
       32.020       14.880
```

```
Effective area values after confluence:
       46.900       37.825
Results of confluence:
Total flow rate =     69.293(CFS)
Time of concentration =    33.634 min.
Effective stream area after confluence =     37.825(Ac.)
Study area average Pervious fraction(Ap) =  0.900
Study area average soil loss rate(Fm) =    0.064(In/Hr)
Study area total (this main stream) =      46.90(Ac.)


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Process from Point/Station       39.700 to Point/Station       39.400
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1890.400(Ft.)
Downstream point elevation =  1889.200(Ft.)
Channel length thru subarea  =   638.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     70.522(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     70.522(CFS)
Depth of flow =   0.849(Ft.), Average velocity =   1.607(Ft/s)
Channel flow top width =   53.395(Ft.)
Flow Velocity =    1.61(Ft/s)
Travel time  =    6.62 min.
Time of concentration =   40.25 min.
Critical depth =      0.395(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.064(In/Hr)
Rainfall intensity =      1.851(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.869
Subarea runoff =      2.370(CFS) for    6.720(Ac.)
Total runoff =     71.662(CFS)
Effective area this stream =       44.54(Ac.)
Total Study Area (Main Stream No. 2) =       88.27(Ac.)
Area averaged Fm value =    0.064(In/Hr)
Depth of flow =   0.857(Ft.), Average velocity =   1.617(Ft/s)
Critical depth =      0.398(Ft.)


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Process from Point/Station       39.700 to Point/Station       39.400
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =     44.545(Ac.)
Runoff from this stream =     71.662(CFS)
Time of concentration =   40.25 min.
Rainfall intensity =     1.851(In/Hr)
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```
Area averaged loss rate (Fm) =    0.0639(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     32.20    34.650     79.20    0.120      1.153
2     71.66    44.545     40.25    0.064      1.851
Qmax(1) =
           1.000 *    1.000 *    32.202) +
           0.609 *    1.000 *    71.662) + =      75.855
Qmax(2) =
           1.677 *    0.508 *    32.202) +
           1.000 *    1.000 *    71.662) + =      99.101

Total of 2 main streams to confluence:
Flow rates before confluence point:
      33.202      72.662
Maximum flow rates at confluence using above data:
       75.855       99.101
Area of streams before confluence:
       34.650       44.545
Effective area values after confluence:
       79.195       62.155


Results of confluence:
Total flow rate =     99.101(CFS)
Time of concentration =    40.249 min.
Effective stream area after confluence  =     62.155(Ac.)
Study area average Pervious fraction(Ap) =  0.900
Study area average soil loss rate(Fm) =    0.089(In/Hr)
Study area total =      79.19(Ac.)


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Process from Point/Station       39.400 to Point/Station       39.100
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1889.200(Ft.)
Downstream point elevation =  1887.800(Ft.)
Channel length thru subarea  =   551.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     99.346(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     99.346(CFS)
Depth of flow =   0.952(Ft.), Average velocity =   2.011(Ft/s)
Channel flow top width =   53.808(Ft.)
Flow Velocity =    2.01(Ft/s)
Travel time  =    4.57 min.
Time of concentration =   44.82 min.
Critical depth =      0.492(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
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USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9800     Max loss rate(Fm)=     0.070(In/Hr)
Rainfall intensity =      1.717(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.854
Subarea runoff =      0.416(CFS) for    5.670(Ac.)
Total runoff =     99.517(CFS)
Effective area this stream =       67.82(Ac.)
Total Study Area (Main Stream No. 1) =       93.94(Ac.)
Area averaged Fm value =    0.087(In/Hr)
Depth of flow =   0.953(Ft.), Average velocity =   2.012(Ft/s)
Critical depth =      0.492(Ft.)


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Process from Point/Station       39.400 to Point/Station       39.100
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     67.825(Ac.)
Runoff from this stream =     99.517(CFS)
Time of concentration =   44.82 min.
Rainfall intensity =     1.717(In/Hr)
Area averaged loss rate (Fm) =    0.0869(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9067


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Process from Point/Station       39.110 to Point/Station       39.120
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.064(In/Hr)
Initial subarea data:
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1892.800(Ft.)
Bottom (of initial area) elevation =  1888.200(Ft.)
Difference in elevation =     4.600(Ft.)
Slope =    0.00460  s(%)=       0.46
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   23.084 min.
Rainfall intensity =      2.732(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.879
Subarea runoff =     22.358(CFS)
Total initial stream area =        9.310(Ac.)
Pervious area fraction = 0.900
Initial area Fm value =    0.064(In/Hr)


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Process from Point/Station       39.120 to Point/Station       39.100
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1888.200(Ft.)
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Downstream point elevation =  1887.800(Ft.)
Channel length thru subarea  =   425.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     22.406(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     22.406(CFS)
Depth of flow =   0.526(Ft.), Average velocity =   0.835(Ft/s)
Channel flow top width =   52.104(Ft.)
Flow Velocity =    0.83(Ft/s)
Travel time  =    8.49 min.
Time of concentration =   31.57 min.
Critical depth =      0.184(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.064(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =     22.339(CFS)
therefore the upstream flow rate of Q =     22.358(CFS) is being used
Rainfall intensity =      2.194(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.874
Subarea runoff =      0.000(CFS) for    2.340(Ac.)
Total runoff =     22.358(CFS)
Effective area this stream =       11.65(Ac.)
Total Study Area (Main Stream No. 1) =      105.59(Ac.)
Area averaged Fm value =    0.064(In/Hr)
Depth of flow =   0.525(Ft.), Average velocity =   0.834(Ft/s)
Critical depth =      0.184(Ft.)


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Process from Point/Station       39.120 to Point/Station       39.100
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     11.650(Ac.)
Runoff from this stream =     22.358(CFS)
Time of concentration =   31.57 min.
Rainfall intensity =     2.194(In/Hr)
Area averaged loss rate (Fm) =    0.0639(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     99.52    67.825     44.82    0.087      1.717
2     22.36    11.650     31.57    0.064      2.194
Qmax(1) =
           1.000 *    1.000 *    99.517) +
           0.776 *    1.000 *    22.358) + =     116.867
Qmax(2) =
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          1.293 *    0.704 *    99.517) +
          1.000 *    1.000 *    22.358) + =     112.986

Total of 2 streams to confluence:
Flow rates before confluence point:
      99.517      22.358
Maximum flow rates at confluence using above data:
      116.867      112.986
Area of streams before confluence:
       67.825       11.650
Effective area values after confluence:
       79.475       59.431
Results of confluence:
Total flow rate =    116.867(CFS)
Time of concentration =    44.816 min.
Effective stream area after confluence =     79.475(Ac.)
Study area average Pervious fraction(Ap) =  0.906
Study area average soil loss rate(Fm) =    0.084(In/Hr)
Study area total (this main stream) =      79.47(Ac.)


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Process from Point/Station       39.100 to Point/Station       39.130
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1887.800(Ft.)
Downstream point elevation =  1886.100(Ft.)
Channel length thru subarea  =   845.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    121.736(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    121.736(CFS)
Depth of flow =   1.152(Ft.), Average velocity =   2.020(Ft/s)
Channel flow top width =   54.608(Ft.)
Flow Velocity =    2.02(Ft/s)
Travel time  =    6.97 min.
Time of concentration =   51.79 min.
Critical depth =      0.563(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 83.23
Adjusted SCS curve number for AMC 3 = 95.94
Pervious ratio(Ap) = 0.9800     Max loss rate(Fm)=     0.078(In/Hr)
Rainfall intensity =      1.552(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.852
Subarea runoff =      9.674(CFS) for   16.220(Ac.)
Total runoff =    126.541(CFS)
Effective area this stream =       95.69(Ac.)
Total Study Area (Main Stream No. 1) =      121.81(Ac.)
Area averaged Fm value =    0.083(In/Hr)
Depth of flow =   1.179(Ft.), Average velocity =   2.050(Ft/s)
Critical depth =      0.578(Ft.)
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Process from Point/Station       39.130 to Point/Station       39.140
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1886.100(Ft.)
Downstream point elevation =  1882.000(Ft.)
Channel length thru subarea  =  1834.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    133.668(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    133.668(CFS)
Depth of flow =   1.180(Ft.), Average velocity =   2.163(Ft/s)
Channel flow top width =   54.722(Ft.)
Flow Velocity =    2.16(Ft/s)
Travel time  =   14.13 min.
Time of concentration =   65.92 min.
Critical depth =      0.602(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 83.30
Adjusted SCS curve number for AMC 3 = 95.98
Pervious ratio(Ap) = 0.9800     Max loss rate(Fm)=     0.078(In/Hr)
Rainfall intensity =      1.311(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.844
Subarea runoff =     14.185(CFS) for   31.500(Ac.)
Total runoff =    140.727(CFS)
Effective area this stream =      127.19(Ac.)
Total Study Area (Main Stream No. 1) =      153.31(Ac.)
Area averaged Fm value =    0.081(In/Hr)
Depth of flow =   1.217(Ft.), Average velocity =   2.205(Ft/s)
Critical depth =      0.625(Ft.)


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Process from Point/Station       39.140 to Point/Station       39.150
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1882.000(Ft.)
Downstream point elevation =  1876.100(Ft.)
Channel length thru subarea  =  2287.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    145.104(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    145.104(CFS)
Depth of flow =   1.188(Ft.), Average velocity =   2.332(Ft/s)
Channel flow top width =   54.751(Ft.)
Flow Velocity =    2.33(Ft/s)
Travel time  =   16.34 min.
Time of concentration =   82.26 min.
Critical depth =      0.633(Ft.)
 Adding area flow to channel
```

```
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9800     Max loss rate(Fm)=     0.070(In/Hr)
Rainfall intensity =      1.122(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.837
Subarea runoff =      8.691(CFS) for   31.910(Ac.)
Total runoff =    149.417(CFS)
Effective area this stream =      159.10(Ac.)
Total Study Area (Main Stream No. 1) =      185.22(Ac.)
Area averaged Fm value =    0.079(In/Hr)
Depth of flow =   1.209(Ft.), Average velocity =   2.358(Ft/s)
Critical depth =      0.648(Ft.)


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Process from Point/Station       39.140 to Point/Station       39.150
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =    159.105(Ac.)
Runoff from this stream =    149.417(CFS)
Time of concentration =   82.26 min.
Rainfall intensity =     1.122(In/Hr)
Area averaged loss rate (Fm) =    0.0790(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9429


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Process from Point/Station       39.160 to Point/Station       39.170
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.064(In/Hr)
Initial subarea data:
Initial area flow distance =   680.000(Ft.)
Top (of initial area) elevation =  1888.000(Ft.)
Bottom (of initial area) elevation =  1886.700(Ft.)
Difference in elevation =     1.300(Ft.)
Slope =    0.00191  s(%)=       0.19
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   23.582 min.
Rainfall intensity =      2.692(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.879
Subarea runoff =     23.650(CFS)
Total initial stream area =       10.000(Ac.)
Pervious area fraction = 0.900
Initial area Fm value =    0.064(In/Hr)


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Process from Point/Station       39.170 to Point/Station       39.180
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
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Upstream point elevation =  1886.700(Ft.)
Downstream point elevation =  1882.400(Ft.)
Channel length thru subarea  =  1765.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     48.955(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     48.955(CFS)
Depth of flow =   0.632(Ft.), Average velocity =   1.512(Ft/s)
Channel flow top width =   52.526(Ft.)
Flow Velocity =    1.51(Ft/s)
Travel time  =   19.45 min.
Time of concentration =   43.04 min.
Critical depth =      0.309(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 83.33
Adjusted SCS curve number for AMC 3 = 96.00
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.071(In/Hr)
Rainfall intensity =      1.767(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.865
Subarea runoff =     50.522(CFS) for   38.560(Ac.)
Total runoff =     74.173(CFS)
Effective area this stream =       48.56(Ac.)
Total Study Area (Main Stream No. 1) =      233.78(Ac.)
Area averaged Fm value =    0.069(In/Hr)
Depth of flow =   0.810(Ft.), Average velocity =   1.775(Ft/s)
Critical depth =      0.406(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       39.180 to Point/Station       39.150
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1882.400(Ft.)
Downstream point elevation =  1876.100(Ft.)
Channel length thru subarea  =  2853.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     79.531(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     79.531(CFS)
Depth of flow =   0.869(Ft.), Average velocity =   1.768(Ft/s)
Channel flow top width =   53.477(Ft.)
Flow Velocity =    1.77(Ft/s)
Travel time  =   26.89 min.
Time of concentration =   69.92 min.
Critical depth =      0.426(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
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Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.064(In/Hr)
Rainfall intensity =      1.258(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.852
Subarea runoff =     10.660(CFS) for   30.620(Ac.)
Total runoff =     84.833(CFS)
Effective area this stream =       79.18(Ac.)
Total Study Area (Main Stream No. 1) =      264.40(Ac.)
Area averaged Fm value =    0.067(In/Hr)
Depth of flow =   0.903(Ft.), Average velocity =   1.813(Ft/s)
Critical depth =      0.445(Ft.)


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Process from Point/Station       39.180 to Point/Station       39.150
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     79.180(Ac.)
Runoff from this stream =     84.833(CFS)
Time of concentration =   69.92 min.
Rainfall intensity =     1.258(In/Hr)
Area averaged loss rate (Fm) =    0.0673(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1    149.42   159.105     82.26    0.079      1.122
2     84.83    79.180     69.92    0.067      1.258
Qmax(1) =
           1.000 *    1.000 *   149.417) +
           0.886 *    1.000 *    84.833) + =     224.611
Qmax(2) =
           1.130 *    0.850 *   149.417) +
           1.000 *    1.000 *    84.833) + =     228.298

Total of 2 streams to confluence:
Flow rates before confluence point:
     149.417      84.833
Maximum flow rates at confluence using above data:
      224.611      228.298
Area of streams before confluence:
      159.105       79.180
Effective area values after confluence:
      238.285      214.417
Results of confluence:
Total flow rate =    228.298(CFS)
Time of concentration =    69.924 min.
Effective stream area after confluence =    214.417(Ac.)
Study area average Pervious fraction(Ap) =  0.929
Study area average soil loss rate(Fm) =    0.075(In/Hr)
Study area total (this main stream) =     238.28(Ac.)


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Process from Point/Station       39.150 to Point/Station       39.190
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**** IMPROVED CHANNEL TRAVEL TIME ****

Upstream point elevation = 1876.100(Ft.)
Downstream point elevation = 1869.900(Ft.)
Channel length thru subarea = 2692.000(Ft.)
Channel base width = 50.000(Ft.)
Slope or 'Z' of left channel bank = 2.000
Slope or 'Z' of right channel bank = 2.000
Estimated mean flow rate at midpoint of channel = 228.326(CFS)
Manning's 'N' = 0.035
Maximum depth of channel = 2.000(Ft.)
Flow(q) thru subarea = 228.326(CFS)
Depth of flow = 1.609(Ft.), Average velocity = 2.667(Ft/s)
Channel flow top width = 56.436(Ft.)
Flow Velocity = 2.67(Ft/s)
Travel time = 16.83 min.
Time of concentration = 86.75 min.
Critical depth = 0.859(Ft.)
Adding area flow to channel
Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.071(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q = 206.571(CFS)
therefore the upstream flow rate of Q = 228.298(CFS) is being used
Rainfall intensity = 1.082(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.838
Subarea runoff = 0.000(CFS) for 13.590(Ac.)
Total runoff = 228.298(CFS)
Effective area this stream = 228.01(Ac.)
Total Study Area (Main Stream No. 1) = 277.99(Ac.)
Area averaged Fm value = 0.075(In/Hr)
Depth of flow = 1.609(Ft.), Average velocity = 2.666(Ft/s)
Critical depth = 0.859(Ft.)
End of computations, Total Study Area = 277.99 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.929
Area averaged SCS curve number = 83.2

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 40
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.400 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 40.000 to Point/Station 40.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.071(In/Hr)
Initial subarea data:
Initial area flow distance = 515.000(Ft.)
Top (of initial area) elevation = 1881.400(Ft.)
Bottom (of initial area) elevation = 1876.500(Ft.)
Difference in elevation = 4.900(Ft.)
Slope = 0.00951 s(%)= 0.95
TC = k(0.541)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 16.669 min.
Rainfall intensity = 3.432(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.881
Subarea runoff = 10.284(CFS)
Total initial stream area = 3.400(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.071(In/Hr)
End of computations, Total Study Area = 3.40 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 84.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 41
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 41.000 to Point/Station 41.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.071(In/Hr)
Initial subarea data:
Initial area flow distance = 340.000(Ft.)
Top (of initial area) elevation = 1878.400(Ft.)
Bottom (of initial area) elevation = 1876.300(Ft.)
Difference in elevation = 2.100(Ft.)
Slope = 0.00618 s(%)= 0.62
TC = k(0.541)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 15.392 min.
Rainfall intensity = 3.603(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.882
Subarea runoff = 7.183(CFS)
Total initial stream area = 2.260(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.071(In/Hr)
End of computations, Total Study Area = 2.26 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 84.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

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Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXITING CONDITIONS AREA 42
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 42.000 to Point/Station 42.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.064(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1886.700(Ft.)
Bottom (of initial area) elevation = 1881.500(Ft.)
Difference in elevation = 5.200(Ft.)
Slope = 0.00520 s(%)= 0.52
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 22.525 min.
Rainfall intensity = 2.760(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.879
Subarea runoff = 16.838(CFS)
Total initial stream area = 6.940(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.064(In/Hr)

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Process from Point/Station 42.100 to Point/Station 42.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1881.500(Ft.)
Downstream point elevation = 1877.700(Ft.)

Channel length thru subarea  =  1696.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     28.000(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     28.000(CFS)
Depth of flow =   0.464(Ft.), Average velocity =   1.186(Ft/s)
Channel flow top width =   51.854(Ft.)
Flow Velocity =    1.19(Ft/s)
Travel time  =   23.83 min.
Time of concentration =   46.36 min.
Critical depth =      0.213(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9500     Max loss rate(Fm)=     0.067(In/Hr)
Rainfall intensity =      1.665(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.864
Subarea runoff =     22.266(CFS) for   20.240(Ac.)
Total runoff =     39.103(CFS)
Effective area this stream =       27.18(Ac.)
Total Study Area (Main Stream No. 1) =       27.18(Ac.)
Area averaged Fm value =    0.067(In/Hr)
Depth of flow =   0.566(Ft.), Average velocity =   1.351(Ft/s)
Critical depth =      0.266(Ft.)


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Process from Point/Station       42.200 to Point/Station       42.300
**** IMPROVED CHANNEL TRAVEL TIME ****
_____________________________________________________________________________
Upstream point elevation =  1877.700(Ft.)
Downstream point elevation =  1875.700(Ft.)
Channel length thru subarea  =  1288.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     50.397(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     50.397(CFS)
Depth of flow =   0.735(Ft.), Average velocity =   1.332(Ft/s)
Channel flow top width =   52.941(Ft.)
Flow Velocity =    1.33(Ft/s)
Travel time  =   16.12 min.
Time of concentration =   62.48 min.
Critical depth =      0.316(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.071(In/Hr)
Rainfall intensity =      1.351(In/Hr) for a   100.0 year storm

```
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.854
Subarea runoff =     22.508(CFS) for   26.200(Ac.)
Total runoff =     61.612(CFS)
Effective area this stream =       53.38(Ac.)
Total Study Area (Main Stream No. 1) =       53.38(Ac.)
Area averaged Fm value =    0.069(In/Hr)
Depth of flow =   0.829(Ft.), Average velocity =   1.439(Ft/s)
Critical depth =      0.359(Ft.)


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Process from Point/Station       42.300 to Point/Station       42.400
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1875.700(Ft.)
Downstream point elevation =  1872.800(Ft.)
Channel length thru subarea  =   781.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     65.763(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     65.763(CFS)
Depth of flow =   0.664(Ft.), Average velocity =   1.929(Ft/s)
Channel flow top width =   52.657(Ft.)
Flow Velocity =    1.93(Ft/s)
Travel time  =    6.75 min.
Time of concentration =   69.23 min.
Critical depth =      0.375(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.071(In/Hr)
Rainfall intensity =      1.258(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.851
Subarea runoff =      8.211(CFS) for   11.900(Ac.)
Total runoff =     69.822(CFS)
Effective area this stream =       65.28(Ac.)
Total Study Area (Main Stream No. 1) =       65.28(Ac.)
Area averaged Fm value =    0.069(In/Hr)
Depth of flow =   0.688(Ft.), Average velocity =   1.974(Ft/s)
Critical depth =      0.391(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       42.300 to Point/Station       42.400
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     65.280(Ac.)
Runoff from this stream =     69.822(CFS)
Time of concentration =   69.23 min.
Rainfall intensity =     1.258(In/Hr)
Area averaged loss rate (Fm) =    0.0691(In/Hr)
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Area averaged Pervious ratio (Ap) = 0.9739


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Process from Point/Station       42.500 to Point/Station       42.600
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9500     Max loss rate(Fm)=     0.067(In/Hr)
Initial subarea data:
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1879.900(Ft.)
Bottom (of initial area) elevation =  1876.400(Ft.)
Difference in elevation =     3.500(Ft.)
Slope =    0.00350  s(%)=       0.35
TC = k(0.509)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   24.987 min.
Rainfall intensity =      2.566(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.876
Subarea runoff =     14.057(CFS)
Total initial stream area =        6.250(Ac.)
Pervious area fraction = 0.950
Initial area Fm value =    0.067(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       42.600 to Point/Station       42.400
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1876.400(Ft.)
Downstream point elevation =  1872.800(Ft.)
Channel length thru subarea  =  1421.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     19.586(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     19.586(CFS)
Depth of flow =   0.361(Ft.), Average velocity =   1.070(Ft/s)
Channel flow top width =   51.443(Ft.)
Flow Velocity =    1.07(Ft/s)
Travel time  =   22.13 min.
Time of concentration =   47.11 min.
Critical depth =      0.168(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.071(In/Hr)
Rainfall intensity =      1.646(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.862
Subarea runoff =     10.960(CFS) for   11.380(Ac.)
Total runoff =     25.016(CFS)
```

```
Effective area this stream =       17.63(Ac.)
Total Study Area (Main Stream No. 1) =       82.91(Ac.)
Area averaged Fm value =    0.070(In/Hr)
Depth of flow =   0.418(Ft.), Average velocity =   1.178(Ft/s)
Critical depth =      0.197(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       42.600 to Point/Station       42.400
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     17.630(Ac.)
Runoff from this stream =     25.016(CFS)
Time of concentration =   47.11 min.
Rainfall intensity =     1.646(In/Hr)
Area averaged loss rate (Fm) =    0.0697(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9823
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     69.82    65.280     69.23    0.069      1.258
2     25.02    17.630     47.11    0.070      1.646
Qmax(1) =
           1.000 *    1.000 *    69.822) +
           0.753 *    1.000 *    25.016) + =      88.670
Qmax(2) =
           1.327 *    0.681 *    69.822) +
           1.000 *    1.000 *    25.016) + =      88.080

Total of 2 streams to confluence:
Flow rates before confluence point:
      69.822      25.016
Maximum flow rates at confluence using above data:
       88.670       88.080
Area of streams before confluence:
       65.280       17.630
Effective area values after confluence:
       82.910       62.056
Results of confluence:
Total flow rate =     88.670(CFS)
Time of concentration =    69.226 min.
Effective stream area after confluence =     82.910(Ac.)
Study area average Pervious fraction(Ap) =  0.976
Study area average soil loss rate(Fm) =    0.069(In/Hr)
Study area total (this main stream) =      82.91(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       42.400 to Point/Station       42.700
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1872.800(Ft.)
Downstream point elevation =  1870.500(Ft.)
Channel length thru subarea  =  1035.000(Ft.)
Channel base width      =   50.000(Ft.)
```

```
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     88.815(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     88.815(CFS)
Depth of flow =   0.927(Ft.), Average velocity =   1.848(Ft/s)
Channel flow top width =   53.707(Ft.)
Flow Velocity =    1.85(Ft/s)
Travel time  =    9.33 min.
Time of concentration =   78.56 min.
Critical depth =      0.461(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.071(In/Hr)
Rainfall intensity =      1.151(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.846
Subarea runoff =      0.215(CFS) for    8.400(Ac.)
Total runoff =     88.884(CFS)
Effective area this stream =       91.31(Ac.)
Total Study Area (Main Stream No. 1) =       91.31(Ac.)
Area averaged Fm value =    0.069(In/Hr)
Depth of flow =   0.927(Ft.), Average velocity =   1.849(Ft/s)
Critical depth =      0.461(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       42.400 to Point/Station       42.700
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     91.310(Ac.)
Runoff from this stream =     88.884(CFS)
Time of concentration =   78.56 min.
Rainfall intensity =     1.151(In/Hr)
Area averaged loss rate (Fm) =    0.0694(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9779


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       42.800 to Point/Station       42.900
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.064(In/Hr)
Initial subarea data:
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1879.900(Ft.)
Bottom (of initial area) elevation =  1876.100(Ft.)
Difference in elevation =     3.800(Ft.)
Slope =    0.00380  s(%)=       0.38
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
```

Initial area time of concentration =  23.983 min.
Rainfall intensity =  2.641(In/Hr) for a  100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.878
Subarea runoff =  12.919(CFS)
Total initial stream area =  5.570(Ac.)
Pervious area fraction = 0.900
Initial area Fm value =  0.064(In/Hr)

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Process from Point/Station  42.900 to Point/Station  42.100
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1876.100(Ft.)
Downstream point elevation =  1874.300(Ft.)
Channel length thru subarea  =  859.000(Ft.)
Channel base width  =  50.000(Ft.)
Slope or 'Z' of left channel bank =  2.000
Slope or 'Z' of right channel bank =  2.000
Estimated mean flow rate at midpoint of channel =  19.339(CFS)
Manning's 'N'  = 0.035
Maximum depth of channel  =  1.000(Ft.)
Flow(q) thru subarea =  19.339(CFS)
Depth of flow =  0.379(Ft.), Average velocity =  1.005(Ft/s)
Channel flow top width =  51.516(Ft.)
Flow Velocity =  1.01(Ft/s)
Travel time  =  14.24 min.
Time of concentration =  38.22 min.
Critical depth =  0.166(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000  Max loss rate(Fm)=  0.064(In/Hr)
Rainfall intensity =  1.906(In/Hr) for a  100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.870
Subarea runoff =  12.776(CFS) for  9.930(Ac.)
Total runoff =  25.696(CFS)
Effective area this stream =  15.50(Ac.)
Total Study Area (Main Stream No. 1) =  106.81(Ac.)
Area averaged Fm value =  0.064(In/Hr)
Depth of flow =  0.449(Ft.), Average velocity =  1.124(Ft/s)
Critical depth =  0.201(Ft.)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station  42.100 to Point/Station  42.700
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1874.300(Ft.)
Downstream point elevation =  1870.500(Ft.)
Channel length thru subarea  =  1381.000(Ft.)
Channel base width  =  50.000(Ft.)
Slope or 'Z' of left channel bank =  2.000
Slope or 'Z' of right channel bank =  2.000
Estimated mean flow rate at midpoint of channel =  30.664(CFS)
Manning's 'N'  = 0.035

```
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     30.664(CFS)
Depth of flow =   0.460(Ft.), Average velocity =   1.308(Ft/s)
Channel flow top width =   51.841(Ft.)
Flow Velocity =    1.31(Ft/s)
Travel time  =   17.59 min.
Time of concentration =   55.82 min.
Critical depth =      0.227(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.071(In/Hr)
Rainfall intensity =      1.462(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.859
Subarea runoff =      9.873(CFS) for   12.830(Ac.)
Total runoff =     35.569(CFS)
Effective area this stream =       28.33(Ac.)
Total Study Area (Main Stream No. 1) =      119.64(Ac.)
Area averaged Fm value =    0.067(In/Hr)
Depth of flow =   0.503(Ft.), Average velocity =   1.386(Ft/s)
Critical depth =      0.250(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       42.100 to Point/Station       42.700
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     28.330(Ac.)
Runoff from this stream =     35.569(CFS)
Time of concentration =   55.82 min.
Rainfall intensity =     1.462(In/Hr)
Area averaged loss rate (Fm) =    0.0671(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9453
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     88.88    91.310     78.56    0.069      1.151
2     35.57    28.330     55.82    0.067      1.462
Qmax(1) =
           1.000 *    1.000 *    88.884) +
           0.777 *    1.000 *    35.569) + =     116.521
Qmax(2) =
           1.288 *    0.710 *    88.884) +
           1.000 *    1.000 *    35.569) + =     116.887

Total of 2 streams to confluence:
Flow rates before confluence point:
      88.884      35.569
Maximum flow rates at confluence using above data:
      116.521      116.887
Area of streams before confluence:
       91.310       28.330
```

```
Effective area values after confluence:
      119.640       93.205
Results of confluence:
Total flow rate =    116.887(CFS)
Time of concentration =    55.816 min.
Effective stream area after confluence =     93.205(Ac.)
Study area average Pervious fraction(Ap) =  0.970
Study area average soil loss rate(Fm) =    0.069(In/Hr)
Study area total (this main stream) =     119.64(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       42.700 to Point/Station       42.110
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1870.500(Ft.)
Downstream point elevation =  1869.200(Ft.)
Channel length thru subarea  =   353.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    117.944(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =    117.944(CFS)
Depth of flow =   0.944(Ft.), Average velocity =   2.408(Ft/s)
Channel flow top width =   53.776(Ft.)
Flow Velocity =    2.41(Ft/s)
Travel time  =    2.44 min.
Time of concentration =   58.26 min.
Critical depth =      0.555(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.071(In/Hr)
Rainfall intensity =      1.419(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.856
Subarea runoff =      2.053(CFS) for    4.690(Ac.)
Total runoff =    118.939(CFS)
Effective area this stream =       97.90(Ac.)
Total Study Area (Main Stream No. 1) =      124.33(Ac.)
Area averaged Fm value =    0.069(In/Hr)
Depth of flow =   0.949(Ft.), Average velocity =   2.416(Ft/s)
Critical depth =      0.555(Ft.)
End of computations, Total Study Area =          124.33 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.971
Area averaged SCS curve number =  84.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 43
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Process from Point/Station 43.000 to Point/Station 43.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.071(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1877.800(Ft.)
Bottom (of initial area) elevation = 1872.000(Ft.)
Difference in elevation = 5.800(Ft.)
Slope = 0.00580 s(%)= 0.58
TC = k(0.541)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 23.998 min.
Rainfall intensity = 2.640(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.876
Subarea runoff = 12.300(CFS)
Total initial stream area = 5.320(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.071(In/Hr)

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Process from Point/Station 43.100 to Point/Station 43.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1872.000(Ft.)
Downstream point elevation = 1871.000(Ft.)

```
Channel length thru subarea  =   245.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     13.399(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     13.399(CFS)
Depth of flow =   0.249(Ft.), Average velocity =   1.065(Ft/s)
Channel flow top width =   50.996(Ft.)
Flow Velocity =    1.07(Ft/s)
Travel time  =    3.83 min.
Time of concentration =   27.83 min.
Critical depth =      0.131(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.071(In/Hr)
Rainfall intensity =      2.380(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.873
Subarea runoff =      2.142(CFS) for    1.630(Ac.)
Total runoff =     14.442(CFS)
Effective area this stream =        6.95(Ac.)
Total Study Area (Main Stream No. 1) =        6.95(Ac.)
Area averaged Fm value =    0.071(In/Hr)
Depth of flow =   0.261(Ft.), Average velocity =   1.097(Ft/s)
Critical depth =      0.137(Ft.)
End of computations, Total Study Area =            6.95 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  84.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 44
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 44.000 to Point/Station 44.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.071(In/Hr)
Initial subarea data:
Initial area flow distance = 850.000(Ft.)
Top (of initial area) elevation = 1874.300(Ft.)
Bottom (of initial area) elevation = 1871.200(Ft.)
Difference in elevation = 3.100(Ft.)
Slope = 0.00365 s(%)= 0.36
TC = k(0.541)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 24.674 min.
Rainfall intensity = 2.589(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.875
Subarea runoff = 14.663(CFS)
Total initial stream area = 6.470(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.071(In/Hr)
End of computations, Total Study Area = 6.47 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 84.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 45
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

---

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 45.000 to Point/Station 45.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.071(In/Hr)
Initial subarea data:
Initial area flow distance = 439.000(Ft.)
Top (of initial area) elevation = 1876.300(Ft.)
Bottom (of initial area) elevation = 1872.800(Ft.)
Difference in elevation = 3.500(Ft.)
Slope = 0.00797 s(%)= 0.80
TC = k(0.541)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 16.200 min.
Rainfall intensity = 3.476(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.882
Subarea runoff = 10.694(CFS)
Total initial stream area = 3.490(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.071(In/Hr)
End of computations, Total Study Area = 3.49 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 84.0

# TECHNICAL APPENDIX NO. 4

Existing Conditions
Unit Hydrograph Calculations
100-Year, 24-Hour Storm Event

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 1
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 1.00 | 1 | 1.26 |
| Rainfall data for year 100 | | |
| 1.00 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 1.00 | 24 | 2.50 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 1.00 | 1.000 | 0.360 | 1.000 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 1.00 | 1.000 | 62.0 | 80.6 | 2.41 | 0.368 |

Area-averaged catchment yield fraction, Y = 0.368
Area-averaged low loss fraction, Yb = 0.632
User entry of time of concentration = 0.310 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 1.00(Ac.)
Catchment Lag time = 0.248 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 33.6022
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.632 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.598(In)
Computed peak 30-minute rainfall = 1.023(In)
Specified peak 1-hour rainfall = 1.260(In)
Computed peak 3-hour rainfall = 1.589(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.500(In)

Rainfall depth area reduction factors:
Using a total area of 1.00(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.598(In)
30-minute factor = 1.000 Adjusted rainfall = 1.023(In)
1-hour factor = 1.000 Adjusted rainfall = 1.260(In)
3-hour factor = 1.000 Adjusted rainfall = 1.589(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.500(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 12.09 (CFS)) | |
| 1 | 2.097 | 0.254 |
| 2 | 12.121 | 1.212 |
| 3 | 38.286 | 3.164 |
| 4 | 58.090 | 2.395 |
| 5 | 68.679 | 1.281 |
| 6 | 75.684 | 0.847 |
| 7 | 80.693 | 0.606 |
| 8 | 84.455 | 0.455 |
| 9 | 87.539 | 0.373 |
| 10 | 89.846 | 0.279 |
| 11 | 91.712 | 0.226 |
| 12 | 93.299 | 0.192 |
| 13 | 94.581 | 0.155 |
| 14 | 95.674 | 0.132 |

| | | |
|---|---|---|
| 15 | 96.566 | 0.108 |
| 16 | 97.275 | 0.086 |
| 17 | 97.826 | 0.067 |
| 18 | 98.181 | 0.043 |
| 19 | 98.560 | 0.046 |
| 20 | 98.963 | 0.049 |
| 21 | 99.363 | 0.048 |
| 22 | 99.640 | 0.033 |
| 23 | 99.850 | 0.025 |
| 24 | 100.000 | 0.018 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5979 | 0.5979 |
| 2 | 0.7360 | 0.1382 |
| 3 | 0.8313 | 0.0952 |
| 4 | 0.9062 | 0.0749 |
| 5 | 0.9689 | 0.0627 |
| 6 | 1.0234 | 0.0545 |
| 7 | 1.0718 | 0.0484 |
| 8 | 1.1156 | 0.0438 |
| 9 | 1.1558 | 0.0401 |
| 10 | 1.1929 | 0.0371 |
| 11 | 1.2275 | 0.0346 |
| 12 | 1.2599 | 0.0325 |
| 13 | 1.2814 | 0.0215 |
| 14 | 1.3017 | 0.0202 |
| 15 | 1.3208 | 0.0191 |
| 16 | 1.3389 | 0.0181 |
| 17 | 1.3562 | 0.0173 |
| 18 | 1.3727 | 0.0165 |
| 19 | 1.3885 | 0.0158 |
| 20 | 1.4036 | 0.0151 |
| 21 | 1.4181 | 0.0145 |
| 22 | 1.4322 | 0.0140 |
| 23 | 1.4457 | 0.0135 |
| 24 | 1.4587 | 0.0131 |
| 25 | 1.4714 | 0.0126 |
| 26 | 1.4836 | 0.0122 |
| 27 | 1.4955 | 0.0119 |
| 28 | 1.5071 | 0.0115 |
| 29 | 1.5183 | 0.0112 |
| 30 | 1.5292 | 0.0109 |
| 31 | 1.5398 | 0.0106 |
| 32 | 1.5502 | 0.0104 |
| 33 | 1.5603 | 0.0101 |
| 34 | 1.5702 | 0.0099 |
| 35 | 1.5798 | 0.0097 |
| 36 | 1.5893 | 0.0094 |
| 37 | 1.5985 | 0.0092 |
| 38 | 1.6075 | 0.0090 |
| 39 | 1.6164 | 0.0088 |
| 40 | 1.6251 | 0.0087 |
| 41 | 1.6336 | 0.0085 |
| 42 | 1.6419 | 0.0083 |
| 43 | 1.6501 | 0.0082 |
| 44 | 1.6581 | 0.0080 |
| 45 | 1.6660 | 0.0079 |
| 46 | 1.6738 | 0.0078 |

| | | |
|---|---|---|
| 47 | 1.6814 | 0.0076 |
| 48 | 1.6889 | 0.0075 |
| 49 | 1.6963 | 0.0074 |
| 50 | 1.7035 | 0.0073 |
| 51 | 1.7107 | 0.0071 |
| 52 | 1.7177 | 0.0070 |
| 53 | 1.7246 | 0.0069 |
| 54 | 1.7315 | 0.0068 |
| 55 | 1.7382 | 0.0067 |
| 56 | 1.7448 | 0.0066 |
| 57 | 1.7514 | 0.0065 |
| 58 | 1.7578 | 0.0064 |
| 59 | 1.7642 | 0.0064 |
| 60 | 1.7704 | 0.0063 |
| 61 | 1.7766 | 0.0062 |
| 62 | 1.7828 | 0.0061 |
| 63 | 1.7888 | 0.0060 |
| 64 | 1.7948 | 0.0060 |
| 65 | 1.8006 | 0.0059 |
| 66 | 1.8065 | 0.0058 |
| 67 | 1.8122 | 0.0058 |
| 68 | 1.8179 | 0.0057 |
| 69 | 1.8235 | 0.0056 |
| 70 | 1.8291 | 0.0056 |
| 71 | 1.8346 | 0.0055 |
| 72 | 1.8400 | 0.0054 |
| 73 | 1.8456 | 0.0056 |
| 74 | 1.8512 | 0.0056 |
| 75 | 1.8567 | 0.0055 |
| 76 | 1.8621 | 0.0054 |
| 77 | 1.8675 | 0.0054 |
| 78 | 1.8728 | 0.0053 |
| 79 | 1.8781 | 0.0053 |
| 80 | 1.8834 | 0.0052 |
| 81 | 1.8885 | 0.0052 |
| 82 | 1.8937 | 0.0051 |
| 83 | 1.8988 | 0.0051 |
| 84 | 1.9038 | 0.0050 |
| 85 | 1.9088 | 0.0050 |
| 86 | 1.9137 | 0.0049 |
| 87 | 1.9186 | 0.0049 |
| 88 | 1.9235 | 0.0049 |
| 89 | 1.9283 | 0.0048 |
| 90 | 1.9331 | 0.0048 |
| 91 | 1.9378 | 0.0047 |
| 92 | 1.9425 | 0.0047 |
| 93 | 1.9471 | 0.0046 |
| 94 | 1.9517 | 0.0046 |
| 95 | 1.9563 | 0.0046 |
| 96 | 1.9608 | 0.0045 |
| 97 | 1.9653 | 0.0045 |
| 98 | 1.9698 | 0.0045 |
| 99 | 1.9742 | 0.0044 |
| 100 | 1.9786 | 0.0044 |
| 101 | 1.9830 | 0.0044 |
| 102 | 1.9873 | 0.0043 |
| 103 | 1.9916 | 0.0043 |
| 104 | 1.9959 | 0.0043 |
| 105 | 2.0001 | 0.0042 |

| | | |
|---|---|---|
| 106 | 2.0043 | 0.0042 |
| 107 | 2.0084 | 0.0042 |
| 108 | 2.0126 | 0.0041 |
| 109 | 2.0167 | 0.0041 |
| 110 | 2.0208 | 0.0041 |
| 111 | 2.0248 | 0.0040 |
| 112 | 2.0288 | 0.0040 |
| 113 | 2.0328 | 0.0040 |
| 114 | 2.0368 | 0.0040 |
| 115 | 2.0407 | 0.0039 |
| 116 | 2.0446 | 0.0039 |
| 117 | 2.0485 | 0.0039 |
| 118 | 2.0524 | 0.0039 |
| 119 | 2.0562 | 0.0038 |
| 120 | 2.0600 | 0.0038 |
| 121 | 2.0638 | 0.0038 |
| 122 | 2.0676 | 0.0038 |
| 123 | 2.0713 | 0.0037 |
| 124 | 2.0750 | 0.0037 |
| 125 | 2.0787 | 0.0037 |
| 126 | 2.0824 | 0.0037 |
| 127 | 2.0860 | 0.0036 |
| 128 | 2.0896 | 0.0036 |
| 129 | 2.0932 | 0.0036 |
| 130 | 2.0968 | 0.0036 |
| 131 | 2.1004 | 0.0036 |
| 132 | 2.1039 | 0.0035 |
| 133 | 2.1074 | 0.0035 |
| 134 | 2.1109 | 0.0035 |
| 135 | 2.1144 | 0.0035 |
| 136 | 2.1178 | 0.0035 |
| 137 | 2.1213 | 0.0034 |
| 138 | 2.1247 | 0.0034 |
| 139 | 2.1281 | 0.0034 |
| 140 | 2.1314 | 0.0034 |
| 141 | 2.1348 | 0.0034 |
| 142 | 2.1381 | 0.0033 |
| 143 | 2.1415 | 0.0033 |
| 144 | 2.1448 | 0.0033 |
| 145 | 2.1480 | 0.0033 |
| 146 | 2.1513 | 0.0033 |
| 147 | 2.1546 | 0.0032 |
| 148 | 2.1578 | 0.0032 |
| 149 | 2.1610 | 0.0032 |
| 150 | 2.1642 | 0.0032 |
| 151 | 2.1674 | 0.0032 |
| 152 | 2.1706 | 0.0032 |
| 153 | 2.1737 | 0.0031 |
| 154 | 2.1768 | 0.0031 |
| 155 | 2.1800 | 0.0031 |
| 156 | 2.1831 | 0.0031 |
| 157 | 2.1861 | 0.0031 |
| 158 | 2.1892 | 0.0031 |
| 159 | 2.1923 | 0.0031 |
| 160 | 2.1953 | 0.0030 |
| 161 | 2.1983 | 0.0030 |
| 162 | 2.2013 | 0.0030 |
| 163 | 2.2043 | 0.0030 |
| 164 | 2.2073 | 0.0030 |

| | | |
|---|---|---|
| 165 | 2.2103 | 0.0030 |
| 166 | 2.2133 | 0.0030 |
| 167 | 2.2162 | 0.0029 |
| 168 | 2.2191 | 0.0029 |
| 169 | 2.2220 | 0.0029 |
| 170 | 2.2249 | 0.0029 |
| 171 | 2.2278 | 0.0029 |
| 172 | 2.2307 | 0.0029 |
| 173 | 2.2336 | 0.0029 |
| 174 | 2.2364 | 0.0028 |
| 175 | 2.2392 | 0.0028 |
| 176 | 2.2421 | 0.0028 |
| 177 | 2.2449 | 0.0028 |
| 178 | 2.2477 | 0.0028 |
| 179 | 2.2505 | 0.0028 |
| 180 | 2.2532 | 0.0028 |
| 181 | 2.2560 | 0.0028 |
| 182 | 2.2587 | 0.0028 |
| 183 | 2.2615 | 0.0027 |
| 184 | 2.2642 | 0.0027 |
| 185 | 2.2669 | 0.0027 |
| 186 | 2.2696 | 0.0027 |
| 187 | 2.2723 | 0.0027 |
| 188 | 2.2750 | 0.0027 |
| 189 | 2.2777 | 0.0027 |
| 190 | 2.2803 | 0.0027 |
| 191 | 2.2830 | 0.0026 |
| 192 | 2.2856 | 0.0026 |
| 193 | 2.2882 | 0.0026 |
| 194 | 2.2909 | 0.0026 |
| 195 | 2.2935 | 0.0026 |
| 196 | 2.2961 | 0.0026 |
| 197 | 2.2986 | 0.0026 |
| 198 | 2.3012 | 0.0026 |
| 199 | 2.3038 | 0.0026 |
| 200 | 2.3063 | 0.0026 |
| 201 | 2.3089 | 0.0025 |
| 202 | 2.3114 | 0.0025 |
| 203 | 2.3139 | 0.0025 |
| 204 | 2.3165 | 0.0025 |
| 205 | 2.3190 | 0.0025 |
| 206 | 2.3215 | 0.0025 |
| 207 | 2.3240 | 0.0025 |
| 208 | 2.3264 | 0.0025 |
| 209 | 2.3289 | 0.0025 |
| 210 | 2.3314 | 0.0025 |
| 211 | 2.3338 | 0.0025 |
| 212 | 2.3362 | 0.0024 |
| 213 | 2.3387 | 0.0024 |
| 214 | 2.3411 | 0.0024 |
| 215 | 2.3435 | 0.0024 |
| 216 | 2.3459 | 0.0024 |
| 217 | 2.3483 | 0.0024 |
| 218 | 2.3507 | 0.0024 |
| 219 | 2.3531 | 0.0024 |
| 220 | 2.3555 | 0.0024 |
| 221 | 2.3578 | 0.0024 |
| 222 | 2.3602 | 0.0024 |
| 223 | 2.3625 | 0.0023 |

| | | |
|---|---|---|
| 224 | 2.3649 | 0.0023 |
| 225 | 2.3672 | 0.0023 |
| 226 | 2.3695 | 0.0023 |
| 227 | 2.3718 | 0.0023 |
| 228 | 2.3741 | 0.0023 |
| 229 | 2.3764 | 0.0023 |
| 230 | 2.3787 | 0.0023 |
| 231 | 2.3810 | 0.0023 |
| 232 | 2.3833 | 0.0023 |
| 233 | 2.3856 | 0.0023 |
| 234 | 2.3878 | 0.0023 |
| 235 | 2.3901 | 0.0023 |
| 236 | 2.3923 | 0.0022 |
| 237 | 2.3945 | 0.0022 |
| 238 | 2.3968 | 0.0022 |
| 239 | 2.3990 | 0.0022 |
| 240 | 2.4012 | 0.0022 |
| 241 | 2.4034 | 0.0022 |
| 242 | 2.4056 | 0.0022 |
| 243 | 2.4078 | 0.0022 |
| 244 | 2.4100 | 0.0022 |
| 245 | 2.4122 | 0.0022 |
| 246 | 2.4144 | 0.0022 |
| 247 | 2.4165 | 0.0022 |
| 248 | 2.4187 | 0.0022 |
| 249 | 2.4208 | 0.0022 |
| 250 | 2.4230 | 0.0021 |
| 251 | 2.4251 | 0.0021 |
| 252 | 2.4273 | 0.0021 |
| 253 | 2.4294 | 0.0021 |
| 254 | 2.4315 | 0.0021 |
| 255 | 2.4336 | 0.0021 |
| 256 | 2.4357 | 0.0021 |
| 257 | 2.4378 | 0.0021 |
| 258 | 2.4399 | 0.0021 |
| 259 | 2.4420 | 0.0021 |
| 260 | 2.4441 | 0.0021 |
| 261 | 2.4462 | 0.0021 |
| 262 | 2.4482 | 0.0021 |
| 263 | 2.4503 | 0.0021 |
| 264 | 2.4524 | 0.0021 |
| 265 | 2.4544 | 0.0021 |
| 266 | 2.4565 | 0.0020 |
| 267 | 2.4585 | 0.0020 |
| 268 | 2.4605 | 0.0020 |
| 269 | 2.4626 | 0.0020 |
| 270 | 2.4646 | 0.0020 |
| 271 | 2.4666 | 0.0020 |
| 272 | 2.4686 | 0.0020 |
| 273 | 2.4706 | 0.0020 |
| 274 | 2.4726 | 0.0020 |
| 275 | 2.4746 | 0.0020 |
| 276 | 2.4766 | 0.0020 |
| 277 | 2.4786 | 0.0020 |
| 278 | 2.4805 | 0.0020 |
| 279 | 2.4825 | 0.0020 |
| 280 | 2.4845 | 0.0020 |
| 281 | 2.4864 | 0.0020 |
| 282 | 2.4884 | 0.0020 |

| | | |
|---|---|---|
| 283 | 2.4903 | 0.0019 |
| 284 | 2.4923 | 0.0019 |
| 285 | 2.4942 | 0.0019 |
| 286 | 2.4961 | 0.0019 |
| 287 | 2.4981 | 0.0019 |
| 288 | 2.5000 | 0.0019 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0019 | 0.0012 | 0.0007 |
| 2 | 0.0019 | 0.0012 | 0.0007 |
| 3 | 0.0019 | 0.0012 | 0.0007 |
| 4 | 0.0019 | 0.0012 | 0.0007 |
| 5 | 0.0020 | 0.0012 | 0.0007 |
| 6 | 0.0020 | 0.0012 | 0.0007 |
| 7 | 0.0020 | 0.0012 | 0.0007 |
| 8 | 0.0020 | 0.0012 | 0.0007 |
| 9 | 0.0020 | 0.0013 | 0.0007 |
| 10 | 0.0020 | 0.0013 | 0.0007 |
| 11 | 0.0020 | 0.0013 | 0.0007 |
| 12 | 0.0020 | 0.0013 | 0.0007 |
| 13 | 0.0020 | 0.0013 | 0.0007 |
| 14 | 0.0020 | 0.0013 | 0.0007 |
| 15 | 0.0020 | 0.0013 | 0.0008 |
| 16 | 0.0020 | 0.0013 | 0.0008 |
| 17 | 0.0021 | 0.0013 | 0.0008 |
| 18 | 0.0021 | 0.0013 | 0.0008 |
| 19 | 0.0021 | 0.0013 | 0.0008 |
| 20 | 0.0021 | 0.0013 | 0.0008 |
| 21 | 0.0021 | 0.0013 | 0.0008 |
| 22 | 0.0021 | 0.0013 | 0.0008 |
| 23 | 0.0021 | 0.0013 | 0.0008 |
| 24 | 0.0021 | 0.0013 | 0.0008 |
| 25 | 0.0021 | 0.0013 | 0.0008 |
| 26 | 0.0021 | 0.0014 | 0.0008 |
| 27 | 0.0022 | 0.0014 | 0.0008 |
| 28 | 0.0022 | 0.0014 | 0.0008 |
| 29 | 0.0022 | 0.0014 | 0.0008 |
| 30 | 0.0022 | 0.0014 | 0.0008 |
| 31 | 0.0022 | 0.0014 | 0.0008 |
| 32 | 0.0022 | 0.0014 | 0.0008 |
| 33 | 0.0022 | 0.0014 | 0.0008 |
| 34 | 0.0022 | 0.0014 | 0.0008 |
| 35 | 0.0022 | 0.0014 | 0.0008 |
| 36 | 0.0022 | 0.0014 | 0.0008 |
| 37 | 0.0023 | 0.0014 | 0.0008 |
| 38 | 0.0023 | 0.0014 | 0.0008 |
| 39 | 0.0023 | 0.0014 | 0.0008 |
| 40 | 0.0023 | 0.0014 | 0.0008 |
| 41 | 0.0023 | 0.0015 | 0.0008 |
| 42 | 0.0023 | 0.0015 | 0.0009 |
| 43 | 0.0023 | 0.0015 | 0.0009 |
| 44 | 0.0023 | 0.0015 | 0.0009 |
| 45 | 0.0024 | 0.0015 | 0.0009 |
| 46 | 0.0024 | 0.0015 | 0.0009 |
| 47 | 0.0024 | 0.0015 | 0.0009 |
| 48 | 0.0024 | 0.0015 | 0.0009 |

| | | | |
|---|---|---|---|
| 49 | 0.0024 | 0.0015 | 0.0009 |
| 50 | 0.0024 | 0.0015 | 0.0009 |
| 51 | 0.0024 | 0.0015 | 0.0009 |
| 52 | 0.0024 | 0.0015 | 0.0009 |
| 53 | 0.0025 | 0.0016 | 0.0009 |
| 54 | 0.0025 | 0.0016 | 0.0009 |
| 55 | 0.0025 | 0.0016 | 0.0009 |
| 56 | 0.0025 | 0.0016 | 0.0009 |
| 57 | 0.0025 | 0.0016 | 0.0009 |
| 58 | 0.0025 | 0.0016 | 0.0009 |
| 59 | 0.0025 | 0.0016 | 0.0009 |
| 60 | 0.0026 | 0.0016 | 0.0009 |
| 61 | 0.0026 | 0.0016 | 0.0009 |
| 62 | 0.0026 | 0.0016 | 0.0010 |
| 63 | 0.0026 | 0.0016 | 0.0010 |
| 64 | 0.0026 | 0.0017 | 0.0010 |
| 65 | 0.0026 | 0.0017 | 0.0010 |
| 66 | 0.0026 | 0.0017 | 0.0010 |
| 67 | 0.0027 | 0.0017 | 0.0010 |
| 68 | 0.0027 | 0.0017 | 0.0010 |
| 69 | 0.0027 | 0.0017 | 0.0010 |
| 70 | 0.0027 | 0.0017 | 0.0010 |
| 71 | 0.0027 | 0.0017 | 0.0010 |
| 72 | 0.0028 | 0.0017 | 0.0010 |
| 73 | 0.0028 | 0.0018 | 0.0010 |
| 74 | 0.0028 | 0.0018 | 0.0010 |
| 75 | 0.0028 | 0.0018 | 0.0010 |
| 76 | 0.0028 | 0.0018 | 0.0010 |
| 77 | 0.0028 | 0.0018 | 0.0010 |
| 78 | 0.0029 | 0.0018 | 0.0011 |
| 79 | 0.0029 | 0.0018 | 0.0011 |
| 80 | 0.0029 | 0.0018 | 0.0011 |
| 81 | 0.0029 | 0.0018 | 0.0011 |
| 82 | 0.0029 | 0.0019 | 0.0011 |
| 83 | 0.0030 | 0.0019 | 0.0011 |
| 84 | 0.0030 | 0.0019 | 0.0011 |
| 85 | 0.0030 | 0.0019 | 0.0011 |
| 86 | 0.0030 | 0.0019 | 0.0011 |
| 87 | 0.0031 | 0.0019 | 0.0011 |
| 88 | 0.0031 | 0.0019 | 0.0011 |
| 89 | 0.0031 | 0.0020 | 0.0011 |
| 90 | 0.0031 | 0.0020 | 0.0011 |
| 91 | 0.0031 | 0.0020 | 0.0012 |
| 92 | 0.0032 | 0.0020 | 0.0012 |
| 93 | 0.0032 | 0.0020 | 0.0012 |
| 94 | 0.0032 | 0.0020 | 0.0012 |
| 95 | 0.0032 | 0.0021 | 0.0012 |
| 96 | 0.0033 | 0.0021 | 0.0012 |
| 97 | 0.0033 | 0.0021 | 0.0012 |
| 98 | 0.0033 | 0.0021 | 0.0012 |
| 99 | 0.0034 | 0.0021 | 0.0012 |
| 100 | 0.0034 | 0.0021 | 0.0012 |
| 101 | 0.0034 | 0.0022 | 0.0013 |
| 102 | 0.0034 | 0.0022 | 0.0013 |
| 103 | 0.0035 | 0.0022 | 0.0013 |
| 104 | 0.0035 | 0.0022 | 0.0013 |
| 105 | 0.0035 | 0.0022 | 0.0013 |
| 106 | 0.0036 | 0.0022 | 0.0013 |
| 107 | 0.0036 | 0.0023 | 0.0013 |

| | | | |
|---|---|---|---|
| 108 | 0.0036 | 0.0023 | 0.0013 |
| 109 | 0.0037 | 0.0023 | 0.0014 |
| 110 | 0.0037 | 0.0023 | 0.0014 |
| 111 | 0.0037 | 0.0024 | 0.0014 |
| 112 | 0.0038 | 0.0024 | 0.0014 |
| 113 | 0.0038 | 0.0024 | 0.0014 |
| 114 | 0.0038 | 0.0024 | 0.0014 |
| 115 | 0.0039 | 0.0025 | 0.0014 |
| 116 | 0.0039 | 0.0025 | 0.0014 |
| 117 | 0.0040 | 0.0025 | 0.0015 |
| 118 | 0.0040 | 0.0025 | 0.0015 |
| 119 | 0.0040 | 0.0026 | 0.0015 |
| 120 | 0.0041 | 0.0026 | 0.0015 |
| 121 | 0.0041 | 0.0026 | 0.0015 |
| 122 | 0.0042 | 0.0026 | 0.0015 |
| 123 | 0.0042 | 0.0027 | 0.0016 |
| 124 | 0.0043 | 0.0027 | 0.0016 |
| 125 | 0.0043 | 0.0027 | 0.0016 |
| 126 | 0.0044 | 0.0028 | 0.0016 |
| 127 | 0.0044 | 0.0028 | 0.0016 |
| 128 | 0.0045 | 0.0028 | 0.0016 |
| 129 | 0.0045 | 0.0029 | 0.0017 |
| 130 | 0.0046 | 0.0029 | 0.0017 |
| 131 | 0.0046 | 0.0029 | 0.0017 |
| 132 | 0.0047 | 0.0030 | 0.0017 |
| 133 | 0.0048 | 0.0030 | 0.0018 |
| 134 | 0.0048 | 0.0030 | 0.0018 |
| 135 | 0.0049 | 0.0031 | 0.0018 |
| 136 | 0.0049 | 0.0031 | 0.0018 |
| 137 | 0.0050 | 0.0032 | 0.0019 |
| 138 | 0.0051 | 0.0032 | 0.0019 |
| 139 | 0.0052 | 0.0033 | 0.0019 |
| 140 | 0.0052 | 0.0033 | 0.0019 |
| 141 | 0.0053 | 0.0034 | 0.0020 |
| 142 | 0.0054 | 0.0034 | 0.0020 |
| 143 | 0.0055 | 0.0035 | 0.0020 |
| 144 | 0.0056 | 0.0035 | 0.0020 |
| 145 | 0.0054 | 0.0034 | 0.0020 |
| 146 | 0.0055 | 0.0035 | 0.0020 |
| 147 | 0.0056 | 0.0035 | 0.0021 |
| 148 | 0.0057 | 0.0036 | 0.0021 |
| 149 | 0.0058 | 0.0037 | 0.0021 |
| 150 | 0.0059 | 0.0037 | 0.0022 |
| 151 | 0.0060 | 0.0038 | 0.0022 |
| 152 | 0.0061 | 0.0039 | 0.0023 |
| 153 | 0.0063 | 0.0040 | 0.0023 |
| 154 | 0.0064 | 0.0040 | 0.0023 |
| 155 | 0.0065 | 0.0041 | 0.0024 |
| 156 | 0.0066 | 0.0042 | 0.0024 |
| 157 | 0.0068 | 0.0043 | 0.0025 |
| 158 | 0.0069 | 0.0044 | 0.0026 |
| 159 | 0.0071 | 0.0045 | 0.0026 |
| 160 | 0.0073 | 0.0046 | 0.0027 |
| 161 | 0.0075 | 0.0047 | 0.0028 |
| 162 | 0.0076 | 0.0048 | 0.0028 |
| 163 | 0.0079 | 0.0050 | 0.0029 |
| 164 | 0.0080 | 0.0051 | 0.0030 |
| 165 | 0.0083 | 0.0053 | 0.0031 |
| 166 | 0.0085 | 0.0054 | 0.0031 |

| | | | |
|---|---|---|---|
| 167 | 0.0088 | 0.0056 | 0.0033 |
| 168 | 0.0090 | 0.0057 | 0.0033 |
| 169 | 0.0094 | 0.0060 | 0.0035 |
| 170 | 0.0097 | 0.0061 | 0.0036 |
| 171 | 0.0101 | 0.0064 | 0.0037 |
| 172 | 0.0104 | 0.0065 | 0.0038 |
| 173 | 0.0109 | 0.0069 | 0.0040 |
| 174 | 0.0112 | 0.0071 | 0.0041 |
| 175 | 0.0119 | 0.0075 | 0.0044 |
| 176 | 0.0122 | 0.0077 | 0.0045 |
| 177 | 0.0131 | 0.0083 | 0.0048 |
| 178 | 0.0135 | 0.0085 | 0.0050 |
| 179 | 0.0145 | 0.0092 | 0.0054 |
| 180 | 0.0151 | 0.0096 | 0.0056 |
| 181 | 0.0165 | 0.0104 | 0.0061 |
| 182 | 0.0173 | 0.0109 | 0.0064 |
| 183 | 0.0191 | 0.0121 | 0.0070 |
| 184 | 0.0202 | 0.0128 | 0.0075 |
| 185 | 0.0325 | 0.0205 | 0.0120 |
| 186 | 0.0346 | 0.0219 | 0.0127 |
| 187 | 0.0401 | 0.0253 | 0.0148 |
| 188 | 0.0438 | 0.0277 | 0.0161 |
| 189 | 0.0545 | 0.0300 | 0.0245 |
| 190 | 0.0627 | 0.0300 | 0.0328 |
| 191 | 0.0952 | 0.0300 | 0.0652 |
| 192 | 0.1382 | 0.0300 | 0.1082 |
| 193 | 0.5979 | 0.0300 | 0.5679 |
| 194 | 0.0749 | 0.0300 | 0.0450 |
| 195 | 0.0484 | 0.0300 | 0.0185 |
| 196 | 0.0371 | 0.0234 | 0.0137 |
| 197 | 0.0215 | 0.0136 | 0.0079 |
| 198 | 0.0181 | 0.0115 | 0.0067 |
| 199 | 0.0158 | 0.0100 | 0.0058 |
| 200 | 0.0140 | 0.0089 | 0.0052 |
| 201 | 0.0126 | 0.0080 | 0.0047 |
| 202 | 0.0115 | 0.0073 | 0.0043 |
| 203 | 0.0106 | 0.0067 | 0.0039 |
| 204 | 0.0099 | 0.0062 | 0.0036 |
| 205 | 0.0092 | 0.0058 | 0.0034 |
| 206 | 0.0087 | 0.0055 | 0.0032 |
| 207 | 0.0082 | 0.0052 | 0.0030 |
| 208 | 0.0078 | 0.0049 | 0.0029 |
| 209 | 0.0074 | 0.0047 | 0.0027 |
| 210 | 0.0070 | 0.0044 | 0.0026 |
| 211 | 0.0067 | 0.0042 | 0.0025 |
| 212 | 0.0064 | 0.0041 | 0.0024 |
| 213 | 0.0062 | 0.0039 | 0.0023 |
| 214 | 0.0060 | 0.0038 | 0.0022 |
| 215 | 0.0058 | 0.0036 | 0.0021 |
| 216 | 0.0056 | 0.0035 | 0.0020 |
| 217 | 0.0056 | 0.0036 | 0.0021 |
| 218 | 0.0054 | 0.0034 | 0.0020 |
| 219 | 0.0053 | 0.0033 | 0.0019 |
| 220 | 0.0051 | 0.0032 | 0.0019 |
| 221 | 0.0050 | 0.0032 | 0.0018 |
| 222 | 0.0049 | 0.0031 | 0.0018 |
| 223 | 0.0047 | 0.0030 | 0.0017 |
| 224 | 0.0046 | 0.0029 | 0.0017 |
| 225 | 0.0045 | 0.0028 | 0.0017 |

| | | | |
|---|---|---|---|
| 226 | 0.0044 | 0.0028 | 0.0016 |
| 227 | 0.0043 | 0.0027 | 0.0016 |
| 228 | 0.0042 | 0.0027 | 0.0015 |
| 229 | 0.0041 | 0.0026 | 0.0015 |
| 230 | 0.0040 | 0.0025 | 0.0015 |
| 231 | 0.0039 | 0.0025 | 0.0015 |
| 232 | 0.0039 | 0.0024 | 0.0014 |
| 233 | 0.0038 | 0.0024 | 0.0014 |
| 234 | 0.0037 | 0.0023 | 0.0014 |
| 235 | 0.0036 | 0.0023 | 0.0013 |
| 236 | 0.0036 | 0.0023 | 0.0013 |
| 237 | 0.0035 | 0.0022 | 0.0013 |
| 238 | 0.0035 | 0.0022 | 0.0013 |
| 239 | 0.0034 | 0.0021 | 0.0013 |
| 240 | 0.0033 | 0.0021 | 0.0012 |
| 241 | 0.0033 | 0.0021 | 0.0012 |
| 242 | 0.0032 | 0.0020 | 0.0012 |
| 243 | 0.0032 | 0.0020 | 0.0012 |
| 244 | 0.0031 | 0.0020 | 0.0012 |
| 245 | 0.0031 | 0.0019 | 0.0011 |
| 246 | 0.0030 | 0.0019 | 0.0011 |
| 247 | 0.0030 | 0.0019 | 0.0011 |
| 248 | 0.0030 | 0.0019 | 0.0011 |
| 249 | 0.0029 | 0.0018 | 0.0011 |
| 250 | 0.0029 | 0.0018 | 0.0011 |
| 251 | 0.0028 | 0.0018 | 0.0010 |
| 252 | 0.0028 | 0.0018 | 0.0010 |
| 253 | 0.0028 | 0.0017 | 0.0010 |
| 254 | 0.0027 | 0.0017 | 0.0010 |
| 255 | 0.0027 | 0.0017 | 0.0010 |
| 256 | 0.0027 | 0.0017 | 0.0010 |
| 257 | 0.0026 | 0.0017 | 0.0010 |
| 258 | 0.0026 | 0.0016 | 0.0010 |
| 259 | 0.0026 | 0.0016 | 0.0009 |
| 260 | 0.0025 | 0.0016 | 0.0009 |
| 261 | 0.0025 | 0.0016 | 0.0009 |
| 262 | 0.0025 | 0.0016 | 0.0009 |
| 263 | 0.0025 | 0.0015 | 0.0009 |
| 264 | 0.0024 | 0.0015 | 0.0009 |
| 265 | 0.0024 | 0.0015 | 0.0009 |
| 266 | 0.0024 | 0.0015 | 0.0009 |
| 267 | 0.0023 | 0.0015 | 0.0009 |
| 268 | 0.0023 | 0.0015 | 0.0009 |
| 269 | 0.0023 | 0.0015 | 0.0008 |
| 270 | 0.0023 | 0.0014 | 0.0008 |
| 271 | 0.0023 | 0.0014 | 0.0008 |
| 272 | 0.0022 | 0.0014 | 0.0008 |
| 273 | 0.0022 | 0.0014 | 0.0008 |
| 274 | 0.0022 | 0.0014 | 0.0008 |
| 275 | 0.0022 | 0.0014 | 0.0008 |
| 276 | 0.0021 | 0.0014 | 0.0008 |
| 277 | 0.0021 | 0.0013 | 0.0008 |
| 278 | 0.0021 | 0.0013 | 0.0008 |
| 279 | 0.0021 | 0.0013 | 0.0008 |
| 280 | 0.0021 | 0.0013 | 0.0008 |
| 281 | 0.0021 | 0.0013 | 0.0008 |
| 282 | 0.0020 | 0.0013 | 0.0007 |
| 283 | 0.0020 | 0.0013 | 0.0007 |
| 284 | 0.0020 | 0.0013 | 0.0007 |

| | | | |
|---|---|---|---|
| 285 | 0.0020 | 0.0013 | 0.0007 |
| 286 | 0.0020 | 0.0012 | 0.0007 |
| 287 | 0.0019 | 0.0012 | 0.0007 |
| 288 | 0.0019 | 0.0012 | 0.0007 |

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Total soil rain loss = 1.11(In)
Total effective rainfall = 1.39(In)
Peak flow rate in flood hydrograph = 2.27(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 2.5 | 5.0 | 7.5 | 10.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0000 | 0.00 | Q | | | | |
| 0+15 | 0.0000 | 0.00 | Q | | | | |
| 0+20 | 0.0001 | 0.00 | Q | | | | |
| 0+25 | 0.0001 | 0.01 | Q | | | | |
| 0+30 | 0.0002 | 0.01 | Q | | | | |
| 0+35 | 0.0002 | 0.01 | Q | | | | |
| 0+40 | 0.0002 | 0.01 | Q | | | | |
| 0+45 | 0.0003 | 0.01 | Q | | | | |
| 0+50 | 0.0004 | 0.01 | Q | | | | |
| 0+55 | 0.0004 | 0.01 | Q | | | | |
| 1+ 0 | 0.0005 | 0.01 | Q | | | | |
| 1+ 5 | 0.0005 | 0.01 | Q | | | | |
| 1+10 | 0.0006 | 0.01 | Q | | | | |
| 1+15 | 0.0006 | 0.01 | Q | | | | |
| 1+20 | 0.0007 | 0.01 | Q | | | | |
| 1+25 | 0.0008 | 0.01 | Q | | | | |
| 1+30 | 0.0008 | 0.01 | Q | | | | |
| 1+35 | 0.0009 | 0.01 | Q | | | | |
| 1+40 | 0.0009 | 0.01 | Q | | | | |
| 1+45 | 0.0010 | 0.01 | Q | | | | |
| 1+50 | 0.0011 | 0.01 | Q | | | | |
| 1+55 | 0.0011 | 0.01 | Q | | | | |
| 2+ 0 | 0.0012 | 0.01 | Q | | | | |
| 2+ 5 | 0.0013 | 0.01 | Q | | | | |
| 2+10 | 0.0013 | 0.01 | Q | | | | |
| 2+15 | 0.0014 | 0.01 | Q | | | | |
| 2+20 | 0.0015 | 0.01 | Q | | | | |
| 2+25 | 0.0015 | 0.01 | Q | | | | |
| 2+30 | 0.0016 | 0.01 | Q | | | | |
| 2+35 | 0.0017 | 0.01 | Q | | | | |
| 2+40 | 0.0017 | 0.01 | Q | | | | |
| 2+45 | 0.0018 | 0.01 | Q | | | | |
| 2+50 | 0.0019 | 0.01 | Q | | | | |
| 2+55 | 0.0019 | 0.01 | Q | | | | |
| 3+ 0 | 0.0020 | 0.01 | Q | | | | |
| 3+ 5 | 0.0021 | 0.01 | Q | | | | |
| 3+10 | 0.0021 | 0.01 | Q | | | | |
| 3+15 | 0.0022 | 0.01 | Q | | | | |
| 3+20 | 0.0023 | 0.01 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+25 | 0.0023 | 0.01 | Q | | | | |
| 3+30 | 0.0024 | 0.01 | Q | | | | |
| 3+35 | 0.0025 | 0.01 | Q | | | | |
| 3+40 | 0.0025 | 0.01 | Q | | | | |
| 3+45 | 0.0026 | 0.01 | Q | | | | |
| 3+50 | 0.0027 | 0.01 | Q | | | | |
| 3+55 | 0.0028 | 0.01 | Q | | | | |
| 4+ 0 | 0.0028 | 0.01 | Q | | | | |
| 4+ 5 | 0.0029 | 0.01 | QV | | | | |
| 4+10 | 0.0030 | 0.01 | QV | | | | |
| 4+15 | 0.0030 | 0.01 | QV | | | | |
| 4+20 | 0.0031 | 0.01 | QV | | | | |
| 4+25 | 0.0032 | 0.01 | QV | | | | |
| 4+30 | 0.0033 | 0.01 | QV | | | | |
| 4+35 | 0.0033 | 0.01 | QV | | | | |
| 4+40 | 0.0034 | 0.01 | QV | | | | |
| 4+45 | 0.0035 | 0.01 | QV | | | | |
| 4+50 | 0.0036 | 0.01 | QV | | | | |
| 4+55 | 0.0036 | 0.01 | QV | | | | |
| 5+ 0 | 0.0037 | 0.01 | QV | | | | |
| 5+ 5 | 0.0038 | 0.01 | QV | | | | |
| 5+10 | 0.0039 | 0.01 | QV | | | | |
| 5+15 | 0.0040 | 0.01 | QV | | | | |
| 5+20 | 0.0040 | 0.01 | QV | | | | |
| 5+25 | 0.0041 | 0.01 | QV | | | | |
| 5+30 | 0.0042 | 0.01 | QV | | | | |
| 5+35 | 0.0043 | 0.01 | QV | | | | |
| 5+40 | 0.0043 | 0.01 | QV | | | | |
| 5+45 | 0.0044 | 0.01 | QV | | | | |
| 5+50 | 0.0045 | 0.01 | QV | | | | |
| 5+55 | 0.0046 | 0.01 | QV | | | | |
| 6+ 0 | 0.0047 | 0.01 | QV | | | | |
| 6+ 5 | 0.0048 | 0.01 | QV | | | | |
| 6+10 | 0.0048 | 0.01 | QV | | | | |
| 6+15 | 0.0049 | 0.01 | QV | | | | |
| 6+20 | 0.0050 | 0.01 | QV | | | | |
| 6+25 | 0.0051 | 0.01 | QV | | | | |
| 6+30 | 0.0052 | 0.01 | QV | | | | |
| 6+35 | 0.0053 | 0.01 | QV | | | | |
| 6+40 | 0.0053 | 0.01 | QV | | | | |
| 6+45 | 0.0054 | 0.01 | QV | | | | |
| 6+50 | 0.0055 | 0.01 | QV | | | | |
| 6+55 | 0.0056 | 0.01 | QV | | | | |
| 7+ 0 | 0.0057 | 0.01 | QV | | | | |
| 7+ 5 | 0.0058 | 0.01 | Q V | | | | |
| 7+10 | 0.0059 | 0.01 | Q V | | | | |
| 7+15 | 0.0060 | 0.01 | Q V | | | | |
| 7+20 | 0.0061 | 0.01 | Q V | | | | |
| 7+25 | 0.0062 | 0.01 | Q V | | | | |
| 7+30 | 0.0062 | 0.01 | Q V | | | | |
| 7+35 | 0.0063 | 0.01 | Q V | | | | |
| 7+40 | 0.0064 | 0.01 | Q V | | | | |
| 7+45 | 0.0065 | 0.01 | Q V | | | | |
| 7+50 | 0.0066 | 0.01 | Q V | | | | |
| 7+55 | 0.0067 | 0.01 | Q V | | | | |
| 8+ 0 | 0.0068 | 0.01 | Q V | | | | |
| 8+ 5 | 0.0069 | 0.01 | Q V | | | | |
| 8+10 | 0.0070 | 0.01 | Q V | | | | |
| 8+15 | 0.0071 | 0.01 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8+20 | 0.0072 | 0.01 | Q V | \| | \| | \| | \| |
| 8+25 | 0.0073 | 0.01 | Q V | \| | \| | \| | \| |
| 8+30 | 0.0074 | 0.01 | Q V | \| | \| | \| | \| |
| 8+35 | 0.0075 | 0.01 | Q V | \| | \| | \| | \| |
| 8+40 | 0.0076 | 0.02 | Q V | \| | \| | \| | \| |
| 8+45 | 0.0077 | 0.02 | Q V | \| | \| | \| | \| |
| 8+50 | 0.0078 | 0.02 | Q V | \| | \| | \| | \| |
| 8+55 | 0.0079 | 0.02 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.0080 | 0.02 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.0082 | 0.02 | Q V | \| | \| | \| | \| |
| 9+10 | 0.0083 | 0.02 | Q V | \| | \| | \| | \| |
| 9+15 | 0.0084 | 0.02 | Q V | \| | \| | \| | \| |
| 9+20 | 0.0085 | 0.02 | Q V | \| | \| | \| | \| |
| 9+25 | 0.0086 | 0.02 | Q V | \| | \| | \| | \| |
| 9+30 | 0.0087 | 0.02 | Q V | \| | \| | \| | \| |
| 9+35 | 0.0088 | 0.02 | Q V | \| | \| | \| | \| |
| 9+40 | 0.0089 | 0.02 | Q V | \| | \| | \| | \| |
| 9+45 | 0.0091 | 0.02 | Q V | \| | \| | \| | \| |
| 9+50 | 0.0092 | 0.02 | Q V | \| | \| | \| | \| |
| 9+55 | 0.0093 | 0.02 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.0094 | 0.02 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.0095 | 0.02 | Q V | \| | \| | \| | \| |
| 10+10 | 0.0097 | 0.02 | Q V | \| | \| | \| | \| |
| 10+15 | 0.0098 | 0.02 | Q V | \| | \| | \| | \| |
| 10+20 | 0.0099 | 0.02 | Q V | \| | \| | \| | \| |
| 10+25 | 0.0100 | 0.02 | Q V | \| | \| | \| | \| |
| 10+30 | 0.0102 | 0.02 | Q V | \| | \| | \| | \| |
| 10+35 | 0.0103 | 0.02 | Q V | \| | \| | \| | \| |
| 10+40 | 0.0104 | 0.02 | Q V | \| | \| | \| | \| |
| 10+45 | 0.0105 | 0.02 | Q V | \| | \| | \| | \| |
| 10+50 | 0.0107 | 0.02 | Q V | \| | \| | \| | \| |
| 10+55 | 0.0108 | 0.02 | Q V | \| | \| | \| | \| |
| 11+ 0 | 0.0110 | 0.02 | Q V | \| | \| | \| | \| |
| 11+ 5 | 0.0111 | 0.02 | Q V | \| | \| | \| | \| |
| 11+10 | 0.0112 | 0.02 | Q V | \| | \| | \| | \| |
| 11+15 | 0.0114 | 0.02 | Q V | \| | \| | \| | \| |
| 11+20 | 0.0115 | 0.02 | Q V | \| | \| | \| | \| |
| 11+25 | 0.0117 | 0.02 | Q V | \| | \| | \| | \| |
| 11+30 | 0.0118 | 0.02 | Q V | \| | \| | \| | \| |
| 11+35 | 0.0120 | 0.02 | Q V | \| | \| | \| | \| |
| 11+40 | 0.0121 | 0.02 | Q V | \| | \| | \| | \| |
| 11+45 | 0.0123 | 0.02 | Q V | \| | \| | \| | \| |
| 11+50 | 0.0124 | 0.02 | Q V | \| | \| | \| | \| |
| 11+55 | 0.0126 | 0.02 | Q V | \| | \| | \| | \| |
| 12+ 0 | 0.0127 | 0.02 | Q V | \| | \| | \| | \| |
| 12+ 5 | 0.0129 | 0.02 | Q V | \| | \| | \| | \| |
| 12+10 | 0.0131 | 0.02 | Q V | \| | \| | \| | \| |
| 12+15 | 0.0132 | 0.02 | Q V | \| | \| | \| | \| |
| 12+20 | 0.0134 | 0.02 | Q V | \| | \| | \| | \| |
| 12+25 | 0.0136 | 0.02 | Q V | \| | \| | \| | \| |
| 12+30 | 0.0137 | 0.02 | Q V | \| | \| | \| | \| |
| 12+35 | 0.0139 | 0.03 | Q V | \| | \| | \| | \| |
| 12+40 | 0.0141 | 0.03 | Q V | \| | \| | \| | \| |
| 12+45 | 0.0143 | 0.03 | Q V | \| | \| | \| | \| |
| 12+50 | 0.0144 | 0.03 | Q V | \| | \| | \| | \| |
| 12+55 | 0.0146 | 0.03 | Q V | \| | \| | \| | \| |
| 13+ 0 | 0.0148 | 0.03 | Q V | \| | \| | \| | \| |
| 13+ 5 | 0.0150 | 0.03 | Q V | \| | \| | \| | \| |
| 13+10 | 0.0152 | 0.03 | Q V | \| | \| | \| | \| |

```
13+15       0.0154      0.03  Q    V    |          |          |          |
13+20       0.0156      0.03  Q    V    |          |          |          |
13+25       0.0158      0.03  Q    V    |          |          |          |
13+30       0.0160      0.03  Q    V    |          |          |          |
13+35       0.0162      0.03  Q    V    |          |          |          |
13+40       0.0165      0.03  Q    V    |          |          |          |
13+45       0.0167      0.03  Q    V    |          |          |          |
13+50       0.0169      0.03  Q    V    |          |          |          |
13+55       0.0172      0.03  Q    V    |          |          |          |
14+ 0       0.0174      0.04  Q     V   |          |          |          |
14+ 5       0.0177      0.04  Q     V   |          |          |          |
14+10       0.0179      0.04  Q     V   |          |          |          |
14+15       0.0182      0.04  Q     V   |          |          |          |
14+20       0.0185      0.04  Q     V   |          |          |          |
14+25       0.0188      0.04  Q     V   |          |          |          |
14+30       0.0191      0.04  Q     V   |          |          |          |
14+35       0.0194      0.04  Q     V   |          |          |          |
14+40       0.0197      0.05  Q     V   |          |          |          |
14+45       0.0200      0.05  Q     V   |          |          |          |
14+50       0.0204      0.05  Q      V  |          |          |          |
14+55       0.0208      0.05  Q      V  |          |          |          |
15+ 0       0.0211      0.06  Q      V  |          |          |          |
15+ 5       0.0215      0.06  Q      V  |          |          |          |
15+10       0.0220      0.06  Q      V  |          |          |          |
15+15       0.0224      0.07  Q      V  |          |          |          |
15+20       0.0229      0.07  Q      V  |          |          |          |
15+25       0.0234      0.08  Q       V |          |          |          |
15+30       0.0240      0.09  Q       V |          |          |          |
15+35       0.0247      0.10  Q       V |          |          |          |
15+40       0.0255      0.12  Q       V |          |          |          |
15+45       0.0265      0.14  Q        V|          |          |          |
15+50       0.0277      0.17  Q        V|          |          |          |
15+55       0.0292      0.22  Q         V          |          |          |
16+ 0       0.0315      0.33  |Q        V          |          |          |
16+ 5       0.0358      0.63  | Q       | V        |          |          |
16+10       0.0447      1.29  |    Q    |    V     |          |          |
16+15       0.0603      2.27  |        Q|          V          |          |
16+20       0.0726      1.77  |      Q  |          |    V     |          |
16+25       0.0800      1.08  |   Q     |          |      V   |          |
16+30       0.0853      0.77  |  Q      |          |        V |          |
16+35       0.0892      0.57  | Q       |          |         V          |
16+40       0.0923      0.45  |Q        |          |         |V         |
16+45       0.0949      0.37  |Q        |          |         | V        |
16+50       0.0969      0.30  |Q        |          |         |  V       |
16+55       0.0986      0.25  Q         |          |         |   V      |
17+ 0       0.1001      0.21  Q         |          |         |   V      |
17+ 5       0.1013      0.18  Q         |          |         |    V     |
17+10       0.1024      0.16  Q         |          |         |    V     |
17+15       0.1033      0.13  Q         |          |         |    V     |
17+20       0.1041      0.11  Q         |          |         |     V    |
17+25       0.1048      0.10  Q         |          |         |     V    |
17+30       0.1053      0.08  Q         |          |         |     V    |
17+35       0.1059      0.08  Q         |          |         |     V    |
17+40       0.1064      0.08  Q         |          |         |     V    |
17+45       0.1069      0.07  Q         |          |         |     V    |
17+50       0.1073      0.06  Q         |          |         |      V   |
17+55       0.1076      0.05  Q         |          |         |      V   |
18+ 0       0.1079      0.04  Q         |          |         |      V   |
18+ 5       0.1081      0.03  Q         |          |         |      V   |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18+10 | 0.1083 | 0.03 | Q | \| | \| | \| | V \| |
| 18+15 | 0.1085 | 0.03 | Q | \| | \| | \| | V \| |
| 18+20 | 0.1087 | 0.03 | Q | \| | \| | \| | V \| |
| 18+25 | 0.1089 | 0.03 | Q | \| | \| | \| | V \| |
| 18+30 | 0.1091 | 0.02 | Q | \| | \| | \| | V \| |
| 18+35 | 0.1092 | 0.02 | Q | \| | \| | \| | V \| |
| 18+40 | 0.1094 | 0.02 | Q | \| | \| | \| | V \| |
| 18+45 | 0.1095 | 0.02 | Q | \| | \| | \| | V \| |
| 18+50 | 0.1097 | 0.02 | Q | \| | \| | \| | V \| |
| 18+55 | 0.1098 | 0.02 | Q | \| | \| | \| | V \| |
| 19+ 0 | 0.1100 | 0.02 | Q | \| | \| | \| | V \| |
| 19+ 5 | 0.1101 | 0.02 | Q | \| | \| | \| | V \| |
| 19+10 | 0.1103 | 0.02 | Q | \| | \| | \| | V \| |
| 19+15 | 0.1104 | 0.02 | Q | \| | \| | \| | V \| |
| 19+20 | 0.1105 | 0.02 | Q | \| | \| | \| | V \| |
| 19+25 | 0.1107 | 0.02 | Q | \| | \| | \| | V \| |
| 19+30 | 0.1108 | 0.02 | Q | \| | \| | \| | V \| |
| 19+35 | 0.1109 | 0.02 | Q | \| | \| | \| | V \| |
| 19+40 | 0.1110 | 0.02 | Q | \| | \| | \| | V \| |
| 19+45 | 0.1111 | 0.02 | Q | \| | \| | \| | V \| |
| 19+50 | 0.1113 | 0.02 | Q | \| | \| | \| | V \| |
| 19+55 | 0.1114 | 0.02 | Q | \| | \| | \| | V \| |
| 20+ 0 | 0.1115 | 0.02 | Q | \| | \| | \| | V \| |
| 20+ 5 | 0.1116 | 0.02 | Q | \| | \| | \| | V \| |
| 20+10 | 0.1117 | 0.02 | Q | \| | \| | \| | V \| |
| 20+15 | 0.1118 | 0.02 | Q | \| | \| | \| | V \| |
| 20+20 | 0.1119 | 0.02 | Q | \| | \| | \| | V \| |
| 20+25 | 0.1120 | 0.01 | Q | \| | \| | \| | V \| |
| 20+30 | 0.1121 | 0.01 | Q | \| | \| | \| | V \| |
| 20+35 | 0.1122 | 0.01 | Q | \| | \| | \| | V \| |
| 20+40 | 0.1123 | 0.01 | Q | \| | \| | \| | V \| |
| 20+45 | 0.1124 | 0.01 | Q | \| | \| | \| | V \| |
| 20+50 | 0.1125 | 0.01 | Q | \| | \| | \| | V \| |
| 20+55 | 0.1126 | 0.01 | Q | \| | \| | \| | V \| |
| 21+ 0 | 0.1127 | 0.01 | Q | \| | \| | \| | V \| |
| 21+ 5 | 0.1128 | 0.01 | Q | \| | \| | \| | V\| |
| 21+10 | 0.1129 | 0.01 | Q | \| | \| | \| | V\| |
| 21+15 | 0.1130 | 0.01 | Q | \| | \| | \| | V\| |
| 21+20 | 0.1130 | 0.01 | Q | \| | \| | \| | V\| |
| 21+25 | 0.1131 | 0.01 | Q | \| | \| | \| | V\| |
| 21+30 | 0.1132 | 0.01 | Q | \| | \| | \| | V\| |
| 21+35 | 0.1133 | 0.01 | Q | \| | \| | \| | V\| |
| 21+40 | 0.1134 | 0.01 | Q | \| | \| | \| | V\| |
| 21+45 | 0.1135 | 0.01 | Q | \| | \| | \| | V\| |
| 21+50 | 0.1135 | 0.01 | Q | \| | \| | \| | V\| |
| 21+55 | 0.1136 | 0.01 | Q | \| | \| | \| | V\| |
| 22+ 0 | 0.1137 | 0.01 | Q | \| | \| | \| | V\| |
| 22+ 5 | 0.1138 | 0.01 | Q | \| | \| | \| | V\| |
| 22+10 | 0.1138 | 0.01 | Q | \| | \| | \| | V\| |
| 22+15 | 0.1139 | 0.01 | Q | \| | \| | \| | V\| |
| 22+20 | 0.1140 | 0.01 | Q | \| | \| | \| | V\| |
| 22+25 | 0.1141 | 0.01 | Q | \| | \| | \| | V\| |
| 22+30 | 0.1141 | 0.01 | Q | \| | \| | \| | V\| |
| 22+35 | 0.1142 | 0.01 | Q | \| | \| | \| | V\| |
| 22+40 | 0.1143 | 0.01 | Q | \| | \| | \| | V\| |
| 22+45 | 0.1144 | 0.01 | Q | \| | \| | \| | V\| |
| 22+50 | 0.1144 | 0.01 | Q | \| | \| | \| | V\| |
| 22+55 | 0.1145 | 0.01 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.1146 | 0.01 | Q | \| | \| | \| | V\| |

```
   23+ 5       0.1146      0.01  Q        |          |         |        V|
   23+10       0.1147      0.01  Q        |          |         |        V|
   23+15       0.1148      0.01  Q        |          |         |        V|
   23+20       0.1148      0.01  Q        |          |         |        V|
   23+25       0.1149      0.01  Q        |          |         |        V|
   23+30       0.1150      0.01  Q        |          |         |        V|
   23+35       0.1150      0.01  Q        |          |         |        V|
   23+40       0.1151      0.01  Q        |          |         |        V|
   23+45       0.1152      0.01  Q        |          |         |        V|
   23+50       0.1152      0.01  Q        |          |         |        V|
   23+55       0.1153      0.01  Q        |          |         |        V|
   24+ 0       0.1153      0.01  Q        |          |         |        V|
   24+ 5       0.1154      0.01  Q        |          |         |        V|
   24+10       0.1155      0.01  Q        |          |         |        V|
   24+15       0.1155      0.01  Q        |          |         |        V|
   24+20       0.1155      0.00  Q        |          |         |        V|
   24+25       0.1155      0.00  Q        |          |         |        V|
   24+30       0.1156      0.00  Q        |          |         |        V|
   24+35       0.1156      0.00  Q        |          |         |        V|
   24+40       0.1156      0.00  Q        |          |         |        V|
   24+45       0.1156      0.00  Q        |          |         |        V|
   24+50       0.1156      0.00  Q        |          |         |        V|
   24+55       0.1156      0.00  Q        |          |         |        V|
   25+ 0       0.1156      0.00  Q        |          |         |        V|
   25+ 5       0.1156      0.00  Q        |          |         |        V|
   25+10       0.1156      0.00  Q        |          |         |        V|
   25+15       0.1156      0.00  Q        |          |         |        V|
   25+20       0.1156      0.00  Q        |          |         |        V|
   25+25       0.1156      0.00  Q        |          |         |        V|
   25+30       0.1156      0.00  Q        |          |         |        V|
   25+35       0.1156      0.00  Q        |          |         |        V|
   25+40       0.1156      0.00  Q        |          |         |        V|
   25+45       0.1156      0.00  Q        |          |         |        V|
   25+50       0.1156      0.00  Q        |          |         |        V|
   25+55       0.1156      0.00  Q        |          |         |         V
---------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 2
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 1.55 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 1.55 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 1.55 | 24 | 2.49 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 1.55 | 1.000 | 0.360 | 1.000 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 1.55 | 1.000 | 62.0 | 80.6 | 2.41 | 0.367 |

Area-averaged catchment yield fraction, Y = 0.367
Area-averaged low loss fraction, Yb = 0.633
User entry of time of concentration = 0.270 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 1.55(Ac.)
Catchment Lag time = 0.216 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 38.5802
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.633 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.490(In)

Rainfall depth area reduction factors:
Using a total area of 1.55(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.603(In)
30-minute factor = 1.000 Adjusted rainfall = 1.031(In)
1-hour factor = 1.000 Adjusted rainfall = 1.270(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.490(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 18.75 (CFS)) | |
| 1 | 2.595 | 0.486 |
| 2 | 17.110 | 2.721 |
| 3 | 47.025 | 5.608 |
| 4 | 64.168 | 3.213 |
| 5 | 73.585 | 1.765 |
| 6 | 79.873 | 1.179 |
| 7 | 84.321 | 0.834 |
| 8 | 87.824 | 0.657 |
| 9 | 90.350 | 0.474 |
| 10 | 92.386 | 0.382 |
| 11 | 94.047 | 0.311 |
| 12 | 95.367 | 0.248 |
| 13 | 96.438 | 0.201 |
| 14 | 97.275 | 0.157 |

| | | |
|---|---|---|
| 15 | 97.884 | 0.114 |
| 16 | 98.288 | 0.076 |
| 17 | 98.739 | 0.085 |
| 18 | 99.202 | 0.087 |
| 19 | 99.584 | 0.072 |
| 20 | 99.827 | 0.046 |
| 21 | 100.000 | 0.032 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6026 | 0.6026 |
| 2 | 0.7419 | 0.1393 |
| 3 | 0.8378 | 0.0960 |
| 4 | 0.9133 | 0.0755 |
| 5 | 0.9766 | 0.0632 |
| 6 | 1.0315 | 0.0549 |
| 7 | 1.0803 | 0.0488 |
| 8 | 1.1245 | 0.0442 |
| 9 | 1.1649 | 0.0404 |
| 10 | 1.2023 | 0.0374 |
| 11 | 1.2372 | 0.0349 |
| 12 | 1.2699 | 0.0327 |
| 13 | 1.2911 | 0.0212 |
| 14 | 1.3111 | 0.0200 |
| 15 | 1.3299 | 0.0189 |
| 16 | 1.3478 | 0.0179 |
| 17 | 1.3648 | 0.0170 |
| 18 | 1.3811 | 0.0162 |
| 19 | 1.3966 | 0.0155 |
| 20 | 1.4115 | 0.0149 |
| 21 | 1.4259 | 0.0143 |
| 22 | 1.4397 | 0.0138 |
| 23 | 1.4530 | 0.0133 |
| 24 | 1.4658 | 0.0129 |
| 25 | 1.4782 | 0.0124 |
| 26 | 1.4903 | 0.0120 |
| 27 | 1.5020 | 0.0117 |
| 28 | 1.5133 | 0.0113 |
| 29 | 1.5244 | 0.0110 |
| 30 | 1.5351 | 0.0107 |
| 31 | 1.5456 | 0.0105 |
| 32 | 1.5557 | 0.0102 |
| 33 | 1.5657 | 0.0099 |
| 34 | 1.5754 | 0.0097 |
| 35 | 1.5849 | 0.0095 |
| 36 | 1.5941 | 0.0093 |
| 37 | 1.6032 | 0.0091 |
| 38 | 1.6121 | 0.0089 |
| 39 | 1.6208 | 0.0087 |
| 40 | 1.6293 | 0.0085 |
| 41 | 1.6376 | 0.0083 |
| 42 | 1.6458 | 0.0082 |
| 43 | 1.6538 | 0.0080 |
| 44 | 1.6617 | 0.0079 |
| 45 | 1.6695 | 0.0077 |
| 46 | 1.6771 | 0.0076 |
| 47 | 1.6846 | 0.0075 |
| 48 | 1.6919 | 0.0074 |
| 49 | 1.6991 | 0.0072 |

| | | |
|---|---|---|
| 50 | 1.7063 | 0.0071 |
| 51 | 1.7133 | 0.0070 |
| 52 | 1.7202 | 0.0069 |
| 53 | 1.7270 | 0.0068 |
| 54 | 1.7337 | 0.0067 |
| 55 | 1.7403 | 0.0066 |
| 56 | 1.7468 | 0.0065 |
| 57 | 1.7532 | 0.0064 |
| 58 | 1.7595 | 0.0063 |
| 59 | 1.7657 | 0.0062 |
| 60 | 1.7719 | 0.0062 |
| 61 | 1.7779 | 0.0061 |
| 62 | 1.7839 | 0.0060 |
| 63 | 1.7898 | 0.0059 |
| 64 | 1.7957 | 0.0058 |
| 65 | 1.8015 | 0.0058 |
| 66 | 1.8072 | 0.0057 |
| 67 | 1.8128 | 0.0056 |
| 68 | 1.8184 | 0.0056 |
| 69 | 1.8239 | 0.0055 |
| 70 | 1.8293 | 0.0054 |
| 71 | 1.8347 | 0.0054 |
| 72 | 1.8400 | 0.0053 |
| 73 | 1.8455 | 0.0055 |
| 74 | 1.8510 | 0.0055 |
| 75 | 1.8565 | 0.0054 |
| 76 | 1.8618 | 0.0054 |
| 77 | 1.8671 | 0.0053 |
| 78 | 1.8724 | 0.0053 |
| 79 | 1.8776 | 0.0052 |
| 80 | 1.8828 | 0.0052 |
| 81 | 1.8879 | 0.0051 |
| 82 | 1.8930 | 0.0051 |
| 83 | 1.8980 | 0.0050 |
| 84 | 1.9029 | 0.0050 |
| 85 | 1.9079 | 0.0049 |
| 86 | 1.9127 | 0.0049 |
| 87 | 1.9176 | 0.0048 |
| 88 | 1.9224 | 0.0048 |
| 89 | 1.9271 | 0.0047 |
| 90 | 1.9318 | 0.0047 |
| 91 | 1.9365 | 0.0047 |
| 92 | 1.9411 | 0.0046 |
| 93 | 1.9457 | 0.0046 |
| 94 | 1.9502 | 0.0045 |
| 95 | 1.9547 | 0.0045 |
| 96 | 1.9592 | 0.0045 |
| 97 | 1.9636 | 0.0044 |
| 98 | 1.9680 | 0.0044 |
| 99 | 1.9724 | 0.0044 |
| 100 | 1.9767 | 0.0043 |
| 101 | 1.9810 | 0.0043 |
| 102 | 1.9853 | 0.0043 |
| 103 | 1.9895 | 0.0042 |
| 104 | 1.9937 | 0.0042 |
| 105 | 1.9979 | 0.0042 |
| 106 | 2.0020 | 0.0041 |
| 107 | 2.0061 | 0.0041 |
| 108 | 2.0102 | 0.0041 |

| | | |
|---|---|---|
| 109 | 2.0143 | 0.0040 |
| 110 | 2.0183 | 0.0040 |
| 111 | 2.0223 | 0.0040 |
| 112 | 2.0262 | 0.0040 |
| 113 | 2.0302 | 0.0039 |
| 114 | 2.0341 | 0.0039 |
| 115 | 2.0380 | 0.0039 |
| 116 | 2.0418 | 0.0039 |
| 117 | 2.0456 | 0.0038 |
| 118 | 2.0494 | 0.0038 |
| 119 | 2.0532 | 0.0038 |
| 120 | 2.0570 | 0.0038 |
| 121 | 2.0607 | 0.0037 |
| 122 | 2.0644 | 0.0037 |
| 123 | 2.0681 | 0.0037 |
| 124 | 2.0717 | 0.0037 |
| 125 | 2.0754 | 0.0036 |
| 126 | 2.0790 | 0.0036 |
| 127 | 2.0826 | 0.0036 |
| 128 | 2.0861 | 0.0036 |
| 129 | 2.0897 | 0.0035 |
| 130 | 2.0932 | 0.0035 |
| 131 | 2.0967 | 0.0035 |
| 132 | 2.1002 | 0.0035 |
| 133 | 2.1037 | 0.0035 |
| 134 | 2.1071 | 0.0034 |
| 135 | 2.1105 | 0.0034 |
| 136 | 2.1139 | 0.0034 |
| 137 | 2.1173 | 0.0034 |
| 138 | 2.1207 | 0.0034 |
| 139 | 2.1240 | 0.0033 |
| 140 | 2.1273 | 0.0033 |
| 141 | 2.1306 | 0.0033 |
| 142 | 2.1339 | 0.0033 |
| 143 | 2.1372 | 0.0033 |
| 144 | 2.1405 | 0.0033 |
| 145 | 2.1437 | 0.0032 |
| 146 | 2.1469 | 0.0032 |
| 147 | 2.1501 | 0.0032 |
| 148 | 2.1533 | 0.0032 |
| 149 | 2.1565 | 0.0032 |
| 150 | 2.1596 | 0.0032 |
| 151 | 2.1627 | 0.0031 |
| 152 | 2.1659 | 0.0031 |
| 153 | 2.1690 | 0.0031 |
| 154 | 2.1721 | 0.0031 |
| 155 | 2.1751 | 0.0031 |
| 156 | 2.1782 | 0.0031 |
| 157 | 2.1812 | 0.0030 |
| 158 | 2.1842 | 0.0030 |
| 159 | 2.1872 | 0.0030 |
| 160 | 2.1902 | 0.0030 |
| 161 | 2.1932 | 0.0030 |
| 162 | 2.1962 | 0.0030 |
| 163 | 2.1991 | 0.0030 |
| 164 | 2.2021 | 0.0029 |
| 165 | 2.2050 | 0.0029 |
| 166 | 2.2079 | 0.0029 |
| 167 | 2.2108 | 0.0029 |

| | | |
|---|---|---|
| 168 | 2.2137 | 0.0029 |
| 169 | 2.2166 | 0.0029 |
| 170 | 2.2194 | 0.0029 |
| 171 | 2.2223 | 0.0028 |
| 172 | 2.2251 | 0.0028 |
| 173 | 2.2279 | 0.0028 |
| 174 | 2.2307 | 0.0028 |
| 175 | 2.2335 | 0.0028 |
| 176 | 2.2363 | 0.0028 |
| 177 | 2.2390 | 0.0028 |
| 178 | 2.2418 | 0.0028 |
| 179 | 2.2445 | 0.0027 |
| 180 | 2.2473 | 0.0027 |
| 181 | 2.2500 | 0.0027 |
| 182 | 2.2527 | 0.0027 |
| 183 | 2.2554 | 0.0027 |
| 184 | 2.2581 | 0.0027 |
| 185 | 2.2607 | 0.0027 |
| 186 | 2.2634 | 0.0027 |
| 187 | 2.2661 | 0.0026 |
| 188 | 2.2687 | 0.0026 |
| 189 | 2.2713 | 0.0026 |
| 190 | 2.2739 | 0.0026 |
| 191 | 2.2765 | 0.0026 |
| 192 | 2.2791 | 0.0026 |
| 193 | 2.2817 | 0.0026 |
| 194 | 2.2843 | 0.0026 |
| 195 | 2.2869 | 0.0026 |
| 196 | 2.2894 | 0.0026 |
| 197 | 2.2920 | 0.0025 |
| 198 | 2.2945 | 0.0025 |
| 199 | 2.2970 | 0.0025 |
| 200 | 2.2995 | 0.0025 |
| 201 | 2.3020 | 0.0025 |
| 202 | 2.3045 | 0.0025 |
| 203 | 2.3070 | 0.0025 |
| 204 | 2.3095 | 0.0025 |
| 205 | 2.3120 | 0.0025 |
| 206 | 2.3144 | 0.0025 |
| 207 | 2.3169 | 0.0024 |
| 208 | 2.3193 | 0.0024 |
| 209 | 2.3217 | 0.0024 |
| 210 | 2.3242 | 0.0024 |
| 211 | 2.3266 | 0.0024 |
| 212 | 2.3290 | 0.0024 |
| 213 | 2.3314 | 0.0024 |
| 214 | 2.3337 | 0.0024 |
| 215 | 2.3361 | 0.0024 |
| 216 | 2.3385 | 0.0024 |
| 217 | 2.3408 | 0.0024 |
| 218 | 2.3432 | 0.0023 |
| 219 | 2.3455 | 0.0023 |
| 220 | 2.3479 | 0.0023 |
| 221 | 2.3502 | 0.0023 |
| 222 | 2.3525 | 0.0023 |
| 223 | 2.3548 | 0.0023 |
| 224 | 2.3571 | 0.0023 |
| 225 | 2.3594 | 0.0023 |
| 226 | 2.3617 | 0.0023 |

| | | |
|---|---|---|
| 227 | 2.3640 | 0.0023 |
| 228 | 2.3662 | 0.0023 |
| 229 | 2.3685 | 0.0023 |
| 230 | 2.3708 | 0.0023 |
| 231 | 2.3730 | 0.0022 |
| 232 | 2.3752 | 0.0022 |
| 233 | 2.3775 | 0.0022 |
| 234 | 2.3797 | 0.0022 |
| 235 | 2.3819 | 0.0022 |
| 236 | 2.3841 | 0.0022 |
| 237 | 2.3863 | 0.0022 |
| 238 | 2.3885 | 0.0022 |
| 239 | 2.3907 | 0.0022 |
| 240 | 2.3929 | 0.0022 |
| 241 | 2.3950 | 0.0022 |
| 242 | 2.3972 | 0.0022 |
| 243 | 2.3994 | 0.0022 |
| 244 | 2.4015 | 0.0022 |
| 245 | 2.4037 | 0.0021 |
| 246 | 2.4058 | 0.0021 |
| 247 | 2.4079 | 0.0021 |
| 248 | 2.4101 | 0.0021 |
| 249 | 2.4122 | 0.0021 |
| 250 | 2.4143 | 0.0021 |
| 251 | 2.4164 | 0.0021 |
| 252 | 2.4185 | 0.0021 |
| 253 | 2.4206 | 0.0021 |
| 254 | 2.4227 | 0.0021 |
| 255 | 2.4247 | 0.0021 |
| 256 | 2.4268 | 0.0021 |
| 257 | 2.4289 | 0.0021 |
| 258 | 2.4309 | 0.0021 |
| 259 | 2.4330 | 0.0021 |
| 260 | 2.4350 | 0.0020 |
| 261 | 2.4371 | 0.0020 |
| 262 | 2.4391 | 0.0020 |
| 263 | 2.4411 | 0.0020 |
| 264 | 2.4432 | 0.0020 |
| 265 | 2.4452 | 0.0020 |
| 266 | 2.4472 | 0.0020 |
| 267 | 2.4492 | 0.0020 |
| 268 | 2.4512 | 0.0020 |
| 269 | 2.4532 | 0.0020 |
| 270 | 2.4552 | 0.0020 |
| 271 | 2.4572 | 0.0020 |
| 272 | 2.4591 | 0.0020 |
| 273 | 2.4611 | 0.0020 |
| 274 | 2.4631 | 0.0020 |
| 275 | 2.4650 | 0.0020 |
| 276 | 2.4670 | 0.0020 |
| 277 | 2.4689 | 0.0019 |
| 278 | 2.4709 | 0.0019 |
| 279 | 2.4728 | 0.0019 |
| 280 | 2.4747 | 0.0019 |
| 281 | 2.4767 | 0.0019 |
| 282 | 2.4786 | 0.0019 |
| 283 | 2.4805 | 0.0019 |
| 284 | 2.4824 | 0.0019 |
| 285 | 2.4843 | 0.0019 |

| | | |
|---|---|---|
| 286 | 2.4862 | 0.0019 |
| 287 | 2.4881 | 0.0019 |
| 288 | 2.4900 | 0.0019 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0019 | 0.0012 | 0.0007 |
| 2 | 0.0019 | 0.0012 | 0.0007 |
| 3 | 0.0019 | 0.0012 | 0.0007 |
| 4 | 0.0019 | 0.0012 | 0.0007 |
| 5 | 0.0019 | 0.0012 | 0.0007 |
| 6 | 0.0019 | 0.0012 | 0.0007 |
| 7 | 0.0019 | 0.0012 | 0.0007 |
| 8 | 0.0019 | 0.0012 | 0.0007 |
| 9 | 0.0020 | 0.0012 | 0.0007 |
| 10 | 0.0020 | 0.0012 | 0.0007 |
| 11 | 0.0020 | 0.0012 | 0.0007 |
| 12 | 0.0020 | 0.0013 | 0.0007 |
| 13 | 0.0020 | 0.0013 | 0.0007 |
| 14 | 0.0020 | 0.0013 | 0.0007 |
| 15 | 0.0020 | 0.0013 | 0.0007 |
| 16 | 0.0020 | 0.0013 | 0.0007 |
| 17 | 0.0020 | 0.0013 | 0.0007 |
| 18 | 0.0020 | 0.0013 | 0.0007 |
| 19 | 0.0020 | 0.0013 | 0.0007 |
| 20 | 0.0020 | 0.0013 | 0.0008 |
| 21 | 0.0021 | 0.0013 | 0.0008 |
| 22 | 0.0021 | 0.0013 | 0.0008 |
| 23 | 0.0021 | 0.0013 | 0.0008 |
| 24 | 0.0021 | 0.0013 | 0.0008 |
| 25 | 0.0021 | 0.0013 | 0.0008 |
| 26 | 0.0021 | 0.0013 | 0.0008 |
| 27 | 0.0021 | 0.0013 | 0.0008 |
| 28 | 0.0021 | 0.0013 | 0.0008 |
| 29 | 0.0021 | 0.0014 | 0.0008 |
| 30 | 0.0021 | 0.0014 | 0.0008 |
| 31 | 0.0022 | 0.0014 | 0.0008 |
| 32 | 0.0022 | 0.0014 | 0.0008 |
| 33 | 0.0022 | 0.0014 | 0.0008 |
| 34 | 0.0022 | 0.0014 | 0.0008 |
| 35 | 0.0022 | 0.0014 | 0.0008 |
| 36 | 0.0022 | 0.0014 | 0.0008 |
| 37 | 0.0022 | 0.0014 | 0.0008 |
| 38 | 0.0022 | 0.0014 | 0.0008 |
| 39 | 0.0022 | 0.0014 | 0.0008 |
| 40 | 0.0023 | 0.0014 | 0.0008 |
| 41 | 0.0023 | 0.0014 | 0.0008 |
| 42 | 0.0023 | 0.0014 | 0.0008 |
| 43 | 0.0023 | 0.0015 | 0.0008 |
| 44 | 0.0023 | 0.0015 | 0.0008 |
| 45 | 0.0023 | 0.0015 | 0.0009 |
| 46 | 0.0023 | 0.0015 | 0.0009 |
| 47 | 0.0023 | 0.0015 | 0.0009 |
| 48 | 0.0023 | 0.0015 | 0.0009 |
| 49 | 0.0024 | 0.0015 | 0.0009 |
| 50 | 0.0024 | 0.0015 | 0.0009 |
| 51 | 0.0024 | 0.0015 | 0.0009 |

| | | | |
|---|---|---|---|
| 52 | 0.0024 | 0.0015 | 0.0009 |
| 53 | 0.0024 | 0.0015 | 0.0009 |
| 54 | 0.0024 | 0.0015 | 0.0009 |
| 55 | 0.0024 | 0.0015 | 0.0009 |
| 56 | 0.0025 | 0.0016 | 0.0009 |
| 57 | 0.0025 | 0.0016 | 0.0009 |
| 58 | 0.0025 | 0.0016 | 0.0009 |
| 59 | 0.0025 | 0.0016 | 0.0009 |
| 60 | 0.0025 | 0.0016 | 0.0009 |
| 61 | 0.0025 | 0.0016 | 0.0009 |
| 62 | 0.0025 | 0.0016 | 0.0009 |
| 63 | 0.0026 | 0.0016 | 0.0009 |
| 64 | 0.0026 | 0.0016 | 0.0009 |
| 65 | 0.0026 | 0.0016 | 0.0010 |
| 66 | 0.0026 | 0.0016 | 0.0010 |
| 67 | 0.0026 | 0.0017 | 0.0010 |
| 68 | 0.0026 | 0.0017 | 0.0010 |
| 69 | 0.0027 | 0.0017 | 0.0010 |
| 70 | 0.0027 | 0.0017 | 0.0010 |
| 71 | 0.0027 | 0.0017 | 0.0010 |
| 72 | 0.0027 | 0.0017 | 0.0010 |
| 73 | 0.0027 | 0.0017 | 0.0010 |
| 74 | 0.0027 | 0.0017 | 0.0010 |
| 75 | 0.0028 | 0.0018 | 0.0010 |
| 76 | 0.0028 | 0.0018 | 0.0010 |
| 77 | 0.0028 | 0.0018 | 0.0010 |
| 78 | 0.0028 | 0.0018 | 0.0010 |
| 79 | 0.0028 | 0.0018 | 0.0010 |
| 80 | 0.0029 | 0.0018 | 0.0010 |
| 81 | 0.0029 | 0.0018 | 0.0011 |
| 82 | 0.0029 | 0.0018 | 0.0011 |
| 83 | 0.0029 | 0.0019 | 0.0011 |
| 84 | 0.0029 | 0.0019 | 0.0011 |
| 85 | 0.0030 | 0.0019 | 0.0011 |
| 86 | 0.0030 | 0.0019 | 0.0011 |
| 87 | 0.0030 | 0.0019 | 0.0011 |
| 88 | 0.0030 | 0.0019 | 0.0011 |
| 89 | 0.0031 | 0.0019 | 0.0011 |
| 90 | 0.0031 | 0.0019 | 0.0011 |
| 91 | 0.0031 | 0.0020 | 0.0011 |
| 92 | 0.0031 | 0.0020 | 0.0011 |
| 93 | 0.0032 | 0.0020 | 0.0012 |
| 94 | 0.0032 | 0.0020 | 0.0012 |
| 95 | 0.0032 | 0.0020 | 0.0012 |
| 96 | 0.0032 | 0.0020 | 0.0012 |
| 97 | 0.0033 | 0.0021 | 0.0012 |
| 98 | 0.0033 | 0.0021 | 0.0012 |
| 99 | 0.0033 | 0.0021 | 0.0012 |
| 100 | 0.0033 | 0.0021 | 0.0012 |
| 101 | 0.0034 | 0.0021 | 0.0012 |
| 102 | 0.0034 | 0.0021 | 0.0012 |
| 103 | 0.0034 | 0.0022 | 0.0013 |
| 104 | 0.0034 | 0.0022 | 0.0013 |
| 105 | 0.0035 | 0.0022 | 0.0013 |
| 106 | 0.0035 | 0.0022 | 0.0013 |
| 107 | 0.0035 | 0.0022 | 0.0013 |
| 108 | 0.0036 | 0.0023 | 0.0013 |
| 109 | 0.0036 | 0.0023 | 0.0013 |
| 110 | 0.0036 | 0.0023 | 0.0013 |

| | | | |
|---|---|---|---|
| 111 | 0.0037 | 0.0023 | 0.0014 |
| 112 | 0.0037 | 0.0023 | 0.0014 |
| 113 | 0.0038 | 0.0024 | 0.0014 |
| 114 | 0.0038 | 0.0024 | 0.0014 |
| 115 | 0.0038 | 0.0024 | 0.0014 |
| 116 | 0.0039 | 0.0024 | 0.0014 |
| 117 | 0.0039 | 0.0025 | 0.0014 |
| 118 | 0.0039 | 0.0025 | 0.0014 |
| 119 | 0.0040 | 0.0025 | 0.0015 |
| 120 | 0.0040 | 0.0025 | 0.0015 |
| 121 | 0.0041 | 0.0026 | 0.0015 |
| 122 | 0.0041 | 0.0026 | 0.0015 |
| 123 | 0.0042 | 0.0026 | 0.0015 |
| 124 | 0.0042 | 0.0027 | 0.0015 |
| 125 | 0.0043 | 0.0027 | 0.0016 |
| 126 | 0.0043 | 0.0027 | 0.0016 |
| 127 | 0.0044 | 0.0028 | 0.0016 |
| 128 | 0.0044 | 0.0028 | 0.0016 |
| 129 | 0.0045 | 0.0028 | 0.0016 |
| 130 | 0.0045 | 0.0029 | 0.0017 |
| 131 | 0.0046 | 0.0029 | 0.0017 |
| 132 | 0.0046 | 0.0029 | 0.0017 |
| 133 | 0.0047 | 0.0030 | 0.0017 |
| 134 | 0.0047 | 0.0030 | 0.0017 |
| 135 | 0.0048 | 0.0031 | 0.0018 |
| 136 | 0.0049 | 0.0031 | 0.0018 |
| 137 | 0.0050 | 0.0031 | 0.0018 |
| 138 | 0.0050 | 0.0032 | 0.0018 |
| 139 | 0.0051 | 0.0032 | 0.0019 |
| 140 | 0.0052 | 0.0033 | 0.0019 |
| 141 | 0.0053 | 0.0033 | 0.0019 |
| 142 | 0.0053 | 0.0034 | 0.0020 |
| 143 | 0.0054 | 0.0034 | 0.0020 |
| 144 | 0.0055 | 0.0035 | 0.0020 |
| 145 | 0.0053 | 0.0034 | 0.0020 |
| 146 | 0.0054 | 0.0034 | 0.0020 |
| 147 | 0.0055 | 0.0035 | 0.0020 |
| 148 | 0.0056 | 0.0035 | 0.0020 |
| 149 | 0.0057 | 0.0036 | 0.0021 |
| 150 | 0.0058 | 0.0037 | 0.0021 |
| 151 | 0.0059 | 0.0037 | 0.0022 |
| 152 | 0.0060 | 0.0038 | 0.0022 |
| 153 | 0.0062 | 0.0039 | 0.0023 |
| 154 | 0.0062 | 0.0039 | 0.0023 |
| 155 | 0.0064 | 0.0041 | 0.0024 |
| 156 | 0.0065 | 0.0041 | 0.0024 |
| 157 | 0.0067 | 0.0042 | 0.0025 |
| 158 | 0.0068 | 0.0043 | 0.0025 |
| 159 | 0.0070 | 0.0044 | 0.0026 |
| 160 | 0.0071 | 0.0045 | 0.0026 |
| 161 | 0.0074 | 0.0047 | 0.0027 |
| 162 | 0.0075 | 0.0047 | 0.0027 |
| 163 | 0.0077 | 0.0049 | 0.0028 |
| 164 | 0.0079 | 0.0050 | 0.0029 |
| 165 | 0.0082 | 0.0052 | 0.0030 |
| 166 | 0.0083 | 0.0053 | 0.0031 |
| 167 | 0.0087 | 0.0055 | 0.0032 |
| 168 | 0.0089 | 0.0056 | 0.0033 |
| 169 | 0.0093 | 0.0059 | 0.0034 |

| | | | |
|---|---|---|---|
| 170 | 0.0095 | 0.0060 | 0.0035 |
| 171 | 0.0099 | 0.0063 | 0.0036 |
| 172 | 0.0102 | 0.0065 | 0.0037 |
| 173 | 0.0107 | 0.0068 | 0.0039 |
| 174 | 0.0110 | 0.0070 | 0.0040 |
| 175 | 0.0117 | 0.0074 | 0.0043 |
| 176 | 0.0120 | 0.0076 | 0.0044 |
| 177 | 0.0129 | 0.0081 | 0.0047 |
| 178 | 0.0133 | 0.0084 | 0.0049 |
| 179 | 0.0143 | 0.0091 | 0.0053 |
| 180 | 0.0149 | 0.0094 | 0.0055 |
| 181 | 0.0162 | 0.0103 | 0.0060 |
| 182 | 0.0170 | 0.0108 | 0.0062 |
| 183 | 0.0189 | 0.0119 | 0.0069 |
| 184 | 0.0200 | 0.0126 | 0.0073 |
| 185 | 0.0327 | 0.0207 | 0.0120 |
| 186 | 0.0349 | 0.0221 | 0.0128 |
| 187 | 0.0404 | 0.0256 | 0.0148 |
| 188 | 0.0442 | 0.0280 | 0.0162 |
| 189 | 0.0549 | 0.0300 | 0.0249 |
| 190 | 0.0632 | 0.0300 | 0.0333 |
| 191 | 0.0960 | 0.0300 | 0.0660 |
| 192 | 0.1393 | 0.0300 | 0.1093 |
| 193 | 0.6026 | 0.0300 | 0.5726 |
| 194 | 0.0755 | 0.0300 | 0.0456 |
| 195 | 0.0488 | 0.0300 | 0.0189 |
| 196 | 0.0374 | 0.0237 | 0.0137 |
| 197 | 0.0212 | 0.0134 | 0.0078 |
| 198 | 0.0179 | 0.0113 | 0.0066 |
| 199 | 0.0155 | 0.0098 | 0.0057 |
| 200 | 0.0138 | 0.0087 | 0.0051 |
| 201 | 0.0124 | 0.0079 | 0.0046 |
| 202 | 0.0113 | 0.0072 | 0.0042 |
| 203 | 0.0105 | 0.0066 | 0.0038 |
| 204 | 0.0097 | 0.0061 | 0.0036 |
| 205 | 0.0091 | 0.0057 | 0.0033 |
| 206 | 0.0085 | 0.0054 | 0.0031 |
| 207 | 0.0080 | 0.0051 | 0.0029 |
| 208 | 0.0076 | 0.0048 | 0.0028 |
| 209 | 0.0072 | 0.0046 | 0.0027 |
| 210 | 0.0069 | 0.0044 | 0.0025 |
| 211 | 0.0066 | 0.0042 | 0.0024 |
| 212 | 0.0063 | 0.0040 | 0.0023 |
| 213 | 0.0061 | 0.0038 | 0.0022 |
| 214 | 0.0058 | 0.0037 | 0.0021 |
| 215 | 0.0056 | 0.0036 | 0.0021 |
| 216 | 0.0054 | 0.0034 | 0.0020 |
| 217 | 0.0055 | 0.0035 | 0.0020 |
| 218 | 0.0054 | 0.0034 | 0.0020 |
| 219 | 0.0052 | 0.0033 | 0.0019 |
| 220 | 0.0051 | 0.0032 | 0.0019 |
| 221 | 0.0049 | 0.0031 | 0.0018 |
| 222 | 0.0048 | 0.0030 | 0.0018 |
| 223 | 0.0047 | 0.0030 | 0.0017 |
| 224 | 0.0045 | 0.0029 | 0.0017 |
| 225 | 0.0044 | 0.0028 | 0.0016 |
| 226 | 0.0043 | 0.0027 | 0.0016 |
| 227 | 0.0042 | 0.0027 | 0.0016 |
| 228 | 0.0041 | 0.0026 | 0.0015 |

| | | | |
|---|---|---|---|
| 229 | 0.0040 | 0.0026 | 0.0015 |
| 230 | 0.0040 | 0.0025 | 0.0015 |
| 231 | 0.0039 | 0.0025 | 0.0014 |
| 232 | 0.0038 | 0.0024 | 0.0014 |
| 233 | 0.0037 | 0.0024 | 0.0014 |
| 234 | 0.0037 | 0.0023 | 0.0013 |
| 235 | 0.0036 | 0.0023 | 0.0013 |
| 236 | 0.0035 | 0.0022 | 0.0013 |
| 237 | 0.0035 | 0.0022 | 0.0013 |
| 238 | 0.0034 | 0.0022 | 0.0012 |
| 239 | 0.0033 | 0.0021 | 0.0012 |
| 240 | 0.0033 | 0.0021 | 0.0012 |
| 241 | 0.0032 | 0.0020 | 0.0012 |
| 242 | 0.0032 | 0.0020 | 0.0012 |
| 243 | 0.0031 | 0.0020 | 0.0011 |
| 244 | 0.0031 | 0.0020 | 0.0011 |
| 245 | 0.0030 | 0.0019 | 0.0011 |
| 246 | 0.0030 | 0.0019 | 0.0011 |
| 247 | 0.0030 | 0.0019 | 0.0011 |
| 248 | 0.0029 | 0.0018 | 0.0011 |
| 249 | 0.0029 | 0.0018 | 0.0011 |
| 250 | 0.0028 | 0.0018 | 0.0010 |
| 251 | 0.0028 | 0.0018 | 0.0010 |
| 252 | 0.0028 | 0.0017 | 0.0010 |
| 253 | 0.0027 | 0.0017 | 0.0010 |
| 254 | 0.0027 | 0.0017 | 0.0010 |
| 255 | 0.0026 | 0.0017 | 0.0010 |
| 256 | 0.0026 | 0.0017 | 0.0010 |
| 257 | 0.0026 | 0.0016 | 0.0009 |
| 258 | 0.0026 | 0.0016 | 0.0009 |
| 259 | 0.0025 | 0.0016 | 0.0009 |
| 260 | 0.0025 | 0.0016 | 0.0009 |
| 261 | 0.0025 | 0.0016 | 0.0009 |
| 262 | 0.0024 | 0.0015 | 0.0009 |
| 263 | 0.0024 | 0.0015 | 0.0009 |
| 264 | 0.0024 | 0.0015 | 0.0009 |
| 265 | 0.0024 | 0.0015 | 0.0009 |
| 266 | 0.0023 | 0.0015 | 0.0009 |
| 267 | 0.0023 | 0.0015 | 0.0008 |
| 268 | 0.0023 | 0.0014 | 0.0008 |
| 269 | 0.0023 | 0.0014 | 0.0008 |
| 270 | 0.0022 | 0.0014 | 0.0008 |
| 271 | 0.0022 | 0.0014 | 0.0008 |
| 272 | 0.0022 | 0.0014 | 0.0008 |
| 273 | 0.0022 | 0.0014 | 0.0008 |
| 274 | 0.0022 | 0.0014 | 0.0008 |
| 275 | 0.0021 | 0.0013 | 0.0008 |
| 276 | 0.0021 | 0.0013 | 0.0008 |
| 277 | 0.0021 | 0.0013 | 0.0008 |
| 278 | 0.0021 | 0.0013 | 0.0008 |
| 279 | 0.0021 | 0.0013 | 0.0008 |
| 280 | 0.0020 | 0.0013 | 0.0007 |
| 281 | 0.0020 | 0.0013 | 0.0007 |
| 282 | 0.0020 | 0.0013 | 0.0007 |
| 283 | 0.0020 | 0.0013 | 0.0007 |
| 284 | 0.0020 | 0.0012 | 0.0007 |
| 285 | 0.0019 | 0.0012 | 0.0007 |
| 286 | 0.0019 | 0.0012 | 0.0007 |
| 287 | 0.0019 | 0.0012 | 0.0007 |

288 0.0019 0.0012 0.0007

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Total soil rain loss = 1.10(In)
Total effective rainfall = 1.39(In)
Peak flow rate in flood hydrograph = 3.91(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 2.5 | 5.0 | 7.5 | 10.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0000 | 0.00 | Q | | | | |
| 0+15 | 0.0001 | 0.01 | Q | | | | |
| 0+20 | 0.0001 | 0.01 | Q | | | | |
| 0+25 | 0.0002 | 0.01 | Q | | | | |
| 0+30 | 0.0003 | 0.01 | Q | | | | |
| 0+35 | 0.0003 | 0.01 | Q | | | | |
| 0+40 | 0.0004 | 0.01 | Q | | | | |
| 0+45 | 0.0005 | 0.01 | Q | | | | |
| 0+50 | 0.0006 | 0.01 | Q | | | | |
| 0+55 | 0.0007 | 0.01 | Q | | | | |
| 1+ 0 | 0.0008 | 0.01 | Q | | | | |
| 1+ 5 | 0.0008 | 0.01 | Q | | | | |
| 1+10 | 0.0009 | 0.01 | Q | | | | |
| 1+15 | 0.0010 | 0.01 | Q | | | | |
| 1+20 | 0.0011 | 0.01 | Q | | | | |
| 1+25 | 0.0012 | 0.01 | Q | | | | |
| 1+30 | 0.0013 | 0.01 | Q | | | | |
| 1+35 | 0.0014 | 0.01 | Q | | | | |
| 1+40 | 0.0015 | 0.01 | Q | | | | |
| 1+45 | 0.0016 | 0.01 | Q | | | | |
| 1+50 | 0.0017 | 0.01 | Q | | | | |
| 1+55 | 0.0018 | 0.01 | Q | | | | |
| 2+ 0 | 0.0019 | 0.01 | Q | | | | |
| 2+ 5 | 0.0020 | 0.01 | Q | | | | |
| 2+10 | 0.0021 | 0.01 | Q | | | | |
| 2+15 | 0.0022 | 0.01 | Q | | | | |
| 2+20 | 0.0023 | 0.01 | Q | | | | |
| 2+25 | 0.0024 | 0.01 | Q | | | | |
| 2+30 | 0.0025 | 0.01 | Q | | | | |
| 2+35 | 0.0026 | 0.01 | Q | | | | |
| 2+40 | 0.0027 | 0.01 | Q | | | | |
| 2+45 | 0.0028 | 0.01 | Q | | | | |
| 2+50 | 0.0029 | 0.01 | Q | | | | |
| 2+55 | 0.0030 | 0.01 | Q | | | | |
| 3+ 0 | 0.0031 | 0.01 | Q | | | | |
| 3+ 5 | 0.0032 | 0.01 | Q | | | | |
| 3+10 | 0.0033 | 0.02 | Q | | | | |
| 3+15 | 0.0034 | 0.02 | Q | | | | |
| 3+20 | 0.0035 | 0.02 | Q | | | | |
| 3+25 | 0.0036 | 0.02 | Q | | | | |
| 3+30 | 0.0037 | 0.02 | Q | | | | |
| 3+35 | 0.0038 | 0.02 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+40 | 0.0039 | 0.02 | Q | | | | |
| 3+45 | 0.0040 | 0.02 | Q | | | | |
| 3+50 | 0.0041 | 0.02 | Q | | | | |
| 3+55 | 0.0042 | 0.02 | Q | | | | |
| 4+ 0 | 0.0044 | 0.02 | Q | | | | |
| 4+ 5 | 0.0045 | 0.02 | Q | | | | |
| 4+10 | 0.0046 | 0.02 | QV | | | | |
| 4+15 | 0.0047 | 0.02 | QV | | | | |
| 4+20 | 0.0048 | 0.02 | QV | | | | |
| 4+25 | 0.0049 | 0.02 | QV | | | | |
| 4+30 | 0.0050 | 0.02 | QV | | | | |
| 4+35 | 0.0051 | 0.02 | QV | | | | |
| 4+40 | 0.0053 | 0.02 | QV | | | | |
| 4+45 | 0.0054 | 0.02 | QV | | | | |
| 4+50 | 0.0055 | 0.02 | QV | | | | |
| 4+55 | 0.0056 | 0.02 | QV | | | | |
| 5+ 0 | 0.0057 | 0.02 | QV | | | | |
| 5+ 5 | 0.0058 | 0.02 | QV | | | | |
| 5+10 | 0.0059 | 0.02 | QV | | | | |
| 5+15 | 0.0061 | 0.02 | QV | | | | |
| 5+20 | 0.0062 | 0.02 | QV | | | | |
| 5+25 | 0.0063 | 0.02 | QV | | | | |
| 5+30 | 0.0064 | 0.02 | QV | | | | |
| 5+35 | 0.0065 | 0.02 | QV | | | | |
| 5+40 | 0.0067 | 0.02 | QV | | | | |
| 5+45 | 0.0068 | 0.02 | QV | | | | |
| 5+50 | 0.0069 | 0.02 | QV | | | | |
| 5+55 | 0.0070 | 0.02 | QV | | | | |
| 6+ 0 | 0.0072 | 0.02 | QV | | | | |
| 6+ 5 | 0.0073 | 0.02 | QV | | | | |
| 6+10 | 0.0074 | 0.02 | QV | | | | |
| 6+15 | 0.0075 | 0.02 | QV | | | | |
| 6+20 | 0.0077 | 0.02 | QV | | | | |
| 6+25 | 0.0078 | 0.02 | QV | | | | |
| 6+30 | 0.0079 | 0.02 | QV | | | | |
| 6+35 | 0.0081 | 0.02 | QV | | | | |
| 6+40 | 0.0082 | 0.02 | QV | | | | |
| 6+45 | 0.0083 | 0.02 | QV | | | | |
| 6+50 | 0.0085 | 0.02 | QV | | | | |
| 6+55 | 0.0086 | 0.02 | QV | | | | |
| 7+ 0 | 0.0087 | 0.02 | QV | | | | |
| 7+ 5 | 0.0089 | 0.02 | QV | | | | |
| 7+10 | 0.0090 | 0.02 | Q V | | | | |
| 7+15 | 0.0092 | 0.02 | Q V | | | | |
| 7+20 | 0.0093 | 0.02 | Q V | | | | |
| 7+25 | 0.0094 | 0.02 | Q V | | | | |
| 7+30 | 0.0096 | 0.02 | Q V | | | | |
| 7+35 | 0.0097 | 0.02 | Q V | | | | |
| 7+40 | 0.0099 | 0.02 | Q V | | | | |
| 7+45 | 0.0100 | 0.02 | Q V | | | | |
| 7+50 | 0.0101 | 0.02 | Q V | | | | |
| 7+55 | 0.0103 | 0.02 | Q V | | | | |
| 8+ 0 | 0.0104 | 0.02 | Q V | | | | |
| 8+ 5 | 0.0106 | 0.02 | Q V | | | | |
| 8+10 | 0.0107 | 0.02 | Q V | | | | |
| 8+15 | 0.0109 | 0.02 | Q V | | | | |
| 8+20 | 0.0110 | 0.02 | Q V | | | | |
| 8+25 | 0.0112 | 0.02 | Q V | | | | |
| 8+30 | 0.0114 | 0.02 | Q V | | | | |

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|---|---|---|---|---|---|---|---|
| 8+35 | 0.0115 | 0.02 | Q V | \| | \| | \| | \| |
| 8+40 | 0.0117 | 0.02 | Q V | \| | \| | \| | \| |
| 8+45 | 0.0118 | 0.02 | Q V | \| | \| | \| | \| |
| 8+50 | 0.0120 | 0.02 | Q V | \| | \| | \| | \| |
| 8+55 | 0.0122 | 0.02 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.0123 | 0.02 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.0125 | 0.02 | Q V | \| | \| | \| | \| |
| 9+10 | 0.0127 | 0.02 | Q V | \| | \| | \| | \| |
| 9+15 | 0.0128 | 0.02 | Q V | \| | \| | \| | \| |
| 9+20 | 0.0130 | 0.02 | Q V | \| | \| | \| | \| |
| 9+25 | 0.0132 | 0.02 | Q V | \| | \| | \| | \| |
| 9+30 | 0.0133 | 0.03 | Q V | \| | \| | \| | \| |
| 9+35 | 0.0135 | 0.03 | Q V | \| | \| | \| | \| |
| 9+40 | 0.0137 | 0.03 | Q V | \| | \| | \| | \| |
| 9+45 | 0.0139 | 0.03 | Q V | \| | \| | \| | \| |
| 9+50 | 0.0140 | 0.03 | Q V | \| | \| | \| | \| |
| 9+55 | 0.0142 | 0.03 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.0144 | 0.03 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.0146 | 0.03 | Q V | \| | \| | \| | \| |
| 10+10 | 0.0148 | 0.03 | Q V | \| | \| | \| | \| |
| 10+15 | 0.0150 | 0.03 | Q V | \| | \| | \| | \| |
| 10+20 | 0.0152 | 0.03 | Q V | \| | \| | \| | \| |
| 10+25 | 0.0154 | 0.03 | Q V | \| | \| | \| | \| |
| 10+30 | 0.0155 | 0.03 | Q V | \| | \| | \| | \| |
| 10+35 | 0.0157 | 0.03 | Q V | \| | \| | \| | \| |
| 10+40 | 0.0159 | 0.03 | Q V | \| | \| | \| | \| |
| 10+45 | 0.0161 | 0.03 | Q V | \| | \| | \| | \| |
| 10+50 | 0.0164 | 0.03 | Q V | \| | \| | \| | \| |
| 10+55 | 0.0166 | 0.03 | Q V | \| | \| | \| | \| |
| 11+ 0 | 0.0168 | 0.03 | Q V | \| | \| | \| | \| |
| 11+ 5 | 0.0170 | 0.03 | Q V | \| | \| | \| | \| |
| 11+10 | 0.0172 | 0.03 | Q V | \| | \| | \| | \| |
| 11+15 | 0.0174 | 0.03 | Q V | \| | \| | \| | \| |
| 11+20 | 0.0176 | 0.03 | Q V | \| | \| | \| | \| |
| 11+25 | 0.0179 | 0.03 | Q V | \| | \| | \| | \| |
| 11+30 | 0.0181 | 0.03 | Q V | \| | \| | \| | \| |
| 11+35 | 0.0183 | 0.03 | Q V | \| | \| | \| | \| |
| 11+40 | 0.0185 | 0.03 | Q V | \| | \| | \| | \| |
| 11+45 | 0.0188 | 0.03 | Q V | \| | \| | \| | \| |
| 11+50 | 0.0190 | 0.03 | Q V | \| | \| | \| | \| |
| 11+55 | 0.0193 | 0.04 | Q V | \| | \| | \| | \| |
| 12+ 0 | 0.0195 | 0.04 | Q V | \| | \| | \| | \| |
| 12+ 5 | 0.0198 | 0.04 | Q V | \| | \| | \| | \| |
| 12+10 | 0.0200 | 0.04 | Q V | \| | \| | \| | \| |
| 12+15 | 0.0203 | 0.04 | Q V | \| | \| | \| | \| |
| 12+20 | 0.0205 | 0.04 | Q V | \| | \| | \| | \| |
| 12+25 | 0.0208 | 0.04 | Q V | \| | \| | \| | \| |
| 12+30 | 0.0210 | 0.04 | Q V | \| | \| | \| | \| |
| 12+35 | 0.0213 | 0.04 | Q V | \| | \| | \| | \| |
| 12+40 | 0.0216 | 0.04 | Q V | \| | \| | \| | \| |
| 12+45 | 0.0218 | 0.04 | Q V | \| | \| | \| | \| |
| 12+50 | 0.0221 | 0.04 | Q V | \| | \| | \| | \| |
| 12+55 | 0.0224 | 0.04 | Q V | \| | \| | \| | \| |
| 13+ 0 | 0.0227 | 0.04 | Q V | \| | \| | \| | \| |
| 13+ 5 | 0.0230 | 0.04 | Q V | \| | \| | \| | \| |
| 13+10 | 0.0233 | 0.04 | Q V | \| | \| | \| | \| |
| 13+15 | 0.0236 | 0.04 | Q V | \| | \| | \| | \| |
| 13+20 | 0.0239 | 0.05 | Q V | \| | \| | \| | \| |
| 13+25 | 0.0242 | 0.05 | Q V | \| | \| | \| | \| |

```
13+30       0.0245      0.05  Q    V    |          |          |          |
13+35       0.0249      0.05  Q    V    |          |          |          |
13+40       0.0252      0.05  Q    V    |          |          |          |
13+45       0.0256      0.05  Q    V    |          |          |          |
13+50       0.0259      0.05  Q    V    |          |          |          |
13+55       0.0263      0.05  Q    V    |          |          |          |
14+ 0       0.0267      0.06  Q    V    |          |          |          |
14+ 5       0.0271      0.06  Q     V   |          |          |          |
14+10       0.0275      0.06  Q     V   |          |          |          |
14+15       0.0279      0.06  Q     V   |          |          |          |
14+20       0.0283      0.06  Q     V   |          |          |          |
14+25       0.0288      0.06  Q     V   |          |          |          |
14+30       0.0292      0.07  Q     V   |          |          |          |
14+35       0.0297      0.07  Q     V   |          |          |          |
14+40       0.0302      0.07  Q     V   |          |          |          |
14+45       0.0307      0.08  Q     V   |          |          |          |
14+50       0.0312      0.08  Q     V   |          |          |          |
14+55       0.0318      0.08  Q      V  |          |          |          |
15+ 0       0.0324      0.09  Q      V  |          |          |          |
15+ 5       0.0330      0.09  Q      V  |          |          |          |
15+10       0.0337      0.10  Q      V  |          |          |          |
15+15       0.0344      0.10  Q      V  |          |          |          |
15+20       0.0351      0.11  Q      V  |          |          |          |
15+25       0.0360      0.12  Q       V |          |          |          |
15+30       0.0369      0.14  Q       V |          |          |          |
15+35       0.0381      0.17  Q       V |          |          |          |
15+40       0.0395      0.20  Q       V |          |          |          |
15+45       0.0411      0.23  Q        V|          |          |          |
15+50       0.0430      0.28  |Q       V|          |          |          |
15+55       0.0456      0.38  |Q        V          |          |          |
16+ 0       0.0496      0.58  | Q       |V         |          |          |
16+ 5       0.0576      1.15  |   Q     | V        |          |          |
16+10       0.0750      2.54  |         Q     V    |          |          |
16+15       0.1019      3.91  |         |    Q     | V        |          |
16+20       0.1191      2.49  |        Q|          |     V    |          |
16+25       0.1297      1.54  |     Q   |          |       V  |          |
16+30       0.1373      1.09  |   Q     |          |         V          |
16+35       0.1428      0.81  |  Q      |          |          |V         |
16+40       0.1473      0.64  | Q       |          |          | V        |
16+45       0.1507      0.50  |Q        |          |          |  V       |
16+50       0.1535      0.41  |Q        |          |          |   V      |
16+55       0.1559      0.35  |Q        |          |          |   V      |
17+ 0       0.1579      0.29  |Q        |          |          |    V     |
17+ 5       0.1596      0.24  Q         |          |          |    V     |
17+10       0.1610      0.20  Q         |          |          |    V     |
17+15       0.1621      0.17  Q         |          |          |     V    |
17+20       0.1631      0.14  Q         |          |          |     V    |
17+25       0.1640      0.13  Q         |          |          |     V    |
17+30       0.1648      0.13  Q         |          |          |     V    |
17+35       0.1656      0.11  Q         |          |          |     V    |
17+40       0.1662      0.09  Q         |          |          |      V   |
17+45       0.1667      0.07  Q         |          |          |      V   |
17+50       0.1671      0.05  Q         |          |          |      V   |
17+55       0.1674      0.05  Q         |          |          |      V   |
18+ 0       0.1677      0.05  Q         |          |          |      V   |
18+ 5       0.1680      0.04  Q         |          |          |      V   |
18+10       0.1683      0.04  Q         |          |          |      V   |
18+15       0.1686      0.04  Q         |          |          |      V   |
18+20       0.1688      0.04  Q         |          |          |      V   |
```

```
18+25       0.1691      0.04  Q         |          |          |      V   |
18+30       0.1694      0.04  Q         |          |          |      V   |
18+35       0.1696      0.04  Q         |          |          |      V   |
18+40       0.1699      0.03  Q         |          |          |      V   |
18+45       0.1701      0.03  Q         |          |          |      V   |
18+50       0.1703      0.03  Q         |          |          |       V  |
18+55       0.1705      0.03  Q         |          |          |       V  |
19+ 0       0.1707      0.03  Q         |          |          |       V  |
19+ 5       0.1710      0.03  Q         |          |          |       V  |
19+10       0.1712      0.03  Q         |          |          |       V  |
19+15       0.1714      0.03  Q         |          |          |       V  |
19+20       0.1716      0.03  Q         |          |          |       V  |
19+25       0.1718      0.03  Q         |          |          |       V  |
19+30       0.1719      0.03  Q         |          |          |       V  |
19+35       0.1721      0.03  Q         |          |          |       V  |
19+40       0.1723      0.03  Q         |          |          |       V  |
19+45       0.1725      0.03  Q         |          |          |       V  |
19+50       0.1727      0.03  Q         |          |          |       V  |
19+55       0.1728      0.02  Q         |          |          |       V  |
20+ 0       0.1730      0.02  Q         |          |          |       V  |
20+ 5       0.1732      0.02  Q         |          |          |       V  |
20+10       0.1733      0.02  Q         |          |          |       V  |
20+15       0.1735      0.02  Q         |          |          |       V  |
20+20       0.1736      0.02  Q         |          |          |       V  |
20+25       0.1738      0.02  Q         |          |          |       V  |
20+30       0.1739      0.02  Q         |          |          |       V  |
20+35       0.1741      0.02  Q         |          |          |       V  |
20+40       0.1742      0.02  Q         |          |          |       V  |
20+45       0.1744      0.02  Q         |          |          |       V  |
20+50       0.1745      0.02  Q         |          |          |       V  |
20+55       0.1747      0.02  Q         |          |          |       V  |
21+ 0       0.1748      0.02  Q         |          |          |        V |
21+ 5       0.1749      0.02  Q         |          |          |        V |
21+10       0.1751      0.02  Q         |          |          |        V |
21+15       0.1752      0.02  Q         |          |          |        V |
21+20       0.1753      0.02  Q         |          |          |        V |
21+25       0.1755      0.02  Q         |          |          |        V |
21+30       0.1756      0.02  Q         |          |          |        V |
21+35       0.1757      0.02  Q         |          |          |        V |
21+40       0.1758      0.02  Q         |          |          |        V |
21+45       0.1760      0.02  Q         |          |          |        V |
21+50       0.1761      0.02  Q         |          |          |        V |
21+55       0.1762      0.02  Q         |          |          |        V |
22+ 0       0.1763      0.02  Q         |          |          |        V |
22+ 5       0.1764      0.02  Q         |          |          |        V |
22+10       0.1766      0.02  Q         |          |          |        V |
22+15       0.1767      0.02  Q         |          |          |        V |
22+20       0.1768      0.02  Q         |          |          |        V |
22+25       0.1769      0.02  Q         |          |          |        V |
22+30       0.1770      0.02  Q         |          |          |        V |
22+35       0.1771      0.02  Q         |          |          |        V |
22+40       0.1772      0.02  Q         |          |          |        V |
22+45       0.1773      0.02  Q         |          |          |        V |
22+50       0.1774      0.02  Q         |          |          |        V |
22+55       0.1775      0.02  Q         |          |          |        V |
23+ 0       0.1776      0.02  Q         |          |          |        V |
23+ 5       0.1777      0.01  Q         |          |          |        V |
23+10       0.1778      0.01  Q         |          |          |        V |
23+15       0.1779      0.01  Q         |          |          |        V |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+20 | 0.1780 | 0.01 | Q | \| | \| | \| | V\| |
| 23+25 | 0.1781 | 0.01 | Q | \| | \| | \| | V\| |
| 23+30 | 0.1782 | 0.01 | Q | \| | \| | \| | V\| |
| 23+35 | 0.1783 | 0.01 | Q | \| | \| | \| | V\| |
| 23+40 | 0.1784 | 0.01 | Q | \| | \| | \| | V\| |
| 23+45 | 0.1785 | 0.01 | Q | \| | \| | \| | V\| |
| 23+50 | 0.1786 | 0.01 | Q | \| | \| | \| | V\| |
| 23+55 | 0.1787 | 0.01 | Q | \| | \| | \| | V\| |
| 24+ 0 | 0.1788 | 0.01 | Q | \| | \| | \| | V\| |
| 24+ 5 | 0.1789 | 0.01 | Q | \| | \| | \| | V\| |
| 24+10 | 0.1790 | 0.01 | Q | \| | \| | \| | V\| |
| 24+15 | 0.1790 | 0.01 | Q | \| | \| | \| | V\| |
| 24+20 | 0.1791 | 0.00 | Q | \| | \| | \| | V\| |
| 24+25 | 0.1791 | 0.00 | Q | \| | \| | \| | V\| |
| 24+30 | 0.1791 | 0.00 | Q | \| | \| | \| | V\| |
| 24+35 | 0.1791 | 0.00 | Q | \| | \| | \| | V\| |
| 24+40 | 0.1791 | 0.00 | Q | \| | \| | \| | V\| |
| 24+45 | 0.1791 | 0.00 | Q | \| | \| | \| | V\| |
| 24+50 | 0.1791 | 0.00 | Q | \| | \| | \| | V\| |
| 24+55 | 0.1792 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 0 | 0.1792 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 5 | 0.1792 | 0.00 | Q | \| | \| | \| | V\| |
| 25+10 | 0.1792 | 0.00 | Q | \| | \| | \| | V\| |
| 25+15 | 0.1792 | 0.00 | Q | \| | \| | \| | V\| |
| 25+20 | 0.1792 | 0.00 | Q | \| | \| | \| | V\| |
| 25+25 | 0.1792 | 0.00 | Q | \| | \| | \| | V\| |
| 25+30 | 0.1792 | 0.00 | Q | \| | \| | \| | V\| |
| 25+35 | 0.1792 | 0.00 | Q | \| | \| | \| | V\| |
| 25+40 | 0.1792 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 3
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 4.92 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 4.92 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 4.92 | 24 | 2.48 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 4.92 | 1.000 | 0.360 | 1.000 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 4.92 | 1.000 | 62.0 | 80.6 | 2.41 | 0.366 |

Area-averaged catchment yield fraction, Y = 0.366
Area-averaged low loss fraction, Yb = 0.634
User entry of time of concentration = 0.440 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 4.92(Ac.)
Catchment Lag time = 0.352 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 23.6742
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.634 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.480(In)

Rainfall depth area reduction factors:
Using a total area of 4.92(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.602(In)
30-minute factor = 1.000 Adjusted rainfall = 1.031(In)
1-hour factor = 1.000 Adjusted rainfall = 1.270(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.480(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 59.50 (CFS)) | |
| 1 | 1.253 | 0.745 |
| 2 | 5.990 | 2.819 |
| 3 | 17.013 | 6.559 |
| 4 | 37.736 | 12.330 |
| 5 | 53.227 | 9.218 |
| 6 | 62.837 | 5.718 |
| 7 | 69.391 | 3.900 |
| 8 | 74.406 | 2.984 |
| 9 | 78.377 | 2.363 |
| 10 | 81.518 | 1.869 |
| 11 | 84.119 | 1.548 |
| 12 | 86.408 | 1.362 |
| 13 | 88.349 | 1.155 |
| 14 | 89.873 | 0.907 |

| | | |
|---|---|---|
| 15 | 91.219 | 0.801 |
| 16 | 92.412 | 0.710 |
| 17 | 93.486 | 0.639 |
| 18 | 94.386 | 0.535 |
| 19 | 95.191 | 0.479 |
| 20 | 95.903 | 0.423 |
| 21 | 96.518 | 0.366 |
| 22 | 97.061 | 0.323 |
| 23 | 97.488 | 0.254 |
| 24 | 97.858 | 0.220 |
| 25 | 98.100 | 0.144 |
| 26 | 98.347 | 0.147 |
| 27 | 98.628 | 0.167 |
| 28 | 98.912 | 0.169 |
| 29 | 99.197 | 0.169 |
| 30 | 99.468 | 0.161 |
| 31 | 99.638 | 0.101 |
| 32 | 99.786 | 0.088 |
| 33 | 100.000 | 0.044 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6025 | 0.6025 |
| 2 | 0.7418 | 0.1393 |
| 3 | 0.8377 | 0.0959 |
| 4 | 0.9132 | 0.0755 |
| 5 | 0.9764 | 0.0632 |
| 6 | 1.0313 | 0.0549 |
| 7 | 1.0801 | 0.0488 |
| 8 | 1.1243 | 0.0441 |
| 9 | 1.1647 | 0.0404 |
| 10 | 1.2021 | 0.0374 |
| 11 | 1.2370 | 0.0349 |
| 12 | 1.2697 | 0.0327 |
| 13 | 1.2909 | 0.0212 |
| 14 | 1.3109 | 0.0200 |
| 15 | 1.3298 | 0.0189 |
| 16 | 1.3477 | 0.0179 |
| 17 | 1.3647 | 0.0170 |
| 18 | 1.3809 | 0.0163 |
| 19 | 1.3965 | 0.0155 |
| 20 | 1.4114 | 0.0149 |
| 21 | 1.4257 | 0.0143 |
| 22 | 1.4395 | 0.0138 |
| 23 | 1.4528 | 0.0133 |
| 24 | 1.4657 | 0.0129 |
| 25 | 1.4782 | 0.0124 |
| 26 | 1.4902 | 0.0121 |
| 27 | 1.5019 | 0.0117 |
| 28 | 1.5133 | 0.0114 |
| 29 | 1.5243 | 0.0110 |
| 30 | 1.5350 | 0.0107 |
| 31 | 1.5455 | 0.0105 |
| 32 | 1.5557 | 0.0102 |
| 33 | 1.5656 | 0.0099 |
| 34 | 1.5753 | 0.0097 |
| 35 | 1.5848 | 0.0095 |
| 36 | 1.5941 | 0.0093 |
| 37 | 1.6032 | 0.0091 |

| | | |
|---|---|---|
| 38 | 1.6120 | 0.0089 |
| 39 | 1.6207 | 0.0087 |
| 40 | 1.6292 | 0.0085 |
| 41 | 1.6376 | 0.0083 |
| 42 | 1.6458 | 0.0082 |
| 43 | 1.6538 | 0.0080 |
| 44 | 1.6617 | 0.0079 |
| 45 | 1.6694 | 0.0077 |
| 46 | 1.6771 | 0.0076 |
| 47 | 1.6845 | 0.0075 |
| 48 | 1.6919 | 0.0074 |
| 49 | 1.6991 | 0.0072 |
| 50 | 1.7062 | 0.0071 |
| 51 | 1.7132 | 0.0070 |
| 52 | 1.7201 | 0.0069 |
| 53 | 1.7269 | 0.0068 |
| 54 | 1.7336 | 0.0067 |
| 55 | 1.7402 | 0.0066 |
| 56 | 1.7467 | 0.0065 |
| 57 | 1.7531 | 0.0064 |
| 58 | 1.7595 | 0.0063 |
| 59 | 1.7657 | 0.0062 |
| 60 | 1.7718 | 0.0062 |
| 61 | 1.7779 | 0.0061 |
| 62 | 1.7839 | 0.0060 |
| 63 | 1.7898 | 0.0059 |
| 64 | 1.7957 | 0.0058 |
| 65 | 1.8014 | 0.0058 |
| 66 | 1.8071 | 0.0057 |
| 67 | 1.8128 | 0.0056 |
| 68 | 1.8183 | 0.0056 |
| 69 | 1.8238 | 0.0055 |
| 70 | 1.8293 | 0.0054 |
| 71 | 1.8347 | 0.0054 |
| 72 | 1.8400 | 0.0053 |
| 73 | 1.8454 | 0.0055 |
| 74 | 1.8509 | 0.0054 |
| 75 | 1.8562 | 0.0054 |
| 76 | 1.8615 | 0.0053 |
| 77 | 1.8668 | 0.0052 |
| 78 | 1.8720 | 0.0052 |
| 79 | 1.8771 | 0.0051 |
| 80 | 1.8822 | 0.0051 |
| 81 | 1.8872 | 0.0050 |
| 82 | 1.8922 | 0.0050 |
| 83 | 1.8972 | 0.0049 |
| 84 | 1.9021 | 0.0049 |
| 85 | 1.9069 | 0.0049 |
| 86 | 1.9117 | 0.0048 |
| 87 | 1.9165 | 0.0048 |
| 88 | 1.9212 | 0.0047 |
| 89 | 1.9259 | 0.0047 |
| 90 | 1.9305 | 0.0046 |
| 91 | 1.9351 | 0.0046 |
| 92 | 1.9397 | 0.0046 |
| 93 | 1.9442 | 0.0045 |
| 94 | 1.9487 | 0.0045 |
| 95 | 1.9531 | 0.0044 |
| 96 | 1.9576 | 0.0044 |

| | | |
|---|---|---|
| 97 | 1.9619 | 0.0044 |
| 98 | 1.9663 | 0.0043 |
| 99 | 1.9706 | 0.0043 |
| 100 | 1.9748 | 0.0043 |
| 101 | 1.9791 | 0.0042 |
| 102 | 1.9833 | 0.0042 |
| 103 | 1.9874 | 0.0042 |
| 104 | 1.9916 | 0.0041 |
| 105 | 1.9957 | 0.0041 |
| 106 | 1.9998 | 0.0041 |
| 107 | 2.0038 | 0.0040 |
| 108 | 2.0078 | 0.0040 |
| 109 | 2.0118 | 0.0040 |
| 110 | 2.0158 | 0.0040 |
| 111 | 2.0197 | 0.0039 |
| 112 | 2.0236 | 0.0039 |
| 113 | 2.0275 | 0.0039 |
| 114 | 2.0313 | 0.0039 |
| 115 | 2.0352 | 0.0038 |
| 116 | 2.0390 | 0.0038 |
| 117 | 2.0427 | 0.0038 |
| 118 | 2.0465 | 0.0037 |
| 119 | 2.0502 | 0.0037 |
| 120 | 2.0539 | 0.0037 |
| 121 | 2.0576 | 0.0037 |
| 122 | 2.0612 | 0.0036 |
| 123 | 2.0649 | 0.0036 |
| 124 | 2.0685 | 0.0036 |
| 125 | 2.0720 | 0.0036 |
| 126 | 2.0756 | 0.0036 |
| 127 | 2.0791 | 0.0035 |
| 128 | 2.0826 | 0.0035 |
| 129 | 2.0861 | 0.0035 |
| 130 | 2.0896 | 0.0035 |
| 131 | 2.0931 | 0.0035 |
| 132 | 2.0965 | 0.0034 |
| 133 | 2.0999 | 0.0034 |
| 134 | 2.1033 | 0.0034 |
| 135 | 2.1067 | 0.0034 |
| 136 | 2.1100 | 0.0034 |
| 137 | 2.1133 | 0.0033 |
| 138 | 2.1167 | 0.0033 |
| 139 | 2.1199 | 0.0033 |
| 140 | 2.1232 | 0.0033 |
| 141 | 2.1265 | 0.0033 |
| 142 | 2.1297 | 0.0032 |
| 143 | 2.1329 | 0.0032 |
| 144 | 2.1361 | 0.0032 |
| 145 | 2.1393 | 0.0032 |
| 146 | 2.1425 | 0.0032 |
| 147 | 2.1456 | 0.0032 |
| 148 | 2.1488 | 0.0031 |
| 149 | 2.1519 | 0.0031 |
| 150 | 2.1550 | 0.0031 |
| 151 | 2.1581 | 0.0031 |
| 152 | 2.1612 | 0.0031 |
| 153 | 2.1642 | 0.0031 |
| 154 | 2.1672 | 0.0030 |
| 155 | 2.1703 | 0.0030 |

| | | |
|---|---|---|
| 156 | 2.1733 | 0.0030 |
| 157 | 2.1763 | 0.0030 |
| 158 | 2.1792 | 0.0030 |
| 159 | 2.1822 | 0.0030 |
| 160 | 2.1852 | 0.0029 |
| 161 | 2.1881 | 0.0029 |
| 162 | 2.1910 | 0.0029 |
| 163 | 2.1939 | 0.0029 |
| 164 | 2.1968 | 0.0029 |
| 165 | 2.1997 | 0.0029 |
| 166 | 2.2025 | 0.0029 |
| 167 | 2.2054 | 0.0029 |
| 168 | 2.2082 | 0.0028 |
| 169 | 2.2111 | 0.0028 |
| 170 | 2.2139 | 0.0028 |
| 171 | 2.2167 | 0.0028 |
| 172 | 2.2195 | 0.0028 |
| 173 | 2.2222 | 0.0028 |
| 174 | 2.2250 | 0.0028 |
| 175 | 2.2277 | 0.0027 |
| 176 | 2.2305 | 0.0027 |
| 177 | 2.2332 | 0.0027 |
| 178 | 2.2359 | 0.0027 |
| 179 | 2.2386 | 0.0027 |
| 180 | 2.2413 | 0.0027 |
| 181 | 2.2440 | 0.0027 |
| 182 | 2.2466 | 0.0027 |
| 183 | 2.2493 | 0.0027 |
| 184 | 2.2519 | 0.0026 |
| 185 | 2.2545 | 0.0026 |
| 186 | 2.2572 | 0.0026 |
| 187 | 2.2598 | 0.0026 |
| 188 | 2.2624 | 0.0026 |
| 189 | 2.2650 | 0.0026 |
| 190 | 2.2675 | 0.0026 |
| 191 | 2.2701 | 0.0026 |
| 192 | 2.2726 | 0.0026 |
| 193 | 2.2752 | 0.0025 |
| 194 | 2.2777 | 0.0025 |
| 195 | 2.2802 | 0.0025 |
| 196 | 2.2828 | 0.0025 |
| 197 | 2.2853 | 0.0025 |
| 198 | 2.2878 | 0.0025 |
| 199 | 2.2902 | 0.0025 |
| 200 | 2.2927 | 0.0025 |
| 201 | 2.2952 | 0.0025 |
| 202 | 2.2976 | 0.0025 |
| 203 | 2.3001 | 0.0024 |
| 204 | 2.3025 | 0.0024 |
| 205 | 2.3049 | 0.0024 |
| 206 | 2.3074 | 0.0024 |
| 207 | 2.3098 | 0.0024 |
| 208 | 2.3122 | 0.0024 |
| 209 | 2.3145 | 0.0024 |
| 210 | 2.3169 | 0.0024 |
| 211 | 2.3193 | 0.0024 |
| 212 | 2.3217 | 0.0024 |
| 213 | 2.3240 | 0.0024 |
| 214 | 2.3264 | 0.0023 |

| | | |
|---|---|---|
| 215 | 2.3287 | 0.0023 |
| 216 | 2.3310 | 0.0023 |
| 217 | 2.3333 | 0.0023 |
| 218 | 2.3357 | 0.0023 |
| 219 | 2.3380 | 0.0023 |
| 220 | 2.3403 | 0.0023 |
| 221 | 2.3425 | 0.0023 |
| 222 | 2.3448 | 0.0023 |
| 223 | 2.3471 | 0.0023 |
| 224 | 2.3493 | 0.0023 |
| 225 | 2.3516 | 0.0023 |
| 226 | 2.3539 | 0.0022 |
| 227 | 2.3561 | 0.0022 |
| 228 | 2.3583 | 0.0022 |
| 229 | 2.3605 | 0.0022 |
| 230 | 2.3628 | 0.0022 |
| 231 | 2.3650 | 0.0022 |
| 232 | 2.3672 | 0.0022 |
| 233 | 2.3694 | 0.0022 |
| 234 | 2.3715 | 0.0022 |
| 235 | 2.3737 | 0.0022 |
| 236 | 2.3759 | 0.0022 |
| 237 | 2.3781 | 0.0022 |
| 238 | 2.3802 | 0.0022 |
| 239 | 2.3824 | 0.0021 |
| 240 | 2.3845 | 0.0021 |
| 241 | 2.3866 | 0.0021 |
| 242 | 2.3888 | 0.0021 |
| 243 | 2.3909 | 0.0021 |
| 244 | 2.3930 | 0.0021 |
| 245 | 2.3951 | 0.0021 |
| 246 | 2.3972 | 0.0021 |
| 247 | 2.3993 | 0.0021 |
| 248 | 2.4014 | 0.0021 |
| 249 | 2.4035 | 0.0021 |
| 250 | 2.4056 | 0.0021 |
| 251 | 2.4076 | 0.0021 |
| 252 | 2.4097 | 0.0021 |
| 253 | 2.4118 | 0.0021 |
| 254 | 2.4138 | 0.0020 |
| 255 | 2.4158 | 0.0020 |
| 256 | 2.4179 | 0.0020 |
| 257 | 2.4199 | 0.0020 |
| 258 | 2.4219 | 0.0020 |
| 259 | 2.4240 | 0.0020 |
| 260 | 2.4260 | 0.0020 |
| 261 | 2.4280 | 0.0020 |
| 262 | 2.4300 | 0.0020 |
| 263 | 2.4320 | 0.0020 |
| 264 | 2.4340 | 0.0020 |
| 265 | 2.4359 | 0.0020 |
| 266 | 2.4379 | 0.0020 |
| 267 | 2.4399 | 0.0020 |
| 268 | 2.4418 | 0.0020 |
| 269 | 2.4438 | 0.0020 |
| 270 | 2.4458 | 0.0020 |
| 271 | 2.4477 | 0.0019 |
| 272 | 2.4496 | 0.0019 |
| 273 | 2.4516 | 0.0019 |

| | | |
|---|---|---|
| 274 | 2.4535 | 0.0019 |
| 275 | 2.4554 | 0.0019 |
| 276 | 2.4574 | 0.0019 |
| 277 | 2.4593 | 0.0019 |
| 278 | 2.4612 | 0.0019 |
| 279 | 2.4631 | 0.0019 |
| 280 | 2.4650 | 0.0019 |
| 281 | 2.4669 | 0.0019 |
| 282 | 2.4688 | 0.0019 |
| 283 | 2.4707 | 0.0019 |
| 284 | 2.4725 | 0.0019 |
| 285 | 2.4744 | 0.0019 |
| 286 | 2.4763 | 0.0019 |
| 287 | 2.4781 | 0.0019 |
| 288 | 2.4800 | 0.0019 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0019 | 0.0012 | 0.0007 |
| 2 | 0.0019 | 0.0012 | 0.0007 |
| 3 | 0.0019 | 0.0012 | 0.0007 |
| 4 | 0.0019 | 0.0012 | 0.0007 |
| 5 | 0.0019 | 0.0012 | 0.0007 |
| 6 | 0.0019 | 0.0012 | 0.0007 |
| 7 | 0.0019 | 0.0012 | 0.0007 |
| 8 | 0.0019 | 0.0012 | 0.0007 |
| 9 | 0.0019 | 0.0012 | 0.0007 |
| 10 | 0.0019 | 0.0012 | 0.0007 |
| 11 | 0.0019 | 0.0012 | 0.0007 |
| 12 | 0.0019 | 0.0012 | 0.0007 |
| 13 | 0.0020 | 0.0012 | 0.0007 |
| 14 | 0.0020 | 0.0012 | 0.0007 |
| 15 | 0.0020 | 0.0013 | 0.0007 |
| 16 | 0.0020 | 0.0013 | 0.0007 |
| 17 | 0.0020 | 0.0013 | 0.0007 |
| 18 | 0.0020 | 0.0013 | 0.0007 |
| 19 | 0.0020 | 0.0013 | 0.0007 |
| 20 | 0.0020 | 0.0013 | 0.0007 |
| 21 | 0.0020 | 0.0013 | 0.0007 |
| 22 | 0.0020 | 0.0013 | 0.0007 |
| 23 | 0.0020 | 0.0013 | 0.0007 |
| 24 | 0.0020 | 0.0013 | 0.0007 |
| 25 | 0.0021 | 0.0013 | 0.0008 |
| 26 | 0.0021 | 0.0013 | 0.0008 |
| 27 | 0.0021 | 0.0013 | 0.0008 |
| 28 | 0.0021 | 0.0013 | 0.0008 |
| 29 | 0.0021 | 0.0013 | 0.0008 |
| 30 | 0.0021 | 0.0013 | 0.0008 |
| 31 | 0.0021 | 0.0013 | 0.0008 |
| 32 | 0.0021 | 0.0014 | 0.0008 |
| 33 | 0.0021 | 0.0014 | 0.0008 |
| 34 | 0.0021 | 0.0014 | 0.0008 |
| 35 | 0.0022 | 0.0014 | 0.0008 |
| 36 | 0.0022 | 0.0014 | 0.0008 |
| 37 | 0.0022 | 0.0014 | 0.0008 |
| 38 | 0.0022 | 0.0014 | 0.0008 |
| 39 | 0.0022 | 0.0014 | 0.0008 |

| | | | |
|---|---|---|---|
| 40 | 0.0022 | 0.0014 | 0.0008 |
| 41 | 0.0022 | 0.0014 | 0.0008 |
| 42 | 0.0022 | 0.0014 | 0.0008 |
| 43 | 0.0023 | 0.0014 | 0.0008 |
| 44 | 0.0023 | 0.0014 | 0.0008 |
| 45 | 0.0023 | 0.0014 | 0.0008 |
| 46 | 0.0023 | 0.0015 | 0.0008 |
| 47 | 0.0023 | 0.0015 | 0.0008 |
| 48 | 0.0023 | 0.0015 | 0.0008 |
| 49 | 0.0023 | 0.0015 | 0.0009 |
| 50 | 0.0023 | 0.0015 | 0.0009 |
| 51 | 0.0024 | 0.0015 | 0.0009 |
| 52 | 0.0024 | 0.0015 | 0.0009 |
| 53 | 0.0024 | 0.0015 | 0.0009 |
| 54 | 0.0024 | 0.0015 | 0.0009 |
| 55 | 0.0024 | 0.0015 | 0.0009 |
| 56 | 0.0024 | 0.0015 | 0.0009 |
| 57 | 0.0024 | 0.0015 | 0.0009 |
| 58 | 0.0024 | 0.0016 | 0.0009 |
| 59 | 0.0025 | 0.0016 | 0.0009 |
| 60 | 0.0025 | 0.0016 | 0.0009 |
| 61 | 0.0025 | 0.0016 | 0.0009 |
| 62 | 0.0025 | 0.0016 | 0.0009 |
| 63 | 0.0025 | 0.0016 | 0.0009 |
| 64 | 0.0025 | 0.0016 | 0.0009 |
| 65 | 0.0026 | 0.0016 | 0.0009 |
| 66 | 0.0026 | 0.0016 | 0.0009 |
| 67 | 0.0026 | 0.0016 | 0.0009 |
| 68 | 0.0026 | 0.0016 | 0.0009 |
| 69 | 0.0026 | 0.0017 | 0.0010 |
| 70 | 0.0026 | 0.0017 | 0.0010 |
| 71 | 0.0027 | 0.0017 | 0.0010 |
| 72 | 0.0027 | 0.0017 | 0.0010 |
| 73 | 0.0027 | 0.0017 | 0.0010 |
| 74 | 0.0027 | 0.0017 | 0.0010 |
| 75 | 0.0027 | 0.0017 | 0.0010 |
| 76 | 0.0027 | 0.0017 | 0.0010 |
| 77 | 0.0028 | 0.0018 | 0.0010 |
| 78 | 0.0028 | 0.0018 | 0.0010 |
| 79 | 0.0028 | 0.0018 | 0.0010 |
| 80 | 0.0028 | 0.0018 | 0.0010 |
| 81 | 0.0028 | 0.0018 | 0.0010 |
| 82 | 0.0029 | 0.0018 | 0.0010 |
| 83 | 0.0029 | 0.0018 | 0.0011 |
| 84 | 0.0029 | 0.0018 | 0.0011 |
| 85 | 0.0029 | 0.0019 | 0.0011 |
| 86 | 0.0029 | 0.0019 | 0.0011 |
| 87 | 0.0030 | 0.0019 | 0.0011 |
| 88 | 0.0030 | 0.0019 | 0.0011 |
| 89 | 0.0030 | 0.0019 | 0.0011 |
| 90 | 0.0030 | 0.0019 | 0.0011 |
| 91 | 0.0031 | 0.0019 | 0.0011 |
| 92 | 0.0031 | 0.0019 | 0.0011 |
| 93 | 0.0031 | 0.0020 | 0.0011 |
| 94 | 0.0031 | 0.0020 | 0.0011 |
| 95 | 0.0032 | 0.0020 | 0.0012 |
| 96 | 0.0032 | 0.0020 | 0.0012 |
| 97 | 0.0032 | 0.0020 | 0.0012 |
| 98 | 0.0032 | 0.0020 | 0.0012 |

| | | | |
|---|---|---|---|
| 99 | 0.0033 | 0.0021 | 0.0012 |
| 100 | 0.0033 | 0.0021 | 0.0012 |
| 101 | 0.0033 | 0.0021 | 0.0012 |
| 102 | 0.0033 | 0.0021 | 0.0012 |
| 103 | 0.0034 | 0.0021 | 0.0012 |
| 104 | 0.0034 | 0.0022 | 0.0012 |
| 105 | 0.0034 | 0.0022 | 0.0013 |
| 106 | 0.0035 | 0.0022 | 0.0013 |
| 107 | 0.0035 | 0.0022 | 0.0013 |
| 108 | 0.0035 | 0.0022 | 0.0013 |
| 109 | 0.0036 | 0.0023 | 0.0013 |
| 110 | 0.0036 | 0.0023 | 0.0013 |
| 111 | 0.0036 | 0.0023 | 0.0013 |
| 112 | 0.0036 | 0.0023 | 0.0013 |
| 113 | 0.0037 | 0.0023 | 0.0014 |
| 114 | 0.0037 | 0.0024 | 0.0014 |
| 115 | 0.0038 | 0.0024 | 0.0014 |
| 116 | 0.0038 | 0.0024 | 0.0014 |
| 117 | 0.0039 | 0.0024 | 0.0014 |
| 118 | 0.0039 | 0.0025 | 0.0014 |
| 119 | 0.0039 | 0.0025 | 0.0014 |
| 120 | 0.0040 | 0.0025 | 0.0014 |
| 121 | 0.0040 | 0.0025 | 0.0015 |
| 122 | 0.0040 | 0.0026 | 0.0015 |
| 123 | 0.0041 | 0.0026 | 0.0015 |
| 124 | 0.0041 | 0.0026 | 0.0015 |
| 125 | 0.0042 | 0.0027 | 0.0015 |
| 126 | 0.0042 | 0.0027 | 0.0015 |
| 127 | 0.0043 | 0.0027 | 0.0016 |
| 128 | 0.0043 | 0.0028 | 0.0016 |
| 129 | 0.0044 | 0.0028 | 0.0016 |
| 130 | 0.0044 | 0.0028 | 0.0016 |
| 131 | 0.0045 | 0.0029 | 0.0017 |
| 132 | 0.0046 | 0.0029 | 0.0017 |
| 133 | 0.0046 | 0.0029 | 0.0017 |
| 134 | 0.0047 | 0.0030 | 0.0017 |
| 135 | 0.0048 | 0.0030 | 0.0017 |
| 136 | 0.0048 | 0.0031 | 0.0018 |
| 137 | 0.0049 | 0.0031 | 0.0018 |
| 138 | 0.0049 | 0.0031 | 0.0018 |
| 139 | 0.0050 | 0.0032 | 0.0018 |
| 140 | 0.0051 | 0.0032 | 0.0019 |
| 141 | 0.0052 | 0.0033 | 0.0019 |
| 142 | 0.0052 | 0.0033 | 0.0019 |
| 143 | 0.0054 | 0.0034 | 0.0020 |
| 144 | 0.0054 | 0.0034 | 0.0020 |
| 145 | 0.0053 | 0.0034 | 0.0019 |
| 146 | 0.0054 | 0.0034 | 0.0020 |
| 147 | 0.0055 | 0.0035 | 0.0020 |
| 148 | 0.0056 | 0.0035 | 0.0020 |
| 149 | 0.0057 | 0.0036 | 0.0021 |
| 150 | 0.0058 | 0.0037 | 0.0021 |
| 151 | 0.0059 | 0.0038 | 0.0022 |
| 152 | 0.0060 | 0.0038 | 0.0022 |
| 153 | 0.0062 | 0.0039 | 0.0022 |
| 154 | 0.0062 | 0.0040 | 0.0023 |
| 155 | 0.0064 | 0.0041 | 0.0023 |
| 156 | 0.0065 | 0.0041 | 0.0024 |
| 157 | 0.0067 | 0.0042 | 0.0024 |

| | | | |
|---|---|---|---|
| 158 | 0.0068 | 0.0043 | 0.0025 |
| 159 | 0.0070 | 0.0044 | 0.0026 |
| 160 | 0.0071 | 0.0045 | 0.0026 |
| 161 | 0.0074 | 0.0047 | 0.0027 |
| 162 | 0.0075 | 0.0047 | 0.0027 |
| 163 | 0.0077 | 0.0049 | 0.0028 |
| 164 | 0.0079 | 0.0050 | 0.0029 |
| 165 | 0.0082 | 0.0052 | 0.0030 |
| 166 | 0.0083 | 0.0053 | 0.0031 |
| 167 | 0.0087 | 0.0055 | 0.0032 |
| 168 | 0.0089 | 0.0056 | 0.0032 |
| 169 | 0.0093 | 0.0059 | 0.0034 |
| 170 | 0.0095 | 0.0060 | 0.0035 |
| 171 | 0.0099 | 0.0063 | 0.0036 |
| 172 | 0.0102 | 0.0065 | 0.0037 |
| 173 | 0.0107 | 0.0068 | 0.0039 |
| 174 | 0.0110 | 0.0070 | 0.0040 |
| 175 | 0.0117 | 0.0074 | 0.0043 |
| 176 | 0.0121 | 0.0076 | 0.0044 |
| 177 | 0.0129 | 0.0082 | 0.0047 |
| 178 | 0.0133 | 0.0084 | 0.0049 |
| 179 | 0.0143 | 0.0091 | 0.0052 |
| 180 | 0.0149 | 0.0095 | 0.0055 |
| 181 | 0.0163 | 0.0103 | 0.0059 |
| 182 | 0.0170 | 0.0108 | 0.0062 |
| 183 | 0.0189 | 0.0120 | 0.0069 |
| 184 | 0.0200 | 0.0127 | 0.0073 |
| 185 | 0.0327 | 0.0208 | 0.0120 |
| 186 | 0.0349 | 0.0221 | 0.0127 |
| 187 | 0.0404 | 0.0257 | 0.0148 |
| 188 | 0.0441 | 0.0280 | 0.0161 |
| 189 | 0.0549 | 0.0300 | 0.0249 |
| 190 | 0.0632 | 0.0300 | 0.0333 |
| 191 | 0.0959 | 0.0300 | 0.0660 |
| 192 | 0.1393 | 0.0300 | 0.1093 |
| 193 | 0.6025 | 0.0300 | 0.5725 |
| 194 | 0.0755 | 0.0300 | 0.0455 |
| 195 | 0.0488 | 0.0300 | 0.0189 |
| 196 | 0.0374 | 0.0237 | 0.0137 |
| 197 | 0.0212 | 0.0135 | 0.0078 |
| 198 | 0.0179 | 0.0114 | 0.0065 |
| 199 | 0.0155 | 0.0099 | 0.0057 |
| 200 | 0.0138 | 0.0088 | 0.0050 |
| 201 | 0.0124 | 0.0079 | 0.0045 |
| 202 | 0.0114 | 0.0072 | 0.0042 |
| 203 | 0.0105 | 0.0066 | 0.0038 |
| 204 | 0.0097 | 0.0062 | 0.0035 |
| 205 | 0.0091 | 0.0058 | 0.0033 |
| 206 | 0.0085 | 0.0054 | 0.0031 |
| 207 | 0.0080 | 0.0051 | 0.0029 |
| 208 | 0.0076 | 0.0048 | 0.0028 |
| 209 | 0.0072 | 0.0046 | 0.0026 |
| 210 | 0.0069 | 0.0044 | 0.0025 |
| 211 | 0.0066 | 0.0042 | 0.0024 |
| 212 | 0.0063 | 0.0040 | 0.0023 |
| 213 | 0.0061 | 0.0039 | 0.0022 |
| 214 | 0.0058 | 0.0037 | 0.0021 |
| 215 | 0.0056 | 0.0036 | 0.0021 |
| 216 | 0.0054 | 0.0035 | 0.0020 |

| | | | |
|---|---|---|---|
| 217 | 0.0055 | 0.0035 | 0.0020 |
| 218 | 0.0053 | 0.0034 | 0.0019 |
| 219 | 0.0051 | 0.0033 | 0.0019 |
| 220 | 0.0050 | 0.0032 | 0.0018 |
| 221 | 0.0049 | 0.0031 | 0.0018 |
| 222 | 0.0047 | 0.0030 | 0.0017 |
| 223 | 0.0046 | 0.0029 | 0.0017 |
| 224 | 0.0045 | 0.0028 | 0.0016 |
| 225 | 0.0044 | 0.0028 | 0.0016 |
| 226 | 0.0043 | 0.0027 | 0.0016 |
| 227 | 0.0042 | 0.0026 | 0.0015 |
| 228 | 0.0041 | 0.0026 | 0.0015 |
| 229 | 0.0040 | 0.0025 | 0.0015 |
| 230 | 0.0039 | 0.0025 | 0.0014 |
| 231 | 0.0038 | 0.0024 | 0.0014 |
| 232 | 0.0037 | 0.0024 | 0.0014 |
| 233 | 0.0037 | 0.0023 | 0.0013 |
| 234 | 0.0036 | 0.0023 | 0.0013 |
| 235 | 0.0035 | 0.0022 | 0.0013 |
| 236 | 0.0035 | 0.0022 | 0.0013 |
| 237 | 0.0034 | 0.0022 | 0.0012 |
| 238 | 0.0034 | 0.0021 | 0.0012 |
| 239 | 0.0033 | 0.0021 | 0.0012 |
| 240 | 0.0032 | 0.0021 | 0.0012 |
| 241 | 0.0032 | 0.0020 | 0.0012 |
| 242 | 0.0031 | 0.0020 | 0.0011 |
| 243 | 0.0031 | 0.0020 | 0.0011 |
| 244 | 0.0030 | 0.0019 | 0.0011 |
| 245 | 0.0030 | 0.0019 | 0.0011 |
| 246 | 0.0029 | 0.0019 | 0.0011 |
| 247 | 0.0029 | 0.0018 | 0.0011 |
| 248 | 0.0029 | 0.0018 | 0.0010 |
| 249 | 0.0028 | 0.0018 | 0.0010 |
| 250 | 0.0028 | 0.0018 | 0.0010 |
| 251 | 0.0027 | 0.0017 | 0.0010 |
| 252 | 0.0027 | 0.0017 | 0.0010 |
| 253 | 0.0027 | 0.0017 | 0.0010 |
| 254 | 0.0026 | 0.0017 | 0.0010 |
| 255 | 0.0026 | 0.0017 | 0.0010 |
| 256 | 0.0026 | 0.0016 | 0.0009 |
| 257 | 0.0025 | 0.0016 | 0.0009 |
| 258 | 0.0025 | 0.0016 | 0.0009 |
| 259 | 0.0025 | 0.0016 | 0.0009 |
| 260 | 0.0025 | 0.0016 | 0.0009 |
| 261 | 0.0024 | 0.0015 | 0.0009 |
| 262 | 0.0024 | 0.0015 | 0.0009 |
| 263 | 0.0024 | 0.0015 | 0.0009 |
| 264 | 0.0023 | 0.0015 | 0.0009 |
| 265 | 0.0023 | 0.0015 | 0.0008 |
| 266 | 0.0023 | 0.0015 | 0.0008 |
| 267 | 0.0023 | 0.0014 | 0.0008 |
| 268 | 0.0022 | 0.0014 | 0.0008 |
| 269 | 0.0022 | 0.0014 | 0.0008 |
| 270 | 0.0022 | 0.0014 | 0.0008 |
| 271 | 0.0022 | 0.0014 | 0.0008 |
| 272 | 0.0022 | 0.0014 | 0.0008 |
| 273 | 0.0021 | 0.0014 | 0.0008 |
| 274 | 0.0021 | 0.0013 | 0.0008 |
| 275 | 0.0021 | 0.0013 | 0.0008 |

| | | | |
|---|---|---|---|
| 276 | 0.0021 | 0.0013 | 0.0008 |
| 277 | 0.0021 | 0.0013 | 0.0008 |
| 278 | 0.0020 | 0.0013 | 0.0007 |
| 279 | 0.0020 | 0.0013 | 0.0007 |
| 280 | 0.0020 | 0.0013 | 0.0007 |
| 281 | 0.0020 | 0.0013 | 0.0007 |
| 282 | 0.0020 | 0.0012 | 0.0007 |
| 283 | 0.0019 | 0.0012 | 0.0007 |
| 284 | 0.0019 | 0.0012 | 0.0007 |
| 285 | 0.0019 | 0.0012 | 0.0007 |
| 286 | 0.0019 | 0.0012 | 0.0007 |
| 287 | 0.0019 | 0.0012 | 0.0007 |
| 288 | 0.0019 | 0.0012 | 0.0007 |

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Total soil rain loss = 1.10(In)
Total effective rainfall = 1.38(In)
Peak flow rate in flood hydrograph = 9.16(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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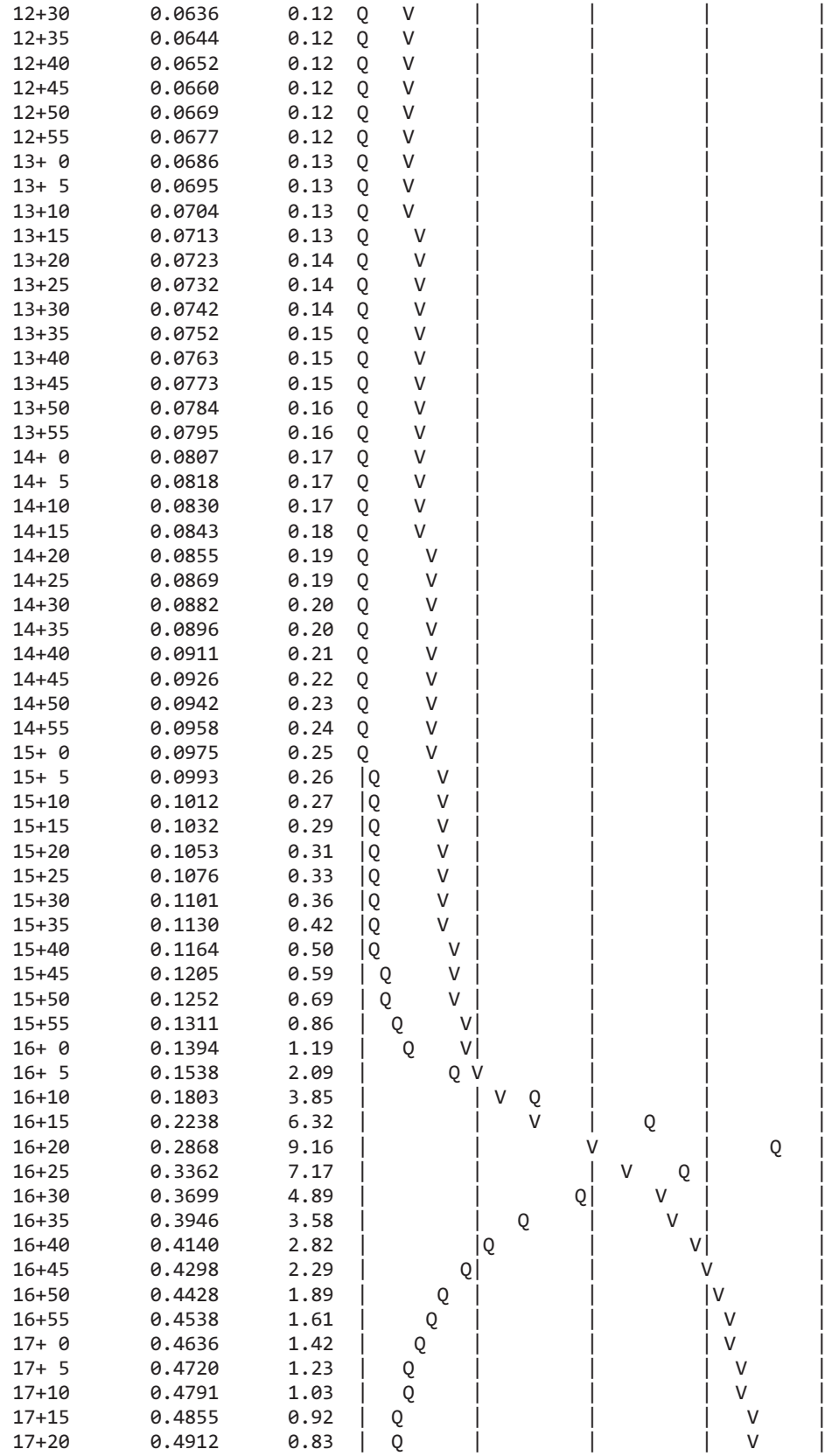
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 2.5 | 5.0 | 7.5 | 10.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0000 | 0.00 | Q | | | | |
| 0+15 | 0.0001 | 0.01 | Q | | | | |
| 0+20 | 0.0002 | 0.02 | Q | | | | |
| 0+25 | 0.0003 | 0.02 | Q | | | | |
| 0+30 | 0.0005 | 0.03 | Q | | | | |
| 0+35 | 0.0007 | 0.03 | Q | | | | |
| 0+40 | 0.0009 | 0.03 | Q | | | | |
| 0+45 | 0.0011 | 0.03 | Q | | | | |
| 0+50 | 0.0014 | 0.03 | Q | | | | |
| 0+55 | 0.0016 | 0.03 | Q | | | | |
| 1+ 0 | 0.0018 | 0.04 | Q | | | | |
| 1+ 5 | 0.0021 | 0.04 | Q | | | | |
| 1+10 | 0.0024 | 0.04 | Q | | | | |
| 1+15 | 0.0026 | 0.04 | Q | | | | |
| 1+20 | 0.0029 | 0.04 | Q | | | | |
| 1+25 | 0.0032 | 0.04 | Q | | | | |
| 1+30 | 0.0034 | 0.04 | Q | | | | |
| 1+35 | 0.0037 | 0.04 | Q | | | | |
| 1+40 | 0.0040 | 0.04 | Q | | | | |
| 1+45 | 0.0043 | 0.04 | Q | | | | |
| 1+50 | 0.0046 | 0.04 | Q | | | | |
| 1+55 | 0.0049 | 0.04 | Q | | | | |
| 2+ 0 | 0.0052 | 0.04 | Q | | | | |
| 2+ 5 | 0.0054 | 0.04 | Q | | | | |
| 2+10 | 0.0057 | 0.04 | Q | | | | |
| 2+15 | 0.0060 | 0.04 | Q | | | | |
| 2+20 | 0.0063 | 0.04 | Q | | | | |
| 2+25 | 0.0066 | 0.04 | Q | | | | |
| 2+30 | 0.0070 | 0.04 | Q | | | | |
| 2+35 | 0.0073 | 0.04 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+40 | 0.0076 | 0.04 | Q | | | | |
| 2+45 | 0.0079 | 0.05 | Q | | | | |
| 2+50 | 0.0082 | 0.05 | Q | | | | |
| 2+55 | 0.0085 | 0.05 | Q | | | | |
| 3+ 0 | 0.0088 | 0.05 | Q | | | | |
| 3+ 5 | 0.0091 | 0.05 | Q | | | | |
| 3+10 | 0.0095 | 0.05 | Q | | | | |
| 3+15 | 0.0098 | 0.05 | Q | | | | |
| 3+20 | 0.0101 | 0.05 | Q | | | | |
| 3+25 | 0.0104 | 0.05 | Q | | | | |
| 3+30 | 0.0107 | 0.05 | Q | | | | |
| 3+35 | 0.0111 | 0.05 | Q | | | | |
| 3+40 | 0.0114 | 0.05 | Q | | | | |
| 3+45 | 0.0117 | 0.05 | Q | | | | |
| 3+50 | 0.0121 | 0.05 | Q | | | | |
| 3+55 | 0.0124 | 0.05 | Q | | | | |
| 4+ 0 | 0.0127 | 0.05 | Q | | | | |
| 4+ 5 | 0.0131 | 0.05 | Q | | | | |
| 4+10 | 0.0134 | 0.05 | Q | | | | |
| 4+15 | 0.0138 | 0.05 | Q | | | | |
| 4+20 | 0.0141 | 0.05 | Q | | | | |
| 4+25 | 0.0144 | 0.05 | QV | | | | |
| 4+30 | 0.0148 | 0.05 | QV | | | | |
| 4+35 | 0.0151 | 0.05 | QV | | | | |
| 4+40 | 0.0155 | 0.05 | QV | | | | |
| 4+45 | 0.0158 | 0.05 | QV | | | | |
| 4+50 | 0.0162 | 0.05 | QV | | | | |
| 4+55 | 0.0165 | 0.05 | QV | | | | |
| 5+ 0 | 0.0169 | 0.05 | QV | | | | |
| 5+ 5 | 0.0173 | 0.05 | QV | | | | |
| 5+10 | 0.0176 | 0.05 | QV | | | | |
| 5+15 | 0.0180 | 0.05 | QV | | | | |
| 5+20 | 0.0184 | 0.05 | QV | | | | |
| 5+25 | 0.0187 | 0.05 | QV | | | | |
| 5+30 | 0.0191 | 0.05 | QV | | | | |
| 5+35 | 0.0195 | 0.05 | QV | | | | |
| 5+40 | 0.0198 | 0.05 | QV | | | | |
| 5+45 | 0.0202 | 0.05 | QV | | | | |
| 5+50 | 0.0206 | 0.06 | QV | | | | |
| 5+55 | 0.0210 | 0.06 | QV | | | | |
| 6+ 0 | 0.0214 | 0.06 | QV | | | | |
| 6+ 5 | 0.0217 | 0.06 | QV | | | | |
| 6+10 | 0.0221 | 0.06 | QV | | | | |
| 6+15 | 0.0225 | 0.06 | QV | | | | |
| 6+20 | 0.0229 | 0.06 | QV | | | | |
| 6+25 | 0.0233 | 0.06 | QV | | | | |
| 6+30 | 0.0237 | 0.06 | QV | | | | |
| 6+35 | 0.0241 | 0.06 | QV | | | | |
| 6+40 | 0.0245 | 0.06 | QV | | | | |
| 6+45 | 0.0249 | 0.06 | QV | | | | |
| 6+50 | 0.0253 | 0.06 | QV | | | | |
| 6+55 | 0.0257 | 0.06 | QV | | | | |
| 7+ 0 | 0.0262 | 0.06 | QV | | | | |
| 7+ 5 | 0.0266 | 0.06 | QV | | | | |
| 7+10 | 0.0270 | 0.06 | QV | | | | |
| 7+15 | 0.0274 | 0.06 | QV | | | | |
| 7+20 | 0.0279 | 0.06 | QV | | | | |
| 7+25 | 0.0283 | 0.06 | Q V | | | | |
| 7+30 | 0.0287 | 0.06 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7+35 | 0.0292 | 0.06 | Q V | \| | \| | \| | \| |
| 7+40 | 0.0296 | 0.06 | Q V | \| | \| | \| | \| |
| 7+45 | 0.0300 | 0.06 | Q V | \| | \| | \| | \| |
| 7+50 | 0.0305 | 0.06 | Q V | \| | \| | \| | \| |
| 7+55 | 0.0309 | 0.07 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.0314 | 0.07 | Q V | \| | \| | \| | \| |
| 8+ 5 | 0.0318 | 0.07 | Q V | \| | \| | \| | \| |
| 8+10 | 0.0323 | 0.07 | Q V | \| | \| | \| | \| |
| 8+15 | 0.0328 | 0.07 | Q V | \| | \| | \| | \| |
| 8+20 | 0.0332 | 0.07 | Q V | \| | \| | \| | \| |
| 8+25 | 0.0337 | 0.07 | Q V | \| | \| | \| | \| |
| 8+30 | 0.0342 | 0.07 | Q V | \| | \| | \| | \| |
| 8+35 | 0.0347 | 0.07 | Q V | \| | \| | \| | \| |
| 8+40 | 0.0351 | 0.07 | Q V | \| | \| | \| | \| |
| 8+45 | 0.0356 | 0.07 | Q V | \| | \| | \| | \| |
| 8+50 | 0.0361 | 0.07 | Q V | \| | \| | \| | \| |
| 8+55 | 0.0366 | 0.07 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.0371 | 0.07 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.0376 | 0.07 | Q V | \| | \| | \| | \| |
| 9+10 | 0.0381 | 0.07 | Q V | \| | \| | \| | \| |
| 9+15 | 0.0386 | 0.07 | Q V | \| | \| | \| | \| |
| 9+20 | 0.0391 | 0.08 | Q V | \| | \| | \| | \| |
| 9+25 | 0.0397 | 0.08 | Q V | \| | \| | \| | \| |
| 9+30 | 0.0402 | 0.08 | Q V | \| | \| | \| | \| |
| 9+35 | 0.0407 | 0.08 | Q V | \| | \| | \| | \| |
| 9+40 | 0.0413 | 0.08 | Q V | \| | \| | \| | \| |
| 9+45 | 0.0418 | 0.08 | Q V | \| | \| | \| | \| |
| 9+50 | 0.0424 | 0.08 | Q V | \| | \| | \| | \| |
| 9+55 | 0.0429 | 0.08 | Q  V | \| | \| | \| | \| |
| 10+ 0 | 0.0435 | 0.08 | Q  V | \| | \| | \| | \| |
| 10+ 5 | 0.0440 | 0.08 | Q  V | \| | \| | \| | \| |
| 10+10 | 0.0446 | 0.08 | Q  V | \| | \| | \| | \| |
| 10+15 | 0.0452 | 0.08 | Q  V | \| | \| | \| | \| |
| 10+20 | 0.0458 | 0.08 | Q  V | \| | \| | \| | \| |
| 10+25 | 0.0463 | 0.09 | Q  V | \| | \| | \| | \| |
| 10+30 | 0.0469 | 0.09 | Q  V | \| | \| | \| | \| |
| 10+35 | 0.0475 | 0.09 | Q  V | \| | \| | \| | \| |
| 10+40 | 0.0481 | 0.09 | Q  V | \| | \| | \| | \| |
| 10+45 | 0.0488 | 0.09 | Q  V | \| | \| | \| | \| |
| 10+50 | 0.0494 | 0.09 | Q  V | \| | \| | \| | \| |
| 10+55 | 0.0500 | 0.09 | Q  V | \| | \| | \| | \| |
| 11+ 0 | 0.0506 | 0.09 | Q  V | \| | \| | \| | \| |
| 11+ 5 | 0.0513 | 0.09 | Q  V | \| | \| | \| | \| |
| 11+10 | 0.0519 | 0.09 | Q  V | \| | \| | \| | \| |
| 11+15 | 0.0526 | 0.10 | Q  V | \| | \| | \| | \| |
| 11+20 | 0.0533 | 0.10 | Q  V | \| | \| | \| | \| |
| 11+25 | 0.0539 | 0.10 | Q  V | \| | \| | \| | \| |
| 11+30 | 0.0546 | 0.10 | Q  V | \| | \| | \| | \| |
| 11+35 | 0.0553 | 0.10 | Q  V | \| | \| | \| | \| |
| 11+40 | 0.0560 | 0.10 | Q  V | \| | \| | \| | \| |
| 11+45 | 0.0567 | 0.10 | Q   V | \| | \| | \| | \| |
| 11+50 | 0.0575 | 0.10 | Q   V | \| | \| | \| | \| |
| 11+55 | 0.0582 | 0.11 | Q   V | \| | \| | \| | \| |
| 12+ 0 | 0.0589 | 0.11 | Q   V | \| | \| | \| | \| |
| 12+ 5 | 0.0597 | 0.11 | Q   V | \| | \| | \| | \| |
| 12+10 | 0.0605 | 0.11 | Q   V | \| | \| | \| | \| |
| 12+15 | 0.0612 | 0.11 | Q   V | \| | \| | \| | \| |
| 12+20 | 0.0620 | 0.11 | Q   V | \| | \| | \| | \| |
| 12+25 | 0.0628 | 0.11 | Q   V | \| | \| | \| | \| |


12+30 0.0636 0.12
12+35 0.0644 0.12
12+40 0.0652 0.12
12+45 0.0660 0.12
12+50 0.0669 0.12
12+55 0.0677 0.12
13+ 0 0.0686 0.13
13+ 5 0.0695 0.13
13+10 0.0704 0.13
13+15 0.0713 0.13
13+20 0.0723 0.14
13+25 0.0732 0.14
13+30 0.0742 0.14
13+35 0.0752 0.15
13+40 0.0763 0.15
13+45 0.0773 0.15
13+50 0.0784 0.16
13+55 0.0795 0.16
14+ 0 0.0807 0.17
14+ 5 0.0818 0.17
14+10 0.0830 0.17
14+15 0.0843 0.18
14+20 0.0855 0.19
14+25 0.0869 0.19
14+30 0.0882 0.20
14+35 0.0896 0.20
14+40 0.0911 0.21
14+45 0.0926 0.22
14+50 0.0942 0.23
14+55 0.0958 0.24
15+ 0 0.0975 0.25
15+ 5 0.0993 0.26
15+10 0.1012 0.27
15+15 0.1032 0.29
15+20 0.1053 0.31
15+25 0.1076 0.33
15+30 0.1101 0.36
15+35 0.1130 0.42
15+40 0.1164 0.50
15+45 0.1205 0.59
15+50 0.1252 0.69
15+55 0.1311 0.86
16+ 0 0.1394 1.19
16+ 5 0.1538 2.09
16+10 0.1803 3.85
16+15 0.2238 6.32
16+20 0.2868 9.16
16+25 0.3362 7.17
16+30 0.3699 4.89
16+35 0.3946 3.58
16+40 0.4140 2.82
16+45 0.4298 2.29
16+50 0.4428 1.89
16+55 0.4538 1.61
17+ 0 0.4636 1.42
17+ 5 0.4720 1.23
17+10 0.4791 1.03
17+15 0.4855 0.92
17+20 0.4912 0.83

```
17+25       0.4964      0.75  |  Q      |         |         |    V    |
17+30       0.5010      0.66  | Q       |         |         |    V    |
17+35       0.5051      0.60  | Q       |         |         |    V    |
17+40       0.5088      0.54  | Q       |         |         |    V    |
17+45       0.5122      0.49  |Q        |         |         |     V   |
17+50       0.5152      0.44  |Q        |         |         |     V   |
17+55       0.5178      0.38  |Q        |         |         |     V   |
18+ 0       0.5202      0.34  |Q        |         |         |     V   |
18+ 5       0.5222      0.29  |Q        |         |         |     V   |
18+10       0.5241      0.28  |Q        |         |         |      V  |
18+15       0.5260      0.28  |Q        |         |         |      V  |
18+20       0.5280      0.28  |Q        |         |         |      V  |
18+25       0.5298      0.27  |Q        |         |         |      V  |
18+30       0.5315      0.25  Q         |         |         |      V  |
18+35       0.5329      0.21  Q         |         |         |      V  |
18+40       0.5342      0.18  Q         |         |         |      V  |
18+45       0.5352      0.15  Q         |         |         |      V  |
18+50       0.5360      0.12  Q         |         |         |      V  |
18+55       0.5368      0.11  Q         |         |         |      V  |
19+ 0       0.5375      0.11  Q         |         |         |       V |
19+ 5       0.5383      0.10  Q         |         |         |       V |
19+10       0.5390      0.10  Q         |         |         |       V |
19+15       0.5396      0.10  Q         |         |         |       V |
19+20       0.5403      0.10  Q         |         |         |       V |
19+25       0.5409      0.09  Q         |         |         |       V |
19+30       0.5416      0.09  Q         |         |         |       V |
19+35       0.5422      0.09  Q         |         |         |       V |
19+40       0.5428      0.09  Q         |         |         |       V |
19+45       0.5434      0.09  Q         |         |         |       V |
19+50       0.5439      0.08  Q         |         |         |       V |
19+55       0.5445      0.08  Q         |         |         |       V |
20+ 0       0.5451      0.08  Q         |         |         |       V |
20+ 5       0.5456      0.08  Q         |         |         |       V |
20+10       0.5461      0.08  Q         |         |         |       V |
20+15       0.5466      0.08  Q         |         |         |       V |
20+20       0.5472      0.07  Q         |         |         |       V |
20+25       0.5477      0.07  Q         |         |         |       V |
20+30       0.5481      0.07  Q         |         |         |       V |
20+35       0.5486      0.07  Q         |         |         |       V |
20+40       0.5491      0.07  Q         |         |         |       V |
20+45       0.5496      0.07  Q         |         |         |       V |
20+50       0.5500      0.07  Q         |         |         |       V |
20+55       0.5505      0.07  Q         |         |         |       V |
21+ 0       0.5509      0.06  Q         |         |         |       V |
21+ 5       0.5514      0.06  Q         |         |         |       V |
21+10       0.5518      0.06  Q         |         |         |        V|
21+15       0.5522      0.06  Q         |         |         |        V|
21+20       0.5527      0.06  Q         |         |         |        V|
21+25       0.5531      0.06  Q         |         |         |        V|
21+30       0.5535      0.06  Q         |         |         |        V|
21+35       0.5539      0.06  Q         |         |         |        V|
21+40       0.5543      0.06  Q         |         |         |        V|
21+45       0.5547      0.06  Q         |         |         |        V|
21+50       0.5551      0.06  Q         |         |         |        V|
21+55       0.5555      0.06  Q         |         |         |        V|
22+ 0       0.5558      0.06  Q         |         |         |        V|
22+ 5       0.5562      0.05  Q         |         |         |        V|
22+10       0.5566      0.05  Q         |         |         |        V|
22+15       0.5569      0.05  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+20 | 0.5573 | 0.05 | Q | \| | \| | \| | V\| |
| 22+25 | 0.5577 | 0.05 | Q | \| | \| | \| | V\| |
| 22+30 | 0.5580 | 0.05 | Q | \| | \| | \| | V\| |
| 22+35 | 0.5584 | 0.05 | Q | \| | \| | \| | V\| |
| 22+40 | 0.5587 | 0.05 | Q | \| | \| | \| | V\| |
| 22+45 | 0.5591 | 0.05 | Q | \| | \| | \| | V\| |
| 22+50 | 0.5594 | 0.05 | Q | \| | \| | \| | V\| |
| 22+55 | 0.5597 | 0.05 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.5601 | 0.05 | Q | \| | \| | \| | V\| |
| 23+ 5 | 0.5604 | 0.05 | Q | \| | \| | \| | V\| |
| 23+10 | 0.5607 | 0.05 | Q | \| | \| | \| | V\| |
| 23+15 | 0.5610 | 0.05 | Q | \| | \| | \| | V\| |
| 23+20 | 0.5613 | 0.05 | Q | \| | \| | \| | V\| |
| 23+25 | 0.5617 | 0.05 | Q | \| | \| | \| | V\| |
| 23+30 | 0.5620 | 0.05 | Q | \| | \| | \| | V\| |
| 23+35 | 0.5623 | 0.04 | Q | \| | \| | \| | V\| |
| 23+40 | 0.5626 | 0.04 | Q | \| | \| | \| | V\| |
| 23+45 | 0.5629 | 0.04 | Q | \| | \| | \| | V\| |
| 23+50 | 0.5632 | 0.04 | Q | \| | \| | \| | V\| |
| 23+55 | 0.5635 | 0.04 | Q | \| | \| | \| | V\| |
| 24+ 0 | 0.5638 | 0.04 | Q | \| | \| | \| | V\| |
| 24+ 5 | 0.5641 | 0.04 | Q | \| | \| | \| | V\| |
| 24+10 | 0.5644 | 0.04 | Q | \| | \| | \| | V\| |
| 24+15 | 0.5646 | 0.03 | Q | \| | \| | \| | V\| |
| 24+20 | 0.5648 | 0.03 | Q | \| | \| | \| | V\| |
| 24+25 | 0.5649 | 0.02 | Q | \| | \| | \| | V\| |
| 24+30 | 0.5650 | 0.02 | Q | \| | \| | \| | V\| |
| 24+35 | 0.5651 | 0.01 | Q | \| | \| | \| | V\| |
| 24+40 | 0.5652 | 0.01 | Q | \| | \| | \| | V\| |
| 24+45 | 0.5652 | 0.01 | Q | \| | \| | \| | V\| |
| 24+50 | 0.5653 | 0.01 | Q | \| | \| | \| | V\| |
| 24+55 | 0.5653 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 0 | 0.5654 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 5 | 0.5654 | 0.00 | Q | \| | \| | \| | V\| |
| 25+10 | 0.5654 | 0.00 | Q | \| | \| | \| | V\| |
| 25+15 | 0.5655 | 0.00 | Q | \| | \| | \| | V\| |
| 25+20 | 0.5655 | 0.00 | Q | \| | \| | \| | V\| |
| 25+25 | 0.5655 | 0.00 | Q | \| | \| | \| | V\| |
| 25+30 | 0.5655 | 0.00 | Q | \| | \| | \| | V\| |
| 25+35 | 0.5655 | 0.00 | Q | \| | \| | \| | V\| |
| 25+40 | 0.5656 | 0.00 | Q | \| | \| | \| | V\| |
| 25+45 | 0.5656 | 0.00 | Q | \| | \| | \| | V\| |
| 25+50 | 0.5656 | 0.00 | Q | \| | \| | \| | V\| |
| 25+55 | 0.5656 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 0 | 0.5656 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 0.5656 | 0.00 | Q | \| | \| | \| | V\| |
| 26+10 | 0.5656 | 0.00 | Q | \| | \| | \| | V\| |
| 26+15 | 0.5656 | 0.00 | Q | \| | \| | \| | V\| |
| 26+20 | 0.5656 | 0.00 | Q | \| | \| | \| | V\| |
| 26+25 | 0.5656 | 0.00 | Q | \| | \| | \| | V\| |
| 26+30 | 0.5656 | 0.00 | Q | \| | \| | \| | V\| |
| 26+35 | 0.5656 | 0.00 | Q | \| | \| | \| | V\| |
| 26+40 | 0.5656 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 4
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 8.95 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 8.95 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 8.95 | 24 | 2.48 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 8.95 | 1.000 | 0.360 | 1.000 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 8.95 | 1.000 | 62.0 | 80.6 | 2.41 | 0.366 |

Area-averaged catchment yield fraction, Y = 0.366
Area-averaged low loss fraction, Yb = 0.634
User entry of time of concentration = 0.520 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 8.95(Ac.)
Catchment Lag time = 0.416 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 20.0321
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.634 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.480(In)

Rainfall depth area reduction factors:
Using a total area of 8.95(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.602(In)
30-minute factor = 1.000 Adjusted rainfall = 1.031(In)
1-hour factor = 1.000 Adjusted rainfall = 1.269(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.480(In)
---

U n i t H y d r o g r a p h

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 108.24 (CFS)) | |
| 1 | 0.995 | 1.077 |
| 2 | 4.516 | 3.811 |
| 3 | 11.300 | 7.344 |
| 4 | 26.240 | 16.170 |
| 5 | 43.399 | 18.573 |
| 6 | 55.091 | 12.655 |
| 7 | 62.875 | 8.425 |
| 8 | 68.500 | 6.089 |
| 9 | 73.033 | 4.906 |
| 10 | 76.661 | 3.927 |
| 11 | 79.664 | 3.251 |
| 12 | 82.167 | 2.709 |
| 13 | 84.311 | 2.321 |
| 14 | 86.250 | 2.099 |

| | | |
|---|---|---|
| 15 | 87.937 | 1.826 |
| 16 | 89.330 | 1.507 |
| 17 | 90.508 | 1.275 |
| 18 | 91.609 | 1.192 |
| 19 | 92.585 | 1.057 |
| 20 | 93.487 | 0.976 |
| 21 | 94.262 | 0.839 |
| 22 | 94.943 | 0.737 |
| 23 | 95.601 | 0.712 |
| 24 | 96.140 | 0.582 |
| 25 | 96.660 | 0.564 |
| 26 | 97.095 | 0.470 |
| 27 | 97.455 | 0.390 |
| 28 | 97.792 | 0.365 |
| 29 | 98.009 | 0.235 |
| 30 | 98.210 | 0.217 |
| 31 | 98.432 | 0.241 |
| 32 | 98.672 | 0.260 |
| 33 | 98.913 | 0.260 |
| 34 | 99.153 | 0.260 |
| 35 | 99.393 | 0.260 |
| 36 | 99.570 | 0.191 |
| 37 | 99.695 | 0.136 |
| 38 | 99.820 | 0.136 |
| 39 | 100.000 | 0.068 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6024 | 0.6024 |
| 2 | 0.7416 | 0.1392 |
| 3 | 0.8375 | 0.0959 |
| 4 | 0.9130 | 0.0755 |
| 5 | 0.9762 | 0.0632 |
| 6 | 1.0311 | 0.0549 |
| 7 | 1.0799 | 0.0488 |
| 8 | 1.1241 | 0.0441 |
| 9 | 1.1645 | 0.0404 |
| 10 | 1.2019 | 0.0374 |
| 11 | 1.2368 | 0.0349 |
| 12 | 1.2695 | 0.0327 |
| 13 | 1.2907 | 0.0212 |
| 14 | 1.3107 | 0.0200 |
| 15 | 1.3296 | 0.0189 |
| 16 | 1.3475 | 0.0179 |
| 17 | 1.3645 | 0.0170 |
| 18 | 1.3808 | 0.0163 |
| 19 | 1.3963 | 0.0156 |
| 20 | 1.4112 | 0.0149 |
| 21 | 1.4256 | 0.0143 |
| 22 | 1.4394 | 0.0138 |
| 23 | 1.4527 | 0.0133 |
| 24 | 1.4656 | 0.0129 |
| 25 | 1.4780 | 0.0125 |
| 26 | 1.4901 | 0.0121 |
| 27 | 1.5018 | 0.0117 |
| 28 | 1.5132 | 0.0114 |
| 29 | 1.5242 | 0.0110 |
| 30 | 1.5350 | 0.0107 |
| 31 | 1.5454 | 0.0105 |

| | | |
|---|---|---|
| 32 | 1.5556 | 0.0102 |
| 33 | 1.5656 | 0.0100 |
| 34 | 1.5753 | 0.0097 |
| 35 | 1.5848 | 0.0095 |
| 36 | 1.5941 | 0.0093 |
| 37 | 1.6031 | 0.0091 |
| 38 | 1.6120 | 0.0089 |
| 39 | 1.6207 | 0.0087 |
| 40 | 1.6292 | 0.0085 |
| 41 | 1.6376 | 0.0083 |
| 42 | 1.6457 | 0.0082 |
| 43 | 1.6538 | 0.0080 |
| 44 | 1.6617 | 0.0079 |
| 45 | 1.6694 | 0.0077 |
| 46 | 1.6770 | 0.0076 |
| 47 | 1.6845 | 0.0075 |
| 48 | 1.6919 | 0.0074 |
| 49 | 1.6991 | 0.0072 |
| 50 | 1.7062 | 0.0071 |
| 51 | 1.7132 | 0.0070 |
| 52 | 1.7201 | 0.0069 |
| 53 | 1.7269 | 0.0068 |
| 54 | 1.7336 | 0.0067 |
| 55 | 1.7402 | 0.0066 |
| 56 | 1.7467 | 0.0065 |
| 57 | 1.7531 | 0.0064 |
| 58 | 1.7594 | 0.0063 |
| 59 | 1.7657 | 0.0062 |
| 60 | 1.7718 | 0.0062 |
| 61 | 1.7779 | 0.0061 |
| 62 | 1.7839 | 0.0060 |
| 63 | 1.7898 | 0.0059 |
| 64 | 1.7956 | 0.0058 |
| 65 | 1.8014 | 0.0058 |
| 66 | 1.8071 | 0.0057 |
| 67 | 1.8127 | 0.0056 |
| 68 | 1.8183 | 0.0056 |
| 69 | 1.8238 | 0.0055 |
| 70 | 1.8293 | 0.0054 |
| 71 | 1.8346 | 0.0054 |
| 72 | 1.8399 | 0.0053 |
| 73 | 1.8454 | 0.0055 |
| 74 | 1.8508 | 0.0054 |
| 75 | 1.8562 | 0.0054 |
| 76 | 1.8615 | 0.0053 |
| 77 | 1.8667 | 0.0052 |
| 78 | 1.8719 | 0.0052 |
| 79 | 1.8771 | 0.0051 |
| 80 | 1.8822 | 0.0051 |
| 81 | 1.8872 | 0.0050 |
| 82 | 1.8922 | 0.0050 |
| 83 | 1.8971 | 0.0049 |
| 84 | 1.9020 | 0.0049 |
| 85 | 1.9069 | 0.0049 |
| 86 | 1.9117 | 0.0048 |
| 87 | 1.9165 | 0.0048 |
| 88 | 1.9212 | 0.0047 |
| 89 | 1.9259 | 0.0047 |
| 90 | 1.9305 | 0.0046 |

| | | |
|---|---|---|
| 91 | 1.9351 | 0.0046 |
| 92 | 1.9397 | 0.0046 |
| 93 | 1.9442 | 0.0045 |
| 94 | 1.9487 | 0.0045 |
| 95 | 1.9531 | 0.0044 |
| 96 | 1.9575 | 0.0044 |
| 97 | 1.9619 | 0.0044 |
| 98 | 1.9662 | 0.0043 |
| 99 | 1.9705 | 0.0043 |
| 100 | 1.9748 | 0.0043 |
| 101 | 1.9790 | 0.0042 |
| 102 | 1.9833 | 0.0042 |
| 103 | 1.9874 | 0.0042 |
| 104 | 1.9916 | 0.0041 |
| 105 | 1.9957 | 0.0041 |
| 106 | 1.9997 | 0.0041 |
| 107 | 2.0038 | 0.0040 |
| 108 | 2.0078 | 0.0040 |
| 109 | 2.0118 | 0.0040 |
| 110 | 2.0158 | 0.0040 |
| 111 | 2.0197 | 0.0039 |
| 112 | 2.0236 | 0.0039 |
| 113 | 2.0275 | 0.0039 |
| 114 | 2.0313 | 0.0039 |
| 115 | 2.0351 | 0.0038 |
| 116 | 2.0389 | 0.0038 |
| 117 | 2.0427 | 0.0038 |
| 118 | 2.0465 | 0.0037 |
| 119 | 2.0502 | 0.0037 |
| 120 | 2.0539 | 0.0037 |
| 121 | 2.0576 | 0.0037 |
| 122 | 2.0612 | 0.0036 |
| 123 | 2.0648 | 0.0036 |
| 124 | 2.0684 | 0.0036 |
| 125 | 2.0720 | 0.0036 |
| 126 | 2.0756 | 0.0036 |
| 127 | 2.0791 | 0.0035 |
| 128 | 2.0826 | 0.0035 |
| 129 | 2.0861 | 0.0035 |
| 130 | 2.0896 | 0.0035 |
| 131 | 2.0930 | 0.0035 |
| 132 | 2.0965 | 0.0034 |
| 133 | 2.0999 | 0.0034 |
| 134 | 2.1033 | 0.0034 |
| 135 | 2.1066 | 0.0034 |
| 136 | 2.1100 | 0.0034 |
| 137 | 2.1133 | 0.0033 |
| 138 | 2.1166 | 0.0033 |
| 139 | 2.1199 | 0.0033 |
| 140 | 2.1232 | 0.0033 |
| 141 | 2.1265 | 0.0033 |
| 142 | 2.1297 | 0.0032 |
| 143 | 2.1329 | 0.0032 |
| 144 | 2.1361 | 0.0032 |
| 145 | 2.1393 | 0.0032 |
| 146 | 2.1425 | 0.0032 |
| 147 | 2.1456 | 0.0032 |
| 148 | 2.1488 | 0.0031 |
| 149 | 2.1519 | 0.0031 |

| | | |
|---|---|---|
| 150 | 2.1550 | 0.0031 |
| 151 | 2.1581 | 0.0031 |
| 152 | 2.1611 | 0.0031 |
| 153 | 2.1642 | 0.0031 |
| 154 | 2.1672 | 0.0030 |
| 155 | 2.1703 | 0.0030 |
| 156 | 2.1733 | 0.0030 |
| 157 | 2.1763 | 0.0030 |
| 158 | 2.1792 | 0.0030 |
| 159 | 2.1822 | 0.0030 |
| 160 | 2.1851 | 0.0029 |
| 161 | 2.1881 | 0.0029 |
| 162 | 2.1910 | 0.0029 |
| 163 | 2.1939 | 0.0029 |
| 164 | 2.1968 | 0.0029 |
| 165 | 2.1997 | 0.0029 |
| 166 | 2.2025 | 0.0029 |
| 167 | 2.2054 | 0.0029 |
| 168 | 2.2082 | 0.0028 |
| 169 | 2.2110 | 0.0028 |
| 170 | 2.2139 | 0.0028 |
| 171 | 2.2166 | 0.0028 |
| 172 | 2.2194 | 0.0028 |
| 173 | 2.2222 | 0.0028 |
| 174 | 2.2250 | 0.0028 |
| 175 | 2.2277 | 0.0027 |
| 176 | 2.2304 | 0.0027 |
| 177 | 2.2332 | 0.0027 |
| 178 | 2.2359 | 0.0027 |
| 179 | 2.2386 | 0.0027 |
| 180 | 2.2413 | 0.0027 |
| 181 | 2.2439 | 0.0027 |
| 182 | 2.2466 | 0.0027 |
| 183 | 2.2493 | 0.0027 |
| 184 | 2.2519 | 0.0026 |
| 185 | 2.2545 | 0.0026 |
| 186 | 2.2571 | 0.0026 |
| 187 | 2.2598 | 0.0026 |
| 188 | 2.2624 | 0.0026 |
| 189 | 2.2649 | 0.0026 |
| 190 | 2.2675 | 0.0026 |
| 191 | 2.2701 | 0.0026 |
| 192 | 2.2726 | 0.0026 |
| 193 | 2.2752 | 0.0025 |
| 194 | 2.2777 | 0.0025 |
| 195 | 2.2802 | 0.0025 |
| 196 | 2.2827 | 0.0025 |
| 197 | 2.2852 | 0.0025 |
| 198 | 2.2877 | 0.0025 |
| 199 | 2.2902 | 0.0025 |
| 200 | 2.2927 | 0.0025 |
| 201 | 2.2952 | 0.0025 |
| 202 | 2.2976 | 0.0025 |
| 203 | 2.3001 | 0.0024 |
| 204 | 2.3025 | 0.0024 |
| 205 | 2.3049 | 0.0024 |
| 206 | 2.3073 | 0.0024 |
| 207 | 2.3097 | 0.0024 |
| 208 | 2.3121 | 0.0024 |

| | | |
|---|---|---|
| 209 | 2.3145 | 0.0024 |
| 210 | 2.3169 | 0.0024 |
| 211 | 2.3193 | 0.0024 |
| 212 | 2.3216 | 0.0024 |
| 213 | 2.3240 | 0.0024 |
| 214 | 2.3263 | 0.0023 |
| 215 | 2.3287 | 0.0023 |
| 216 | 2.3310 | 0.0023 |
| 217 | 2.3333 | 0.0023 |
| 218 | 2.3356 | 0.0023 |
| 219 | 2.3379 | 0.0023 |
| 220 | 2.3402 | 0.0023 |
| 221 | 2.3425 | 0.0023 |
| 222 | 2.3448 | 0.0023 |
| 223 | 2.3471 | 0.0023 |
| 224 | 2.3493 | 0.0023 |
| 225 | 2.3516 | 0.0023 |
| 226 | 2.3538 | 0.0022 |
| 227 | 2.3561 | 0.0022 |
| 228 | 2.3583 | 0.0022 |
| 229 | 2.3605 | 0.0022 |
| 230 | 2.3627 | 0.0022 |
| 231 | 2.3650 | 0.0022 |
| 232 | 2.3672 | 0.0022 |
| 233 | 2.3693 | 0.0022 |
| 234 | 2.3715 | 0.0022 |
| 235 | 2.3737 | 0.0022 |
| 236 | 2.3759 | 0.0022 |
| 237 | 2.3780 | 0.0022 |
| 238 | 2.3802 | 0.0022 |
| 239 | 2.3824 | 0.0021 |
| 240 | 2.3845 | 0.0021 |
| 241 | 2.3866 | 0.0021 |
| 242 | 2.3888 | 0.0021 |
| 243 | 2.3909 | 0.0021 |
| 244 | 2.3930 | 0.0021 |
| 245 | 2.3951 | 0.0021 |
| 246 | 2.3972 | 0.0021 |
| 247 | 2.3993 | 0.0021 |
| 248 | 2.4014 | 0.0021 |
| 249 | 2.4035 | 0.0021 |
| 250 | 2.4055 | 0.0021 |
| 251 | 2.4076 | 0.0021 |
| 252 | 2.4097 | 0.0021 |
| 253 | 2.4117 | 0.0021 |
| 254 | 2.4138 | 0.0020 |
| 255 | 2.4158 | 0.0020 |
| 256 | 2.4179 | 0.0020 |
| 257 | 2.4199 | 0.0020 |
| 258 | 2.4219 | 0.0020 |
| 259 | 2.4239 | 0.0020 |
| 260 | 2.4260 | 0.0020 |
| 261 | 2.4280 | 0.0020 |
| 262 | 2.4300 | 0.0020 |
| 263 | 2.4320 | 0.0020 |
| 264 | 2.4339 | 0.0020 |
| 265 | 2.4359 | 0.0020 |
| 266 | 2.4379 | 0.0020 |
| 267 | 2.4399 | 0.0020 |

| | | |
|---|---|---|
| 268 | 2.4418 | 0.0020 |
| 269 | 2.4438 | 0.0020 |
| 270 | 2.4457 | 0.0020 |
| 271 | 2.4477 | 0.0019 |
| 272 | 2.4496 | 0.0019 |
| 273 | 2.4516 | 0.0019 |
| 274 | 2.4535 | 0.0019 |
| 275 | 2.4554 | 0.0019 |
| 276 | 2.4573 | 0.0019 |
| 277 | 2.4593 | 0.0019 |
| 278 | 2.4612 | 0.0019 |
| 279 | 2.4631 | 0.0019 |
| 280 | 2.4650 | 0.0019 |
| 281 | 2.4669 | 0.0019 |
| 282 | 2.4688 | 0.0019 |
| 283 | 2.4706 | 0.0019 |
| 284 | 2.4725 | 0.0019 |
| 285 | 2.4744 | 0.0019 |
| 286 | 2.4763 | 0.0019 |
| 287 | 2.4781 | 0.0019 |
| 288 | 2.4800 | 0.0019 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0019 | 0.0012 | 0.0007 |
| 2 | 0.0019 | 0.0012 | 0.0007 |
| 3 | 0.0019 | 0.0012 | 0.0007 |
| 4 | 0.0019 | 0.0012 | 0.0007 |
| 5 | 0.0019 | 0.0012 | 0.0007 |
| 6 | 0.0019 | 0.0012 | 0.0007 |
| 7 | 0.0019 | 0.0012 | 0.0007 |
| 8 | 0.0019 | 0.0012 | 0.0007 |
| 9 | 0.0019 | 0.0012 | 0.0007 |
| 10 | 0.0019 | 0.0012 | 0.0007 |
| 11 | 0.0019 | 0.0012 | 0.0007 |
| 12 | 0.0019 | 0.0012 | 0.0007 |
| 13 | 0.0020 | 0.0012 | 0.0007 |
| 14 | 0.0020 | 0.0012 | 0.0007 |
| 15 | 0.0020 | 0.0013 | 0.0007 |
| 16 | 0.0020 | 0.0013 | 0.0007 |
| 17 | 0.0020 | 0.0013 | 0.0007 |
| 18 | 0.0020 | 0.0013 | 0.0007 |
| 19 | 0.0020 | 0.0013 | 0.0007 |
| 20 | 0.0020 | 0.0013 | 0.0007 |
| 21 | 0.0020 | 0.0013 | 0.0007 |
| 22 | 0.0020 | 0.0013 | 0.0007 |
| 23 | 0.0020 | 0.0013 | 0.0007 |
| 24 | 0.0020 | 0.0013 | 0.0007 |
| 25 | 0.0021 | 0.0013 | 0.0008 |
| 26 | 0.0021 | 0.0013 | 0.0008 |
| 27 | 0.0021 | 0.0013 | 0.0008 |
| 28 | 0.0021 | 0.0013 | 0.0008 |
| 29 | 0.0021 | 0.0013 | 0.0008 |
| 30 | 0.0021 | 0.0013 | 0.0008 |
| 31 | 0.0021 | 0.0013 | 0.0008 |
| 32 | 0.0021 | 0.0014 | 0.0008 |
| 33 | 0.0021 | 0.0014 | 0.0008 |

| | | | |
|---|---|---|---|
| 34 | 0.0021 | 0.0014 | 0.0008 |
| 35 | 0.0022 | 0.0014 | 0.0008 |
| 36 | 0.0022 | 0.0014 | 0.0008 |
| 37 | 0.0022 | 0.0014 | 0.0008 |
| 38 | 0.0022 | 0.0014 | 0.0008 |
| 39 | 0.0022 | 0.0014 | 0.0008 |
| 40 | 0.0022 | 0.0014 | 0.0008 |
| 41 | 0.0022 | 0.0014 | 0.0008 |
| 42 | 0.0022 | 0.0014 | 0.0008 |
| 43 | 0.0023 | 0.0014 | 0.0008 |
| 44 | 0.0023 | 0.0014 | 0.0008 |
| 45 | 0.0023 | 0.0014 | 0.0008 |
| 46 | 0.0023 | 0.0015 | 0.0008 |
| 47 | 0.0023 | 0.0015 | 0.0008 |
| 48 | 0.0023 | 0.0015 | 0.0008 |
| 49 | 0.0023 | 0.0015 | 0.0009 |
| 50 | 0.0023 | 0.0015 | 0.0009 |
| 51 | 0.0024 | 0.0015 | 0.0009 |
| 52 | 0.0024 | 0.0015 | 0.0009 |
| 53 | 0.0024 | 0.0015 | 0.0009 |
| 54 | 0.0024 | 0.0015 | 0.0009 |
| 55 | 0.0024 | 0.0015 | 0.0009 |
| 56 | 0.0024 | 0.0015 | 0.0009 |
| 57 | 0.0024 | 0.0015 | 0.0009 |
| 58 | 0.0024 | 0.0016 | 0.0009 |
| 59 | 0.0025 | 0.0016 | 0.0009 |
| 60 | 0.0025 | 0.0016 | 0.0009 |
| 61 | 0.0025 | 0.0016 | 0.0009 |
| 62 | 0.0025 | 0.0016 | 0.0009 |
| 63 | 0.0025 | 0.0016 | 0.0009 |
| 64 | 0.0025 | 0.0016 | 0.0009 |
| 65 | 0.0026 | 0.0016 | 0.0009 |
| 66 | 0.0026 | 0.0016 | 0.0009 |
| 67 | 0.0026 | 0.0016 | 0.0009 |
| 68 | 0.0026 | 0.0016 | 0.0009 |
| 69 | 0.0026 | 0.0017 | 0.0010 |
| 70 | 0.0026 | 0.0017 | 0.0010 |
| 71 | 0.0027 | 0.0017 | 0.0010 |
| 72 | 0.0027 | 0.0017 | 0.0010 |
| 73 | 0.0027 | 0.0017 | 0.0010 |
| 74 | 0.0027 | 0.0017 | 0.0010 |
| 75 | 0.0027 | 0.0017 | 0.0010 |
| 76 | 0.0027 | 0.0017 | 0.0010 |
| 77 | 0.0028 | 0.0018 | 0.0010 |
| 78 | 0.0028 | 0.0018 | 0.0010 |
| 79 | 0.0028 | 0.0018 | 0.0010 |
| 80 | 0.0028 | 0.0018 | 0.0010 |
| 81 | 0.0028 | 0.0018 | 0.0010 |
| 82 | 0.0029 | 0.0018 | 0.0010 |
| 83 | 0.0029 | 0.0018 | 0.0011 |
| 84 | 0.0029 | 0.0018 | 0.0011 |
| 85 | 0.0029 | 0.0019 | 0.0011 |
| 86 | 0.0029 | 0.0019 | 0.0011 |
| 87 | 0.0030 | 0.0019 | 0.0011 |
| 88 | 0.0030 | 0.0019 | 0.0011 |
| 89 | 0.0030 | 0.0019 | 0.0011 |
| 90 | 0.0030 | 0.0019 | 0.0011 |
| 91 | 0.0031 | 0.0019 | 0.0011 |
| 92 | 0.0031 | 0.0019 | 0.0011 |

| | | | |
|---|---|---|---|
| 93 | 0.0031 | 0.0020 | 0.0011 |
| 94 | 0.0031 | 0.0020 | 0.0011 |
| 95 | 0.0032 | 0.0020 | 0.0012 |
| 96 | 0.0032 | 0.0020 | 0.0012 |
| 97 | 0.0032 | 0.0020 | 0.0012 |
| 98 | 0.0032 | 0.0020 | 0.0012 |
| 99 | 0.0033 | 0.0021 | 0.0012 |
| 100 | 0.0033 | 0.0021 | 0.0012 |
| 101 | 0.0033 | 0.0021 | 0.0012 |
| 102 | 0.0033 | 0.0021 | 0.0012 |
| 103 | 0.0034 | 0.0021 | 0.0012 |
| 104 | 0.0034 | 0.0022 | 0.0012 |
| 105 | 0.0034 | 0.0022 | 0.0013 |
| 106 | 0.0035 | 0.0022 | 0.0013 |
| 107 | 0.0035 | 0.0022 | 0.0013 |
| 108 | 0.0035 | 0.0022 | 0.0013 |
| 109 | 0.0036 | 0.0023 | 0.0013 |
| 110 | 0.0036 | 0.0023 | 0.0013 |
| 111 | 0.0036 | 0.0023 | 0.0013 |
| 112 | 0.0036 | 0.0023 | 0.0013 |
| 113 | 0.0037 | 0.0023 | 0.0014 |
| 114 | 0.0037 | 0.0024 | 0.0014 |
| 115 | 0.0038 | 0.0024 | 0.0014 |
| 116 | 0.0038 | 0.0024 | 0.0014 |
| 117 | 0.0039 | 0.0024 | 0.0014 |
| 118 | 0.0039 | 0.0025 | 0.0014 |
| 119 | 0.0039 | 0.0025 | 0.0014 |
| 120 | 0.0040 | 0.0025 | 0.0014 |
| 121 | 0.0040 | 0.0025 | 0.0015 |
| 122 | 0.0040 | 0.0026 | 0.0015 |
| 123 | 0.0041 | 0.0026 | 0.0015 |
| 124 | 0.0041 | 0.0026 | 0.0015 |
| 125 | 0.0042 | 0.0027 | 0.0015 |
| 126 | 0.0042 | 0.0027 | 0.0015 |
| 127 | 0.0043 | 0.0027 | 0.0016 |
| 128 | 0.0043 | 0.0028 | 0.0016 |
| 129 | 0.0044 | 0.0028 | 0.0016 |
| 130 | 0.0044 | 0.0028 | 0.0016 |
| 131 | 0.0045 | 0.0029 | 0.0017 |
| 132 | 0.0046 | 0.0029 | 0.0017 |
| 133 | 0.0046 | 0.0029 | 0.0017 |
| 134 | 0.0047 | 0.0030 | 0.0017 |
| 135 | 0.0048 | 0.0030 | 0.0017 |
| 136 | 0.0048 | 0.0031 | 0.0018 |
| 137 | 0.0049 | 0.0031 | 0.0018 |
| 138 | 0.0049 | 0.0031 | 0.0018 |
| 139 | 0.0050 | 0.0032 | 0.0018 |
| 140 | 0.0051 | 0.0032 | 0.0019 |
| 141 | 0.0052 | 0.0033 | 0.0019 |
| 142 | 0.0052 | 0.0033 | 0.0019 |
| 143 | 0.0054 | 0.0034 | 0.0020 |
| 144 | 0.0054 | 0.0034 | 0.0020 |
| 145 | 0.0053 | 0.0034 | 0.0019 |
| 146 | 0.0054 | 0.0034 | 0.0020 |
| 147 | 0.0055 | 0.0035 | 0.0020 |
| 148 | 0.0056 | 0.0035 | 0.0020 |
| 149 | 0.0057 | 0.0036 | 0.0021 |
| 150 | 0.0058 | 0.0037 | 0.0021 |
| 151 | 0.0059 | 0.0038 | 0.0022 |

| | | | |
|---|---|---|---|
| 152 | 0.0060 | 0.0038 | 0.0022 |
| 153 | 0.0062 | 0.0039 | 0.0022 |
| 154 | 0.0062 | 0.0040 | 0.0023 |
| 155 | 0.0064 | 0.0041 | 0.0023 |
| 156 | 0.0065 | 0.0041 | 0.0024 |
| 157 | 0.0067 | 0.0042 | 0.0024 |
| 158 | 0.0068 | 0.0043 | 0.0025 |
| 159 | 0.0070 | 0.0044 | 0.0026 |
| 160 | 0.0071 | 0.0045 | 0.0026 |
| 161 | 0.0074 | 0.0047 | 0.0027 |
| 162 | 0.0075 | 0.0047 | 0.0027 |
| 163 | 0.0077 | 0.0049 | 0.0028 |
| 164 | 0.0079 | 0.0050 | 0.0029 |
| 165 | 0.0082 | 0.0052 | 0.0030 |
| 166 | 0.0083 | 0.0053 | 0.0031 |
| 167 | 0.0087 | 0.0055 | 0.0032 |
| 168 | 0.0089 | 0.0056 | 0.0032 |
| 169 | 0.0093 | 0.0059 | 0.0034 |
| 170 | 0.0095 | 0.0060 | 0.0035 |
| 171 | 0.0100 | 0.0063 | 0.0036 |
| 172 | 0.0102 | 0.0065 | 0.0037 |
| 173 | 0.0107 | 0.0068 | 0.0039 |
| 174 | 0.0110 | 0.0070 | 0.0040 |
| 175 | 0.0117 | 0.0074 | 0.0043 |
| 176 | 0.0121 | 0.0077 | 0.0044 |
| 177 | 0.0129 | 0.0082 | 0.0047 |
| 178 | 0.0133 | 0.0085 | 0.0049 |
| 179 | 0.0143 | 0.0091 | 0.0052 |
| 180 | 0.0149 | 0.0095 | 0.0055 |
| 181 | 0.0163 | 0.0103 | 0.0059 |
| 182 | 0.0170 | 0.0108 | 0.0062 |
| 183 | 0.0189 | 0.0120 | 0.0069 |
| 184 | 0.0200 | 0.0127 | 0.0073 |
| 185 | 0.0327 | 0.0208 | 0.0120 |
| 186 | 0.0349 | 0.0221 | 0.0127 |
| 187 | 0.0404 | 0.0256 | 0.0148 |
| 188 | 0.0441 | 0.0280 | 0.0161 |
| 189 | 0.0549 | 0.0300 | 0.0249 |
| 190 | 0.0632 | 0.0300 | 0.0332 |
| 191 | 0.0959 | 0.0300 | 0.0660 |
| 192 | 0.1392 | 0.0300 | 0.1093 |
| 193 | 0.6024 | 0.0300 | 0.5724 |
| 194 | 0.0755 | 0.0300 | 0.0455 |
| 195 | 0.0488 | 0.0300 | 0.0188 |
| 196 | 0.0374 | 0.0237 | 0.0137 |
| 197 | 0.0212 | 0.0135 | 0.0078 |
| 198 | 0.0179 | 0.0114 | 0.0065 |
| 199 | 0.0156 | 0.0099 | 0.0057 |
| 200 | 0.0138 | 0.0088 | 0.0050 |
| 201 | 0.0125 | 0.0079 | 0.0046 |
| 202 | 0.0114 | 0.0072 | 0.0042 |
| 203 | 0.0105 | 0.0066 | 0.0038 |
| 204 | 0.0097 | 0.0062 | 0.0036 |
| 205 | 0.0091 | 0.0058 | 0.0033 |
| 206 | 0.0085 | 0.0054 | 0.0031 |
| 207 | 0.0080 | 0.0051 | 0.0029 |
| 208 | 0.0076 | 0.0048 | 0.0028 |
| 209 | 0.0072 | 0.0046 | 0.0026 |
| 210 | 0.0069 | 0.0044 | 0.0025 |

| | | | |
|---|---|---|---|
| 211 | 0.0066 | 0.0042 | 0.0024 |
| 212 | 0.0063 | 0.0040 | 0.0023 |
| 213 | 0.0061 | 0.0039 | 0.0022 |
| 214 | 0.0058 | 0.0037 | 0.0021 |
| 215 | 0.0056 | 0.0036 | 0.0021 |
| 216 | 0.0054 | 0.0035 | 0.0020 |
| 217 | 0.0055 | 0.0035 | 0.0020 |
| 218 | 0.0053 | 0.0034 | 0.0019 |
| 219 | 0.0051 | 0.0033 | 0.0019 |
| 220 | 0.0050 | 0.0032 | 0.0018 |
| 221 | 0.0049 | 0.0031 | 0.0018 |
| 222 | 0.0047 | 0.0030 | 0.0017 |
| 223 | 0.0046 | 0.0029 | 0.0017 |
| 224 | 0.0045 | 0.0028 | 0.0016 |
| 225 | 0.0044 | 0.0028 | 0.0016 |
| 226 | 0.0043 | 0.0027 | 0.0016 |
| 227 | 0.0042 | 0.0026 | 0.0015 |
| 228 | 0.0041 | 0.0026 | 0.0015 |
| 229 | 0.0040 | 0.0025 | 0.0015 |
| 230 | 0.0039 | 0.0025 | 0.0014 |
| 231 | 0.0038 | 0.0024 | 0.0014 |
| 232 | 0.0037 | 0.0024 | 0.0014 |
| 233 | 0.0037 | 0.0023 | 0.0013 |
| 234 | 0.0036 | 0.0023 | 0.0013 |
| 235 | 0.0035 | 0.0022 | 0.0013 |
| 236 | 0.0035 | 0.0022 | 0.0013 |
| 237 | 0.0034 | 0.0022 | 0.0012 |
| 238 | 0.0034 | 0.0021 | 0.0012 |
| 239 | 0.0033 | 0.0021 | 0.0012 |
| 240 | 0.0032 | 0.0021 | 0.0012 |
| 241 | 0.0032 | 0.0020 | 0.0012 |
| 242 | 0.0031 | 0.0020 | 0.0011 |
| 243 | 0.0031 | 0.0020 | 0.0011 |
| 244 | 0.0030 | 0.0019 | 0.0011 |
| 245 | 0.0030 | 0.0019 | 0.0011 |
| 246 | 0.0029 | 0.0019 | 0.0011 |
| 247 | 0.0029 | 0.0018 | 0.0011 |
| 248 | 0.0029 | 0.0018 | 0.0010 |
| 249 | 0.0028 | 0.0018 | 0.0010 |
| 250 | 0.0028 | 0.0018 | 0.0010 |
| 251 | 0.0027 | 0.0017 | 0.0010 |
| 252 | 0.0027 | 0.0017 | 0.0010 |
| 253 | 0.0027 | 0.0017 | 0.0010 |
| 254 | 0.0026 | 0.0017 | 0.0010 |
| 255 | 0.0026 | 0.0017 | 0.0010 |
| 256 | 0.0026 | 0.0016 | 0.0009 |
| 257 | 0.0025 | 0.0016 | 0.0009 |
| 258 | 0.0025 | 0.0016 | 0.0009 |
| 259 | 0.0025 | 0.0016 | 0.0009 |
| 260 | 0.0025 | 0.0016 | 0.0009 |
| 261 | 0.0024 | 0.0015 | 0.0009 |
| 262 | 0.0024 | 0.0015 | 0.0009 |
| 263 | 0.0024 | 0.0015 | 0.0009 |
| 264 | 0.0023 | 0.0015 | 0.0009 |
| 265 | 0.0023 | 0.0015 | 0.0008 |
| 266 | 0.0023 | 0.0015 | 0.0008 |
| 267 | 0.0023 | 0.0014 | 0.0008 |
| 268 | 0.0022 | 0.0014 | 0.0008 |
| 269 | 0.0022 | 0.0014 | 0.0008 |

| | | | |
|---|---|---|---|
| 270 | 0.0022 | 0.0014 | 0.0008 |
| 271 | 0.0022 | 0.0014 | 0.0008 |
| 272 | 0.0022 | 0.0014 | 0.0008 |
| 273 | 0.0021 | 0.0014 | 0.0008 |
| 274 | 0.0021 | 0.0013 | 0.0008 |
| 275 | 0.0021 | 0.0013 | 0.0008 |
| 276 | 0.0021 | 0.0013 | 0.0008 |
| 277 | 0.0021 | 0.0013 | 0.0008 |
| 278 | 0.0020 | 0.0013 | 0.0007 |
| 279 | 0.0020 | 0.0013 | 0.0007 |
| 280 | 0.0020 | 0.0013 | 0.0007 |
| 281 | 0.0020 | 0.0013 | 0.0007 |
| 282 | 0.0020 | 0.0012 | 0.0007 |
| 283 | 0.0019 | 0.0012 | 0.0007 |
| 284 | 0.0019 | 0.0012 | 0.0007 |
| 285 | 0.0019 | 0.0012 | 0.0007 |
| 286 | 0.0019 | 0.0012 | 0.0007 |
| 287 | 0.0019 | 0.0012 | 0.0007 |
| 288 | 0.0019 | 0.0012 | 0.0007 |

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Total soil rain loss = 1.10(In)
Total effective rainfall = 1.38(In)
Peak flow rate in flood hydrograph = 14.09(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+15 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+20 | 0.0002 | 0.02 | Q | \| | \| | \| | \| |
| 0+25 | 0.0004 | 0.03 | Q | \| | \| | \| | \| |
| 0+30 | 0.0007 | 0.04 | Q | \| | \| | \| | \| |
| 0+35 | 0.0010 | 0.05 | Q | \| | \| | \| | \| |
| 0+40 | 0.0014 | 0.05 | Q | \| | \| | \| | \| |
| 0+45 | 0.0018 | 0.05 | Q | \| | \| | \| | \| |
| 0+50 | 0.0022 | 0.06 | Q | \| | \| | \| | \| |
| 0+55 | 0.0026 | 0.06 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0030 | 0.06 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0034 | 0.06 | Q | \| | \| | \| | \| |
| 1+10 | 0.0039 | 0.07 | Q | \| | \| | \| | \| |
| 1+15 | 0.0043 | 0.07 | Q | \| | \| | \| | \| |
| 1+20 | 0.0048 | 0.07 | Q | \| | \| | \| | \| |
| 1+25 | 0.0053 | 0.07 | Q | \| | \| | \| | \| |
| 1+30 | 0.0058 | 0.07 | Q | \| | \| | \| | \| |
| 1+35 | 0.0063 | 0.07 | Q | \| | \| | \| | \| |
| 1+40 | 0.0068 | 0.07 | Q | \| | \| | \| | \| |
| 1+45 | 0.0073 | 0.07 | Q | \| | \| | \| | \| |
| 1+50 | 0.0078 | 0.07 | Q | \| | \| | \| | \| |
| 1+55 | 0.0083 | 0.08 | Q | \| | \| | \| | \| |
| 2+ 0 | 0.0088 | 0.08 | Q | \| | \| | \| | \| |
| 2+ 5 | 0.0094 | 0.08 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+10 | 0.0099 | 0.08 | Q | | | | |
| 2+15 | 0.0104 | 0.08 | Q | | | | |
| 2+20 | 0.0110 | 0.08 | Q | | | | |
| 2+25 | 0.0115 | 0.08 | Q | | | | |
| 2+30 | 0.0121 | 0.08 | Q | | | | |
| 2+35 | 0.0126 | 0.08 | Q | | | | |
| 2+40 | 0.0132 | 0.08 | Q | | | | |
| 2+45 | 0.0137 | 0.08 | Q | | | | |
| 2+50 | 0.0143 | 0.08 | Q | | | | |
| 2+55 | 0.0148 | 0.08 | Q | | | | |
| 3+ 0 | 0.0154 | 0.08 | Q | | | | |
| 3+ 5 | 0.0160 | 0.08 | Q | | | | |
| 3+10 | 0.0166 | 0.08 | Q | | | | |
| 3+15 | 0.0171 | 0.08 | Q | | | | |
| 3+20 | 0.0177 | 0.08 | Q | | | | |
| 3+25 | 0.0183 | 0.08 | Q | | | | |
| 3+30 | 0.0189 | 0.09 | Q | | | | |
| 3+35 | 0.0195 | 0.09 | Q | | | | |
| 3+40 | 0.0201 | 0.09 | Q | | | | |
| 3+45 | 0.0207 | 0.09 | Q | | | | |
| 3+50 | 0.0213 | 0.09 | Q | | | | |
| 3+55 | 0.0219 | 0.09 | Q | | | | |
| 4+ 0 | 0.0225 | 0.09 | Q | | | | |
| 4+ 5 | 0.0231 | 0.09 | Q | | | | |
| 4+10 | 0.0237 | 0.09 | Q | | | | |
| 4+15 | 0.0243 | 0.09 | Q | | | | |
| 4+20 | 0.0250 | 0.09 | Q | | | | |
| 4+25 | 0.0256 | 0.09 | Q | | | | |
| 4+30 | 0.0262 | 0.09 | QV | | | | |
| 4+35 | 0.0268 | 0.09 | QV | | | | |
| 4+40 | 0.0275 | 0.09 | QV | | | | |
| 4+45 | 0.0281 | 0.09 | QV | | | | |
| 4+50 | 0.0287 | 0.09 | QV | | | | |
| 4+55 | 0.0294 | 0.09 | QV | | | | |
| 5+ 0 | 0.0300 | 0.09 | QV | | | | |
| 5+ 5 | 0.0307 | 0.09 | QV | | | | |
| 5+10 | 0.0313 | 0.09 | QV | | | | |
| 5+15 | 0.0320 | 0.10 | QV | | | | |
| 5+20 | 0.0327 | 0.10 | QV | | | | |
| 5+25 | 0.0333 | 0.10 | QV | | | | |
| 5+30 | 0.0340 | 0.10 | QV | | | | |
| 5+35 | 0.0347 | 0.10 | QV | | | | |
| 5+40 | 0.0353 | 0.10 | QV | | | | |
| 5+45 | 0.0360 | 0.10 | QV | | | | |
| 5+50 | 0.0367 | 0.10 | QV | | | | |
| 5+55 | 0.0374 | 0.10 | QV | | | | |
| 6+ 0 | 0.0381 | 0.10 | QV | | | | |
| 6+ 5 | 0.0388 | 0.10 | QV | | | | |
| 6+10 | 0.0395 | 0.10 | QV | | | | |
| 6+15 | 0.0402 | 0.10 | QV | | | | |
| 6+20 | 0.0409 | 0.10 | QV | | | | |
| 6+25 | 0.0416 | 0.10 | QV | | | | |
| 6+30 | 0.0423 | 0.10 | QV | | | | |
| 6+35 | 0.0431 | 0.11 | QV | | | | |
| 6+40 | 0.0438 | 0.11 | QV | | | | |
| 6+45 | 0.0445 | 0.11 | QV | | | | |
| 6+50 | 0.0453 | 0.11 | QV | | | | |
| 6+55 | 0.0460 | 0.11 | QV | | | | |
| 7+ 0 | 0.0468 | 0.11 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7+ 5 | 0.0475 | 0.11 | QV | | | | |
| 7+10 | 0.0483 | 0.11 | QV | | | | |
| 7+15 | 0.0491 | 0.11 | QV | | | | |
| 7+20 | 0.0498 | 0.11 | QV | | | | |
| 7+25 | 0.0506 | 0.11 | QV | | | | |
| 7+30 | 0.0514 | 0.11 | QV | | | | |
| 7+35 | 0.0522 | 0.11 | Q V | | | | |
| 7+40 | 0.0530 | 0.12 | Q V | | | | |
| 7+45 | 0.0538 | 0.12 | Q V | | | | |
| 7+50 | 0.0546 | 0.12 | Q V | | | | |
| 7+55 | 0.0554 | 0.12 | Q V | | | | |
| 8+ 0 | 0.0562 | 0.12 | Q V | | | | |
| 8+ 5 | 0.0570 | 0.12 | Q V | | | | |
| 8+10 | 0.0579 | 0.12 | Q V | | | | |
| 8+15 | 0.0587 | 0.12 | Q V | | | | |
| 8+20 | 0.0595 | 0.12 | Q V | | | | |
| 8+25 | 0.0604 | 0.12 | Q V | | | | |
| 8+30 | 0.0612 | 0.12 | Q V | | | | |
| 8+35 | 0.0621 | 0.13 | Q V | | | | |
| 8+40 | 0.0630 | 0.13 | Q V | | | | |
| 8+45 | 0.0638 | 0.13 | Q V | | | | |
| 8+50 | 0.0647 | 0.13 | Q V | | | | |
| 8+55 | 0.0656 | 0.13 | Q V | | | | |
| 9+ 0 | 0.0665 | 0.13 | Q V | | | | |
| 9+ 5 | 0.0674 | 0.13 | Q V | | | | |
| 9+10 | 0.0684 | 0.13 | Q V | | | | |
| 9+15 | 0.0693 | 0.13 | Q V | | | | |
| 9+20 | 0.0702 | 0.14 | Q V | | | | |
| 9+25 | 0.0711 | 0.14 | Q V | | | | |
| 9+30 | 0.0721 | 0.14 | Q V | | | | |
| 9+35 | 0.0731 | 0.14 | Q V | | | | |
| 9+40 | 0.0740 | 0.14 | Q V | | | | |
| 9+45 | 0.0750 | 0.14 | Q V | | | | |
| 9+50 | 0.0760 | 0.14 | Q V | | | | |
| 9+55 | 0.0770 | 0.14 | Q V | | | | |
| 10+ 0 | 0.0780 | 0.15 | Q  V | | | | |
| 10+ 5 | 0.0790 | 0.15 | Q  V | | | | |
| 10+10 | 0.0800 | 0.15 | Q  V | | | | |
| 10+15 | 0.0811 | 0.15 | Q  V | | | | |
| 10+20 | 0.0821 | 0.15 | Q  V | | | | |
| 10+25 | 0.0832 | 0.15 | Q  V | | | | |
| 10+30 | 0.0842 | 0.16 | Q  V | | | | |
| 10+35 | 0.0853 | 0.16 | Q  V | | | | |
| 10+40 | 0.0864 | 0.16 | Q  V | | | | |
| 10+45 | 0.0875 | 0.16 | Q  V | | | | |
| 10+50 | 0.0886 | 0.16 | Q  V | | | | |
| 10+55 | 0.0898 | 0.16 | Q  V | | | | |
| 11+ 0 | 0.0909 | 0.17 | Q  V | | | | |
| 11+ 5 | 0.0921 | 0.17 | Q  V | | | | |
| 11+10 | 0.0932 | 0.17 | Q  V | | | | |
| 11+15 | 0.0944 | 0.17 | Q  V | | | | |
| 11+20 | 0.0956 | 0.17 | Q  V | | | | |
| 11+25 | 0.0968 | 0.18 | Q  V | | | | |
| 11+30 | 0.0981 | 0.18 | Q  V | | | | |
| 11+35 | 0.0993 | 0.18 | Q  V | | | | |
| 11+40 | 0.1006 | 0.18 | Q  V | | | | |
| 11+45 | 0.1019 | 0.19 | Q  V | | | | |
| 11+50 | 0.1031 | 0.19 | Q   V | | | | |
| 11+55 | 0.1045 | 0.19 | Q   V | | | | |

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12+ 0       0.1058      0.19  Q   V     |          |          |          |
12+ 5       0.1071      0.20  Q   V     |          |          |          |
12+10       0.1085      0.20  Q   V     |          |          |          |
12+15       0.1099      0.20  Q   V     |          |          |          |
12+20       0.1113      0.20  Q   V     |          |          |          |
12+25       0.1127      0.20  Q   V     |          |          |          |
12+30       0.1141      0.21  Q   V     |          |          |          |
12+35       0.1156      0.21  Q   V     |          |          |          |
12+40       0.1171      0.21  Q   V     |          |          |          |
12+45       0.1185      0.22  Q   V     |          |          |          |
12+50       0.1201      0.22  Q   V     |          |          |          |
12+55       0.1216      0.22  Q   V     |          |          |          |
13+ 0       0.1232      0.23  Q   V     |          |          |          |
13+ 5       0.1248      0.23  Q   V     |          |          |          |
13+10       0.1264      0.24  Q   V     |          |          |          |
13+15       0.1280      0.24  Q   V     |          |          |          |
13+20       0.1297      0.24  Q    V    |          |          |          |
13+25       0.1314      0.25  Q    V    |          |          |          |
13+30       0.1332      0.26  Q    V    |          |          |          |
13+35       0.1350      0.26  Q    V    |          |          |          |
13+40       0.1368      0.27  Q    V    |          |          |          |
13+45       0.1387      0.27  Q    V    |          |          |          |
13+50       0.1406      0.28  Q    V    |          |          |          |
13+55       0.1426      0.29  Q    V    |          |          |          |
14+ 0       0.1446      0.29  Q    V    |          |          |          |
14+ 5       0.1467      0.30  Q    V    |          |          |          |
14+10       0.1488      0.31  Q    V    |          |          |          |
14+15       0.1510      0.32  Q    V    |          |          |          |
14+20       0.1533      0.33  Q    V    |          |          |          |
14+25       0.1556      0.34  Q     V   |          |          |          |
14+30       0.1580      0.35  Q     V   |          |          |          |
14+35       0.1605      0.36  Q     V   |          |          |          |
14+40       0.1631      0.37  Q     V   |          |          |          |
14+45       0.1658      0.39  Q     V   |          |          |          |
14+50       0.1685      0.40  Q     V   |          |          |          |
14+55       0.1714      0.42  Q     V   |          |          |          |
15+ 0       0.1744      0.44  Q     V   |          |          |          |
15+ 5       0.1776      0.46  Q     V   |          |          |          |
15+10       0.1809      0.48  Q      V  |          |          |          |
15+15       0.1844      0.51  |Q     V  |          |          |          |
15+20       0.1881      0.53  |Q     V  |          |          |          |
15+25       0.1920      0.57  |Q     V  |          |          |          |
15+30       0.1963      0.62  |Q     V  |          |          |          |
15+35       0.2011      0.70  |Q     V  |          |          |          |
15+40       0.2067      0.82  |Q      V |          |          |          |
15+45       0.2134      0.97  |Q      V |          |          |          |
15+50       0.2212      1.14  | Q     V |          |          |          |
15+55       0.2308      1.39  | Q     V |          |          |          |
16+ 0       0.2436      1.86  |  Q     V|          |          |          |
16+ 5       0.2652      3.14  |     Q   V          |          |          |
16+10       0.3031      5.50  |         QV         |          |          |
16+15       0.3609      8.39  |          |   V Q   |          |          |
16+20       0.4524     13.28  |          |      V  |     Q    |          |
16+25       0.5495     14.09  |          |         |V      Q  |          |
16+30       0.6207     10.34  |          |         Q   V      |          |
16+35       0.6720      7.45  |          |   Q     |     V    |          |
16+40       0.7112      5.70  |          |Q        |      V   |          |
16+45       0.7434      4.67  |        Q |         |       V  |          |
16+50       0.7700      3.86  |      Q   |         |        V |          |
```

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16+55       0.7926      3.28  |     Q   |         |         V         |
17+ 0       0.8121      2.82  |    Q    |         |         |V        |
17+ 5       0.8291      2.47  |   Q     |         |         | V       |
17+10       0.8445      2.23  |   Q     |         |         | V       |
17+15       0.8581      1.98  |  Q      |         |         |  V      |
17+20       0.8699      1.71  |  Q      |         |         |  V      |
17+25       0.8803      1.52  |  Q      |         |         |   V     |
17+30       0.8900      1.40  | Q       |         |         |   V     |
17+35       0.8988      1.28  | Q       |         |         |   V     |
17+40       0.9069      1.18  | Q       |         |         |    V    |
17+45       0.9142      1.06  | Q       |         |         |    V    |
17+50       0.9208      0.96  |Q        |         |         |    V    |
17+55       0.9270      0.90  |Q        |         |         |     V   |
18+ 0       0.9326      0.80  |Q        |         |         |     V   |
18+ 5       0.9378      0.75  |Q        |         |         |     V   |
18+10       0.9424      0.67  |Q        |         |         |     V   |
18+15       0.9465      0.60  |Q        |         |         |     V   |
18+20       0.9504      0.56  |Q        |         |         |     V   |
18+25       0.9537      0.47  Q         |         |         |      V  |
18+30       0.9568      0.45  Q         |         |         |      V  |
18+35       0.9599      0.45  Q         |         |         |      V  |
18+40       0.9630      0.45  Q         |         |         |      V  |
18+45       0.9660      0.44  Q         |         |         |      V  |
18+50       0.9690      0.43  Q         |         |         |      V  |
18+55       0.9718      0.41  Q         |         |         |      V  |
19+ 0       0.9742      0.35  Q         |         |         |      V  |
19+ 5       0.9764      0.31  Q         |         |         |      V  |
19+10       0.9783      0.29  Q         |         |         |       V |
19+15       0.9800      0.24  Q         |         |         |       V |
19+20       0.9813      0.19  Q         |         |         |       V |
19+25       0.9825      0.18  Q         |         |         |       V |
19+30       0.9837      0.17  Q         |         |         |       V |
19+35       0.9849      0.17  Q         |         |         |       V |
19+40       0.9860      0.17  Q         |         |         |       V |
19+45       0.9871      0.16  Q         |         |         |       V |
19+50       0.9882      0.16  Q         |         |         |       V |
19+55       0.9893      0.15  Q         |         |         |       V |
20+ 0       0.9903      0.15  Q         |         |         |       V |
20+ 5       0.9913      0.15  Q         |         |         |       V |
20+10       0.9923      0.14  Q         |         |         |       V |
20+15       0.9933      0.14  Q         |         |         |       V |
20+20       0.9943      0.14  Q         |         |         |       V |
20+25       0.9952      0.14  Q         |         |         |       V |
20+30       0.9961      0.13  Q         |         |         |       V |
20+35       0.9970      0.13  Q         |         |         |       V |
20+40       0.9979      0.13  Q         |         |         |       V |
20+45       0.9988      0.13  Q         |         |         |       V |
20+50       0.9996      0.12  Q         |         |         |       V |
20+55       1.0005      0.12  Q         |         |         |       V |
21+ 0       1.0013      0.12  Q         |         |         |       V |
21+ 5       1.0021      0.12  Q         |         |         |       V |
21+10       1.0029      0.12  Q         |         |         |       V |
21+15       1.0037      0.12  Q         |         |         |        V|
21+20       1.0045      0.11  Q         |         |         |        V|
21+25       1.0053      0.11  Q         |         |         |        V|
21+30       1.0060      0.11  Q         |         |         |        V|
21+35       1.0068      0.11  Q         |         |         |        V|
21+40       1.0075      0.11  Q         |         |         |        V|
21+45       1.0083      0.11  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+50 | 1.0090 | 0.10 | Q | \| | \| | \| | V\| |
| 21+55 | 1.0097 | 0.10 | Q | \| | \| | \| | V\| |
| 22+ 0 | 1.0104 | 0.10 | Q | \| | \| | \| | V\| |
| 22+ 5 | 1.0111 | 0.10 | Q | \| | \| | \| | V\| |
| 22+10 | 1.0118 | 0.10 | Q | \| | \| | \| | V\| |
| 22+15 | 1.0125 | 0.10 | Q | \| | \| | \| | V\| |
| 22+20 | 1.0131 | 0.10 | Q | \| | \| | \| | V\| |
| 22+25 | 1.0138 | 0.10 | Q | \| | \| | \| | V\| |
| 22+30 | 1.0144 | 0.09 | Q | \| | \| | \| | V\| |
| 22+35 | 1.0151 | 0.09 | Q | \| | \| | \| | V\| |
| 22+40 | 1.0157 | 0.09 | Q | \| | \| | \| | V\| |
| 22+45 | 1.0163 | 0.09 | Q | \| | \| | \| | V\| |
| 22+50 | 1.0170 | 0.09 | Q | \| | \| | \| | V\| |
| 22+55 | 1.0176 | 0.09 | Q | \| | \| | \| | V\| |
| 23+ 0 | 1.0182 | 0.09 | Q | \| | \| | \| | V\| |
| 23+ 5 | 1.0188 | 0.09 | Q | \| | \| | \| | V\| |
| 23+10 | 1.0194 | 0.09 | Q | \| | \| | \| | V\| |
| 23+15 | 1.0200 | 0.09 | Q | \| | \| | \| | V\| |
| 23+20 | 1.0206 | 0.09 | Q | \| | \| | \| | V\| |
| 23+25 | 1.0212 | 0.08 | Q | \| | \| | \| | V\| |
| 23+30 | 1.0217 | 0.08 | Q | \| | \| | \| | V\| |
| 23+35 | 1.0223 | 0.08 | Q | \| | \| | \| | V\| |
| 23+40 | 1.0229 | 0.08 | Q | \| | \| | \| | V\| |
| 23+45 | 1.0234 | 0.08 | Q | \| | \| | \| | V\| |
| 23+50 | 1.0240 | 0.08 | Q | \| | \| | \| | V\| |
| 23+55 | 1.0245 | 0.08 | Q | \| | \| | \| | V\| |
| 24+ 0 | 1.0251 | 0.08 | Q | \| | \| | \| | V\| |
| 24+ 5 | 1.0256 | 0.08 | Q | \| | \| | \| | V\| |
| 24+10 | 1.0261 | 0.07 | Q | \| | \| | \| | V\| |
| 24+15 | 1.0266 | 0.07 | Q | \| | \| | \| | V\| |
| 24+20 | 1.0270 | 0.06 | Q | \| | \| | \| | V\| |
| 24+25 | 1.0273 | 0.04 | Q | \| | \| | \| | V\| |
| 24+30 | 1.0275 | 0.04 | Q | \| | \| | \| | V\| |
| 24+35 | 1.0277 | 0.03 | Q | \| | \| | \| | V\| |
| 24+40 | 1.0279 | 0.02 | Q | \| | \| | \| | V\| |
| 24+45 | 1.0280 | 0.02 | Q | \| | \| | \| | V\| |
| 24+50 | 1.0282 | 0.02 | Q | \| | \| | \| | V\| |
| 24+55 | 1.0283 | 0.02 | Q | \| | \| | \| | V\| |
| 25+ 0 | 1.0284 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 5 | 1.0285 | 0.01 | Q | \| | \| | \| | V\| |
| 25+10 | 1.0285 | 0.01 | Q | \| | \| | \| | V\| |
| 25+15 | 1.0286 | 0.01 | Q | \| | \| | \| | V\| |
| 25+20 | 1.0287 | 0.01 | Q | \| | \| | \| | V\| |
| 25+25 | 1.0287 | 0.01 | Q | \| | \| | \| | V\| |
| 25+30 | 1.0288 | 0.01 | Q | \| | \| | \| | V\| |
| 25+35 | 1.0288 | 0.01 | Q | \| | \| | \| | V\| |
| 25+40 | 1.0288 | 0.00 | Q | \| | \| | \| | V\| |
| 25+45 | 1.0289 | 0.00 | Q | \| | \| | \| | V\| |
| 25+50 | 1.0289 | 0.00 | Q | \| | \| | \| | V\| |
| 25+55 | 1.0289 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 0 | 1.0289 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 1.0289 | 0.00 | Q | \| | \| | \| | V\| |
| 26+10 | 1.0290 | 0.00 | Q | \| | \| | \| | V\| |
| 26+15 | 1.0290 | 0.00 | Q | \| | \| | \| | V\| |
| 26+20 | 1.0290 | 0.00 | Q | \| | \| | \| | V\| |
| 26+25 | 1.0290 | 0.00 | Q | \| | \| | \| | V\| |
| 26+30 | 1.0290 | 0.00 | Q | \| | \| | \| | V\| |
| 26+35 | 1.0290 | 0.00 | Q | \| | \| | \| | V\| |
| 26+40 | 1.0290 | 0.00 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+45 | 1.0290 | 0.00 | Q | \| | \| | \| | V\| |
| 26+50 | 1.0290 | 0.00 | Q | \| | \| | \| | V\| |
| 26+55 | 1.0290 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 0 | 1.0290 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 5 | 1.0290 | 0.00 | Q | \| | \| | \| | V\| |
| 27+10 | 1.0290 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 5
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 13.66 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 13.66 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 13.66 | 24 | 2.46 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 13.66 | 1.000 | 0.360 | 1.000 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 13.66 | 1.000 | 62.0 | 80.6 | 2.41 | 0.363 |

Area-averaged catchment yield fraction, Y = 0.363
Area-averaged low loss fraction, Yb = 0.637
User entry of time of concentration = 0.520 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 13.66(Ac.)
Catchment Lag time = 0.416 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 20.0321
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.637 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.460(In)

Rainfall depth area reduction factors:
Using a total area of 13.66(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.602(In)
30-minute factor = 0.999 Adjusted rainfall = 1.031(In)
1-hour factor = 0.999 Adjusted rainfall = 1.269(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.460(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 165.20 (CFS)) | |
| 1 | 0.995 | 1.643 |
| 2 | 4.516 | 5.817 |
| 3 | 11.300 | 11.208 |
| 4 | 26.240 | 24.680 |
| 5 | 43.399 | 28.347 |
| 6 | 55.091 | 19.315 |
| 7 | 62.875 | 12.859 |
| 8 | 68.500 | 9.294 |
| 9 | 73.033 | 7.487 |
| 10 | 76.661 | 5.993 |
| 11 | 79.664 | 4.962 |
| 12 | 82.167 | 4.134 |
| 13 | 84.311 | 3.542 |
| 14 | 86.250 | 3.203 |

| | | |
|---|---|---|
| 15 | 87.937 | 2.788 |
| 16 | 89.330 | 2.301 |
| 17 | 90.508 | 1.946 |
| 18 | 91.609 | 1.820 |
| 19 | 92.585 | 1.613 |
| 20 | 93.487 | 1.490 |
| 21 | 94.262 | 1.280 |
| 22 | 94.943 | 1.125 |
| 23 | 95.601 | 1.087 |
| 24 | 96.140 | 0.889 |
| 25 | 96.660 | 0.860 |
| 26 | 97.095 | 0.718 |
| 27 | 97.455 | 0.596 |
| 28 | 97.792 | 0.557 |
| 29 | 98.009 | 0.358 |
| 30 | 98.210 | 0.331 |
| 31 | 98.432 | 0.367 |
| 32 | 98.672 | 0.397 |
| 33 | 98.913 | 0.397 |
| 34 | 99.153 | 0.397 |
| 35 | 99.393 | 0.397 |
| 36 | 99.570 | 0.292 |
| 37 | 99.695 | 0.207 |
| 38 | 99.820 | 0.207 |
| 39 | 100.000 | 0.103 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6022 | 0.6022 |
| 2 | 0.7414 | 0.1392 |
| 3 | 0.8374 | 0.0959 |
| 4 | 0.9128 | 0.0755 |
| 5 | 0.9760 | 0.0632 |
| 6 | 1.0309 | 0.0549 |
| 7 | 1.0797 | 0.0488 |
| 8 | 1.1238 | 0.0441 |
| 9 | 1.1642 | 0.0404 |
| 10 | 1.2016 | 0.0374 |
| 11 | 1.2365 | 0.0349 |
| 12 | 1.2692 | 0.0327 |
| 13 | 1.2904 | 0.0212 |
| 14 | 1.3104 | 0.0200 |
| 15 | 1.3293 | 0.0189 |
| 16 | 1.3472 | 0.0179 |
| 17 | 1.3643 | 0.0170 |
| 18 | 1.3805 | 0.0163 |
| 19 | 1.3961 | 0.0156 |
| 20 | 1.4111 | 0.0149 |
| 21 | 1.4254 | 0.0144 |
| 22 | 1.4392 | 0.0138 |
| 23 | 1.4526 | 0.0133 |
| 24 | 1.4654 | 0.0129 |
| 25 | 1.4779 | 0.0125 |
| 26 | 1.4900 | 0.0121 |
| 27 | 1.5017 | 0.0117 |
| 28 | 1.5131 | 0.0114 |
| 29 | 1.5241 | 0.0111 |
| 30 | 1.5349 | 0.0108 |
| 31 | 1.5453 | 0.0105 |

| | | |
|---|---|---|
| 32 | 1.5555 | 0.0102 |
| 33 | 1.5655 | 0.0100 |
| 34 | 1.5752 | 0.0097 |
| 35 | 1.5847 | 0.0095 |
| 36 | 1.5940 | 0.0093 |
| 37 | 1.6031 | 0.0091 |
| 38 | 1.6120 | 0.0089 |
| 39 | 1.6206 | 0.0087 |
| 40 | 1.6292 | 0.0085 |
| 41 | 1.6375 | 0.0083 |
| 42 | 1.6457 | 0.0082 |
| 43 | 1.6537 | 0.0080 |
| 44 | 1.6616 | 0.0079 |
| 45 | 1.6694 | 0.0077 |
| 46 | 1.6770 | 0.0076 |
| 47 | 1.6845 | 0.0075 |
| 48 | 1.6918 | 0.0074 |
| 49 | 1.6991 | 0.0072 |
| 50 | 1.7062 | 0.0071 |
| 51 | 1.7132 | 0.0070 |
| 52 | 1.7201 | 0.0069 |
| 53 | 1.7269 | 0.0068 |
| 54 | 1.7336 | 0.0067 |
| 55 | 1.7402 | 0.0066 |
| 56 | 1.7467 | 0.0065 |
| 57 | 1.7531 | 0.0064 |
| 58 | 1.7594 | 0.0063 |
| 59 | 1.7656 | 0.0062 |
| 60 | 1.7718 | 0.0062 |
| 61 | 1.7779 | 0.0061 |
| 62 | 1.7838 | 0.0060 |
| 63 | 1.7898 | 0.0059 |
| 64 | 1.7956 | 0.0058 |
| 65 | 1.8014 | 0.0058 |
| 66 | 1.8071 | 0.0057 |
| 67 | 1.8127 | 0.0056 |
| 68 | 1.8183 | 0.0056 |
| 69 | 1.8238 | 0.0055 |
| 70 | 1.8292 | 0.0054 |
| 71 | 1.8346 | 0.0054 |
| 72 | 1.8399 | 0.0053 |
| 73 | 1.8452 | 0.0053 |
| 74 | 1.8505 | 0.0053 |
| 75 | 1.8557 | 0.0052 |
| 76 | 1.8609 | 0.0052 |
| 77 | 1.8660 | 0.0051 |
| 78 | 1.8710 | 0.0051 |
| 79 | 1.8760 | 0.0050 |
| 80 | 1.8810 | 0.0050 |
| 81 | 1.8859 | 0.0049 |
| 82 | 1.8907 | 0.0049 |
| 83 | 1.8955 | 0.0048 |
| 84 | 1.9003 | 0.0048 |
| 85 | 1.9050 | 0.0047 |
| 86 | 1.9097 | 0.0047 |
| 87 | 1.9143 | 0.0046 |
| 88 | 1.9189 | 0.0046 |
| 89 | 1.9235 | 0.0045 |
| 90 | 1.9280 | 0.0045 |

| | | |
|---|---|---|
| 91 | 1.9324 | 0.0045 |
| 92 | 1.9369 | 0.0044 |
| 93 | 1.9413 | 0.0044 |
| 94 | 1.9456 | 0.0044 |
| 95 | 1.9499 | 0.0043 |
| 96 | 1.9542 | 0.0043 |
| 97 | 1.9585 | 0.0042 |
| 98 | 1.9627 | 0.0042 |
| 99 | 1.9669 | 0.0042 |
| 100 | 1.9710 | 0.0041 |
| 101 | 1.9751 | 0.0041 |
| 102 | 1.9792 | 0.0041 |
| 103 | 1.9832 | 0.0040 |
| 104 | 1.9873 | 0.0040 |
| 105 | 1.9913 | 0.0040 |
| 106 | 1.9952 | 0.0040 |
| 107 | 1.9991 | 0.0039 |
| 108 | 2.0030 | 0.0039 |
| 109 | 2.0069 | 0.0039 |
| 110 | 2.0108 | 0.0038 |
| 111 | 2.0146 | 0.0038 |
| 112 | 2.0184 | 0.0038 |
| 113 | 2.0221 | 0.0038 |
| 114 | 2.0259 | 0.0037 |
| 115 | 2.0296 | 0.0037 |
| 116 | 2.0333 | 0.0037 |
| 117 | 2.0369 | 0.0037 |
| 118 | 2.0405 | 0.0036 |
| 119 | 2.0442 | 0.0036 |
| 120 | 2.0477 | 0.0036 |
| 121 | 2.0513 | 0.0036 |
| 122 | 2.0548 | 0.0035 |
| 123 | 2.0584 | 0.0035 |
| 124 | 2.0619 | 0.0035 |
| 125 | 2.0653 | 0.0035 |
| 126 | 2.0688 | 0.0035 |
| 127 | 2.0722 | 0.0034 |
| 128 | 2.0756 | 0.0034 |
| 129 | 2.0790 | 0.0034 |
| 130 | 2.0824 | 0.0034 |
| 131 | 2.0857 | 0.0033 |
| 132 | 2.0890 | 0.0033 |
| 133 | 2.0923 | 0.0033 |
| 134 | 2.0956 | 0.0033 |
| 135 | 2.0989 | 0.0033 |
| 136 | 2.1021 | 0.0032 |
| 137 | 2.1054 | 0.0032 |
| 138 | 2.1086 | 0.0032 |
| 139 | 2.1118 | 0.0032 |
| 140 | 2.1150 | 0.0032 |
| 141 | 2.1181 | 0.0032 |
| 142 | 2.1212 | 0.0031 |
| 143 | 2.1244 | 0.0031 |
| 144 | 2.1275 | 0.0031 |
| 145 | 2.1306 | 0.0031 |
| 146 | 2.1336 | 0.0031 |
| 147 | 2.1367 | 0.0031 |
| 148 | 2.1397 | 0.0030 |
| 149 | 2.1427 | 0.0030 |

| | | |
|---|---|---|
| 150 | 2.1457 | 0.0030 |
| 151 | 2.1487 | 0.0030 |
| 152 | 2.1517 | 0.0030 |
| 153 | 2.1547 | 0.0030 |
| 154 | 2.1576 | 0.0029 |
| 155 | 2.1605 | 0.0029 |
| 156 | 2.1634 | 0.0029 |
| 157 | 2.1663 | 0.0029 |
| 158 | 2.1692 | 0.0029 |
| 159 | 2.1721 | 0.0029 |
| 160 | 2.1750 | 0.0029 |
| 161 | 2.1778 | 0.0028 |
| 162 | 2.1806 | 0.0028 |
| 163 | 2.1834 | 0.0028 |
| 164 | 2.1862 | 0.0028 |
| 165 | 2.1890 | 0.0028 |
| 166 | 2.1918 | 0.0028 |
| 167 | 2.1945 | 0.0028 |
| 168 | 2.1973 | 0.0027 |
| 169 | 2.2000 | 0.0027 |
| 170 | 2.2028 | 0.0027 |
| 171 | 2.2055 | 0.0027 |
| 172 | 2.2082 | 0.0027 |
| 173 | 2.2108 | 0.0027 |
| 174 | 2.2135 | 0.0027 |
| 175 | 2.2162 | 0.0027 |
| 176 | 2.2188 | 0.0026 |
| 177 | 2.2214 | 0.0026 |
| 178 | 2.2241 | 0.0026 |
| 179 | 2.2267 | 0.0026 |
| 180 | 2.2293 | 0.0026 |
| 181 | 2.2319 | 0.0026 |
| 182 | 2.2345 | 0.0026 |
| 183 | 2.2370 | 0.0026 |
| 184 | 2.2396 | 0.0026 |
| 185 | 2.2421 | 0.0025 |
| 186 | 2.2447 | 0.0025 |
| 187 | 2.2472 | 0.0025 |
| 188 | 2.2497 | 0.0025 |
| 189 | 2.2522 | 0.0025 |
| 190 | 2.2547 | 0.0025 |
| 191 | 2.2572 | 0.0025 |
| 192 | 2.2596 | 0.0025 |
| 193 | 2.2621 | 0.0025 |
| 194 | 2.2645 | 0.0025 |
| 195 | 2.2670 | 0.0024 |
| 196 | 2.2694 | 0.0024 |
| 197 | 2.2718 | 0.0024 |
| 198 | 2.2742 | 0.0024 |
| 199 | 2.2766 | 0.0024 |
| 200 | 2.2790 | 0.0024 |
| 201 | 2.2814 | 0.0024 |
| 202 | 2.2838 | 0.0024 |
| 203 | 2.2862 | 0.0024 |
| 204 | 2.2885 | 0.0024 |
| 205 | 2.2909 | 0.0023 |
| 206 | 2.2932 | 0.0023 |
| 207 | 2.2955 | 0.0023 |
| 208 | 2.2978 | 0.0023 |

| | | |
|---|---|---|
| 209 | 2.3002 | 0.0023 |
| 210 | 2.3025 | 0.0023 |
| 211 | 2.3047 | 0.0023 |
| 212 | 2.3070 | 0.0023 |
| 213 | 2.3093 | 0.0023 |
| 214 | 2.3116 | 0.0023 |
| 215 | 2.3138 | 0.0023 |
| 216 | 2.3161 | 0.0023 |
| 217 | 2.3183 | 0.0022 |
| 218 | 2.3206 | 0.0022 |
| 219 | 2.3228 | 0.0022 |
| 220 | 2.3250 | 0.0022 |
| 221 | 2.3272 | 0.0022 |
| 222 | 2.3294 | 0.0022 |
| 223 | 2.3316 | 0.0022 |
| 224 | 2.3338 | 0.0022 |
| 225 | 2.3360 | 0.0022 |
| 226 | 2.3381 | 0.0022 |
| 227 | 2.3403 | 0.0022 |
| 228 | 2.3425 | 0.0022 |
| 229 | 2.3446 | 0.0021 |
| 230 | 2.3468 | 0.0021 |
| 231 | 2.3489 | 0.0021 |
| 232 | 2.3510 | 0.0021 |
| 233 | 2.3531 | 0.0021 |
| 234 | 2.3552 | 0.0021 |
| 235 | 2.3574 | 0.0021 |
| 236 | 2.3594 | 0.0021 |
| 237 | 2.3615 | 0.0021 |
| 238 | 2.3636 | 0.0021 |
| 239 | 2.3657 | 0.0021 |
| 240 | 2.3678 | 0.0021 |
| 241 | 2.3698 | 0.0021 |
| 242 | 2.3719 | 0.0021 |
| 243 | 2.3739 | 0.0020 |
| 244 | 2.3760 | 0.0020 |
| 245 | 2.3780 | 0.0020 |
| 246 | 2.3801 | 0.0020 |
| 247 | 2.3821 | 0.0020 |
| 248 | 2.3841 | 0.0020 |
| 249 | 2.3861 | 0.0020 |
| 250 | 2.3881 | 0.0020 |
| 251 | 2.3901 | 0.0020 |
| 252 | 2.3921 | 0.0020 |
| 253 | 2.3941 | 0.0020 |
| 254 | 2.3961 | 0.0020 |
| 255 | 2.3980 | 0.0020 |
| 256 | 2.4000 | 0.0020 |
| 257 | 2.4020 | 0.0020 |
| 258 | 2.4039 | 0.0020 |
| 259 | 2.4059 | 0.0019 |
| 260 | 2.4078 | 0.0019 |
| 261 | 2.4097 | 0.0019 |
| 262 | 2.4117 | 0.0019 |
| 263 | 2.4136 | 0.0019 |
| 264 | 2.4155 | 0.0019 |
| 265 | 2.4174 | 0.0019 |
| 266 | 2.4193 | 0.0019 |
| 267 | 2.4212 | 0.0019 |

| | | |
|---|---|---|
| 268 | 2.4231 | 0.0019 |
| 269 | 2.4250 | 0.0019 |
| 270 | 2.4269 | 0.0019 |
| 271 | 2.4288 | 0.0019 |
| 272 | 2.4307 | 0.0019 |
| 273 | 2.4325 | 0.0019 |
| 274 | 2.4344 | 0.0019 |
| 275 | 2.4363 | 0.0019 |
| 276 | 2.4381 | 0.0019 |
| 277 | 2.4400 | 0.0018 |
| 278 | 2.4418 | 0.0018 |
| 279 | 2.4437 | 0.0018 |
| 280 | 2.4455 | 0.0018 |
| 281 | 2.4473 | 0.0018 |
| 282 | 2.4491 | 0.0018 |
| 283 | 2.4509 | 0.0018 |
| 284 | 2.4528 | 0.0018 |
| 285 | 2.4546 | 0.0018 |
| 286 | 2.4564 | 0.0018 |
| 287 | 2.4582 | 0.0018 |
| 288 | 2.4600 | 0.0018 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0018 | 0.0011 | 0.0007 |
| 2 | 0.0018 | 0.0011 | 0.0007 |
| 3 | 0.0018 | 0.0012 | 0.0007 |
| 4 | 0.0018 | 0.0012 | 0.0007 |
| 5 | 0.0018 | 0.0012 | 0.0007 |
| 6 | 0.0018 | 0.0012 | 0.0007 |
| 7 | 0.0018 | 0.0012 | 0.0007 |
| 8 | 0.0018 | 0.0012 | 0.0007 |
| 9 | 0.0019 | 0.0012 | 0.0007 |
| 10 | 0.0019 | 0.0012 | 0.0007 |
| 11 | 0.0019 | 0.0012 | 0.0007 |
| 12 | 0.0019 | 0.0012 | 0.0007 |
| 13 | 0.0019 | 0.0012 | 0.0007 |
| 14 | 0.0019 | 0.0012 | 0.0007 |
| 15 | 0.0019 | 0.0012 | 0.0007 |
| 16 | 0.0019 | 0.0012 | 0.0007 |
| 17 | 0.0019 | 0.0012 | 0.0007 |
| 18 | 0.0019 | 0.0012 | 0.0007 |
| 19 | 0.0019 | 0.0012 | 0.0007 |
| 20 | 0.0019 | 0.0012 | 0.0007 |
| 21 | 0.0020 | 0.0012 | 0.0007 |
| 22 | 0.0020 | 0.0012 | 0.0007 |
| 23 | 0.0020 | 0.0013 | 0.0007 |
| 24 | 0.0020 | 0.0013 | 0.0007 |
| 25 | 0.0020 | 0.0013 | 0.0007 |
| 26 | 0.0020 | 0.0013 | 0.0007 |
| 27 | 0.0020 | 0.0013 | 0.0007 |
| 28 | 0.0020 | 0.0013 | 0.0007 |
| 29 | 0.0020 | 0.0013 | 0.0007 |
| 30 | 0.0020 | 0.0013 | 0.0007 |
| 31 | 0.0020 | 0.0013 | 0.0007 |
| 32 | 0.0021 | 0.0013 | 0.0007 |
| 33 | 0.0021 | 0.0013 | 0.0008 |

| | | | |
|---|---|---|---|
| 34 | 0.0021 | 0.0013 | 0.0008 |
| 35 | 0.0021 | 0.0013 | 0.0008 |
| 36 | 0.0021 | 0.0013 | 0.0008 |
| 37 | 0.0021 | 0.0013 | 0.0008 |
| 38 | 0.0021 | 0.0014 | 0.0008 |
| 39 | 0.0021 | 0.0014 | 0.0008 |
| 40 | 0.0021 | 0.0014 | 0.0008 |
| 41 | 0.0022 | 0.0014 | 0.0008 |
| 42 | 0.0022 | 0.0014 | 0.0008 |
| 43 | 0.0022 | 0.0014 | 0.0008 |
| 44 | 0.0022 | 0.0014 | 0.0008 |
| 45 | 0.0022 | 0.0014 | 0.0008 |
| 46 | 0.0022 | 0.0014 | 0.0008 |
| 47 | 0.0022 | 0.0014 | 0.0008 |
| 48 | 0.0022 | 0.0014 | 0.0008 |
| 49 | 0.0023 | 0.0014 | 0.0008 |
| 50 | 0.0023 | 0.0014 | 0.0008 |
| 51 | 0.0023 | 0.0014 | 0.0008 |
| 52 | 0.0023 | 0.0015 | 0.0008 |
| 53 | 0.0023 | 0.0015 | 0.0008 |
| 54 | 0.0023 | 0.0015 | 0.0008 |
| 55 | 0.0023 | 0.0015 | 0.0008 |
| 56 | 0.0023 | 0.0015 | 0.0008 |
| 57 | 0.0024 | 0.0015 | 0.0009 |
| 58 | 0.0024 | 0.0015 | 0.0009 |
| 59 | 0.0024 | 0.0015 | 0.0009 |
| 60 | 0.0024 | 0.0015 | 0.0009 |
| 61 | 0.0024 | 0.0015 | 0.0009 |
| 62 | 0.0024 | 0.0015 | 0.0009 |
| 63 | 0.0024 | 0.0016 | 0.0009 |
| 64 | 0.0025 | 0.0016 | 0.0009 |
| 65 | 0.0025 | 0.0016 | 0.0009 |
| 66 | 0.0025 | 0.0016 | 0.0009 |
| 67 | 0.0025 | 0.0016 | 0.0009 |
| 68 | 0.0025 | 0.0016 | 0.0009 |
| 69 | 0.0025 | 0.0016 | 0.0009 |
| 70 | 0.0025 | 0.0016 | 0.0009 |
| 71 | 0.0026 | 0.0016 | 0.0009 |
| 72 | 0.0026 | 0.0016 | 0.0009 |
| 73 | 0.0026 | 0.0017 | 0.0009 |
| 74 | 0.0026 | 0.0017 | 0.0009 |
| 75 | 0.0026 | 0.0017 | 0.0010 |
| 76 | 0.0026 | 0.0017 | 0.0010 |
| 77 | 0.0027 | 0.0017 | 0.0010 |
| 78 | 0.0027 | 0.0017 | 0.0010 |
| 79 | 0.0027 | 0.0017 | 0.0010 |
| 80 | 0.0027 | 0.0017 | 0.0010 |
| 81 | 0.0027 | 0.0017 | 0.0010 |
| 82 | 0.0028 | 0.0018 | 0.0010 |
| 83 | 0.0028 | 0.0018 | 0.0010 |
| 84 | 0.0028 | 0.0018 | 0.0010 |
| 85 | 0.0028 | 0.0018 | 0.0010 |
| 86 | 0.0028 | 0.0018 | 0.0010 |
| 87 | 0.0029 | 0.0018 | 0.0010 |
| 88 | 0.0029 | 0.0018 | 0.0010 |
| 89 | 0.0029 | 0.0019 | 0.0011 |
| 90 | 0.0029 | 0.0019 | 0.0011 |
| 91 | 0.0030 | 0.0019 | 0.0011 |
| 92 | 0.0030 | 0.0019 | 0.0011 |

| | | | |
|---|---|---|---|
| 93 | 0.0030 | 0.0019 | 0.0011 |
| 94 | 0.0030 | 0.0019 | 0.0011 |
| 95 | 0.0031 | 0.0019 | 0.0011 |
| 96 | 0.0031 | 0.0020 | 0.0011 |
| 97 | 0.0031 | 0.0020 | 0.0011 |
| 98 | 0.0031 | 0.0020 | 0.0011 |
| 99 | 0.0032 | 0.0020 | 0.0011 |
| 100 | 0.0032 | 0.0020 | 0.0012 |
| 101 | 0.0032 | 0.0020 | 0.0012 |
| 102 | 0.0032 | 0.0021 | 0.0012 |
| 103 | 0.0033 | 0.0021 | 0.0012 |
| 104 | 0.0033 | 0.0021 | 0.0012 |
| 105 | 0.0033 | 0.0021 | 0.0012 |
| 106 | 0.0033 | 0.0021 | 0.0012 |
| 107 | 0.0034 | 0.0022 | 0.0012 |
| 108 | 0.0034 | 0.0022 | 0.0012 |
| 109 | 0.0035 | 0.0022 | 0.0013 |
| 110 | 0.0035 | 0.0022 | 0.0013 |
| 111 | 0.0035 | 0.0022 | 0.0013 |
| 112 | 0.0035 | 0.0023 | 0.0013 |
| 113 | 0.0036 | 0.0023 | 0.0013 |
| 114 | 0.0036 | 0.0023 | 0.0013 |
| 115 | 0.0037 | 0.0023 | 0.0013 |
| 116 | 0.0037 | 0.0023 | 0.0013 |
| 117 | 0.0037 | 0.0024 | 0.0014 |
| 118 | 0.0038 | 0.0024 | 0.0014 |
| 119 | 0.0038 | 0.0024 | 0.0014 |
| 120 | 0.0038 | 0.0024 | 0.0014 |
| 121 | 0.0039 | 0.0025 | 0.0014 |
| 122 | 0.0039 | 0.0025 | 0.0014 |
| 123 | 0.0040 | 0.0025 | 0.0014 |
| 124 | 0.0040 | 0.0026 | 0.0015 |
| 125 | 0.0041 | 0.0026 | 0.0015 |
| 126 | 0.0041 | 0.0026 | 0.0015 |
| 127 | 0.0042 | 0.0027 | 0.0015 |
| 128 | 0.0042 | 0.0027 | 0.0015 |
| 129 | 0.0043 | 0.0027 | 0.0016 |
| 130 | 0.0043 | 0.0028 | 0.0016 |
| 131 | 0.0044 | 0.0028 | 0.0016 |
| 132 | 0.0044 | 0.0028 | 0.0016 |
| 133 | 0.0045 | 0.0029 | 0.0016 |
| 134 | 0.0045 | 0.0029 | 0.0017 |
| 135 | 0.0046 | 0.0030 | 0.0017 |
| 136 | 0.0047 | 0.0030 | 0.0017 |
| 137 | 0.0048 | 0.0030 | 0.0017 |
| 138 | 0.0048 | 0.0031 | 0.0017 |
| 139 | 0.0049 | 0.0031 | 0.0018 |
| 140 | 0.0050 | 0.0032 | 0.0018 |
| 141 | 0.0051 | 0.0032 | 0.0018 |
| 142 | 0.0051 | 0.0033 | 0.0019 |
| 143 | 0.0052 | 0.0033 | 0.0019 |
| 144 | 0.0053 | 0.0034 | 0.0019 |
| 145 | 0.0053 | 0.0034 | 0.0019 |
| 146 | 0.0054 | 0.0034 | 0.0020 |
| 147 | 0.0055 | 0.0035 | 0.0020 |
| 148 | 0.0056 | 0.0035 | 0.0020 |
| 149 | 0.0057 | 0.0036 | 0.0021 |
| 150 | 0.0058 | 0.0037 | 0.0021 |
| 151 | 0.0059 | 0.0038 | 0.0021 |

| | | | |
|---|---|---|---|
| 152 | 0.0060 | 0.0038 | 0.0022 |
| 153 | 0.0062 | 0.0039 | 0.0022 |
| 154 | 0.0062 | 0.0040 | 0.0023 |
| 155 | 0.0064 | 0.0041 | 0.0023 |
| 156 | 0.0065 | 0.0041 | 0.0024 |
| 157 | 0.0067 | 0.0043 | 0.0024 |
| 158 | 0.0068 | 0.0043 | 0.0025 |
| 159 | 0.0070 | 0.0045 | 0.0025 |
| 160 | 0.0071 | 0.0045 | 0.0026 |
| 161 | 0.0074 | 0.0047 | 0.0027 |
| 162 | 0.0075 | 0.0048 | 0.0027 |
| 163 | 0.0077 | 0.0049 | 0.0028 |
| 164 | 0.0079 | 0.0050 | 0.0029 |
| 165 | 0.0082 | 0.0052 | 0.0030 |
| 166 | 0.0083 | 0.0053 | 0.0030 |
| 167 | 0.0087 | 0.0055 | 0.0032 |
| 168 | 0.0089 | 0.0057 | 0.0032 |
| 169 | 0.0093 | 0.0059 | 0.0034 |
| 170 | 0.0095 | 0.0061 | 0.0034 |
| 171 | 0.0100 | 0.0063 | 0.0036 |
| 172 | 0.0102 | 0.0065 | 0.0037 |
| 173 | 0.0108 | 0.0069 | 0.0039 |
| 174 | 0.0111 | 0.0070 | 0.0040 |
| 175 | 0.0117 | 0.0075 | 0.0042 |
| 176 | 0.0121 | 0.0077 | 0.0044 |
| 177 | 0.0129 | 0.0082 | 0.0047 |
| 178 | 0.0133 | 0.0085 | 0.0048 |
| 179 | 0.0144 | 0.0091 | 0.0052 |
| 180 | 0.0149 | 0.0095 | 0.0054 |
| 181 | 0.0163 | 0.0104 | 0.0059 |
| 182 | 0.0170 | 0.0109 | 0.0062 |
| 183 | 0.0189 | 0.0120 | 0.0069 |
| 184 | 0.0200 | 0.0127 | 0.0073 |
| 185 | 0.0327 | 0.0208 | 0.0119 |
| 186 | 0.0349 | 0.0222 | 0.0126 |
| 187 | 0.0404 | 0.0258 | 0.0147 |
| 188 | 0.0441 | 0.0281 | 0.0160 |
| 189 | 0.0549 | 0.0300 | 0.0249 |
| 190 | 0.0632 | 0.0300 | 0.0332 |
| 191 | 0.0959 | 0.0300 | 0.0659 |
| 192 | 0.1392 | 0.0300 | 0.1092 |
| 193 | 0.6022 | 0.0300 | 0.5723 |
| 194 | 0.0755 | 0.0300 | 0.0455 |
| 195 | 0.0488 | 0.0300 | 0.0188 |
| 196 | 0.0374 | 0.0238 | 0.0136 |
| 197 | 0.0212 | 0.0135 | 0.0077 |
| 198 | 0.0179 | 0.0114 | 0.0065 |
| 199 | 0.0156 | 0.0099 | 0.0057 |
| 200 | 0.0138 | 0.0088 | 0.0050 |
| 201 | 0.0125 | 0.0079 | 0.0045 |
| 202 | 0.0114 | 0.0072 | 0.0041 |
| 203 | 0.0105 | 0.0067 | 0.0038 |
| 204 | 0.0097 | 0.0062 | 0.0035 |
| 205 | 0.0091 | 0.0058 | 0.0033 |
| 206 | 0.0085 | 0.0054 | 0.0031 |
| 207 | 0.0080 | 0.0051 | 0.0029 |
| 208 | 0.0076 | 0.0048 | 0.0028 |
| 209 | 0.0072 | 0.0046 | 0.0026 |
| 210 | 0.0069 | 0.0044 | 0.0025 |

| | | | |
|---|---|---|---|
| 211 | 0.0066 | 0.0042 | 0.0024 |
| 212 | 0.0063 | 0.0040 | 0.0023 |
| 213 | 0.0061 | 0.0039 | 0.0022 |
| 214 | 0.0058 | 0.0037 | 0.0021 |
| 215 | 0.0056 | 0.0036 | 0.0020 |
| 216 | 0.0054 | 0.0035 | 0.0020 |
| 217 | 0.0053 | 0.0034 | 0.0019 |
| 218 | 0.0052 | 0.0033 | 0.0019 |
| 219 | 0.0050 | 0.0032 | 0.0018 |
| 220 | 0.0049 | 0.0031 | 0.0018 |
| 221 | 0.0047 | 0.0030 | 0.0017 |
| 222 | 0.0046 | 0.0029 | 0.0017 |
| 223 | 0.0045 | 0.0028 | 0.0016 |
| 224 | 0.0044 | 0.0028 | 0.0016 |
| 225 | 0.0042 | 0.0027 | 0.0015 |
| 226 | 0.0041 | 0.0026 | 0.0015 |
| 227 | 0.0040 | 0.0026 | 0.0015 |
| 228 | 0.0040 | 0.0025 | 0.0014 |
| 229 | 0.0039 | 0.0025 | 0.0014 |
| 230 | 0.0038 | 0.0024 | 0.0014 |
| 231 | 0.0037 | 0.0024 | 0.0013 |
| 232 | 0.0036 | 0.0023 | 0.0013 |
| 233 | 0.0036 | 0.0023 | 0.0013 |
| 234 | 0.0035 | 0.0022 | 0.0013 |
| 235 | 0.0034 | 0.0022 | 0.0012 |
| 236 | 0.0034 | 0.0021 | 0.0012 |
| 237 | 0.0033 | 0.0021 | 0.0012 |
| 238 | 0.0032 | 0.0021 | 0.0012 |
| 239 | 0.0032 | 0.0020 | 0.0012 |
| 240 | 0.0031 | 0.0020 | 0.0011 |
| 241 | 0.0031 | 0.0020 | 0.0011 |
| 242 | 0.0030 | 0.0019 | 0.0011 |
| 243 | 0.0030 | 0.0019 | 0.0011 |
| 244 | 0.0029 | 0.0019 | 0.0011 |
| 245 | 0.0029 | 0.0018 | 0.0011 |
| 246 | 0.0029 | 0.0018 | 0.0010 |
| 247 | 0.0028 | 0.0018 | 0.0010 |
| 248 | 0.0028 | 0.0018 | 0.0010 |
| 249 | 0.0027 | 0.0017 | 0.0010 |
| 250 | 0.0027 | 0.0017 | 0.0010 |
| 251 | 0.0027 | 0.0017 | 0.0010 |
| 252 | 0.0026 | 0.0017 | 0.0010 |
| 253 | 0.0026 | 0.0016 | 0.0009 |
| 254 | 0.0026 | 0.0016 | 0.0009 |
| 255 | 0.0025 | 0.0016 | 0.0009 |
| 256 | 0.0025 | 0.0016 | 0.0009 |
| 257 | 0.0025 | 0.0016 | 0.0009 |
| 258 | 0.0024 | 0.0015 | 0.0009 |
| 259 | 0.0024 | 0.0015 | 0.0009 |
| 260 | 0.0024 | 0.0015 | 0.0009 |
| 261 | 0.0023 | 0.0015 | 0.0009 |
| 262 | 0.0023 | 0.0015 | 0.0008 |
| 263 | 0.0023 | 0.0015 | 0.0008 |
| 264 | 0.0023 | 0.0014 | 0.0008 |
| 265 | 0.0022 | 0.0014 | 0.0008 |
| 266 | 0.0022 | 0.0014 | 0.0008 |
| 267 | 0.0022 | 0.0014 | 0.0008 |
| 268 | 0.0022 | 0.0014 | 0.0008 |
| 269 | 0.0021 | 0.0014 | 0.0008 |

| | | | |
|---|---|---|---|
| 270 | 0.0021 | 0.0014 | 0.0008 |
| 271 | 0.0021 | 0.0013 | 0.0008 |
| 272 | 0.0021 | 0.0013 | 0.0008 |
| 273 | 0.0021 | 0.0013 | 0.0007 |
| 274 | 0.0020 | 0.0013 | 0.0007 |
| 275 | 0.0020 | 0.0013 | 0.0007 |
| 276 | 0.0020 | 0.0013 | 0.0007 |
| 277 | 0.0020 | 0.0013 | 0.0007 |
| 278 | 0.0020 | 0.0013 | 0.0007 |
| 279 | 0.0019 | 0.0012 | 0.0007 |
| 280 | 0.0019 | 0.0012 | 0.0007 |
| 281 | 0.0019 | 0.0012 | 0.0007 |
| 282 | 0.0019 | 0.0012 | 0.0007 |
| 283 | 0.0019 | 0.0012 | 0.0007 |
| 284 | 0.0019 | 0.0012 | 0.0007 |
| 285 | 0.0018 | 0.0012 | 0.0007 |
| 286 | 0.0018 | 0.0012 | 0.0007 |
| 287 | 0.0018 | 0.0012 | 0.0007 |
| 288 | 0.0018 | 0.0011 | 0.0007 |

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Total soil rain loss = 1.09(In)
Total effective rainfall = 1.37(In)
Peak flow rate in flood hydrograph = 21.50(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 7.5 | 15.0 | 22.5 | 30.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+15 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+20 | 0.0003 | 0.03 | Q | \| | \| | \| | \| |
| 0+25 | 0.0006 | 0.05 | Q | \| | \| | \| | \| |
| 0+30 | 0.0011 | 0.06 | Q | \| | \| | \| | \| |
| 0+35 | 0.0015 | 0.07 | Q | \| | \| | \| | \| |
| 0+40 | 0.0020 | 0.07 | Q | \| | \| | \| | \| |
| 0+45 | 0.0026 | 0.08 | Q | \| | \| | \| | \| |
| 0+50 | 0.0032 | 0.08 | Q | \| | \| | \| | \| |
| 0+55 | 0.0038 | 0.09 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0044 | 0.09 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0050 | 0.09 | Q | \| | \| | \| | \| |
| 1+10 | 0.0057 | 0.10 | Q | \| | \| | \| | \| |
| 1+15 | 0.0064 | 0.10 | Q | \| | \| | \| | \| |
| 1+20 | 0.0070 | 0.10 | Q | \| | \| | \| | \| |
| 1+25 | 0.0077 | 0.10 | Q | \| | \| | \| | \| |
| 1+30 | 0.0085 | 0.10 | Q | \| | \| | \| | \| |
| 1+35 | 0.0092 | 0.10 | Q | \| | \| | \| | \| |
| 1+40 | 0.0099 | 0.11 | Q | \| | \| | \| | \| |
| 1+45 | 0.0106 | 0.11 | Q | \| | \| | \| | \| |
| 1+50 | 0.0114 | 0.11 | Q | \| | \| | \| | \| |
| 1+55 | 0.0122 | 0.11 | Q | \| | \| | \| | \| |
| 2+ 0 | 0.0129 | 0.11 | Q | \| | \| | \| | \| |
| 2+ 5 | 0.0137 | 0.11 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+10 | 0.0145 | 0.11 | Q | | | | |
| 2+15 | 0.0152 | 0.11 | Q | | | | |
| 2+20 | 0.0160 | 0.11 | Q | | | | |
| 2+25 | 0.0168 | 0.12 | Q | | | | |
| 2+30 | 0.0176 | 0.12 | Q | | | | |
| 2+35 | 0.0184 | 0.12 | Q | | | | |
| 2+40 | 0.0192 | 0.12 | Q | | | | |
| 2+45 | 0.0201 | 0.12 | Q | | | | |
| 2+50 | 0.0209 | 0.12 | Q | | | | |
| 2+55 | 0.0217 | 0.12 | Q | | | | |
| 3+ 0 | 0.0226 | 0.12 | Q | | | | |
| 3+ 5 | 0.0234 | 0.12 | Q | | | | |
| 3+10 | 0.0242 | 0.12 | Q | | | | |
| 3+15 | 0.0251 | 0.12 | Q | | | | |
| 3+20 | 0.0259 | 0.12 | Q | | | | |
| 3+25 | 0.0268 | 0.12 | Q | | | | |
| 3+30 | 0.0277 | 0.13 | Q | | | | |
| 3+35 | 0.0285 | 0.13 | Q | | | | |
| 3+40 | 0.0294 | 0.13 | Q | | | | |
| 3+45 | 0.0303 | 0.13 | Q | | | | |
| 3+50 | 0.0311 | 0.13 | Q | | | | |
| 3+55 | 0.0320 | 0.13 | Q | | | | |
| 4+ 0 | 0.0329 | 0.13 | Q | | | | |
| 4+ 5 | 0.0338 | 0.13 | Q | | | | |
| 4+10 | 0.0347 | 0.13 | Q | | | | |
| 4+15 | 0.0356 | 0.13 | Q | | | | |
| 4+20 | 0.0365 | 0.13 | Q | | | | |
| 4+25 | 0.0374 | 0.13 | Q | | | | |
| 4+30 | 0.0383 | 0.13 | Q | | | | |
| 4+35 | 0.0393 | 0.13 | QV | | | | |
| 4+40 | 0.0402 | 0.13 | QV | | | | |
| 4+45 | 0.0411 | 0.14 | QV | | | | |
| 4+50 | 0.0421 | 0.14 | QV | | | | |
| 4+55 | 0.0430 | 0.14 | QV | | | | |
| 5+ 0 | 0.0439 | 0.14 | QV | | | | |
| 5+ 5 | 0.0449 | 0.14 | QV | | | | |
| 5+10 | 0.0459 | 0.14 | QV | | | | |
| 5+15 | 0.0468 | 0.14 | QV | | | | |
| 5+20 | 0.0478 | 0.14 | QV | | | | |
| 5+25 | 0.0488 | 0.14 | QV | | | | |
| 5+30 | 0.0497 | 0.14 | QV | | | | |
| 5+35 | 0.0507 | 0.14 | QV | | | | |
| 5+40 | 0.0517 | 0.14 | QV | | | | |
| 5+45 | 0.0527 | 0.15 | QV | | | | |
| 5+50 | 0.0537 | 0.15 | QV | | | | |
| 5+55 | 0.0547 | 0.15 | QV | | | | |
| 6+ 0 | 0.0558 | 0.15 | QV | | | | |
| 6+ 5 | 0.0568 | 0.15 | QV | | | | |
| 6+10 | 0.0578 | 0.15 | QV | | | | |
| 6+15 | 0.0588 | 0.15 | QV | | | | |
| 6+20 | 0.0599 | 0.15 | QV | | | | |
| 6+25 | 0.0609 | 0.15 | QV | | | | |
| 6+30 | 0.0620 | 0.15 | QV | | | | |
| 6+35 | 0.0631 | 0.15 | QV | | | | |
| 6+40 | 0.0641 | 0.16 | QV | | | | |
| 6+45 | 0.0652 | 0.16 | QV | | | | |
| 6+50 | 0.0663 | 0.16 | QV | | | | |
| 6+55 | 0.0674 | 0.16 | QV | | | | |
| 7+ 0 | 0.0685 | 0.16 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7+ 5 | 0.0696 | 0.16 | QV | | | | |
| 7+10 | 0.0707 | 0.16 | QV | | | | |
| 7+15 | 0.0718 | 0.16 | QV | | | | |
| 7+20 | 0.0730 | 0.16 | QV | | | | |
| 7+25 | 0.0741 | 0.17 | QV | | | | |
| 7+30 | 0.0752 | 0.17 | QV | | | | |
| 7+35 | 0.0764 | 0.17 | QV | | | | |
| 7+40 | 0.0776 | 0.17 | QV | | | | |
| 7+45 | 0.0787 | 0.17 | Q V | | | | |
| 7+50 | 0.0799 | 0.17 | Q V | | | | |
| 7+55 | 0.0811 | 0.17 | Q V | | | | |
| 8+ 0 | 0.0823 | 0.17 | Q V | | | | |
| 8+ 5 | 0.0835 | 0.18 | Q V | | | | |
| 8+10 | 0.0847 | 0.18 | Q V | | | | |
| 8+15 | 0.0860 | 0.18 | Q V | | | | |
| 8+20 | 0.0872 | 0.18 | Q V | | | | |
| 8+25 | 0.0884 | 0.18 | Q V | | | | |
| 8+30 | 0.0897 | 0.18 | Q V | | | | |
| 8+35 | 0.0910 | 0.18 | Q V | | | | |
| 8+40 | 0.0922 | 0.19 | Q V | | | | |
| 8+45 | 0.0935 | 0.19 | Q V | | | | |
| 8+50 | 0.0948 | 0.19 | Q V | | | | |
| 8+55 | 0.0961 | 0.19 | Q V | | | | |
| 9+ 0 | 0.0975 | 0.19 | Q V | | | | |
| 9+ 5 | 0.0988 | 0.19 | Q V | | | | |
| 9+10 | 0.1001 | 0.20 | Q V | | | | |
| 9+15 | 0.1015 | 0.20 | Q V | | | | |
| 9+20 | 0.1029 | 0.20 | Q V | | | | |
| 9+25 | 0.1043 | 0.20 | Q V | | | | |
| 9+30 | 0.1056 | 0.20 | Q V | | | | |
| 9+35 | 0.1071 | 0.20 | Q V | | | | |
| 9+40 | 0.1085 | 0.21 | Q V | | | | |
| 9+45 | 0.1099 | 0.21 | Q V | | | | |
| 9+50 | 0.1114 | 0.21 | Q V | | | | |
| 9+55 | 0.1128 | 0.21 | Q V | | | | |
| 10+ 0 | 0.1143 | 0.21 | Q V | | | | |
| 10+ 5 | 0.1158 | 0.22 | Q V | | | | |
| 10+10 | 0.1173 | 0.22 | Q  V | | | | |
| 10+15 | 0.1188 | 0.22 | Q  V | | | | |
| 10+20 | 0.1204 | 0.22 | Q  V | | | | |
| 10+25 | 0.1219 | 0.23 | Q  V | | | | |
| 10+30 | 0.1235 | 0.23 | Q  V | | | | |
| 10+35 | 0.1251 | 0.23 | Q  V | | | | |
| 10+40 | 0.1267 | 0.23 | Q  V | | | | |
| 10+45 | 0.1283 | 0.24 | Q  V | | | | |
| 10+50 | 0.1299 | 0.24 | Q  V | | | | |
| 10+55 | 0.1316 | 0.24 | Q  V | | | | |
| 11+ 0 | 0.1333 | 0.24 | Q  V | | | | |
| 11+ 5 | 0.1350 | 0.25 | Q  V | | | | |
| 11+10 | 0.1367 | 0.25 | Q  V | | | | |
| 11+15 | 0.1385 | 0.25 | Q  V | | | | |
| 11+20 | 0.1402 | 0.26 | Q  V | | | | |
| 11+25 | 0.1420 | 0.26 | Q  V | | | | |
| 11+30 | 0.1438 | 0.26 | Q  V | | | | |
| 11+35 | 0.1457 | 0.27 | Q  V | | | | |
| 11+40 | 0.1475 | 0.27 | Q  V | | | | |
| 11+45 | 0.1494 | 0.27 | Q  V | | | | |
| 11+50 | 0.1513 | 0.28 | Q  V | | | | |
| 11+55 | 0.1532 | 0.28 | Q  V | | | | |

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12+ 0       0.1552      0.29  Q  V      |          |          |          |
12+ 5       0.1572      0.29  Q   V     |          |          |          |
12+10       0.1592      0.29  Q   V     |          |          |          |
12+15       0.1613      0.30  Q   V     |          |          |          |
12+20       0.1634      0.30  Q   V     |          |          |          |
12+25       0.1655      0.31  Q   V     |          |          |          |
12+30       0.1676      0.31  Q   V     |          |          |          |
12+35       0.1698      0.32  Q   V     |          |          |          |
12+40       0.1720      0.32  Q   V     |          |          |          |
12+45       0.1742      0.33  Q   V     |          |          |          |
12+50       0.1765      0.33  Q   V     |          |          |          |
12+55       0.1788      0.34  Q   V     |          |          |          |
13+ 0       0.1812      0.34  Q   V     |          |          |          |
13+ 5       0.1836      0.35  Q   V     |          |          |          |
13+10       0.1860      0.36  Q   V     |          |          |          |
13+15       0.1885      0.36  Q   V     |          |          |          |
13+20       0.1911      0.37  Q   V     |          |          |          |
13+25       0.1937      0.38  Q   V     |          |          |          |
13+30       0.1963      0.39  Q    V    |          |          |          |
13+35       0.1991      0.39  Q    V    |          |          |          |
13+40       0.2018      0.40  Q    V    |          |          |          |
13+45       0.2047      0.41  Q    V    |          |          |          |
13+50       0.2076      0.42  Q    V    |          |          |          |
13+55       0.2106      0.43  Q    V    |          |          |          |
14+ 0       0.2136      0.44  Q    V    |          |          |          |
14+ 5       0.2168      0.46  Q    V    |          |          |          |
14+10       0.2200      0.47  Q    V    |          |          |          |
14+15       0.2233      0.48  Q    V    |          |          |          |
14+20       0.2267      0.50  Q    V    |          |          |          |
14+25       0.2303      0.51  Q    V    |          |          |          |
14+30       0.2339      0.53  Q     V   |          |          |          |
14+35       0.2377      0.55  Q     V   |          |          |          |
14+40       0.2416      0.57  Q     V   |          |          |          |
14+45       0.2456      0.59  Q     V   |          |          |          |
14+50       0.2498      0.61  Q     V   |          |          |          |
14+55       0.2542      0.64  Q     V   |          |          |          |
15+ 0       0.2588      0.66  Q     V   |          |          |          |
15+ 5       0.2636      0.69  Q     V   |          |          |          |
15+10       0.2686      0.73  Q     V   |          |          |          |
15+15       0.2739      0.77  |Q     V  |          |          |          |
15+20       0.2795      0.81  |Q     V  |          |          |          |
15+25       0.2854      0.87  |Q     V  |          |          |          |
15+30       0.2919      0.95  |Q     V  |          |          |          |
15+35       0.2992      1.06  |Q     V  |          |          |          |
15+40       0.3078      1.24  |Q     V  |          |          |          |
15+45       0.3178      1.46  |Q      V |          |          |          |
15+50       0.3297      1.73  | Q     V |          |          |          |
15+55       0.3443      2.11  | Q     V |          |          |          |
16+ 0       0.3638      2.83  |  Q     V|          |          |          |
16+ 5       0.3967      4.78  |     Q   V          |          |          |
16+10       0.4544      8.39  |         |Q         |          |          |
16+15       0.5426     12.80  |         |  V   Q   |          |          |
16+20       0.6822     20.27  |         |      V   |       Q  |          |
16+25       0.8302     21.50  |         |          |V      Q  |          |
16+30       0.9389     15.77  |         |          |Q  V      |          |
16+35       1.0171     11.37  |         |    Q     |     V    |          |
16+40       1.0770      8.69  |         |Q         |      V   |          |
16+45       1.1261      7.12  |        Q|          |       V  |          |
16+50       1.1666      5.89  |      Q  |          |        V|          |
```

```
16+55       1.2011      5.00  |     Q   |         |         V         |
17+ 0       1.2307      4.30  |    Q    |         |         |V        |
17+ 5       1.2566      3.77  |    Q    |         |         | V       |
17+10       1.2801      3.40  |   Q     |         |         | V       |
17+15       1.3008      3.01  |   Q     |         |         |  V      |
17+20       1.3188      2.61  |  Q      |         |         |  V      |
17+25       1.3347      2.31  |  Q      |         |         |   V     |
17+30       1.3494      2.14  | Q       |         |         |   V     |
17+35       1.3628      1.94  | Q       |         |         |   V     |
17+40       1.3751      1.79  | Q       |         |         |    V    |
17+45       1.3862      1.61  | Q       |         |         |    V    |
17+50       1.3963      1.46  |Q        |         |         |    V    |
17+55       1.4058      1.38  |Q        |         |         |     V   |
18+ 0       1.4142      1.22  |Q        |         |         |     V   |
18+ 5       1.4221      1.15  |Q        |         |         |     V   |
18+10       1.4291      1.02  |Q        |         |         |     V   |
18+15       1.4354      0.91  |Q        |         |         |     V   |
18+20       1.4413      0.85  |Q        |         |         |      V  |
18+25       1.4462      0.71  Q         |         |         |      V  |
18+30       1.4509      0.68  Q         |         |         |      V  |
18+35       1.4556      0.68  Q         |         |         |      V  |
18+40       1.4603      0.68  Q         |         |         |      V  |
18+45       1.4649      0.67  Q         |         |         |      V  |
18+50       1.4693      0.64  Q         |         |         |      V  |
18+55       1.4735      0.62  Q         |         |         |      V  |
19+ 0       1.4772      0.53  Q         |         |         |      V  |
19+ 5       1.4804      0.46  Q         |         |         |       V |
19+10       1.4834      0.43  Q         |         |         |       V |
19+15       1.4858      0.35  Q         |         |         |       V |
19+20       1.4877      0.28  Q         |         |         |       V |
19+25       1.4896      0.27  Q         |         |         |       V |
19+30       1.4913      0.26  Q         |         |         |       V |
19+35       1.4931      0.25  Q         |         |         |       V |
19+40       1.4947      0.24  Q         |         |         |       V |
19+45       1.4964      0.24  Q         |         |         |       V |
19+50       1.4980      0.23  Q         |         |         |       V |
19+55       1.4995      0.23  Q         |         |         |       V |
20+ 0       1.5011      0.22  Q         |         |         |       V |
20+ 5       1.5026      0.22  Q         |         |         |       V |
20+10       1.5040      0.21  Q         |         |         |       V |
20+15       1.5055      0.21  Q         |         |         |       V |
20+20       1.5069      0.20  Q         |         |         |       V |
20+25       1.5082      0.20  Q         |         |         |       V |
20+30       1.5096      0.20  Q         |         |         |       V |
20+35       1.5109      0.19  Q         |         |         |       V |
20+40       1.5122      0.19  Q         |         |         |       V |
20+45       1.5135      0.19  Q         |         |         |       V |
20+50       1.5148      0.18  Q         |         |         |       V |
20+55       1.5160      0.18  Q         |         |         |       V |
21+ 0       1.5172      0.18  Q         |         |         |       V |
21+ 5       1.5184      0.17  Q         |         |         |       V |
21+10       1.5196      0.17  Q         |         |         |        V|
21+15       1.5208      0.17  Q         |         |         |        V|
21+20       1.5219      0.17  Q         |         |         |        V|
21+25       1.5230      0.16  Q         |         |         |        V|
21+30       1.5242      0.16  Q         |         |         |        V|
21+35       1.5253      0.16  Q         |         |         |        V|
21+40       1.5263      0.16  Q         |         |         |        V|
21+45       1.5274      0.16  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+50 | 1.5285 | 0.15 | Q | \| | \| | \| | V\| |
| 21+55 | 1.5295 | 0.15 | Q | \| | \| | \| | V\| |
| 22+ 0 | 1.5305 | 0.15 | Q | \| | \| | \| | V\| |
| 22+ 5 | 1.5316 | 0.15 | Q | \| | \| | \| | V\| |
| 22+10 | 1.5326 | 0.15 | Q | \| | \| | \| | V\| |
| 22+15 | 1.5335 | 0.14 | Q | \| | \| | \| | V\| |
| 22+20 | 1.5345 | 0.14 | Q | \| | \| | \| | V\| |
| 22+25 | 1.5355 | 0.14 | Q | \| | \| | \| | V\| |
| 22+30 | 1.5364 | 0.14 | Q | \| | \| | \| | V\| |
| 22+35 | 1.5374 | 0.14 | Q | \| | \| | \| | V\| |
| 22+40 | 1.5383 | 0.14 | Q | \| | \| | \| | V\| |
| 22+45 | 1.5393 | 0.13 | Q | \| | \| | \| | V\| |
| 22+50 | 1.5402 | 0.13 | Q | \| | \| | \| | V\| |
| 22+55 | 1.5411 | 0.13 | Q | \| | \| | \| | V\| |
| 23+ 0 | 1.5420 | 0.13 | Q | \| | \| | \| | V\| |
| 23+ 5 | 1.5429 | 0.13 | Q | \| | \| | \| | V\| |
| 23+10 | 1.5437 | 0.13 | Q | \| | \| | \| | V\| |
| 23+15 | 1.5446 | 0.13 | Q | \| | \| | \| | V\| |
| 23+20 | 1.5455 | 0.12 | Q | \| | \| | \| | V\| |
| 23+25 | 1.5463 | 0.12 | Q | \| | \| | \| | V\| |
| 23+30 | 1.5471 | 0.12 | Q | \| | \| | \| | V\| |
| 23+35 | 1.5480 | 0.12 | Q | \| | \| | \| | V\| |
| 23+40 | 1.5488 | 0.12 | Q | \| | \| | \| | V\| |
| 23+45 | 1.5496 | 0.12 | Q | \| | \| | \| | V\| |
| 23+50 | 1.5504 | 0.12 | Q | \| | \| | \| | V\| |
| 23+55 | 1.5512 | 0.12 | Q | \| | \| | \| | V\| |
| 24+ 0 | 1.5520 | 0.12 | Q | \| | \| | \| | V\| |
| 24+ 5 | 1.5528 | 0.11 | Q | \| | \| | \| | V\| |
| 24+10 | 1.5536 | 0.11 | Q | \| | \| | \| | V\| |
| 24+15 | 1.5543 | 0.10 | Q | \| | \| | \| | V\| |
| 24+20 | 1.5548 | 0.08 | Q | \| | \| | \| | V\| |
| 24+25 | 1.5553 | 0.06 | Q | \| | \| | \| | V\| |
| 24+30 | 1.5556 | 0.05 | Q | \| | \| | \| | V\| |
| 24+35 | 1.5559 | 0.04 | Q | \| | \| | \| | V\| |
| 24+40 | 1.5562 | 0.04 | Q | \| | \| | \| | V\| |
| 24+45 | 1.5564 | 0.03 | Q | \| | \| | \| | V\| |
| 24+50 | 1.5566 | 0.03 | Q | \| | \| | \| | V\| |
| 24+55 | 1.5567 | 0.02 | Q | \| | \| | \| | V\| |
| 25+ 0 | 1.5569 | 0.02 | Q | \| | \| | \| | V\| |
| 25+ 5 | 1.5570 | 0.02 | Q | \| | \| | \| | V\| |
| 25+10 | 1.5571 | 0.02 | Q | \| | \| | \| | V\| |
| 25+15 | 1.5572 | 0.01 | Q | \| | \| | \| | V\| |
| 25+20 | 1.5573 | 0.01 | Q | \| | \| | \| | V\| |
| 25+25 | 1.5573 | 0.01 | Q | \| | \| | \| | V\| |
| 25+30 | 1.5574 | 0.01 | Q | \| | \| | \| | V\| |
| 25+35 | 1.5575 | 0.01 | Q | \| | \| | \| | V\| |
| 25+40 | 1.5575 | 0.01 | Q | \| | \| | \| | V\| |
| 25+45 | 1.5576 | 0.01 | Q | \| | \| | \| | V\| |
| 25+50 | 1.5576 | 0.01 | Q | \| | \| | \| | V\| |
| 25+55 | 1.5576 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 0 | 1.5577 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 1.5577 | 0.00 | Q | \| | \| | \| | V\| |
| 26+10 | 1.5577 | 0.00 | Q | \| | \| | \| | V\| |
| 26+15 | 1.5577 | 0.00 | Q | \| | \| | \| | V\| |
| 26+20 | 1.5577 | 0.00 | Q | \| | \| | \| | V\| |
| 26+25 | 1.5578 | 0.00 | Q | \| | \| | \| | V\| |
| 26+30 | 1.5578 | 0.00 | Q | \| | \| | \| | V\| |
| 26+35 | 1.5578 | 0.00 | Q | \| | \| | \| | V\| |
| 26+40 | 1.5578 | 0.00 | Q | \| | \| | \| | V\| |

```
   26+45       1.5578      0.00  Q         |          |         |        V|
   26+50       1.5578      0.00  Q         |          |         |        V|
   26+55       1.5578      0.00  Q         |          |         |        V|
   27+ 0       1.5578      0.00  Q         |          |         |        V|
   27+ 5       1.5578      0.00  Q         |          |         |        V|
   27+10       1.5578      0.00  Q         |          |         |         V
-------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 6
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 13.80 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 13.80 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 13.80 | 24 | 2.45 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 13.80 | 1.000 | 0.360 | 1.000 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 13.80 | 1.000 | 62.0 | 80.6 | 2.41 | 0.362 |

Area-averaged catchment yield fraction, Y = 0.362
Area-averaged low loss fraction, Yb = 0.638
User entry of time of concentration = 0.670 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 13.80(Ac.)
Catchment Lag time = 0.536 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 15.5473
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.638 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.450(In)

Rainfall depth area reduction factors:
Using a total area of 13.80(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.602(In)
30-minute factor = 0.999 Adjusted rainfall = 1.031(In)
1-hour factor = 0.999 Adjusted rainfall = 1.269(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.450(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 166.89 (CFS)) | |
| 1 | 0.708 | 1.182 |
| 2 | 3.013 | 3.848 |
| 3 | 6.876 | 6.446 |
| 4 | 13.436 | 10.949 |
| 5 | 26.103 | 21.139 |
| 6 | 40.064 | 23.301 |
| 7 | 50.376 | 17.209 |
| 8 | 58.017 | 12.753 |
| 9 | 63.521 | 9.186 |
| 10 | 67.869 | 7.257 |
| 11 | 71.586 | 6.202 |
| 12 | 74.655 | 5.123 |
| 13 | 77.344 | 4.487 |
| 14 | 79.605 | 3.774 |

| | | |
|---|---|---|
| 15 | 81.605 | 3.338 |
| 16 | 83.326 | 2.872 |
| 17 | 84.926 | 2.671 |
| 18 | 86.407 | 2.472 |
| 19 | 87.710 | 2.174 |
| 20 | 88.877 | 1.947 |
| 21 | 89.823 | 1.579 |
| 22 | 90.719 | 1.495 |
| 23 | 91.575 | 1.428 |
| 24 | 92.337 | 1.273 |
| 25 | 93.060 | 1.205 |
| 26 | 93.738 | 1.133 |
| 27 | 94.308 | 0.951 |
| 28 | 94.837 | 0.882 |
| 29 | 95.365 | 0.882 |
| 30 | 95.825 | 0.767 |
| 31 | 96.229 | 0.675 |
| 32 | 96.633 | 0.675 |
| 33 | 96.994 | 0.601 |
| 34 | 97.275 | 0.470 |
| 35 | 97.555 | 0.467 |
| 36 | 97.810 | 0.427 |
| 37 | 97.975 | 0.274 |
| 38 | 98.130 | 0.259 |
| 39 | 98.288 | 0.264 |
| 40 | 98.469 | 0.302 |
| 41 | 98.656 | 0.311 |
| 42 | 98.843 | 0.311 |
| 43 | 99.029 | 0.311 |
| 44 | 99.216 | 0.311 |
| 45 | 99.402 | 0.311 |
| 46 | 99.546 | 0.240 |
| 47 | 99.643 | 0.162 |
| 48 | 99.741 | 0.162 |
| 49 | 99.838 | 0.162 |
| 50 | 99.935 | 0.162 |
| 51 | 100.000 | 0.109 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6022 | 0.6022 |
| 2 | 0.7414 | 0.1392 |
| 3 | 0.8373 | 0.0959 |
| 4 | 0.9128 | 0.0755 |
| 5 | 0.9760 | 0.0632 |
| 6 | 1.0309 | 0.0549 |
| 7 | 1.0797 | 0.0488 |
| 8 | 1.1238 | 0.0441 |
| 9 | 1.1642 | 0.0404 |
| 10 | 1.2016 | 0.0374 |
| 11 | 1.2365 | 0.0349 |
| 12 | 1.2692 | 0.0327 |
| 13 | 1.2904 | 0.0212 |
| 14 | 1.3104 | 0.0200 |
| 15 | 1.3293 | 0.0189 |
| 16 | 1.3472 | 0.0179 |
| 17 | 1.3643 | 0.0170 |
| 18 | 1.3805 | 0.0163 |
| 19 | 1.3961 | 0.0156 |

| | | |
|---|---|---|
| 20 | 1.4110 | 0.0149 |
| 21 | 1.4254 | 0.0144 |
| 22 | 1.4392 | 0.0138 |
| 23 | 1.4526 | 0.0133 |
| 24 | 1.4654 | 0.0129 |
| 25 | 1.4779 | 0.0125 |
| 26 | 1.4900 | 0.0121 |
| 27 | 1.5017 | 0.0117 |
| 28 | 1.5131 | 0.0114 |
| 29 | 1.5241 | 0.0111 |
| 30 | 1.5349 | 0.0108 |
| 31 | 1.5453 | 0.0105 |
| 32 | 1.5555 | 0.0102 |
| 33 | 1.5655 | 0.0100 |
| 34 | 1.5752 | 0.0097 |
| 35 | 1.5847 | 0.0095 |
| 36 | 1.5940 | 0.0093 |
| 37 | 1.6031 | 0.0091 |
| 38 | 1.6120 | 0.0089 |
| 39 | 1.6206 | 0.0087 |
| 40 | 1.6292 | 0.0085 |
| 41 | 1.6375 | 0.0083 |
| 42 | 1.6457 | 0.0082 |
| 43 | 1.6537 | 0.0080 |
| 44 | 1.6616 | 0.0079 |
| 45 | 1.6694 | 0.0077 |
| 46 | 1.6770 | 0.0076 |
| 47 | 1.6845 | 0.0075 |
| 48 | 1.6918 | 0.0074 |
| 49 | 1.6990 | 0.0072 |
| 50 | 1.7062 | 0.0071 |
| 51 | 1.7132 | 0.0070 |
| 52 | 1.7201 | 0.0069 |
| 53 | 1.7269 | 0.0068 |
| 54 | 1.7336 | 0.0067 |
| 55 | 1.7402 | 0.0066 |
| 56 | 1.7467 | 0.0065 |
| 57 | 1.7531 | 0.0064 |
| 58 | 1.7594 | 0.0063 |
| 59 | 1.7656 | 0.0062 |
| 60 | 1.7718 | 0.0062 |
| 61 | 1.7779 | 0.0061 |
| 62 | 1.7838 | 0.0060 |
| 63 | 1.7898 | 0.0059 |
| 64 | 1.7956 | 0.0058 |
| 65 | 1.8014 | 0.0058 |
| 66 | 1.8071 | 0.0057 |
| 67 | 1.8127 | 0.0056 |
| 68 | 1.8183 | 0.0056 |
| 69 | 1.8238 | 0.0055 |
| 70 | 1.8292 | 0.0054 |
| 71 | 1.8346 | 0.0054 |
| 72 | 1.8399 | 0.0053 |
| 73 | 1.8452 | 0.0052 |
| 74 | 1.8504 | 0.0052 |
| 75 | 1.8555 | 0.0051 |
| 76 | 1.8606 | 0.0051 |
| 77 | 1.8656 | 0.0050 |
| 78 | 1.8706 | 0.0050 |

| | | |
|---|---|---|
| 79 | 1.8755 | 0.0049 |
| 80 | 1.8804 | 0.0049 |
| 81 | 1.8852 | 0.0048 |
| 82 | 1.8900 | 0.0048 |
| 83 | 1.8948 | 0.0047 |
| 84 | 1.8994 | 0.0047 |
| 85 | 1.9041 | 0.0046 |
| 86 | 1.9087 | 0.0046 |
| 87 | 1.9133 | 0.0046 |
| 88 | 1.9178 | 0.0045 |
| 89 | 1.9223 | 0.0045 |
| 90 | 1.9267 | 0.0044 |
| 91 | 1.9311 | 0.0044 |
| 92 | 1.9355 | 0.0044 |
| 93 | 1.9398 | 0.0043 |
| 94 | 1.9441 | 0.0043 |
| 95 | 1.9483 | 0.0043 |
| 96 | 1.9526 | 0.0042 |
| 97 | 1.9568 | 0.0042 |
| 98 | 1.9609 | 0.0041 |
| 99 | 1.9650 | 0.0041 |
| 100 | 1.9691 | 0.0041 |
| 101 | 1.9732 | 0.0041 |
| 102 | 1.9772 | 0.0040 |
| 103 | 1.9812 | 0.0040 |
| 104 | 1.9851 | 0.0040 |
| 105 | 1.9890 | 0.0039 |
| 106 | 1.9929 | 0.0039 |
| 107 | 1.9968 | 0.0039 |
| 108 | 2.0007 | 0.0038 |
| 109 | 2.0045 | 0.0038 |
| 110 | 2.0083 | 0.0038 |
| 111 | 2.0120 | 0.0038 |
| 112 | 2.0157 | 0.0037 |
| 113 | 2.0194 | 0.0037 |
| 114 | 2.0231 | 0.0037 |
| 115 | 2.0268 | 0.0037 |
| 116 | 2.0304 | 0.0036 |
| 117 | 2.0340 | 0.0036 |
| 118 | 2.0376 | 0.0036 |
| 119 | 2.0411 | 0.0036 |
| 120 | 2.0447 | 0.0035 |
| 121 | 2.0482 | 0.0035 |
| 122 | 2.0517 | 0.0035 |
| 123 | 2.0551 | 0.0035 |
| 124 | 2.0586 | 0.0034 |
| 125 | 2.0620 | 0.0034 |
| 126 | 2.0654 | 0.0034 |
| 127 | 2.0688 | 0.0034 |
| 128 | 2.0721 | 0.0034 |
| 129 | 2.0754 | 0.0033 |
| 130 | 2.0788 | 0.0033 |
| 131 | 2.0821 | 0.0033 |
| 132 | 2.0853 | 0.0033 |
| 133 | 2.0886 | 0.0033 |
| 134 | 2.0918 | 0.0032 |
| 135 | 2.0950 | 0.0032 |
| 136 | 2.0982 | 0.0032 |
| 137 | 2.1014 | 0.0032 |

| | | |
|---|---|---|
| 138 | 2.1046 | 0.0032 |
| 139 | 2.1077 | 0.0031 |
| 140 | 2.1108 | 0.0031 |
| 141 | 2.1139 | 0.0031 |
| 142 | 2.1170 | 0.0031 |
| 143 | 2.1201 | 0.0031 |
| 144 | 2.1231 | 0.0031 |
| 145 | 2.1262 | 0.0030 |
| 146 | 2.1292 | 0.0030 |
| 147 | 2.1322 | 0.0030 |
| 148 | 2.1352 | 0.0030 |
| 149 | 2.1382 | 0.0030 |
| 150 | 2.1411 | 0.0030 |
| 151 | 2.1441 | 0.0029 |
| 152 | 2.1470 | 0.0029 |
| 153 | 2.1499 | 0.0029 |
| 154 | 2.1528 | 0.0029 |
| 155 | 2.1557 | 0.0029 |
| 156 | 2.1585 | 0.0029 |
| 157 | 2.1614 | 0.0029 |
| 158 | 2.1642 | 0.0028 |
| 159 | 2.1670 | 0.0028 |
| 160 | 2.1699 | 0.0028 |
| 161 | 2.1726 | 0.0028 |
| 162 | 2.1754 | 0.0028 |
| 163 | 2.1782 | 0.0028 |
| 164 | 2.1809 | 0.0028 |
| 165 | 2.1837 | 0.0027 |
| 166 | 2.1864 | 0.0027 |
| 167 | 2.1891 | 0.0027 |
| 168 | 2.1918 | 0.0027 |
| 169 | 2.1945 | 0.0027 |
| 170 | 2.1972 | 0.0027 |
| 171 | 2.1999 | 0.0027 |
| 172 | 2.2025 | 0.0027 |
| 173 | 2.2051 | 0.0026 |
| 174 | 2.2078 | 0.0026 |
| 175 | 2.2104 | 0.0026 |
| 176 | 2.2130 | 0.0026 |
| 177 | 2.2156 | 0.0026 |
| 178 | 2.2182 | 0.0026 |
| 179 | 2.2207 | 0.0026 |
| 180 | 2.2233 | 0.0026 |
| 181 | 2.2258 | 0.0025 |
| 182 | 2.2284 | 0.0025 |
| 183 | 2.2309 | 0.0025 |
| 184 | 2.2334 | 0.0025 |
| 185 | 2.2359 | 0.0025 |
| 186 | 2.2384 | 0.0025 |
| 187 | 2.2409 | 0.0025 |
| 188 | 2.2434 | 0.0025 |
| 189 | 2.2458 | 0.0025 |
| 190 | 2.2483 | 0.0024 |
| 191 | 2.2507 | 0.0024 |
| 192 | 2.2531 | 0.0024 |
| 193 | 2.2555 | 0.0024 |
| 194 | 2.2580 | 0.0024 |
| 195 | 2.2604 | 0.0024 |
| 196 | 2.2627 | 0.0024 |

| | | |
|---|---|---|
| 197 | 2.2651 | 0.0024 |
| 198 | 2.2675 | 0.0024 |
| 199 | 2.2699 | 0.0024 |
| 200 | 2.2722 | 0.0024 |
| 201 | 2.2745 | 0.0023 |
| 202 | 2.2769 | 0.0023 |
| 203 | 2.2792 | 0.0023 |
| 204 | 2.2815 | 0.0023 |
| 205 | 2.2838 | 0.0023 |
| 206 | 2.2861 | 0.0023 |
| 207 | 2.2884 | 0.0023 |
| 208 | 2.2907 | 0.0023 |
| 209 | 2.2930 | 0.0023 |
| 210 | 2.2952 | 0.0023 |
| 211 | 2.2975 | 0.0023 |
| 212 | 2.2997 | 0.0022 |
| 213 | 2.3020 | 0.0022 |
| 214 | 2.3042 | 0.0022 |
| 215 | 2.3064 | 0.0022 |
| 216 | 2.3086 | 0.0022 |
| 217 | 2.3108 | 0.0022 |
| 218 | 2.3130 | 0.0022 |
| 219 | 2.3152 | 0.0022 |
| 220 | 2.3174 | 0.0022 |
| 221 | 2.3196 | 0.0022 |
| 222 | 2.3217 | 0.0022 |
| 223 | 2.3239 | 0.0022 |
| 224 | 2.3260 | 0.0021 |
| 225 | 2.3282 | 0.0021 |
| 226 | 2.3303 | 0.0021 |
| 227 | 2.3324 | 0.0021 |
| 228 | 2.3345 | 0.0021 |
| 229 | 2.3367 | 0.0021 |
| 230 | 2.3388 | 0.0021 |
| 231 | 2.3409 | 0.0021 |
| 232 | 2.3429 | 0.0021 |
| 233 | 2.3450 | 0.0021 |
| 234 | 2.3471 | 0.0021 |
| 235 | 2.3492 | 0.0021 |
| 236 | 2.3512 | 0.0021 |
| 237 | 2.3533 | 0.0021 |
| 238 | 2.3553 | 0.0020 |
| 239 | 2.3574 | 0.0020 |
| 240 | 2.3594 | 0.0020 |
| 241 | 2.3614 | 0.0020 |
| 242 | 2.3635 | 0.0020 |
| 243 | 2.3655 | 0.0020 |
| 244 | 2.3675 | 0.0020 |
| 245 | 2.3695 | 0.0020 |
| 246 | 2.3715 | 0.0020 |
| 247 | 2.3735 | 0.0020 |
| 248 | 2.3754 | 0.0020 |
| 249 | 2.3774 | 0.0020 |
| 250 | 2.3794 | 0.0020 |
| 251 | 2.3814 | 0.0020 |
| 252 | 2.3833 | 0.0020 |
| 253 | 2.3853 | 0.0020 |
| 254 | 2.3872 | 0.0019 |
| 255 | 2.3891 | 0.0019 |

| | | |
|---|---|---|
| 256 | 2.3911 | 0.0019 |
| 257 | 2.3930 | 0.0019 |
| 258 | 2.3949 | 0.0019 |
| 259 | 2.3968 | 0.0019 |
| 260 | 2.3987 | 0.0019 |
| 261 | 2.4006 | 0.0019 |
| 262 | 2.4025 | 0.0019 |
| 263 | 2.4044 | 0.0019 |
| 264 | 2.4063 | 0.0019 |
| 265 | 2.4082 | 0.0019 |
| 266 | 2.4101 | 0.0019 |
| 267 | 2.4119 | 0.0019 |
| 268 | 2.4138 | 0.0019 |
| 269 | 2.4157 | 0.0019 |
| 270 | 2.4175 | 0.0019 |
| 271 | 2.4194 | 0.0018 |
| 272 | 2.4212 | 0.0018 |
| 273 | 2.4230 | 0.0018 |
| 274 | 2.4249 | 0.0018 |
| 275 | 2.4267 | 0.0018 |
| 276 | 2.4285 | 0.0018 |
| 277 | 2.4303 | 0.0018 |
| 278 | 2.4321 | 0.0018 |
| 279 | 2.4339 | 0.0018 |
| 280 | 2.4357 | 0.0018 |
| 281 | 2.4375 | 0.0018 |
| 282 | 2.4393 | 0.0018 |
| 283 | 2.4411 | 0.0018 |
| 284 | 2.4429 | 0.0018 |
| 285 | 2.4447 | 0.0018 |
| 286 | 2.4464 | 0.0018 |
| 287 | 2.4482 | 0.0018 |
| 288 | 2.4500 | 0.0018 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0018 | 0.0011 | 0.0006 |
| 2 | 0.0018 | 0.0011 | 0.0006 |
| 3 | 0.0018 | 0.0011 | 0.0006 |
| 4 | 0.0018 | 0.0011 | 0.0006 |
| 5 | 0.0018 | 0.0011 | 0.0006 |
| 6 | 0.0018 | 0.0011 | 0.0006 |
| 7 | 0.0018 | 0.0012 | 0.0007 |
| 8 | 0.0018 | 0.0012 | 0.0007 |
| 9 | 0.0018 | 0.0012 | 0.0007 |
| 10 | 0.0018 | 0.0012 | 0.0007 |
| 11 | 0.0018 | 0.0012 | 0.0007 |
| 12 | 0.0018 | 0.0012 | 0.0007 |
| 13 | 0.0019 | 0.0012 | 0.0007 |
| 14 | 0.0019 | 0.0012 | 0.0007 |
| 15 | 0.0019 | 0.0012 | 0.0007 |
| 16 | 0.0019 | 0.0012 | 0.0007 |
| 17 | 0.0019 | 0.0012 | 0.0007 |
| 18 | 0.0019 | 0.0012 | 0.0007 |
| 19 | 0.0019 | 0.0012 | 0.0007 |
| 20 | 0.0019 | 0.0012 | 0.0007 |
| 21 | 0.0019 | 0.0012 | 0.0007 |

| | | | |
|---|---|---|---|
| 22 | 0.0019 | 0.0012 | 0.0007 |
| 23 | 0.0019 | 0.0012 | 0.0007 |
| 24 | 0.0019 | 0.0012 | 0.0007 |
| 25 | 0.0020 | 0.0012 | 0.0007 |
| 26 | 0.0020 | 0.0013 | 0.0007 |
| 27 | 0.0020 | 0.0013 | 0.0007 |
| 28 | 0.0020 | 0.0013 | 0.0007 |
| 29 | 0.0020 | 0.0013 | 0.0007 |
| 30 | 0.0020 | 0.0013 | 0.0007 |
| 31 | 0.0020 | 0.0013 | 0.0007 |
| 32 | 0.0020 | 0.0013 | 0.0007 |
| 33 | 0.0020 | 0.0013 | 0.0007 |
| 34 | 0.0020 | 0.0013 | 0.0007 |
| 35 | 0.0021 | 0.0013 | 0.0007 |
| 36 | 0.0021 | 0.0013 | 0.0007 |
| 37 | 0.0021 | 0.0013 | 0.0008 |
| 38 | 0.0021 | 0.0013 | 0.0008 |
| 39 | 0.0021 | 0.0013 | 0.0008 |
| 40 | 0.0021 | 0.0013 | 0.0008 |
| 41 | 0.0021 | 0.0014 | 0.0008 |
| 42 | 0.0021 | 0.0014 | 0.0008 |
| 43 | 0.0021 | 0.0014 | 0.0008 |
| 44 | 0.0021 | 0.0014 | 0.0008 |
| 45 | 0.0022 | 0.0014 | 0.0008 |
| 46 | 0.0022 | 0.0014 | 0.0008 |
| 47 | 0.0022 | 0.0014 | 0.0008 |
| 48 | 0.0022 | 0.0014 | 0.0008 |
| 49 | 0.0022 | 0.0014 | 0.0008 |
| 50 | 0.0022 | 0.0014 | 0.0008 |
| 51 | 0.0022 | 0.0014 | 0.0008 |
| 52 | 0.0022 | 0.0014 | 0.0008 |
| 53 | 0.0023 | 0.0014 | 0.0008 |
| 54 | 0.0023 | 0.0014 | 0.0008 |
| 55 | 0.0023 | 0.0015 | 0.0008 |
| 56 | 0.0023 | 0.0015 | 0.0008 |
| 57 | 0.0023 | 0.0015 | 0.0008 |
| 58 | 0.0023 | 0.0015 | 0.0008 |
| 59 | 0.0023 | 0.0015 | 0.0008 |
| 60 | 0.0024 | 0.0015 | 0.0009 |
| 61 | 0.0024 | 0.0015 | 0.0009 |
| 62 | 0.0024 | 0.0015 | 0.0009 |
| 63 | 0.0024 | 0.0015 | 0.0009 |
| 64 | 0.0024 | 0.0015 | 0.0009 |
| 65 | 0.0024 | 0.0016 | 0.0009 |
| 66 | 0.0024 | 0.0016 | 0.0009 |
| 67 | 0.0025 | 0.0016 | 0.0009 |
| 68 | 0.0025 | 0.0016 | 0.0009 |
| 69 | 0.0025 | 0.0016 | 0.0009 |
| 70 | 0.0025 | 0.0016 | 0.0009 |
| 71 | 0.0025 | 0.0016 | 0.0009 |
| 72 | 0.0025 | 0.0016 | 0.0009 |
| 73 | 0.0026 | 0.0016 | 0.0009 |
| 74 | 0.0026 | 0.0016 | 0.0009 |
| 75 | 0.0026 | 0.0017 | 0.0009 |
| 76 | 0.0026 | 0.0017 | 0.0009 |
| 77 | 0.0026 | 0.0017 | 0.0009 |
| 78 | 0.0026 | 0.0017 | 0.0010 |
| 79 | 0.0027 | 0.0017 | 0.0010 |
| 80 | 0.0027 | 0.0017 | 0.0010 |

| | | | |
|---|---|---|---|
| 81 | 0.0027 | 0.0017 | 0.0010 |
| 82 | 0.0027 | 0.0017 | 0.0010 |
| 83 | 0.0027 | 0.0017 | 0.0010 |
| 84 | 0.0028 | 0.0018 | 0.0010 |
| 85 | 0.0028 | 0.0018 | 0.0010 |
| 86 | 0.0028 | 0.0018 | 0.0010 |
| 87 | 0.0028 | 0.0018 | 0.0010 |
| 88 | 0.0028 | 0.0018 | 0.0010 |
| 89 | 0.0029 | 0.0018 | 0.0010 |
| 90 | 0.0029 | 0.0018 | 0.0010 |
| 91 | 0.0029 | 0.0019 | 0.0011 |
| 92 | 0.0029 | 0.0019 | 0.0011 |
| 93 | 0.0030 | 0.0019 | 0.0011 |
| 94 | 0.0030 | 0.0019 | 0.0011 |
| 95 | 0.0030 | 0.0019 | 0.0011 |
| 96 | 0.0030 | 0.0019 | 0.0011 |
| 97 | 0.0031 | 0.0019 | 0.0011 |
| 98 | 0.0031 | 0.0020 | 0.0011 |
| 99 | 0.0031 | 0.0020 | 0.0011 |
| 100 | 0.0031 | 0.0020 | 0.0011 |
| 101 | 0.0032 | 0.0020 | 0.0011 |
| 102 | 0.0032 | 0.0020 | 0.0011 |
| 103 | 0.0032 | 0.0021 | 0.0012 |
| 104 | 0.0032 | 0.0021 | 0.0012 |
| 105 | 0.0033 | 0.0021 | 0.0012 |
| 106 | 0.0033 | 0.0021 | 0.0012 |
| 107 | 0.0033 | 0.0021 | 0.0012 |
| 108 | 0.0034 | 0.0021 | 0.0012 |
| 109 | 0.0034 | 0.0022 | 0.0012 |
| 110 | 0.0034 | 0.0022 | 0.0012 |
| 111 | 0.0035 | 0.0022 | 0.0013 |
| 112 | 0.0035 | 0.0022 | 0.0013 |
| 113 | 0.0035 | 0.0023 | 0.0013 |
| 114 | 0.0036 | 0.0023 | 0.0013 |
| 115 | 0.0036 | 0.0023 | 0.0013 |
| 116 | 0.0036 | 0.0023 | 0.0013 |
| 117 | 0.0037 | 0.0023 | 0.0013 |
| 118 | 0.0037 | 0.0024 | 0.0013 |
| 119 | 0.0038 | 0.0024 | 0.0014 |
| 120 | 0.0038 | 0.0024 | 0.0014 |
| 121 | 0.0038 | 0.0025 | 0.0014 |
| 122 | 0.0039 | 0.0025 | 0.0014 |
| 123 | 0.0039 | 0.0025 | 0.0014 |
| 124 | 0.0040 | 0.0025 | 0.0014 |
| 125 | 0.0040 | 0.0026 | 0.0015 |
| 126 | 0.0041 | 0.0026 | 0.0015 |
| 127 | 0.0041 | 0.0026 | 0.0015 |
| 128 | 0.0041 | 0.0026 | 0.0015 |
| 129 | 0.0042 | 0.0027 | 0.0015 |
| 130 | 0.0043 | 0.0027 | 0.0015 |
| 131 | 0.0043 | 0.0028 | 0.0016 |
| 132 | 0.0044 | 0.0028 | 0.0016 |
| 133 | 0.0044 | 0.0028 | 0.0016 |
| 134 | 0.0045 | 0.0029 | 0.0016 |
| 135 | 0.0046 | 0.0029 | 0.0016 |
| 136 | 0.0046 | 0.0029 | 0.0017 |
| 137 | 0.0047 | 0.0030 | 0.0017 |
| 138 | 0.0047 | 0.0030 | 0.0017 |
| 139 | 0.0048 | 0.0031 | 0.0017 |

| | | | |
|---|---|---|---|
| 140 | 0.0049 | 0.0031 | 0.0018 |
| 141 | 0.0050 | 0.0032 | 0.0018 |
| 142 | 0.0050 | 0.0032 | 0.0018 |
| 143 | 0.0051 | 0.0033 | 0.0019 |
| 144 | 0.0052 | 0.0033 | 0.0019 |
| 145 | 0.0053 | 0.0034 | 0.0019 |
| 146 | 0.0054 | 0.0034 | 0.0019 |
| 147 | 0.0055 | 0.0035 | 0.0020 |
| 148 | 0.0056 | 0.0036 | 0.0020 |
| 149 | 0.0057 | 0.0036 | 0.0021 |
| 150 | 0.0058 | 0.0037 | 0.0021 |
| 151 | 0.0059 | 0.0038 | 0.0021 |
| 152 | 0.0060 | 0.0038 | 0.0022 |
| 153 | 0.0062 | 0.0039 | 0.0022 |
| 154 | 0.0062 | 0.0040 | 0.0023 |
| 155 | 0.0064 | 0.0041 | 0.0023 |
| 156 | 0.0065 | 0.0042 | 0.0024 |
| 157 | 0.0067 | 0.0043 | 0.0024 |
| 158 | 0.0068 | 0.0043 | 0.0025 |
| 159 | 0.0070 | 0.0045 | 0.0025 |
| 160 | 0.0071 | 0.0045 | 0.0026 |
| 161 | 0.0074 | 0.0047 | 0.0027 |
| 162 | 0.0075 | 0.0048 | 0.0027 |
| 163 | 0.0077 | 0.0049 | 0.0028 |
| 164 | 0.0079 | 0.0050 | 0.0029 |
| 165 | 0.0082 | 0.0052 | 0.0030 |
| 166 | 0.0083 | 0.0053 | 0.0030 |
| 167 | 0.0087 | 0.0055 | 0.0031 |
| 168 | 0.0089 | 0.0057 | 0.0032 |
| 169 | 0.0093 | 0.0059 | 0.0034 |
| 170 | 0.0095 | 0.0061 | 0.0034 |
| 171 | 0.0100 | 0.0064 | 0.0036 |
| 172 | 0.0102 | 0.0065 | 0.0037 |
| 173 | 0.0108 | 0.0069 | 0.0039 |
| 174 | 0.0111 | 0.0071 | 0.0040 |
| 175 | 0.0117 | 0.0075 | 0.0042 |
| 176 | 0.0121 | 0.0077 | 0.0044 |
| 177 | 0.0129 | 0.0082 | 0.0047 |
| 178 | 0.0133 | 0.0085 | 0.0048 |
| 179 | 0.0144 | 0.0092 | 0.0052 |
| 180 | 0.0149 | 0.0095 | 0.0054 |
| 181 | 0.0163 | 0.0104 | 0.0059 |
| 182 | 0.0170 | 0.0109 | 0.0062 |
| 183 | 0.0189 | 0.0121 | 0.0068 |
| 184 | 0.0200 | 0.0128 | 0.0072 |
| 185 | 0.0327 | 0.0209 | 0.0118 |
| 186 | 0.0349 | 0.0223 | 0.0126 |
| 187 | 0.0404 | 0.0258 | 0.0146 |
| 188 | 0.0441 | 0.0282 | 0.0160 |
| 189 | 0.0549 | 0.0300 | 0.0249 |
| 190 | 0.0632 | 0.0300 | 0.0332 |
| 191 | 0.0959 | 0.0300 | 0.0659 |
| 192 | 0.1392 | 0.0300 | 0.1092 |
| 193 | 0.6022 | 0.0300 | 0.5723 |
| 194 | 0.0755 | 0.0300 | 0.0455 |
| 195 | 0.0488 | 0.0300 | 0.0188 |
| 196 | 0.0374 | 0.0239 | 0.0135 |
| 197 | 0.0212 | 0.0136 | 0.0077 |
| 198 | 0.0179 | 0.0114 | 0.0065 |

| | | | |
|---|---|---|---|
| 199 | 0.0156 | 0.0099 | 0.0056 |
| 200 | 0.0138 | 0.0088 | 0.0050 |
| 201 | 0.0125 | 0.0080 | 0.0045 |
| 202 | 0.0114 | 0.0073 | 0.0041 |
| 203 | 0.0105 | 0.0067 | 0.0038 |
| 204 | 0.0097 | 0.0062 | 0.0035 |
| 205 | 0.0091 | 0.0058 | 0.0033 |
| 206 | 0.0085 | 0.0054 | 0.0031 |
| 207 | 0.0080 | 0.0051 | 0.0029 |
| 208 | 0.0076 | 0.0049 | 0.0028 |
| 209 | 0.0072 | 0.0046 | 0.0026 |
| 210 | 0.0069 | 0.0044 | 0.0025 |
| 211 | 0.0066 | 0.0042 | 0.0024 |
| 212 | 0.0063 | 0.0040 | 0.0023 |
| 213 | 0.0061 | 0.0039 | 0.0022 |
| 214 | 0.0058 | 0.0037 | 0.0021 |
| 215 | 0.0056 | 0.0036 | 0.0020 |
| 216 | 0.0054 | 0.0035 | 0.0020 |
| 217 | 0.0052 | 0.0034 | 0.0019 |
| 218 | 0.0051 | 0.0032 | 0.0018 |
| 219 | 0.0049 | 0.0031 | 0.0018 |
| 220 | 0.0048 | 0.0031 | 0.0017 |
| 221 | 0.0046 | 0.0030 | 0.0017 |
| 222 | 0.0045 | 0.0029 | 0.0016 |
| 223 | 0.0044 | 0.0028 | 0.0016 |
| 224 | 0.0043 | 0.0027 | 0.0016 |
| 225 | 0.0042 | 0.0027 | 0.0015 |
| 226 | 0.0041 | 0.0026 | 0.0015 |
| 227 | 0.0040 | 0.0025 | 0.0014 |
| 228 | 0.0039 | 0.0025 | 0.0014 |
| 229 | 0.0038 | 0.0024 | 0.0014 |
| 230 | 0.0037 | 0.0024 | 0.0013 |
| 231 | 0.0037 | 0.0023 | 0.0013 |
| 232 | 0.0036 | 0.0023 | 0.0013 |
| 233 | 0.0035 | 0.0022 | 0.0013 |
| 234 | 0.0034 | 0.0022 | 0.0012 |
| 235 | 0.0034 | 0.0022 | 0.0012 |
| 236 | 0.0033 | 0.0021 | 0.0012 |
| 237 | 0.0033 | 0.0021 | 0.0012 |
| 238 | 0.0032 | 0.0020 | 0.0012 |
| 239 | 0.0031 | 0.0020 | 0.0011 |
| 240 | 0.0031 | 0.0020 | 0.0011 |
| 241 | 0.0030 | 0.0019 | 0.0011 |
| 242 | 0.0030 | 0.0019 | 0.0011 |
| 243 | 0.0029 | 0.0019 | 0.0011 |
| 244 | 0.0029 | 0.0018 | 0.0010 |
| 245 | 0.0029 | 0.0018 | 0.0010 |
| 246 | 0.0028 | 0.0018 | 0.0010 |
| 247 | 0.0028 | 0.0018 | 0.0010 |
| 248 | 0.0027 | 0.0017 | 0.0010 |
| 249 | 0.0027 | 0.0017 | 0.0010 |
| 250 | 0.0027 | 0.0017 | 0.0010 |
| 251 | 0.0026 | 0.0017 | 0.0009 |
| 252 | 0.0026 | 0.0016 | 0.0009 |
| 253 | 0.0025 | 0.0016 | 0.0009 |
| 254 | 0.0025 | 0.0016 | 0.0009 |
| 255 | 0.0025 | 0.0016 | 0.0009 |
| 256 | 0.0024 | 0.0016 | 0.0009 |
| 257 | 0.0024 | 0.0015 | 0.0009 |

| | | | |
|---|---|---|---|
| 258 | 0.0024 | 0.0015 | 0.0009 |
| 259 | 0.0024 | 0.0015 | 0.0009 |
| 260 | 0.0023 | 0.0015 | 0.0008 |
| 261 | 0.0023 | 0.0015 | 0.0008 |
| 262 | 0.0023 | 0.0015 | 0.0008 |
| 263 | 0.0023 | 0.0014 | 0.0008 |
| 264 | 0.0022 | 0.0014 | 0.0008 |
| 265 | 0.0022 | 0.0014 | 0.0008 |
| 266 | 0.0022 | 0.0014 | 0.0008 |
| 267 | 0.0022 | 0.0014 | 0.0008 |
| 268 | 0.0021 | 0.0014 | 0.0008 |
| 269 | 0.0021 | 0.0013 | 0.0008 |
| 270 | 0.0021 | 0.0013 | 0.0008 |
| 271 | 0.0021 | 0.0013 | 0.0007 |
| 272 | 0.0020 | 0.0013 | 0.0007 |
| 273 | 0.0020 | 0.0013 | 0.0007 |
| 274 | 0.0020 | 0.0013 | 0.0007 |
| 275 | 0.0020 | 0.0013 | 0.0007 |
| 276 | 0.0020 | 0.0013 | 0.0007 |
| 277 | 0.0020 | 0.0012 | 0.0007 |
| 278 | 0.0019 | 0.0012 | 0.0007 |
| 279 | 0.0019 | 0.0012 | 0.0007 |
| 280 | 0.0019 | 0.0012 | 0.0007 |
| 281 | 0.0019 | 0.0012 | 0.0007 |
| 282 | 0.0019 | 0.0012 | 0.0007 |
| 283 | 0.0018 | 0.0012 | 0.0007 |
| 284 | 0.0018 | 0.0012 | 0.0007 |
| 285 | 0.0018 | 0.0012 | 0.0007 |
| 286 | 0.0018 | 0.0011 | 0.0007 |
| 287 | 0.0018 | 0.0011 | 0.0006 |
| 288 | 0.0018 | 0.0011 | 0.0006 |

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Total soil rain loss = 1.08(In)
Total effective rainfall = 1.37(In)
Peak flow rate in flood hydrograph = 18.27(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+15 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+20 | 0.0002 | 0.01 | Q | \| | \| | \| | \| |
| 0+25 | 0.0004 | 0.03 | Q | \| | \| | \| | \| |
| 0+30 | 0.0007 | 0.04 | Q | \| | \| | \| | \| |
| 0+35 | 0.0010 | 0.05 | Q | \| | \| | \| | \| |
| 0+40 | 0.0015 | 0.06 | Q | \| | \| | \| | \| |
| 0+45 | 0.0019 | 0.07 | Q | \| | \| | \| | \| |
| 0+50 | 0.0024 | 0.07 | Q | \| | \| | \| | \| |
| 0+55 | 0.0030 | 0.08 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0035 | 0.08 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0041 | 0.08 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+10 | 0.0047 | 0.09 | Q | | | | |
| 1+15 | 0.0053 | 0.09 | Q | | | | |
| 1+20 | 0.0060 | 0.09 | Q | | | | |
| 1+25 | 0.0066 | 0.09 | Q | | | | |
| 1+30 | 0.0073 | 0.10 | Q | | | | |
| 1+35 | 0.0079 | 0.10 | Q | | | | |
| 1+40 | 0.0086 | 0.10 | Q | | | | |
| 1+45 | 0.0093 | 0.10 | Q | | | | |
| 1+50 | 0.0100 | 0.10 | Q | | | | |
| 1+55 | 0.0107 | 0.10 | Q | | | | |
| 2+ 0 | 0.0114 | 0.10 | Q | | | | |
| 2+ 5 | 0.0122 | 0.11 | Q | | | | |
| 2+10 | 0.0129 | 0.11 | Q | | | | |
| 2+15 | 0.0137 | 0.11 | Q | | | | |
| 2+20 | 0.0144 | 0.11 | Q | | | | |
| 2+25 | 0.0152 | 0.11 | Q | | | | |
| 2+30 | 0.0159 | 0.11 | Q | | | | |
| 2+35 | 0.0167 | 0.11 | Q | | | | |
| 2+40 | 0.0175 | 0.11 | Q | | | | |
| 2+45 | 0.0183 | 0.11 | Q | | | | |
| 2+50 | 0.0191 | 0.12 | Q | | | | |
| 2+55 | 0.0199 | 0.12 | Q | | | | |
| 3+ 0 | 0.0207 | 0.12 | Q | | | | |
| 3+ 5 | 0.0215 | 0.12 | Q | | | | |
| 3+10 | 0.0223 | 0.12 | Q | | | | |
| 3+15 | 0.0231 | 0.12 | Q | | | | |
| 3+20 | 0.0239 | 0.12 | Q | | | | |
| 3+25 | 0.0248 | 0.12 | Q | | | | |
| 3+30 | 0.0256 | 0.12 | Q | | | | |
| 3+35 | 0.0264 | 0.12 | Q | | | | |
| 3+40 | 0.0273 | 0.12 | Q | | | | |
| 3+45 | 0.0281 | 0.12 | Q | | | | |
| 3+50 | 0.0290 | 0.12 | Q | | | | |
| 3+55 | 0.0299 | 0.13 | Q | | | | |
| 4+ 0 | 0.0307 | 0.13 | Q | | | | |
| 4+ 5 | 0.0316 | 0.13 | Q | | | | |
| 4+10 | 0.0325 | 0.13 | Q | | | | |
| 4+15 | 0.0334 | 0.13 | Q | | | | |
| 4+20 | 0.0343 | 0.13 | Q | | | | |
| 4+25 | 0.0351 | 0.13 | Q | | | | |
| 4+30 | 0.0360 | 0.13 | Q | | | | |
| 4+35 | 0.0369 | 0.13 | Q | | | | |
| 4+40 | 0.0379 | 0.13 | Q | | | | |
| 4+45 | 0.0388 | 0.13 | Q | | | | |
| 4+50 | 0.0397 | 0.13 | QV | | | | |
| 4+55 | 0.0406 | 0.13 | QV | | | | |
| 5+ 0 | 0.0415 | 0.13 | QV | | | | |
| 5+ 5 | 0.0425 | 0.14 | QV | | | | |
| 5+10 | 0.0434 | 0.14 | QV | | | | |
| 5+15 | 0.0444 | 0.14 | QV | | | | |
| 5+20 | 0.0453 | 0.14 | QV | | | | |
| 5+25 | 0.0463 | 0.14 | QV | | | | |
| 5+30 | 0.0472 | 0.14 | QV | | | | |
| 5+35 | 0.0482 | 0.14 | QV | | | | |
| 5+40 | 0.0492 | 0.14 | QV | | | | |
| 5+45 | 0.0501 | 0.14 | QV | | | | |
| 5+50 | 0.0511 | 0.14 | QV | | | | |
| 5+55 | 0.0521 | 0.14 | QV | | | | |
| 6+ 0 | 0.0531 | 0.14 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+ 5 | 0.0541 | 0.15 | QV | | | | |
| 6+10 | 0.0551 | 0.15 | QV | | | | |
| 6+15 | 0.0561 | 0.15 | QV | | | | |
| 6+20 | 0.0571 | 0.15 | QV | | | | |
| 6+25 | 0.0582 | 0.15 | QV | | | | |
| 6+30 | 0.0592 | 0.15 | QV | | | | |
| 6+35 | 0.0602 | 0.15 | QV | | | | |
| 6+40 | 0.0613 | 0.15 | QV | | | | |
| 6+45 | 0.0623 | 0.15 | QV | | | | |
| 6+50 | 0.0634 | 0.15 | QV | | | | |
| 6+55 | 0.0645 | 0.16 | QV | | | | |
| 7+ 0 | 0.0655 | 0.16 | QV | | | | |
| 7+ 5 | 0.0666 | 0.16 | QV | | | | |
| 7+10 | 0.0677 | 0.16 | QV | | | | |
| 7+15 | 0.0688 | 0.16 | QV | | | | |
| 7+20 | 0.0699 | 0.16 | QV | | | | |
| 7+25 | 0.0710 | 0.16 | QV | | | | |
| 7+30 | 0.0722 | 0.16 | QV | | | | |
| 7+35 | 0.0733 | 0.16 | QV | | | | |
| 7+40 | 0.0744 | 0.17 | QV | | | | |
| 7+45 | 0.0756 | 0.17 | QV | | | | |
| 7+50 | 0.0767 | 0.17 | QV | | | | |
| 7+55 | 0.0779 | 0.17 | QV | | | | |
| 8+ 0 | 0.0791 | 0.17 | Q V | | | | |
| 8+ 5 | 0.0802 | 0.17 | Q V | | | | |
| 8+10 | 0.0814 | 0.17 | Q V | | | | |
| 8+15 | 0.0826 | 0.17 | Q V | | | | |
| 8+20 | 0.0838 | 0.18 | Q V | | | | |
| 8+25 | 0.0850 | 0.18 | Q V | | | | |
| 8+30 | 0.0863 | 0.18 | Q V | | | | |
| 8+35 | 0.0875 | 0.18 | Q V | | | | |
| 8+40 | 0.0888 | 0.18 | Q V | | | | |
| 8+45 | 0.0900 | 0.18 | Q V | | | | |
| 8+50 | 0.0913 | 0.18 | Q V | | | | |
| 8+55 | 0.0926 | 0.19 | Q V | | | | |
| 9+ 0 | 0.0938 | 0.19 | Q V | | | | |
| 9+ 5 | 0.0951 | 0.19 | Q V | | | | |
| 9+10 | 0.0965 | 0.19 | Q V | | | | |
| 9+15 | 0.0978 | 0.19 | Q V | | | | |
| 9+20 | 0.0991 | 0.19 | Q V | | | | |
| 9+25 | 0.1005 | 0.20 | Q V | | | | |
| 9+30 | 0.1018 | 0.20 | Q V | | | | |
| 9+35 | 0.1032 | 0.20 | Q V | | | | |
| 9+40 | 0.1046 | 0.20 | Q V | | | | |
| 9+45 | 0.1060 | 0.20 | Q V | | | | |
| 9+50 | 0.1074 | 0.20 | Q V | | | | |
| 9+55 | 0.1088 | 0.21 | Q V | | | | |
| 10+ 0 | 0.1102 | 0.21 | Q V | | | | |
| 10+ 5 | 0.1117 | 0.21 | Q V | | | | |
| 10+10 | 0.1132 | 0.21 | Q V | | | | |
| 10+15 | 0.1146 | 0.22 | Q V | | | | |
| 10+20 | 0.1161 | 0.22 | Q V | | | | |
| 10+25 | 0.1177 | 0.22 | Q V | | | | |
| 10+30 | 0.1192 | 0.22 | Q  V | | | | |
| 10+35 | 0.1207 | 0.22 | Q  V | | | | |
| 10+40 | 0.1223 | 0.23 | Q  V | | | | |
| 10+45 | 0.1239 | 0.23 | Q  V | | | | |
| 10+50 | 0.1255 | 0.23 | Q  V | | | | |
| 10+55 | 0.1271 | 0.23 | Q  V | | | | |

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11+ 0       0.1287      0.24  Q  V      |          |          |          |
11+ 5       0.1304      0.24  Q  V      |          |          |          |
11+10       0.1320      0.24  Q  V      |          |          |          |
11+15       0.1337      0.25  Q  V      |          |          |          |
11+20       0.1354      0.25  Q  V      |          |          |          |
11+25       0.1372      0.25  Q  V      |          |          |          |
11+30       0.1389      0.25  Q  V      |          |          |          |
11+35       0.1407      0.26  Q  V      |          |          |          |
11+40       0.1425      0.26  Q  V      |          |          |          |
11+45       0.1443      0.26  Q  V      |          |          |          |
11+50       0.1462      0.27  Q  V      |          |          |          |
11+55       0.1481      0.27  Q  V      |          |          |          |
12+ 0       0.1500      0.28  Q  V      |          |          |          |
12+ 5       0.1519      0.28  Q  V      |          |          |          |
12+10       0.1538      0.28  Q  V      |          |          |          |
12+15       0.1558      0.29  Q  V      |          |          |          |
12+20       0.1578      0.29  Q   V     |          |          |          |
12+25       0.1599      0.30  Q   V     |          |          |          |
12+30       0.1620      0.30  Q   V     |          |          |          |
12+35       0.1641      0.31  Q   V     |          |          |          |
12+40       0.1662      0.31  Q   V     |          |          |          |
12+45       0.1684      0.32  Q   V     |          |          |          |
12+50       0.1706      0.32  Q   V     |          |          |          |
12+55       0.1729      0.33  Q   V     |          |          |          |
13+ 0       0.1752      0.33  Q   V     |          |          |          |
13+ 5       0.1775      0.34  Q   V     |          |          |          |
13+10       0.1799      0.35  Q   V     |          |          |          |
13+15       0.1823      0.35  Q   V     |          |          |          |
13+20       0.1848      0.36  Q   V     |          |          |          |
13+25       0.1873      0.37  Q   V     |          |          |          |
13+30       0.1899      0.37  Q   V     |          |          |          |
13+35       0.1926      0.38  Q   V     |          |          |          |
13+40       0.1952      0.39  Q   V     |          |          |          |
13+45       0.1980      0.40  Q    V    |          |          |          |
13+50       0.2008      0.41  Q    V    |          |          |          |
13+55       0.2037      0.42  Q    V    |          |          |          |
14+ 0       0.2067      0.43  Q    V    |          |          |          |
14+ 5       0.2097      0.44  Q    V    |          |          |          |
14+10       0.2128      0.45  Q    V    |          |          |          |
14+15       0.2160      0.46  Q    V    |          |          |          |
14+20       0.2193      0.48  Q    V    |          |          |          |
14+25       0.2227      0.49  Q    V    |          |          |          |
14+30       0.2262      0.51 |Q   V     |          |          |          |
14+35       0.2298      0.52 |Q   V     |          |          |          |
14+40       0.2335      0.54 |Q   V     |          |          |          |
14+45       0.2373      0.56 |Q    V    |          |          |          |
14+50       0.2413      0.58 |Q    V    |          |          |          |
14+55       0.2455      0.60 |Q    V    |          |          |          |
15+ 0       0.2498      0.63 |Q    V    |          |          |          |
15+ 5       0.2543      0.65 |Q    V    |          |          |          |
15+10       0.2590      0.68 |Q    V    |          |          |          |
15+15       0.2640      0.72 |Q    V    |          |          |          |
15+20       0.2692      0.76 |Q    V    |          |          |          |
15+25       0.2747      0.80 |Q     V   |          |          |          |
15+30       0.2807      0.87 |Q     V   |          |          |          |
15+35       0.2872      0.95 |Q     V   |          |          |          |
15+40       0.2945      1.06 | Q    V   |          |          |          |
15+45       0.3030      1.23 | Q    V   |          |          |          |
15+50       0.3131      1.46 | Q    V   |          |          |          |
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15+55       0.3253      1.77  |  Q    V |          |          |          |
16+ 0       0.3409      2.27  |   Q   V |          |          |          |
16+ 5       0.3657      3.60  |      Q V|          |          |          |
16+10       0.4063      5.89  |         VQ         |          |          |
16+15       0.4642      8.41  |          |V    Q   |          |          |
16+20       0.5467     11.98  |          |  V      |  Q       |          |
16+25       0.6680     17.62  |          |      V  |          |    Q     |
16+30       0.7939     18.27  |          |         V          |     Q    |
16+35       0.8924     14.31  |          |          | V     Q |          |
16+40       0.9690     11.11  |          |          | Q V      |          |
16+45       1.0279      8.55  |          |       Q  |     V    |          |
16+50       1.0761      7.00  |          |    Q     |       V  |          |
16+55       1.1176      6.03  |          |  Q       |        V |          |
17+ 0       1.1531      5.15  |          Q          |         V|          |
17+ 5       1.1845      4.55  |         Q|          |          V          |
17+10       1.2118      3.97  |       Q  |          |          V          |
17+15       1.2363      3.56  |       Q  |          |          |V         |
17+20       1.2582      3.17  |      Q   |          |          | V        |
17+25       1.2784      2.94  |     Q    |          |          | V        |
17+30       1.2971      2.71  |     Q    |          |          |  V       |
17+35       1.3139      2.45  |    Q     |          |          |  V       |
17+40       1.3292      2.22  |    Q     |          |          |  V       |
17+45       1.3426      1.95  |  Q       |          |          |   V      |
17+50       1.3552      1.83  |  Q       |          |          |   V      |
17+55       1.3672      1.73  |  Q       |          |          |   V      |
18+ 0       1.3782      1.60  |  Q       |          |          |    V     |
18+ 5       1.3885      1.51  |  Q       |          |          |    V     |
18+10       1.3983      1.41  | Q        |          |          |    V     |
18+15       1.4070      1.27  | Q        |          |          |    V     |
18+20       1.4152      1.19  | Q        |          |          |     V    |
18+25       1.4232      1.15  | Q        |          |          |     V    |
18+30       1.4304      1.05  | Q        |          |          |     V    |
18+35       1.4371      0.97  |Q         |          |          |     V    |
18+40       1.4436      0.93  |Q         |          |          |     V    |
18+45       1.4495      0.86  |Q         |          |          |     V    |
18+50       1.4547      0.76  |Q         |          |          |      V   |
18+55       1.4598      0.73  |Q         |          |          |      V   |
19+ 0       1.4644      0.68  |Q         |          |          |      V   |
19+ 5       1.4684      0.58  |Q         |          |          |      V   |
19+10       1.4722      0.56  |Q         |          |          |      V   |
19+15       1.4760      0.55  |Q         |          |          |      V   |
19+20       1.4799      0.56  |Q         |          |          |      V   |
19+25       1.4837      0.56  |Q         |          |          |      V   |
19+30       1.4875      0.55  |Q         |          |          |      V   |
19+35       1.4912      0.54  |Q         |          |          |       V  |
19+40       1.4947      0.52  |Q         |          |          |       V  |
19+45       1.4982      0.50  |Q         |          |          |       V  |
19+50       1.5013      0.44  Q         |          |          |       V  |
19+55       1.5039      0.39  Q         |          |          |       V  |
20+ 0       1.5065      0.38  Q         |          |          |       V  |
20+ 5       1.5090      0.36  Q         |          |          |       V  |
20+10       1.5114      0.34  Q         |          |          |       V  |
20+15       1.5134      0.30  Q         |          |          |       V  |
20+20       1.5150      0.23  Q         |          |          |       V  |
20+25       1.5165      0.22  Q         |          |          |       V  |
20+30       1.5179      0.21  Q         |          |          |       V  |
20+35       1.5194      0.21  Q         |          |          |       V  |
20+40       1.5207      0.20  Q         |          |          |       V  |
20+45       1.5221      0.20  Q         |          |          |       V  |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20+50 | 1.5234 | 0.19 | Q | \| | \| | \| | V \| |
| 20+55 | 1.5247 | 0.19 | Q | \| | \| | \| | V \| |
| 21+ 0 | 1.5260 | 0.19 | Q | \| | \| | \| | V \| |
| 21+ 5 | 1.5273 | 0.18 | Q | \| | \| | \| | V \| |
| 21+10 | 1.5285 | 0.18 | Q | \| | \| | \| | V \| |
| 21+15 | 1.5297 | 0.18 | Q | \| | \| | \| | V \| |
| 21+20 | 1.5309 | 0.17 | Q | \| | \| | \| | V\| |
| 21+25 | 1.5321 | 0.17 | Q | \| | \| | \| | V\| |
| 21+30 | 1.5332 | 0.17 | Q | \| | \| | \| | V\| |
| 21+35 | 1.5344 | 0.17 | Q | \| | \| | \| | V\| |
| 21+40 | 1.5355 | 0.16 | Q | \| | \| | \| | V\| |
| 21+45 | 1.5366 | 0.16 | Q | \| | \| | \| | V\| |
| 21+50 | 1.5377 | 0.16 | Q | \| | \| | \| | V\| |
| 21+55 | 1.5387 | 0.16 | Q | \| | \| | \| | V\| |
| 22+ 0 | 1.5398 | 0.15 | Q | \| | \| | \| | V\| |
| 22+ 5 | 1.5408 | 0.15 | Q | \| | \| | \| | V\| |
| 22+10 | 1.5419 | 0.15 | Q | \| | \| | \| | V\| |
| 22+15 | 1.5429 | 0.15 | Q | \| | \| | \| | V\| |
| 22+20 | 1.5439 | 0.15 | Q | \| | \| | \| | V\| |
| 22+25 | 1.5449 | 0.14 | Q | \| | \| | \| | V\| |
| 22+30 | 1.5459 | 0.14 | Q | \| | \| | \| | V\| |
| 22+35 | 1.5468 | 0.14 | Q | \| | \| | \| | V\| |
| 22+40 | 1.5478 | 0.14 | Q | \| | \| | \| | V\| |
| 22+45 | 1.5487 | 0.14 | Q | \| | \| | \| | V\| |
| 22+50 | 1.5497 | 0.14 | Q | \| | \| | \| | V\| |
| 22+55 | 1.5506 | 0.13 | Q | \| | \| | \| | V\| |
| 23+ 0 | 1.5515 | 0.13 | Q | \| | \| | \| | V\| |
| 23+ 5 | 1.5524 | 0.13 | Q | \| | \| | \| | V\| |
| 23+10 | 1.5533 | 0.13 | Q | \| | \| | \| | V\| |
| 23+15 | 1.5542 | 0.13 | Q | \| | \| | \| | V\| |
| 23+20 | 1.5551 | 0.13 | Q | \| | \| | \| | V\| |
| 23+25 | 1.5559 | 0.13 | Q | \| | \| | \| | V\| |
| 23+30 | 1.5568 | 0.12 | Q | \| | \| | \| | V\| |
| 23+35 | 1.5576 | 0.12 | Q | \| | \| | \| | V\| |
| 23+40 | 1.5585 | 0.12 | Q | \| | \| | \| | V\| |
| 23+45 | 1.5593 | 0.12 | Q | \| | \| | \| | V\| |
| 23+50 | 1.5601 | 0.12 | Q | \| | \| | \| | V\| |
| 23+55 | 1.5609 | 0.12 | Q | \| | \| | \| | V\| |
| 24+ 0 | 1.5617 | 0.12 | Q | \| | \| | \| | V\| |
| 24+ 5 | 1.5625 | 0.12 | Q | \| | \| | \| | V\| |
| 24+10 | 1.5633 | 0.11 | Q | \| | \| | \| | V\| |
| 24+15 | 1.5640 | 0.11 | Q | \| | \| | \| | V\| |
| 24+20 | 1.5647 | 0.10 | Q | \| | \| | \| | V\| |
| 24+25 | 1.5653 | 0.08 | Q | \| | \| | \| | V\| |
| 24+30 | 1.5658 | 0.07 | Q | \| | \| | \| | V\| |
| 24+35 | 1.5662 | 0.06 | Q | \| | \| | \| | V\| |
| 24+40 | 1.5665 | 0.05 | Q | \| | \| | \| | V\| |
| 24+45 | 1.5668 | 0.04 | Q | \| | \| | \| | V\| |
| 24+50 | 1.5670 | 0.04 | Q | \| | \| | \| | V\| |
| 24+55 | 1.5673 | 0.03 | Q | \| | \| | \| | V\| |
| 25+ 0 | 1.5675 | 0.03 | Q | \| | \| | \| | V\| |
| 25+ 5 | 1.5677 | 0.03 | Q | \| | \| | \| | V\| |
| 25+10 | 1.5678 | 0.02 | Q | \| | \| | \| | V\| |
| 25+15 | 1.5680 | 0.02 | Q | \| | \| | \| | V\| |
| 25+20 | 1.5681 | 0.02 | Q | \| | \| | \| | V\| |
| 25+25 | 1.5682 | 0.02 | Q | \| | \| | \| | V\| |
| 25+30 | 1.5683 | 0.02 | Q | \| | \| | \| | V\| |
| 25+35 | 1.5684 | 0.01 | Q | \| | \| | \| | V\| |
| 25+40 | 1.5685 | 0.01 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+45 | 1.5686 | 0.01 | Q | \| | \| | \| | V\| |
| 25+50 | 1.5687 | 0.01 | Q | \| | \| | \| | V\| |
| 25+55 | 1.5687 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 0 | 1.5688 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 5 | 1.5689 | 0.01 | Q | \| | \| | \| | V\| |
| 26+10 | 1.5689 | 0.01 | Q | \| | \| | \| | V\| |
| 26+15 | 1.5689 | 0.01 | Q | \| | \| | \| | V\| |
| 26+20 | 1.5690 | 0.01 | Q | \| | \| | \| | V\| |
| 26+25 | 1.5690 | 0.01 | Q | \| | \| | \| | V\| |
| 26+30 | 1.5691 | 0.00 | Q | \| | \| | \| | V\| |
| 26+35 | 1.5691 | 0.00 | Q | \| | \| | \| | V\| |
| 26+40 | 1.5691 | 0.00 | Q | \| | \| | \| | V\| |
| 26+45 | 1.5691 | 0.00 | Q | \| | \| | \| | V\| |
| 26+50 | 1.5692 | 0.00 | Q | \| | \| | \| | V\| |
| 26+55 | 1.5692 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 0 | 1.5692 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 5 | 1.5692 | 0.00 | Q | \| | \| | \| | V\| |
| 27+10 | 1.5692 | 0.00 | Q | \| | \| | \| | V\| |
| 27+15 | 1.5692 | 0.00 | Q | \| | \| | \| | V\| |
| 27+20 | 1.5692 | 0.00 | Q | \| | \| | \| | V\| |
| 27+25 | 1.5693 | 0.00 | Q | \| | \| | \| | V\| |
| 27+30 | 1.5693 | 0.00 | Q | \| | \| | \| | V\| |
| 27+35 | 1.5693 | 0.00 | Q | \| | \| | \| | V\| |
| 27+40 | 1.5693 | 0.00 | Q | \| | \| | \| | V\| |
| 27+45 | 1.5693 | 0.00 | Q | \| | \| | \| | V\| |
| 27+50 | 1.5693 | 0.00 | Q | \| | \| | \| | V\| |
| 27+55 | 1.5693 | 0.00 | Q | \| | \| | \| | V\| |
| 28+ 0 | 1.5693 | 0.00 | Q | \| | \| | \| | V\| |
| 28+ 5 | 1.5693 | 0.00 | Q | \| | \| | \| | V\| |
| 28+10 | 1.5693 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 7
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 14.99 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 14.99 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 14.99 | 24 | 2.44 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 14.99 | 1.000 | 0.360 | 1.000 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 14.99 | 1.000 | 62.0 | 80.6 | 2.41 | 0.360 |

Area-averaged catchment yield fraction, Y = 0.360
Area-averaged low loss fraction, Yb = 0.640
User entry of time of concentration = 0.810 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 14.99(Ac.)
Catchment Lag time = 0.648 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 12.8601
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.640 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.440(In)

Rainfall depth area reduction factors:
Using a total area of 14.99(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.602(In)
30-minute factor = 0.999 Adjusted rainfall = 1.031(In)
1-hour factor = 0.999 Adjusted rainfall = 1.269(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.440(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 181.29 (CFS)) | |
| 1 | 0.566 | 1.027 |
| 2 | 2.242 | 3.039 |
| 3 | 4.977 | 4.958 |
| 4 | 8.848 | 7.017 |
| 5 | 15.585 | 12.214 |
| 6 | 26.897 | 20.507 |
| 7 | 38.600 | 21.215 |
| 8 | 47.690 | 16.478 |
| 9 | 54.786 | 12.865 |
| 10 | 60.177 | 9.774 |
| 11 | 64.400 | 7.656 |
| 12 | 67.926 | 6.391 |
| 13 | 71.046 | 5.657 |
| 14 | 73.699 | 4.808 |

| | | |
|---|---|---|
| 15 | 76.010 | 4.190 |
| 16 | 78.141 | 3.864 |
| 17 | 79.909 | 3.205 |
| 18 | 81.568 | 3.006 |
| 19 | 82.994 | 2.587 |
| 20 | 84.359 | 2.474 |
| 21 | 85.609 | 2.265 |
| 22 | 86.804 | 2.167 |
| 23 | 87.848 | 1.893 |
| 24 | 88.819 | 1.760 |
| 25 | 89.604 | 1.424 |
| 26 | 90.362 | 1.374 |
| 27 | 91.084 | 1.309 |
| 28 | 91.773 | 1.248 |
| 29 | 92.393 | 1.123 |
| 30 | 92.992 | 1.086 |
| 31 | 93.558 | 1.027 |
| 32 | 94.072 | 0.932 |
| 33 | 94.510 | 0.794 |
| 34 | 94.948 | 0.793 |
| 35 | 95.385 | 0.793 |
| 36 | 95.770 | 0.698 |
| 37 | 96.104 | 0.606 |
| 38 | 96.439 | 0.606 |
| 39 | 96.772 | 0.605 |
| 40 | 97.044 | 0.492 |
| 41 | 97.275 | 0.420 |
| 42 | 97.506 | 0.420 |
| 43 | 97.735 | 0.415 |
| 44 | 97.894 | 0.288 |
| 45 | 98.023 | 0.233 |
| 46 | 98.151 | 0.233 |
| 47 | 98.281 | 0.236 |
| 48 | 98.430 | 0.270 |
| 49 | 98.585 | 0.280 |
| 50 | 98.739 | 0.280 |
| 51 | 98.893 | 0.280 |
| 52 | 99.048 | 0.280 |
| 53 | 99.202 | 0.280 |
| 54 | 99.356 | 0.280 |
| 55 | 99.499 | 0.258 |
| 56 | 99.586 | 0.158 |
| 57 | 99.666 | 0.146 |
| 58 | 99.747 | 0.146 |
| 59 | 99.827 | 0.146 |
| 60 | 99.907 | 0.146 |
| 61 | 100.000 | 0.073 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6022 | 0.6022 |
| 2 | 0.7414 | 0.1392 |
| 3 | 0.8373 | 0.0959 |
| 4 | 0.9128 | 0.0755 |
| 5 | 0.9760 | 0.0632 |
| 6 | 1.0308 | 0.0549 |
| 7 | 1.0796 | 0.0488 |
| 8 | 1.1238 | 0.0441 |
| 9 | 1.1642 | 0.0404 |

| | | |
|---|---|---|
| 10 | 1.2016 | 0.0374 |
| 11 | 1.2364 | 0.0349 |
| 12 | 1.2691 | 0.0327 |
| 13 | 1.2904 | 0.0213 |
| 14 | 1.3104 | 0.0200 |
| 15 | 1.3292 | 0.0189 |
| 16 | 1.3472 | 0.0179 |
| 17 | 1.3642 | 0.0171 |
| 18 | 1.3805 | 0.0163 |
| 19 | 1.3961 | 0.0156 |
| 20 | 1.4110 | 0.0149 |
| 21 | 1.4254 | 0.0144 |
| 22 | 1.4392 | 0.0138 |
| 23 | 1.4525 | 0.0133 |
| 24 | 1.4654 | 0.0129 |
| 25 | 1.4779 | 0.0125 |
| 26 | 1.4899 | 0.0121 |
| 27 | 1.5016 | 0.0117 |
| 28 | 1.5130 | 0.0114 |
| 29 | 1.5241 | 0.0111 |
| 30 | 1.5348 | 0.0108 |
| 31 | 1.5453 | 0.0105 |
| 32 | 1.5555 | 0.0102 |
| 33 | 1.5655 | 0.0100 |
| 34 | 1.5752 | 0.0097 |
| 35 | 1.5847 | 0.0095 |
| 36 | 1.5940 | 0.0093 |
| 37 | 1.6031 | 0.0091 |
| 38 | 1.6119 | 0.0089 |
| 39 | 1.6206 | 0.0087 |
| 40 | 1.6292 | 0.0085 |
| 41 | 1.6375 | 0.0083 |
| 42 | 1.6457 | 0.0082 |
| 43 | 1.6537 | 0.0080 |
| 44 | 1.6616 | 0.0079 |
| 45 | 1.6694 | 0.0077 |
| 46 | 1.6770 | 0.0076 |
| 47 | 1.6844 | 0.0075 |
| 48 | 1.6918 | 0.0074 |
| 49 | 1.6990 | 0.0072 |
| 50 | 1.7062 | 0.0071 |
| 51 | 1.7132 | 0.0070 |
| 52 | 1.7201 | 0.0069 |
| 53 | 1.7269 | 0.0068 |
| 54 | 1.7336 | 0.0067 |
| 55 | 1.7402 | 0.0066 |
| 56 | 1.7467 | 0.0065 |
| 57 | 1.7531 | 0.0064 |
| 58 | 1.7594 | 0.0063 |
| 59 | 1.7656 | 0.0062 |
| 60 | 1.7718 | 0.0062 |
| 61 | 1.7778 | 0.0061 |
| 62 | 1.7838 | 0.0060 |
| 63 | 1.7898 | 0.0059 |
| 64 | 1.7956 | 0.0058 |
| 65 | 1.8014 | 0.0058 |
| 66 | 1.8071 | 0.0057 |
| 67 | 1.8127 | 0.0056 |
| 68 | 1.8183 | 0.0056 |

| | | |
|---|---|---|
| 69 | 1.8238 | 0.0055 |
| 70 | 1.8292 | 0.0054 |
| 71 | 1.8346 | 0.0054 |
| 72 | 1.8399 | 0.0053 |
| 73 | 1.8451 | 0.0052 |
| 74 | 1.8502 | 0.0051 |
| 75 | 1.8553 | 0.0051 |
| 76 | 1.8603 | 0.0050 |
| 77 | 1.8652 | 0.0050 |
| 78 | 1.8701 | 0.0049 |
| 79 | 1.8750 | 0.0049 |
| 80 | 1.8798 | 0.0048 |
| 81 | 1.8846 | 0.0048 |
| 82 | 1.8893 | 0.0047 |
| 83 | 1.8940 | 0.0047 |
| 84 | 1.8986 | 0.0046 |
| 85 | 1.9032 | 0.0046 |
| 86 | 1.9077 | 0.0045 |
| 87 | 1.9122 | 0.0045 |
| 88 | 1.9166 | 0.0045 |
| 89 | 1.9211 | 0.0044 |
| 90 | 1.9254 | 0.0044 |
| 91 | 1.9298 | 0.0043 |
| 92 | 1.9341 | 0.0043 |
| 93 | 1.9383 | 0.0043 |
| 94 | 1.9426 | 0.0042 |
| 95 | 1.9467 | 0.0042 |
| 96 | 1.9509 | 0.0042 |
| 97 | 1.9550 | 0.0041 |
| 98 | 1.9591 | 0.0041 |
| 99 | 1.9632 | 0.0041 |
| 100 | 1.9672 | 0.0040 |
| 101 | 1.9712 | 0.0040 |
| 102 | 1.9751 | 0.0040 |
| 103 | 1.9791 | 0.0039 |
| 104 | 1.9830 | 0.0039 |
| 105 | 1.9868 | 0.0039 |
| 106 | 1.9907 | 0.0038 |
| 107 | 1.9945 | 0.0038 |
| 108 | 1.9983 | 0.0038 |
| 109 | 2.0020 | 0.0038 |
| 110 | 2.0057 | 0.0037 |
| 111 | 2.0094 | 0.0037 |
| 112 | 2.0131 | 0.0037 |
| 113 | 2.0168 | 0.0036 |
| 114 | 2.0204 | 0.0036 |
| 115 | 2.0240 | 0.0036 |
| 116 | 2.0275 | 0.0036 |
| 117 | 2.0311 | 0.0035 |
| 118 | 2.0346 | 0.0035 |
| 119 | 2.0381 | 0.0035 |
| 120 | 2.0416 | 0.0035 |
| 121 | 2.0450 | 0.0035 |
| 122 | 2.0485 | 0.0034 |
| 123 | 2.0519 | 0.0034 |
| 124 | 2.0553 | 0.0034 |
| 125 | 2.0586 | 0.0034 |
| 126 | 2.0620 | 0.0033 |
| 127 | 2.0653 | 0.0033 |

| | | |
|---|---|---|
| 128 | 2.0686 | 0.0033 |
| 129 | 2.0719 | 0.0033 |
| 130 | 2.0751 | 0.0033 |
| 131 | 2.0784 | 0.0032 |
| 132 | 2.0816 | 0.0032 |
| 133 | 2.0848 | 0.0032 |
| 134 | 2.0880 | 0.0032 |
| 135 | 2.0911 | 0.0032 |
| 136 | 2.0943 | 0.0031 |
| 137 | 2.0974 | 0.0031 |
| 138 | 2.1005 | 0.0031 |
| 139 | 2.1036 | 0.0031 |
| 140 | 2.1067 | 0.0031 |
| 141 | 2.1097 | 0.0031 |
| 142 | 2.1128 | 0.0030 |
| 143 | 2.1158 | 0.0030 |
| 144 | 2.1188 | 0.0030 |
| 145 | 2.1218 | 0.0030 |
| 146 | 2.1248 | 0.0030 |
| 147 | 2.1277 | 0.0030 |
| 148 | 2.1307 | 0.0029 |
| 149 | 2.1336 | 0.0029 |
| 150 | 2.1365 | 0.0029 |
| 151 | 2.1394 | 0.0029 |
| 152 | 2.1423 | 0.0029 |
| 153 | 2.1451 | 0.0029 |
| 154 | 2.1480 | 0.0028 |
| 155 | 2.1508 | 0.0028 |
| 156 | 2.1536 | 0.0028 |
| 157 | 2.1564 | 0.0028 |
| 158 | 2.1592 | 0.0028 |
| 159 | 2.1620 | 0.0028 |
| 160 | 2.1647 | 0.0028 |
| 161 | 2.1675 | 0.0027 |
| 162 | 2.1702 | 0.0027 |
| 163 | 2.1729 | 0.0027 |
| 164 | 2.1757 | 0.0027 |
| 165 | 2.1783 | 0.0027 |
| 166 | 2.1810 | 0.0027 |
| 167 | 2.1837 | 0.0027 |
| 168 | 2.1864 | 0.0027 |
| 169 | 2.1890 | 0.0026 |
| 170 | 2.1916 | 0.0026 |
| 171 | 2.1942 | 0.0026 |
| 172 | 2.1969 | 0.0026 |
| 173 | 2.1994 | 0.0026 |
| 174 | 2.2020 | 0.0026 |
| 175 | 2.2046 | 0.0026 |
| 176 | 2.2072 | 0.0026 |
| 177 | 2.2097 | 0.0025 |
| 178 | 2.2122 | 0.0025 |
| 179 | 2.2148 | 0.0025 |
| 180 | 2.2173 | 0.0025 |
| 181 | 2.2198 | 0.0025 |
| 182 | 2.2223 | 0.0025 |
| 183 | 2.2248 | 0.0025 |
| 184 | 2.2272 | 0.0025 |
| 185 | 2.2297 | 0.0025 |
| 186 | 2.2321 | 0.0024 |

| | | |
|---|---|---|
| 187 | 2.2346 | 0.0024 |
| 188 | 2.2370 | 0.0024 |
| 189 | 2.2394 | 0.0024 |
| 190 | 2.2418 | 0.0024 |
| 191 | 2.2442 | 0.0024 |
| 192 | 2.2466 | 0.0024 |
| 193 | 2.2490 | 0.0024 |
| 194 | 2.2514 | 0.0024 |
| 195 | 2.2537 | 0.0024 |
| 196 | 2.2561 | 0.0023 |
| 197 | 2.2584 | 0.0023 |
| 198 | 2.2607 | 0.0023 |
| 199 | 2.2631 | 0.0023 |
| 200 | 2.2654 | 0.0023 |
| 201 | 2.2677 | 0.0023 |
| 202 | 2.2700 | 0.0023 |
| 203 | 2.2722 | 0.0023 |
| 204 | 2.2745 | 0.0023 |
| 205 | 2.2768 | 0.0023 |
| 206 | 2.2790 | 0.0023 |
| 207 | 2.2813 | 0.0022 |
| 208 | 2.2835 | 0.0022 |
| 209 | 2.2858 | 0.0022 |
| 210 | 2.2880 | 0.0022 |
| 211 | 2.2902 | 0.0022 |
| 212 | 2.2924 | 0.0022 |
| 213 | 2.2946 | 0.0022 |
| 214 | 2.2968 | 0.0022 |
| 215 | 2.2990 | 0.0022 |
| 216 | 2.3011 | 0.0022 |
| 217 | 2.3033 | 0.0022 |
| 218 | 2.3055 | 0.0022 |
| 219 | 2.3076 | 0.0021 |
| 220 | 2.3098 | 0.0021 |
| 221 | 2.3119 | 0.0021 |
| 222 | 2.3140 | 0.0021 |
| 223 | 2.3161 | 0.0021 |
| 224 | 2.3182 | 0.0021 |
| 225 | 2.3203 | 0.0021 |
| 226 | 2.3224 | 0.0021 |
| 227 | 2.3245 | 0.0021 |
| 228 | 2.3266 | 0.0021 |
| 229 | 2.3287 | 0.0021 |
| 230 | 2.3308 | 0.0021 |
| 231 | 2.3328 | 0.0021 |
| 232 | 2.3349 | 0.0021 |
| 233 | 2.3369 | 0.0020 |
| 234 | 2.3390 | 0.0020 |
| 235 | 2.3410 | 0.0020 |
| 236 | 2.3430 | 0.0020 |
| 237 | 2.3450 | 0.0020 |
| 238 | 2.3470 | 0.0020 |
| 239 | 2.3490 | 0.0020 |
| 240 | 2.3510 | 0.0020 |
| 241 | 2.3530 | 0.0020 |
| 242 | 2.3550 | 0.0020 |
| 243 | 2.3570 | 0.0020 |
| 244 | 2.3590 | 0.0020 |
| 245 | 2.3609 | 0.0020 |

| | | |
|---|---|---|
| 246 | 2.3629 | 0.0020 |
| 247 | 2.3648 | 0.0020 |
| 248 | 2.3668 | 0.0019 |
| 249 | 2.3687 | 0.0019 |
| 250 | 2.3707 | 0.0019 |
| 251 | 2.3726 | 0.0019 |
| 252 | 2.3745 | 0.0019 |
| 253 | 2.3764 | 0.0019 |
| 254 | 2.3783 | 0.0019 |
| 255 | 2.3802 | 0.0019 |
| 256 | 2.3821 | 0.0019 |
| 257 | 2.3840 | 0.0019 |
| 258 | 2.3859 | 0.0019 |
| 259 | 2.3878 | 0.0019 |
| 260 | 2.3897 | 0.0019 |
| 261 | 2.3915 | 0.0019 |
| 262 | 2.3934 | 0.0019 |
| 263 | 2.3953 | 0.0019 |
| 264 | 2.3971 | 0.0019 |
| 265 | 2.3990 | 0.0018 |
| 266 | 2.4008 | 0.0018 |
| 267 | 2.4026 | 0.0018 |
| 268 | 2.4045 | 0.0018 |
| 269 | 2.4063 | 0.0018 |
| 270 | 2.4081 | 0.0018 |
| 271 | 2.4099 | 0.0018 |
| 272 | 2.4117 | 0.0018 |
| 273 | 2.4135 | 0.0018 |
| 274 | 2.4153 | 0.0018 |
| 275 | 2.4171 | 0.0018 |
| 276 | 2.4189 | 0.0018 |
| 277 | 2.4207 | 0.0018 |
| 278 | 2.4225 | 0.0018 |
| 279 | 2.4242 | 0.0018 |
| 280 | 2.4260 | 0.0018 |
| 281 | 2.4278 | 0.0018 |
| 282 | 2.4295 | 0.0018 |
| 283 | 2.4313 | 0.0018 |
| 284 | 2.4330 | 0.0017 |
| 285 | 2.4348 | 0.0017 |
| 286 | 2.4365 | 0.0017 |
| 287 | 2.4382 | 0.0017 |
| 288 | 2.4400 | 0.0017 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0017 | 0.0011 | 0.0006 |
| 2 | 0.0017 | 0.0011 | 0.0006 |
| 3 | 0.0017 | 0.0011 | 0.0006 |
| 4 | 0.0017 | 0.0011 | 0.0006 |
| 5 | 0.0018 | 0.0011 | 0.0006 |
| 6 | 0.0018 | 0.0011 | 0.0006 |
| 7 | 0.0018 | 0.0011 | 0.0006 |
| 8 | 0.0018 | 0.0011 | 0.0006 |
| 9 | 0.0018 | 0.0011 | 0.0006 |
| 10 | 0.0018 | 0.0011 | 0.0006 |
| 11 | 0.0018 | 0.0012 | 0.0006 |

| | | | |
|---|---|---|---|
| 12 | 0.0018 | 0.0012 | 0.0007 |
| 13 | 0.0018 | 0.0012 | 0.0007 |
| 14 | 0.0018 | 0.0012 | 0.0007 |
| 15 | 0.0018 | 0.0012 | 0.0007 |
| 16 | 0.0018 | 0.0012 | 0.0007 |
| 17 | 0.0019 | 0.0012 | 0.0007 |
| 18 | 0.0019 | 0.0012 | 0.0007 |
| 19 | 0.0019 | 0.0012 | 0.0007 |
| 20 | 0.0019 | 0.0012 | 0.0007 |
| 21 | 0.0019 | 0.0012 | 0.0007 |
| 22 | 0.0019 | 0.0012 | 0.0007 |
| 23 | 0.0019 | 0.0012 | 0.0007 |
| 24 | 0.0019 | 0.0012 | 0.0007 |
| 25 | 0.0019 | 0.0012 | 0.0007 |
| 26 | 0.0019 | 0.0012 | 0.0007 |
| 27 | 0.0019 | 0.0012 | 0.0007 |
| 28 | 0.0019 | 0.0012 | 0.0007 |
| 29 | 0.0020 | 0.0013 | 0.0007 |
| 30 | 0.0020 | 0.0013 | 0.0007 |
| 31 | 0.0020 | 0.0013 | 0.0007 |
| 32 | 0.0020 | 0.0013 | 0.0007 |
| 33 | 0.0020 | 0.0013 | 0.0007 |
| 34 | 0.0020 | 0.0013 | 0.0007 |
| 35 | 0.0020 | 0.0013 | 0.0007 |
| 36 | 0.0020 | 0.0013 | 0.0007 |
| 37 | 0.0020 | 0.0013 | 0.0007 |
| 38 | 0.0020 | 0.0013 | 0.0007 |
| 39 | 0.0021 | 0.0013 | 0.0007 |
| 40 | 0.0021 | 0.0013 | 0.0007 |
| 41 | 0.0021 | 0.0013 | 0.0007 |
| 42 | 0.0021 | 0.0013 | 0.0008 |
| 43 | 0.0021 | 0.0013 | 0.0008 |
| 44 | 0.0021 | 0.0014 | 0.0008 |
| 45 | 0.0021 | 0.0014 | 0.0008 |
| 46 | 0.0021 | 0.0014 | 0.0008 |
| 47 | 0.0021 | 0.0014 | 0.0008 |
| 48 | 0.0022 | 0.0014 | 0.0008 |
| 49 | 0.0022 | 0.0014 | 0.0008 |
| 50 | 0.0022 | 0.0014 | 0.0008 |
| 51 | 0.0022 | 0.0014 | 0.0008 |
| 52 | 0.0022 | 0.0014 | 0.0008 |
| 53 | 0.0022 | 0.0014 | 0.0008 |
| 54 | 0.0022 | 0.0014 | 0.0008 |
| 55 | 0.0022 | 0.0014 | 0.0008 |
| 56 | 0.0023 | 0.0014 | 0.0008 |
| 57 | 0.0023 | 0.0015 | 0.0008 |
| 58 | 0.0023 | 0.0015 | 0.0008 |
| 59 | 0.0023 | 0.0015 | 0.0008 |
| 60 | 0.0023 | 0.0015 | 0.0008 |
| 61 | 0.0023 | 0.0015 | 0.0008 |
| 62 | 0.0023 | 0.0015 | 0.0008 |
| 63 | 0.0024 | 0.0015 | 0.0008 |
| 64 | 0.0024 | 0.0015 | 0.0009 |
| 65 | 0.0024 | 0.0015 | 0.0009 |
| 66 | 0.0024 | 0.0015 | 0.0009 |
| 67 | 0.0024 | 0.0015 | 0.0009 |
| 68 | 0.0024 | 0.0016 | 0.0009 |
| 69 | 0.0024 | 0.0016 | 0.0009 |
| 70 | 0.0025 | 0.0016 | 0.0009 |

| | | | |
|---|---|---|---|
| 71 | 0.0025 | 0.0016 | 0.0009 |
| 72 | 0.0025 | 0.0016 | 0.0009 |
| 73 | 0.0025 | 0.0016 | 0.0009 |
| 74 | 0.0025 | 0.0016 | 0.0009 |
| 75 | 0.0025 | 0.0016 | 0.0009 |
| 76 | 0.0026 | 0.0016 | 0.0009 |
| 77 | 0.0026 | 0.0017 | 0.0009 |
| 78 | 0.0026 | 0.0017 | 0.0009 |
| 79 | 0.0026 | 0.0017 | 0.0009 |
| 80 | 0.0026 | 0.0017 | 0.0009 |
| 81 | 0.0027 | 0.0017 | 0.0010 |
| 82 | 0.0027 | 0.0017 | 0.0010 |
| 83 | 0.0027 | 0.0017 | 0.0010 |
| 84 | 0.0027 | 0.0017 | 0.0010 |
| 85 | 0.0027 | 0.0017 | 0.0010 |
| 86 | 0.0027 | 0.0018 | 0.0010 |
| 87 | 0.0028 | 0.0018 | 0.0010 |
| 88 | 0.0028 | 0.0018 | 0.0010 |
| 89 | 0.0028 | 0.0018 | 0.0010 |
| 90 | 0.0028 | 0.0018 | 0.0010 |
| 91 | 0.0029 | 0.0018 | 0.0010 |
| 92 | 0.0029 | 0.0018 | 0.0010 |
| 93 | 0.0029 | 0.0019 | 0.0010 |
| 94 | 0.0029 | 0.0019 | 0.0011 |
| 95 | 0.0030 | 0.0019 | 0.0011 |
| 96 | 0.0030 | 0.0019 | 0.0011 |
| 97 | 0.0030 | 0.0019 | 0.0011 |
| 98 | 0.0030 | 0.0019 | 0.0011 |
| 99 | 0.0031 | 0.0020 | 0.0011 |
| 100 | 0.0031 | 0.0020 | 0.0011 |
| 101 | 0.0031 | 0.0020 | 0.0011 |
| 102 | 0.0031 | 0.0020 | 0.0011 |
| 103 | 0.0032 | 0.0020 | 0.0011 |
| 104 | 0.0032 | 0.0020 | 0.0011 |
| 105 | 0.0032 | 0.0021 | 0.0012 |
| 106 | 0.0032 | 0.0021 | 0.0012 |
| 107 | 0.0033 | 0.0021 | 0.0012 |
| 108 | 0.0033 | 0.0021 | 0.0012 |
| 109 | 0.0033 | 0.0021 | 0.0012 |
| 110 | 0.0034 | 0.0022 | 0.0012 |
| 111 | 0.0034 | 0.0022 | 0.0012 |
| 112 | 0.0034 | 0.0022 | 0.0012 |
| 113 | 0.0035 | 0.0022 | 0.0013 |
| 114 | 0.0035 | 0.0022 | 0.0013 |
| 115 | 0.0035 | 0.0023 | 0.0013 |
| 116 | 0.0036 | 0.0023 | 0.0013 |
| 117 | 0.0036 | 0.0023 | 0.0013 |
| 118 | 0.0036 | 0.0023 | 0.0013 |
| 119 | 0.0037 | 0.0024 | 0.0013 |
| 120 | 0.0037 | 0.0024 | 0.0013 |
| 121 | 0.0038 | 0.0024 | 0.0014 |
| 122 | 0.0038 | 0.0024 | 0.0014 |
| 123 | 0.0039 | 0.0025 | 0.0014 |
| 124 | 0.0039 | 0.0025 | 0.0014 |
| 125 | 0.0040 | 0.0025 | 0.0014 |
| 126 | 0.0040 | 0.0026 | 0.0014 |
| 127 | 0.0041 | 0.0026 | 0.0015 |
| 128 | 0.0041 | 0.0026 | 0.0015 |
| 129 | 0.0042 | 0.0027 | 0.0015 |

| | | | |
|---|---|---|---|
| 130 | 0.0042 | 0.0027 | 0.0015 |
| 131 | 0.0043 | 0.0027 | 0.0015 |
| 132 | 0.0043 | 0.0028 | 0.0015 |
| 133 | 0.0044 | 0.0028 | 0.0016 |
| 134 | 0.0044 | 0.0028 | 0.0016 |
| 135 | 0.0045 | 0.0029 | 0.0016 |
| 136 | 0.0045 | 0.0029 | 0.0016 |
| 137 | 0.0046 | 0.0030 | 0.0017 |
| 138 | 0.0047 | 0.0030 | 0.0017 |
| 139 | 0.0048 | 0.0030 | 0.0017 |
| 140 | 0.0048 | 0.0031 | 0.0017 |
| 141 | 0.0049 | 0.0031 | 0.0018 |
| 142 | 0.0050 | 0.0032 | 0.0018 |
| 143 | 0.0051 | 0.0032 | 0.0018 |
| 144 | 0.0051 | 0.0033 | 0.0018 |
| 145 | 0.0053 | 0.0034 | 0.0019 |
| 146 | 0.0054 | 0.0034 | 0.0019 |
| 147 | 0.0055 | 0.0035 | 0.0020 |
| 148 | 0.0056 | 0.0036 | 0.0020 |
| 149 | 0.0057 | 0.0036 | 0.0021 |
| 150 | 0.0058 | 0.0037 | 0.0021 |
| 151 | 0.0059 | 0.0038 | 0.0021 |
| 152 | 0.0060 | 0.0038 | 0.0022 |
| 153 | 0.0062 | 0.0039 | 0.0022 |
| 154 | 0.0062 | 0.0040 | 0.0022 |
| 155 | 0.0064 | 0.0041 | 0.0023 |
| 156 | 0.0065 | 0.0042 | 0.0023 |
| 157 | 0.0067 | 0.0043 | 0.0024 |
| 158 | 0.0068 | 0.0043 | 0.0024 |
| 159 | 0.0070 | 0.0045 | 0.0025 |
| 160 | 0.0071 | 0.0046 | 0.0026 |
| 161 | 0.0074 | 0.0047 | 0.0026 |
| 162 | 0.0075 | 0.0048 | 0.0027 |
| 163 | 0.0077 | 0.0050 | 0.0028 |
| 164 | 0.0079 | 0.0050 | 0.0028 |
| 165 | 0.0082 | 0.0052 | 0.0029 |
| 166 | 0.0083 | 0.0053 | 0.0030 |
| 167 | 0.0087 | 0.0056 | 0.0031 |
| 168 | 0.0089 | 0.0057 | 0.0032 |
| 169 | 0.0093 | 0.0059 | 0.0033 |
| 170 | 0.0095 | 0.0061 | 0.0034 |
| 171 | 0.0100 | 0.0064 | 0.0036 |
| 172 | 0.0102 | 0.0065 | 0.0037 |
| 173 | 0.0108 | 0.0069 | 0.0039 |
| 174 | 0.0111 | 0.0071 | 0.0040 |
| 175 | 0.0117 | 0.0075 | 0.0042 |
| 176 | 0.0121 | 0.0077 | 0.0043 |
| 177 | 0.0129 | 0.0082 | 0.0046 |
| 178 | 0.0133 | 0.0085 | 0.0048 |
| 179 | 0.0144 | 0.0092 | 0.0052 |
| 180 | 0.0149 | 0.0096 | 0.0054 |
| 181 | 0.0163 | 0.0104 | 0.0059 |
| 182 | 0.0171 | 0.0109 | 0.0061 |
| 183 | 0.0189 | 0.0121 | 0.0068 |
| 184 | 0.0200 | 0.0128 | 0.0072 |
| 185 | 0.0327 | 0.0209 | 0.0118 |
| 186 | 0.0349 | 0.0223 | 0.0126 |
| 187 | 0.0404 | 0.0259 | 0.0146 |
| 188 | 0.0441 | 0.0282 | 0.0159 |

| | | | |
|---|---|---|---|
| 189 | 0.0549 | 0.0300 | 0.0249 |
| 190 | 0.0632 | 0.0300 | 0.0332 |
| 191 | 0.0959 | 0.0300 | 0.0659 |
| 192 | 0.1392 | 0.0300 | 0.1092 |
| 193 | 0.6022 | 0.0300 | 0.5722 |
| 194 | 0.0755 | 0.0300 | 0.0455 |
| 195 | 0.0488 | 0.0300 | 0.0188 |
| 196 | 0.0374 | 0.0239 | 0.0135 |
| 197 | 0.0213 | 0.0136 | 0.0077 |
| 198 | 0.0179 | 0.0115 | 0.0065 |
| 199 | 0.0156 | 0.0100 | 0.0056 |
| 200 | 0.0138 | 0.0088 | 0.0050 |
| 201 | 0.0125 | 0.0080 | 0.0045 |
| 202 | 0.0114 | 0.0073 | 0.0041 |
| 203 | 0.0105 | 0.0067 | 0.0038 |
| 204 | 0.0097 | 0.0062 | 0.0035 |
| 205 | 0.0091 | 0.0058 | 0.0033 |
| 206 | 0.0085 | 0.0054 | 0.0031 |
| 207 | 0.0080 | 0.0051 | 0.0029 |
| 208 | 0.0076 | 0.0049 | 0.0027 |
| 209 | 0.0072 | 0.0046 | 0.0026 |
| 210 | 0.0069 | 0.0044 | 0.0025 |
| 211 | 0.0066 | 0.0042 | 0.0024 |
| 212 | 0.0063 | 0.0040 | 0.0023 |
| 213 | 0.0061 | 0.0039 | 0.0022 |
| 214 | 0.0058 | 0.0037 | 0.0021 |
| 215 | 0.0056 | 0.0036 | 0.0020 |
| 216 | 0.0054 | 0.0035 | 0.0020 |
| 217 | 0.0052 | 0.0033 | 0.0019 |
| 218 | 0.0050 | 0.0032 | 0.0018 |
| 219 | 0.0049 | 0.0031 | 0.0017 |
| 220 | 0.0047 | 0.0030 | 0.0017 |
| 221 | 0.0046 | 0.0029 | 0.0016 |
| 222 | 0.0045 | 0.0029 | 0.0016 |
| 223 | 0.0043 | 0.0028 | 0.0016 |
| 224 | 0.0042 | 0.0027 | 0.0015 |
| 225 | 0.0041 | 0.0026 | 0.0015 |
| 226 | 0.0040 | 0.0026 | 0.0014 |
| 227 | 0.0039 | 0.0025 | 0.0014 |
| 228 | 0.0038 | 0.0025 | 0.0014 |
| 229 | 0.0038 | 0.0024 | 0.0014 |
| 230 | 0.0037 | 0.0024 | 0.0013 |
| 231 | 0.0036 | 0.0023 | 0.0013 |
| 232 | 0.0035 | 0.0023 | 0.0013 |
| 233 | 0.0035 | 0.0022 | 0.0012 |
| 234 | 0.0034 | 0.0022 | 0.0012 |
| 235 | 0.0033 | 0.0021 | 0.0012 |
| 236 | 0.0033 | 0.0021 | 0.0012 |
| 237 | 0.0032 | 0.0020 | 0.0012 |
| 238 | 0.0031 | 0.0020 | 0.0011 |
| 239 | 0.0031 | 0.0020 | 0.0011 |
| 240 | 0.0030 | 0.0019 | 0.0011 |
| 241 | 0.0030 | 0.0019 | 0.0011 |
| 242 | 0.0029 | 0.0019 | 0.0011 |
| 243 | 0.0029 | 0.0019 | 0.0010 |
| 244 | 0.0028 | 0.0018 | 0.0010 |
| 245 | 0.0028 | 0.0018 | 0.0010 |
| 246 | 0.0028 | 0.0018 | 0.0010 |
| 247 | 0.0027 | 0.0017 | 0.0010 |

| | | | |
|---|---|---|---|
| 248 | 0.0027 | 0.0017 | 0.0010 |
| 249 | 0.0026 | 0.0017 | 0.0010 |
| 250 | 0.0026 | 0.0017 | 0.0009 |
| 251 | 0.0026 | 0.0016 | 0.0009 |
| 252 | 0.0025 | 0.0016 | 0.0009 |
| 253 | 0.0025 | 0.0016 | 0.0009 |
| 254 | 0.0025 | 0.0016 | 0.0009 |
| 255 | 0.0024 | 0.0016 | 0.0009 |
| 256 | 0.0024 | 0.0015 | 0.0009 |
| 257 | 0.0024 | 0.0015 | 0.0009 |
| 258 | 0.0023 | 0.0015 | 0.0008 |
| 259 | 0.0023 | 0.0015 | 0.0008 |
| 260 | 0.0023 | 0.0015 | 0.0008 |
| 261 | 0.0023 | 0.0014 | 0.0008 |
| 262 | 0.0022 | 0.0014 | 0.0008 |
| 263 | 0.0022 | 0.0014 | 0.0008 |
| 264 | 0.0022 | 0.0014 | 0.0008 |
| 265 | 0.0022 | 0.0014 | 0.0008 |
| 266 | 0.0021 | 0.0014 | 0.0008 |
| 267 | 0.0021 | 0.0014 | 0.0008 |
| 268 | 0.0021 | 0.0013 | 0.0008 |
| 269 | 0.0021 | 0.0013 | 0.0007 |
| 270 | 0.0021 | 0.0013 | 0.0007 |
| 271 | 0.0020 | 0.0013 | 0.0007 |
| 272 | 0.0020 | 0.0013 | 0.0007 |
| 273 | 0.0020 | 0.0013 | 0.0007 |
| 274 | 0.0020 | 0.0013 | 0.0007 |
| 275 | 0.0020 | 0.0012 | 0.0007 |
| 276 | 0.0019 | 0.0012 | 0.0007 |
| 277 | 0.0019 | 0.0012 | 0.0007 |
| 278 | 0.0019 | 0.0012 | 0.0007 |
| 279 | 0.0019 | 0.0012 | 0.0007 |
| 280 | 0.0019 | 0.0012 | 0.0007 |
| 281 | 0.0018 | 0.0012 | 0.0007 |
| 282 | 0.0018 | 0.0012 | 0.0007 |
| 283 | 0.0018 | 0.0012 | 0.0007 |
| 284 | 0.0018 | 0.0012 | 0.0006 |
| 285 | 0.0018 | 0.0011 | 0.0006 |
| 286 | 0.0018 | 0.0011 | 0.0006 |
| 287 | 0.0018 | 0.0011 | 0.0006 |
| 288 | 0.0017 | 0.0011 | 0.0006 |

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Total soil rain loss = 1.08(In)
Total effective rainfall = 1.36(In)
Peak flow rate in flood hydrograph = 17.15(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+15 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+20 | 0.0001 | 0.01 | Q | | | | |
| 0+25 | 0.0003 | 0.02 | Q | | | | |
| 0+30 | 0.0005 | 0.03 | Q | | | | |
| 0+35 | 0.0008 | 0.04 | Q | | | | |
| 0+40 | 0.0011 | 0.05 | Q | | | | |
| 0+45 | 0.0016 | 0.06 | Q | | | | |
| 0+50 | 0.0020 | 0.07 | Q | | | | |
| 0+55 | 0.0025 | 0.07 | Q | | | | |
| 1+ 0 | 0.0031 | 0.08 | Q | | | | |
| 1+ 5 | 0.0037 | 0.08 | Q | | | | |
| 1+10 | 0.0042 | 0.09 | Q | | | | |
| 1+15 | 0.0048 | 0.09 | Q | | | | |
| 1+20 | 0.0055 | 0.09 | Q | | | | |
| 1+25 | 0.0061 | 0.09 | Q | | | | |
| 1+30 | 0.0068 | 0.10 | Q | | | | |
| 1+35 | 0.0074 | 0.10 | Q | | | | |
| 1+40 | 0.0081 | 0.10 | Q | | | | |
| 1+45 | 0.0088 | 0.10 | Q | | | | |
| 1+50 | 0.0095 | 0.10 | Q | | | | |
| 1+55 | 0.0103 | 0.11 | Q | | | | |
| 2+ 0 | 0.0110 | 0.11 | Q | | | | |
| 2+ 5 | 0.0117 | 0.11 | Q | | | | |
| 2+10 | 0.0125 | 0.11 | Q | | | | |
| 2+15 | 0.0133 | 0.11 | Q | | | | |
| 2+20 | 0.0140 | 0.11 | Q | | | | |
| 2+25 | 0.0148 | 0.11 | Q | | | | |
| 2+30 | 0.0156 | 0.11 | Q | | | | |
| 2+35 | 0.0164 | 0.12 | Q | | | | |
| 2+40 | 0.0172 | 0.12 | Q | | | | |
| 2+45 | 0.0180 | 0.12 | Q | | | | |
| 2+50 | 0.0188 | 0.12 | Q | | | | |
| 2+55 | 0.0197 | 0.12 | Q | | | | |
| 3+ 0 | 0.0205 | 0.12 | Q | | | | |
| 3+ 5 | 0.0213 | 0.12 | Q | | | | |
| 3+10 | 0.0222 | 0.12 | Q | | | | |
| 3+15 | 0.0230 | 0.12 | Q | | | | |
| 3+20 | 0.0239 | 0.12 | Q | | | | |
| 3+25 | 0.0247 | 0.13 | Q | | | | |
| 3+30 | 0.0256 | 0.13 | Q | | | | |
| 3+35 | 0.0265 | 0.13 | Q | | | | |
| 3+40 | 0.0274 | 0.13 | Q | | | | |
| 3+45 | 0.0283 | 0.13 | Q | | | | |
| 3+50 | 0.0291 | 0.13 | Q | | | | |
| 3+55 | 0.0300 | 0.13 | Q | | | | |
| 4+ 0 | 0.0309 | 0.13 | Q | | | | |
| 4+ 5 | 0.0319 | 0.13 | Q | | | | |
| 4+10 | 0.0328 | 0.13 | Q | | | | |
| 4+15 | 0.0337 | 0.13 | Q | | | | |
| 4+20 | 0.0346 | 0.13 | Q | | | | |
| 4+25 | 0.0356 | 0.14 | Q | | | | |
| 4+30 | 0.0365 | 0.14 | Q | | | | |
| 4+35 | 0.0374 | 0.14 | Q | | | | |
| 4+40 | 0.0384 | 0.14 | Q | | | | |
| 4+45 | 0.0394 | 0.14 | Q | | | | |
| 4+50 | 0.0403 | 0.14 | Q | | | | |
| 4+55 | 0.0413 | 0.14 | Q | | | | |
| 5+ 0 | 0.0423 | 0.14 | Q | | | | |
| 5+ 5 | 0.0432 | 0.14 | QV | | | | |
| 5+10 | 0.0442 | 0.14 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+15 | 0.0452 | 0.14 | QV | | | | |
| 5+20 | 0.0462 | 0.14 | QV | | | | |
| 5+25 | 0.0472 | 0.15 | QV | | | | |
| 5+30 | 0.0482 | 0.15 | QV | | | | |
| 5+35 | 0.0493 | 0.15 | QV | | | | |
| 5+40 | 0.0503 | 0.15 | QV | | | | |
| 5+45 | 0.0513 | 0.15 | QV | | | | |
| 5+50 | 0.0523 | 0.15 | QV | | | | |
| 5+55 | 0.0534 | 0.15 | QV | | | | |
| 6+ 0 | 0.0544 | 0.15 | QV | | | | |
| 6+ 5 | 0.0555 | 0.15 | QV | | | | |
| 6+10 | 0.0565 | 0.15 | QV | | | | |
| 6+15 | 0.0576 | 0.15 | QV | | | | |
| 6+20 | 0.0587 | 0.16 | QV | | | | |
| 6+25 | 0.0598 | 0.16 | QV | | | | |
| 6+30 | 0.0608 | 0.16 | QV | | | | |
| 6+35 | 0.0619 | 0.16 | QV | | | | |
| 6+40 | 0.0630 | 0.16 | QV | | | | |
| 6+45 | 0.0641 | 0.16 | QV | | | | |
| 6+50 | 0.0653 | 0.16 | QV | | | | |
| 6+55 | 0.0664 | 0.16 | QV | | | | |
| 7+ 0 | 0.0675 | 0.16 | QV | | | | |
| 7+ 5 | 0.0686 | 0.17 | QV | | | | |
| 7+10 | 0.0698 | 0.17 | QV | | | | |
| 7+15 | 0.0709 | 0.17 | QV | | | | |
| 7+20 | 0.0721 | 0.17 | QV | | | | |
| 7+25 | 0.0733 | 0.17 | QV | | | | |
| 7+30 | 0.0744 | 0.17 | QV | | | | |
| 7+35 | 0.0756 | 0.17 | QV | | | | |
| 7+40 | 0.0768 | 0.17 | QV | | | | |
| 7+45 | 0.0780 | 0.17 | QV | | | | |
| 7+50 | 0.0792 | 0.18 | QV | | | | |
| 7+55 | 0.0805 | 0.18 | QV | | | | |
| 8+ 0 | 0.0817 | 0.18 | QV | | | | |
| 8+ 5 | 0.0829 | 0.18 | QV | | | | |
| 8+10 | 0.0842 | 0.18 | QV | | | | |
| 8+15 | 0.0854 | 0.18 | Q V | | | | |
| 8+20 | 0.0867 | 0.18 | Q V | | | | |
| 8+25 | 0.0880 | 0.19 | Q V | | | | |
| 8+30 | 0.0893 | 0.19 | Q V | | | | |
| 8+35 | 0.0906 | 0.19 | Q V | | | | |
| 8+40 | 0.0919 | 0.19 | Q V | | | | |
| 8+45 | 0.0932 | 0.19 | Q V | | | | |
| 8+50 | 0.0945 | 0.19 | Q V | | | | |
| 8+55 | 0.0959 | 0.19 | Q V | | | | |
| 9+ 0 | 0.0972 | 0.20 | Q V | | | | |
| 9+ 5 | 0.0986 | 0.20 | Q V | | | | |
| 9+10 | 0.0999 | 0.20 | Q V | | | | |
| 9+15 | 0.1013 | 0.20 | Q V | | | | |
| 9+20 | 0.1027 | 0.20 | Q V | | | | |
| 9+25 | 0.1041 | 0.20 | Q V | | | | |
| 9+30 | 0.1056 | 0.21 | Q V | | | | |
| 9+35 | 0.1070 | 0.21 | Q V | | | | |
| 9+40 | 0.1085 | 0.21 | Q V | | | | |
| 9+45 | 0.1099 | 0.21 | Q V | | | | |
| 9+50 | 0.1114 | 0.21 | Q V | | | | |
| 9+55 | 0.1129 | 0.22 | Q V | | | | |
| 10+ 0 | 0.1144 | 0.22 | Q V | | | | |
| 10+ 5 | 0.1159 | 0.22 | Q V | | | | |

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10+10       0.1174      0.22  Q V       |          |          |          |
10+15       0.1190      0.23  Q V       |          |          |          |
10+20       0.1206      0.23  Q V       |          |          |          |
10+25       0.1221      0.23  Q V       |          |          |          |
10+30       0.1237      0.23  Q V       |          |          |          |
10+35       0.1254      0.23  Q V       |          |          |          |
10+40       0.1270      0.24  Q V       |          |          |          |
10+45       0.1286      0.24  Q  V      |          |          |          |
10+50       0.1303      0.24  Q  V      |          |          |          |
10+55       0.1320      0.24  Q  V      |          |          |          |
11+ 0       0.1337      0.25  Q  V      |          |          |          |
11+ 5       0.1354      0.25  Q  V      |          |          |          |
11+10       0.1372      0.25  Q  V      |          |          |          |
11+15       0.1389      0.26  Q  V      |          |          |          |
11+20       0.1407      0.26  Q  V      |          |          |          |
11+25       0.1425      0.26  Q  V      |          |          |          |
11+30       0.1444      0.27  Q  V      |          |          |          |
11+35       0.1462      0.27  Q  V      |          |          |          |
11+40       0.1481      0.27  Q  V      |          |          |          |
11+45       0.1500      0.28  Q  V      |          |          |          |
11+50       0.1519      0.28  Q  V      |          |          |          |
11+55       0.1539      0.28  Q  V      |          |          |          |
12+ 0       0.1559      0.29  Q  V      |          |          |          |
12+ 5       0.1579      0.29  Q  V      |          |          |          |
12+10       0.1599      0.30  Q  V      |          |          |          |
12+15       0.1620      0.30  Q  V      |          |          |          |
12+20       0.1641      0.30  Q  V      |          |          |          |
12+25       0.1662      0.31  Q  V      |          |          |          |
12+30       0.1684      0.32  Q  V      |          |          |          |
12+35       0.1706      0.32  Q   V     |          |          |          |
12+40       0.1728      0.33  Q   V     |          |          |          |
12+45       0.1751      0.33  Q   V     |          |          |          |
12+50       0.1774      0.34  Q   V     |          |          |          |
12+55       0.1798      0.34  Q   V     |          |          |          |
13+ 0       0.1822      0.35  Q   V     |          |          |          |
13+ 5       0.1847      0.36  Q   V     |          |          |          |
13+10       0.1872      0.36  Q   V     |          |          |          |
13+15       0.1897      0.37  Q   V     |          |          |          |
13+20       0.1923      0.38  Q   V     |          |          |          |
13+25       0.1950      0.38  Q   V     |          |          |          |
13+30       0.1977      0.39  Q   V     |          |          |          |
13+35       0.2004      0.40  Q   V     |          |          |          |
13+40       0.2032      0.41  Q   V     |          |          |          |
13+45       0.2061      0.42  Q   V     |          |          |          |
13+50       0.2090      0.43  Q   V     |          |          |          |
13+55       0.2120      0.44  Q   V     |          |          |          |
14+ 0       0.2151      0.45  Q    V    |          |          |          |
14+ 5       0.2183      0.46  Q    V    |          |          |          |
14+10       0.2215      0.47  Q    V    |          |          |          |
14+15       0.2248      0.48  Q    V    |          |          |          |
14+20       0.2282      0.50  Q    V    |          |          |          |
14+25       0.2318      0.51  |Q   V    |          |          |          |
14+30       0.2354      0.52  |Q   V    |          |          |          |
14+35       0.2391      0.54  |Q   V    |          |          |          |
14+40       0.2429      0.56  |Q   V    |          |          |          |
14+45       0.2469      0.58  |Q   V    |          |          |          |
14+50       0.2510      0.60  |Q   V    |          |          |          |
14+55       0.2553      0.62  |Q    V   |          |          |          |
15+ 0       0.2597      0.64  |Q    V   |          |          |          |
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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 15+ 5 | 0.2643 | 0.67 | Q V | | | | |
| 15+10 | 0.2691 | 0.70 | Q V | | | | |
| 15+15 | 0.2742 | 0.73 | Q V | | | | |
| 15+20 | 0.2795 | 0.77 | Q V | | | | |
| 15+25 | 0.2850 | 0.81 | Q V | | | | |
| 15+30 | 0.2910 | 0.87 | Q V | | | | |
| 15+35 | 0.2975 | 0.94 | Q V | | | | |
| 15+40 | 0.3046 | 1.03 | Q V | | | | |
| 15+45 | 0.3127 | 1.16 | Q V | | | | |
| 15+50 | 0.3220 | 1.36 | Q V | | | | |
| 15+55 | 0.3334 | 1.64 | Q V | | | | |
| 16+ 0 | 0.3476 | 2.07 | Q V | | | | |
| 16+ 5 | 0.3694 | 3.17 | Q V | | | | |
| 16+10 | 0.4032 | 4.90 | Q | | | | |
| 16+15 | 0.4496 | 6.74 | V Q | | | | |
| 16+20 | 0.5109 | 8.90 | V Q | | | | |
| 16+25 | 0.5977 | 12.61 | V Q | | | | |
| 16+30 | 0.7159 | 17.15 | V | | | Q | |
| 16+35 | 0.8337 | 17.12 | V | | | Q | |
| 16+40 | 0.9298 | 13.95 | V Q | | | | |
| 16+45 | 1.0076 | 11.29 | QV | | | | |
| 16+50 | 1.0696 | 9.01 | Q V | | | | |
| 16+55 | 1.1204 | 7.38 | Q V | | | | |
| 17+ 0 | 1.1639 | 6.32 | Q V | | | | |
| 17+ 5 | 1.2026 | 5.62 | Q V | | | | |
| 17+10 | 1.2365 | 4.92 | Q V | | | | |
| 17+15 | 1.2667 | 4.38 | Q V | | | | |
| 17+20 | 1.2943 | 4.01 | Q V | | | | |
| 17+25 | 1.3185 | 3.52 | Q V | | | | |
| 17+30 | 1.3410 | 3.27 | Q V | | | | |
| 17+35 | 1.3613 | 2.94 | Q V | | | | |
| 17+40 | 1.3804 | 2.78 | Q V | | | | |
| 17+45 | 1.3982 | 2.58 | Q V | | | | |
| 17+50 | 1.4149 | 2.43 | Q V | | | | |
| 17+55 | 1.4301 | 2.20 | Q V | | | | |
| 18+ 0 | 1.4442 | 2.05 | Q V | | | | |
| 18+ 5 | 1.4566 | 1.81 | Q V | | | | |
| 18+10 | 1.4685 | 1.72 | Q V | | | | |
| 18+15 | 1.4798 | 1.64 | Q V | | | | |
| 18+20 | 1.4906 | 1.56 | Q V | | | | |
| 18+25 | 1.5006 | 1.45 | Q V | | | | |
| 18+30 | 1.5101 | 1.39 | Q V | | | | |
| 18+35 | 1.5192 | 1.32 | Q V | | | | |
| 18+40 | 1.5276 | 1.22 | Q V | | | | |
| 18+45 | 1.5354 | 1.12 | Q V | | | | |
| 18+50 | 1.5429 | 1.09 | Q V | | | | |
| 18+55 | 1.5501 | 1.06 | Q V | | | | |
| 19+ 0 | 1.5568 | 0.97 | Q V | | | | |
| 19+ 5 | 1.5630 | 0.90 | Q V | | | | |
| 19+10 | 1.5691 | 0.87 | Q V | | | | |
| 19+15 | 1.5749 | 0.84 | Q V | | | | |
| 19+20 | 1.5801 | 0.76 | Q V | | | | |
| 19+25 | 1.5849 | 0.70 | Q V | | | | |
| 19+30 | 1.5896 | 0.68 | Q V | | | | |
| 19+35 | 1.5940 | 0.65 | Q V | | | | |
| 19+40 | 1.5979 | 0.56 | Q V | | | | |
| 19+45 | 1.6014 | 0.52 | Q V | | | | |
| 19+50 | 1.6049 | 0.51 | Q V | | | | |
| 19+55 | 1.6084 | 0.50 | Q V | | | | |

```
20+ 0       1.6119      0.51  |Q        |         |         |      V  |
20+ 5       1.6154      0.51  |Q        |         |         |       V |
20+10       1.6189      0.51  |Q        |         |         |       V |
20+15       1.6224      0.50  Q         |         |         |       V |
20+20       1.6257      0.49  Q         |         |         |       V |
20+25       1.6290      0.48  Q         |         |         |       V |
20+30       1.6322      0.46  Q         |         |         |       V |
20+35       1.6352      0.43  Q         |         |         |       V |
20+40       1.6378      0.37  Q         |         |         |       V |
20+45       1.6402      0.35  Q         |         |         |       V |
20+50       1.6425      0.34  Q         |         |         |       V |
20+55       1.6448      0.33  Q         |         |         |       V |
21+ 0       1.6469      0.31  Q         |         |         |       V |
21+ 5       1.6487      0.26  Q         |         |         |       V |
21+10       1.6502      0.21  Q         |         |         |       V |
21+15       1.6516      0.20  Q         |         |         |       V |
21+20       1.6529      0.20  Q         |         |         |       V |
21+25       1.6542      0.19  Q         |         |         |       V |
21+30       1.6555      0.19  Q         |         |         |        V|
21+35       1.6568      0.19  Q         |         |         |        V|
21+40       1.6581      0.18  Q         |         |         |        V|
21+45       1.6593      0.18  Q         |         |         |        V|
21+50       1.6605      0.18  Q         |         |         |        V|
21+55       1.6617      0.17  Q         |         |         |        V|
22+ 0       1.6629      0.17  Q         |         |         |        V|
22+ 5       1.6640      0.17  Q         |         |         |        V|
22+10       1.6652      0.17  Q         |         |         |        V|
22+15       1.6663      0.16  Q         |         |         |        V|
22+20       1.6674      0.16  Q         |         |         |        V|
22+25       1.6685      0.16  Q         |         |         |        V|
22+30       1.6696      0.16  Q         |         |         |        V|
22+35       1.6707      0.15  Q         |         |         |        V|
22+40       1.6717      0.15  Q         |         |         |        V|
22+45       1.6727      0.15  Q         |         |         |        V|
22+50       1.6738      0.15  Q         |         |         |        V|
22+55       1.6748      0.15  Q         |         |         |        V|
23+ 0       1.6758      0.15  Q         |         |         |        V|
23+ 5       1.6768      0.14  Q         |         |         |        V|
23+10       1.6777      0.14  Q         |         |         |        V|
23+15       1.6787      0.14  Q         |         |         |        V|
23+20       1.6797      0.14  Q         |         |         |        V|
23+25       1.6806      0.14  Q         |         |         |        V|
23+30       1.6815      0.14  Q         |         |         |        V|
23+35       1.6825      0.13  Q         |         |         |        V|
23+40       1.6834      0.13  Q         |         |         |        V|
23+45       1.6843      0.13  Q         |         |         |        V|
23+50       1.6852      0.13  Q         |         |         |        V|
23+55       1.6861      0.13  Q         |         |         |        V|
24+ 0       1.6869      0.13  Q         |         |         |        V|
24+ 5       1.6878      0.13  Q         |         |         |        V|
24+10       1.6886      0.12  Q         |         |         |        V|
24+15       1.6895      0.12  Q         |         |         |        V|
24+20       1.6902      0.11  Q         |         |         |        V|
24+25       1.6909      0.10  Q         |         |         |        V|
24+30       1.6916      0.09  Q         |         |         |        V|
24+35       1.6921      0.08  Q         |         |         |        V|
24+40       1.6925      0.07  Q         |         |         |        V|
24+45       1.6929      0.06  Q         |         |         |        V|
24+50       1.6933      0.05  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24+55 | 1.6936 | 0.04 | Q | \| | \| | \| | V\| |
| 25+ 0 | 1.6939 | 0.04 | Q | \| | \| | \| | V\| |
| 25+ 5 | 1.6941 | 0.04 | Q | \| | \| | \| | V\| |
| 25+10 | 1.6944 | 0.03 | Q | \| | \| | \| | V\| |
| 25+15 | 1.6946 | 0.03 | Q | \| | \| | \| | V\| |
| 25+20 | 1.6948 | 0.03 | Q | \| | \| | \| | V\| |
| 25+25 | 1.6949 | 0.03 | Q | \| | \| | \| | V\| |
| 25+30 | 1.6951 | 0.02 | Q | \| | \| | \| | V\| |
| 25+35 | 1.6952 | 0.02 | Q | \| | \| | \| | V\| |
| 25+40 | 1.6954 | 0.02 | Q | \| | \| | \| | V\| |
| 25+45 | 1.6955 | 0.02 | Q | \| | \| | \| | V\| |
| 25+50 | 1.6956 | 0.02 | Q | \| | \| | \| | V\| |
| 25+55 | 1.6957 | 0.02 | Q | \| | \| | \| | V\| |
| 26+ 0 | 1.6958 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 5 | 1.6959 | 0.01 | Q | \| | \| | \| | V\| |
| 26+10 | 1.6960 | 0.01 | Q | \| | \| | \| | V\| |
| 26+15 | 1.6961 | 0.01 | Q | \| | \| | \| | V\| |
| 26+20 | 1.6961 | 0.01 | Q | \| | \| | \| | V\| |
| 26+25 | 1.6962 | 0.01 | Q | \| | \| | \| | V\| |
| 26+30 | 1.6963 | 0.01 | Q | \| | \| | \| | V\| |
| 26+35 | 1.6963 | 0.01 | Q | \| | \| | \| | V\| |
| 26+40 | 1.6964 | 0.01 | Q | \| | \| | \| | V\| |
| 26+45 | 1.6964 | 0.01 | Q | \| | \| | \| | V\| |
| 26+50 | 1.6964 | 0.01 | Q | \| | \| | \| | V\| |
| 26+55 | 1.6965 | 0.01 | Q | \| | \| | \| | V\| |
| 27+ 0 | 1.6965 | 0.01 | Q | \| | \| | \| | V\| |
| 27+ 5 | 1.6966 | 0.00 | Q | \| | \| | \| | V\| |
| 27+10 | 1.6966 | 0.00 | Q | \| | \| | \| | V\| |
| 27+15 | 1.6966 | 0.00 | Q | \| | \| | \| | V\| |
| 27+20 | 1.6966 | 0.00 | Q | \| | \| | \| | V\| |
| 27+25 | 1.6967 | 0.00 | Q | \| | \| | \| | V\| |
| 27+30 | 1.6967 | 0.00 | Q | \| | \| | \| | V\| |
| 27+35 | 1.6967 | 0.00 | Q | \| | \| | \| | V\| |
| 27+40 | 1.6967 | 0.00 | Q | \| | \| | \| | V\| |
| 27+45 | 1.6967 | 0.00 | Q | \| | \| | \| | V\| |
| 27+50 | 1.6967 | 0.00 | Q | \| | \| | \| | V\| |
| 27+55 | 1.6968 | 0.00 | Q | \| | \| | \| | V\| |
| 28+ 0 | 1.6968 | 0.00 | Q | \| | \| | \| | V\| |
| 28+ 5 | 1.6968 | 0.00 | Q | \| | \| | \| | V\| |
| 28+10 | 1.6968 | 0.00 | Q | \| | \| | \| | V\| |
| 28+15 | 1.6968 | 0.00 | Q | \| | \| | \| | V\| |
| 28+20 | 1.6968 | 0.00 | Q | \| | \| | \| | V\| |
| 28+25 | 1.6968 | 0.00 | Q | \| | \| | \| | V\| |
| 28+30 | 1.6968 | 0.00 | Q | \| | \| | \| | V\| |
| 28+35 | 1.6968 | 0.00 | Q | \| | \| | \| | V\| |
| 28+40 | 1.6968 | 0.00 | Q | \| | \| | \| | V\| |
| 28+45 | 1.6968 | 0.00 | Q | \| | \| | \| | V\| |
| 28+50 | 1.6968 | 0.00 | Q | \| | \| | \| | V\| |
| 28+55 | 1.6968 | 0.00 | Q | \| | \| | \| | V\| |
| 29+ 0 | 1.6968 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 8
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 8.97 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 8.97 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 8.97 | 24 | 2.42 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 8.97 | 1.000 | 0.360 | 1.000 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 8.97 | 1.000 | 62.0 | 80.6 | 2.41 | 0.357 |

Area-averaged catchment yield fraction, Y = 0.357
Area-averaged low loss fraction, Yb = 0.643
User entry of time of concentration = 0.520 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 8.97(Ac.)
Catchment Lag time = 0.416 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 20.0321
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.643 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.420(In)

Rainfall depth area reduction factors:
Using a total area of 8.97(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.602(In)
30-minute factor = 1.000 Adjusted rainfall = 1.031(In)
1-hour factor = 1.000 Adjusted rainfall = 1.269(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.420(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 108.48 (CFS)) | |
| 1 | 0.995 | 1.079 |
| 2 | 4.516 | 3.820 |
| 3 | 11.300 | 7.360 |
| 4 | 26.240 | 16.207 |
| 5 | 43.399 | 18.615 |
| 6 | 55.091 | 12.683 |
| 7 | 62.875 | 8.444 |
| 8 | 68.500 | 6.103 |
| 9 | 73.033 | 4.917 |
| 10 | 76.661 | 3.936 |
| 11 | 79.664 | 3.258 |
| 12 | 82.167 | 2.715 |
| 13 | 84.311 | 2.326 |
| 14 | 86.250 | 2.103 |

| | | |
|---|---|---|
| 15 | 87.937 | 1.830 |
| 16 | 89.330 | 1.511 |
| 17 | 90.508 | 1.278 |
| 18 | 91.609 | 1.195 |
| 19 | 92.585 | 1.059 |
| 20 | 93.487 | 0.979 |
| 21 | 94.262 | 0.841 |
| 22 | 94.943 | 0.739 |
| 23 | 95.601 | 0.714 |
| 24 | 96.140 | 0.584 |
| 25 | 96.660 | 0.565 |
| 26 | 97.095 | 0.471 |
| 27 | 97.455 | 0.391 |
| 28 | 97.792 | 0.365 |
| 29 | 98.009 | 0.235 |
| 30 | 98.210 | 0.217 |
| 31 | 98.432 | 0.241 |
| 32 | 98.672 | 0.261 |
| 33 | 98.913 | 0.261 |
| 34 | 99.153 | 0.261 |
| 35 | 99.393 | 0.261 |
| 36 | 99.570 | 0.191 |
| 37 | 99.695 | 0.136 |
| 38 | 99.820 | 0.136 |
| 39 | 100.000 | 0.068 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6024 | 0.6024 |
| 2 | 0.7416 | 0.1392 |
| 3 | 0.8375 | 0.0959 |
| 4 | 0.9130 | 0.0755 |
| 5 | 0.9762 | 0.0632 |
| 6 | 1.0311 | 0.0549 |
| 7 | 1.0799 | 0.0488 |
| 8 | 1.1241 | 0.0441 |
| 9 | 1.1645 | 0.0404 |
| 10 | 1.2019 | 0.0374 |
| 11 | 1.2368 | 0.0349 |
| 12 | 1.2695 | 0.0327 |
| 13 | 1.2907 | 0.0212 |
| 14 | 1.3107 | 0.0200 |
| 15 | 1.3296 | 0.0189 |
| 16 | 1.3475 | 0.0179 |
| 17 | 1.3645 | 0.0170 |
| 18 | 1.3808 | 0.0163 |
| 19 | 1.3963 | 0.0156 |
| 20 | 1.4112 | 0.0149 |
| 21 | 1.4256 | 0.0143 |
| 22 | 1.4394 | 0.0138 |
| 23 | 1.4527 | 0.0133 |
| 24 | 1.4656 | 0.0129 |
| 25 | 1.4780 | 0.0125 |
| 26 | 1.4901 | 0.0121 |
| 27 | 1.5018 | 0.0117 |
| 28 | 1.5132 | 0.0114 |
| 29 | 1.5242 | 0.0110 |
| 30 | 1.5350 | 0.0107 |
| 31 | 1.5454 | 0.0105 |

| | | |
|---|---|---|
| 32 | 1.5556 | 0.0102 |
| 33 | 1.5656 | 0.0100 |
| 34 | 1.5753 | 0.0097 |
| 35 | 1.5848 | 0.0095 |
| 36 | 1.5941 | 0.0093 |
| 37 | 1.6031 | 0.0091 |
| 38 | 1.6120 | 0.0089 |
| 39 | 1.6207 | 0.0087 |
| 40 | 1.6292 | 0.0085 |
| 41 | 1.6376 | 0.0083 |
| 42 | 1.6457 | 0.0082 |
| 43 | 1.6538 | 0.0080 |
| 44 | 1.6617 | 0.0079 |
| 45 | 1.6694 | 0.0077 |
| 46 | 1.6770 | 0.0076 |
| 47 | 1.6845 | 0.0075 |
| 48 | 1.6919 | 0.0074 |
| 49 | 1.6991 | 0.0072 |
| 50 | 1.7062 | 0.0071 |
| 51 | 1.7132 | 0.0070 |
| 52 | 1.7201 | 0.0069 |
| 53 | 1.7269 | 0.0068 |
| 54 | 1.7336 | 0.0067 |
| 55 | 1.7402 | 0.0066 |
| 56 | 1.7467 | 0.0065 |
| 57 | 1.7531 | 0.0064 |
| 58 | 1.7594 | 0.0063 |
| 59 | 1.7657 | 0.0062 |
| 60 | 1.7718 | 0.0062 |
| 61 | 1.7779 | 0.0061 |
| 62 | 1.7839 | 0.0060 |
| 63 | 1.7898 | 0.0059 |
| 64 | 1.7956 | 0.0058 |
| 65 | 1.8014 | 0.0058 |
| 66 | 1.8071 | 0.0057 |
| 67 | 1.8127 | 0.0056 |
| 68 | 1.8183 | 0.0056 |
| 69 | 1.8238 | 0.0055 |
| 70 | 1.8293 | 0.0054 |
| 71 | 1.8346 | 0.0054 |
| 72 | 1.8399 | 0.0053 |
| 73 | 1.8450 | 0.0050 |
| 74 | 1.8499 | 0.0050 |
| 75 | 1.8549 | 0.0049 |
| 76 | 1.8597 | 0.0049 |
| 77 | 1.8645 | 0.0048 |
| 78 | 1.8693 | 0.0048 |
| 79 | 1.8740 | 0.0047 |
| 80 | 1.8787 | 0.0047 |
| 81 | 1.8833 | 0.0046 |
| 82 | 1.8879 | 0.0046 |
| 83 | 1.8924 | 0.0045 |
| 84 | 1.8969 | 0.0045 |
| 85 | 1.9013 | 0.0044 |
| 86 | 1.9057 | 0.0044 |
| 87 | 1.9101 | 0.0044 |
| 88 | 1.9144 | 0.0043 |
| 89 | 1.9187 | 0.0043 |
| 90 | 1.9229 | 0.0042 |

| | | |
|---|---|---|
| 91 | 1.9271 | 0.0042 |
| 92 | 1.9313 | 0.0042 |
| 93 | 1.9354 | 0.0041 |
| 94 | 1.9395 | 0.0041 |
| 95 | 1.9436 | 0.0041 |
| 96 | 1.9476 | 0.0040 |
| 97 | 1.9516 | 0.0040 |
| 98 | 1.9556 | 0.0040 |
| 99 | 1.9595 | 0.0039 |
| 100 | 1.9634 | 0.0039 |
| 101 | 1.9673 | 0.0039 |
| 102 | 1.9711 | 0.0038 |
| 103 | 1.9749 | 0.0038 |
| 104 | 1.9787 | 0.0038 |
| 105 | 1.9824 | 0.0037 |
| 106 | 1.9861 | 0.0037 |
| 107 | 1.9898 | 0.0037 |
| 108 | 1.9935 | 0.0037 |
| 109 | 1.9971 | 0.0036 |
| 110 | 2.0007 | 0.0036 |
| 111 | 2.0043 | 0.0036 |
| 112 | 2.0079 | 0.0036 |
| 113 | 2.0114 | 0.0035 |
| 114 | 2.0149 | 0.0035 |
| 115 | 2.0184 | 0.0035 |
| 116 | 2.0218 | 0.0035 |
| 117 | 2.0253 | 0.0034 |
| 118 | 2.0287 | 0.0034 |
| 119 | 2.0321 | 0.0034 |
| 120 | 2.0354 | 0.0034 |
| 121 | 2.0388 | 0.0033 |
| 122 | 2.0421 | 0.0033 |
| 123 | 2.0454 | 0.0033 |
| 124 | 2.0487 | 0.0033 |
| 125 | 2.0519 | 0.0033 |
| 126 | 2.0552 | 0.0032 |
| 127 | 2.0584 | 0.0032 |
| 128 | 2.0616 | 0.0032 |
| 129 | 2.0647 | 0.0032 |
| 130 | 2.0679 | 0.0032 |
| 131 | 2.0710 | 0.0031 |
| 132 | 2.0741 | 0.0031 |
| 133 | 2.0772 | 0.0031 |
| 134 | 2.0803 | 0.0031 |
| 135 | 2.0834 | 0.0031 |
| 136 | 2.0864 | 0.0030 |
| 137 | 2.0894 | 0.0030 |
| 138 | 2.0924 | 0.0030 |
| 139 | 2.0954 | 0.0030 |
| 140 | 2.0984 | 0.0030 |
| 141 | 2.1014 | 0.0030 |
| 142 | 2.1043 | 0.0029 |
| 143 | 2.1072 | 0.0029 |
| 144 | 2.1101 | 0.0029 |
| 145 | 2.1130 | 0.0029 |
| 146 | 2.1159 | 0.0029 |
| 147 | 2.1187 | 0.0029 |
| 148 | 2.1216 | 0.0028 |
| 149 | 2.1244 | 0.0028 |

| | | |
|---|---|---|
| 150 | 2.1272 | 0.0028 |
| 151 | 2.1300 | 0.0028 |
| 152 | 2.1328 | 0.0028 |
| 153 | 2.1356 | 0.0028 |
| 154 | 2.1383 | 0.0028 |
| 155 | 2.1411 | 0.0027 |
| 156 | 2.1438 | 0.0027 |
| 157 | 2.1465 | 0.0027 |
| 158 | 2.1492 | 0.0027 |
| 159 | 2.1519 | 0.0027 |
| 160 | 2.1545 | 0.0027 |
| 161 | 2.1572 | 0.0027 |
| 162 | 2.1598 | 0.0026 |
| 163 | 2.1625 | 0.0026 |
| 164 | 2.1651 | 0.0026 |
| 165 | 2.1677 | 0.0026 |
| 166 | 2.1703 | 0.0026 |
| 167 | 2.1728 | 0.0026 |
| 168 | 2.1754 | 0.0026 |
| 169 | 2.1780 | 0.0026 |
| 170 | 2.1805 | 0.0025 |
| 171 | 2.1830 | 0.0025 |
| 172 | 2.1856 | 0.0025 |
| 173 | 2.1881 | 0.0025 |
| 174 | 2.1906 | 0.0025 |
| 175 | 2.1930 | 0.0025 |
| 176 | 2.1955 | 0.0025 |
| 177 | 2.1980 | 0.0025 |
| 178 | 2.2004 | 0.0024 |
| 179 | 2.2029 | 0.0024 |
| 180 | 2.2053 | 0.0024 |
| 181 | 2.2077 | 0.0024 |
| 182 | 2.2101 | 0.0024 |
| 183 | 2.2125 | 0.0024 |
| 184 | 2.2149 | 0.0024 |
| 185 | 2.2173 | 0.0024 |
| 186 | 2.2196 | 0.0024 |
| 187 | 2.2220 | 0.0024 |
| 188 | 2.2243 | 0.0023 |
| 189 | 2.2266 | 0.0023 |
| 190 | 2.2290 | 0.0023 |
| 191 | 2.2313 | 0.0023 |
| 192 | 2.2336 | 0.0023 |
| 193 | 2.2359 | 0.0023 |
| 194 | 2.2382 | 0.0023 |
| 195 | 2.2404 | 0.0023 |
| 196 | 2.2427 | 0.0023 |
| 197 | 2.2450 | 0.0023 |
| 198 | 2.2472 | 0.0022 |
| 199 | 2.2495 | 0.0022 |
| 200 | 2.2517 | 0.0022 |
| 201 | 2.2539 | 0.0022 |
| 202 | 2.2561 | 0.0022 |
| 203 | 2.2583 | 0.0022 |
| 204 | 2.2605 | 0.0022 |
| 205 | 2.2627 | 0.0022 |
| 206 | 2.2649 | 0.0022 |
| 207 | 2.2671 | 0.0022 |
| 208 | 2.2692 | 0.0022 |

| | | |
|---|---|---|
| 209 | 2.2714 | 0.0022 |
| 210 | 2.2735 | 0.0021 |
| 211 | 2.2756 | 0.0021 |
| 212 | 2.2778 | 0.0021 |
| 213 | 2.2799 | 0.0021 |
| 214 | 2.2820 | 0.0021 |
| 215 | 2.2841 | 0.0021 |
| 216 | 2.2862 | 0.0021 |
| 217 | 2.2883 | 0.0021 |
| 218 | 2.2904 | 0.0021 |
| 219 | 2.2924 | 0.0021 |
| 220 | 2.2945 | 0.0021 |
| 221 | 2.2966 | 0.0021 |
| 222 | 2.2986 | 0.0021 |
| 223 | 2.3007 | 0.0020 |
| 224 | 2.3027 | 0.0020 |
| 225 | 2.3047 | 0.0020 |
| 226 | 2.3067 | 0.0020 |
| 227 | 2.3088 | 0.0020 |
| 228 | 2.3108 | 0.0020 |
| 229 | 2.3128 | 0.0020 |
| 230 | 2.3148 | 0.0020 |
| 231 | 2.3167 | 0.0020 |
| 232 | 2.3187 | 0.0020 |
| 233 | 2.3207 | 0.0020 |
| 234 | 2.3227 | 0.0020 |
| 235 | 2.3246 | 0.0020 |
| 236 | 2.3266 | 0.0020 |
| 237 | 2.3285 | 0.0019 |
| 238 | 2.3305 | 0.0019 |
| 239 | 2.3324 | 0.0019 |
| 240 | 2.3343 | 0.0019 |
| 241 | 2.3362 | 0.0019 |
| 242 | 2.3381 | 0.0019 |
| 243 | 2.3401 | 0.0019 |
| 244 | 2.3420 | 0.0019 |
| 245 | 2.3438 | 0.0019 |
| 246 | 2.3457 | 0.0019 |
| 247 | 2.3476 | 0.0019 |
| 248 | 2.3495 | 0.0019 |
| 249 | 2.3514 | 0.0019 |
| 250 | 2.3532 | 0.0019 |
| 251 | 2.3551 | 0.0019 |
| 252 | 2.3569 | 0.0019 |
| 253 | 2.3588 | 0.0018 |
| 254 | 2.3606 | 0.0018 |
| 255 | 2.3625 | 0.0018 |
| 256 | 2.3643 | 0.0018 |
| 257 | 2.3661 | 0.0018 |
| 258 | 2.3679 | 0.0018 |
| 259 | 2.3697 | 0.0018 |
| 260 | 2.3715 | 0.0018 |
| 261 | 2.3733 | 0.0018 |
| 262 | 2.3751 | 0.0018 |
| 263 | 2.3769 | 0.0018 |
| 264 | 2.3787 | 0.0018 |
| 265 | 2.3805 | 0.0018 |
| 266 | 2.3823 | 0.0018 |
| 267 | 2.3840 | 0.0018 |

| | | |
|---|---|---|
| 268 | 2.3858 | 0.0018 |
| 269 | 2.3875 | 0.0018 |
| 270 | 2.3893 | 0.0018 |
| 271 | 2.3910 | 0.0017 |
| 272 | 2.3928 | 0.0017 |
| 273 | 2.3945 | 0.0017 |
| 274 | 2.3963 | 0.0017 |
| 275 | 2.3980 | 0.0017 |
| 276 | 2.3997 | 0.0017 |
| 277 | 2.4014 | 0.0017 |
| 278 | 2.4031 | 0.0017 |
| 279 | 2.4048 | 0.0017 |
| 280 | 2.4065 | 0.0017 |
| 281 | 2.4082 | 0.0017 |
| 282 | 2.4099 | 0.0017 |
| 283 | 2.4116 | 0.0017 |
| 284 | 2.4133 | 0.0017 |
| 285 | 2.4150 | 0.0017 |
| 286 | 2.4166 | 0.0017 |
| 287 | 2.4183 | 0.0017 |
| 288 | 2.4200 | 0.0017 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0017 | 0.0011 | 0.0006 |
| 2 | 0.0017 | 0.0011 | 0.0006 |
| 3 | 0.0017 | 0.0011 | 0.0006 |
| 4 | 0.0017 | 0.0011 | 0.0006 |
| 5 | 0.0017 | 0.0011 | 0.0006 |
| 6 | 0.0017 | 0.0011 | 0.0006 |
| 7 | 0.0017 | 0.0011 | 0.0006 |
| 8 | 0.0017 | 0.0011 | 0.0006 |
| 9 | 0.0017 | 0.0011 | 0.0006 |
| 10 | 0.0017 | 0.0011 | 0.0006 |
| 11 | 0.0017 | 0.0011 | 0.0006 |
| 12 | 0.0017 | 0.0011 | 0.0006 |
| 13 | 0.0018 | 0.0011 | 0.0006 |
| 14 | 0.0018 | 0.0011 | 0.0006 |
| 15 | 0.0018 | 0.0011 | 0.0006 |
| 16 | 0.0018 | 0.0011 | 0.0006 |
| 17 | 0.0018 | 0.0011 | 0.0006 |
| 18 | 0.0018 | 0.0011 | 0.0006 |
| 19 | 0.0018 | 0.0012 | 0.0006 |
| 20 | 0.0018 | 0.0012 | 0.0006 |
| 21 | 0.0018 | 0.0012 | 0.0006 |
| 22 | 0.0018 | 0.0012 | 0.0007 |
| 23 | 0.0018 | 0.0012 | 0.0007 |
| 24 | 0.0018 | 0.0012 | 0.0007 |
| 25 | 0.0019 | 0.0012 | 0.0007 |
| 26 | 0.0019 | 0.0012 | 0.0007 |
| 27 | 0.0019 | 0.0012 | 0.0007 |
| 28 | 0.0019 | 0.0012 | 0.0007 |
| 29 | 0.0019 | 0.0012 | 0.0007 |
| 30 | 0.0019 | 0.0012 | 0.0007 |
| 31 | 0.0019 | 0.0012 | 0.0007 |
| 32 | 0.0019 | 0.0012 | 0.0007 |
| 33 | 0.0019 | 0.0012 | 0.0007 |

| | | | |
|---|---|---|---|
| 34 | 0.0019 | 0.0012 | 0.0007 |
| 35 | 0.0019 | 0.0013 | 0.0007 |
| 36 | 0.0020 | 0.0013 | 0.0007 |
| 37 | 0.0020 | 0.0013 | 0.0007 |
| 38 | 0.0020 | 0.0013 | 0.0007 |
| 39 | 0.0020 | 0.0013 | 0.0007 |
| 40 | 0.0020 | 0.0013 | 0.0007 |
| 41 | 0.0020 | 0.0013 | 0.0007 |
| 42 | 0.0020 | 0.0013 | 0.0007 |
| 43 | 0.0020 | 0.0013 | 0.0007 |
| 44 | 0.0020 | 0.0013 | 0.0007 |
| 45 | 0.0021 | 0.0013 | 0.0007 |
| 46 | 0.0021 | 0.0013 | 0.0007 |
| 47 | 0.0021 | 0.0013 | 0.0007 |
| 48 | 0.0021 | 0.0013 | 0.0007 |
| 49 | 0.0021 | 0.0013 | 0.0007 |
| 50 | 0.0021 | 0.0014 | 0.0008 |
| 51 | 0.0021 | 0.0014 | 0.0008 |
| 52 | 0.0021 | 0.0014 | 0.0008 |
| 53 | 0.0021 | 0.0014 | 0.0008 |
| 54 | 0.0022 | 0.0014 | 0.0008 |
| 55 | 0.0022 | 0.0014 | 0.0008 |
| 56 | 0.0022 | 0.0014 | 0.0008 |
| 57 | 0.0022 | 0.0014 | 0.0008 |
| 58 | 0.0022 | 0.0014 | 0.0008 |
| 59 | 0.0022 | 0.0014 | 0.0008 |
| 60 | 0.0022 | 0.0014 | 0.0008 |
| 61 | 0.0022 | 0.0014 | 0.0008 |
| 62 | 0.0023 | 0.0015 | 0.0008 |
| 63 | 0.0023 | 0.0015 | 0.0008 |
| 64 | 0.0023 | 0.0015 | 0.0008 |
| 65 | 0.0023 | 0.0015 | 0.0008 |
| 66 | 0.0023 | 0.0015 | 0.0008 |
| 67 | 0.0023 | 0.0015 | 0.0008 |
| 68 | 0.0023 | 0.0015 | 0.0008 |
| 69 | 0.0024 | 0.0015 | 0.0008 |
| 70 | 0.0024 | 0.0015 | 0.0008 |
| 71 | 0.0024 | 0.0015 | 0.0009 |
| 72 | 0.0024 | 0.0015 | 0.0009 |
| 73 | 0.0024 | 0.0016 | 0.0009 |
| 74 | 0.0024 | 0.0016 | 0.0009 |
| 75 | 0.0025 | 0.0016 | 0.0009 |
| 76 | 0.0025 | 0.0016 | 0.0009 |
| 77 | 0.0025 | 0.0016 | 0.0009 |
| 78 | 0.0025 | 0.0016 | 0.0009 |
| 79 | 0.0025 | 0.0016 | 0.0009 |
| 80 | 0.0025 | 0.0016 | 0.0009 |
| 81 | 0.0026 | 0.0016 | 0.0009 |
| 82 | 0.0026 | 0.0017 | 0.0009 |
| 83 | 0.0026 | 0.0017 | 0.0009 |
| 84 | 0.0026 | 0.0017 | 0.0009 |
| 85 | 0.0026 | 0.0017 | 0.0009 |
| 86 | 0.0027 | 0.0017 | 0.0009 |
| 87 | 0.0027 | 0.0017 | 0.0010 |
| 88 | 0.0027 | 0.0017 | 0.0010 |
| 89 | 0.0027 | 0.0018 | 0.0010 |
| 90 | 0.0027 | 0.0018 | 0.0010 |
| 91 | 0.0028 | 0.0018 | 0.0010 |
| 92 | 0.0028 | 0.0018 | 0.0010 |

| | | | |
|---|---|---|---|
| 93 | 0.0028 | 0.0018 | 0.0010 |
| 94 | 0.0028 | 0.0018 | 0.0010 |
| 95 | 0.0029 | 0.0018 | 0.0010 |
| 96 | 0.0029 | 0.0018 | 0.0010 |
| 97 | 0.0029 | 0.0019 | 0.0010 |
| 98 | 0.0029 | 0.0019 | 0.0010 |
| 99 | 0.0030 | 0.0019 | 0.0011 |
| 100 | 0.0030 | 0.0019 | 0.0011 |
| 101 | 0.0030 | 0.0019 | 0.0011 |
| 102 | 0.0030 | 0.0019 | 0.0011 |
| 103 | 0.0031 | 0.0020 | 0.0011 |
| 104 | 0.0031 | 0.0020 | 0.0011 |
| 105 | 0.0031 | 0.0020 | 0.0011 |
| 106 | 0.0031 | 0.0020 | 0.0011 |
| 107 | 0.0032 | 0.0020 | 0.0011 |
| 108 | 0.0032 | 0.0021 | 0.0011 |
| 109 | 0.0032 | 0.0021 | 0.0012 |
| 110 | 0.0033 | 0.0021 | 0.0012 |
| 111 | 0.0033 | 0.0021 | 0.0012 |
| 112 | 0.0033 | 0.0021 | 0.0012 |
| 113 | 0.0034 | 0.0022 | 0.0012 |
| 114 | 0.0034 | 0.0022 | 0.0012 |
| 115 | 0.0034 | 0.0022 | 0.0012 |
| 116 | 0.0035 | 0.0022 | 0.0012 |
| 117 | 0.0035 | 0.0023 | 0.0013 |
| 118 | 0.0035 | 0.0023 | 0.0013 |
| 119 | 0.0036 | 0.0023 | 0.0013 |
| 120 | 0.0036 | 0.0023 | 0.0013 |
| 121 | 0.0037 | 0.0024 | 0.0013 |
| 122 | 0.0037 | 0.0024 | 0.0013 |
| 123 | 0.0037 | 0.0024 | 0.0013 |
| 124 | 0.0038 | 0.0024 | 0.0013 |
| 125 | 0.0038 | 0.0025 | 0.0014 |
| 126 | 0.0039 | 0.0025 | 0.0014 |
| 127 | 0.0039 | 0.0025 | 0.0014 |
| 128 | 0.0040 | 0.0025 | 0.0014 |
| 129 | 0.0040 | 0.0026 | 0.0014 |
| 130 | 0.0041 | 0.0026 | 0.0015 |
| 131 | 0.0041 | 0.0027 | 0.0015 |
| 132 | 0.0042 | 0.0027 | 0.0015 |
| 133 | 0.0042 | 0.0027 | 0.0015 |
| 134 | 0.0043 | 0.0028 | 0.0015 |
| 135 | 0.0044 | 0.0028 | 0.0016 |
| 136 | 0.0044 | 0.0028 | 0.0016 |
| 137 | 0.0045 | 0.0029 | 0.0016 |
| 138 | 0.0045 | 0.0029 | 0.0016 |
| 139 | 0.0046 | 0.0030 | 0.0017 |
| 140 | 0.0047 | 0.0030 | 0.0017 |
| 141 | 0.0048 | 0.0031 | 0.0017 |
| 142 | 0.0048 | 0.0031 | 0.0017 |
| 143 | 0.0049 | 0.0032 | 0.0018 |
| 144 | 0.0050 | 0.0032 | 0.0018 |
| 145 | 0.0053 | 0.0034 | 0.0019 |
| 146 | 0.0054 | 0.0035 | 0.0019 |
| 147 | 0.0055 | 0.0035 | 0.0020 |
| 148 | 0.0056 | 0.0036 | 0.0020 |
| 149 | 0.0057 | 0.0037 | 0.0020 |
| 150 | 0.0058 | 0.0037 | 0.0021 |
| 151 | 0.0059 | 0.0038 | 0.0021 |

| | | | |
|---|---|---|---|
| 152 | 0.0060 | 0.0039 | 0.0021 |
| 153 | 0.0062 | 0.0040 | 0.0022 |
| 154 | 0.0062 | 0.0040 | 0.0022 |
| 155 | 0.0064 | 0.0041 | 0.0023 |
| 156 | 0.0065 | 0.0042 | 0.0023 |
| 157 | 0.0067 | 0.0043 | 0.0024 |
| 158 | 0.0068 | 0.0044 | 0.0024 |
| 159 | 0.0070 | 0.0045 | 0.0025 |
| 160 | 0.0071 | 0.0046 | 0.0025 |
| 161 | 0.0074 | 0.0047 | 0.0026 |
| 162 | 0.0075 | 0.0048 | 0.0027 |
| 163 | 0.0077 | 0.0050 | 0.0028 |
| 164 | 0.0079 | 0.0051 | 0.0028 |
| 165 | 0.0082 | 0.0053 | 0.0029 |
| 166 | 0.0083 | 0.0054 | 0.0030 |
| 167 | 0.0087 | 0.0056 | 0.0031 |
| 168 | 0.0089 | 0.0057 | 0.0032 |
| 169 | 0.0093 | 0.0060 | 0.0033 |
| 170 | 0.0095 | 0.0061 | 0.0034 |
| 171 | 0.0100 | 0.0064 | 0.0036 |
| 172 | 0.0102 | 0.0066 | 0.0036 |
| 173 | 0.0107 | 0.0069 | 0.0038 |
| 174 | 0.0110 | 0.0071 | 0.0039 |
| 175 | 0.0117 | 0.0075 | 0.0042 |
| 176 | 0.0121 | 0.0078 | 0.0043 |
| 177 | 0.0129 | 0.0083 | 0.0046 |
| 178 | 0.0133 | 0.0086 | 0.0048 |
| 179 | 0.0143 | 0.0092 | 0.0051 |
| 180 | 0.0149 | 0.0096 | 0.0053 |
| 181 | 0.0163 | 0.0104 | 0.0058 |
| 182 | 0.0170 | 0.0109 | 0.0061 |
| 183 | 0.0189 | 0.0121 | 0.0067 |
| 184 | 0.0200 | 0.0128 | 0.0071 |
| 185 | 0.0327 | 0.0210 | 0.0117 |
| 186 | 0.0349 | 0.0224 | 0.0125 |
| 187 | 0.0404 | 0.0260 | 0.0144 |
| 188 | 0.0441 | 0.0284 | 0.0158 |
| 189 | 0.0549 | 0.0300 | 0.0249 |
| 190 | 0.0632 | 0.0300 | 0.0332 |
| 191 | 0.0959 | 0.0300 | 0.0660 |
| 192 | 0.1392 | 0.0300 | 0.1093 |
| 193 | 0.6024 | 0.0300 | 0.5724 |
| 194 | 0.0755 | 0.0300 | 0.0455 |
| 195 | 0.0488 | 0.0300 | 0.0188 |
| 196 | 0.0374 | 0.0240 | 0.0134 |
| 197 | 0.0212 | 0.0136 | 0.0076 |
| 198 | 0.0179 | 0.0115 | 0.0064 |
| 199 | 0.0156 | 0.0100 | 0.0056 |
| 200 | 0.0138 | 0.0089 | 0.0049 |
| 201 | 0.0125 | 0.0080 | 0.0045 |
| 202 | 0.0114 | 0.0073 | 0.0041 |
| 203 | 0.0105 | 0.0067 | 0.0037 |
| 204 | 0.0097 | 0.0062 | 0.0035 |
| 205 | 0.0091 | 0.0058 | 0.0032 |
| 206 | 0.0085 | 0.0055 | 0.0030 |
| 207 | 0.0080 | 0.0052 | 0.0029 |
| 208 | 0.0076 | 0.0049 | 0.0027 |
| 209 | 0.0072 | 0.0046 | 0.0026 |
| 210 | 0.0069 | 0.0044 | 0.0025 |

| | | | |
|---|---|---|---|
| 211 | 0.0066 | 0.0042 | 0.0024 |
| 212 | 0.0063 | 0.0041 | 0.0023 |
| 213 | 0.0061 | 0.0039 | 0.0022 |
| 214 | 0.0058 | 0.0038 | 0.0021 |
| 215 | 0.0056 | 0.0036 | 0.0020 |
| 216 | 0.0054 | 0.0035 | 0.0019 |
| 217 | 0.0050 | 0.0032 | 0.0018 |
| 218 | 0.0049 | 0.0031 | 0.0017 |
| 219 | 0.0047 | 0.0030 | 0.0017 |
| 220 | 0.0046 | 0.0029 | 0.0016 |
| 221 | 0.0044 | 0.0029 | 0.0016 |
| 222 | 0.0043 | 0.0028 | 0.0015 |
| 223 | 0.0042 | 0.0027 | 0.0015 |
| 224 | 0.0041 | 0.0026 | 0.0015 |
| 225 | 0.0040 | 0.0026 | 0.0014 |
| 226 | 0.0039 | 0.0025 | 0.0014 |
| 227 | 0.0038 | 0.0024 | 0.0014 |
| 228 | 0.0037 | 0.0024 | 0.0013 |
| 229 | 0.0036 | 0.0023 | 0.0013 |
| 230 | 0.0036 | 0.0023 | 0.0013 |
| 231 | 0.0035 | 0.0022 | 0.0012 |
| 232 | 0.0034 | 0.0022 | 0.0012 |
| 233 | 0.0033 | 0.0021 | 0.0012 |
| 234 | 0.0033 | 0.0021 | 0.0012 |
| 235 | 0.0032 | 0.0021 | 0.0011 |
| 236 | 0.0032 | 0.0020 | 0.0011 |
| 237 | 0.0031 | 0.0020 | 0.0011 |
| 238 | 0.0030 | 0.0020 | 0.0011 |
| 239 | 0.0030 | 0.0019 | 0.0011 |
| 240 | 0.0029 | 0.0019 | 0.0010 |
| 241 | 0.0029 | 0.0019 | 0.0010 |
| 242 | 0.0028 | 0.0018 | 0.0010 |
| 243 | 0.0028 | 0.0018 | 0.0010 |
| 244 | 0.0028 | 0.0018 | 0.0010 |
| 245 | 0.0027 | 0.0017 | 0.0010 |
| 246 | 0.0027 | 0.0017 | 0.0010 |
| 247 | 0.0026 | 0.0017 | 0.0009 |
| 248 | 0.0026 | 0.0017 | 0.0009 |
| 249 | 0.0026 | 0.0016 | 0.0009 |
| 250 | 0.0025 | 0.0016 | 0.0009 |
| 251 | 0.0025 | 0.0016 | 0.0009 |
| 252 | 0.0024 | 0.0016 | 0.0009 |
| 253 | 0.0024 | 0.0016 | 0.0009 |
| 254 | 0.0024 | 0.0015 | 0.0009 |
| 255 | 0.0024 | 0.0015 | 0.0008 |
| 256 | 0.0023 | 0.0015 | 0.0008 |
| 257 | 0.0023 | 0.0015 | 0.0008 |
| 258 | 0.0023 | 0.0015 | 0.0008 |
| 259 | 0.0022 | 0.0014 | 0.0008 |
| 260 | 0.0022 | 0.0014 | 0.0008 |
| 261 | 0.0022 | 0.0014 | 0.0008 |
| 262 | 0.0022 | 0.0014 | 0.0008 |
| 263 | 0.0021 | 0.0014 | 0.0008 |
| 264 | 0.0021 | 0.0014 | 0.0008 |
| 265 | 0.0021 | 0.0013 | 0.0007 |
| 266 | 0.0021 | 0.0013 | 0.0007 |
| 267 | 0.0020 | 0.0013 | 0.0007 |
| 268 | 0.0020 | 0.0013 | 0.0007 |
| 269 | 0.0020 | 0.0013 | 0.0007 |

| | | | |
|---|---|---|---|
| 270 | 0.0020 | 0.0013 | 0.0007 |
| 271 | 0.0020 | 0.0013 | 0.0007 |
| 272 | 0.0019 | 0.0012 | 0.0007 |
| 273 | 0.0019 | 0.0012 | 0.0007 |
| 274 | 0.0019 | 0.0012 | 0.0007 |
| 275 | 0.0019 | 0.0012 | 0.0007 |
| 276 | 0.0019 | 0.0012 | 0.0007 |
| 277 | 0.0018 | 0.0012 | 0.0007 |
| 278 | 0.0018 | 0.0012 | 0.0007 |
| 279 | 0.0018 | 0.0012 | 0.0006 |
| 280 | 0.0018 | 0.0012 | 0.0006 |
| 281 | 0.0018 | 0.0011 | 0.0006 |
| 282 | 0.0018 | 0.0011 | 0.0006 |
| 283 | 0.0017 | 0.0011 | 0.0006 |
| 284 | 0.0017 | 0.0011 | 0.0006 |
| 285 | 0.0017 | 0.0011 | 0.0006 |
| 286 | 0.0017 | 0.0011 | 0.0006 |
| 287 | 0.0017 | 0.0011 | 0.0006 |
| 288 | 0.0017 | 0.0011 | 0.0006 |

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Total soil rain loss = 1.07(In)
Total effective rainfall = 1.35(In)
Peak flow rate in flood hydrograph = 14.12(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+15 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+20 | 0.0002 | 0.02 | Q | \| | \| | \| | \| |
| 0+25 | 0.0004 | 0.03 | Q | \| | \| | \| | \| |
| 0+30 | 0.0006 | 0.04 | Q | \| | \| | \| | \| |
| 0+35 | 0.0009 | 0.04 | Q | \| | \| | \| | \| |
| 0+40 | 0.0012 | 0.04 | Q | \| | \| | \| | \| |
| 0+45 | 0.0015 | 0.05 | Q | \| | \| | \| | \| |
| 0+50 | 0.0019 | 0.05 | Q | \| | \| | \| | \| |
| 0+55 | 0.0023 | 0.05 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0026 | 0.05 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0030 | 0.06 | Q | \| | \| | \| | \| |
| 1+10 | 0.0034 | 0.06 | Q | \| | \| | \| | \| |
| 1+15 | 0.0038 | 0.06 | Q | \| | \| | \| | \| |
| 1+20 | 0.0042 | 0.06 | Q | \| | \| | \| | \| |
| 1+25 | 0.0047 | 0.06 | Q | \| | \| | \| | \| |
| 1+30 | 0.0051 | 0.06 | Q | \| | \| | \| | \| |
| 1+35 | 0.0055 | 0.06 | Q | \| | \| | \| | \| |
| 1+40 | 0.0059 | 0.06 | Q | \| | \| | \| | \| |
| 1+45 | 0.0064 | 0.06 | Q | \| | \| | \| | \| |
| 1+50 | 0.0068 | 0.07 | Q | \| | \| | \| | \| |
| 1+55 | 0.0073 | 0.07 | Q | \| | \| | \| | \| |
| 2+ 0 | 0.0078 | 0.07 | Q | \| | \| | \| | \| |
| 2+ 5 | 0.0082 | 0.07 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+10 | 0.0087 | 0.07 | Q | | | | |
| 2+15 | 0.0092 | 0.07 | Q | | | | |
| 2+20 | 0.0096 | 0.07 | Q | | | | |
| 2+25 | 0.0101 | 0.07 | Q | | | | |
| 2+30 | 0.0106 | 0.07 | Q | | | | |
| 2+35 | 0.0111 | 0.07 | Q | | | | |
| 2+40 | 0.0116 | 0.07 | Q | | | | |
| 2+45 | 0.0121 | 0.07 | Q | | | | |
| 2+50 | 0.0125 | 0.07 | Q | | | | |
| 2+55 | 0.0130 | 0.07 | Q | | | | |
| 3+ 0 | 0.0135 | 0.07 | Q | | | | |
| 3+ 5 | 0.0141 | 0.07 | Q | | | | |
| 3+10 | 0.0146 | 0.07 | Q | | | | |
| 3+15 | 0.0151 | 0.07 | Q | | | | |
| 3+20 | 0.0156 | 0.07 | Q | | | | |
| 3+25 | 0.0161 | 0.07 | Q | | | | |
| 3+30 | 0.0166 | 0.08 | Q | | | | |
| 3+35 | 0.0171 | 0.08 | Q | | | | |
| 3+40 | 0.0177 | 0.08 | Q | | | | |
| 3+45 | 0.0182 | 0.08 | Q | | | | |
| 3+50 | 0.0187 | 0.08 | Q | | | | |
| 3+55 | 0.0192 | 0.08 | Q | | | | |
| 4+ 0 | 0.0198 | 0.08 | Q | | | | |
| 4+ 5 | 0.0203 | 0.08 | Q | | | | |
| 4+10 | 0.0209 | 0.08 | Q | | | | |
| 4+15 | 0.0214 | 0.08 | Q | | | | |
| 4+20 | 0.0219 | 0.08 | Q | | | | |
| 4+25 | 0.0225 | 0.08 | Q | | | | |
| 4+30 | 0.0230 | 0.08 | Q | | | | |
| 4+35 | 0.0236 | 0.08 | Q | | | | |
| 4+40 | 0.0242 | 0.08 | Q | | | | |
| 4+45 | 0.0247 | 0.08 | Q | | | | |
| 4+50 | 0.0253 | 0.08 | QV | | | | |
| 4+55 | 0.0259 | 0.08 | QV | | | | |
| 5+ 0 | 0.0264 | 0.08 | QV | | | | |
| 5+ 5 | 0.0270 | 0.08 | QV | | | | |
| 5+10 | 0.0276 | 0.08 | QV | | | | |
| 5+15 | 0.0282 | 0.08 | QV | | | | |
| 5+20 | 0.0287 | 0.08 | QV | | | | |
| 5+25 | 0.0293 | 0.09 | QV | | | | |
| 5+30 | 0.0299 | 0.09 | QV | | | | |
| 5+35 | 0.0305 | 0.09 | QV | | | | |
| 5+40 | 0.0311 | 0.09 | QV | | | | |
| 5+45 | 0.0317 | 0.09 | QV | | | | |
| 5+50 | 0.0323 | 0.09 | QV | | | | |
| 5+55 | 0.0329 | 0.09 | QV | | | | |
| 6+ 0 | 0.0335 | 0.09 | QV | | | | |
| 6+ 5 | 0.0342 | 0.09 | QV | | | | |
| 6+10 | 0.0348 | 0.09 | QV | | | | |
| 6+15 | 0.0354 | 0.09 | QV | | | | |
| 6+20 | 0.0360 | 0.09 | QV | | | | |
| 6+25 | 0.0367 | 0.09 | QV | | | | |
| 6+30 | 0.0373 | 0.09 | QV | | | | |
| 6+35 | 0.0380 | 0.09 | QV | | | | |
| 6+40 | 0.0386 | 0.09 | QV | | | | |
| 6+45 | 0.0392 | 0.09 | QV | | | | |
| 6+50 | 0.0399 | 0.10 | QV | | | | |
| 6+55 | 0.0406 | 0.10 | QV | | | | |
| 7+ 0 | 0.0412 | 0.10 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7+ 5 | 0.0419 | 0.10 | QV | \| | \| | \| | \| |
| 7+10 | 0.0426 | 0.10 | QV | \| | \| | \| | \| |
| 7+15 | 0.0432 | 0.10 | QV | \| | \| | \| | \| |
| 7+20 | 0.0439 | 0.10 | QV | \| | \| | \| | \| |
| 7+25 | 0.0446 | 0.10 | QV | \| | \| | \| | \| |
| 7+30 | 0.0453 | 0.10 | QV | \| | \| | \| | \| |
| 7+35 | 0.0460 | 0.10 | QV | \| | \| | \| | \| |
| 7+40 | 0.0467 | 0.10 | QV | \| | \| | \| | \| |
| 7+45 | 0.0474 | 0.10 | QV | \| | \| | \| | \| |
| 7+50 | 0.0481 | 0.10 | QV | \| | \| | \| | \| |
| 7+55 | 0.0489 | 0.10 | QV | \| | \| | \| | \| |
| 8+ 0 | 0.0496 | 0.11 | QV | \| | \| | \| | \| |
| 8+ 5 | 0.0503 | 0.11 | QV | \| | \| | \| | \| |
| 8+10 | 0.0510 | 0.11 | Q V | \| | \| | \| | \| |
| 8+15 | 0.0518 | 0.11 | Q V | \| | \| | \| | \| |
| 8+20 | 0.0525 | 0.11 | Q V | \| | \| | \| | \| |
| 8+25 | 0.0533 | 0.11 | Q V | \| | \| | \| | \| |
| 8+30 | 0.0541 | 0.11 | Q V | \| | \| | \| | \| |
| 8+35 | 0.0548 | 0.11 | Q V | \| | \| | \| | \| |
| 8+40 | 0.0556 | 0.11 | Q V | \| | \| | \| | \| |
| 8+45 | 0.0564 | 0.11 | Q V | \| | \| | \| | \| |
| 8+50 | 0.0572 | 0.11 | Q V | \| | \| | \| | \| |
| 8+55 | 0.0580 | 0.12 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.0588 | 0.12 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.0596 | 0.12 | Q V | \| | \| | \| | \| |
| 9+10 | 0.0604 | 0.12 | Q V | \| | \| | \| | \| |
| 9+15 | 0.0612 | 0.12 | Q V | \| | \| | \| | \| |
| 9+20 | 0.0620 | 0.12 | Q V | \| | \| | \| | \| |
| 9+25 | 0.0629 | 0.12 | Q V | \| | \| | \| | \| |
| 9+30 | 0.0637 | 0.12 | Q V | \| | \| | \| | \| |
| 9+35 | 0.0646 | 0.12 | Q V | \| | \| | \| | \| |
| 9+40 | 0.0654 | 0.13 | Q V | \| | \| | \| | \| |
| 9+45 | 0.0663 | 0.13 | Q V | \| | \| | \| | \| |
| 9+50 | 0.0672 | 0.13 | Q V | \| | \| | \| | \| |
| 9+55 | 0.0681 | 0.13 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.0690 | 0.13 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.0699 | 0.13 | Q V | \| | \| | \| | \| |
| 10+10 | 0.0708 | 0.13 | Q V | \| | \| | \| | \| |
| 10+15 | 0.0717 | 0.13 | Q V | \| | \| | \| | \| |
| 10+20 | 0.0726 | 0.14 | Q V | \| | \| | \| | \| |
| 10+25 | 0.0736 | 0.14 | Q V | \| | \| | \| | \| |
| 10+30 | 0.0745 | 0.14 | Q V | \| | \| | \| | \| |
| 10+35 | 0.0755 | 0.14 | Q V | \| | \| | \| | \| |
| 10+40 | 0.0765 | 0.14 | Q  V | \| | \| | \| | \| |
| 10+45 | 0.0775 | 0.14 | Q  V | \| | \| | \| | \| |
| 10+50 | 0.0785 | 0.14 | Q  V | \| | \| | \| | \| |
| 10+55 | 0.0795 | 0.15 | Q  V | \| | \| | \| | \| |
| 11+ 0 | 0.0805 | 0.15 | Q  V | \| | \| | \| | \| |
| 11+ 5 | 0.0815 | 0.15 | Q  V | \| | \| | \| | \| |
| 11+10 | 0.0826 | 0.15 | Q  V | \| | \| | \| | \| |
| 11+15 | 0.0836 | 0.15 | Q  V | \| | \| | \| | \| |
| 11+20 | 0.0847 | 0.16 | Q  V | \| | \| | \| | \| |
| 11+25 | 0.0858 | 0.16 | Q  V | \| | \| | \| | \| |
| 11+30 | 0.0869 | 0.16 | Q  V | \| | \| | \| | \| |
| 11+35 | 0.0880 | 0.16 | Q  V | \| | \| | \| | \| |
| 11+40 | 0.0891 | 0.16 | Q  V | \| | \| | \| | \| |
| 11+45 | 0.0903 | 0.17 | Q  V | \| | \| | \| | \| |
| 11+50 | 0.0915 | 0.17 | Q  V | \| | \| | \| | \| |
| 11+55 | 0.0926 | 0.17 | Q  V | \| | \| | \| | \| |

```
12+ 0       0.0938      0.17  Q  V      |          |          |          |
12+ 5       0.0950      0.18  Q  V      |          |          |          |
12+10       0.0963      0.18  Q  V      |          |          |          |
12+15       0.0975      0.18  Q  V      |          |          |          |
12+20       0.0988      0.19  Q  V      |          |          |          |
12+25       0.1001      0.19  Q  V      |          |          |          |
12+30       0.1015      0.20  Q   V     |          |          |          |
12+35       0.1029      0.20  Q   V     |          |          |          |
12+40       0.1043      0.20  Q   V     |          |          |          |
12+45       0.1057      0.21  Q   V     |          |          |          |
12+50       0.1072      0.21  Q   V     |          |          |          |
12+55       0.1086      0.22  Q   V     |          |          |          |
13+ 0       0.1102      0.22  Q   V     |          |          |          |
13+ 5       0.1117      0.22  Q   V     |          |          |          |
13+10       0.1133      0.23  Q   V     |          |          |          |
13+15       0.1149      0.23  Q   V     |          |          |          |
13+20       0.1165      0.24  Q   V     |          |          |          |
13+25       0.1182      0.24  Q   V     |          |          |          |
13+30       0.1199      0.25  Q   V     |          |          |          |
13+35       0.1217      0.25  Q   V     |          |          |          |
13+40       0.1235      0.26  Q   V     |          |          |          |
13+45       0.1253      0.27  Q   V     |          |          |          |
13+50       0.1272      0.27  Q    V    |          |          |          |
13+55       0.1291      0.28  Q    V    |          |          |          |
14+ 0       0.1311      0.29  Q    V    |          |          |          |
14+ 5       0.1331      0.29  Q    V    |          |          |          |
14+10       0.1352      0.30  Q    V    |          |          |          |
14+15       0.1373      0.31  Q    V    |          |          |          |
14+20       0.1395      0.32  Q    V    |          |          |          |
14+25       0.1418      0.33  Q    V    |          |          |          |
14+30       0.1442      0.34  Q    V    |          |          |          |
14+35       0.1466      0.35  Q    V    |          |          |          |
14+40       0.1491      0.37  Q    V    |          |          |          |
14+45       0.1517      0.38  Q     V   |          |          |          |
14+50       0.1545      0.39  Q     V   |          |          |          |
14+55       0.1573      0.41  Q     V   |          |          |          |
15+ 0       0.1602      0.43  Q     V   |          |          |          |
15+ 5       0.1633      0.45  Q     V   |          |          |          |
15+10       0.1666      0.47  Q     V   |          |          |          |
15+15       0.1700      0.50  Q     V   |          |          |          |
15+20       0.1736      0.52  |Q    V   |          |          |          |
15+25       0.1775      0.56  |Q     V  |          |          |          |
15+30       0.1817      0.61  |Q     V  |          |          |          |
15+35       0.1864      0.68  |Q     V  |          |          |          |
15+40       0.1919      0.80  |Q     V  |          |          |          |
15+45       0.1984      0.95  |Q     V  |          |          |          |
15+50       0.2061      1.12  | Q     V |          |          |          |
15+55       0.2156      1.37  | Q     V |          |          |          |
16+ 0       0.2283      1.85  |  Q     V|          |          |          |
16+ 5       0.2498      3.13  |     Q  V|          |          |          |
16+10       0.2877      5.50  |          |Q         |          |          |
16+15       0.3456      8.40  |          |  V  Q    |          |          |
16+20       0.4372     13.31  |          |     V    |     Q    |          |
16+25       0.5345     14.12  |          |          |V      Q  |          |
16+30       0.6058     10.35  |          |          Q   V      |          |
16+35       0.6571      7.46  |          |   Q      |     V    |          |
16+40       0.6964      5.70  |          |Q         |      V   |          |
16+45       0.7285      4.67  |        Q |          |       V  |          |
16+50       0.7551      3.86  |      Q   |          |         V|          |
```

```
16+55       0.7777      3.28  |     Q   |         |         V         |
17+ 0       0.7971      2.81  |    Q    |         |         |V        |
17+ 5       0.8141      2.47  |   Q     |         |         | V       |
17+10       0.8294      2.23  |   Q     |         |         | V       |
17+15       0.8430      1.97  |  Q      |         |         |  V      |
17+20       0.8547      1.71  |  Q      |         |         |  V      |
17+25       0.8651      1.51  |  Q      |         |         |   V     |
17+30       0.8747      1.40  | Q       |         |         |   V     |
17+35       0.8835      1.27  | Q       |         |         |    V    |
17+40       0.8916      1.17  | Q       |         |         |    V    |
17+45       0.8988      1.05  | Q       |         |         |    V    |
17+50       0.9054      0.96  |Q        |         |         |    V    |
17+55       0.9116      0.90  |Q        |         |         |     V   |
18+ 0       0.9171      0.80  |Q        |         |         |     V   |
18+ 5       0.9222      0.75  |Q        |         |         |     V   |
18+10       0.9268      0.67  |Q        |         |         |     V   |
18+15       0.9309      0.59  |Q        |         |         |     V   |
18+20       0.9347      0.55  |Q        |         |         |      V  |
18+25       0.9379      0.46  Q         |         |         |      V  |
18+30       0.9409      0.44  Q         |         |         |      V  |
18+35       0.9439      0.44  Q         |         |         |      V  |
18+40       0.9469      0.44  Q         |         |         |      V  |
18+45       0.9498      0.43  Q         |         |         |      V  |
18+50       0.9527      0.41  Q         |         |         |      V  |
18+55       0.9554      0.39  Q         |         |         |      V  |
19+ 0       0.9577      0.34  Q         |         |         |       V |
19+ 5       0.9597      0.29  Q         |         |         |       V |
19+10       0.9616      0.27  Q         |         |         |       V |
19+15       0.9631      0.22  Q         |         |         |       V |
19+20       0.9643      0.17  Q         |         |         |       V |
19+25       0.9654      0.16  Q         |         |         |       V |
19+30       0.9665      0.16  Q         |         |         |       V |
19+35       0.9676      0.15  Q         |         |         |       V |
19+40       0.9686      0.15  Q         |         |         |       V |
19+45       0.9696      0.15  Q         |         |         |       V |
19+50       0.9706      0.14  Q         |         |         |       V |
19+55       0.9715      0.14  Q         |         |         |       V |
20+ 0       0.9725      0.13  Q         |         |         |       V |
20+ 5       0.9734      0.13  Q         |         |         |       V |
20+10       0.9743      0.13  Q         |         |         |       V |
20+15       0.9751      0.13  Q         |         |         |       V |
20+20       0.9760      0.12  Q         |         |         |       V |
20+25       0.9768      0.12  Q         |         |         |       V |
20+30       0.9777      0.12  Q         |         |         |       V |
20+35       0.9785      0.12  Q         |         |         |       V |
20+40       0.9792      0.11  Q         |         |         |       V |
20+45       0.9800      0.11  Q         |         |         |       V |
20+50       0.9808      0.11  Q         |         |         |       V |
20+55       0.9815      0.11  Q         |         |         |       V |
21+ 0       0.9823      0.11  Q         |         |         |        V|
21+ 5       0.9830      0.11  Q         |         |         |        V|
21+10       0.9837      0.10  Q         |         |         |        V|
21+15       0.9844      0.10  Q         |         |         |        V|
21+20       0.9851      0.10  Q         |         |         |        V|
21+25       0.9858      0.10  Q         |         |         |        V|
21+30       0.9865      0.10  Q         |         |         |        V|
21+35       0.9871      0.10  Q         |         |         |        V|
21+40       0.9878      0.10  Q         |         |         |        V|
21+45       0.9884      0.09  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+50 | 0.9891 | 0.09 | Q | \| | \| | \| | V\| |
| 21+55 | 0.9897 | 0.09 | Q | \| | \| | \| | V\| |
| 22+ 0 | 0.9903 | 0.09 | Q | \| | \| | \| | V\| |
| 22+ 5 | 0.9909 | 0.09 | Q | \| | \| | \| | V\| |
| 22+10 | 0.9915 | 0.09 | Q | \| | \| | \| | V\| |
| 22+15 | 0.9921 | 0.09 | Q | \| | \| | \| | V\| |
| 22+20 | 0.9927 | 0.09 | Q | \| | \| | \| | V\| |
| 22+25 | 0.9933 | 0.08 | Q | \| | \| | \| | V\| |
| 22+30 | 0.9939 | 0.08 | Q | \| | \| | \| | V\| |
| 22+35 | 0.9945 | 0.08 | Q | \| | \| | \| | V\| |
| 22+40 | 0.9950 | 0.08 | Q | \| | \| | \| | V\| |
| 22+45 | 0.9956 | 0.08 | Q | \| | \| | \| | V\| |
| 22+50 | 0.9961 | 0.08 | Q | \| | \| | \| | V\| |
| 22+55 | 0.9967 | 0.08 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.9972 | 0.08 | Q | \| | \| | \| | V\| |
| 23+ 5 | 0.9977 | 0.08 | Q | \| | \| | \| | V\| |
| 23+10 | 0.9983 | 0.08 | Q | \| | \| | \| | V\| |
| 23+15 | 0.9988 | 0.08 | Q | \| | \| | \| | V\| |
| 23+20 | 0.9993 | 0.08 | Q | \| | \| | \| | V\| |
| 23+25 | 0.9998 | 0.07 | Q | \| | \| | \| | V\| |
| 23+30 | 1.0003 | 0.07 | Q | \| | \| | \| | V\| |
| 23+35 | 1.0008 | 0.07 | Q | \| | \| | \| | V\| |
| 23+40 | 1.0013 | 0.07 | Q | \| | \| | \| | V\| |
| 23+45 | 1.0018 | 0.07 | Q | \| | \| | \| | V\| |
| 23+50 | 1.0023 | 0.07 | Q | \| | \| | \| | V\| |
| 23+55 | 1.0028 | 0.07 | Q | \| | \| | \| | V\| |
| 24+ 0 | 1.0033 | 0.07 | Q | \| | \| | \| | V\| |
| 24+ 5 | 1.0037 | 0.07 | Q | \| | \| | \| | V\| |
| 24+10 | 1.0042 | 0.07 | Q | \| | \| | \| | V\| |
| 24+15 | 1.0046 | 0.06 | Q | \| | \| | \| | V\| |
| 24+20 | 1.0049 | 0.05 | Q | \| | \| | \| | V\| |
| 24+25 | 1.0052 | 0.04 | Q | \| | \| | \| | V\| |
| 24+30 | 1.0054 | 0.03 | Q | \| | \| | \| | V\| |
| 24+35 | 1.0056 | 0.03 | Q | \| | \| | \| | V\| |
| 24+40 | 1.0057 | 0.02 | Q | \| | \| | \| | V\| |
| 24+45 | 1.0059 | 0.02 | Q | \| | \| | \| | V\| |
| 24+50 | 1.0060 | 0.02 | Q | \| | \| | \| | V\| |
| 24+55 | 1.0061 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 0 | 1.0062 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 5 | 1.0062 | 0.01 | Q | \| | \| | \| | V\| |
| 25+10 | 1.0063 | 0.01 | Q | \| | \| | \| | V\| |
| 25+15 | 1.0064 | 0.01 | Q | \| | \| | \| | V\| |
| 25+20 | 1.0064 | 0.01 | Q | \| | \| | \| | V\| |
| 25+25 | 1.0065 | 0.01 | Q | \| | \| | \| | V\| |
| 25+30 | 1.0065 | 0.01 | Q | \| | \| | \| | V\| |
| 25+35 | 1.0065 | 0.01 | Q | \| | \| | \| | V\| |
| 25+40 | 1.0066 | 0.00 | Q | \| | \| | \| | V\| |
| 25+45 | 1.0066 | 0.00 | Q | \| | \| | \| | V\| |
| 25+50 | 1.0066 | 0.00 | Q | \| | \| | \| | V\| |
| 25+55 | 1.0066 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 0 | 1.0066 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 1.0067 | 0.00 | Q | \| | \| | \| | V\| |
| 26+10 | 1.0067 | 0.00 | Q | \| | \| | \| | V\| |
| 26+15 | 1.0067 | 0.00 | Q | \| | \| | \| | V\| |
| 26+20 | 1.0067 | 0.00 | Q | \| | \| | \| | V\| |
| 26+25 | 1.0067 | 0.00 | Q | \| | \| | \| | V\| |
| 26+30 | 1.0067 | 0.00 | Q | \| | \| | \| | V\| |
| 26+35 | 1.0067 | 0.00 | Q | \| | \| | \| | V\| |
| 26+40 | 1.0067 | 0.00 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+45 | 1.0067 | 0.00 | Q | \| | \| | \| | V\| |
| 26+50 | 1.0067 | 0.00 | Q | \| | \| | \| | V\| |
| 26+55 | 1.0067 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 0 | 1.0067 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 5 | 1.0067 | 0.00 | Q | \| | \| | \| | V\| |
| 27+10 | 1.0067 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 9
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 29.97 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 29.97 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 29.97 | 24 | 2.42 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 29.97 | 1.000 | 0.360 | 1.000 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 29.97 | 1.000 | 62.0 | 80.6 | 2.41 | 0.357 |

Area-averaged catchment yield fraction, Y = 0.357
Area-averaged low loss fraction, Yb = 0.643
User entry of time of concentration = 0.660 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 29.97(Ac.)
Catchment Lag time = 0.528 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 15.7828
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.643 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.420(In)

Rainfall depth area reduction factors:
Using a total area of 29.97(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.602(In)
30-minute factor = 0.999 Adjusted rainfall = 1.030(In)
1-hour factor = 0.999 Adjusted rainfall = 1.268(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.420(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 362.45 (CFS)) | |
| 1 | 0.722 | 2.616 |
| 2 | 3.087 | 8.571 |
| 3 | 7.056 | 14.386 |
| 4 | 13.926 | 24.902 |
| 5 | 27.146 | 47.915 |
| 6 | 41.051 | 50.400 |
| 7 | 51.239 | 36.926 |
| 8 | 58.733 | 27.163 |
| 9 | 64.125 | 19.541 |
| 10 | 68.437 | 15.629 |
| 11 | 72.116 | 13.336 |
| 12 | 75.142 | 10.967 |
| 13 | 77.813 | 9.682 |
| 14 | 80.025 | 8.016 |

| | | |
|---|---|---|
| 15 | 82.003 | 7.171 |
| 16 | 83.718 | 6.214 |
| 17 | 85.300 | 5.734 |
| 18 | 86.773 | 5.340 |
| 19 | 88.059 | 4.659 |
| 20 | 89.166 | 4.013 |
| 21 | 90.108 | 3.413 |
| 22 | 91.003 | 3.244 |
| 23 | 91.843 | 3.048 |
| 24 | 92.601 | 2.746 |
| 25 | 93.314 | 2.583 |
| 26 | 93.974 | 2.394 |
| 27 | 94.520 | 1.979 |
| 28 | 95.057 | 1.945 |
| 29 | 95.579 | 1.890 |
| 30 | 96.005 | 1.547 |
| 31 | 96.416 | 1.487 |
| 32 | 96.820 | 1.464 |
| 33 | 97.133 | 1.135 |
| 34 | 97.417 | 1.030 |
| 35 | 97.700 | 1.024 |
| 36 | 97.903 | 0.737 |
| 37 | 98.061 | 0.572 |
| 38 | 98.219 | 0.572 |
| 39 | 98.392 | 0.627 |
| 40 | 98.581 | 0.686 |
| 41 | 98.770 | 0.686 |
| 42 | 98.960 | 0.686 |
| 43 | 99.149 | 0.686 |
| 44 | 99.339 | 0.686 |
| 45 | 99.509 | 0.617 |
| 46 | 99.613 | 0.378 |
| 47 | 99.712 | 0.358 |
| 48 | 99.811 | 0.358 |
| 49 | 99.909 | 0.358 |
| 50 | 100.000 | 0.329 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6018 | 0.6018 |
| 2 | 0.7409 | 0.1391 |
| 3 | 0.8367 | 0.0958 |
| 4 | 0.9121 | 0.0754 |
| 5 | 0.9753 | 0.0632 |
| 6 | 1.0301 | 0.0548 |
| 7 | 1.0789 | 0.0488 |
| 8 | 1.1230 | 0.0441 |
| 9 | 1.1634 | 0.0404 |
| 10 | 1.2007 | 0.0374 |
| 11 | 1.2355 | 0.0348 |
| 12 | 1.2682 | 0.0327 |
| 13 | 1.2895 | 0.0213 |
| 14 | 1.3095 | 0.0200 |
| 15 | 1.3285 | 0.0189 |
| 16 | 1.3464 | 0.0180 |
| 17 | 1.3635 | 0.0171 |
| 18 | 1.3798 | 0.0163 |
| 19 | 1.3954 | 0.0156 |
| 20 | 1.4104 | 0.0150 |

| | | |
|---|---|---|
| 21 | 1.4248 | 0.0144 |
| 22 | 1.4387 | 0.0139 |
| 23 | 1.4520 | 0.0134 |
| 24 | 1.4649 | 0.0129 |
| 25 | 1.4774 | 0.0125 |
| 26 | 1.4895 | 0.0121 |
| 27 | 1.5013 | 0.0117 |
| 28 | 1.5127 | 0.0114 |
| 29 | 1.5238 | 0.0111 |
| 30 | 1.5345 | 0.0108 |
| 31 | 1.5450 | 0.0105 |
| 32 | 1.5553 | 0.0102 |
| 33 | 1.5653 | 0.0100 |
| 34 | 1.5750 | 0.0098 |
| 35 | 1.5846 | 0.0095 |
| 36 | 1.5939 | 0.0093 |
| 37 | 1.6029 | 0.0091 |
| 38 | 1.6118 | 0.0089 |
| 39 | 1.6205 | 0.0087 |
| 40 | 1.6290 | 0.0085 |
| 41 | 1.6374 | 0.0083 |
| 42 | 1.6456 | 0.0082 |
| 43 | 1.6536 | 0.0080 |
| 44 | 1.6615 | 0.0079 |
| 45 | 1.6692 | 0.0077 |
| 46 | 1.6768 | 0.0076 |
| 47 | 1.6843 | 0.0075 |
| 48 | 1.6917 | 0.0074 |
| 49 | 1.6989 | 0.0072 |
| 50 | 1.7060 | 0.0071 |
| 51 | 1.7131 | 0.0070 |
| 52 | 1.7200 | 0.0069 |
| 53 | 1.7267 | 0.0068 |
| 54 | 1.7334 | 0.0067 |
| 55 | 1.7400 | 0.0066 |
| 56 | 1.7465 | 0.0065 |
| 57 | 1.7530 | 0.0064 |
| 58 | 1.7593 | 0.0063 |
| 59 | 1.7655 | 0.0062 |
| 60 | 1.7717 | 0.0062 |
| 61 | 1.7777 | 0.0061 |
| 62 | 1.7837 | 0.0060 |
| 63 | 1.7897 | 0.0059 |
| 64 | 1.7955 | 0.0058 |
| 65 | 1.8013 | 0.0058 |
| 66 | 1.8070 | 0.0057 |
| 67 | 1.8126 | 0.0056 |
| 68 | 1.8182 | 0.0056 |
| 69 | 1.8237 | 0.0055 |
| 70 | 1.8291 | 0.0054 |
| 71 | 1.8345 | 0.0054 |
| 72 | 1.8398 | 0.0053 |
| 73 | 1.8449 | 0.0050 |
| 74 | 1.8498 | 0.0050 |
| 75 | 1.8547 | 0.0049 |
| 76 | 1.8596 | 0.0049 |
| 77 | 1.8644 | 0.0048 |
| 78 | 1.8692 | 0.0048 |
| 79 | 1.8739 | 0.0047 |

| | | |
|---|---|---|
| 80 | 1.8786 | 0.0047 |
| 81 | 1.8832 | 0.0046 |
| 82 | 1.8877 | 0.0046 |
| 83 | 1.8923 | 0.0045 |
| 84 | 1.8968 | 0.0045 |
| 85 | 1.9012 | 0.0044 |
| 86 | 1.9056 | 0.0044 |
| 87 | 1.9100 | 0.0044 |
| 88 | 1.9143 | 0.0043 |
| 89 | 1.9186 | 0.0043 |
| 90 | 1.9228 | 0.0042 |
| 91 | 1.9270 | 0.0042 |
| 92 | 1.9312 | 0.0042 |
| 93 | 1.9353 | 0.0041 |
| 94 | 1.9394 | 0.0041 |
| 95 | 1.9435 | 0.0041 |
| 96 | 1.9475 | 0.0040 |
| 97 | 1.9515 | 0.0040 |
| 98 | 1.9555 | 0.0040 |
| 99 | 1.9594 | 0.0039 |
| 100 | 1.9633 | 0.0039 |
| 101 | 1.9671 | 0.0039 |
| 102 | 1.9710 | 0.0038 |
| 103 | 1.9748 | 0.0038 |
| 104 | 1.9786 | 0.0038 |
| 105 | 1.9823 | 0.0037 |
| 106 | 1.9860 | 0.0037 |
| 107 | 1.9897 | 0.0037 |
| 108 | 1.9934 | 0.0037 |
| 109 | 1.9970 | 0.0036 |
| 110 | 2.0006 | 0.0036 |
| 111 | 2.0042 | 0.0036 |
| 112 | 2.0078 | 0.0036 |
| 113 | 2.0113 | 0.0035 |
| 114 | 2.0148 | 0.0035 |
| 115 | 2.0183 | 0.0035 |
| 116 | 2.0217 | 0.0035 |
| 117 | 2.0252 | 0.0034 |
| 118 | 2.0286 | 0.0034 |
| 119 | 2.0320 | 0.0034 |
| 120 | 2.0353 | 0.0034 |
| 121 | 2.0387 | 0.0033 |
| 122 | 2.0420 | 0.0033 |
| 123 | 2.0453 | 0.0033 |
| 124 | 2.0486 | 0.0033 |
| 125 | 2.0518 | 0.0033 |
| 126 | 2.0551 | 0.0032 |
| 127 | 2.0583 | 0.0032 |
| 128 | 2.0615 | 0.0032 |
| 129 | 2.0646 | 0.0032 |
| 130 | 2.0678 | 0.0032 |
| 131 | 2.0709 | 0.0031 |
| 132 | 2.0740 | 0.0031 |
| 133 | 2.0771 | 0.0031 |
| 134 | 2.0802 | 0.0031 |
| 135 | 2.0833 | 0.0031 |
| 136 | 2.0863 | 0.0030 |
| 137 | 2.0893 | 0.0030 |
| 138 | 2.0923 | 0.0030 |

| | | |
|---|---|---|
| 139 | 2.0953 | 0.0030 |
| 140 | 2.0983 | 0.0030 |
| 141 | 2.1013 | 0.0030 |
| 142 | 2.1042 | 0.0029 |
| 143 | 2.1071 | 0.0029 |
| 144 | 2.1100 | 0.0029 |
| 145 | 2.1129 | 0.0029 |
| 146 | 2.1158 | 0.0029 |
| 147 | 2.1186 | 0.0029 |
| 148 | 2.1215 | 0.0028 |
| 149 | 2.1243 | 0.0028 |
| 150 | 2.1271 | 0.0028 |
| 151 | 2.1299 | 0.0028 |
| 152 | 2.1327 | 0.0028 |
| 153 | 2.1355 | 0.0028 |
| 154 | 2.1382 | 0.0028 |
| 155 | 2.1410 | 0.0027 |
| 156 | 2.1437 | 0.0027 |
| 157 | 2.1464 | 0.0027 |
| 158 | 2.1491 | 0.0027 |
| 159 | 2.1518 | 0.0027 |
| 160 | 2.1544 | 0.0027 |
| 161 | 2.1571 | 0.0027 |
| 162 | 2.1597 | 0.0026 |
| 163 | 2.1624 | 0.0026 |
| 164 | 2.1650 | 0.0026 |
| 165 | 2.1676 | 0.0026 |
| 166 | 2.1702 | 0.0026 |
| 167 | 2.1728 | 0.0026 |
| 168 | 2.1753 | 0.0026 |
| 169 | 2.1779 | 0.0026 |
| 170 | 2.1804 | 0.0025 |
| 171 | 2.1829 | 0.0025 |
| 172 | 2.1855 | 0.0025 |
| 173 | 2.1880 | 0.0025 |
| 174 | 2.1905 | 0.0025 |
| 175 | 2.1929 | 0.0025 |
| 176 | 2.1954 | 0.0025 |
| 177 | 2.1979 | 0.0025 |
| 178 | 2.2003 | 0.0024 |
| 179 | 2.2028 | 0.0024 |
| 180 | 2.2052 | 0.0024 |
| 181 | 2.2076 | 0.0024 |
| 182 | 2.2100 | 0.0024 |
| 183 | 2.2124 | 0.0024 |
| 184 | 2.2148 | 0.0024 |
| 185 | 2.2172 | 0.0024 |
| 186 | 2.2195 | 0.0024 |
| 187 | 2.2219 | 0.0024 |
| 188 | 2.2242 | 0.0023 |
| 189 | 2.2266 | 0.0023 |
| 190 | 2.2289 | 0.0023 |
| 191 | 2.2312 | 0.0023 |
| 192 | 2.2335 | 0.0023 |
| 193 | 2.2358 | 0.0023 |
| 194 | 2.2381 | 0.0023 |
| 195 | 2.2404 | 0.0023 |
| 196 | 2.2426 | 0.0023 |
| 197 | 2.2449 | 0.0023 |

| | | |
|---|---|---|
| 198 | 2.2471 | 0.0022 |
| 199 | 2.2494 | 0.0022 |
| 200 | 2.2516 | 0.0022 |
| 201 | 2.2538 | 0.0022 |
| 202 | 2.2560 | 0.0022 |
| 203 | 2.2582 | 0.0022 |
| 204 | 2.2604 | 0.0022 |
| 205 | 2.2626 | 0.0022 |
| 206 | 2.2648 | 0.0022 |
| 207 | 2.2670 | 0.0022 |
| 208 | 2.2691 | 0.0022 |
| 209 | 2.2713 | 0.0022 |
| 210 | 2.2734 | 0.0021 |
| 211 | 2.2756 | 0.0021 |
| 212 | 2.2777 | 0.0021 |
| 213 | 2.2798 | 0.0021 |
| 214 | 2.2819 | 0.0021 |
| 215 | 2.2840 | 0.0021 |
| 216 | 2.2861 | 0.0021 |
| 217 | 2.2882 | 0.0021 |
| 218 | 2.2903 | 0.0021 |
| 219 | 2.2924 | 0.0021 |
| 220 | 2.2944 | 0.0021 |
| 221 | 2.2965 | 0.0021 |
| 222 | 2.2985 | 0.0021 |
| 223 | 2.3006 | 0.0020 |
| 224 | 2.3026 | 0.0020 |
| 225 | 2.3046 | 0.0020 |
| 226 | 2.3067 | 0.0020 |
| 227 | 2.3087 | 0.0020 |
| 228 | 2.3107 | 0.0020 |
| 229 | 2.3127 | 0.0020 |
| 230 | 2.3147 | 0.0020 |
| 231 | 2.3167 | 0.0020 |
| 232 | 2.3186 | 0.0020 |
| 233 | 2.3206 | 0.0020 |
| 234 | 2.3226 | 0.0020 |
| 235 | 2.3245 | 0.0020 |
| 236 | 2.3265 | 0.0020 |
| 237 | 2.3284 | 0.0019 |
| 238 | 2.3304 | 0.0019 |
| 239 | 2.3323 | 0.0019 |
| 240 | 2.3342 | 0.0019 |
| 241 | 2.3362 | 0.0019 |
| 242 | 2.3381 | 0.0019 |
| 243 | 2.3400 | 0.0019 |
| 244 | 2.3419 | 0.0019 |
| 245 | 2.3438 | 0.0019 |
| 246 | 2.3457 | 0.0019 |
| 247 | 2.3475 | 0.0019 |
| 248 | 2.3494 | 0.0019 |
| 249 | 2.3513 | 0.0019 |
| 250 | 2.3532 | 0.0019 |
| 251 | 2.3550 | 0.0019 |
| 252 | 2.3569 | 0.0019 |
| 253 | 2.3587 | 0.0018 |
| 254 | 2.3606 | 0.0018 |
| 255 | 2.3624 | 0.0018 |
| 256 | 2.3642 | 0.0018 |

| | | |
|---|---|---|
| 257 | 2.3660 | 0.0018 |
| 258 | 2.3679 | 0.0018 |
| 259 | 2.3697 | 0.0018 |
| 260 | 2.3715 | 0.0018 |
| 261 | 2.3733 | 0.0018 |
| 262 | 2.3751 | 0.0018 |
| 263 | 2.3769 | 0.0018 |
| 264 | 2.3786 | 0.0018 |
| 265 | 2.3804 | 0.0018 |
| 266 | 2.3822 | 0.0018 |
| 267 | 2.3840 | 0.0018 |
| 268 | 2.3857 | 0.0018 |
| 269 | 2.3875 | 0.0018 |
| 270 | 2.3892 | 0.0018 |
| 271 | 2.3910 | 0.0017 |
| 272 | 2.3927 | 0.0017 |
| 273 | 2.3945 | 0.0017 |
| 274 | 2.3962 | 0.0017 |
| 275 | 2.3979 | 0.0017 |
| 276 | 2.3996 | 0.0017 |
| 277 | 2.4014 | 0.0017 |
| 278 | 2.4031 | 0.0017 |
| 279 | 2.4048 | 0.0017 |
| 280 | 2.4065 | 0.0017 |
| 281 | 2.4082 | 0.0017 |
| 282 | 2.4099 | 0.0017 |
| 283 | 2.4115 | 0.0017 |
| 284 | 2.4132 | 0.0017 |
| 285 | 2.4149 | 0.0017 |
| 286 | 2.4166 | 0.0017 |
| 287 | 2.4182 | 0.0017 |
| 288 | 2.4199 | 0.0017 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0017 | 0.0011 | 0.0006 |
| 2 | 0.0017 | 0.0011 | 0.0006 |
| 3 | 0.0017 | 0.0011 | 0.0006 |
| 4 | 0.0017 | 0.0011 | 0.0006 |
| 5 | 0.0017 | 0.0011 | 0.0006 |
| 6 | 0.0017 | 0.0011 | 0.0006 |
| 7 | 0.0017 | 0.0011 | 0.0006 |
| 8 | 0.0017 | 0.0011 | 0.0006 |
| 9 | 0.0017 | 0.0011 | 0.0006 |
| 10 | 0.0017 | 0.0011 | 0.0006 |
| 11 | 0.0017 | 0.0011 | 0.0006 |
| 12 | 0.0017 | 0.0011 | 0.0006 |
| 13 | 0.0018 | 0.0011 | 0.0006 |
| 14 | 0.0018 | 0.0011 | 0.0006 |
| 15 | 0.0018 | 0.0011 | 0.0006 |
| 16 | 0.0018 | 0.0011 | 0.0006 |
| 17 | 0.0018 | 0.0011 | 0.0006 |
| 18 | 0.0018 | 0.0011 | 0.0006 |
| 19 | 0.0018 | 0.0012 | 0.0006 |
| 20 | 0.0018 | 0.0012 | 0.0006 |
| 21 | 0.0018 | 0.0012 | 0.0006 |
| 22 | 0.0018 | 0.0012 | 0.0007 |

| | | | |
|---|---|---|---|
| 23 | 0.0018 | 0.0012 | 0.0007 |
| 24 | 0.0018 | 0.0012 | 0.0007 |
| 25 | 0.0019 | 0.0012 | 0.0007 |
| 26 | 0.0019 | 0.0012 | 0.0007 |
| 27 | 0.0019 | 0.0012 | 0.0007 |
| 28 | 0.0019 | 0.0012 | 0.0007 |
| 29 | 0.0019 | 0.0012 | 0.0007 |
| 30 | 0.0019 | 0.0012 | 0.0007 |
| 31 | 0.0019 | 0.0012 | 0.0007 |
| 32 | 0.0019 | 0.0012 | 0.0007 |
| 33 | 0.0019 | 0.0012 | 0.0007 |
| 34 | 0.0019 | 0.0012 | 0.0007 |
| 35 | 0.0019 | 0.0013 | 0.0007 |
| 36 | 0.0020 | 0.0013 | 0.0007 |
| 37 | 0.0020 | 0.0013 | 0.0007 |
| 38 | 0.0020 | 0.0013 | 0.0007 |
| 39 | 0.0020 | 0.0013 | 0.0007 |
| 40 | 0.0020 | 0.0013 | 0.0007 |
| 41 | 0.0020 | 0.0013 | 0.0007 |
| 42 | 0.0020 | 0.0013 | 0.0007 |
| 43 | 0.0020 | 0.0013 | 0.0007 |
| 44 | 0.0020 | 0.0013 | 0.0007 |
| 45 | 0.0021 | 0.0013 | 0.0007 |
| 46 | 0.0021 | 0.0013 | 0.0007 |
| 47 | 0.0021 | 0.0013 | 0.0007 |
| 48 | 0.0021 | 0.0013 | 0.0007 |
| 49 | 0.0021 | 0.0013 | 0.0007 |
| 50 | 0.0021 | 0.0014 | 0.0008 |
| 51 | 0.0021 | 0.0014 | 0.0008 |
| 52 | 0.0021 | 0.0014 | 0.0008 |
| 53 | 0.0021 | 0.0014 | 0.0008 |
| 54 | 0.0022 | 0.0014 | 0.0008 |
| 55 | 0.0022 | 0.0014 | 0.0008 |
| 56 | 0.0022 | 0.0014 | 0.0008 |
| 57 | 0.0022 | 0.0014 | 0.0008 |
| 58 | 0.0022 | 0.0014 | 0.0008 |
| 59 | 0.0022 | 0.0014 | 0.0008 |
| 60 | 0.0022 | 0.0014 | 0.0008 |
| 61 | 0.0022 | 0.0014 | 0.0008 |
| 62 | 0.0023 | 0.0015 | 0.0008 |
| 63 | 0.0023 | 0.0015 | 0.0008 |
| 64 | 0.0023 | 0.0015 | 0.0008 |
| 65 | 0.0023 | 0.0015 | 0.0008 |
| 66 | 0.0023 | 0.0015 | 0.0008 |
| 67 | 0.0023 | 0.0015 | 0.0008 |
| 68 | 0.0023 | 0.0015 | 0.0008 |
| 69 | 0.0024 | 0.0015 | 0.0008 |
| 70 | 0.0024 | 0.0015 | 0.0008 |
| 71 | 0.0024 | 0.0015 | 0.0009 |
| 72 | 0.0024 | 0.0015 | 0.0009 |
| 73 | 0.0024 | 0.0016 | 0.0009 |
| 74 | 0.0024 | 0.0016 | 0.0009 |
| 75 | 0.0025 | 0.0016 | 0.0009 |
| 76 | 0.0025 | 0.0016 | 0.0009 |
| 77 | 0.0025 | 0.0016 | 0.0009 |
| 78 | 0.0025 | 0.0016 | 0.0009 |
| 79 | 0.0025 | 0.0016 | 0.0009 |
| 80 | 0.0025 | 0.0016 | 0.0009 |
| 81 | 0.0026 | 0.0016 | 0.0009 |

| | | | |
|---|---|---|---|
| 82 | 0.0026 | 0.0017 | 0.0009 |
| 83 | 0.0026 | 0.0017 | 0.0009 |
| 84 | 0.0026 | 0.0017 | 0.0009 |
| 85 | 0.0026 | 0.0017 | 0.0009 |
| 86 | 0.0027 | 0.0017 | 0.0009 |
| 87 | 0.0027 | 0.0017 | 0.0010 |
| 88 | 0.0027 | 0.0017 | 0.0010 |
| 89 | 0.0027 | 0.0018 | 0.0010 |
| 90 | 0.0027 | 0.0018 | 0.0010 |
| 91 | 0.0028 | 0.0018 | 0.0010 |
| 92 | 0.0028 | 0.0018 | 0.0010 |
| 93 | 0.0028 | 0.0018 | 0.0010 |
| 94 | 0.0028 | 0.0018 | 0.0010 |
| 95 | 0.0029 | 0.0018 | 0.0010 |
| 96 | 0.0029 | 0.0018 | 0.0010 |
| 97 | 0.0029 | 0.0019 | 0.0010 |
| 98 | 0.0029 | 0.0019 | 0.0010 |
| 99 | 0.0030 | 0.0019 | 0.0011 |
| 100 | 0.0030 | 0.0019 | 0.0011 |
| 101 | 0.0030 | 0.0019 | 0.0011 |
| 102 | 0.0030 | 0.0019 | 0.0011 |
| 103 | 0.0031 | 0.0020 | 0.0011 |
| 104 | 0.0031 | 0.0020 | 0.0011 |
| 105 | 0.0031 | 0.0020 | 0.0011 |
| 106 | 0.0031 | 0.0020 | 0.0011 |
| 107 | 0.0032 | 0.0020 | 0.0011 |
| 108 | 0.0032 | 0.0021 | 0.0011 |
| 109 | 0.0032 | 0.0021 | 0.0012 |
| 110 | 0.0033 | 0.0021 | 0.0012 |
| 111 | 0.0033 | 0.0021 | 0.0012 |
| 112 | 0.0033 | 0.0021 | 0.0012 |
| 113 | 0.0034 | 0.0022 | 0.0012 |
| 114 | 0.0034 | 0.0022 | 0.0012 |
| 115 | 0.0034 | 0.0022 | 0.0012 |
| 116 | 0.0035 | 0.0022 | 0.0012 |
| 117 | 0.0035 | 0.0023 | 0.0013 |
| 118 | 0.0035 | 0.0023 | 0.0013 |
| 119 | 0.0036 | 0.0023 | 0.0013 |
| 120 | 0.0036 | 0.0023 | 0.0013 |
| 121 | 0.0037 | 0.0024 | 0.0013 |
| 122 | 0.0037 | 0.0024 | 0.0013 |
| 123 | 0.0037 | 0.0024 | 0.0013 |
| 124 | 0.0038 | 0.0024 | 0.0013 |
| 125 | 0.0038 | 0.0025 | 0.0014 |
| 126 | 0.0039 | 0.0025 | 0.0014 |
| 127 | 0.0039 | 0.0025 | 0.0014 |
| 128 | 0.0040 | 0.0025 | 0.0014 |
| 129 | 0.0040 | 0.0026 | 0.0014 |
| 130 | 0.0041 | 0.0026 | 0.0015 |
| 131 | 0.0041 | 0.0027 | 0.0015 |
| 132 | 0.0042 | 0.0027 | 0.0015 |
| 133 | 0.0042 | 0.0027 | 0.0015 |
| 134 | 0.0043 | 0.0028 | 0.0015 |
| 135 | 0.0044 | 0.0028 | 0.0016 |
| 136 | 0.0044 | 0.0028 | 0.0016 |
| 137 | 0.0045 | 0.0029 | 0.0016 |
| 138 | 0.0045 | 0.0029 | 0.0016 |
| 139 | 0.0046 | 0.0030 | 0.0017 |
| 140 | 0.0047 | 0.0030 | 0.0017 |

| | | | |
|---|---|---|---|
| 141 | 0.0048 | 0.0031 | 0.0017 |
| 142 | 0.0048 | 0.0031 | 0.0017 |
| 143 | 0.0049 | 0.0032 | 0.0018 |
| 144 | 0.0050 | 0.0032 | 0.0018 |
| 145 | 0.0053 | 0.0034 | 0.0019 |
| 146 | 0.0054 | 0.0035 | 0.0019 |
| 147 | 0.0055 | 0.0035 | 0.0020 |
| 148 | 0.0056 | 0.0036 | 0.0020 |
| 149 | 0.0057 | 0.0037 | 0.0020 |
| 150 | 0.0058 | 0.0037 | 0.0021 |
| 151 | 0.0059 | 0.0038 | 0.0021 |
| 152 | 0.0060 | 0.0039 | 0.0021 |
| 153 | 0.0062 | 0.0040 | 0.0022 |
| 154 | 0.0062 | 0.0040 | 0.0022 |
| 155 | 0.0064 | 0.0041 | 0.0023 |
| 156 | 0.0065 | 0.0042 | 0.0023 |
| 157 | 0.0067 | 0.0043 | 0.0024 |
| 158 | 0.0068 | 0.0044 | 0.0024 |
| 159 | 0.0070 | 0.0045 | 0.0025 |
| 160 | 0.0071 | 0.0046 | 0.0025 |
| 161 | 0.0074 | 0.0047 | 0.0026 |
| 162 | 0.0075 | 0.0048 | 0.0027 |
| 163 | 0.0077 | 0.0050 | 0.0028 |
| 164 | 0.0079 | 0.0051 | 0.0028 |
| 165 | 0.0082 | 0.0053 | 0.0029 |
| 166 | 0.0083 | 0.0054 | 0.0030 |
| 167 | 0.0087 | 0.0056 | 0.0031 |
| 168 | 0.0089 | 0.0057 | 0.0032 |
| 169 | 0.0093 | 0.0060 | 0.0033 |
| 170 | 0.0095 | 0.0061 | 0.0034 |
| 171 | 0.0100 | 0.0064 | 0.0036 |
| 172 | 0.0102 | 0.0066 | 0.0037 |
| 173 | 0.0108 | 0.0069 | 0.0039 |
| 174 | 0.0111 | 0.0071 | 0.0040 |
| 175 | 0.0117 | 0.0075 | 0.0042 |
| 176 | 0.0121 | 0.0078 | 0.0043 |
| 177 | 0.0129 | 0.0083 | 0.0046 |
| 178 | 0.0134 | 0.0086 | 0.0048 |
| 179 | 0.0144 | 0.0092 | 0.0051 |
| 180 | 0.0150 | 0.0096 | 0.0053 |
| 181 | 0.0163 | 0.0105 | 0.0058 |
| 182 | 0.0171 | 0.0110 | 0.0061 |
| 183 | 0.0189 | 0.0122 | 0.0068 |
| 184 | 0.0200 | 0.0129 | 0.0072 |
| 185 | 0.0327 | 0.0210 | 0.0117 |
| 186 | 0.0348 | 0.0224 | 0.0124 |
| 187 | 0.0404 | 0.0260 | 0.0144 |
| 188 | 0.0441 | 0.0283 | 0.0158 |
| 189 | 0.0548 | 0.0300 | 0.0249 |
| 190 | 0.0632 | 0.0300 | 0.0332 |
| 191 | 0.0958 | 0.0300 | 0.0659 |
| 192 | 0.1391 | 0.0300 | 0.1091 |
| 193 | 0.6018 | 0.0300 | 0.5718 |
| 194 | 0.0754 | 0.0300 | 0.0455 |
| 195 | 0.0488 | 0.0300 | 0.0188 |
| 196 | 0.0374 | 0.0240 | 0.0134 |
| 197 | 0.0213 | 0.0137 | 0.0076 |
| 198 | 0.0180 | 0.0115 | 0.0064 |
| 199 | 0.0156 | 0.0100 | 0.0056 |

| | | | |
|---|---|---|---|
| 200 | 0.0139 | 0.0089 | 0.0050 |
| 201 | 0.0125 | 0.0080 | 0.0045 |
| 202 | 0.0114 | 0.0073 | 0.0041 |
| 203 | 0.0105 | 0.0067 | 0.0038 |
| 204 | 0.0098 | 0.0063 | 0.0035 |
| 205 | 0.0091 | 0.0058 | 0.0032 |
| 206 | 0.0085 | 0.0055 | 0.0030 |
| 207 | 0.0080 | 0.0052 | 0.0029 |
| 208 | 0.0076 | 0.0049 | 0.0027 |
| 209 | 0.0072 | 0.0047 | 0.0026 |
| 210 | 0.0069 | 0.0044 | 0.0025 |
| 211 | 0.0066 | 0.0042 | 0.0024 |
| 212 | 0.0063 | 0.0041 | 0.0023 |
| 213 | 0.0061 | 0.0039 | 0.0022 |
| 214 | 0.0058 | 0.0038 | 0.0021 |
| 215 | 0.0056 | 0.0036 | 0.0020 |
| 216 | 0.0054 | 0.0035 | 0.0019 |
| 217 | 0.0050 | 0.0032 | 0.0018 |
| 218 | 0.0049 | 0.0031 | 0.0017 |
| 219 | 0.0047 | 0.0030 | 0.0017 |
| 220 | 0.0046 | 0.0029 | 0.0016 |
| 221 | 0.0044 | 0.0029 | 0.0016 |
| 222 | 0.0043 | 0.0028 | 0.0015 |
| 223 | 0.0042 | 0.0027 | 0.0015 |
| 224 | 0.0041 | 0.0026 | 0.0015 |
| 225 | 0.0040 | 0.0026 | 0.0014 |
| 226 | 0.0039 | 0.0025 | 0.0014 |
| 227 | 0.0038 | 0.0024 | 0.0014 |
| 228 | 0.0037 | 0.0024 | 0.0013 |
| 229 | 0.0036 | 0.0023 | 0.0013 |
| 230 | 0.0036 | 0.0023 | 0.0013 |
| 231 | 0.0035 | 0.0022 | 0.0012 |
| 232 | 0.0034 | 0.0022 | 0.0012 |
| 233 | 0.0033 | 0.0021 | 0.0012 |
| 234 | 0.0033 | 0.0021 | 0.0012 |
| 235 | 0.0032 | 0.0021 | 0.0011 |
| 236 | 0.0032 | 0.0020 | 0.0011 |
| 237 | 0.0031 | 0.0020 | 0.0011 |
| 238 | 0.0030 | 0.0020 | 0.0011 |
| 239 | 0.0030 | 0.0019 | 0.0011 |
| 240 | 0.0029 | 0.0019 | 0.0010 |
| 241 | 0.0029 | 0.0019 | 0.0010 |
| 242 | 0.0028 | 0.0018 | 0.0010 |
| 243 | 0.0028 | 0.0018 | 0.0010 |
| 244 | 0.0028 | 0.0018 | 0.0010 |
| 245 | 0.0027 | 0.0017 | 0.0010 |
| 246 | 0.0027 | 0.0017 | 0.0010 |
| 247 | 0.0026 | 0.0017 | 0.0009 |
| 248 | 0.0026 | 0.0017 | 0.0009 |
| 249 | 0.0026 | 0.0016 | 0.0009 |
| 250 | 0.0025 | 0.0016 | 0.0009 |
| 251 | 0.0025 | 0.0016 | 0.0009 |
| 252 | 0.0024 | 0.0016 | 0.0009 |
| 253 | 0.0024 | 0.0016 | 0.0009 |
| 254 | 0.0024 | 0.0015 | 0.0009 |
| 255 | 0.0024 | 0.0015 | 0.0008 |
| 256 | 0.0023 | 0.0015 | 0.0008 |
| 257 | 0.0023 | 0.0015 | 0.0008 |
| 258 | 0.0023 | 0.0015 | 0.0008 |

| | | | |
|---|---|---|---|
| 259 | 0.0022 | 0.0014 | 0.0008 |
| 260 | 0.0022 | 0.0014 | 0.0008 |
| 261 | 0.0022 | 0.0014 | 0.0008 |
| 262 | 0.0022 | 0.0014 | 0.0008 |
| 263 | 0.0021 | 0.0014 | 0.0008 |
| 264 | 0.0021 | 0.0014 | 0.0008 |
| 265 | 0.0021 | 0.0013 | 0.0007 |
| 266 | 0.0021 | 0.0013 | 0.0007 |
| 267 | 0.0020 | 0.0013 | 0.0007 |
| 268 | 0.0020 | 0.0013 | 0.0007 |
| 269 | 0.0020 | 0.0013 | 0.0007 |
| 270 | 0.0020 | 0.0013 | 0.0007 |
| 271 | 0.0020 | 0.0013 | 0.0007 |
| 272 | 0.0019 | 0.0012 | 0.0007 |
| 273 | 0.0019 | 0.0012 | 0.0007 |
| 274 | 0.0019 | 0.0012 | 0.0007 |
| 275 | 0.0019 | 0.0012 | 0.0007 |
| 276 | 0.0019 | 0.0012 | 0.0007 |
| 277 | 0.0018 | 0.0012 | 0.0007 |
| 278 | 0.0018 | 0.0012 | 0.0007 |
| 279 | 0.0018 | 0.0012 | 0.0006 |
| 280 | 0.0018 | 0.0012 | 0.0006 |
| 281 | 0.0018 | 0.0011 | 0.0006 |
| 282 | 0.0018 | 0.0011 | 0.0006 |
| 283 | 0.0017 | 0.0011 | 0.0006 |
| 284 | 0.0017 | 0.0011 | 0.0006 |
| 285 | 0.0017 | 0.0011 | 0.0006 |
| 286 | 0.0017 | 0.0011 | 0.0006 |
| 287 | 0.0017 | 0.0011 | 0.0006 |
| 288 | 0.0017 | 0.0011 | 0.0006 |

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Total soil rain loss = 1.07(In)
Total effective rainfall = 1.35(In)
Peak flow rate in flood hydrograph = 39.52(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 10.0 | 20.0 | 30.0 | 40.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+15 | 0.0002 | 0.02 | Q | \| | \| | \| | \| |
| 0+20 | 0.0004 | 0.03 | Q | \| | \| | \| | \| |
| 0+25 | 0.0008 | 0.06 | Q | \| | \| | \| | \| |
| 0+30 | 0.0014 | 0.09 | Q | \| | \| | \| | \| |
| 0+35 | 0.0022 | 0.11 | Q | \| | \| | \| | \| |
| 0+40 | 0.0030 | 0.13 | Q | \| | \| | \| | \| |
| 0+45 | 0.0040 | 0.14 | Q | \| | \| | \| | \| |
| 0+50 | 0.0050 | 0.15 | Q | \| | \| | \| | \| |
| 0+55 | 0.0061 | 0.16 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0073 | 0.17 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0084 | 0.17 | Q | \| | \| | \| | \| |
| 1+10 | 0.0097 | 0.18 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+15 | 0.0109 | 0.18 | Q | | | | |
| 1+20 | 0.0122 | 0.19 | Q | | | | |
| 1+25 | 0.0135 | 0.19 | Q | | | | |
| 1+30 | 0.0149 | 0.20 | Q | | | | |
| 1+35 | 0.0162 | 0.20 | Q | | | | |
| 1+40 | 0.0176 | 0.20 | Q | | | | |
| 1+45 | 0.0190 | 0.21 | Q | | | | |
| 1+50 | 0.0205 | 0.21 | Q | | | | |
| 1+55 | 0.0219 | 0.21 | Q | | | | |
| 2+ 0 | 0.0234 | 0.21 | Q | | | | |
| 2+ 5 | 0.0249 | 0.22 | Q | | | | |
| 2+10 | 0.0264 | 0.22 | Q | | | | |
| 2+15 | 0.0279 | 0.22 | Q | | | | |
| 2+20 | 0.0294 | 0.22 | Q | | | | |
| 2+25 | 0.0310 | 0.22 | Q | | | | |
| 2+30 | 0.0326 | 0.23 | Q | | | | |
| 2+35 | 0.0341 | 0.23 | Q | | | | |
| 2+40 | 0.0357 | 0.23 | Q | | | | |
| 2+45 | 0.0373 | 0.23 | Q | | | | |
| 2+50 | 0.0389 | 0.23 | Q | | | | |
| 2+55 | 0.0406 | 0.24 | Q | | | | |
| 3+ 0 | 0.0422 | 0.24 | Q | | | | |
| 3+ 5 | 0.0438 | 0.24 | Q | | | | |
| 3+10 | 0.0455 | 0.24 | Q | | | | |
| 3+15 | 0.0472 | 0.24 | Q | | | | |
| 3+20 | 0.0488 | 0.24 | Q | | | | |
| 3+25 | 0.0505 | 0.25 | Q | | | | |
| 3+30 | 0.0522 | 0.25 | Q | | | | |
| 3+35 | 0.0539 | 0.25 | Q | | | | |
| 3+40 | 0.0557 | 0.25 | Q | | | | |
| 3+45 | 0.0574 | 0.25 | Q | | | | |
| 3+50 | 0.0592 | 0.25 | Q | | | | |
| 3+55 | 0.0609 | 0.26 | Q | | | | |
| 4+ 0 | 0.0627 | 0.26 | Q | | | | |
| 4+ 5 | 0.0645 | 0.26 | Q | | | | |
| 4+10 | 0.0662 | 0.26 | Q | | | | |
| 4+15 | 0.0680 | 0.26 | Q | | | | |
| 4+20 | 0.0699 | 0.26 | Q | | | | |
| 4+25 | 0.0717 | 0.26 | Q | | | | |
| 4+30 | 0.0735 | 0.27 | Q | | | | |
| 4+35 | 0.0753 | 0.27 | Q | | | | |
| 4+40 | 0.0772 | 0.27 | Q | | | | |
| 4+45 | 0.0790 | 0.27 | Q | | | | |
| 4+50 | 0.0809 | 0.27 | Q | | | | |
| 4+55 | 0.0828 | 0.27 | Q | | | | |
| 5+ 0 | 0.0847 | 0.27 | QV | | | | |
| 5+ 5 | 0.0866 | 0.28 | QV | | | | |
| 5+10 | 0.0885 | 0.28 | QV | | | | |
| 5+15 | 0.0904 | 0.28 | QV | | | | |
| 5+20 | 0.0923 | 0.28 | QV | | | | |
| 5+25 | 0.0943 | 0.28 | QV | | | | |
| 5+30 | 0.0962 | 0.28 | QV | | | | |
| 5+35 | 0.0982 | 0.29 | QV | | | | |
| 5+40 | 0.1002 | 0.29 | QV | | | | |
| 5+45 | 0.1022 | 0.29 | QV | | | | |
| 5+50 | 0.1042 | 0.29 | QV | | | | |
| 5+55 | 0.1062 | 0.29 | QV | | | | |
| 6+ 0 | 0.1082 | 0.29 | QV | | | | |
| 6+ 5 | 0.1103 | 0.30 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+10 | 0.1123 | 0.30 | QV | \| | \| | \| | \| |
| 6+15 | 0.1144 | 0.30 | QV | \| | \| | \| | \| |
| 6+20 | 0.1165 | 0.30 | QV | \| | \| | \| | \| |
| 6+25 | 0.1186 | 0.30 | QV | \| | \| | \| | \| |
| 6+30 | 0.1207 | 0.31 | QV | \| | \| | \| | \| |
| 6+35 | 0.1228 | 0.31 | QV | \| | \| | \| | \| |
| 6+40 | 0.1249 | 0.31 | QV | \| | \| | \| | \| |
| 6+45 | 0.1271 | 0.31 | QV | \| | \| | \| | \| |
| 6+50 | 0.1292 | 0.31 | QV | \| | \| | \| | \| |
| 6+55 | 0.1314 | 0.32 | QV | \| | \| | \| | \| |
| 7+ 0 | 0.1336 | 0.32 | QV | \| | \| | \| | \| |
| 7+ 5 | 0.1358 | 0.32 | QV | \| | \| | \| | \| |
| 7+10 | 0.1380 | 0.32 | QV | \| | \| | \| | \| |
| 7+15 | 0.1403 | 0.33 | QV | \| | \| | \| | \| |
| 7+20 | 0.1425 | 0.33 | QV | \| | \| | \| | \| |
| 7+25 | 0.1448 | 0.33 | QV | \| | \| | \| | \| |
| 7+30 | 0.1471 | 0.33 | QV | \| | \| | \| | \| |
| 7+35 | 0.1494 | 0.33 | QV | \| | \| | \| | \| |
| 7+40 | 0.1517 | 0.34 | QV | \| | \| | \| | \| |
| 7+45 | 0.1541 | 0.34 | QV | \| | \| | \| | \| |
| 7+50 | 0.1564 | 0.34 | QV | \| | \| | \| | \| |
| 7+55 | 0.1588 | 0.34 | QV | \| | \| | \| | \| |
| 8+ 0 | 0.1612 | 0.35 | QV | \| | \| | \| | \| |
| 8+ 5 | 0.1636 | 0.35 | QV | \| | \| | \| | \| |
| 8+10 | 0.1660 | 0.35 | QV | \| | \| | \| | \| |
| 8+15 | 0.1685 | 0.36 | Q V | \| | \| | \| | \| |
| 8+20 | 0.1709 | 0.36 | Q V | \| | \| | \| | \| |
| 8+25 | 0.1734 | 0.36 | Q V | \| | \| | \| | \| |
| 8+30 | 0.1759 | 0.36 | Q V | \| | \| | \| | \| |
| 8+35 | 0.1785 | 0.37 | Q V | \| | \| | \| | \| |
| 8+40 | 0.1810 | 0.37 | Q V | \| | \| | \| | \| |
| 8+45 | 0.1836 | 0.37 | Q V | \| | \| | \| | \| |
| 8+50 | 0.1862 | 0.38 | Q V | \| | \| | \| | \| |
| 8+55 | 0.1888 | 0.38 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.1914 | 0.38 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.1941 | 0.39 | Q V | \| | \| | \| | \| |
| 9+10 | 0.1968 | 0.39 | Q V | \| | \| | \| | \| |
| 9+15 | 0.1995 | 0.39 | Q V | \| | \| | \| | \| |
| 9+20 | 0.2022 | 0.40 | Q V | \| | \| | \| | \| |
| 9+25 | 0.2050 | 0.40 | Q V | \| | \| | \| | \| |
| 9+30 | 0.2077 | 0.40 | Q V | \| | \| | \| | \| |
| 9+35 | 0.2105 | 0.41 | Q V | \| | \| | \| | \| |
| 9+40 | 0.2134 | 0.41 | Q V | \| | \| | \| | \| |
| 9+45 | 0.2162 | 0.42 | Q V | \| | \| | \| | \| |
| 9+50 | 0.2191 | 0.42 | Q V | \| | \| | \| | \| |
| 9+55 | 0.2220 | 0.42 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.2250 | 0.43 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.2280 | 0.43 | Q V | \| | \| | \| | \| |
| 10+10 | 0.2310 | 0.44 | Q V | \| | \| | \| | \| |
| 10+15 | 0.2340 | 0.44 | Q V | \| | \| | \| | \| |
| 10+20 | 0.2371 | 0.45 | Q V | \| | \| | \| | \| |
| 10+25 | 0.2402 | 0.45 | Q V | \| | \| | \| | \| |
| 10+30 | 0.2433 | 0.45 | Q V | \| | \| | \| | \| |
| 10+35 | 0.2465 | 0.46 | Q V | \| | \| | \| | \| |
| 10+40 | 0.2497 | 0.46 | Q V | \| | \| | \| | \| |
| 10+45 | 0.2529 | 0.47 | Q  V | \| | \| | \| | \| |
| 10+50 | 0.2562 | 0.48 | Q  V | \| | \| | \| | \| |
| 10+55 | 0.2595 | 0.48 | Q  V | \| | \| | \| | \| |
| 11+ 0 | 0.2628 | 0.49 | Q  V | \| | \| | \| | \| |

```
11+ 5       0.2662      0.49  Q  V      |          |          |          |
11+10       0.2696      0.50  Q  V      |          |          |          |
11+15       0.2731      0.50  Q  V      |          |          |          |
11+20       0.2766      0.51  Q  V      |          |          |          |
11+25       0.2802      0.52  Q  V      |          |          |          |
11+30       0.2838      0.52  Q  V      |          |          |          |
11+35       0.2874      0.53  Q  V      |          |          |          |
11+40       0.2911      0.54  Q  V      |          |          |          |
11+45       0.2949      0.54  Q  V      |          |          |          |
11+50       0.2987      0.55  Q  V      |          |          |          |
11+55       0.3025      0.56  Q  V      |          |          |          |
12+ 0       0.3064      0.57  Q  V      |          |          |          |
12+ 5       0.3104      0.58  Q  V      |          |          |          |
12+10       0.3144      0.58  Q  V      |          |          |          |
12+15       0.3185      0.59  Q  V      |          |          |          |
12+20       0.3227      0.61  Q  V      |          |          |          |
12+25       0.3269      0.62  Q  V      |          |          |          |
12+30       0.3313      0.63  Q  V      |          |          |          |
12+35       0.3358      0.65  Q  V      |          |          |          |
12+40       0.3403      0.66  Q   V     |          |          |          |
12+45       0.3449      0.67  Q   V     |          |          |          |
12+50       0.3497      0.69  Q   V     |          |          |          |
12+55       0.3545      0.70  Q   V     |          |          |          |
13+ 0       0.3594      0.71  Q   V     |          |          |          |
13+ 5       0.3644      0.73  Q   V     |          |          |          |
13+10       0.3695      0.74  Q   V     |          |          |          |
13+15       0.3747      0.75  Q   V     |          |          |          |
13+20       0.3800      0.77  Q   V     |          |          |          |
13+25       0.3854      0.79  Q   V     |          |          |          |
13+30       0.3909      0.80  Q   V     |          |          |          |
13+35       0.3966      0.82  Q   V     |          |          |          |
13+40       0.4023      0.84  Q   V     |          |          |          |
13+45       0.4082      0.86  Q   V     |          |          |          |
13+50       0.4143      0.88  Q   V     |          |          |          |
13+55       0.4205      0.90  Q   V     |          |          |          |
14+ 0       0.4268      0.92  Q    V    |          |          |          |
14+ 5       0.4333      0.95  Q    V    |          |          |          |
14+10       0.4400      0.97  Q    V    |          |          |          |
14+15       0.4469      1.00  Q    V    |          |          |          |
14+20       0.4540      1.03  |Q   V    |          |          |          |
14+25       0.4613      1.06  |Q   V    |          |          |          |
14+30       0.4688      1.09  |Q   V    |          |          |          |
14+35       0.4765      1.13  |Q   V    |          |          |          |
14+40       0.4846      1.17  |Q   V    |          |          |          |
14+45       0.4929      1.21  |Q   V    |          |          |          |
14+50       0.5015      1.25  |Q   V    |          |          |          |
14+55       0.5105      1.30  |Q    V   |          |          |          |
15+ 0       0.5198      1.35  |Q    V   |          |          |          |
15+ 5       0.5295      1.41  |Q    V   |          |          |          |
15+10       0.5397      1.48  |Q    V   |          |          |          |
15+15       0.5504      1.55  |Q    V   |          |          |          |
15+20       0.5617      1.63  |Q    V   |          |          |          |
15+25       0.5736      1.74  |Q    V   |          |          |          |
15+30       0.5865      1.88  |Q    V   |          |          |          |
15+35       0.6007      2.06  | Q    V  |          |          |          |
15+40       0.6165      2.30  | Q    V  |          |          |          |
15+45       0.6350      2.68  | Q    V  |          |          |          |
15+50       0.6569      3.18  |  Q   V  |          |          |          |
15+55       0.6834      3.85  |  Q    V |          |          |          |
```

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16+ 0       0.7175      4.95  |   Q   V |         |         |         |
16+ 5       0.7721      7.93  |      Q V|         |         |         |
16+10       0.8619     13.03  |         V  Q      |         |         |
16+15       0.9905     18.68  |         |V      Q |         |         |
16+20       1.1751     26.80  |         |  V      |     Q   |         |
16+25       1.4459     39.33  |         |      V  |         |        Q|
16+30       1.7181     39.52  |         |         V         |        Q|
16+35       1.9297     30.73  |         |         | V       Q         |
16+40       2.0931     23.73  |         |         |  QV     |         |
16+45       2.2188     18.25  |         |       Q |     V   |         |
16+50       2.3224     15.04  |         |    Q    |      V  |         |
16+55       2.4116     12.96  |         | Q       |       V |         |
17+ 0       2.4877     11.04  |         |Q        |        V|         |
17+ 5       2.5551      9.79  |        Q|         |         V         |
17+10       2.6134      8.47  |       Q |         |         |V        |
17+15       2.6660      7.64  |      Q  |         |         |V        |
17+20       2.7130      6.83  |     Q   |         |         | V       |
17+25       2.7564      6.30  |     Q   |         |         | V       |
17+30       2.7965      5.83  |    Q    |         |         |  V      |
17+35       2.8325      5.22  |    Q    |         |         |  V      |
17+40       2.8647      4.67  |   Q     |         |         |   V     |
17+45       2.8935      4.18  |   Q     |         |         |   V     |
17+50       2.9206      3.94  |  Q      |         |         |   V     |
17+55       2.9461      3.70  |  Q      |         |         |    V    |
18+ 0       2.9697      3.42  |  Q      |         |         |    V    |
18+ 5       2.9918      3.22  |  Q      |         |         |    V    |
18+10       3.0125      3.00  | Q       |         |         |    V    |
18+15       3.0310      2.69  | Q       |         |         |     V   |
18+20       3.0487      2.57  | Q       |         |         |     V   |
18+25       3.0655      2.45  | Q       |         |         |     V   |
18+30       3.0806      2.19  | Q       |         |         |     V   |
18+35       3.0949      2.07  | Q       |         |         |     V   |
18+40       3.1085      1.98  |Q        |         |         |     V   |
18+45       3.1205      1.74  |Q        |         |         |      V  |
18+50       3.1316      1.61  |Q        |         |         |      V  |
18+55       3.1421      1.54  |Q        |         |         |      V  |
19+ 0       3.1513      1.33  |Q        |         |         |      V  |
19+ 5       3.1596      1.21  |Q        |         |         |      V  |
19+10       3.1678      1.18  |Q        |         |         |      V  |
19+15       3.1760      1.19  |Q        |         |         |      V  |
19+20       3.1843      1.20  |Q        |         |         |      V  |
19+25       3.1924      1.18  |Q        |         |         |      V  |
19+30       3.2004      1.16  |Q        |         |         |       V |
19+35       3.2082      1.13  |Q        |         |         |       V |
19+40       3.2157      1.09  |Q        |         |         |       V |
19+45       3.2226      1.01  |Q        |         |         |       V |
19+50       3.2285      0.85  Q        |         |         |       V |
19+55       3.2340      0.81  Q        |         |         |       V |
20+ 0       3.2394      0.78  Q        |         |         |       V |
20+ 5       3.2445      0.74  Q        |         |         |       V |
20+10       3.2492      0.68  Q        |         |         |       V |
20+15       3.2525      0.48  Q        |         |         |       V |
20+20       3.2557      0.46  Q        |         |         |       V |
20+25       3.2587      0.44  Q        |         |         |       V |
20+30       3.2616      0.43  Q        |         |         |       V |
20+35       3.2645      0.42  Q        |         |         |       V |
20+40       3.2674      0.41  Q        |         |         |       V |
20+45       3.2701      0.40  Q        |         |         |       V |
20+50       3.2728      0.39  Q        |         |         |       V |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20+55 | 3.2755 | 0.39 | Q | \| | \| | \| | V \| |
| 21+ 0 | 3.2781 | 0.38 | Q | \| | \| | \| | V \| |
| 21+ 5 | 3.2806 | 0.37 | Q | \| | \| | \| | V \| |
| 21+10 | 3.2832 | 0.36 | Q | \| | \| | \| | V\| |
| 21+15 | 3.2856 | 0.36 | Q | \| | \| | \| | V\| |
| 21+20 | 3.2881 | 0.35 | Q | \| | \| | \| | V\| |
| 21+25 | 3.2904 | 0.35 | Q | \| | \| | \| | V\| |
| 21+30 | 3.2928 | 0.34 | Q | \| | \| | \| | V\| |
| 21+35 | 3.2951 | 0.34 | Q | \| | \| | \| | V\| |
| 21+40 | 3.2974 | 0.33 | Q | \| | \| | \| | V\| |
| 21+45 | 3.2996 | 0.33 | Q | \| | \| | \| | V\| |
| 21+50 | 3.3018 | 0.32 | Q | \| | \| | \| | V\| |
| 21+55 | 3.3040 | 0.32 | Q | \| | \| | \| | V\| |
| 22+ 0 | 3.3062 | 0.31 | Q | \| | \| | \| | V\| |
| 22+ 5 | 3.3083 | 0.31 | Q | \| | \| | \| | V\| |
| 22+10 | 3.3104 | 0.30 | Q | \| | \| | \| | V\| |
| 22+15 | 3.3125 | 0.30 | Q | \| | \| | \| | V\| |
| 22+20 | 3.3145 | 0.30 | Q | \| | \| | \| | V\| |
| 22+25 | 3.3165 | 0.29 | Q | \| | \| | \| | V\| |
| 22+30 | 3.3185 | 0.29 | Q | \| | \| | \| | V\| |
| 22+35 | 3.3205 | 0.29 | Q | \| | \| | \| | V\| |
| 22+40 | 3.3224 | 0.28 | Q | \| | \| | \| | V\| |
| 22+45 | 3.3243 | 0.28 | Q | \| | \| | \| | V\| |
| 22+50 | 3.3262 | 0.28 | Q | \| | \| | \| | V\| |
| 22+55 | 3.3281 | 0.27 | Q | \| | \| | \| | V\| |
| 23+ 0 | 3.3299 | 0.27 | Q | \| | \| | \| | V\| |
| 23+ 5 | 3.3318 | 0.27 | Q | \| | \| | \| | V\| |
| 23+10 | 3.3336 | 0.26 | Q | \| | \| | \| | V\| |
| 23+15 | 3.3354 | 0.26 | Q | \| | \| | \| | V\| |
| 23+20 | 3.3372 | 0.26 | Q | \| | \| | \| | V\| |
| 23+25 | 3.3389 | 0.25 | Q | \| | \| | \| | V\| |
| 23+30 | 3.3406 | 0.25 | Q | \| | \| | \| | V\| |
| 23+35 | 3.3424 | 0.25 | Q | \| | \| | \| | V\| |
| 23+40 | 3.3441 | 0.25 | Q | \| | \| | \| | V\| |
| 23+45 | 3.3457 | 0.24 | Q | \| | \| | \| | V\| |
| 23+50 | 3.3474 | 0.24 | Q | \| | \| | \| | V\| |
| 23+55 | 3.3491 | 0.24 | Q | \| | \| | \| | V\| |
| 24+ 0 | 3.3507 | 0.24 | Q | \| | \| | \| | V\| |
| 24+ 5 | 3.3523 | 0.23 | Q | \| | \| | \| | V\| |
| 24+10 | 3.3539 | 0.23 | Q | \| | \| | \| | V\| |
| 24+15 | 3.3554 | 0.22 | Q | \| | \| | \| | V\| |
| 24+20 | 3.3567 | 0.20 | Q | \| | \| | \| | V\| |
| 24+25 | 3.3579 | 0.17 | Q | \| | \| | \| | V\| |
| 24+30 | 3.3588 | 0.14 | Q | \| | \| | \| | V\| |
| 24+35 | 3.3596 | 0.11 | Q | \| | \| | \| | V\| |
| 24+40 | 3.3603 | 0.10 | Q | \| | \| | \| | V\| |
| 24+45 | 3.3609 | 0.08 | Q | \| | \| | \| | V\| |
| 24+50 | 3.3614 | 0.07 | Q | \| | \| | \| | V\| |
| 24+55 | 3.3618 | 0.07 | Q | \| | \| | \| | V\| |
| 25+ 0 | 3.3622 | 0.06 | Q | \| | \| | \| | V\| |
| 25+ 5 | 3.3626 | 0.05 | Q | \| | \| | \| | V\| |
| 25+10 | 3.3629 | 0.05 | Q | \| | \| | \| | V\| |
| 25+15 | 3.3632 | 0.04 | Q | \| | \| | \| | V\| |
| 25+20 | 3.3635 | 0.04 | Q | \| | \| | \| | V\| |
| 25+25 | 3.3637 | 0.03 | Q | \| | \| | \| | V\| |
| 25+30 | 3.3639 | 0.03 | Q | \| | \| | \| | V\| |
| 25+35 | 3.3641 | 0.03 | Q | \| | \| | \| | V\| |
| 25+40 | 3.3643 | 0.03 | Q | \| | \| | \| | V\| |
| 25+45 | 3.3645 | 0.02 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+50 | 3.3646 | 0.02 | Q | \| | \| | \| | V\| |
| 25+55 | 3.3648 | 0.02 | Q | \| | \| | \| | V\| |
| 26+ 0 | 3.3649 | 0.02 | Q | \| | \| | \| | V\| |
| 26+ 5 | 3.3650 | 0.02 | Q | \| | \| | \| | V\| |
| 26+10 | 3.3651 | 0.01 | Q | \| | \| | \| | V\| |
| 26+15 | 3.3652 | 0.01 | Q | \| | \| | \| | V\| |
| 26+20 | 3.3652 | 0.01 | Q | \| | \| | \| | V\| |
| 26+25 | 3.3653 | 0.01 | Q | \| | \| | \| | V\| |
| 26+30 | 3.3654 | 0.01 | Q | \| | \| | \| | V\| |
| 26+35 | 3.3654 | 0.01 | Q | \| | \| | \| | V\| |
| 26+40 | 3.3655 | 0.01 | Q | \| | \| | \| | V\| |
| 26+45 | 3.3655 | 0.01 | Q | \| | \| | \| | V\| |
| 26+50 | 3.3656 | 0.01 | Q | \| | \| | \| | V\| |
| 26+55 | 3.3656 | 0.01 | Q | \| | \| | \| | V\| |
| 27+ 0 | 3.3656 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 5 | 3.3657 | 0.00 | Q | \| | \| | \| | V\| |
| 27+10 | 3.3657 | 0.00 | Q | \| | \| | \| | V\| |
| 27+15 | 3.3657 | 0.00 | Q | \| | \| | \| | V\| |
| 27+20 | 3.3657 | 0.00 | Q | \| | \| | \| | V\| |
| 27+25 | 3.3658 | 0.00 | Q | \| | \| | \| | V\| |
| 27+30 | 3.3658 | 0.00 | Q | \| | \| | \| | V\| |
| 27+35 | 3.3658 | 0.00 | Q | \| | \| | \| | V\| |
| 27+40 | 3.3658 | 0.00 | Q | \| | \| | \| | V\| |
| 27+45 | 3.3658 | 0.00 | Q | \| | \| | \| | V\| |
| 27+50 | 3.3658 | 0.00 | Q | \| | \| | \| | V\| |
| 27+55 | 3.3658 | 0.00 | Q | \| | \| | \| | V\| |
| 28+ 0 | 3.3658 | 0.00 | Q | \| | \| | \| | V\| |
| 28+ 5 | 3.3658 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 10A
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 13.57 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 13.57 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 13.57 | 24 | 2.40 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 13.57 | 1.000 | 0.360 | 1.000 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 13.57 | 1.000 | 62.0 | 80.6 | 2.41 | 0.355 |

Area-averaged catchment yield fraction, Y = 0.355
Area-averaged low loss fraction, Yb = 0.645
User entry of time of concentration = 1.400 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 13.57(Ac.)
Catchment Lag time = 1.120 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 7.4405
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.645 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.400(In)

Rainfall depth area reduction factors:
Using a total area of 13.57(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.602(In)
30-minute factor = 0.999 Adjusted rainfall = 1.031(In)
1-hour factor = 0.999 Adjusted rainfall = 1.269(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.400(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 164.11 (CFS)) | |
| 1 | 0.327 | 0.537 |
| 2 | 1.013 | 1.125 |
| 3 | 2.125 | 1.826 |
| 4 | 3.497 | 2.251 |
| 5 | 5.304 | 2.965 |
| 6 | 7.451 | 3.523 |
| 7 | 10.039 | 4.247 |
| 8 | 14.214 | 6.853 |
| 9 | 19.490 | 8.659 |
| 10 | 26.881 | 12.129 |
| 11 | 33.971 | 11.636 |
| 12 | 40.298 | 10.383 |
| 13 | 45.524 | 8.577 |
| 14 | 50.146 | 7.585 |

| | | |
|---|---|---|
| 15 | 54.101 | 6.491 |
| 16 | 57.578 | 5.707 |
| 17 | 60.432 | 4.683 |
| 18 | 62.925 | 4.091 |
| 19 | 65.198 | 3.731 |
| 20 | 67.204 | 3.291 |
| 21 | 69.105 | 3.120 |
| 22 | 70.889 | 2.928 |
| 23 | 72.482 | 2.614 |
| 24 | 73.950 | 2.408 |
| 25 | 75.283 | 2.189 |
| 26 | 76.574 | 2.118 |
| 27 | 77.823 | 2.050 |
| 28 | 78.909 | 1.782 |
| 29 | 79.891 | 1.612 |
| 30 | 80.873 | 1.612 |
| 31 | 81.804 | 1.527 |
| 32 | 82.613 | 1.327 |
| 33 | 83.416 | 1.319 |
| 34 | 84.213 | 1.307 |
| 35 | 84.943 | 1.199 |
| 36 | 85.657 | 1.172 |
| 37 | 86.371 | 1.172 |
| 38 | 87.021 | 1.067 |
| 39 | 87.617 | 0.977 |
| 40 | 88.212 | 0.977 |
| 41 | 88.773 | 0.920 |
| 42 | 89.227 | 0.745 |
| 43 | 89.673 | 0.733 |
| 44 | 90.118 | 0.730 |
| 45 | 90.542 | 0.695 |
| 46 | 90.958 | 0.684 |
| 47 | 91.375 | 0.684 |
| 48 | 91.764 | 0.639 |
| 49 | 92.121 | 0.586 |
| 50 | 92.479 | 0.586 |
| 51 | 92.830 | 0.577 |
| 52 | 93.160 | 0.541 |
| 53 | 93.488 | 0.537 |
| 54 | 93.813 | 0.534 |
| 55 | 94.087 | 0.450 |
| 56 | 94.340 | 0.415 |
| 57 | 94.593 | 0.415 |
| 58 | 94.846 | 0.415 |
| 59 | 95.099 | 0.415 |
| 60 | 95.352 | 0.415 |
| 61 | 95.597 | 0.402 |
| 62 | 95.797 | 0.329 |
| 63 | 95.991 | 0.317 |
| 64 | 96.184 | 0.317 |
| 65 | 96.378 | 0.317 |
| 66 | 96.571 | 0.317 |
| 67 | 96.765 | 0.317 |
| 68 | 96.939 | 0.286 |
| 69 | 97.074 | 0.222 |
| 70 | 97.208 | 0.220 |
| 71 | 97.342 | 0.220 |
| 72 | 97.476 | 0.220 |
| 73 | 97.610 | 0.220 |

| | | |
|---|---|---|
| 74 | 97.744 | 0.219 |
| 75 | 97.843 | 0.163 |
| 76 | 97.918 | 0.122 |
| 77 | 97.992 | 0.122 |
| 78 | 98.066 | 0.122 |
| 79 | 98.141 | 0.122 |
| 80 | 98.215 | 0.122 |
| 81 | 98.291 | 0.124 |
| 82 | 98.377 | 0.142 |
| 83 | 98.466 | 0.147 |
| 84 | 98.555 | 0.147 |
| 85 | 98.645 | 0.147 |
| 86 | 98.734 | 0.147 |
| 87 | 98.823 | 0.147 |
| 88 | 98.912 | 0.147 |
| 89 | 99.002 | 0.147 |
| 90 | 99.091 | 0.147 |
| 91 | 99.180 | 0.147 |
| 92 | 99.270 | 0.147 |
| 93 | 99.359 | 0.147 |
| 94 | 99.448 | 0.147 |
| 95 | 99.519 | 0.117 |
| 96 | 99.566 | 0.077 |
| 97 | 99.613 | 0.076 |
| 98 | 99.659 | 0.076 |
| 99 | 99.706 | 0.076 |
| 100 | 99.752 | 0.076 |
| 101 | 99.799 | 0.076 |
| 102 | 99.845 | 0.076 |
| 103 | 99.892 | 0.076 |
| 104 | 99.938 | 0.076 |
| 105 | 100.000 | 0.038 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6022 | 0.6022 |
| 2 | 0.7415 | 0.1392 |
| 3 | 0.8374 | 0.0959 |
| 4 | 0.9128 | 0.0755 |
| 5 | 0.9760 | 0.0632 |
| 6 | 1.0309 | 0.0549 |
| 7 | 1.0797 | 0.0488 |
| 8 | 1.1238 | 0.0441 |
| 9 | 1.1642 | 0.0404 |
| 10 | 1.2016 | 0.0374 |
| 11 | 1.2365 | 0.0349 |
| 12 | 1.2692 | 0.0327 |
| 13 | 1.2904 | 0.0212 |
| 14 | 1.3104 | 0.0200 |
| 15 | 1.3293 | 0.0189 |
| 16 | 1.3472 | 0.0179 |
| 17 | 1.3643 | 0.0170 |
| 18 | 1.3806 | 0.0163 |
| 19 | 1.3961 | 0.0156 |
| 20 | 1.4111 | 0.0149 |
| 21 | 1.4254 | 0.0144 |
| 22 | 1.4392 | 0.0138 |
| 23 | 1.4526 | 0.0133 |
| 24 | 1.4654 | 0.0129 |

| | | |
|---|---|---|
| 25 | 1.4779 | 0.0125 |
| 26 | 1.4900 | 0.0121 |
| 27 | 1.5017 | 0.0117 |
| 28 | 1.5131 | 0.0114 |
| 29 | 1.5241 | 0.0111 |
| 30 | 1.5349 | 0.0108 |
| 31 | 1.5453 | 0.0105 |
| 32 | 1.5555 | 0.0102 |
| 33 | 1.5655 | 0.0100 |
| 34 | 1.5752 | 0.0097 |
| 35 | 1.5847 | 0.0095 |
| 36 | 1.5940 | 0.0093 |
| 37 | 1.6031 | 0.0091 |
| 38 | 1.6120 | 0.0089 |
| 39 | 1.6206 | 0.0087 |
| 40 | 1.6292 | 0.0085 |
| 41 | 1.6375 | 0.0083 |
| 42 | 1.6457 | 0.0082 |
| 43 | 1.6537 | 0.0080 |
| 44 | 1.6616 | 0.0079 |
| 45 | 1.6694 | 0.0077 |
| 46 | 1.6770 | 0.0076 |
| 47 | 1.6845 | 0.0075 |
| 48 | 1.6918 | 0.0074 |
| 49 | 1.6991 | 0.0072 |
| 50 | 1.7062 | 0.0071 |
| 51 | 1.7132 | 0.0070 |
| 52 | 1.7201 | 0.0069 |
| 53 | 1.7269 | 0.0068 |
| 54 | 1.7336 | 0.0067 |
| 55 | 1.7402 | 0.0066 |
| 56 | 1.7467 | 0.0065 |
| 57 | 1.7531 | 0.0064 |
| 58 | 1.7594 | 0.0063 |
| 59 | 1.7656 | 0.0062 |
| 60 | 1.7718 | 0.0062 |
| 61 | 1.7779 | 0.0061 |
| 62 | 1.7839 | 0.0060 |
| 63 | 1.7898 | 0.0059 |
| 64 | 1.7956 | 0.0058 |
| 65 | 1.8014 | 0.0058 |
| 66 | 1.8071 | 0.0057 |
| 67 | 1.8127 | 0.0056 |
| 68 | 1.8183 | 0.0056 |
| 69 | 1.8238 | 0.0055 |
| 70 | 1.8292 | 0.0054 |
| 71 | 1.8346 | 0.0054 |
| 72 | 1.8399 | 0.0053 |
| 73 | 1.8448 | 0.0049 |
| 74 | 1.8496 | 0.0048 |
| 75 | 1.8544 | 0.0048 |
| 76 | 1.8591 | 0.0047 |
| 77 | 1.8638 | 0.0047 |
| 78 | 1.8684 | 0.0046 |
| 79 | 1.8729 | 0.0046 |
| 80 | 1.8775 | 0.0045 |
| 81 | 1.8819 | 0.0045 |
| 82 | 1.8864 | 0.0044 |
| 83 | 1.8908 | 0.0044 |

| | | |
|---|---|---|
| 84 | 1.8951 | 0.0043 |
| 85 | 1.8994 | 0.0043 |
| 86 | 1.9037 | 0.0043 |
| 87 | 1.9079 | 0.0042 |
| 88 | 1.9121 | 0.0042 |
| 89 | 1.9162 | 0.0041 |
| 90 | 1.9203 | 0.0041 |
| 91 | 1.9244 | 0.0041 |
| 92 | 1.9284 | 0.0040 |
| 93 | 1.9324 | 0.0040 |
| 94 | 1.9364 | 0.0040 |
| 95 | 1.9403 | 0.0039 |
| 96 | 1.9442 | 0.0039 |
| 97 | 1.9481 | 0.0039 |
| 98 | 1.9519 | 0.0038 |
| 99 | 1.9557 | 0.0038 |
| 100 | 1.9595 | 0.0038 |
| 101 | 1.9632 | 0.0037 |
| 102 | 1.9670 | 0.0037 |
| 103 | 1.9706 | 0.0037 |
| 104 | 1.9743 | 0.0037 |
| 105 | 1.9779 | 0.0036 |
| 106 | 1.9815 | 0.0036 |
| 107 | 1.9851 | 0.0036 |
| 108 | 1.9886 | 0.0035 |
| 109 | 1.9921 | 0.0035 |
| 110 | 1.9956 | 0.0035 |
| 111 | 1.9991 | 0.0035 |
| 112 | 2.0025 | 0.0034 |
| 113 | 2.0060 | 0.0034 |
| 114 | 2.0093 | 0.0034 |
| 115 | 2.0127 | 0.0034 |
| 116 | 2.0161 | 0.0033 |
| 117 | 2.0194 | 0.0033 |
| 118 | 2.0227 | 0.0033 |
| 119 | 2.0259 | 0.0033 |
| 120 | 2.0292 | 0.0033 |
| 121 | 2.0324 | 0.0032 |
| 122 | 2.0356 | 0.0032 |
| 123 | 2.0388 | 0.0032 |
| 124 | 2.0420 | 0.0032 |
| 125 | 2.0451 | 0.0031 |
| 126 | 2.0483 | 0.0031 |
| 127 | 2.0514 | 0.0031 |
| 128 | 2.0545 | 0.0031 |
| 129 | 2.0575 | 0.0031 |
| 130 | 2.0606 | 0.0030 |
| 131 | 2.0636 | 0.0030 |
| 132 | 2.0666 | 0.0030 |
| 133 | 2.0696 | 0.0030 |
| 134 | 2.0726 | 0.0030 |
| 135 | 2.0755 | 0.0030 |
| 136 | 2.0785 | 0.0029 |
| 137 | 2.0814 | 0.0029 |
| 138 | 2.0843 | 0.0029 |
| 139 | 2.0872 | 0.0029 |
| 140 | 2.0900 | 0.0029 |
| 141 | 2.0929 | 0.0029 |
| 142 | 2.0957 | 0.0028 |

| | | |
|---|---|---|
| 143 | 2.0986 | 0.0028 |
| 144 | 2.1014 | 0.0028 |
| 145 | 2.1042 | 0.0028 |
| 146 | 2.1069 | 0.0028 |
| 147 | 2.1097 | 0.0028 |
| 148 | 2.1124 | 0.0027 |
| 149 | 2.1152 | 0.0027 |
| 150 | 2.1179 | 0.0027 |
| 151 | 2.1206 | 0.0027 |
| 152 | 2.1233 | 0.0027 |
| 153 | 2.1259 | 0.0027 |
| 154 | 2.1286 | 0.0027 |
| 155 | 2.1312 | 0.0026 |
| 156 | 2.1339 | 0.0026 |
| 157 | 2.1365 | 0.0026 |
| 158 | 2.1391 | 0.0026 |
| 159 | 2.1417 | 0.0026 |
| 160 | 2.1442 | 0.0026 |
| 161 | 2.1468 | 0.0026 |
| 162 | 2.1493 | 0.0025 |
| 163 | 2.1519 | 0.0025 |
| 164 | 2.1544 | 0.0025 |
| 165 | 2.1569 | 0.0025 |
| 166 | 2.1594 | 0.0025 |
| 167 | 2.1619 | 0.0025 |
| 168 | 2.1644 | 0.0025 |
| 169 | 2.1668 | 0.0025 |
| 170 | 2.1693 | 0.0025 |
| 171 | 2.1717 | 0.0024 |
| 172 | 2.1742 | 0.0024 |
| 173 | 2.1766 | 0.0024 |
| 174 | 2.1790 | 0.0024 |
| 175 | 2.1814 | 0.0024 |
| 176 | 2.1838 | 0.0024 |
| 177 | 2.1861 | 0.0024 |
| 178 | 2.1885 | 0.0024 |
| 179 | 2.1909 | 0.0024 |
| 180 | 2.1932 | 0.0023 |
| 181 | 2.1955 | 0.0023 |
| 182 | 2.1978 | 0.0023 |
| 183 | 2.2002 | 0.0023 |
| 184 | 2.2025 | 0.0023 |
| 185 | 2.2047 | 0.0023 |
| 186 | 2.2070 | 0.0023 |
| 187 | 2.2093 | 0.0023 |
| 188 | 2.2116 | 0.0023 |
| 189 | 2.2138 | 0.0023 |
| 190 | 2.2160 | 0.0022 |
| 191 | 2.2183 | 0.0022 |
| 192 | 2.2205 | 0.0022 |
| 193 | 2.2227 | 0.0022 |
| 194 | 2.2249 | 0.0022 |
| 195 | 2.2271 | 0.0022 |
| 196 | 2.2293 | 0.0022 |
| 197 | 2.2315 | 0.0022 |
| 198 | 2.2336 | 0.0022 |
| 199 | 2.2358 | 0.0022 |
| 200 | 2.2379 | 0.0021 |
| 201 | 2.2401 | 0.0021 |

| | | |
|---|---|---|
| 202 | 2.2422 | 0.0021 |
| 203 | 2.2443 | 0.0021 |
| 204 | 2.2465 | 0.0021 |
| 205 | 2.2486 | 0.0021 |
| 206 | 2.2507 | 0.0021 |
| 207 | 2.2527 | 0.0021 |
| 208 | 2.2548 | 0.0021 |
| 209 | 2.2569 | 0.0021 |
| 210 | 2.2590 | 0.0021 |
| 211 | 2.2610 | 0.0021 |
| 212 | 2.2631 | 0.0021 |
| 213 | 2.2651 | 0.0020 |
| 214 | 2.2672 | 0.0020 |
| 215 | 2.2692 | 0.0020 |
| 216 | 2.2712 | 0.0020 |
| 217 | 2.2732 | 0.0020 |
| 218 | 2.2752 | 0.0020 |
| 219 | 2.2772 | 0.0020 |
| 220 | 2.2792 | 0.0020 |
| 221 | 2.2812 | 0.0020 |
| 222 | 2.2832 | 0.0020 |
| 223 | 2.2851 | 0.0020 |
| 224 | 2.2871 | 0.0020 |
| 225 | 2.2890 | 0.0020 |
| 226 | 2.2910 | 0.0019 |
| 227 | 2.2929 | 0.0019 |
| 228 | 2.2949 | 0.0019 |
| 229 | 2.2968 | 0.0019 |
| 230 | 2.2987 | 0.0019 |
| 231 | 2.3006 | 0.0019 |
| 232 | 2.3025 | 0.0019 |
| 233 | 2.3044 | 0.0019 |
| 234 | 2.3063 | 0.0019 |
| 235 | 2.3082 | 0.0019 |
| 236 | 2.3101 | 0.0019 |
| 237 | 2.3120 | 0.0019 |
| 238 | 2.3138 | 0.0019 |
| 239 | 2.3157 | 0.0019 |
| 240 | 2.3175 | 0.0019 |
| 241 | 2.3194 | 0.0018 |
| 242 | 2.3212 | 0.0018 |
| 243 | 2.3231 | 0.0018 |
| 244 | 2.3249 | 0.0018 |
| 245 | 2.3267 | 0.0018 |
| 246 | 2.3285 | 0.0018 |
| 247 | 2.3303 | 0.0018 |
| 248 | 2.3321 | 0.0018 |
| 249 | 2.3339 | 0.0018 |
| 250 | 2.3357 | 0.0018 |
| 251 | 2.3375 | 0.0018 |
| 252 | 2.3393 | 0.0018 |
| 253 | 2.3411 | 0.0018 |
| 254 | 2.3429 | 0.0018 |
| 255 | 2.3446 | 0.0018 |
| 256 | 2.3464 | 0.0018 |
| 257 | 2.3481 | 0.0018 |
| 258 | 2.3499 | 0.0017 |
| 259 | 2.3516 | 0.0017 |
| 260 | 2.3534 | 0.0017 |

| | | |
|---|---|---|
| 261 | 2.3551 | 0.0017 |
| 262 | 2.3568 | 0.0017 |
| 263 | 2.3585 | 0.0017 |
| 264 | 2.3603 | 0.0017 |
| 265 | 2.3620 | 0.0017 |
| 266 | 2.3637 | 0.0017 |
| 267 | 2.3654 | 0.0017 |
| 268 | 2.3671 | 0.0017 |
| 269 | 2.3688 | 0.0017 |
| 270 | 2.3705 | 0.0017 |
| 271 | 2.3721 | 0.0017 |
| 272 | 2.3738 | 0.0017 |
| 273 | 2.3755 | 0.0017 |
| 274 | 2.3771 | 0.0017 |
| 275 | 2.3788 | 0.0017 |
| 276 | 2.3805 | 0.0017 |
| 277 | 2.3821 | 0.0017 |
| 278 | 2.3838 | 0.0016 |
| 279 | 2.3854 | 0.0016 |
| 280 | 2.3870 | 0.0016 |
| 281 | 2.3887 | 0.0016 |
| 282 | 2.3903 | 0.0016 |
| 283 | 2.3919 | 0.0016 |
| 284 | 2.3935 | 0.0016 |
| 285 | 2.3951 | 0.0016 |
| 286 | 2.3968 | 0.0016 |
| 287 | 2.3984 | 0.0016 |
| 288 | 2.4000 | 0.0016 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0016 | 0.0010 | 0.0006 |
| 2 | 0.0016 | 0.0010 | 0.0006 |
| 3 | 0.0016 | 0.0010 | 0.0006 |
| 4 | 0.0016 | 0.0010 | 0.0006 |
| 5 | 0.0016 | 0.0011 | 0.0006 |
| 6 | 0.0016 | 0.0011 | 0.0006 |
| 7 | 0.0016 | 0.0011 | 0.0006 |
| 8 | 0.0016 | 0.0011 | 0.0006 |
| 9 | 0.0017 | 0.0011 | 0.0006 |
| 10 | 0.0017 | 0.0011 | 0.0006 |
| 11 | 0.0017 | 0.0011 | 0.0006 |
| 12 | 0.0017 | 0.0011 | 0.0006 |
| 13 | 0.0017 | 0.0011 | 0.0006 |
| 14 | 0.0017 | 0.0011 | 0.0006 |
| 15 | 0.0017 | 0.0011 | 0.0006 |
| 16 | 0.0017 | 0.0011 | 0.0006 |
| 17 | 0.0017 | 0.0011 | 0.0006 |
| 18 | 0.0017 | 0.0011 | 0.0006 |
| 19 | 0.0017 | 0.0011 | 0.0006 |
| 20 | 0.0017 | 0.0011 | 0.0006 |
| 21 | 0.0017 | 0.0011 | 0.0006 |
| 22 | 0.0018 | 0.0011 | 0.0006 |
| 23 | 0.0018 | 0.0011 | 0.0006 |
| 24 | 0.0018 | 0.0011 | 0.0006 |
| 25 | 0.0018 | 0.0012 | 0.0006 |
| 26 | 0.0018 | 0.0012 | 0.0006 |

| | | | |
|---|---|---|---|
| 27 | 0.0018 | 0.0012 | 0.0006 |
| 28 | 0.0018 | 0.0012 | 0.0006 |
| 29 | 0.0018 | 0.0012 | 0.0006 |
| 30 | 0.0018 | 0.0012 | 0.0006 |
| 31 | 0.0018 | 0.0012 | 0.0007 |
| 32 | 0.0018 | 0.0012 | 0.0007 |
| 33 | 0.0019 | 0.0012 | 0.0007 |
| 34 | 0.0019 | 0.0012 | 0.0007 |
| 35 | 0.0019 | 0.0012 | 0.0007 |
| 36 | 0.0019 | 0.0012 | 0.0007 |
| 37 | 0.0019 | 0.0012 | 0.0007 |
| 38 | 0.0019 | 0.0012 | 0.0007 |
| 39 | 0.0019 | 0.0012 | 0.0007 |
| 40 | 0.0019 | 0.0012 | 0.0007 |
| 41 | 0.0019 | 0.0012 | 0.0007 |
| 42 | 0.0019 | 0.0013 | 0.0007 |
| 43 | 0.0020 | 0.0013 | 0.0007 |
| 44 | 0.0020 | 0.0013 | 0.0007 |
| 45 | 0.0020 | 0.0013 | 0.0007 |
| 46 | 0.0020 | 0.0013 | 0.0007 |
| 47 | 0.0020 | 0.0013 | 0.0007 |
| 48 | 0.0020 | 0.0013 | 0.0007 |
| 49 | 0.0020 | 0.0013 | 0.0007 |
| 50 | 0.0020 | 0.0013 | 0.0007 |
| 51 | 0.0020 | 0.0013 | 0.0007 |
| 52 | 0.0021 | 0.0013 | 0.0007 |
| 53 | 0.0021 | 0.0013 | 0.0007 |
| 54 | 0.0021 | 0.0013 | 0.0007 |
| 55 | 0.0021 | 0.0013 | 0.0007 |
| 56 | 0.0021 | 0.0014 | 0.0007 |
| 57 | 0.0021 | 0.0014 | 0.0007 |
| 58 | 0.0021 | 0.0014 | 0.0008 |
| 59 | 0.0021 | 0.0014 | 0.0008 |
| 60 | 0.0021 | 0.0014 | 0.0008 |
| 61 | 0.0022 | 0.0014 | 0.0008 |
| 62 | 0.0022 | 0.0014 | 0.0008 |
| 63 | 0.0022 | 0.0014 | 0.0008 |
| 64 | 0.0022 | 0.0014 | 0.0008 |
| 65 | 0.0022 | 0.0014 | 0.0008 |
| 66 | 0.0022 | 0.0014 | 0.0008 |
| 67 | 0.0023 | 0.0015 | 0.0008 |
| 68 | 0.0023 | 0.0015 | 0.0008 |
| 69 | 0.0023 | 0.0015 | 0.0008 |
| 70 | 0.0023 | 0.0015 | 0.0008 |
| 71 | 0.0023 | 0.0015 | 0.0008 |
| 72 | 0.0023 | 0.0015 | 0.0008 |
| 73 | 0.0023 | 0.0015 | 0.0008 |
| 74 | 0.0024 | 0.0015 | 0.0008 |
| 75 | 0.0024 | 0.0015 | 0.0008 |
| 76 | 0.0024 | 0.0015 | 0.0008 |
| 77 | 0.0024 | 0.0016 | 0.0009 |
| 78 | 0.0024 | 0.0016 | 0.0009 |
| 79 | 0.0024 | 0.0016 | 0.0009 |
| 80 | 0.0025 | 0.0016 | 0.0009 |
| 81 | 0.0025 | 0.0016 | 0.0009 |
| 82 | 0.0025 | 0.0016 | 0.0009 |
| 83 | 0.0025 | 0.0016 | 0.0009 |
| 84 | 0.0025 | 0.0016 | 0.0009 |
| 85 | 0.0025 | 0.0016 | 0.0009 |

| | | | |
|---|---|---|---|
| 86 | 0.0026 | 0.0017 | 0.0009 |
| 87 | 0.0026 | 0.0017 | 0.0009 |
| 88 | 0.0026 | 0.0017 | 0.0009 |
| 89 | 0.0026 | 0.0017 | 0.0009 |
| 90 | 0.0026 | 0.0017 | 0.0009 |
| 91 | 0.0027 | 0.0017 | 0.0009 |
| 92 | 0.0027 | 0.0017 | 0.0010 |
| 93 | 0.0027 | 0.0018 | 0.0010 |
| 94 | 0.0027 | 0.0018 | 0.0010 |
| 95 | 0.0028 | 0.0018 | 0.0010 |
| 96 | 0.0028 | 0.0018 | 0.0010 |
| 97 | 0.0028 | 0.0018 | 0.0010 |
| 98 | 0.0028 | 0.0018 | 0.0010 |
| 99 | 0.0029 | 0.0018 | 0.0010 |
| 100 | 0.0029 | 0.0019 | 0.0010 |
| 101 | 0.0029 | 0.0019 | 0.0010 |
| 102 | 0.0029 | 0.0019 | 0.0010 |
| 103 | 0.0030 | 0.0019 | 0.0010 |
| 104 | 0.0030 | 0.0019 | 0.0011 |
| 105 | 0.0030 | 0.0019 | 0.0011 |
| 106 | 0.0030 | 0.0020 | 0.0011 |
| 107 | 0.0031 | 0.0020 | 0.0011 |
| 108 | 0.0031 | 0.0020 | 0.0011 |
| 109 | 0.0031 | 0.0020 | 0.0011 |
| 110 | 0.0031 | 0.0020 | 0.0011 |
| 111 | 0.0032 | 0.0021 | 0.0011 |
| 112 | 0.0032 | 0.0021 | 0.0011 |
| 113 | 0.0033 | 0.0021 | 0.0012 |
| 114 | 0.0033 | 0.0021 | 0.0012 |
| 115 | 0.0033 | 0.0021 | 0.0012 |
| 116 | 0.0033 | 0.0022 | 0.0012 |
| 117 | 0.0034 | 0.0022 | 0.0012 |
| 118 | 0.0034 | 0.0022 | 0.0012 |
| 119 | 0.0035 | 0.0022 | 0.0012 |
| 120 | 0.0035 | 0.0023 | 0.0012 |
| 121 | 0.0035 | 0.0023 | 0.0013 |
| 122 | 0.0036 | 0.0023 | 0.0013 |
| 123 | 0.0036 | 0.0023 | 0.0013 |
| 124 | 0.0037 | 0.0024 | 0.0013 |
| 125 | 0.0037 | 0.0024 | 0.0013 |
| 126 | 0.0037 | 0.0024 | 0.0013 |
| 127 | 0.0038 | 0.0025 | 0.0013 |
| 128 | 0.0038 | 0.0025 | 0.0014 |
| 129 | 0.0039 | 0.0025 | 0.0014 |
| 130 | 0.0039 | 0.0025 | 0.0014 |
| 131 | 0.0040 | 0.0026 | 0.0014 |
| 132 | 0.0040 | 0.0026 | 0.0014 |
| 133 | 0.0041 | 0.0027 | 0.0015 |
| 134 | 0.0041 | 0.0027 | 0.0015 |
| 135 | 0.0042 | 0.0027 | 0.0015 |
| 136 | 0.0043 | 0.0028 | 0.0015 |
| 137 | 0.0043 | 0.0028 | 0.0015 |
| 138 | 0.0044 | 0.0028 | 0.0016 |
| 139 | 0.0045 | 0.0029 | 0.0016 |
| 140 | 0.0045 | 0.0029 | 0.0016 |
| 141 | 0.0046 | 0.0030 | 0.0016 |
| 142 | 0.0047 | 0.0030 | 0.0017 |
| 143 | 0.0048 | 0.0031 | 0.0017 |
| 144 | 0.0048 | 0.0031 | 0.0017 |

| | | | |
|---|---|---|---|
| 145 | 0.0053 | 0.0034 | 0.0019 |
| 146 | 0.0054 | 0.0035 | 0.0019 |
| 147 | 0.0055 | 0.0036 | 0.0020 |
| 148 | 0.0056 | 0.0036 | 0.0020 |
| 149 | 0.0057 | 0.0037 | 0.0020 |
| 150 | 0.0058 | 0.0037 | 0.0020 |
| 151 | 0.0059 | 0.0038 | 0.0021 |
| 152 | 0.0060 | 0.0039 | 0.0021 |
| 153 | 0.0062 | 0.0040 | 0.0022 |
| 154 | 0.0062 | 0.0040 | 0.0022 |
| 155 | 0.0064 | 0.0041 | 0.0023 |
| 156 | 0.0065 | 0.0042 | 0.0023 |
| 157 | 0.0067 | 0.0043 | 0.0024 |
| 158 | 0.0068 | 0.0044 | 0.0024 |
| 159 | 0.0070 | 0.0045 | 0.0025 |
| 160 | 0.0071 | 0.0046 | 0.0025 |
| 161 | 0.0074 | 0.0047 | 0.0026 |
| 162 | 0.0075 | 0.0048 | 0.0027 |
| 163 | 0.0077 | 0.0050 | 0.0027 |
| 164 | 0.0079 | 0.0051 | 0.0028 |
| 165 | 0.0082 | 0.0053 | 0.0029 |
| 166 | 0.0083 | 0.0054 | 0.0030 |
| 167 | 0.0087 | 0.0056 | 0.0031 |
| 168 | 0.0089 | 0.0057 | 0.0031 |
| 169 | 0.0093 | 0.0060 | 0.0033 |
| 170 | 0.0095 | 0.0061 | 0.0034 |
| 171 | 0.0100 | 0.0064 | 0.0035 |
| 172 | 0.0102 | 0.0066 | 0.0036 |
| 173 | 0.0108 | 0.0069 | 0.0038 |
| 174 | 0.0111 | 0.0071 | 0.0039 |
| 175 | 0.0117 | 0.0076 | 0.0042 |
| 176 | 0.0121 | 0.0078 | 0.0043 |
| 177 | 0.0129 | 0.0083 | 0.0046 |
| 178 | 0.0133 | 0.0086 | 0.0047 |
| 179 | 0.0144 | 0.0093 | 0.0051 |
| 180 | 0.0149 | 0.0096 | 0.0053 |
| 181 | 0.0163 | 0.0105 | 0.0058 |
| 182 | 0.0170 | 0.0110 | 0.0060 |
| 183 | 0.0189 | 0.0122 | 0.0067 |
| 184 | 0.0200 | 0.0129 | 0.0071 |
| 185 | 0.0327 | 0.0211 | 0.0116 |
| 186 | 0.0349 | 0.0225 | 0.0124 |
| 187 | 0.0404 | 0.0261 | 0.0143 |
| 188 | 0.0441 | 0.0285 | 0.0156 |
| 189 | 0.0549 | 0.0300 | 0.0249 |
| 190 | 0.0632 | 0.0300 | 0.0332 |
| 191 | 0.0959 | 0.0300 | 0.0659 |
| 192 | 0.1392 | 0.0300 | 0.1092 |
| 193 | 0.6022 | 0.0300 | 0.5723 |
| 194 | 0.0755 | 0.0300 | 0.0455 |
| 195 | 0.0488 | 0.0300 | 0.0188 |
| 196 | 0.0374 | 0.0241 | 0.0133 |
| 197 | 0.0212 | 0.0137 | 0.0075 |
| 198 | 0.0179 | 0.0116 | 0.0064 |
| 199 | 0.0156 | 0.0100 | 0.0055 |
| 200 | 0.0138 | 0.0089 | 0.0049 |
| 201 | 0.0125 | 0.0080 | 0.0044 |
| 202 | 0.0114 | 0.0073 | 0.0040 |
| 203 | 0.0105 | 0.0068 | 0.0037 |

| | | | |
|---|---|---|---|
| 204 | 0.0097 | 0.0063 | 0.0034 |
| 205 | 0.0091 | 0.0059 | 0.0032 |
| 206 | 0.0085 | 0.0055 | 0.0030 |
| 207 | 0.0080 | 0.0052 | 0.0028 |
| 208 | 0.0076 | 0.0049 | 0.0027 |
| 209 | 0.0072 | 0.0047 | 0.0026 |
| 210 | 0.0069 | 0.0045 | 0.0024 |
| 211 | 0.0066 | 0.0043 | 0.0023 |
| 212 | 0.0063 | 0.0041 | 0.0022 |
| 213 | 0.0061 | 0.0039 | 0.0022 |
| 214 | 0.0058 | 0.0038 | 0.0021 |
| 215 | 0.0056 | 0.0036 | 0.0020 |
| 216 | 0.0054 | 0.0035 | 0.0019 |
| 217 | 0.0049 | 0.0031 | 0.0017 |
| 218 | 0.0047 | 0.0030 | 0.0017 |
| 219 | 0.0046 | 0.0029 | 0.0016 |
| 220 | 0.0044 | 0.0029 | 0.0016 |
| 221 | 0.0043 | 0.0028 | 0.0015 |
| 222 | 0.0042 | 0.0027 | 0.0015 |
| 223 | 0.0041 | 0.0026 | 0.0014 |
| 224 | 0.0040 | 0.0026 | 0.0014 |
| 225 | 0.0039 | 0.0025 | 0.0014 |
| 226 | 0.0038 | 0.0024 | 0.0013 |
| 227 | 0.0037 | 0.0024 | 0.0013 |
| 228 | 0.0036 | 0.0023 | 0.0013 |
| 229 | 0.0035 | 0.0023 | 0.0012 |
| 230 | 0.0034 | 0.0022 | 0.0012 |
| 231 | 0.0034 | 0.0022 | 0.0012 |
| 232 | 0.0033 | 0.0021 | 0.0012 |
| 233 | 0.0032 | 0.0021 | 0.0011 |
| 234 | 0.0032 | 0.0020 | 0.0011 |
| 235 | 0.0031 | 0.0020 | 0.0011 |
| 236 | 0.0030 | 0.0020 | 0.0011 |
| 237 | 0.0030 | 0.0019 | 0.0011 |
| 238 | 0.0029 | 0.0019 | 0.0010 |
| 239 | 0.0029 | 0.0019 | 0.0010 |
| 240 | 0.0028 | 0.0018 | 0.0010 |
| 241 | 0.0028 | 0.0018 | 0.0010 |
| 242 | 0.0027 | 0.0018 | 0.0010 |
| 243 | 0.0027 | 0.0017 | 0.0010 |
| 244 | 0.0027 | 0.0017 | 0.0009 |
| 245 | 0.0026 | 0.0017 | 0.0009 |
| 246 | 0.0026 | 0.0017 | 0.0009 |
| 247 | 0.0025 | 0.0016 | 0.0009 |
| 248 | 0.0025 | 0.0016 | 0.0009 |
| 249 | 0.0025 | 0.0016 | 0.0009 |
| 250 | 0.0024 | 0.0016 | 0.0009 |
| 251 | 0.0024 | 0.0015 | 0.0008 |
| 252 | 0.0024 | 0.0015 | 0.0008 |
| 253 | 0.0023 | 0.0015 | 0.0008 |
| 254 | 0.0023 | 0.0015 | 0.0008 |
| 255 | 0.0023 | 0.0015 | 0.0008 |
| 256 | 0.0022 | 0.0014 | 0.0008 |
| 257 | 0.0022 | 0.0014 | 0.0008 |
| 258 | 0.0022 | 0.0014 | 0.0008 |
| 259 | 0.0022 | 0.0014 | 0.0008 |
| 260 | 0.0021 | 0.0014 | 0.0008 |
| 261 | 0.0021 | 0.0014 | 0.0007 |
| 262 | 0.0021 | 0.0013 | 0.0007 |

| | | | |
|---|---|---|---|
| 263 | 0.0021 | 0.0013 | 0.0007 |
| 264 | 0.0020 | 0.0013 | 0.0007 |
| 265 | 0.0020 | 0.0013 | 0.0007 |
| 266 | 0.0020 | 0.0013 | 0.0007 |
| 267 | 0.0020 | 0.0013 | 0.0007 |
| 268 | 0.0019 | 0.0013 | 0.0007 |
| 269 | 0.0019 | 0.0012 | 0.0007 |
| 270 | 0.0019 | 0.0012 | 0.0007 |
| 271 | 0.0019 | 0.0012 | 0.0007 |
| 272 | 0.0019 | 0.0012 | 0.0007 |
| 273 | 0.0018 | 0.0012 | 0.0007 |
| 274 | 0.0018 | 0.0012 | 0.0006 |
| 275 | 0.0018 | 0.0012 | 0.0006 |
| 276 | 0.0018 | 0.0012 | 0.0006 |
| 277 | 0.0018 | 0.0011 | 0.0006 |
| 278 | 0.0018 | 0.0011 | 0.0006 |
| 279 | 0.0017 | 0.0011 | 0.0006 |
| 280 | 0.0017 | 0.0011 | 0.0006 |
| 281 | 0.0017 | 0.0011 | 0.0006 |
| 282 | 0.0017 | 0.0011 | 0.0006 |
| 283 | 0.0017 | 0.0011 | 0.0006 |
| 284 | 0.0017 | 0.0011 | 0.0006 |
| 285 | 0.0017 | 0.0011 | 0.0006 |
| 286 | 0.0016 | 0.0011 | 0.0006 |
| 287 | 0.0016 | 0.0010 | 0.0006 |
| 288 | 0.0016 | 0.0010 | 0.0006 |

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Total soil rain loss = 1.06(In)
Total effective rainfall = 1.34(In)
Peak flow rate in flood hydrograph = 10.55(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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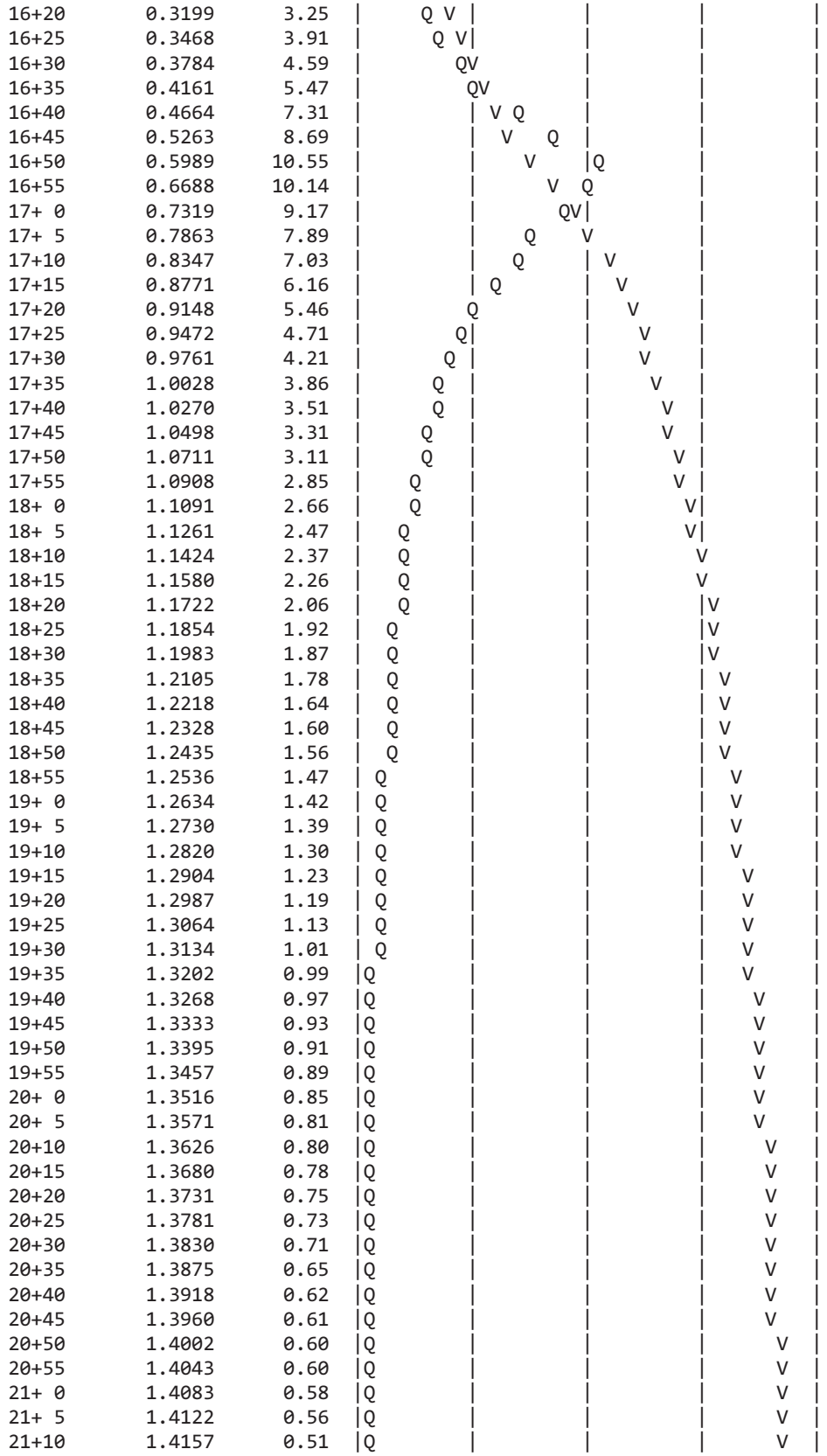
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+15 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+20 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+25 | 0.0001 | 0.00 | Q | \| | \| | \| | \| |
| 0+30 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+35 | 0.0002 | 0.01 | Q | \| | \| | \| | \| |
| 0+40 | 0.0003 | 0.01 | Q | \| | \| | \| | \| |
| 0+45 | 0.0004 | 0.02 | Q | \| | \| | \| | \| |
| 0+50 | 0.0006 | 0.03 | Q | \| | \| | \| | \| |
| 0+55 | 0.0008 | 0.03 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0011 | 0.04 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0014 | 0.04 | Q | \| | \| | \| | \| |
| 1+10 | 0.0017 | 0.05 | Q | \| | \| | \| | \| |
| 1+15 | 0.0020 | 0.05 | Q | \| | \| | \| | \| |
| 1+20 | 0.0024 | 0.05 | Q | \| | \| | \| | \| |
| 1+25 | 0.0028 | 0.06 | Q | \| | \| | \| | \| |
| 1+30 | 0.0032 | 0.06 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+35 | 0.0037 | 0.06 | Q | | | | |
| 1+40 | 0.0041 | 0.06 | Q | | | | |
| 1+45 | 0.0046 | 0.07 | Q | | | | |
| 1+50 | 0.0050 | 0.07 | Q | | | | |
| 1+55 | 0.0055 | 0.07 | Q | | | | |
| 2+ 0 | 0.0060 | 0.07 | Q | | | | |
| 2+ 5 | 0.0065 | 0.07 | Q | | | | |
| 2+10 | 0.0071 | 0.08 | Q | | | | |
| 2+15 | 0.0076 | 0.08 | Q | | | | |
| 2+20 | 0.0081 | 0.08 | Q | | | | |
| 2+25 | 0.0087 | 0.08 | Q | | | | |
| 2+30 | 0.0092 | 0.08 | Q | | | | |
| 2+35 | 0.0098 | 0.08 | Q | | | | |
| 2+40 | 0.0104 | 0.08 | Q | | | | |
| 2+45 | 0.0110 | 0.08 | Q | | | | |
| 2+50 | 0.0115 | 0.09 | Q | | | | |
| 2+55 | 0.0121 | 0.09 | Q | | | | |
| 3+ 0 | 0.0127 | 0.09 | Q | | | | |
| 3+ 5 | 0.0134 | 0.09 | Q | | | | |
| 3+10 | 0.0140 | 0.09 | Q | | | | |
| 3+15 | 0.0146 | 0.09 | Q | | | | |
| 3+20 | 0.0152 | 0.09 | Q | | | | |
| 3+25 | 0.0159 | 0.09 | Q | | | | |
| 3+30 | 0.0165 | 0.09 | Q | | | | |
| 3+35 | 0.0172 | 0.09 | Q | | | | |
| 3+40 | 0.0178 | 0.10 | Q | | | | |
| 3+45 | 0.0185 | 0.10 | Q | | | | |
| 3+50 | 0.0191 | 0.10 | Q | | | | |
| 3+55 | 0.0198 | 0.10 | Q | | | | |
| 4+ 0 | 0.0205 | 0.10 | Q | | | | |
| 4+ 5 | 0.0212 | 0.10 | Q | | | | |
| 4+10 | 0.0219 | 0.10 | Q | | | | |
| 4+15 | 0.0226 | 0.10 | Q | | | | |
| 4+20 | 0.0233 | 0.10 | Q | | | | |
| 4+25 | 0.0240 | 0.10 | Q | | | | |
| 4+30 | 0.0247 | 0.10 | Q | | | | |
| 4+35 | 0.0254 | 0.10 | Q | | | | |
| 4+40 | 0.0262 | 0.11 | Q | | | | |
| 4+45 | 0.0269 | 0.11 | Q | | | | |
| 4+50 | 0.0276 | 0.11 | Q | | | | |
| 4+55 | 0.0284 | 0.11 | Q | | | | |
| 5+ 0 | 0.0291 | 0.11 | Q | | | | |
| 5+ 5 | 0.0299 | 0.11 | Q | | | | |
| 5+10 | 0.0306 | 0.11 | Q | | | | |
| 5+15 | 0.0314 | 0.11 | Q | | | | |
| 5+20 | 0.0322 | 0.11 | Q | | | | |
| 5+25 | 0.0329 | 0.11 | Q | | | | |
| 5+30 | 0.0337 | 0.11 | Q | | | | |
| 5+35 | 0.0345 | 0.11 | Q | | | | |
| 5+40 | 0.0353 | 0.12 | Q | | | | |
| 5+45 | 0.0361 | 0.12 | Q | | | | |
| 5+50 | 0.0369 | 0.12 | Q | | | | |
| 5+55 | 0.0377 | 0.12 | Q | | | | |
| 6+ 0 | 0.0385 | 0.12 | QV | | | | |
| 6+ 5 | 0.0393 | 0.12 | QV | | | | |
| 6+10 | 0.0402 | 0.12 | QV | | | | |
| 6+15 | 0.0410 | 0.12 | QV | | | | |
| 6+20 | 0.0418 | 0.12 | QV | | | | |
| 6+25 | 0.0427 | 0.12 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+30 | 0.0435 | 0.12 | QV | | | | |
| 6+35 | 0.0444 | 0.12 | QV | | | | |
| 6+40 | 0.0453 | 0.12 | QV | | | | |
| 6+45 | 0.0461 | 0.13 | QV | | | | |
| 6+50 | 0.0470 | 0.13 | QV | | | | |
| 6+55 | 0.0479 | 0.13 | QV | | | | |
| 7+ 0 | 0.0488 | 0.13 | QV | | | | |
| 7+ 5 | 0.0496 | 0.13 | QV | | | | |
| 7+10 | 0.0505 | 0.13 | QV | | | | |
| 7+15 | 0.0514 | 0.13 | QV | | | | |
| 7+20 | 0.0524 | 0.13 | QV | | | | |
| 7+25 | 0.0533 | 0.13 | QV | | | | |
| 7+30 | 0.0542 | 0.13 | QV | | | | |
| 7+35 | 0.0551 | 0.14 | QV | | | | |
| 7+40 | 0.0561 | 0.14 | QV | | | | |
| 7+45 | 0.0570 | 0.14 | QV | | | | |
| 7+50 | 0.0580 | 0.14 | QV | | | | |
| 7+55 | 0.0589 | 0.14 | QV | | | | |
| 8+ 0 | 0.0599 | 0.14 | QV | | | | |
| 8+ 5 | 0.0609 | 0.14 | QV | | | | |
| 8+10 | 0.0619 | 0.14 | QV | | | | |
| 8+15 | 0.0628 | 0.14 | QV | | | | |
| 8+20 | 0.0638 | 0.14 | QV | | | | |
| 8+25 | 0.0648 | 0.15 | QV | | | | |
| 8+30 | 0.0659 | 0.15 | QV | | | | |
| 8+35 | 0.0669 | 0.15 | QV | | | | |
| 8+40 | 0.0679 | 0.15 | QV | | | | |
| 8+45 | 0.0689 | 0.15 | QV | | | | |
| 8+50 | 0.0700 | 0.15 | QV | | | | |
| 8+55 | 0.0710 | 0.15 | QV | | | | |
| 9+ 0 | 0.0721 | 0.15 | QV | | | | |
| 9+ 5 | 0.0732 | 0.16 | QV | | | | |
| 9+10 | 0.0742 | 0.16 | QV | | | | |
| 9+15 | 0.0753 | 0.16 | QV | | | | |
| 9+20 | 0.0764 | 0.16 | Q V | | | | |
| 9+25 | 0.0775 | 0.16 | Q V | | | | |
| 9+30 | 0.0787 | 0.16 | Q V | | | | |
| 9+35 | 0.0798 | 0.16 | Q V | | | | |
| 9+40 | 0.0809 | 0.16 | Q V | | | | |
| 9+45 | 0.0821 | 0.17 | Q V | | | | |
| 9+50 | 0.0832 | 0.17 | Q V | | | | |
| 9+55 | 0.0844 | 0.17 | Q V | | | | |
| 10+ 0 | 0.0856 | 0.17 | Q V | | | | |
| 10+ 5 | 0.0867 | 0.17 | Q V | | | | |
| 10+10 | 0.0879 | 0.17 | Q V | | | | |
| 10+15 | 0.0891 | 0.18 | Q V | | | | |
| 10+20 | 0.0904 | 0.18 | Q V | | | | |
| 10+25 | 0.0916 | 0.18 | Q V | | | | |
| 10+30 | 0.0928 | 0.18 | Q V | | | | |
| 10+35 | 0.0941 | 0.18 | Q V | | | | |
| 10+40 | 0.0954 | 0.18 | Q V | | | | |
| 10+45 | 0.0966 | 0.19 | Q V | | | | |
| 10+50 | 0.0979 | 0.19 | Q V | | | | |
| 10+55 | 0.0993 | 0.19 | Q V | | | | |
| 11+ 0 | 0.1006 | 0.19 | Q V | | | | |
| 11+ 5 | 0.1019 | 0.19 | Q V | | | | |
| 11+10 | 0.1033 | 0.20 | Q V | | | | |
| 11+15 | 0.1046 | 0.20 | Q V | | | | |
| 11+20 | 0.1060 | 0.20 | Q V | | | | |

```
11+25       0.1074      0.20  Q V       |          |          |          |
11+30       0.1088      0.21  Q V       |          |          |          |
11+35       0.1103      0.21  Q V       |          |          |          |
11+40       0.1117      0.21  Q V       |          |          |          |
11+45       0.1132      0.21  Q V       |          |          |          |
11+50       0.1146      0.22  Q  V      |          |          |          |
11+55       0.1161      0.22  Q  V      |          |          |          |
12+ 0       0.1177      0.22  Q  V      |          |          |          |
12+ 5       0.1192      0.22  Q  V      |          |          |          |
12+10       0.1208      0.23  Q  V      |          |          |          |
12+15       0.1223      0.23  Q  V      |          |          |          |
12+20       0.1240      0.23  Q  V      |          |          |          |
12+25       0.1256      0.24  Q  V      |          |          |          |
12+30       0.1272      0.24  Q  V      |          |          |          |
12+35       0.1289      0.24  Q  V      |          |          |          |
12+40       0.1306      0.25  Q  V      |          |          |          |
12+45       0.1324      0.25  Q  V      |          |          |          |
12+50       0.1342      0.26  Q  V      |          |          |          |
12+55       0.1360      0.27  Q  V      |          |          |          |
13+ 0       0.1379      0.27  Q  V      |          |          |          |
13+ 5       0.1398      0.28  Q  V      |          |          |          |
13+10       0.1417      0.28  Q  V      |          |          |          |
13+15       0.1437      0.29  Q  V      |          |          |          |
13+20       0.1457      0.29  Q  V      |          |          |          |
13+25       0.1478      0.30  Q  V      |          |          |          |
13+30       0.1499      0.31  Q  V      |          |          |          |
13+35       0.1520      0.31  Q   V     |          |          |          |
13+40       0.1542      0.32  Q   V     |          |          |          |
13+45       0.1565      0.32  Q   V     |          |          |          |
13+50       0.1587      0.33  Q   V     |          |          |          |
13+55       0.1611      0.34  Q   V     |          |          |          |
14+ 0       0.1634      0.35  Q   V     |          |          |          |
14+ 5       0.1659      0.35  Q   V     |          |          |          |
14+10       0.1684      0.36  Q   V     |          |          |          |
14+15       0.1709      0.37  Q   V     |          |          |          |
14+20       0.1735      0.38  Q   V     |          |          |          |
14+25       0.1762      0.39  Q   V     |          |          |          |
14+30       0.1789      0.40  Q   V     |          |          |          |
14+35       0.1817      0.41  Q   V     |          |          |          |
14+40       0.1846      0.42  Q   V     |          |          |          |
14+45       0.1876      0.43  Q   V     |          |          |          |
14+50       0.1907      0.44  Q    V    |          |          |          |
14+55       0.1938      0.46  Q    V    |          |          |          |
15+ 0       0.1971      0.47  Q    V    |          |          |          |
15+ 5       0.2005      0.49  Q    V    |          |          |          |
15+10       0.2040      0.51  |Q   V    |          |          |          |
15+15       0.2076      0.53  |Q   V    |          |          |          |
15+20       0.2114      0.55  |Q   V    |          |          |          |
15+25       0.2153      0.57  |Q   V    |          |          |          |
15+30       0.2195      0.60  |Q   V    |          |          |          |
15+35       0.2239      0.64  |Q   V    |          |          |          |
15+40       0.2286      0.68  |Q    V   |          |          |          |
15+45       0.2336      0.74  |Q    V   |          |          |          |
15+50       0.2392      0.81  |Q    V   |          |          |          |
15+55       0.2455      0.91  |Q    V   |          |          |          |
16+ 0       0.2530      1.09  | Q   V   |          |          |          |
16+ 5       0.2638      1.58  |  Q  V   |          |          |          |
16+10       0.2785      2.14  |   Q  V  |          |          |          |
16+15       0.2975      2.75  |    Q V  |          |          |          |
```



| | | | |
|---|---|---|---|
| 16+20 | 0.3199 | 3.25 | |
| 16+25 | 0.3468 | 3.91 | |
| 16+30 | 0.3784 | 4.59 | |
| 16+35 | 0.4161 | 5.47 | |
| 16+40 | 0.4664 | 7.31 | |
| 16+45 | 0.5263 | 8.69 | |
| 16+50 | 0.5989 | 10.55 | |
| 16+55 | 0.6688 | 10.14 | |
| 17+ 0 | 0.7319 | 9.17 | |
| 17+ 5 | 0.7863 | 7.89 | |
| 17+10 | 0.8347 | 7.03 | |
| 17+15 | 0.8771 | 6.16 | |
| 17+20 | 0.9148 | 5.46 | |
| 17+25 | 0.9472 | 4.71 | |
| 17+30 | 0.9761 | 4.21 | |
| 17+35 | 1.0028 | 3.86 | |
| 17+40 | 1.0270 | 3.51 | |
| 17+45 | 1.0498 | 3.31 | |
| 17+50 | 1.0711 | 3.11 | |
| 17+55 | 1.0908 | 2.85 | |
| 18+ 0 | 1.1091 | 2.66 | |
| 18+ 5 | 1.1261 | 2.47 | |
| 18+10 | 1.1424 | 2.37 | |
| 18+15 | 1.1580 | 2.26 | |
| 18+20 | 1.1722 | 2.06 | |
| 18+25 | 1.1854 | 1.92 | |
| 18+30 | 1.1983 | 1.87 | |
| 18+35 | 1.2105 | 1.78 | |
| 18+40 | 1.2218 | 1.64 | |
| 18+45 | 1.2328 | 1.60 | |
| 18+50 | 1.2435 | 1.56 | |
| 18+55 | 1.2536 | 1.47 | |
| 19+ 0 | 1.2634 | 1.42 | |
| 19+ 5 | 1.2730 | 1.39 | |
| 19+10 | 1.2820 | 1.30 | |
| 19+15 | 1.2904 | 1.23 | |
| 19+20 | 1.2987 | 1.19 | |
| 19+25 | 1.3064 | 1.13 | |
| 19+30 | 1.3134 | 1.01 | |
| 19+35 | 1.3202 | 0.99 | |
| 19+40 | 1.3268 | 0.97 | |
| 19+45 | 1.3333 | 0.93 | |
| 19+50 | 1.3395 | 0.91 | |
| 19+55 | 1.3457 | 0.89 | |
| 20+ 0 | 1.3516 | 0.85 | |
| 20+ 5 | 1.3571 | 0.81 | |
| 20+10 | 1.3626 | 0.80 | |
| 20+15 | 1.3680 | 0.78 | |
| 20+20 | 1.3731 | 0.75 | |
| 20+25 | 1.3781 | 0.73 | |
| 20+30 | 1.3830 | 0.71 | |
| 20+35 | 1.3875 | 0.65 | |
| 20+40 | 1.3918 | 0.62 | |
| 20+45 | 1.3960 | 0.61 | |
| 20+50 | 1.4002 | 0.60 | |
| 20+55 | 1.4043 | 0.60 | |
| 21+ 0 | 1.4083 | 0.58 | |
| 21+ 5 | 1.4122 | 0.56 | |
| 21+10 | 1.4157 | 0.51 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+15 | 1.4192 | 0.50 | Q | \| | \| | \| | V \| |
| 21+20 | 1.4226 | 0.49 | Q | \| | \| | \| | V \| |
| 21+25 | 1.4259 | 0.49 | Q | \| | \| | \| | V \| |
| 21+30 | 1.4292 | 0.48 | Q | \| | \| | \| | V \| |
| 21+35 | 1.4324 | 0.47 | Q | \| | \| | \| | V \| |
| 21+40 | 1.4354 | 0.44 | Q | \| | \| | \| | V \| |
| 21+45 | 1.4381 | 0.39 | Q | \| | \| | \| | V \| |
| 21+50 | 1.4408 | 0.39 | Q | \| | \| | \| | V \| |
| 21+55 | 1.4434 | 0.38 | Q | \| | \| | \| | V \| |
| 22+ 0 | 1.4460 | 0.37 | Q | \| | \| | \| | V \| |
| 22+ 5 | 1.4485 | 0.37 | Q | \| | \| | \| | V \| |
| 22+10 | 1.4509 | 0.35 | Q | \| | \| | \| | V \| |
| 22+15 | 1.4531 | 0.31 | Q | \| | \| | \| | V \| |
| 22+20 | 1.4551 | 0.29 | Q | \| | \| | \| | V \| |
| 22+25 | 1.4570 | 0.28 | Q | \| | \| | \| | V \| |
| 22+30 | 1.4589 | 0.28 | Q | \| | \| | \| | V \| |
| 22+35 | 1.4608 | 0.28 | Q | \| | \| | \| | V \| |
| 22+40 | 1.4627 | 0.27 | Q | \| | \| | \| | V \| |
| 22+45 | 1.4646 | 0.27 | Q | \| | \| | \| | V \| |
| 22+50 | 1.4665 | 0.28 | Q | \| | \| | \| | V \| |
| 22+55 | 1.4685 | 0.28 | Q | \| | \| | \| | V \| |
| 23+ 0 | 1.4704 | 0.28 | Q | \| | \| | \| | V \| |
| 23+ 5 | 1.4723 | 0.28 | Q | \| | \| | \| | V \| |
| 23+10 | 1.4742 | 0.28 | Q | \| | \| | \| | V\| |
| 23+15 | 1.4761 | 0.27 | Q | \| | \| | \| | V\| |
| 23+20 | 1.4780 | 0.27 | Q | \| | \| | \| | V\| |
| 23+25 | 1.4799 | 0.27 | Q | \| | \| | \| | V\| |
| 23+30 | 1.4817 | 0.27 | Q | \| | \| | \| | V\| |
| 23+35 | 1.4835 | 0.26 | Q | \| | \| | \| | V\| |
| 23+40 | 1.4853 | 0.26 | Q | \| | \| | \| | V\| |
| 23+45 | 1.4871 | 0.26 | Q | \| | \| | \| | V\| |
| 23+50 | 1.4888 | 0.25 | Q | \| | \| | \| | V\| |
| 23+55 | 1.4903 | 0.22 | Q | \| | \| | \| | V\| |
| 24+ 0 | 1.4917 | 0.20 | Q | \| | \| | \| | V\| |
| 24+ 5 | 1.4930 | 0.19 | Q | \| | \| | \| | V\| |
| 24+10 | 1.4943 | 0.19 | Q | \| | \| | \| | V\| |
| 24+15 | 1.4956 | 0.19 | Q | \| | \| | \| | V\| |
| 24+20 | 1.4969 | 0.18 | Q | \| | \| | \| | V\| |
| 24+25 | 1.4981 | 0.18 | Q | \| | \| | \| | V\| |
| 24+30 | 1.4993 | 0.17 | Q | \| | \| | \| | V\| |
| 24+35 | 1.5004 | 0.17 | Q | \| | \| | \| | V\| |
| 24+40 | 1.5015 | 0.15 | Q | \| | \| | \| | V\| |
| 24+45 | 1.5023 | 0.12 | Q | \| | \| | \| | V\| |
| 24+50 | 1.5029 | 0.09 | Q | \| | \| | \| | V\| |
| 24+55 | 1.5035 | 0.08 | Q | \| | \| | \| | V\| |
| 25+ 0 | 1.5040 | 0.07 | Q | \| | \| | \| | V\| |
| 25+ 5 | 1.5045 | 0.07 | Q | \| | \| | \| | V\| |
| 25+10 | 1.5049 | 0.06 | Q | \| | \| | \| | V\| |
| 25+15 | 1.5053 | 0.06 | Q | \| | \| | \| | V\| |
| 25+20 | 1.5056 | 0.05 | Q | \| | \| | \| | V\| |
| 25+25 | 1.5059 | 0.05 | Q | \| | \| | \| | V\| |
| 25+30 | 1.5063 | 0.05 | Q | \| | \| | \| | V\| |
| 25+35 | 1.5066 | 0.04 | Q | \| | \| | \| | V\| |
| 25+40 | 1.5068 | 0.04 | Q | \| | \| | \| | V\| |
| 25+45 | 1.5071 | 0.04 | Q | \| | \| | \| | V\| |
| 25+50 | 1.5073 | 0.04 | Q | \| | \| | \| | V\| |
| 25+55 | 1.5076 | 0.03 | Q | \| | \| | \| | V\| |
| 26+ 0 | 1.5078 | 0.03 | Q | \| | \| | \| | V\| |
| 26+ 5 | 1.5080 | 0.03 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+10 | 1.5082 | 0.03 | Q | \| | \| | \| | V\| |
| 26+15 | 1.5084 | 0.03 | Q | \| | \| | \| | V\| |
| 26+20 | 1.5085 | 0.03 | Q | \| | \| | \| | V\| |
| 26+25 | 1.5087 | 0.02 | Q | \| | \| | \| | V\| |
| 26+30 | 1.5089 | 0.02 | Q | \| | \| | \| | V\| |
| 26+35 | 1.5090 | 0.02 | Q | \| | \| | \| | V\| |
| 26+40 | 1.5092 | 0.02 | Q | \| | \| | \| | V\| |
| 26+45 | 1.5093 | 0.02 | Q | \| | \| | \| | V\| |
| 26+50 | 1.5094 | 0.02 | Q | \| | \| | \| | V\| |
| 26+55 | 1.5095 | 0.02 | Q | \| | \| | \| | V\| |
| 27+ 0 | 1.5097 | 0.02 | Q | \| | \| | \| | V\| |
| 27+ 5 | 1.5098 | 0.02 | Q | \| | \| | \| | V\| |
| 27+10 | 1.5099 | 0.02 | Q | \| | \| | \| | V\| |
| 27+15 | 1.5100 | 0.01 | Q | \| | \| | \| | V\| |
| 27+20 | 1.5101 | 0.01 | Q | \| | \| | \| | V\| |
| 27+25 | 1.5102 | 0.01 | Q | \| | \| | \| | V\| |
| 27+30 | 1.5103 | 0.01 | Q | \| | \| | \| | V\| |
| 27+35 | 1.5103 | 0.01 | Q | \| | \| | \| | V\| |
| 27+40 | 1.5104 | 0.01 | Q | \| | \| | \| | V\| |
| 27+45 | 1.5105 | 0.01 | Q | \| | \| | \| | V\| |
| 27+50 | 1.5106 | 0.01 | Q | \| | \| | \| | V\| |
| 27+55 | 1.5106 | 0.01 | Q | \| | \| | \| | V\| |
| 28+ 0 | 1.5107 | 0.01 | Q | \| | \| | \| | V\| |
| 28+ 5 | 1.5108 | 0.01 | Q | \| | \| | \| | V\| |
| 28+10 | 1.5108 | 0.01 | Q | \| | \| | \| | V\| |
| 28+15 | 1.5109 | 0.01 | Q | \| | \| | \| | V\| |
| 28+20 | 1.5109 | 0.01 | Q | \| | \| | \| | V\| |
| 28+25 | 1.5110 | 0.01 | Q | \| | \| | \| | V\| |
| 28+30 | 1.5110 | 0.01 | Q | \| | \| | \| | V\| |
| 28+35 | 1.5111 | 0.01 | Q | \| | \| | \| | V\| |
| 28+40 | 1.5111 | 0.01 | Q | \| | \| | \| | V\| |
| 28+45 | 1.5111 | 0.01 | Q | \| | \| | \| | V\| |
| 28+50 | 1.5112 | 0.01 | Q | \| | \| | \| | V\| |
| 28+55 | 1.5112 | 0.01 | Q | \| | \| | \| | V\| |
| 29+ 0 | 1.5113 | 0.01 | Q | \| | \| | \| | V\| |
| 29+ 5 | 1.5113 | 0.00 | Q | \| | \| | \| | V\| |
| 29+10 | 1.5113 | 0.00 | Q | \| | \| | \| | V\| |
| 29+15 | 1.5114 | 0.00 | Q | \| | \| | \| | V\| |
| 29+20 | 1.5114 | 0.00 | Q | \| | \| | \| | V\| |
| 29+25 | 1.5114 | 0.00 | Q | \| | \| | \| | V\| |
| 29+30 | 1.5114 | 0.00 | Q | \| | \| | \| | V\| |
| 29+35 | 1.5115 | 0.00 | Q | \| | \| | \| | V\| |
| 29+40 | 1.5115 | 0.00 | Q | \| | \| | \| | V\| |
| 29+45 | 1.5115 | 0.00 | Q | \| | \| | \| | V\| |
| 29+50 | 1.5115 | 0.00 | Q | \| | \| | \| | V\| |
| 29+55 | 1.5115 | 0.00 | Q | \| | \| | \| | V\| |
| 30+ 0 | 1.5116 | 0.00 | Q | \| | \| | \| | V\| |
| 30+ 5 | 1.5116 | 0.00 | Q | \| | \| | \| | V\| |
| 30+10 | 1.5116 | 0.00 | Q | \| | \| | \| | V\| |
| 30+15 | 1.5116 | 0.00 | Q | \| | \| | \| | V\| |
| 30+20 | 1.5116 | 0.00 | Q | \| | \| | \| | V\| |
| 30+25 | 1.5116 | 0.00 | Q | \| | \| | \| | V\| |
| 30+30 | 1.5117 | 0.00 | Q | \| | \| | \| | V\| |
| 30+35 | 1.5117 | 0.00 | Q | \| | \| | \| | V\| |
| 30+40 | 1.5117 | 0.00 | Q | \| | \| | \| | V\| |
| 30+45 | 1.5117 | 0.00 | Q | \| | \| | \| | V\| |
| 30+50 | 1.5117 | 0.00 | Q | \| | \| | \| | V\| |
| 30+55 | 1.5117 | 0.00 | Q | \| | \| | \| | V\| |
| 31+ 0 | 1.5117 | 0.00 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 31+ 5 | 1.5117 | 0.00 | Q | \| | \| | \| | V\| |
| 31+10 | 1.5117 | 0.00 | Q | \| | \| | \| | V\| |
| 31+15 | 1.5117 | 0.00 | Q | \| | \| | \| | V\| |
| 31+20 | 1.5118 | 0.00 | Q | \| | \| | \| | V\| |
| 31+25 | 1.5118 | 0.00 | Q | \| | \| | \| | V\| |
| 31+30 | 1.5118 | 0.00 | Q | \| | \| | \| | V\| |
| 31+35 | 1.5118 | 0.00 | Q | \| | \| | \| | V\| |
| 31+40 | 1.5118 | 0.00 | Q | \| | \| | \| | V\| |
| 31+45 | 1.5118 | 0.00 | Q | \| | \| | \| | V\| |
| 31+50 | 1.5118 | 0.00 | Q | \| | \| | \| | V\| |
| 31+55 | 1.5118 | 0.00 | Q | \| | \| | \| | V\| |
| 32+ 0 | 1.5118 | 0.00 | Q | \| | \| | \| | V\| |
| 32+ 5 | 1.5118 | 0.00 | Q | \| | \| | \| | V\| |
| 32+10 | 1.5118 | 0.00 | Q | \| | \| | \| | V\| |
| 32+15 | 1.5118 | 0.00 | Q | \| | \| | \| | V\| |
| 32+20 | 1.5118 | 0.00 | Q | \| | \| | \| | V\| |
| 32+25 | 1.5118 | 0.00 | Q | \| | \| | \| | V\| |
| 32+30 | 1.5118 | 0.00 | Q | \| | \| | \| | V\| |
| 32+35 | 1.5118 | 0.00 | Q | \| | \| | \| | V\| |
| 32+40 | 1.5118 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/07/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 10B (BORROW PIT)
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 43.92 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 43.92 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 43.92 | 24 | 2.40 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 98.0 | 99.6 | 43.92 | 1.000 | 0.008 | 0.010 | 0.000 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.000

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 0.44 | 0.010 | 98.0 | 99.6 | 0.04 | 0.980 |
| 43.48 | 0.990 | 98.0 | 98.0 | 0.20 | 0.905 |

Area-averaged catchment yield fraction, Y = 0.905
Area-averaged low loss fraction, Yb = 0.095
Direct entry of lag time by user
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 43.92(Ac.)
Catchment Lag time = 0.500 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 16.6667
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.000(In/Hr)
Average low loss rate fraction (Yb) = 0.095 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.400(In)

Rainfall depth area reduction factors:
Using a total area of 43.92(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.601(In)
30-minute factor = 0.998 Adjusted rainfall = 1.029(In)
1-hour factor = 0.998 Adjusted rainfall = 1.267(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.400(In)
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U n i t H y d r o g r a p h
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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 531.16 (CFS)) | |
| 1 | 0.775 | 4.116 |
| 2 | 3.367 | 13.766 |
| 3 | 7.746 | 23.260 |
| 4 | 16.033 | 44.020 |
| 5 | 30.950 | 79.231 |
| 6 | 44.554 | 72.260 |
| 7 | 54.263 | 51.567 |
| 8 | 61.150 | 36.583 |
| 9 | 66.275 | 27.222 |
| 10 | 70.479 | 22.331 |
| 11 | 73.950 | 18.436 |
| 12 | 76.896 | 15.647 |
| 13 | 79.400 | 13.301 |

| | | |
|---|---|---|
| 14 | 81.550 | 11.420 |
| 15 | 83.400 | 9.826 |
| 16 | 85.100 | 9.030 |
| 17 | 86.667 | 8.321 |
| 18 | 88.033 | 7.259 |
| 19 | 89.200 | 6.197 |
| 20 | 90.192 | 5.267 |
| 21 | 91.133 | 5.002 |
| 22 | 92.000 | 4.603 |
| 23 | 92.792 | 4.205 |
| 24 | 93.533 | 3.939 |
| 25 | 94.183 | 3.453 |
| 26 | 94.750 | 3.010 |
| 27 | 95.317 | 3.010 |
| 28 | 95.817 | 2.656 |
| 29 | 96.250 | 2.302 |
| 30 | 96.683 | 2.302 |
| 31 | 97.050 | 1.948 |
| 32 | 97.350 | 1.593 |
| 33 | 97.650 | 1.593 |
| 34 | 97.883 | 1.239 |
| 35 | 98.050 | 0.885 |
| 36 | 98.217 | 0.885 |
| 37 | 98.400 | 0.974 |
| 38 | 98.600 | 1.062 |
| 39 | 98.800 | 1.062 |
| 40 | 99.000 | 1.062 |
| 41 | 99.200 | 1.062 |
| 42 | 99.400 | 1.062 |
| 43 | 99.552 | 0.808 |
| 44 | 99.656 | 0.553 |
| 45 | 99.760 | 0.553 |
| 46 | 99.865 | 0.553 |
| 47 | 100.000 | 0.277 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6014 | 0.6014 |
| 2 | 0.7404 | 0.1390 |
| 3 | 0.8362 | 0.0958 |
| 4 | 0.9115 | 0.0754 |
| 5 | 0.9746 | 0.0631 |
| 6 | 1.0294 | 0.0548 |
| 7 | 1.0782 | 0.0487 |
| 8 | 1.1222 | 0.0441 |
| 9 | 1.1626 | 0.0404 |
| 10 | 1.1999 | 0.0373 |
| 11 | 1.2347 | 0.0348 |
| 12 | 1.2674 | 0.0327 |
| 13 | 1.2887 | 0.0213 |
| 14 | 1.3088 | 0.0201 |
| 15 | 1.3278 | 0.0190 |
| 16 | 1.3458 | 0.0180 |
| 17 | 1.3629 | 0.0171 |
| 18 | 1.3792 | 0.0163 |
| 19 | 1.3949 | 0.0156 |
| 20 | 1.4099 | 0.0150 |
| 21 | 1.4243 | 0.0144 |
| 22 | 1.4382 | 0.0139 |

| | | |
|---|---|---|
| 23 | 1.4516 | 0.0134 |
| 24 | 1.4645 | 0.0129 |
| 25 | 1.4770 | 0.0125 |
| 26 | 1.4892 | 0.0121 |
| 27 | 1.5009 | 0.0118 |
| 28 | 1.5124 | 0.0114 |
| 29 | 1.5235 | 0.0111 |
| 30 | 1.5343 | 0.0108 |
| 31 | 1.5448 | 0.0105 |
| 32 | 1.5551 | 0.0103 |
| 33 | 1.5651 | 0.0100 |
| 34 | 1.5748 | 0.0098 |
| 35 | 1.5844 | 0.0095 |
| 36 | 1.5937 | 0.0093 |
| 37 | 1.6028 | 0.0091 |
| 38 | 1.6117 | 0.0089 |
| 39 | 1.6204 | 0.0087 |
| 40 | 1.6289 | 0.0085 |
| 41 | 1.6372 | 0.0084 |
| 42 | 1.6454 | 0.0082 |
| 43 | 1.6535 | 0.0080 |
| 44 | 1.6614 | 0.0079 |
| 45 | 1.6691 | 0.0078 |
| 46 | 1.6767 | 0.0076 |
| 47 | 1.6842 | 0.0075 |
| 48 | 1.6916 | 0.0074 |
| 49 | 1.6988 | 0.0072 |
| 50 | 1.7059 | 0.0071 |
| 51 | 1.7129 | 0.0070 |
| 52 | 1.7198 | 0.0069 |
| 53 | 1.7266 | 0.0068 |
| 54 | 1.7333 | 0.0067 |
| 55 | 1.7399 | 0.0066 |
| 56 | 1.7464 | 0.0065 |
| 57 | 1.7529 | 0.0064 |
| 58 | 1.7592 | 0.0063 |
| 59 | 1.7654 | 0.0062 |
| 60 | 1.7716 | 0.0062 |
| 61 | 1.7777 | 0.0061 |
| 62 | 1.7836 | 0.0060 |
| 63 | 1.7896 | 0.0059 |
| 64 | 1.7954 | 0.0058 |
| 65 | 1.8012 | 0.0058 |
| 66 | 1.8069 | 0.0057 |
| 67 | 1.8125 | 0.0056 |
| 68 | 1.8181 | 0.0056 |
| 69 | 1.8236 | 0.0055 |
| 70 | 1.8290 | 0.0054 |
| 71 | 1.8344 | 0.0054 |
| 72 | 1.8397 | 0.0053 |
| 73 | 1.8446 | 0.0049 |
| 74 | 1.8494 | 0.0048 |
| 75 | 1.8542 | 0.0048 |
| 76 | 1.8589 | 0.0047 |
| 77 | 1.8636 | 0.0047 |
| 78 | 1.8682 | 0.0046 |
| 79 | 1.8728 | 0.0046 |
| 80 | 1.8773 | 0.0045 |
| 81 | 1.8818 | 0.0045 |

| | | |
|---|---|---|
| 82 | 1.8862 | 0.0044 |
| 83 | 1.8906 | 0.0044 |
| 84 | 1.8949 | 0.0043 |
| 85 | 1.8992 | 0.0043 |
| 86 | 1.9035 | 0.0043 |
| 87 | 1.9077 | 0.0042 |
| 88 | 1.9119 | 0.0042 |
| 89 | 1.9161 | 0.0041 |
| 90 | 1.9202 | 0.0041 |
| 91 | 1.9242 | 0.0041 |
| 92 | 1.9283 | 0.0040 |
| 93 | 1.9323 | 0.0040 |
| 94 | 1.9362 | 0.0040 |
| 95 | 1.9402 | 0.0039 |
| 96 | 1.9441 | 0.0039 |
| 97 | 1.9479 | 0.0039 |
| 98 | 1.9518 | 0.0038 |
| 99 | 1.9556 | 0.0038 |
| 100 | 1.9593 | 0.0038 |
| 101 | 1.9631 | 0.0037 |
| 102 | 1.9668 | 0.0037 |
| 103 | 1.9705 | 0.0037 |
| 104 | 1.9741 | 0.0037 |
| 105 | 1.9778 | 0.0036 |
| 106 | 1.9814 | 0.0036 |
| 107 | 1.9849 | 0.0036 |
| 108 | 1.9885 | 0.0035 |
| 109 | 1.9920 | 0.0035 |
| 110 | 1.9955 | 0.0035 |
| 111 | 1.9989 | 0.0035 |
| 112 | 2.0024 | 0.0034 |
| 113 | 2.0058 | 0.0034 |
| 114 | 2.0092 | 0.0034 |
| 115 | 2.0126 | 0.0034 |
| 116 | 2.0159 | 0.0033 |
| 117 | 2.0192 | 0.0033 |
| 118 | 2.0225 | 0.0033 |
| 119 | 2.0258 | 0.0033 |
| 120 | 2.0290 | 0.0033 |
| 121 | 2.0323 | 0.0032 |
| 122 | 2.0355 | 0.0032 |
| 123 | 2.0387 | 0.0032 |
| 124 | 2.0418 | 0.0032 |
| 125 | 2.0450 | 0.0031 |
| 126 | 2.0481 | 0.0031 |
| 127 | 2.0512 | 0.0031 |
| 128 | 2.0543 | 0.0031 |
| 129 | 2.0574 | 0.0031 |
| 130 | 2.0604 | 0.0030 |
| 131 | 2.0635 | 0.0030 |
| 132 | 2.0665 | 0.0030 |
| 133 | 2.0695 | 0.0030 |
| 134 | 2.0724 | 0.0030 |
| 135 | 2.0754 | 0.0030 |
| 136 | 2.0783 | 0.0029 |
| 137 | 2.0812 | 0.0029 |
| 138 | 2.0842 | 0.0029 |
| 139 | 2.0870 | 0.0029 |
| 140 | 2.0899 | 0.0029 |

| | | |
|---|---|---|
| 141 | 2.0928 | 0.0029 |
| 142 | 2.0956 | 0.0028 |
| 143 | 2.0984 | 0.0028 |
| 144 | 2.1012 | 0.0028 |
| 145 | 2.1040 | 0.0028 |
| 146 | 2.1068 | 0.0028 |
| 147 | 2.1095 | 0.0028 |
| 148 | 2.1123 | 0.0027 |
| 149 | 2.1150 | 0.0027 |
| 150 | 2.1177 | 0.0027 |
| 151 | 2.1204 | 0.0027 |
| 152 | 2.1231 | 0.0027 |
| 153 | 2.1258 | 0.0027 |
| 154 | 2.1284 | 0.0027 |
| 155 | 2.1311 | 0.0026 |
| 156 | 2.1337 | 0.0026 |
| 157 | 2.1363 | 0.0026 |
| 158 | 2.1389 | 0.0026 |
| 159 | 2.1415 | 0.0026 |
| 160 | 2.1441 | 0.0026 |
| 161 | 2.1467 | 0.0026 |
| 162 | 2.1492 | 0.0025 |
| 163 | 2.1518 | 0.0025 |
| 164 | 2.1543 | 0.0025 |
| 165 | 2.1568 | 0.0025 |
| 166 | 2.1593 | 0.0025 |
| 167 | 2.1618 | 0.0025 |
| 168 | 2.1643 | 0.0025 |
| 169 | 2.1667 | 0.0025 |
| 170 | 2.1692 | 0.0025 |
| 171 | 2.1716 | 0.0024 |
| 172 | 2.1740 | 0.0024 |
| 173 | 2.1765 | 0.0024 |
| 174 | 2.1789 | 0.0024 |
| 175 | 2.1813 | 0.0024 |
| 176 | 2.1836 | 0.0024 |
| 177 | 2.1860 | 0.0024 |
| 178 | 2.1884 | 0.0024 |
| 179 | 2.1907 | 0.0024 |
| 180 | 2.1931 | 0.0023 |
| 181 | 2.1954 | 0.0023 |
| 182 | 2.1977 | 0.0023 |
| 183 | 2.2000 | 0.0023 |
| 184 | 2.2023 | 0.0023 |
| 185 | 2.2046 | 0.0023 |
| 186 | 2.2069 | 0.0023 |
| 187 | 2.2092 | 0.0023 |
| 188 | 2.2114 | 0.0023 |
| 189 | 2.2137 | 0.0023 |
| 190 | 2.2159 | 0.0022 |
| 191 | 2.2182 | 0.0022 |
| 192 | 2.2204 | 0.0022 |
| 193 | 2.2226 | 0.0022 |
| 194 | 2.2248 | 0.0022 |
| 195 | 2.2270 | 0.0022 |
| 196 | 2.2292 | 0.0022 |
| 197 | 2.2313 | 0.0022 |
| 198 | 2.2335 | 0.0022 |
| 199 | 2.2357 | 0.0022 |

| | | |
|---|---|---|
| 200 | 2.2378 | 0.0021 |
| 201 | 2.2400 | 0.0021 |
| 202 | 2.2421 | 0.0021 |
| 203 | 2.2442 | 0.0021 |
| 204 | 2.2463 | 0.0021 |
| 205 | 2.2484 | 0.0021 |
| 206 | 2.2505 | 0.0021 |
| 207 | 2.2526 | 0.0021 |
| 208 | 2.2547 | 0.0021 |
| 209 | 2.2568 | 0.0021 |
| 210 | 2.2589 | 0.0021 |
| 211 | 2.2609 | 0.0021 |
| 212 | 2.2630 | 0.0021 |
| 213 | 2.2650 | 0.0020 |
| 214 | 2.2670 | 0.0020 |
| 215 | 2.2691 | 0.0020 |
| 216 | 2.2711 | 0.0020 |
| 217 | 2.2731 | 0.0020 |
| 218 | 2.2751 | 0.0020 |
| 219 | 2.2771 | 0.0020 |
| 220 | 2.2791 | 0.0020 |
| 221 | 2.2811 | 0.0020 |
| 222 | 2.2830 | 0.0020 |
| 223 | 2.2850 | 0.0020 |
| 224 | 2.2870 | 0.0020 |
| 225 | 2.2889 | 0.0020 |
| 226 | 2.2909 | 0.0019 |
| 227 | 2.2928 | 0.0019 |
| 228 | 2.2948 | 0.0019 |
| 229 | 2.2967 | 0.0019 |
| 230 | 2.2986 | 0.0019 |
| 231 | 2.3005 | 0.0019 |
| 232 | 2.3024 | 0.0019 |
| 233 | 2.3043 | 0.0019 |
| 234 | 2.3062 | 0.0019 |
| 235 | 2.3081 | 0.0019 |
| 236 | 2.3100 | 0.0019 |
| 237 | 2.3118 | 0.0019 |
| 238 | 2.3137 | 0.0019 |
| 239 | 2.3156 | 0.0019 |
| 240 | 2.3174 | 0.0019 |
| 241 | 2.3193 | 0.0018 |
| 242 | 2.3211 | 0.0018 |
| 243 | 2.3230 | 0.0018 |
| 244 | 2.3248 | 0.0018 |
| 245 | 2.3266 | 0.0018 |
| 246 | 2.3284 | 0.0018 |
| 247 | 2.3302 | 0.0018 |
| 248 | 2.3320 | 0.0018 |
| 249 | 2.3338 | 0.0018 |
| 250 | 2.3356 | 0.0018 |
| 251 | 2.3374 | 0.0018 |
| 252 | 2.3392 | 0.0018 |
| 253 | 2.3410 | 0.0018 |
| 254 | 2.3428 | 0.0018 |
| 255 | 2.3445 | 0.0018 |
| 256 | 2.3463 | 0.0018 |
| 257 | 2.3480 | 0.0018 |
| 258 | 2.3498 | 0.0017 |

| | | |
|---|---|---|
| 259 | 2.3515 | 0.0017 |
| 260 | 2.3533 | 0.0017 |
| 261 | 2.3550 | 0.0017 |
| 262 | 2.3567 | 0.0017 |
| 263 | 2.3584 | 0.0017 |
| 264 | 2.3602 | 0.0017 |
| 265 | 2.3619 | 0.0017 |
| 266 | 2.3636 | 0.0017 |
| 267 | 2.3653 | 0.0017 |
| 268 | 2.3670 | 0.0017 |
| 269 | 2.3687 | 0.0017 |
| 270 | 2.3704 | 0.0017 |
| 271 | 2.3720 | 0.0017 |
| 272 | 2.3737 | 0.0017 |
| 273 | 2.3754 | 0.0017 |
| 274 | 2.3770 | 0.0017 |
| 275 | 2.3787 | 0.0017 |
| 276 | 2.3804 | 0.0017 |
| 277 | 2.3820 | 0.0017 |
| 278 | 2.3837 | 0.0016 |
| 279 | 2.3853 | 0.0016 |
| 280 | 2.3869 | 0.0016 |
| 281 | 2.3886 | 0.0016 |
| 282 | 2.3902 | 0.0016 |
| 283 | 2.3918 | 0.0016 |
| 284 | 2.3934 | 0.0016 |
| 285 | 2.3951 | 0.0016 |
| 286 | 2.3967 | 0.0016 |
| 287 | 2.3983 | 0.0016 |
| 288 | 2.3999 | 0.0016 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0016 | 0.0000 | 0.0016 |
| 2 | 0.0016 | 0.0000 | 0.0016 |
| 3 | 0.0016 | 0.0000 | 0.0016 |
| 4 | 0.0016 | 0.0000 | 0.0016 |
| 5 | 0.0016 | 0.0000 | 0.0016 |
| 6 | 0.0016 | 0.0000 | 0.0016 |
| 7 | 0.0016 | 0.0000 | 0.0016 |
| 8 | 0.0016 | 0.0000 | 0.0016 |
| 9 | 0.0017 | 0.0000 | 0.0016 |
| 10 | 0.0017 | 0.0000 | 0.0017 |
| 11 | 0.0017 | 0.0000 | 0.0017 |
| 12 | 0.0017 | 0.0000 | 0.0017 |
| 13 | 0.0017 | 0.0000 | 0.0017 |
| 14 | 0.0017 | 0.0000 | 0.0017 |
| 15 | 0.0017 | 0.0000 | 0.0017 |
| 16 | 0.0017 | 0.0000 | 0.0017 |
| 17 | 0.0017 | 0.0000 | 0.0017 |
| 18 | 0.0017 | 0.0000 | 0.0017 |
| 19 | 0.0017 | 0.0000 | 0.0017 |
| 20 | 0.0017 | 0.0000 | 0.0017 |
| 21 | 0.0017 | 0.0000 | 0.0017 |
| 22 | 0.0018 | 0.0000 | 0.0017 |
| 23 | 0.0018 | 0.0000 | 0.0018 |
| 24 | 0.0018 | 0.0000 | 0.0018 |

| | | | |
|---|---|---|---|
| 25 | 0.0018 | 0.0000 | 0.0018 |
| 26 | 0.0018 | 0.0000 | 0.0018 |
| 27 | 0.0018 | 0.0000 | 0.0018 |
| 28 | 0.0018 | 0.0000 | 0.0018 |
| 29 | 0.0018 | 0.0000 | 0.0018 |
| 30 | 0.0018 | 0.0000 | 0.0018 |
| 31 | 0.0018 | 0.0000 | 0.0018 |
| 32 | 0.0018 | 0.0000 | 0.0018 |
| 33 | 0.0019 | 0.0000 | 0.0018 |
| 34 | 0.0019 | 0.0000 | 0.0019 |
| 35 | 0.0019 | 0.0000 | 0.0019 |
| 36 | 0.0019 | 0.0000 | 0.0019 |
| 37 | 0.0019 | 0.0000 | 0.0019 |
| 38 | 0.0019 | 0.0000 | 0.0019 |
| 39 | 0.0019 | 0.0000 | 0.0019 |
| 40 | 0.0019 | 0.0000 | 0.0019 |
| 41 | 0.0019 | 0.0000 | 0.0019 |
| 42 | 0.0019 | 0.0000 | 0.0019 |
| 43 | 0.0020 | 0.0000 | 0.0019 |
| 44 | 0.0020 | 0.0000 | 0.0020 |
| 45 | 0.0020 | 0.0000 | 0.0020 |
| 46 | 0.0020 | 0.0000 | 0.0020 |
| 47 | 0.0020 | 0.0000 | 0.0020 |
| 48 | 0.0020 | 0.0000 | 0.0020 |
| 49 | 0.0020 | 0.0000 | 0.0020 |
| 50 | 0.0020 | 0.0000 | 0.0020 |
| 51 | 0.0020 | 0.0000 | 0.0020 |
| 52 | 0.0021 | 0.0000 | 0.0020 |
| 53 | 0.0021 | 0.0000 | 0.0021 |
| 54 | 0.0021 | 0.0000 | 0.0021 |
| 55 | 0.0021 | 0.0000 | 0.0021 |
| 56 | 0.0021 | 0.0000 | 0.0021 |
| 57 | 0.0021 | 0.0000 | 0.0021 |
| 58 | 0.0021 | 0.0000 | 0.0021 |
| 59 | 0.0021 | 0.0000 | 0.0021 |
| 60 | 0.0021 | 0.0000 | 0.0021 |
| 61 | 0.0022 | 0.0000 | 0.0022 |
| 62 | 0.0022 | 0.0000 | 0.0022 |
| 63 | 0.0022 | 0.0000 | 0.0022 |
| 64 | 0.0022 | 0.0000 | 0.0022 |
| 65 | 0.0022 | 0.0000 | 0.0022 |
| 66 | 0.0022 | 0.0000 | 0.0022 |
| 67 | 0.0023 | 0.0000 | 0.0022 |
| 68 | 0.0023 | 0.0000 | 0.0023 |
| 69 | 0.0023 | 0.0000 | 0.0023 |
| 70 | 0.0023 | 0.0000 | 0.0023 |
| 71 | 0.0023 | 0.0000 | 0.0023 |
| 72 | 0.0023 | 0.0000 | 0.0023 |
| 73 | 0.0023 | 0.0000 | 0.0023 |
| 74 | 0.0024 | 0.0000 | 0.0023 |
| 75 | 0.0024 | 0.0000 | 0.0024 |
| 76 | 0.0024 | 0.0000 | 0.0024 |
| 77 | 0.0024 | 0.0000 | 0.0024 |
| 78 | 0.0024 | 0.0000 | 0.0024 |
| 79 | 0.0024 | 0.0000 | 0.0024 |
| 80 | 0.0025 | 0.0000 | 0.0024 |
| 81 | 0.0025 | 0.0000 | 0.0025 |
| 82 | 0.0025 | 0.0000 | 0.0025 |
| 83 | 0.0025 | 0.0000 | 0.0025 |

| | | | |
|---|---|---|---|
| 84 | 0.0025 | 0.0000 | 0.0025 |
| 85 | 0.0025 | 0.0000 | 0.0025 |
| 86 | 0.0026 | 0.0000 | 0.0026 |
| 87 | 0.0026 | 0.0000 | 0.0026 |
| 88 | 0.0026 | 0.0000 | 0.0026 |
| 89 | 0.0026 | 0.0000 | 0.0026 |
| 90 | 0.0026 | 0.0000 | 0.0026 |
| 91 | 0.0027 | 0.0000 | 0.0027 |
| 92 | 0.0027 | 0.0000 | 0.0027 |
| 93 | 0.0027 | 0.0000 | 0.0027 |
| 94 | 0.0027 | 0.0000 | 0.0027 |
| 95 | 0.0028 | 0.0000 | 0.0028 |
| 96 | 0.0028 | 0.0000 | 0.0028 |
| 97 | 0.0028 | 0.0000 | 0.0028 |
| 98 | 0.0028 | 0.0000 | 0.0028 |
| 99 | 0.0029 | 0.0000 | 0.0028 |
| 100 | 0.0029 | 0.0000 | 0.0029 |
| 101 | 0.0029 | 0.0000 | 0.0029 |
| 102 | 0.0029 | 0.0000 | 0.0029 |
| 103 | 0.0030 | 0.0000 | 0.0029 |
| 104 | 0.0030 | 0.0000 | 0.0030 |
| 105 | 0.0030 | 0.0000 | 0.0030 |
| 106 | 0.0030 | 0.0000 | 0.0030 |
| 107 | 0.0031 | 0.0000 | 0.0031 |
| 108 | 0.0031 | 0.0000 | 0.0031 |
| 109 | 0.0031 | 0.0000 | 0.0031 |
| 110 | 0.0031 | 0.0000 | 0.0031 |
| 111 | 0.0032 | 0.0000 | 0.0032 |
| 112 | 0.0032 | 0.0000 | 0.0032 |
| 113 | 0.0033 | 0.0000 | 0.0032 |
| 114 | 0.0033 | 0.0000 | 0.0033 |
| 115 | 0.0033 | 0.0000 | 0.0033 |
| 116 | 0.0033 | 0.0000 | 0.0033 |
| 117 | 0.0034 | 0.0000 | 0.0034 |
| 118 | 0.0034 | 0.0000 | 0.0034 |
| 119 | 0.0035 | 0.0000 | 0.0035 |
| 120 | 0.0035 | 0.0000 | 0.0035 |
| 121 | 0.0035 | 0.0000 | 0.0035 |
| 122 | 0.0036 | 0.0000 | 0.0036 |
| 123 | 0.0036 | 0.0000 | 0.0036 |
| 124 | 0.0037 | 0.0000 | 0.0036 |
| 125 | 0.0037 | 0.0000 | 0.0037 |
| 126 | 0.0037 | 0.0000 | 0.0037 |
| 127 | 0.0038 | 0.0000 | 0.0038 |
| 128 | 0.0038 | 0.0000 | 0.0038 |
| 129 | 0.0039 | 0.0000 | 0.0039 |
| 130 | 0.0039 | 0.0000 | 0.0039 |
| 131 | 0.0040 | 0.0000 | 0.0040 |
| 132 | 0.0040 | 0.0000 | 0.0040 |
| 133 | 0.0041 | 0.0000 | 0.0041 |
| 134 | 0.0041 | 0.0000 | 0.0041 |
| 135 | 0.0042 | 0.0000 | 0.0042 |
| 136 | 0.0043 | 0.0000 | 0.0043 |
| 137 | 0.0043 | 0.0000 | 0.0043 |
| 138 | 0.0044 | 0.0000 | 0.0044 |
| 139 | 0.0045 | 0.0000 | 0.0045 |
| 140 | 0.0045 | 0.0000 | 0.0045 |
| 141 | 0.0046 | 0.0000 | 0.0046 |
| 142 | 0.0047 | 0.0000 | 0.0047 |

| | | | |
|---|---|---|---|
| 143 | 0.0048 | 0.0000 | 0.0048 |
| 144 | 0.0048 | 0.0000 | 0.0048 |
| 145 | 0.0053 | 0.0000 | 0.0053 |
| 146 | 0.0054 | 0.0000 | 0.0054 |
| 147 | 0.0055 | 0.0000 | 0.0055 |
| 148 | 0.0056 | 0.0000 | 0.0056 |
| 149 | 0.0057 | 0.0000 | 0.0057 |
| 150 | 0.0058 | 0.0000 | 0.0058 |
| 151 | 0.0059 | 0.0000 | 0.0059 |
| 152 | 0.0060 | 0.0000 | 0.0060 |
| 153 | 0.0062 | 0.0000 | 0.0061 |
| 154 | 0.0062 | 0.0000 | 0.0062 |
| 155 | 0.0064 | 0.0000 | 0.0064 |
| 156 | 0.0065 | 0.0000 | 0.0065 |
| 157 | 0.0067 | 0.0000 | 0.0067 |
| 158 | 0.0068 | 0.0000 | 0.0068 |
| 159 | 0.0070 | 0.0000 | 0.0070 |
| 160 | 0.0071 | 0.0000 | 0.0071 |
| 161 | 0.0074 | 0.0000 | 0.0074 |
| 162 | 0.0075 | 0.0000 | 0.0075 |
| 163 | 0.0078 | 0.0000 | 0.0077 |
| 164 | 0.0079 | 0.0000 | 0.0079 |
| 165 | 0.0082 | 0.0000 | 0.0082 |
| 166 | 0.0084 | 0.0000 | 0.0083 |
| 167 | 0.0087 | 0.0000 | 0.0087 |
| 168 | 0.0089 | 0.0000 | 0.0089 |
| 169 | 0.0093 | 0.0000 | 0.0093 |
| 170 | 0.0095 | 0.0000 | 0.0095 |
| 171 | 0.0100 | 0.0000 | 0.0100 |
| 172 | 0.0103 | 0.0000 | 0.0103 |
| 173 | 0.0108 | 0.0000 | 0.0108 |
| 174 | 0.0111 | 0.0000 | 0.0111 |
| 175 | 0.0118 | 0.0000 | 0.0118 |
| 176 | 0.0121 | 0.0000 | 0.0121 |
| 177 | 0.0129 | 0.0000 | 0.0129 |
| 178 | 0.0134 | 0.0000 | 0.0134 |
| 179 | 0.0144 | 0.0000 | 0.0144 |
| 180 | 0.0150 | 0.0000 | 0.0150 |
| 181 | 0.0163 | 0.0000 | 0.0163 |
| 182 | 0.0171 | 0.0000 | 0.0171 |
| 183 | 0.0190 | 0.0000 | 0.0190 |
| 184 | 0.0201 | 0.0000 | 0.0201 |
| 185 | 0.0327 | 0.0000 | 0.0326 |
| 186 | 0.0348 | 0.0000 | 0.0348 |
| 187 | 0.0404 | 0.0000 | 0.0404 |
| 188 | 0.0441 | 0.0000 | 0.0441 |
| 189 | 0.0548 | 0.0000 | 0.0548 |
| 190 | 0.0631 | 0.0000 | 0.0631 |
| 191 | 0.0958 | 0.0000 | 0.0958 |
| 192 | 0.1390 | 0.0000 | 0.1390 |
| 193 | 0.6014 | 0.0000 | 0.6014 |
| 194 | 0.0754 | 0.0000 | 0.0754 |
| 195 | 0.0487 | 0.0000 | 0.0487 |
| 196 | 0.0373 | 0.0000 | 0.0373 |
| 197 | 0.0213 | 0.0000 | 0.0213 |
| 198 | 0.0180 | 0.0000 | 0.0180 |
| 199 | 0.0156 | 0.0000 | 0.0156 |
| 200 | 0.0139 | 0.0000 | 0.0139 |
| 201 | 0.0125 | 0.0000 | 0.0125 |

| | | | |
|---|---|---|---|
| 202 | 0.0114 | 0.0000 | 0.0114 |
| 203 | 0.0105 | 0.0000 | 0.0105 |
| 204 | 0.0098 | 0.0000 | 0.0098 |
| 205 | 0.0091 | 0.0000 | 0.0091 |
| 206 | 0.0085 | 0.0000 | 0.0085 |
| 207 | 0.0080 | 0.0000 | 0.0080 |
| 208 | 0.0076 | 0.0000 | 0.0076 |
| 209 | 0.0072 | 0.0000 | 0.0072 |
| 210 | 0.0069 | 0.0000 | 0.0069 |
| 211 | 0.0066 | 0.0000 | 0.0066 |
| 212 | 0.0063 | 0.0000 | 0.0063 |
| 213 | 0.0061 | 0.0000 | 0.0061 |
| 214 | 0.0058 | 0.0000 | 0.0058 |
| 215 | 0.0056 | 0.0000 | 0.0056 |
| 216 | 0.0054 | 0.0000 | 0.0054 |
| 217 | 0.0049 | 0.0000 | 0.0049 |
| 218 | 0.0047 | 0.0000 | 0.0047 |
| 219 | 0.0046 | 0.0000 | 0.0046 |
| 220 | 0.0044 | 0.0000 | 0.0044 |
| 221 | 0.0043 | 0.0000 | 0.0043 |
| 222 | 0.0042 | 0.0000 | 0.0042 |
| 223 | 0.0041 | 0.0000 | 0.0041 |
| 224 | 0.0040 | 0.0000 | 0.0040 |
| 225 | 0.0039 | 0.0000 | 0.0039 |
| 226 | 0.0038 | 0.0000 | 0.0038 |
| 227 | 0.0037 | 0.0000 | 0.0037 |
| 228 | 0.0036 | 0.0000 | 0.0036 |
| 229 | 0.0035 | 0.0000 | 0.0035 |
| 230 | 0.0034 | 0.0000 | 0.0034 |
| 231 | 0.0034 | 0.0000 | 0.0034 |
| 232 | 0.0033 | 0.0000 | 0.0033 |
| 233 | 0.0032 | 0.0000 | 0.0032 |
| 234 | 0.0032 | 0.0000 | 0.0032 |
| 235 | 0.0031 | 0.0000 | 0.0031 |
| 236 | 0.0030 | 0.0000 | 0.0030 |
| 237 | 0.0030 | 0.0000 | 0.0030 |
| 238 | 0.0029 | 0.0000 | 0.0029 |
| 239 | 0.0029 | 0.0000 | 0.0029 |
| 240 | 0.0028 | 0.0000 | 0.0028 |
| 241 | 0.0028 | 0.0000 | 0.0028 |
| 242 | 0.0027 | 0.0000 | 0.0027 |
| 243 | 0.0027 | 0.0000 | 0.0027 |
| 244 | 0.0027 | 0.0000 | 0.0027 |
| 245 | 0.0026 | 0.0000 | 0.0026 |
| 246 | 0.0026 | 0.0000 | 0.0026 |
| 247 | 0.0025 | 0.0000 | 0.0025 |
| 248 | 0.0025 | 0.0000 | 0.0025 |
| 249 | 0.0025 | 0.0000 | 0.0025 |
| 250 | 0.0024 | 0.0000 | 0.0024 |
| 251 | 0.0024 | 0.0000 | 0.0024 |
| 252 | 0.0024 | 0.0000 | 0.0024 |
| 253 | 0.0023 | 0.0000 | 0.0023 |
| 254 | 0.0023 | 0.0000 | 0.0023 |
| 255 | 0.0023 | 0.0000 | 0.0023 |
| 256 | 0.0022 | 0.0000 | 0.0022 |
| 257 | 0.0022 | 0.0000 | 0.0022 |
| 258 | 0.0022 | 0.0000 | 0.0022 |
| 259 | 0.0022 | 0.0000 | 0.0022 |
| 260 | 0.0021 | 0.0000 | 0.0021 |

| | | | |
|---|---|---|---|
| 261 | 0.0021 | 0.0000 | 0.0021 |
| 262 | 0.0021 | 0.0000 | 0.0021 |
| 263 | 0.0021 | 0.0000 | 0.0021 |
| 264 | 0.0020 | 0.0000 | 0.0020 |
| 265 | 0.0020 | 0.0000 | 0.0020 |
| 266 | 0.0020 | 0.0000 | 0.0020 |
| 267 | 0.0020 | 0.0000 | 0.0020 |
| 268 | 0.0019 | 0.0000 | 0.0019 |
| 269 | 0.0019 | 0.0000 | 0.0019 |
| 270 | 0.0019 | 0.0000 | 0.0019 |
| 271 | 0.0019 | 0.0000 | 0.0019 |
| 272 | 0.0019 | 0.0000 | 0.0019 |
| 273 | 0.0018 | 0.0000 | 0.0018 |
| 274 | 0.0018 | 0.0000 | 0.0018 |
| 275 | 0.0018 | 0.0000 | 0.0018 |
| 276 | 0.0018 | 0.0000 | 0.0018 |
| 277 | 0.0018 | 0.0000 | 0.0018 |
| 278 | 0.0018 | 0.0000 | 0.0018 |
| 279 | 0.0017 | 0.0000 | 0.0017 |
| 280 | 0.0017 | 0.0000 | 0.0017 |
| 281 | 0.0017 | 0.0000 | 0.0017 |
| 282 | 0.0017 | 0.0000 | 0.0017 |
| 283 | 0.0017 | 0.0000 | 0.0017 |
| 284 | 0.0017 | 0.0000 | 0.0017 |
| 285 | 0.0017 | 0.0000 | 0.0016 |
| 286 | 0.0016 | 0.0000 | 0.0016 |
| 287 | 0.0016 | 0.0000 | 0.0016 |
| 288 | 0.0016 | 0.0000 | 0.0016 |

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Total soil rain loss = 0.00(In)
Total effective rainfall = 2.40(In)
Peak flow rate in flood hydrograph = 75.67(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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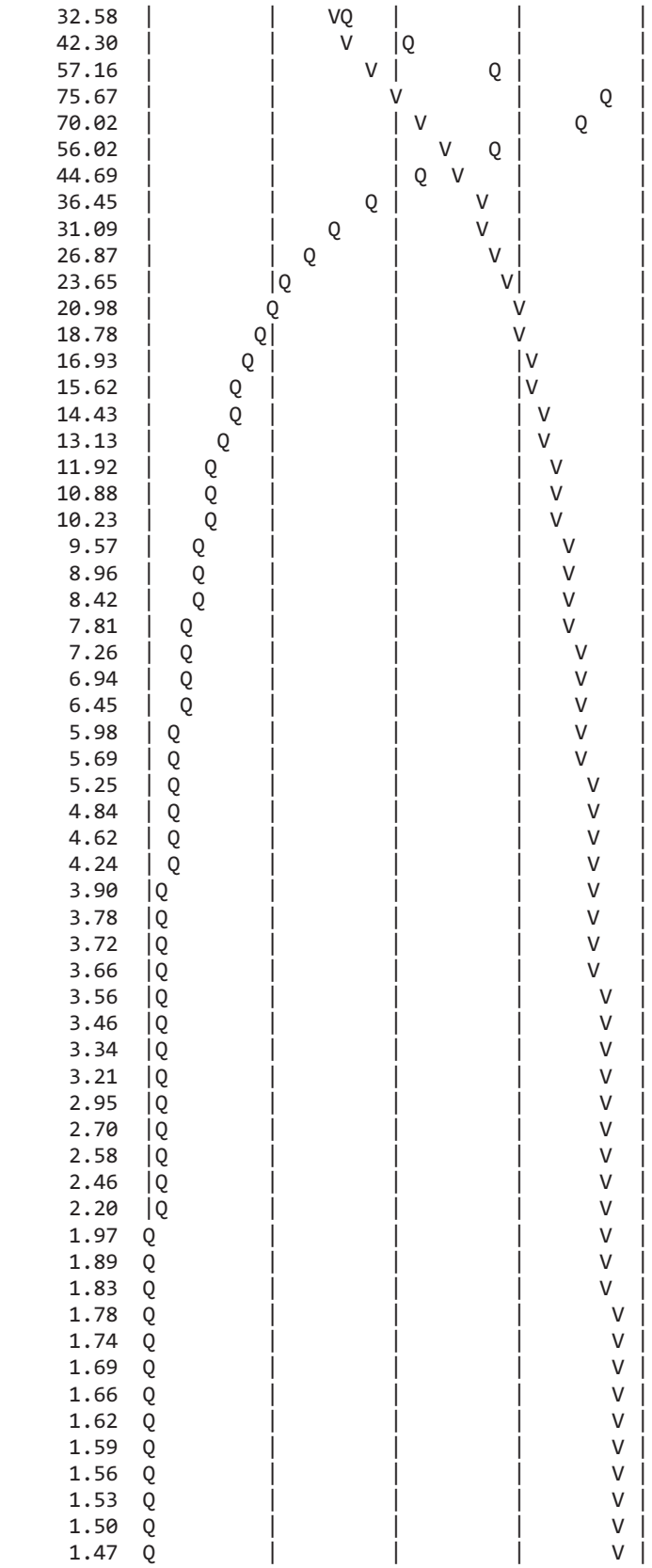
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 20.0 | 40.0 | 60.0 | 80.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.01 | Q | \| | \| | \| | \| |
| 0+10 | 0.0002 | 0.03 | Q | \| | \| | \| | \| |
| 0+15 | 0.0007 | 0.07 | Q | \| | \| | \| | \| |
| 0+20 | 0.0016 | 0.14 | Q | \| | \| | \| | \| |
| 0+25 | 0.0034 | 0.26 | Q | \| | \| | \| | \| |
| 0+30 | 0.0061 | 0.38 | Q | \| | \| | \| | \| |
| 0+35 | 0.0092 | 0.46 | Q | \| | \| | \| | \| |
| 0+40 | 0.0128 | 0.52 | Q | \| | \| | \| | \| |
| 0+45 | 0.0168 | 0.57 | Q | \| | \| | \| | \| |
| 0+50 | 0.0209 | 0.61 | Q | \| | \| | \| | \| |
| 0+55 | 0.0253 | 0.64 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0299 | 0.67 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0347 | 0.69 | Q | \| | \| | \| | \| |
| 1+10 | 0.0396 | 0.71 | Q | \| | \| | \| | \| |
| 1+15 | 0.0446 | 0.73 | Q | \| | \| | \| | \| |
| 1+20 | 0.0497 | 0.75 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+25 | 0.0550 | 0.76 | Q | | | | |
| 1+30 | 0.0604 | 0.78 | Q | | | | |
| 1+35 | 0.0658 | 0.79 | Q | | | | |
| 1+40 | 0.0714 | 0.80 | Q | | | | |
| 1+45 | 0.0770 | 0.82 | Q | | | | |
| 1+50 | 0.0827 | 0.83 | Q | | | | |
| 1+55 | 0.0885 | 0.84 | Q | | | | |
| 2+ 0 | 0.0943 | 0.85 | Q | | | | |
| 2+ 5 | 0.1002 | 0.86 | Q | | | | |
| 2+10 | 0.1062 | 0.87 | Q | | | | |
| 2+15 | 0.1122 | 0.88 | Q | | | | |
| 2+20 | 0.1183 | 0.88 | Q | | | | |
| 2+25 | 0.1244 | 0.89 | Q | | | | |
| 2+30 | 0.1306 | 0.90 | Q | | | | |
| 2+35 | 0.1369 | 0.91 | Q | | | | |
| 2+40 | 0.1432 | 0.91 | Q | | | | |
| 2+45 | 0.1495 | 0.92 | Q | | | | |
| 2+50 | 0.1559 | 0.93 | Q | | | | |
| 2+55 | 0.1623 | 0.93 | Q | | | | |
| 3+ 0 | 0.1688 | 0.94 | Q | | | | |
| 3+ 5 | 0.1753 | 0.95 | Q | | | | |
| 3+10 | 0.1818 | 0.95 | Q | | | | |
| 3+15 | 0.1884 | 0.96 | Q | | | | |
| 3+20 | 0.1951 | 0.96 | Q | | | | |
| 3+25 | 0.2018 | 0.97 | Q | | | | |
| 3+30 | 0.2085 | 0.98 | Q | | | | |
| 3+35 | 0.2153 | 0.98 | Q | | | | |
| 3+40 | 0.2221 | 0.99 | QV | | | | |
| 3+45 | 0.2290 | 1.00 | QV | | | | |
| 3+50 | 0.2359 | 1.00 | QV | | | | |
| 3+55 | 0.2428 | 1.01 | QV | | | | |
| 4+ 0 | 0.2498 | 1.01 | QV | | | | |
| 4+ 5 | 0.2568 | 1.02 | QV | | | | |
| 4+10 | 0.2638 | 1.02 | QV | | | | |
| 4+15 | 0.2709 | 1.03 | QV | | | | |
| 4+20 | 0.2781 | 1.04 | QV | | | | |
| 4+25 | 0.2852 | 1.04 | QV | | | | |
| 4+30 | 0.2924 | 1.05 | QV | | | | |
| 4+35 | 0.2997 | 1.05 | QV | | | | |
| 4+40 | 0.3070 | 1.06 | QV | | | | |
| 4+45 | 0.3143 | 1.06 | QV | | | | |
| 4+50 | 0.3217 | 1.07 | QV | | | | |
| 4+55 | 0.3291 | 1.08 | QV | | | | |
| 5+ 0 | 0.3365 | 1.08 | QV | | | | |
| 5+ 5 | 0.3440 | 1.09 | QV | | | | |
| 5+10 | 0.3516 | 1.10 | QV | | | | |
| 5+15 | 0.3592 | 1.10 | QV | | | | |
| 5+20 | 0.3668 | 1.11 | QV | | | | |
| 5+25 | 0.3745 | 1.11 | QV | | | | |
| 5+30 | 0.3822 | 1.12 | QV | | | | |
| 5+35 | 0.3900 | 1.13 | QV | | | | |
| 5+40 | 0.3978 | 1.13 | QV | | | | |
| 5+45 | 0.4057 | 1.14 | QV | | | | |
| 5+50 | 0.4136 | 1.15 | QV | | | | |
| 5+55 | 0.4215 | 1.16 | QV | | | | |
| 6+ 0 | 0.4295 | 1.16 | QV | | | | |
| 6+ 5 | 0.4376 | 1.17 | QV | | | | |
| 6+10 | 0.4457 | 1.18 | Q V | | | | |
| 6+15 | 0.4539 | 1.19 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+20 | 0.4621 | 1.19 | Q V | \| | \| | \| | \| |
| 6+25 | 0.4704 | 1.20 | Q V | \| | \| | \| | \| |
| 6+30 | 0.4787 | 1.21 | Q V | \| | \| | \| | \| |
| 6+35 | 0.4871 | 1.22 | Q V | \| | \| | \| | \| |
| 6+40 | 0.4955 | 1.23 | Q V | \| | \| | \| | \| |
| 6+45 | 0.5040 | 1.23 | Q V | \| | \| | \| | \| |
| 6+50 | 0.5126 | 1.24 | Q V | \| | \| | \| | \| |
| 6+55 | 0.5212 | 1.25 | Q V | \| | \| | \| | \| |
| 7+ 0 | 0.5299 | 1.26 | Q V | \| | \| | \| | \| |
| 7+ 5 | 0.5386 | 1.27 | Q V | \| | \| | \| | \| |
| 7+10 | 0.5474 | 1.28 | Q V | \| | \| | \| | \| |
| 7+15 | 0.5563 | 1.29 | Q V | \| | \| | \| | \| |
| 7+20 | 0.5652 | 1.30 | Q V | \| | \| | \| | \| |
| 7+25 | 0.5742 | 1.30 | Q V | \| | \| | \| | \| |
| 7+30 | 0.5832 | 1.31 | Q V | \| | \| | \| | \| |
| 7+35 | 0.5923 | 1.32 | Q V | \| | \| | \| | \| |
| 7+40 | 0.6015 | 1.33 | Q V | \| | \| | \| | \| |
| 7+45 | 0.6108 | 1.34 | Q V | \| | \| | \| | \| |
| 7+50 | 0.6201 | 1.35 | Q V | \| | \| | \| | \| |
| 7+55 | 0.6295 | 1.36 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.6390 | 1.37 | Q V | \| | \| | \| | \| |
| 8+ 5 | 0.6485 | 1.39 | Q V | \| | \| | \| | \| |
| 8+10 | 0.6581 | 1.40 | Q  V | \| | \| | \| | \| |
| 8+15 | 0.6678 | 1.41 | Q  V | \| | \| | \| | \| |
| 8+20 | 0.6776 | 1.42 | Q  V | \| | \| | \| | \| |
| 8+25 | 0.6874 | 1.43 | Q  V | \| | \| | \| | \| |
| 8+30 | 0.6974 | 1.44 | Q  V | \| | \| | \| | \| |
| 8+35 | 0.7074 | 1.45 | Q  V | \| | \| | \| | \| |
| 8+40 | 0.7175 | 1.47 | Q  V | \| | \| | \| | \| |
| 8+45 | 0.7277 | 1.48 | Q  V | \| | \| | \| | \| |
| 8+50 | 0.7379 | 1.49 | Q  V | \| | \| | \| | \| |
| 8+55 | 0.7483 | 1.50 | Q  V | \| | \| | \| | \| |
| 9+ 0 | 0.7587 | 1.52 | Q  V | \| | \| | \| | \| |
| 9+ 5 | 0.7693 | 1.53 | Q  V | \| | \| | \| | \| |
| 9+10 | 0.7799 | 1.54 | Q  V | \| | \| | \| | \| |
| 9+15 | 0.7907 | 1.56 | Q  V | \| | \| | \| | \| |
| 9+20 | 0.8015 | 1.57 | Q  V | \| | \| | \| | \| |
| 9+25 | 0.8124 | 1.59 | Q  V | \| | \| | \| | \| |
| 9+30 | 0.8234 | 1.60 | Q  V | \| | \| | \| | \| |
| 9+35 | 0.8346 | 1.62 | Q  V | \| | \| | \| | \| |
| 9+40 | 0.8458 | 1.63 | Q  V | \| | \| | \| | \| |
| 9+45 | 0.8572 | 1.65 | Q  V | \| | \| | \| | \| |
| 9+50 | 0.8686 | 1.66 | Q  V | \| | \| | \| | \| |
| 9+55 | 0.8802 | 1.68 | Q   V | \| | \| | \| | \| |
| 10+ 0 | 0.8919 | 1.70 | Q   V | \| | \| | \| | \| |
| 10+ 5 | 0.9037 | 1.71 | Q   V | \| | \| | \| | \| |
| 10+10 | 0.9156 | 1.73 | Q   V | \| | \| | \| | \| |
| 10+15 | 0.9277 | 1.75 | Q   V | \| | \| | \| | \| |
| 10+20 | 0.9399 | 1.77 | Q   V | \| | \| | \| | \| |
| 10+25 | 0.9522 | 1.79 | Q   V | \| | \| | \| | \| |
| 10+30 | 0.9646 | 1.81 | Q   V | \| | \| | \| | \| |
| 10+35 | 0.9772 | 1.83 | Q   V | \| | \| | \| | \| |
| 10+40 | 0.9900 | 1.85 | Q   V | \| | \| | \| | \| |
| 10+45 | 1.0028 | 1.87 | Q   V | \| | \| | \| | \| |
| 10+50 | 1.0158 | 1.89 | Q   V | \| | \| | \| | \| |
| 10+55 | 1.0290 | 1.91 | Q   V | \| | \| | \| | \| |
| 11+ 0 | 1.0423 | 1.93 | Q   V | \| | \| | \| | \| |
| 11+ 5 | 1.0558 | 1.96 | Q   V | \| | \| | \| | \| |
| 11+10 | 1.0695 | 1.98 | Q   V | \| | \| | \| | \| |

```
11+15       1.0833      2.01  |Q  V     |          |          |          |
11+20       1.0973      2.03  |Q   V     |          |          |          |
11+25       1.1114      2.06  |Q   V     |          |          |          |
11+30       1.1258      2.08  |Q   V     |          |          |          |
11+35       1.1403      2.11  |Q   V     |          |          |          |
11+40       1.1550      2.14  |Q   V     |          |          |          |
11+45       1.1700      2.17  |Q   V     |          |          |          |
11+50       1.1851      2.20  |Q   V     |          |          |          |
11+55       1.2005      2.23  |Q   V     |          |          |          |
12+ 0       1.2160      2.26  |Q   V     |          |          |          |
12+ 5       1.2319      2.30  |Q   V     |          |          |          |
12+10       1.2479      2.34  |Q   V     |          |          |          |
12+15       1.2643      2.38  |Q   V     |          |          |          |
12+20       1.2811      2.43  |Q   V     |          |          |          |
12+25       1.2983      2.50  |Q   V     |          |          |          |
12+30       1.3161      2.57  |Q    V    |          |          |          |
12+35       1.3342      2.63  |Q    V    |          |          |          |
12+40       1.3528      2.69  |Q    V    |          |          |          |
12+45       1.3717      2.75  |Q    V    |          |          |          |
12+50       1.3910      2.81  |Q    V    |          |          |          |
12+55       1.4107      2.86  |Q    V    |          |          |          |
13+ 0       1.4308      2.92  |Q    V    |          |          |          |
13+ 5       1.4514      2.98  |Q    V    |          |          |          |
13+10       1.4723      3.04  |Q    V    |          |          |          |
13+15       1.4937      3.10  |Q    V    |          |          |          |
13+20       1.5155      3.17  |Q    V    |          |          |          |
13+25       1.5378      3.24  |Q     V   |          |          |          |
13+30       1.5606      3.31  |Q     V   |          |          |          |
13+35       1.5839      3.38  |Q     V   |          |          |          |
13+40       1.6077      3.46  |Q     V   |          |          |          |
13+45       1.6321      3.54  |Q     V   |          |          |          |
13+50       1.6570      3.62  |Q     V   |          |          |          |
13+55       1.6826      3.71  |Q     V   |          |          |          |
14+ 0       1.7088      3.81  |Q     V   |          |          |          |
14+ 5       1.7357      3.91  |Q     V   |          |          |          |
14+10       1.7634      4.01  | Q     V  |          |          |          |
14+15       1.7918      4.13  | Q     V  |          |          |          |
14+20       1.8211      4.25  | Q     V  |          |          |          |
14+25       1.8513      4.39  | Q     V  |          |          |          |
14+30       1.8825      4.53  | Q     V  |          |          |          |
14+35       1.9147      4.68  | Q     V  |          |          |          |
14+40       1.9481      4.84  | Q     V  |          |          |          |
14+45       1.9826      5.02  | Q      V |          |          |          |
14+50       2.0185      5.20  | Q      V |          |          |          |
14+55       2.0557      5.41  | Q      V |          |          |          |
15+ 0       2.0946      5.64  | Q      V |          |          |          |
15+ 5       2.1351      5.89  | Q      V |          |          |          |
15+10       2.1776      6.16  |  Q     V |          |          |          |
15+15       2.2222      6.48  |  Q      V          |          |          |
15+20       2.2692      6.82  |  Q      V          |          |          |
15+25       2.3192      7.27  |  Q      V          |          |          |
15+30       2.3734      7.86  |  Q      V          |          |          |
15+35       2.4329      8.65  |   Q     |V         |          |          |
15+40       2.5001      9.75  |   Q     |V         |          |          |
15+45       2.5785     11.39  |    Q    |V         |          |          |
15+50       2.6697     13.23  |     Q   | V        |          |          |
15+55       2.7753     15.34  |      Q  | V        |          |          |
16+ 0       2.8996     18.06  |        Q|  V       |          |          |
16+ 5       3.0625     23.65  |         |Q V       |          |          |
```

| | | | |
|---|---|---|---|
| 16+10 | 3.2868 | 32.58 |  |
| 16+15 | 3.5781 | 42.30 | |
| 16+20 | 3.9718 | 57.16 | |
| 16+25 | 4.4929 | 75.67 | |
| 16+30 | 4.9752 | 70.02 | |
| 16+35 | 5.3610 | 56.02 | |
| 16+40 | 5.6687 | 44.69 | |
| 16+45 | 5.9198 | 36.45 | |
| 16+50 | 6.1339 | 31.09 | |
| 16+55 | 6.3190 | 26.87 | |
| 17+ 0 | 6.4818 | 23.65 | |
| 17+ 5 | 6.6263 | 20.98 | |
| 17+10 | 6.7556 | 18.78 | |
| 17+15 | 6.8722 | 16.93 | |
| 17+20 | 6.9798 | 15.62 | |
| 17+25 | 7.0792 | 14.43 | |
| 17+30 | 7.1696 | 13.13 | |
| 17+35 | 7.2517 | 11.92 | |
| 17+40 | 7.3266 | 10.88 | |
| 17+45 | 7.3971 | 10.23 | |
| 17+50 | 7.4630 | 9.57 | |
| 17+55 | 7.5247 | 8.96 | |
| 18+ 0 | 7.5827 | 8.42 | |
| 18+ 5 | 7.6365 | 7.81 | |
| 18+10 | 7.6866 | 7.26 | |
| 18+15 | 7.7343 | 6.94 | |
| 18+20 | 7.7787 | 6.45 | |
| 18+25 | 7.8199 | 5.98 | |
| 18+30 | 7.8591 | 5.69 | |
| 18+35 | 7.8952 | 5.25 | |
| 18+40 | 7.9286 | 4.84 | |
| 18+45 | 7.9604 | 4.62 | |
| 18+50 | 7.9896 | 4.24 | |
| 18+55 | 8.0165 | 3.90 | |
| 19+ 0 | 8.0425 | 3.78 | |
| 19+ 5 | 8.0681 | 3.72 | |
| 19+10 | 8.0933 | 3.66 | |
| 19+15 | 8.1178 | 3.56 | |
| 19+20 | 8.1416 | 3.46 | |
| 19+25 | 8.1647 | 3.34 | |
| 19+30 | 8.1867 | 3.21 | |
| 19+35 | 8.2070 | 2.95 | |
| 19+40 | 8.2256 | 2.70 | |
| 19+45 | 8.2434 | 2.58 | |
| 19+50 | 8.2603 | 2.46 | |
| 19+55 | 8.2754 | 2.20 | |
| 20+ 0 | 8.2890 | 1.97 | |
| 20+ 5 | 8.3020 | 1.89 | |
| 20+10 | 8.3147 | 1.83 | |
| 20+15 | 8.3269 | 1.78 | |
| 20+20 | 8.3389 | 1.74 | |
| 20+25 | 8.3505 | 1.69 | |
| 20+30 | 8.3619 | 1.66 | |
| 20+35 | 8.3731 | 1.62 | |
| 20+40 | 8.3840 | 1.59 | |
| 20+45 | 8.3948 | 1.56 | |
| 20+50 | 8.4053 | 1.53 | |
| 20+55 | 8.4156 | 1.50 | |
| 21+ 0 | 8.4257 | 1.47 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+ 5 | 8.4357 | 1.44 | Q | \| | \| | \| | V \| |
| 21+10 | 8.4454 | 1.42 | Q | \| | \| | \| | V \| |
| 21+15 | 8.4551 | 1.40 | Q | \| | \| | \| | V \| |
| 21+20 | 8.4645 | 1.37 | Q | \| | \| | \| | V \| |
| 21+25 | 8.4738 | 1.35 | Q | \| | \| | \| | V \| |
| 21+30 | 8.4830 | 1.33 | Q | \| | \| | \| | V \| |
| 21+35 | 8.4920 | 1.31 | Q | \| | \| | \| | V \| |
| 21+40 | 8.5009 | 1.29 | Q | \| | \| | \| | V \| |
| 21+45 | 8.5096 | 1.27 | Q | \| | \| | \| | V \| |
| 21+50 | 8.5182 | 1.25 | Q | \| | \| | \| | V \| |
| 21+55 | 8.5267 | 1.23 | Q | \| | \| | \| | V \| |
| 22+ 0 | 8.5351 | 1.22 | Q | \| | \| | \| | V \| |
| 22+ 5 | 8.5434 | 1.20 | Q | \| | \| | \| | V \| |
| 22+10 | 8.5516 | 1.19 | Q | \| | \| | \| | V\| |
| 22+15 | 8.5596 | 1.17 | Q | \| | \| | \| | V\| |
| 22+20 | 8.5676 | 1.16 | Q | \| | \| | \| | V\| |
| 22+25 | 8.5755 | 1.14 | Q | \| | \| | \| | V\| |
| 22+30 | 8.5832 | 1.13 | Q | \| | \| | \| | V\| |
| 22+35 | 8.5909 | 1.11 | Q | \| | \| | \| | V\| |
| 22+40 | 8.5985 | 1.10 | Q | \| | \| | \| | V\| |
| 22+45 | 8.6059 | 1.09 | Q | \| | \| | \| | V\| |
| 22+50 | 8.6133 | 1.07 | Q | \| | \| | \| | V\| |
| 22+55 | 8.6207 | 1.06 | Q | \| | \| | \| | V\| |
| 23+ 0 | 8.6279 | 1.05 | Q | \| | \| | \| | V\| |
| 23+ 5 | 8.6350 | 1.04 | Q | \| | \| | \| | V\| |
| 23+10 | 8.6421 | 1.03 | Q | \| | \| | \| | V\| |
| 23+15 | 8.6491 | 1.02 | Q | \| | \| | \| | V\| |
| 23+20 | 8.6560 | 1.01 | Q | \| | \| | \| | V\| |
| 23+25 | 8.6629 | 0.99 | Q | \| | \| | \| | V\| |
| 23+30 | 8.6697 | 0.98 | Q | \| | \| | \| | V\| |
| 23+35 | 8.6764 | 0.97 | Q | \| | \| | \| | V\| |
| 23+40 | 8.6830 | 0.96 | Q | \| | \| | \| | V\| |
| 23+45 | 8.6896 | 0.95 | Q | \| | \| | \| | V\| |
| 23+50 | 8.6961 | 0.95 | Q | \| | \| | \| | V\| |
| 23+55 | 8.7025 | 0.94 | Q | \| | \| | \| | V\| |
| 24+ 0 | 8.7089 | 0.93 | Q | \| | \| | \| | V\| |
| 24+ 5 | 8.7152 | 0.91 | Q | \| | \| | \| | V\| |
| 24+10 | 8.7213 | 0.88 | Q | \| | \| | \| | V\| |
| 24+15 | 8.7270 | 0.84 | Q | \| | \| | \| | V\| |
| 24+20 | 8.7323 | 0.76 | Q | \| | \| | \| | V\| |
| 24+25 | 8.7366 | 0.63 | Q | \| | \| | \| | V\| |
| 24+30 | 8.7401 | 0.51 | Q | \| | \| | \| | V\| |
| 24+35 | 8.7429 | 0.42 | Q | \| | \| | \| | V\| |
| 24+40 | 8.7454 | 0.36 | Q | \| | \| | \| | V\| |
| 24+45 | 8.7475 | 0.31 | Q | \| | \| | \| | V\| |
| 24+50 | 8.7494 | 0.27 | Q | \| | \| | \| | V\| |
| 24+55 | 8.7511 | 0.24 | Q | \| | \| | \| | V\| |
| 25+ 0 | 8.7525 | 0.21 | Q | \| | \| | \| | V\| |
| 25+ 5 | 8.7538 | 0.19 | Q | \| | \| | \| | V\| |
| 25+10 | 8.7550 | 0.17 | Q | \| | \| | \| | V\| |
| 25+15 | 8.7560 | 0.15 | Q | \| | \| | \| | V\| |
| 25+20 | 8.7570 | 0.14 | Q | \| | \| | \| | V\| |
| 25+25 | 8.7578 | 0.12 | Q | \| | \| | \| | V\| |
| 25+30 | 8.7586 | 0.11 | Q | \| | \| | \| | V\| |
| 25+35 | 8.7593 | 0.10 | Q | \| | \| | \| | V\| |
| 25+40 | 8.7599 | 0.09 | Q | \| | \| | \| | V\| |
| 25+45 | 8.7604 | 0.08 | Q | \| | \| | \| | V\| |
| 25+50 | 8.7609 | 0.07 | Q | \| | \| | \| | V\| |
| 25+55 | 8.7614 | 0.07 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+ 0 | 8.7618 | 0.06 | Q | \| | \| | \| | V\| |
| 26+ 5 | 8.7621 | 0.05 | Q | \| | \| | \| | V\| |
| 26+10 | 8.7625 | 0.05 | Q | \| | \| | \| | V\| |
| 26+15 | 8.7627 | 0.04 | Q | \| | \| | \| | V\| |
| 26+20 | 8.7630 | 0.04 | Q | \| | \| | \| | V\| |
| 26+25 | 8.7632 | 0.03 | Q | \| | \| | \| | V\| |
| 26+30 | 8.7634 | 0.03 | Q | \| | \| | \| | V\| |
| 26+35 | 8.7636 | 0.03 | Q | \| | \| | \| | V\| |
| 26+40 | 8.7638 | 0.02 | Q | \| | \| | \| | V\| |
| 26+45 | 8.7639 | 0.02 | Q | \| | \| | \| | V\| |
| 26+50 | 8.7640 | 0.02 | Q | \| | \| | \| | V\| |
| 26+55 | 8.7641 | 0.02 | Q | \| | \| | \| | V\| |
| 27+ 0 | 8.7642 | 0.02 | Q | \| | \| | \| | V\| |
| 27+ 5 | 8.7643 | 0.01 | Q | \| | \| | \| | V\| |
| 27+10 | 8.7644 | 0.01 | Q | \| | \| | \| | V\| |
| 27+15 | 8.7645 | 0.01 | Q | \| | \| | \| | V\| |
| 27+20 | 8.7645 | 0.01 | Q | \| | \| | \| | V\| |
| 27+25 | 8.7646 | 0.01 | Q | \| | \| | \| | V\| |
| 27+30 | 8.7646 | 0.00 | Q | \| | \| | \| | V\| |
| 27+35 | 8.7646 | 0.00 | Q | \| | \| | \| | V\| |
| 27+40 | 8.7646 | 0.00 | Q | \| | \| | \| | V\| |
| 27+45 | 8.7647 | 0.00 | Q | \| | \| | \| | V\| |
| 27+50 | 8.7647 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 11
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 9.20 | 1 | 1.28 |
| Rainfall data for year 100 | | |
| 9.20 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 9.20 | 24 | 2.38 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 9.20 | 1.000 | 0.360 | 1.000 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 9.20 | 1.000 | 62.0 | 80.6 | 2.41 | 0.352 |

Area-averaged catchment yield fraction, Y = 0.352
Area-averaged low loss fraction, Yb = 0.648
User entry of time of concentration = 0.520 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 9.20(Ac.)
Catchment Lag time = 0.416 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 20.0321
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.648 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.607(In)
Computed peak 30-minute rainfall = 1.040(In)
Specified peak 1-hour rainfall = 1.280(In)
Computed peak 3-hour rainfall = 1.599(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.380(In)

Rainfall depth area reduction factors:
Using a total area of 9.20(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.607(In)
30-minute factor = 1.000 Adjusted rainfall = 1.039(In)
1-hour factor = 1.000 Adjusted rainfall = 1.279(In)
3-hour factor = 1.000 Adjusted rainfall = 1.599(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.380(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 111.26 (CFS)) | |
| 1 | 0.995 | 1.107 |
| 2 | 4.516 | 3.918 |
| 3 | 11.300 | 7.549 |
| 4 | 26.240 | 16.622 |
| 5 | 43.399 | 19.092 |
| 6 | 55.091 | 13.008 |
| 7 | 62.875 | 8.660 |
| 8 | 68.500 | 6.259 |
| 9 | 73.033 | 5.043 |
| 10 | 76.661 | 4.037 |
| 11 | 79.664 | 3.342 |
| 12 | 82.167 | 2.784 |
| 13 | 84.311 | 2.385 |
| 14 | 86.250 | 2.157 |

| | | |
|---|---|---|
| 15 | 87.937 | 1.877 |
| 16 | 89.330 | 1.550 |
| 17 | 90.508 | 1.310 |
| 18 | 91.609 | 1.226 |
| 19 | 92.585 | 1.086 |
| 20 | 93.487 | 1.004 |
| 21 | 94.262 | 0.862 |
| 22 | 94.943 | 0.758 |
| 23 | 95.601 | 0.732 |
| 24 | 96.140 | 0.599 |
| 25 | 96.660 | 0.579 |
| 26 | 97.095 | 0.483 |
| 27 | 97.455 | 0.401 |
| 28 | 97.792 | 0.375 |
| 29 | 98.009 | 0.241 |
| 30 | 98.210 | 0.223 |
| 31 | 98.432 | 0.247 |
| 32 | 98.672 | 0.267 |
| 33 | 98.913 | 0.267 |
| 34 | 99.153 | 0.267 |
| 35 | 99.393 | 0.267 |
| 36 | 99.570 | 0.196 |
| 37 | 99.695 | 0.139 |
| 38 | 99.820 | 0.139 |
| 39 | 100.000 | 0.070 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6071 | 0.6071 |
| 2 | 0.7474 | 0.1403 |
| 3 | 0.8441 | 0.0967 |
| 4 | 0.9202 | 0.0761 |
| 5 | 0.9839 | 0.0637 |
| 6 | 1.0392 | 0.0553 |
| 7 | 1.0884 | 0.0492 |
| 8 | 1.1329 | 0.0445 |
| 9 | 1.1737 | 0.0407 |
| 10 | 1.2113 | 0.0377 |
| 11 | 1.2465 | 0.0351 |
| 12 | 1.2794 | 0.0330 |
| 13 | 1.3004 | 0.0209 |
| 14 | 1.3201 | 0.0197 |
| 15 | 1.3387 | 0.0186 |
| 16 | 1.3563 | 0.0176 |
| 17 | 1.3731 | 0.0168 |
| 18 | 1.3891 | 0.0160 |
| 19 | 1.4045 | 0.0153 |
| 20 | 1.4192 | 0.0147 |
| 21 | 1.4333 | 0.0141 |
| 22 | 1.4469 | 0.0136 |
| 23 | 1.4600 | 0.0131 |
| 24 | 1.4726 | 0.0127 |
| 25 | 1.4849 | 0.0122 |
| 26 | 1.4968 | 0.0119 |
| 27 | 1.5083 | 0.0115 |
| 28 | 1.5194 | 0.0112 |
| 29 | 1.5303 | 0.0109 |
| 30 | 1.5408 | 0.0106 |
| 31 | 1.5511 | 0.0103 |

| | | |
|---|---|---|
| 32 | 1.5612 | 0.0100 |
| 33 | 1.5709 | 0.0098 |
| 34 | 1.5805 | 0.0095 |
| 35 | 1.5898 | 0.0093 |
| 36 | 1.5989 | 0.0091 |
| 37 | 1.6078 | 0.0089 |
| 38 | 1.6165 | 0.0087 |
| 39 | 1.6250 | 0.0085 |
| 40 | 1.6334 | 0.0084 |
| 41 | 1.6416 | 0.0082 |
| 42 | 1.6496 | 0.0080 |
| 43 | 1.6575 | 0.0079 |
| 44 | 1.6652 | 0.0077 |
| 45 | 1.6728 | 0.0076 |
| 46 | 1.6803 | 0.0075 |
| 47 | 1.6876 | 0.0073 |
| 48 | 1.6949 | 0.0072 |
| 49 | 1.7020 | 0.0071 |
| 50 | 1.7089 | 0.0070 |
| 51 | 1.7158 | 0.0069 |
| 52 | 1.7226 | 0.0068 |
| 53 | 1.7292 | 0.0067 |
| 54 | 1.7358 | 0.0066 |
| 55 | 1.7422 | 0.0065 |
| 56 | 1.7486 | 0.0064 |
| 57 | 1.7549 | 0.0063 |
| 58 | 1.7611 | 0.0062 |
| 59 | 1.7672 | 0.0061 |
| 60 | 1.7732 | 0.0060 |
| 61 | 1.7792 | 0.0059 |
| 62 | 1.7850 | 0.0059 |
| 63 | 1.7908 | 0.0058 |
| 64 | 1.7966 | 0.0057 |
| 65 | 1.8022 | 0.0057 |
| 66 | 1.8078 | 0.0056 |
| 67 | 1.8133 | 0.0055 |
| 68 | 1.8188 | 0.0055 |
| 69 | 1.8242 | 0.0054 |
| 70 | 1.8295 | 0.0053 |
| 71 | 1.8347 | 0.0053 |
| 72 | 1.8399 | 0.0052 |
| 73 | 1.8447 | 0.0047 |
| 74 | 1.8493 | 0.0047 |
| 75 | 1.8539 | 0.0046 |
| 76 | 1.8585 | 0.0046 |
| 77 | 1.8630 | 0.0045 |
| 78 | 1.8675 | 0.0045 |
| 79 | 1.8719 | 0.0044 |
| 80 | 1.8763 | 0.0044 |
| 81 | 1.8806 | 0.0043 |
| 82 | 1.8849 | 0.0043 |
| 83 | 1.8892 | 0.0042 |
| 84 | 1.8934 | 0.0042 |
| 85 | 1.8975 | 0.0042 |
| 86 | 1.9016 | 0.0041 |
| 87 | 1.9057 | 0.0041 |
| 88 | 1.9098 | 0.0040 |
| 89 | 1.9138 | 0.0040 |
| 90 | 1.9178 | 0.0040 |

| | | |
|---|---|---|
| 91 | 1.9217 | 0.0039 |
| 92 | 1.9256 | 0.0039 |
| 93 | 1.9295 | 0.0039 |
| 94 | 1.9333 | 0.0038 |
| 95 | 1.9371 | 0.0038 |
| 96 | 1.9409 | 0.0038 |
| 97 | 1.9446 | 0.0037 |
| 98 | 1.9483 | 0.0037 |
| 99 | 1.9520 | 0.0037 |
| 100 | 1.9556 | 0.0036 |
| 101 | 1.9593 | 0.0036 |
| 102 | 1.9628 | 0.0036 |
| 103 | 1.9664 | 0.0036 |
| 104 | 1.9699 | 0.0035 |
| 105 | 1.9734 | 0.0035 |
| 106 | 1.9769 | 0.0035 |
| 107 | 1.9804 | 0.0034 |
| 108 | 1.9838 | 0.0034 |
| 109 | 1.9872 | 0.0034 |
| 110 | 1.9906 | 0.0034 |
| 111 | 1.9939 | 0.0033 |
| 112 | 1.9972 | 0.0033 |
| 113 | 2.0005 | 0.0033 |
| 114 | 2.0038 | 0.0033 |
| 115 | 2.0070 | 0.0033 |
| 116 | 2.0103 | 0.0032 |
| 117 | 2.0135 | 0.0032 |
| 118 | 2.0167 | 0.0032 |
| 119 | 2.0198 | 0.0032 |
| 120 | 2.0230 | 0.0031 |
| 121 | 2.0261 | 0.0031 |
| 122 | 2.0292 | 0.0031 |
| 123 | 2.0323 | 0.0031 |
| 124 | 2.0353 | 0.0031 |
| 125 | 2.0384 | 0.0030 |
| 126 | 2.0414 | 0.0030 |
| 127 | 2.0444 | 0.0030 |
| 128 | 2.0474 | 0.0030 |
| 129 | 2.0503 | 0.0030 |
| 130 | 2.0533 | 0.0029 |
| 131 | 2.0562 | 0.0029 |
| 132 | 2.0591 | 0.0029 |
| 133 | 2.0620 | 0.0029 |
| 134 | 2.0648 | 0.0029 |
| 135 | 2.0677 | 0.0029 |
| 136 | 2.0705 | 0.0028 |
| 137 | 2.0733 | 0.0028 |
| 138 | 2.0761 | 0.0028 |
| 139 | 2.0789 | 0.0028 |
| 140 | 2.0817 | 0.0028 |
| 141 | 2.0844 | 0.0028 |
| 142 | 2.0872 | 0.0027 |
| 143 | 2.0899 | 0.0027 |
| 144 | 2.0926 | 0.0027 |
| 145 | 2.0953 | 0.0027 |
| 146 | 2.0980 | 0.0027 |
| 147 | 2.1006 | 0.0027 |
| 148 | 2.1033 | 0.0026 |
| 149 | 2.1059 | 0.0026 |

| | | |
|---|---|---|
| 150 | 2.1085 | 0.0026 |
| 151 | 2.1111 | 0.0026 |
| 152 | 2.1137 | 0.0026 |
| 153 | 2.1163 | 0.0026 |
| 154 | 2.1189 | 0.0026 |
| 155 | 2.1214 | 0.0025 |
| 156 | 2.1239 | 0.0025 |
| 157 | 2.1265 | 0.0025 |
| 158 | 2.1290 | 0.0025 |
| 159 | 2.1315 | 0.0025 |
| 160 | 2.1339 | 0.0025 |
| 161 | 2.1364 | 0.0025 |
| 162 | 2.1389 | 0.0025 |
| 163 | 2.1413 | 0.0024 |
| 164 | 2.1437 | 0.0024 |
| 165 | 2.1462 | 0.0024 |
| 166 | 2.1486 | 0.0024 |
| 167 | 2.1510 | 0.0024 |
| 168 | 2.1534 | 0.0024 |
| 169 | 2.1557 | 0.0024 |
| 170 | 2.1581 | 0.0024 |
| 171 | 2.1604 | 0.0024 |
| 172 | 2.1628 | 0.0023 |
| 173 | 2.1651 | 0.0023 |
| 174 | 2.1674 | 0.0023 |
| 175 | 2.1697 | 0.0023 |
| 176 | 2.1720 | 0.0023 |
| 177 | 2.1743 | 0.0023 |
| 178 | 2.1766 | 0.0023 |
| 179 | 2.1789 | 0.0023 |
| 180 | 2.1811 | 0.0023 |
| 181 | 2.1834 | 0.0022 |
| 182 | 2.1856 | 0.0022 |
| 183 | 2.1878 | 0.0022 |
| 184 | 2.1900 | 0.0022 |
| 185 | 2.1922 | 0.0022 |
| 186 | 2.1944 | 0.0022 |
| 187 | 2.1966 | 0.0022 |
| 188 | 2.1988 | 0.0022 |
| 189 | 2.2010 | 0.0022 |
| 190 | 2.2031 | 0.0022 |
| 191 | 2.2053 | 0.0021 |
| 192 | 2.2074 | 0.0021 |
| 193 | 2.2095 | 0.0021 |
| 194 | 2.2117 | 0.0021 |
| 195 | 2.2138 | 0.0021 |
| 196 | 2.2159 | 0.0021 |
| 197 | 2.2180 | 0.0021 |
| 198 | 2.2201 | 0.0021 |
| 199 | 2.2221 | 0.0021 |
| 200 | 2.2242 | 0.0021 |
| 201 | 2.2263 | 0.0021 |
| 202 | 2.2283 | 0.0021 |
| 203 | 2.2304 | 0.0020 |
| 204 | 2.2324 | 0.0020 |
| 205 | 2.2344 | 0.0020 |
| 206 | 2.2364 | 0.0020 |
| 207 | 2.2384 | 0.0020 |
| 208 | 2.2405 | 0.0020 |

| | | |
|---|---|---|
| 209 | 2.2424 | 0.0020 |
| 210 | 2.2444 | 0.0020 |
| 211 | 2.2464 | 0.0020 |
| 212 | 2.2484 | 0.0020 |
| 213 | 2.2504 | 0.0020 |
| 214 | 2.2523 | 0.0020 |
| 215 | 2.2543 | 0.0020 |
| 216 | 2.2562 | 0.0019 |
| 217 | 2.2581 | 0.0019 |
| 218 | 2.2601 | 0.0019 |
| 219 | 2.2620 | 0.0019 |
| 220 | 2.2639 | 0.0019 |
| 221 | 2.2658 | 0.0019 |
| 222 | 2.2677 | 0.0019 |
| 223 | 2.2696 | 0.0019 |
| 224 | 2.2715 | 0.0019 |
| 225 | 2.2734 | 0.0019 |
| 226 | 2.2752 | 0.0019 |
| 227 | 2.2771 | 0.0019 |
| 228 | 2.2790 | 0.0019 |
| 229 | 2.2808 | 0.0019 |
| 230 | 2.2827 | 0.0018 |
| 231 | 2.2845 | 0.0018 |
| 232 | 2.2863 | 0.0018 |
| 233 | 2.2882 | 0.0018 |
| 234 | 2.2900 | 0.0018 |
| 235 | 2.2918 | 0.0018 |
| 236 | 2.2936 | 0.0018 |
| 237 | 2.2954 | 0.0018 |
| 238 | 2.2972 | 0.0018 |
| 239 | 2.2990 | 0.0018 |
| 240 | 2.3008 | 0.0018 |
| 241 | 2.3025 | 0.0018 |
| 242 | 2.3043 | 0.0018 |
| 243 | 2.3061 | 0.0018 |
| 244 | 2.3078 | 0.0018 |
| 245 | 2.3096 | 0.0018 |
| 246 | 2.3113 | 0.0017 |
| 247 | 2.3131 | 0.0017 |
| 248 | 2.3148 | 0.0017 |
| 249 | 2.3165 | 0.0017 |
| 250 | 2.3183 | 0.0017 |
| 251 | 2.3200 | 0.0017 |
| 252 | 2.3217 | 0.0017 |
| 253 | 2.3234 | 0.0017 |
| 254 | 2.3251 | 0.0017 |
| 255 | 2.3268 | 0.0017 |
| 256 | 2.3285 | 0.0017 |
| 257 | 2.3302 | 0.0017 |
| 258 | 2.3319 | 0.0017 |
| 259 | 2.3335 | 0.0017 |
| 260 | 2.3352 | 0.0017 |
| 261 | 2.3369 | 0.0017 |
| 262 | 2.3385 | 0.0017 |
| 263 | 2.3402 | 0.0017 |
| 264 | 2.3418 | 0.0016 |
| 265 | 2.3435 | 0.0016 |
| 266 | 2.3451 | 0.0016 |
| 267 | 2.3468 | 0.0016 |

| | | |
|---|---|---|
| 268 | 2.3484 | 0.0016 |
| 269 | 2.3500 | 0.0016 |
| 270 | 2.3516 | 0.0016 |
| 271 | 2.3532 | 0.0016 |
| 272 | 2.3549 | 0.0016 |
| 273 | 2.3565 | 0.0016 |
| 274 | 2.3581 | 0.0016 |
| 275 | 2.3597 | 0.0016 |
| 276 | 2.3612 | 0.0016 |
| 277 | 2.3628 | 0.0016 |
| 278 | 2.3644 | 0.0016 |
| 279 | 2.3660 | 0.0016 |
| 280 | 2.3676 | 0.0016 |
| 281 | 2.3691 | 0.0016 |
| 282 | 2.3707 | 0.0016 |
| 283 | 2.3722 | 0.0016 |
| 284 | 2.3738 | 0.0016 |
| 285 | 2.3754 | 0.0015 |
| 286 | 2.3769 | 0.0015 |
| 287 | 2.3784 | 0.0015 |
| 288 | 2.3800 | 0.0015 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0015 | 0.0010 | 0.0005 |
| 2 | 0.0015 | 0.0010 | 0.0005 |
| 3 | 0.0015 | 0.0010 | 0.0005 |
| 4 | 0.0016 | 0.0010 | 0.0005 |
| 5 | 0.0016 | 0.0010 | 0.0005 |
| 6 | 0.0016 | 0.0010 | 0.0006 |
| 7 | 0.0016 | 0.0010 | 0.0006 |
| 8 | 0.0016 | 0.0010 | 0.0006 |
| 9 | 0.0016 | 0.0010 | 0.0006 |
| 10 | 0.0016 | 0.0010 | 0.0006 |
| 11 | 0.0016 | 0.0010 | 0.0006 |
| 12 | 0.0016 | 0.0010 | 0.0006 |
| 13 | 0.0016 | 0.0010 | 0.0006 |
| 14 | 0.0016 | 0.0011 | 0.0006 |
| 15 | 0.0016 | 0.0011 | 0.0006 |
| 16 | 0.0016 | 0.0011 | 0.0006 |
| 17 | 0.0016 | 0.0011 | 0.0006 |
| 18 | 0.0017 | 0.0011 | 0.0006 |
| 19 | 0.0017 | 0.0011 | 0.0006 |
| 20 | 0.0017 | 0.0011 | 0.0006 |
| 21 | 0.0017 | 0.0011 | 0.0006 |
| 22 | 0.0017 | 0.0011 | 0.0006 |
| 23 | 0.0017 | 0.0011 | 0.0006 |
| 24 | 0.0017 | 0.0011 | 0.0006 |
| 25 | 0.0017 | 0.0011 | 0.0006 |
| 26 | 0.0017 | 0.0011 | 0.0006 |
| 27 | 0.0017 | 0.0011 | 0.0006 |
| 28 | 0.0017 | 0.0011 | 0.0006 |
| 29 | 0.0017 | 0.0011 | 0.0006 |
| 30 | 0.0018 | 0.0011 | 0.0006 |
| 31 | 0.0018 | 0.0011 | 0.0006 |
| 32 | 0.0018 | 0.0011 | 0.0006 |
| 33 | 0.0018 | 0.0012 | 0.0006 |

| | | | |
|---|---|---|---|
| 34 | 0.0018 | 0.0012 | 0.0006 |
| 35 | 0.0018 | 0.0012 | 0.0006 |
| 36 | 0.0018 | 0.0012 | 0.0006 |
| 37 | 0.0018 | 0.0012 | 0.0006 |
| 38 | 0.0018 | 0.0012 | 0.0006 |
| 39 | 0.0018 | 0.0012 | 0.0006 |
| 40 | 0.0018 | 0.0012 | 0.0006 |
| 41 | 0.0019 | 0.0012 | 0.0007 |
| 42 | 0.0019 | 0.0012 | 0.0007 |
| 43 | 0.0019 | 0.0012 | 0.0007 |
| 44 | 0.0019 | 0.0012 | 0.0007 |
| 45 | 0.0019 | 0.0012 | 0.0007 |
| 46 | 0.0019 | 0.0012 | 0.0007 |
| 47 | 0.0019 | 0.0012 | 0.0007 |
| 48 | 0.0019 | 0.0012 | 0.0007 |
| 49 | 0.0019 | 0.0013 | 0.0007 |
| 50 | 0.0020 | 0.0013 | 0.0007 |
| 51 | 0.0020 | 0.0013 | 0.0007 |
| 52 | 0.0020 | 0.0013 | 0.0007 |
| 53 | 0.0020 | 0.0013 | 0.0007 |
| 54 | 0.0020 | 0.0013 | 0.0007 |
| 55 | 0.0020 | 0.0013 | 0.0007 |
| 56 | 0.0020 | 0.0013 | 0.0007 |
| 57 | 0.0020 | 0.0013 | 0.0007 |
| 58 | 0.0020 | 0.0013 | 0.0007 |
| 59 | 0.0021 | 0.0013 | 0.0007 |
| 60 | 0.0021 | 0.0013 | 0.0007 |
| 61 | 0.0021 | 0.0014 | 0.0007 |
| 62 | 0.0021 | 0.0014 | 0.0007 |
| 63 | 0.0021 | 0.0014 | 0.0007 |
| 64 | 0.0021 | 0.0014 | 0.0007 |
| 65 | 0.0021 | 0.0014 | 0.0008 |
| 66 | 0.0021 | 0.0014 | 0.0008 |
| 67 | 0.0022 | 0.0014 | 0.0008 |
| 68 | 0.0022 | 0.0014 | 0.0008 |
| 69 | 0.0022 | 0.0014 | 0.0008 |
| 70 | 0.0022 | 0.0014 | 0.0008 |
| 71 | 0.0022 | 0.0014 | 0.0008 |
| 72 | 0.0022 | 0.0014 | 0.0008 |
| 73 | 0.0023 | 0.0015 | 0.0008 |
| 74 | 0.0023 | 0.0015 | 0.0008 |
| 75 | 0.0023 | 0.0015 | 0.0008 |
| 76 | 0.0023 | 0.0015 | 0.0008 |
| 77 | 0.0023 | 0.0015 | 0.0008 |
| 78 | 0.0023 | 0.0015 | 0.0008 |
| 79 | 0.0024 | 0.0015 | 0.0008 |
| 80 | 0.0024 | 0.0015 | 0.0008 |
| 81 | 0.0024 | 0.0015 | 0.0008 |
| 82 | 0.0024 | 0.0016 | 0.0008 |
| 83 | 0.0024 | 0.0016 | 0.0009 |
| 84 | 0.0024 | 0.0016 | 0.0009 |
| 85 | 0.0025 | 0.0016 | 0.0009 |
| 86 | 0.0025 | 0.0016 | 0.0009 |
| 87 | 0.0025 | 0.0016 | 0.0009 |
| 88 | 0.0025 | 0.0016 | 0.0009 |
| 89 | 0.0025 | 0.0016 | 0.0009 |
| 90 | 0.0025 | 0.0017 | 0.0009 |
| 91 | 0.0026 | 0.0017 | 0.0009 |
| 92 | 0.0026 | 0.0017 | 0.0009 |

| | | | |
|---|---|---|---|
| 93 | 0.0026 | 0.0017 | 0.0009 |
| 94 | 0.0026 | 0.0017 | 0.0009 |
| 95 | 0.0027 | 0.0017 | 0.0009 |
| 96 | 0.0027 | 0.0017 | 0.0009 |
| 97 | 0.0027 | 0.0018 | 0.0010 |
| 98 | 0.0027 | 0.0018 | 0.0010 |
| 99 | 0.0028 | 0.0018 | 0.0010 |
| 100 | 0.0028 | 0.0018 | 0.0010 |
| 101 | 0.0028 | 0.0018 | 0.0010 |
| 102 | 0.0028 | 0.0018 | 0.0010 |
| 103 | 0.0029 | 0.0018 | 0.0010 |
| 104 | 0.0029 | 0.0019 | 0.0010 |
| 105 | 0.0029 | 0.0019 | 0.0010 |
| 106 | 0.0029 | 0.0019 | 0.0010 |
| 107 | 0.0030 | 0.0019 | 0.0010 |
| 108 | 0.0030 | 0.0019 | 0.0010 |
| 109 | 0.0030 | 0.0020 | 0.0011 |
| 110 | 0.0030 | 0.0020 | 0.0011 |
| 111 | 0.0031 | 0.0020 | 0.0011 |
| 112 | 0.0031 | 0.0020 | 0.0011 |
| 113 | 0.0031 | 0.0020 | 0.0011 |
| 114 | 0.0032 | 0.0020 | 0.0011 |
| 115 | 0.0032 | 0.0021 | 0.0011 |
| 116 | 0.0032 | 0.0021 | 0.0011 |
| 117 | 0.0033 | 0.0021 | 0.0012 |
| 118 | 0.0033 | 0.0021 | 0.0012 |
| 119 | 0.0033 | 0.0022 | 0.0012 |
| 120 | 0.0034 | 0.0022 | 0.0012 |
| 121 | 0.0034 | 0.0022 | 0.0012 |
| 122 | 0.0034 | 0.0022 | 0.0012 |
| 123 | 0.0035 | 0.0023 | 0.0012 |
| 124 | 0.0035 | 0.0023 | 0.0012 |
| 125 | 0.0036 | 0.0023 | 0.0013 |
| 126 | 0.0036 | 0.0023 | 0.0013 |
| 127 | 0.0037 | 0.0024 | 0.0013 |
| 128 | 0.0037 | 0.0024 | 0.0013 |
| 129 | 0.0038 | 0.0024 | 0.0013 |
| 130 | 0.0038 | 0.0025 | 0.0013 |
| 131 | 0.0039 | 0.0025 | 0.0014 |
| 132 | 0.0039 | 0.0025 | 0.0014 |
| 133 | 0.0040 | 0.0026 | 0.0014 |
| 134 | 0.0040 | 0.0026 | 0.0014 |
| 135 | 0.0041 | 0.0026 | 0.0014 |
| 136 | 0.0041 | 0.0027 | 0.0015 |
| 137 | 0.0042 | 0.0027 | 0.0015 |
| 138 | 0.0042 | 0.0028 | 0.0015 |
| 139 | 0.0043 | 0.0028 | 0.0015 |
| 140 | 0.0044 | 0.0028 | 0.0015 |
| 141 | 0.0045 | 0.0029 | 0.0016 |
| 142 | 0.0045 | 0.0029 | 0.0016 |
| 143 | 0.0046 | 0.0030 | 0.0016 |
| 144 | 0.0047 | 0.0030 | 0.0016 |
| 145 | 0.0052 | 0.0034 | 0.0018 |
| 146 | 0.0053 | 0.0034 | 0.0019 |
| 147 | 0.0054 | 0.0035 | 0.0019 |
| 148 | 0.0055 | 0.0035 | 0.0019 |
| 149 | 0.0056 | 0.0036 | 0.0020 |
| 150 | 0.0057 | 0.0037 | 0.0020 |
| 151 | 0.0058 | 0.0038 | 0.0020 |

| | | | |
|---|---|---|---|
| 152 | 0.0059 | 0.0038 | 0.0021 |
| 153 | 0.0060 | 0.0039 | 0.0021 |
| 154 | 0.0061 | 0.0040 | 0.0021 |
| 155 | 0.0063 | 0.0041 | 0.0022 |
| 156 | 0.0064 | 0.0041 | 0.0022 |
| 157 | 0.0066 | 0.0043 | 0.0023 |
| 158 | 0.0067 | 0.0043 | 0.0023 |
| 159 | 0.0069 | 0.0045 | 0.0024 |
| 160 | 0.0070 | 0.0045 | 0.0025 |
| 161 | 0.0072 | 0.0047 | 0.0025 |
| 162 | 0.0073 | 0.0048 | 0.0026 |
| 163 | 0.0076 | 0.0049 | 0.0027 |
| 164 | 0.0077 | 0.0050 | 0.0027 |
| 165 | 0.0080 | 0.0052 | 0.0028 |
| 166 | 0.0082 | 0.0053 | 0.0029 |
| 167 | 0.0085 | 0.0055 | 0.0030 |
| 168 | 0.0087 | 0.0056 | 0.0031 |
| 169 | 0.0091 | 0.0059 | 0.0032 |
| 170 | 0.0093 | 0.0060 | 0.0033 |
| 171 | 0.0098 | 0.0063 | 0.0034 |
| 172 | 0.0100 | 0.0065 | 0.0035 |
| 173 | 0.0106 | 0.0068 | 0.0037 |
| 174 | 0.0109 | 0.0070 | 0.0038 |
| 175 | 0.0115 | 0.0075 | 0.0040 |
| 176 | 0.0119 | 0.0077 | 0.0042 |
| 177 | 0.0127 | 0.0082 | 0.0045 |
| 178 | 0.0131 | 0.0085 | 0.0046 |
| 179 | 0.0141 | 0.0092 | 0.0050 |
| 180 | 0.0147 | 0.0095 | 0.0052 |
| 181 | 0.0160 | 0.0104 | 0.0056 |
| 182 | 0.0168 | 0.0109 | 0.0059 |
| 183 | 0.0186 | 0.0121 | 0.0065 |
| 184 | 0.0197 | 0.0128 | 0.0069 |
| 185 | 0.0330 | 0.0214 | 0.0116 |
| 186 | 0.0351 | 0.0228 | 0.0124 |
| 187 | 0.0407 | 0.0264 | 0.0143 |
| 188 | 0.0445 | 0.0288 | 0.0156 |
| 189 | 0.0553 | 0.0300 | 0.0254 |
| 190 | 0.0637 | 0.0300 | 0.0337 |
| 191 | 0.0967 | 0.0300 | 0.0667 |
| 192 | 0.1403 | 0.0300 | 0.1104 |
| 193 | 0.6071 | 0.0300 | 0.5771 |
| 194 | 0.0761 | 0.0300 | 0.0461 |
| 195 | 0.0492 | 0.0300 | 0.0192 |
| 196 | 0.0377 | 0.0244 | 0.0133 |
| 197 | 0.0209 | 0.0136 | 0.0074 |
| 198 | 0.0176 | 0.0114 | 0.0062 |
| 199 | 0.0153 | 0.0099 | 0.0054 |
| 200 | 0.0136 | 0.0088 | 0.0048 |
| 201 | 0.0122 | 0.0079 | 0.0043 |
| 202 | 0.0112 | 0.0072 | 0.0039 |
| 203 | 0.0103 | 0.0067 | 0.0036 |
| 204 | 0.0095 | 0.0062 | 0.0034 |
| 205 | 0.0089 | 0.0058 | 0.0031 |
| 206 | 0.0084 | 0.0054 | 0.0029 |
| 207 | 0.0079 | 0.0051 | 0.0028 |
| 208 | 0.0075 | 0.0048 | 0.0026 |
| 209 | 0.0071 | 0.0046 | 0.0025 |
| 210 | 0.0068 | 0.0044 | 0.0024 |

| | | | |
|---|---|---|---|
| 211 | 0.0065 | 0.0042 | 0.0023 |
| 212 | 0.0062 | 0.0040 | 0.0022 |
| 213 | 0.0059 | 0.0039 | 0.0021 |
| 214 | 0.0057 | 0.0037 | 0.0020 |
| 215 | 0.0055 | 0.0036 | 0.0019 |
| 216 | 0.0053 | 0.0035 | 0.0019 |
| 217 | 0.0047 | 0.0031 | 0.0017 |
| 218 | 0.0046 | 0.0030 | 0.0016 |
| 219 | 0.0044 | 0.0029 | 0.0016 |
| 220 | 0.0043 | 0.0028 | 0.0015 |
| 221 | 0.0042 | 0.0027 | 0.0015 |
| 222 | 0.0040 | 0.0026 | 0.0014 |
| 223 | 0.0039 | 0.0026 | 0.0014 |
| 224 | 0.0038 | 0.0025 | 0.0013 |
| 225 | 0.0037 | 0.0024 | 0.0013 |
| 226 | 0.0036 | 0.0024 | 0.0013 |
| 227 | 0.0036 | 0.0023 | 0.0013 |
| 228 | 0.0035 | 0.0023 | 0.0012 |
| 229 | 0.0034 | 0.0022 | 0.0012 |
| 230 | 0.0033 | 0.0022 | 0.0012 |
| 231 | 0.0033 | 0.0021 | 0.0011 |
| 232 | 0.0032 | 0.0021 | 0.0011 |
| 233 | 0.0031 | 0.0020 | 0.0011 |
| 234 | 0.0031 | 0.0020 | 0.0011 |
| 235 | 0.0030 | 0.0019 | 0.0011 |
| 236 | 0.0029 | 0.0019 | 0.0010 |
| 237 | 0.0029 | 0.0019 | 0.0010 |
| 238 | 0.0028 | 0.0018 | 0.0010 |
| 239 | 0.0028 | 0.0018 | 0.0010 |
| 240 | 0.0027 | 0.0018 | 0.0010 |
| 241 | 0.0027 | 0.0017 | 0.0009 |
| 242 | 0.0026 | 0.0017 | 0.0009 |
| 243 | 0.0026 | 0.0017 | 0.0009 |
| 244 | 0.0026 | 0.0017 | 0.0009 |
| 245 | 0.0025 | 0.0016 | 0.0009 |
| 246 | 0.0025 | 0.0016 | 0.0009 |
| 247 | 0.0024 | 0.0016 | 0.0009 |
| 248 | 0.0024 | 0.0016 | 0.0008 |
| 249 | 0.0024 | 0.0015 | 0.0008 |
| 250 | 0.0023 | 0.0015 | 0.0008 |
| 251 | 0.0023 | 0.0015 | 0.0008 |
| 252 | 0.0023 | 0.0015 | 0.0008 |
| 253 | 0.0022 | 0.0015 | 0.0008 |
| 254 | 0.0022 | 0.0014 | 0.0008 |
| 255 | 0.0022 | 0.0014 | 0.0008 |
| 256 | 0.0022 | 0.0014 | 0.0008 |
| 257 | 0.0021 | 0.0014 | 0.0007 |
| 258 | 0.0021 | 0.0014 | 0.0007 |
| 259 | 0.0021 | 0.0013 | 0.0007 |
| 260 | 0.0021 | 0.0013 | 0.0007 |
| 261 | 0.0020 | 0.0013 | 0.0007 |
| 262 | 0.0020 | 0.0013 | 0.0007 |
| 263 | 0.0020 | 0.0013 | 0.0007 |
| 264 | 0.0020 | 0.0013 | 0.0007 |
| 265 | 0.0019 | 0.0013 | 0.0007 |
| 266 | 0.0019 | 0.0012 | 0.0007 |
| 267 | 0.0019 | 0.0012 | 0.0007 |
| 268 | 0.0019 | 0.0012 | 0.0007 |
| 269 | 0.0019 | 0.0012 | 0.0007 |

| | | | |
|---|---|---|---|
| 270 | 0.0018 | 0.0012 | 0.0006 |
| 271 | 0.0018 | 0.0012 | 0.0006 |
| 272 | 0.0018 | 0.0012 | 0.0006 |
| 273 | 0.0018 | 0.0012 | 0.0006 |
| 274 | 0.0018 | 0.0011 | 0.0006 |
| 275 | 0.0017 | 0.0011 | 0.0006 |
| 276 | 0.0017 | 0.0011 | 0.0006 |
| 277 | 0.0017 | 0.0011 | 0.0006 |
| 278 | 0.0017 | 0.0011 | 0.0006 |
| 279 | 0.0017 | 0.0011 | 0.0006 |
| 280 | 0.0017 | 0.0011 | 0.0006 |
| 281 | 0.0016 | 0.0011 | 0.0006 |
| 282 | 0.0016 | 0.0011 | 0.0006 |
| 283 | 0.0016 | 0.0010 | 0.0006 |
| 284 | 0.0016 | 0.0010 | 0.0006 |
| 285 | 0.0016 | 0.0010 | 0.0006 |
| 286 | 0.0016 | 0.0010 | 0.0006 |
| 287 | 0.0016 | 0.0010 | 0.0005 |
| 288 | 0.0015 | 0.0010 | 0.0005 |

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Total soil rain loss = 1.05(In)
Total effective rainfall = 1.33(In)
Peak flow rate in flood hydrograph = 14.60(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0000 | 0.00 | Q | | | | |
| 0+15 | 0.0001 | 0.01 | Q | | | | |
| 0+20 | 0.0002 | 0.02 | Q | | | | |
| 0+25 | 0.0004 | 0.03 | Q | | | | |
| 0+30 | 0.0006 | 0.03 | Q | | | | |
| 0+35 | 0.0009 | 0.04 | Q | | | | |
| 0+40 | 0.0011 | 0.04 | Q | | | | |
| 0+45 | 0.0014 | 0.04 | Q | | | | |
| 0+50 | 0.0018 | 0.05 | Q | | | | |
| 0+55 | 0.0021 | 0.05 | Q | | | | |
| 1+ 0 | 0.0025 | 0.05 | Q | | | | |
| 1+ 5 | 0.0028 | 0.05 | Q | | | | |
| 1+10 | 0.0032 | 0.05 | Q | | | | |
| 1+15 | 0.0036 | 0.05 | Q | | | | |
| 1+20 | 0.0039 | 0.06 | Q | | | | |
| 1+25 | 0.0043 | 0.06 | Q | | | | |
| 1+30 | 0.0047 | 0.06 | Q | | | | |
| 1+35 | 0.0051 | 0.06 | Q | | | | |
| 1+40 | 0.0056 | 0.06 | Q | | | | |
| 1+45 | 0.0060 | 0.06 | Q | | | | |
| 1+50 | 0.0064 | 0.06 | Q | | | | |
| 1+55 | 0.0068 | 0.06 | Q | | | | |
| 2+ 0 | 0.0072 | 0.06 | Q | | | | |
| 2+ 5 | 0.0077 | 0.06 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+10 | 0.0081 | 0.06 | Q | | | | |
| 2+15 | 0.0085 | 0.06 | Q | | | | |
| 2+20 | 0.0090 | 0.06 | Q | | | | |
| 2+25 | 0.0094 | 0.06 | Q | | | | |
| 2+30 | 0.0099 | 0.07 | Q | | | | |
| 2+35 | 0.0103 | 0.07 | Q | | | | |
| 2+40 | 0.0108 | 0.07 | Q | | | | |
| 2+45 | 0.0113 | 0.07 | Q | | | | |
| 2+50 | 0.0117 | 0.07 | Q | | | | |
| 2+55 | 0.0122 | 0.07 | Q | | | | |
| 3+ 0 | 0.0126 | 0.07 | Q | | | | |
| 3+ 5 | 0.0131 | 0.07 | Q | | | | |
| 3+10 | 0.0136 | 0.07 | Q | | | | |
| 3+15 | 0.0141 | 0.07 | Q | | | | |
| 3+20 | 0.0145 | 0.07 | Q | | | | |
| 3+25 | 0.0150 | 0.07 | Q | | | | |
| 3+30 | 0.0155 | 0.07 | Q | | | | |
| 3+35 | 0.0160 | 0.07 | Q | | | | |
| 3+40 | 0.0165 | 0.07 | Q | | | | |
| 3+45 | 0.0170 | 0.07 | Q | | | | |
| 3+50 | 0.0175 | 0.07 | Q | | | | |
| 3+55 | 0.0180 | 0.07 | Q | | | | |
| 4+ 0 | 0.0185 | 0.07 | Q | | | | |
| 4+ 5 | 0.0190 | 0.07 | Q | | | | |
| 4+10 | 0.0195 | 0.07 | Q | | | | |
| 4+15 | 0.0200 | 0.07 | Q | | | | |
| 4+20 | 0.0205 | 0.07 | Q | | | | |
| 4+25 | 0.0210 | 0.07 | Q | | | | |
| 4+30 | 0.0215 | 0.07 | Q | | | | |
| 4+35 | 0.0220 | 0.08 | Q | | | | |
| 4+40 | 0.0226 | 0.08 | Q | | | | |
| 4+45 | 0.0231 | 0.08 | Q | | | | |
| 4+50 | 0.0236 | 0.08 | Q | | | | |
| 4+55 | 0.0242 | 0.08 | Q | | | | |
| 5+ 0 | 0.0247 | 0.08 | Q | | | | |
| 5+ 5 | 0.0252 | 0.08 | Q | | | | |
| 5+10 | 0.0258 | 0.08 | QV | | | | |
| 5+15 | 0.0263 | 0.08 | QV | | | | |
| 5+20 | 0.0269 | 0.08 | QV | | | | |
| 5+25 | 0.0274 | 0.08 | QV | | | | |
| 5+30 | 0.0280 | 0.08 | QV | | | | |
| 5+35 | 0.0285 | 0.08 | QV | | | | |
| 5+40 | 0.0291 | 0.08 | QV | | | | |
| 5+45 | 0.0296 | 0.08 | QV | | | | |
| 5+50 | 0.0302 | 0.08 | QV | | | | |
| 5+55 | 0.0308 | 0.08 | QV | | | | |
| 6+ 0 | 0.0314 | 0.08 | QV | | | | |
| 6+ 5 | 0.0319 | 0.08 | QV | | | | |
| 6+10 | 0.0325 | 0.08 | QV | | | | |
| 6+15 | 0.0331 | 0.09 | QV | | | | |
| 6+20 | 0.0337 | 0.09 | QV | | | | |
| 6+25 | 0.0343 | 0.09 | QV | | | | |
| 6+30 | 0.0349 | 0.09 | QV | | | | |
| 6+35 | 0.0355 | 0.09 | QV | | | | |
| 6+40 | 0.0361 | 0.09 | QV | | | | |
| 6+45 | 0.0367 | 0.09 | QV | | | | |
| 6+50 | 0.0373 | 0.09 | QV | | | | |
| 6+55 | 0.0379 | 0.09 | QV | | | | |
| 7+ 0 | 0.0386 | 0.09 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7+ 5 | 0.0392 | 0.09 | QV | | | | |
| 7+10 | 0.0398 | 0.09 | QV | | | | |
| 7+15 | 0.0405 | 0.09 | QV | | | | |
| 7+20 | 0.0411 | 0.09 | QV | | | | |
| 7+25 | 0.0417 | 0.09 | QV | | | | |
| 7+30 | 0.0424 | 0.09 | QV | | | | |
| 7+35 | 0.0431 | 0.10 | QV | | | | |
| 7+40 | 0.0437 | 0.10 | QV | | | | |
| 7+45 | 0.0444 | 0.10 | QV | | | | |
| 7+50 | 0.0450 | 0.10 | QV | | | | |
| 7+55 | 0.0457 | 0.10 | QV | | | | |
| 8+ 0 | 0.0464 | 0.10 | QV | | | | |
| 8+ 5 | 0.0471 | 0.10 | QV | | | | |
| 8+10 | 0.0478 | 0.10 | QV | | | | |
| 8+15 | 0.0485 | 0.10 | QV | | | | |
| 8+20 | 0.0492 | 0.10 | QV | | | | |
| 8+25 | 0.0499 | 0.10 | QV | | | | |
| 8+30 | 0.0506 | 0.10 | QV | | | | |
| 8+35 | 0.0513 | 0.10 | Q V | | | | |
| 8+40 | 0.0521 | 0.11 | Q V | | | | |
| 8+45 | 0.0528 | 0.11 | Q V | | | | |
| 8+50 | 0.0535 | 0.11 | Q V | | | | |
| 8+55 | 0.0543 | 0.11 | Q V | | | | |
| 9+ 0 | 0.0550 | 0.11 | Q V | | | | |
| 9+ 5 | 0.0558 | 0.11 | Q V | | | | |
| 9+10 | 0.0566 | 0.11 | Q V | | | | |
| 9+15 | 0.0573 | 0.11 | Q V | | | | |
| 9+20 | 0.0581 | 0.11 | Q V | | | | |
| 9+25 | 0.0589 | 0.11 | Q V | | | | |
| 9+30 | 0.0597 | 0.12 | Q V | | | | |
| 9+35 | 0.0605 | 0.12 | Q V | | | | |
| 9+40 | 0.0613 | 0.12 | Q V | | | | |
| 9+45 | 0.0621 | 0.12 | Q V | | | | |
| 9+50 | 0.0630 | 0.12 | Q V | | | | |
| 9+55 | 0.0638 | 0.12 | Q V | | | | |
| 10+ 0 | 0.0646 | 0.12 | Q V | | | | |
| 10+ 5 | 0.0655 | 0.12 | Q V | | | | |
| 10+10 | 0.0664 | 0.13 | Q V | | | | |
| 10+15 | 0.0672 | 0.13 | Q V | | | | |
| 10+20 | 0.0681 | 0.13 | Q V | | | | |
| 10+25 | 0.0690 | 0.13 | Q V | | | | |
| 10+30 | 0.0699 | 0.13 | Q V | | | | |
| 10+35 | 0.0708 | 0.13 | Q V | | | | |
| 10+40 | 0.0717 | 0.13 | Q V | | | | |
| 10+45 | 0.0727 | 0.14 | Q V | | | | |
| 10+50 | 0.0736 | 0.14 | Q V | | | | |
| 10+55 | 0.0746 | 0.14 | Q V | | | | |
| 11+ 0 | 0.0755 | 0.14 | Q V | | | | |
| 11+ 5 | 0.0765 | 0.14 | Q V | | | | |
| 11+10 | 0.0775 | 0.14 | Q  V | | | | |
| 11+15 | 0.0785 | 0.15 | Q  V | | | | |
| 11+20 | 0.0795 | 0.15 | Q  V | | | | |
| 11+25 | 0.0805 | 0.15 | Q  V | | | | |
| 11+30 | 0.0816 | 0.15 | Q  V | | | | |
| 11+35 | 0.0826 | 0.15 | Q  V | | | | |
| 11+40 | 0.0837 | 0.16 | Q  V | | | | |
| 11+45 | 0.0848 | 0.16 | Q  V | | | | |
| 11+50 | 0.0859 | 0.16 | Q  V | | | | |
| 11+55 | 0.0870 | 0.16 | Q  V | | | | |

```
12+ 0       0.0881      0.16  Q  V      |          |          |          |
12+ 5       0.0893      0.17  Q  V      |          |          |          |
12+10       0.0904      0.17  Q  V      |          |          |          |
12+15       0.0916      0.17  Q  V      |          |          |          |
12+20       0.0929      0.18  Q  V      |          |          |          |
12+25       0.0942      0.19  Q  V      |          |          |          |
12+30       0.0955      0.19  Q  V      |          |          |          |
12+35       0.0968      0.19  Q  V      |          |          |          |
12+40       0.0982      0.20  Q  V      |          |          |          |
12+45       0.0996      0.20  Q  V      |          |          |          |
12+50       0.1010      0.21  Q  V      |          |          |          |
12+55       0.1025      0.21  Q   V     |          |          |          |
13+ 0       0.1040      0.22  Q   V     |          |          |          |
13+ 5       0.1055      0.22  Q   V     |          |          |          |
13+10       0.1070      0.23  Q   V     |          |          |          |
13+15       0.1086      0.23  Q   V     |          |          |          |
13+20       0.1102      0.23  Q   V     |          |          |          |
13+25       0.1119      0.24  Q   V     |          |          |          |
13+30       0.1136      0.25  Q   V     |          |          |          |
13+35       0.1153      0.25  Q   V     |          |          |          |
13+40       0.1171      0.26  Q   V     |          |          |          |
13+45       0.1189      0.26  Q   V     |          |          |          |
13+50       0.1207      0.27  Q   V     |          |          |          |
13+55       0.1226      0.28  Q   V     |          |          |          |
14+ 0       0.1246      0.28  Q   V     |          |          |          |
14+ 5       0.1266      0.29  Q   V     |          |          |          |
14+10       0.1287      0.30  Q    V    |          |          |          |
14+15       0.1308      0.31  Q    V    |          |          |          |
14+20       0.1330      0.32  Q    V    |          |          |          |
14+25       0.1352      0.33  Q    V    |          |          |          |
14+30       0.1376      0.34  Q    V    |          |          |          |
14+35       0.1400      0.35  Q    V    |          |          |          |
14+40       0.1425      0.36  Q    V    |          |          |          |
14+45       0.1451      0.38  Q    V    |          |          |          |
14+50       0.1478      0.39  Q    V    |          |          |          |
14+55       0.1506      0.41  Q    V    |          |          |          |
15+ 0       0.1535      0.43  Q     V   |          |          |          |
15+ 5       0.1566      0.45  Q     V   |          |          |          |
15+10       0.1598      0.47  Q     V   |          |          |          |
15+15       0.1632      0.49  Q     V   |          |          |          |
15+20       0.1668      0.52  |Q    V   |          |          |          |
15+25       0.1706      0.56  |Q    V   |          |          |          |
15+30       0.1748      0.61  |Q    V   |          |          |          |
15+35       0.1795      0.68  |Q     V  |          |          |          |
15+40       0.1851      0.80  |Q     V  |          |          |          |
15+45       0.1916      0.96  |Q     V  |          |          |          |
15+50       0.1995      1.14  | Q    V  |          |          |          |
15+55       0.2091      1.40  | Q     V |          |          |          |
16+ 0       0.2222      1.90  |  Q    V |          |          |          |
16+ 5       0.2444      3.23  |     Q  V|          |          |          |
16+10       0.2836      5.69  |         |Q         |          |          |
16+15       0.3435      8.70  |         |  V   Q   |          |          |
16+20       0.4383     13.76  |         |      V   |       Q  |          |
16+25       0.5389     14.60  |         |          |V       Q|          |
16+30       0.6126     10.71  |         |          |Q  V      |          |
16+35       0.6658      7.71  |         |    Q     |     V    |          |
16+40       0.7063      5.89  |         |Q         |      V   |          |
16+45       0.7395      4.82  |        Q|          |       V  |          |
16+50       0.7669      3.98  |      Q   |          |         V|          |
```

```
16+55       0.7901      3.37  |     Q   |         |         V         |
17+ 0       0.8100      2.89  |    Q    |         |         |V        |
17+ 5       0.8275      2.54  |    Q    |         |         | V       |
17+10       0.8432      2.29  |   Q     |         |         |  V      |
17+15       0.8572      2.02  |   Q     |         |         |  V      |
17+20       0.8692      1.75  |  Q      |         |         |   V     |
17+25       0.8799      1.55  |  Q      |         |         |   V     |
17+30       0.8897      1.43  | Q       |         |         |   V     |
17+35       0.8987      1.30  | Q       |         |         |    V    |
17+40       0.9069      1.20  | Q       |         |         |    V    |
17+45       0.9143      1.07  | Q       |         |         |    V    |
17+50       0.9211      0.98  |Q        |         |         |     V   |
17+55       0.9274      0.92  |Q        |         |         |     V   |
18+ 0       0.9330      0.81  |Q        |         |         |     V   |
18+ 5       0.9382      0.76  |Q        |         |         |     V   |
18+10       0.9429      0.68  |Q        |         |         |     V   |
18+15       0.9471      0.60  |Q        |         |         |      V  |
18+20       0.9509      0.56  |Q        |         |         |      V  |
18+25       0.9541      0.46  Q         |         |         |      V  |
18+30       0.9571      0.44  Q         |         |         |      V  |
18+35       0.9601      0.44  Q         |         |         |      V  |
18+40       0.9631      0.44  Q         |         |         |      V  |
18+45       0.9661      0.43  Q         |         |         |      V  |
18+50       0.9689      0.41  Q         |         |         |      V  |
18+55       0.9716      0.39  Q         |         |         |       V |
19+ 0       0.9739      0.34  Q         |         |         |       V |
19+ 5       0.9759      0.29  Q         |         |         |       V |
19+10       0.9778      0.27  Q         |         |         |       V |
19+15       0.9792      0.21  Q         |         |         |       V |
19+20       0.9804      0.17  Q         |         |         |       V |
19+25       0.9814      0.16  Q         |         |         |       V |
19+30       0.9825      0.15  Q         |         |         |       V |
19+35       0.9835      0.15  Q         |         |         |       V |
19+40       0.9845      0.14  Q         |         |         |       V |
19+45       0.9854      0.14  Q         |         |         |       V |
19+50       0.9863      0.13  Q         |         |         |       V |
19+55       0.9872      0.13  Q         |         |         |       V |
20+ 0       0.9881      0.13  Q         |         |         |       V |
20+ 5       0.9890      0.12  Q         |         |         |       V |
20+10       0.9898      0.12  Q         |         |         |       V |
20+15       0.9906      0.12  Q         |         |         |       V |
20+20       0.9914      0.12  Q         |         |         |       V |
20+25       0.9922      0.11  Q         |         |         |       V |
20+30       0.9930      0.11  Q         |         |         |       V |
20+35       0.9938      0.11  Q         |         |         |       V |
20+40       0.9945      0.11  Q         |         |         |       V |
20+45       0.9952      0.11  Q         |         |         |        V|
20+50       0.9960      0.10  Q         |         |         |        V|
20+55       0.9967      0.10  Q         |         |         |        V|
21+ 0       0.9974      0.10  Q         |         |         |        V|
21+ 5       0.9980      0.10  Q         |         |         |        V|
21+10       0.9987      0.10  Q         |         |         |        V|
21+15       0.9994      0.10  Q         |         |         |        V|
21+20       1.0000      0.09  Q         |         |         |        V|
21+25       1.0007      0.09  Q         |         |         |        V|
21+30       1.0013      0.09  Q         |         |         |        V|
21+35       1.0019      0.09  Q         |         |         |        V|
21+40       1.0025      0.09  Q         |         |         |        V|
21+45       1.0031      0.09  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+50 | 1.0037 | 0.09 | Q | \| | \| | \| | V\| |
| 21+55 | 1.0043 | 0.09 | Q | \| | \| | \| | V\| |
| 22+ 0 | 1.0049 | 0.08 | Q | \| | \| | \| | V\| |
| 22+ 5 | 1.0055 | 0.08 | Q | \| | \| | \| | V\| |
| 22+10 | 1.0060 | 0.08 | Q | \| | \| | \| | V\| |
| 22+15 | 1.0066 | 0.08 | Q | \| | \| | \| | V\| |
| 22+20 | 1.0072 | 0.08 | Q | \| | \| | \| | V\| |
| 22+25 | 1.0077 | 0.08 | Q | \| | \| | \| | V\| |
| 22+30 | 1.0082 | 0.08 | Q | \| | \| | \| | V\| |
| 22+35 | 1.0088 | 0.08 | Q | \| | \| | \| | V\| |
| 22+40 | 1.0093 | 0.08 | Q | \| | \| | \| | V\| |
| 22+45 | 1.0098 | 0.08 | Q | \| | \| | \| | V\| |
| 22+50 | 1.0103 | 0.07 | Q | \| | \| | \| | V\| |
| 22+55 | 1.0108 | 0.07 | Q | \| | \| | \| | V\| |
| 23+ 0 | 1.0114 | 0.07 | Q | \| | \| | \| | V\| |
| 23+ 5 | 1.0119 | 0.07 | Q | \| | \| | \| | V\| |
| 23+10 | 1.0123 | 0.07 | Q | \| | \| | \| | V\| |
| 23+15 | 1.0128 | 0.07 | Q | \| | \| | \| | V\| |
| 23+20 | 1.0133 | 0.07 | Q | \| | \| | \| | V\| |
| 23+25 | 1.0138 | 0.07 | Q | \| | \| | \| | V\| |
| 23+30 | 1.0143 | 0.07 | Q | \| | \| | \| | V\| |
| 23+35 | 1.0147 | 0.07 | Q | \| | \| | \| | V\| |
| 23+40 | 1.0152 | 0.07 | Q | \| | \| | \| | V\| |
| 23+45 | 1.0157 | 0.07 | Q | \| | \| | \| | V\| |
| 23+50 | 1.0161 | 0.07 | Q | \| | \| | \| | V\| |
| 23+55 | 1.0166 | 0.07 | Q | \| | \| | \| | V\| |
| 24+ 0 | 1.0170 | 0.06 | Q | \| | \| | \| | V\| |
| 24+ 5 | 1.0174 | 0.06 | Q | \| | \| | \| | V\| |
| 24+10 | 1.0179 | 0.06 | Q | \| | \| | \| | V\| |
| 24+15 | 1.0183 | 0.06 | Q | \| | \| | \| | V\| |
| 24+20 | 1.0186 | 0.05 | Q | \| | \| | \| | V\| |
| 24+25 | 1.0188 | 0.04 | Q | \| | \| | \| | V\| |
| 24+30 | 1.0190 | 0.03 | Q | \| | \| | \| | V\| |
| 24+35 | 1.0192 | 0.02 | Q | \| | \| | \| | V\| |
| 24+40 | 1.0193 | 0.02 | Q | \| | \| | \| | V\| |
| 24+45 | 1.0194 | 0.02 | Q | \| | \| | \| | V\| |
| 24+50 | 1.0195 | 0.01 | Q | \| | \| | \| | V\| |
| 24+55 | 1.0196 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 0 | 1.0197 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 5 | 1.0198 | 0.01 | Q | \| | \| | \| | V\| |
| 25+10 | 1.0198 | 0.01 | Q | \| | \| | \| | V\| |
| 25+15 | 1.0199 | 0.01 | Q | \| | \| | \| | V\| |
| 25+20 | 1.0199 | 0.01 | Q | \| | \| | \| | V\| |
| 25+25 | 1.0200 | 0.01 | Q | \| | \| | \| | V\| |
| 25+30 | 1.0200 | 0.01 | Q | \| | \| | \| | V\| |
| 25+35 | 1.0201 | 0.00 | Q | \| | \| | \| | V\| |
| 25+40 | 1.0201 | 0.00 | Q | \| | \| | \| | V\| |
| 25+45 | 1.0201 | 0.00 | Q | \| | \| | \| | V\| |
| 25+50 | 1.0201 | 0.00 | Q | \| | \| | \| | V\| |
| 25+55 | 1.0202 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 0 | 1.0202 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 1.0202 | 0.00 | Q | \| | \| | \| | V\| |
| 26+10 | 1.0202 | 0.00 | Q | \| | \| | \| | V\| |
| 26+15 | 1.0202 | 0.00 | Q | \| | \| | \| | V\| |
| 26+20 | 1.0202 | 0.00 | Q | \| | \| | \| | V\| |
| 26+25 | 1.0202 | 0.00 | Q | \| | \| | \| | V\| |
| 26+30 | 1.0202 | 0.00 | Q | \| | \| | \| | V\| |
| 26+35 | 1.0202 | 0.00 | Q | \| | \| | \| | V\| |
| 26+40 | 1.0202 | 0.00 | Q | \| | \| | \| | V\| |

```
   26+45       1.0202      0.00  Q         |          |         |        V|
   26+50       1.0202      0.00  Q         |          |         |        V|
   26+55       1.0202      0.00  Q         |          |         |        V|
   27+ 0       1.0202      0.00  Q         |          |         |        V|
   27+ 5       1.0203      0.00  Q         |          |         |        V|
   27+10       1.0203      0.00  Q         |          |         |         V
-------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 12
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 0.87 | 1 | 1.28 |
| Rainfall data for year 100 | | |
| 0.87 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 0.87 | 24 | 2.37 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 0.87 | 1.000 | 0.360 | 1.000 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 0.87 | 1.000 | 62.0 | 80.6 | 2.41 | 0.350 |

Area-averaged catchment yield fraction, Y = 0.350
Area-averaged low loss fraction, Yb = 0.650
User entry of time of concentration = 0.260 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 0.87(Ac.)
Catchment Lag time = 0.208 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 40.0641
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.650 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.607(In)
Computed peak 30-minute rainfall = 1.040(In)
Specified peak 1-hour rainfall = 1.280(In)
Computed peak 3-hour rainfall = 1.599(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.370(In)

Rainfall depth area reduction factors:
Using a total area of 0.87(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.607(In)
30-minute factor = 1.000 Adjusted rainfall = 1.040(In)
1-hour factor = 1.000 Adjusted rainfall = 1.280(In)
3-hour factor = 1.000 Adjusted rainfall = 1.599(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.370(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 10.52 (CFS)) | |
| 1 | 2.755 | 0.290 |
| 2 | 18.770 | 1.685 |
| 3 | 49.245 | 3.206 |
| 4 | 65.688 | 1.730 |
| 5 | 74.847 | 0.964 |
| 6 | 80.916 | 0.639 |
| 7 | 85.280 | 0.459 |
| 8 | 88.633 | 0.353 |
| 9 | 91.058 | 0.255 |
| 10 | 93.036 | 0.208 |
| 11 | 94.603 | 0.165 |
| 12 | 95.871 | 0.133 |
| 13 | 96.878 | 0.106 |
| 14 | 97.624 | 0.079 |

| | | |
|---|---|---|
| 15 | 98.109 | 0.051 |
| 16 | 98.552 | 0.047 |
| 17 | 99.033 | 0.051 |
| 18 | 99.481 | 0.047 |
| 19 | 99.757 | 0.029 |
| 20 | 100.000 | 0.026 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6073 | 0.6073 |
| 2 | 0.7477 | 0.1404 |
| 3 | 0.8445 | 0.0967 |
| 4 | 0.9206 | 0.0761 |
| 5 | 0.9843 | 0.0637 |
| 6 | 1.0396 | 0.0553 |
| 7 | 1.0888 | 0.0492 |
| 8 | 1.1334 | 0.0445 |
| 9 | 1.1741 | 0.0408 |
| 10 | 1.2118 | 0.0377 |
| 11 | 1.2470 | 0.0351 |
| 12 | 1.2799 | 0.0330 |
| 13 | 1.3009 | 0.0209 |
| 14 | 1.3205 | 0.0197 |
| 15 | 1.3391 | 0.0186 |
| 16 | 1.3568 | 0.0176 |
| 17 | 1.3735 | 0.0168 |
| 18 | 1.3895 | 0.0160 |
| 19 | 1.4048 | 0.0153 |
| 20 | 1.4195 | 0.0147 |
| 21 | 1.4336 | 0.0141 |
| 22 | 1.4472 | 0.0136 |
| 23 | 1.4603 | 0.0131 |
| 24 | 1.4729 | 0.0126 |
| 25 | 1.4851 | 0.0122 |
| 26 | 1.4970 | 0.0118 |
| 27 | 1.5085 | 0.0115 |
| 28 | 1.5196 | 0.0112 |
| 29 | 1.5305 | 0.0108 |
| 30 | 1.5410 | 0.0105 |
| 31 | 1.5513 | 0.0103 |
| 32 | 1.5613 | 0.0100 |
| 33 | 1.5710 | 0.0098 |
| 34 | 1.5806 | 0.0095 |
| 35 | 1.5899 | 0.0093 |
| 36 | 1.5990 | 0.0091 |
| 37 | 1.6079 | 0.0089 |
| 38 | 1.6166 | 0.0087 |
| 39 | 1.6251 | 0.0085 |
| 40 | 1.6335 | 0.0084 |
| 41 | 1.6417 | 0.0082 |
| 42 | 1.6497 | 0.0080 |
| 43 | 1.6576 | 0.0079 |
| 44 | 1.6653 | 0.0077 |
| 45 | 1.6729 | 0.0076 |
| 46 | 1.6804 | 0.0075 |
| 47 | 1.6877 | 0.0073 |
| 48 | 1.6949 | 0.0072 |
| 49 | 1.7020 | 0.0071 |
| 50 | 1.7090 | 0.0070 |

| | | |
|---|---|---|
| 51 | 1.7159 | 0.0069 |
| 52 | 1.7226 | 0.0068 |
| 53 | 1.7293 | 0.0067 |
| 54 | 1.7358 | 0.0066 |
| 55 | 1.7423 | 0.0065 |
| 56 | 1.7487 | 0.0064 |
| 57 | 1.7550 | 0.0063 |
| 58 | 1.7612 | 0.0062 |
| 59 | 1.7673 | 0.0061 |
| 60 | 1.7733 | 0.0060 |
| 61 | 1.7792 | 0.0059 |
| 62 | 1.7851 | 0.0059 |
| 63 | 1.7909 | 0.0058 |
| 64 | 1.7966 | 0.0057 |
| 65 | 1.8023 | 0.0057 |
| 66 | 1.8079 | 0.0056 |
| 67 | 1.8134 | 0.0055 |
| 68 | 1.8188 | 0.0054 |
| 69 | 1.8242 | 0.0054 |
| 70 | 1.8295 | 0.0053 |
| 71 | 1.8348 | 0.0053 |
| 72 | 1.8400 | 0.0052 |
| 73 | 1.8446 | 0.0046 |
| 74 | 1.8492 | 0.0046 |
| 75 | 1.8538 | 0.0045 |
| 76 | 1.8582 | 0.0045 |
| 77 | 1.8627 | 0.0044 |
| 78 | 1.8671 | 0.0044 |
| 79 | 1.8714 | 0.0043 |
| 80 | 1.8757 | 0.0043 |
| 81 | 1.8800 | 0.0043 |
| 82 | 1.8842 | 0.0042 |
| 83 | 1.8884 | 0.0042 |
| 84 | 1.8925 | 0.0041 |
| 85 | 1.8966 | 0.0041 |
| 86 | 1.9007 | 0.0041 |
| 87 | 1.9047 | 0.0040 |
| 88 | 1.9087 | 0.0040 |
| 89 | 1.9126 | 0.0039 |
| 90 | 1.9165 | 0.0039 |
| 91 | 1.9204 | 0.0039 |
| 92 | 1.9242 | 0.0038 |
| 93 | 1.9280 | 0.0038 |
| 94 | 1.9318 | 0.0038 |
| 95 | 1.9355 | 0.0037 |
| 96 | 1.9392 | 0.0037 |
| 97 | 1.9429 | 0.0037 |
| 98 | 1.9465 | 0.0036 |
| 99 | 1.9502 | 0.0036 |
| 100 | 1.9537 | 0.0036 |
| 101 | 1.9573 | 0.0036 |
| 102 | 1.9608 | 0.0035 |
| 103 | 1.9643 | 0.0035 |
| 104 | 1.9678 | 0.0035 |
| 105 | 1.9712 | 0.0034 |
| 106 | 1.9746 | 0.0034 |
| 107 | 1.9780 | 0.0034 |
| 108 | 1.9814 | 0.0034 |
| 109 | 1.9847 | 0.0033 |

| | | |
|---|---|---|
| 110 | 1.9880 | 0.0033 |
| 111 | 1.9913 | 0.0033 |
| 112 | 1.9946 | 0.0033 |
| 113 | 1.9978 | 0.0032 |
| 114 | 2.0010 | 0.0032 |
| 115 | 2.0042 | 0.0032 |
| 116 | 2.0074 | 0.0032 |
| 117 | 2.0106 | 0.0031 |
| 118 | 2.0137 | 0.0031 |
| 119 | 2.0168 | 0.0031 |
| 120 | 2.0199 | 0.0031 |
| 121 | 2.0229 | 0.0031 |
| 122 | 2.0260 | 0.0030 |
| 123 | 2.0290 | 0.0030 |
| 124 | 2.0320 | 0.0030 |
| 125 | 2.0350 | 0.0030 |
| 126 | 2.0379 | 0.0030 |
| 127 | 2.0409 | 0.0029 |
| 128 | 2.0438 | 0.0029 |
| 129 | 2.0467 | 0.0029 |
| 130 | 2.0496 | 0.0029 |
| 131 | 2.0525 | 0.0029 |
| 132 | 2.0553 | 0.0029 |
| 133 | 2.0582 | 0.0028 |
| 134 | 2.0610 | 0.0028 |
| 135 | 2.0638 | 0.0028 |
| 136 | 2.0666 | 0.0028 |
| 137 | 2.0693 | 0.0028 |
| 138 | 2.0721 | 0.0027 |
| 139 | 2.0748 | 0.0027 |
| 140 | 2.0775 | 0.0027 |
| 141 | 2.0802 | 0.0027 |
| 142 | 2.0829 | 0.0027 |
| 143 | 2.0856 | 0.0027 |
| 144 | 2.0882 | 0.0027 |
| 145 | 2.0909 | 0.0026 |
| 146 | 2.0935 | 0.0026 |
| 147 | 2.0961 | 0.0026 |
| 148 | 2.0987 | 0.0026 |
| 149 | 2.1013 | 0.0026 |
| 150 | 2.1039 | 0.0026 |
| 151 | 2.1064 | 0.0026 |
| 152 | 2.1090 | 0.0025 |
| 153 | 2.1115 | 0.0025 |
| 154 | 2.1140 | 0.0025 |
| 155 | 2.1165 | 0.0025 |
| 156 | 2.1190 | 0.0025 |
| 157 | 2.1215 | 0.0025 |
| 158 | 2.1239 | 0.0025 |
| 159 | 2.1264 | 0.0024 |
| 160 | 2.1288 | 0.0024 |
| 161 | 2.1312 | 0.0024 |
| 162 | 2.1336 | 0.0024 |
| 163 | 2.1360 | 0.0024 |
| 164 | 2.1384 | 0.0024 |
| 165 | 2.1408 | 0.0024 |
| 166 | 2.1432 | 0.0024 |
| 167 | 2.1455 | 0.0024 |
| 168 | 2.1479 | 0.0023 |

| | | |
|---|---|---|
| 169 | 2.1502 | 0.0023 |
| 170 | 2.1525 | 0.0023 |
| 171 | 2.1548 | 0.0023 |
| 172 | 2.1571 | 0.0023 |
| 173 | 2.1594 | 0.0023 |
| 174 | 2.1617 | 0.0023 |
| 175 | 2.1639 | 0.0023 |
| 176 | 2.1662 | 0.0023 |
| 177 | 2.1684 | 0.0022 |
| 178 | 2.1707 | 0.0022 |
| 179 | 2.1729 | 0.0022 |
| 180 | 2.1751 | 0.0022 |
| 181 | 2.1773 | 0.0022 |
| 182 | 2.1795 | 0.0022 |
| 183 | 2.1817 | 0.0022 |
| 184 | 2.1838 | 0.0022 |
| 185 | 2.1860 | 0.0022 |
| 186 | 2.1882 | 0.0022 |
| 187 | 2.1903 | 0.0021 |
| 188 | 2.1924 | 0.0021 |
| 189 | 2.1946 | 0.0021 |
| 190 | 2.1967 | 0.0021 |
| 191 | 2.1988 | 0.0021 |
| 192 | 2.2009 | 0.0021 |
| 193 | 2.2030 | 0.0021 |
| 194 | 2.2050 | 0.0021 |
| 195 | 2.2071 | 0.0021 |
| 196 | 2.2092 | 0.0021 |
| 197 | 2.2112 | 0.0021 |
| 198 | 2.2133 | 0.0020 |
| 199 | 2.2153 | 0.0020 |
| 200 | 2.2173 | 0.0020 |
| 201 | 2.2194 | 0.0020 |
| 202 | 2.2214 | 0.0020 |
| 203 | 2.2234 | 0.0020 |
| 204 | 2.2254 | 0.0020 |
| 205 | 2.2274 | 0.0020 |
| 206 | 2.2293 | 0.0020 |
| 207 | 2.2313 | 0.0020 |
| 208 | 2.2333 | 0.0020 |
| 209 | 2.2352 | 0.0020 |
| 210 | 2.2372 | 0.0019 |
| 211 | 2.2391 | 0.0019 |
| 212 | 2.2411 | 0.0019 |
| 213 | 2.2430 | 0.0019 |
| 214 | 2.2449 | 0.0019 |
| 215 | 2.2468 | 0.0019 |
| 216 | 2.2487 | 0.0019 |
| 217 | 2.2506 | 0.0019 |
| 218 | 2.2525 | 0.0019 |
| 219 | 2.2544 | 0.0019 |
| 220 | 2.2563 | 0.0019 |
| 221 | 2.2581 | 0.0019 |
| 222 | 2.2600 | 0.0019 |
| 223 | 2.2619 | 0.0019 |
| 224 | 2.2637 | 0.0018 |
| 225 | 2.2655 | 0.0018 |
| 226 | 2.2674 | 0.0018 |
| 227 | 2.2692 | 0.0018 |

| | | |
|---|---|---|
| 228 | 2.2710 | 0.0018 |
| 229 | 2.2728 | 0.0018 |
| 230 | 2.2747 | 0.0018 |
| 231 | 2.2765 | 0.0018 |
| 232 | 2.2783 | 0.0018 |
| 233 | 2.2800 | 0.0018 |
| 234 | 2.2818 | 0.0018 |
| 235 | 2.2836 | 0.0018 |
| 236 | 2.2854 | 0.0018 |
| 237 | 2.2871 | 0.0018 |
| 238 | 2.2889 | 0.0018 |
| 239 | 2.2907 | 0.0018 |
| 240 | 2.2924 | 0.0017 |
| 241 | 2.2941 | 0.0017 |
| 242 | 2.2959 | 0.0017 |
| 243 | 2.2976 | 0.0017 |
| 244 | 2.2993 | 0.0017 |
| 245 | 2.3010 | 0.0017 |
| 246 | 2.3028 | 0.0017 |
| 247 | 2.3045 | 0.0017 |
| 248 | 2.3062 | 0.0017 |
| 249 | 2.3079 | 0.0017 |
| 250 | 2.3095 | 0.0017 |
| 251 | 2.3112 | 0.0017 |
| 252 | 2.3129 | 0.0017 |
| 253 | 2.3146 | 0.0017 |
| 254 | 2.3163 | 0.0017 |
| 255 | 2.3179 | 0.0017 |
| 256 | 2.3196 | 0.0017 |
| 257 | 2.3212 | 0.0017 |
| 258 | 2.3229 | 0.0016 |
| 259 | 2.3245 | 0.0016 |
| 260 | 2.3261 | 0.0016 |
| 261 | 2.3278 | 0.0016 |
| 262 | 2.3294 | 0.0016 |
| 263 | 2.3310 | 0.0016 |
| 264 | 2.3326 | 0.0016 |
| 265 | 2.3343 | 0.0016 |
| 266 | 2.3359 | 0.0016 |
| 267 | 2.3375 | 0.0016 |
| 268 | 2.3391 | 0.0016 |
| 269 | 2.3406 | 0.0016 |
| 270 | 2.3422 | 0.0016 |
| 271 | 2.3438 | 0.0016 |
| 272 | 2.3454 | 0.0016 |
| 273 | 2.3470 | 0.0016 |
| 274 | 2.3485 | 0.0016 |
| 275 | 2.3501 | 0.0016 |
| 276 | 2.3517 | 0.0016 |
| 277 | 2.3532 | 0.0016 |
| 278 | 2.3548 | 0.0015 |
| 279 | 2.3563 | 0.0015 |
| 280 | 2.3578 | 0.0015 |
| 281 | 2.3594 | 0.0015 |
| 282 | 2.3609 | 0.0015 |
| 283 | 2.3624 | 0.0015 |
| 284 | 2.3640 | 0.0015 |
| 285 | 2.3655 | 0.0015 |
| 286 | 2.3670 | 0.0015 |

| | | |
|---|---|---|
| 287 | 2.3685 | 0.0015 |
| 288 | 2.3700 | 0.0015 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0015 | 0.0010 | 0.0005 |
| 2 | 0.0015 | 0.0010 | 0.0005 |
| 3 | 0.0015 | 0.0010 | 0.0005 |
| 4 | 0.0015 | 0.0010 | 0.0005 |
| 5 | 0.0015 | 0.0010 | 0.0005 |
| 6 | 0.0015 | 0.0010 | 0.0005 |
| 7 | 0.0015 | 0.0010 | 0.0005 |
| 8 | 0.0015 | 0.0010 | 0.0005 |
| 9 | 0.0016 | 0.0010 | 0.0005 |
| 10 | 0.0016 | 0.0010 | 0.0005 |
| 11 | 0.0016 | 0.0010 | 0.0006 |
| 12 | 0.0016 | 0.0010 | 0.0006 |
| 13 | 0.0016 | 0.0010 | 0.0006 |
| 14 | 0.0016 | 0.0010 | 0.0006 |
| 15 | 0.0016 | 0.0010 | 0.0006 |
| 16 | 0.0016 | 0.0010 | 0.0006 |
| 17 | 0.0016 | 0.0010 | 0.0006 |
| 18 | 0.0016 | 0.0011 | 0.0006 |
| 19 | 0.0016 | 0.0011 | 0.0006 |
| 20 | 0.0016 | 0.0011 | 0.0006 |
| 21 | 0.0016 | 0.0011 | 0.0006 |
| 22 | 0.0017 | 0.0011 | 0.0006 |
| 23 | 0.0017 | 0.0011 | 0.0006 |
| 24 | 0.0017 | 0.0011 | 0.0006 |
| 25 | 0.0017 | 0.0011 | 0.0006 |
| 26 | 0.0017 | 0.0011 | 0.0006 |
| 27 | 0.0017 | 0.0011 | 0.0006 |
| 28 | 0.0017 | 0.0011 | 0.0006 |
| 29 | 0.0017 | 0.0011 | 0.0006 |
| 30 | 0.0017 | 0.0011 | 0.0006 |
| 31 | 0.0017 | 0.0011 | 0.0006 |
| 32 | 0.0017 | 0.0011 | 0.0006 |
| 33 | 0.0017 | 0.0011 | 0.0006 |
| 34 | 0.0018 | 0.0011 | 0.0006 |
| 35 | 0.0018 | 0.0011 | 0.0006 |
| 36 | 0.0018 | 0.0012 | 0.0006 |
| 37 | 0.0018 | 0.0012 | 0.0006 |
| 38 | 0.0018 | 0.0012 | 0.0006 |
| 39 | 0.0018 | 0.0012 | 0.0006 |
| 40 | 0.0018 | 0.0012 | 0.0006 |
| 41 | 0.0018 | 0.0012 | 0.0006 |
| 42 | 0.0018 | 0.0012 | 0.0006 |
| 43 | 0.0018 | 0.0012 | 0.0006 |
| 44 | 0.0018 | 0.0012 | 0.0006 |
| 45 | 0.0019 | 0.0012 | 0.0007 |
| 46 | 0.0019 | 0.0012 | 0.0007 |
| 47 | 0.0019 | 0.0012 | 0.0007 |
| 48 | 0.0019 | 0.0012 | 0.0007 |
| 49 | 0.0019 | 0.0012 | 0.0007 |
| 50 | 0.0019 | 0.0012 | 0.0007 |
| 51 | 0.0019 | 0.0013 | 0.0007 |
| 52 | 0.0019 | 0.0013 | 0.0007 |

| | | | |
|---|---|---|---|
| 53 | 0.0019 | 0.0013 | 0.0007 |
| 54 | 0.0020 | 0.0013 | 0.0007 |
| 55 | 0.0020 | 0.0013 | 0.0007 |
| 56 | 0.0020 | 0.0013 | 0.0007 |
| 57 | 0.0020 | 0.0013 | 0.0007 |
| 58 | 0.0020 | 0.0013 | 0.0007 |
| 59 | 0.0020 | 0.0013 | 0.0007 |
| 60 | 0.0020 | 0.0013 | 0.0007 |
| 61 | 0.0020 | 0.0013 | 0.0007 |
| 62 | 0.0021 | 0.0013 | 0.0007 |
| 63 | 0.0021 | 0.0013 | 0.0007 |
| 64 | 0.0021 | 0.0014 | 0.0007 |
| 65 | 0.0021 | 0.0014 | 0.0007 |
| 66 | 0.0021 | 0.0014 | 0.0007 |
| 67 | 0.0021 | 0.0014 | 0.0007 |
| 68 | 0.0021 | 0.0014 | 0.0007 |
| 69 | 0.0022 | 0.0014 | 0.0008 |
| 70 | 0.0022 | 0.0014 | 0.0008 |
| 71 | 0.0022 | 0.0014 | 0.0008 |
| 72 | 0.0022 | 0.0014 | 0.0008 |
| 73 | 0.0022 | 0.0014 | 0.0008 |
| 74 | 0.0022 | 0.0014 | 0.0008 |
| 75 | 0.0022 | 0.0015 | 0.0008 |
| 76 | 0.0023 | 0.0015 | 0.0008 |
| 77 | 0.0023 | 0.0015 | 0.0008 |
| 78 | 0.0023 | 0.0015 | 0.0008 |
| 79 | 0.0023 | 0.0015 | 0.0008 |
| 80 | 0.0023 | 0.0015 | 0.0008 |
| 81 | 0.0023 | 0.0015 | 0.0008 |
| 82 | 0.0024 | 0.0015 | 0.0008 |
| 83 | 0.0024 | 0.0015 | 0.0008 |
| 84 | 0.0024 | 0.0016 | 0.0008 |
| 85 | 0.0024 | 0.0016 | 0.0008 |
| 86 | 0.0024 | 0.0016 | 0.0008 |
| 87 | 0.0024 | 0.0016 | 0.0009 |
| 88 | 0.0025 | 0.0016 | 0.0009 |
| 89 | 0.0025 | 0.0016 | 0.0009 |
| 90 | 0.0025 | 0.0016 | 0.0009 |
| 91 | 0.0025 | 0.0016 | 0.0009 |
| 92 | 0.0025 | 0.0017 | 0.0009 |
| 93 | 0.0026 | 0.0017 | 0.0009 |
| 94 | 0.0026 | 0.0017 | 0.0009 |
| 95 | 0.0026 | 0.0017 | 0.0009 |
| 96 | 0.0026 | 0.0017 | 0.0009 |
| 97 | 0.0027 | 0.0017 | 0.0009 |
| 98 | 0.0027 | 0.0017 | 0.0009 |
| 99 | 0.0027 | 0.0018 | 0.0009 |
| 100 | 0.0027 | 0.0018 | 0.0010 |
| 101 | 0.0027 | 0.0018 | 0.0010 |
| 102 | 0.0028 | 0.0018 | 0.0010 |
| 103 | 0.0028 | 0.0018 | 0.0010 |
| 104 | 0.0028 | 0.0018 | 0.0010 |
| 105 | 0.0029 | 0.0019 | 0.0010 |
| 106 | 0.0029 | 0.0019 | 0.0010 |
| 107 | 0.0029 | 0.0019 | 0.0010 |
| 108 | 0.0029 | 0.0019 | 0.0010 |
| 109 | 0.0030 | 0.0019 | 0.0010 |
| 110 | 0.0030 | 0.0019 | 0.0010 |
| 111 | 0.0030 | 0.0020 | 0.0011 |

| | | | |
|---|---|---|---|
| 112 | 0.0030 | 0.0020 | 0.0011 |
| 113 | 0.0031 | 0.0020 | 0.0011 |
| 114 | 0.0031 | 0.0020 | 0.0011 |
| 115 | 0.0031 | 0.0020 | 0.0011 |
| 116 | 0.0032 | 0.0021 | 0.0011 |
| 117 | 0.0032 | 0.0021 | 0.0011 |
| 118 | 0.0032 | 0.0021 | 0.0011 |
| 119 | 0.0033 | 0.0021 | 0.0012 |
| 120 | 0.0033 | 0.0022 | 0.0012 |
| 121 | 0.0034 | 0.0022 | 0.0012 |
| 122 | 0.0034 | 0.0022 | 0.0012 |
| 123 | 0.0034 | 0.0022 | 0.0012 |
| 124 | 0.0035 | 0.0023 | 0.0012 |
| 125 | 0.0035 | 0.0023 | 0.0012 |
| 126 | 0.0036 | 0.0023 | 0.0012 |
| 127 | 0.0036 | 0.0023 | 0.0013 |
| 128 | 0.0036 | 0.0024 | 0.0013 |
| 129 | 0.0037 | 0.0024 | 0.0013 |
| 130 | 0.0037 | 0.0024 | 0.0013 |
| 131 | 0.0038 | 0.0025 | 0.0013 |
| 132 | 0.0038 | 0.0025 | 0.0013 |
| 133 | 0.0039 | 0.0025 | 0.0014 |
| 134 | 0.0039 | 0.0026 | 0.0014 |
| 135 | 0.0040 | 0.0026 | 0.0014 |
| 136 | 0.0041 | 0.0026 | 0.0014 |
| 137 | 0.0041 | 0.0027 | 0.0014 |
| 138 | 0.0042 | 0.0027 | 0.0015 |
| 139 | 0.0043 | 0.0028 | 0.0015 |
| 140 | 0.0043 | 0.0028 | 0.0015 |
| 141 | 0.0044 | 0.0029 | 0.0015 |
| 142 | 0.0044 | 0.0029 | 0.0016 |
| 143 | 0.0045 | 0.0029 | 0.0016 |
| 144 | 0.0046 | 0.0030 | 0.0016 |
| 145 | 0.0052 | 0.0034 | 0.0018 |
| 146 | 0.0053 | 0.0034 | 0.0018 |
| 147 | 0.0054 | 0.0035 | 0.0019 |
| 148 | 0.0054 | 0.0035 | 0.0019 |
| 149 | 0.0056 | 0.0036 | 0.0020 |
| 150 | 0.0057 | 0.0037 | 0.0020 |
| 151 | 0.0058 | 0.0038 | 0.0020 |
| 152 | 0.0059 | 0.0038 | 0.0021 |
| 153 | 0.0060 | 0.0039 | 0.0021 |
| 154 | 0.0061 | 0.0040 | 0.0021 |
| 155 | 0.0063 | 0.0041 | 0.0022 |
| 156 | 0.0064 | 0.0041 | 0.0022 |
| 157 | 0.0066 | 0.0043 | 0.0023 |
| 158 | 0.0067 | 0.0043 | 0.0023 |
| 159 | 0.0069 | 0.0045 | 0.0024 |
| 160 | 0.0070 | 0.0045 | 0.0024 |
| 161 | 0.0072 | 0.0047 | 0.0025 |
| 162 | 0.0073 | 0.0048 | 0.0026 |
| 163 | 0.0076 | 0.0049 | 0.0027 |
| 164 | 0.0077 | 0.0050 | 0.0027 |
| 165 | 0.0080 | 0.0052 | 0.0028 |
| 166 | 0.0082 | 0.0053 | 0.0029 |
| 167 | 0.0085 | 0.0055 | 0.0030 |
| 168 | 0.0087 | 0.0057 | 0.0031 |
| 169 | 0.0091 | 0.0059 | 0.0032 |
| 170 | 0.0093 | 0.0060 | 0.0033 |

| | | | |
|---|---|---|---|
| 171 | 0.0098 | 0.0063 | 0.0034 |
| 172 | 0.0100 | 0.0065 | 0.0035 |
| 173 | 0.0105 | 0.0069 | 0.0037 |
| 174 | 0.0108 | 0.0070 | 0.0038 |
| 175 | 0.0115 | 0.0075 | 0.0040 |
| 176 | 0.0118 | 0.0077 | 0.0042 |
| 177 | 0.0126 | 0.0082 | 0.0044 |
| 178 | 0.0131 | 0.0085 | 0.0046 |
| 179 | 0.0141 | 0.0092 | 0.0049 |
| 180 | 0.0147 | 0.0095 | 0.0051 |
| 181 | 0.0160 | 0.0104 | 0.0056 |
| 182 | 0.0168 | 0.0109 | 0.0059 |
| 183 | 0.0186 | 0.0121 | 0.0065 |
| 184 | 0.0197 | 0.0128 | 0.0069 |
| 185 | 0.0330 | 0.0214 | 0.0116 |
| 186 | 0.0351 | 0.0228 | 0.0123 |
| 187 | 0.0408 | 0.0265 | 0.0143 |
| 188 | 0.0445 | 0.0289 | 0.0156 |
| 189 | 0.0553 | 0.0300 | 0.0254 |
| 190 | 0.0637 | 0.0300 | 0.0338 |
| 191 | 0.0967 | 0.0300 | 0.0668 |
| 192 | 0.1404 | 0.0300 | 0.1104 |
| 193 | 0.6073 | 0.0300 | 0.5774 |
| 194 | 0.0761 | 0.0300 | 0.0462 |
| 195 | 0.0492 | 0.0300 | 0.0192 |
| 196 | 0.0377 | 0.0245 | 0.0132 |
| 197 | 0.0209 | 0.0136 | 0.0073 |
| 198 | 0.0176 | 0.0114 | 0.0062 |
| 199 | 0.0153 | 0.0099 | 0.0054 |
| 200 | 0.0136 | 0.0088 | 0.0048 |
| 201 | 0.0122 | 0.0079 | 0.0043 |
| 202 | 0.0112 | 0.0072 | 0.0039 |
| 203 | 0.0103 | 0.0067 | 0.0036 |
| 204 | 0.0095 | 0.0062 | 0.0033 |
| 205 | 0.0089 | 0.0058 | 0.0031 |
| 206 | 0.0084 | 0.0054 | 0.0029 |
| 207 | 0.0079 | 0.0051 | 0.0028 |
| 208 | 0.0075 | 0.0048 | 0.0026 |
| 209 | 0.0071 | 0.0046 | 0.0025 |
| 210 | 0.0068 | 0.0044 | 0.0024 |
| 211 | 0.0065 | 0.0042 | 0.0023 |
| 212 | 0.0062 | 0.0040 | 0.0022 |
| 213 | 0.0059 | 0.0039 | 0.0021 |
| 214 | 0.0057 | 0.0037 | 0.0020 |
| 215 | 0.0055 | 0.0036 | 0.0019 |
| 216 | 0.0053 | 0.0035 | 0.0019 |
| 217 | 0.0046 | 0.0030 | 0.0016 |
| 218 | 0.0045 | 0.0029 | 0.0016 |
| 219 | 0.0043 | 0.0028 | 0.0015 |
| 220 | 0.0042 | 0.0027 | 0.0015 |
| 221 | 0.0041 | 0.0027 | 0.0014 |
| 222 | 0.0040 | 0.0026 | 0.0014 |
| 223 | 0.0039 | 0.0025 | 0.0014 |
| 224 | 0.0038 | 0.0024 | 0.0013 |
| 225 | 0.0037 | 0.0024 | 0.0013 |
| 226 | 0.0036 | 0.0023 | 0.0013 |
| 227 | 0.0035 | 0.0023 | 0.0012 |
| 228 | 0.0034 | 0.0022 | 0.0012 |
| 229 | 0.0033 | 0.0022 | 0.0012 |

| | | | |
|---|---|---|---|
| 230 | 0.0033 | 0.0021 | 0.0011 |
| 231 | 0.0032 | 0.0021 | 0.0011 |
| 232 | 0.0031 | 0.0020 | 0.0011 |
| 233 | 0.0031 | 0.0020 | 0.0011 |
| 234 | 0.0030 | 0.0020 | 0.0011 |
| 235 | 0.0029 | 0.0019 | 0.0010 |
| 236 | 0.0029 | 0.0019 | 0.0010 |
| 237 | 0.0028 | 0.0018 | 0.0010 |
| 238 | 0.0028 | 0.0018 | 0.0010 |
| 239 | 0.0027 | 0.0018 | 0.0010 |
| 240 | 0.0027 | 0.0017 | 0.0009 |
| 241 | 0.0026 | 0.0017 | 0.0009 |
| 242 | 0.0026 | 0.0017 | 0.0009 |
| 243 | 0.0026 | 0.0017 | 0.0009 |
| 244 | 0.0025 | 0.0016 | 0.0009 |
| 245 | 0.0025 | 0.0016 | 0.0009 |
| 246 | 0.0024 | 0.0016 | 0.0009 |
| 247 | 0.0024 | 0.0016 | 0.0008 |
| 248 | 0.0024 | 0.0015 | 0.0008 |
| 249 | 0.0023 | 0.0015 | 0.0008 |
| 250 | 0.0023 | 0.0015 | 0.0008 |
| 251 | 0.0023 | 0.0015 | 0.0008 |
| 252 | 0.0022 | 0.0014 | 0.0008 |
| 253 | 0.0022 | 0.0014 | 0.0008 |
| 254 | 0.0022 | 0.0014 | 0.0008 |
| 255 | 0.0021 | 0.0014 | 0.0008 |
| 256 | 0.0021 | 0.0014 | 0.0007 |
| 257 | 0.0021 | 0.0014 | 0.0007 |
| 258 | 0.0021 | 0.0013 | 0.0007 |
| 259 | 0.0020 | 0.0013 | 0.0007 |
| 260 | 0.0020 | 0.0013 | 0.0007 |
| 261 | 0.0020 | 0.0013 | 0.0007 |
| 262 | 0.0020 | 0.0013 | 0.0007 |
| 263 | 0.0019 | 0.0013 | 0.0007 |
| 264 | 0.0019 | 0.0012 | 0.0007 |
| 265 | 0.0019 | 0.0012 | 0.0007 |
| 266 | 0.0019 | 0.0012 | 0.0007 |
| 267 | 0.0019 | 0.0012 | 0.0007 |
| 268 | 0.0018 | 0.0012 | 0.0006 |
| 269 | 0.0018 | 0.0012 | 0.0006 |
| 270 | 0.0018 | 0.0012 | 0.0006 |
| 271 | 0.0018 | 0.0012 | 0.0006 |
| 272 | 0.0018 | 0.0011 | 0.0006 |
| 273 | 0.0017 | 0.0011 | 0.0006 |
| 274 | 0.0017 | 0.0011 | 0.0006 |
| 275 | 0.0017 | 0.0011 | 0.0006 |
| 276 | 0.0017 | 0.0011 | 0.0006 |
| 277 | 0.0017 | 0.0011 | 0.0006 |
| 278 | 0.0017 | 0.0011 | 0.0006 |
| 279 | 0.0016 | 0.0011 | 0.0006 |
| 280 | 0.0016 | 0.0011 | 0.0006 |
| 281 | 0.0016 | 0.0010 | 0.0006 |
| 282 | 0.0016 | 0.0010 | 0.0006 |
| 283 | 0.0016 | 0.0010 | 0.0006 |
| 284 | 0.0016 | 0.0010 | 0.0005 |
| 285 | 0.0016 | 0.0010 | 0.0005 |
| 286 | 0.0015 | 0.0010 | 0.0005 |
| 287 | 0.0015 | 0.0010 | 0.0005 |
| 288 | 0.0015 | 0.0010 | 0.0005 |

Total soil rain loss = 1.04(In)
Total effective rainfall = 1.33(In)
Peak flow rate in flood hydrograph = 2.24(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 2.5 | 5.0 | 7.5 | 10.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0000 | 0.00 | Q | | | | |
| 0+15 | 0.0000 | 0.00 | Q | | | | |
| 0+20 | 0.0001 | 0.00 | Q | | | | |
| 0+25 | 0.0001 | 0.00 | Q | | | | |
| 0+30 | 0.0001 | 0.00 | Q | | | | |
| 0+35 | 0.0001 | 0.00 | Q | | | | |
| 0+40 | 0.0002 | 0.01 | Q | | | | |
| 0+45 | 0.0002 | 0.01 | Q | | | | |
| 0+50 | 0.0003 | 0.01 | Q | | | | |
| 0+55 | 0.0003 | 0.01 | Q | | | | |
| 1+ 0 | 0.0003 | 0.01 | Q | | | | |
| 1+ 5 | 0.0004 | 0.01 | Q | | | | |
| 1+10 | 0.0004 | 0.01 | Q | | | | |
| 1+15 | 0.0004 | 0.01 | Q | | | | |
| 1+20 | 0.0005 | 0.01 | Q | | | | |
| 1+25 | 0.0005 | 0.01 | Q | | | | |
| 1+30 | 0.0006 | 0.01 | Q | | | | |
| 1+35 | 0.0006 | 0.01 | Q | | | | |
| 1+40 | 0.0006 | 0.01 | Q | | | | |
| 1+45 | 0.0007 | 0.01 | Q | | | | |
| 1+50 | 0.0007 | 0.01 | Q | | | | |
| 1+55 | 0.0008 | 0.01 | Q | | | | |
| 2+ 0 | 0.0008 | 0.01 | Q | | | | |
| 2+ 5 | 0.0009 | 0.01 | Q | | | | |
| 2+10 | 0.0009 | 0.01 | Q | | | | |
| 2+15 | 0.0009 | 0.01 | Q | | | | |
| 2+20 | 0.0010 | 0.01 | Q | | | | |
| 2+25 | 0.0010 | 0.01 | Q | | | | |
| 2+30 | 0.0011 | 0.01 | Q | | | | |
| 2+35 | 0.0011 | 0.01 | Q | | | | |
| 2+40 | 0.0012 | 0.01 | Q | | | | |
| 2+45 | 0.0012 | 0.01 | Q | | | | |
| 2+50 | 0.0012 | 0.01 | Q | | | | |
| 2+55 | 0.0013 | 0.01 | Q | | | | |
| 3+ 0 | 0.0013 | 0.01 | Q | | | | |
| 3+ 5 | 0.0014 | 0.01 | Q | | | | |
| 3+10 | 0.0014 | 0.01 | Q | | | | |
| 3+15 | 0.0015 | 0.01 | Q | | | | |
| 3+20 | 0.0015 | 0.01 | Q | | | | |
| 3+25 | 0.0016 | 0.01 | Q | | | | |
| 3+30 | 0.0016 | 0.01 | Q | | | | |
| 3+35 | 0.0016 | 0.01 | Q | | | | |
| 3+40 | 0.0017 | 0.01 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+45 | 0.0017 | 0.01 | Q | | | | |
| 3+50 | 0.0018 | 0.01 | Q | | | | |
| 3+55 | 0.0018 | 0.01 | Q | | | | |
| 4+ 0 | 0.0019 | 0.01 | Q | | | | |
| 4+ 5 | 0.0019 | 0.01 | Q | | | | |
| 4+10 | 0.0020 | 0.01 | Q | | | | |
| 4+15 | 0.0020 | 0.01 | Q | | | | |
| 4+20 | 0.0021 | 0.01 | Q | | | | |
| 4+25 | 0.0021 | 0.01 | Q | | | | |
| 4+30 | 0.0022 | 0.01 | Q | | | | |
| 4+35 | 0.0022 | 0.01 | Q | | | | |
| 4+40 | 0.0023 | 0.01 | Q | | | | |
| 4+45 | 0.0023 | 0.01 | Q | | | | |
| 4+50 | 0.0024 | 0.01 | Q | | | | |
| 4+55 | 0.0024 | 0.01 | QV | | | | |
| 5+ 0 | 0.0025 | 0.01 | QV | | | | |
| 5+ 5 | 0.0025 | 0.01 | QV | | | | |
| 5+10 | 0.0026 | 0.01 | QV | | | | |
| 5+15 | 0.0026 | 0.01 | QV | | | | |
| 5+20 | 0.0027 | 0.01 | QV | | | | |
| 5+25 | 0.0027 | 0.01 | QV | | | | |
| 5+30 | 0.0028 | 0.01 | QV | | | | |
| 5+35 | 0.0028 | 0.01 | QV | | | | |
| 5+40 | 0.0029 | 0.01 | QV | | | | |
| 5+45 | 0.0029 | 0.01 | QV | | | | |
| 5+50 | 0.0030 | 0.01 | QV | | | | |
| 5+55 | 0.0030 | 0.01 | QV | | | | |
| 6+ 0 | 0.0031 | 0.01 | QV | | | | |
| 6+ 5 | 0.0031 | 0.01 | QV | | | | |
| 6+10 | 0.0032 | 0.01 | QV | | | | |
| 6+15 | 0.0033 | 0.01 | QV | | | | |
| 6+20 | 0.0033 | 0.01 | QV | | | | |
| 6+25 | 0.0034 | 0.01 | QV | | | | |
| 6+30 | 0.0034 | 0.01 | QV | | | | |
| 6+35 | 0.0035 | 0.01 | QV | | | | |
| 6+40 | 0.0035 | 0.01 | QV | | | | |
| 6+45 | 0.0036 | 0.01 | QV | | | | |
| 6+50 | 0.0037 | 0.01 | QV | | | | |
| 6+55 | 0.0037 | 0.01 | QV | | | | |
| 7+ 0 | 0.0038 | 0.01 | QV | | | | |
| 7+ 5 | 0.0038 | 0.01 | QV | | | | |
| 7+10 | 0.0039 | 0.01 | QV | | | | |
| 7+15 | 0.0040 | 0.01 | QV | | | | |
| 7+20 | 0.0040 | 0.01 | QV | | | | |
| 7+25 | 0.0041 | 0.01 | QV | | | | |
| 7+30 | 0.0041 | 0.01 | QV | | | | |
| 7+35 | 0.0042 | 0.01 | QV | | | | |
| 7+40 | 0.0043 | 0.01 | QV | | | | |
| 7+45 | 0.0043 | 0.01 | QV | | | | |
| 7+50 | 0.0044 | 0.01 | QV | | | | |
| 7+55 | 0.0045 | 0.01 | QV | | | | |
| 8+ 0 | 0.0045 | 0.01 | QV | | | | |
| 8+ 5 | 0.0046 | 0.01 | QV | | | | |
| 8+10 | 0.0046 | 0.01 | QV | | | | |
| 8+15 | 0.0047 | 0.01 | QV | | | | |
| 8+20 | 0.0048 | 0.01 | QV | | | | |
| 8+25 | 0.0048 | 0.01 | Q V | | | | |
| 8+30 | 0.0049 | 0.01 | Q V | | | | |
| 8+35 | 0.0050 | 0.01 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8+40 | 0.0051 | 0.01 | Q V | \| | \| | \| | \| |
| 8+45 | 0.0051 | 0.01 | Q V | \| | \| | \| | \| |
| 8+50 | 0.0052 | 0.01 | Q V | \| | \| | \| | \| |
| 8+55 | 0.0053 | 0.01 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.0053 | 0.01 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.0054 | 0.01 | Q V | \| | \| | \| | \| |
| 9+10 | 0.0055 | 0.01 | Q V | \| | \| | \| | \| |
| 9+15 | 0.0056 | 0.01 | Q V | \| | \| | \| | \| |
| 9+20 | 0.0056 | 0.01 | Q V | \| | \| | \| | \| |
| 9+25 | 0.0057 | 0.01 | Q V | \| | \| | \| | \| |
| 9+30 | 0.0058 | 0.01 | Q V | \| | \| | \| | \| |
| 9+35 | 0.0059 | 0.01 | Q V | \| | \| | \| | \| |
| 9+40 | 0.0059 | 0.01 | Q V | \| | \| | \| | \| |
| 9+45 | 0.0060 | 0.01 | Q V | \| | \| | \| | \| |
| 9+50 | 0.0061 | 0.01 | Q V | \| | \| | \| | \| |
| 9+55 | 0.0062 | 0.01 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.0063 | 0.01 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.0063 | 0.01 | Q V | \| | \| | \| | \| |
| 10+10 | 0.0064 | 0.01 | Q V | \| | \| | \| | \| |
| 10+15 | 0.0065 | 0.01 | Q V | \| | \| | \| | \| |
| 10+20 | 0.0066 | 0.01 | Q V | \| | \| | \| | \| |
| 10+25 | 0.0067 | 0.01 | Q V | \| | \| | \| | \| |
| 10+30 | 0.0068 | 0.01 | Q V | \| | \| | \| | \| |
| 10+35 | 0.0069 | 0.01 | Q V | \| | \| | \| | \| |
| 10+40 | 0.0069 | 0.01 | Q V | \| | \| | \| | \| |
| 10+45 | 0.0070 | 0.01 | Q V | \| | \| | \| | \| |
| 10+50 | 0.0071 | 0.01 | Q V | \| | \| | \| | \| |
| 10+55 | 0.0072 | 0.01 | Q V | \| | \| | \| | \| |
| 11+ 0 | 0.0073 | 0.01 | Q V | \| | \| | \| | \| |
| 11+ 5 | 0.0074 | 0.01 | Q V | \| | \| | \| | \| |
| 11+10 | 0.0075 | 0.01 | Q V | \| | \| | \| | \| |
| 11+15 | 0.0076 | 0.01 | Q V | \| | \| | \| | \| |
| 11+20 | 0.0077 | 0.01 | Q V | \| | \| | \| | \| |
| 11+25 | 0.0078 | 0.01 | Q V | \| | \| | \| | \| |
| 11+30 | 0.0079 | 0.01 | Q V | \| | \| | \| | \| |
| 11+35 | 0.0080 | 0.01 | Q V | \| | \| | \| | \| |
| 11+40 | 0.0081 | 0.02 | Q V | \| | \| | \| | \| |
| 11+45 | 0.0082 | 0.02 | Q V | \| | \| | \| | \| |
| 11+50 | 0.0083 | 0.02 | Q V | \| | \| | \| | \| |
| 11+55 | 0.0084 | 0.02 | Q V | \| | \| | \| | \| |
| 12+ 0 | 0.0085 | 0.02 | Q V | \| | \| | \| | \| |
| 12+ 5 | 0.0086 | 0.02 | Q V | \| | \| | \| | \| |
| 12+10 | 0.0088 | 0.02 | Q V | \| | \| | \| | \| |
| 12+15 | 0.0089 | 0.02 | Q V | \| | \| | \| | \| |
| 12+20 | 0.0090 | 0.02 | Q V | \| | \| | \| | \| |
| 12+25 | 0.0091 | 0.02 | Q V | \| | \| | \| | \| |
| 12+30 | 0.0093 | 0.02 | Q V | \| | \| | \| | \| |
| 12+35 | 0.0094 | 0.02 | Q V | \| | \| | \| | \| |
| 12+40 | 0.0095 | 0.02 | Q V | \| | \| | \| | \| |
| 12+45 | 0.0097 | 0.02 | Q V | \| | \| | \| | \| |
| 12+50 | 0.0098 | 0.02 | Q V | \| | \| | \| | \| |
| 12+55 | 0.0100 | 0.02 | Q V | \| | \| | \| | \| |
| 13+ 0 | 0.0101 | 0.02 | Q V | \| | \| | \| | \| |
| 13+ 5 | 0.0103 | 0.02 | Q V | \| | \| | \| | \| |
| 13+10 | 0.0104 | 0.02 | Q V | \| | \| | \| | \| |
| 13+15 | 0.0106 | 0.02 | Q V | \| | \| | \| | \| |
| 13+20 | 0.0108 | 0.02 | Q V | \| | \| | \| | \| |
| 13+25 | 0.0109 | 0.02 | Q V | \| | \| | \| | \| |
| 13+30 | 0.0111 | 0.02 | Q V | \| | \| | \| | \| |

```
13+35       0.0113      0.03  Q   V     |          |          |          |
13+40       0.0115      0.03  Q   V     |          |          |          |
13+45       0.0116      0.03  Q   V     |          |          |          |
13+50       0.0118      0.03  Q   V     |          |          |          |
13+55       0.0120      0.03  Q   V     |          |          |          |
14+ 0       0.0122      0.03  Q    V    |          |          |          |
14+ 5       0.0124      0.03  Q    V    |          |          |          |
14+10       0.0126      0.03  Q    V    |          |          |          |
14+15       0.0129      0.03  Q    V    |          |          |          |
14+20       0.0131      0.03  Q    V    |          |          |          |
14+25       0.0133      0.03  Q    V    |          |          |          |
14+30       0.0136      0.04  Q    V    |          |          |          |
14+35       0.0138      0.04  Q    V    |          |          |          |
14+40       0.0141      0.04  Q    V    |          |          |          |
14+45       0.0144      0.04  Q    V    |          |          |          |
14+50       0.0146      0.04  Q     V   |          |          |          |
14+55       0.0149      0.04  Q     V   |          |          |          |
15+ 0       0.0153      0.05  Q     V   |          |          |          |
15+ 5       0.0156      0.05  Q     V   |          |          |          |
15+10       0.0159      0.05  Q     V   |          |          |          |
15+15       0.0163      0.05  Q     V   |          |          |          |
15+20       0.0167      0.06  Q     V   |          |          |          |
15+25       0.0171      0.06  Q      V  |          |          |          |
15+30       0.0177      0.07  Q      V  |          |          |          |
15+35       0.0183      0.09  Q      V  |          |          |          |
15+40       0.0191      0.11  Q      V  |          |          |          |
15+45       0.0199      0.13  Q       V |          |          |          |
15+50       0.0210      0.16  Q       V |          |          |          |
15+55       0.0225      0.22  Q        V|          |          |          |
16+ 0       0.0249      0.34  |Q        V          |          |          |
16+ 5       0.0295      0.68  | Q       | V        |          |          |
16+10       0.0400      1.53  |     Q   |     V    |          |          |
16+15       0.0555      2.24  |       Q |          |  V       |          |
16+20       0.0649      1.37  |    Q    |          |     V    |          |
16+25       0.0708      0.85  |  Q      |          |        V |          |
16+30       0.0749      0.60  | Q       |          |          |V         |
16+35       0.0780      0.45  |Q        |          |          | V        |
16+40       0.0804      0.35  |Q        |          |          |  V       |
16+45       0.0822      0.27  |Q        |          |          |   V      |
16+50       0.0838      0.22  Q         |          |          |   V      |
16+55       0.0850      0.18  Q         |          |          |    V     |
17+ 0       0.0861      0.15  Q         |          |          |    V     |
17+ 5       0.0870      0.13  Q         |          |          |     V    |
17+10       0.0877      0.10  Q         |          |          |     V    |
17+15       0.0883      0.08  Q         |          |          |     V    |
17+20       0.0888      0.08  Q         |          |          |     V    |
17+25       0.0893      0.07  Q         |          |          |      V   |
17+30       0.0898      0.07  Q         |          |          |      V   |
17+35       0.0901      0.05  Q         |          |          |      V   |
17+40       0.0904      0.05  Q         |          |          |      V   |
17+45       0.0906      0.03  Q         |          |          |      V   |
17+50       0.0908      0.03  Q         |          |          |      V   |
17+55       0.0910      0.02  Q         |          |          |      V   |
18+ 0       0.0911      0.02  Q         |          |          |      V   |
18+ 5       0.0913      0.02  Q         |          |          |      V   |
18+10       0.0914      0.02  Q         |          |          |       V  |
18+15       0.0916      0.02  Q         |          |          |       V  |
18+20       0.0917      0.02  Q         |          |          |       V  |
18+25       0.0918      0.02  Q         |          |          |       V  |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18+30 | 0.0919 | 0.02 | Q | \| | \| | \| | V \| |
| 18+35 | 0.0921 | 0.02 | Q | \| | \| | \| | V \| |
| 18+40 | 0.0922 | 0.02 | Q | \| | \| | \| | V \| |
| 18+45 | 0.0923 | 0.02 | Q | \| | \| | \| | V \| |
| 18+50 | 0.0924 | 0.01 | Q | \| | \| | \| | V \| |
| 18+55 | 0.0925 | 0.01 | Q | \| | \| | \| | V \| |
| 19+ 0 | 0.0926 | 0.01 | Q | \| | \| | \| | V \| |
| 19+ 5 | 0.0927 | 0.01 | Q | \| | \| | \| | V \| |
| 19+10 | 0.0928 | 0.01 | Q | \| | \| | \| | V \| |
| 19+15 | 0.0929 | 0.01 | Q | \| | \| | \| | V \| |
| 19+20 | 0.0929 | 0.01 | Q | \| | \| | \| | V \| |
| 19+25 | 0.0930 | 0.01 | Q | \| | \| | \| | V \| |
| 19+30 | 0.0931 | 0.01 | Q | \| | \| | \| | V \| |
| 19+35 | 0.0932 | 0.01 | Q | \| | \| | \| | V \| |
| 19+40 | 0.0933 | 0.01 | Q | \| | \| | \| | V \| |
| 19+45 | 0.0933 | 0.01 | Q | \| | \| | \| | V \| |
| 19+50 | 0.0934 | 0.01 | Q | \| | \| | \| | V \| |
| 19+55 | 0.0935 | 0.01 | Q | \| | \| | \| | V \| |
| 20+ 0 | 0.0936 | 0.01 | Q | \| | \| | \| | V \| |
| 20+ 5 | 0.0936 | 0.01 | Q | \| | \| | \| | V \| |
| 20+10 | 0.0937 | 0.01 | Q | \| | \| | \| | V \| |
| 20+15 | 0.0938 | 0.01 | Q | \| | \| | \| | V \| |
| 20+20 | 0.0938 | 0.01 | Q | \| | \| | \| | V\| |
| 20+25 | 0.0939 | 0.01 | Q | \| | \| | \| | V\| |
| 20+30 | 0.0940 | 0.01 | Q | \| | \| | \| | V\| |
| 20+35 | 0.0940 | 0.01 | Q | \| | \| | \| | V\| |
| 20+40 | 0.0941 | 0.01 | Q | \| | \| | \| | V\| |
| 20+45 | 0.0942 | 0.01 | Q | \| | \| | \| | V\| |
| 20+50 | 0.0942 | 0.01 | Q | \| | \| | \| | V\| |
| 20+55 | 0.0943 | 0.01 | Q | \| | \| | \| | V\| |
| 21+ 0 | 0.0944 | 0.01 | Q | \| | \| | \| | V\| |
| 21+ 5 | 0.0944 | 0.01 | Q | \| | \| | \| | V\| |
| 21+10 | 0.0945 | 0.01 | Q | \| | \| | \| | V\| |
| 21+15 | 0.0945 | 0.01 | Q | \| | \| | \| | V\| |
| 21+20 | 0.0946 | 0.01 | Q | \| | \| | \| | V\| |
| 21+25 | 0.0946 | 0.01 | Q | \| | \| | \| | V\| |
| 21+30 | 0.0947 | 0.01 | Q | \| | \| | \| | V\| |
| 21+35 | 0.0948 | 0.01 | Q | \| | \| | \| | V\| |
| 21+40 | 0.0948 | 0.01 | Q | \| | \| | \| | V\| |
| 21+45 | 0.0949 | 0.01 | Q | \| | \| | \| | V\| |
| 21+50 | 0.0949 | 0.01 | Q | \| | \| | \| | V\| |
| 21+55 | 0.0950 | 0.01 | Q | \| | \| | \| | V\| |
| 22+ 0 | 0.0950 | 0.01 | Q | \| | \| | \| | V\| |
| 22+ 5 | 0.0951 | 0.01 | Q | \| | \| | \| | V\| |
| 22+10 | 0.0951 | 0.01 | Q | \| | \| | \| | V\| |
| 22+15 | 0.0952 | 0.01 | Q | \| | \| | \| | V\| |
| 22+20 | 0.0952 | 0.01 | Q | \| | \| | \| | V\| |
| 22+25 | 0.0953 | 0.01 | Q | \| | \| | \| | V\| |
| 22+30 | 0.0953 | 0.01 | Q | \| | \| | \| | V\| |
| 22+35 | 0.0954 | 0.01 | Q | \| | \| | \| | V\| |
| 22+40 | 0.0954 | 0.01 | Q | \| | \| | \| | V\| |
| 22+45 | 0.0954 | 0.01 | Q | \| | \| | \| | V\| |
| 22+50 | 0.0955 | 0.01 | Q | \| | \| | \| | V\| |
| 22+55 | 0.0955 | 0.01 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.0956 | 0.01 | Q | \| | \| | \| | V\| |
| 23+ 5 | 0.0956 | 0.01 | Q | \| | \| | \| | V\| |
| 23+10 | 0.0957 | 0.01 | Q | \| | \| | \| | V\| |
| 23+15 | 0.0957 | 0.01 | Q | \| | \| | \| | V\| |
| 23+20 | 0.0958 | 0.01 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+25 | 0.0958 | 0.01 | Q | \| | \| | \| | V\| |
| 23+30 | 0.0958 | 0.01 | Q | \| | \| | \| | V\| |
| 23+35 | 0.0959 | 0.01 | Q | \| | \| | \| | V\| |
| 23+40 | 0.0959 | 0.01 | Q | \| | \| | \| | V\| |
| 23+45 | 0.0960 | 0.01 | Q | \| | \| | \| | V\| |
| 23+50 | 0.0960 | 0.01 | Q | \| | \| | \| | V\| |
| 23+55 | 0.0960 | 0.01 | Q | \| | \| | \| | V\| |
| 24+ 0 | 0.0961 | 0.01 | Q | \| | \| | \| | V\| |
| 24+ 5 | 0.0961 | 0.01 | Q | \| | \| | \| | V\| |
| 24+10 | 0.0962 | 0.00 | Q | \| | \| | \| | V\| |
| 24+15 | 0.0962 | 0.00 | Q | \| | \| | \| | V\| |
| 24+20 | 0.0962 | 0.00 | Q | \| | \| | \| | V\| |
| 24+25 | 0.0962 | 0.00 | Q | \| | \| | \| | V\| |
| 24+30 | 0.0962 | 0.00 | Q | \| | \| | \| | V\| |
| 24+35 | 0.0962 | 0.00 | Q | \| | \| | \| | V\| |
| 24+40 | 0.0962 | 0.00 | Q | \| | \| | \| | V\| |
| 24+45 | 0.0962 | 0.00 | Q | \| | \| | \| | V\| |
| 24+50 | 0.0962 | 0.00 | Q | \| | \| | \| | V\| |
| 24+55 | 0.0962 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 0 | 0.0962 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 5 | 0.0962 | 0.00 | Q | \| | \| | \| | V\| |
| 25+10 | 0.0962 | 0.00 | Q | \| | \| | \| | V\| |
| 25+15 | 0.0962 | 0.00 | Q | \| | \| | \| | V\| |
| 25+20 | 0.0962 | 0.00 | Q | \| | \| | \| | V\| |
| 25+25 | 0.0962 | 0.00 | Q | \| | \| | \| | V\| |
| 25+30 | 0.0962 | 0.00 | Q | \| | \| | \| | V\| |
| 25+35 | 0.0962 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 13
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 16.85 | 1 | 1.28 |
| Rainfall data for year 100 | | |
| 16.85 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 16.85 | 24 | 2.39 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 16.85 | 1.000 | 0.360 | 1.000 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 16.85 | 1.000 | 62.0 | 80.6 | 2.41 | 0.353 |

Area-averaged catchment yield fraction, Y = 0.353
Area-averaged low loss fraction, Yb = 0.647
User entry of time of concentration = 0.920 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 16.85(Ac.)
Catchment Lag time = 0.736 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 11.3225
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.647 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.607(In)
Computed peak 30-minute rainfall = 1.040(In)
Specified peak 1-hour rainfall = 1.280(In)
Computed peak 3-hour rainfall = 1.599(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.390(In)

Rainfall depth area reduction factors:
Using a total area of 16.85(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.607(In)
30-minute factor = 0.999 Adjusted rainfall = 1.039(In)
1-hour factor = 0.999 Adjusted rainfall = 1.279(In)
3-hour factor = 1.000 Adjusted rainfall = 1.599(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.390(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 203.78 (CFS)) | |
| 1 | 0.498 | 1.015 |
| 2 | 1.858 | 2.771 |
| 3 | 4.040 | 4.445 |
| 4 | 7.064 | 6.163 |
| 5 | 11.407 | 8.850 |
| 6 | 18.856 | 15.180 |
| 7 | 29.728 | 22.155 |
| 8 | 39.700 | 20.321 |
| 9 | 47.575 | 16.048 |
| 10 | 53.930 | 12.950 |
| 11 | 58.952 | 10.235 |
| 12 | 62.924 | 8.094 |
| 13 | 66.258 | 6.794 |
| 14 | 69.176 | 5.946 |

| | | |
|---|---|---|
| 15 | 71.807 | 5.361 |
| 16 | 74.059 | 4.590 |
| 17 | 76.072 | 4.101 |
| 18 | 77.965 | 3.858 |
| 19 | 79.549 | 3.229 |
| 20 | 81.042 | 3.041 |
| 21 | 82.368 | 2.702 |
| 22 | 83.591 | 2.492 |
| 23 | 84.756 | 2.375 |
| 24 | 85.843 | 2.216 |
| 25 | 86.885 | 2.121 |
| 26 | 87.798 | 1.861 |
| 27 | 88.675 | 1.787 |
| 28 | 89.382 | 1.441 |
| 29 | 90.059 | 1.380 |
| 30 | 90.705 | 1.315 |
| 31 | 91.338 | 1.291 |
| 32 | 91.920 | 1.184 |
| 33 | 92.463 | 1.107 |
| 34 | 92.989 | 1.072 |
| 35 | 93.487 | 1.016 |
| 36 | 93.960 | 0.963 |
| 37 | 94.351 | 0.797 |
| 38 | 94.736 | 0.784 |
| 39 | 95.121 | 0.784 |
| 40 | 95.503 | 0.778 |
| 41 | 95.823 | 0.651 |
| 42 | 96.117 | 0.600 |
| 43 | 96.411 | 0.600 |
| 44 | 96.706 | 0.600 |
| 45 | 96.968 | 0.535 |
| 46 | 97.173 | 0.418 |
| 47 | 97.377 | 0.415 |
| 48 | 97.581 | 0.415 |
| 49 | 97.776 | 0.399 |
| 50 | 97.905 | 0.261 |
| 51 | 98.018 | 0.231 |
| 52 | 98.131 | 0.231 |
| 53 | 98.244 | 0.231 |
| 54 | 98.369 | 0.254 |
| 55 | 98.505 | 0.277 |
| 56 | 98.641 | 0.277 |
| 57 | 98.777 | 0.277 |
| 58 | 98.913 | 0.277 |
| 59 | 99.048 | 0.277 |
| 60 | 99.184 | 0.277 |
| 61 | 99.320 | 0.277 |
| 62 | 99.455 | 0.275 |
| 63 | 99.548 | 0.189 |
| 64 | 99.619 | 0.144 |
| 65 | 99.689 | 0.144 |
| 66 | 99.760 | 0.144 |
| 67 | 99.831 | 0.144 |
| 68 | 99.902 | 0.144 |
| 69 | 100.000 | 0.072 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6069 | 0.6069 |

| | | |
|---|---|---|
| 2 | 0.7472 | 0.1403 |
| 3 | 0.8438 | 0.0966 |
| 4 | 0.9199 | 0.0761 |
| 5 | 0.9836 | 0.0637 |
| 6 | 1.0389 | 0.0553 |
| 7 | 1.0880 | 0.0492 |
| 8 | 1.1325 | 0.0445 |
| 9 | 1.1732 | 0.0407 |
| 10 | 1.2109 | 0.0377 |
| 11 | 1.2460 | 0.0351 |
| 12 | 1.2790 | 0.0330 |
| 13 | 1.3000 | 0.0210 |
| 14 | 1.3197 | 0.0197 |
| 15 | 1.3383 | 0.0186 |
| 16 | 1.3560 | 0.0177 |
| 17 | 1.3728 | 0.0168 |
| 18 | 1.3888 | 0.0160 |
| 19 | 1.4042 | 0.0153 |
| 20 | 1.4189 | 0.0147 |
| 21 | 1.4330 | 0.0141 |
| 22 | 1.4466 | 0.0136 |
| 23 | 1.4597 | 0.0131 |
| 24 | 1.4724 | 0.0127 |
| 25 | 1.4847 | 0.0123 |
| 26 | 1.4965 | 0.0119 |
| 27 | 1.5081 | 0.0115 |
| 28 | 1.5192 | 0.0112 |
| 29 | 1.5301 | 0.0109 |
| 30 | 1.5407 | 0.0106 |
| 31 | 1.5510 | 0.0103 |
| 32 | 1.5610 | 0.0100 |
| 33 | 1.5708 | 0.0098 |
| 34 | 1.5804 | 0.0096 |
| 35 | 1.5897 | 0.0093 |
| 36 | 1.5988 | 0.0091 |
| 37 | 1.6077 | 0.0089 |
| 38 | 1.6164 | 0.0087 |
| 39 | 1.6250 | 0.0085 |
| 40 | 1.6333 | 0.0084 |
| 41 | 1.6415 | 0.0082 |
| 42 | 1.6496 | 0.0080 |
| 43 | 1.6574 | 0.0079 |
| 44 | 1.6652 | 0.0077 |
| 45 | 1.6728 | 0.0076 |
| 46 | 1.6802 | 0.0075 |
| 47 | 1.6876 | 0.0073 |
| 48 | 1.6948 | 0.0072 |
| 49 | 1.7019 | 0.0071 |
| 50 | 1.7089 | 0.0070 |
| 51 | 1.7157 | 0.0069 |
| 52 | 1.7225 | 0.0068 |
| 53 | 1.7292 | 0.0067 |
| 54 | 1.7357 | 0.0066 |
| 55 | 1.7422 | 0.0065 |
| 56 | 1.7486 | 0.0064 |
| 57 | 1.7548 | 0.0063 |
| 58 | 1.7610 | 0.0062 |
| 59 | 1.7671 | 0.0061 |
| 60 | 1.7732 | 0.0060 |

| | | |
|---|---|---|
| 61 | 1.7791 | 0.0059 |
| 62 | 1.7850 | 0.0059 |
| 63 | 1.7908 | 0.0058 |
| 64 | 1.7965 | 0.0057 |
| 65 | 1.8022 | 0.0057 |
| 66 | 1.8078 | 0.0056 |
| 67 | 1.8133 | 0.0055 |
| 68 | 1.8187 | 0.0055 |
| 69 | 1.8241 | 0.0054 |
| 70 | 1.8294 | 0.0053 |
| 71 | 1.8347 | 0.0053 |
| 72 | 1.8399 | 0.0052 |
| 73 | 1.8447 | 0.0048 |
| 74 | 1.8494 | 0.0047 |
| 75 | 1.8541 | 0.0047 |
| 76 | 1.8588 | 0.0046 |
| 77 | 1.8634 | 0.0046 |
| 78 | 1.8679 | 0.0045 |
| 79 | 1.8724 | 0.0045 |
| 80 | 1.8768 | 0.0044 |
| 81 | 1.8812 | 0.0044 |
| 82 | 1.8856 | 0.0044 |
| 83 | 1.8899 | 0.0043 |
| 84 | 1.8942 | 0.0043 |
| 85 | 1.8984 | 0.0042 |
| 86 | 1.9026 | 0.0042 |
| 87 | 1.9068 | 0.0042 |
| 88 | 1.9109 | 0.0041 |
| 89 | 1.9150 | 0.0041 |
| 90 | 1.9190 | 0.0040 |
| 91 | 1.9230 | 0.0040 |
| 92 | 1.9270 | 0.0040 |
| 93 | 1.9309 | 0.0039 |
| 94 | 1.9348 | 0.0039 |
| 95 | 1.9387 | 0.0039 |
| 96 | 1.9425 | 0.0038 |
| 97 | 1.9463 | 0.0038 |
| 98 | 1.9501 | 0.0038 |
| 99 | 1.9538 | 0.0037 |
| 100 | 1.9575 | 0.0037 |
| 101 | 1.9612 | 0.0037 |
| 102 | 1.9649 | 0.0036 |
| 103 | 1.9685 | 0.0036 |
| 104 | 1.9721 | 0.0036 |
| 105 | 1.9757 | 0.0036 |
| 106 | 1.9792 | 0.0035 |
| 107 | 1.9827 | 0.0035 |
| 108 | 1.9862 | 0.0035 |
| 109 | 1.9896 | 0.0035 |
| 110 | 1.9931 | 0.0034 |
| 111 | 1.9965 | 0.0034 |
| 112 | 1.9999 | 0.0034 |
| 113 | 2.0032 | 0.0034 |
| 114 | 2.0065 | 0.0033 |
| 115 | 2.0099 | 0.0033 |
| 116 | 2.0131 | 0.0033 |
| 117 | 2.0164 | 0.0033 |
| 118 | 2.0196 | 0.0032 |
| 119 | 2.0229 | 0.0032 |

| | | |
|---|---|---|
| 120 | 2.0261 | 0.0032 |
| 121 | 2.0292 | 0.0032 |
| 122 | 2.0324 | 0.0032 |
| 123 | 2.0355 | 0.0031 |
| 124 | 2.0386 | 0.0031 |
| 125 | 2.0417 | 0.0031 |
| 126 | 2.0448 | 0.0031 |
| 127 | 2.0478 | 0.0031 |
| 128 | 2.0509 | 0.0030 |
| 129 | 2.0539 | 0.0030 |
| 130 | 2.0569 | 0.0030 |
| 131 | 2.0599 | 0.0030 |
| 132 | 2.0628 | 0.0030 |
| 133 | 2.0658 | 0.0029 |
| 134 | 2.0687 | 0.0029 |
| 135 | 2.0716 | 0.0029 |
| 136 | 2.0745 | 0.0029 |
| 137 | 2.0773 | 0.0029 |
| 138 | 2.0802 | 0.0029 |
| 139 | 2.0830 | 0.0028 |
| 140 | 2.0859 | 0.0028 |
| 141 | 2.0887 | 0.0028 |
| 142 | 2.0914 | 0.0028 |
| 143 | 2.0942 | 0.0028 |
| 144 | 2.0970 | 0.0028 |
| 145 | 2.0997 | 0.0027 |
| 146 | 2.1024 | 0.0027 |
| 147 | 2.1051 | 0.0027 |
| 148 | 2.1078 | 0.0027 |
| 149 | 2.1105 | 0.0027 |
| 150 | 2.1132 | 0.0027 |
| 151 | 2.1158 | 0.0027 |
| 152 | 2.1185 | 0.0026 |
| 153 | 2.1211 | 0.0026 |
| 154 | 2.1237 | 0.0026 |
| 155 | 2.1263 | 0.0026 |
| 156 | 2.1289 | 0.0026 |
| 157 | 2.1314 | 0.0026 |
| 158 | 2.1340 | 0.0026 |
| 159 | 2.1365 | 0.0025 |
| 160 | 2.1391 | 0.0025 |
| 161 | 2.1416 | 0.0025 |
| 162 | 2.1441 | 0.0025 |
| 163 | 2.1466 | 0.0025 |
| 164 | 2.1491 | 0.0025 |
| 165 | 2.1515 | 0.0025 |
| 166 | 2.1540 | 0.0025 |
| 167 | 2.1564 | 0.0024 |
| 168 | 2.1589 | 0.0024 |
| 169 | 2.1613 | 0.0024 |
| 170 | 2.1637 | 0.0024 |
| 171 | 2.1661 | 0.0024 |
| 172 | 2.1685 | 0.0024 |
| 173 | 2.1708 | 0.0024 |
| 174 | 2.1732 | 0.0024 |
| 175 | 2.1755 | 0.0024 |
| 176 | 2.1779 | 0.0023 |
| 177 | 2.1802 | 0.0023 |
| 178 | 2.1825 | 0.0023 |

| | | |
|---|---|---|
| 179 | 2.1848 | 0.0023 |
| 180 | 2.1871 | 0.0023 |
| 181 | 2.1894 | 0.0023 |
| 182 | 2.1917 | 0.0023 |
| 183 | 2.1940 | 0.0023 |
| 184 | 2.1962 | 0.0023 |
| 185 | 2.1985 | 0.0022 |
| 186 | 2.2007 | 0.0022 |
| 187 | 2.2029 | 0.0022 |
| 188 | 2.2052 | 0.0022 |
| 189 | 2.2074 | 0.0022 |
| 190 | 2.2096 | 0.0022 |
| 191 | 2.2118 | 0.0022 |
| 192 | 2.2139 | 0.0022 |
| 193 | 2.2161 | 0.0022 |
| 194 | 2.2183 | 0.0022 |
| 195 | 2.2204 | 0.0022 |
| 196 | 2.2226 | 0.0021 |
| 197 | 2.2247 | 0.0021 |
| 198 | 2.2268 | 0.0021 |
| 199 | 2.2289 | 0.0021 |
| 200 | 2.2311 | 0.0021 |
| 201 | 2.2332 | 0.0021 |
| 202 | 2.2352 | 0.0021 |
| 203 | 2.2373 | 0.0021 |
| 204 | 2.2394 | 0.0021 |
| 205 | 2.2415 | 0.0021 |
| 206 | 2.2435 | 0.0021 |
| 207 | 2.2456 | 0.0021 |
| 208 | 2.2476 | 0.0020 |
| 209 | 2.2497 | 0.0020 |
| 210 | 2.2517 | 0.0020 |
| 211 | 2.2537 | 0.0020 |
| 212 | 2.2557 | 0.0020 |
| 213 | 2.2577 | 0.0020 |
| 214 | 2.2597 | 0.0020 |
| 215 | 2.2617 | 0.0020 |
| 216 | 2.2637 | 0.0020 |
| 217 | 2.2657 | 0.0020 |
| 218 | 2.2676 | 0.0020 |
| 219 | 2.2696 | 0.0020 |
| 220 | 2.2715 | 0.0020 |
| 221 | 2.2735 | 0.0019 |
| 222 | 2.2754 | 0.0019 |
| 223 | 2.2773 | 0.0019 |
| 224 | 2.2793 | 0.0019 |
| 225 | 2.2812 | 0.0019 |
| 226 | 2.2831 | 0.0019 |
| 227 | 2.2850 | 0.0019 |
| 228 | 2.2869 | 0.0019 |
| 229 | 2.2888 | 0.0019 |
| 230 | 2.2907 | 0.0019 |
| 231 | 2.2925 | 0.0019 |
| 232 | 2.2944 | 0.0019 |
| 233 | 2.2963 | 0.0019 |
| 234 | 2.2981 | 0.0019 |
| 235 | 2.3000 | 0.0018 |
| 236 | 2.3018 | 0.0018 |
| 237 | 2.3037 | 0.0018 |

| | | |
|---|---|---|
| 238 | 2.3055 | 0.0018 |
| 239 | 2.3073 | 0.0018 |
| 240 | 2.3091 | 0.0018 |
| 241 | 2.3109 | 0.0018 |
| 242 | 2.3128 | 0.0018 |
| 243 | 2.3146 | 0.0018 |
| 244 | 2.3163 | 0.0018 |
| 245 | 2.3181 | 0.0018 |
| 246 | 2.3199 | 0.0018 |
| 247 | 2.3217 | 0.0018 |
| 248 | 2.3235 | 0.0018 |
| 249 | 2.3252 | 0.0018 |
| 250 | 2.3270 | 0.0018 |
| 251 | 2.3287 | 0.0018 |
| 252 | 2.3305 | 0.0017 |
| 253 | 2.3322 | 0.0017 |
| 254 | 2.3340 | 0.0017 |
| 255 | 2.3357 | 0.0017 |
| 256 | 2.3374 | 0.0017 |
| 257 | 2.3391 | 0.0017 |
| 258 | 2.3409 | 0.0017 |
| 259 | 2.3426 | 0.0017 |
| 260 | 2.3443 | 0.0017 |
| 261 | 2.3460 | 0.0017 |
| 262 | 2.3477 | 0.0017 |
| 263 | 2.3494 | 0.0017 |
| 264 | 2.3510 | 0.0017 |
| 265 | 2.3527 | 0.0017 |
| 266 | 2.3544 | 0.0017 |
| 267 | 2.3561 | 0.0017 |
| 268 | 2.3577 | 0.0017 |
| 269 | 2.3594 | 0.0017 |
| 270 | 2.3610 | 0.0017 |
| 271 | 2.3627 | 0.0016 |
| 272 | 2.3643 | 0.0016 |
| 273 | 2.3660 | 0.0016 |
| 274 | 2.3676 | 0.0016 |
| 275 | 2.3692 | 0.0016 |
| 276 | 2.3708 | 0.0016 |
| 277 | 2.3725 | 0.0016 |
| 278 | 2.3741 | 0.0016 |
| 279 | 2.3757 | 0.0016 |
| 280 | 2.3773 | 0.0016 |
| 281 | 2.3789 | 0.0016 |
| 282 | 2.3805 | 0.0016 |
| 283 | 2.3821 | 0.0016 |
| 284 | 2.3837 | 0.0016 |
| 285 | 2.3852 | 0.0016 |
| 286 | 2.3868 | 0.0016 |
| 287 | 2.3884 | 0.0016 |
| 288 | 2.3899 | 0.0016 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0016 | 0.0010 | 0.0006 |
| 2 | 0.0016 | 0.0010 | 0.0006 |
| 3 | 0.0016 | 0.0010 | 0.0006 |

| | | | |
|---|---|---|---|
| 4 | 0.0016 | 0.0010 | 0.0006 |
| 5 | 0.0016 | 0.0010 | 0.0006 |
| 6 | 0.0016 | 0.0010 | 0.0006 |
| 7 | 0.0016 | 0.0010 | 0.0006 |
| 8 | 0.0016 | 0.0010 | 0.0006 |
| 9 | 0.0016 | 0.0010 | 0.0006 |
| 10 | 0.0016 | 0.0011 | 0.0006 |
| 11 | 0.0016 | 0.0011 | 0.0006 |
| 12 | 0.0016 | 0.0011 | 0.0006 |
| 13 | 0.0017 | 0.0011 | 0.0006 |
| 14 | 0.0017 | 0.0011 | 0.0006 |
| 15 | 0.0017 | 0.0011 | 0.0006 |
| 16 | 0.0017 | 0.0011 | 0.0006 |
| 17 | 0.0017 | 0.0011 | 0.0006 |
| 18 | 0.0017 | 0.0011 | 0.0006 |
| 19 | 0.0017 | 0.0011 | 0.0006 |
| 20 | 0.0017 | 0.0011 | 0.0006 |
| 21 | 0.0017 | 0.0011 | 0.0006 |
| 22 | 0.0017 | 0.0011 | 0.0006 |
| 23 | 0.0017 | 0.0011 | 0.0006 |
| 24 | 0.0017 | 0.0011 | 0.0006 |
| 25 | 0.0017 | 0.0011 | 0.0006 |
| 26 | 0.0018 | 0.0011 | 0.0006 |
| 27 | 0.0018 | 0.0011 | 0.0006 |
| 28 | 0.0018 | 0.0011 | 0.0006 |
| 29 | 0.0018 | 0.0012 | 0.0006 |
| 30 | 0.0018 | 0.0012 | 0.0006 |
| 31 | 0.0018 | 0.0012 | 0.0006 |
| 32 | 0.0018 | 0.0012 | 0.0006 |
| 33 | 0.0018 | 0.0012 | 0.0006 |
| 34 | 0.0018 | 0.0012 | 0.0006 |
| 35 | 0.0018 | 0.0012 | 0.0006 |
| 36 | 0.0018 | 0.0012 | 0.0007 |
| 37 | 0.0019 | 0.0012 | 0.0007 |
| 38 | 0.0019 | 0.0012 | 0.0007 |
| 39 | 0.0019 | 0.0012 | 0.0007 |
| 40 | 0.0019 | 0.0012 | 0.0007 |
| 41 | 0.0019 | 0.0012 | 0.0007 |
| 42 | 0.0019 | 0.0012 | 0.0007 |
| 43 | 0.0019 | 0.0012 | 0.0007 |
| 44 | 0.0019 | 0.0012 | 0.0007 |
| 45 | 0.0019 | 0.0013 | 0.0007 |
| 46 | 0.0019 | 0.0013 | 0.0007 |
| 47 | 0.0020 | 0.0013 | 0.0007 |
| 48 | 0.0020 | 0.0013 | 0.0007 |
| 49 | 0.0020 | 0.0013 | 0.0007 |
| 50 | 0.0020 | 0.0013 | 0.0007 |
| 51 | 0.0020 | 0.0013 | 0.0007 |
| 52 | 0.0020 | 0.0013 | 0.0007 |
| 53 | 0.0020 | 0.0013 | 0.0007 |
| 54 | 0.0020 | 0.0013 | 0.0007 |
| 55 | 0.0021 | 0.0013 | 0.0007 |
| 56 | 0.0021 | 0.0013 | 0.0007 |
| 57 | 0.0021 | 0.0013 | 0.0007 |
| 58 | 0.0021 | 0.0013 | 0.0007 |
| 59 | 0.0021 | 0.0014 | 0.0007 |
| 60 | 0.0021 | 0.0014 | 0.0007 |
| 61 | 0.0021 | 0.0014 | 0.0008 |
| 62 | 0.0021 | 0.0014 | 0.0008 |

| | | | |
|---|---|---|---|
| 63 | 0.0022 | 0.0014 | 0.0008 |
| 64 | 0.0022 | 0.0014 | 0.0008 |
| 65 | 0.0022 | 0.0014 | 0.0008 |
| 66 | 0.0022 | 0.0014 | 0.0008 |
| 67 | 0.0022 | 0.0014 | 0.0008 |
| 68 | 0.0022 | 0.0014 | 0.0008 |
| 69 | 0.0022 | 0.0014 | 0.0008 |
| 70 | 0.0022 | 0.0015 | 0.0008 |
| 71 | 0.0023 | 0.0015 | 0.0008 |
| 72 | 0.0023 | 0.0015 | 0.0008 |
| 73 | 0.0023 | 0.0015 | 0.0008 |
| 74 | 0.0023 | 0.0015 | 0.0008 |
| 75 | 0.0023 | 0.0015 | 0.0008 |
| 76 | 0.0023 | 0.0015 | 0.0008 |
| 77 | 0.0024 | 0.0015 | 0.0008 |
| 78 | 0.0024 | 0.0015 | 0.0008 |
| 79 | 0.0024 | 0.0015 | 0.0008 |
| 80 | 0.0024 | 0.0016 | 0.0009 |
| 81 | 0.0024 | 0.0016 | 0.0009 |
| 82 | 0.0024 | 0.0016 | 0.0009 |
| 83 | 0.0025 | 0.0016 | 0.0009 |
| 84 | 0.0025 | 0.0016 | 0.0009 |
| 85 | 0.0025 | 0.0016 | 0.0009 |
| 86 | 0.0025 | 0.0016 | 0.0009 |
| 87 | 0.0025 | 0.0016 | 0.0009 |
| 88 | 0.0026 | 0.0017 | 0.0009 |
| 89 | 0.0026 | 0.0017 | 0.0009 |
| 90 | 0.0026 | 0.0017 | 0.0009 |
| 91 | 0.0026 | 0.0017 | 0.0009 |
| 92 | 0.0026 | 0.0017 | 0.0009 |
| 93 | 0.0027 | 0.0017 | 0.0009 |
| 94 | 0.0027 | 0.0017 | 0.0009 |
| 95 | 0.0027 | 0.0018 | 0.0010 |
| 96 | 0.0027 | 0.0018 | 0.0010 |
| 97 | 0.0028 | 0.0018 | 0.0010 |
| 98 | 0.0028 | 0.0018 | 0.0010 |
| 99 | 0.0028 | 0.0018 | 0.0010 |
| 100 | 0.0028 | 0.0018 | 0.0010 |
| 101 | 0.0029 | 0.0018 | 0.0010 |
| 102 | 0.0029 | 0.0019 | 0.0010 |
| 103 | 0.0029 | 0.0019 | 0.0010 |
| 104 | 0.0029 | 0.0019 | 0.0010 |
| 105 | 0.0030 | 0.0019 | 0.0010 |
| 106 | 0.0030 | 0.0019 | 0.0011 |
| 107 | 0.0030 | 0.0019 | 0.0011 |
| 108 | 0.0030 | 0.0020 | 0.0011 |
| 109 | 0.0031 | 0.0020 | 0.0011 |
| 110 | 0.0031 | 0.0020 | 0.0011 |
| 111 | 0.0031 | 0.0020 | 0.0011 |
| 112 | 0.0032 | 0.0020 | 0.0011 |
| 113 | 0.0032 | 0.0021 | 0.0011 |
| 114 | 0.0032 | 0.0021 | 0.0011 |
| 115 | 0.0033 | 0.0021 | 0.0012 |
| 116 | 0.0033 | 0.0021 | 0.0012 |
| 117 | 0.0033 | 0.0022 | 0.0012 |
| 118 | 0.0034 | 0.0022 | 0.0012 |
| 119 | 0.0034 | 0.0022 | 0.0012 |
| 120 | 0.0034 | 0.0022 | 0.0012 |
| 121 | 0.0035 | 0.0023 | 0.0012 |

| | | | |
|---|---|---|---|
| 122 | 0.0035 | 0.0023 | 0.0012 |
| 123 | 0.0036 | 0.0023 | 0.0013 |
| 124 | 0.0036 | 0.0023 | 0.0013 |
| 125 | 0.0036 | 0.0024 | 0.0013 |
| 126 | 0.0037 | 0.0024 | 0.0013 |
| 127 | 0.0037 | 0.0024 | 0.0013 |
| 128 | 0.0038 | 0.0024 | 0.0013 |
| 129 | 0.0038 | 0.0025 | 0.0014 |
| 130 | 0.0039 | 0.0025 | 0.0014 |
| 131 | 0.0039 | 0.0025 | 0.0014 |
| 132 | 0.0040 | 0.0026 | 0.0014 |
| 133 | 0.0040 | 0.0026 | 0.0014 |
| 134 | 0.0041 | 0.0026 | 0.0014 |
| 135 | 0.0042 | 0.0027 | 0.0015 |
| 136 | 0.0042 | 0.0027 | 0.0015 |
| 137 | 0.0043 | 0.0028 | 0.0015 |
| 138 | 0.0043 | 0.0028 | 0.0015 |
| 139 | 0.0044 | 0.0028 | 0.0016 |
| 140 | 0.0044 | 0.0029 | 0.0016 |
| 141 | 0.0045 | 0.0029 | 0.0016 |
| 142 | 0.0046 | 0.0030 | 0.0016 |
| 143 | 0.0047 | 0.0030 | 0.0017 |
| 144 | 0.0047 | 0.0031 | 0.0017 |
| 145 | 0.0052 | 0.0034 | 0.0018 |
| 146 | 0.0053 | 0.0034 | 0.0019 |
| 147 | 0.0054 | 0.0035 | 0.0019 |
| 148 | 0.0055 | 0.0035 | 0.0019 |
| 149 | 0.0056 | 0.0036 | 0.0020 |
| 150 | 0.0057 | 0.0037 | 0.0020 |
| 151 | 0.0058 | 0.0037 | 0.0020 |
| 152 | 0.0059 | 0.0038 | 0.0021 |
| 153 | 0.0060 | 0.0039 | 0.0021 |
| 154 | 0.0061 | 0.0040 | 0.0022 |
| 155 | 0.0063 | 0.0041 | 0.0022 |
| 156 | 0.0064 | 0.0041 | 0.0023 |
| 157 | 0.0066 | 0.0042 | 0.0023 |
| 158 | 0.0067 | 0.0043 | 0.0024 |
| 159 | 0.0069 | 0.0044 | 0.0024 |
| 160 | 0.0070 | 0.0045 | 0.0025 |
| 161 | 0.0072 | 0.0047 | 0.0025 |
| 162 | 0.0073 | 0.0047 | 0.0026 |
| 163 | 0.0076 | 0.0049 | 0.0027 |
| 164 | 0.0077 | 0.0050 | 0.0027 |
| 165 | 0.0080 | 0.0052 | 0.0028 |
| 166 | 0.0082 | 0.0053 | 0.0029 |
| 167 | 0.0085 | 0.0055 | 0.0030 |
| 168 | 0.0087 | 0.0056 | 0.0031 |
| 169 | 0.0091 | 0.0059 | 0.0032 |
| 170 | 0.0093 | 0.0060 | 0.0033 |
| 171 | 0.0098 | 0.0063 | 0.0035 |
| 172 | 0.0100 | 0.0065 | 0.0035 |
| 173 | 0.0106 | 0.0068 | 0.0037 |
| 174 | 0.0109 | 0.0070 | 0.0038 |
| 175 | 0.0115 | 0.0075 | 0.0041 |
| 176 | 0.0119 | 0.0077 | 0.0042 |
| 177 | 0.0127 | 0.0082 | 0.0045 |
| 178 | 0.0131 | 0.0085 | 0.0046 |
| 179 | 0.0141 | 0.0091 | 0.0050 |
| 180 | 0.0147 | 0.0095 | 0.0052 |

| | | | |
|---|---|---|---|
| 181 | 0.0160 | 0.0104 | 0.0057 |
| 182 | 0.0168 | 0.0109 | 0.0059 |
| 183 | 0.0186 | 0.0120 | 0.0066 |
| 184 | 0.0197 | 0.0128 | 0.0070 |
| 185 | 0.0330 | 0.0213 | 0.0116 |
| 186 | 0.0351 | 0.0227 | 0.0124 |
| 187 | 0.0407 | 0.0263 | 0.0144 |
| 188 | 0.0445 | 0.0288 | 0.0157 |
| 189 | 0.0553 | 0.0300 | 0.0253 |
| 190 | 0.0637 | 0.0300 | 0.0337 |
| 191 | 0.0966 | 0.0300 | 0.0667 |
| 192 | 0.1403 | 0.0300 | 0.1103 |
| 193 | 0.6069 | 0.0300 | 0.5769 |
| 194 | 0.0761 | 0.0300 | 0.0461 |
| 195 | 0.0492 | 0.0300 | 0.0192 |
| 196 | 0.0377 | 0.0244 | 0.0133 |
| 197 | 0.0210 | 0.0136 | 0.0074 |
| 198 | 0.0177 | 0.0114 | 0.0062 |
| 199 | 0.0153 | 0.0099 | 0.0054 |
| 200 | 0.0136 | 0.0088 | 0.0048 |
| 201 | 0.0123 | 0.0079 | 0.0043 |
| 202 | 0.0112 | 0.0072 | 0.0040 |
| 203 | 0.0103 | 0.0067 | 0.0036 |
| 204 | 0.0096 | 0.0062 | 0.0034 |
| 205 | 0.0089 | 0.0058 | 0.0031 |
| 206 | 0.0084 | 0.0054 | 0.0030 |
| 207 | 0.0079 | 0.0051 | 0.0028 |
| 208 | 0.0075 | 0.0048 | 0.0026 |
| 209 | 0.0071 | 0.0046 | 0.0025 |
| 210 | 0.0068 | 0.0044 | 0.0024 |
| 211 | 0.0065 | 0.0042 | 0.0023 |
| 212 | 0.0062 | 0.0040 | 0.0022 |
| 213 | 0.0059 | 0.0038 | 0.0021 |
| 214 | 0.0057 | 0.0037 | 0.0020 |
| 215 | 0.0055 | 0.0036 | 0.0019 |
| 216 | 0.0053 | 0.0034 | 0.0019 |
| 217 | 0.0048 | 0.0031 | 0.0017 |
| 218 | 0.0046 | 0.0030 | 0.0016 |
| 219 | 0.0045 | 0.0029 | 0.0016 |
| 220 | 0.0044 | 0.0028 | 0.0015 |
| 221 | 0.0042 | 0.0027 | 0.0015 |
| 222 | 0.0041 | 0.0027 | 0.0015 |
| 223 | 0.0040 | 0.0026 | 0.0014 |
| 224 | 0.0039 | 0.0025 | 0.0014 |
| 225 | 0.0038 | 0.0025 | 0.0013 |
| 226 | 0.0037 | 0.0024 | 0.0013 |
| 227 | 0.0036 | 0.0023 | 0.0013 |
| 228 | 0.0035 | 0.0023 | 0.0012 |
| 229 | 0.0035 | 0.0022 | 0.0012 |
| 230 | 0.0034 | 0.0022 | 0.0012 |
| 231 | 0.0033 | 0.0021 | 0.0012 |
| 232 | 0.0032 | 0.0021 | 0.0011 |
| 233 | 0.0032 | 0.0021 | 0.0011 |
| 234 | 0.0031 | 0.0020 | 0.0011 |
| 235 | 0.0031 | 0.0020 | 0.0011 |
| 236 | 0.0030 | 0.0019 | 0.0011 |
| 237 | 0.0029 | 0.0019 | 0.0010 |
| 238 | 0.0029 | 0.0019 | 0.0010 |
| 239 | 0.0028 | 0.0018 | 0.0010 |

| | | | |
|---|---|---|---|
| 240 | 0.0028 | 0.0018 | 0.0010 |
| 241 | 0.0027 | 0.0018 | 0.0010 |
| 242 | 0.0027 | 0.0017 | 0.0010 |
| 243 | 0.0027 | 0.0017 | 0.0009 |
| 244 | 0.0026 | 0.0017 | 0.0009 |
| 245 | 0.0026 | 0.0017 | 0.0009 |
| 246 | 0.0025 | 0.0016 | 0.0009 |
| 247 | 0.0025 | 0.0016 | 0.0009 |
| 248 | 0.0025 | 0.0016 | 0.0009 |
| 249 | 0.0024 | 0.0016 | 0.0009 |
| 250 | 0.0024 | 0.0015 | 0.0008 |
| 251 | 0.0024 | 0.0015 | 0.0008 |
| 252 | 0.0023 | 0.0015 | 0.0008 |
| 253 | 0.0023 | 0.0015 | 0.0008 |
| 254 | 0.0023 | 0.0015 | 0.0008 |
| 255 | 0.0022 | 0.0014 | 0.0008 |
| 256 | 0.0022 | 0.0014 | 0.0008 |
| 257 | 0.0022 | 0.0014 | 0.0008 |
| 258 | 0.0021 | 0.0014 | 0.0008 |
| 259 | 0.0021 | 0.0014 | 0.0007 |
| 260 | 0.0021 | 0.0014 | 0.0007 |
| 261 | 0.0021 | 0.0013 | 0.0007 |
| 262 | 0.0020 | 0.0013 | 0.0007 |
| 263 | 0.0020 | 0.0013 | 0.0007 |
| 264 | 0.0020 | 0.0013 | 0.0007 |
| 265 | 0.0020 | 0.0013 | 0.0007 |
| 266 | 0.0020 | 0.0013 | 0.0007 |
| 267 | 0.0019 | 0.0012 | 0.0007 |
| 268 | 0.0019 | 0.0012 | 0.0007 |
| 269 | 0.0019 | 0.0012 | 0.0007 |
| 270 | 0.0019 | 0.0012 | 0.0007 |
| 271 | 0.0018 | 0.0012 | 0.0007 |
| 272 | 0.0018 | 0.0012 | 0.0006 |
| 273 | 0.0018 | 0.0012 | 0.0006 |
| 274 | 0.0018 | 0.0012 | 0.0006 |
| 275 | 0.0018 | 0.0011 | 0.0006 |
| 276 | 0.0018 | 0.0011 | 0.0006 |
| 277 | 0.0017 | 0.0011 | 0.0006 |
| 278 | 0.0017 | 0.0011 | 0.0006 |
| 279 | 0.0017 | 0.0011 | 0.0006 |
| 280 | 0.0017 | 0.0011 | 0.0006 |
| 281 | 0.0017 | 0.0011 | 0.0006 |
| 282 | 0.0017 | 0.0011 | 0.0006 |
| 283 | 0.0016 | 0.0011 | 0.0006 |
| 284 | 0.0016 | 0.0011 | 0.0006 |
| 285 | 0.0016 | 0.0010 | 0.0006 |
| 286 | 0.0016 | 0.0010 | 0.0006 |
| 287 | 0.0016 | 0.0010 | 0.0006 |
| 288 | 0.0016 | 0.0010 | 0.0006 |

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Total soil rain loss = 1.05(In)
Total effective rainfall = 1.34(In)
Peak flow rate in flood hydrograph = 18.40(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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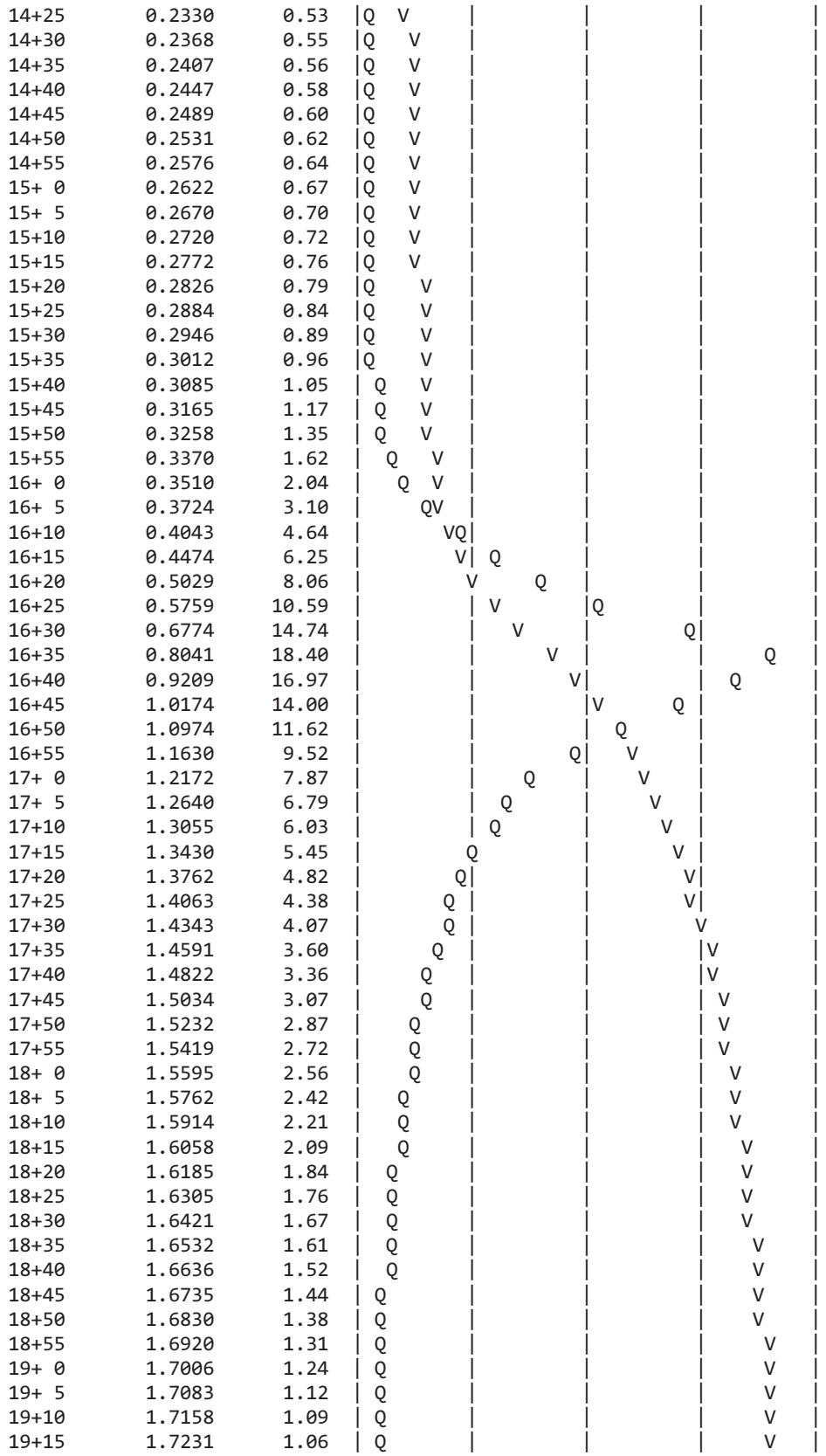
Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0000 | 0.00 | Q | | | | |
| 0+15 | 0.0000 | 0.00 | Q | | | | |
| 0+20 | 0.0001 | 0.01 | Q | | | | |
| 0+25 | 0.0002 | 0.01 | Q | | | | |
| 0+30 | 0.0003 | 0.02 | Q | | | | |
| 0+35 | 0.0006 | 0.03 | Q | | | | |
| 0+40 | 0.0009 | 0.05 | Q | | | | |
| 0+45 | 0.0013 | 0.05 | Q | | | | |
| 0+50 | 0.0017 | 0.06 | Q | | | | |
| 0+55 | 0.0021 | 0.07 | Q | | | | |
| 1+ 0 | 0.0026 | 0.07 | Q | | | | |
| 1+ 5 | 0.0032 | 0.08 | Q | | | | |
| 1+10 | 0.0037 | 0.08 | Q | | | | |
| 1+15 | 0.0043 | 0.08 | Q | | | | |
| 1+20 | 0.0049 | 0.09 | Q | | | | |
| 1+25 | 0.0055 | 0.09 | Q | | | | |
| 1+30 | 0.0061 | 0.09 | Q | | | | |
| 1+35 | 0.0068 | 0.09 | Q | | | | |
| 1+40 | 0.0074 | 0.10 | Q | | | | |
| 1+45 | 0.0081 | 0.10 | Q | | | | |
| 1+50 | 0.0088 | 0.10 | Q | | | | |
| 1+55 | 0.0095 | 0.10 | Q | | | | |
| 2+ 0 | 0.0102 | 0.10 | Q | | | | |
| 2+ 5 | 0.0109 | 0.10 | Q | | | | |
| 2+10 | 0.0116 | 0.11 | Q | | | | |
| 2+15 | 0.0124 | 0.11 | Q | | | | |
| 2+20 | 0.0131 | 0.11 | Q | | | | |
| 2+25 | 0.0139 | 0.11 | Q | | | | |
| 2+30 | 0.0147 | 0.11 | Q | | | | |
| 2+35 | 0.0154 | 0.11 | Q | | | | |
| 2+40 | 0.0162 | 0.11 | Q | | | | |
| 2+45 | 0.0170 | 0.11 | Q | | | | |
| 2+50 | 0.0178 | 0.12 | Q | | | | |
| 2+55 | 0.0186 | 0.12 | Q | | | | |
| 3+ 0 | 0.0194 | 0.12 | Q | | | | |
| 3+ 5 | 0.0203 | 0.12 | Q | | | | |
| 3+10 | 0.0211 | 0.12 | Q | | | | |
| 3+15 | 0.0219 | 0.12 | Q | | | | |
| 3+20 | 0.0228 | 0.12 | Q | | | | |
| 3+25 | 0.0236 | 0.12 | Q | | | | |
| 3+30 | 0.0245 | 0.12 | Q | | | | |
| 3+35 | 0.0253 | 0.13 | Q | | | | |
| 3+40 | 0.0262 | 0.13 | Q | | | | |
| 3+45 | 0.0271 | 0.13 | Q | | | | |
| 3+50 | 0.0280 | 0.13 | Q | | | | |
| 3+55 | 0.0289 | 0.13 | Q | | | | |
| 4+ 0 | 0.0297 | 0.13 | Q | | | | |
| 4+ 5 | 0.0306 | 0.13 | Q | | | | |
| 4+10 | 0.0316 | 0.13 | Q | | | | |
| 4+15 | 0.0325 | 0.13 | Q | | | | |
| 4+20 | 0.0334 | 0.13 | Q | | | | |
| 4+25 | 0.0343 | 0.13 | Q | | | | |
| 4+30 | 0.0352 | 0.13 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4+35 | 0.0362 | 0.14 | Q | | | | |
| 4+40 | 0.0371 | 0.14 | Q | | | | |
| 4+45 | 0.0381 | 0.14 | Q | | | | |
| 4+50 | 0.0390 | 0.14 | Q | | | | |
| 4+55 | 0.0400 | 0.14 | Q | | | | |
| 5+ 0 | 0.0409 | 0.14 | Q | | | | |
| 5+ 5 | 0.0419 | 0.14 | Q | | | | |
| 5+10 | 0.0429 | 0.14 | Q | | | | |
| 5+15 | 0.0439 | 0.14 | Q | | | | |
| 5+20 | 0.0449 | 0.14 | Q | | | | |
| 5+25 | 0.0459 | 0.15 | Q | | | | |
| 5+30 | 0.0469 | 0.15 | Q | | | | |
| 5+35 | 0.0479 | 0.15 | QV | | | | |
| 5+40 | 0.0489 | 0.15 | QV | | | | |
| 5+45 | 0.0499 | 0.15 | QV | | | | |
| 5+50 | 0.0510 | 0.15 | QV | | | | |
| 5+55 | 0.0520 | 0.15 | QV | | | | |
| 6+ 0 | 0.0531 | 0.15 | QV | | | | |
| 6+ 5 | 0.0541 | 0.15 | QV | | | | |
| 6+10 | 0.0552 | 0.15 | QV | | | | |
| 6+15 | 0.0562 | 0.15 | QV | | | | |
| 6+20 | 0.0573 | 0.16 | QV | | | | |
| 6+25 | 0.0584 | 0.16 | QV | | | | |
| 6+30 | 0.0595 | 0.16 | QV | | | | |
| 6+35 | 0.0605 | 0.16 | QV | | | | |
| 6+40 | 0.0616 | 0.16 | QV | | | | |
| 6+45 | 0.0627 | 0.16 | QV | | | | |
| 6+50 | 0.0639 | 0.16 | QV | | | | |
| 6+55 | 0.0650 | 0.16 | QV | | | | |
| 7+ 0 | 0.0661 | 0.16 | QV | | | | |
| 7+ 5 | 0.0672 | 0.16 | QV | | | | |
| 7+10 | 0.0684 | 0.17 | QV | | | | |
| 7+15 | 0.0695 | 0.17 | QV | | | | |
| 7+20 | 0.0707 | 0.17 | QV | | | | |
| 7+25 | 0.0719 | 0.17 | QV | | | | |
| 7+30 | 0.0730 | 0.17 | QV | | | | |
| 7+35 | 0.0742 | 0.17 | QV | | | | |
| 7+40 | 0.0754 | 0.17 | QV | | | | |
| 7+45 | 0.0766 | 0.17 | QV | | | | |
| 7+50 | 0.0778 | 0.18 | QV | | | | |
| 7+55 | 0.0790 | 0.18 | QV | | | | |
| 8+ 0 | 0.0803 | 0.18 | QV | | | | |
| 8+ 5 | 0.0815 | 0.18 | QV | | | | |
| 8+10 | 0.0828 | 0.18 | QV | | | | |
| 8+15 | 0.0840 | 0.18 | QV | | | | |
| 8+20 | 0.0853 | 0.18 | QV | | | | |
| 8+25 | 0.0866 | 0.19 | QV | | | | |
| 8+30 | 0.0878 | 0.19 | QV | | | | |
| 8+35 | 0.0891 | 0.19 | QV | | | | |
| 8+40 | 0.0904 | 0.19 | QV | | | | |
| 8+45 | 0.0918 | 0.19 | QV | | | | |
| 8+50 | 0.0931 | 0.19 | QV | | | | |
| 8+55 | 0.0944 | 0.19 | Q V | | | | |
| 9+ 0 | 0.0958 | 0.20 | Q V | | | | |
| 9+ 5 | 0.0971 | 0.20 | Q V | | | | |
| 9+10 | 0.0985 | 0.20 | Q V | | | | |
| 9+15 | 0.0999 | 0.20 | Q V | | | | |
| 9+20 | 0.1013 | 0.20 | Q V | | | | |
| 9+25 | 0.1027 | 0.20 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 9+30 | 0.1041 | 0.21 | Q V | \| | \| | \| | \| |
| 9+35 | 0.1056 | 0.21 | Q V | \| | \| | \| | \| |
| 9+40 | 0.1070 | 0.21 | Q V | \| | \| | \| | \| |
| 9+45 | 0.1085 | 0.21 | Q V | \| | \| | \| | \| |
| 9+50 | 0.1100 | 0.21 | Q V | \| | \| | \| | \| |
| 9+55 | 0.1115 | 0.22 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.1130 | 0.22 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.1145 | 0.22 | Q V | \| | \| | \| | \| |
| 10+10 | 0.1160 | 0.22 | Q V | \| | \| | \| | \| |
| 10+15 | 0.1176 | 0.23 | Q V | \| | \| | \| | \| |
| 10+20 | 0.1191 | 0.23 | Q V | \| | \| | \| | \| |
| 10+25 | 0.1207 | 0.23 | Q V | \| | \| | \| | \| |
| 10+30 | 0.1223 | 0.23 | Q V | \| | \| | \| | \| |
| 10+35 | 0.1239 | 0.23 | Q V | \| | \| | \| | \| |
| 10+40 | 0.1256 | 0.24 | Q V | \| | \| | \| | \| |
| 10+45 | 0.1272 | 0.24 | Q V | \| | \| | \| | \| |
| 10+50 | 0.1289 | 0.24 | Q V | \| | \| | \| | \| |
| 10+55 | 0.1306 | 0.25 | Q V | \| | \| | \| | \| |
| 11+ 0 | 0.1323 | 0.25 | Q V | \| | \| | \| | \| |
| 11+ 5 | 0.1340 | 0.25 | Q V | \| | \| | \| | \| |
| 11+10 | 0.1357 | 0.25 | Q V | \| | \| | \| | \| |
| 11+15 | 0.1375 | 0.26 | Q V | \| | \| | \| | \| |
| 11+20 | 0.1393 | 0.26 | Q V | \| | \| | \| | \| |
| 11+25 | 0.1411 | 0.26 | Q  V | \| | \| | \| | \| |
| 11+30 | 0.1429 | 0.27 | Q  V | \| | \| | \| | \| |
| 11+35 | 0.1448 | 0.27 | Q  V | \| | \| | \| | \| |
| 11+40 | 0.1467 | 0.27 | Q  V | \| | \| | \| | \| |
| 11+45 | 0.1486 | 0.28 | Q  V | \| | \| | \| | \| |
| 11+50 | 0.1505 | 0.28 | Q  V | \| | \| | \| | \| |
| 11+55 | 0.1525 | 0.28 | Q  V | \| | \| | \| | \| |
| 12+ 0 | 0.1544 | 0.29 | Q  V | \| | \| | \| | \| |
| 12+ 5 | 0.1565 | 0.29 | Q  V | \| | \| | \| | \| |
| 12+10 | 0.1585 | 0.30 | Q  V | \| | \| | \| | \| |
| 12+15 | 0.1606 | 0.30 | Q  V | \| | \| | \| | \| |
| 12+20 | 0.1627 | 0.31 | Q  V | \| | \| | \| | \| |
| 12+25 | 0.1648 | 0.31 | Q  V | \| | \| | \| | \| |
| 12+30 | 0.1670 | 0.32 | Q  V | \| | \| | \| | \| |
| 12+35 | 0.1693 | 0.33 | Q  V | \| | \| | \| | \| |
| 12+40 | 0.1716 | 0.33 | Q  V | \| | \| | \| | \| |
| 12+45 | 0.1739 | 0.34 | Q  V | \| | \| | \| | \| |
| 12+50 | 0.1763 | 0.35 | Q  V | \| | \| | \| | \| |
| 12+55 | 0.1788 | 0.36 | Q  V | \| | \| | \| | \| |
| 13+ 0 | 0.1813 | 0.36 | Q  V | \| | \| | \| | \| |
| 13+ 5 | 0.1838 | 0.37 | Q  V | \| | \| | \| | \| |
| 13+10 | 0.1864 | 0.38 | Q  V | \| | \| | \| | \| |
| 13+15 | 0.1891 | 0.39 | Q   V | \| | \| | \| | \| |
| 13+20 | 0.1918 | 0.39 | Q   V | \| | \| | \| | \| |
| 13+25 | 0.1946 | 0.40 | Q   V | \| | \| | \| | \| |
| 13+30 | 0.1974 | 0.41 | Q   V | \| | \| | \| | \| |
| 13+35 | 0.2003 | 0.42 | Q   V | \| | \| | \| | \| |
| 13+40 | 0.2032 | 0.43 | Q   V | \| | \| | \| | \| |
| 13+45 | 0.2062 | 0.44 | Q   V | \| | \| | \| | \| |
| 13+50 | 0.2093 | 0.45 | Q   V | \| | \| | \| | \| |
| 13+55 | 0.2124 | 0.46 | Q   V | \| | \| | \| | \| |
| 14+ 0 | 0.2156 | 0.47 | Q   V | \| | \| | \| | \| |
| 14+ 5 | 0.2190 | 0.48 | Q   V | \| | \| | \| | \| |
| 14+10 | 0.2223 | 0.49 | Q   V | \| | \| | \| | \| |
| 14+15 | 0.2258 | 0.50 | \|Q  V | \| | \| | \| | \| |
| 14+20 | 0.2294 | 0.52 | \|Q  V | \| | \| | \| | \| |



| | | | |
|---|---|---|---|
| 14+25 | 0.2330 | 0.53 | |
| 14+30 | 0.2368 | 0.55 | |
| 14+35 | 0.2407 | 0.56 | |
| 14+40 | 0.2447 | 0.58 | |
| 14+45 | 0.2489 | 0.60 | |
| 14+50 | 0.2531 | 0.62 | |
| 14+55 | 0.2576 | 0.64 | |
| 15+ 0 | 0.2622 | 0.67 | |
| 15+ 5 | 0.2670 | 0.70 | |
| 15+10 | 0.2720 | 0.72 | |
| 15+15 | 0.2772 | 0.76 | |
| 15+20 | 0.2826 | 0.79 | |
| 15+25 | 0.2884 | 0.84 | |
| 15+30 | 0.2946 | 0.89 | |
| 15+35 | 0.3012 | 0.96 | |
| 15+40 | 0.3085 | 1.05 | |
| 15+45 | 0.3165 | 1.17 | |
| 15+50 | 0.3258 | 1.35 | |
| 15+55 | 0.3370 | 1.62 | |
| 16+ 0 | 0.3510 | 2.04 | |
| 16+ 5 | 0.3724 | 3.10 | |
| 16+10 | 0.4043 | 4.64 | |
| 16+15 | 0.4474 | 6.25 | |
| 16+20 | 0.5029 | 8.06 | |
| 16+25 | 0.5759 | 10.59 | |
| 16+30 | 0.6774 | 14.74 | |
| 16+35 | 0.8041 | 18.40 | |
| 16+40 | 0.9209 | 16.97 | |
| 16+45 | 1.0174 | 14.00 | |
| 16+50 | 1.0974 | 11.62 | |
| 16+55 | 1.1630 | 9.52 | |
| 17+ 0 | 1.2172 | 7.87 | |
| 17+ 5 | 1.2640 | 6.79 | |
| 17+10 | 1.3055 | 6.03 | |
| 17+15 | 1.3430 | 5.45 | |
| 17+20 | 1.3762 | 4.82 | |
| 17+25 | 1.4063 | 4.38 | |
| 17+30 | 1.4343 | 4.07 | |
| 17+35 | 1.4591 | 3.60 | |
| 17+40 | 1.4822 | 3.36 | |
| 17+45 | 1.5034 | 3.07 | |
| 17+50 | 1.5232 | 2.87 | |
| 17+55 | 1.5419 | 2.72 | |
| 18+ 0 | 1.5595 | 2.56 | |
| 18+ 5 | 1.5762 | 2.42 | |
| 18+10 | 1.5914 | 2.21 | |
| 18+15 | 1.6058 | 2.09 | |
| 18+20 | 1.6185 | 1.84 | |
| 18+25 | 1.6305 | 1.76 | |
| 18+30 | 1.6421 | 1.67 | |
| 18+35 | 1.6532 | 1.61 | |
| 18+40 | 1.6636 | 1.52 | |
| 18+45 | 1.6735 | 1.44 | |
| 18+50 | 1.6830 | 1.38 | |
| 18+55 | 1.6920 | 1.31 | |
| 19+ 0 | 1.7006 | 1.24 | |
| 19+ 5 | 1.7083 | 1.12 | |
| 19+10 | 1.7158 | 1.09 | |
| 19+15 | 1.7231 | 1.06 | |

```
19+20       1.7302      1.03  | Q       |         |         |     V   |
19+25       1.7367      0.93  |Q        |         |         |      V  |
19+30       1.7427      0.88  |Q        |         |         |      V  |
19+35       1.7487      0.86  |Q        |         |         |      V  |
19+40       1.7544      0.84  |Q        |         |         |      V  |
19+45       1.7598      0.77  |Q        |         |         |      V  |
19+50       1.7645      0.69  |Q        |         |         |      V  |
19+55       1.7692      0.67  |Q        |         |         |      V  |
20+ 0       1.7736      0.65  |Q        |         |         |      V  |
20+ 5       1.7779      0.62  |Q        |         |         |      V  |
20+10       1.7815      0.53  |Q        |         |         |      V  |
20+15       1.7849      0.50  Q         |         |         |       V |
20+20       1.7883      0.49  Q         |         |         |       V |
20+25       1.7916      0.48  Q         |         |         |       V |
20+30       1.7950      0.49  Q         |         |         |       V |
20+35       1.7985      0.50  Q         |         |         |       V |
20+40       1.8019      0.49  Q         |         |         |       V |
20+45       1.8052      0.49  Q         |         |         |       V |
20+50       1.8085      0.48  Q         |         |         |       V |
20+55       1.8118      0.47  Q         |         |         |       V |
21+ 0       1.8150      0.47  Q         |         |         |       V |
21+ 5       1.8181      0.45  Q         |         |         |       V |
21+10       1.8211      0.43  Q         |         |         |       V |
21+15       1.8237      0.38  Q         |         |         |       V |
21+20       1.8261      0.34  Q         |         |         |       V |
21+25       1.8283      0.33  Q         |         |         |       V |
21+30       1.8306      0.32  Q         |         |         |        V|
21+35       1.8327      0.31  Q         |         |         |        V|
21+40       1.8347      0.30  Q         |         |         |        V|
21+45       1.8364      0.24  Q         |         |         |        V|
21+50       1.8378      0.19  Q         |         |         |        V|
21+55       1.8390      0.19  Q         |         |         |        V|
22+ 0       1.8403      0.18  Q         |         |         |        V|
22+ 5       1.8415      0.18  Q         |         |         |        V|
22+10       1.8427      0.18  Q         |         |         |        V|
22+15       1.8439      0.17  Q         |         |         |        V|
22+20       1.8451      0.17  Q         |         |         |        V|
22+25       1.8462      0.17  Q         |         |         |        V|
22+30       1.8474      0.16  Q         |         |         |        V|
22+35       1.8485      0.16  Q         |         |         |        V|
22+40       1.8496      0.16  Q         |         |         |        V|
22+45       1.8507      0.16  Q         |         |         |        V|
22+50       1.8517      0.15  Q         |         |         |        V|
22+55       1.8528      0.15  Q         |         |         |        V|
23+ 0       1.8538      0.15  Q         |         |         |        V|
23+ 5       1.8548      0.15  Q         |         |         |        V|
23+10       1.8558      0.15  Q         |         |         |        V|
23+15       1.8568      0.14  Q         |         |         |        V|
23+20       1.8578      0.14  Q         |         |         |        V|
23+25       1.8588      0.14  Q         |         |         |        V|
23+30       1.8598      0.14  Q         |         |         |        V|
23+35       1.8607      0.14  Q         |         |         |        V|
23+40       1.8616      0.14  Q         |         |         |        V|
23+45       1.8626      0.13  Q         |         |         |        V|
23+50       1.8635      0.13  Q         |         |         |        V|
23+55       1.8644      0.13  Q         |         |         |        V|
24+ 0       1.8653      0.13  Q         |         |         |        V|
24+ 5       1.8662      0.13  Q         |         |         |        V|
24+10       1.8671      0.13  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24+15 | 1.8679 | 0.12 | Q | \| | \| | \| | V\| |
| 24+20 | 1.8687 | 0.12 | Q | \| | \| | \| | V\| |
| 24+25 | 1.8695 | 0.11 | Q | \| | \| | \| | V\| |
| 24+30 | 1.8702 | 0.10 | Q | \| | \| | \| | V\| |
| 24+35 | 1.8708 | 0.09 | Q | \| | \| | \| | V\| |
| 24+40 | 1.8713 | 0.08 | Q | \| | \| | \| | V\| |
| 24+45 | 1.8718 | 0.07 | Q | \| | \| | \| | V\| |
| 24+50 | 1.8722 | 0.06 | Q | \| | \| | \| | V\| |
| 24+55 | 1.8725 | 0.05 | Q | \| | \| | \| | V\| |
| 25+ 0 | 1.8729 | 0.05 | Q | \| | \| | \| | V\| |
| 25+ 5 | 1.8732 | 0.04 | Q | \| | \| | \| | V\| |
| 25+10 | 1.8734 | 0.04 | Q | \| | \| | \| | V\| |
| 25+15 | 1.8737 | 0.04 | Q | \| | \| | \| | V\| |
| 25+20 | 1.8739 | 0.03 | Q | \| | \| | \| | V\| |
| 25+25 | 1.8741 | 0.03 | Q | \| | \| | \| | V\| |
| 25+30 | 1.8743 | 0.03 | Q | \| | \| | \| | V\| |
| 25+35 | 1.8745 | 0.03 | Q | \| | \| | \| | V\| |
| 25+40 | 1.8747 | 0.02 | Q | \| | \| | \| | V\| |
| 25+45 | 1.8748 | 0.02 | Q | \| | \| | \| | V\| |
| 25+50 | 1.8750 | 0.02 | Q | \| | \| | \| | V\| |
| 25+55 | 1.8751 | 0.02 | Q | \| | \| | \| | V\| |
| 26+ 0 | 1.8752 | 0.02 | Q | \| | \| | \| | V\| |
| 26+ 5 | 1.8754 | 0.02 | Q | \| | \| | \| | V\| |
| 26+10 | 1.8755 | 0.02 | Q | \| | \| | \| | V\| |
| 26+15 | 1.8756 | 0.01 | Q | \| | \| | \| | V\| |
| 26+20 | 1.8757 | 0.01 | Q | \| | \| | \| | V\| |
| 26+25 | 1.8758 | 0.01 | Q | \| | \| | \| | V\| |
| 26+30 | 1.8758 | 0.01 | Q | \| | \| | \| | V\| |
| 26+35 | 1.8759 | 0.01 | Q | \| | \| | \| | V\| |
| 26+40 | 1.8760 | 0.01 | Q | \| | \| | \| | V\| |
| 26+45 | 1.8760 | 0.01 | Q | \| | \| | \| | V\| |
| 26+50 | 1.8761 | 0.01 | Q | \| | \| | \| | V\| |
| 26+55 | 1.8762 | 0.01 | Q | \| | \| | \| | V\| |
| 27+ 0 | 1.8762 | 0.01 | Q | \| | \| | \| | V\| |
| 27+ 5 | 1.8763 | 0.01 | Q | \| | \| | \| | V\| |
| 27+10 | 1.8763 | 0.01 | Q | \| | \| | \| | V\| |
| 27+15 | 1.8763 | 0.01 | Q | \| | \| | \| | V\| |
| 27+20 | 1.8764 | 0.01 | Q | \| | \| | \| | V\| |
| 27+25 | 1.8764 | 0.01 | Q | \| | \| | \| | V\| |
| 27+30 | 1.8765 | 0.00 | Q | \| | \| | \| | V\| |
| 27+35 | 1.8765 | 0.00 | Q | \| | \| | \| | V\| |
| 27+40 | 1.8765 | 0.00 | Q | \| | \| | \| | V\| |
| 27+45 | 1.8765 | 0.00 | Q | \| | \| | \| | V\| |
| 27+50 | 1.8766 | 0.00 | Q | \| | \| | \| | V\| |
| 27+55 | 1.8766 | 0.00 | Q | \| | \| | \| | V\| |
| 28+ 0 | 1.8766 | 0.00 | Q | \| | \| | \| | V\| |
| 28+ 5 | 1.8766 | 0.00 | Q | \| | \| | \| | V\| |
| 28+10 | 1.8766 | 0.00 | Q | \| | \| | \| | V\| |
| 28+15 | 1.8767 | 0.00 | Q | \| | \| | \| | V\| |
| 28+20 | 1.8767 | 0.00 | Q | \| | \| | \| | V\| |
| 28+25 | 1.8767 | 0.00 | Q | \| | \| | \| | V\| |
| 28+30 | 1.8767 | 0.00 | Q | \| | \| | \| | V\| |
| 28+35 | 1.8767 | 0.00 | Q | \| | \| | \| | V\| |
| 28+40 | 1.8767 | 0.00 | Q | \| | \| | \| | V\| |
| 28+45 | 1.8767 | 0.00 | Q | \| | \| | \| | V\| |
| 28+50 | 1.8767 | 0.00 | Q | \| | \| | \| | V\| |
| 28+55 | 1.8767 | 0.00 | Q | \| | \| | \| | V\| |
| 29+ 0 | 1.8767 | 0.00 | Q | \| | \| | \| | V\| |
| 29+ 5 | 1.8768 | 0.00 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 29+10 | 1.8768 | 0.00 | Q | \| | \| | \| | V\| |
| 29+15 | 1.8768 | 0.00 | Q | \| | \| | \| | V\| |
| 29+20 | 1.8768 | 0.00 | Q | \| | \| | \| | V\| |
| 29+25 | 1.8768 | 0.00 | Q | \| | \| | \| | V\| |
| 29+30 | 1.8768 | 0.00 | Q | \| | \| | \| | V\| |
| 29+35 | 1.8768 | 0.00 | Q | \| | \| | \| | V\| |
| 29+40 | 1.8768 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 14
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 18.15 | 1 | 1.29 |
| Rainfall data for year 100 | | |
| 18.15 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 18.15 | 24 | 2.39 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 18.15 | 1.000 | 0.360 | 1.000 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 18.15 | 1.000 | 62.0 | 80.6 | 2.41 | 0.353 |

Area-averaged catchment yield fraction, Y = 0.353
Area-averaged low loss fraction, Yb = 0.647
User entry of time of concentration = 0.860 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 18.15(Ac.)
Catchment Lag time = 0.688 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 12.1124
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.647 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.612(In)
Computed peak 30-minute rainfall = 1.048(In)
Specified peak 1-hour rainfall = 1.290(In)
Computed peak 3-hour rainfall = 1.604(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.390(In)

Rainfall depth area reduction factors:
Using a total area of 18.15(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.612(In)
30-minute factor = 0.999 Adjusted rainfall = 1.047(In)
1-hour factor = 0.999 Adjusted rainfall = 1.289(In)
3-hour factor = 1.000 Adjusted rainfall = 1.604(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.390(In)
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U n i t H y d r o g r a p h

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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 219.50 (CFS)) | |
| 1 | 0.533 | 1.170 |
| 2 | 2.053 | 3.336 |
| 3 | 4.512 | 5.397 |
| 4 | 7.949 | 7.545 |
| 5 | 13.414 | 11.995 |
| 6 | 22.777 | 20.551 |
| 7 | 34.456 | 25.636 |
| 8 | 44.074 | 21.112 |
| 9 | 51.489 | 16.277 |
| 10 | 57.418 | 13.013 |
| 11 | 61.936 | 9.917 |
| 12 | 65.637 | 8.125 |
| 13 | 68.816 | 6.977 |
| 14 | 71.662 | 6.247 |

| | | |
|---|---|---|
| 15 | 74.082 | 5.312 |
| 16 | 76.230 | 4.715 |
| 17 | 78.224 | 4.377 |
| 18 | 79.880 | 3.635 |
| 19 | 81.452 | 3.452 |
| 20 | 82.809 | 2.977 |
| 21 | 84.107 | 2.851 |
| 22 | 85.300 | 2.618 |
| 23 | 86.454 | 2.534 |
| 24 | 87.471 | 2.232 |
| 25 | 88.434 | 2.113 |
| 26 | 89.232 | 1.752 |
| 27 | 89.958 | 1.594 |
| 28 | 90.653 | 1.526 |
| 29 | 91.331 | 1.488 |
| 30 | 91.951 | 1.362 |
| 31 | 92.533 | 1.276 |
| 32 | 93.088 | 1.219 |
| 33 | 93.621 | 1.170 |
| 34 | 94.096 | 1.043 |
| 35 | 94.508 | 0.904 |
| 36 | 94.920 | 0.904 |
| 37 | 95.331 | 0.904 |
| 38 | 95.708 | 0.827 |
| 39 | 96.025 | 0.694 |
| 40 | 96.339 | 0.691 |
| 41 | 96.654 | 0.691 |
| 42 | 96.944 | 0.636 |
| 43 | 97.166 | 0.487 |
| 44 | 97.384 | 0.479 |
| 45 | 97.602 | 0.479 |
| 46 | 97.803 | 0.441 |
| 47 | 97.932 | 0.284 |
| 48 | 98.053 | 0.266 |
| 49 | 98.175 | 0.266 |
| 50 | 98.298 | 0.272 |
| 51 | 98.440 | 0.311 |
| 52 | 98.585 | 0.319 |
| 53 | 98.731 | 0.319 |
| 54 | 98.876 | 0.319 |
| 55 | 99.022 | 0.319 |
| 56 | 99.167 | 0.319 |
| 57 | 99.312 | 0.319 |
| 58 | 99.456 | 0.316 |
| 59 | 99.554 | 0.214 |
| 60 | 99.629 | 0.166 |
| 61 | 99.705 | 0.166 |
| 62 | 99.781 | 0.166 |
| 63 | 99.856 | 0.166 |
| 64 | 99.932 | 0.166 |
| 65 | 100.000 | 0.149 |

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| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6116 | 0.6116 |
| 2 | 0.7530 | 0.1414 |
| 3 | 0.8504 | 0.0974 |
| 4 | 0.9270 | 0.0766 |
| 5 | 0.9912 | 0.0642 |

| | | |
|---|---|---|
| 6 | 1.0469 | 0.0557 |
| 7 | 1.0965 | 0.0496 |
| 8 | 1.1413 | 0.0448 |
| 9 | 1.1823 | 0.0410 |
| 10 | 1.2203 | 0.0380 |
| 11 | 1.2557 | 0.0354 |
| 12 | 1.2889 | 0.0332 |
| 13 | 1.3096 | 0.0207 |
| 14 | 1.3290 | 0.0194 |
| 15 | 1.3474 | 0.0184 |
| 16 | 1.3648 | 0.0174 |
| 17 | 1.3813 | 0.0166 |
| 18 | 1.3971 | 0.0158 |
| 19 | 1.4122 | 0.0151 |
| 20 | 1.4267 | 0.0145 |
| 21 | 1.4406 | 0.0139 |
| 22 | 1.4540 | 0.0134 |
| 23 | 1.4669 | 0.0129 |
| 24 | 1.4794 | 0.0125 |
| 25 | 1.4915 | 0.0121 |
| 26 | 1.5031 | 0.0117 |
| 27 | 1.5145 | 0.0113 |
| 28 | 1.5255 | 0.0110 |
| 29 | 1.5361 | 0.0107 |
| 30 | 1.5465 | 0.0104 |
| 31 | 1.5567 | 0.0101 |
| 32 | 1.5665 | 0.0099 |
| 33 | 1.5761 | 0.0096 |
| 34 | 1.5855 | 0.0094 |
| 35 | 1.5947 | 0.0092 |
| 36 | 1.6036 | 0.0090 |
| 37 | 1.6124 | 0.0087 |
| 38 | 1.6209 | 0.0085 |
| 39 | 1.6293 | 0.0084 |
| 40 | 1.6375 | 0.0082 |
| 41 | 1.6455 | 0.0080 |
| 42 | 1.6534 | 0.0079 |
| 43 | 1.6611 | 0.0077 |
| 44 | 1.6687 | 0.0076 |
| 45 | 1.6762 | 0.0075 |
| 46 | 1.6835 | 0.0073 |
| 47 | 1.6907 | 0.0072 |
| 48 | 1.6978 | 0.0071 |
| 49 | 1.7047 | 0.0070 |
| 50 | 1.7116 | 0.0068 |
| 51 | 1.7183 | 0.0067 |
| 52 | 1.7249 | 0.0066 |
| 53 | 1.7315 | 0.0065 |
| 54 | 1.7379 | 0.0064 |
| 55 | 1.7442 | 0.0063 |
| 56 | 1.7505 | 0.0062 |
| 57 | 1.7566 | 0.0062 |
| 58 | 1.7627 | 0.0061 |
| 59 | 1.7687 | 0.0060 |
| 60 | 1.7746 | 0.0059 |
| 61 | 1.7804 | 0.0058 |
| 62 | 1.7861 | 0.0057 |
| 63 | 1.7918 | 0.0057 |
| 64 | 1.7974 | 0.0056 |

| | | |
|---|---|---|
| 65 | 1.8030 | 0.0055 |
| 66 | 1.8084 | 0.0055 |
| 67 | 1.8138 | 0.0054 |
| 68 | 1.8192 | 0.0053 |
| 69 | 1.8244 | 0.0053 |
| 70 | 1.8296 | 0.0052 |
| 71 | 1.8348 | 0.0052 |
| 72 | 1.8399 | 0.0051 |
| 73 | 1.8447 | 0.0048 |
| 74 | 1.8494 | 0.0047 |
| 75 | 1.8541 | 0.0047 |
| 76 | 1.8588 | 0.0046 |
| 77 | 1.8634 | 0.0046 |
| 78 | 1.8679 | 0.0045 |
| 79 | 1.8724 | 0.0045 |
| 80 | 1.8768 | 0.0044 |
| 81 | 1.8812 | 0.0044 |
| 82 | 1.8856 | 0.0044 |
| 83 | 1.8899 | 0.0043 |
| 84 | 1.8942 | 0.0043 |
| 85 | 1.8984 | 0.0042 |
| 86 | 1.9026 | 0.0042 |
| 87 | 1.9068 | 0.0042 |
| 88 | 1.9109 | 0.0041 |
| 89 | 1.9150 | 0.0041 |
| 90 | 1.9190 | 0.0040 |
| 91 | 1.9230 | 0.0040 |
| 92 | 1.9270 | 0.0040 |
| 93 | 1.9309 | 0.0039 |
| 94 | 1.9348 | 0.0039 |
| 95 | 1.9387 | 0.0039 |
| 96 | 1.9425 | 0.0038 |
| 97 | 1.9463 | 0.0038 |
| 98 | 1.9501 | 0.0038 |
| 99 | 1.9538 | 0.0037 |
| 100 | 1.9575 | 0.0037 |
| 101 | 1.9612 | 0.0037 |
| 102 | 1.9649 | 0.0036 |
| 103 | 1.9685 | 0.0036 |
| 104 | 1.9721 | 0.0036 |
| 105 | 1.9756 | 0.0036 |
| 106 | 1.9792 | 0.0035 |
| 107 | 1.9827 | 0.0035 |
| 108 | 1.9862 | 0.0035 |
| 109 | 1.9896 | 0.0035 |
| 110 | 1.9931 | 0.0034 |
| 111 | 1.9965 | 0.0034 |
| 112 | 1.9999 | 0.0034 |
| 113 | 2.0032 | 0.0034 |
| 114 | 2.0065 | 0.0033 |
| 115 | 2.0098 | 0.0033 |
| 116 | 2.0131 | 0.0033 |
| 117 | 2.0164 | 0.0033 |
| 118 | 2.0196 | 0.0032 |
| 119 | 2.0229 | 0.0032 |
| 120 | 2.0261 | 0.0032 |
| 121 | 2.0292 | 0.0032 |
| 122 | 2.0324 | 0.0032 |
| 123 | 2.0355 | 0.0031 |

| | | |
|---|---|---|
| 124 | 2.0386 | 0.0031 |
| 125 | 2.0417 | 0.0031 |
| 126 | 2.0448 | 0.0031 |
| 127 | 2.0478 | 0.0031 |
| 128 | 2.0509 | 0.0030 |
| 129 | 2.0539 | 0.0030 |
| 130 | 2.0569 | 0.0030 |
| 131 | 2.0599 | 0.0030 |
| 132 | 2.0628 | 0.0030 |
| 133 | 2.0658 | 0.0029 |
| 134 | 2.0687 | 0.0029 |
| 135 | 2.0716 | 0.0029 |
| 136 | 2.0745 | 0.0029 |
| 137 | 2.0773 | 0.0029 |
| 138 | 2.0802 | 0.0029 |
| 139 | 2.0830 | 0.0028 |
| 140 | 2.0858 | 0.0028 |
| 141 | 2.0886 | 0.0028 |
| 142 | 2.0914 | 0.0028 |
| 143 | 2.0942 | 0.0028 |
| 144 | 2.0970 | 0.0028 |
| 145 | 2.0997 | 0.0027 |
| 146 | 2.1024 | 0.0027 |
| 147 | 2.1051 | 0.0027 |
| 148 | 2.1078 | 0.0027 |
| 149 | 2.1105 | 0.0027 |
| 150 | 2.1132 | 0.0027 |
| 151 | 2.1158 | 0.0027 |
| 152 | 2.1185 | 0.0026 |
| 153 | 2.1211 | 0.0026 |
| 154 | 2.1237 | 0.0026 |
| 155 | 2.1263 | 0.0026 |
| 156 | 2.1289 | 0.0026 |
| 157 | 2.1314 | 0.0026 |
| 158 | 2.1340 | 0.0026 |
| 159 | 2.1365 | 0.0025 |
| 160 | 2.1391 | 0.0025 |
| 161 | 2.1416 | 0.0025 |
| 162 | 2.1441 | 0.0025 |
| 163 | 2.1466 | 0.0025 |
| 164 | 2.1491 | 0.0025 |
| 165 | 2.1515 | 0.0025 |
| 166 | 2.1540 | 0.0025 |
| 167 | 2.1564 | 0.0024 |
| 168 | 2.1588 | 0.0024 |
| 169 | 2.1613 | 0.0024 |
| 170 | 2.1637 | 0.0024 |
| 171 | 2.1661 | 0.0024 |
| 172 | 2.1685 | 0.0024 |
| 173 | 2.1708 | 0.0024 |
| 174 | 2.1732 | 0.0024 |
| 175 | 2.1755 | 0.0024 |
| 176 | 2.1779 | 0.0023 |
| 177 | 2.1802 | 0.0023 |
| 178 | 2.1825 | 0.0023 |
| 179 | 2.1848 | 0.0023 |
| 180 | 2.1871 | 0.0023 |
| 181 | 2.1894 | 0.0023 |
| 182 | 2.1917 | 0.0023 |

| | | |
|---|---|---|
| 183 | 2.1940 | 0.0023 |
| 184 | 2.1962 | 0.0023 |
| 185 | 2.1985 | 0.0022 |
| 186 | 2.2007 | 0.0022 |
| 187 | 2.2029 | 0.0022 |
| 188 | 2.2052 | 0.0022 |
| 189 | 2.2074 | 0.0022 |
| 190 | 2.2096 | 0.0022 |
| 191 | 2.2117 | 0.0022 |
| 192 | 2.2139 | 0.0022 |
| 193 | 2.2161 | 0.0022 |
| 194 | 2.2183 | 0.0022 |
| 195 | 2.2204 | 0.0022 |
| 196 | 2.2226 | 0.0021 |
| 197 | 2.2247 | 0.0021 |
| 198 | 2.2268 | 0.0021 |
| 199 | 2.2289 | 0.0021 |
| 200 | 2.2310 | 0.0021 |
| 201 | 2.2331 | 0.0021 |
| 202 | 2.2352 | 0.0021 |
| 203 | 2.2373 | 0.0021 |
| 204 | 2.2394 | 0.0021 |
| 205 | 2.2415 | 0.0021 |
| 206 | 2.2435 | 0.0021 |
| 207 | 2.2456 | 0.0021 |
| 208 | 2.2476 | 0.0020 |
| 209 | 2.2497 | 0.0020 |
| 210 | 2.2517 | 0.0020 |
| 211 | 2.2537 | 0.0020 |
| 212 | 2.2557 | 0.0020 |
| 213 | 2.2577 | 0.0020 |
| 214 | 2.2597 | 0.0020 |
| 215 | 2.2617 | 0.0020 |
| 216 | 2.2637 | 0.0020 |
| 217 | 2.2657 | 0.0020 |
| 218 | 2.2676 | 0.0020 |
| 219 | 2.2696 | 0.0020 |
| 220 | 2.2715 | 0.0020 |
| 221 | 2.2735 | 0.0019 |
| 222 | 2.2754 | 0.0019 |
| 223 | 2.2773 | 0.0019 |
| 224 | 2.2793 | 0.0019 |
| 225 | 2.2812 | 0.0019 |
| 226 | 2.2831 | 0.0019 |
| 227 | 2.2850 | 0.0019 |
| 228 | 2.2869 | 0.0019 |
| 229 | 2.2888 | 0.0019 |
| 230 | 2.2907 | 0.0019 |
| 231 | 2.2925 | 0.0019 |
| 232 | 2.2944 | 0.0019 |
| 233 | 2.2963 | 0.0019 |
| 234 | 2.2981 | 0.0019 |
| 235 | 2.3000 | 0.0018 |
| 236 | 2.3018 | 0.0018 |
| 237 | 2.3037 | 0.0018 |
| 238 | 2.3055 | 0.0018 |
| 239 | 2.3073 | 0.0018 |
| 240 | 2.3091 | 0.0018 |
| 241 | 2.3109 | 0.0018 |

| | | |
|---|---|---|
| 242 | 2.3127 | 0.0018 |
| 243 | 2.3145 | 0.0018 |
| 244 | 2.3163 | 0.0018 |
| 245 | 2.3181 | 0.0018 |
| 246 | 2.3199 | 0.0018 |
| 247 | 2.3217 | 0.0018 |
| 248 | 2.3235 | 0.0018 |
| 249 | 2.3252 | 0.0018 |
| 250 | 2.3270 | 0.0018 |
| 251 | 2.3287 | 0.0018 |
| 252 | 2.3305 | 0.0017 |
| 253 | 2.3322 | 0.0017 |
| 254 | 2.3340 | 0.0017 |
| 255 | 2.3357 | 0.0017 |
| 256 | 2.3374 | 0.0017 |
| 257 | 2.3391 | 0.0017 |
| 258 | 2.3409 | 0.0017 |
| 259 | 2.3426 | 0.0017 |
| 260 | 2.3443 | 0.0017 |
| 261 | 2.3460 | 0.0017 |
| 262 | 2.3477 | 0.0017 |
| 263 | 2.3493 | 0.0017 |
| 264 | 2.3510 | 0.0017 |
| 265 | 2.3527 | 0.0017 |
| 266 | 2.3544 | 0.0017 |
| 267 | 2.3560 | 0.0017 |
| 268 | 2.3577 | 0.0017 |
| 269 | 2.3594 | 0.0017 |
| 270 | 2.3610 | 0.0017 |
| 271 | 2.3627 | 0.0016 |
| 272 | 2.3643 | 0.0016 |
| 273 | 2.3659 | 0.0016 |
| 274 | 2.3676 | 0.0016 |
| 275 | 2.3692 | 0.0016 |
| 276 | 2.3708 | 0.0016 |
| 277 | 2.3724 | 0.0016 |
| 278 | 2.3741 | 0.0016 |
| 279 | 2.3757 | 0.0016 |
| 280 | 2.3773 | 0.0016 |
| 281 | 2.3789 | 0.0016 |
| 282 | 2.3805 | 0.0016 |
| 283 | 2.3821 | 0.0016 |
| 284 | 2.3836 | 0.0016 |
| 285 | 2.3852 | 0.0016 |
| 286 | 2.3868 | 0.0016 |
| 287 | 2.3884 | 0.0016 |
| 288 | 2.3899 | 0.0016 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0016 | 0.0010 | 0.0006 |
| 2 | 0.0016 | 0.0010 | 0.0006 |
| 3 | 0.0016 | 0.0010 | 0.0006 |
| 4 | 0.0016 | 0.0010 | 0.0006 |
| 5 | 0.0016 | 0.0010 | 0.0006 |
| 6 | 0.0016 | 0.0010 | 0.0006 |
| 7 | 0.0016 | 0.0010 | 0.0006 |

| | | | |
|---|---|---|---|
| 8 | 0.0016 | 0.0010 | 0.0006 |
| 9 | 0.0016 | 0.0010 | 0.0006 |
| 10 | 0.0016 | 0.0011 | 0.0006 |
| 11 | 0.0016 | 0.0011 | 0.0006 |
| 12 | 0.0016 | 0.0011 | 0.0006 |
| 13 | 0.0017 | 0.0011 | 0.0006 |
| 14 | 0.0017 | 0.0011 | 0.0006 |
| 15 | 0.0017 | 0.0011 | 0.0006 |
| 16 | 0.0017 | 0.0011 | 0.0006 |
| 17 | 0.0017 | 0.0011 | 0.0006 |
| 18 | 0.0017 | 0.0011 | 0.0006 |
| 19 | 0.0017 | 0.0011 | 0.0006 |
| 20 | 0.0017 | 0.0011 | 0.0006 |
| 21 | 0.0017 | 0.0011 | 0.0006 |
| 22 | 0.0017 | 0.0011 | 0.0006 |
| 23 | 0.0017 | 0.0011 | 0.0006 |
| 24 | 0.0017 | 0.0011 | 0.0006 |
| 25 | 0.0017 | 0.0011 | 0.0006 |
| 26 | 0.0018 | 0.0011 | 0.0006 |
| 27 | 0.0018 | 0.0011 | 0.0006 |
| 28 | 0.0018 | 0.0011 | 0.0006 |
| 29 | 0.0018 | 0.0012 | 0.0006 |
| 30 | 0.0018 | 0.0012 | 0.0006 |
| 31 | 0.0018 | 0.0012 | 0.0006 |
| 32 | 0.0018 | 0.0012 | 0.0006 |
| 33 | 0.0018 | 0.0012 | 0.0006 |
| 34 | 0.0018 | 0.0012 | 0.0006 |
| 35 | 0.0018 | 0.0012 | 0.0006 |
| 36 | 0.0018 | 0.0012 | 0.0007 |
| 37 | 0.0019 | 0.0012 | 0.0007 |
| 38 | 0.0019 | 0.0012 | 0.0007 |
| 39 | 0.0019 | 0.0012 | 0.0007 |
| 40 | 0.0019 | 0.0012 | 0.0007 |
| 41 | 0.0019 | 0.0012 | 0.0007 |
| 42 | 0.0019 | 0.0012 | 0.0007 |
| 43 | 0.0019 | 0.0012 | 0.0007 |
| 44 | 0.0019 | 0.0012 | 0.0007 |
| 45 | 0.0019 | 0.0013 | 0.0007 |
| 46 | 0.0019 | 0.0013 | 0.0007 |
| 47 | 0.0020 | 0.0013 | 0.0007 |
| 48 | 0.0020 | 0.0013 | 0.0007 |
| 49 | 0.0020 | 0.0013 | 0.0007 |
| 50 | 0.0020 | 0.0013 | 0.0007 |
| 51 | 0.0020 | 0.0013 | 0.0007 |
| 52 | 0.0020 | 0.0013 | 0.0007 |
| 53 | 0.0020 | 0.0013 | 0.0007 |
| 54 | 0.0020 | 0.0013 | 0.0007 |
| 55 | 0.0021 | 0.0013 | 0.0007 |
| 56 | 0.0021 | 0.0013 | 0.0007 |
| 57 | 0.0021 | 0.0013 | 0.0007 |
| 58 | 0.0021 | 0.0013 | 0.0007 |
| 59 | 0.0021 | 0.0014 | 0.0007 |
| 60 | 0.0021 | 0.0014 | 0.0007 |
| 61 | 0.0021 | 0.0014 | 0.0008 |
| 62 | 0.0021 | 0.0014 | 0.0008 |
| 63 | 0.0022 | 0.0014 | 0.0008 |
| 64 | 0.0022 | 0.0014 | 0.0008 |
| 65 | 0.0022 | 0.0014 | 0.0008 |
| 66 | 0.0022 | 0.0014 | 0.0008 |

| | | | |
|---|---|---|---|
| 67 | 0.0022 | 0.0014 | 0.0008 |
| 68 | 0.0022 | 0.0014 | 0.0008 |
| 69 | 0.0022 | 0.0014 | 0.0008 |
| 70 | 0.0022 | 0.0015 | 0.0008 |
| 71 | 0.0023 | 0.0015 | 0.0008 |
| 72 | 0.0023 | 0.0015 | 0.0008 |
| 73 | 0.0023 | 0.0015 | 0.0008 |
| 74 | 0.0023 | 0.0015 | 0.0008 |
| 75 | 0.0023 | 0.0015 | 0.0008 |
| 76 | 0.0023 | 0.0015 | 0.0008 |
| 77 | 0.0024 | 0.0015 | 0.0008 |
| 78 | 0.0024 | 0.0015 | 0.0008 |
| 79 | 0.0024 | 0.0015 | 0.0008 |
| 80 | 0.0024 | 0.0016 | 0.0009 |
| 81 | 0.0024 | 0.0016 | 0.0009 |
| 82 | 0.0024 | 0.0016 | 0.0009 |
| 83 | 0.0025 | 0.0016 | 0.0009 |
| 84 | 0.0025 | 0.0016 | 0.0009 |
| 85 | 0.0025 | 0.0016 | 0.0009 |
| 86 | 0.0025 | 0.0016 | 0.0009 |
| 87 | 0.0025 | 0.0016 | 0.0009 |
| 88 | 0.0026 | 0.0017 | 0.0009 |
| 89 | 0.0026 | 0.0017 | 0.0009 |
| 90 | 0.0026 | 0.0017 | 0.0009 |
| 91 | 0.0026 | 0.0017 | 0.0009 |
| 92 | 0.0026 | 0.0017 | 0.0009 |
| 93 | 0.0027 | 0.0017 | 0.0009 |
| 94 | 0.0027 | 0.0017 | 0.0009 |
| 95 | 0.0027 | 0.0018 | 0.0010 |
| 96 | 0.0027 | 0.0018 | 0.0010 |
| 97 | 0.0028 | 0.0018 | 0.0010 |
| 98 | 0.0028 | 0.0018 | 0.0010 |
| 99 | 0.0028 | 0.0018 | 0.0010 |
| 100 | 0.0028 | 0.0018 | 0.0010 |
| 101 | 0.0029 | 0.0018 | 0.0010 |
| 102 | 0.0029 | 0.0019 | 0.0010 |
| 103 | 0.0029 | 0.0019 | 0.0010 |
| 104 | 0.0029 | 0.0019 | 0.0010 |
| 105 | 0.0030 | 0.0019 | 0.0010 |
| 106 | 0.0030 | 0.0019 | 0.0011 |
| 107 | 0.0030 | 0.0019 | 0.0011 |
| 108 | 0.0030 | 0.0020 | 0.0011 |
| 109 | 0.0031 | 0.0020 | 0.0011 |
| 110 | 0.0031 | 0.0020 | 0.0011 |
| 111 | 0.0031 | 0.0020 | 0.0011 |
| 112 | 0.0032 | 0.0020 | 0.0011 |
| 113 | 0.0032 | 0.0021 | 0.0011 |
| 114 | 0.0032 | 0.0021 | 0.0011 |
| 115 | 0.0033 | 0.0021 | 0.0012 |
| 116 | 0.0033 | 0.0021 | 0.0012 |
| 117 | 0.0033 | 0.0022 | 0.0012 |
| 118 | 0.0034 | 0.0022 | 0.0012 |
| 119 | 0.0034 | 0.0022 | 0.0012 |
| 120 | 0.0034 | 0.0022 | 0.0012 |
| 121 | 0.0035 | 0.0023 | 0.0012 |
| 122 | 0.0035 | 0.0023 | 0.0012 |
| 123 | 0.0036 | 0.0023 | 0.0013 |
| 124 | 0.0036 | 0.0023 | 0.0013 |
| 125 | 0.0036 | 0.0024 | 0.0013 |

| | | | |
|---|---|---|---|
| 126 | 0.0037 | 0.0024 | 0.0013 |
| 127 | 0.0037 | 0.0024 | 0.0013 |
| 128 | 0.0038 | 0.0024 | 0.0013 |
| 129 | 0.0038 | 0.0025 | 0.0014 |
| 130 | 0.0039 | 0.0025 | 0.0014 |
| 131 | 0.0039 | 0.0025 | 0.0014 |
| 132 | 0.0040 | 0.0026 | 0.0014 |
| 133 | 0.0040 | 0.0026 | 0.0014 |
| 134 | 0.0041 | 0.0026 | 0.0014 |
| 135 | 0.0042 | 0.0027 | 0.0015 |
| 136 | 0.0042 | 0.0027 | 0.0015 |
| 137 | 0.0043 | 0.0028 | 0.0015 |
| 138 | 0.0043 | 0.0028 | 0.0015 |
| 139 | 0.0044 | 0.0028 | 0.0016 |
| 140 | 0.0044 | 0.0029 | 0.0016 |
| 141 | 0.0045 | 0.0029 | 0.0016 |
| 142 | 0.0046 | 0.0030 | 0.0016 |
| 143 | 0.0047 | 0.0030 | 0.0017 |
| 144 | 0.0047 | 0.0031 | 0.0017 |
| 145 | 0.0051 | 0.0033 | 0.0018 |
| 146 | 0.0052 | 0.0033 | 0.0018 |
| 147 | 0.0053 | 0.0034 | 0.0019 |
| 148 | 0.0053 | 0.0035 | 0.0019 |
| 149 | 0.0055 | 0.0035 | 0.0019 |
| 150 | 0.0055 | 0.0036 | 0.0020 |
| 151 | 0.0057 | 0.0037 | 0.0020 |
| 152 | 0.0057 | 0.0037 | 0.0020 |
| 153 | 0.0059 | 0.0038 | 0.0021 |
| 154 | 0.0060 | 0.0039 | 0.0021 |
| 155 | 0.0062 | 0.0040 | 0.0022 |
| 156 | 0.0062 | 0.0040 | 0.0022 |
| 157 | 0.0064 | 0.0042 | 0.0023 |
| 158 | 0.0065 | 0.0042 | 0.0023 |
| 159 | 0.0067 | 0.0044 | 0.0024 |
| 160 | 0.0068 | 0.0044 | 0.0024 |
| 161 | 0.0071 | 0.0046 | 0.0025 |
| 162 | 0.0072 | 0.0047 | 0.0025 |
| 163 | 0.0075 | 0.0048 | 0.0026 |
| 164 | 0.0076 | 0.0049 | 0.0027 |
| 165 | 0.0079 | 0.0051 | 0.0028 |
| 166 | 0.0080 | 0.0052 | 0.0028 |
| 167 | 0.0084 | 0.0054 | 0.0030 |
| 168 | 0.0085 | 0.0055 | 0.0030 |
| 169 | 0.0090 | 0.0058 | 0.0032 |
| 170 | 0.0092 | 0.0059 | 0.0032 |
| 171 | 0.0096 | 0.0062 | 0.0034 |
| 172 | 0.0099 | 0.0064 | 0.0035 |
| 173 | 0.0104 | 0.0067 | 0.0037 |
| 174 | 0.0107 | 0.0069 | 0.0038 |
| 175 | 0.0113 | 0.0073 | 0.0040 |
| 176 | 0.0117 | 0.0076 | 0.0041 |
| 177 | 0.0125 | 0.0081 | 0.0044 |
| 178 | 0.0129 | 0.0084 | 0.0046 |
| 179 | 0.0139 | 0.0090 | 0.0049 |
| 180 | 0.0145 | 0.0094 | 0.0051 |
| 181 | 0.0158 | 0.0102 | 0.0056 |
| 182 | 0.0166 | 0.0107 | 0.0058 |
| 183 | 0.0184 | 0.0119 | 0.0065 |
| 184 | 0.0194 | 0.0126 | 0.0069 |

| | | | |
|---|---|---|---|
| 185 | 0.0332 | 0.0215 | 0.0117 |
| 186 | 0.0354 | 0.0229 | 0.0125 |
| 187 | 0.0410 | 0.0266 | 0.0145 |
| 188 | 0.0448 | 0.0290 | 0.0158 |
| 189 | 0.0557 | 0.0300 | 0.0258 |
| 190 | 0.0642 | 0.0300 | 0.0342 |
| 191 | 0.0974 | 0.0300 | 0.0674 |
| 192 | 0.1414 | 0.0300 | 0.1114 |
| 193 | 0.6116 | 0.0300 | 0.5816 |
| 194 | 0.0766 | 0.0300 | 0.0467 |
| 195 | 0.0496 | 0.0300 | 0.0196 |
| 196 | 0.0380 | 0.0246 | 0.0134 |
| 197 | 0.0207 | 0.0134 | 0.0073 |
| 198 | 0.0174 | 0.0113 | 0.0061 |
| 199 | 0.0151 | 0.0098 | 0.0053 |
| 200 | 0.0134 | 0.0087 | 0.0047 |
| 201 | 0.0121 | 0.0078 | 0.0043 |
| 202 | 0.0110 | 0.0071 | 0.0039 |
| 203 | 0.0101 | 0.0065 | 0.0036 |
| 204 | 0.0094 | 0.0061 | 0.0033 |
| 205 | 0.0087 | 0.0057 | 0.0031 |
| 206 | 0.0082 | 0.0053 | 0.0029 |
| 207 | 0.0077 | 0.0050 | 0.0027 |
| 208 | 0.0073 | 0.0047 | 0.0026 |
| 209 | 0.0070 | 0.0045 | 0.0025 |
| 210 | 0.0066 | 0.0043 | 0.0023 |
| 211 | 0.0063 | 0.0041 | 0.0022 |
| 212 | 0.0061 | 0.0039 | 0.0021 |
| 213 | 0.0058 | 0.0038 | 0.0021 |
| 214 | 0.0056 | 0.0036 | 0.0020 |
| 215 | 0.0054 | 0.0035 | 0.0019 |
| 216 | 0.0052 | 0.0034 | 0.0018 |
| 217 | 0.0048 | 0.0031 | 0.0017 |
| 218 | 0.0046 | 0.0030 | 0.0016 |
| 219 | 0.0045 | 0.0029 | 0.0016 |
| 220 | 0.0044 | 0.0028 | 0.0015 |
| 221 | 0.0042 | 0.0027 | 0.0015 |
| 222 | 0.0041 | 0.0027 | 0.0015 |
| 223 | 0.0040 | 0.0026 | 0.0014 |
| 224 | 0.0039 | 0.0025 | 0.0014 |
| 225 | 0.0038 | 0.0025 | 0.0013 |
| 226 | 0.0037 | 0.0024 | 0.0013 |
| 227 | 0.0036 | 0.0023 | 0.0013 |
| 228 | 0.0035 | 0.0023 | 0.0012 |
| 229 | 0.0035 | 0.0022 | 0.0012 |
| 230 | 0.0034 | 0.0022 | 0.0012 |
| 231 | 0.0033 | 0.0021 | 0.0012 |
| 232 | 0.0032 | 0.0021 | 0.0011 |
| 233 | 0.0032 | 0.0021 | 0.0011 |
| 234 | 0.0031 | 0.0020 | 0.0011 |
| 235 | 0.0031 | 0.0020 | 0.0011 |
| 236 | 0.0030 | 0.0019 | 0.0011 |
| 237 | 0.0029 | 0.0019 | 0.0010 |
| 238 | 0.0029 | 0.0019 | 0.0010 |
| 239 | 0.0028 | 0.0018 | 0.0010 |
| 240 | 0.0028 | 0.0018 | 0.0010 |
| 241 | 0.0027 | 0.0018 | 0.0010 |
| 242 | 0.0027 | 0.0017 | 0.0010 |
| 243 | 0.0027 | 0.0017 | 0.0009 |

| | | | |
|---|---|---|---|
| 244 | 0.0026 | 0.0017 | 0.0009 |
| 245 | 0.0026 | 0.0017 | 0.0009 |
| 246 | 0.0025 | 0.0016 | 0.0009 |
| 247 | 0.0025 | 0.0016 | 0.0009 |
| 248 | 0.0025 | 0.0016 | 0.0009 |
| 249 | 0.0024 | 0.0016 | 0.0009 |
| 250 | 0.0024 | 0.0015 | 0.0008 |
| 251 | 0.0024 | 0.0015 | 0.0008 |
| 252 | 0.0023 | 0.0015 | 0.0008 |
| 253 | 0.0023 | 0.0015 | 0.0008 |
| 254 | 0.0023 | 0.0015 | 0.0008 |
| 255 | 0.0022 | 0.0014 | 0.0008 |
| 256 | 0.0022 | 0.0014 | 0.0008 |
| 257 | 0.0022 | 0.0014 | 0.0008 |
| 258 | 0.0021 | 0.0014 | 0.0008 |
| 259 | 0.0021 | 0.0014 | 0.0007 |
| 260 | 0.0021 | 0.0014 | 0.0007 |
| 261 | 0.0021 | 0.0013 | 0.0007 |
| 262 | 0.0020 | 0.0013 | 0.0007 |
| 263 | 0.0020 | 0.0013 | 0.0007 |
| 264 | 0.0020 | 0.0013 | 0.0007 |
| 265 | 0.0020 | 0.0013 | 0.0007 |
| 266 | 0.0020 | 0.0013 | 0.0007 |
| 267 | 0.0019 | 0.0012 | 0.0007 |
| 268 | 0.0019 | 0.0012 | 0.0007 |
| 269 | 0.0019 | 0.0012 | 0.0007 |
| 270 | 0.0019 | 0.0012 | 0.0007 |
| 271 | 0.0018 | 0.0012 | 0.0007 |
| 272 | 0.0018 | 0.0012 | 0.0006 |
| 273 | 0.0018 | 0.0012 | 0.0006 |
| 274 | 0.0018 | 0.0012 | 0.0006 |
| 275 | 0.0018 | 0.0011 | 0.0006 |
| 276 | 0.0018 | 0.0011 | 0.0006 |
| 277 | 0.0017 | 0.0011 | 0.0006 |
| 278 | 0.0017 | 0.0011 | 0.0006 |
| 279 | 0.0017 | 0.0011 | 0.0006 |
| 280 | 0.0017 | 0.0011 | 0.0006 |
| 281 | 0.0017 | 0.0011 | 0.0006 |
| 282 | 0.0017 | 0.0011 | 0.0006 |
| 283 | 0.0016 | 0.0011 | 0.0006 |
| 284 | 0.0016 | 0.0011 | 0.0006 |
| 285 | 0.0016 | 0.0010 | 0.0006 |
| 286 | 0.0016 | 0.0010 | 0.0006 |
| 287 | 0.0016 | 0.0010 | 0.0006 |
| 288 | 0.0016 | 0.0010 | 0.0006 |

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Total soil rain loss = 1.05(In)
Total effective rainfall = 1.34(In)
Peak flow rate in flood hydrograph = 21.03(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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Time(h+m) Volume Ac.Ft Q(CFS) 0 7.5 15.0 22.5 30.0

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0000 | 0.00 | Q | | | | |
| 0+15 | 0.0001 | 0.01 | Q | | | | |
| 0+20 | 0.0001 | 0.01 | Q | | | | |
| 0+25 | 0.0002 | 0.02 | Q | | | | |
| 0+30 | 0.0004 | 0.03 | Q | | | | |
| 0+35 | 0.0007 | 0.04 | Q | | | | |
| 0+40 | 0.0011 | 0.05 | Q | | | | |
| 0+45 | 0.0015 | 0.06 | Q | | | | |
| 0+50 | 0.0020 | 0.07 | Q | | | | |
| 0+55 | 0.0025 | 0.08 | Q | | | | |
| 1+ 0 | 0.0031 | 0.08 | Q | | | | |
| 1+ 5 | 0.0037 | 0.09 | Q | | | | |
| 1+10 | 0.0043 | 0.09 | Q | | | | |
| 1+15 | 0.0049 | 0.09 | Q | | | | |
| 1+20 | 0.0056 | 0.10 | Q | | | | |
| 1+25 | 0.0063 | 0.10 | Q | | | | |
| 1+30 | 0.0070 | 0.10 | Q | | | | |
| 1+35 | 0.0077 | 0.10 | Q | | | | |
| 1+40 | 0.0084 | 0.11 | Q | | | | |
| 1+45 | 0.0092 | 0.11 | Q | | | | |
| 1+50 | 0.0099 | 0.11 | Q | | | | |
| 1+55 | 0.0107 | 0.11 | Q | | | | |
| 2+ 0 | 0.0115 | 0.11 | Q | | | | |
| 2+ 5 | 0.0122 | 0.11 | Q | | | | |
| 2+10 | 0.0130 | 0.12 | Q | | | | |
| 2+15 | 0.0139 | 0.12 | Q | | | | |
| 2+20 | 0.0147 | 0.12 | Q | | | | |
| 2+25 | 0.0155 | 0.12 | Q | | | | |
| 2+30 | 0.0163 | 0.12 | Q | | | | |
| 2+35 | 0.0172 | 0.12 | Q | | | | |
| 2+40 | 0.0181 | 0.12 | Q | | | | |
| 2+45 | 0.0189 | 0.13 | Q | | | | |
| 2+50 | 0.0198 | 0.13 | Q | | | | |
| 2+55 | 0.0207 | 0.13 | Q | | | | |
| 3+ 0 | 0.0216 | 0.13 | Q | | | | |
| 3+ 5 | 0.0225 | 0.13 | Q | | | | |
| 3+10 | 0.0234 | 0.13 | Q | | | | |
| 3+15 | 0.0243 | 0.13 | Q | | | | |
| 3+20 | 0.0252 | 0.13 | Q | | | | |
| 3+25 | 0.0261 | 0.13 | Q | | | | |
| 3+30 | 0.0270 | 0.14 | Q | | | | |
| 3+35 | 0.0280 | 0.14 | Q | | | | |
| 3+40 | 0.0289 | 0.14 | Q | | | | |
| 3+45 | 0.0299 | 0.14 | Q | | | | |
| 3+50 | 0.0308 | 0.14 | Q | | | | |
| 3+55 | 0.0318 | 0.14 | Q | | | | |
| 4+ 0 | 0.0328 | 0.14 | Q | | | | |
| 4+ 5 | 0.0338 | 0.14 | Q | | | | |
| 4+10 | 0.0347 | 0.14 | Q | | | | |
| 4+15 | 0.0357 | 0.14 | Q | | | | |
| 4+20 | 0.0367 | 0.14 | Q | | | | |
| 4+25 | 0.0377 | 0.15 | Q | | | | |
| 4+30 | 0.0387 | 0.15 | Q | | | | |
| 4+35 | 0.0398 | 0.15 | Q | | | | |
| 4+40 | 0.0408 | 0.15 | Q | | | | |
| 4+45 | 0.0418 | 0.15 | Q | | | | |
| 4+50 | 0.0428 | 0.15 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4+55 | 0.0439 | 0.15 | Q | | | | |
| 5+ 0 | 0.0449 | 0.15 | Q | | | | |
| 5+ 5 | 0.0460 | 0.15 | Q | | | | |
| 5+10 | 0.0471 | 0.15 | Q | | | | |
| 5+15 | 0.0481 | 0.16 | Q | | | | |
| 5+20 | 0.0492 | 0.16 | Q | | | | |
| 5+25 | 0.0503 | 0.16 | Q | | | | |
| 5+30 | 0.0514 | 0.16 | QV | | | | |
| 5+35 | 0.0525 | 0.16 | QV | | | | |
| 5+40 | 0.0536 | 0.16 | QV | | | | |
| 5+45 | 0.0547 | 0.16 | QV | | | | |
| 5+50 | 0.0558 | 0.16 | QV | | | | |
| 5+55 | 0.0569 | 0.16 | QV | | | | |
| 6+ 0 | 0.0581 | 0.16 | QV | | | | |
| 6+ 5 | 0.0592 | 0.17 | QV | | | | |
| 6+10 | 0.0603 | 0.17 | QV | | | | |
| 6+15 | 0.0615 | 0.17 | QV | | | | |
| 6+20 | 0.0627 | 0.17 | QV | | | | |
| 6+25 | 0.0638 | 0.17 | QV | | | | |
| 6+30 | 0.0650 | 0.17 | QV | | | | |
| 6+35 | 0.0662 | 0.17 | QV | | | | |
| 6+40 | 0.0674 | 0.17 | QV | | | | |
| 6+45 | 0.0686 | 0.17 | QV | | | | |
| 6+50 | 0.0698 | 0.17 | QV | | | | |
| 6+55 | 0.0710 | 0.18 | QV | | | | |
| 7+ 0 | 0.0722 | 0.18 | QV | | | | |
| 7+ 5 | 0.0734 | 0.18 | QV | | | | |
| 7+10 | 0.0747 | 0.18 | QV | | | | |
| 7+15 | 0.0759 | 0.18 | QV | | | | |
| 7+20 | 0.0772 | 0.18 | QV | | | | |
| 7+25 | 0.0784 | 0.18 | QV | | | | |
| 7+30 | 0.0797 | 0.18 | QV | | | | |
| 7+35 | 0.0810 | 0.19 | QV | | | | |
| 7+40 | 0.0823 | 0.19 | QV | | | | |
| 7+45 | 0.0836 | 0.19 | QV | | | | |
| 7+50 | 0.0849 | 0.19 | QV | | | | |
| 7+55 | 0.0862 | 0.19 | QV | | | | |
| 8+ 0 | 0.0875 | 0.19 | QV | | | | |
| 8+ 5 | 0.0889 | 0.19 | QV | | | | |
| 8+10 | 0.0902 | 0.20 | QV | | | | |
| 8+15 | 0.0916 | 0.20 | QV | | | | |
| 8+20 | 0.0930 | 0.20 | QV | | | | |
| 8+25 | 0.0944 | 0.20 | QV | | | | |
| 8+30 | 0.0957 | 0.20 | QV | | | | |
| 8+35 | 0.0972 | 0.20 | QV | | | | |
| 8+40 | 0.0986 | 0.21 | QV | | | | |
| 8+45 | 0.1000 | 0.21 | QV | | | | |
| 8+50 | 0.1014 | 0.21 | QV | | | | |
| 8+55 | 0.1029 | 0.21 | Q V | | | | |
| 9+ 0 | 0.1044 | 0.21 | Q V | | | | |
| 9+ 5 | 0.1058 | 0.21 | Q V | | | | |
| 9+10 | 0.1073 | 0.22 | Q V | | | | |
| 9+15 | 0.1088 | 0.22 | Q V | | | | |
| 9+20 | 0.1103 | 0.22 | Q V | | | | |
| 9+25 | 0.1119 | 0.22 | Q V | | | | |
| 9+30 | 0.1134 | 0.22 | Q V | | | | |
| 9+35 | 0.1150 | 0.23 | Q V | | | | |
| 9+40 | 0.1166 | 0.23 | Q V | | | | |
| 9+45 | 0.1181 | 0.23 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 9+50 | 0.1197 | 0.23 | Q | V | | | |
| 9+55 | 0.1214 | 0.23 | Q | V | | | |
| 10+ 0 | 0.1230 | 0.24 | Q | V | | | |
| 10+ 5 | 0.1246 | 0.24 | Q | V | | | |
| 10+10 | 0.1263 | 0.24 | Q | V | | | |
| 10+15 | 0.1280 | 0.24 | Q | V | | | |
| 10+20 | 0.1297 | 0.25 | Q | V | | | |
| 10+25 | 0.1314 | 0.25 | Q | V | | | |
| 10+30 | 0.1331 | 0.25 | Q | V | | | |
| 10+35 | 0.1349 | 0.25 | Q | V | | | |
| 10+40 | 0.1367 | 0.26 | Q | V | | | |
| 10+45 | 0.1385 | 0.26 | Q | V | | | |
| 10+50 | 0.1403 | 0.26 | Q | V | | | |
| 10+55 | 0.1421 | 0.27 | Q | V | | | |
| 11+ 0 | 0.1440 | 0.27 | Q | V | | | |
| 11+ 5 | 0.1458 | 0.27 | Q | V | | | |
| 11+10 | 0.1477 | 0.28 | Q | V | | | |
| 11+15 | 0.1497 | 0.28 | Q | V | | | |
| 11+20 | 0.1516 | 0.28 | Q | V | | | |
| 11+25 | 0.1536 | 0.29 | Q | V | | | |
| 11+30 | 0.1556 | 0.29 | Q | V | | | |
| 11+35 | 0.1576 | 0.29 | Q | V | | | |
| 11+40 | 0.1596 | 0.30 | Q | V | | | |
| 11+45 | 0.1617 | 0.30 | Q | V | | | |
| 11+50 | 0.1638 | 0.30 | Q | V | | | |
| 11+55 | 0.1659 | 0.31 | Q | V | | | |
| 12+ 0 | 0.1681 | 0.31 | Q | V | | | |
| 12+ 5 | 0.1703 | 0.32 | Q | V | | | |
| 12+10 | 0.1725 | 0.32 | Q | V | | | |
| 12+15 | 0.1747 | 0.33 | Q | V | | | |
| 12+20 | 0.1770 | 0.33 | Q | V | | | |
| 12+25 | 0.1794 | 0.34 | Q | V | | | |
| 12+30 | 0.1817 | 0.35 | Q | V | | | |
| 12+35 | 0.1842 | 0.35 | Q | V | | | |
| 12+40 | 0.1867 | 0.36 | Q | V | | | |
| 12+45 | 0.1892 | 0.37 | Q | V | | | |
| 12+50 | 0.1918 | 0.38 | Q | V | | | |
| 12+55 | 0.1944 | 0.38 | Q | V | | | |
| 13+ 0 | 0.1971 | 0.39 | Q | V | | | |
| 13+ 5 | 0.1999 | 0.40 | Q | V | | | |
| 13+10 | 0.2027 | 0.41 | Q | V | | | |
| 13+15 | 0.2055 | 0.41 | Q | V | | | |
| 13+20 | 0.2084 | 0.42 | Q | V | | | |
| 13+25 | 0.2114 | 0.43 | Q | V | | | |
| 13+30 | 0.2144 | 0.44 | Q | V | | | |
| 13+35 | 0.2175 | 0.45 | Q | V | | | |
| 13+40 | 0.2206 | 0.46 | Q | V | | | |
| 13+45 | 0.2239 | 0.47 | Q | V | | | |
| 13+50 | 0.2272 | 0.48 | Q | V | | | |
| 13+55 | 0.2306 | 0.49 | Q | V | | | |
| 14+ 0 | 0.2340 | 0.50 | Q | V | | | |
| 14+ 5 | 0.2376 | 0.52 | Q | V | | | |
| 14+10 | 0.2412 | 0.53 | Q | V | | | |
| 14+15 | 0.2449 | 0.54 | Q | V | | | |
| 14+20 | 0.2488 | 0.56 | Q | V | | | |
| 14+25 | 0.2527 | 0.57 | Q | V | | | |
| 14+30 | 0.2568 | 0.59 | Q | V | | | |
| 14+35 | 0.2610 | 0.61 | Q | V | | | |
| 14+40 | 0.2653 | 0.63 | Q | V | | | |

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14+45       0.2698      0.65  Q    V    |          |          |          |
14+50       0.2744      0.67  Q    V    |          |          |          |
14+55       0.2792      0.70  Q    V    |          |          |          |
15+ 0       0.2842      0.72  Q    V    |          |          |          |
15+ 5       0.2894      0.75  |Q   V    |          |          |          |
15+10       0.2948      0.79  |Q   V    |          |          |          |
15+15       0.3004      0.82  |Q   V    |          |          |          |
15+20       0.3064      0.86  |Q    V   |          |          |          |
15+25       0.3126      0.91  |Q    V   |          |          |          |
15+30       0.3194      0.98  |Q    V   |          |          |          |
15+35       0.3267      1.06  |Q    V   |          |          |          |
15+40       0.3347      1.16  |Q    V   |          |          |          |
15+45       0.3437      1.31  |Q    V   |          |          |          |
15+50       0.3542      1.53  | Q   V   |          |          |          |
15+55       0.3670      1.86  | Q    V  |          |          |          |
16+ 0       0.3832      2.36  |  Q   V  |          |          |          |
16+ 5       0.4081      3.62  |   Q   V |          |          |          |
16+10       0.4462      5.53  |      QV |          |          |          |
16+15       0.4981      7.54  |        VQ          |          |          |
16+20       0.5660      9.86  |          |V Q      |          |          |
16+25       0.6588     13.48  |          | V    Q  |          |          |
16+30       0.7872     18.64  |          |    V    |   Q      |          |
16+35       0.9321     21.03  |          |       V |       Q  |          |
16+40       1.0556     17.93  |          |         V  Q       |          |
16+45       1.1553     14.48  |          |        Q| V        |          |
16+50       1.2371     11.88  |          |    Q    |   V      |          |
16+55       1.3029      9.55  |          | Q       |    V     |          |
17+ 0       1.3585      8.07  |         Q          |     V    |          |
17+ 5       1.4070      7.06  |        Q|          |      V   |          |
17+10       1.4506      6.33  |       Q |          |       V  |          |
17+15       1.4889      5.56  |      Q  |          |        V |          |
17+20       1.5234      5.01  |     Q   |          |         V          |
17+25       1.5552      4.61  |     Q   |          |         V          |
17+30       1.5831      4.05  |    Q    |          |          |V        |
17+35       1.6092      3.79  |    Q    |          |          |V        |
17+40       1.6328      3.42  |   Q     |          |          | V       |
17+45       1.6551      3.24  |   Q     |          |          | V       |
17+50       1.6758      3.01  |   Q     |          |          |  V      |
17+55       1.6955      2.86  |  Q      |          |          |  V      |
18+ 0       1.7135      2.61  |  Q      |          |          |  V      |
18+ 5       1.7304      2.45  |  Q      |          |          |   V     |
18+10       1.7453      2.18  | Q       |          |          |   V     |
18+15       1.7593      2.02  | Q       |          |          |   V     |
18+20       1.7726      1.93  | Q       |          |          |   V     |
18+25       1.7853      1.85  | Q       |          |          |    V    |
18+30       1.7973      1.74  | Q       |          |          |    V    |
18+35       1.8086      1.64  | Q       |          |          |    V    |
18+40       1.8194      1.57  | Q       |          |          |    V    |
18+45       1.8297      1.49  |Q        |          |          |     V   |
18+50       1.8392      1.38  |Q        |          |          |     V   |
18+55       1.8479      1.27  |Q        |          |          |     V   |
19+ 0       1.8564      1.24  |Q        |          |          |     V   |
19+ 5       1.8647      1.20  |Q        |          |          |     V   |
19+10       1.8724      1.12  |Q        |          |          |     V   |
19+15       1.8795      1.02  |Q        |          |          |      V  |
19+20       1.8863      1.00  |Q        |          |          |      V  |
19+25       1.8930      0.96  |Q        |          |          |      V  |
19+30       1.8992      0.90  |Q        |          |          |      V  |
19+35       1.9047      0.80  |Q        |          |          |      V  |
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19+40       1.9100      0.77  |Q        |          |          |      V  |
19+45       1.9151      0.74  Q         |          |          |      V  |
19+50       1.9198      0.69  Q         |          |          |      V  |
19+55       1.9239      0.59  Q         |          |          |      V  |
20+ 0       1.9278      0.57  Q         |          |          |      V  |
20+ 5       1.9317      0.56  Q         |          |          |       V |
20+10       1.9355      0.56  Q         |          |          |       V |
20+15       1.9394      0.57  Q         |          |          |       V |
20+20       1.9434      0.57  Q         |          |          |       V |
20+25       1.9472      0.56  Q         |          |          |       V |
20+30       1.9510      0.55  Q         |          |          |       V |
20+35       1.9548      0.55  Q         |          |          |       V |
20+40       1.9585      0.54  Q         |          |          |       V |
20+45       1.9621      0.52  Q         |          |          |       V |
20+50       1.9655      0.50  Q         |          |          |       V |
20+55       1.9685      0.43  Q         |          |          |       V |
21+ 0       1.9712      0.39  Q         |          |          |       V |
21+ 5       1.9738      0.38  Q         |          |          |       V |
21+10       1.9763      0.37  Q         |          |          |       V |
21+15       1.9788      0.36  Q         |          |          |       V |
21+20       1.9812      0.34  Q         |          |          |        V|
21+25       1.9833      0.31  Q         |          |          |        V|
21+30       1.9849      0.22  Q         |          |          |        V|
21+35       1.9863      0.21  Q         |          |          |        V|
21+40       1.9878      0.21  Q         |          |          |        V|
21+45       1.9891      0.20  Q         |          |          |        V|
21+50       1.9905      0.20  Q         |          |          |        V|
21+55       1.9918      0.19  Q         |          |          |        V|
22+ 0       1.9931      0.19  Q         |          |          |        V|
22+ 5       1.9944      0.19  Q         |          |          |        V|
22+10       1.9957      0.18  Q         |          |          |        V|
22+15       1.9969      0.18  Q         |          |          |        V|
22+20       1.9982      0.18  Q         |          |          |        V|
22+25       1.9994      0.18  Q         |          |          |        V|
22+30       2.0006      0.17  Q         |          |          |        V|
22+35       2.0017      0.17  Q         |          |          |        V|
22+40       2.0029      0.17  Q         |          |          |        V|
22+45       2.0040      0.17  Q         |          |          |        V|
22+50       2.0052      0.16  Q         |          |          |        V|
22+55       2.0063      0.16  Q         |          |          |        V|
23+ 0       2.0074      0.16  Q         |          |          |        V|
23+ 5       2.0085      0.16  Q         |          |          |        V|
23+10       2.0095      0.16  Q         |          |          |        V|
23+15       2.0106      0.15  Q         |          |          |        V|
23+20       2.0116      0.15  Q         |          |          |        V|
23+25       2.0127      0.15  Q         |          |          |        V|
23+30       2.0137      0.15  Q         |          |          |        V|
23+35       2.0147      0.15  Q         |          |          |        V|
23+40       2.0157      0.15  Q         |          |          |        V|
23+45       2.0167      0.14  Q         |          |          |        V|
23+50       2.0177      0.14  Q         |          |          |        V|
23+55       2.0186      0.14  Q         |          |          |        V|
24+ 0       2.0196      0.14  Q         |          |          |        V|
24+ 5       2.0205      0.14  Q         |          |          |        V|
24+10       2.0215      0.13  Q         |          |          |        V|
24+15       2.0224      0.13  Q         |          |          |        V|
24+20       2.0232      0.12  Q         |          |          |        V|
24+25       2.0240      0.12  Q         |          |          |        V|
24+30       2.0247      0.10  Q         |          |          |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24+35 | 2.0253 | 0.09 | Q | \| | \| | \| | V\| |
| 24+40 | 2.0259 | 0.08 | Q | \| | \| | \| | V\| |
| 24+45 | 2.0263 | 0.07 | Q | \| | \| | \| | V\| |
| 24+50 | 2.0267 | 0.06 | Q | \| | \| | \| | V\| |
| 24+55 | 2.0271 | 0.05 | Q | \| | \| | \| | V\| |
| 25+ 0 | 2.0274 | 0.05 | Q | \| | \| | \| | V\| |
| 25+ 5 | 2.0277 | 0.04 | Q | \| | \| | \| | V\| |
| 25+10 | 2.0280 | 0.04 | Q | \| | \| | \| | V\| |
| 25+15 | 2.0282 | 0.04 | Q | \| | \| | \| | V\| |
| 25+20 | 2.0284 | 0.03 | Q | \| | \| | \| | V\| |
| 25+25 | 2.0287 | 0.03 | Q | \| | \| | \| | V\| |
| 25+30 | 2.0288 | 0.03 | Q | \| | \| | \| | V\| |
| 25+35 | 2.0290 | 0.03 | Q | \| | \| | \| | V\| |
| 25+40 | 2.0292 | 0.02 | Q | \| | \| | \| | V\| |
| 25+45 | 2.0293 | 0.02 | Q | \| | \| | \| | V\| |
| 25+50 | 2.0295 | 0.02 | Q | \| | \| | \| | V\| |
| 25+55 | 2.0296 | 0.02 | Q | \| | \| | \| | V\| |
| 26+ 0 | 2.0297 | 0.02 | Q | \| | \| | \| | V\| |
| 26+ 5 | 2.0298 | 0.02 | Q | \| | \| | \| | V\| |
| 26+10 | 2.0299 | 0.01 | Q | \| | \| | \| | V\| |
| 26+15 | 2.0300 | 0.01 | Q | \| | \| | \| | V\| |
| 26+20 | 2.0301 | 0.01 | Q | \| | \| | \| | V\| |
| 26+25 | 2.0302 | 0.01 | Q | \| | \| | \| | V\| |
| 26+30 | 2.0303 | 0.01 | Q | \| | \| | \| | V\| |
| 26+35 | 2.0303 | 0.01 | Q | \| | \| | \| | V\| |
| 26+40 | 2.0304 | 0.01 | Q | \| | \| | \| | V\| |
| 26+45 | 2.0305 | 0.01 | Q | \| | \| | \| | V\| |
| 26+50 | 2.0305 | 0.01 | Q | \| | \| | \| | V\| |
| 26+55 | 2.0306 | 0.01 | Q | \| | \| | \| | V\| |
| 27+ 0 | 2.0306 | 0.01 | Q | \| | \| | \| | V\| |
| 27+ 5 | 2.0307 | 0.01 | Q | \| | \| | \| | V\| |
| 27+10 | 2.0307 | 0.01 | Q | \| | \| | \| | V\| |
| 27+15 | 2.0307 | 0.01 | Q | \| | \| | \| | V\| |
| 27+20 | 2.0308 | 0.00 | Q | \| | \| | \| | V\| |
| 27+25 | 2.0308 | 0.00 | Q | \| | \| | \| | V\| |
| 27+30 | 2.0308 | 0.00 | Q | \| | \| | \| | V\| |
| 27+35 | 2.0309 | 0.00 | Q | \| | \| | \| | V\| |
| 27+40 | 2.0309 | 0.00 | Q | \| | \| | \| | V\| |
| 27+45 | 2.0309 | 0.00 | Q | \| | \| | \| | V\| |
| 27+50 | 2.0309 | 0.00 | Q | \| | \| | \| | V\| |
| 27+55 | 2.0309 | 0.00 | Q | \| | \| | \| | V\| |
| 28+ 0 | 2.0310 | 0.00 | Q | \| | \| | \| | V\| |
| 28+ 5 | 2.0310 | 0.00 | Q | \| | \| | \| | V\| |
| 28+10 | 2.0310 | 0.00 | Q | \| | \| | \| | V\| |
| 28+15 | 2.0310 | 0.00 | Q | \| | \| | \| | V\| |
| 28+20 | 2.0310 | 0.00 | Q | \| | \| | \| | V\| |
| 28+25 | 2.0310 | 0.00 | Q | \| | \| | \| | V\| |
| 28+30 | 2.0310 | 0.00 | Q | \| | \| | \| | V\| |
| 28+35 | 2.0310 | 0.00 | Q | \| | \| | \| | V\| |
| 28+40 | 2.0311 | 0.00 | Q | \| | \| | \| | V\| |
| 28+45 | 2.0311 | 0.00 | Q | \| | \| | \| | V\| |
| 28+50 | 2.0311 | 0.00 | Q | \| | \| | \| | V\| |
| 28+55 | 2.0311 | 0.00 | Q | \| | \| | \| | V\| |
| 29+ 0 | 2.0311 | 0.00 | Q | \| | \| | \| | V\| |
| 29+ 5 | 2.0311 | 0.00 | Q | \| | \| | \| | V\| |
| 29+10 | 2.0311 | 0.00 | Q | \| | \| | \| | V\| |
| 29+15 | 2.0311 | 0.00 | Q | \| | \| | \| | V\| |
| 29+20 | 2.0311 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 15
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 197.08 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 197.08 | 6 | 1.83 |
| Rainfall data for year 100 | | |
| 197.08 | 24 | 2.43 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 197.08 | 1.000 | 0.360 | 0.743 | 0.267 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.267

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 146.43 | 0.743 | 62.0 | 80.6 | 2.41 | 0.359 |
| 50.65 | 0.257 | 98.0 | 98.0 | 0.20 | 0.906 |

Area-averaged catchment yield fraction, Y = 0.499
Area-averaged low loss fraction, Yb = 0.501
User entry of time of concentration = 1.580 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 197.08(Ac.)
Catchment Lag time = 1.264 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 6.5928
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.267(In/Hr)
Average low loss rate fraction (Yb) = 0.501 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.589(In)
Specified peak 6-hour rainfall = 1.830(In)
Specified peak 24-hour rainfall = 2.430(In)

Rainfall depth area reduction factors:
Using a total area of 197.08(Ac.) (Ref: fig. E-4)

5-minute factor = 0.991 Adjusted rainfall = 0.597(In)
30-minute factor = 0.991 Adjusted rainfall = 1.022(In)
1-hour factor = 0.991 Adjusted rainfall = 1.258(In)
3-hour factor = 0.999 Adjusted rainfall = 1.587(In)
6-hour factor = 0.999 Adjusted rainfall = 1.829(In)
24-hour factor = 1.000 Adjusted rainfall = 2.429(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 2383.44 (CFS)) | |
| 1 | 0.290 | 6.914 |
| 2 | 0.873 | 13.896 |
| 3 | 1.769 | 21.353 |
| 4 | 2.888 | 26.671 |
| 5 | 4.358 | 35.027 |
| 6 | 6.021 | 39.643 |
| 7 | 8.099 | 49.525 |
| 8 | 10.487 | 56.931 |
| 9 | 14.365 | 92.421 |
| 10 | 18.927 | 108.725 |
| 11 | 25.386 | 153.956 |
| 12 | 31.921 | 155.768 |
| 13 | 37.643 | 136.374 |

| | | |
|---|---|---|
| 14 | 42.909 | 125.514 |
| 15 | 47.181 | 101.822 |
| 16 | 51.127 | 94.041 |
| 17 | 54.566 | 81.977 |
| 18 | 57.602 | 72.349 |
| 19 | 60.135 | 60.375 |
| 20 | 62.411 | 54.240 |
| 21 | 64.464 | 48.948 |
| 22 | 66.321 | 44.247 |
| 23 | 68.057 | 41.368 |
| 24 | 69.684 | 38.779 |
| 25 | 71.249 | 37.323 |
| 26 | 72.623 | 32.747 |
| 27 | 73.926 | 31.035 |
| 28 | 75.109 | 28.214 |
| 29 | 76.261 | 27.459 |
| 30 | 77.374 | 26.521 |
| 31 | 78.429 | 25.152 |
| 32 | 79.313 | 21.061 |
| 33 | 80.183 | 20.742 |
| 34 | 81.053 | 20.742 |
| 35 | 81.864 | 19.308 |
| 36 | 82.577 | 17.002 |
| 37 | 83.289 | 16.971 |
| 38 | 84.001 | 16.965 |
| 39 | 84.667 | 15.883 |
| 40 | 85.300 | 15.085 |
| 41 | 85.933 | 15.085 |
| 42 | 86.561 | 14.981 |
| 43 | 87.116 | 13.208 |
| 44 | 87.643 | 12.571 |
| 45 | 88.170 | 12.571 |
| 46 | 88.682 | 12.184 |
| 47 | 89.094 | 9.827 |
| 48 | 89.490 | 9.428 |
| 49 | 89.885 | 9.428 |
| 50 | 90.274 | 9.272 |
| 51 | 90.645 | 8.827 |
| 52 | 91.014 | 8.800 |
| 53 | 91.383 | 8.800 |
| 54 | 91.730 | 8.277 |
| 55 | 92.047 | 7.547 |
| 56 | 92.363 | 7.543 |
| 57 | 92.680 | 7.538 |
| 58 | 92.980 | 7.157 |
| 59 | 93.270 | 6.914 |
| 60 | 93.560 | 6.914 |
| 61 | 93.847 | 6.829 |
| 62 | 94.086 | 5.697 |
| 63 | 94.310 | 5.343 |
| 64 | 94.534 | 5.343 |
| 65 | 94.758 | 5.343 |
| 66 | 94.982 | 5.343 |
| 67 | 95.206 | 5.343 |
| 68 | 95.431 | 5.343 |
| 69 | 95.640 | 4.995 |
| 70 | 95.813 | 4.127 |
| 71 | 95.985 | 4.086 |
| 72 | 96.156 | 4.086 |

| | | |
|---|---|---|
| 73 | 96.327 | 4.086 |
| 74 | 96.499 | 4.086 |
| 75 | 96.670 | 4.086 |
| 76 | 96.841 | 4.069 |
| 77 | 96.978 | 3.272 |
| 78 | 97.097 | 2.828 |
| 79 | 97.216 | 2.828 |
| 80 | 97.334 | 2.828 |
| 81 | 97.453 | 2.828 |
| 82 | 97.572 | 2.828 |
| 83 | 97.690 | 2.828 |
| 84 | 97.800 | 2.620 |
| 85 | 97.871 | 1.684 |
| 86 | 97.937 | 1.571 |
| 87 | 98.003 | 1.571 |
| 88 | 98.069 | 1.571 |
| 89 | 98.135 | 1.571 |
| 90 | 98.201 | 1.571 |
| 91 | 98.267 | 1.571 |
| 92 | 98.339 | 1.726 |
| 93 | 98.418 | 1.886 |
| 94 | 98.497 | 1.886 |
| 95 | 98.576 | 1.886 |
| 96 | 98.655 | 1.886 |
| 97 | 98.734 | 1.886 |
| 98 | 98.814 | 1.886 |
| 99 | 98.893 | 1.886 |
| 100 | 98.972 | 1.886 |
| 101 | 99.051 | 1.886 |
| 102 | 99.130 | 1.886 |
| 103 | 99.209 | 1.886 |
| 104 | 99.288 | 1.886 |
| 105 | 99.367 | 1.886 |
| 106 | 99.447 | 1.886 |
| 107 | 99.513 | 1.579 |
| 108 | 99.555 | 0.996 |
| 109 | 99.596 | 0.982 |
| 110 | 99.637 | 0.982 |
| 111 | 99.678 | 0.982 |
| 112 | 99.719 | 0.982 |
| 113 | 99.761 | 0.982 |
| 114 | 99.802 | 0.982 |
| 115 | 99.843 | 0.982 |
| 116 | 99.884 | 0.982 |
| 117 | 99.925 | 0.982 |
| 118 | 99.967 | 0.982 |
| 119 | 100.000 | 0.796 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5971 | 0.5971 |
| 2 | 0.7351 | 0.1380 |
| 3 | 0.8301 | 0.0951 |
| 4 | 0.9050 | 0.0748 |
| 5 | 0.9676 | 0.0627 |
| 6 | 1.0220 | 0.0544 |
| 7 | 1.0704 | 0.0484 |
| 8 | 1.1142 | 0.0438 |
| 9 | 1.1542 | 0.0401 |

| | | |
|---|---|---|
| 10 | 1.1913 | 0.0371 |
| 11 | 1.2258 | 0.0346 |
| 12 | 1.2583 | 0.0324 |
| 13 | 1.2797 | 0.0215 |
| 14 | 1.2999 | 0.0202 |
| 15 | 1.3190 | 0.0191 |
| 16 | 1.3371 | 0.0181 |
| 17 | 1.3543 | 0.0172 |
| 18 | 1.3708 | 0.0165 |
| 19 | 1.3865 | 0.0157 |
| 20 | 1.4017 | 0.0151 |
| 21 | 1.4162 | 0.0145 |
| 22 | 1.4302 | 0.0140 |
| 23 | 1.4437 | 0.0135 |
| 24 | 1.4567 | 0.0130 |
| 25 | 1.4693 | 0.0126 |
| 26 | 1.4815 | 0.0122 |
| 27 | 1.4934 | 0.0119 |
| 28 | 1.5049 | 0.0115 |
| 29 | 1.5161 | 0.0112 |
| 30 | 1.5270 | 0.0109 |
| 31 | 1.5376 | 0.0106 |
| 32 | 1.5480 | 0.0103 |
| 33 | 1.5581 | 0.0101 |
| 34 | 1.5679 | 0.0099 |
| 35 | 1.5776 | 0.0096 |
| 36 | 1.5870 | 0.0094 |
| 37 | 1.5959 | 0.0089 |
| 38 | 1.6046 | 0.0087 |
| 39 | 1.6132 | 0.0086 |
| 40 | 1.6216 | 0.0084 |
| 41 | 1.6298 | 0.0082 |
| 42 | 1.6378 | 0.0081 |
| 43 | 1.6457 | 0.0079 |
| 44 | 1.6535 | 0.0078 |
| 45 | 1.6611 | 0.0076 |
| 46 | 1.6686 | 0.0075 |
| 47 | 1.6760 | 0.0074 |
| 48 | 1.6832 | 0.0072 |
| 49 | 1.6903 | 0.0071 |
| 50 | 1.6973 | 0.0070 |
| 51 | 1.7042 | 0.0069 |
| 52 | 1.7110 | 0.0068 |
| 53 | 1.7177 | 0.0067 |
| 54 | 1.7243 | 0.0066 |
| 55 | 1.7308 | 0.0065 |
| 56 | 1.7372 | 0.0064 |
| 57 | 1.7435 | 0.0063 |
| 58 | 1.7497 | 0.0062 |
| 59 | 1.7558 | 0.0061 |
| 60 | 1.7619 | 0.0061 |
| 61 | 1.7679 | 0.0060 |
| 62 | 1.7737 | 0.0059 |
| 63 | 1.7796 | 0.0058 |
| 64 | 1.7853 | 0.0057 |
| 65 | 1.7910 | 0.0057 |
| 66 | 1.7966 | 0.0056 |
| 67 | 1.8021 | 0.0055 |
| 68 | 1.8076 | 0.0055 |

| | | |
|---|---|---|
| 69 | 1.8130 | 0.0054 |
| 70 | 1.8184 | 0.0053 |
| 71 | 1.8236 | 0.0053 |
| 72 | 1.8289 | 0.0052 |
| 73 | 1.8340 | 0.0052 |
| 74 | 1.8392 | 0.0051 |
| 75 | 1.8442 | 0.0051 |
| 76 | 1.8492 | 0.0050 |
| 77 | 1.8542 | 0.0050 |
| 78 | 1.8591 | 0.0049 |
| 79 | 1.8640 | 0.0049 |
| 80 | 1.8688 | 0.0048 |
| 81 | 1.8735 | 0.0048 |
| 82 | 1.8782 | 0.0047 |
| 83 | 1.8829 | 0.0047 |
| 84 | 1.8875 | 0.0046 |
| 85 | 1.8921 | 0.0046 |
| 86 | 1.8967 | 0.0045 |
| 87 | 1.9012 | 0.0045 |
| 88 | 1.9056 | 0.0045 |
| 89 | 1.9100 | 0.0044 |
| 90 | 1.9144 | 0.0044 |
| 91 | 1.9187 | 0.0043 |
| 92 | 1.9230 | 0.0043 |
| 93 | 1.9273 | 0.0043 |
| 94 | 1.9315 | 0.0042 |
| 95 | 1.9357 | 0.0042 |
| 96 | 1.9399 | 0.0042 |
| 97 | 1.9440 | 0.0041 |
| 98 | 1.9481 | 0.0041 |
| 99 | 1.9521 | 0.0041 |
| 100 | 1.9562 | 0.0040 |
| 101 | 1.9602 | 0.0040 |
| 102 | 1.9641 | 0.0040 |
| 103 | 1.9680 | 0.0039 |
| 104 | 1.9719 | 0.0039 |
| 105 | 1.9758 | 0.0039 |
| 106 | 1.9796 | 0.0038 |
| 107 | 1.9835 | 0.0038 |
| 108 | 1.9872 | 0.0038 |
| 109 | 1.9910 | 0.0038 |
| 110 | 1.9947 | 0.0037 |
| 111 | 1.9984 | 0.0037 |
| 112 | 2.0021 | 0.0037 |
| 113 | 2.0058 | 0.0036 |
| 114 | 2.0094 | 0.0036 |
| 115 | 2.0130 | 0.0036 |
| 116 | 2.0165 | 0.0036 |
| 117 | 2.0201 | 0.0035 |
| 118 | 2.0236 | 0.0035 |
| 119 | 2.0271 | 0.0035 |
| 120 | 2.0306 | 0.0035 |
| 121 | 2.0340 | 0.0035 |
| 122 | 2.0375 | 0.0034 |
| 123 | 2.0409 | 0.0034 |
| 124 | 2.0443 | 0.0034 |
| 125 | 2.0476 | 0.0034 |
| 126 | 2.0510 | 0.0033 |
| 127 | 2.0543 | 0.0033 |

| | | |
|---|---|---|
| 128 | 2.0576 | 0.0033 |
| 129 | 2.0609 | 0.0033 |
| 130 | 2.0642 | 0.0033 |
| 131 | 2.0674 | 0.0032 |
| 132 | 2.0706 | 0.0032 |
| 133 | 2.0738 | 0.0032 |
| 134 | 2.0770 | 0.0032 |
| 135 | 2.0802 | 0.0032 |
| 136 | 2.0833 | 0.0031 |
| 137 | 2.0865 | 0.0031 |
| 138 | 2.0896 | 0.0031 |
| 139 | 2.0927 | 0.0031 |
| 140 | 2.0957 | 0.0031 |
| 141 | 2.0988 | 0.0031 |
| 142 | 2.1018 | 0.0030 |
| 143 | 2.1049 | 0.0030 |
| 144 | 2.1079 | 0.0030 |
| 145 | 2.1108 | 0.0030 |
| 146 | 2.1138 | 0.0030 |
| 147 | 2.1168 | 0.0030 |
| 148 | 2.1197 | 0.0029 |
| 149 | 2.1226 | 0.0029 |
| 150 | 2.1256 | 0.0029 |
| 151 | 2.1285 | 0.0029 |
| 152 | 2.1313 | 0.0029 |
| 153 | 2.1342 | 0.0029 |
| 154 | 2.1370 | 0.0028 |
| 155 | 2.1399 | 0.0028 |
| 156 | 2.1427 | 0.0028 |
| 157 | 2.1455 | 0.0028 |
| 158 | 2.1483 | 0.0028 |
| 159 | 2.1511 | 0.0028 |
| 160 | 2.1538 | 0.0028 |
| 161 | 2.1566 | 0.0028 |
| 162 | 2.1593 | 0.0027 |
| 163 | 2.1621 | 0.0027 |
| 164 | 2.1648 | 0.0027 |
| 165 | 2.1675 | 0.0027 |
| 166 | 2.1701 | 0.0027 |
| 167 | 2.1728 | 0.0027 |
| 168 | 2.1755 | 0.0027 |
| 169 | 2.1781 | 0.0026 |
| 170 | 2.1808 | 0.0026 |
| 171 | 2.1834 | 0.0026 |
| 172 | 2.1860 | 0.0026 |
| 173 | 2.1886 | 0.0026 |
| 174 | 2.1912 | 0.0026 |
| 175 | 2.1937 | 0.0026 |
| 176 | 2.1963 | 0.0026 |
| 177 | 2.1989 | 0.0026 |
| 178 | 2.2014 | 0.0025 |
| 179 | 2.2039 | 0.0025 |
| 180 | 2.2064 | 0.0025 |
| 181 | 2.2089 | 0.0025 |
| 182 | 2.2114 | 0.0025 |
| 183 | 2.2139 | 0.0025 |
| 184 | 2.2164 | 0.0025 |
| 185 | 2.2189 | 0.0025 |
| 186 | 2.2213 | 0.0025 |

| | | |
|---|---|---|
| 187 | 2.2237 | 0.0024 |
| 188 | 2.2262 | 0.0024 |
| 189 | 2.2286 | 0.0024 |
| 190 | 2.2310 | 0.0024 |
| 191 | 2.2334 | 0.0024 |
| 192 | 2.2358 | 0.0024 |
| 193 | 2.2382 | 0.0024 |
| 194 | 2.2405 | 0.0024 |
| 195 | 2.2429 | 0.0024 |
| 196 | 2.2453 | 0.0024 |
| 197 | 2.2476 | 0.0023 |
| 198 | 2.2499 | 0.0023 |
| 199 | 2.2523 | 0.0023 |
| 200 | 2.2546 | 0.0023 |
| 201 | 2.2569 | 0.0023 |
| 202 | 2.2592 | 0.0023 |
| 203 | 2.2615 | 0.0023 |
| 204 | 2.2637 | 0.0023 |
| 205 | 2.2660 | 0.0023 |
| 206 | 2.2683 | 0.0023 |
| 207 | 2.2705 | 0.0023 |
| 208 | 2.2728 | 0.0022 |
| 209 | 2.2750 | 0.0022 |
| 210 | 2.2772 | 0.0022 |
| 211 | 2.2794 | 0.0022 |
| 212 | 2.2816 | 0.0022 |
| 213 | 2.2838 | 0.0022 |
| 214 | 2.2860 | 0.0022 |
| 215 | 2.2882 | 0.0022 |
| 216 | 2.2904 | 0.0022 |
| 217 | 2.2926 | 0.0022 |
| 218 | 2.2947 | 0.0022 |
| 219 | 2.2969 | 0.0022 |
| 220 | 2.2990 | 0.0021 |
| 221 | 2.3011 | 0.0021 |
| 222 | 2.3033 | 0.0021 |
| 223 | 2.3054 | 0.0021 |
| 224 | 2.3075 | 0.0021 |
| 225 | 2.3096 | 0.0021 |
| 226 | 2.3117 | 0.0021 |
| 227 | 2.3138 | 0.0021 |
| 228 | 2.3159 | 0.0021 |
| 229 | 2.3180 | 0.0021 |
| 230 | 2.3200 | 0.0021 |
| 231 | 2.3221 | 0.0021 |
| 232 | 2.3242 | 0.0021 |
| 233 | 2.3262 | 0.0020 |
| 234 | 2.3282 | 0.0020 |
| 235 | 2.3303 | 0.0020 |
| 236 | 2.3323 | 0.0020 |
| 237 | 2.3343 | 0.0020 |
| 238 | 2.3363 | 0.0020 |
| 239 | 2.3384 | 0.0020 |
| 240 | 2.3404 | 0.0020 |
| 241 | 2.3423 | 0.0020 |
| 242 | 2.3443 | 0.0020 |
| 243 | 2.3463 | 0.0020 |
| 244 | 2.3483 | 0.0020 |
| 245 | 2.3503 | 0.0020 |

| | | |
|---|---|---|
| 246 | 2.3522 | 0.0020 |
| 247 | 2.3542 | 0.0020 |
| 248 | 2.3561 | 0.0019 |
| 249 | 2.3581 | 0.0019 |
| 250 | 2.3600 | 0.0019 |
| 251 | 2.3619 | 0.0019 |
| 252 | 2.3639 | 0.0019 |
| 253 | 2.3658 | 0.0019 |
| 254 | 2.3677 | 0.0019 |
| 255 | 2.3696 | 0.0019 |
| 256 | 2.3715 | 0.0019 |
| 257 | 2.3734 | 0.0019 |
| 258 | 2.3753 | 0.0019 |
| 259 | 2.3772 | 0.0019 |
| 260 | 2.3790 | 0.0019 |
| 261 | 2.3809 | 0.0019 |
| 262 | 2.3828 | 0.0019 |
| 263 | 2.3846 | 0.0019 |
| 264 | 2.3865 | 0.0019 |
| 265 | 2.3883 | 0.0018 |
| 266 | 2.3902 | 0.0018 |
| 267 | 2.3920 | 0.0018 |
| 268 | 2.3939 | 0.0018 |
| 269 | 2.3957 | 0.0018 |
| 270 | 2.3975 | 0.0018 |
| 271 | 2.3993 | 0.0018 |
| 272 | 2.4011 | 0.0018 |
| 273 | 2.4029 | 0.0018 |
| 274 | 2.4047 | 0.0018 |
| 275 | 2.4065 | 0.0018 |
| 276 | 2.4083 | 0.0018 |
| 277 | 2.4101 | 0.0018 |
| 278 | 2.4119 | 0.0018 |
| 279 | 2.4137 | 0.0018 |
| 280 | 2.4154 | 0.0018 |
| 281 | 2.4172 | 0.0018 |
| 282 | 2.4189 | 0.0018 |
| 283 | 2.4207 | 0.0018 |
| 284 | 2.4225 | 0.0017 |
| 285 | 2.4242 | 0.0017 |
| 286 | 2.4259 | 0.0017 |
| 287 | 2.4277 | 0.0017 |
| 288 | 2.4294 | 0.0017 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0017 | 0.0009 | 0.0009 |
| 2 | 0.0017 | 0.0009 | 0.0009 |
| 3 | 0.0017 | 0.0009 | 0.0009 |
| 4 | 0.0017 | 0.0009 | 0.0009 |
| 5 | 0.0018 | 0.0009 | 0.0009 |
| 6 | 0.0018 | 0.0009 | 0.0009 |
| 7 | 0.0018 | 0.0009 | 0.0009 |
| 8 | 0.0018 | 0.0009 | 0.0009 |
| 9 | 0.0018 | 0.0009 | 0.0009 |
| 10 | 0.0018 | 0.0009 | 0.0009 |
| 11 | 0.0018 | 0.0009 | 0.0009 |

| | | | |
|---|---|---|---|
| 12 | 0.0018 | 0.0009 | 0.0009 |
| 13 | 0.0018 | 0.0009 | 0.0009 |
| 14 | 0.0018 | 0.0009 | 0.0009 |
| 15 | 0.0018 | 0.0009 | 0.0009 |
| 16 | 0.0018 | 0.0009 | 0.0009 |
| 17 | 0.0019 | 0.0009 | 0.0009 |
| 18 | 0.0019 | 0.0009 | 0.0009 |
| 19 | 0.0019 | 0.0009 | 0.0009 |
| 20 | 0.0019 | 0.0009 | 0.0009 |
| 21 | 0.0019 | 0.0009 | 0.0009 |
| 22 | 0.0019 | 0.0009 | 0.0009 |
| 23 | 0.0019 | 0.0010 | 0.0010 |
| 24 | 0.0019 | 0.0010 | 0.0010 |
| 25 | 0.0019 | 0.0010 | 0.0010 |
| 26 | 0.0019 | 0.0010 | 0.0010 |
| 27 | 0.0019 | 0.0010 | 0.0010 |
| 28 | 0.0019 | 0.0010 | 0.0010 |
| 29 | 0.0020 | 0.0010 | 0.0010 |
| 30 | 0.0020 | 0.0010 | 0.0010 |
| 31 | 0.0020 | 0.0010 | 0.0010 |
| 32 | 0.0020 | 0.0010 | 0.0010 |
| 33 | 0.0020 | 0.0010 | 0.0010 |
| 34 | 0.0020 | 0.0010 | 0.0010 |
| 35 | 0.0020 | 0.0010 | 0.0010 |
| 36 | 0.0020 | 0.0010 | 0.0010 |
| 37 | 0.0020 | 0.0010 | 0.0010 |
| 38 | 0.0020 | 0.0010 | 0.0010 |
| 39 | 0.0021 | 0.0010 | 0.0010 |
| 40 | 0.0021 | 0.0010 | 0.0010 |
| 41 | 0.0021 | 0.0010 | 0.0010 |
| 42 | 0.0021 | 0.0010 | 0.0010 |
| 43 | 0.0021 | 0.0011 | 0.0011 |
| 44 | 0.0021 | 0.0011 | 0.0011 |
| 45 | 0.0021 | 0.0011 | 0.0011 |
| 46 | 0.0021 | 0.0011 | 0.0011 |
| 47 | 0.0022 | 0.0011 | 0.0011 |
| 48 | 0.0022 | 0.0011 | 0.0011 |
| 49 | 0.0022 | 0.0011 | 0.0011 |
| 50 | 0.0022 | 0.0011 | 0.0011 |
| 51 | 0.0022 | 0.0011 | 0.0011 |
| 52 | 0.0022 | 0.0011 | 0.0011 |
| 53 | 0.0022 | 0.0011 | 0.0011 |
| 54 | 0.0022 | 0.0011 | 0.0011 |
| 55 | 0.0023 | 0.0011 | 0.0011 |
| 56 | 0.0023 | 0.0011 | 0.0011 |
| 57 | 0.0023 | 0.0011 | 0.0011 |
| 58 | 0.0023 | 0.0011 | 0.0011 |
| 59 | 0.0023 | 0.0012 | 0.0012 |
| 60 | 0.0023 | 0.0012 | 0.0012 |
| 61 | 0.0023 | 0.0012 | 0.0012 |
| 62 | 0.0023 | 0.0012 | 0.0012 |
| 63 | 0.0024 | 0.0012 | 0.0012 |
| 64 | 0.0024 | 0.0012 | 0.0012 |
| 65 | 0.0024 | 0.0012 | 0.0012 |
| 66 | 0.0024 | 0.0012 | 0.0012 |
| 67 | 0.0024 | 0.0012 | 0.0012 |
| 68 | 0.0024 | 0.0012 | 0.0012 |
| 69 | 0.0025 | 0.0012 | 0.0012 |
| 70 | 0.0025 | 0.0012 | 0.0012 |

| | | | |
|---|---|---|---|
| 71 | 0.0025 | 0.0012 | 0.0012 |
| 72 | 0.0025 | 0.0012 | 0.0012 |
| 73 | 0.0025 | 0.0013 | 0.0013 |
| 74 | 0.0025 | 0.0013 | 0.0013 |
| 75 | 0.0026 | 0.0013 | 0.0013 |
| 76 | 0.0026 | 0.0013 | 0.0013 |
| 77 | 0.0026 | 0.0013 | 0.0013 |
| 78 | 0.0026 | 0.0013 | 0.0013 |
| 79 | 0.0026 | 0.0013 | 0.0013 |
| 80 | 0.0026 | 0.0013 | 0.0013 |
| 81 | 0.0027 | 0.0013 | 0.0013 |
| 82 | 0.0027 | 0.0013 | 0.0013 |
| 83 | 0.0027 | 0.0014 | 0.0013 |
| 84 | 0.0027 | 0.0014 | 0.0014 |
| 85 | 0.0027 | 0.0014 | 0.0014 |
| 86 | 0.0028 | 0.0014 | 0.0014 |
| 87 | 0.0028 | 0.0014 | 0.0014 |
| 88 | 0.0028 | 0.0014 | 0.0014 |
| 89 | 0.0028 | 0.0014 | 0.0014 |
| 90 | 0.0028 | 0.0014 | 0.0014 |
| 91 | 0.0029 | 0.0014 | 0.0014 |
| 92 | 0.0029 | 0.0014 | 0.0014 |
| 93 | 0.0029 | 0.0015 | 0.0015 |
| 94 | 0.0029 | 0.0015 | 0.0015 |
| 95 | 0.0030 | 0.0015 | 0.0015 |
| 96 | 0.0030 | 0.0015 | 0.0015 |
| 97 | 0.0030 | 0.0015 | 0.0015 |
| 98 | 0.0030 | 0.0015 | 0.0015 |
| 99 | 0.0031 | 0.0015 | 0.0015 |
| 100 | 0.0031 | 0.0015 | 0.0015 |
| 101 | 0.0031 | 0.0016 | 0.0016 |
| 102 | 0.0031 | 0.0016 | 0.0016 |
| 103 | 0.0032 | 0.0016 | 0.0016 |
| 104 | 0.0032 | 0.0016 | 0.0016 |
| 105 | 0.0032 | 0.0016 | 0.0016 |
| 106 | 0.0032 | 0.0016 | 0.0016 |
| 107 | 0.0033 | 0.0016 | 0.0016 |
| 108 | 0.0033 | 0.0017 | 0.0016 |
| 109 | 0.0033 | 0.0017 | 0.0017 |
| 110 | 0.0034 | 0.0017 | 0.0017 |
| 111 | 0.0034 | 0.0017 | 0.0017 |
| 112 | 0.0034 | 0.0017 | 0.0017 |
| 113 | 0.0035 | 0.0017 | 0.0017 |
| 114 | 0.0035 | 0.0018 | 0.0017 |
| 115 | 0.0035 | 0.0018 | 0.0018 |
| 116 | 0.0036 | 0.0018 | 0.0018 |
| 117 | 0.0036 | 0.0018 | 0.0018 |
| 118 | 0.0036 | 0.0018 | 0.0018 |
| 119 | 0.0037 | 0.0019 | 0.0018 |
| 120 | 0.0037 | 0.0019 | 0.0019 |
| 121 | 0.0038 | 0.0019 | 0.0019 |
| 122 | 0.0038 | 0.0019 | 0.0019 |
| 123 | 0.0039 | 0.0019 | 0.0019 |
| 124 | 0.0039 | 0.0020 | 0.0019 |
| 125 | 0.0040 | 0.0020 | 0.0020 |
| 126 | 0.0040 | 0.0020 | 0.0020 |
| 127 | 0.0041 | 0.0020 | 0.0020 |
| 128 | 0.0041 | 0.0020 | 0.0020 |
| 129 | 0.0042 | 0.0021 | 0.0021 |

| | | | |
|---|---|---|---|
| 130 | 0.0042 | 0.0021 | 0.0021 |
| 131 | 0.0043 | 0.0021 | 0.0021 |
| 132 | 0.0043 | 0.0022 | 0.0021 |
| 133 | 0.0044 | 0.0022 | 0.0022 |
| 134 | 0.0044 | 0.0022 | 0.0022 |
| 135 | 0.0045 | 0.0023 | 0.0022 |
| 136 | 0.0045 | 0.0023 | 0.0023 |
| 137 | 0.0046 | 0.0023 | 0.0023 |
| 138 | 0.0047 | 0.0023 | 0.0023 |
| 139 | 0.0048 | 0.0024 | 0.0024 |
| 140 | 0.0048 | 0.0024 | 0.0024 |
| 141 | 0.0049 | 0.0025 | 0.0025 |
| 142 | 0.0050 | 0.0025 | 0.0025 |
| 143 | 0.0051 | 0.0025 | 0.0025 |
| 144 | 0.0051 | 0.0026 | 0.0026 |
| 145 | 0.0052 | 0.0026 | 0.0026 |
| 146 | 0.0053 | 0.0026 | 0.0026 |
| 147 | 0.0054 | 0.0027 | 0.0027 |
| 148 | 0.0055 | 0.0027 | 0.0027 |
| 149 | 0.0056 | 0.0028 | 0.0028 |
| 150 | 0.0057 | 0.0028 | 0.0028 |
| 151 | 0.0058 | 0.0029 | 0.0029 |
| 152 | 0.0059 | 0.0030 | 0.0029 |
| 153 | 0.0061 | 0.0030 | 0.0030 |
| 154 | 0.0061 | 0.0031 | 0.0031 |
| 155 | 0.0063 | 0.0032 | 0.0031 |
| 156 | 0.0064 | 0.0032 | 0.0032 |
| 157 | 0.0066 | 0.0033 | 0.0033 |
| 158 | 0.0067 | 0.0033 | 0.0033 |
| 159 | 0.0069 | 0.0035 | 0.0034 |
| 160 | 0.0070 | 0.0035 | 0.0035 |
| 161 | 0.0072 | 0.0036 | 0.0036 |
| 162 | 0.0074 | 0.0037 | 0.0037 |
| 163 | 0.0076 | 0.0038 | 0.0038 |
| 164 | 0.0078 | 0.0039 | 0.0039 |
| 165 | 0.0081 | 0.0040 | 0.0040 |
| 166 | 0.0082 | 0.0041 | 0.0041 |
| 167 | 0.0086 | 0.0043 | 0.0043 |
| 168 | 0.0087 | 0.0044 | 0.0044 |
| 169 | 0.0094 | 0.0047 | 0.0047 |
| 170 | 0.0096 | 0.0048 | 0.0048 |
| 171 | 0.0101 | 0.0051 | 0.0050 |
| 172 | 0.0103 | 0.0052 | 0.0052 |
| 173 | 0.0109 | 0.0055 | 0.0054 |
| 174 | 0.0112 | 0.0056 | 0.0056 |
| 175 | 0.0119 | 0.0059 | 0.0059 |
| 176 | 0.0122 | 0.0061 | 0.0061 |
| 177 | 0.0130 | 0.0065 | 0.0065 |
| 178 | 0.0135 | 0.0068 | 0.0067 |
| 179 | 0.0145 | 0.0073 | 0.0073 |
| 180 | 0.0151 | 0.0076 | 0.0075 |
| 181 | 0.0165 | 0.0082 | 0.0082 |
| 182 | 0.0172 | 0.0086 | 0.0086 |
| 183 | 0.0191 | 0.0096 | 0.0095 |
| 184 | 0.0202 | 0.0101 | 0.0101 |
| 185 | 0.0324 | 0.0162 | 0.0162 |
| 186 | 0.0346 | 0.0173 | 0.0173 |
| 187 | 0.0401 | 0.0201 | 0.0200 |
| 188 | 0.0438 | 0.0219 | 0.0218 |

| | | | |
|---|---|---|---|
| 189 | 0.0544 | 0.0223 | 0.0321 |
| 190 | 0.0627 | 0.0223 | 0.0404 |
| 191 | 0.0951 | 0.0223 | 0.0728 |
| 192 | 0.1380 | 0.0223 | 0.1157 |
| 193 | 0.5971 | 0.0223 | 0.5748 |
| 194 | 0.0748 | 0.0223 | 0.0526 |
| 195 | 0.0484 | 0.0223 | 0.0261 |
| 196 | 0.0371 | 0.0186 | 0.0185 |
| 197 | 0.0215 | 0.0107 | 0.0107 |
| 198 | 0.0181 | 0.0091 | 0.0090 |
| 199 | 0.0157 | 0.0079 | 0.0079 |
| 200 | 0.0140 | 0.0070 | 0.0070 |
| 201 | 0.0126 | 0.0063 | 0.0063 |
| 202 | 0.0115 | 0.0058 | 0.0058 |
| 203 | 0.0106 | 0.0053 | 0.0053 |
| 204 | 0.0099 | 0.0049 | 0.0049 |
| 205 | 0.0089 | 0.0045 | 0.0045 |
| 206 | 0.0084 | 0.0042 | 0.0042 |
| 207 | 0.0079 | 0.0040 | 0.0039 |
| 208 | 0.0075 | 0.0037 | 0.0037 |
| 209 | 0.0071 | 0.0036 | 0.0036 |
| 210 | 0.0068 | 0.0034 | 0.0034 |
| 211 | 0.0065 | 0.0032 | 0.0032 |
| 212 | 0.0062 | 0.0031 | 0.0031 |
| 213 | 0.0060 | 0.0030 | 0.0030 |
| 214 | 0.0057 | 0.0029 | 0.0029 |
| 215 | 0.0055 | 0.0028 | 0.0028 |
| 216 | 0.0053 | 0.0027 | 0.0027 |
| 217 | 0.0052 | 0.0026 | 0.0026 |
| 218 | 0.0050 | 0.0025 | 0.0025 |
| 219 | 0.0049 | 0.0024 | 0.0024 |
| 220 | 0.0047 | 0.0024 | 0.0024 |
| 221 | 0.0046 | 0.0023 | 0.0023 |
| 222 | 0.0045 | 0.0022 | 0.0022 |
| 223 | 0.0043 | 0.0022 | 0.0022 |
| 224 | 0.0042 | 0.0021 | 0.0021 |
| 225 | 0.0041 | 0.0021 | 0.0021 |
| 226 | 0.0040 | 0.0020 | 0.0020 |
| 227 | 0.0039 | 0.0020 | 0.0020 |
| 228 | 0.0038 | 0.0019 | 0.0019 |
| 229 | 0.0038 | 0.0019 | 0.0019 |
| 230 | 0.0037 | 0.0018 | 0.0018 |
| 231 | 0.0036 | 0.0018 | 0.0018 |
| 232 | 0.0035 | 0.0018 | 0.0018 |
| 233 | 0.0035 | 0.0017 | 0.0017 |
| 234 | 0.0034 | 0.0017 | 0.0017 |
| 235 | 0.0033 | 0.0017 | 0.0017 |
| 236 | 0.0033 | 0.0016 | 0.0016 |
| 237 | 0.0032 | 0.0016 | 0.0016 |
| 238 | 0.0031 | 0.0016 | 0.0016 |
| 239 | 0.0031 | 0.0015 | 0.0015 |
| 240 | 0.0030 | 0.0015 | 0.0015 |
| 241 | 0.0030 | 0.0015 | 0.0015 |
| 242 | 0.0029 | 0.0015 | 0.0015 |
| 243 | 0.0029 | 0.0014 | 0.0014 |
| 244 | 0.0028 | 0.0014 | 0.0014 |
| 245 | 0.0028 | 0.0014 | 0.0014 |
| 246 | 0.0028 | 0.0014 | 0.0014 |
| 247 | 0.0027 | 0.0014 | 0.0014 |

| | | | |
|---|---|---|---|
| 248 | 0.0027 | 0.0013 | 0.0013 |
| 249 | 0.0026 | 0.0013 | 0.0013 |
| 250 | 0.0026 | 0.0013 | 0.0013 |
| 251 | 0.0026 | 0.0013 | 0.0013 |
| 252 | 0.0025 | 0.0013 | 0.0013 |
| 253 | 0.0025 | 0.0013 | 0.0013 |
| 254 | 0.0025 | 0.0012 | 0.0012 |
| 255 | 0.0024 | 0.0012 | 0.0012 |
| 256 | 0.0024 | 0.0012 | 0.0012 |
| 257 | 0.0024 | 0.0012 | 0.0012 |
| 258 | 0.0024 | 0.0012 | 0.0012 |
| 259 | 0.0023 | 0.0012 | 0.0012 |
| 260 | 0.0023 | 0.0011 | 0.0011 |
| 261 | 0.0023 | 0.0011 | 0.0011 |
| 262 | 0.0022 | 0.0011 | 0.0011 |
| 263 | 0.0022 | 0.0011 | 0.0011 |
| 264 | 0.0022 | 0.0011 | 0.0011 |
| 265 | 0.0022 | 0.0011 | 0.0011 |
| 266 | 0.0021 | 0.0011 | 0.0011 |
| 267 | 0.0021 | 0.0011 | 0.0011 |
| 268 | 0.0021 | 0.0011 | 0.0010 |
| 269 | 0.0021 | 0.0010 | 0.0010 |
| 270 | 0.0021 | 0.0010 | 0.0010 |
| 271 | 0.0020 | 0.0010 | 0.0010 |
| 272 | 0.0020 | 0.0010 | 0.0010 |
| 273 | 0.0020 | 0.0010 | 0.0010 |
| 274 | 0.0020 | 0.0010 | 0.0010 |
| 275 | 0.0020 | 0.0010 | 0.0010 |
| 276 | 0.0019 | 0.0010 | 0.0010 |
| 277 | 0.0019 | 0.0010 | 0.0010 |
| 278 | 0.0019 | 0.0010 | 0.0009 |
| 279 | 0.0019 | 0.0009 | 0.0009 |
| 280 | 0.0019 | 0.0009 | 0.0009 |
| 281 | 0.0018 | 0.0009 | 0.0009 |
| 282 | 0.0018 | 0.0009 | 0.0009 |
| 283 | 0.0018 | 0.0009 | 0.0009 |
| 284 | 0.0018 | 0.0009 | 0.0009 |
| 285 | 0.0018 | 0.0009 | 0.0009 |
| 286 | 0.0018 | 0.0009 | 0.0009 |
| 287 | 0.0018 | 0.0009 | 0.0009 |
| 288 | 0.0017 | 0.0009 | 0.0009 |

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Total soil rain loss = 0.84(In)
Total effective rainfall = 1.59(In)
Peak flow rate in flood hydrograph = 146.52(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 50.0 | 100.0 | 150.0 | 200.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.01 | Q | \| | \| | \| | \| |
| 0+10 | 0.0002 | 0.02 | Q | \| | \| | \| | \| |
| 0+15 | 0.0004 | 0.04 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+20 | 0.0008 | 0.06 | Q | \| | \| | \| | \| |
| 0+25 | 0.0014 | 0.09 | Q | \| | \| | \| | \| |
| 0+30 | 0.0023 | 0.12 | Q | \| | \| | \| | \| |
| 0+35 | 0.0035 | 0.17 | Q | \| | \| | \| | \| |
| 0+40 | 0.0050 | 0.22 | Q | \| | \| | \| | \| |
| 0+45 | 0.0070 | 0.30 | Q | \| | \| | \| | \| |
| 0+50 | 0.0097 | 0.39 | Q | \| | \| | \| | \| |
| 0+55 | 0.0134 | 0.53 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0180 | 0.67 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0234 | 0.79 | Q | \| | \| | \| | \| |
| 1+10 | 0.0295 | 0.90 | Q | \| | \| | \| | \| |
| 1+15 | 0.0364 | 0.99 | Q | \| | \| | \| | \| |
| 1+20 | 0.0438 | 1.07 | Q | \| | \| | \| | \| |
| 1+25 | 0.0517 | 1.15 | Q | \| | \| | \| | \| |
| 1+30 | 0.0601 | 1.22 | Q | \| | \| | \| | \| |
| 1+35 | 0.0688 | 1.27 | Q | \| | \| | \| | \| |
| 1+40 | 0.0780 | 1.33 | Q | \| | \| | \| | \| |
| 1+45 | 0.0874 | 1.37 | Q | \| | \| | \| | \| |
| 1+50 | 0.0972 | 1.42 | Q | \| | \| | \| | \| |
| 1+55 | 0.1073 | 1.46 | Q | \| | \| | \| | \| |
| 2+ 0 | 0.1176 | 1.50 | Q | \| | \| | \| | \| |
| 2+ 5 | 0.1282 | 1.54 | Q | \| | \| | \| | \| |
| 2+10 | 0.1391 | 1.57 | Q | \| | \| | \| | \| |
| 2+15 | 0.1502 | 1.61 | Q | \| | \| | \| | \| |
| 2+20 | 0.1614 | 1.64 | Q | \| | \| | \| | \| |
| 2+25 | 0.1730 | 1.67 | Q | \| | \| | \| | \| |
| 2+30 | 0.1847 | 1.70 | Q | \| | \| | \| | \| |
| 2+35 | 0.1966 | 1.73 | Q | \| | \| | \| | \| |
| 2+40 | 0.2087 | 1.76 | Q | \| | \| | \| | \| |
| 2+45 | 0.2210 | 1.78 | Q | \| | \| | \| | \| |
| 2+50 | 0.2334 | 1.81 | Q | \| | \| | \| | \| |
| 2+55 | 0.2461 | 1.83 | Q | \| | \| | \| | \| |
| 3+ 0 | 0.2589 | 1.86 | Q | \| | \| | \| | \| |
| 3+ 5 | 0.2718 | 1.88 | Q | \| | \| | \| | \| |
| 3+10 | 0.2849 | 1.90 | Q | \| | \| | \| | \| |
| 3+15 | 0.2982 | 1.93 | Q | \| | \| | \| | \| |
| 3+20 | 0.3116 | 1.95 | Q | \| | \| | \| | \| |
| 3+25 | 0.3252 | 1.97 | Q | \| | \| | \| | \| |
| 3+30 | 0.3390 | 1.99 | Q | \| | \| | \| | \| |
| 3+35 | 0.3528 | 2.01 | Q | \| | \| | \| | \| |
| 3+40 | 0.3669 | 2.04 | Q | \| | \| | \| | \| |
| 3+45 | 0.3810 | 2.06 | Q | \| | \| | \| | \| |
| 3+50 | 0.3953 | 2.08 | Q | \| | \| | \| | \| |
| 3+55 | 0.4097 | 2.10 | Q | \| | \| | \| | \| |
| 4+ 0 | 0.4243 | 2.11 | Q | \| | \| | \| | \| |
| 4+ 5 | 0.4390 | 2.13 | Q | \| | \| | \| | \| |
| 4+10 | 0.4538 | 2.15 | Q | \| | \| | \| | \| |
| 4+15 | 0.4688 | 2.17 | Q | \| | \| | \| | \| |
| 4+20 | 0.4838 | 2.19 | Q | \| | \| | \| | \| |
| 4+25 | 0.4990 | 2.21 | Q | \| | \| | \| | \| |
| 4+30 | 0.5144 | 2.23 | Q | \| | \| | \| | \| |
| 4+35 | 0.5298 | 2.24 | Q | \| | \| | \| | \| |
| 4+40 | 0.5454 | 2.26 | Q | \| | \| | \| | \| |
| 4+45 | 0.5611 | 2.28 | Q | \| | \| | \| | \| |
| 4+50 | 0.5769 | 2.30 | Q | \| | \| | \| | \| |
| 4+55 | 0.5929 | 2.32 | Q | \| | \| | \| | \| |
| 5+ 0 | 0.6090 | 2.33 | Q | \| | \| | \| | \| |
| 5+ 5 | 0.6252 | 2.35 | Q | \| | \| | \| | \| |
| 5+10 | 0.6415 | 2.37 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+15 | 0.6579 | 2.39 | QV | | | | |
| 5+20 | 0.6745 | 2.41 | QV | | | | |
| 5+25 | 0.6912 | 2.42 | QV | | | | |
| 5+30 | 0.7080 | 2.44 | QV | | | | |
| 5+35 | 0.7249 | 2.46 | QV | | | | |
| 5+40 | 0.7420 | 2.48 | QV | | | | |
| 5+45 | 0.7592 | 2.50 | QV | | | | |
| 5+50 | 0.7765 | 2.51 | QV | | | | |
| 5+55 | 0.7939 | 2.53 | QV | | | | |
| 6+ 0 | 0.8115 | 2.55 | QV | | | | |
| 6+ 5 | 0.8292 | 2.57 | QV | | | | |
| 6+10 | 0.8470 | 2.59 | QV | | | | |
| 6+15 | 0.8649 | 2.61 | QV | | | | |
| 6+20 | 0.8830 | 2.62 | QV | | | | |
| 6+25 | 0.9012 | 2.64 | QV | | | | |
| 6+30 | 0.9195 | 2.66 | QV | | | | |
| 6+35 | 0.9380 | 2.68 | QV | | | | |
| 6+40 | 0.9566 | 2.70 | QV | | | | |
| 6+45 | 0.9753 | 2.72 | QV | | | | |
| 6+50 | 0.9941 | 2.74 | QV | | | | |
| 6+55 | 1.0131 | 2.76 | QV | | | | |
| 7+ 0 | 1.0322 | 2.78 | QV | | | | |
| 7+ 5 | 1.0515 | 2.79 | QV | | | | |
| 7+10 | 1.0708 | 2.81 | QV | | | | |
| 7+15 | 1.0903 | 2.83 | QV | | | | |
| 7+20 | 1.1100 | 2.85 | QV | | | | |
| 7+25 | 1.1298 | 2.87 | QV | | | | |
| 7+30 | 1.1497 | 2.89 | QV | | | | |
| 7+35 | 1.1698 | 2.91 | QV | | | | |
| 7+40 | 1.1900 | 2.93 | QV | | | | |
| 7+45 | 1.2103 | 2.96 | QV | | | | |
| 7+50 | 1.2308 | 2.98 | QV | | | | |
| 7+55 | 1.2515 | 3.00 | QV | | | | |
| 8+ 0 | 1.2723 | 3.02 | QV | | | | |
| 8+ 5 | 1.2933 | 3.04 | QV | | | | |
| 8+10 | 1.3144 | 3.07 | Q V | | | | |
| 8+15 | 1.3357 | 3.09 | Q V | | | | |
| 8+20 | 1.3571 | 3.11 | Q V | | | | |
| 8+25 | 1.3788 | 3.14 | Q V | | | | |
| 8+30 | 1.4005 | 3.16 | Q V | | | | |
| 8+35 | 1.4225 | 3.19 | Q V | | | | |
| 8+40 | 1.4446 | 3.21 | Q V | | | | |
| 8+45 | 1.4669 | 3.24 | Q V | | | | |
| 8+50 | 1.4894 | 3.27 | Q V | | | | |
| 8+55 | 1.5121 | 3.29 | Q V | | | | |
| 9+ 0 | 1.5350 | 3.32 | Q V | | | | |
| 9+ 5 | 1.5580 | 3.35 | Q V | | | | |
| 9+10 | 1.5812 | 3.37 | Q V | | | | |
| 9+15 | 1.6047 | 3.40 | Q V | | | | |
| 9+20 | 1.6283 | 3.43 | Q V | | | | |
| 9+25 | 1.6521 | 3.46 | Q V | | | | |
| 9+30 | 1.6761 | 3.49 | Q V | | | | |
| 9+35 | 1.7003 | 3.52 | Q V | | | | |
| 9+40 | 1.7247 | 3.55 | Q V | | | | |
| 9+45 | 1.7494 | 3.58 | Q V | | | | |
| 9+50 | 1.7742 | 3.61 | Q V | | | | |
| 9+55 | 1.7993 | 3.64 | Q V | | | | |
| 10+ 0 | 1.8246 | 3.67 | Q V | | | | |
| 10+ 5 | 1.8501 | 3.71 | Q V | | | | |

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10+10       1.8759      3.74  Q V       |          |          |          |
10+15       1.9019      3.77  Q V       |          |          |          |
10+20       1.9281      3.81  Q V       |          |          |          |
10+25       1.9545      3.84  Q V       |          |          |          |
10+30       1.9813      3.88  Q  V      |          |          |          |
10+35       2.0082      3.92  Q  V      |          |          |          |
10+40       2.0355      3.95  Q  V      |          |          |          |
10+45       2.0630      3.99  Q  V      |          |          |          |
10+50       2.0907      4.03  Q  V      |          |          |          |
10+55       2.1188      4.07  Q  V      |          |          |          |
11+ 0       2.1471      4.11  Q  V      |          |          |          |
11+ 5       2.1757      4.16  Q  V      |          |          |          |
11+10       2.2047      4.20  Q  V      |          |          |          |
11+15       2.2339      4.24  Q  V      |          |          |          |
11+20       2.2635      4.29  Q  V      |          |          |          |
11+25       2.2933      4.34  Q  V      |          |          |          |
11+30       2.3235      4.39  Q  V      |          |          |          |
11+35       2.3541      4.43  Q  V      |          |          |          |
11+40       2.3850      4.48  Q  V      |          |          |          |
11+45       2.4162      4.54  Q  V      |          |          |          |
11+50       2.4478      4.59  Q  V      |          |          |          |
11+55       2.4798      4.65  Q  V      |          |          |          |
12+ 0       2.5122      4.70  Q  V      |          |          |          |
12+ 5       2.5450      4.76  Q  V      |          |          |          |
12+10       2.5781      4.82  Q  V      |          |          |          |
12+15       2.6118      4.88  Q  V      |          |          |          |
12+20       2.6458      4.94  Q   V     |          |          |          |
12+25       2.6803      5.01  |Q  V     |          |          |          |
12+30       2.7152      5.08  |Q  V     |          |          |          |
12+35       2.7507      5.15  |Q  V     |          |          |          |
12+40       2.7866      5.22  |Q  V     |          |          |          |
12+45       2.8230      5.29  |Q  V     |          |          |          |
12+50       2.8600      5.37  |Q  V     |          |          |          |
12+55       2.8975      5.45  |Q  V     |          |          |          |
13+ 0       2.9356      5.53  |Q  V     |          |          |          |
13+ 5       2.9742      5.61  |Q  V     |          |          |          |
13+10       3.0135      5.70  |Q  V     |          |          |          |
13+15       3.0534      5.79  |Q  V     |          |          |          |
13+20       3.0939      5.89  |Q  V     |          |          |          |
13+25       3.1351      5.99  |Q  V     |          |          |          |
13+30       3.1771      6.09  |Q  V     |          |          |          |
13+35       3.2197      6.19  |Q  V     |          |          |          |
13+40       3.2632      6.31  |Q  V     |          |          |          |
13+45       3.3074      6.42  |Q   V    |          |          |          |
13+50       3.3525      6.54  |Q   V    |          |          |          |
13+55       3.3984      6.67  |Q   V    |          |          |          |
14+ 0       3.4453      6.80  |Q   V    |          |          |          |
14+ 5       3.4931      6.95  |Q   V    |          |          |          |
14+10       3.5420      7.09  |Q   V    |          |          |          |
14+15       3.5919      7.25  |Q   V    |          |          |          |
14+20       3.6430      7.42  |Q   V    |          |          |          |
14+25       3.6954      7.60  |Q   V    |          |          |          |
14+30       3.7490      7.79  |Q   V    |          |          |          |
14+35       3.8040      7.99  |Q   V    |          |          |          |
14+40       3.8605      8.20  |Q   V    |          |          |          |
14+45       3.9186      8.44  |Q   V    |          |          |          |
14+50       3.9784      8.69  |Q    V   |          |          |          |
14+55       4.0402      8.97  |Q    V   |          |          |          |
15+ 0       4.1040      9.26  |Q    V   |          |          |          |
```

| | | | |
|---|---|---|---|
| 15+ 5 | 4.1699 | 9.58 | |
| 15+10 | 4.2382 | 9.92 | |
| 15+15 | 4.3090 | 10.28 | |
| 15+20 | 4.3826 | 10.68 | |
| 15+25 | 4.4594 | 11.15 | |
| 15+30 | 4.5400 | 11.70 | |
| 15+35 | 4.6250 | 12.35 | |
| 15+40 | 4.7153 | 13.10 | |
| 15+45 | 4.8120 | 14.05 | |
| 15+50 | 4.9168 | 15.21 | |
| 15+55 | 5.0329 | 16.86 | |
| 16+ 0 | 5.1656 | 19.26 | |
| 16+ 5 | 5.3430 | 25.77 | |
| 16+10 | 5.5678 | 32.64 | |
| 16+15 | 5.8438 | 40.08 | |
| 16+20 | 6.1649 | 46.62 | |
| 16+25 | 6.5425 | 54.83 | |
| 16+30 | 6.9668 | 61.61 | |
| 16+35 | 7.4627 | 72.01 | |
| 16+40 | 8.0320 | 82.66 | |
| 16+45 | 8.7698 | 107.13 | |
| 16+50 | 9.6084 | 121.77 | |
| 16+55 | 10.6175 | 146.52 | |
| 17+ 0 | 11.6237 | 146.10 | |
| 17+ 5 | 12.5373 | 132.66 | |
| 17+10 | 13.3789 | 122.20 | |
| 17+15 | 14.1062 | 105.60 | |
| 17+20 | 14.7743 | 97.02 | |
| 17+25 | 15.3719 | 86.76 | |
| 17+30 | 15.9087 | 77.95 | |
| 17+35 | 16.3816 | 68.66 | |
| 17+40 | 16.8138 | 62.76 | |
| 17+45 | 17.2116 | 57.76 | |
| 17+50 | 17.5795 | 53.43 | |
| 17+55 | 17.9259 | 50.30 | |
| 18+ 0 | 18.2527 | 47.45 | |
| 18+ 5 | 18.5638 | 45.17 | |
| 18+10 | 18.8498 | 41.52 | |
| 18+15 | 19.1212 | 39.41 | |
| 18+20 | 19.3756 | 36.94 | |
| 18+25 | 19.6207 | 35.58 | |
| 18+30 | 19.8557 | 34.13 | |
| 18+35 | 20.0790 | 32.41 | |
| 18+40 | 20.2824 | 29.54 | |
| 18+45 | 20.4798 | 28.66 | |
| 18+50 | 20.6723 | 27.95 | |
| 18+55 | 20.8549 | 26.51 | |
| 19+ 0 | 21.0256 | 24.80 | |
| 19+ 5 | 21.1928 | 24.27 | |
| 19+10 | 21.3565 | 23.77 | |
| 19+15 | 21.5132 | 22.75 | |
| 19+20 | 21.6642 | 21.92 | |
| 19+25 | 21.8121 | 21.48 | |
| 19+30 | 21.9561 | 20.92 | |
| 19+35 | 22.0908 | 19.56 | |
| 19+40 | 22.2205 | 18.82 | |
| 19+45 | 22.3470 | 18.37 | |
| 19+50 | 22.4686 | 17.66 | |
| 19+55 | 22.5793 | 16.07 | |

```
20+ 0      22.6862     15.53  |  Q      |         |         |   V     |
20+ 5      22.7913     15.25  |  Q      |         |         |   V     |
20+10      22.8939     14.91  | Q       |         |         |    V    |
20+15      22.9935     14.45  | Q       |         |         |    V    |
20+20      23.0913     14.21  | Q       |         |         |    V    |
20+25      23.1874     13.95  | Q       |         |         |    V    |
20+30      23.2798     13.42  | Q       |         |         |    V    |
20+35      23.3682     12.83  | Q       |         |         |    V    |
20+40      23.4550     12.61  | Q       |         |         |    V    |
20+45      23.5404     12.40  | Q       |         |         |     V   |
20+50      23.6231     12.00  | Q       |         |         |     V   |
20+55      23.7036     11.69  | Q       |         |         |     V   |
21+ 0      23.7826     11.47  | Q       |         |         |     V   |
21+ 5      23.8595     11.16  | Q       |         |         |     V   |
21+10      23.9309     10.37  | Q       |         |         |     V   |
21+15      23.9998     10.01  | Q       |         |         |     V   |
21+20      24.0677      9.86  |Q        |         |         |     V   |
21+25      24.1347      9.73  |Q        |         |         |     V   |
21+30      24.2008      9.60  |Q        |         |         |      V  |
21+35      24.2660      9.46  |Q        |         |         |      V  |
21+40      24.3299      9.28  |Q        |         |         |      V  |
21+45      24.3911      8.89  |Q        |         |         |      V  |
21+50      24.4482      8.29  |Q        |         |         |      V  |
21+55      24.5043      8.13  |Q        |         |         |      V  |
22+ 0      24.5595      8.02  |Q        |         |         |      V  |
22+ 5      24.6140      7.91  |Q        |         |         |      V  |
22+10      24.6677      7.80  |Q        |         |         |      V  |
22+15      24.7204      7.66  |Q        |         |         |      V  |
22+20      24.7718      7.46  |Q        |         |         |      V  |
22+25      24.8193      6.89  |Q        |         |         |      V  |
22+30      24.8642      6.52  |Q        |         |         |       V |
22+35      24.9084      6.41  |Q        |         |         |       V |
22+40      24.9519      6.32  |Q        |         |         |       V |
22+45      24.9947      6.22  |Q        |         |         |       V |
22+50      25.0369      6.12  |Q        |         |         |       V |
22+55      25.0780      5.98  |Q        |         |         |       V |
23+ 0      25.1173      5.70  |Q        |         |         |       V |
23+ 5      25.1524      5.10  |Q        |         |         |       V |
23+10      25.1864      4.94  Q        |         |         |       V |
23+15      25.2200      4.87  Q        |         |         |       V |
23+20      25.2532      4.82  Q        |         |         |       V |
23+25      25.2861      4.78  Q        |         |         |       V |
23+30      25.3187      4.74  Q        |         |         |       V |
23+35      25.3513      4.73  Q        |         |         |       V |
23+40      25.3843      4.79  Q        |         |         |       V |
23+45      25.4176      4.84  Q        |         |         |       V |
23+50      25.4508      4.81  Q        |         |         |       V |
23+55      25.4837      4.78  Q        |         |         |       V |
24+ 0      25.5163      4.74  Q        |         |         |        V|
24+ 5      25.5487      4.70  Q        |         |         |        V|
24+10      25.5807      4.65  Q        |         |         |        V|
24+15      25.6123      4.59  Q        |         |         |        V|
24+20      25.6434      4.52  Q        |         |         |        V|
24+25      25.6741      4.45  Q        |         |         |        V|
24+30      25.7041      4.37  Q        |         |         |        V|
24+35      25.7336      4.28  Q        |         |         |        V|
24+40      25.7623      4.17  Q        |         |         |        V|
24+45      25.7900      4.02  Q        |         |         |        V|
24+50      25.8163      3.82  Q        |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24+55 | 25.8398 | 3.42 | Q | \| | \| | \| | V\| |
| 25+ 0 | 25.8598 | 2.91 | Q | \| | \| | \| | V\| |
| 25+ 5 | 25.8786 | 2.72 | Q | \| | \| | \| | V\| |
| 25+10 | 25.8963 | 2.57 | Q | \| | \| | \| | V\| |
| 25+15 | 25.9131 | 2.45 | Q | \| | \| | \| | V\| |
| 25+20 | 25.9292 | 2.33 | Q | \| | \| | \| | V\| |
| 25+25 | 25.9445 | 2.23 | Q | \| | \| | \| | V\| |
| 25+30 | 25.9592 | 2.13 | Q | \| | \| | \| | V\| |
| 25+35 | 25.9732 | 2.04 | Q | \| | \| | \| | V\| |
| 25+40 | 25.9867 | 1.95 | Q | \| | \| | \| | V\| |
| 25+45 | 25.9994 | 1.85 | Q | \| | \| | \| | V\| |
| 25+50 | 26.0112 | 1.72 | Q | \| | \| | \| | V\| |
| 25+55 | 26.0214 | 1.48 | Q | \| | \| | \| | V\| |
| 26+ 0 | 26.0281 | 0.97 | Q | \| | \| | \| | V\| |
| 26+ 5 | 26.0341 | 0.88 | Q | \| | \| | \| | V\| |
| 26+10 | 26.0398 | 0.82 | Q | \| | \| | \| | V\| |
| 26+15 | 26.0451 | 0.77 | Q | \| | \| | \| | V\| |
| 26+20 | 26.0501 | 0.73 | Q | \| | \| | \| | V\| |
| 26+25 | 26.0549 | 0.69 | Q | \| | \| | \| | V\| |
| 26+30 | 26.0594 | 0.66 | Q | \| | \| | \| | V\| |
| 26+35 | 26.0637 | 0.62 | Q | \| | \| | \| | V\| |
| 26+40 | 26.0678 | 0.59 | Q | \| | \| | \| | V\| |
| 26+45 | 26.0716 | 0.57 | Q | \| | \| | \| | V\| |
| 26+50 | 26.0753 | 0.54 | Q | \| | \| | \| | V\| |
| 26+55 | 26.0789 | 0.51 | Q | \| | \| | \| | V\| |
| 27+ 0 | 26.0823 | 0.49 | Q | \| | \| | \| | V\| |
| 27+ 5 | 26.0855 | 0.47 | Q | \| | \| | \| | V\| |
| 27+10 | 26.0886 | 0.45 | Q | \| | \| | \| | V\| |
| 27+15 | 26.0915 | 0.43 | Q | \| | \| | \| | V\| |
| 27+20 | 26.0943 | 0.41 | Q | \| | \| | \| | V\| |
| 27+25 | 26.0970 | 0.39 | Q | \| | \| | \| | V\| |
| 27+30 | 26.0995 | 0.37 | Q | \| | \| | \| | V\| |
| 27+35 | 26.1020 | 0.35 | Q | \| | \| | \| | V\| |
| 27+40 | 26.1043 | 0.34 | Q | \| | \| | \| | V\| |
| 27+45 | 26.1065 | 0.32 | Q | \| | \| | \| | V\| |
| 27+50 | 26.1086 | 0.31 | Q | \| | \| | \| | V\| |
| 27+55 | 26.1107 | 0.30 | Q | \| | \| | \| | V\| |
| 28+ 0 | 26.1126 | 0.28 | Q | \| | \| | \| | V\| |
| 28+ 5 | 26.1145 | 0.27 | Q | \| | \| | \| | V\| |
| 28+10 | 26.1163 | 0.26 | Q | \| | \| | \| | V\| |
| 28+15 | 26.1180 | 0.25 | Q | \| | \| | \| | V\| |
| 28+20 | 26.1197 | 0.24 | Q | \| | \| | \| | V\| |
| 28+25 | 26.1212 | 0.23 | Q | \| | \| | \| | V\| |
| 28+30 | 26.1227 | 0.22 | Q | \| | \| | \| | V\| |
| 28+35 | 26.1242 | 0.21 | Q | \| | \| | \| | V\| |
| 28+40 | 26.1256 | 0.20 | Q | \| | \| | \| | V\| |
| 28+45 | 26.1269 | 0.19 | Q | \| | \| | \| | V\| |
| 28+50 | 26.1281 | 0.18 | Q | \| | \| | \| | V\| |
| 28+55 | 26.1294 | 0.17 | Q | \| | \| | \| | V\| |
| 29+ 0 | 26.1305 | 0.17 | Q | \| | \| | \| | V\| |
| 29+ 5 | 26.1316 | 0.16 | Q | \| | \| | \| | V\| |
| 29+10 | 26.1326 | 0.15 | Q | \| | \| | \| | V\| |
| 29+15 | 26.1337 | 0.15 | Q | \| | \| | \| | V\| |
| 29+20 | 26.1346 | 0.14 | Q | \| | \| | \| | V\| |
| 29+25 | 26.1355 | 0.13 | Q | \| | \| | \| | V\| |
| 29+30 | 26.1364 | 0.13 | Q | \| | \| | \| | V\| |
| 29+35 | 26.1372 | 0.12 | Q | \| | \| | \| | V\| |
| 29+40 | 26.1380 | 0.12 | Q | \| | \| | \| | V\| |
| 29+45 | 26.1388 | 0.11 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 29+50 | 26.1395 | 0.11 | Q | \| | \| | \| | V\| |
| 29+55 | 26.1402 | 0.10 | Q | \| | \| | \| | V\| |
| 30+ 0 | 26.1409 | 0.10 | Q | \| | \| | \| | V\| |
| 30+ 5 | 26.1415 | 0.09 | Q | \| | \| | \| | V\| |
| 30+10 | 26.1421 | 0.09 | Q | \| | \| | \| | V\| |
| 30+15 | 26.1427 | 0.08 | Q | \| | \| | \| | V\| |
| 30+20 | 26.1432 | 0.08 | Q | \| | \| | \| | V\| |
| 30+25 | 26.1437 | 0.07 | Q | \| | \| | \| | V\| |
| 30+30 | 26.1442 | 0.07 | Q | \| | \| | \| | V\| |
| 30+35 | 26.1447 | 0.07 | Q | \| | \| | \| | V\| |
| 30+40 | 26.1451 | 0.06 | Q | \| | \| | \| | V\| |
| 30+45 | 26.1456 | 0.06 | Q | \| | \| | \| | V\| |
| 30+50 | 26.1460 | 0.06 | Q | \| | \| | \| | V\| |
| 30+55 | 26.1463 | 0.06 | Q | \| | \| | \| | V\| |
| 31+ 0 | 26.1467 | 0.05 | Q | \| | \| | \| | V\| |
| 31+ 5 | 26.1471 | 0.05 | Q | \| | \| | \| | V\| |
| 31+10 | 26.1474 | 0.05 | Q | \| | \| | \| | V\| |
| 31+15 | 26.1477 | 0.05 | Q | \| | \| | \| | V\| |
| 31+20 | 26.1480 | 0.05 | Q | \| | \| | \| | V\| |
| 31+25 | 26.1483 | 0.04 | Q | \| | \| | \| | V\| |
| 31+30 | 26.1486 | 0.04 | Q | \| | \| | \| | V\| |
| 31+35 | 26.1489 | 0.04 | Q | \| | \| | \| | V\| |
| 31+40 | 26.1491 | 0.04 | Q | \| | \| | \| | V\| |
| 31+45 | 26.1494 | 0.04 | Q | \| | \| | \| | V\| |
| 31+50 | 26.1496 | 0.03 | Q | \| | \| | \| | V\| |
| 31+55 | 26.1499 | 0.03 | Q | \| | \| | \| | V\| |
| 32+ 0 | 26.1501 | 0.03 | Q | \| | \| | \| | V\| |
| 32+ 5 | 26.1503 | 0.03 | Q | \| | \| | \| | V\| |
| 32+10 | 26.1504 | 0.03 | Q | \| | \| | \| | V\| |
| 32+15 | 26.1506 | 0.02 | Q | \| | \| | \| | V\| |
| 32+20 | 26.1508 | 0.02 | Q | \| | \| | \| | V\| |
| 32+25 | 26.1509 | 0.02 | Q | \| | \| | \| | V\| |
| 32+30 | 26.1510 | 0.02 | Q | \| | \| | \| | V\| |
| 32+35 | 26.1512 | 0.02 | Q | \| | \| | \| | V\| |
| 32+40 | 26.1513 | 0.02 | Q | \| | \| | \| | V\| |
| 32+45 | 26.1514 | 0.01 | Q | \| | \| | \| | V\| |
| 32+50 | 26.1514 | 0.01 | Q | \| | \| | \| | V\| |
| 32+55 | 26.1515 | 0.01 | Q | \| | \| | \| | V\| |
| 33+ 0 | 26.1516 | 0.01 | Q | \| | \| | \| | V\| |
| 33+ 5 | 26.1516 | 0.01 | Q | \| | \| | \| | V\| |
| 33+10 | 26.1517 | 0.01 | Q | \| | \| | \| | V\| |
| 33+15 | 26.1517 | 0.01 | Q | \| | \| | \| | V\| |
| 33+20 | 26.1518 | 0.01 | Q | \| | \| | \| | V\| |
| 33+25 | 26.1518 | 0.01 | Q | \| | \| | \| | V\| |
| 33+30 | 26.1519 | 0.00 | Q | \| | \| | \| | V\| |
| 33+35 | 26.1519 | 0.00 | Q | \| | \| | \| | V\| |
| 33+40 | 26.1519 | 0.00 | Q | \| | \| | \| | V\| |
| 33+45 | 26.1519 | 0.00 | Q | \| | \| | \| | V\| |
| 33+50 | 26.1519 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/07/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 16 (LINED EVAPORATION PONDS)
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 158.96 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 158.96 | 6 | 1.83 |
| Rainfall data for year 100 | | |
| 158.96 | 24 | 2.44 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 98.0 | 99.6 | 158.96 | 1.000 | 0.008 | 0.010 | 0.000 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.000

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 1.59 | 0.010 | 98.0 | 99.6 | 0.04 | 0.981 |
| 157.37 | 0.990 | 98.0 | 98.0 | 0.20 | 0.906 |

Area-averaged catchment yield fraction, Y = 0.907
Area-averaged low loss fraction, Yb = 0.093
Direct entry of lag time by user
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 158.96(Ac.)
Catchment Lag time = 0.500 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 16.6667
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.000(In/Hr)
Average low loss rate fraction (Yb) = 0.093 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.589(In)
Specified peak 6-hour rainfall = 1.830(In)
Specified peak 24-hour rainfall = 2.440(In)

Rainfall depth area reduction factors:
Using a total area of 158.96(Ac.) (Ref: fig. E-4)

5-minute factor = 0.993 Adjusted rainfall = 0.598(In)
30-minute factor = 0.993 Adjusted rainfall = 1.024(In)
1-hour factor = 0.993 Adjusted rainfall = 1.261(In)
3-hour factor = 0.999 Adjusted rainfall = 1.587(In)
6-hour factor = 1.000 Adjusted rainfall = 1.829(In)
24-hour factor = 1.000 Adjusted rainfall = 2.440(In)
---------------------------------------------------------------------

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 1922.42 (CFS)) | |
| 1 | 0.775 | 14.899 |
| 2 | 3.367 | 49.823 |
| 3 | 7.746 | 84.186 |
| 4 | 16.033 | 159.321 |
| 5 | 30.950 | 286.761 |
| 6 | 44.554 | 261.530 |
| 7 | 54.263 | 186.635 |
| 8 | 61.150 | 132.407 |
| 9 | 66.275 | 98.524 |
| 10 | 70.479 | 80.822 |
| 11 | 73.950 | 66.724 |
| 12 | 76.896 | 56.631 |
| 13 | 79.400 | 48.141 |

| | | |
|---|---|---|
| 14 | 81.550 | 41.332 |
| 15 | 83.400 | 35.565 |
| 16 | 85.100 | 32.681 |
| 17 | 86.667 | 30.118 |
| 18 | 88.033 | 26.273 |
| 19 | 89.200 | 22.428 |
| 20 | 90.192 | 19.064 |
| 21 | 91.133 | 18.103 |
| 22 | 92.000 | 16.661 |
| 23 | 92.792 | 15.219 |
| 24 | 93.533 | 14.258 |
| 25 | 94.183 | 12.496 |
| 26 | 94.750 | 10.894 |
| 27 | 95.317 | 10.894 |
| 28 | 95.817 | 9.612 |
| 29 | 96.250 | 8.330 |
| 30 | 96.683 | 8.330 |
| 31 | 97.050 | 7.049 |
| 32 | 97.350 | 5.767 |
| 33 | 97.650 | 5.767 |
| 34 | 97.883 | 4.486 |
| 35 | 98.050 | 3.204 |
| 36 | 98.217 | 3.204 |
| 37 | 98.400 | 3.524 |
| 38 | 98.600 | 3.845 |
| 39 | 98.800 | 3.845 |
| 40 | 99.000 | 3.845 |
| 41 | 99.200 | 3.845 |
| 42 | 99.400 | 3.845 |
| 43 | 99.552 | 2.924 |
| 44 | 99.656 | 2.003 |
| 45 | 99.760 | 2.003 |
| 46 | 99.865 | 2.003 |
| 47 | 100.000 | 1.001 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5981 | 0.5981 |
| 2 | 0.7364 | 0.1383 |
| 3 | 0.8316 | 0.0953 |
| 4 | 0.9066 | 0.0750 |
| 5 | 0.9694 | 0.0628 |
| 6 | 1.0239 | 0.0545 |
| 7 | 1.0723 | 0.0485 |
| 8 | 1.1162 | 0.0438 |
| 9 | 1.1563 | 0.0401 |
| 10 | 1.1934 | 0.0371 |
| 11 | 1.2281 | 0.0346 |
| 12 | 1.2605 | 0.0325 |
| 13 | 1.2819 | 0.0213 |
| 14 | 1.3020 | 0.0201 |
| 15 | 1.3210 | 0.0190 |
| 16 | 1.3390 | 0.0180 |
| 17 | 1.3561 | 0.0171 |
| 18 | 1.3725 | 0.0164 |
| 19 | 1.3881 | 0.0157 |
| 20 | 1.4032 | 0.0150 |
| 21 | 1.4176 | 0.0144 |
| 22 | 1.4315 | 0.0139 |

| | | |
|---|---|---|
| 23 | 1.4449 | 0.0134 |
| 24 | 1.4579 | 0.0130 |
| 25 | 1.4704 | 0.0125 |
| 26 | 1.4826 | 0.0122 |
| 27 | 1.4944 | 0.0118 |
| 28 | 1.5058 | 0.0114 |
| 29 | 1.5169 | 0.0111 |
| 30 | 1.5278 | 0.0108 |
| 31 | 1.5383 | 0.0105 |
| 32 | 1.5486 | 0.0103 |
| 33 | 1.5586 | 0.0100 |
| 34 | 1.5684 | 0.0098 |
| 35 | 1.5780 | 0.0096 |
| 36 | 1.5873 | 0.0094 |
| 37 | 1.5963 | 0.0089 |
| 38 | 1.6050 | 0.0087 |
| 39 | 1.6135 | 0.0085 |
| 40 | 1.6219 | 0.0084 |
| 41 | 1.6301 | 0.0082 |
| 42 | 1.6382 | 0.0081 |
| 43 | 1.6461 | 0.0079 |
| 44 | 1.6538 | 0.0078 |
| 45 | 1.6615 | 0.0076 |
| 46 | 1.6689 | 0.0075 |
| 47 | 1.6763 | 0.0074 |
| 48 | 1.6835 | 0.0072 |
| 49 | 1.6906 | 0.0071 |
| 50 | 1.6976 | 0.0070 |
| 51 | 1.7045 | 0.0069 |
| 52 | 1.7113 | 0.0068 |
| 53 | 1.7180 | 0.0067 |
| 54 | 1.7246 | 0.0066 |
| 55 | 1.7311 | 0.0065 |
| 56 | 1.7375 | 0.0064 |
| 57 | 1.7438 | 0.0063 |
| 58 | 1.7500 | 0.0062 |
| 59 | 1.7561 | 0.0061 |
| 60 | 1.7621 | 0.0060 |
| 61 | 1.7681 | 0.0060 |
| 62 | 1.7740 | 0.0059 |
| 63 | 1.7798 | 0.0058 |
| 64 | 1.7856 | 0.0057 |
| 65 | 1.7912 | 0.0057 |
| 66 | 1.7968 | 0.0056 |
| 67 | 1.8024 | 0.0055 |
| 68 | 1.8078 | 0.0055 |
| 69 | 1.8132 | 0.0054 |
| 70 | 1.8186 | 0.0053 |
| 71 | 1.8239 | 0.0053 |
| 72 | 1.8291 | 0.0052 |
| 73 | 1.8343 | 0.0052 |
| 74 | 1.8395 | 0.0052 |
| 75 | 1.8447 | 0.0051 |
| 76 | 1.8498 | 0.0051 |
| 77 | 1.8548 | 0.0050 |
| 78 | 1.8598 | 0.0050 |
| 79 | 1.8647 | 0.0049 |
| 80 | 1.8696 | 0.0049 |
| 81 | 1.8744 | 0.0048 |

| | | |
|---|---|---|
| 82 | 1.8792 | 0.0048 |
| 83 | 1.8839 | 0.0047 |
| 84 | 1.8886 | 0.0047 |
| 85 | 1.8933 | 0.0046 |
| 86 | 1.8979 | 0.0046 |
| 87 | 1.9024 | 0.0046 |
| 88 | 1.9070 | 0.0045 |
| 89 | 1.9114 | 0.0045 |
| 90 | 1.9159 | 0.0044 |
| 91 | 1.9203 | 0.0044 |
| 92 | 1.9246 | 0.0044 |
| 93 | 1.9290 | 0.0043 |
| 94 | 1.9333 | 0.0043 |
| 95 | 1.9375 | 0.0043 |
| 96 | 1.9417 | 0.0042 |
| 97 | 1.9459 | 0.0042 |
| 98 | 1.9501 | 0.0042 |
| 99 | 1.9542 | 0.0041 |
| 100 | 1.9583 | 0.0041 |
| 101 | 1.9623 | 0.0041 |
| 102 | 1.9663 | 0.0040 |
| 103 | 1.9703 | 0.0040 |
| 104 | 1.9743 | 0.0040 |
| 105 | 1.9782 | 0.0039 |
| 106 | 1.9821 | 0.0039 |
| 107 | 1.9860 | 0.0039 |
| 108 | 1.9898 | 0.0038 |
| 109 | 1.9936 | 0.0038 |
| 110 | 1.9974 | 0.0038 |
| 111 | 2.0012 | 0.0038 |
| 112 | 2.0049 | 0.0037 |
| 113 | 2.0086 | 0.0037 |
| 114 | 2.0123 | 0.0037 |
| 115 | 2.0160 | 0.0037 |
| 116 | 2.0196 | 0.0036 |
| 117 | 2.0232 | 0.0036 |
| 118 | 2.0268 | 0.0036 |
| 119 | 2.0303 | 0.0036 |
| 120 | 2.0339 | 0.0035 |
| 121 | 2.0374 | 0.0035 |
| 122 | 2.0409 | 0.0035 |
| 123 | 2.0443 | 0.0035 |
| 124 | 2.0478 | 0.0034 |
| 125 | 2.0512 | 0.0034 |
| 126 | 2.0546 | 0.0034 |
| 127 | 2.0580 | 0.0034 |
| 128 | 2.0613 | 0.0034 |
| 129 | 2.0646 | 0.0033 |
| 130 | 2.0680 | 0.0033 |
| 131 | 2.0713 | 0.0033 |
| 132 | 2.0745 | 0.0033 |
| 133 | 2.0778 | 0.0033 |
| 134 | 2.0810 | 0.0032 |
| 135 | 2.0842 | 0.0032 |
| 136 | 2.0874 | 0.0032 |
| 137 | 2.0906 | 0.0032 |
| 138 | 2.0938 | 0.0032 |
| 139 | 2.0969 | 0.0031 |
| 140 | 2.1000 | 0.0031 |

| | | |
|---|---|---|
| 141 | 2.1031 | 0.0031 |
| 142 | 2.1062 | 0.0031 |
| 143 | 2.1093 | 0.0031 |
| 144 | 2.1124 | 0.0031 |
| 145 | 2.1154 | 0.0030 |
| 146 | 2.1184 | 0.0030 |
| 147 | 2.1214 | 0.0030 |
| 148 | 2.1244 | 0.0030 |
| 149 | 2.1274 | 0.0030 |
| 150 | 2.1304 | 0.0030 |
| 151 | 2.1333 | 0.0029 |
| 152 | 2.1362 | 0.0029 |
| 153 | 2.1391 | 0.0029 |
| 154 | 2.1420 | 0.0029 |
| 155 | 2.1449 | 0.0029 |
| 156 | 2.1478 | 0.0029 |
| 157 | 2.1506 | 0.0029 |
| 158 | 2.1535 | 0.0028 |
| 159 | 2.1563 | 0.0028 |
| 160 | 2.1591 | 0.0028 |
| 161 | 2.1619 | 0.0028 |
| 162 | 2.1647 | 0.0028 |
| 163 | 2.1675 | 0.0028 |
| 164 | 2.1702 | 0.0028 |
| 165 | 2.1730 | 0.0027 |
| 166 | 2.1757 | 0.0027 |
| 167 | 2.1784 | 0.0027 |
| 168 | 2.1811 | 0.0027 |
| 169 | 2.1838 | 0.0027 |
| 170 | 2.1865 | 0.0027 |
| 171 | 2.1891 | 0.0027 |
| 172 | 2.1918 | 0.0027 |
| 173 | 2.1944 | 0.0026 |
| 174 | 2.1971 | 0.0026 |
| 175 | 2.1997 | 0.0026 |
| 176 | 2.2023 | 0.0026 |
| 177 | 2.2049 | 0.0026 |
| 178 | 2.2075 | 0.0026 |
| 179 | 2.2100 | 0.0026 |
| 180 | 2.2126 | 0.0026 |
| 181 | 2.2151 | 0.0025 |
| 182 | 2.2177 | 0.0025 |
| 183 | 2.2202 | 0.0025 |
| 184 | 2.2227 | 0.0025 |
| 185 | 2.2252 | 0.0025 |
| 186 | 2.2277 | 0.0025 |
| 187 | 2.2302 | 0.0025 |
| 188 | 2.2327 | 0.0025 |
| 189 | 2.2351 | 0.0025 |
| 190 | 2.2376 | 0.0025 |
| 191 | 2.2400 | 0.0024 |
| 192 | 2.2425 | 0.0024 |
| 193 | 2.2449 | 0.0024 |
| 194 | 2.2473 | 0.0024 |
| 195 | 2.2497 | 0.0024 |
| 196 | 2.2521 | 0.0024 |
| 197 | 2.2545 | 0.0024 |
| 198 | 2.2568 | 0.0024 |
| 199 | 2.2592 | 0.0024 |

| | | |
|---|---|---|
| 200 | 2.2616 | 0.0024 |
| 201 | 2.2639 | 0.0023 |
| 202 | 2.2662 | 0.0023 |
| 203 | 2.2686 | 0.0023 |
| 204 | 2.2709 | 0.0023 |
| 205 | 2.2732 | 0.0023 |
| 206 | 2.2755 | 0.0023 |
| 207 | 2.2778 | 0.0023 |
| 208 | 2.2801 | 0.0023 |
| 209 | 2.2823 | 0.0023 |
| 210 | 2.2846 | 0.0023 |
| 211 | 2.2868 | 0.0023 |
| 212 | 2.2891 | 0.0022 |
| 213 | 2.2913 | 0.0022 |
| 214 | 2.2936 | 0.0022 |
| 215 | 2.2958 | 0.0022 |
| 216 | 2.2980 | 0.0022 |
| 217 | 2.3002 | 0.0022 |
| 218 | 2.3024 | 0.0022 |
| 219 | 2.3046 | 0.0022 |
| 220 | 2.3068 | 0.0022 |
| 221 | 2.3089 | 0.0022 |
| 222 | 2.3111 | 0.0022 |
| 223 | 2.3133 | 0.0022 |
| 224 | 2.3154 | 0.0022 |
| 225 | 2.3176 | 0.0021 |
| 226 | 2.3197 | 0.0021 |
| 227 | 2.3218 | 0.0021 |
| 228 | 2.3240 | 0.0021 |
| 229 | 2.3261 | 0.0021 |
| 230 | 2.3282 | 0.0021 |
| 231 | 2.3303 | 0.0021 |
| 232 | 2.3324 | 0.0021 |
| 233 | 2.3344 | 0.0021 |
| 234 | 2.3365 | 0.0021 |
| 235 | 2.3386 | 0.0021 |
| 236 | 2.3407 | 0.0021 |
| 237 | 2.3427 | 0.0021 |
| 238 | 2.3448 | 0.0021 |
| 239 | 2.3468 | 0.0020 |
| 240 | 2.3488 | 0.0020 |
| 241 | 2.3509 | 0.0020 |
| 242 | 2.3529 | 0.0020 |
| 243 | 2.3549 | 0.0020 |
| 244 | 2.3569 | 0.0020 |
| 245 | 2.3589 | 0.0020 |
| 246 | 2.3609 | 0.0020 |
| 247 | 2.3629 | 0.0020 |
| 248 | 2.3649 | 0.0020 |
| 249 | 2.3669 | 0.0020 |
| 250 | 2.3689 | 0.0020 |
| 251 | 2.3708 | 0.0020 |
| 252 | 2.3728 | 0.0020 |
| 253 | 2.3747 | 0.0020 |
| 254 | 2.3767 | 0.0019 |
| 255 | 2.3786 | 0.0019 |
| 256 | 2.3806 | 0.0019 |
| 257 | 2.3825 | 0.0019 |
| 258 | 2.3844 | 0.0019 |

| | | |
|---|---|---|
| 259 | 2.3863 | 0.0019 |
| 260 | 2.3882 | 0.0019 |
| 261 | 2.3901 | 0.0019 |
| 262 | 2.3920 | 0.0019 |
| 263 | 2.3939 | 0.0019 |
| 264 | 2.3958 | 0.0019 |
| 265 | 2.3977 | 0.0019 |
| 266 | 2.3996 | 0.0019 |
| 267 | 2.4014 | 0.0019 |
| 268 | 2.4033 | 0.0019 |
| 269 | 2.4052 | 0.0019 |
| 270 | 2.4070 | 0.0019 |
| 271 | 2.4089 | 0.0018 |
| 272 | 2.4107 | 0.0018 |
| 273 | 2.4126 | 0.0018 |
| 274 | 2.4144 | 0.0018 |
| 275 | 2.4162 | 0.0018 |
| 276 | 2.4180 | 0.0018 |
| 277 | 2.4199 | 0.0018 |
| 278 | 2.4217 | 0.0018 |
| 279 | 2.4235 | 0.0018 |
| 280 | 2.4253 | 0.0018 |
| 281 | 2.4271 | 0.0018 |
| 282 | 2.4289 | 0.0018 |
| 283 | 2.4307 | 0.0018 |
| 284 | 2.4324 | 0.0018 |
| 285 | 2.4342 | 0.0018 |
| 286 | 2.4360 | 0.0018 |
| 287 | 2.4378 | 0.0018 |
| 288 | 2.4395 | 0.0018 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0018 | 0.0000 | 0.0018 |
| 2 | 0.0018 | 0.0000 | 0.0018 |
| 3 | 0.0018 | 0.0000 | 0.0018 |
| 4 | 0.0018 | 0.0000 | 0.0018 |
| 5 | 0.0018 | 0.0000 | 0.0018 |
| 6 | 0.0018 | 0.0000 | 0.0018 |
| 7 | 0.0018 | 0.0000 | 0.0018 |
| 8 | 0.0018 | 0.0000 | 0.0018 |
| 9 | 0.0018 | 0.0000 | 0.0018 |
| 10 | 0.0018 | 0.0000 | 0.0018 |
| 11 | 0.0018 | 0.0000 | 0.0018 |
| 12 | 0.0018 | 0.0000 | 0.0018 |
| 13 | 0.0019 | 0.0000 | 0.0018 |
| 14 | 0.0019 | 0.0000 | 0.0019 |
| 15 | 0.0019 | 0.0000 | 0.0019 |
| 16 | 0.0019 | 0.0000 | 0.0019 |
| 17 | 0.0019 | 0.0000 | 0.0019 |
| 18 | 0.0019 | 0.0000 | 0.0019 |
| 19 | 0.0019 | 0.0000 | 0.0019 |
| 20 | 0.0019 | 0.0000 | 0.0019 |
| 21 | 0.0019 | 0.0000 | 0.0019 |
| 22 | 0.0019 | 0.0000 | 0.0019 |
| 23 | 0.0019 | 0.0000 | 0.0019 |
| 24 | 0.0019 | 0.0000 | 0.0019 |

| | | | |
|---|---|---|---|
| 25 | 0.0020 | 0.0000 | 0.0020 |
| 26 | 0.0020 | 0.0000 | 0.0020 |
| 27 | 0.0020 | 0.0000 | 0.0020 |
| 28 | 0.0020 | 0.0000 | 0.0020 |
| 29 | 0.0020 | 0.0000 | 0.0020 |
| 30 | 0.0020 | 0.0000 | 0.0020 |
| 31 | 0.0020 | 0.0000 | 0.0020 |
| 32 | 0.0020 | 0.0000 | 0.0020 |
| 33 | 0.0020 | 0.0000 | 0.0020 |
| 34 | 0.0020 | 0.0000 | 0.0020 |
| 35 | 0.0021 | 0.0000 | 0.0021 |
| 36 | 0.0021 | 0.0000 | 0.0021 |
| 37 | 0.0021 | 0.0000 | 0.0021 |
| 38 | 0.0021 | 0.0000 | 0.0021 |
| 39 | 0.0021 | 0.0000 | 0.0021 |
| 40 | 0.0021 | 0.0000 | 0.0021 |
| 41 | 0.0021 | 0.0000 | 0.0021 |
| 42 | 0.0021 | 0.0000 | 0.0021 |
| 43 | 0.0021 | 0.0000 | 0.0021 |
| 44 | 0.0022 | 0.0000 | 0.0021 |
| 45 | 0.0022 | 0.0000 | 0.0022 |
| 46 | 0.0022 | 0.0000 | 0.0022 |
| 47 | 0.0022 | 0.0000 | 0.0022 |
| 48 | 0.0022 | 0.0000 | 0.0022 |
| 49 | 0.0022 | 0.0000 | 0.0022 |
| 50 | 0.0022 | 0.0000 | 0.0022 |
| 51 | 0.0022 | 0.0000 | 0.0022 |
| 52 | 0.0022 | 0.0000 | 0.0022 |
| 53 | 0.0023 | 0.0000 | 0.0023 |
| 54 | 0.0023 | 0.0000 | 0.0023 |
| 55 | 0.0023 | 0.0000 | 0.0023 |
| 56 | 0.0023 | 0.0000 | 0.0023 |
| 57 | 0.0023 | 0.0000 | 0.0023 |
| 58 | 0.0023 | 0.0000 | 0.0023 |
| 59 | 0.0023 | 0.0000 | 0.0023 |
| 60 | 0.0024 | 0.0000 | 0.0023 |
| 61 | 0.0024 | 0.0000 | 0.0024 |
| 62 | 0.0024 | 0.0000 | 0.0024 |
| 63 | 0.0024 | 0.0000 | 0.0024 |
| 64 | 0.0024 | 0.0000 | 0.0024 |
| 65 | 0.0024 | 0.0000 | 0.0024 |
| 66 | 0.0024 | 0.0000 | 0.0024 |
| 67 | 0.0025 | 0.0000 | 0.0025 |
| 68 | 0.0025 | 0.0000 | 0.0025 |
| 69 | 0.0025 | 0.0000 | 0.0025 |
| 70 | 0.0025 | 0.0000 | 0.0025 |
| 71 | 0.0025 | 0.0000 | 0.0025 |
| 72 | 0.0025 | 0.0000 | 0.0025 |
| 73 | 0.0026 | 0.0000 | 0.0026 |
| 74 | 0.0026 | 0.0000 | 0.0026 |
| 75 | 0.0026 | 0.0000 | 0.0026 |
| 76 | 0.0026 | 0.0000 | 0.0026 |
| 77 | 0.0026 | 0.0000 | 0.0026 |
| 78 | 0.0026 | 0.0000 | 0.0026 |
| 79 | 0.0027 | 0.0000 | 0.0027 |
| 80 | 0.0027 | 0.0000 | 0.0027 |
| 81 | 0.0027 | 0.0000 | 0.0027 |
| 82 | 0.0027 | 0.0000 | 0.0027 |
| 83 | 0.0027 | 0.0000 | 0.0027 |

| | | | |
|---|---|---|---|
| 84 | 0.0028 | 0.0000 | 0.0027 |
| 85 | 0.0028 | 0.0000 | 0.0028 |
| 86 | 0.0028 | 0.0000 | 0.0028 |
| 87 | 0.0028 | 0.0000 | 0.0028 |
| 88 | 0.0028 | 0.0000 | 0.0028 |
| 89 | 0.0029 | 0.0000 | 0.0029 |
| 90 | 0.0029 | 0.0000 | 0.0029 |
| 91 | 0.0029 | 0.0000 | 0.0029 |
| 92 | 0.0029 | 0.0000 | 0.0029 |
| 93 | 0.0030 | 0.0000 | 0.0030 |
| 94 | 0.0030 | 0.0000 | 0.0030 |
| 95 | 0.0030 | 0.0000 | 0.0030 |
| 96 | 0.0030 | 0.0000 | 0.0030 |
| 97 | 0.0031 | 0.0000 | 0.0030 |
| 98 | 0.0031 | 0.0000 | 0.0031 |
| 99 | 0.0031 | 0.0000 | 0.0031 |
| 100 | 0.0031 | 0.0000 | 0.0031 |
| 101 | 0.0032 | 0.0000 | 0.0032 |
| 102 | 0.0032 | 0.0000 | 0.0032 |
| 103 | 0.0032 | 0.0000 | 0.0032 |
| 104 | 0.0032 | 0.0000 | 0.0032 |
| 105 | 0.0033 | 0.0000 | 0.0033 |
| 106 | 0.0033 | 0.0000 | 0.0033 |
| 107 | 0.0033 | 0.0000 | 0.0033 |
| 108 | 0.0034 | 0.0000 | 0.0033 |
| 109 | 0.0034 | 0.0000 | 0.0034 |
| 110 | 0.0034 | 0.0000 | 0.0034 |
| 111 | 0.0035 | 0.0000 | 0.0035 |
| 112 | 0.0035 | 0.0000 | 0.0035 |
| 113 | 0.0035 | 0.0000 | 0.0035 |
| 114 | 0.0036 | 0.0000 | 0.0035 |
| 115 | 0.0036 | 0.0000 | 0.0036 |
| 116 | 0.0036 | 0.0000 | 0.0036 |
| 117 | 0.0037 | 0.0000 | 0.0037 |
| 118 | 0.0037 | 0.0000 | 0.0037 |
| 119 | 0.0038 | 0.0000 | 0.0038 |
| 120 | 0.0038 | 0.0000 | 0.0038 |
| 121 | 0.0038 | 0.0000 | 0.0038 |
| 122 | 0.0039 | 0.0000 | 0.0039 |
| 123 | 0.0039 | 0.0000 | 0.0039 |
| 124 | 0.0040 | 0.0000 | 0.0040 |
| 125 | 0.0040 | 0.0000 | 0.0040 |
| 126 | 0.0041 | 0.0000 | 0.0040 |
| 127 | 0.0041 | 0.0000 | 0.0041 |
| 128 | 0.0042 | 0.0000 | 0.0041 |
| 129 | 0.0042 | 0.0000 | 0.0042 |
| 130 | 0.0043 | 0.0000 | 0.0042 |
| 131 | 0.0043 | 0.0000 | 0.0043 |
| 132 | 0.0044 | 0.0000 | 0.0044 |
| 133 | 0.0044 | 0.0000 | 0.0044 |
| 134 | 0.0045 | 0.0000 | 0.0045 |
| 135 | 0.0046 | 0.0000 | 0.0046 |
| 136 | 0.0046 | 0.0000 | 0.0046 |
| 137 | 0.0047 | 0.0000 | 0.0047 |
| 138 | 0.0047 | 0.0000 | 0.0047 |
| 139 | 0.0048 | 0.0000 | 0.0048 |
| 140 | 0.0049 | 0.0000 | 0.0049 |
| 141 | 0.0050 | 0.0000 | 0.0050 |
| 142 | 0.0050 | 0.0000 | 0.0050 |

| | | | |
|---|---|---|---|
| 143 | 0.0051 | 0.0000 | 0.0051 |
| 144 | 0.0052 | 0.0000 | 0.0052 |
| 145 | 0.0052 | 0.0000 | 0.0052 |
| 146 | 0.0053 | 0.0000 | 0.0053 |
| 147 | 0.0054 | 0.0000 | 0.0054 |
| 148 | 0.0055 | 0.0000 | 0.0055 |
| 149 | 0.0056 | 0.0000 | 0.0056 |
| 150 | 0.0057 | 0.0000 | 0.0057 |
| 151 | 0.0058 | 0.0000 | 0.0058 |
| 152 | 0.0059 | 0.0000 | 0.0059 |
| 153 | 0.0060 | 0.0000 | 0.0060 |
| 154 | 0.0061 | 0.0000 | 0.0061 |
| 155 | 0.0063 | 0.0000 | 0.0063 |
| 156 | 0.0064 | 0.0000 | 0.0064 |
| 157 | 0.0066 | 0.0000 | 0.0066 |
| 158 | 0.0067 | 0.0000 | 0.0067 |
| 159 | 0.0069 | 0.0000 | 0.0069 |
| 160 | 0.0070 | 0.0000 | 0.0070 |
| 161 | 0.0072 | 0.0000 | 0.0072 |
| 162 | 0.0074 | 0.0000 | 0.0074 |
| 163 | 0.0076 | 0.0000 | 0.0076 |
| 164 | 0.0078 | 0.0000 | 0.0078 |
| 165 | 0.0081 | 0.0000 | 0.0080 |
| 166 | 0.0082 | 0.0000 | 0.0082 |
| 167 | 0.0085 | 0.0000 | 0.0085 |
| 168 | 0.0087 | 0.0000 | 0.0087 |
| 169 | 0.0094 | 0.0000 | 0.0093 |
| 170 | 0.0096 | 0.0000 | 0.0096 |
| 171 | 0.0100 | 0.0000 | 0.0100 |
| 172 | 0.0103 | 0.0000 | 0.0103 |
| 173 | 0.0108 | 0.0000 | 0.0108 |
| 174 | 0.0111 | 0.0000 | 0.0111 |
| 175 | 0.0118 | 0.0000 | 0.0118 |
| 176 | 0.0122 | 0.0000 | 0.0121 |
| 177 | 0.0130 | 0.0000 | 0.0130 |
| 178 | 0.0134 | 0.0000 | 0.0134 |
| 179 | 0.0144 | 0.0000 | 0.0144 |
| 180 | 0.0150 | 0.0000 | 0.0150 |
| 181 | 0.0164 | 0.0000 | 0.0164 |
| 182 | 0.0171 | 0.0000 | 0.0171 |
| 183 | 0.0190 | 0.0000 | 0.0190 |
| 184 | 0.0201 | 0.0000 | 0.0201 |
| 185 | 0.0325 | 0.0000 | 0.0325 |
| 186 | 0.0346 | 0.0000 | 0.0346 |
| 187 | 0.0401 | 0.0000 | 0.0401 |
| 188 | 0.0438 | 0.0000 | 0.0438 |
| 189 | 0.0545 | 0.0000 | 0.0545 |
| 190 | 0.0628 | 0.0000 | 0.0628 |
| 191 | 0.0953 | 0.0000 | 0.0952 |
| 192 | 0.1383 | 0.0000 | 0.1382 |
| 193 | 0.5981 | 0.0000 | 0.5981 |
| 194 | 0.0750 | 0.0000 | 0.0750 |
| 195 | 0.0485 | 0.0000 | 0.0485 |
| 196 | 0.0371 | 0.0000 | 0.0371 |
| 197 | 0.0213 | 0.0000 | 0.0213 |
| 198 | 0.0180 | 0.0000 | 0.0180 |
| 199 | 0.0157 | 0.0000 | 0.0157 |
| 200 | 0.0139 | 0.0000 | 0.0139 |
| 201 | 0.0125 | 0.0000 | 0.0125 |

| | | | |
|---|---|---|---|
| 202 | 0.0114 | 0.0000 | 0.0114 |
| 203 | 0.0105 | 0.0000 | 0.0105 |
| 204 | 0.0098 | 0.0000 | 0.0098 |
| 205 | 0.0089 | 0.0000 | 0.0089 |
| 206 | 0.0084 | 0.0000 | 0.0084 |
| 207 | 0.0079 | 0.0000 | 0.0079 |
| 208 | 0.0075 | 0.0000 | 0.0075 |
| 209 | 0.0071 | 0.0000 | 0.0071 |
| 210 | 0.0068 | 0.0000 | 0.0068 |
| 211 | 0.0065 | 0.0000 | 0.0065 |
| 212 | 0.0062 | 0.0000 | 0.0062 |
| 213 | 0.0060 | 0.0000 | 0.0060 |
| 214 | 0.0057 | 0.0000 | 0.0057 |
| 215 | 0.0055 | 0.0000 | 0.0055 |
| 216 | 0.0053 | 0.0000 | 0.0053 |
| 217 | 0.0052 | 0.0000 | 0.0052 |
| 218 | 0.0051 | 0.0000 | 0.0051 |
| 219 | 0.0049 | 0.0000 | 0.0049 |
| 220 | 0.0048 | 0.0000 | 0.0048 |
| 221 | 0.0046 | 0.0000 | 0.0046 |
| 222 | 0.0045 | 0.0000 | 0.0045 |
| 223 | 0.0044 | 0.0000 | 0.0044 |
| 224 | 0.0043 | 0.0000 | 0.0043 |
| 225 | 0.0042 | 0.0000 | 0.0042 |
| 226 | 0.0041 | 0.0000 | 0.0041 |
| 227 | 0.0040 | 0.0000 | 0.0040 |
| 228 | 0.0039 | 0.0000 | 0.0039 |
| 229 | 0.0038 | 0.0000 | 0.0038 |
| 230 | 0.0037 | 0.0000 | 0.0037 |
| 231 | 0.0037 | 0.0000 | 0.0036 |
| 232 | 0.0036 | 0.0000 | 0.0036 |
| 233 | 0.0035 | 0.0000 | 0.0035 |
| 234 | 0.0034 | 0.0000 | 0.0034 |
| 235 | 0.0034 | 0.0000 | 0.0034 |
| 236 | 0.0033 | 0.0000 | 0.0033 |
| 237 | 0.0033 | 0.0000 | 0.0032 |
| 238 | 0.0032 | 0.0000 | 0.0032 |
| 239 | 0.0031 | 0.0000 | 0.0031 |
| 240 | 0.0031 | 0.0000 | 0.0031 |
| 241 | 0.0030 | 0.0000 | 0.0030 |
| 242 | 0.0030 | 0.0000 | 0.0030 |
| 243 | 0.0029 | 0.0000 | 0.0029 |
| 244 | 0.0029 | 0.0000 | 0.0029 |
| 245 | 0.0029 | 0.0000 | 0.0028 |
| 246 | 0.0028 | 0.0000 | 0.0028 |
| 247 | 0.0028 | 0.0000 | 0.0028 |
| 248 | 0.0027 | 0.0000 | 0.0027 |
| 249 | 0.0027 | 0.0000 | 0.0027 |
| 250 | 0.0027 | 0.0000 | 0.0026 |
| 251 | 0.0026 | 0.0000 | 0.0026 |
| 252 | 0.0026 | 0.0000 | 0.0026 |
| 253 | 0.0025 | 0.0000 | 0.0025 |
| 254 | 0.0025 | 0.0000 | 0.0025 |
| 255 | 0.0025 | 0.0000 | 0.0025 |
| 256 | 0.0025 | 0.0000 | 0.0024 |
| 257 | 0.0024 | 0.0000 | 0.0024 |
| 258 | 0.0024 | 0.0000 | 0.0024 |
| 259 | 0.0024 | 0.0000 | 0.0024 |
| 260 | 0.0023 | 0.0000 | 0.0023 |

| | | | |
|---|---|---|---|
| 261 | 0.0023 | 0.0000 | 0.0023 |
| 262 | 0.0023 | 0.0000 | 0.0023 |
| 263 | 0.0023 | 0.0000 | 0.0022 |
| 264 | 0.0022 | 0.0000 | 0.0022 |
| 265 | 0.0022 | 0.0000 | 0.0022 |
| 266 | 0.0022 | 0.0000 | 0.0022 |
| 267 | 0.0022 | 0.0000 | 0.0022 |
| 268 | 0.0021 | 0.0000 | 0.0021 |
| 269 | 0.0021 | 0.0000 | 0.0021 |
| 270 | 0.0021 | 0.0000 | 0.0021 |
| 271 | 0.0021 | 0.0000 | 0.0021 |
| 272 | 0.0021 | 0.0000 | 0.0020 |
| 273 | 0.0020 | 0.0000 | 0.0020 |
| 274 | 0.0020 | 0.0000 | 0.0020 |
| 275 | 0.0020 | 0.0000 | 0.0020 |
| 276 | 0.0020 | 0.0000 | 0.0020 |
| 277 | 0.0020 | 0.0000 | 0.0019 |
| 278 | 0.0019 | 0.0000 | 0.0019 |
| 279 | 0.0019 | 0.0000 | 0.0019 |
| 280 | 0.0019 | 0.0000 | 0.0019 |
| 281 | 0.0019 | 0.0000 | 0.0019 |
| 282 | 0.0019 | 0.0000 | 0.0019 |
| 283 | 0.0018 | 0.0000 | 0.0018 |
| 284 | 0.0018 | 0.0000 | 0.0018 |
| 285 | 0.0018 | 0.0000 | 0.0018 |
| 286 | 0.0018 | 0.0000 | 0.0018 |
| 287 | 0.0018 | 0.0000 | 0.0018 |
| 288 | 0.0018 | 0.0000 | 0.0018 |

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Total soil rain loss = 0.00(In)
Total effective rainfall = 2.44(In)
Peak flow rate in flood hydrograph = 272.42(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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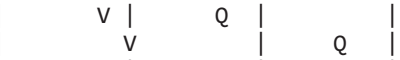
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 75.0 | 150.0 | 225.0 | 300.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0002 | 0.03 | Q | \| | \| | \| | \| |
| 0+10 | 0.0010 | 0.11 | Q | \| | \| | \| | \| |
| 0+15 | 0.0028 | 0.26 | Q | \| | \| | \| | \| |
| 0+20 | 0.0065 | 0.54 | Q | \| | \| | \| | \| |
| 0+25 | 0.0137 | 1.05 | Q | \| | \| | \| | \| |
| 0+30 | 0.0241 | 1.51 | Q | \| | \| | \| | \| |
| 0+35 | 0.0368 | 1.84 | Q | \| | \| | \| | \| |
| 0+40 | 0.0512 | 2.08 | Q | \| | \| | \| | \| |
| 0+45 | 0.0668 | 2.27 | Q | \| | \| | \| | \| |
| 0+50 | 0.0834 | 2.42 | Q | \| | \| | \| | \| |
| 0+55 | 0.1010 | 2.54 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.1193 | 2.66 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.1382 | 2.75 | Q | \| | \| | \| | \| |
| 1+10 | 0.1577 | 2.84 | Q | \| | \| | \| | \| |
| 1+15 | 0.1778 | 2.91 | Q | \| | \| | \| | \| |
| 1+20 | 0.1983 | 2.98 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+25 | 0.2193 | 3.05 | Q | | | | |
| 1+30 | 0.2407 | 3.11 | Q | | | | |
| 1+35 | 0.2624 | 3.16 | Q | | | | |
| 1+40 | 0.2845 | 3.21 | Q | | | | |
| 1+45 | 0.3069 | 3.25 | Q | | | | |
| 1+50 | 0.3296 | 3.30 | Q | | | | |
| 1+55 | 0.3526 | 3.34 | Q | | | | |
| 2+ 0 | 0.3758 | 3.38 | Q | | | | |
| 2+ 5 | 0.3993 | 3.41 | Q | | | | |
| 2+10 | 0.4231 | 3.45 | Q | | | | |
| 2+15 | 0.4471 | 3.48 | Q | | | | |
| 2+20 | 0.4713 | 3.52 | Q | | | | |
| 2+25 | 0.4957 | 3.55 | Q | | | | |
| 2+30 | 0.5204 | 3.58 | Q | | | | |
| 2+35 | 0.5452 | 3.61 | Q | | | | |
| 2+40 | 0.5703 | 3.64 | Q | | | | |
| 2+45 | 0.5955 | 3.66 | Q | | | | |
| 2+50 | 0.6209 | 3.69 | Q | | | | |
| 2+55 | 0.6465 | 3.71 | Q | | | | |
| 3+ 0 | 0.6722 | 3.73 | Q | | | | |
| 3+ 5 | 0.6981 | 3.76 | Q | | | | |
| 3+10 | 0.7241 | 3.78 | Q | | | | |
| 3+15 | 0.7504 | 3.81 | Q | | | | |
| 3+20 | 0.7768 | 3.84 | Q | | | | |
| 3+25 | 0.8034 | 3.86 | Q | | | | |
| 3+30 | 0.8302 | 3.89 | QV | | | | |
| 3+35 | 0.8571 | 3.91 | QV | | | | |
| 3+40 | 0.8842 | 3.93 | QV | | | | |
| 3+45 | 0.9115 | 3.96 | QV | | | | |
| 3+50 | 0.9389 | 3.98 | QV | | | | |
| 3+55 | 0.9665 | 4.00 | QV | | | | |
| 4+ 0 | 0.9942 | 4.03 | QV | | | | |
| 4+ 5 | 1.0221 | 4.05 | QV | | | | |
| 4+10 | 1.0501 | 4.07 | QV | | | | |
| 4+15 | 1.0782 | 4.09 | QV | | | | |
| 4+20 | 1.1065 | 4.11 | QV | | | | |
| 4+25 | 1.1350 | 4.13 | QV | | | | |
| 4+30 | 1.1636 | 4.16 | QV | | | | |
| 4+35 | 1.1924 | 4.18 | QV | | | | |
| 4+40 | 1.2213 | 4.20 | QV | | | | |
| 4+45 | 1.2504 | 4.22 | QV | | | | |
| 4+50 | 1.2797 | 4.25 | QV | | | | |
| 4+55 | 1.3091 | 4.27 | QV | | | | |
| 5+ 0 | 1.3387 | 4.30 | QV | | | | |
| 5+ 5 | 1.3684 | 4.32 | QV | | | | |
| 5+10 | 1.3983 | 4.34 | QV | | | | |
| 5+15 | 1.4284 | 4.37 | QV | | | | |
| 5+20 | 1.4587 | 4.39 | QV | | | | |
| 5+25 | 1.4891 | 4.42 | QV | | | | |
| 5+30 | 1.5198 | 4.45 | QV | | | | |
| 5+35 | 1.5506 | 4.47 | QV | | | | |
| 5+40 | 1.5816 | 4.50 | QV | | | | |
| 5+45 | 1.6127 | 4.53 | Q V | | | | |
| 5+50 | 1.6441 | 4.55 | Q V | | | | |
| 5+55 | 1.6756 | 4.58 | Q V | | | | |
| 6+ 0 | 1.7074 | 4.61 | Q V | | | | |
| 6+ 5 | 1.7393 | 4.64 | Q V | | | | |
| 6+10 | 1.7715 | 4.67 | Q V | | | | |
| 6+15 | 1.8038 | 4.70 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+20 | 1.8364 | 4.73 | Q V | \| | \| | \| | \| |
| 6+25 | 1.8691 | 4.76 | Q V | \| | \| | \| | \| |
| 6+30 | 1.9021 | 4.79 | Q V | \| | \| | \| | \| |
| 6+35 | 1.9353 | 4.82 | Q V | \| | \| | \| | \| |
| 6+40 | 1.9687 | 4.85 | Q V | \| | \| | \| | \| |
| 6+45 | 2.0023 | 4.88 | Q V | \| | \| | \| | \| |
| 6+50 | 2.0362 | 4.91 | Q V | \| | \| | \| | \| |
| 6+55 | 2.0703 | 4.95 | Q V | \| | \| | \| | \| |
| 7+ 0 | 2.1046 | 4.98 | Q V | \| | \| | \| | \| |
| 7+ 5 | 2.1391 | 5.02 | Q V | \| | \| | \| | \| |
| 7+10 | 2.1739 | 5.05 | Q V | \| | \| | \| | \| |
| 7+15 | 2.2089 | 5.09 | Q V | \| | \| | \| | \| |
| 7+20 | 2.2442 | 5.12 | Q V | \| | \| | \| | \| |
| 7+25 | 2.2797 | 5.16 | Q V | \| | \| | \| | \| |
| 7+30 | 2.3155 | 5.19 | Q V | \| | \| | \| | \| |
| 7+35 | 2.3515 | 5.23 | Q V | \| | \| | \| | \| |
| 7+40 | 2.3878 | 5.27 | Q V | \| | \| | \| | \| |
| 7+45 | 2.4244 | 5.31 | Q  V | \| | \| | \| | \| |
| 7+50 | 2.4612 | 5.35 | Q  V | \| | \| | \| | \| |
| 7+55 | 2.4983 | 5.39 | Q  V | \| | \| | \| | \| |
| 8+ 0 | 2.5357 | 5.43 | Q  V | \| | \| | \| | \| |
| 8+ 5 | 2.5734 | 5.47 | Q  V | \| | \| | \| | \| |
| 8+10 | 2.6113 | 5.51 | Q  V | \| | \| | \| | \| |
| 8+15 | 2.6496 | 5.56 | Q  V | \| | \| | \| | \| |
| 8+20 | 2.6882 | 5.60 | Q  V | \| | \| | \| | \| |
| 8+25 | 2.7270 | 5.64 | Q  V | \| | \| | \| | \| |
| 8+30 | 2.7662 | 5.69 | Q  V | \| | \| | \| | \| |
| 8+35 | 2.8057 | 5.74 | Q  V | \| | \| | \| | \| |
| 8+40 | 2.8456 | 5.78 | Q  V | \| | \| | \| | \| |
| 8+45 | 2.8857 | 5.83 | Q  V | \| | \| | \| | \| |
| 8+50 | 2.9262 | 5.88 | Q  V | \| | \| | \| | \| |
| 8+55 | 2.9670 | 5.93 | Q  V | \| | \| | \| | \| |
| 9+ 0 | 3.0082 | 5.98 | Q  V | \| | \| | \| | \| |
| 9+ 5 | 3.0498 | 6.03 | Q  V | \| | \| | \| | \| |
| 9+10 | 3.0917 | 6.08 | Q  V | \| | \| | \| | \| |
| 9+15 | 3.1339 | 6.14 | Q  V | \| | \| | \| | \| |
| 9+20 | 3.1766 | 6.19 | Q  V | \| | \| | \| | \| |
| 9+25 | 3.2196 | 6.25 | Q  V | \| | \| | \| | \| |
| 9+30 | 3.2630 | 6.31 | Q   V | \| | \| | \| | \| |
| 9+35 | 3.3069 | 6.36 | Q   V | \| | \| | \| | \| |
| 9+40 | 3.3511 | 6.42 | Q   V | \| | \| | \| | \| |
| 9+45 | 3.3958 | 6.48 | Q   V | \| | \| | \| | \| |
| 9+50 | 3.4408 | 6.55 | Q   V | \| | \| | \| | \| |
| 9+55 | 3.4864 | 6.61 | Q   V | \| | \| | \| | \| |
| 10+ 0 | 3.5323 | 6.68 | Q   V | \| | \| | \| | \| |
| 10+ 5 | 3.5788 | 6.74 | Q   V | \| | \| | \| | \| |
| 10+10 | 3.6257 | 6.81 | Q   V | \| | \| | \| | \| |
| 10+15 | 3.6731 | 6.88 | Q   V | \| | \| | \| | \| |
| 10+20 | 3.7209 | 6.95 | Q   V | \| | \| | \| | \| |
| 10+25 | 3.7693 | 7.02 | Q   V | \| | \| | \| | \| |
| 10+30 | 3.8182 | 7.10 | Q   V | \| | \| | \| | \| |
| 10+35 | 3.8676 | 7.17 | Q   V | \| | \| | \| | \| |
| 10+40 | 3.9175 | 7.25 | Q   V | \| | \| | \| | \| |
| 10+45 | 3.9680 | 7.33 | Q   V | \| | \| | \| | \| |
| 10+50 | 4.0191 | 7.42 | Q   V | \| | \| | \| | \| |
| 10+55 | 4.0708 | 7.50 | \|Q   V | \| | \| | \| | \| |
| 11+ 0 | 4.1230 | 7.59 | \|Q   V | \| | \| | \| | \| |
| 11+ 5 | 4.1759 | 7.68 | \|Q   V | \| | \| | \| | \| |
| 11+10 | 4.2294 | 7.77 | \|Q   V | \| | \| | \| | \| |

```
11+15       4.2835      7.86  |Q   V    |          |          |          |
11+20       4.3383      7.96  |Q   V    |          |          |          |
11+25       4.3938      8.06  |Q   V    |          |          |          |
11+30       4.4500      8.16  |Q   V    |          |          |          |
11+35       4.5069      8.26  |Q   V    |          |          |          |
11+40       4.5646      8.37  |Q   V    |          |          |          |
11+45       4.6230      8.49  |Q   V    |          |          |          |
11+50       4.6822      8.60  |Q   V    |          |          |          |
11+55       4.7423      8.72  |Q   V    |          |          |          |
12+ 0       4.8032      8.84  |Q   V    |          |          |          |
12+ 5       4.8649      8.97  |Q    V   |          |          |          |
12+10       4.9276      9.09  |Q    V   |          |          |          |
12+15       4.9911      9.22  |Q    V   |          |          |          |
12+20       5.0554      9.35  |Q    V   |          |          |          |
12+25       5.1207      9.47  |Q    V   |          |          |          |
12+30       5.1868      9.60  |Q    V   |          |          |          |
12+35       5.2538      9.74  |Q    V   |          |          |          |
12+40       5.3219      9.89  |Q    V   |          |          |          |
12+45       5.3911     10.05  |Q    V   |          |          |          |
12+50       5.4614     10.21  |Q    V   |          |          |          |
12+55       5.5329     10.39  |Q    V   |          |          |          |
13+ 0       5.6057     10.57  |Q    V   |          |          |          |
13+ 5       5.6798     10.76  |Q     V  |          |          |          |
13+10       5.7553     10.96  |Q     V  |          |          |          |
13+15       5.8322     11.17  |Q     V  |          |          |          |
13+20       5.9106     11.39  |Q     V  |          |          |          |
13+25       5.9906     11.62  |Q     V  |          |          |          |
13+30       6.0723     11.86  |Q     V  |          |          |          |
13+35       6.1557     12.11  |Q     V  |          |          |          |
13+40       6.2410     12.38  |Q     V  |          |          |          |
13+45       6.3282     12.66  |Q     V  |          |          |          |
13+50       6.4174     12.95  |Q     V  |          |          |          |
13+55       6.5088     13.27  |Q      V |          |          |          |
14+ 0       6.6024     13.60  |Q      V |          |          |          |
14+ 5       6.6985     13.96  |Q      V |          |          |          |
14+10       6.7973     14.34  |Q      V |          |          |          |
14+15       6.8989     14.76  |Q      V |          |          |          |
14+20       7.0037     15.22  | Q     V |          |          |          |
14+25       7.1121     15.74  | Q     V |          |          |          |
14+30       7.2244     16.29  | Q     V |          |          |          |
14+35       7.3405     16.87  | Q      V|          |          |          |
14+40       7.4608     17.47  | Q      V|          |          |          |
14+45       7.5856     18.12  | Q      V|          |          |          |
14+50       7.7152     18.81  | Q      V|          |          |          |
14+55       7.8499     19.57  | Q      V|          |          |          |
15+ 0       7.9903     20.39  | Q      V|          |          |          |
15+ 5       8.1371     21.30  | Q       V          |          |          |
15+10       8.2907     22.31  | Q       V          |          |          |
15+15       8.4521     23.44  |  Q      V          |          |          |
15+20       8.6222     24.70  |  Q      V          |          |          |
15+25       8.8034     26.30  |  Q      V          |          |          |
15+30       8.9993     28.45  |  Q      |V         |          |          |
15+35       9.2147     31.27  |   Q     |V         |          |          |
15+40       9.4574     35.24  |   Q     |V         |          |          |
15+45       9.7406     41.12  |    Q    | V        |          |          |
15+50      10.0692     47.72  |     Q   | V        |          |          |
15+55      10.4498     55.27  |      Q  | V        |          |          |
16+ 0      10.8979     65.05  |       Q |  V       |          |          |
16+ 5      11.4844     85.16  |         |Q  V      |          |          |
```

| | | | |
|---|---|---|---|
| 16+10 | 12.2923 | 117.30 | |
| 16+15 | 13.3411 | 152.29 |  |
| 16+20 | 14.7584 | 205.79 |  |
| 16+25 | 16.6346 | 272.42 | |
| 16+30 | 18.3707 | 252.10 |  |
| 16+35 | 19.7597 | 201.68 | |
| 16+40 | 20.8681 | 160.93 | |
| 16+45 | 21.7723 | 131.30 | |
| 16+50 | 22.5438 | 112.02 | |
| 16+55 | 23.2109 | 96.85 |  |
| 17+ 0 | 23.7981 | 85.27 | |
| 17+ 5 | 24.3191 | 75.65 |  |
| 17+10 | 24.7854 | 67.71 | |
| 17+15 | 25.2059 | 61.05 |  |
| 17+20 | 25.5936 | 56.30 | |
| 17+25 | 25.9515 | 51.97 | |
| 17+30 | 26.2770 | 47.26 |  |
| 17+35 | 26.5723 | 42.88 | |
| 17+40 | 26.8416 | 39.10 |  |
| 17+45 | 27.0947 | 36.76 | |
| 17+50 | 27.3315 | 34.38 |  |
| 17+55 | 27.5529 | 32.15 | |
| 18+ 0 | 27.7612 | 30.24 | |
| 18+ 5 | 27.9543 | 28.04 |  |
| 18+10 | 28.1338 | 26.07 | |
| 18+15 | 28.3056 | 24.94 |  |
| 18+20 | 28.4658 | 23.25 | |
| 18+25 | 28.6151 | 21.68 |  |
| 18+30 | 28.7581 | 20.77 | |
| 18+35 | 28.8908 | 19.26 |  |
| 18+40 | 29.0136 | 17.84 | |
| 18+45 | 29.1312 | 17.07 |  |
| 18+50 | 29.2396 | 15.74 | |
| 18+55 | 29.3398 | 14.55 |  |
| 19+ 0 | 29.4370 | 14.11 | |
| 19+ 5 | 29.5327 | 13.90 | |
| 19+10 | 29.6271 | 13.71 |  |
| 19+15 | 29.7190 | 13.35 | |
| 19+20 | 29.8084 | 12.98 |  |
| 19+25 | 29.8950 | 12.57 | |
| 19+30 | 29.9783 | 12.09 | |
| 19+35 | 30.0551 | 11.15 |  |
| 19+40 | 30.1257 | 10.25 | |
| 19+45 | 30.1934 | 9.83 |  |
| 19+50 | 30.2579 | 9.38 | |
| 19+55 | 30.3162 | 8.46 |  |
| 20+ 0 | 30.3686 | 7.62 | |
| 20+ 5 | 30.4192 | 7.35 |  |
| 20+10 | 30.4683 | 7.12 | |
| 20+15 | 30.5160 | 6.93 |  |
| 20+20 | 30.5627 | 6.77 | |
| 20+25 | 30.6082 | 6.62 |  |
| 20+30 | 30.6528 | 6.48 | |
| 20+35 | 30.6965 | 6.34 |  |
| 20+40 | 30.7393 | 6.22 | |
| 20+45 | 30.7814 | 6.10 |  |
| 20+50 | 30.8226 | 5.99 | |
| 20+55 | 30.8631 | 5.88 | |
| 21+ 0 | 30.9029 | 5.78 |  |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+ 5 | 30.9420 | 5.68 | Q | \| | \| | \| | V \| |
| 21+10 | 30.9805 | 5.59 | Q | \| | \| | \| | V \| |
| 21+15 | 31.0183 | 5.50 | Q | \| | \| | \| | V \| |
| 21+20 | 31.0556 | 5.41 | Q | \| | \| | \| | V \| |
| 21+25 | 31.0923 | 5.33 | Q | \| | \| | \| | V \| |
| 21+30 | 31.1284 | 5.25 | Q | \| | \| | \| | V \| |
| 21+35 | 31.1640 | 5.17 | Q | \| | \| | \| | V \| |
| 21+40 | 31.1991 | 5.10 | Q | \| | \| | \| | V \| |
| 21+45 | 31.2337 | 5.02 | Q | \| | \| | \| | V \| |
| 21+50 | 31.2679 | 4.95 | Q | \| | \| | \| | V \| |
| 21+55 | 31.3015 | 4.89 | Q | \| | \| | \| | V \| |
| 22+ 0 | 31.3347 | 4.82 | Q | \| | \| | \| | V \| |
| 22+ 5 | 31.3675 | 4.76 | Q | \| | \| | \| | V \| |
| 22+10 | 31.3998 | 4.70 | Q | \| | \| | \| | V \| |
| 22+15 | 31.4317 | 4.64 | Q | \| | \| | \| | V \| |
| 22+20 | 31.4633 | 4.58 | Q | \| | \| | \| | V\| |
| 22+25 | 31.4944 | 4.52 | Q | \| | \| | \| | V\| |
| 22+30 | 31.5252 | 4.47 | Q | \| | \| | \| | V\| |
| 22+35 | 31.5556 | 4.41 | Q | \| | \| | \| | V\| |
| 22+40 | 31.5856 | 4.36 | Q | \| | \| | \| | V\| |
| 22+45 | 31.6153 | 4.31 | Q | \| | \| | \| | V\| |
| 22+50 | 31.6447 | 4.26 | Q | \| | \| | \| | V\| |
| 22+55 | 31.6737 | 4.22 | Q | \| | \| | \| | V\| |
| 23+ 0 | 31.7024 | 4.17 | Q | \| | \| | \| | V\| |
| 23+ 5 | 31.7308 | 4.12 | Q | \| | \| | \| | V\| |
| 23+10 | 31.7589 | 4.08 | Q | \| | \| | \| | V\| |
| 23+15 | 31.7867 | 4.04 | Q | \| | \| | \| | V\| |
| 23+20 | 31.8142 | 3.99 | Q | \| | \| | \| | V\| |
| 23+25 | 31.8415 | 3.95 | Q | \| | \| | \| | V\| |
| 23+30 | 31.8684 | 3.91 | Q | \| | \| | \| | V\| |
| 23+35 | 31.8951 | 3.87 | Q | \| | \| | \| | V\| |
| 23+40 | 31.9215 | 3.84 | Q | \| | \| | \| | V\| |
| 23+45 | 31.9476 | 3.80 | Q | \| | \| | \| | V\| |
| 23+50 | 31.9736 | 3.76 | Q | \| | \| | \| | V\| |
| 23+55 | 31.9992 | 3.73 | Q | \| | \| | \| | V\| |
| 24+ 0 | 32.0246 | 3.69 | Q | \| | \| | \| | V\| |
| 24+ 5 | 32.0496 | 3.63 | Q | \| | \| | \| | V\| |
| 24+10 | 32.0738 | 3.51 | Q | \| | \| | \| | V\| |
| 24+15 | 32.0967 | 3.33 | Q | \| | \| | \| | V\| |
| 24+20 | 32.1175 | 3.02 | Q | \| | \| | \| | V\| |
| 24+25 | 32.1347 | 2.49 | Q | \| | \| | \| | V\| |
| 24+30 | 32.1486 | 2.01 | Q | \| | \| | \| | V\| |
| 24+35 | 32.1600 | 1.67 | Q | \| | \| | \| | V\| |
| 24+40 | 32.1698 | 1.42 | Q | \| | \| | \| | V\| |
| 24+45 | 32.1783 | 1.23 | Q | \| | \| | \| | V\| |
| 24+50 | 32.1857 | 1.08 | Q | \| | \| | \| | V\| |
| 24+55 | 32.1923 | 0.95 | Q | \| | \| | \| | V\| |
| 25+ 0 | 32.1981 | 0.85 | Q | \| | \| | \| | V\| |
| 25+ 5 | 32.2033 | 0.75 | Q | \| | \| | \| | V\| |
| 25+10 | 32.2080 | 0.67 | Q | \| | \| | \| | V\| |
| 25+15 | 32.2122 | 0.61 | Q | \| | \| | \| | V\| |
| 25+20 | 32.2159 | 0.54 | Q | \| | \| | \| | V\| |
| 25+25 | 32.2193 | 0.49 | Q | \| | \| | \| | V\| |
| 25+30 | 32.2223 | 0.44 | Q | \| | \| | \| | V\| |
| 25+35 | 32.2250 | 0.39 | Q | \| | \| | \| | V\| |
| 25+40 | 32.2274 | 0.36 | Q | \| | \| | \| | V\| |
| 25+45 | 32.2296 | 0.32 | Q | \| | \| | \| | V\| |
| 25+50 | 32.2316 | 0.29 | Q | \| | \| | \| | V\| |
| 25+55 | 32.2334 | 0.26 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+ 0 | 32.2350 | 0.23 | Q | \| | \| | \| | V\| |
| 26+ 5 | 32.2364 | 0.21 | Q | \| | \| | \| | V\| |
| 26+10 | 32.2377 | 0.19 | Q | \| | \| | \| | V\| |
| 26+15 | 32.2388 | 0.17 | Q | \| | \| | \| | V\| |
| 26+20 | 32.2399 | 0.15 | Q | \| | \| | \| | V\| |
| 26+25 | 32.2408 | 0.13 | Q | \| | \| | \| | V\| |
| 26+30 | 32.2416 | 0.12 | Q | \| | \| | \| | V\| |
| 26+35 | 32.2423 | 0.10 | Q | \| | \| | \| | V\| |
| 26+40 | 32.2429 | 0.09 | Q | \| | \| | \| | V\| |
| 26+45 | 32.2435 | 0.08 | Q | \| | \| | \| | V\| |
| 26+50 | 32.2440 | 0.07 | Q | \| | \| | \| | V\| |
| 26+55 | 32.2444 | 0.07 | Q | \| | \| | \| | V\| |
| 27+ 0 | 32.2448 | 0.06 | Q | \| | \| | \| | V\| |
| 27+ 5 | 32.2452 | 0.05 | Q | \| | \| | \| | V\| |
| 27+10 | 32.2455 | 0.05 | Q | \| | \| | \| | V\| |
| 27+15 | 32.2458 | 0.04 | Q | \| | \| | \| | V\| |
| 27+20 | 32.2460 | 0.03 | Q | \| | \| | \| | V\| |
| 27+25 | 32.2462 | 0.02 | Q | \| | \| | \| | V\| |
| 27+30 | 32.2463 | 0.02 | Q | \| | \| | \| | V\| |
| 27+35 | 32.2464 | 0.01 | Q | \| | \| | \| | V\| |
| 27+40 | 32.2464 | 0.01 | Q | \| | \| | \| | V\| |
| 27+45 | 32.2465 | 0.01 | Q | \| | \| | \| | V\| |
| 27+50 | 32.2465 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 17
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 148.48 | 1 | 1.30 |
| Rainfall data for year 100 | | |
| 148.48 | 6 | 1.83 |
| Rainfall data for year 100 | | |
| 148.48 | 24 | 2.43 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 74.0 | 90.2 | 148.48 | 1.000 | 0.189 | 0.993 | 0.187 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.187

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 147.44 | 0.993 | 74.0 | 90.2 | 1.09 | 0.611 |
| 1.04 | 0.007 | 98.0 | 98.0 | 0.20 | 0.906 |

Area-averaged catchment yield fraction, Y = 0.613
Area-averaged low loss fraction, Yb = 0.387
User entry of time of concentration = 0.750 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 148.48(Ac.)
Catchment Lag time = 0.600 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 13.8889
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.187(In/Hr)
Average low loss rate fraction (Yb) = 0.387 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.617(In)
Computed peak 30-minute rainfall = 1.056(In)
Specified peak 1-hour rainfall = 1.300(In)
Computed peak 3-hour rainfall = 1.603(In)
Specified peak 6-hour rainfall = 1.830(In)
Specified peak 24-hour rainfall = 2.430(In)

Rainfall depth area reduction factors:
Using a total area of 148.48(Ac.) (Ref: fig. E-4)

5-minute factor = 0.993 Adjusted rainfall = 0.613(In)
30-minute factor = 0.993 Adjusted rainfall = 1.049(In)
1-hour factor = 0.993 Adjusted rainfall = 1.291(In)
3-hour factor = 0.999 Adjusted rainfall = 1.602(In)
6-hour factor = 1.000 Adjusted rainfall = 1.829(In)
24-hour factor = 1.000 Adjusted rainfall = 2.430(In)
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U n i t H y d r o g r a p h

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 1795.68 (CFS)) | |
| 1 | 0.617 | 11.073 |
| 2 | 2.522 | 34.218 |
| 3 | 5.666 | 56.454 |
| 4 | 10.371 | 84.487 |
| 5 | 19.167 | 157.940 |
| 6 | 32.302 | 235.873 |
| 7 | 43.643 | 203.640 |
| 8 | 52.133 | 152.463 |
| 9 | 58.624 | 116.550 |
| 10 | 63.463 | 86.901 |
| 11 | 67.393 | 70.570 |
| 12 | 70.808 | 61.322 |
| 13 | 73.696 | 51.845 |

| | | |
|---|---|---|
| 14 | 76.186 | 44.722 |
| 15 | 78.443 | 40.532 |
| 16 | 80.317 | 33.639 |
| 17 | 82.043 | 31.005 |
| 18 | 83.550 | 27.055 |
| 19 | 84.967 | 25.439 |
| 20 | 86.296 | 23.863 |
| 21 | 87.478 | 21.229 |
| 22 | 88.567 | 19.553 |
| 23 | 89.450 | 15.862 |
| 24 | 90.273 | 14.784 |
| 25 | 91.056 | 14.046 |
| 26 | 91.798 | 13.328 |
| 27 | 92.467 | 12.011 |
| 28 | 93.106 | 11.472 |
| 29 | 93.714 | 10.924 |
| 30 | 94.231 | 9.278 |
| 31 | 94.703 | 8.480 |
| 32 | 95.175 | 8.480 |
| 33 | 95.627 | 8.120 |
| 34 | 95.997 | 6.644 |
| 35 | 96.358 | 6.484 |
| 36 | 96.719 | 6.484 |
| 37 | 97.025 | 5.487 |
| 38 | 97.275 | 4.489 |
| 39 | 97.525 | 4.489 |
| 40 | 97.766 | 4.330 |
| 41 | 97.925 | 2.853 |
| 42 | 98.064 | 2.494 |
| 43 | 98.203 | 2.494 |
| 44 | 98.351 | 2.654 |
| 45 | 98.517 | 2.983 |
| 46 | 98.683 | 2.993 |
| 47 | 98.850 | 2.993 |
| 48 | 99.017 | 2.993 |
| 49 | 99.183 | 2.993 |
| 50 | 99.350 | 2.993 |
| 51 | 99.502 | 2.735 |
| 52 | 99.595 | 1.673 |
| 53 | 99.682 | 1.559 |
| 54 | 99.769 | 1.559 |
| 55 | 99.856 | 1.559 |
| 56 | 99.943 | 1.559 |
| 57 | 100.000 | 1.029 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6126 | 0.6126 |
| 2 | 0.7542 | 0.1416 |
| 3 | 0.8517 | 0.0975 |
| 4 | 0.9285 | 0.0768 |
| 5 | 0.9928 | 0.0643 |
| 6 | 1.0486 | 0.0558 |
| 7 | 1.0982 | 0.0496 |
| 8 | 1.1431 | 0.0449 |
| 9 | 1.1842 | 0.0411 |
| 10 | 1.2222 | 0.0380 |
| 11 | 1.2577 | 0.0355 |
| 12 | 1.2910 | 0.0333 |

| | | |
|---|---|---|
| 13 | 1.3114 | 0.0205 |
| 14 | 1.3306 | 0.0192 |
| 15 | 1.3488 | 0.0182 |
| 16 | 1.3660 | 0.0172 |
| 17 | 1.3824 | 0.0164 |
| 18 | 1.3980 | 0.0156 |
| 19 | 1.4129 | 0.0149 |
| 20 | 1.4272 | 0.0143 |
| 21 | 1.4409 | 0.0137 |
| 22 | 1.4542 | 0.0132 |
| 23 | 1.4669 | 0.0128 |
| 24 | 1.4792 | 0.0123 |
| 25 | 1.4911 | 0.0119 |
| 26 | 1.5027 | 0.0115 |
| 27 | 1.5138 | 0.0112 |
| 28 | 1.5247 | 0.0109 |
| 29 | 1.5352 | 0.0105 |
| 30 | 1.5455 | 0.0103 |
| 31 | 1.5555 | 0.0100 |
| 32 | 1.5652 | 0.0097 |
| 33 | 1.5747 | 0.0095 |
| 34 | 1.5840 | 0.0093 |
| 35 | 1.5930 | 0.0090 |
| 36 | 1.6018 | 0.0088 |
| 37 | 1.6103 | 0.0084 |
| 38 | 1.6185 | 0.0082 |
| 39 | 1.6266 | 0.0081 |
| 40 | 1.6345 | 0.0079 |
| 41 | 1.6422 | 0.0077 |
| 42 | 1.6498 | 0.0076 |
| 43 | 1.6573 | 0.0074 |
| 44 | 1.6646 | 0.0073 |
| 45 | 1.6717 | 0.0072 |
| 46 | 1.6788 | 0.0070 |
| 47 | 1.6857 | 0.0069 |
| 48 | 1.6925 | 0.0068 |
| 49 | 1.6992 | 0.0067 |
| 50 | 1.7058 | 0.0066 |
| 51 | 1.7123 | 0.0065 |
| 52 | 1.7187 | 0.0064 |
| 53 | 1.7249 | 0.0063 |
| 54 | 1.7311 | 0.0062 |
| 55 | 1.7372 | 0.0061 |
| 56 | 1.7432 | 0.0060 |
| 57 | 1.7491 | 0.0059 |
| 58 | 1.7550 | 0.0058 |
| 59 | 1.7607 | 0.0058 |
| 60 | 1.7664 | 0.0057 |
| 61 | 1.7720 | 0.0056 |
| 62 | 1.7775 | 0.0055 |
| 63 | 1.7830 | 0.0055 |
| 64 | 1.7884 | 0.0054 |
| 65 | 1.7937 | 0.0053 |
| 66 | 1.7989 | 0.0053 |
| 67 | 1.8041 | 0.0052 |
| 68 | 1.8092 | 0.0051 |
| 69 | 1.8143 | 0.0051 |
| 70 | 1.8193 | 0.0050 |
| 71 | 1.8243 | 0.0049 |

| | | |
|---|---|---|
| 72 | 1.8292 | 0.0049 |
| 73 | 1.8343 | 0.0052 |
| 74 | 1.8394 | 0.0051 |
| 75 | 1.8445 | 0.0051 |
| 76 | 1.8495 | 0.0050 |
| 77 | 1.8545 | 0.0050 |
| 78 | 1.8594 | 0.0049 |
| 79 | 1.8642 | 0.0049 |
| 80 | 1.8690 | 0.0048 |
| 81 | 1.8738 | 0.0048 |
| 82 | 1.8785 | 0.0047 |
| 83 | 1.8832 | 0.0047 |
| 84 | 1.8878 | 0.0046 |
| 85 | 1.8924 | 0.0046 |
| 86 | 1.8969 | 0.0045 |
| 87 | 1.9014 | 0.0045 |
| 88 | 1.9059 | 0.0045 |
| 89 | 1.9103 | 0.0044 |
| 90 | 1.9147 | 0.0044 |
| 91 | 1.9190 | 0.0043 |
| 92 | 1.9233 | 0.0043 |
| 93 | 1.9276 | 0.0043 |
| 94 | 1.9318 | 0.0042 |
| 95 | 1.9360 | 0.0042 |
| 96 | 1.9401 | 0.0042 |
| 97 | 1.9443 | 0.0041 |
| 98 | 1.9483 | 0.0041 |
| 99 | 1.9524 | 0.0041 |
| 100 | 1.9564 | 0.0040 |
| 101 | 1.9604 | 0.0040 |
| 102 | 1.9644 | 0.0040 |
| 103 | 1.9683 | 0.0039 |
| 104 | 1.9722 | 0.0039 |
| 105 | 1.9761 | 0.0039 |
| 106 | 1.9799 | 0.0038 |
| 107 | 1.9837 | 0.0038 |
| 108 | 1.9875 | 0.0038 |
| 109 | 1.9912 | 0.0038 |
| 110 | 1.9950 | 0.0037 |
| 111 | 1.9987 | 0.0037 |
| 112 | 2.0023 | 0.0037 |
| 113 | 2.0060 | 0.0036 |
| 114 | 2.0096 | 0.0036 |
| 115 | 2.0132 | 0.0036 |
| 116 | 2.0168 | 0.0036 |
| 117 | 2.0203 | 0.0035 |
| 118 | 2.0239 | 0.0035 |
| 119 | 2.0274 | 0.0035 |
| 120 | 2.0308 | 0.0035 |
| 121 | 2.0343 | 0.0035 |
| 122 | 2.0377 | 0.0034 |
| 123 | 2.0411 | 0.0034 |
| 124 | 2.0445 | 0.0034 |
| 125 | 2.0479 | 0.0034 |
| 126 | 2.0512 | 0.0033 |
| 127 | 2.0545 | 0.0033 |
| 128 | 2.0579 | 0.0033 |
| 129 | 2.0611 | 0.0033 |
| 130 | 2.0644 | 0.0033 |

| | | |
|---|---|---|
| 131 | 2.0676 | 0.0032 |
| 132 | 2.0709 | 0.0032 |
| 133 | 2.0741 | 0.0032 |
| 134 | 2.0772 | 0.0032 |
| 135 | 2.0804 | 0.0032 |
| 136 | 2.0836 | 0.0031 |
| 137 | 2.0867 | 0.0031 |
| 138 | 2.0898 | 0.0031 |
| 139 | 2.0929 | 0.0031 |
| 140 | 2.0960 | 0.0031 |
| 141 | 2.0990 | 0.0031 |
| 142 | 2.1021 | 0.0030 |
| 143 | 2.1051 | 0.0030 |
| 144 | 2.1081 | 0.0030 |
| 145 | 2.1111 | 0.0030 |
| 146 | 2.1140 | 0.0030 |
| 147 | 2.1170 | 0.0030 |
| 148 | 2.1199 | 0.0029 |
| 149 | 2.1229 | 0.0029 |
| 150 | 2.1258 | 0.0029 |
| 151 | 2.1287 | 0.0029 |
| 152 | 2.1315 | 0.0029 |
| 153 | 2.1344 | 0.0029 |
| 154 | 2.1373 | 0.0028 |
| 155 | 2.1401 | 0.0028 |
| 156 | 2.1429 | 0.0028 |
| 157 | 2.1457 | 0.0028 |
| 158 | 2.1485 | 0.0028 |
| 159 | 2.1513 | 0.0028 |
| 160 | 2.1541 | 0.0028 |
| 161 | 2.1568 | 0.0027 |
| 162 | 2.1595 | 0.0027 |
| 163 | 2.1623 | 0.0027 |
| 164 | 2.1650 | 0.0027 |
| 165 | 2.1677 | 0.0027 |
| 166 | 2.1704 | 0.0027 |
| 167 | 2.1730 | 0.0027 |
| 168 | 2.1757 | 0.0027 |
| 169 | 2.1783 | 0.0026 |
| 170 | 2.1810 | 0.0026 |
| 171 | 2.1836 | 0.0026 |
| 172 | 2.1862 | 0.0026 |
| 173 | 2.1888 | 0.0026 |
| 174 | 2.1914 | 0.0026 |
| 175 | 2.1939 | 0.0026 |
| 176 | 2.1965 | 0.0026 |
| 177 | 2.1991 | 0.0025 |
| 178 | 2.2016 | 0.0025 |
| 179 | 2.2041 | 0.0025 |
| 180 | 2.2066 | 0.0025 |
| 181 | 2.2091 | 0.0025 |
| 182 | 2.2116 | 0.0025 |
| 183 | 2.2141 | 0.0025 |
| 184 | 2.2166 | 0.0025 |
| 185 | 2.2190 | 0.0025 |
| 186 | 2.2215 | 0.0025 |
| 187 | 2.2239 | 0.0024 |
| 188 | 2.2264 | 0.0024 |
| 189 | 2.2288 | 0.0024 |

| | | |
|---|---|---|
| 190 | 2.2312 | 0.0024 |
| 191 | 2.2336 | 0.0024 |
| 192 | 2.2360 | 0.0024 |
| 193 | 2.2384 | 0.0024 |
| 194 | 2.2407 | 0.0024 |
| 195 | 2.2431 | 0.0024 |
| 196 | 2.2454 | 0.0024 |
| 197 | 2.2478 | 0.0023 |
| 198 | 2.2501 | 0.0023 |
| 199 | 2.2524 | 0.0023 |
| 200 | 2.2548 | 0.0023 |
| 201 | 2.2571 | 0.0023 |
| 202 | 2.2594 | 0.0023 |
| 203 | 2.2616 | 0.0023 |
| 204 | 2.2639 | 0.0023 |
| 205 | 2.2662 | 0.0023 |
| 206 | 2.2684 | 0.0023 |
| 207 | 2.2707 | 0.0023 |
| 208 | 2.2729 | 0.0022 |
| 209 | 2.2752 | 0.0022 |
| 210 | 2.2774 | 0.0022 |
| 211 | 2.2796 | 0.0022 |
| 212 | 2.2818 | 0.0022 |
| 213 | 2.2840 | 0.0022 |
| 214 | 2.2862 | 0.0022 |
| 215 | 2.2884 | 0.0022 |
| 216 | 2.2906 | 0.0022 |
| 217 | 2.2927 | 0.0022 |
| 218 | 2.2949 | 0.0022 |
| 219 | 2.2970 | 0.0022 |
| 220 | 2.2992 | 0.0021 |
| 221 | 2.3013 | 0.0021 |
| 222 | 2.3035 | 0.0021 |
| 223 | 2.3056 | 0.0021 |
| 224 | 2.3077 | 0.0021 |
| 225 | 2.3098 | 0.0021 |
| 226 | 2.3119 | 0.0021 |
| 227 | 2.3140 | 0.0021 |
| 228 | 2.3161 | 0.0021 |
| 229 | 2.3181 | 0.0021 |
| 230 | 2.3202 | 0.0021 |
| 231 | 2.3223 | 0.0021 |
| 232 | 2.3243 | 0.0021 |
| 233 | 2.3264 | 0.0020 |
| 234 | 2.3284 | 0.0020 |
| 235 | 2.3305 | 0.0020 |
| 236 | 2.3325 | 0.0020 |
| 237 | 2.3345 | 0.0020 |
| 238 | 2.3365 | 0.0020 |
| 239 | 2.3385 | 0.0020 |
| 240 | 2.3405 | 0.0020 |
| 241 | 2.3425 | 0.0020 |
| 242 | 2.3445 | 0.0020 |
| 243 | 2.3465 | 0.0020 |
| 244 | 2.3485 | 0.0020 |
| 245 | 2.3504 | 0.0020 |
| 246 | 2.3524 | 0.0020 |
| 247 | 2.3543 | 0.0020 |
| 248 | 2.3563 | 0.0019 |

| | | |
|---|---|---|
| 249 | 2.3582 | 0.0019 |
| 250 | 2.3602 | 0.0019 |
| 251 | 2.3621 | 0.0019 |
| 252 | 2.3640 | 0.0019 |
| 253 | 2.3659 | 0.0019 |
| 254 | 2.3679 | 0.0019 |
| 255 | 2.3698 | 0.0019 |
| 256 | 2.3717 | 0.0019 |
| 257 | 2.3736 | 0.0019 |
| 258 | 2.3754 | 0.0019 |
| 259 | 2.3773 | 0.0019 |
| 260 | 2.3792 | 0.0019 |
| 261 | 2.3811 | 0.0019 |
| 262 | 2.3829 | 0.0019 |
| 263 | 2.3848 | 0.0019 |
| 264 | 2.3866 | 0.0019 |
| 265 | 2.3885 | 0.0018 |
| 266 | 2.3903 | 0.0018 |
| 267 | 2.3922 | 0.0018 |
| 268 | 2.3940 | 0.0018 |
| 269 | 2.3958 | 0.0018 |
| 270 | 2.3977 | 0.0018 |
| 271 | 2.3995 | 0.0018 |
| 272 | 2.4013 | 0.0018 |
| 273 | 2.4031 | 0.0018 |
| 274 | 2.4049 | 0.0018 |
| 275 | 2.4067 | 0.0018 |
| 276 | 2.4085 | 0.0018 |
| 277 | 2.4103 | 0.0018 |
| 278 | 2.4120 | 0.0018 |
| 279 | 2.4138 | 0.0018 |
| 280 | 2.4156 | 0.0018 |
| 281 | 2.4173 | 0.0018 |
| 282 | 2.4191 | 0.0018 |
| 283 | 2.4209 | 0.0018 |
| 284 | 2.4226 | 0.0017 |
| 285 | 2.4243 | 0.0017 |
| 286 | 2.4261 | 0.0017 |
| 287 | 2.4278 | 0.0017 |
| 288 | 2.4295 | 0.0017 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0017 | 0.0007 | 0.0011 |
| 2 | 0.0017 | 0.0007 | 0.0011 |
| 3 | 0.0017 | 0.0007 | 0.0011 |
| 4 | 0.0017 | 0.0007 | 0.0011 |
| 5 | 0.0018 | 0.0007 | 0.0011 |
| 6 | 0.0018 | 0.0007 | 0.0011 |
| 7 | 0.0018 | 0.0007 | 0.0011 |
| 8 | 0.0018 | 0.0007 | 0.0011 |
| 9 | 0.0018 | 0.0007 | 0.0011 |
| 10 | 0.0018 | 0.0007 | 0.0011 |
| 11 | 0.0018 | 0.0007 | 0.0011 |
| 12 | 0.0018 | 0.0007 | 0.0011 |
| 13 | 0.0018 | 0.0007 | 0.0011 |
| 14 | 0.0018 | 0.0007 | 0.0011 |

| | | | |
|---|---|---|---|
| 15 | 0.0018 | 0.0007 | 0.0011 |
| 16 | 0.0018 | 0.0007 | 0.0011 |
| 17 | 0.0019 | 0.0007 | 0.0011 |
| 18 | 0.0019 | 0.0007 | 0.0011 |
| 19 | 0.0019 | 0.0007 | 0.0011 |
| 20 | 0.0019 | 0.0007 | 0.0011 |
| 21 | 0.0019 | 0.0007 | 0.0012 |
| 22 | 0.0019 | 0.0007 | 0.0012 |
| 23 | 0.0019 | 0.0007 | 0.0012 |
| 24 | 0.0019 | 0.0007 | 0.0012 |
| 25 | 0.0019 | 0.0007 | 0.0012 |
| 26 | 0.0019 | 0.0007 | 0.0012 |
| 27 | 0.0019 | 0.0008 | 0.0012 |
| 28 | 0.0019 | 0.0008 | 0.0012 |
| 29 | 0.0020 | 0.0008 | 0.0012 |
| 30 | 0.0020 | 0.0008 | 0.0012 |
| 31 | 0.0020 | 0.0008 | 0.0012 |
| 32 | 0.0020 | 0.0008 | 0.0012 |
| 33 | 0.0020 | 0.0008 | 0.0012 |
| 34 | 0.0020 | 0.0008 | 0.0012 |
| 35 | 0.0020 | 0.0008 | 0.0012 |
| 36 | 0.0020 | 0.0008 | 0.0012 |
| 37 | 0.0020 | 0.0008 | 0.0013 |
| 38 | 0.0020 | 0.0008 | 0.0013 |
| 39 | 0.0021 | 0.0008 | 0.0013 |
| 40 | 0.0021 | 0.0008 | 0.0013 |
| 41 | 0.0021 | 0.0008 | 0.0013 |
| 42 | 0.0021 | 0.0008 | 0.0013 |
| 43 | 0.0021 | 0.0008 | 0.0013 |
| 44 | 0.0021 | 0.0008 | 0.0013 |
| 45 | 0.0021 | 0.0008 | 0.0013 |
| 46 | 0.0021 | 0.0008 | 0.0013 |
| 47 | 0.0022 | 0.0008 | 0.0013 |
| 48 | 0.0022 | 0.0008 | 0.0013 |
| 49 | 0.0022 | 0.0008 | 0.0013 |
| 50 | 0.0022 | 0.0008 | 0.0013 |
| 51 | 0.0022 | 0.0009 | 0.0013 |
| 52 | 0.0022 | 0.0009 | 0.0014 |
| 53 | 0.0022 | 0.0009 | 0.0014 |
| 54 | 0.0022 | 0.0009 | 0.0014 |
| 55 | 0.0023 | 0.0009 | 0.0014 |
| 56 | 0.0023 | 0.0009 | 0.0014 |
| 57 | 0.0023 | 0.0009 | 0.0014 |
| 58 | 0.0023 | 0.0009 | 0.0014 |
| 59 | 0.0023 | 0.0009 | 0.0014 |
| 60 | 0.0023 | 0.0009 | 0.0014 |
| 61 | 0.0023 | 0.0009 | 0.0014 |
| 62 | 0.0023 | 0.0009 | 0.0014 |
| 63 | 0.0024 | 0.0009 | 0.0014 |
| 64 | 0.0024 | 0.0009 | 0.0015 |
| 65 | 0.0024 | 0.0009 | 0.0015 |
| 66 | 0.0024 | 0.0009 | 0.0015 |
| 67 | 0.0024 | 0.0009 | 0.0015 |
| 68 | 0.0024 | 0.0009 | 0.0015 |
| 69 | 0.0025 | 0.0009 | 0.0015 |
| 70 | 0.0025 | 0.0010 | 0.0015 |
| 71 | 0.0025 | 0.0010 | 0.0015 |
| 72 | 0.0025 | 0.0010 | 0.0015 |
| 73 | 0.0025 | 0.0010 | 0.0015 |

| | | | |
|---|---|---|---|
| 74 | 0.0025 | 0.0010 | 0.0015 |
| 75 | 0.0025 | 0.0010 | 0.0016 |
| 76 | 0.0026 | 0.0010 | 0.0016 |
| 77 | 0.0026 | 0.0010 | 0.0016 |
| 78 | 0.0026 | 0.0010 | 0.0016 |
| 79 | 0.0026 | 0.0010 | 0.0016 |
| 80 | 0.0026 | 0.0010 | 0.0016 |
| 81 | 0.0027 | 0.0010 | 0.0016 |
| 82 | 0.0027 | 0.0010 | 0.0016 |
| 83 | 0.0027 | 0.0010 | 0.0017 |
| 84 | 0.0027 | 0.0010 | 0.0017 |
| 85 | 0.0027 | 0.0011 | 0.0017 |
| 86 | 0.0027 | 0.0011 | 0.0017 |
| 87 | 0.0028 | 0.0011 | 0.0017 |
| 88 | 0.0028 | 0.0011 | 0.0017 |
| 89 | 0.0028 | 0.0011 | 0.0017 |
| 90 | 0.0028 | 0.0011 | 0.0017 |
| 91 | 0.0029 | 0.0011 | 0.0018 |
| 92 | 0.0029 | 0.0011 | 0.0018 |
| 93 | 0.0029 | 0.0011 | 0.0018 |
| 94 | 0.0029 | 0.0011 | 0.0018 |
| 95 | 0.0030 | 0.0011 | 0.0018 |
| 96 | 0.0030 | 0.0012 | 0.0018 |
| 97 | 0.0030 | 0.0012 | 0.0018 |
| 98 | 0.0030 | 0.0012 | 0.0019 |
| 99 | 0.0031 | 0.0012 | 0.0019 |
| 100 | 0.0031 | 0.0012 | 0.0019 |
| 101 | 0.0031 | 0.0012 | 0.0019 |
| 102 | 0.0031 | 0.0012 | 0.0019 |
| 103 | 0.0032 | 0.0012 | 0.0019 |
| 104 | 0.0032 | 0.0012 | 0.0020 |
| 105 | 0.0032 | 0.0012 | 0.0020 |
| 106 | 0.0032 | 0.0013 | 0.0020 |
| 107 | 0.0033 | 0.0013 | 0.0020 |
| 108 | 0.0033 | 0.0013 | 0.0020 |
| 109 | 0.0033 | 0.0013 | 0.0020 |
| 110 | 0.0034 | 0.0013 | 0.0021 |
| 111 | 0.0034 | 0.0013 | 0.0021 |
| 112 | 0.0034 | 0.0013 | 0.0021 |
| 113 | 0.0035 | 0.0013 | 0.0021 |
| 114 | 0.0035 | 0.0014 | 0.0021 |
| 115 | 0.0035 | 0.0014 | 0.0022 |
| 116 | 0.0036 | 0.0014 | 0.0022 |
| 117 | 0.0036 | 0.0014 | 0.0022 |
| 118 | 0.0036 | 0.0014 | 0.0022 |
| 119 | 0.0037 | 0.0014 | 0.0023 |
| 120 | 0.0037 | 0.0014 | 0.0023 |
| 121 | 0.0038 | 0.0015 | 0.0023 |
| 122 | 0.0038 | 0.0015 | 0.0023 |
| 123 | 0.0039 | 0.0015 | 0.0024 |
| 124 | 0.0039 | 0.0015 | 0.0024 |
| 125 | 0.0040 | 0.0015 | 0.0024 |
| 126 | 0.0040 | 0.0015 | 0.0024 |
| 127 | 0.0041 | 0.0016 | 0.0025 |
| 128 | 0.0041 | 0.0016 | 0.0025 |
| 129 | 0.0042 | 0.0016 | 0.0025 |
| 130 | 0.0042 | 0.0016 | 0.0026 |
| 131 | 0.0043 | 0.0017 | 0.0026 |
| 132 | 0.0043 | 0.0017 | 0.0026 |

| | | | |
|---|---|---|---|
| 133 | 0.0044 | 0.0017 | 0.0027 |
| 134 | 0.0044 | 0.0017 | 0.0027 |
| 135 | 0.0045 | 0.0017 | 0.0028 |
| 136 | 0.0045 | 0.0018 | 0.0028 |
| 137 | 0.0046 | 0.0018 | 0.0028 |
| 138 | 0.0047 | 0.0018 | 0.0029 |
| 139 | 0.0048 | 0.0018 | 0.0029 |
| 140 | 0.0048 | 0.0019 | 0.0029 |
| 141 | 0.0049 | 0.0019 | 0.0030 |
| 142 | 0.0050 | 0.0019 | 0.0030 |
| 143 | 0.0051 | 0.0020 | 0.0031 |
| 144 | 0.0051 | 0.0020 | 0.0031 |
| 145 | 0.0049 | 0.0019 | 0.0030 |
| 146 | 0.0049 | 0.0019 | 0.0030 |
| 147 | 0.0051 | 0.0020 | 0.0031 |
| 148 | 0.0051 | 0.0020 | 0.0031 |
| 149 | 0.0053 | 0.0020 | 0.0032 |
| 150 | 0.0053 | 0.0021 | 0.0033 |
| 151 | 0.0055 | 0.0021 | 0.0033 |
| 152 | 0.0055 | 0.0021 | 0.0034 |
| 153 | 0.0057 | 0.0022 | 0.0035 |
| 154 | 0.0058 | 0.0022 | 0.0035 |
| 155 | 0.0059 | 0.0023 | 0.0036 |
| 156 | 0.0060 | 0.0023 | 0.0037 |
| 157 | 0.0062 | 0.0024 | 0.0038 |
| 158 | 0.0063 | 0.0024 | 0.0038 |
| 159 | 0.0065 | 0.0025 | 0.0040 |
| 160 | 0.0066 | 0.0025 | 0.0040 |
| 161 | 0.0068 | 0.0026 | 0.0042 |
| 162 | 0.0069 | 0.0027 | 0.0042 |
| 163 | 0.0072 | 0.0028 | 0.0044 |
| 164 | 0.0073 | 0.0028 | 0.0045 |
| 165 | 0.0076 | 0.0029 | 0.0047 |
| 166 | 0.0077 | 0.0030 | 0.0047 |
| 167 | 0.0081 | 0.0031 | 0.0049 |
| 168 | 0.0082 | 0.0032 | 0.0051 |
| 169 | 0.0088 | 0.0034 | 0.0054 |
| 170 | 0.0090 | 0.0035 | 0.0055 |
| 171 | 0.0095 | 0.0037 | 0.0058 |
| 172 | 0.0097 | 0.0038 | 0.0060 |
| 173 | 0.0103 | 0.0040 | 0.0063 |
| 174 | 0.0105 | 0.0041 | 0.0065 |
| 175 | 0.0112 | 0.0043 | 0.0069 |
| 176 | 0.0115 | 0.0045 | 0.0071 |
| 177 | 0.0123 | 0.0048 | 0.0075 |
| 178 | 0.0128 | 0.0049 | 0.0078 |
| 179 | 0.0137 | 0.0053 | 0.0084 |
| 180 | 0.0143 | 0.0055 | 0.0088 |
| 181 | 0.0156 | 0.0060 | 0.0096 |
| 182 | 0.0164 | 0.0063 | 0.0100 |
| 183 | 0.0182 | 0.0070 | 0.0111 |
| 184 | 0.0192 | 0.0074 | 0.0118 |
| 185 | 0.0333 | 0.0129 | 0.0204 |
| 186 | 0.0355 | 0.0137 | 0.0217 |
| 187 | 0.0411 | 0.0156 | 0.0255 |
| 188 | 0.0449 | 0.0156 | 0.0293 |
| 189 | 0.0558 | 0.0156 | 0.0402 |
| 190 | 0.0643 | 0.0156 | 0.0487 |
| 191 | 0.0975 | 0.0156 | 0.0819 |

| | | | |
|---|---|---|---|
| 192 | 0.1416 | 0.0156 | 0.1260 |
| 193 | 0.6126 | 0.0156 | 0.5970 |
| 194 | 0.0768 | 0.0156 | 0.0612 |
| 195 | 0.0496 | 0.0156 | 0.0340 |
| 196 | 0.0380 | 0.0147 | 0.0233 |
| 197 | 0.0205 | 0.0079 | 0.0125 |
| 198 | 0.0172 | 0.0067 | 0.0105 |
| 199 | 0.0149 | 0.0058 | 0.0091 |
| 200 | 0.0132 | 0.0051 | 0.0081 |
| 201 | 0.0119 | 0.0046 | 0.0073 |
| 202 | 0.0109 | 0.0042 | 0.0066 |
| 203 | 0.0100 | 0.0039 | 0.0061 |
| 204 | 0.0093 | 0.0036 | 0.0057 |
| 205 | 0.0084 | 0.0033 | 0.0052 |
| 206 | 0.0079 | 0.0031 | 0.0048 |
| 207 | 0.0074 | 0.0029 | 0.0046 |
| 208 | 0.0070 | 0.0027 | 0.0043 |
| 209 | 0.0067 | 0.0026 | 0.0041 |
| 210 | 0.0064 | 0.0025 | 0.0039 |
| 211 | 0.0061 | 0.0024 | 0.0037 |
| 212 | 0.0058 | 0.0023 | 0.0036 |
| 213 | 0.0056 | 0.0022 | 0.0034 |
| 214 | 0.0054 | 0.0021 | 0.0033 |
| 215 | 0.0052 | 0.0020 | 0.0032 |
| 216 | 0.0050 | 0.0019 | 0.0031 |
| 217 | 0.0052 | 0.0020 | 0.0032 |
| 218 | 0.0050 | 0.0019 | 0.0031 |
| 219 | 0.0049 | 0.0019 | 0.0030 |
| 220 | 0.0047 | 0.0018 | 0.0029 |
| 221 | 0.0046 | 0.0018 | 0.0028 |
| 222 | 0.0045 | 0.0017 | 0.0027 |
| 223 | 0.0043 | 0.0017 | 0.0027 |
| 224 | 0.0042 | 0.0016 | 0.0026 |
| 225 | 0.0041 | 0.0016 | 0.0025 |
| 226 | 0.0040 | 0.0016 | 0.0025 |
| 227 | 0.0039 | 0.0015 | 0.0024 |
| 228 | 0.0038 | 0.0015 | 0.0024 |
| 229 | 0.0038 | 0.0015 | 0.0023 |
| 230 | 0.0037 | 0.0014 | 0.0023 |
| 231 | 0.0036 | 0.0014 | 0.0022 |
| 232 | 0.0035 | 0.0014 | 0.0022 |
| 233 | 0.0035 | 0.0013 | 0.0021 |
| 234 | 0.0034 | 0.0013 | 0.0021 |
| 235 | 0.0033 | 0.0013 | 0.0020 |
| 236 | 0.0033 | 0.0013 | 0.0020 |
| 237 | 0.0032 | 0.0012 | 0.0020 |
| 238 | 0.0031 | 0.0012 | 0.0019 |
| 239 | 0.0031 | 0.0012 | 0.0019 |
| 240 | 0.0030 | 0.0012 | 0.0019 |
| 241 | 0.0030 | 0.0012 | 0.0018 |
| 242 | 0.0029 | 0.0011 | 0.0018 |
| 243 | 0.0029 | 0.0011 | 0.0018 |
| 244 | 0.0028 | 0.0011 | 0.0017 |
| 245 | 0.0028 | 0.0011 | 0.0017 |
| 246 | 0.0028 | 0.0011 | 0.0017 |
| 247 | 0.0027 | 0.0011 | 0.0017 |
| 248 | 0.0027 | 0.0010 | 0.0016 |
| 249 | 0.0026 | 0.0010 | 0.0016 |
| 250 | 0.0026 | 0.0010 | 0.0016 |

| | | | |
|---|---|---|---|
| 251 | 0.0026 | 0.0010 | 0.0016 |
| 252 | 0.0025 | 0.0010 | 0.0016 |
| 253 | 0.0025 | 0.0010 | 0.0015 |
| 254 | 0.0025 | 0.0010 | 0.0015 |
| 255 | 0.0024 | 0.0009 | 0.0015 |
| 256 | 0.0024 | 0.0009 | 0.0015 |
| 257 | 0.0024 | 0.0009 | 0.0015 |
| 258 | 0.0024 | 0.0009 | 0.0014 |
| 259 | 0.0023 | 0.0009 | 0.0014 |
| 260 | 0.0023 | 0.0009 | 0.0014 |
| 261 | 0.0023 | 0.0009 | 0.0014 |
| 262 | 0.0022 | 0.0009 | 0.0014 |
| 263 | 0.0022 | 0.0009 | 0.0014 |
| 264 | 0.0022 | 0.0008 | 0.0013 |
| 265 | 0.0022 | 0.0008 | 0.0013 |
| 266 | 0.0021 | 0.0008 | 0.0013 |
| 267 | 0.0021 | 0.0008 | 0.0013 |
| 268 | 0.0021 | 0.0008 | 0.0013 |
| 269 | 0.0021 | 0.0008 | 0.0013 |
| 270 | 0.0021 | 0.0008 | 0.0013 |
| 271 | 0.0020 | 0.0008 | 0.0012 |
| 272 | 0.0020 | 0.0008 | 0.0012 |
| 273 | 0.0020 | 0.0008 | 0.0012 |
| 274 | 0.0020 | 0.0008 | 0.0012 |
| 275 | 0.0020 | 0.0008 | 0.0012 |
| 276 | 0.0019 | 0.0007 | 0.0012 |
| 277 | 0.0019 | 0.0007 | 0.0012 |
| 278 | 0.0019 | 0.0007 | 0.0012 |
| 279 | 0.0019 | 0.0007 | 0.0012 |
| 280 | 0.0019 | 0.0007 | 0.0011 |
| 281 | 0.0018 | 0.0007 | 0.0011 |
| 282 | 0.0018 | 0.0007 | 0.0011 |
| 283 | 0.0018 | 0.0007 | 0.0011 |
| 284 | 0.0018 | 0.0007 | 0.0011 |
| 285 | 0.0018 | 0.0007 | 0.0011 |
| 286 | 0.0018 | 0.0007 | 0.0011 |
| 287 | 0.0018 | 0.0007 | 0.0011 |
| 288 | 0.0017 | 0.0007 | 0.0011 |

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Total soil rain loss = 0.62(In)
Total effective rainfall = 1.81(In)
Peak flow rate in flood hydrograph = 211.40(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 75.0 | 150.0 | 225.0 | 300.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+10 | 0.0004 | 0.05 | Q | \| | \| | \| | \| |
| 0+15 | 0.0012 | 0.11 | Q | \| | \| | \| | \| |
| 0+20 | 0.0025 | 0.20 | Q | \| | \| | \| | \| |
| 0+25 | 0.0050 | 0.37 | Q | \| | \| | \| | \| |
| 0+30 | 0.0093 | 0.62 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+35 | 0.0151 | 0.84 | Q | | | | |
| 0+40 | 0.0219 | 1.00 | Q | | | | |
| 0+45 | 0.0297 | 1.13 | Q | | | | |
| 0+50 | 0.0382 | 1.23 | Q | | | | |
| 0+55 | 0.0471 | 1.31 | Q | | | | |
| 1+ 0 | 0.0566 | 1.38 | Q | | | | |
| 1+ 5 | 0.0665 | 1.44 | Q | | | | |
| 1+10 | 0.0768 | 1.49 | Q | | | | |
| 1+15 | 0.0874 | 1.54 | Q | | | | |
| 1+20 | 0.0983 | 1.58 | Q | | | | |
| 1+25 | 0.1094 | 1.62 | Q | | | | |
| 1+30 | 0.1208 | 1.66 | Q | | | | |
| 1+35 | 0.1325 | 1.69 | Q | | | | |
| 1+40 | 0.1444 | 1.72 | Q | | | | |
| 1+45 | 0.1564 | 1.75 | Q | | | | |
| 1+50 | 0.1687 | 1.78 | Q | | | | |
| 1+55 | 0.1812 | 1.81 | Q | | | | |
| 2+ 0 | 0.1938 | 1.83 | Q | | | | |
| 2+ 5 | 0.2066 | 1.85 | Q | | | | |
| 2+10 | 0.2195 | 1.88 | Q | | | | |
| 2+15 | 0.2326 | 1.90 | Q | | | | |
| 2+20 | 0.2458 | 1.92 | Q | | | | |
| 2+25 | 0.2591 | 1.94 | Q | | | | |
| 2+30 | 0.2726 | 1.96 | Q | | | | |
| 2+35 | 0.2862 | 1.98 | Q | | | | |
| 2+40 | 0.3000 | 1.99 | Q | | | | |
| 2+45 | 0.3138 | 2.01 | Q | | | | |
| 2+50 | 0.3278 | 2.03 | Q | | | | |
| 2+55 | 0.3419 | 2.05 | Q | | | | |
| 3+ 0 | 0.3561 | 2.06 | Q | | | | |
| 3+ 5 | 0.3704 | 2.08 | Q | | | | |
| 3+10 | 0.3848 | 2.09 | Q | | | | |
| 3+15 | 0.3994 | 2.11 | Q | | | | |
| 3+20 | 0.4140 | 2.12 | Q | | | | |
| 3+25 | 0.4287 | 2.14 | Q | | | | |
| 3+30 | 0.4435 | 2.15 | Q | | | | |
| 3+35 | 0.4584 | 2.16 | Q | | | | |
| 3+40 | 0.4734 | 2.18 | Q | | | | |
| 3+45 | 0.4885 | 2.19 | Q | | | | |
| 3+50 | 0.5037 | 2.21 | Q | | | | |
| 3+55 | 0.5190 | 2.22 | Q | | | | |
| 4+ 0 | 0.5343 | 2.23 | Q | | | | |
| 4+ 5 | 0.5498 | 2.25 | Q | | | | |
| 4+10 | 0.5654 | 2.26 | QV | | | | |
| 4+15 | 0.5811 | 2.28 | QV | | | | |
| 4+20 | 0.5969 | 2.29 | QV | | | | |
| 4+25 | 0.6128 | 2.31 | QV | | | | |
| 4+30 | 0.6288 | 2.32 | QV | | | | |
| 4+35 | 0.6449 | 2.33 | QV | | | | |
| 4+40 | 0.6610 | 2.35 | QV | | | | |
| 4+45 | 0.6773 | 2.36 | QV | | | | |
| 4+50 | 0.6937 | 2.38 | QV | | | | |
| 4+55 | 0.7101 | 2.39 | QV | | | | |
| 5+ 0 | 0.7267 | 2.40 | QV | | | | |
| 5+ 5 | 0.7433 | 2.42 | QV | | | | |
| 5+10 | 0.7600 | 2.43 | QV | | | | |
| 5+15 | 0.7769 | 2.44 | QV | | | | |
| 5+20 | 0.7938 | 2.46 | QV | | | | |
| 5+25 | 0.8108 | 2.47 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+30 | 0.8279 | 2.49 | QV | | | | |
| 5+35 | 0.8452 | 2.50 | QV | | | | |
| 5+40 | 0.8625 | 2.52 | QV | | | | |
| 5+45 | 0.8799 | 2.53 | QV | | | | |
| 5+50 | 0.8974 | 2.55 | QV | | | | |
| 5+55 | 0.9151 | 2.56 | QV | | | | |
| 6+ 0 | 0.9328 | 2.58 | QV | | | | |
| 6+ 5 | 0.9507 | 2.59 | QV | | | | |
| 6+10 | 0.9686 | 2.61 | QV | | | | |
| 6+15 | 0.9867 | 2.62 | QV | | | | |
| 6+20 | 1.0049 | 2.64 | QV | | | | |
| 6+25 | 1.0232 | 2.66 | QV | | | | |
| 6+30 | 1.0416 | 2.67 | QV | | | | |
| 6+35 | 1.0602 | 2.69 | QV | | | | |
| 6+40 | 1.0788 | 2.71 | QV | | | | |
| 6+45 | 1.0976 | 2.73 | QV | | | | |
| 6+50 | 1.1165 | 2.75 | QV | | | | |
| 6+55 | 1.1355 | 2.76 | Q V | | | | |
| 7+ 0 | 1.1547 | 2.78 | Q V | | | | |
| 7+ 5 | 1.1740 | 2.80 | Q V | | | | |
| 7+10 | 1.1934 | 2.82 | Q V | | | | |
| 7+15 | 1.2129 | 2.84 | Q V | | | | |
| 7+20 | 1.2326 | 2.86 | Q V | | | | |
| 7+25 | 1.2525 | 2.88 | Q V | | | | |
| 7+30 | 1.2724 | 2.90 | Q V | | | | |
| 7+35 | 1.2925 | 2.92 | Q V | | | | |
| 7+40 | 1.3128 | 2.94 | Q V | | | | |
| 7+45 | 1.3332 | 2.96 | Q V | | | | |
| 7+50 | 1.3537 | 2.98 | Q V | | | | |
| 7+55 | 1.3744 | 3.01 | Q V | | | | |
| 8+ 0 | 1.3953 | 3.03 | Q V | | | | |
| 8+ 5 | 1.4163 | 3.05 | Q V | | | | |
| 8+10 | 1.4375 | 3.07 | Q V | | | | |
| 8+15 | 1.4588 | 3.10 | Q V | | | | |
| 8+20 | 1.4803 | 3.12 | Q V | | | | |
| 8+25 | 1.5020 | 3.15 | Q V | | | | |
| 8+30 | 1.5239 | 3.17 | Q V | | | | |
| 8+35 | 1.5459 | 3.20 | Q V | | | | |
| 8+40 | 1.5681 | 3.22 | Q V | | | | |
| 8+45 | 1.5905 | 3.25 | Q V | | | | |
| 8+50 | 1.6130 | 3.28 | Q V | | | | |
| 8+55 | 1.6358 | 3.30 | Q V | | | | |
| 9+ 0 | 1.6587 | 3.33 | Q V | | | | |
| 9+ 5 | 1.6819 | 3.36 | Q  V | | | | |
| 9+10 | 1.7052 | 3.39 | Q  V | | | | |
| 9+15 | 1.7287 | 3.42 | Q  V | | | | |
| 9+20 | 1.7525 | 3.45 | Q  V | | | | |
| 9+25 | 1.7764 | 3.48 | Q  V | | | | |
| 9+30 | 1.8006 | 3.51 | Q  V | | | | |
| 9+35 | 1.8250 | 3.54 | Q  V | | | | |
| 9+40 | 1.8496 | 3.58 | Q  V | | | | |
| 9+45 | 1.8745 | 3.61 | Q  V | | | | |
| 9+50 | 1.8996 | 3.64 | Q  V | | | | |
| 9+55 | 1.9249 | 3.68 | Q  V | | | | |
| 10+ 0 | 1.9505 | 3.71 | Q  V | | | | |
| 10+ 5 | 1.9763 | 3.75 | Q  V | | | | |
| 10+10 | 2.0024 | 3.79 | Q  V | | | | |
| 10+15 | 2.0287 | 3.82 | Q  V | | | | |
| 10+20 | 2.0553 | 3.86 | Q  V | | | | |

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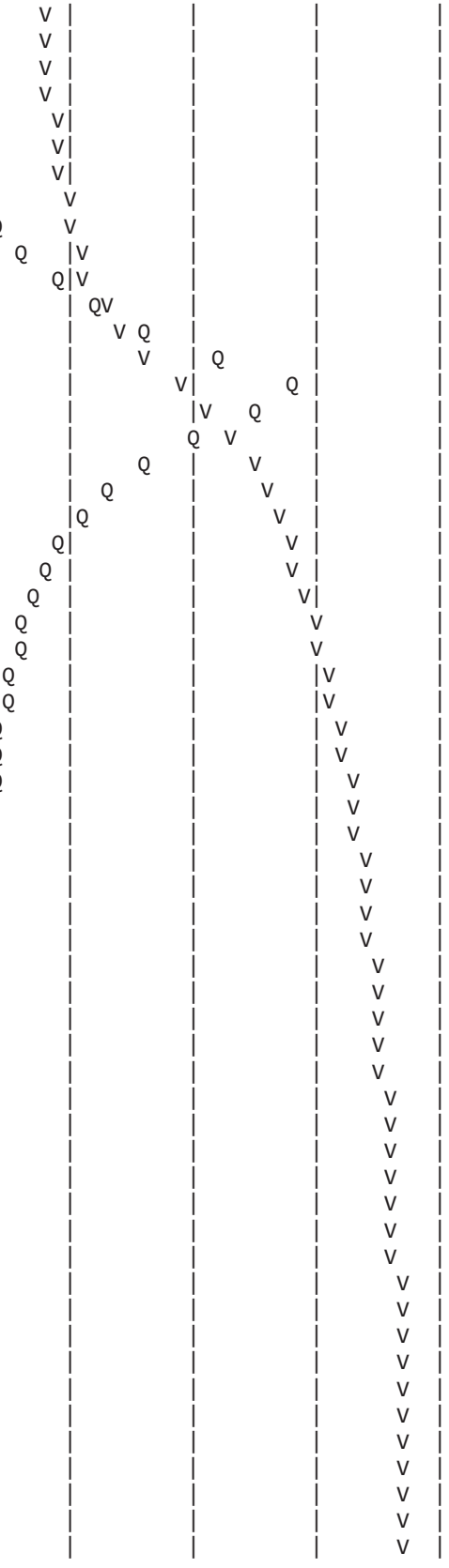
10+25       2.0822      3.90  Q  V      |          |          |          |
10+30       2.1094      3.94  Q  V      |          |          |          |
10+35       2.1368      3.99  Q  V      |          |          |          |
10+40       2.1646      4.03  Q  V      |          |          |          |
10+45       2.1926      4.07  Q  V      |          |          |          |
10+50       2.2210      4.12  Q  V      |          |          |          |
10+55       2.2497      4.16  Q   V      |          |          |          |
11+ 0       2.2787      4.21  Q   V      |          |          |          |
11+ 5       2.3080      4.26  Q   V      |          |          |          |
11+10       2.3377      4.31  Q   V      |          |          |          |
11+15       2.3677      4.36  Q   V      |          |          |          |
11+20       2.3981      4.41  Q   V      |          |          |          |
11+25       2.4289      4.47  Q   V      |          |          |          |
11+30       2.4600      4.52  Q   V      |          |          |          |
11+35       2.4916      4.58  Q   V      |          |          |          |
11+40       2.5235      4.64  Q   V      |          |          |          |
11+45       2.5559      4.70  Q   V      |          |          |          |
11+50       2.5887      4.76  Q   V      |          |          |          |
11+55       2.6219      4.83  Q   V      |          |          |          |
12+ 0       2.6556      4.89  Q   V      |          |          |          |
12+ 5       2.6898      4.96  Q   V      |          |          |          |
12+10       2.7244      5.02  Q   V      |          |          |          |
12+15       2.7594      5.08  Q   V      |          |          |          |
12+20       2.7948      5.14  Q    V     |          |          |          |
12+25       2.8305      5.19  Q    V     |          |          |          |
12+30       2.8665      5.22  Q    V     |          |          |          |
12+35       2.9027      5.26  Q    V     |          |          |          |
12+40       2.9393      5.31  Q    V     |          |          |          |
12+45       2.9763      5.38  Q    V     |          |          |          |
12+50       3.0138      5.45  Q    V     |          |          |          |
12+55       3.0519      5.53  Q    V     |          |          |          |
13+ 0       3.0906      5.61  Q    V     |          |          |          |
13+ 5       3.1298      5.70  Q    V     |          |          |          |
13+10       3.1698      5.80  Q    V     |          |          |          |
13+15       3.2104      5.90  Q    V     |          |          |          |
13+20       3.2518      6.01  Q    V     |          |          |          |
13+25       3.2940      6.12  Q    V     |          |          |          |
13+30       3.3370      6.24  Q    V     |          |          |          |
13+35       3.3809      6.37  Q     V    |          |          |          |
13+40       3.4257      6.50  Q     V    |          |          |          |
13+45       3.4714      6.64  Q     V    |          |          |          |
13+50       3.5182      6.79  Q     V    |          |          |          |
13+55       3.5661      6.95  Q     V    |          |          |          |
14+ 0       3.6152      7.12  Q     V    |          |          |          |
14+ 5       3.6654      7.30  Q     V    |          |          |          |
14+10       3.7170      7.49  Q     V    |          |          |          |
14+15       3.7700      7.70  |Q    V    |          |          |          |
14+20       3.8246      7.93  |Q    V    |          |          |          |
14+25       3.8809      8.18  |Q    V    |          |          |          |
14+30       3.9392      8.46  |Q     V   |          |          |          |
14+35       3.9994      8.75  |Q     V   |          |          |          |
14+40       4.0618      9.06  |Q     V   |          |          |          |
14+45       4.1264      9.38  |Q     V   |          |          |          |
14+50       4.1935      9.73  |Q     V   |          |          |          |
14+55       4.2631     10.11  |Q     V   |          |          |          |
15+ 0       4.3356     10.53  |Q     V   |          |          |          |
15+ 5       4.4112     10.98  |Q     V   |          |          |          |
15+10       4.4903     11.48  |Q      V  |          |          |          |
15+15       4.5732     12.04  |Q      V  |          |          |          |
```

| | | | |
|---|---|---|---|
| 15+20 | 4.6604 | 12.66 |  |
| 15+25 | 4.7530 | 13.45 | |
| 15+30 | 4.8528 | 14.50 | |
| 15+35 | 4.9621 | 15.86 | |
| 15+40 | 5.0836 | 17.65 | |
| 15+45 | 5.2236 | 20.33 | |
| 15+50 | 5.3900 | 24.16 | |
| 15+55 | 5.5891 | 28.90 | |
| 16+ 0 | 5.8328 | 35.38 | |
| 16+ 5 | 6.1745 | 49.62 | |
| 16+10 | 6.6672 | 71.54 | |
| 16+15 | 7.3192 | 94.68 | |
| 16+20 | 8.1662 | 122.98 | |
| 16+25 | 9.3447 | 171.12 | |
| 16+30 | 10.8006 | 211.40 | |
| 16+35 | 12.0964 | 188.14 | |
| 16+40 | 13.1419 | 151.80 | |
| 16+45 | 13.9888 | 122.98 | |
| 16+50 | 14.6695 | 98.83 | |
| 16+55 | 15.2446 | 83.52 | |
| 17+ 0 | 15.7498 | 73.35 | |
| 17+ 5 | 16.1918 | 64.18 | |
| 17+10 | 16.5844 | 57.00 | |
| 17+15 | 16.9408 | 51.75 | |
| 17+20 | 17.2553 | 45.66 | |
| 17+25 | 17.5449 | 42.06 | |
| 17+30 | 17.8079 | 38.18 | |
| 17+35 | 18.0535 | 35.67 | |
| 17+40 | 18.2831 | 33.33 | |
| 17+45 | 18.4933 | 30.53 | |
| 17+50 | 18.6880 | 28.26 | |
| 17+55 | 18.8615 | 25.20 | |
| 18+ 0 | 19.0243 | 23.64 | |
| 18+ 5 | 19.1785 | 22.39 | |
| 18+10 | 19.3245 | 21.21 | |
| 18+15 | 19.4610 | 19.81 | |
| 18+20 | 19.5908 | 18.85 | |
| 18+25 | 19.7141 | 17.89 | |
| 18+30 | 19.8274 | 16.46 | |
| 18+35 | 19.9345 | 15.54 | |
| 18+40 | 20.0381 | 15.04 | |
| 18+45 | 20.1367 | 14.32 | |
| 18+50 | 20.2270 | 13.11 | |
| 18+55 | 20.3137 | 12.59 | |
| 19+ 0 | 20.3972 | 12.12 | |
| 19+ 5 | 20.4741 | 11.16 | |
| 19+10 | 20.5448 | 10.27 | |
| 19+15 | 20.6130 | 9.90 | |
| 19+20 | 20.6779 | 9.42 | |
| 19+25 | 20.7354 | 8.35 | |
| 19+30 | 20.7900 | 7.93 | |
| 19+35 | 20.8435 | 7.77 | |
| 19+40 | 20.8967 | 7.72 | |
| 19+45 | 20.9502 | 7.77 | |
| 19+50 | 21.0028 | 7.65 | |
| 19+55 | 21.0545 | 7.51 | |
| 20+ 0 | 21.1051 | 7.35 | |
| 20+ 5 | 21.1546 | 7.17 | |
| 20+10 | 21.2024 | 6.95 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20+15 | 21.2475 | 6.54 | Q | \| | \| | \| | V \| |
| 20+20 | 21.2872 | 5.77 | Q | \| | \| | \| | V \| |
| 20+25 | 21.3252 | 5.52 | Q | \| | \| | \| | V \| |
| 20+30 | 21.3620 | 5.34 | Q | \| | \| | \| | V \| |
| 20+35 | 21.3976 | 5.16 | Q | \| | \| | \| | V \| |
| 20+40 | 21.4316 | 4.94 | Q | \| | \| | \| | V \| |
| 20+45 | 21.4621 | 4.43 | Q | \| | \| | \| | V \| |
| 20+50 | 21.4877 | 3.72 | Q | \| | \| | \| | V \| |
| 20+55 | 21.5124 | 3.58 | Q | \| | \| | \| | V \| |
| 21+ 0 | 21.5363 | 3.48 | Q | \| | \| | \| | V \| |
| 21+ 5 | 21.5597 | 3.39 | Q | \| | \| | \| | V \| |
| 21+10 | 21.5826 | 3.33 | Q | \| | \| | \| | V \| |
| 21+15 | 21.6051 | 3.26 | Q | \| | \| | \| | V \| |
| 21+20 | 21.6271 | 3.20 | Q | \| | \| | \| | V \| |
| 21+25 | 21.6488 | 3.15 | Q | \| | \| | \| | V \| |
| 21+30 | 21.6701 | 3.09 | Q | \| | \| | \| | V \| |
| 21+35 | 21.6910 | 3.04 | Q | \| | \| | \| | V \| |
| 21+40 | 21.7116 | 2.99 | Q | \| | \| | \| | V \| |
| 21+45 | 21.7319 | 2.95 | Q | \| | \| | \| | V \| |
| 21+50 | 21.7519 | 2.90 | Q | \| | \| | \| | V \| |
| 21+55 | 21.7716 | 2.86 | Q | \| | \| | \| | V \| |
| 22+ 0 | 21.7910 | 2.82 | Q | \| | \| | \| | V\| |
| 22+ 5 | 21.8101 | 2.78 | Q | \| | \| | \| | V\| |
| 22+10 | 21.8290 | 2.74 | Q | \| | \| | \| | V\| |
| 22+15 | 21.8476 | 2.70 | Q | \| | \| | \| | V\| |
| 22+20 | 21.8660 | 2.67 | Q | \| | \| | \| | V\| |
| 22+25 | 21.8841 | 2.63 | Q | \| | \| | \| | V\| |
| 22+30 | 21.9020 | 2.60 | Q | \| | \| | \| | V\| |
| 22+35 | 21.9197 | 2.57 | Q | \| | \| | \| | V\| |
| 22+40 | 21.9371 | 2.54 | Q | \| | \| | \| | V\| |
| 22+45 | 21.9544 | 2.50 | Q | \| | \| | \| | V\| |
| 22+50 | 21.9714 | 2.47 | Q | \| | \| | \| | V\| |
| 22+55 | 21.9883 | 2.45 | Q | \| | \| | \| | V\| |
| 23+ 0 | 22.0049 | 2.42 | Q | \| | \| | \| | V\| |
| 23+ 5 | 22.0214 | 2.39 | Q | \| | \| | \| | V\| |
| 23+10 | 22.0377 | 2.36 | Q | \| | \| | \| | V\| |
| 23+15 | 22.0537 | 2.34 | Q | \| | \| | \| | V\| |
| 23+20 | 22.0697 | 2.31 | Q | \| | \| | \| | V\| |
| 23+25 | 22.0854 | 2.29 | Q | \| | \| | \| | V\| |
| 23+30 | 22.1010 | 2.26 | Q | \| | \| | \| | V\| |
| 23+35 | 22.1164 | 2.24 | Q | \| | \| | \| | V\| |
| 23+40 | 22.1317 | 2.22 | Q | \| | \| | \| | V\| |
| 23+45 | 22.1468 | 2.19 | Q | \| | \| | \| | V\| |
| 23+50 | 22.1617 | 2.17 | Q | \| | \| | \| | V\| |
| 23+55 | 22.1765 | 2.15 | Q | \| | \| | \| | V\| |
| 24+ 0 | 22.1912 | 2.13 | Q | \| | \| | \| | V\| |
| 24+ 5 | 22.2056 | 2.10 | Q | \| | \| | \| | V\| |
| 24+10 | 22.2197 | 2.04 | Q | \| | \| | \| | V\| |
| 24+15 | 22.2332 | 1.96 | Q | \| | \| | \| | V\| |
| 24+20 | 22.2459 | 1.85 | Q | \| | \| | \| | V\| |
| 24+25 | 22.2574 | 1.67 | Q | \| | \| | \| | V\| |
| 24+30 | 22.2671 | 1.40 | Q | \| | \| | \| | V\| |
| 24+35 | 22.2752 | 1.18 | Q | \| | \| | \| | V\| |
| 24+40 | 22.2821 | 1.00 | Q | \| | \| | \| | V\| |
| 24+45 | 22.2881 | 0.87 | Q | \| | \| | \| | V\| |
| 24+50 | 22.2934 | 0.77 | Q | \| | \| | \| | V\| |
| 24+55 | 22.2982 | 0.69 | Q | \| | \| | \| | V\| |
| 25+ 0 | 22.3024 | 0.62 | Q | \| | \| | \| | V\| |
| 25+ 5 | 22.3063 | 0.56 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+10 | 22.3097 | 0.50 | Q | \| | \| | \| | V\| |
| 25+15 | 22.3129 | 0.46 | Q | \| | \| | \| | V\| |
| 25+20 | 22.3158 | 0.42 | Q | \| | \| | \| | V\| |
| 25+25 | 22.3184 | 0.38 | Q | \| | \| | \| | V\| |
| 25+30 | 22.3208 | 0.35 | Q | \| | \| | \| | V\| |
| 25+35 | 22.3230 | 0.32 | Q | \| | \| | \| | V\| |
| 25+40 | 22.3250 | 0.29 | Q | \| | \| | \| | V\| |
| 25+45 | 22.3268 | 0.26 | Q | \| | \| | \| | V\| |
| 25+50 | 22.3284 | 0.24 | Q | \| | \| | \| | V\| |
| 25+55 | 22.3300 | 0.22 | Q | \| | \| | \| | V\| |
| 26+ 0 | 22.3314 | 0.20 | Q | \| | \| | \| | V\| |
| 26+ 5 | 22.3327 | 0.19 | Q | \| | \| | \| | V\| |
| 26+10 | 22.3339 | 0.17 | Q | \| | \| | \| | V\| |
| 26+15 | 22.3349 | 0.16 | Q | \| | \| | \| | V\| |
| 26+20 | 22.3359 | 0.14 | Q | \| | \| | \| | V\| |
| 26+25 | 22.3368 | 0.13 | Q | \| | \| | \| | V\| |
| 26+30 | 22.3377 | 0.12 | Q | \| | \| | \| | V\| |
| 26+35 | 22.3384 | 0.11 | Q | \| | \| | \| | V\| |
| 26+40 | 22.3391 | 0.10 | Q | \| | \| | \| | V\| |
| 26+45 | 22.3397 | 0.09 | Q | \| | \| | \| | V\| |
| 26+50 | 22.3403 | 0.08 | Q | \| | \| | \| | V\| |
| 26+55 | 22.3408 | 0.08 | Q | \| | \| | \| | V\| |
| 27+ 0 | 22.3413 | 0.07 | Q | \| | \| | \| | V\| |
| 27+ 5 | 22.3417 | 0.06 | Q | \| | \| | \| | V\| |
| 27+10 | 22.3421 | 0.06 | Q | \| | \| | \| | V\| |
| 27+15 | 22.3424 | 0.05 | Q | \| | \| | \| | V\| |
| 27+20 | 22.3427 | 0.05 | Q | \| | \| | \| | V\| |
| 27+25 | 22.3430 | 0.04 | Q | \| | \| | \| | V\| |
| 27+30 | 22.3433 | 0.04 | Q | \| | \| | \| | V\| |
| 27+35 | 22.3436 | 0.04 | Q | \| | \| | \| | V\| |
| 27+40 | 22.3438 | 0.03 | Q | \| | \| | \| | V\| |
| 27+45 | 22.3440 | 0.03 | Q | \| | \| | \| | V\| |
| 27+50 | 22.3442 | 0.03 | Q | \| | \| | \| | V\| |
| 27+55 | 22.3443 | 0.02 | Q | \| | \| | \| | V\| |
| 28+ 0 | 22.3445 | 0.02 | Q | \| | \| | \| | V\| |
| 28+ 5 | 22.3446 | 0.02 | Q | \| | \| | \| | V\| |
| 28+10 | 22.3447 | 0.01 | Q | \| | \| | \| | V\| |
| 28+15 | 22.3447 | 0.01 | Q | \| | \| | \| | V\| |
| 28+20 | 22.3448 | 0.01 | Q | \| | \| | \| | V\| |
| 28+25 | 22.3448 | 0.01 | Q | \| | \| | \| | V\| |
| 28+30 | 22.3448 | 0.00 | Q | \| | \| | \| | V\| |
| 28+35 | 22.3449 | 0.00 | Q | \| | \| | \| | V\| |
| 28+40 | 22.3449 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 18
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 48.06 | 1 | 1.33 |
| Rainfall data for year 100 | | |
| 48.06 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 48.06 | 24 | 2.48 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 48.06 | 1.000 | 0.360 | 1.000 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 48.06 | 1.000 | 62.0 | 80.6 | 2.41 | 0.366 |

Area-averaged catchment yield fraction, Y = 0.366
Area-averaged low loss fraction, Yb = 0.634
User entry of time of concentration = 0.550 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 48.06(Ac.)
Catchment Lag time = 0.440 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 18.9394
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.634 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.631(In)
Computed peak 30-minute rainfall = 1.080(In)
Specified peak 1-hour rainfall = 1.330(In)
Computed peak 3-hour rainfall = 1.623(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.480(In)

Rainfall depth area reduction factors:
Using a total area of 48.06(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.630(In)
30-minute factor = 0.998 Adjusted rainfall = 1.078(In)
1-hour factor = 0.998 Adjusted rainfall = 1.327(In)
3-hour factor = 1.000 Adjusted rainfall = 1.622(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.480(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 581.23 (CFS)) | |
| 1 | 0.921 | 5.353 |
| 2 | 4.123 | 18.613 |
| 3 | 9.982 | 34.053 |
| 4 | 22.704 | 73.940 |
| 5 | 39.759 | 99.132 |
| 6 | 52.073 | 71.571 |
| 7 | 60.464 | 48.769 |
| 8 | 66.368 | 34.317 |
| 9 | 71.070 | 27.328 |
| 10 | 74.853 | 21.989 |
| 11 | 78.043 | 18.543 |
| 12 | 80.647 | 15.133 |
| 13 | 82.868 | 12.912 |
| 14 | 84.841 | 11.466 |

| | | |
|---|---|---|
| 15 | 86.629 | 10.391 |
| 16 | 88.180 | 9.016 |
| 17 | 89.450 | 7.382 |
| 18 | 90.560 | 6.449 |
| 19 | 91.601 | 6.051 |
| 20 | 92.526 | 5.377 |
| 21 | 93.383 | 4.984 |
| 22 | 94.143 | 4.417 |
| 23 | 94.789 | 3.751 |
| 24 | 95.428 | 3.717 |
| 25 | 95.964 | 3.116 |
| 26 | 96.457 | 2.862 |
| 27 | 96.922 | 2.704 |
| 28 | 97.275 | 2.052 |
| 29 | 97.616 | 1.981 |
| 30 | 97.887 | 1.576 |
| 31 | 98.077 | 1.102 |
| 32 | 98.268 | 1.112 |
| 33 | 98.486 | 1.270 |
| 34 | 98.714 | 1.321 |
| 35 | 98.941 | 1.321 |
| 36 | 99.168 | 1.321 |
| 37 | 99.395 | 1.320 |
| 38 | 99.564 | 0.980 |
| 39 | 99.682 | 0.688 |
| 40 | 99.801 | 0.688 |
| 41 | 99.919 | 0.688 |
| 42 | 100.000 | 0.471 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6297 | 0.6297 |
| 2 | 0.7752 | 0.1455 |
| 3 | 0.8755 | 0.1003 |
| 4 | 0.9544 | 0.0789 |
| 5 | 1.0205 | 0.0661 |
| 6 | 1.0779 | 0.0574 |
| 7 | 1.1289 | 0.0510 |
| 8 | 1.1750 | 0.0461 |
| 9 | 1.2173 | 0.0423 |
| 10 | 1.2564 | 0.0391 |
| 11 | 1.2928 | 0.0364 |
| 12 | 1.3270 | 0.0342 |
| 13 | 1.3466 | 0.0196 |
| 14 | 1.3650 | 0.0184 |
| 15 | 1.3823 | 0.0173 |
| 16 | 1.3987 | 0.0164 |
| 17 | 1.4143 | 0.0156 |
| 18 | 1.4292 | 0.0149 |
| 19 | 1.4434 | 0.0142 |
| 20 | 1.4570 | 0.0136 |
| 21 | 1.4701 | 0.0131 |
| 22 | 1.4826 | 0.0126 |
| 23 | 1.4947 | 0.0121 |
| 24 | 1.5064 | 0.0117 |
| 25 | 1.5177 | 0.0113 |
| 26 | 1.5286 | 0.0109 |
| 27 | 1.5392 | 0.0106 |
| 28 | 1.5495 | 0.0103 |

| | | |
|---|---|---|
| 29 | 1.5595 | 0.0100 |
| 30 | 1.5692 | 0.0097 |
| 31 | 1.5786 | 0.0094 |
| 32 | 1.5878 | 0.0092 |
| 33 | 1.5968 | 0.0090 |
| 34 | 1.6055 | 0.0087 |
| 35 | 1.6141 | 0.0085 |
| 36 | 1.6224 | 0.0083 |
| 37 | 1.6305 | 0.0081 |
| 38 | 1.6384 | 0.0079 |
| 39 | 1.6461 | 0.0077 |
| 40 | 1.6537 | 0.0076 |
| 41 | 1.6611 | 0.0074 |
| 42 | 1.6684 | 0.0073 |
| 43 | 1.6755 | 0.0071 |
| 44 | 1.6825 | 0.0070 |
| 45 | 1.6894 | 0.0069 |
| 46 | 1.6962 | 0.0067 |
| 47 | 1.7028 | 0.0066 |
| 48 | 1.7093 | 0.0065 |
| 49 | 1.7157 | 0.0064 |
| 50 | 1.7220 | 0.0063 |
| 51 | 1.7282 | 0.0062 |
| 52 | 1.7343 | 0.0061 |
| 53 | 1.7403 | 0.0060 |
| 54 | 1.7462 | 0.0059 |
| 55 | 1.7520 | 0.0058 |
| 56 | 1.7578 | 0.0057 |
| 57 | 1.7634 | 0.0057 |
| 58 | 1.7690 | 0.0056 |
| 59 | 1.7745 | 0.0055 |
| 60 | 1.7799 | 0.0054 |
| 61 | 1.7852 | 0.0053 |
| 62 | 1.7905 | 0.0053 |
| 63 | 1.7957 | 0.0052 |
| 64 | 1.8008 | 0.0051 |
| 65 | 1.8059 | 0.0051 |
| 66 | 1.8109 | 0.0050 |
| 67 | 1.8159 | 0.0049 |
| 68 | 1.8208 | 0.0049 |
| 69 | 1.8256 | 0.0048 |
| 70 | 1.8303 | 0.0048 |
| 71 | 1.8351 | 0.0047 |
| 72 | 1.8397 | 0.0047 |
| 73 | 1.8452 | 0.0055 |
| 74 | 1.8506 | 0.0054 |
| 75 | 1.8560 | 0.0054 |
| 76 | 1.8613 | 0.0053 |
| 77 | 1.8665 | 0.0052 |
| 78 | 1.8717 | 0.0052 |
| 79 | 1.8769 | 0.0051 |
| 80 | 1.8819 | 0.0051 |
| 81 | 1.8870 | 0.0050 |
| 82 | 1.8920 | 0.0050 |
| 83 | 1.8969 | 0.0049 |
| 84 | 1.9018 | 0.0049 |
| 85 | 1.9067 | 0.0049 |
| 86 | 1.9115 | 0.0048 |
| 87 | 1.9163 | 0.0048 |

| | | |
|---|---|---|
| 88 | 1.9210 | 0.0047 |
| 89 | 1.9257 | 0.0047 |
| 90 | 1.9303 | 0.0046 |
| 91 | 1.9349 | 0.0046 |
| 92 | 1.9395 | 0.0046 |
| 93 | 1.9440 | 0.0045 |
| 94 | 1.9485 | 0.0045 |
| 95 | 1.9529 | 0.0044 |
| 96 | 1.9573 | 0.0044 |
| 97 | 1.9617 | 0.0044 |
| 98 | 1.9660 | 0.0043 |
| 99 | 1.9703 | 0.0043 |
| 100 | 1.9746 | 0.0043 |
| 101 | 1.9788 | 0.0042 |
| 102 | 1.9830 | 0.0042 |
| 103 | 1.9872 | 0.0042 |
| 104 | 1.9914 | 0.0041 |
| 105 | 1.9955 | 0.0041 |
| 106 | 1.9995 | 0.0041 |
| 107 | 2.0036 | 0.0040 |
| 108 | 2.0076 | 0.0040 |
| 109 | 2.0116 | 0.0040 |
| 110 | 2.0156 | 0.0040 |
| 111 | 2.0195 | 0.0039 |
| 112 | 2.0234 | 0.0039 |
| 113 | 2.0273 | 0.0039 |
| 114 | 2.0311 | 0.0039 |
| 115 | 2.0350 | 0.0038 |
| 116 | 2.0387 | 0.0038 |
| 117 | 2.0425 | 0.0038 |
| 118 | 2.0463 | 0.0037 |
| 119 | 2.0500 | 0.0037 |
| 120 | 2.0537 | 0.0037 |
| 121 | 2.0574 | 0.0037 |
| 122 | 2.0610 | 0.0037 |
| 123 | 2.0646 | 0.0036 |
| 124 | 2.0682 | 0.0036 |
| 125 | 2.0718 | 0.0036 |
| 126 | 2.0754 | 0.0036 |
| 127 | 2.0789 | 0.0035 |
| 128 | 2.0824 | 0.0035 |
| 129 | 2.0859 | 0.0035 |
| 130 | 2.0894 | 0.0035 |
| 131 | 2.0929 | 0.0035 |
| 132 | 2.0963 | 0.0034 |
| 133 | 2.0997 | 0.0034 |
| 134 | 2.1031 | 0.0034 |
| 135 | 2.1065 | 0.0034 |
| 136 | 2.1098 | 0.0034 |
| 137 | 2.1131 | 0.0033 |
| 138 | 2.1165 | 0.0033 |
| 139 | 2.1197 | 0.0033 |
| 140 | 2.1230 | 0.0033 |
| 141 | 2.1263 | 0.0033 |
| 142 | 2.1295 | 0.0032 |
| 143 | 2.1327 | 0.0032 |
| 144 | 2.1359 | 0.0032 |
| 145 | 2.1391 | 0.0032 |
| 146 | 2.1423 | 0.0032 |

| | | |
|---|---|---|
| 147 | 2.1454 | 0.0032 |
| 148 | 2.1486 | 0.0031 |
| 149 | 2.1517 | 0.0031 |
| 150 | 2.1548 | 0.0031 |
| 151 | 2.1579 | 0.0031 |
| 152 | 2.1610 | 0.0031 |
| 153 | 2.1640 | 0.0031 |
| 154 | 2.1671 | 0.0030 |
| 155 | 2.1701 | 0.0030 |
| 156 | 2.1731 | 0.0030 |
| 157 | 2.1761 | 0.0030 |
| 158 | 2.1791 | 0.0030 |
| 159 | 2.1820 | 0.0030 |
| 160 | 2.1850 | 0.0029 |
| 161 | 2.1879 | 0.0029 |
| 162 | 2.1908 | 0.0029 |
| 163 | 2.1937 | 0.0029 |
| 164 | 2.1966 | 0.0029 |
| 165 | 2.1995 | 0.0029 |
| 166 | 2.2024 | 0.0029 |
| 167 | 2.2052 | 0.0029 |
| 168 | 2.2080 | 0.0028 |
| 169 | 2.2109 | 0.0028 |
| 170 | 2.2137 | 0.0028 |
| 171 | 2.2165 | 0.0028 |
| 172 | 2.2193 | 0.0028 |
| 173 | 2.2220 | 0.0028 |
| 174 | 2.2248 | 0.0028 |
| 175 | 2.2275 | 0.0027 |
| 176 | 2.2303 | 0.0027 |
| 177 | 2.2330 | 0.0027 |
| 178 | 2.2357 | 0.0027 |
| 179 | 2.2384 | 0.0027 |
| 180 | 2.2411 | 0.0027 |
| 181 | 2.2438 | 0.0027 |
| 182 | 2.2464 | 0.0027 |
| 183 | 2.2491 | 0.0027 |
| 184 | 2.2517 | 0.0026 |
| 185 | 2.2544 | 0.0026 |
| 186 | 2.2570 | 0.0026 |
| 187 | 2.2596 | 0.0026 |
| 188 | 2.2622 | 0.0026 |
| 189 | 2.2648 | 0.0026 |
| 190 | 2.2674 | 0.0026 |
| 191 | 2.2699 | 0.0026 |
| 192 | 2.2725 | 0.0026 |
| 193 | 2.2750 | 0.0025 |
| 194 | 2.2776 | 0.0025 |
| 195 | 2.2801 | 0.0025 |
| 196 | 2.2826 | 0.0025 |
| 197 | 2.2851 | 0.0025 |
| 198 | 2.2876 | 0.0025 |
| 199 | 2.2901 | 0.0025 |
| 200 | 2.2925 | 0.0025 |
| 201 | 2.2950 | 0.0025 |
| 202 | 2.2975 | 0.0025 |
| 203 | 2.2999 | 0.0024 |
| 204 | 2.3023 | 0.0024 |
| 205 | 2.3048 | 0.0024 |

| | | |
|---|---|---|
| 206 | 2.3072 | 0.0024 |
| 207 | 2.3096 | 0.0024 |
| 208 | 2.3120 | 0.0024 |
| 209 | 2.3144 | 0.0024 |
| 210 | 2.3168 | 0.0024 |
| 211 | 2.3191 | 0.0024 |
| 212 | 2.3215 | 0.0024 |
| 213 | 2.3238 | 0.0024 |
| 214 | 2.3262 | 0.0023 |
| 215 | 2.3285 | 0.0023 |
| 216 | 2.3309 | 0.0023 |
| 217 | 2.3332 | 0.0023 |
| 218 | 2.3355 | 0.0023 |
| 219 | 2.3378 | 0.0023 |
| 220 | 2.3401 | 0.0023 |
| 221 | 2.3424 | 0.0023 |
| 222 | 2.3447 | 0.0023 |
| 223 | 2.3469 | 0.0023 |
| 224 | 2.3492 | 0.0023 |
| 225 | 2.3514 | 0.0023 |
| 226 | 2.3537 | 0.0022 |
| 227 | 2.3559 | 0.0022 |
| 228 | 2.3582 | 0.0022 |
| 229 | 2.3604 | 0.0022 |
| 230 | 2.3626 | 0.0022 |
| 231 | 2.3648 | 0.0022 |
| 232 | 2.3670 | 0.0022 |
| 233 | 2.3692 | 0.0022 |
| 234 | 2.3714 | 0.0022 |
| 235 | 2.3736 | 0.0022 |
| 236 | 2.3757 | 0.0022 |
| 237 | 2.3779 | 0.0022 |
| 238 | 2.3801 | 0.0022 |
| 239 | 2.3822 | 0.0022 |
| 240 | 2.3844 | 0.0021 |
| 241 | 2.3865 | 0.0021 |
| 242 | 2.3886 | 0.0021 |
| 243 | 2.3907 | 0.0021 |
| 244 | 2.3929 | 0.0021 |
| 245 | 2.3950 | 0.0021 |
| 246 | 2.3971 | 0.0021 |
| 247 | 2.3992 | 0.0021 |
| 248 | 2.4013 | 0.0021 |
| 249 | 2.4033 | 0.0021 |
| 250 | 2.4054 | 0.0021 |
| 251 | 2.4075 | 0.0021 |
| 252 | 2.4095 | 0.0021 |
| 253 | 2.4116 | 0.0021 |
| 254 | 2.4137 | 0.0020 |
| 255 | 2.4157 | 0.0020 |
| 256 | 2.4177 | 0.0020 |
| 257 | 2.4198 | 0.0020 |
| 258 | 2.4218 | 0.0020 |
| 259 | 2.4238 | 0.0020 |
| 260 | 2.4258 | 0.0020 |
| 261 | 2.4278 | 0.0020 |
| 262 | 2.4298 | 0.0020 |
| 263 | 2.4318 | 0.0020 |
| 264 | 2.4338 | 0.0020 |

| | | |
|---|---|---|
| 265 | 2.4358 | 0.0020 |
| 266 | 2.4378 | 0.0020 |
| 267 | 2.4397 | 0.0020 |
| 268 | 2.4417 | 0.0020 |
| 269 | 2.4437 | 0.0020 |
| 270 | 2.4456 | 0.0020 |
| 271 | 2.4476 | 0.0019 |
| 272 | 2.4495 | 0.0019 |
| 273 | 2.4514 | 0.0019 |
| 274 | 2.4534 | 0.0019 |
| 275 | 2.4553 | 0.0019 |
| 276 | 2.4572 | 0.0019 |
| 277 | 2.4591 | 0.0019 |
| 278 | 2.4610 | 0.0019 |
| 279 | 2.4630 | 0.0019 |
| 280 | 2.4649 | 0.0019 |
| 281 | 2.4667 | 0.0019 |
| 282 | 2.4686 | 0.0019 |
| 283 | 2.4705 | 0.0019 |
| 284 | 2.4724 | 0.0019 |
| 285 | 2.4743 | 0.0019 |
| 286 | 2.4761 | 0.0019 |
| 287 | 2.4780 | 0.0019 |
| 288 | 2.4799 | 0.0019 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0019 | 0.0012 | 0.0007 |
| 2 | 0.0019 | 0.0012 | 0.0007 |
| 3 | 0.0019 | 0.0012 | 0.0007 |
| 4 | 0.0019 | 0.0012 | 0.0007 |
| 5 | 0.0019 | 0.0012 | 0.0007 |
| 6 | 0.0019 | 0.0012 | 0.0007 |
| 7 | 0.0019 | 0.0012 | 0.0007 |
| 8 | 0.0019 | 0.0012 | 0.0007 |
| 9 | 0.0019 | 0.0012 | 0.0007 |
| 10 | 0.0019 | 0.0012 | 0.0007 |
| 11 | 0.0019 | 0.0012 | 0.0007 |
| 12 | 0.0019 | 0.0012 | 0.0007 |
| 13 | 0.0020 | 0.0012 | 0.0007 |
| 14 | 0.0020 | 0.0012 | 0.0007 |
| 15 | 0.0020 | 0.0013 | 0.0007 |
| 16 | 0.0020 | 0.0013 | 0.0007 |
| 17 | 0.0020 | 0.0013 | 0.0007 |
| 18 | 0.0020 | 0.0013 | 0.0007 |
| 19 | 0.0020 | 0.0013 | 0.0007 |
| 20 | 0.0020 | 0.0013 | 0.0007 |
| 21 | 0.0020 | 0.0013 | 0.0007 |
| 22 | 0.0020 | 0.0013 | 0.0007 |
| 23 | 0.0020 | 0.0013 | 0.0007 |
| 24 | 0.0020 | 0.0013 | 0.0007 |
| 25 | 0.0021 | 0.0013 | 0.0008 |
| 26 | 0.0021 | 0.0013 | 0.0008 |
| 27 | 0.0021 | 0.0013 | 0.0008 |
| 28 | 0.0021 | 0.0013 | 0.0008 |
| 29 | 0.0021 | 0.0013 | 0.0008 |
| 30 | 0.0021 | 0.0013 | 0.0008 |

| | | | |
|---|---|---|---|
| 31 | 0.0021 | 0.0013 | 0.0008 |
| 32 | 0.0021 | 0.0014 | 0.0008 |
| 33 | 0.0021 | 0.0014 | 0.0008 |
| 34 | 0.0022 | 0.0014 | 0.0008 |
| 35 | 0.0022 | 0.0014 | 0.0008 |
| 36 | 0.0022 | 0.0014 | 0.0008 |
| 37 | 0.0022 | 0.0014 | 0.0008 |
| 38 | 0.0022 | 0.0014 | 0.0008 |
| 39 | 0.0022 | 0.0014 | 0.0008 |
| 40 | 0.0022 | 0.0014 | 0.0008 |
| 41 | 0.0022 | 0.0014 | 0.0008 |
| 42 | 0.0022 | 0.0014 | 0.0008 |
| 43 | 0.0023 | 0.0014 | 0.0008 |
| 44 | 0.0023 | 0.0014 | 0.0008 |
| 45 | 0.0023 | 0.0014 | 0.0008 |
| 46 | 0.0023 | 0.0015 | 0.0008 |
| 47 | 0.0023 | 0.0015 | 0.0008 |
| 48 | 0.0023 | 0.0015 | 0.0008 |
| 49 | 0.0023 | 0.0015 | 0.0009 |
| 50 | 0.0023 | 0.0015 | 0.0009 |
| 51 | 0.0024 | 0.0015 | 0.0009 |
| 52 | 0.0024 | 0.0015 | 0.0009 |
| 53 | 0.0024 | 0.0015 | 0.0009 |
| 54 | 0.0024 | 0.0015 | 0.0009 |
| 55 | 0.0024 | 0.0015 | 0.0009 |
| 56 | 0.0024 | 0.0015 | 0.0009 |
| 57 | 0.0024 | 0.0015 | 0.0009 |
| 58 | 0.0024 | 0.0016 | 0.0009 |
| 59 | 0.0025 | 0.0016 | 0.0009 |
| 60 | 0.0025 | 0.0016 | 0.0009 |
| 61 | 0.0025 | 0.0016 | 0.0009 |
| 62 | 0.0025 | 0.0016 | 0.0009 |
| 63 | 0.0025 | 0.0016 | 0.0009 |
| 64 | 0.0025 | 0.0016 | 0.0009 |
| 65 | 0.0026 | 0.0016 | 0.0009 |
| 66 | 0.0026 | 0.0016 | 0.0009 |
| 67 | 0.0026 | 0.0016 | 0.0009 |
| 68 | 0.0026 | 0.0016 | 0.0009 |
| 69 | 0.0026 | 0.0017 | 0.0010 |
| 70 | 0.0026 | 0.0017 | 0.0010 |
| 71 | 0.0027 | 0.0017 | 0.0010 |
| 72 | 0.0027 | 0.0017 | 0.0010 |
| 73 | 0.0027 | 0.0017 | 0.0010 |
| 74 | 0.0027 | 0.0017 | 0.0010 |
| 75 | 0.0027 | 0.0017 | 0.0010 |
| 76 | 0.0027 | 0.0017 | 0.0010 |
| 77 | 0.0028 | 0.0018 | 0.0010 |
| 78 | 0.0028 | 0.0018 | 0.0010 |
| 79 | 0.0028 | 0.0018 | 0.0010 |
| 80 | 0.0028 | 0.0018 | 0.0010 |
| 81 | 0.0028 | 0.0018 | 0.0010 |
| 82 | 0.0029 | 0.0018 | 0.0010 |
| 83 | 0.0029 | 0.0018 | 0.0011 |
| 84 | 0.0029 | 0.0018 | 0.0011 |
| 85 | 0.0029 | 0.0019 | 0.0011 |
| 86 | 0.0029 | 0.0019 | 0.0011 |
| 87 | 0.0030 | 0.0019 | 0.0011 |
| 88 | 0.0030 | 0.0019 | 0.0011 |
| 89 | 0.0030 | 0.0019 | 0.0011 |

| | | | |
|---|---|---|---|
| 90 | 0.0030 | 0.0019 | 0.0011 |
| 91 | 0.0031 | 0.0019 | 0.0011 |
| 92 | 0.0031 | 0.0019 | 0.0011 |
| 93 | 0.0031 | 0.0020 | 0.0011 |
| 94 | 0.0031 | 0.0020 | 0.0011 |
| 95 | 0.0032 | 0.0020 | 0.0012 |
| 96 | 0.0032 | 0.0020 | 0.0012 |
| 97 | 0.0032 | 0.0020 | 0.0012 |
| 98 | 0.0032 | 0.0020 | 0.0012 |
| 99 | 0.0033 | 0.0021 | 0.0012 |
| 100 | 0.0033 | 0.0021 | 0.0012 |
| 101 | 0.0033 | 0.0021 | 0.0012 |
| 102 | 0.0033 | 0.0021 | 0.0012 |
| 103 | 0.0034 | 0.0021 | 0.0012 |
| 104 | 0.0034 | 0.0022 | 0.0012 |
| 105 | 0.0034 | 0.0022 | 0.0013 |
| 106 | 0.0035 | 0.0022 | 0.0013 |
| 107 | 0.0035 | 0.0022 | 0.0013 |
| 108 | 0.0035 | 0.0022 | 0.0013 |
| 109 | 0.0036 | 0.0023 | 0.0013 |
| 110 | 0.0036 | 0.0023 | 0.0013 |
| 111 | 0.0036 | 0.0023 | 0.0013 |
| 112 | 0.0037 | 0.0023 | 0.0013 |
| 113 | 0.0037 | 0.0023 | 0.0014 |
| 114 | 0.0037 | 0.0024 | 0.0014 |
| 115 | 0.0038 | 0.0024 | 0.0014 |
| 116 | 0.0038 | 0.0024 | 0.0014 |
| 117 | 0.0039 | 0.0024 | 0.0014 |
| 118 | 0.0039 | 0.0025 | 0.0014 |
| 119 | 0.0039 | 0.0025 | 0.0014 |
| 120 | 0.0040 | 0.0025 | 0.0014 |
| 121 | 0.0040 | 0.0025 | 0.0015 |
| 122 | 0.0040 | 0.0026 | 0.0015 |
| 123 | 0.0041 | 0.0026 | 0.0015 |
| 124 | 0.0041 | 0.0026 | 0.0015 |
| 125 | 0.0042 | 0.0027 | 0.0015 |
| 126 | 0.0042 | 0.0027 | 0.0015 |
| 127 | 0.0043 | 0.0027 | 0.0016 |
| 128 | 0.0043 | 0.0028 | 0.0016 |
| 129 | 0.0044 | 0.0028 | 0.0016 |
| 130 | 0.0044 | 0.0028 | 0.0016 |
| 131 | 0.0045 | 0.0029 | 0.0017 |
| 132 | 0.0046 | 0.0029 | 0.0017 |
| 133 | 0.0046 | 0.0029 | 0.0017 |
| 134 | 0.0047 | 0.0030 | 0.0017 |
| 135 | 0.0048 | 0.0030 | 0.0017 |
| 136 | 0.0048 | 0.0031 | 0.0018 |
| 137 | 0.0049 | 0.0031 | 0.0018 |
| 138 | 0.0049 | 0.0031 | 0.0018 |
| 139 | 0.0050 | 0.0032 | 0.0018 |
| 140 | 0.0051 | 0.0032 | 0.0019 |
| 141 | 0.0052 | 0.0033 | 0.0019 |
| 142 | 0.0052 | 0.0033 | 0.0019 |
| 143 | 0.0054 | 0.0034 | 0.0020 |
| 144 | 0.0054 | 0.0034 | 0.0020 |
| 145 | 0.0047 | 0.0030 | 0.0017 |
| 146 | 0.0047 | 0.0030 | 0.0017 |
| 147 | 0.0048 | 0.0031 | 0.0018 |
| 148 | 0.0049 | 0.0031 | 0.0018 |

| | | | |
|---|---|---|---|
| 149 | 0.0050 | 0.0032 | 0.0018 |
| 150 | 0.0051 | 0.0032 | 0.0019 |
| 151 | 0.0052 | 0.0033 | 0.0019 |
| 152 | 0.0053 | 0.0033 | 0.0019 |
| 153 | 0.0054 | 0.0034 | 0.0020 |
| 154 | 0.0055 | 0.0035 | 0.0020 |
| 155 | 0.0057 | 0.0036 | 0.0021 |
| 156 | 0.0057 | 0.0036 | 0.0021 |
| 157 | 0.0059 | 0.0037 | 0.0022 |
| 158 | 0.0060 | 0.0038 | 0.0022 |
| 159 | 0.0062 | 0.0039 | 0.0023 |
| 160 | 0.0063 | 0.0040 | 0.0023 |
| 161 | 0.0065 | 0.0041 | 0.0024 |
| 162 | 0.0066 | 0.0042 | 0.0024 |
| 163 | 0.0069 | 0.0044 | 0.0025 |
| 164 | 0.0070 | 0.0044 | 0.0026 |
| 165 | 0.0073 | 0.0046 | 0.0027 |
| 166 | 0.0074 | 0.0047 | 0.0027 |
| 167 | 0.0077 | 0.0049 | 0.0028 |
| 168 | 0.0079 | 0.0050 | 0.0029 |
| 169 | 0.0083 | 0.0053 | 0.0030 |
| 170 | 0.0085 | 0.0054 | 0.0031 |
| 171 | 0.0090 | 0.0057 | 0.0033 |
| 172 | 0.0092 | 0.0058 | 0.0034 |
| 173 | 0.0097 | 0.0062 | 0.0035 |
| 174 | 0.0100 | 0.0063 | 0.0036 |
| 175 | 0.0106 | 0.0067 | 0.0039 |
| 176 | 0.0109 | 0.0069 | 0.0040 |
| 177 | 0.0117 | 0.0074 | 0.0043 |
| 178 | 0.0121 | 0.0077 | 0.0044 |
| 179 | 0.0131 | 0.0083 | 0.0048 |
| 180 | 0.0136 | 0.0086 | 0.0050 |
| 181 | 0.0149 | 0.0094 | 0.0054 |
| 182 | 0.0156 | 0.0099 | 0.0057 |
| 183 | 0.0173 | 0.0110 | 0.0063 |
| 184 | 0.0184 | 0.0117 | 0.0067 |
| 185 | 0.0342 | 0.0217 | 0.0125 |
| 186 | 0.0364 | 0.0231 | 0.0133 |
| 187 | 0.0423 | 0.0268 | 0.0155 |
| 188 | 0.0461 | 0.0293 | 0.0169 |
| 189 | 0.0574 | 0.0300 | 0.0274 |
| 190 | 0.0661 | 0.0300 | 0.0361 |
| 191 | 0.1003 | 0.0300 | 0.0703 |
| 192 | 0.1455 | 0.0300 | 0.1156 |
| 193 | 0.6297 | 0.0300 | 0.5997 |
| 194 | 0.0789 | 0.0300 | 0.0490 |
| 195 | 0.0510 | 0.0300 | 0.0211 |
| 196 | 0.0391 | 0.0248 | 0.0143 |
| 197 | 0.0196 | 0.0124 | 0.0072 |
| 198 | 0.0164 | 0.0104 | 0.0060 |
| 199 | 0.0142 | 0.0090 | 0.0052 |
| 200 | 0.0126 | 0.0080 | 0.0046 |
| 201 | 0.0113 | 0.0072 | 0.0041 |
| 202 | 0.0103 | 0.0065 | 0.0038 |
| 203 | 0.0094 | 0.0060 | 0.0035 |
| 204 | 0.0087 | 0.0055 | 0.0032 |
| 205 | 0.0081 | 0.0051 | 0.0030 |
| 206 | 0.0076 | 0.0048 | 0.0028 |
| 207 | 0.0071 | 0.0045 | 0.0026 |

| | | | |
|---|---|---|---|
| 208 | 0.0067 | 0.0043 | 0.0025 |
| 209 | 0.0064 | 0.0041 | 0.0023 |
| 210 | 0.0061 | 0.0039 | 0.0022 |
| 211 | 0.0058 | 0.0037 | 0.0021 |
| 212 | 0.0056 | 0.0035 | 0.0020 |
| 213 | 0.0053 | 0.0034 | 0.0020 |
| 214 | 0.0051 | 0.0033 | 0.0019 |
| 215 | 0.0049 | 0.0031 | 0.0018 |
| 216 | 0.0048 | 0.0030 | 0.0017 |
| 217 | 0.0055 | 0.0035 | 0.0020 |
| 218 | 0.0053 | 0.0034 | 0.0019 |
| 219 | 0.0051 | 0.0033 | 0.0019 |
| 220 | 0.0050 | 0.0032 | 0.0018 |
| 221 | 0.0049 | 0.0031 | 0.0018 |
| 222 | 0.0047 | 0.0030 | 0.0017 |
| 223 | 0.0046 | 0.0029 | 0.0017 |
| 224 | 0.0045 | 0.0028 | 0.0016 |
| 225 | 0.0044 | 0.0028 | 0.0016 |
| 226 | 0.0043 | 0.0027 | 0.0016 |
| 227 | 0.0042 | 0.0026 | 0.0015 |
| 228 | 0.0041 | 0.0026 | 0.0015 |
| 229 | 0.0040 | 0.0025 | 0.0015 |
| 230 | 0.0039 | 0.0025 | 0.0014 |
| 231 | 0.0038 | 0.0024 | 0.0014 |
| 232 | 0.0037 | 0.0024 | 0.0014 |
| 233 | 0.0037 | 0.0023 | 0.0013 |
| 234 | 0.0036 | 0.0023 | 0.0013 |
| 235 | 0.0035 | 0.0022 | 0.0013 |
| 236 | 0.0035 | 0.0022 | 0.0013 |
| 237 | 0.0034 | 0.0022 | 0.0012 |
| 238 | 0.0034 | 0.0021 | 0.0012 |
| 239 | 0.0033 | 0.0021 | 0.0012 |
| 240 | 0.0032 | 0.0021 | 0.0012 |
| 241 | 0.0032 | 0.0020 | 0.0012 |
| 242 | 0.0031 | 0.0020 | 0.0011 |
| 243 | 0.0031 | 0.0020 | 0.0011 |
| 244 | 0.0030 | 0.0019 | 0.0011 |
| 245 | 0.0030 | 0.0019 | 0.0011 |
| 246 | 0.0029 | 0.0019 | 0.0011 |
| 247 | 0.0029 | 0.0018 | 0.0011 |
| 248 | 0.0029 | 0.0018 | 0.0010 |
| 249 | 0.0028 | 0.0018 | 0.0010 |
| 250 | 0.0028 | 0.0018 | 0.0010 |
| 251 | 0.0027 | 0.0017 | 0.0010 |
| 252 | 0.0027 | 0.0017 | 0.0010 |
| 253 | 0.0027 | 0.0017 | 0.0010 |
| 254 | 0.0026 | 0.0017 | 0.0010 |
| 255 | 0.0026 | 0.0017 | 0.0010 |
| 256 | 0.0026 | 0.0016 | 0.0009 |
| 257 | 0.0025 | 0.0016 | 0.0009 |
| 258 | 0.0025 | 0.0016 | 0.0009 |
| 259 | 0.0025 | 0.0016 | 0.0009 |
| 260 | 0.0025 | 0.0016 | 0.0009 |
| 261 | 0.0024 | 0.0015 | 0.0009 |
| 262 | 0.0024 | 0.0015 | 0.0009 |
| 263 | 0.0024 | 0.0015 | 0.0009 |
| 264 | 0.0023 | 0.0015 | 0.0009 |
| 265 | 0.0023 | 0.0015 | 0.0008 |
| 266 | 0.0023 | 0.0015 | 0.0008 |

| | | | |
|---|---|---|---|
| 267 | 0.0023 | 0.0014 | 0.0008 |
| 268 | 0.0022 | 0.0014 | 0.0008 |
| 269 | 0.0022 | 0.0014 | 0.0008 |
| 270 | 0.0022 | 0.0014 | 0.0008 |
| 271 | 0.0022 | 0.0014 | 0.0008 |
| 272 | 0.0022 | 0.0014 | 0.0008 |
| 273 | 0.0021 | 0.0014 | 0.0008 |
| 274 | 0.0021 | 0.0013 | 0.0008 |
| 275 | 0.0021 | 0.0013 | 0.0008 |
| 276 | 0.0021 | 0.0013 | 0.0008 |
| 277 | 0.0021 | 0.0013 | 0.0008 |
| 278 | 0.0020 | 0.0013 | 0.0007 |
| 279 | 0.0020 | 0.0013 | 0.0007 |
| 280 | 0.0020 | 0.0013 | 0.0007 |
| 281 | 0.0020 | 0.0013 | 0.0007 |
| 282 | 0.0020 | 0.0012 | 0.0007 |
| 283 | 0.0019 | 0.0012 | 0.0007 |
| 284 | 0.0019 | 0.0012 | 0.0007 |
| 285 | 0.0019 | 0.0012 | 0.0007 |
| 286 | 0.0019 | 0.0012 | 0.0007 |
| 287 | 0.0019 | 0.0012 | 0.0007 |
| 288 | 0.0019 | 0.0012 | 0.0007 |

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Total soil rain loss = 1.07(In)
Total effective rainfall = 1.41(In)
Peak flow rate in flood hydrograph = 79.26(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 20.0 | 40.0 | 60.0 | 80.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0001 | 0.02 | Q | \| | \| | \| | \| |
| 0+15 | 0.0004 | 0.04 | Q | \| | \| | \| | \| |
| 0+20 | 0.0010 | 0.09 | Q | \| | \| | \| | \| |
| 0+25 | 0.0021 | 0.16 | Q | \| | \| | \| | \| |
| 0+30 | 0.0035 | 0.21 | Q | \| | \| | \| | \| |
| 0+35 | 0.0052 | 0.24 | Q | \| | \| | \| | \| |
| 0+40 | 0.0070 | 0.26 | Q | \| | \| | \| | \| |
| 0+45 | 0.0090 | 0.28 | Q | \| | \| | \| | \| |
| 0+50 | 0.0110 | 0.30 | Q | \| | \| | \| | \| |
| 0+55 | 0.0132 | 0.31 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0155 | 0.33 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0178 | 0.34 | Q | \| | \| | \| | \| |
| 1+10 | 0.0202 | 0.35 | Q | \| | \| | \| | \| |
| 1+15 | 0.0226 | 0.35 | Q | \| | \| | \| | \| |
| 1+20 | 0.0251 | 0.36 | Q | \| | \| | \| | \| |
| 1+25 | 0.0276 | 0.37 | Q | \| | \| | \| | \| |
| 1+30 | 0.0302 | 0.37 | Q | \| | \| | \| | \| |
| 1+35 | 0.0328 | 0.38 | Q | \| | \| | \| | \| |
| 1+40 | 0.0355 | 0.39 | Q | \| | \| | \| | \| |
| 1+45 | 0.0381 | 0.39 | Q | \| | \| | \| | \| |
| 1+50 | 0.0409 | 0.39 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+55 | 0.0436 | 0.40 | Q | | | | |
| 2+ 0 | 0.0464 | 0.40 | Q | | | | |
| 2+ 5 | 0.0492 | 0.41 | Q | | | | |
| 2+10 | 0.0520 | 0.41 | Q | | | | |
| 2+15 | 0.0549 | 0.42 | Q | | | | |
| 2+20 | 0.0578 | 0.42 | Q | | | | |
| 2+25 | 0.0607 | 0.42 | Q | | | | |
| 2+30 | 0.0636 | 0.42 | Q | | | | |
| 2+35 | 0.0665 | 0.43 | Q | | | | |
| 2+40 | 0.0695 | 0.43 | Q | | | | |
| 2+45 | 0.0725 | 0.43 | Q | | | | |
| 2+50 | 0.0755 | 0.44 | Q | | | | |
| 2+55 | 0.0785 | 0.44 | Q | | | | |
| 3+ 0 | 0.0816 | 0.44 | Q | | | | |
| 3+ 5 | 0.0846 | 0.44 | Q | | | | |
| 3+10 | 0.0877 | 0.45 | Q | | | | |
| 3+15 | 0.0908 | 0.45 | Q | | | | |
| 3+20 | 0.0939 | 0.45 | Q | | | | |
| 3+25 | 0.0971 | 0.46 | Q | | | | |
| 3+30 | 0.1002 | 0.46 | Q | | | | |
| 3+35 | 0.1034 | 0.46 | Q | | | | |
| 3+40 | 0.1066 | 0.46 | Q | | | | |
| 3+45 | 0.1098 | 0.47 | Q | | | | |
| 3+50 | 0.1130 | 0.47 | Q | | | | |
| 3+55 | 0.1162 | 0.47 | Q | | | | |
| 4+ 0 | 0.1195 | 0.47 | Q | | | | |
| 4+ 5 | 0.1228 | 0.47 | Q | | | | |
| 4+10 | 0.1260 | 0.48 | Q | | | | |
| 4+15 | 0.1294 | 0.48 | Q | | | | |
| 4+20 | 0.1327 | 0.48 | Q | | | | |
| 4+25 | 0.1360 | 0.48 | Q | | | | |
| 4+30 | 0.1394 | 0.49 | Q | | | | |
| 4+35 | 0.1427 | 0.49 | QV | | | | |
| 4+40 | 0.1461 | 0.49 | QV | | | | |
| 4+45 | 0.1496 | 0.50 | QV | | | | |
| 4+50 | 0.1530 | 0.50 | QV | | | | |
| 4+55 | 0.1564 | 0.50 | QV | | | | |
| 5+ 0 | 0.1599 | 0.50 | QV | | | | |
| 5+ 5 | 0.1634 | 0.51 | QV | | | | |
| 5+10 | 0.1669 | 0.51 | QV | | | | |
| 5+15 | 0.1704 | 0.51 | QV | | | | |
| 5+20 | 0.1740 | 0.52 | QV | | | | |
| 5+25 | 0.1776 | 0.52 | QV | | | | |
| 5+30 | 0.1811 | 0.52 | QV | | | | |
| 5+35 | 0.1848 | 0.52 | QV | | | | |
| 5+40 | 0.1884 | 0.53 | QV | | | | |
| 5+45 | 0.1920 | 0.53 | QV | | | | |
| 5+50 | 0.1957 | 0.53 | QV | | | | |
| 5+55 | 0.1994 | 0.54 | QV | | | | |
| 6+ 0 | 0.2031 | 0.54 | QV | | | | |
| 6+ 5 | 0.2069 | 0.54 | QV | | | | |
| 6+10 | 0.2107 | 0.55 | QV | | | | |
| 6+15 | 0.2145 | 0.55 | QV | | | | |
| 6+20 | 0.2183 | 0.55 | QV | | | | |
| 6+25 | 0.2221 | 0.56 | QV | | | | |
| 6+30 | 0.2260 | 0.56 | QV | | | | |
| 6+35 | 0.2299 | 0.56 | QV | | | | |
| 6+40 | 0.2338 | 0.57 | QV | | | | |
| 6+45 | 0.2377 | 0.57 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+50 | 0.2417 | 0.58 | QV | \| | \| | \| | \| |
| 6+55 | 0.2457 | 0.58 | QV | \| | \| | \| | \| |
| 7+ 0 | 0.2497 | 0.58 | QV | \| | \| | \| | \| |
| 7+ 5 | 0.2538 | 0.59 | QV | \| | \| | \| | \| |
| 7+10 | 0.2578 | 0.59 | QV | \| | \| | \| | \| |
| 7+15 | 0.2619 | 0.60 | QV | \| | \| | \| | \| |
| 7+20 | 0.2661 | 0.60 | QV | \| | \| | \| | \| |
| 7+25 | 0.2702 | 0.60 | QV | \| | \| | \| | \| |
| 7+30 | 0.2744 | 0.61 | QV | \| | \| | \| | \| |
| 7+35 | 0.2786 | 0.61 | QV | \| | \| | \| | \| |
| 7+40 | 0.2829 | 0.62 | Q V | \| | \| | \| | \| |
| 7+45 | 0.2872 | 0.62 | Q V | \| | \| | \| | \| |
| 7+50 | 0.2915 | 0.63 | Q V | \| | \| | \| | \| |
| 7+55 | 0.2958 | 0.63 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.3002 | 0.64 | Q V | \| | \| | \| | \| |
| 8+ 5 | 0.3046 | 0.64 | Q V | \| | \| | \| | \| |
| 8+10 | 0.3091 | 0.65 | Q V | \| | \| | \| | \| |
| 8+15 | 0.3136 | 0.65 | Q V | \| | \| | \| | \| |
| 8+20 | 0.3181 | 0.66 | Q V | \| | \| | \| | \| |
| 8+25 | 0.3226 | 0.66 | Q V | \| | \| | \| | \| |
| 8+30 | 0.3272 | 0.67 | Q V | \| | \| | \| | \| |
| 8+35 | 0.3319 | 0.67 | Q V | \| | \| | \| | \| |
| 8+40 | 0.3365 | 0.68 | Q V | \| | \| | \| | \| |
| 8+45 | 0.3412 | 0.68 | Q V | \| | \| | \| | \| |
| 8+50 | 0.3460 | 0.69 | Q V | \| | \| | \| | \| |
| 8+55 | 0.3508 | 0.69 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.3556 | 0.70 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.3604 | 0.71 | Q V | \| | \| | \| | \| |
| 9+10 | 0.3654 | 0.71 | Q V | \| | \| | \| | \| |
| 9+15 | 0.3703 | 0.72 | Q V | \| | \| | \| | \| |
| 9+20 | 0.3753 | 0.73 | Q V | \| | \| | \| | \| |
| 9+25 | 0.3803 | 0.73 | Q V | \| | \| | \| | \| |
| 9+30 | 0.3854 | 0.74 | Q V | \| | \| | \| | \| |
| 9+35 | 0.3906 | 0.75 | Q V | \| | \| | \| | \| |
| 9+40 | 0.3957 | 0.75 | Q V | \| | \| | \| | \| |
| 9+45 | 0.4010 | 0.76 | Q V | \| | \| | \| | \| |
| 9+50 | 0.4062 | 0.77 | Q V | \| | \| | \| | \| |
| 9+55 | 0.4116 | 0.77 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.4170 | 0.78 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.4224 | 0.79 | Q V | \| | \| | \| | \| |
| 10+10 | 0.4279 | 0.80 | Q  V | \| | \| | \| | \| |
| 10+15 | 0.4334 | 0.81 | Q  V | \| | \| | \| | \| |
| 10+20 | 0.4390 | 0.81 | Q  V | \| | \| | \| | \| |
| 10+25 | 0.4447 | 0.82 | Q  V | \| | \| | \| | \| |
| 10+30 | 0.4504 | 0.83 | Q  V | \| | \| | \| | \| |
| 10+35 | 0.4562 | 0.84 | Q  V | \| | \| | \| | \| |
| 10+40 | 0.4621 | 0.85 | Q  V | \| | \| | \| | \| |
| 10+45 | 0.4680 | 0.86 | Q  V | \| | \| | \| | \| |
| 10+50 | 0.4740 | 0.87 | Q  V | \| | \| | \| | \| |
| 10+55 | 0.4800 | 0.88 | Q  V | \| | \| | \| | \| |
| 11+ 0 | 0.4861 | 0.89 | Q  V | \| | \| | \| | \| |
| 11+ 5 | 0.4923 | 0.90 | Q  V | \| | \| | \| | \| |
| 11+10 | 0.4986 | 0.91 | Q  V | \| | \| | \| | \| |
| 11+15 | 0.5049 | 0.92 | Q  V | \| | \| | \| | \| |
| 11+20 | 0.5113 | 0.93 | Q  V | \| | \| | \| | \| |
| 11+25 | 0.5178 | 0.94 | Q  V | \| | \| | \| | \| |
| 11+30 | 0.5244 | 0.96 | Q  V | \| | \| | \| | \| |
| 11+35 | 0.5311 | 0.97 | Q  V | \| | \| | \| | \| |
| 11+40 | 0.5378 | 0.98 | Q  V | \| | \| | \| | \| |

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11+45       0.5447      0.99  Q  V      |          |          |          |
11+50       0.5516      1.01  Q  V      |          |          |          |
11+55       0.5587      1.02  Q  V      |          |          |          |
12+ 0       0.5658      1.04  Q   V      |          |          |          |
12+ 5       0.5730      1.05  Q   V      |          |          |          |
12+10       0.5803      1.06  Q   V      |          |          |          |
12+15       0.5876      1.06  Q   V      |          |          |          |
12+20       0.5949      1.06  Q   V      |          |          |          |
12+25       0.6021      1.04  Q   V      |          |          |          |
12+30       0.6092      1.03  Q   V      |          |          |          |
12+35       0.6163      1.04  Q   V      |          |          |          |
12+40       0.6235      1.04  Q   V      |          |          |          |
12+45       0.6307      1.05  Q   V      |          |          |          |
12+50       0.6381      1.06  Q   V      |          |          |          |
12+55       0.6455      1.08  Q   V      |          |          |          |
13+ 0       0.6530      1.09  Q   V      |          |          |          |
13+ 5       0.6606      1.11  Q   V      |          |          |          |
13+10       0.6684      1.13  Q   V      |          |          |          |
13+15       0.6763      1.15  Q   V      |          |          |          |
13+20       0.6843      1.17  Q   V      |          |          |          |
13+25       0.6925      1.19  Q   V      |          |          |          |
13+30       0.7009      1.21  Q   V      |          |          |          |
13+35       0.7094      1.24  Q    V     |          |          |          |
13+40       0.7181      1.27  Q    V     |          |          |          |
13+45       0.7270      1.29  Q    V     |          |          |          |
13+50       0.7362      1.32  Q    V     |          |          |          |
13+55       0.7455      1.36  Q    V     |          |          |          |
14+ 0       0.7551      1.39  Q    V     |          |          |          |
14+ 5       0.7649      1.43  Q    V     |          |          |          |
14+10       0.7750      1.47  Q    V     |          |          |          |
14+15       0.7855      1.51  Q    V     |          |          |          |
14+20       0.7962      1.56  Q    V     |          |          |          |
14+25       0.8073      1.61  Q    V     |          |          |          |
14+30       0.8187      1.66  Q    V     |          |          |          |
14+35       0.8306      1.72  Q    V     |          |          |          |
14+40       0.8429      1.79  Q    V     |          |          |          |
14+45       0.8557      1.85  Q     V    |          |          |          |
14+50       0.8689      1.93  Q     V    |          |          |          |
14+55       0.8828      2.01  |Q    V    |          |          |          |
15+ 0       0.8972      2.10  |Q    V    |          |          |          |
15+ 5       0.9123      2.20  |Q    V    |          |          |          |
15+10       0.9282      2.31  |Q    V    |          |          |          |
15+15       0.9449      2.43  |Q    V    |          |          |          |
15+20       0.9626      2.57  |Q    V    |          |          |          |
15+25       0.9816      2.76  |Q    V    |          |          |          |
15+30       1.0026      3.04  |Q     V   |          |          |          |
15+35       1.0262      3.43  |Q     V   |          |          |          |
15+40       1.0543      4.08  | Q    V   |          |          |          |
15+45       1.0886      4.98  | Q    V   |          |          |          |
15+50       1.1299      6.00  |  Q   V   |          |          |          |
15+55       1.1811      7.43  |  Q    V  |          |          |          |
16+ 0       1.2498      9.97  |   Q   V  |          |          |          |
16+ 5       1.3648     16.70  |       QV |          |          |          |
16+10       1.5630     28.78  |          |V  Q      |          |          |
16+15       1.8591     43.00  |          |  V       |Q         |          |
16+20       2.3235     67.43  |          |     V    |          |  Q       |
16+25       2.8694     79.26  |          |          V          |        Q |
16+30       3.2888     60.89  |          |          |  V       Q          |
16+35       3.5957     44.57  |          |          | Q  V     |          |
```

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16+40       3.8264     33.50  |          |     Q    |      V  |          |
16+45       4.0135     27.15  |          |  Q       |       V |          |
16+50       4.1679     22.43  |          |Q         |        V|          |
16+55       4.2997     19.14  |        Q |          |         V          |
17+ 0       4.4114     16.21  |       Q  |          |          |V        |
17+ 5       4.5089     14.15  |      Q   |          |          |V        |
17+10       4.5961     12.66  |     Q    |          |          | V       |
17+15       4.6749     11.44  |    Q     |          |          |  V      |
17+20       4.7445     10.11  |    Q     |          |          |  V      |
17+25       4.8048      8.75  |   Q      |          |          |  V      |
17+30       4.8589      7.85  |  Q       |          |          |   V     |
17+35       4.9091      7.29  |  Q       |          |          |   V     |
17+40       4.9548      6.63  |  Q       |          |          |    V    |
17+45       4.9970      6.13  |  Q       |          |          |    V    |
17+50       5.0353      5.57  | Q        |          |          |    V    |
17+55       5.0697      4.99  | Q        |          |          |    V    |
18+ 0       5.1024      4.75  | Q        |          |          |     V   |
18+ 5       5.1316      4.24  | Q        |          |          |     V   |
18+10       5.1586      3.93  |Q         |          |          |     V   |
18+15       5.1839      3.67  |Q         |          |          |     V   |
18+20       5.2058      3.18  |Q         |          |          |     V   |
18+25       5.2266      3.02  |Q         |          |          |     V   |
18+30       5.2451      2.68  |Q         |          |          |      V  |
18+35       5.2613      2.35  |Q         |          |          |      V  |
18+40       5.2772      2.31  |Q         |          |          |      V  |
18+45       5.2934      2.36  |Q         |          |          |      V  |
18+50       5.3096      2.35  |Q         |          |          |      V  |
18+55       5.3254      2.30  |Q         |          |          |      V  |
19+ 0       5.3408      2.23  |Q         |          |          |      V  |
19+ 5       5.3555      2.14  |Q         |          |          |      V  |
19+10       5.3684      1.87  Q          |          |          |      V  |
19+15       5.3796      1.63  Q          |          |          |       V |
19+20       5.3904      1.56  Q          |          |          |       V |
19+25       5.4005      1.48  Q          |          |          |       V |
19+30       5.4093      1.27  Q          |          |          |       V |
19+35       5.4159      0.96  Q          |          |          |       V |
19+40       5.4221      0.91  Q          |          |          |       V |
19+45       5.4282      0.88  Q          |          |          |       V |
19+50       5.4340      0.85  Q          |          |          |       V |
19+55       5.4398      0.83  Q          |          |          |       V |
20+ 0       5.4454      0.82  Q          |          |          |       V |
20+ 5       5.4509      0.80  Q          |          |          |       V |
20+10       5.4563      0.78  Q          |          |          |       V |
20+15       5.4616      0.77  Q          |          |          |       V |
20+20       5.4667      0.75  Q          |          |          |       V |
20+25       5.4718      0.74  Q          |          |          |       V |
20+30       5.4768      0.72  Q          |          |          |       V |
20+35       5.4817      0.71  Q          |          |          |       V |
20+40       5.4865      0.70  Q          |          |          |       V |
20+45       5.4912      0.69  Q          |          |          |       V |
20+50       5.4959      0.68  Q          |          |          |       V |
20+55       5.5005      0.66  Q          |          |          |       V |
21+ 0       5.5050      0.65  Q          |          |          |       V |
21+ 5       5.5094      0.64  Q          |          |          |       V |
21+10       5.5138      0.63  Q          |          |          |       V |
21+15       5.5181      0.63  Q          |          |          |        V|
21+20       5.5223      0.62  Q          |          |          |        V|
21+25       5.5265      0.61  Q          |          |          |        V|
21+30       5.5306      0.60  Q          |          |          |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+35 | 5.5347 | 0.59 | Q | \| | \| | \| | V\| |
| 21+40 | 5.5387 | 0.58 | Q | \| | \| | \| | V\| |
| 21+45 | 5.5427 | 0.57 | Q | \| | \| | \| | V\| |
| 21+50 | 5.5466 | 0.57 | Q | \| | \| | \| | V\| |
| 21+55 | 5.5504 | 0.56 | Q | \| | \| | \| | V\| |
| 22+ 0 | 5.5542 | 0.55 | Q | \| | \| | \| | V\| |
| 22+ 5 | 5.5580 | 0.55 | Q | \| | \| | \| | V\| |
| 22+10 | 5.5617 | 0.54 | Q | \| | \| | \| | V\| |
| 22+15 | 5.5653 | 0.53 | Q | \| | \| | \| | V\| |
| 22+20 | 5.5690 | 0.53 | Q | \| | \| | \| | V\| |
| 22+25 | 5.5725 | 0.52 | Q | \| | \| | \| | V\| |
| 22+30 | 5.5761 | 0.51 | Q | \| | \| | \| | V\| |
| 22+35 | 5.5796 | 0.51 | Q | \| | \| | \| | V\| |
| 22+40 | 5.5830 | 0.50 | Q | \| | \| | \| | V\| |
| 22+45 | 5.5864 | 0.50 | Q | \| | \| | \| | V\| |
| 22+50 | 5.5898 | 0.49 | Q | \| | \| | \| | V\| |
| 22+55 | 5.5931 | 0.49 | Q | \| | \| | \| | V\| |
| 23+ 0 | 5.5965 | 0.48 | Q | \| | \| | \| | V\| |
| 23+ 5 | 5.5997 | 0.48 | Q | \| | \| | \| | V\| |
| 23+10 | 5.6030 | 0.47 | Q | \| | \| | \| | V\| |
| 23+15 | 5.6062 | 0.47 | Q | \| | \| | \| | V\| |
| 23+20 | 5.6093 | 0.46 | Q | \| | \| | \| | V\| |
| 23+25 | 5.6125 | 0.46 | Q | \| | \| | \| | V\| |
| 23+30 | 5.6156 | 0.45 | Q | \| | \| | \| | V\| |
| 23+35 | 5.6187 | 0.45 | Q | \| | \| | \| | V\| |
| 23+40 | 5.6217 | 0.44 | Q | \| | \| | \| | V\| |
| 23+45 | 5.6247 | 0.44 | Q | \| | \| | \| | V\| |
| 23+50 | 5.6277 | 0.43 | Q | \| | \| | \| | V\| |
| 23+55 | 5.6307 | 0.43 | Q | \| | \| | \| | V\| |
| 24+ 0 | 5.6336 | 0.43 | Q | \| | \| | \| | V\| |
| 24+ 5 | 5.6365 | 0.42 | Q | \| | \| | \| | V\| |
| 24+10 | 5.6393 | 0.40 | Q | \| | \| | \| | V\| |
| 24+15 | 5.6419 | 0.38 | Q | \| | \| | \| | V\| |
| 24+20 | 5.6441 | 0.32 | Q | \| | \| | \| | V\| |
| 24+25 | 5.6459 | 0.25 | Q | \| | \| | \| | V\| |
| 24+30 | 5.6472 | 0.20 | Q | \| | \| | \| | V\| |
| 24+35 | 5.6484 | 0.17 | Q | \| | \| | \| | V\| |
| 24+40 | 5.6494 | 0.14 | Q | \| | \| | \| | V\| |
| 24+45 | 5.6502 | 0.12 | Q | \| | \| | \| | V\| |
| 24+50 | 5.6510 | 0.11 | Q | \| | \| | \| | V\| |
| 24+55 | 5.6516 | 0.09 | Q | \| | \| | \| | V\| |
| 25+ 0 | 5.6522 | 0.08 | Q | \| | \| | \| | V\| |
| 25+ 5 | 5.6527 | 0.07 | Q | \| | \| | \| | V\| |
| 25+10 | 5.6531 | 0.06 | Q | \| | \| | \| | V\| |
| 25+15 | 5.6535 | 0.06 | Q | \| | \| | \| | V\| |
| 25+20 | 5.6539 | 0.05 | Q | \| | \| | \| | V\| |
| 25+25 | 5.6542 | 0.04 | Q | \| | \| | \| | V\| |
| 25+30 | 5.6544 | 0.04 | Q | \| | \| | \| | V\| |
| 25+35 | 5.6547 | 0.04 | Q | \| | \| | \| | V\| |
| 25+40 | 5.6549 | 0.03 | Q | \| | \| | \| | V\| |
| 25+45 | 5.6551 | 0.03 | Q | \| | \| | \| | V\| |
| 25+50 | 5.6553 | 0.02 | Q | \| | \| | \| | V\| |
| 25+55 | 5.6554 | 0.02 | Q | \| | \| | \| | V\| |
| 26+ 0 | 5.6555 | 0.02 | Q | \| | \| | \| | V\| |
| 26+ 5 | 5.6557 | 0.02 | Q | \| | \| | \| | V\| |
| 26+10 | 5.6558 | 0.01 | Q | \| | \| | \| | V\| |
| 26+15 | 5.6558 | 0.01 | Q | \| | \| | \| | V\| |
| 26+20 | 5.6559 | 0.01 | Q | \| | \| | \| | V\| |
| 26+25 | 5.6560 | 0.01 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+30 | 5.6561 | 0.01 | Q | \| | \| | \| | V\| |
| 26+35 | 5.6561 | 0.01 | Q | \| | \| | \| | V\| |
| 26+40 | 5.6562 | 0.01 | Q | \| | \| | \| | V\| |
| 26+45 | 5.6562 | 0.01 | Q | \| | \| | \| | V\| |
| 26+50 | 5.6562 | 0.01 | Q | \| | \| | \| | V\| |
| 26+55 | 5.6563 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 0 | 5.6563 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 5 | 5.6563 | 0.00 | Q | \| | \| | \| | V\| |
| 27+10 | 5.6563 | 0.00 | Q | \| | \| | \| | V\| |
| 27+15 | 5.6563 | 0.00 | Q | \| | \| | \| | V\| |
| 27+20 | 5.6563 | 0.00 | Q | \| | \| | \| | V\| |
| 27+25 | 5.6563 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 19
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 7.87 | 1 | 1.35 |
| Rainfall data for year 100 | | |
| 7.87 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 7.87 | 24 | 2.48 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 7.87 | 1.000 | 0.360 | 1.000 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 7.87 | 1.000 | 62.0 | 80.6 | 2.41 | 0.366 |

Area-averaged catchment yield fraction, Y = 0.366
Area-averaged low loss fraction, Yb = 0.634
User entry of time of concentration = 0.580 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 7.87(Ac.)
Catchment Lag time = 0.464 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 17.9598
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.634 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.641(In)
Computed peak 30-minute rainfall = 1.097(In)
Specified peak 1-hour rainfall = 1.350(In)
Computed peak 3-hour rainfall = 1.632(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.480(In)

Rainfall depth area reduction factors:
Using a total area of 7.87(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.640(In)
30-minute factor = 1.000 Adjusted rainfall = 1.096(In)
1-hour factor = 1.000 Adjusted rainfall = 1.350(In)
3-hour factor = 1.000 Adjusted rainfall = 1.632(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.480(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 95.18 (CFS)) | |
| 1 | 0.857 | 0.815 |
| 2 | 3.791 | 2.793 |
| 3 | 8.920 | 4.881 |
| 4 | 19.662 | 10.225 |
| 5 | 36.203 | 15.743 |
| 6 | 49.017 | 12.197 |
| 7 | 58.041 | 8.589 |
| 8 | 64.275 | 5.933 |
| 9 | 69.111 | 4.603 |
| 10 | 73.109 | 3.805 |
| 11 | 76.367 | 3.101 |
| 12 | 79.157 | 2.655 |
| 13 | 81.486 | 2.216 |
| 14 | 83.485 | 1.903 |

| | | |
|---|---|---|
| 15 | 85.300 | 1.728 |
| 16 | 86.956 | 1.576 |
| 17 | 88.391 | 1.366 |
| 18 | 89.558 | 1.110 |
| 19 | 90.606 | 0.998 |
| 20 | 91.593 | 0.940 |
| 21 | 92.472 | 0.836 |
| 22 | 93.290 | 0.779 |
| 23 | 94.033 | 0.707 |
| 24 | 94.650 | 0.588 |
| 25 | 95.260 | 0.581 |
| 26 | 95.807 | 0.520 |
| 27 | 96.274 | 0.445 |
| 28 | 96.739 | 0.443 |
| 29 | 97.113 | 0.356 |
| 30 | 97.437 | 0.308 |
| 31 | 97.750 | 0.298 |
| 32 | 97.957 | 0.198 |
| 33 | 98.137 | 0.171 |
| 34 | 98.323 | 0.177 |
| 35 | 98.535 | 0.202 |
| 36 | 98.751 | 0.205 |
| 37 | 98.966 | 0.205 |
| 38 | 99.182 | 0.205 |
| 39 | 99.397 | 0.205 |
| 40 | 99.559 | 0.154 |
| 41 | 99.671 | 0.107 |
| 42 | 99.783 | 0.107 |
| 43 | 99.896 | 0.107 |
| 44 | 100.000 | 0.099 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6404 | 0.6404 |
| 2 | 0.7884 | 0.1480 |
| 3 | 0.8903 | 0.1020 |
| 4 | 0.9706 | 0.0803 |
| 5 | 1.0378 | 0.0672 |
| 6 | 1.0961 | 0.0583 |
| 7 | 1.1480 | 0.0519 |
| 8 | 1.1949 | 0.0469 |
| 9 | 1.2379 | 0.0430 |
| 10 | 1.2777 | 0.0398 |
| 11 | 1.3147 | 0.0371 |
| 12 | 1.3495 | 0.0348 |
| 13 | 1.3683 | 0.0188 |
| 14 | 1.3860 | 0.0177 |
| 15 | 1.4027 | 0.0167 |
| 16 | 1.4184 | 0.0158 |
| 17 | 1.4334 | 0.0150 |
| 18 | 1.4476 | 0.0143 |
| 19 | 1.4612 | 0.0136 |
| 20 | 1.4743 | 0.0130 |
| 21 | 1.4868 | 0.0125 |
| 22 | 1.4988 | 0.0120 |
| 23 | 1.5104 | 0.0116 |
| 24 | 1.5216 | 0.0112 |
| 25 | 1.5323 | 0.0108 |
| 26 | 1.5428 | 0.0104 |

| | | |
|---|---|---|
| 27 | 1.5529 | 0.0101 |
| 28 | 1.5627 | 0.0098 |
| 29 | 1.5722 | 0.0095 |
| 30 | 1.5815 | 0.0093 |
| 31 | 1.5905 | 0.0090 |
| 32 | 1.5993 | 0.0088 |
| 33 | 1.6078 | 0.0085 |
| 34 | 1.6161 | 0.0083 |
| 35 | 1.6243 | 0.0081 |
| 36 | 1.6322 | 0.0079 |
| 37 | 1.6399 | 0.0077 |
| 38 | 1.6475 | 0.0076 |
| 39 | 1.6549 | 0.0074 |
| 40 | 1.6622 | 0.0073 |
| 41 | 1.6693 | 0.0071 |
| 42 | 1.6763 | 0.0070 |
| 43 | 1.6831 | 0.0068 |
| 44 | 1.6898 | 0.0067 |
| 45 | 1.6964 | 0.0066 |
| 46 | 1.7028 | 0.0065 |
| 47 | 1.7092 | 0.0063 |
| 48 | 1.7154 | 0.0062 |
| 49 | 1.7215 | 0.0061 |
| 50 | 1.7276 | 0.0060 |
| 51 | 1.7335 | 0.0059 |
| 52 | 1.7393 | 0.0058 |
| 53 | 1.7450 | 0.0057 |
| 54 | 1.7507 | 0.0056 |
| 55 | 1.7563 | 0.0056 |
| 56 | 1.7617 | 0.0055 |
| 57 | 1.7671 | 0.0054 |
| 58 | 1.7725 | 0.0053 |
| 59 | 1.7777 | 0.0052 |
| 60 | 1.7829 | 0.0052 |
| 61 | 1.7880 | 0.0051 |
| 62 | 1.7930 | 0.0050 |
| 63 | 1.7980 | 0.0050 |
| 64 | 1.8029 | 0.0049 |
| 65 | 1.8077 | 0.0048 |
| 66 | 1.8125 | 0.0048 |
| 67 | 1.8172 | 0.0047 |
| 68 | 1.8219 | 0.0047 |
| 69 | 1.8265 | 0.0046 |
| 70 | 1.8310 | 0.0045 |
| 71 | 1.8355 | 0.0045 |
| 72 | 1.8400 | 0.0044 |
| 73 | 1.8454 | 0.0055 |
| 74 | 1.8508 | 0.0054 |
| 75 | 1.8562 | 0.0054 |
| 76 | 1.8615 | 0.0053 |
| 77 | 1.8667 | 0.0052 |
| 78 | 1.8719 | 0.0052 |
| 79 | 1.8771 | 0.0051 |
| 80 | 1.8822 | 0.0051 |
| 81 | 1.8872 | 0.0050 |
| 82 | 1.8922 | 0.0050 |
| 83 | 1.8972 | 0.0049 |
| 84 | 1.9021 | 0.0049 |
| 85 | 1.9069 | 0.0049 |

| | | |
|---|---|---|
| 86 | 1.9117 | 0.0048 |
| 87 | 1.9165 | 0.0048 |
| 88 | 1.9212 | 0.0047 |
| 89 | 1.9259 | 0.0047 |
| 90 | 1.9305 | 0.0046 |
| 91 | 1.9351 | 0.0046 |
| 92 | 1.9397 | 0.0046 |
| 93 | 1.9442 | 0.0045 |
| 94 | 1.9487 | 0.0045 |
| 95 | 1.9531 | 0.0044 |
| 96 | 1.9575 | 0.0044 |
| 97 | 1.9619 | 0.0044 |
| 98 | 1.9662 | 0.0043 |
| 99 | 1.9706 | 0.0043 |
| 100 | 1.9748 | 0.0043 |
| 101 | 1.9791 | 0.0042 |
| 102 | 1.9833 | 0.0042 |
| 103 | 1.9874 | 0.0042 |
| 104 | 1.9916 | 0.0041 |
| 105 | 1.9957 | 0.0041 |
| 106 | 1.9998 | 0.0041 |
| 107 | 2.0038 | 0.0040 |
| 108 | 2.0078 | 0.0040 |
| 109 | 2.0118 | 0.0040 |
| 110 | 2.0158 | 0.0040 |
| 111 | 2.0197 | 0.0039 |
| 112 | 2.0236 | 0.0039 |
| 113 | 2.0275 | 0.0039 |
| 114 | 2.0313 | 0.0039 |
| 115 | 2.0352 | 0.0038 |
| 116 | 2.0390 | 0.0038 |
| 117 | 2.0427 | 0.0038 |
| 118 | 2.0465 | 0.0037 |
| 119 | 2.0502 | 0.0037 |
| 120 | 2.0539 | 0.0037 |
| 121 | 2.0576 | 0.0037 |
| 122 | 2.0612 | 0.0036 |
| 123 | 2.0648 | 0.0036 |
| 124 | 2.0684 | 0.0036 |
| 125 | 2.0720 | 0.0036 |
| 126 | 2.0756 | 0.0036 |
| 127 | 2.0791 | 0.0035 |
| 128 | 2.0826 | 0.0035 |
| 129 | 2.0861 | 0.0035 |
| 130 | 2.0896 | 0.0035 |
| 131 | 2.0930 | 0.0035 |
| 132 | 2.0965 | 0.0034 |
| 133 | 2.0999 | 0.0034 |
| 134 | 2.1033 | 0.0034 |
| 135 | 2.1066 | 0.0034 |
| 136 | 2.1100 | 0.0034 |
| 137 | 2.1133 | 0.0033 |
| 138 | 2.1166 | 0.0033 |
| 139 | 2.1199 | 0.0033 |
| 140 | 2.1232 | 0.0033 |
| 141 | 2.1265 | 0.0033 |
| 142 | 2.1297 | 0.0032 |
| 143 | 2.1329 | 0.0032 |
| 144 | 2.1361 | 0.0032 |

| | | |
|---|---|---|
| 145 | 2.1393 | 0.0032 |
| 146 | 2.1425 | 0.0032 |
| 147 | 2.1456 | 0.0032 |
| 148 | 2.1488 | 0.0031 |
| 149 | 2.1519 | 0.0031 |
| 150 | 2.1550 | 0.0031 |
| 151 | 2.1581 | 0.0031 |
| 152 | 2.1611 | 0.0031 |
| 153 | 2.1642 | 0.0031 |
| 154 | 2.1672 | 0.0030 |
| 155 | 2.1703 | 0.0030 |
| 156 | 2.1733 | 0.0030 |
| 157 | 2.1763 | 0.0030 |
| 158 | 2.1792 | 0.0030 |
| 159 | 2.1822 | 0.0030 |
| 160 | 2.1851 | 0.0029 |
| 161 | 2.1881 | 0.0029 |
| 162 | 2.1910 | 0.0029 |
| 163 | 2.1939 | 0.0029 |
| 164 | 2.1968 | 0.0029 |
| 165 | 2.1997 | 0.0029 |
| 166 | 2.2025 | 0.0029 |
| 167 | 2.2054 | 0.0029 |
| 168 | 2.2082 | 0.0028 |
| 169 | 2.2110 | 0.0028 |
| 170 | 2.2139 | 0.0028 |
| 171 | 2.2167 | 0.0028 |
| 172 | 2.2194 | 0.0028 |
| 173 | 2.2222 | 0.0028 |
| 174 | 2.2250 | 0.0028 |
| 175 | 2.2277 | 0.0027 |
| 176 | 2.2305 | 0.0027 |
| 177 | 2.2332 | 0.0027 |
| 178 | 2.2359 | 0.0027 |
| 179 | 2.2386 | 0.0027 |
| 180 | 2.2413 | 0.0027 |
| 181 | 2.2439 | 0.0027 |
| 182 | 2.2466 | 0.0027 |
| 183 | 2.2493 | 0.0027 |
| 184 | 2.2519 | 0.0026 |
| 185 | 2.2545 | 0.0026 |
| 186 | 2.2572 | 0.0026 |
| 187 | 2.2598 | 0.0026 |
| 188 | 2.2624 | 0.0026 |
| 189 | 2.2649 | 0.0026 |
| 190 | 2.2675 | 0.0026 |
| 191 | 2.2701 | 0.0026 |
| 192 | 2.2726 | 0.0026 |
| 193 | 2.2752 | 0.0025 |
| 194 | 2.2777 | 0.0025 |
| 195 | 2.2802 | 0.0025 |
| 196 | 2.2827 | 0.0025 |
| 197 | 2.2853 | 0.0025 |
| 198 | 2.2877 | 0.0025 |
| 199 | 2.2902 | 0.0025 |
| 200 | 2.2927 | 0.0025 |
| 201 | 2.2952 | 0.0025 |
| 202 | 2.2976 | 0.0025 |
| 203 | 2.3001 | 0.0024 |

| | | |
|---|---|---|
| 204 | 2.3025 | 0.0024 |
| 205 | 2.3049 | 0.0024 |
| 206 | 2.3073 | 0.0024 |
| 207 | 2.3097 | 0.0024 |
| 208 | 2.3121 | 0.0024 |
| 209 | 2.3145 | 0.0024 |
| 210 | 2.3169 | 0.0024 |
| 211 | 2.3193 | 0.0024 |
| 212 | 2.3216 | 0.0024 |
| 213 | 2.3240 | 0.0024 |
| 214 | 2.3263 | 0.0023 |
| 215 | 2.3287 | 0.0023 |
| 216 | 2.3310 | 0.0023 |
| 217 | 2.3333 | 0.0023 |
| 218 | 2.3356 | 0.0023 |
| 219 | 2.3379 | 0.0023 |
| 220 | 2.3402 | 0.0023 |
| 221 | 2.3425 | 0.0023 |
| 222 | 2.3448 | 0.0023 |
| 223 | 2.3471 | 0.0023 |
| 224 | 2.3493 | 0.0023 |
| 225 | 2.3516 | 0.0023 |
| 226 | 2.3538 | 0.0022 |
| 227 | 2.3561 | 0.0022 |
| 228 | 2.3583 | 0.0022 |
| 229 | 2.3605 | 0.0022 |
| 230 | 2.3627 | 0.0022 |
| 231 | 2.3650 | 0.0022 |
| 232 | 2.3672 | 0.0022 |
| 233 | 2.3694 | 0.0022 |
| 234 | 2.3715 | 0.0022 |
| 235 | 2.3737 | 0.0022 |
| 236 | 2.3759 | 0.0022 |
| 237 | 2.3781 | 0.0022 |
| 238 | 2.3802 | 0.0022 |
| 239 | 2.3824 | 0.0021 |
| 240 | 2.3845 | 0.0021 |
| 241 | 2.3866 | 0.0021 |
| 242 | 2.3888 | 0.0021 |
| 243 | 2.3909 | 0.0021 |
| 244 | 2.3930 | 0.0021 |
| 245 | 2.3951 | 0.0021 |
| 246 | 2.3972 | 0.0021 |
| 247 | 2.3993 | 0.0021 |
| 248 | 2.4014 | 0.0021 |
| 249 | 2.4035 | 0.0021 |
| 250 | 2.4056 | 0.0021 |
| 251 | 2.4076 | 0.0021 |
| 252 | 2.4097 | 0.0021 |
| 253 | 2.4117 | 0.0021 |
| 254 | 2.4138 | 0.0020 |
| 255 | 2.4158 | 0.0020 |
| 256 | 2.4179 | 0.0020 |
| 257 | 2.4199 | 0.0020 |
| 258 | 2.4219 | 0.0020 |
| 259 | 2.4239 | 0.0020 |
| 260 | 2.4260 | 0.0020 |
| 261 | 2.4280 | 0.0020 |
| 262 | 2.4300 | 0.0020 |

| | | |
|---|---|---|
| 263 | 2.4320 | 0.0020 |
| 264 | 2.4339 | 0.0020 |
| 265 | 2.4359 | 0.0020 |
| 266 | 2.4379 | 0.0020 |
| 267 | 2.4399 | 0.0020 |
| 268 | 2.4418 | 0.0020 |
| 269 | 2.4438 | 0.0020 |
| 270 | 2.4457 | 0.0020 |
| 271 | 2.4477 | 0.0019 |
| 272 | 2.4496 | 0.0019 |
| 273 | 2.4516 | 0.0019 |
| 274 | 2.4535 | 0.0019 |
| 275 | 2.4554 | 0.0019 |
| 276 | 2.4574 | 0.0019 |
| 277 | 2.4593 | 0.0019 |
| 278 | 2.4612 | 0.0019 |
| 279 | 2.4631 | 0.0019 |
| 280 | 2.4650 | 0.0019 |
| 281 | 2.4669 | 0.0019 |
| 282 | 2.4688 | 0.0019 |
| 283 | 2.4706 | 0.0019 |
| 284 | 2.4725 | 0.0019 |
| 285 | 2.4744 | 0.0019 |
| 286 | 2.4763 | 0.0019 |
| 287 | 2.4781 | 0.0019 |
| 288 | 2.4800 | 0.0019 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0019 | 0.0012 | 0.0007 |
| 2 | 0.0019 | 0.0012 | 0.0007 |
| 3 | 0.0019 | 0.0012 | 0.0007 |
| 4 | 0.0019 | 0.0012 | 0.0007 |
| 5 | 0.0019 | 0.0012 | 0.0007 |
| 6 | 0.0019 | 0.0012 | 0.0007 |
| 7 | 0.0019 | 0.0012 | 0.0007 |
| 8 | 0.0019 | 0.0012 | 0.0007 |
| 9 | 0.0019 | 0.0012 | 0.0007 |
| 10 | 0.0019 | 0.0012 | 0.0007 |
| 11 | 0.0019 | 0.0012 | 0.0007 |
| 12 | 0.0019 | 0.0012 | 0.0007 |
| 13 | 0.0020 | 0.0012 | 0.0007 |
| 14 | 0.0020 | 0.0012 | 0.0007 |
| 15 | 0.0020 | 0.0013 | 0.0007 |
| 16 | 0.0020 | 0.0013 | 0.0007 |
| 17 | 0.0020 | 0.0013 | 0.0007 |
| 18 | 0.0020 | 0.0013 | 0.0007 |
| 19 | 0.0020 | 0.0013 | 0.0007 |
| 20 | 0.0020 | 0.0013 | 0.0007 |
| 21 | 0.0020 | 0.0013 | 0.0007 |
| 22 | 0.0020 | 0.0013 | 0.0007 |
| 23 | 0.0020 | 0.0013 | 0.0007 |
| 24 | 0.0020 | 0.0013 | 0.0007 |
| 25 | 0.0021 | 0.0013 | 0.0008 |
| 26 | 0.0021 | 0.0013 | 0.0008 |
| 27 | 0.0021 | 0.0013 | 0.0008 |
| 28 | 0.0021 | 0.0013 | 0.0008 |

| | | | |
|---|---|---|---|
| 29 | 0.0021 | 0.0013 | 0.0008 |
| 30 | 0.0021 | 0.0013 | 0.0008 |
| 31 | 0.0021 | 0.0013 | 0.0008 |
| 32 | 0.0021 | 0.0014 | 0.0008 |
| 33 | 0.0021 | 0.0014 | 0.0008 |
| 34 | 0.0021 | 0.0014 | 0.0008 |
| 35 | 0.0022 | 0.0014 | 0.0008 |
| 36 | 0.0022 | 0.0014 | 0.0008 |
| 37 | 0.0022 | 0.0014 | 0.0008 |
| 38 | 0.0022 | 0.0014 | 0.0008 |
| 39 | 0.0022 | 0.0014 | 0.0008 |
| 40 | 0.0022 | 0.0014 | 0.0008 |
| 41 | 0.0022 | 0.0014 | 0.0008 |
| 42 | 0.0022 | 0.0014 | 0.0008 |
| 43 | 0.0023 | 0.0014 | 0.0008 |
| 44 | 0.0023 | 0.0014 | 0.0008 |
| 45 | 0.0023 | 0.0014 | 0.0008 |
| 46 | 0.0023 | 0.0015 | 0.0008 |
| 47 | 0.0023 | 0.0015 | 0.0008 |
| 48 | 0.0023 | 0.0015 | 0.0008 |
| 49 | 0.0023 | 0.0015 | 0.0009 |
| 50 | 0.0023 | 0.0015 | 0.0009 |
| 51 | 0.0024 | 0.0015 | 0.0009 |
| 52 | 0.0024 | 0.0015 | 0.0009 |
| 53 | 0.0024 | 0.0015 | 0.0009 |
| 54 | 0.0024 | 0.0015 | 0.0009 |
| 55 | 0.0024 | 0.0015 | 0.0009 |
| 56 | 0.0024 | 0.0015 | 0.0009 |
| 57 | 0.0024 | 0.0015 | 0.0009 |
| 58 | 0.0024 | 0.0016 | 0.0009 |
| 59 | 0.0025 | 0.0016 | 0.0009 |
| 60 | 0.0025 | 0.0016 | 0.0009 |
| 61 | 0.0025 | 0.0016 | 0.0009 |
| 62 | 0.0025 | 0.0016 | 0.0009 |
| 63 | 0.0025 | 0.0016 | 0.0009 |
| 64 | 0.0025 | 0.0016 | 0.0009 |
| 65 | 0.0026 | 0.0016 | 0.0009 |
| 66 | 0.0026 | 0.0016 | 0.0009 |
| 67 | 0.0026 | 0.0016 | 0.0009 |
| 68 | 0.0026 | 0.0016 | 0.0009 |
| 69 | 0.0026 | 0.0017 | 0.0010 |
| 70 | 0.0026 | 0.0017 | 0.0010 |
| 71 | 0.0027 | 0.0017 | 0.0010 |
| 72 | 0.0027 | 0.0017 | 0.0010 |
| 73 | 0.0027 | 0.0017 | 0.0010 |
| 74 | 0.0027 | 0.0017 | 0.0010 |
| 75 | 0.0027 | 0.0017 | 0.0010 |
| 76 | 0.0027 | 0.0017 | 0.0010 |
| 77 | 0.0028 | 0.0018 | 0.0010 |
| 78 | 0.0028 | 0.0018 | 0.0010 |
| 79 | 0.0028 | 0.0018 | 0.0010 |
| 80 | 0.0028 | 0.0018 | 0.0010 |
| 81 | 0.0028 | 0.0018 | 0.0010 |
| 82 | 0.0029 | 0.0018 | 0.0010 |
| 83 | 0.0029 | 0.0018 | 0.0011 |
| 84 | 0.0029 | 0.0018 | 0.0011 |
| 85 | 0.0029 | 0.0019 | 0.0011 |
| 86 | 0.0029 | 0.0019 | 0.0011 |
| 87 | 0.0030 | 0.0019 | 0.0011 |

| | | | |
|---|---|---|---|
| 88 | 0.0030 | 0.0019 | 0.0011 |
| 89 | 0.0030 | 0.0019 | 0.0011 |
| 90 | 0.0030 | 0.0019 | 0.0011 |
| 91 | 0.0031 | 0.0019 | 0.0011 |
| 92 | 0.0031 | 0.0019 | 0.0011 |
| 93 | 0.0031 | 0.0020 | 0.0011 |
| 94 | 0.0031 | 0.0020 | 0.0011 |
| 95 | 0.0032 | 0.0020 | 0.0012 |
| 96 | 0.0032 | 0.0020 | 0.0012 |
| 97 | 0.0032 | 0.0020 | 0.0012 |
| 98 | 0.0032 | 0.0020 | 0.0012 |
| 99 | 0.0033 | 0.0021 | 0.0012 |
| 100 | 0.0033 | 0.0021 | 0.0012 |
| 101 | 0.0033 | 0.0021 | 0.0012 |
| 102 | 0.0033 | 0.0021 | 0.0012 |
| 103 | 0.0034 | 0.0021 | 0.0012 |
| 104 | 0.0034 | 0.0022 | 0.0012 |
| 105 | 0.0034 | 0.0022 | 0.0013 |
| 106 | 0.0035 | 0.0022 | 0.0013 |
| 107 | 0.0035 | 0.0022 | 0.0013 |
| 108 | 0.0035 | 0.0022 | 0.0013 |
| 109 | 0.0036 | 0.0023 | 0.0013 |
| 110 | 0.0036 | 0.0023 | 0.0013 |
| 111 | 0.0036 | 0.0023 | 0.0013 |
| 112 | 0.0036 | 0.0023 | 0.0013 |
| 113 | 0.0037 | 0.0023 | 0.0014 |
| 114 | 0.0037 | 0.0024 | 0.0014 |
| 115 | 0.0038 | 0.0024 | 0.0014 |
| 116 | 0.0038 | 0.0024 | 0.0014 |
| 117 | 0.0039 | 0.0024 | 0.0014 |
| 118 | 0.0039 | 0.0025 | 0.0014 |
| 119 | 0.0039 | 0.0025 | 0.0014 |
| 120 | 0.0040 | 0.0025 | 0.0014 |
| 121 | 0.0040 | 0.0025 | 0.0015 |
| 122 | 0.0040 | 0.0026 | 0.0015 |
| 123 | 0.0041 | 0.0026 | 0.0015 |
| 124 | 0.0041 | 0.0026 | 0.0015 |
| 125 | 0.0042 | 0.0027 | 0.0015 |
| 126 | 0.0042 | 0.0027 | 0.0015 |
| 127 | 0.0043 | 0.0027 | 0.0016 |
| 128 | 0.0043 | 0.0028 | 0.0016 |
| 129 | 0.0044 | 0.0028 | 0.0016 |
| 130 | 0.0044 | 0.0028 | 0.0016 |
| 131 | 0.0045 | 0.0029 | 0.0017 |
| 132 | 0.0046 | 0.0029 | 0.0017 |
| 133 | 0.0046 | 0.0029 | 0.0017 |
| 134 | 0.0047 | 0.0030 | 0.0017 |
| 135 | 0.0048 | 0.0030 | 0.0017 |
| 136 | 0.0048 | 0.0031 | 0.0018 |
| 137 | 0.0049 | 0.0031 | 0.0018 |
| 138 | 0.0049 | 0.0031 | 0.0018 |
| 139 | 0.0050 | 0.0032 | 0.0018 |
| 140 | 0.0051 | 0.0032 | 0.0019 |
| 141 | 0.0052 | 0.0033 | 0.0019 |
| 142 | 0.0052 | 0.0033 | 0.0019 |
| 143 | 0.0054 | 0.0034 | 0.0020 |
| 144 | 0.0054 | 0.0034 | 0.0020 |
| 145 | 0.0044 | 0.0028 | 0.0016 |
| 146 | 0.0045 | 0.0029 | 0.0016 |

| | | | |
|---|---|---|---|
| 147 | 0.0046 | 0.0029 | 0.0017 |
| 148 | 0.0047 | 0.0030 | 0.0017 |
| 149 | 0.0048 | 0.0030 | 0.0017 |
| 150 | 0.0048 | 0.0031 | 0.0018 |
| 151 | 0.0050 | 0.0032 | 0.0018 |
| 152 | 0.0050 | 0.0032 | 0.0018 |
| 153 | 0.0052 | 0.0033 | 0.0019 |
| 154 | 0.0052 | 0.0033 | 0.0019 |
| 155 | 0.0054 | 0.0034 | 0.0020 |
| 156 | 0.0055 | 0.0035 | 0.0020 |
| 157 | 0.0056 | 0.0036 | 0.0021 |
| 158 | 0.0057 | 0.0036 | 0.0021 |
| 159 | 0.0059 | 0.0038 | 0.0022 |
| 160 | 0.0060 | 0.0038 | 0.0022 |
| 161 | 0.0062 | 0.0040 | 0.0023 |
| 162 | 0.0063 | 0.0040 | 0.0023 |
| 163 | 0.0066 | 0.0042 | 0.0024 |
| 164 | 0.0067 | 0.0043 | 0.0025 |
| 165 | 0.0070 | 0.0044 | 0.0025 |
| 166 | 0.0071 | 0.0045 | 0.0026 |
| 167 | 0.0074 | 0.0047 | 0.0027 |
| 168 | 0.0076 | 0.0048 | 0.0028 |
| 169 | 0.0079 | 0.0050 | 0.0029 |
| 170 | 0.0081 | 0.0052 | 0.0030 |
| 171 | 0.0085 | 0.0054 | 0.0031 |
| 172 | 0.0088 | 0.0056 | 0.0032 |
| 173 | 0.0093 | 0.0059 | 0.0034 |
| 174 | 0.0095 | 0.0060 | 0.0035 |
| 175 | 0.0101 | 0.0064 | 0.0037 |
| 176 | 0.0104 | 0.0066 | 0.0038 |
| 177 | 0.0112 | 0.0071 | 0.0041 |
| 178 | 0.0116 | 0.0073 | 0.0042 |
| 179 | 0.0125 | 0.0079 | 0.0046 |
| 180 | 0.0130 | 0.0083 | 0.0048 |
| 181 | 0.0143 | 0.0090 | 0.0052 |
| 182 | 0.0150 | 0.0095 | 0.0055 |
| 183 | 0.0167 | 0.0106 | 0.0061 |
| 184 | 0.0177 | 0.0112 | 0.0065 |
| 185 | 0.0348 | 0.0221 | 0.0127 |
| 186 | 0.0371 | 0.0235 | 0.0135 |
| 187 | 0.0430 | 0.0273 | 0.0157 |
| 188 | 0.0469 | 0.0298 | 0.0172 |
| 189 | 0.0583 | 0.0300 | 0.0284 |
| 190 | 0.0672 | 0.0300 | 0.0372 |
| 191 | 0.1020 | 0.0300 | 0.0720 |
| 192 | 0.1480 | 0.0300 | 0.1181 |
| 193 | 0.6404 | 0.0300 | 0.6104 |
| 194 | 0.0803 | 0.0300 | 0.0503 |
| 195 | 0.0519 | 0.0300 | 0.0219 |
| 196 | 0.0398 | 0.0252 | 0.0145 |
| 197 | 0.0188 | 0.0119 | 0.0069 |
| 198 | 0.0158 | 0.0100 | 0.0058 |
| 199 | 0.0136 | 0.0086 | 0.0050 |
| 200 | 0.0120 | 0.0076 | 0.0044 |
| 201 | 0.0108 | 0.0068 | 0.0039 |
| 202 | 0.0098 | 0.0062 | 0.0036 |
| 203 | 0.0090 | 0.0057 | 0.0033 |
| 204 | 0.0083 | 0.0053 | 0.0030 |
| 205 | 0.0077 | 0.0049 | 0.0028 |

| | | | |
|---|---|---|---|
| 206 | 0.0073 | 0.0046 | 0.0027 |
| 207 | 0.0068 | 0.0043 | 0.0025 |
| 208 | 0.0065 | 0.0041 | 0.0024 |
| 209 | 0.0061 | 0.0039 | 0.0022 |
| 210 | 0.0058 | 0.0037 | 0.0021 |
| 211 | 0.0056 | 0.0035 | 0.0020 |
| 212 | 0.0053 | 0.0034 | 0.0019 |
| 213 | 0.0051 | 0.0032 | 0.0019 |
| 214 | 0.0049 | 0.0031 | 0.0018 |
| 215 | 0.0047 | 0.0030 | 0.0017 |
| 216 | 0.0045 | 0.0029 | 0.0017 |
| 217 | 0.0055 | 0.0035 | 0.0020 |
| 218 | 0.0053 | 0.0034 | 0.0019 |
| 219 | 0.0051 | 0.0033 | 0.0019 |
| 220 | 0.0050 | 0.0032 | 0.0018 |
| 221 | 0.0049 | 0.0031 | 0.0018 |
| 222 | 0.0047 | 0.0030 | 0.0017 |
| 223 | 0.0046 | 0.0029 | 0.0017 |
| 224 | 0.0045 | 0.0028 | 0.0016 |
| 225 | 0.0044 | 0.0028 | 0.0016 |
| 226 | 0.0043 | 0.0027 | 0.0016 |
| 227 | 0.0042 | 0.0026 | 0.0015 |
| 228 | 0.0041 | 0.0026 | 0.0015 |
| 229 | 0.0040 | 0.0025 | 0.0015 |
| 230 | 0.0039 | 0.0025 | 0.0014 |
| 231 | 0.0038 | 0.0024 | 0.0014 |
| 232 | 0.0037 | 0.0024 | 0.0014 |
| 233 | 0.0037 | 0.0023 | 0.0013 |
| 234 | 0.0036 | 0.0023 | 0.0013 |
| 235 | 0.0035 | 0.0022 | 0.0013 |
| 236 | 0.0035 | 0.0022 | 0.0013 |
| 237 | 0.0034 | 0.0022 | 0.0012 |
| 238 | 0.0034 | 0.0021 | 0.0012 |
| 239 | 0.0033 | 0.0021 | 0.0012 |
| 240 | 0.0032 | 0.0021 | 0.0012 |
| 241 | 0.0032 | 0.0020 | 0.0012 |
| 242 | 0.0031 | 0.0020 | 0.0011 |
| 243 | 0.0031 | 0.0020 | 0.0011 |
| 244 | 0.0030 | 0.0019 | 0.0011 |
| 245 | 0.0030 | 0.0019 | 0.0011 |
| 246 | 0.0029 | 0.0019 | 0.0011 |
| 247 | 0.0029 | 0.0018 | 0.0011 |
| 248 | 0.0029 | 0.0018 | 0.0010 |
| 249 | 0.0028 | 0.0018 | 0.0010 |
| 250 | 0.0028 | 0.0018 | 0.0010 |
| 251 | 0.0027 | 0.0017 | 0.0010 |
| 252 | 0.0027 | 0.0017 | 0.0010 |
| 253 | 0.0027 | 0.0017 | 0.0010 |
| 254 | 0.0026 | 0.0017 | 0.0010 |
| 255 | 0.0026 | 0.0017 | 0.0010 |
| 256 | 0.0026 | 0.0016 | 0.0009 |
| 257 | 0.0025 | 0.0016 | 0.0009 |
| 258 | 0.0025 | 0.0016 | 0.0009 |
| 259 | 0.0025 | 0.0016 | 0.0009 |
| 260 | 0.0025 | 0.0016 | 0.0009 |
| 261 | 0.0024 | 0.0015 | 0.0009 |
| 262 | 0.0024 | 0.0015 | 0.0009 |
| 263 | 0.0024 | 0.0015 | 0.0009 |
| 264 | 0.0023 | 0.0015 | 0.0009 |

| | | | |
|---|---|---|---|
| 265 | 0.0023 | 0.0015 | 0.0008 |
| 266 | 0.0023 | 0.0015 | 0.0008 |
| 267 | 0.0023 | 0.0014 | 0.0008 |
| 268 | 0.0022 | 0.0014 | 0.0008 |
| 269 | 0.0022 | 0.0014 | 0.0008 |
| 270 | 0.0022 | 0.0014 | 0.0008 |
| 271 | 0.0022 | 0.0014 | 0.0008 |
| 272 | 0.0022 | 0.0014 | 0.0008 |
| 273 | 0.0021 | 0.0014 | 0.0008 |
| 274 | 0.0021 | 0.0013 | 0.0008 |
| 275 | 0.0021 | 0.0013 | 0.0008 |
| 276 | 0.0021 | 0.0013 | 0.0008 |
| 277 | 0.0021 | 0.0013 | 0.0008 |
| 278 | 0.0020 | 0.0013 | 0.0007 |
| 279 | 0.0020 | 0.0013 | 0.0007 |
| 280 | 0.0020 | 0.0013 | 0.0007 |
| 281 | 0.0020 | 0.0013 | 0.0007 |
| 282 | 0.0020 | 0.0012 | 0.0007 |
| 283 | 0.0019 | 0.0012 | 0.0007 |
| 284 | 0.0019 | 0.0012 | 0.0007 |
| 285 | 0.0019 | 0.0012 | 0.0007 |
| 286 | 0.0019 | 0.0012 | 0.0007 |
| 287 | 0.0019 | 0.0012 | 0.0007 |
| 288 | 0.0019 | 0.0012 | 0.0007 |

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Total soil rain loss = 1.05(In)
Total effective rainfall = 1.43(In)
Peak flow rate in flood hydrograph = 12.94(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0000 | 0.00 | Q | | | | |
| 0+15 | 0.0001 | 0.01 | Q | | | | |
| 0+20 | 0.0001 | 0.01 | Q | | | | |
| 0+25 | 0.0003 | 0.02 | Q | | | | |
| 0+30 | 0.0005 | 0.03 | Q | | | | |
| 0+35 | 0.0008 | 0.04 | Q | | | | |
| 0+40 | 0.0011 | 0.04 | Q | | | | |
| 0+45 | 0.0014 | 0.05 | Q | | | | |
| 0+50 | 0.0017 | 0.05 | Q | | | | |
| 0+55 | 0.0021 | 0.05 | Q | | | | |
| 1+ 0 | 0.0024 | 0.05 | Q | | | | |
| 1+ 5 | 0.0028 | 0.05 | Q | | | | |
| 1+10 | 0.0032 | 0.06 | Q | | | | |
| 1+15 | 0.0036 | 0.06 | Q | | | | |
| 1+20 | 0.0040 | 0.06 | Q | | | | |
| 1+25 | 0.0044 | 0.06 | Q | | | | |
| 1+30 | 0.0048 | 0.06 | Q | | | | |
| 1+35 | 0.0052 | 0.06 | Q | | | | |
| 1+40 | 0.0057 | 0.06 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+45 | 0.0061 | 0.06 | Q | | | | |
| 1+50 | 0.0065 | 0.06 | Q | | | | |
| 1+55 | 0.0070 | 0.06 | Q | | | | |
| 2+ 0 | 0.0074 | 0.07 | Q | | | | |
| 2+ 5 | 0.0079 | 0.07 | Q | | | | |
| 2+10 | 0.0083 | 0.07 | Q | | | | |
| 2+15 | 0.0088 | 0.07 | Q | | | | |
| 2+20 | 0.0093 | 0.07 | Q | | | | |
| 2+25 | 0.0098 | 0.07 | Q | | | | |
| 2+30 | 0.0102 | 0.07 | Q | | | | |
| 2+35 | 0.0107 | 0.07 | Q | | | | |
| 2+40 | 0.0112 | 0.07 | Q | | | | |
| 2+45 | 0.0117 | 0.07 | Q | | | | |
| 2+50 | 0.0122 | 0.07 | Q | | | | |
| 2+55 | 0.0127 | 0.07 | Q | | | | |
| 3+ 0 | 0.0132 | 0.07 | Q | | | | |
| 3+ 5 | 0.0137 | 0.07 | Q | | | | |
| 3+10 | 0.0142 | 0.07 | Q | | | | |
| 3+15 | 0.0147 | 0.07 | Q | | | | |
| 3+20 | 0.0152 | 0.07 | Q | | | | |
| 3+25 | 0.0157 | 0.07 | Q | | | | |
| 3+30 | 0.0162 | 0.07 | Q | | | | |
| 3+35 | 0.0167 | 0.08 | Q | | | | |
| 3+40 | 0.0172 | 0.08 | Q | | | | |
| 3+45 | 0.0178 | 0.08 | Q | | | | |
| 3+50 | 0.0183 | 0.08 | Q | | | | |
| 3+55 | 0.0188 | 0.08 | Q | | | | |
| 4+ 0 | 0.0193 | 0.08 | Q | | | | |
| 4+ 5 | 0.0199 | 0.08 | Q | | | | |
| 4+10 | 0.0204 | 0.08 | Q | | | | |
| 4+15 | 0.0210 | 0.08 | Q | | | | |
| 4+20 | 0.0215 | 0.08 | Q | | | | |
| 4+25 | 0.0220 | 0.08 | Q | | | | |
| 4+30 | 0.0226 | 0.08 | Q | | | | |
| 4+35 | 0.0231 | 0.08 | Q | | | | |
| 4+40 | 0.0237 | 0.08 | QV | | | | |
| 4+45 | 0.0243 | 0.08 | QV | | | | |
| 4+50 | 0.0248 | 0.08 | QV | | | | |
| 4+55 | 0.0254 | 0.08 | QV | | | | |
| 5+ 0 | 0.0259 | 0.08 | QV | | | | |
| 5+ 5 | 0.0265 | 0.08 | QV | | | | |
| 5+10 | 0.0271 | 0.08 | QV | | | | |
| 5+15 | 0.0277 | 0.08 | QV | | | | |
| 5+20 | 0.0282 | 0.08 | QV | | | | |
| 5+25 | 0.0288 | 0.08 | QV | | | | |
| 5+30 | 0.0294 | 0.09 | QV | | | | |
| 5+35 | 0.0300 | 0.09 | QV | | | | |
| 5+40 | 0.0306 | 0.09 | QV | | | | |
| 5+45 | 0.0312 | 0.09 | QV | | | | |
| 5+50 | 0.0318 | 0.09 | QV | | | | |
| 5+55 | 0.0324 | 0.09 | QV | | | | |
| 6+ 0 | 0.0330 | 0.09 | QV | | | | |
| 6+ 5 | 0.0336 | 0.09 | QV | | | | |
| 6+10 | 0.0342 | 0.09 | QV | | | | |
| 6+15 | 0.0349 | 0.09 | QV | | | | |
| 6+20 | 0.0355 | 0.09 | QV | | | | |
| 6+25 | 0.0361 | 0.09 | QV | | | | |
| 6+30 | 0.0367 | 0.09 | QV | | | | |
| 6+35 | 0.0374 | 0.09 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+40 | 0.0380 | 0.09 | QV | \| | \| | \| | \| |
| 6+45 | 0.0387 | 0.09 | QV | \| | \| | \| | \| |
| 6+50 | 0.0393 | 0.09 | QV | \| | \| | \| | \| |
| 6+55 | 0.0400 | 0.09 | QV | \| | \| | \| | \| |
| 7+ 0 | 0.0406 | 0.10 | QV | \| | \| | \| | \| |
| 7+ 5 | 0.0413 | 0.10 | QV | \| | \| | \| | \| |
| 7+10 | 0.0419 | 0.10 | QV | \| | \| | \| | \| |
| 7+15 | 0.0426 | 0.10 | QV | \| | \| | \| | \| |
| 7+20 | 0.0433 | 0.10 | QV | \| | \| | \| | \| |
| 7+25 | 0.0440 | 0.10 | QV | \| | \| | \| | \| |
| 7+30 | 0.0446 | 0.10 | QV | \| | \| | \| | \| |
| 7+35 | 0.0453 | 0.10 | QV | \| | \| | \| | \| |
| 7+40 | 0.0460 | 0.10 | QV | \| | \| | \| | \| |
| 7+45 | 0.0467 | 0.10 | Q V | \| | \| | \| | \| |
| 7+50 | 0.0474 | 0.10 | Q V | \| | \| | \| | \| |
| 7+55 | 0.0481 | 0.10 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.0489 | 0.10 | Q V | \| | \| | \| | \| |
| 8+ 5 | 0.0496 | 0.10 | Q V | \| | \| | \| | \| |
| 8+10 | 0.0503 | 0.11 | Q V | \| | \| | \| | \| |
| 8+15 | 0.0510 | 0.11 | Q V | \| | \| | \| | \| |
| 8+20 | 0.0518 | 0.11 | Q V | \| | \| | \| | \| |
| 8+25 | 0.0525 | 0.11 | Q V | \| | \| | \| | \| |
| 8+30 | 0.0533 | 0.11 | Q V | \| | \| | \| | \| |
| 8+35 | 0.0540 | 0.11 | Q V | \| | \| | \| | \| |
| 8+40 | 0.0548 | 0.11 | Q V | \| | \| | \| | \| |
| 8+45 | 0.0556 | 0.11 | Q V | \| | \| | \| | \| |
| 8+50 | 0.0563 | 0.11 | Q V | \| | \| | \| | \| |
| 8+55 | 0.0571 | 0.11 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.0579 | 0.11 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.0587 | 0.12 | Q V | \| | \| | \| | \| |
| 9+10 | 0.0595 | 0.12 | Q V | \| | \| | \| | \| |
| 9+15 | 0.0603 | 0.12 | Q V | \| | \| | \| | \| |
| 9+20 | 0.0611 | 0.12 | Q V | \| | \| | \| | \| |
| 9+25 | 0.0619 | 0.12 | Q V | \| | \| | \| | \| |
| 9+30 | 0.0628 | 0.12 | Q V | \| | \| | \| | \| |
| 9+35 | 0.0636 | 0.12 | Q V | \| | \| | \| | \| |
| 9+40 | 0.0644 | 0.12 | Q V | \| | \| | \| | \| |
| 9+45 | 0.0653 | 0.12 | Q V | \| | \| | \| | \| |
| 9+50 | 0.0662 | 0.13 | Q V | \| | \| | \| | \| |
| 9+55 | 0.0670 | 0.13 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.0679 | 0.13 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.0688 | 0.13 | Q V | \| | \| | \| | \| |
| 10+10 | 0.0697 | 0.13 | Q V | \| | \| | \| | \| |
| 10+15 | 0.0706 | 0.13 | Q  V | \| | \| | \| | \| |
| 10+20 | 0.0715 | 0.13 | Q  V | \| | \| | \| | \| |
| 10+25 | 0.0724 | 0.13 | Q  V | \| | \| | \| | \| |
| 10+30 | 0.0734 | 0.14 | Q  V | \| | \| | \| | \| |
| 10+35 | 0.0743 | 0.14 | Q  V | \| | \| | \| | \| |
| 10+40 | 0.0753 | 0.14 | Q  V | \| | \| | \| | \| |
| 10+45 | 0.0762 | 0.14 | Q  V | \| | \| | \| | \| |
| 10+50 | 0.0772 | 0.14 | Q  V | \| | \| | \| | \| |
| 10+55 | 0.0782 | 0.14 | Q  V | \| | \| | \| | \| |
| 11+ 0 | 0.0792 | 0.14 | Q  V | \| | \| | \| | \| |
| 11+ 5 | 0.0802 | 0.15 | Q  V | \| | \| | \| | \| |
| 11+10 | 0.0812 | 0.15 | Q  V | \| | \| | \| | \| |
| 11+15 | 0.0823 | 0.15 | Q  V | \| | \| | \| | \| |
| 11+20 | 0.0833 | 0.15 | Q  V | \| | \| | \| | \| |
| 11+25 | 0.0844 | 0.15 | Q  V | \| | \| | \| | \| |
| 11+30 | 0.0854 | 0.16 | Q  V | \| | \| | \| | \| |

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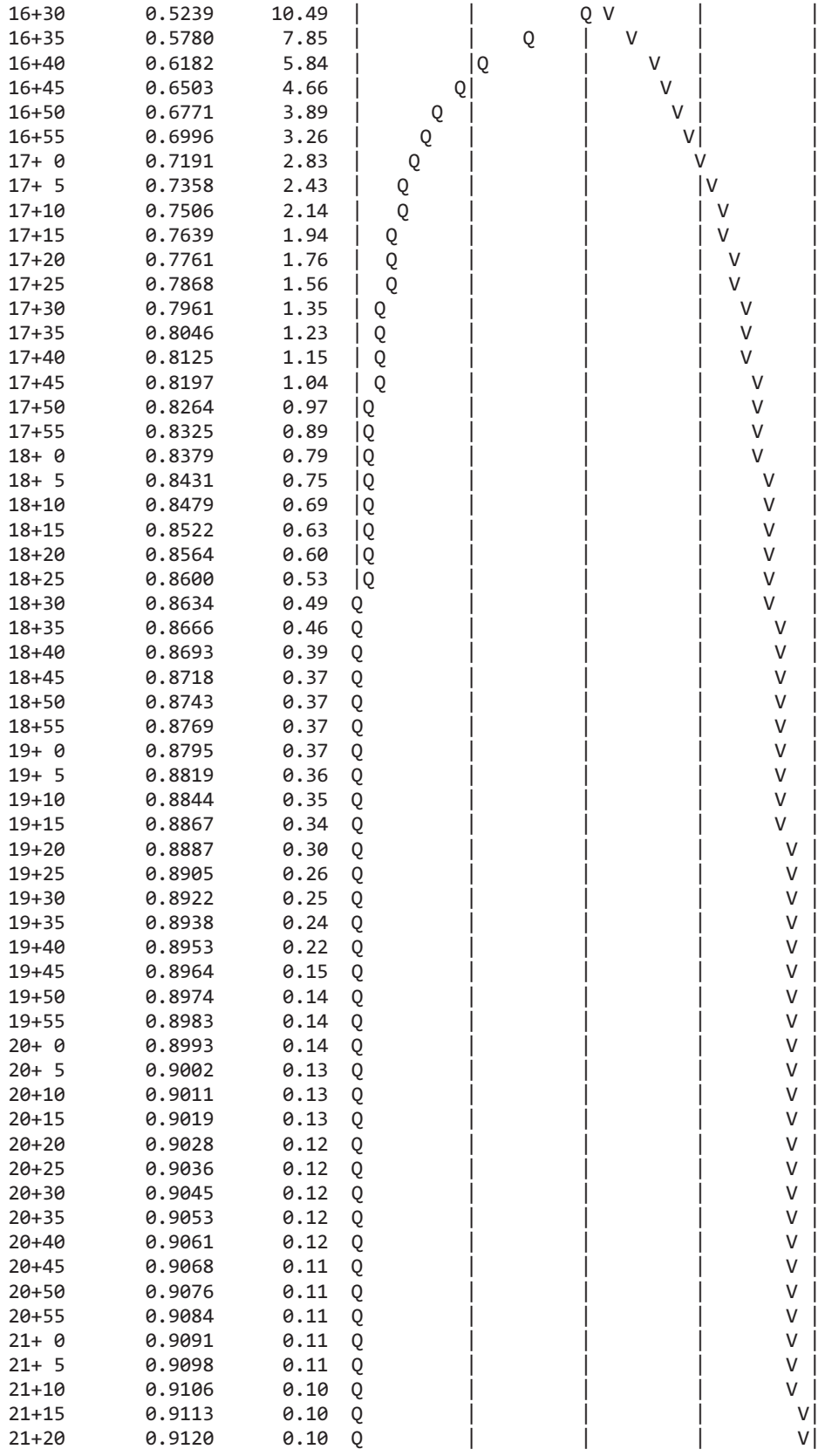
11+35       0.0865      0.16  Q  V      |          |          |          |
11+40       0.0876      0.16  Q  V      |          |          |          |
11+45       0.0887      0.16  Q  V      |          |          |          |
11+50       0.0899      0.16  Q  V      |          |          |          |
11+55       0.0910      0.17  Q  V      |          |          |          |
12+ 0       0.0922      0.17  Q  V      |          |          |          |
12+ 5       0.0933      0.17  Q  V      |          |          |          |
12+10       0.0945      0.17  Q   V     |          |          |          |
12+15       0.0957      0.17  Q   V     |          |          |          |
12+20       0.0969      0.17  Q   V     |          |          |          |
12+25       0.0981      0.17  Q   V     |          |          |          |
12+30       0.0992      0.17  Q   V     |          |          |          |
12+35       0.1003      0.16  Q   V     |          |          |          |
12+40       0.1015      0.17  Q   V     |          |          |          |
12+45       0.1026      0.17  Q   V     |          |          |          |
12+50       0.1038      0.17  Q   V     |          |          |          |
12+55       0.1049      0.17  Q   V     |          |          |          |
13+ 0       0.1061      0.17  Q   V     |          |          |          |
13+ 5       0.1073      0.17  Q   V     |          |          |          |
13+10       0.1085      0.18  Q   V     |          |          |          |
13+15       0.1098      0.18  Q   V     |          |          |          |
13+20       0.1110      0.18  Q   V     |          |          |          |
13+25       0.1123      0.19  Q   V     |          |          |          |
13+30       0.1136      0.19  Q   V     |          |          |          |
13+35       0.1149      0.19  Q   V     |          |          |          |
13+40       0.1163      0.20  Q   V     |          |          |          |
13+45       0.1177      0.20  Q    V    |          |          |          |
13+50       0.1191      0.21  Q    V    |          |          |          |
13+55       0.1206      0.21  Q    V    |          |          |          |
14+ 0       0.1221      0.22  Q    V    |          |          |          |
14+ 5       0.1236      0.22  Q    V    |          |          |          |
14+10       0.1252      0.23  Q    V    |          |          |          |
14+15       0.1268      0.24  Q    V    |          |          |          |
14+20       0.1285      0.24  Q    V    |          |          |          |
14+25       0.1302      0.25  Q    V    |          |          |          |
14+30       0.1319      0.26  Q    V    |          |          |          |
14+35       0.1338      0.27  Q    V    |          |          |          |
14+40       0.1357      0.28  Q    V    |          |          |          |
14+45       0.1377      0.29  Q    V    |          |          |          |
14+50       0.1397      0.30  Q    V    |          |          |          |
14+55       0.1418      0.31  Q     V   |          |          |          |
15+ 0       0.1441      0.32  Q     V   |          |          |          |
15+ 5       0.1464      0.34  Q     V   |          |          |          |
15+10       0.1489      0.36  Q     V   |          |          |          |
15+15       0.1514      0.37  Q     V   |          |          |          |
15+20       0.1542      0.40  Q     V   |          |          |          |
15+25       0.1571      0.43  Q     V   |          |          |          |
15+30       0.1603      0.47  Q     V   |          |          |          |
15+35       0.1640      0.53  |Q     V   |          |          |          |
15+40       0.1683      0.63  |Q     V   |          |          |          |
15+45       0.1737      0.78  |Q     V   |          |          |          |
15+50       0.1802      0.95  |Q     V   |          |          |          |
15+55       0.1884      1.18  | Q     V  |          |          |          |
16+ 0       0.1992      1.58  |  Q    V  |          |          |          |
16+ 5       0.2173      2.62  |    Q   V|          |          |          |
16+10       0.2480      4.46  |       Q V          |          |          |
16+15       0.2930      6.54  |         | VQ       |          |          |
16+20       0.3625     10.09  |         |    V    Q          |          |
16+25       0.4516     12.94  |         |        V|    Q     |          |
```

| | | | |
|---|---|---|---|
| 16+30 | 0.5239 | 10.49 |  |
| 16+35 | 0.5780 | 7.85 | |
| 16+40 | 0.6182 | 5.84 | |
| 16+45 | 0.6503 | 4.66 | |
| 16+50 | 0.6771 | 3.89 | |
| 16+55 | 0.6996 | 3.26 | |
| 17+ 0 | 0.7191 | 2.83 | |
| 17+ 5 | 0.7358 | 2.43 | |
| 17+10 | 0.7506 | 2.14 | |
| 17+15 | 0.7639 | 1.94 | |
| 17+20 | 0.7761 | 1.76 | |
| 17+25 | 0.7868 | 1.56 | |
| 17+30 | 0.7961 | 1.35 | |
| 17+35 | 0.8046 | 1.23 | |
| 17+40 | 0.8125 | 1.15 | |
| 17+45 | 0.8197 | 1.04 | |
| 17+50 | 0.8264 | 0.97 | |
| 17+55 | 0.8325 | 0.89 | |
| 18+ 0 | 0.8379 | 0.79 | |
| 18+ 5 | 0.8431 | 0.75 | |
| 18+10 | 0.8479 | 0.69 | |
| 18+15 | 0.8522 | 0.63 | |
| 18+20 | 0.8564 | 0.60 | |
| 18+25 | 0.8600 | 0.53 | |
| 18+30 | 0.8634 | 0.49 | |
| 18+35 | 0.8666 | 0.46 | |
| 18+40 | 0.8693 | 0.39 | |
| 18+45 | 0.8718 | 0.37 | |
| 18+50 | 0.8743 | 0.37 | |
| 18+55 | 0.8769 | 0.37 | |
| 19+ 0 | 0.8795 | 0.37 | |
| 19+ 5 | 0.8819 | 0.36 | |
| 19+10 | 0.8844 | 0.35 | |
| 19+15 | 0.8867 | 0.34 | |
| 19+20 | 0.8887 | 0.30 | |
| 19+25 | 0.8905 | 0.26 | |
| 19+30 | 0.8922 | 0.25 | |
| 19+35 | 0.8938 | 0.24 | |
| 19+40 | 0.8953 | 0.22 | |
| 19+45 | 0.8964 | 0.15 | |
| 19+50 | 0.8974 | 0.14 | |
| 19+55 | 0.8983 | 0.14 | |
| 20+ 0 | 0.8993 | 0.14 | |
| 20+ 5 | 0.9002 | 0.13 | |
| 20+10 | 0.9011 | 0.13 | |
| 20+15 | 0.9019 | 0.13 | |
| 20+20 | 0.9028 | 0.12 | |
| 20+25 | 0.9036 | 0.12 | |
| 20+30 | 0.9045 | 0.12 | |
| 20+35 | 0.9053 | 0.12 | |
| 20+40 | 0.9061 | 0.12 | |
| 20+45 | 0.9068 | 0.11 | |
| 20+50 | 0.9076 | 0.11 | |
| 20+55 | 0.9084 | 0.11 | |
| 21+ 0 | 0.9091 | 0.11 | |
| 21+ 5 | 0.9098 | 0.11 | |
| 21+10 | 0.9106 | 0.10 | |
| 21+15 | 0.9113 | 0.10 | |
| 21+20 | 0.9120 | 0.10 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+25 | 0.9127 | 0.10 | Q | \| | \| | \| | V\| |
| 21+30 | 0.9133 | 0.10 | Q | \| | \| | \| | V\| |
| 21+35 | 0.9140 | 0.10 | Q | \| | \| | \| | V\| |
| 21+40 | 0.9147 | 0.10 | Q | \| | \| | \| | V\| |
| 21+45 | 0.9153 | 0.09 | Q | \| | \| | \| | V\| |
| 21+50 | 0.9160 | 0.09 | Q | \| | \| | \| | V\| |
| 21+55 | 0.9166 | 0.09 | Q | \| | \| | \| | V\| |
| 22+ 0 | 0.9172 | 0.09 | Q | \| | \| | \| | V\| |
| 22+ 5 | 0.9178 | 0.09 | Q | \| | \| | \| | V\| |
| 22+10 | 0.9185 | 0.09 | Q | \| | \| | \| | V\| |
| 22+15 | 0.9191 | 0.09 | Q | \| | \| | \| | V\| |
| 22+20 | 0.9197 | 0.09 | Q | \| | \| | \| | V\| |
| 22+25 | 0.9202 | 0.09 | Q | \| | \| | \| | V\| |
| 22+30 | 0.9208 | 0.08 | Q | \| | \| | \| | V\| |
| 22+35 | 0.9214 | 0.08 | Q | \| | \| | \| | V\| |
| 22+40 | 0.9220 | 0.08 | Q | \| | \| | \| | V\| |
| 22+45 | 0.9225 | 0.08 | Q | \| | \| | \| | V\| |
| 22+50 | 0.9231 | 0.08 | Q | \| | \| | \| | V\| |
| 22+55 | 0.9236 | 0.08 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.9242 | 0.08 | Q | \| | \| | \| | V\| |
| 23+ 5 | 0.9247 | 0.08 | Q | \| | \| | \| | V\| |
| 23+10 | 0.9253 | 0.08 | Q | \| | \| | \| | V\| |
| 23+15 | 0.9258 | 0.08 | Q | \| | \| | \| | V\| |
| 23+20 | 0.9263 | 0.08 | Q | \| | \| | \| | V\| |
| 23+25 | 0.9268 | 0.08 | Q | \| | \| | \| | V\| |
| 23+30 | 0.9273 | 0.07 | Q | \| | \| | \| | V\| |
| 23+35 | 0.9278 | 0.07 | Q | \| | \| | \| | V\| |
| 23+40 | 0.9283 | 0.07 | Q | \| | \| | \| | V\| |
| 23+45 | 0.9288 | 0.07 | Q | \| | \| | \| | V\| |
| 23+50 | 0.9293 | 0.07 | Q | \| | \| | \| | V\| |
| 23+55 | 0.9298 | 0.07 | Q | \| | \| | \| | V\| |
| 24+ 0 | 0.9303 | 0.07 | Q | \| | \| | \| | V\| |
| 24+ 5 | 0.9308 | 0.07 | Q | \| | \| | \| | V\| |
| 24+10 | 0.9312 | 0.07 | Q | \| | \| | \| | V\| |
| 24+15 | 0.9317 | 0.06 | Q | \| | \| | \| | V\| |
| 24+20 | 0.9320 | 0.06 | Q | \| | \| | \| | V\| |
| 24+25 | 0.9323 | 0.04 | Q | \| | \| | \| | V\| |
| 24+30 | 0.9326 | 0.04 | Q | \| | \| | \| | V\| |
| 24+35 | 0.9328 | 0.03 | Q | \| | \| | \| | V\| |
| 24+40 | 0.9330 | 0.02 | Q | \| | \| | \| | V\| |
| 24+45 | 0.9331 | 0.02 | Q | \| | \| | \| | V\| |
| 24+50 | 0.9332 | 0.02 | Q | \| | \| | \| | V\| |
| 24+55 | 0.9334 | 0.02 | Q | \| | \| | \| | V\| |
| 25+ 0 | 0.9335 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 5 | 0.9335 | 0.01 | Q | \| | \| | \| | V\| |
| 25+10 | 0.9336 | 0.01 | Q | \| | \| | \| | V\| |
| 25+15 | 0.9337 | 0.01 | Q | \| | \| | \| | V\| |
| 25+20 | 0.9338 | 0.01 | Q | \| | \| | \| | V\| |
| 25+25 | 0.9338 | 0.01 | Q | \| | \| | \| | V\| |
| 25+30 | 0.9339 | 0.01 | Q | \| | \| | \| | V\| |
| 25+35 | 0.9339 | 0.01 | Q | \| | \| | \| | V\| |
| 25+40 | 0.9339 | 0.01 | Q | \| | \| | \| | V\| |
| 25+45 | 0.9340 | 0.01 | Q | \| | \| | \| | V\| |
| 25+50 | 0.9340 | 0.00 | Q | \| | \| | \| | V\| |
| 25+55 | 0.9340 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 0 | 0.9341 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 0.9341 | 0.00 | Q | \| | \| | \| | V\| |
| 26+10 | 0.9341 | 0.00 | Q | \| | \| | \| | V\| |
| 26+15 | 0.9341 | 0.00 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+20 | 0.9341 | 0.00 | Q | \| | \| | \| | V\| |
| 26+25 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 26+30 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 26+35 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 26+40 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 26+45 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 26+50 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 26+55 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 0 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 5 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 27+10 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 27+15 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 27+20 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 27+25 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 27+30 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 27+35 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 20
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 24.41 | 1 | 1.36 |
| Rainfall data for year 100 | | |
| 24.41 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 24.41 | 24 | 2.48 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 58.4 | 77.7 | 24.41 | 1.000 | 0.408 | 1.000 | 0.408 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.408

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 24.41 | 1.000 | 58.4 | 77.7 | 2.87 | 0.307 |

Area-averaged catchment yield fraction, Y = 0.307
Area-averaged low loss fraction, Yb = 0.693
User entry of time of concentration = 0.820 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 24.41(Ac.)
Catchment Lag time = 0.656 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 12.7033
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.408(In/Hr)
Average low loss rate fraction (Yb) = 0.693 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.645(In)
Computed peak 30-minute rainfall = 1.105(In)
Specified peak 1-hour rainfall = 1.360(In)
Computed peak 3-hour rainfall = 1.637(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.480(In)

Rainfall depth area reduction factors:
Using a total area of 24.41(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.645(In)
30-minute factor = 0.999 Adjusted rainfall = 1.103(In)
1-hour factor = 0.999 Adjusted rainfall = 1.358(In)
3-hour factor = 1.000 Adjusted rainfall = 1.637(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.480(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 295.21 (CFS)) | |
| 1 | 0.559 | 1.650 |
| 2 | 2.202 | 4.849 |
| 3 | 4.877 | 7.898 |
| 4 | 8.647 | 11.128 |
| 5 | 15.101 | 19.053 |
| 6 | 26.035 | 32.278 |
| 7 | 37.764 | 34.624 |
| 8 | 46.963 | 27.158 |
| 9 | 54.130 | 21.159 |
| 10 | 59.630 | 16.234 |
| 11 | 63.906 | 12.625 |
| 12 | 67.461 | 10.495 |
| 13 | 70.599 | 9.262 |
| 14 | 73.291 | 7.948 |

| | | |
|---|---|---|
| 15 | 75.616 | 6.863 |
| 16 | 77.764 | 6.343 |
| 17 | 79.568 | 5.324 |
| 18 | 81.232 | 4.913 |
| 19 | 82.681 | 4.278 |
| 20 | 84.045 | 4.027 |
| 21 | 85.300 | 3.704 |
| 22 | 86.507 | 3.563 |
| 23 | 87.566 | 3.126 |
| 24 | 88.563 | 2.945 |
| 25 | 89.374 | 2.392 |
| 26 | 90.132 | 2.237 |
| 27 | 90.852 | 2.126 |
| 28 | 91.553 | 2.070 |
| 29 | 92.178 | 1.846 |
| 30 | 92.782 | 1.783 |
| 31 | 93.348 | 1.670 |
| 32 | 93.890 | 1.601 |
| 33 | 94.337 | 1.320 |
| 34 | 94.769 | 1.275 |
| 35 | 95.201 | 1.275 |
| 36 | 95.616 | 1.225 |
| 37 | 95.955 | 1.002 |
| 38 | 96.286 | 0.975 |
| 39 | 96.616 | 0.975 |
| 40 | 96.925 | 0.914 |
| 41 | 97.161 | 0.694 |
| 42 | 97.389 | 0.675 |
| 43 | 97.618 | 0.675 |
| 44 | 97.821 | 0.601 |
| 45 | 97.953 | 0.388 |
| 46 | 98.080 | 0.375 |
| 47 | 98.207 | 0.375 |
| 48 | 98.342 | 0.397 |
| 49 | 98.493 | 0.448 |
| 50 | 98.646 | 0.450 |
| 51 | 98.798 | 0.450 |
| 52 | 98.951 | 0.450 |
| 53 | 99.103 | 0.450 |
| 54 | 99.255 | 0.450 |
| 55 | 99.408 | 0.450 |
| 56 | 99.531 | 0.363 |
| 57 | 99.611 | 0.236 |
| 58 | 99.690 | 0.234 |
| 59 | 99.770 | 0.234 |
| 60 | 99.849 | 0.234 |
| 61 | 99.928 | 0.234 |
| 62 | 100.000 | 0.211 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6446 | 0.6446 |
| 2 | 0.7936 | 0.1490 |
| 3 | 0.8962 | 0.1026 |
| 4 | 0.9770 | 0.0808 |
| 5 | 1.0447 | 0.0676 |
| 6 | 1.1034 | 0.0587 |
| 7 | 1.1556 | 0.0522 |
| 8 | 1.2029 | 0.0472 |

| | | |
|---|---|---|
| 9 | 1.2461 | 0.0433 |
| 10 | 1.2861 | 0.0400 |
| 11 | 1.3234 | 0.0373 |
| 12 | 1.3584 | 0.0350 |
| 13 | 1.3770 | 0.0186 |
| 14 | 1.3944 | 0.0174 |
| 15 | 1.4108 | 0.0164 |
| 16 | 1.4264 | 0.0155 |
| 17 | 1.4411 | 0.0147 |
| 18 | 1.4552 | 0.0140 |
| 19 | 1.4686 | 0.0134 |
| 20 | 1.4814 | 0.0128 |
| 21 | 1.4937 | 0.0123 |
| 22 | 1.5055 | 0.0118 |
| 23 | 1.5169 | 0.0114 |
| 24 | 1.5279 | 0.0110 |
| 25 | 1.5385 | 0.0106 |
| 26 | 1.5488 | 0.0103 |
| 27 | 1.5588 | 0.0099 |
| 28 | 1.5684 | 0.0096 |
| 29 | 1.5778 | 0.0094 |
| 30 | 1.5869 | 0.0091 |
| 31 | 1.5957 | 0.0089 |
| 32 | 1.6043 | 0.0086 |
| 33 | 1.6127 | 0.0084 |
| 34 | 1.6209 | 0.0082 |
| 35 | 1.6289 | 0.0080 |
| 36 | 1.6367 | 0.0078 |
| 37 | 1.6443 | 0.0076 |
| 38 | 1.6517 | 0.0074 |
| 39 | 1.6590 | 0.0073 |
| 40 | 1.6661 | 0.0071 |
| 41 | 1.6730 | 0.0070 |
| 42 | 1.6798 | 0.0068 |
| 43 | 1.6865 | 0.0067 |
| 44 | 1.6931 | 0.0066 |
| 45 | 1.6995 | 0.0064 |
| 46 | 1.7058 | 0.0063 |
| 47 | 1.7120 | 0.0062 |
| 48 | 1.7181 | 0.0061 |
| 49 | 1.7241 | 0.0060 |
| 50 | 1.7300 | 0.0059 |
| 51 | 1.7358 | 0.0058 |
| 52 | 1.7415 | 0.0057 |
| 53 | 1.7471 | 0.0056 |
| 54 | 1.7526 | 0.0055 |
| 55 | 1.7581 | 0.0054 |
| 56 | 1.7634 | 0.0054 |
| 57 | 1.7687 | 0.0053 |
| 58 | 1.7739 | 0.0052 |
| 59 | 1.7790 | 0.0051 |
| 60 | 1.7841 | 0.0051 |
| 61 | 1.7891 | 0.0050 |
| 62 | 1.7940 | 0.0049 |
| 63 | 1.7989 | 0.0049 |
| 64 | 1.8036 | 0.0048 |
| 65 | 1.8084 | 0.0047 |
| 66 | 1.8130 | 0.0047 |
| 67 | 1.8176 | 0.0046 |

| | | |
|---|---|---|
| 68 | 1.8222 | 0.0046 |
| 69 | 1.8267 | 0.0045 |
| 70 | 1.8311 | 0.0044 |
| 71 | 1.8355 | 0.0044 |
| 72 | 1.8399 | 0.0043 |
| 73 | 1.8453 | 0.0055 |
| 74 | 1.8507 | 0.0054 |
| 75 | 1.8561 | 0.0054 |
| 76 | 1.8614 | 0.0053 |
| 77 | 1.8667 | 0.0052 |
| 78 | 1.8718 | 0.0052 |
| 79 | 1.8770 | 0.0051 |
| 80 | 1.8821 | 0.0051 |
| 81 | 1.8871 | 0.0050 |
| 82 | 1.8921 | 0.0050 |
| 83 | 1.8971 | 0.0049 |
| 84 | 1.9020 | 0.0049 |
| 85 | 1.9068 | 0.0049 |
| 86 | 1.9116 | 0.0048 |
| 87 | 1.9164 | 0.0048 |
| 88 | 1.9211 | 0.0047 |
| 89 | 1.9258 | 0.0047 |
| 90 | 1.9304 | 0.0046 |
| 91 | 1.9350 | 0.0046 |
| 92 | 1.9396 | 0.0046 |
| 93 | 1.9441 | 0.0045 |
| 94 | 1.9486 | 0.0045 |
| 95 | 1.9530 | 0.0044 |
| 96 | 1.9574 | 0.0044 |
| 97 | 1.9618 | 0.0044 |
| 98 | 1.9662 | 0.0043 |
| 99 | 1.9705 | 0.0043 |
| 100 | 1.9747 | 0.0043 |
| 101 | 1.9790 | 0.0042 |
| 102 | 1.9832 | 0.0042 |
| 103 | 1.9873 | 0.0042 |
| 104 | 1.9915 | 0.0041 |
| 105 | 1.9956 | 0.0041 |
| 106 | 1.9997 | 0.0041 |
| 107 | 2.0037 | 0.0040 |
| 108 | 2.0077 | 0.0040 |
| 109 | 2.0117 | 0.0040 |
| 110 | 2.0157 | 0.0040 |
| 111 | 2.0196 | 0.0039 |
| 112 | 2.0235 | 0.0039 |
| 113 | 2.0274 | 0.0039 |
| 114 | 2.0312 | 0.0039 |
| 115 | 2.0351 | 0.0038 |
| 116 | 2.0389 | 0.0038 |
| 117 | 2.0426 | 0.0038 |
| 118 | 2.0464 | 0.0037 |
| 119 | 2.0501 | 0.0037 |
| 120 | 2.0538 | 0.0037 |
| 121 | 2.0575 | 0.0037 |
| 122 | 2.0611 | 0.0036 |
| 123 | 2.0648 | 0.0036 |
| 124 | 2.0684 | 0.0036 |
| 125 | 2.0719 | 0.0036 |
| 126 | 2.0755 | 0.0036 |

| | | |
|---|---|---|
| 127 | 2.0790 | 0.0035 |
| 128 | 2.0826 | 0.0035 |
| 129 | 2.0860 | 0.0035 |
| 130 | 2.0895 | 0.0035 |
| 131 | 2.0930 | 0.0035 |
| 132 | 2.0964 | 0.0034 |
| 133 | 2.0998 | 0.0034 |
| 134 | 2.1032 | 0.0034 |
| 135 | 2.1066 | 0.0034 |
| 136 | 2.1099 | 0.0034 |
| 137 | 2.1133 | 0.0033 |
| 138 | 2.1166 | 0.0033 |
| 139 | 2.1199 | 0.0033 |
| 140 | 2.1231 | 0.0033 |
| 141 | 2.1264 | 0.0033 |
| 142 | 2.1296 | 0.0032 |
| 143 | 2.1328 | 0.0032 |
| 144 | 2.1361 | 0.0032 |
| 145 | 2.1392 | 0.0032 |
| 146 | 2.1424 | 0.0032 |
| 147 | 2.1456 | 0.0032 |
| 148 | 2.1487 | 0.0031 |
| 149 | 2.1518 | 0.0031 |
| 150 | 2.1549 | 0.0031 |
| 151 | 2.1580 | 0.0031 |
| 152 | 2.1611 | 0.0031 |
| 153 | 2.1641 | 0.0031 |
| 154 | 2.1672 | 0.0030 |
| 155 | 2.1702 | 0.0030 |
| 156 | 2.1732 | 0.0030 |
| 157 | 2.1762 | 0.0030 |
| 158 | 2.1792 | 0.0030 |
| 159 | 2.1821 | 0.0030 |
| 160 | 2.1851 | 0.0029 |
| 161 | 2.1880 | 0.0029 |
| 162 | 2.1909 | 0.0029 |
| 163 | 2.1938 | 0.0029 |
| 164 | 2.1967 | 0.0029 |
| 165 | 2.1996 | 0.0029 |
| 166 | 2.2025 | 0.0029 |
| 167 | 2.2053 | 0.0029 |
| 168 | 2.2081 | 0.0028 |
| 169 | 2.2110 | 0.0028 |
| 170 | 2.2138 | 0.0028 |
| 171 | 2.2166 | 0.0028 |
| 172 | 2.2194 | 0.0028 |
| 173 | 2.2221 | 0.0028 |
| 174 | 2.2249 | 0.0028 |
| 175 | 2.2276 | 0.0027 |
| 176 | 2.2304 | 0.0027 |
| 177 | 2.2331 | 0.0027 |
| 178 | 2.2358 | 0.0027 |
| 179 | 2.2385 | 0.0027 |
| 180 | 2.2412 | 0.0027 |
| 181 | 2.2439 | 0.0027 |
| 182 | 2.2465 | 0.0027 |
| 183 | 2.2492 | 0.0027 |
| 184 | 2.2518 | 0.0026 |
| 185 | 2.2545 | 0.0026 |

| | | |
|---|---|---|
| 186 | 2.2571 | 0.0026 |
| 187 | 2.2597 | 0.0026 |
| 188 | 2.2623 | 0.0026 |
| 189 | 2.2649 | 0.0026 |
| 190 | 2.2675 | 0.0026 |
| 191 | 2.2700 | 0.0026 |
| 192 | 2.2726 | 0.0026 |
| 193 | 2.2751 | 0.0025 |
| 194 | 2.2776 | 0.0025 |
| 195 | 2.2802 | 0.0025 |
| 196 | 2.2827 | 0.0025 |
| 197 | 2.2852 | 0.0025 |
| 198 | 2.2877 | 0.0025 |
| 199 | 2.2902 | 0.0025 |
| 200 | 2.2926 | 0.0025 |
| 201 | 2.2951 | 0.0025 |
| 202 | 2.2976 | 0.0025 |
| 203 | 2.3000 | 0.0024 |
| 204 | 2.3024 | 0.0024 |
| 205 | 2.3049 | 0.0024 |
| 206 | 2.3073 | 0.0024 |
| 207 | 2.3097 | 0.0024 |
| 208 | 2.3121 | 0.0024 |
| 209 | 2.3145 | 0.0024 |
| 210 | 2.3169 | 0.0024 |
| 211 | 2.3192 | 0.0024 |
| 212 | 2.3216 | 0.0024 |
| 213 | 2.3239 | 0.0024 |
| 214 | 2.3263 | 0.0023 |
| 215 | 2.3286 | 0.0023 |
| 216 | 2.3309 | 0.0023 |
| 217 | 2.3333 | 0.0023 |
| 218 | 2.3356 | 0.0023 |
| 219 | 2.3379 | 0.0023 |
| 220 | 2.3402 | 0.0023 |
| 221 | 2.3425 | 0.0023 |
| 222 | 2.3447 | 0.0023 |
| 223 | 2.3470 | 0.0023 |
| 224 | 2.3493 | 0.0023 |
| 225 | 2.3515 | 0.0023 |
| 226 | 2.3538 | 0.0022 |
| 227 | 2.3560 | 0.0022 |
| 228 | 2.3582 | 0.0022 |
| 229 | 2.3605 | 0.0022 |
| 230 | 2.3627 | 0.0022 |
| 231 | 2.3649 | 0.0022 |
| 232 | 2.3671 | 0.0022 |
| 233 | 2.3693 | 0.0022 |
| 234 | 2.3715 | 0.0022 |
| 235 | 2.3737 | 0.0022 |
| 236 | 2.3758 | 0.0022 |
| 237 | 2.3780 | 0.0022 |
| 238 | 2.3801 | 0.0022 |
| 239 | 2.3823 | 0.0022 |
| 240 | 2.3844 | 0.0021 |
| 241 | 2.3866 | 0.0021 |
| 242 | 2.3887 | 0.0021 |
| 243 | 2.3908 | 0.0021 |
| 244 | 2.3929 | 0.0021 |

| | | |
|---|---|---|
| 245 | 2.3951 | 0.0021 |
| 246 | 2.3972 | 0.0021 |
| 247 | 2.3993 | 0.0021 |
| 248 | 2.4013 | 0.0021 |
| 249 | 2.4034 | 0.0021 |
| 250 | 2.4055 | 0.0021 |
| 251 | 2.4076 | 0.0021 |
| 252 | 2.4096 | 0.0021 |
| 253 | 2.4117 | 0.0021 |
| 254 | 2.4137 | 0.0020 |
| 255 | 2.4158 | 0.0020 |
| 256 | 2.4178 | 0.0020 |
| 257 | 2.4198 | 0.0020 |
| 258 | 2.4219 | 0.0020 |
| 259 | 2.4239 | 0.0020 |
| 260 | 2.4259 | 0.0020 |
| 261 | 2.4279 | 0.0020 |
| 262 | 2.4299 | 0.0020 |
| 263 | 2.4319 | 0.0020 |
| 264 | 2.4339 | 0.0020 |
| 265 | 2.4359 | 0.0020 |
| 266 | 2.4378 | 0.0020 |
| 267 | 2.4398 | 0.0020 |
| 268 | 2.4418 | 0.0020 |
| 269 | 2.4437 | 0.0020 |
| 270 | 2.4457 | 0.0020 |
| 271 | 2.4476 | 0.0019 |
| 272 | 2.4496 | 0.0019 |
| 273 | 2.4515 | 0.0019 |
| 274 | 2.4535 | 0.0019 |
| 275 | 2.4554 | 0.0019 |
| 276 | 2.4573 | 0.0019 |
| 277 | 2.4592 | 0.0019 |
| 278 | 2.4611 | 0.0019 |
| 279 | 2.4630 | 0.0019 |
| 280 | 2.4649 | 0.0019 |
| 281 | 2.4668 | 0.0019 |
| 282 | 2.4687 | 0.0019 |
| 283 | 2.4706 | 0.0019 |
| 284 | 2.4725 | 0.0019 |
| 285 | 2.4743 | 0.0019 |
| 286 | 2.4762 | 0.0019 |
| 287 | 2.4781 | 0.0019 |
| 288 | 2.4799 | 0.0019 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0019 | 0.0013 | 0.0006 |
| 2 | 0.0019 | 0.0013 | 0.0006 |
| 3 | 0.0019 | 0.0013 | 0.0006 |
| 4 | 0.0019 | 0.0013 | 0.0006 |
| 5 | 0.0019 | 0.0013 | 0.0006 |
| 6 | 0.0019 | 0.0013 | 0.0006 |
| 7 | 0.0019 | 0.0013 | 0.0006 |
| 8 | 0.0019 | 0.0013 | 0.0006 |
| 9 | 0.0019 | 0.0013 | 0.0006 |
| 10 | 0.0019 | 0.0013 | 0.0006 |

| | | | |
|---|---|---|---|
| 11 | 0.0019 | 0.0013 | 0.0006 |
| 12 | 0.0019 | 0.0013 | 0.0006 |
| 13 | 0.0020 | 0.0014 | 0.0006 |
| 14 | 0.0020 | 0.0014 | 0.0006 |
| 15 | 0.0020 | 0.0014 | 0.0006 |
| 16 | 0.0020 | 0.0014 | 0.0006 |
| 17 | 0.0020 | 0.0014 | 0.0006 |
| 18 | 0.0020 | 0.0014 | 0.0006 |
| 19 | 0.0020 | 0.0014 | 0.0006 |
| 20 | 0.0020 | 0.0014 | 0.0006 |
| 21 | 0.0020 | 0.0014 | 0.0006 |
| 22 | 0.0020 | 0.0014 | 0.0006 |
| 23 | 0.0020 | 0.0014 | 0.0006 |
| 24 | 0.0020 | 0.0014 | 0.0006 |
| 25 | 0.0021 | 0.0014 | 0.0006 |
| 26 | 0.0021 | 0.0014 | 0.0006 |
| 27 | 0.0021 | 0.0014 | 0.0006 |
| 28 | 0.0021 | 0.0014 | 0.0006 |
| 29 | 0.0021 | 0.0015 | 0.0006 |
| 30 | 0.0021 | 0.0015 | 0.0006 |
| 31 | 0.0021 | 0.0015 | 0.0007 |
| 32 | 0.0021 | 0.0015 | 0.0007 |
| 33 | 0.0021 | 0.0015 | 0.0007 |
| 34 | 0.0022 | 0.0015 | 0.0007 |
| 35 | 0.0022 | 0.0015 | 0.0007 |
| 36 | 0.0022 | 0.0015 | 0.0007 |
| 37 | 0.0022 | 0.0015 | 0.0007 |
| 38 | 0.0022 | 0.0015 | 0.0007 |
| 39 | 0.0022 | 0.0015 | 0.0007 |
| 40 | 0.0022 | 0.0015 | 0.0007 |
| 41 | 0.0022 | 0.0015 | 0.0007 |
| 42 | 0.0022 | 0.0016 | 0.0007 |
| 43 | 0.0023 | 0.0016 | 0.0007 |
| 44 | 0.0023 | 0.0016 | 0.0007 |
| 45 | 0.0023 | 0.0016 | 0.0007 |
| 46 | 0.0023 | 0.0016 | 0.0007 |
| 47 | 0.0023 | 0.0016 | 0.0007 |
| 48 | 0.0023 | 0.0016 | 0.0007 |
| 49 | 0.0023 | 0.0016 | 0.0007 |
| 50 | 0.0023 | 0.0016 | 0.0007 |
| 51 | 0.0024 | 0.0016 | 0.0007 |
| 52 | 0.0024 | 0.0016 | 0.0007 |
| 53 | 0.0024 | 0.0016 | 0.0007 |
| 54 | 0.0024 | 0.0017 | 0.0007 |
| 55 | 0.0024 | 0.0017 | 0.0007 |
| 56 | 0.0024 | 0.0017 | 0.0007 |
| 57 | 0.0024 | 0.0017 | 0.0007 |
| 58 | 0.0024 | 0.0017 | 0.0008 |
| 59 | 0.0025 | 0.0017 | 0.0008 |
| 60 | 0.0025 | 0.0017 | 0.0008 |
| 61 | 0.0025 | 0.0017 | 0.0008 |
| 62 | 0.0025 | 0.0017 | 0.0008 |
| 63 | 0.0025 | 0.0017 | 0.0008 |
| 64 | 0.0025 | 0.0018 | 0.0008 |
| 65 | 0.0026 | 0.0018 | 0.0008 |
| 66 | 0.0026 | 0.0018 | 0.0008 |
| 67 | 0.0026 | 0.0018 | 0.0008 |
| 68 | 0.0026 | 0.0018 | 0.0008 |
| 69 | 0.0026 | 0.0018 | 0.0008 |

| | | | |
|---|---|---|---|
| 70 | 0.0026 | 0.0018 | 0.0008 |
| 71 | 0.0027 | 0.0018 | 0.0008 |
| 72 | 0.0027 | 0.0018 | 0.0008 |
| 73 | 0.0027 | 0.0019 | 0.0008 |
| 74 | 0.0027 | 0.0019 | 0.0008 |
| 75 | 0.0027 | 0.0019 | 0.0008 |
| 76 | 0.0027 | 0.0019 | 0.0008 |
| 77 | 0.0028 | 0.0019 | 0.0008 |
| 78 | 0.0028 | 0.0019 | 0.0009 |
| 79 | 0.0028 | 0.0019 | 0.0009 |
| 80 | 0.0028 | 0.0019 | 0.0009 |
| 81 | 0.0028 | 0.0020 | 0.0009 |
| 82 | 0.0029 | 0.0020 | 0.0009 |
| 83 | 0.0029 | 0.0020 | 0.0009 |
| 84 | 0.0029 | 0.0020 | 0.0009 |
| 85 | 0.0029 | 0.0020 | 0.0009 |
| 86 | 0.0029 | 0.0020 | 0.0009 |
| 87 | 0.0030 | 0.0021 | 0.0009 |
| 88 | 0.0030 | 0.0021 | 0.0009 |
| 89 | 0.0030 | 0.0021 | 0.0009 |
| 90 | 0.0030 | 0.0021 | 0.0009 |
| 91 | 0.0031 | 0.0021 | 0.0009 |
| 92 | 0.0031 | 0.0021 | 0.0009 |
| 93 | 0.0031 | 0.0021 | 0.0010 |
| 94 | 0.0031 | 0.0022 | 0.0010 |
| 95 | 0.0032 | 0.0022 | 0.0010 |
| 96 | 0.0032 | 0.0022 | 0.0010 |
| 97 | 0.0032 | 0.0022 | 0.0010 |
| 98 | 0.0032 | 0.0022 | 0.0010 |
| 99 | 0.0033 | 0.0023 | 0.0010 |
| 100 | 0.0033 | 0.0023 | 0.0010 |
| 101 | 0.0033 | 0.0023 | 0.0010 |
| 102 | 0.0033 | 0.0023 | 0.0010 |
| 103 | 0.0034 | 0.0023 | 0.0010 |
| 104 | 0.0034 | 0.0023 | 0.0010 |
| 105 | 0.0034 | 0.0024 | 0.0011 |
| 106 | 0.0035 | 0.0024 | 0.0011 |
| 107 | 0.0035 | 0.0024 | 0.0011 |
| 108 | 0.0035 | 0.0024 | 0.0011 |
| 109 | 0.0036 | 0.0025 | 0.0011 |
| 110 | 0.0036 | 0.0025 | 0.0011 |
| 111 | 0.0036 | 0.0025 | 0.0011 |
| 112 | 0.0036 | 0.0025 | 0.0011 |
| 113 | 0.0037 | 0.0026 | 0.0011 |
| 114 | 0.0037 | 0.0026 | 0.0011 |
| 115 | 0.0038 | 0.0026 | 0.0012 |
| 116 | 0.0038 | 0.0026 | 0.0012 |
| 117 | 0.0039 | 0.0027 | 0.0012 |
| 118 | 0.0039 | 0.0027 | 0.0012 |
| 119 | 0.0039 | 0.0027 | 0.0012 |
| 120 | 0.0040 | 0.0027 | 0.0012 |
| 121 | 0.0040 | 0.0028 | 0.0012 |
| 122 | 0.0040 | 0.0028 | 0.0012 |
| 123 | 0.0041 | 0.0028 | 0.0013 |
| 124 | 0.0041 | 0.0029 | 0.0013 |
| 125 | 0.0042 | 0.0029 | 0.0013 |
| 126 | 0.0042 | 0.0029 | 0.0013 |
| 127 | 0.0043 | 0.0030 | 0.0013 |
| 128 | 0.0043 | 0.0030 | 0.0013 |

| | | | |
|---|---|---|---|
| 129 | 0.0044 | 0.0031 | 0.0014 |
| 130 | 0.0044 | 0.0031 | 0.0014 |
| 131 | 0.0045 | 0.0031 | 0.0014 |
| 132 | 0.0046 | 0.0032 | 0.0014 |
| 133 | 0.0046 | 0.0032 | 0.0014 |
| 134 | 0.0047 | 0.0032 | 0.0014 |
| 135 | 0.0048 | 0.0033 | 0.0015 |
| 136 | 0.0048 | 0.0033 | 0.0015 |
| 137 | 0.0049 | 0.0034 | 0.0015 |
| 138 | 0.0049 | 0.0034 | 0.0015 |
| 139 | 0.0050 | 0.0035 | 0.0015 |
| 140 | 0.0051 | 0.0035 | 0.0016 |
| 141 | 0.0052 | 0.0036 | 0.0016 |
| 142 | 0.0052 | 0.0036 | 0.0016 |
| 143 | 0.0054 | 0.0037 | 0.0016 |
| 144 | 0.0054 | 0.0038 | 0.0017 |
| 145 | 0.0043 | 0.0030 | 0.0013 |
| 146 | 0.0044 | 0.0030 | 0.0013 |
| 147 | 0.0045 | 0.0031 | 0.0014 |
| 148 | 0.0046 | 0.0032 | 0.0014 |
| 149 | 0.0047 | 0.0032 | 0.0014 |
| 150 | 0.0047 | 0.0033 | 0.0015 |
| 151 | 0.0049 | 0.0034 | 0.0015 |
| 152 | 0.0049 | 0.0034 | 0.0015 |
| 153 | 0.0051 | 0.0035 | 0.0016 |
| 154 | 0.0051 | 0.0036 | 0.0016 |
| 155 | 0.0053 | 0.0037 | 0.0016 |
| 156 | 0.0054 | 0.0037 | 0.0016 |
| 157 | 0.0055 | 0.0038 | 0.0017 |
| 158 | 0.0056 | 0.0039 | 0.0017 |
| 159 | 0.0058 | 0.0040 | 0.0018 |
| 160 | 0.0059 | 0.0041 | 0.0018 |
| 161 | 0.0061 | 0.0042 | 0.0019 |
| 162 | 0.0062 | 0.0043 | 0.0019 |
| 163 | 0.0064 | 0.0045 | 0.0020 |
| 164 | 0.0066 | 0.0045 | 0.0020 |
| 165 | 0.0068 | 0.0047 | 0.0021 |
| 166 | 0.0070 | 0.0048 | 0.0021 |
| 167 | 0.0073 | 0.0050 | 0.0022 |
| 168 | 0.0074 | 0.0051 | 0.0023 |
| 169 | 0.0078 | 0.0054 | 0.0024 |
| 170 | 0.0080 | 0.0055 | 0.0025 |
| 171 | 0.0084 | 0.0058 | 0.0026 |
| 172 | 0.0086 | 0.0060 | 0.0026 |
| 173 | 0.0091 | 0.0063 | 0.0028 |
| 174 | 0.0094 | 0.0065 | 0.0029 |
| 175 | 0.0099 | 0.0069 | 0.0031 |
| 176 | 0.0103 | 0.0071 | 0.0032 |
| 177 | 0.0110 | 0.0076 | 0.0034 |
| 178 | 0.0114 | 0.0079 | 0.0035 |
| 179 | 0.0123 | 0.0085 | 0.0038 |
| 180 | 0.0128 | 0.0089 | 0.0039 |
| 181 | 0.0140 | 0.0097 | 0.0043 |
| 182 | 0.0147 | 0.0102 | 0.0045 |
| 183 | 0.0164 | 0.0114 | 0.0050 |
| 184 | 0.0174 | 0.0121 | 0.0053 |
| 185 | 0.0350 | 0.0243 | 0.0107 |
| 186 | 0.0373 | 0.0258 | 0.0115 |
| 187 | 0.0433 | 0.0300 | 0.0133 |

| | | | |
|---|---|---|---|
| 188 | 0.0472 | 0.0327 | 0.0145 |
| 189 | 0.0587 | 0.0340 | 0.0247 |
| 190 | 0.0676 | 0.0340 | 0.0336 |
| 191 | 0.1026 | 0.0340 | 0.0686 |
| 192 | 0.1490 | 0.0340 | 0.1150 |
| 193 | 0.6446 | 0.0340 | 0.6106 |
| 194 | 0.0808 | 0.0340 | 0.0468 |
| 195 | 0.0522 | 0.0340 | 0.0182 |
| 196 | 0.0400 | 0.0277 | 0.0123 |
| 197 | 0.0186 | 0.0129 | 0.0057 |
| 198 | 0.0155 | 0.0108 | 0.0048 |
| 199 | 0.0134 | 0.0093 | 0.0041 |
| 200 | 0.0118 | 0.0082 | 0.0036 |
| 201 | 0.0106 | 0.0074 | 0.0033 |
| 202 | 0.0096 | 0.0067 | 0.0030 |
| 203 | 0.0089 | 0.0061 | 0.0027 |
| 204 | 0.0082 | 0.0057 | 0.0025 |
| 205 | 0.0076 | 0.0053 | 0.0023 |
| 206 | 0.0071 | 0.0049 | 0.0022 |
| 207 | 0.0067 | 0.0046 | 0.0021 |
| 208 | 0.0063 | 0.0044 | 0.0019 |
| 209 | 0.0060 | 0.0042 | 0.0018 |
| 210 | 0.0057 | 0.0039 | 0.0018 |
| 211 | 0.0054 | 0.0038 | 0.0017 |
| 212 | 0.0052 | 0.0036 | 0.0016 |
| 213 | 0.0050 | 0.0035 | 0.0015 |
| 214 | 0.0048 | 0.0033 | 0.0015 |
| 215 | 0.0046 | 0.0032 | 0.0014 |
| 216 | 0.0044 | 0.0031 | 0.0014 |
| 217 | 0.0055 | 0.0038 | 0.0017 |
| 218 | 0.0053 | 0.0037 | 0.0016 |
| 219 | 0.0051 | 0.0036 | 0.0016 |
| 220 | 0.0050 | 0.0035 | 0.0015 |
| 221 | 0.0049 | 0.0034 | 0.0015 |
| 222 | 0.0047 | 0.0033 | 0.0015 |
| 223 | 0.0046 | 0.0032 | 0.0014 |
| 224 | 0.0045 | 0.0031 | 0.0014 |
| 225 | 0.0044 | 0.0030 | 0.0013 |
| 226 | 0.0043 | 0.0030 | 0.0013 |
| 227 | 0.0042 | 0.0029 | 0.0013 |
| 228 | 0.0041 | 0.0028 | 0.0013 |
| 229 | 0.0040 | 0.0028 | 0.0012 |
| 230 | 0.0039 | 0.0027 | 0.0012 |
| 231 | 0.0038 | 0.0026 | 0.0012 |
| 232 | 0.0037 | 0.0026 | 0.0012 |
| 233 | 0.0037 | 0.0025 | 0.0011 |
| 234 | 0.0036 | 0.0025 | 0.0011 |
| 235 | 0.0035 | 0.0025 | 0.0011 |
| 236 | 0.0035 | 0.0024 | 0.0011 |
| 237 | 0.0034 | 0.0024 | 0.0010 |
| 238 | 0.0034 | 0.0023 | 0.0010 |
| 239 | 0.0033 | 0.0023 | 0.0010 |
| 240 | 0.0032 | 0.0022 | 0.0010 |
| 241 | 0.0032 | 0.0022 | 0.0010 |
| 242 | 0.0031 | 0.0022 | 0.0010 |
| 243 | 0.0031 | 0.0021 | 0.0009 |
| 244 | 0.0030 | 0.0021 | 0.0009 |
| 245 | 0.0030 | 0.0021 | 0.0009 |
| 246 | 0.0029 | 0.0020 | 0.0009 |

| | | | |
|---|---|---|---|
| 247 | 0.0029 | 0.0020 | 0.0009 |
| 248 | 0.0029 | 0.0020 | 0.0009 |
| 249 | 0.0028 | 0.0020 | 0.0009 |
| 250 | 0.0028 | 0.0019 | 0.0009 |
| 251 | 0.0027 | 0.0019 | 0.0008 |
| 252 | 0.0027 | 0.0019 | 0.0008 |
| 253 | 0.0027 | 0.0019 | 0.0008 |
| 254 | 0.0026 | 0.0018 | 0.0008 |
| 255 | 0.0026 | 0.0018 | 0.0008 |
| 256 | 0.0026 | 0.0018 | 0.0008 |
| 257 | 0.0025 | 0.0018 | 0.0008 |
| 258 | 0.0025 | 0.0017 | 0.0008 |
| 259 | 0.0025 | 0.0017 | 0.0008 |
| 260 | 0.0025 | 0.0017 | 0.0008 |
| 261 | 0.0024 | 0.0017 | 0.0007 |
| 262 | 0.0024 | 0.0017 | 0.0007 |
| 263 | 0.0024 | 0.0016 | 0.0007 |
| 264 | 0.0023 | 0.0016 | 0.0007 |
| 265 | 0.0023 | 0.0016 | 0.0007 |
| 266 | 0.0023 | 0.0016 | 0.0007 |
| 267 | 0.0023 | 0.0016 | 0.0007 |
| 268 | 0.0022 | 0.0016 | 0.0007 |
| 269 | 0.0022 | 0.0015 | 0.0007 |
| 270 | 0.0022 | 0.0015 | 0.0007 |
| 271 | 0.0022 | 0.0015 | 0.0007 |
| 272 | 0.0022 | 0.0015 | 0.0007 |
| 273 | 0.0021 | 0.0015 | 0.0007 |
| 274 | 0.0021 | 0.0015 | 0.0006 |
| 275 | 0.0021 | 0.0015 | 0.0006 |
| 276 | 0.0021 | 0.0014 | 0.0006 |
| 277 | 0.0021 | 0.0014 | 0.0006 |
| 278 | 0.0020 | 0.0014 | 0.0006 |
| 279 | 0.0020 | 0.0014 | 0.0006 |
| 280 | 0.0020 | 0.0014 | 0.0006 |
| 281 | 0.0020 | 0.0014 | 0.0006 |
| 282 | 0.0020 | 0.0014 | 0.0006 |
| 283 | 0.0019 | 0.0013 | 0.0006 |
| 284 | 0.0019 | 0.0013 | 0.0006 |
| 285 | 0.0019 | 0.0013 | 0.0006 |
| 286 | 0.0019 | 0.0013 | 0.0006 |
| 287 | 0.0019 | 0.0013 | 0.0006 |
| 288 | 0.0019 | 0.0013 | 0.0006 |

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Total soil rain loss = 1.16(In)
Total effective rainfall = 1.32(In)
Peak flow rate in flood hydrograph = 29.32(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 7.5 | 15.0 | 22.5 | 30.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+15 | 0.0001 | 0.01 | Q | | | | |
| 0+20 | 0.0002 | 0.01 | Q | | | | |
| 0+25 | 0.0004 | 0.03 | Q | | | | |
| 0+30 | 0.0007 | 0.04 | Q | | | | |
| 0+35 | 0.0011 | 0.06 | Q | | | | |
| 0+40 | 0.0017 | 0.08 | Q | | | | |
| 0+45 | 0.0023 | 0.09 | Q | | | | |
| 0+50 | 0.0030 | 0.10 | Q | | | | |
| 0+55 | 0.0037 | 0.11 | Q | | | | |
| 1+ 0 | 0.0045 | 0.12 | Q | | | | |
| 1+ 5 | 0.0054 | 0.12 | Q | | | | |
| 1+10 | 0.0063 | 0.13 | Q | | | | |
| 1+15 | 0.0072 | 0.13 | Q | | | | |
| 1+20 | 0.0081 | 0.14 | Q | | | | |
| 1+25 | 0.0090 | 0.14 | Q | | | | |
| 1+30 | 0.0100 | 0.14 | Q | | | | |
| 1+35 | 0.0110 | 0.15 | Q | | | | |
| 1+40 | 0.0120 | 0.15 | Q | | | | |
| 1+45 | 0.0131 | 0.15 | Q | | | | |
| 1+50 | 0.0141 | 0.15 | Q | | | | |
| 1+55 | 0.0152 | 0.16 | Q | | | | |
| 2+ 0 | 0.0163 | 0.16 | Q | | | | |
| 2+ 5 | 0.0174 | 0.16 | Q | | | | |
| 2+10 | 0.0185 | 0.16 | Q | | | | |
| 2+15 | 0.0197 | 0.16 | Q | | | | |
| 2+20 | 0.0208 | 0.17 | Q | | | | |
| 2+25 | 0.0220 | 0.17 | Q | | | | |
| 2+30 | 0.0231 | 0.17 | Q | | | | |
| 2+35 | 0.0243 | 0.17 | Q | | | | |
| 2+40 | 0.0255 | 0.17 | Q | | | | |
| 2+45 | 0.0267 | 0.17 | Q | | | | |
| 2+50 | 0.0279 | 0.18 | Q | | | | |
| 2+55 | 0.0292 | 0.18 | Q | | | | |
| 3+ 0 | 0.0304 | 0.18 | Q | | | | |
| 3+ 5 | 0.0316 | 0.18 | Q | | | | |
| 3+10 | 0.0329 | 0.18 | Q | | | | |
| 3+15 | 0.0342 | 0.18 | Q | | | | |
| 3+20 | 0.0354 | 0.19 | Q | | | | |
| 3+25 | 0.0367 | 0.19 | Q | | | | |
| 3+30 | 0.0380 | 0.19 | Q | | | | |
| 3+35 | 0.0393 | 0.19 | Q | | | | |
| 3+40 | 0.0406 | 0.19 | Q | | | | |
| 3+45 | 0.0420 | 0.19 | Q | | | | |
| 3+50 | 0.0433 | 0.19 | Q | | | | |
| 3+55 | 0.0446 | 0.19 | Q | | | | |
| 4+ 0 | 0.0460 | 0.20 | Q | | | | |
| 4+ 5 | 0.0473 | 0.20 | Q | | | | |
| 4+10 | 0.0487 | 0.20 | Q | | | | |
| 4+15 | 0.0500 | 0.20 | Q | | | | |
| 4+20 | 0.0514 | 0.20 | Q | | | | |
| 4+25 | 0.0528 | 0.20 | Q | | | | |
| 4+30 | 0.0542 | 0.20 | Q | | | | |
| 4+35 | 0.0556 | 0.20 | Q | | | | |
| 4+40 | 0.0570 | 0.21 | Q | | | | |
| 4+45 | 0.0585 | 0.21 | Q | | | | |
| 4+50 | 0.0599 | 0.21 | Q | | | | |
| 4+55 | 0.0613 | 0.21 | Q | | | | |
| 5+ 0 | 0.0628 | 0.21 | Q | | | | |
| 5+ 5 | 0.0642 | 0.21 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+10 | 0.0657 | 0.21 | Q | \| | \| | \| | \| |
| 5+15 | 0.0672 | 0.21 | Q | \| | \| | \| | \| |
| 5+20 | 0.0687 | 0.22 | QV | \| | \| | \| | \| |
| 5+25 | 0.0702 | 0.22 | QV | \| | \| | \| | \| |
| 5+30 | 0.0717 | 0.22 | QV | \| | \| | \| | \| |
| 5+35 | 0.0732 | 0.22 | QV | \| | \| | \| | \| |
| 5+40 | 0.0747 | 0.22 | QV | \| | \| | \| | \| |
| 5+45 | 0.0762 | 0.22 | QV | \| | \| | \| | \| |
| 5+50 | 0.0777 | 0.22 | QV | \| | \| | \| | \| |
| 5+55 | 0.0793 | 0.22 | QV | \| | \| | \| | \| |
| 6+ 0 | 0.0808 | 0.23 | QV | \| | \| | \| | \| |
| 6+ 5 | 0.0824 | 0.23 | QV | \| | \| | \| | \| |
| 6+10 | 0.0840 | 0.23 | QV | \| | \| | \| | \| |
| 6+15 | 0.0856 | 0.23 | QV | \| | \| | \| | \| |
| 6+20 | 0.0872 | 0.23 | QV | \| | \| | \| | \| |
| 6+25 | 0.0888 | 0.23 | QV | \| | \| | \| | \| |
| 6+30 | 0.0904 | 0.23 | QV | \| | \| | \| | \| |
| 6+35 | 0.0920 | 0.24 | QV | \| | \| | \| | \| |
| 6+40 | 0.0936 | 0.24 | QV | \| | \| | \| | \| |
| 6+45 | 0.0953 | 0.24 | QV | \| | \| | \| | \| |
| 6+50 | 0.0969 | 0.24 | QV | \| | \| | \| | \| |
| 6+55 | 0.0986 | 0.24 | QV | \| | \| | \| | \| |
| 7+ 0 | 0.1003 | 0.24 | QV | \| | \| | \| | \| |
| 7+ 5 | 0.1020 | 0.24 | QV | \| | \| | \| | \| |
| 7+10 | 0.1037 | 0.25 | QV | \| | \| | \| | \| |
| 7+15 | 0.1054 | 0.25 | QV | \| | \| | \| | \| |
| 7+20 | 0.1071 | 0.25 | QV | \| | \| | \| | \| |
| 7+25 | 0.1088 | 0.25 | QV | \| | \| | \| | \| |
| 7+30 | 0.1106 | 0.25 | QV | \| | \| | \| | \| |
| 7+35 | 0.1123 | 0.26 | QV | \| | \| | \| | \| |
| 7+40 | 0.1141 | 0.26 | QV | \| | \| | \| | \| |
| 7+45 | 0.1159 | 0.26 | QV | \| | \| | \| | \| |
| 7+50 | 0.1177 | 0.26 | QV | \| | \| | \| | \| |
| 7+55 | 0.1195 | 0.26 | QV | \| | \| | \| | \| |
| 8+ 0 | 0.1213 | 0.26 | QV | \| | \| | \| | \| |
| 8+ 5 | 0.1231 | 0.27 | QV | \| | \| | \| | \| |
| 8+10 | 0.1250 | 0.27 | QV | \| | \| | \| | \| |
| 8+15 | 0.1268 | 0.27 | QV | \| | \| | \| | \| |
| 8+20 | 0.1287 | 0.27 | QV | \| | \| | \| | \| |
| 8+25 | 0.1306 | 0.27 | QV | \| | \| | \| | \| |
| 8+30 | 0.1325 | 0.28 | QV | \| | \| | \| | \| |
| 8+35 | 0.1344 | 0.28 | QV | \| | \| | \| | \| |
| 8+40 | 0.1364 | 0.28 | Q V | \| | \| | \| | \| |
| 8+45 | 0.1383 | 0.28 | Q V | \| | \| | \| | \| |
| 8+50 | 0.1403 | 0.29 | Q V | \| | \| | \| | \| |
| 8+55 | 0.1423 | 0.29 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.1443 | 0.29 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.1463 | 0.29 | Q V | \| | \| | \| | \| |
| 9+10 | 0.1483 | 0.30 | Q V | \| | \| | \| | \| |
| 9+15 | 0.1504 | 0.30 | Q V | \| | \| | \| | \| |
| 9+20 | 0.1524 | 0.30 | Q V | \| | \| | \| | \| |
| 9+25 | 0.1545 | 0.30 | Q V | \| | \| | \| | \| |
| 9+30 | 0.1566 | 0.31 | Q V | \| | \| | \| | \| |
| 9+35 | 0.1588 | 0.31 | Q V | \| | \| | \| | \| |
| 9+40 | 0.1609 | 0.31 | Q V | \| | \| | \| | \| |
| 9+45 | 0.1631 | 0.31 | Q V | \| | \| | \| | \| |
| 9+50 | 0.1653 | 0.32 | Q V | \| | \| | \| | \| |
| 9+55 | 0.1675 | 0.32 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.1697 | 0.32 | Q V | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10+ 5 | 0.1719 | 0.33 | Q V | \| | \| | \| | \| |
| 10+10 | 0.1742 | 0.33 | Q V | \| | \| | \| | \| |
| 10+15 | 0.1765 | 0.33 | Q V | \| | \| | \| | \| |
| 10+20 | 0.1788 | 0.34 | Q V | \| | \| | \| | \| |
| 10+25 | 0.1811 | 0.34 | Q V | \| | \| | \| | \| |
| 10+30 | 0.1835 | 0.34 | Q V | \| | \| | \| | \| |
| 10+35 | 0.1859 | 0.35 | Q V | \| | \| | \| | \| |
| 10+40 | 0.1883 | 0.35 | Q V | \| | \| | \| | \| |
| 10+45 | 0.1907 | 0.35 | Q V | \| | \| | \| | \| |
| 10+50 | 0.1932 | 0.36 | Q V | \| | \| | \| | \| |
| 10+55 | 0.1957 | 0.36 | Q V | \| | \| | \| | \| |
| 11+ 0 | 0.1982 | 0.37 | Q V | \| | \| | \| | \| |
| 11+ 5 | 0.2007 | 0.37 | Q V | \| | \| | \| | \| |
| 11+10 | 0.2033 | 0.37 | Q V | \| | \| | \| | \| |
| 11+15 | 0.2059 | 0.38 | Q V | \| | \| | \| | \| |
| 11+20 | 0.2085 | 0.38 | Q V | \| | \| | \| | \| |
| 11+25 | 0.2112 | 0.39 | Q V | \| | \| | \| | \| |
| 11+30 | 0.2139 | 0.39 | Q V | \| | \| | \| | \| |
| 11+35 | 0.2166 | 0.40 | Q V | \| | \| | \| | \| |
| 11+40 | 0.2194 | 0.40 | Q V | \| | \| | \| | \| |
| 11+45 | 0.2222 | 0.41 | Q V | \| | \| | \| | \| |
| 11+50 | 0.2250 | 0.41 | Q V | \| | \| | \| | \| |
| 11+55 | 0.2279 | 0.42 | Q V | \| | \| | \| | \| |
| 12+ 0 | 0.2308 | 0.42 | Q V | \| | \| | \| | \| |
| 12+ 5 | 0.2337 | 0.43 | Q V | \| | \| | \| | \| |
| 12+10 | 0.2367 | 0.43 | Q V | \| | \| | \| | \| |
| 12+15 | 0.2397 | 0.44 | Q V | \| | \| | \| | \| |
| 12+20 | 0.2427 | 0.44 | Q V | \| | \| | \| | \| |
| 12+25 | 0.2457 | 0.44 | Q V | \| | \| | \| | \| |
| 12+30 | 0.2487 | 0.43 | Q V | \| | \| | \| | \| |
| 12+35 | 0.2516 | 0.43 | Q V | \| | \| | \| | \| |
| 12+40 | 0.2545 | 0.42 | Q V | \| | \| | \| | \| |
| 12+45 | 0.2574 | 0.42 | Q V | \| | \| | \| | \| |
| 12+50 | 0.2604 | 0.42 | Q V | \| | \| | \| | \| |
| 12+55 | 0.2633 | 0.43 | Q V | \| | \| | \| | \| |
| 13+ 0 | 0.2662 | 0.43 | Q V | \| | \| | \| | \| |
| 13+ 5 | 0.2692 | 0.43 | Q V | \| | \| | \| | \| |
| 13+10 | 0.2722 | 0.44 | Q V | \| | \| | \| | \| |
| 13+15 | 0.2753 | 0.44 | Q V | \| | \| | \| | \| |
| 13+20 | 0.2784 | 0.45 | Q V | \| | \| | \| | \| |
| 13+25 | 0.2815 | 0.46 | Q V | \| | \| | \| | \| |
| 13+30 | 0.2847 | 0.46 | Q V | \| | \| | \| | \| |
| 13+35 | 0.2880 | 0.47 | Q V | \| | \| | \| | \| |
| 13+40 | 0.2913 | 0.48 | Q V | \| | \| | \| | \| |
| 13+45 | 0.2947 | 0.49 | Q V | \| | \| | \| | \| |
| 13+50 | 0.2982 | 0.50 | Q V | \| | \| | \| | \| |
| 13+55 | 0.3017 | 0.51 | Q V | \| | \| | \| | \| |
| 14+ 0 | 0.3053 | 0.52 | Q V | \| | \| | \| | \| |
| 14+ 5 | 0.3090 | 0.54 | Q V | \| | \| | \| | \| |
| 14+10 | 0.3128 | 0.55 | Q V | \| | \| | \| | \| |
| 14+15 | 0.3166 | 0.56 | Q V | \| | \| | \| | \| |
| 14+20 | 0.3206 | 0.58 | Q V | \| | \| | \| | \| |
| 14+25 | 0.3247 | 0.60 | Q V | \| | \| | \| | \| |
| 14+30 | 0.3289 | 0.61 | Q V | \| | \| | \| | \| |
| 14+35 | 0.3333 | 0.63 | Q V | \| | \| | \| | \| |
| 14+40 | 0.3378 | 0.65 | Q V | \| | \| | \| | \| |
| 14+45 | 0.3424 | 0.68 | Q V | \| | \| | \| | \| |
| 14+50 | 0.3473 | 0.70 | Q V | \| | \| | \| | \| |
| 14+55 | 0.3523 | 0.73 | Q V | \| | \| | \| | \| |

```
15+ 0       0.3575      0.75  |Q   V    |          |          |          |
15+ 5       0.3629      0.79  |Q   V    |          |          |          |
15+10       0.3685      0.82  |Q   V    |          |          |          |
15+15       0.3745      0.86  |Q   V    |          |          |          |
15+20       0.3807      0.91  |Q   V    |          |          |          |
15+25       0.3873      0.96  |Q   V    |          |          |          |
15+30       0.3945      1.04  |Q   V    |          |          |          |
15+35       0.4024      1.15  |Q   V    |          |          |          |
15+40       0.4113      1.28  |Q    V   |          |          |          |
15+45       0.4215      1.49  |Q    V   |          |          |          |
15+50       0.4341      1.82  | Q   V   |          |          |          |
15+55       0.4499      2.30  |  Q  V   |          |          |          |
16+ 0       0.4707      3.02  |   Q V   |          |          |          |
16+ 5       0.5044      4.89  |     QV  |          |          |          |
16+10       0.5584      7.84  |       V Q          |          |          |
16+15       0.6339     10.97  |        V|   Q      |          |          |
16+20       0.7346     14.62  |         V        Q|          |          |
16+25       0.8779     20.80  |          |  V       |       Q  |          |
16+30       1.0753     28.67  |          |    V     |          |        Q |
16+35       1.2772     29.32  |          |       V  |          |         Q|
16+40       1.4424     23.98  |          |          |V         |Q         |
16+45       1.5752     19.28  |          |          |  V Q     |          |
16+50       1.6809     15.35  |          |         Q|   V      |          |
16+55       1.7664     12.41  |          |     Q    |     V    |          |
17+ 0       1.8390     10.54  |          |   Q      |      V   |          |
17+ 5       1.9031      9.30  |          | Q        |       V  |          |
17+10       1.9591      8.14  |          Q          |        V|          |
17+15       2.0086      7.18  |         Q|          |        V|          |
17+20       2.0539      6.57  |        Q |          |         V          |
17+25       2.0934      5.75  |       Q  |          |          |V         |
17+30       2.1298      5.28  |       Q  |          |          |V         |
17+35       2.1625      4.75  |      Q   |          |          | V        |
17+40       2.1931      4.45  |     Q    |          |          | V        |
17+45       2.2215      4.13  |     Q    |          |          |  V       |
17+50       2.2484      3.90  |     Q    |          |          |  V       |
17+55       2.2727      3.52  |    Q     |          |          |  V       |
18+ 0       2.2953      3.28  |    Q     |          |          |   V      |
18+ 5       2.3150      2.87  |  Q       |          |          |   V      |
18+10       2.3336      2.69  |  Q       |          |          |   V      |
18+15       2.3512      2.56  |  Q       |          |          |   V      |
18+20       2.3681      2.46  |  Q       |          |          |    V     |
18+25       2.3838      2.27  |  Q       |          |          |    V     |
18+30       2.3988      2.19  | Q        |          |          |    V     |
18+35       2.4131      2.07  | Q        |          |          |    V     |
18+40       2.4267      1.98  | Q        |          |          |     V    |
18+45       2.4390      1.78  | Q        |          |          |     V    |
18+50       2.4508      1.71  | Q        |          |          |     V    |
18+55       2.4622      1.67  | Q        |          |          |     V    |
19+ 0       2.4732      1.59  | Q        |          |          |     V    |
19+ 5       2.4831      1.43  |Q         |          |          |     V    |
19+10       2.4926      1.38  |Q         |          |          |      V   |
19+15       2.5018      1.34  |Q         |          |          |      V   |
19+20       2.5104      1.26  |Q         |          |          |      V   |
19+25       2.5180      1.10  |Q         |          |          |      V   |
19+30       2.5253      1.06  |Q         |          |          |      V   |
19+35       2.5324      1.02  |Q         |          |          |      V   |
19+40       2.5389      0.94  |Q         |          |          |      V   |
19+45       2.5444      0.80  |Q         |          |          |      V   |
19+50       2.5497      0.78  |Q         |          |          |      V   |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 19+55 | 2.5550 | 0.77 | \|Q | \| | \| | \| | V \| |
| 20+ 0 | 2.5604 | 0.78 | \|Q | \| | \| | \| | V \| |
| 20+ 5 | 2.5658 | 0.80 | \|Q | \| | \| | \| | V \| |
| 20+10 | 2.5713 | 0.79 | \|Q | \| | \| | \| | V \| |
| 20+15 | 2.5767 | 0.78 | \|Q | \| | \| | \| | V \| |
| 20+20 | 2.5820 | 0.77 | \|Q | \| | \| | \| | V \| |
| 20+25 | 2.5872 | 0.76 | \|Q | \| | \| | \| | V \| |
| 20+30 | 2.5923 | 0.74 | Q | \| | \| | \| | V \| |
| 20+35 | 2.5973 | 0.72 | Q | \| | \| | \| | V \| |
| 20+40 | 2.6017 | 0.64 | Q | \| | \| | \| | V \| |
| 20+45 | 2.6055 | 0.55 | Q | \| | \| | \| | V \| |
| 20+50 | 2.6091 | 0.53 | Q | \| | \| | \| | V \| |
| 20+55 | 2.6127 | 0.52 | Q | \| | \| | \| | V \| |
| 21+ 0 | 2.6162 | 0.51 | Q | \| | \| | \| | V \| |
| 21+ 5 | 2.6196 | 0.48 | Q | \| | \| | \| | V \| |
| 21+10 | 2.6226 | 0.44 | Q | \| | \| | \| | V \| |
| 21+15 | 2.6247 | 0.31 | Q | \| | \| | \| | V \| |
| 21+20 | 2.6267 | 0.29 | Q | \| | \| | \| | V\| |
| 21+25 | 2.6287 | 0.28 | Q | \| | \| | \| | V\| |
| 21+30 | 2.6306 | 0.28 | Q | \| | \| | \| | V\| |
| 21+35 | 2.6325 | 0.27 | Q | \| | \| | \| | V\| |
| 21+40 | 2.6343 | 0.27 | Q | \| | \| | \| | V\| |
| 21+45 | 2.6362 | 0.26 | Q | \| | \| | \| | V\| |
| 21+50 | 2.6379 | 0.26 | Q | \| | \| | \| | V\| |
| 21+55 | 2.6397 | 0.26 | Q | \| | \| | \| | V\| |
| 22+ 0 | 2.6414 | 0.25 | Q | \| | \| | \| | V\| |
| 22+ 5 | 2.6432 | 0.25 | Q | \| | \| | \| | V\| |
| 22+10 | 2.6448 | 0.24 | Q | \| | \| | \| | V\| |
| 22+15 | 2.6465 | 0.24 | Q | \| | \| | \| | V\| |
| 22+20 | 2.6481 | 0.24 | Q | \| | \| | \| | V\| |
| 22+25 | 2.6498 | 0.24 | Q | \| | \| | \| | V\| |
| 22+30 | 2.6514 | 0.23 | Q | \| | \| | \| | V\| |
| 22+35 | 2.6530 | 0.23 | Q | \| | \| | \| | V\| |
| 22+40 | 2.6545 | 0.23 | Q | \| | \| | \| | V\| |
| 22+45 | 2.6561 | 0.22 | Q | \| | \| | \| | V\| |
| 22+50 | 2.6576 | 0.22 | Q | \| | \| | \| | V\| |
| 22+55 | 2.6591 | 0.22 | Q | \| | \| | \| | V\| |
| 23+ 0 | 2.6606 | 0.22 | Q | \| | \| | \| | V\| |
| 23+ 5 | 2.6621 | 0.21 | Q | \| | \| | \| | V\| |
| 23+10 | 2.6635 | 0.21 | Q | \| | \| | \| | V\| |
| 23+15 | 2.6650 | 0.21 | Q | \| | \| | \| | V\| |
| 23+20 | 2.6664 | 0.21 | Q | \| | \| | \| | V\| |
| 23+25 | 2.6678 | 0.20 | Q | \| | \| | \| | V\| |
| 23+30 | 2.6692 | 0.20 | Q | \| | \| | \| | V\| |
| 23+35 | 2.6706 | 0.20 | Q | \| | \| | \| | V\| |
| 23+40 | 2.6719 | 0.20 | Q | \| | \| | \| | V\| |
| 23+45 | 2.6733 | 0.20 | Q | \| | \| | \| | V\| |
| 23+50 | 2.6746 | 0.19 | Q | \| | \| | \| | V\| |
| 23+55 | 2.6759 | 0.19 | Q | \| | \| | \| | V\| |
| 24+ 0 | 2.6772 | 0.19 | Q | \| | \| | \| | V\| |
| 24+ 5 | 2.6785 | 0.19 | Q | \| | \| | \| | V\| |
| 24+10 | 2.6798 | 0.18 | Q | \| | \| | \| | V\| |
| 24+15 | 2.6810 | 0.18 | Q | \| | \| | \| | V\| |
| 24+20 | 2.6822 | 0.17 | Q | \| | \| | \| | V\| |
| 24+25 | 2.6833 | 0.16 | Q | \| | \| | \| | V\| |
| 24+30 | 2.6842 | 0.14 | Q | \| | \| | \| | V\| |
| 24+35 | 2.6850 | 0.12 | Q | \| | \| | \| | V\| |
| 24+40 | 2.6857 | 0.10 | Q | \| | \| | \| | V\| |
| 24+45 | 2.6863 | 0.09 | Q | \| | \| | \| | V\| |

```
   24+50       2.6868      0.08  Q          |          |          |         V|
   24+55       2.6873      0.07  Q          |          |          |         V|
   25+ 0       2.6877      0.06  Q          |          |          |         V|
   25+ 5       2.6881      0.06  Q          |          |          |         V|
   25+10       2.6884      0.05  Q          |          |          |         V|
   25+15       2.6887      0.05  Q          |          |          |         V|
   25+20       2.6890      0.04  Q          |          |          |         V|
   25+25       2.6893      0.04  Q          |          |          |         V|
   25+30       2.6895      0.04  Q          |          |          |         V|
   25+35       2.6898      0.03  Q          |          |          |         V|
   25+40       2.6900      0.03  Q          |          |          |         V|
   25+45       2.6902      0.03  Q          |          |          |         V|
   25+50       2.6903      0.03  Q          |          |          |         V|
   25+55       2.6905      0.02  Q          |          |          |         V|
   26+ 0       2.6906      0.02  Q          |          |          |         V|
   26+ 5       2.6908      0.02  Q          |          |          |         V|
   26+10       2.6909      0.02  Q          |          |          |         V|
   26+15       2.6910      0.02  Q          |          |          |         V|
   26+20       2.6911      0.02  Q          |          |          |         V|
   26+25       2.6912      0.01  Q          |          |          |         V|
   26+30       2.6913      0.01  Q          |          |          |         V|
   26+35       2.6914      0.01  Q          |          |          |         V|
   26+40       2.6915      0.01  Q          |          |          |         V|
   26+45       2.6916      0.01  Q          |          |          |         V|
   26+50       2.6916      0.01  Q          |          |          |         V|
   26+55       2.6917      0.01  Q          |          |          |         V|
   27+ 0       2.6917      0.01  Q          |          |          |         V|
   27+ 5       2.6918      0.01  Q          |          |          |         V|
   27+10       2.6918      0.01  Q          |          |          |         V|
   27+15       2.6919      0.01  Q          |          |          |         V|
   27+20       2.6919      0.01  Q          |          |          |         V|
   27+25       2.6920      0.01  Q          |          |          |         V|
   27+30       2.6920      0.00  Q          |          |          |         V|
   27+35       2.6920      0.00  Q          |          |          |         V|
   27+40       2.6920      0.00  Q          |          |          |         V|
   27+45       2.6921      0.00  Q          |          |          |         V|
   27+50       2.6921      0.00  Q          |          |          |         V|
   27+55       2.6921      0.00  Q          |          |          |         V|
   28+ 0       2.6921      0.00  Q          |          |          |         V|
   28+ 5       2.6922      0.00  Q          |          |          |         V|
   28+10       2.6922      0.00  Q          |          |          |         V|
   28+15       2.6922      0.00  Q          |          |          |         V|
   28+20       2.6922      0.00  Q          |          |          |         V|
   28+25       2.6922      0.00  Q          |          |          |         V|
   28+30       2.6922      0.00  Q          |          |          |         V|
   28+35       2.6922      0.00  Q          |          |          |         V|
   28+40       2.6922      0.00  Q          |          |          |         V|
   28+45       2.6922      0.00  Q          |          |          |         V|
   28+50       2.6922      0.00  Q          |          |          |         V|
   28+55       2.6922      0.00  Q          |          |          |         V|
   29+ 0       2.6922      0.00  Q          |          |          |         V|
   29+ 5       2.6922      0.00  Q          |          |          |          V
-------------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 21
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 9.89 | 1 | 1.36 |
| Rainfall data for year 100 | | |
| 9.89 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 9.89 | 24 | 2.47 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 61.6 | 80.3 | 9.89 | 1.000 | 0.365 | 1.000 | 0.365 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.365

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 9.89 | 1.000 | 61.6 | 80.3 | 2.46 | 0.357 |

Area-averaged catchment yield fraction, Y = 0.357
Area-averaged low loss fraction, Yb = 0.643
User entry of time of concentration = 0.810 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 9.89(Ac.)
Catchment Lag time = 0.648 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 12.8601
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.365(In/Hr)
Average low loss rate fraction (Yb) = 0.643 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.645(In)
Computed peak 30-minute rainfall = 1.105(In)
Specified peak 1-hour rainfall = 1.360(In)
Computed peak 3-hour rainfall = 1.637(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.470(In)

Rainfall depth area reduction factors:
Using a total area of 9.89(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.645(In)
30-minute factor = 1.000 Adjusted rainfall = 1.104(In)
1-hour factor = 1.000 Adjusted rainfall = 1.359(In)
3-hour factor = 1.000 Adjusted rainfall = 1.637(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.470(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 119.61 (CFS)) | |
| 1 | 0.566 | 0.677 |
| 2 | 2.242 | 2.005 |
| 3 | 4.977 | 3.271 |
| 4 | 8.848 | 4.630 |
| 5 | 15.585 | 8.058 |
| 6 | 26.897 | 13.530 |
| 7 | 38.600 | 13.997 |
| 8 | 47.690 | 10.872 |
| 9 | 54.786 | 8.488 |
| 10 | 60.177 | 6.448 |
| 11 | 64.400 | 5.051 |
| 12 | 67.926 | 4.217 |
| 13 | 71.046 | 3.732 |
| 14 | 73.699 | 3.172 |

| | | |
|---|---|---|
| 15 | 76.010 | 2.765 |
| 16 | 78.141 | 2.549 |
| 17 | 79.909 | 2.115 |
| 18 | 81.568 | 1.983 |
| 19 | 82.994 | 1.707 |
| 20 | 84.359 | 1.632 |
| 21 | 85.609 | 1.494 |
| 22 | 86.804 | 1.430 |
| 23 | 87.848 | 1.249 |
| 24 | 88.819 | 1.161 |
| 25 | 89.604 | 0.939 |
| 26 | 90.362 | 0.907 |
| 27 | 91.084 | 0.864 |
| 28 | 91.773 | 0.824 |
| 29 | 92.393 | 0.741 |
| 30 | 92.992 | 0.717 |
| 31 | 93.558 | 0.678 |
| 32 | 94.072 | 0.615 |
| 33 | 94.510 | 0.524 |
| 34 | 94.948 | 0.523 |
| 35 | 95.385 | 0.523 |
| 36 | 95.770 | 0.460 |
| 37 | 96.104 | 0.400 |
| 38 | 96.439 | 0.400 |
| 39 | 96.772 | 0.399 |
| 40 | 97.044 | 0.325 |
| 41 | 97.275 | 0.277 |
| 42 | 97.506 | 0.277 |
| 43 | 97.735 | 0.274 |
| 44 | 97.894 | 0.190 |
| 45 | 98.023 | 0.154 |
| 46 | 98.151 | 0.154 |
| 47 | 98.281 | 0.156 |
| 48 | 98.430 | 0.178 |
| 49 | 98.585 | 0.185 |
| 50 | 98.739 | 0.185 |
| 51 | 98.893 | 0.185 |
| 52 | 99.048 | 0.185 |
| 53 | 99.202 | 0.185 |
| 54 | 99.356 | 0.185 |
| 55 | 99.499 | 0.170 |
| 56 | 99.586 | 0.104 |
| 57 | 99.666 | 0.096 |
| 58 | 99.747 | 0.096 |
| 59 | 99.827 | 0.096 |
| 60 | 99.907 | 0.096 |
| 61 | 100.000 | 0.048 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6450 | 0.6450 |
| 2 | 0.7941 | 0.1491 |
| 3 | 0.8968 | 0.1027 |
| 4 | 0.9777 | 0.0808 |
| 5 | 1.0454 | 0.0677 |
| 6 | 1.1042 | 0.0588 |
| 7 | 1.1564 | 0.0523 |
| 8 | 1.2037 | 0.0473 |
| 9 | 1.2470 | 0.0433 |

| | | |
|---|---|---|
| 10 | 1.2870 | 0.0400 |
| 11 | 1.3243 | 0.0373 |
| 12 | 1.3594 | 0.0350 |
| 13 | 1.3779 | 0.0185 |
| 14 | 1.3953 | 0.0174 |
| 15 | 1.4116 | 0.0164 |
| 16 | 1.4271 | 0.0155 |
| 17 | 1.4418 | 0.0147 |
| 18 | 1.4558 | 0.0140 |
| 19 | 1.4692 | 0.0134 |
| 20 | 1.4820 | 0.0128 |
| 21 | 1.4943 | 0.0123 |
| 22 | 1.5061 | 0.0118 |
| 23 | 1.5174 | 0.0114 |
| 24 | 1.5284 | 0.0110 |
| 25 | 1.5390 | 0.0106 |
| 26 | 1.5492 | 0.0102 |
| 27 | 1.5591 | 0.0099 |
| 28 | 1.5687 | 0.0096 |
| 29 | 1.5781 | 0.0093 |
| 30 | 1.5872 | 0.0091 |
| 31 | 1.5960 | 0.0088 |
| 32 | 1.6046 | 0.0086 |
| 33 | 1.6129 | 0.0084 |
| 34 | 1.6211 | 0.0082 |
| 35 | 1.6291 | 0.0080 |
| 36 | 1.6368 | 0.0078 |
| 37 | 1.6444 | 0.0076 |
| 38 | 1.6518 | 0.0074 |
| 39 | 1.6591 | 0.0073 |
| 40 | 1.6662 | 0.0071 |
| 41 | 1.6732 | 0.0070 |
| 42 | 1.6800 | 0.0068 |
| 43 | 1.6867 | 0.0067 |
| 44 | 1.6932 | 0.0066 |
| 45 | 1.6997 | 0.0064 |
| 46 | 1.7060 | 0.0063 |
| 47 | 1.7122 | 0.0062 |
| 48 | 1.7183 | 0.0061 |
| 49 | 1.7243 | 0.0060 |
| 50 | 1.7301 | 0.0059 |
| 51 | 1.7359 | 0.0058 |
| 52 | 1.7416 | 0.0057 |
| 53 | 1.7472 | 0.0056 |
| 54 | 1.7528 | 0.0055 |
| 55 | 1.7582 | 0.0054 |
| 56 | 1.7635 | 0.0054 |
| 57 | 1.7688 | 0.0053 |
| 58 | 1.7740 | 0.0052 |
| 59 | 1.7791 | 0.0051 |
| 60 | 1.7842 | 0.0051 |
| 61 | 1.7892 | 0.0050 |
| 62 | 1.7941 | 0.0049 |
| 63 | 1.7989 | 0.0049 |
| 64 | 1.8037 | 0.0048 |
| 65 | 1.8085 | 0.0047 |
| 66 | 1.8131 | 0.0047 |
| 67 | 1.8177 | 0.0046 |
| 68 | 1.8223 | 0.0045 |

| | | |
|---|---|---|
| 69 | 1.8268 | 0.0045 |
| 70 | 1.8312 | 0.0044 |
| 71 | 1.8356 | 0.0044 |
| 72 | 1.8399 | 0.0043 |
| 73 | 1.8453 | 0.0054 |
| 74 | 1.8507 | 0.0053 |
| 75 | 1.8560 | 0.0053 |
| 76 | 1.8612 | 0.0052 |
| 77 | 1.8664 | 0.0052 |
| 78 | 1.8715 | 0.0051 |
| 79 | 1.8766 | 0.0051 |
| 80 | 1.8816 | 0.0050 |
| 81 | 1.8866 | 0.0050 |
| 82 | 1.8915 | 0.0049 |
| 83 | 1.8964 | 0.0049 |
| 84 | 1.9012 | 0.0048 |
| 85 | 1.9060 | 0.0048 |
| 86 | 1.9107 | 0.0047 |
| 87 | 1.9154 | 0.0047 |
| 88 | 1.9201 | 0.0047 |
| 89 | 1.9247 | 0.0046 |
| 90 | 1.9293 | 0.0046 |
| 91 | 1.9338 | 0.0045 |
| 92 | 1.9383 | 0.0045 |
| 93 | 1.9427 | 0.0045 |
| 94 | 1.9472 | 0.0044 |
| 95 | 1.9515 | 0.0044 |
| 96 | 1.9559 | 0.0043 |
| 97 | 1.9602 | 0.0043 |
| 98 | 1.9645 | 0.0043 |
| 99 | 1.9687 | 0.0042 |
| 100 | 1.9729 | 0.0042 |
| 101 | 1.9771 | 0.0042 |
| 102 | 1.9812 | 0.0041 |
| 103 | 1.9853 | 0.0041 |
| 104 | 1.9894 | 0.0041 |
| 105 | 1.9935 | 0.0040 |
| 106 | 1.9975 | 0.0040 |
| 107 | 2.0015 | 0.0040 |
| 108 | 2.0054 | 0.0040 |
| 109 | 2.0094 | 0.0039 |
| 110 | 2.0133 | 0.0039 |
| 111 | 2.0171 | 0.0039 |
| 112 | 2.0210 | 0.0038 |
| 113 | 2.0248 | 0.0038 |
| 114 | 2.0286 | 0.0038 |
| 115 | 2.0324 | 0.0038 |
| 116 | 2.0361 | 0.0037 |
| 117 | 2.0398 | 0.0037 |
| 118 | 2.0435 | 0.0037 |
| 119 | 2.0472 | 0.0037 |
| 120 | 2.0508 | 0.0036 |
| 121 | 2.0544 | 0.0036 |
| 122 | 2.0580 | 0.0036 |
| 123 | 2.0616 | 0.0036 |
| 124 | 2.0652 | 0.0035 |
| 125 | 2.0687 | 0.0035 |
| 126 | 2.0722 | 0.0035 |
| 127 | 2.0757 | 0.0035 |

| | | |
|---|---|---|
| 128 | 2.0791 | 0.0035 |
| 129 | 2.0826 | 0.0034 |
| 130 | 2.0860 | 0.0034 |
| 131 | 2.0894 | 0.0034 |
| 132 | 2.0928 | 0.0034 |
| 133 | 2.0961 | 0.0034 |
| 134 | 2.0995 | 0.0033 |
| 135 | 2.1028 | 0.0033 |
| 136 | 2.1061 | 0.0033 |
| 137 | 2.1094 | 0.0033 |
| 138 | 2.1126 | 0.0033 |
| 139 | 2.1159 | 0.0032 |
| 140 | 2.1191 | 0.0032 |
| 141 | 2.1223 | 0.0032 |
| 142 | 2.1255 | 0.0032 |
| 143 | 2.1287 | 0.0032 |
| 144 | 2.1318 | 0.0032 |
| 145 | 2.1349 | 0.0031 |
| 146 | 2.1381 | 0.0031 |
| 147 | 2.1412 | 0.0031 |
| 148 | 2.1443 | 0.0031 |
| 149 | 2.1473 | 0.0031 |
| 150 | 2.1504 | 0.0031 |
| 151 | 2.1534 | 0.0030 |
| 152 | 2.1564 | 0.0030 |
| 153 | 2.1594 | 0.0030 |
| 154 | 2.1624 | 0.0030 |
| 155 | 2.1654 | 0.0030 |
| 156 | 2.1684 | 0.0030 |
| 157 | 2.1713 | 0.0029 |
| 158 | 2.1742 | 0.0029 |
| 159 | 2.1772 | 0.0029 |
| 160 | 2.1801 | 0.0029 |
| 161 | 2.1829 | 0.0029 |
| 162 | 2.1858 | 0.0029 |
| 163 | 2.1887 | 0.0029 |
| 164 | 2.1915 | 0.0028 |
| 165 | 2.1944 | 0.0028 |
| 166 | 2.1972 | 0.0028 |
| 167 | 2.2000 | 0.0028 |
| 168 | 2.2028 | 0.0028 |
| 169 | 2.2055 | 0.0028 |
| 170 | 2.2083 | 0.0028 |
| 171 | 2.2111 | 0.0028 |
| 172 | 2.2138 | 0.0027 |
| 173 | 2.2165 | 0.0027 |
| 174 | 2.2192 | 0.0027 |
| 175 | 2.2220 | 0.0027 |
| 176 | 2.2246 | 0.0027 |
| 177 | 2.2273 | 0.0027 |
| 178 | 2.2300 | 0.0027 |
| 179 | 2.2326 | 0.0027 |
| 180 | 2.2353 | 0.0026 |
| 181 | 2.2379 | 0.0026 |
| 182 | 2.2405 | 0.0026 |
| 183 | 2.2431 | 0.0026 |
| 184 | 2.2457 | 0.0026 |
| 185 | 2.2483 | 0.0026 |
| 186 | 2.2509 | 0.0026 |

| | | |
|---|---|---|
| 187 | 2.2535 | 0.0026 |
| 188 | 2.2560 | 0.0026 |
| 189 | 2.2586 | 0.0025 |
| 190 | 2.2611 | 0.0025 |
| 191 | 2.2636 | 0.0025 |
| 192 | 2.2661 | 0.0025 |
| 193 | 2.2686 | 0.0025 |
| 194 | 2.2711 | 0.0025 |
| 195 | 2.2736 | 0.0025 |
| 196 | 2.2761 | 0.0025 |
| 197 | 2.2786 | 0.0025 |
| 198 | 2.2810 | 0.0025 |
| 199 | 2.2834 | 0.0024 |
| 200 | 2.2859 | 0.0024 |
| 201 | 2.2883 | 0.0024 |
| 202 | 2.2907 | 0.0024 |
| 203 | 2.2931 | 0.0024 |
| 204 | 2.2955 | 0.0024 |
| 205 | 2.2979 | 0.0024 |
| 206 | 2.3003 | 0.0024 |
| 207 | 2.3026 | 0.0024 |
| 208 | 2.3050 | 0.0024 |
| 209 | 2.3073 | 0.0023 |
| 210 | 2.3097 | 0.0023 |
| 211 | 2.3120 | 0.0023 |
| 212 | 2.3143 | 0.0023 |
| 213 | 2.3167 | 0.0023 |
| 214 | 2.3190 | 0.0023 |
| 215 | 2.3213 | 0.0023 |
| 216 | 2.3236 | 0.0023 |
| 217 | 2.3258 | 0.0023 |
| 218 | 2.3281 | 0.0023 |
| 219 | 2.3304 | 0.0023 |
| 220 | 2.3326 | 0.0023 |
| 221 | 2.3349 | 0.0022 |
| 222 | 2.3371 | 0.0022 |
| 223 | 2.3393 | 0.0022 |
| 224 | 2.3416 | 0.0022 |
| 225 | 2.3438 | 0.0022 |
| 226 | 2.3460 | 0.0022 |
| 227 | 2.3482 | 0.0022 |
| 228 | 2.3504 | 0.0022 |
| 229 | 2.3526 | 0.0022 |
| 230 | 2.3548 | 0.0022 |
| 231 | 2.3569 | 0.0022 |
| 232 | 2.3591 | 0.0022 |
| 233 | 2.3612 | 0.0022 |
| 234 | 2.3634 | 0.0021 |
| 235 | 2.3655 | 0.0021 |
| 236 | 2.3677 | 0.0021 |
| 237 | 2.3698 | 0.0021 |
| 238 | 2.3719 | 0.0021 |
| 239 | 2.3740 | 0.0021 |
| 240 | 2.3761 | 0.0021 |
| 241 | 2.3782 | 0.0021 |
| 242 | 2.3803 | 0.0021 |
| 243 | 2.3824 | 0.0021 |
| 244 | 2.3845 | 0.0021 |
| 245 | 2.3866 | 0.0021 |

| | | |
|---|---|---|
| 246 | 2.3886 | 0.0021 |
| 247 | 2.3907 | 0.0021 |
| 248 | 2.3927 | 0.0021 |
| 249 | 2.3948 | 0.0020 |
| 250 | 2.3968 | 0.0020 |
| 251 | 2.3989 | 0.0020 |
| 252 | 2.4009 | 0.0020 |
| 253 | 2.4029 | 0.0020 |
| 254 | 2.4049 | 0.0020 |
| 255 | 2.4069 | 0.0020 |
| 256 | 2.4089 | 0.0020 |
| 257 | 2.4109 | 0.0020 |
| 258 | 2.4129 | 0.0020 |
| 259 | 2.4149 | 0.0020 |
| 260 | 2.4169 | 0.0020 |
| 261 | 2.4189 | 0.0020 |
| 262 | 2.4208 | 0.0020 |
| 263 | 2.4228 | 0.0020 |
| 264 | 2.4247 | 0.0020 |
| 265 | 2.4267 | 0.0019 |
| 266 | 2.4286 | 0.0019 |
| 267 | 2.4306 | 0.0019 |
| 268 | 2.4325 | 0.0019 |
| 269 | 2.4344 | 0.0019 |
| 270 | 2.4363 | 0.0019 |
| 271 | 2.4383 | 0.0019 |
| 272 | 2.4402 | 0.0019 |
| 273 | 2.4421 | 0.0019 |
| 274 | 2.4440 | 0.0019 |
| 275 | 2.4459 | 0.0019 |
| 276 | 2.4477 | 0.0019 |
| 277 | 2.4496 | 0.0019 |
| 278 | 2.4515 | 0.0019 |
| 279 | 2.4534 | 0.0019 |
| 280 | 2.4552 | 0.0019 |
| 281 | 2.4571 | 0.0019 |
| 282 | 2.4589 | 0.0019 |
| 283 | 2.4608 | 0.0018 |
| 284 | 2.4626 | 0.0018 |
| 285 | 2.4645 | 0.0018 |
| 286 | 2.4663 | 0.0018 |
| 287 | 2.4681 | 0.0018 |
| 288 | 2.4700 | 0.0018 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0018 | 0.0012 | 0.0007 |
| 2 | 0.0018 | 0.0012 | 0.0007 |
| 3 | 0.0018 | 0.0012 | 0.0007 |
| 4 | 0.0018 | 0.0012 | 0.0007 |
| 5 | 0.0019 | 0.0012 | 0.0007 |
| 6 | 0.0019 | 0.0012 | 0.0007 |
| 7 | 0.0019 | 0.0012 | 0.0007 |
| 8 | 0.0019 | 0.0012 | 0.0007 |
| 9 | 0.0019 | 0.0012 | 0.0007 |
| 10 | 0.0019 | 0.0012 | 0.0007 |
| 11 | 0.0019 | 0.0012 | 0.0007 |

| | | | |
|---|---|---|---|
| 12 | 0.0019 | 0.0012 | 0.0007 |
| 13 | 0.0019 | 0.0012 | 0.0007 |
| 14 | 0.0019 | 0.0012 | 0.0007 |
| 15 | 0.0019 | 0.0012 | 0.0007 |
| 16 | 0.0019 | 0.0012 | 0.0007 |
| 17 | 0.0020 | 0.0013 | 0.0007 |
| 18 | 0.0020 | 0.0013 | 0.0007 |
| 19 | 0.0020 | 0.0013 | 0.0007 |
| 20 | 0.0020 | 0.0013 | 0.0007 |
| 21 | 0.0020 | 0.0013 | 0.0007 |
| 22 | 0.0020 | 0.0013 | 0.0007 |
| 23 | 0.0020 | 0.0013 | 0.0007 |
| 24 | 0.0020 | 0.0013 | 0.0007 |
| 25 | 0.0020 | 0.0013 | 0.0007 |
| 26 | 0.0020 | 0.0013 | 0.0007 |
| 27 | 0.0020 | 0.0013 | 0.0007 |
| 28 | 0.0021 | 0.0013 | 0.0007 |
| 29 | 0.0021 | 0.0013 | 0.0007 |
| 30 | 0.0021 | 0.0013 | 0.0007 |
| 31 | 0.0021 | 0.0013 | 0.0007 |
| 32 | 0.0021 | 0.0013 | 0.0007 |
| 33 | 0.0021 | 0.0014 | 0.0008 |
| 34 | 0.0021 | 0.0014 | 0.0008 |
| 35 | 0.0021 | 0.0014 | 0.0008 |
| 36 | 0.0021 | 0.0014 | 0.0008 |
| 37 | 0.0021 | 0.0014 | 0.0008 |
| 38 | 0.0022 | 0.0014 | 0.0008 |
| 39 | 0.0022 | 0.0014 | 0.0008 |
| 40 | 0.0022 | 0.0014 | 0.0008 |
| 41 | 0.0022 | 0.0014 | 0.0008 |
| 42 | 0.0022 | 0.0014 | 0.0008 |
| 43 | 0.0022 | 0.0014 | 0.0008 |
| 44 | 0.0022 | 0.0014 | 0.0008 |
| 45 | 0.0022 | 0.0014 | 0.0008 |
| 46 | 0.0022 | 0.0014 | 0.0008 |
| 47 | 0.0023 | 0.0015 | 0.0008 |
| 48 | 0.0023 | 0.0015 | 0.0008 |
| 49 | 0.0023 | 0.0015 | 0.0008 |
| 50 | 0.0023 | 0.0015 | 0.0008 |
| 51 | 0.0023 | 0.0015 | 0.0008 |
| 52 | 0.0023 | 0.0015 | 0.0008 |
| 53 | 0.0023 | 0.0015 | 0.0008 |
| 54 | 0.0023 | 0.0015 | 0.0008 |
| 55 | 0.0024 | 0.0015 | 0.0008 |
| 56 | 0.0024 | 0.0015 | 0.0008 |
| 57 | 0.0024 | 0.0015 | 0.0009 |
| 58 | 0.0024 | 0.0015 | 0.0009 |
| 59 | 0.0024 | 0.0016 | 0.0009 |
| 60 | 0.0024 | 0.0016 | 0.0009 |
| 61 | 0.0025 | 0.0016 | 0.0009 |
| 62 | 0.0025 | 0.0016 | 0.0009 |
| 63 | 0.0025 | 0.0016 | 0.0009 |
| 64 | 0.0025 | 0.0016 | 0.0009 |
| 65 | 0.0025 | 0.0016 | 0.0009 |
| 66 | 0.0025 | 0.0016 | 0.0009 |
| 67 | 0.0025 | 0.0016 | 0.0009 |
| 68 | 0.0026 | 0.0016 | 0.0009 |
| 69 | 0.0026 | 0.0017 | 0.0009 |
| 70 | 0.0026 | 0.0017 | 0.0009 |

| | | | |
|---|---|---|---|
| 71 | 0.0026 | 0.0017 | 0.0009 |
| 72 | 0.0026 | 0.0017 | 0.0009 |
| 73 | 0.0026 | 0.0017 | 0.0009 |
| 74 | 0.0027 | 0.0017 | 0.0009 |
| 75 | 0.0027 | 0.0017 | 0.0010 |
| 76 | 0.0027 | 0.0017 | 0.0010 |
| 77 | 0.0027 | 0.0017 | 0.0010 |
| 78 | 0.0027 | 0.0018 | 0.0010 |
| 79 | 0.0028 | 0.0018 | 0.0010 |
| 80 | 0.0028 | 0.0018 | 0.0010 |
| 81 | 0.0028 | 0.0018 | 0.0010 |
| 82 | 0.0028 | 0.0018 | 0.0010 |
| 83 | 0.0028 | 0.0018 | 0.0010 |
| 84 | 0.0028 | 0.0018 | 0.0010 |
| 85 | 0.0029 | 0.0018 | 0.0010 |
| 86 | 0.0029 | 0.0019 | 0.0010 |
| 87 | 0.0029 | 0.0019 | 0.0010 |
| 88 | 0.0029 | 0.0019 | 0.0010 |
| 89 | 0.0030 | 0.0019 | 0.0011 |
| 90 | 0.0030 | 0.0019 | 0.0011 |
| 91 | 0.0030 | 0.0019 | 0.0011 |
| 92 | 0.0030 | 0.0019 | 0.0011 |
| 93 | 0.0031 | 0.0020 | 0.0011 |
| 94 | 0.0031 | 0.0020 | 0.0011 |
| 95 | 0.0031 | 0.0020 | 0.0011 |
| 96 | 0.0031 | 0.0020 | 0.0011 |
| 97 | 0.0032 | 0.0020 | 0.0011 |
| 98 | 0.0032 | 0.0020 | 0.0011 |
| 99 | 0.0032 | 0.0021 | 0.0011 |
| 100 | 0.0032 | 0.0021 | 0.0012 |
| 101 | 0.0033 | 0.0021 | 0.0012 |
| 102 | 0.0033 | 0.0021 | 0.0012 |
| 103 | 0.0033 | 0.0021 | 0.0012 |
| 104 | 0.0033 | 0.0021 | 0.0012 |
| 105 | 0.0034 | 0.0022 | 0.0012 |
| 106 | 0.0034 | 0.0022 | 0.0012 |
| 107 | 0.0034 | 0.0022 | 0.0012 |
| 108 | 0.0035 | 0.0022 | 0.0012 |
| 109 | 0.0035 | 0.0023 | 0.0013 |
| 110 | 0.0035 | 0.0023 | 0.0013 |
| 111 | 0.0036 | 0.0023 | 0.0013 |
| 112 | 0.0036 | 0.0023 | 0.0013 |
| 113 | 0.0036 | 0.0023 | 0.0013 |
| 114 | 0.0037 | 0.0024 | 0.0013 |
| 115 | 0.0037 | 0.0024 | 0.0013 |
| 116 | 0.0037 | 0.0024 | 0.0013 |
| 117 | 0.0038 | 0.0024 | 0.0014 |
| 118 | 0.0038 | 0.0025 | 0.0014 |
| 119 | 0.0039 | 0.0025 | 0.0014 |
| 120 | 0.0039 | 0.0025 | 0.0014 |
| 121 | 0.0040 | 0.0025 | 0.0014 |
| 122 | 0.0040 | 0.0026 | 0.0014 |
| 123 | 0.0040 | 0.0026 | 0.0014 |
| 124 | 0.0041 | 0.0026 | 0.0015 |
| 125 | 0.0041 | 0.0027 | 0.0015 |
| 126 | 0.0042 | 0.0027 | 0.0015 |
| 127 | 0.0042 | 0.0027 | 0.0015 |
| 128 | 0.0043 | 0.0027 | 0.0015 |
| 129 | 0.0043 | 0.0028 | 0.0016 |

| | | | |
|---|---|---|---|
| 130 | 0.0044 | 0.0028 | 0.0016 |
| 131 | 0.0045 | 0.0029 | 0.0016 |
| 132 | 0.0045 | 0.0029 | 0.0016 |
| 133 | 0.0046 | 0.0029 | 0.0016 |
| 134 | 0.0046 | 0.0030 | 0.0016 |
| 135 | 0.0047 | 0.0030 | 0.0017 |
| 136 | 0.0047 | 0.0030 | 0.0017 |
| 137 | 0.0048 | 0.0031 | 0.0017 |
| 138 | 0.0049 | 0.0031 | 0.0017 |
| 139 | 0.0050 | 0.0032 | 0.0018 |
| 140 | 0.0050 | 0.0032 | 0.0018 |
| 141 | 0.0051 | 0.0033 | 0.0018 |
| 142 | 0.0052 | 0.0033 | 0.0018 |
| 143 | 0.0053 | 0.0034 | 0.0019 |
| 144 | 0.0053 | 0.0034 | 0.0019 |
| 145 | 0.0043 | 0.0028 | 0.0016 |
| 146 | 0.0044 | 0.0028 | 0.0016 |
| 147 | 0.0045 | 0.0029 | 0.0016 |
| 148 | 0.0045 | 0.0029 | 0.0016 |
| 149 | 0.0047 | 0.0030 | 0.0017 |
| 150 | 0.0047 | 0.0030 | 0.0017 |
| 151 | 0.0049 | 0.0031 | 0.0017 |
| 152 | 0.0049 | 0.0032 | 0.0018 |
| 153 | 0.0051 | 0.0032 | 0.0018 |
| 154 | 0.0051 | 0.0033 | 0.0018 |
| 155 | 0.0053 | 0.0034 | 0.0019 |
| 156 | 0.0054 | 0.0034 | 0.0019 |
| 157 | 0.0055 | 0.0035 | 0.0020 |
| 158 | 0.0056 | 0.0036 | 0.0020 |
| 159 | 0.0058 | 0.0037 | 0.0021 |
| 160 | 0.0059 | 0.0038 | 0.0021 |
| 161 | 0.0061 | 0.0039 | 0.0022 |
| 162 | 0.0062 | 0.0040 | 0.0022 |
| 163 | 0.0064 | 0.0041 | 0.0023 |
| 164 | 0.0066 | 0.0042 | 0.0023 |
| 165 | 0.0068 | 0.0044 | 0.0024 |
| 166 | 0.0070 | 0.0045 | 0.0025 |
| 167 | 0.0073 | 0.0047 | 0.0026 |
| 168 | 0.0074 | 0.0048 | 0.0027 |
| 169 | 0.0078 | 0.0050 | 0.0028 |
| 170 | 0.0080 | 0.0051 | 0.0028 |
| 171 | 0.0084 | 0.0054 | 0.0030 |
| 172 | 0.0086 | 0.0055 | 0.0031 |
| 173 | 0.0091 | 0.0058 | 0.0032 |
| 174 | 0.0093 | 0.0060 | 0.0033 |
| 175 | 0.0099 | 0.0064 | 0.0035 |
| 176 | 0.0102 | 0.0066 | 0.0037 |
| 177 | 0.0110 | 0.0070 | 0.0039 |
| 178 | 0.0114 | 0.0073 | 0.0041 |
| 179 | 0.0123 | 0.0079 | 0.0044 |
| 180 | 0.0128 | 0.0082 | 0.0046 |
| 181 | 0.0140 | 0.0090 | 0.0050 |
| 182 | 0.0147 | 0.0094 | 0.0053 |
| 183 | 0.0164 | 0.0105 | 0.0059 |
| 184 | 0.0174 | 0.0112 | 0.0062 |
| 185 | 0.0350 | 0.0225 | 0.0125 |
| 186 | 0.0373 | 0.0240 | 0.0133 |
| 187 | 0.0433 | 0.0278 | 0.0155 |
| 188 | 0.0473 | 0.0304 | 0.0169 |

| | | | |
|---|---|---|---|
| 189 | 0.0588 | 0.0304 | 0.0284 |
| 190 | 0.0677 | 0.0304 | 0.0373 |
| 191 | 0.1027 | 0.0304 | 0.0723 |
| 192 | 0.1491 | 0.0304 | 0.1187 |
| 193 | 0.6450 | 0.0304 | 0.6146 |
| 194 | 0.0808 | 0.0304 | 0.0504 |
| 195 | 0.0523 | 0.0304 | 0.0218 |
| 196 | 0.0400 | 0.0257 | 0.0143 |
| 197 | 0.0185 | 0.0119 | 0.0066 |
| 198 | 0.0155 | 0.0100 | 0.0055 |
| 199 | 0.0134 | 0.0086 | 0.0048 |
| 200 | 0.0118 | 0.0076 | 0.0042 |
| 201 | 0.0106 | 0.0068 | 0.0038 |
| 202 | 0.0096 | 0.0062 | 0.0034 |
| 203 | 0.0088 | 0.0057 | 0.0032 |
| 204 | 0.0082 | 0.0052 | 0.0029 |
| 205 | 0.0076 | 0.0049 | 0.0027 |
| 206 | 0.0071 | 0.0046 | 0.0025 |
| 207 | 0.0067 | 0.0043 | 0.0024 |
| 208 | 0.0063 | 0.0041 | 0.0023 |
| 209 | 0.0060 | 0.0038 | 0.0021 |
| 210 | 0.0057 | 0.0037 | 0.0020 |
| 211 | 0.0054 | 0.0035 | 0.0019 |
| 212 | 0.0052 | 0.0033 | 0.0019 |
| 213 | 0.0050 | 0.0032 | 0.0018 |
| 214 | 0.0048 | 0.0031 | 0.0017 |
| 215 | 0.0046 | 0.0030 | 0.0016 |
| 216 | 0.0044 | 0.0029 | 0.0016 |
| 217 | 0.0054 | 0.0035 | 0.0019 |
| 218 | 0.0052 | 0.0034 | 0.0019 |
| 219 | 0.0051 | 0.0033 | 0.0018 |
| 220 | 0.0049 | 0.0032 | 0.0018 |
| 221 | 0.0048 | 0.0031 | 0.0017 |
| 222 | 0.0047 | 0.0030 | 0.0017 |
| 223 | 0.0045 | 0.0029 | 0.0016 |
| 224 | 0.0044 | 0.0028 | 0.0016 |
| 225 | 0.0043 | 0.0028 | 0.0015 |
| 226 | 0.0042 | 0.0027 | 0.0015 |
| 227 | 0.0041 | 0.0026 | 0.0015 |
| 228 | 0.0040 | 0.0026 | 0.0014 |
| 229 | 0.0039 | 0.0025 | 0.0014 |
| 230 | 0.0038 | 0.0025 | 0.0014 |
| 231 | 0.0038 | 0.0024 | 0.0013 |
| 232 | 0.0037 | 0.0024 | 0.0013 |
| 233 | 0.0036 | 0.0023 | 0.0013 |
| 234 | 0.0035 | 0.0023 | 0.0013 |
| 235 | 0.0035 | 0.0022 | 0.0012 |
| 236 | 0.0034 | 0.0022 | 0.0012 |
| 237 | 0.0034 | 0.0022 | 0.0012 |
| 238 | 0.0033 | 0.0021 | 0.0012 |
| 239 | 0.0032 | 0.0021 | 0.0012 |
| 240 | 0.0032 | 0.0020 | 0.0011 |
| 241 | 0.0031 | 0.0020 | 0.0011 |
| 242 | 0.0031 | 0.0020 | 0.0011 |
| 243 | 0.0030 | 0.0020 | 0.0011 |
| 244 | 0.0030 | 0.0019 | 0.0011 |
| 245 | 0.0029 | 0.0019 | 0.0011 |
| 246 | 0.0029 | 0.0019 | 0.0010 |
| 247 | 0.0029 | 0.0018 | 0.0010 |

| | | | |
|---|---|---|---|
| 248 | 0.0028 | 0.0018 | 0.0010 |
| 249 | 0.0028 | 0.0018 | 0.0010 |
| 250 | 0.0027 | 0.0018 | 0.0010 |
| 251 | 0.0027 | 0.0017 | 0.0010 |
| 252 | 0.0027 | 0.0017 | 0.0010 |
| 253 | 0.0026 | 0.0017 | 0.0009 |
| 254 | 0.0026 | 0.0017 | 0.0009 |
| 255 | 0.0026 | 0.0016 | 0.0009 |
| 256 | 0.0025 | 0.0016 | 0.0009 |
| 257 | 0.0025 | 0.0016 | 0.0009 |
| 258 | 0.0025 | 0.0016 | 0.0009 |
| 259 | 0.0024 | 0.0016 | 0.0009 |
| 260 | 0.0024 | 0.0016 | 0.0009 |
| 261 | 0.0024 | 0.0015 | 0.0009 |
| 262 | 0.0024 | 0.0015 | 0.0008 |
| 263 | 0.0023 | 0.0015 | 0.0008 |
| 264 | 0.0023 | 0.0015 | 0.0008 |
| 265 | 0.0023 | 0.0015 | 0.0008 |
| 266 | 0.0023 | 0.0014 | 0.0008 |
| 267 | 0.0022 | 0.0014 | 0.0008 |
| 268 | 0.0022 | 0.0014 | 0.0008 |
| 269 | 0.0022 | 0.0014 | 0.0008 |
| 270 | 0.0022 | 0.0014 | 0.0008 |
| 271 | 0.0021 | 0.0014 | 0.0008 |
| 272 | 0.0021 | 0.0014 | 0.0008 |
| 273 | 0.0021 | 0.0013 | 0.0008 |
| 274 | 0.0021 | 0.0013 | 0.0007 |
| 275 | 0.0021 | 0.0013 | 0.0007 |
| 276 | 0.0020 | 0.0013 | 0.0007 |
| 277 | 0.0020 | 0.0013 | 0.0007 |
| 278 | 0.0020 | 0.0013 | 0.0007 |
| 279 | 0.0020 | 0.0013 | 0.0007 |
| 280 | 0.0020 | 0.0013 | 0.0007 |
| 281 | 0.0019 | 0.0013 | 0.0007 |
| 282 | 0.0019 | 0.0012 | 0.0007 |
| 283 | 0.0019 | 0.0012 | 0.0007 |
| 284 | 0.0019 | 0.0012 | 0.0007 |
| 285 | 0.0019 | 0.0012 | 0.0007 |
| 286 | 0.0019 | 0.0012 | 0.0007 |
| 287 | 0.0018 | 0.0012 | 0.0007 |
| 288 | 0.0018 | 0.0012 | 0.0007 |

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Total soil rain loss = 1.06(In)
Total effective rainfall = 1.41(In)
Peak flow rate in flood hydrograph = 12.19(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+15 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+20 | 0.0001 | 0.01 | Q | | | | |
| 0+25 | 0.0002 | 0.01 | Q | | | | |
| 0+30 | 0.0003 | 0.02 | Q | | | | |
| 0+35 | 0.0005 | 0.03 | Q | | | | |
| 0+40 | 0.0008 | 0.04 | Q | | | | |
| 0+45 | 0.0011 | 0.04 | Q | | | | |
| 0+50 | 0.0014 | 0.05 | Q | | | | |
| 0+55 | 0.0018 | 0.05 | Q | | | | |
| 1+ 0 | 0.0021 | 0.05 | Q | | | | |
| 1+ 5 | 0.0025 | 0.06 | Q | | | | |
| 1+10 | 0.0029 | 0.06 | Q | | | | |
| 1+15 | 0.0034 | 0.06 | Q | | | | |
| 1+20 | 0.0038 | 0.06 | Q | | | | |
| 1+25 | 0.0042 | 0.06 | Q | | | | |
| 1+30 | 0.0047 | 0.07 | Q | | | | |
| 1+35 | 0.0051 | 0.07 | Q | | | | |
| 1+40 | 0.0056 | 0.07 | Q | | | | |
| 1+45 | 0.0061 | 0.07 | Q | | | | |
| 1+50 | 0.0066 | 0.07 | Q | | | | |
| 1+55 | 0.0071 | 0.07 | Q | | | | |
| 2+ 0 | 0.0076 | 0.07 | Q | | | | |
| 2+ 5 | 0.0081 | 0.07 | Q | | | | |
| 2+10 | 0.0086 | 0.08 | Q | | | | |
| 2+15 | 0.0092 | 0.08 | Q | | | | |
| 2+20 | 0.0097 | 0.08 | Q | | | | |
| 2+25 | 0.0102 | 0.08 | Q | | | | |
| 2+30 | 0.0108 | 0.08 | Q | | | | |
| 2+35 | 0.0113 | 0.08 | Q | | | | |
| 2+40 | 0.0119 | 0.08 | Q | | | | |
| 2+45 | 0.0124 | 0.08 | Q | | | | |
| 2+50 | 0.0130 | 0.08 | Q | | | | |
| 2+55 | 0.0136 | 0.08 | Q | | | | |
| 3+ 0 | 0.0142 | 0.08 | Q | | | | |
| 3+ 5 | 0.0147 | 0.08 | Q | | | | |
| 3+10 | 0.0153 | 0.08 | Q | | | | |
| 3+15 | 0.0159 | 0.09 | Q | | | | |
| 3+20 | 0.0165 | 0.09 | Q | | | | |
| 3+25 | 0.0171 | 0.09 | Q | | | | |
| 3+30 | 0.0177 | 0.09 | Q | | | | |
| 3+35 | 0.0183 | 0.09 | Q | | | | |
| 3+40 | 0.0189 | 0.09 | Q | | | | |
| 3+45 | 0.0195 | 0.09 | Q | | | | |
| 3+50 | 0.0201 | 0.09 | Q | | | | |
| 3+55 | 0.0208 | 0.09 | Q | | | | |
| 4+ 0 | 0.0214 | 0.09 | Q | | | | |
| 4+ 5 | 0.0220 | 0.09 | Q | | | | |
| 4+10 | 0.0226 | 0.09 | Q | | | | |
| 4+15 | 0.0233 | 0.09 | Q | | | | |
| 4+20 | 0.0239 | 0.09 | Q | | | | |
| 4+25 | 0.0246 | 0.09 | Q | | | | |
| 4+30 | 0.0252 | 0.09 | Q | | | | |
| 4+35 | 0.0259 | 0.09 | Q | | | | |
| 4+40 | 0.0265 | 0.10 | Q | | | | |
| 4+45 | 0.0272 | 0.10 | Q | | | | |
| 4+50 | 0.0278 | 0.10 | Q | | | | |
| 4+55 | 0.0285 | 0.10 | Q | | | | |
| 5+ 0 | 0.0292 | 0.10 | QV | | | | |
| 5+ 5 | 0.0299 | 0.10 | QV | | | | |
| 5+10 | 0.0305 | 0.10 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+15 | 0.0312 | 0.10 | QV | | | | |
| 5+20 | 0.0319 | 0.10 | QV | | | | |
| 5+25 | 0.0326 | 0.10 | QV | | | | |
| 5+30 | 0.0333 | 0.10 | QV | | | | |
| 5+35 | 0.0340 | 0.10 | QV | | | | |
| 5+40 | 0.0347 | 0.10 | QV | | | | |
| 5+45 | 0.0354 | 0.10 | QV | | | | |
| 5+50 | 0.0361 | 0.10 | QV | | | | |
| 5+55 | 0.0368 | 0.10 | QV | | | | |
| 6+ 0 | 0.0376 | 0.10 | QV | | | | |
| 6+ 5 | 0.0383 | 0.11 | QV | | | | |
| 6+10 | 0.0390 | 0.11 | QV | | | | |
| 6+15 | 0.0398 | 0.11 | QV | | | | |
| 6+20 | 0.0405 | 0.11 | QV | | | | |
| 6+25 | 0.0412 | 0.11 | QV | | | | |
| 6+30 | 0.0420 | 0.11 | QV | | | | |
| 6+35 | 0.0427 | 0.11 | QV | | | | |
| 6+40 | 0.0435 | 0.11 | QV | | | | |
| 6+45 | 0.0443 | 0.11 | QV | | | | |
| 6+50 | 0.0450 | 0.11 | QV | | | | |
| 6+55 | 0.0458 | 0.11 | QV | | | | |
| 7+ 0 | 0.0466 | 0.11 | QV | | | | |
| 7+ 5 | 0.0474 | 0.11 | QV | | | | |
| 7+10 | 0.0482 | 0.11 | QV | | | | |
| 7+15 | 0.0489 | 0.12 | QV | | | | |
| 7+20 | 0.0497 | 0.12 | QV | | | | |
| 7+25 | 0.0506 | 0.12 | QV | | | | |
| 7+30 | 0.0514 | 0.12 | QV | | | | |
| 7+35 | 0.0522 | 0.12 | QV | | | | |
| 7+40 | 0.0530 | 0.12 | QV | | | | |
| 7+45 | 0.0538 | 0.12 | QV | | | | |
| 7+50 | 0.0547 | 0.12 | QV | | | | |
| 7+55 | 0.0555 | 0.12 | QV | | | | |
| 8+ 0 | 0.0563 | 0.12 | QV | | | | |
| 8+ 5 | 0.0572 | 0.12 | QV | | | | |
| 8+10 | 0.0581 | 0.12 | QV | | | | |
| 8+15 | 0.0589 | 0.13 | Q V | | | | |
| 8+20 | 0.0598 | 0.13 | Q V | | | | |
| 8+25 | 0.0607 | 0.13 | Q V | | | | |
| 8+30 | 0.0616 | 0.13 | Q V | | | | |
| 8+35 | 0.0624 | 0.13 | Q V | | | | |
| 8+40 | 0.0633 | 0.13 | Q V | | | | |
| 8+45 | 0.0643 | 0.13 | Q V | | | | |
| 8+50 | 0.0652 | 0.13 | Q V | | | | |
| 8+55 | 0.0661 | 0.13 | Q V | | | | |
| 9+ 0 | 0.0670 | 0.13 | Q V | | | | |
| 9+ 5 | 0.0680 | 0.14 | Q V | | | | |
| 9+10 | 0.0689 | 0.14 | Q V | | | | |
| 9+15 | 0.0698 | 0.14 | Q V | | | | |
| 9+20 | 0.0708 | 0.14 | Q V | | | | |
| 9+25 | 0.0718 | 0.14 | Q V | | | | |
| 9+30 | 0.0728 | 0.14 | Q V | | | | |
| 9+35 | 0.0737 | 0.14 | Q V | | | | |
| 9+40 | 0.0747 | 0.14 | Q V | | | | |
| 9+45 | 0.0757 | 0.15 | Q V | | | | |
| 9+50 | 0.0768 | 0.15 | Q V | | | | |
| 9+55 | 0.0778 | 0.15 | Q V | | | | |
| 10+ 0 | 0.0788 | 0.15 | Q V | | | | |
| 10+ 5 | 0.0799 | 0.15 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10+10 | 0.0809 | 0.15 | Q V | \| | \| | \| | \| |
| 10+15 | 0.0820 | 0.15 | Q V | \| | \| | \| | \| |
| 10+20 | 0.0831 | 0.16 | Q V | \| | \| | \| | \| |
| 10+25 | 0.0841 | 0.16 | Q V | \| | \| | \| | \| |
| 10+30 | 0.0852 | 0.16 | Q V | \| | \| | \| | \| |
| 10+35 | 0.0863 | 0.16 | Q V | \| | \| | \| | \| |
| 10+40 | 0.0875 | 0.16 | Q V | \| | \| | \| | \| |
| 10+45 | 0.0886 | 0.16 | Q V | \| | \| | \| | \| |
| 10+50 | 0.0897 | 0.17 | Q V | \| | \| | \| | \| |
| 10+55 | 0.0909 | 0.17 | Q V | \| | \| | \| | \| |
| 11+ 0 | 0.0921 | 0.17 | Q V | \| | \| | \| | \| |
| 11+ 5 | 0.0932 | 0.17 | Q V | \| | \| | \| | \| |
| 11+10 | 0.0944 | 0.17 | Q V | \| | \| | \| | \| |
| 11+15 | 0.0957 | 0.18 | Q V | \| | \| | \| | \| |
| 11+20 | 0.0969 | 0.18 | Q V | \| | \| | \| | \| |
| 11+25 | 0.0981 | 0.18 | Q V | \| | \| | \| | \| |
| 11+30 | 0.0994 | 0.18 | Q V | \| | \| | \| | \| |
| 11+35 | 0.1006 | 0.18 | Q V | \| | \| | \| | \| |
| 11+40 | 0.1019 | 0.19 | Q V | \| | \| | \| | \| |
| 11+45 | 0.1032 | 0.19 | Q V | \| | \| | \| | \| |
| 11+50 | 0.1045 | 0.19 | Q V | \| | \| | \| | \| |
| 11+55 | 0.1059 | 0.19 | Q V | \| | \| | \| | \| |
| 12+ 0 | 0.1072 | 0.20 | Q V | \| | \| | \| | \| |
| 12+ 5 | 0.1086 | 0.20 | Q V | \| | \| | \| | \| |
| 12+10 | 0.1100 | 0.20 | Q V | \| | \| | \| | \| |
| 12+15 | 0.1114 | 0.20 | Q V | \| | \| | \| | \| |
| 12+20 | 0.1128 | 0.20 | Q V | \| | \| | \| | \| |
| 12+25 | 0.1142 | 0.20 | Q V | \| | \| | \| | \| |
| 12+30 | 0.1156 | 0.20 | Q V | \| | \| | \| | \| |
| 12+35 | 0.1170 | 0.20 | Q V | \| | \| | \| | \| |
| 12+40 | 0.1183 | 0.20 | Q V | \| | \| | \| | \| |
| 12+45 | 0.1197 | 0.20 | Q V | \| | \| | \| | \| |
| 12+50 | 0.1210 | 0.20 | Q V | \| | \| | \| | \| |
| 12+55 | 0.1224 | 0.20 | Q V | \| | \| | \| | \| |
| 13+ 0 | 0.1238 | 0.20 | Q V | \| | \| | \| | \| |
| 13+ 5 | 0.1252 | 0.20 | Q V | \| | \| | \| | \| |
| 13+10 | 0.1266 | 0.21 | Q V | \| | \| | \| | \| |
| 13+15 | 0.1281 | 0.21 | Q V | \| | \| | \| | \| |
| 13+20 | 0.1295 | 0.21 | Q V | \| | \| | \| | \| |
| 13+25 | 0.1310 | 0.22 | Q V | \| | \| | \| | \| |
| 13+30 | 0.1325 | 0.22 | Q V | \| | \| | \| | \| |
| 13+35 | 0.1340 | 0.22 | Q V | \| | \| | \| | \| |
| 13+40 | 0.1356 | 0.23 | Q V | \| | \| | \| | \| |
| 13+45 | 0.1372 | 0.23 | Q V | \| | \| | \| | \| |
| 13+50 | 0.1388 | 0.24 | Q V | \| | \| | \| | \| |
| 13+55 | 0.1405 | 0.24 | Q V | \| | \| | \| | \| |
| 14+ 0 | 0.1422 | 0.25 | Q V | \| | \| | \| | \| |
| 14+ 5 | 0.1439 | 0.25 | Q V | \| | \| | \| | \| |
| 14+10 | 0.1457 | 0.26 | Q V | \| | \| | \| | \| |
| 14+15 | 0.1475 | 0.27 | Q V | \| | \| | \| | \| |
| 14+20 | 0.1494 | 0.27 | Q V | \| | \| | \| | \| |
| 14+25 | 0.1514 | 0.28 | Q V | \| | \| | \| | \| |
| 14+30 | 0.1534 | 0.29 | Q V | \| | \| | \| | \| |
| 14+35 | 0.1554 | 0.30 | Q V | \| | \| | \| | \| |
| 14+40 | 0.1575 | 0.31 | Q V | \| | \| | \| | \| |
| 14+45 | 0.1597 | 0.32 | Q V | \| | \| | \| | \| |
| 14+50 | 0.1620 | 0.33 | Q V | \| | \| | \| | \| |
| 14+55 | 0.1644 | 0.34 | Q V | \| | \| | \| | \| |
| 15+ 0 | 0.1668 | 0.36 | Q V | \| | \| | \| | \| |

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15+ 5       0.1694      0.37  Q    V    |          |          |          |
15+10       0.1720      0.39  Q    V    |          |          |          |
15+15       0.1748      0.41  Q     V   |          |          |          |
15+20       0.1778      0.43  Q     V   |          |          |          |
15+25       0.1809      0.45  Q     V   |          |          |          |
15+30       0.1843      0.49  Q     V   |          |          |          |
15+35       0.1881      0.54  |Q    V   |          |          |          |
15+40       0.1922      0.61  |Q    V   |          |          |          |
15+45       0.1971      0.71  |Q    V   |          |          |          |
15+50       0.2031      0.87  |Q    V   |          |          |          |
15+55       0.2106      1.09  | Q    V  |          |          |          |
16+ 0       0.2203      1.41  | Q    V  |          |          |          |
16+ 5       0.2355      2.21  |   Q   V |          |          |          |
16+10       0.2593      3.46  |     Q V |          |          |          |
16+15       0.2923      4.79  |        QV          |          |          |
16+20       0.3360      6.34  |         |VQ        |          |          |
16+25       0.3978      8.98  |         |  V   Q   |          |          |
16+30       0.4818     12.19  |         |     V    |   Q      |          |
16+35       0.5656     12.17  |         |        V |   Q      |          |
16+40       0.6340      9.92  |         |        Q |V         |          |
16+45       0.6891      8.01  |         |     Q    |  V       |          |
16+50       0.7330      6.37  |         | Q        |    V     |          |
16+55       0.7687      5.19  |         Q          |     V    |          |
17+ 0       0.7991      4.42  |       Q  |         |      V   |          |
17+ 5       0.8261      3.91  |      Q   |         |       V  |          |
17+10       0.8496      3.41  |     Q    |         |        V |          |
17+15       0.8704      3.03  |     Q    |         |        V |          |
17+20       0.8895      2.77  |    Q     |         |         V          |
17+25       0.9061      2.41  |   Q      |         |          |V         |
17+30       0.9215      2.24  |   Q      |         |          |V         |
17+35       0.9353      2.01  |   Q      |         |          | V        |
17+40       0.9484      1.89  |  Q       |         |          | V        |
17+45       0.9604      1.75  |  Q       |         |          |  V       |
17+50       0.9718      1.65  |  Q       |         |          |  V       |
17+55       0.9820      1.49  | Q        |         |          |  V       |
18+ 0       0.9915      1.38  | Q        |         |          |   V      |
18+ 5       0.9999      1.21  | Q        |         |          |   V      |
18+10       1.0078      1.15  | Q        |         |          |   V      |
18+15       1.0154      1.10  | Q        |         |          |   V      |
18+20       1.0225      1.04  | Q        |         |          |    V     |
18+25       1.0292      0.97  |Q         |         |          |    V     |
18+30       1.0357      0.93  |Q         |         |          |    V     |
18+35       1.0418      0.89  |Q         |         |          |    V     |
18+40       1.0475      0.83  |Q         |         |          |     V    |
18+45       1.0527      0.76  |Q         |         |          |     V    |
18+50       1.0578      0.74  |Q         |         |          |     V    |
18+55       1.0628      0.72  |Q         |         |          |     V    |
19+ 0       1.0674      0.66  |Q         |         |          |     V    |
19+ 5       1.0716      0.61  |Q         |         |          |     V    |
19+10       1.0757      0.60  |Q         |         |          |     V    |
19+15       1.0797      0.58  |Q         |         |          |      V   |
19+20       1.0833      0.52  |Q         |         |          |      V   |
19+25       1.0865      0.48  Q         |         |          |      V   |
19+30       1.0897      0.46  Q         |         |          |      V   |
19+35       1.0927      0.44  Q         |         |          |      V   |
19+40       1.0954      0.38  Q         |         |          |      V   |
19+45       1.0978      0.35  Q         |         |          |      V   |
19+50       1.1002      0.35  Q         |         |          |      V   |
19+55       1.1025      0.34  Q         |         |          |      V   |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20+ 0 | 1.1049 | 0.35 | Q | \| | \| | \| | V \| |
| 20+ 5 | 1.1074 | 0.35 | Q | \| | \| | \| | V \| |
| 20+10 | 1.1098 | 0.35 | Q | \| | \| | \| | V \| |
| 20+15 | 1.1121 | 0.34 | Q | \| | \| | \| | V \| |
| 20+20 | 1.1145 | 0.34 | Q | \| | \| | \| | V \| |
| 20+25 | 1.1168 | 0.33 | Q | \| | \| | \| | V \| |
| 20+30 | 1.1190 | 0.32 | Q | \| | \| | \| | V \| |
| 20+35 | 1.1210 | 0.30 | Q | \| | \| | \| | V \| |
| 20+40 | 1.1228 | 0.25 | Q | \| | \| | \| | V \| |
| 20+45 | 1.1244 | 0.24 | Q | \| | \| | \| | V \| |
| 20+50 | 1.1261 | 0.23 | Q | \| | \| | \| | V \| |
| 20+55 | 1.1276 | 0.23 | Q | \| | \| | \| | V \| |
| 21+ 0 | 1.1291 | 0.21 | Q | \| | \| | \| | V \| |
| 21+ 5 | 1.1303 | 0.18 | Q | \| | \| | \| | V \| |
| 21+10 | 1.1313 | 0.14 | Q | \| | \| | \| | V \| |
| 21+15 | 1.1322 | 0.14 | Q | \| | \| | \| | V \| |
| 21+20 | 1.1331 | 0.13 | Q | \| | \| | \| | V \| |
| 21+25 | 1.1340 | 0.13 | Q | \| | \| | \| | V \| |
| 21+30 | 1.1349 | 0.13 | Q | \| | \| | \| | V\| |
| 21+35 | 1.1358 | 0.13 | Q | \| | \| | \| | V\| |
| 21+40 | 1.1366 | 0.12 | Q | \| | \| | \| | V\| |
| 21+45 | 1.1375 | 0.12 | Q | \| | \| | \| | V\| |
| 21+50 | 1.1383 | 0.12 | Q | \| | \| | \| | V\| |
| 21+55 | 1.1391 | 0.12 | Q | \| | \| | \| | V\| |
| 22+ 0 | 1.1399 | 0.12 | Q | \| | \| | \| | V\| |
| 22+ 5 | 1.1407 | 0.11 | Q | \| | \| | \| | V\| |
| 22+10 | 1.1415 | 0.11 | Q | \| | \| | \| | V\| |
| 22+15 | 1.1423 | 0.11 | Q | \| | \| | \| | V\| |
| 22+20 | 1.1430 | 0.11 | Q | \| | \| | \| | V\| |
| 22+25 | 1.1438 | 0.11 | Q | \| | \| | \| | V\| |
| 22+30 | 1.1445 | 0.11 | Q | \| | \| | \| | V\| |
| 22+35 | 1.1452 | 0.11 | Q | \| | \| | \| | V\| |
| 22+40 | 1.1460 | 0.10 | Q | \| | \| | \| | V\| |
| 22+45 | 1.1467 | 0.10 | Q | \| | \| | \| | V\| |
| 22+50 | 1.1474 | 0.10 | Q | \| | \| | \| | V\| |
| 22+55 | 1.1481 | 0.10 | Q | \| | \| | \| | V\| |
| 23+ 0 | 1.1488 | 0.10 | Q | \| | \| | \| | V\| |
| 23+ 5 | 1.1494 | 0.10 | Q | \| | \| | \| | V\| |
| 23+10 | 1.1501 | 0.10 | Q | \| | \| | \| | V\| |
| 23+15 | 1.1508 | 0.10 | Q | \| | \| | \| | V\| |
| 23+20 | 1.1514 | 0.10 | Q | \| | \| | \| | V\| |
| 23+25 | 1.1521 | 0.09 | Q | \| | \| | \| | V\| |
| 23+30 | 1.1527 | 0.09 | Q | \| | \| | \| | V\| |
| 23+35 | 1.1534 | 0.09 | Q | \| | \| | \| | V\| |
| 23+40 | 1.1540 | 0.09 | Q | \| | \| | \| | V\| |
| 23+45 | 1.1546 | 0.09 | Q | \| | \| | \| | V\| |
| 23+50 | 1.1553 | 0.09 | Q | \| | \| | \| | V\| |
| 23+55 | 1.1559 | 0.09 | Q | \| | \| | \| | V\| |
| 24+ 0 | 1.1565 | 0.09 | Q | \| | \| | \| | V\| |
| 24+ 5 | 1.1571 | 0.09 | Q | \| | \| | \| | V\| |
| 24+10 | 1.1576 | 0.08 | Q | \| | \| | \| | V\| |
| 24+15 | 1.1582 | 0.08 | Q | \| | \| | \| | V\| |
| 24+20 | 1.1587 | 0.08 | Q | \| | \| | \| | V\| |
| 24+25 | 1.1592 | 0.07 | Q | \| | \| | \| | V\| |
| 24+30 | 1.1597 | 0.06 | Q | \| | \| | \| | V\| |
| 24+35 | 1.1600 | 0.05 | Q | \| | \| | \| | V\| |
| 24+40 | 1.1603 | 0.05 | Q | \| | \| | \| | V\| |
| 24+45 | 1.1606 | 0.04 | Q | \| | \| | \| | V\| |
| 24+50 | 1.1609 | 0.03 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24+55 | 1.1611 | 0.03 | Q | \| | \| | \| | V\| |
| 25+ 0 | 1.1613 | 0.03 | Q | \| | \| | \| | V\| |
| 25+ 5 | 1.1614 | 0.03 | Q | \| | \| | \| | V\| |
| 25+10 | 1.1616 | 0.02 | Q | \| | \| | \| | V\| |
| 25+15 | 1.1617 | 0.02 | Q | \| | \| | \| | V\| |
| 25+20 | 1.1619 | 0.02 | Q | \| | \| | \| | V\| |
| 25+25 | 1.1620 | 0.02 | Q | \| | \| | \| | V\| |
| 25+30 | 1.1621 | 0.02 | Q | \| | \| | \| | V\| |
| 25+35 | 1.1622 | 0.01 | Q | \| | \| | \| | V\| |
| 25+40 | 1.1623 | 0.01 | Q | \| | \| | \| | V\| |
| 25+45 | 1.1624 | 0.01 | Q | \| | \| | \| | V\| |
| 25+50 | 1.1625 | 0.01 | Q | \| | \| | \| | V\| |
| 25+55 | 1.1625 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 0 | 1.1626 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 5 | 1.1627 | 0.01 | Q | \| | \| | \| | V\| |
| 26+10 | 1.1627 | 0.01 | Q | \| | \| | \| | V\| |
| 26+15 | 1.1628 | 0.01 | Q | \| | \| | \| | V\| |
| 26+20 | 1.1628 | 0.01 | Q | \| | \| | \| | V\| |
| 26+25 | 1.1629 | 0.01 | Q | \| | \| | \| | V\| |
| 26+30 | 1.1629 | 0.01 | Q | \| | \| | \| | V\| |
| 26+35 | 1.1629 | 0.01 | Q | \| | \| | \| | V\| |
| 26+40 | 1.1630 | 0.01 | Q | \| | \| | \| | V\| |
| 26+45 | 1.1630 | 0.00 | Q | \| | \| | \| | V\| |
| 26+50 | 1.1630 | 0.00 | Q | \| | \| | \| | V\| |
| 26+55 | 1.1631 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 0 | 1.1631 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 5 | 1.1631 | 0.00 | Q | \| | \| | \| | V\| |
| 27+10 | 1.1631 | 0.00 | Q | \| | \| | \| | V\| |
| 27+15 | 1.1632 | 0.00 | Q | \| | \| | \| | V\| |
| 27+20 | 1.1632 | 0.00 | Q | \| | \| | \| | V\| |
| 27+25 | 1.1632 | 0.00 | Q | \| | \| | \| | V\| |
| 27+30 | 1.1632 | 0.00 | Q | \| | \| | \| | V\| |
| 27+35 | 1.1632 | 0.00 | Q | \| | \| | \| | V\| |
| 27+40 | 1.1632 | 0.00 | Q | \| | \| | \| | V\| |
| 27+45 | 1.1632 | 0.00 | Q | \| | \| | \| | V\| |
| 27+50 | 1.1632 | 0.00 | Q | \| | \| | \| | V\| |
| 27+55 | 1.1633 | 0.00 | Q | \| | \| | \| | V\| |
| 28+ 0 | 1.1633 | 0.00 | Q | \| | \| | \| | V\| |
| 28+ 5 | 1.1633 | 0.00 | Q | \| | \| | \| | V\| |
| 28+10 | 1.1633 | 0.00 | Q | \| | \| | \| | V\| |
| 28+15 | 1.1633 | 0.00 | Q | \| | \| | \| | V\| |
| 28+20 | 1.1633 | 0.00 | Q | \| | \| | \| | V\| |
| 28+25 | 1.1633 | 0.00 | Q | \| | \| | \| | V\| |
| 28+30 | 1.1633 | 0.00 | Q | \| | \| | \| | V\| |
| 28+35 | 1.1633 | 0.00 | Q | \| | \| | \| | V\| |
| 28+40 | 1.1633 | 0.00 | Q | \| | \| | \| | V\| |
| 28+45 | 1.1633 | 0.00 | Q | \| | \| | \| | V\| |
| 28+50 | 1.1633 | 0.00 | Q | \| | \| | \| | V\| |
| 28+55 | 1.1633 | 0.00 | Q | \| | \| | \| | V\| |
| 29+ 0 | 1.1633 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 22
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 3.73 | 1 | 1.36 |
| Rainfall data for year 100 | | |
| 3.73 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 3.73 | 24 | 2.47 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 3.73 | 1.000 | 0.360 | 1.000 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 3.73 | 1.000 | 62.0 | 80.6 | 2.41 | 0.364 |

Area-averaged catchment yield fraction, Y = 0.364
Area-averaged low loss fraction, Yb = 0.636
User entry of time of concentration = 0.390 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 3.73(Ac.)
Catchment Lag time = 0.312 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 26.7094
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.636 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.645(In)
Computed peak 30-minute rainfall = 1.105(In)
Specified peak 1-hour rainfall = 1.360(In)
Computed peak 3-hour rainfall = 1.637(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.470(In)

Rainfall depth area reduction factors:
Using a total area of 3.73(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.645(In)
30-minute factor = 1.000 Adjusted rainfall = 1.104(In)
1-hour factor = 1.000 Adjusted rainfall = 1.360(In)
3-hour factor = 1.000 Adjusted rainfall = 1.637(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.470(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 45.11 (CFS)) | |
| 1 | 1.482 | 0.669 |
| 2 | 7.420 | 2.679 |
| 3 | 23.386 | 7.202 |
| 4 | 45.504 | 9.977 |
| 5 | 59.274 | 6.211 |
| 6 | 67.621 | 3.765 |
| 7 | 73.654 | 2.722 |
| 8 | 78.228 | 2.063 |
| 9 | 81.762 | 1.594 |
| 10 | 84.638 | 1.298 |
| 11 | 87.117 | 1.118 |
| 12 | 89.115 | 0.901 |
| 13 | 90.695 | 0.713 |
| 14 | 92.107 | 0.637 |

| | | |
|---|---|---|
| 15 | 93.340 | 0.557 |
| 16 | 94.376 | 0.467 |
| 17 | 95.282 | 0.409 |
| 18 | 96.053 | 0.348 |
| 19 | 96.739 | 0.309 |
| 20 | 97.275 | 0.242 |
| 21 | 97.738 | 0.209 |
| 22 | 98.043 | 0.137 |
| 23 | 98.317 | 0.124 |
| 24 | 98.632 | 0.142 |
| 25 | 98.953 | 0.145 |
| 26 | 99.273 | 0.145 |
| 27 | 99.545 | 0.123 |
| 28 | 99.716 | 0.077 |
| 29 | 99.883 | 0.075 |
| 30 | 100.000 | 0.053 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6452 | 0.6452 |
| 2 | 0.7944 | 0.1491 |
| 3 | 0.8971 | 0.1027 |
| 4 | 0.9780 | 0.0809 |
| 5 | 1.0457 | 0.0677 |
| 6 | 1.1045 | 0.0588 |
| 7 | 1.1567 | 0.0523 |
| 8 | 1.2040 | 0.0473 |
| 9 | 1.2473 | 0.0433 |
| 10 | 1.2874 | 0.0401 |
| 11 | 1.3247 | 0.0373 |
| 12 | 1.3598 | 0.0350 |
| 13 | 1.3783 | 0.0185 |
| 14 | 1.3956 | 0.0174 |
| 15 | 1.4120 | 0.0164 |
| 16 | 1.4274 | 0.0155 |
| 17 | 1.4421 | 0.0147 |
| 18 | 1.4561 | 0.0140 |
| 19 | 1.4695 | 0.0134 |
| 20 | 1.4822 | 0.0128 |
| 21 | 1.4945 | 0.0123 |
| 22 | 1.5063 | 0.0118 |
| 23 | 1.5176 | 0.0113 |
| 24 | 1.5286 | 0.0109 |
| 25 | 1.5392 | 0.0106 |
| 26 | 1.5494 | 0.0102 |
| 27 | 1.5593 | 0.0099 |
| 28 | 1.5689 | 0.0096 |
| 29 | 1.5782 | 0.0093 |
| 30 | 1.5873 | 0.0091 |
| 31 | 1.5961 | 0.0088 |
| 32 | 1.6047 | 0.0086 |
| 33 | 1.6130 | 0.0084 |
| 34 | 1.6212 | 0.0082 |
| 35 | 1.6291 | 0.0080 |
| 36 | 1.6369 | 0.0078 |
| 37 | 1.6445 | 0.0076 |
| 38 | 1.6519 | 0.0074 |
| 39 | 1.6592 | 0.0073 |
| 40 | 1.6663 | 0.0071 |

| | | |
|---|---|---|
| 41 | 1.6732 | 0.0070 |
| 42 | 1.6800 | 0.0068 |
| 43 | 1.6867 | 0.0067 |
| 44 | 1.6933 | 0.0066 |
| 45 | 1.6997 | 0.0064 |
| 46 | 1.7060 | 0.0063 |
| 47 | 1.7122 | 0.0062 |
| 48 | 1.7183 | 0.0061 |
| 49 | 1.7243 | 0.0060 |
| 50 | 1.7302 | 0.0059 |
| 51 | 1.7360 | 0.0058 |
| 52 | 1.7417 | 0.0057 |
| 53 | 1.7473 | 0.0056 |
| 54 | 1.7528 | 0.0055 |
| 55 | 1.7582 | 0.0054 |
| 56 | 1.7636 | 0.0054 |
| 57 | 1.7689 | 0.0053 |
| 58 | 1.7741 | 0.0052 |
| 59 | 1.7792 | 0.0051 |
| 60 | 1.7842 | 0.0051 |
| 61 | 1.7892 | 0.0050 |
| 62 | 1.7941 | 0.0049 |
| 63 | 1.7990 | 0.0048 |
| 64 | 1.8038 | 0.0048 |
| 65 | 1.8085 | 0.0047 |
| 66 | 1.8132 | 0.0047 |
| 67 | 1.8178 | 0.0046 |
| 68 | 1.8223 | 0.0045 |
| 69 | 1.8268 | 0.0045 |
| 70 | 1.8313 | 0.0044 |
| 71 | 1.8356 | 0.0044 |
| 72 | 1.8400 | 0.0043 |
| 73 | 1.8454 | 0.0054 |
| 74 | 1.8507 | 0.0053 |
| 75 | 1.8560 | 0.0053 |
| 76 | 1.8612 | 0.0052 |
| 77 | 1.8664 | 0.0052 |
| 78 | 1.8715 | 0.0051 |
| 79 | 1.8766 | 0.0051 |
| 80 | 1.8816 | 0.0050 |
| 81 | 1.8866 | 0.0050 |
| 82 | 1.8915 | 0.0049 |
| 83 | 1.8964 | 0.0049 |
| 84 | 1.9012 | 0.0048 |
| 85 | 1.9060 | 0.0048 |
| 86 | 1.9107 | 0.0047 |
| 87 | 1.9154 | 0.0047 |
| 88 | 1.9201 | 0.0047 |
| 89 | 1.9247 | 0.0046 |
| 90 | 1.9293 | 0.0046 |
| 91 | 1.9338 | 0.0045 |
| 92 | 1.9383 | 0.0045 |
| 93 | 1.9428 | 0.0045 |
| 94 | 1.9472 | 0.0044 |
| 95 | 1.9516 | 0.0044 |
| 96 | 1.9559 | 0.0043 |
| 97 | 1.9602 | 0.0043 |
| 98 | 1.9645 | 0.0043 |
| 99 | 1.9687 | 0.0042 |

| | | |
|---|---|---|
| 100 | 1.9730 | 0.0042 |
| 101 | 1.9771 | 0.0042 |
| 102 | 1.9813 | 0.0041 |
| 103 | 1.9854 | 0.0041 |
| 104 | 1.9895 | 0.0041 |
| 105 | 1.9935 | 0.0040 |
| 106 | 1.9975 | 0.0040 |
| 107 | 2.0015 | 0.0040 |
| 108 | 2.0055 | 0.0040 |
| 109 | 2.0094 | 0.0039 |
| 110 | 2.0133 | 0.0039 |
| 111 | 2.0172 | 0.0039 |
| 112 | 2.0210 | 0.0038 |
| 113 | 2.0248 | 0.0038 |
| 114 | 2.0286 | 0.0038 |
| 115 | 2.0324 | 0.0038 |
| 116 | 2.0361 | 0.0037 |
| 117 | 2.0399 | 0.0037 |
| 118 | 2.0435 | 0.0037 |
| 119 | 2.0472 | 0.0037 |
| 120 | 2.0509 | 0.0036 |
| 121 | 2.0545 | 0.0036 |
| 122 | 2.0581 | 0.0036 |
| 123 | 2.0616 | 0.0036 |
| 124 | 2.0652 | 0.0035 |
| 125 | 2.0687 | 0.0035 |
| 126 | 2.0722 | 0.0035 |
| 127 | 2.0757 | 0.0035 |
| 128 | 2.0792 | 0.0035 |
| 129 | 2.0826 | 0.0034 |
| 130 | 2.0860 | 0.0034 |
| 131 | 2.0894 | 0.0034 |
| 132 | 2.0928 | 0.0034 |
| 133 | 2.0962 | 0.0034 |
| 134 | 2.0995 | 0.0033 |
| 135 | 2.1028 | 0.0033 |
| 136 | 2.1061 | 0.0033 |
| 137 | 2.1094 | 0.0033 |
| 138 | 2.1127 | 0.0033 |
| 139 | 2.1159 | 0.0032 |
| 140 | 2.1191 | 0.0032 |
| 141 | 2.1223 | 0.0032 |
| 142 | 2.1255 | 0.0032 |
| 143 | 2.1287 | 0.0032 |
| 144 | 2.1318 | 0.0032 |
| 145 | 2.1350 | 0.0031 |
| 146 | 2.1381 | 0.0031 |
| 147 | 2.1412 | 0.0031 |
| 148 | 2.1443 | 0.0031 |
| 149 | 2.1473 | 0.0031 |
| 150 | 2.1504 | 0.0031 |
| 151 | 2.1534 | 0.0030 |
| 152 | 2.1565 | 0.0030 |
| 153 | 2.1595 | 0.0030 |
| 154 | 2.1625 | 0.0030 |
| 155 | 2.1654 | 0.0030 |
| 156 | 2.1684 | 0.0030 |
| 157 | 2.1713 | 0.0029 |
| 158 | 2.1743 | 0.0029 |

| | | |
|---|---|---|
| 159 | 2.1772 | 0.0029 |
| 160 | 2.1801 | 0.0029 |
| 161 | 2.1830 | 0.0029 |
| 162 | 2.1858 | 0.0029 |
| 163 | 2.1887 | 0.0029 |
| 164 | 2.1915 | 0.0028 |
| 165 | 2.1944 | 0.0028 |
| 166 | 2.1972 | 0.0028 |
| 167 | 2.2000 | 0.0028 |
| 168 | 2.2028 | 0.0028 |
| 169 | 2.2056 | 0.0028 |
| 170 | 2.2083 | 0.0028 |
| 171 | 2.2111 | 0.0028 |
| 172 | 2.2138 | 0.0027 |
| 173 | 2.2166 | 0.0027 |
| 174 | 2.2193 | 0.0027 |
| 175 | 2.2220 | 0.0027 |
| 176 | 2.2247 | 0.0027 |
| 177 | 2.2273 | 0.0027 |
| 178 | 2.2300 | 0.0027 |
| 179 | 2.2327 | 0.0027 |
| 180 | 2.2353 | 0.0026 |
| 181 | 2.2379 | 0.0026 |
| 182 | 2.2406 | 0.0026 |
| 183 | 2.2432 | 0.0026 |
| 184 | 2.2458 | 0.0026 |
| 185 | 2.2484 | 0.0026 |
| 186 | 2.2509 | 0.0026 |
| 187 | 2.2535 | 0.0026 |
| 188 | 2.2561 | 0.0026 |
| 189 | 2.2586 | 0.0025 |
| 190 | 2.2611 | 0.0025 |
| 191 | 2.2637 | 0.0025 |
| 192 | 2.2662 | 0.0025 |
| 193 | 2.2687 | 0.0025 |
| 194 | 2.2712 | 0.0025 |
| 195 | 2.2736 | 0.0025 |
| 196 | 2.2761 | 0.0025 |
| 197 | 2.2786 | 0.0025 |
| 198 | 2.2810 | 0.0025 |
| 199 | 2.2835 | 0.0024 |
| 200 | 2.2859 | 0.0024 |
| 201 | 2.2883 | 0.0024 |
| 202 | 2.2907 | 0.0024 |
| 203 | 2.2931 | 0.0024 |
| 204 | 2.2955 | 0.0024 |
| 205 | 2.2979 | 0.0024 |
| 206 | 2.3003 | 0.0024 |
| 207 | 2.3027 | 0.0024 |
| 208 | 2.3050 | 0.0024 |
| 209 | 2.3074 | 0.0023 |
| 210 | 2.3097 | 0.0023 |
| 211 | 2.3120 | 0.0023 |
| 212 | 2.3144 | 0.0023 |
| 213 | 2.3167 | 0.0023 |
| 214 | 2.3190 | 0.0023 |
| 215 | 2.3213 | 0.0023 |
| 216 | 2.3236 | 0.0023 |
| 217 | 2.3259 | 0.0023 |

| | | |
|---|---|---|
| 218 | 2.3281 | 0.0023 |
| 219 | 2.3304 | 0.0023 |
| 220 | 2.3327 | 0.0023 |
| 221 | 2.3349 | 0.0022 |
| 222 | 2.3371 | 0.0022 |
| 223 | 2.3394 | 0.0022 |
| 224 | 2.3416 | 0.0022 |
| 225 | 2.3438 | 0.0022 |
| 226 | 2.3460 | 0.0022 |
| 227 | 2.3482 | 0.0022 |
| 228 | 2.3504 | 0.0022 |
| 229 | 2.3526 | 0.0022 |
| 230 | 2.3548 | 0.0022 |
| 231 | 2.3570 | 0.0022 |
| 232 | 2.3591 | 0.0022 |
| 233 | 2.3613 | 0.0022 |
| 234 | 2.3634 | 0.0021 |
| 235 | 2.3656 | 0.0021 |
| 236 | 2.3677 | 0.0021 |
| 237 | 2.3698 | 0.0021 |
| 238 | 2.3719 | 0.0021 |
| 239 | 2.3741 | 0.0021 |
| 240 | 2.3762 | 0.0021 |
| 241 | 2.3783 | 0.0021 |
| 242 | 2.3804 | 0.0021 |
| 243 | 2.3824 | 0.0021 |
| 244 | 2.3845 | 0.0021 |
| 245 | 2.3866 | 0.0021 |
| 246 | 2.3887 | 0.0021 |
| 247 | 2.3907 | 0.0021 |
| 248 | 2.3928 | 0.0021 |
| 249 | 2.3948 | 0.0020 |
| 250 | 2.3969 | 0.0020 |
| 251 | 2.3989 | 0.0020 |
| 252 | 2.4009 | 0.0020 |
| 253 | 2.4029 | 0.0020 |
| 254 | 2.4050 | 0.0020 |
| 255 | 2.4070 | 0.0020 |
| 256 | 2.4090 | 0.0020 |
| 257 | 2.4110 | 0.0020 |
| 258 | 2.4129 | 0.0020 |
| 259 | 2.4149 | 0.0020 |
| 260 | 2.4169 | 0.0020 |
| 261 | 2.4189 | 0.0020 |
| 262 | 2.4208 | 0.0020 |
| 263 | 2.4228 | 0.0020 |
| 264 | 2.4248 | 0.0020 |
| 265 | 2.4267 | 0.0019 |
| 266 | 2.4286 | 0.0019 |
| 267 | 2.4306 | 0.0019 |
| 268 | 2.4325 | 0.0019 |
| 269 | 2.4344 | 0.0019 |
| 270 | 2.4364 | 0.0019 |
| 271 | 2.4383 | 0.0019 |
| 272 | 2.4402 | 0.0019 |
| 273 | 2.4421 | 0.0019 |
| 274 | 2.4440 | 0.0019 |
| 275 | 2.4459 | 0.0019 |
| 276 | 2.4478 | 0.0019 |

| | | |
|---|---|---|
| 277 | 2.4496 | 0.0019 |
| 278 | 2.4515 | 0.0019 |
| 279 | 2.4534 | 0.0019 |
| 280 | 2.4553 | 0.0019 |
| 281 | 2.4571 | 0.0019 |
| 282 | 2.4590 | 0.0019 |
| 283 | 2.4608 | 0.0018 |
| 284 | 2.4627 | 0.0018 |
| 285 | 2.4645 | 0.0018 |
| 286 | 2.4663 | 0.0018 |
| 287 | 2.4682 | 0.0018 |
| 288 | 2.4700 | 0.0018 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0018 | 0.0012 | 0.0007 |
| 2 | 0.0018 | 0.0012 | 0.0007 |
| 3 | 0.0018 | 0.0012 | 0.0007 |
| 4 | 0.0018 | 0.0012 | 0.0007 |
| 5 | 0.0019 | 0.0012 | 0.0007 |
| 6 | 0.0019 | 0.0012 | 0.0007 |
| 7 | 0.0019 | 0.0012 | 0.0007 |
| 8 | 0.0019 | 0.0012 | 0.0007 |
| 9 | 0.0019 | 0.0012 | 0.0007 |
| 10 | 0.0019 | 0.0012 | 0.0007 |
| 11 | 0.0019 | 0.0012 | 0.0007 |
| 12 | 0.0019 | 0.0012 | 0.0007 |
| 13 | 0.0019 | 0.0012 | 0.0007 |
| 14 | 0.0019 | 0.0012 | 0.0007 |
| 15 | 0.0019 | 0.0012 | 0.0007 |
| 16 | 0.0019 | 0.0012 | 0.0007 |
| 17 | 0.0020 | 0.0012 | 0.0007 |
| 18 | 0.0020 | 0.0012 | 0.0007 |
| 19 | 0.0020 | 0.0013 | 0.0007 |
| 20 | 0.0020 | 0.0013 | 0.0007 |
| 21 | 0.0020 | 0.0013 | 0.0007 |
| 22 | 0.0020 | 0.0013 | 0.0007 |
| 23 | 0.0020 | 0.0013 | 0.0007 |
| 24 | 0.0020 | 0.0013 | 0.0007 |
| 25 | 0.0020 | 0.0013 | 0.0007 |
| 26 | 0.0020 | 0.0013 | 0.0007 |
| 27 | 0.0020 | 0.0013 | 0.0007 |
| 28 | 0.0021 | 0.0013 | 0.0007 |
| 29 | 0.0021 | 0.0013 | 0.0008 |
| 30 | 0.0021 | 0.0013 | 0.0008 |
| 31 | 0.0021 | 0.0013 | 0.0008 |
| 32 | 0.0021 | 0.0013 | 0.0008 |
| 33 | 0.0021 | 0.0013 | 0.0008 |
| 34 | 0.0021 | 0.0013 | 0.0008 |
| 35 | 0.0021 | 0.0014 | 0.0008 |
| 36 | 0.0021 | 0.0014 | 0.0008 |
| 37 | 0.0021 | 0.0014 | 0.0008 |
| 38 | 0.0022 | 0.0014 | 0.0008 |
| 39 | 0.0022 | 0.0014 | 0.0008 |
| 40 | 0.0022 | 0.0014 | 0.0008 |
| 41 | 0.0022 | 0.0014 | 0.0008 |
| 42 | 0.0022 | 0.0014 | 0.0008 |

| | | | |
|---|---|---|---|
| 43 | 0.0022 | 0.0014 | 0.0008 |
| 44 | 0.0022 | 0.0014 | 0.0008 |
| 45 | 0.0022 | 0.0014 | 0.0008 |
| 46 | 0.0022 | 0.0014 | 0.0008 |
| 47 | 0.0023 | 0.0014 | 0.0008 |
| 48 | 0.0023 | 0.0014 | 0.0008 |
| 49 | 0.0023 | 0.0015 | 0.0008 |
| 50 | 0.0023 | 0.0015 | 0.0008 |
| 51 | 0.0023 | 0.0015 | 0.0008 |
| 52 | 0.0023 | 0.0015 | 0.0008 |
| 53 | 0.0023 | 0.0015 | 0.0009 |
| 54 | 0.0023 | 0.0015 | 0.0009 |
| 55 | 0.0024 | 0.0015 | 0.0009 |
| 56 | 0.0024 | 0.0015 | 0.0009 |
| 57 | 0.0024 | 0.0015 | 0.0009 |
| 58 | 0.0024 | 0.0015 | 0.0009 |
| 59 | 0.0024 | 0.0015 | 0.0009 |
| 60 | 0.0024 | 0.0015 | 0.0009 |
| 61 | 0.0025 | 0.0016 | 0.0009 |
| 62 | 0.0025 | 0.0016 | 0.0009 |
| 63 | 0.0025 | 0.0016 | 0.0009 |
| 64 | 0.0025 | 0.0016 | 0.0009 |
| 65 | 0.0025 | 0.0016 | 0.0009 |
| 66 | 0.0025 | 0.0016 | 0.0009 |
| 67 | 0.0025 | 0.0016 | 0.0009 |
| 68 | 0.0026 | 0.0016 | 0.0009 |
| 69 | 0.0026 | 0.0016 | 0.0009 |
| 70 | 0.0026 | 0.0016 | 0.0009 |
| 71 | 0.0026 | 0.0017 | 0.0010 |
| 72 | 0.0026 | 0.0017 | 0.0010 |
| 73 | 0.0026 | 0.0017 | 0.0010 |
| 74 | 0.0027 | 0.0017 | 0.0010 |
| 75 | 0.0027 | 0.0017 | 0.0010 |
| 76 | 0.0027 | 0.0017 | 0.0010 |
| 77 | 0.0027 | 0.0017 | 0.0010 |
| 78 | 0.0027 | 0.0017 | 0.0010 |
| 79 | 0.0028 | 0.0018 | 0.0010 |
| 80 | 0.0028 | 0.0018 | 0.0010 |
| 81 | 0.0028 | 0.0018 | 0.0010 |
| 82 | 0.0028 | 0.0018 | 0.0010 |
| 83 | 0.0028 | 0.0018 | 0.0010 |
| 84 | 0.0028 | 0.0018 | 0.0010 |
| 85 | 0.0029 | 0.0018 | 0.0010 |
| 86 | 0.0029 | 0.0018 | 0.0011 |
| 87 | 0.0029 | 0.0019 | 0.0011 |
| 88 | 0.0029 | 0.0019 | 0.0011 |
| 89 | 0.0030 | 0.0019 | 0.0011 |
| 90 | 0.0030 | 0.0019 | 0.0011 |
| 91 | 0.0030 | 0.0019 | 0.0011 |
| 92 | 0.0030 | 0.0019 | 0.0011 |
| 93 | 0.0031 | 0.0019 | 0.0011 |
| 94 | 0.0031 | 0.0020 | 0.0011 |
| 95 | 0.0031 | 0.0020 | 0.0011 |
| 96 | 0.0031 | 0.0020 | 0.0011 |
| 97 | 0.0032 | 0.0020 | 0.0011 |
| 98 | 0.0032 | 0.0020 | 0.0012 |
| 99 | 0.0032 | 0.0020 | 0.0012 |
| 100 | 0.0032 | 0.0020 | 0.0012 |
| 101 | 0.0033 | 0.0021 | 0.0012 |

| | | | |
|---|---|---|---|
| 102 | 0.0033 | 0.0021 | 0.0012 |
| 103 | 0.0033 | 0.0021 | 0.0012 |
| 104 | 0.0033 | 0.0021 | 0.0012 |
| 105 | 0.0034 | 0.0021 | 0.0012 |
| 106 | 0.0034 | 0.0022 | 0.0012 |
| 107 | 0.0034 | 0.0022 | 0.0013 |
| 108 | 0.0035 | 0.0022 | 0.0013 |
| 109 | 0.0035 | 0.0022 | 0.0013 |
| 110 | 0.0035 | 0.0022 | 0.0013 |
| 111 | 0.0036 | 0.0023 | 0.0013 |
| 112 | 0.0036 | 0.0023 | 0.0013 |
| 113 | 0.0036 | 0.0023 | 0.0013 |
| 114 | 0.0037 | 0.0023 | 0.0013 |
| 115 | 0.0037 | 0.0024 | 0.0014 |
| 116 | 0.0037 | 0.0024 | 0.0014 |
| 117 | 0.0038 | 0.0024 | 0.0014 |
| 118 | 0.0038 | 0.0024 | 0.0014 |
| 119 | 0.0039 | 0.0025 | 0.0014 |
| 120 | 0.0039 | 0.0025 | 0.0014 |
| 121 | 0.0040 | 0.0025 | 0.0014 |
| 122 | 0.0040 | 0.0025 | 0.0015 |
| 123 | 0.0040 | 0.0026 | 0.0015 |
| 124 | 0.0041 | 0.0026 | 0.0015 |
| 125 | 0.0041 | 0.0026 | 0.0015 |
| 126 | 0.0042 | 0.0027 | 0.0015 |
| 127 | 0.0042 | 0.0027 | 0.0015 |
| 128 | 0.0043 | 0.0027 | 0.0016 |
| 129 | 0.0043 | 0.0028 | 0.0016 |
| 130 | 0.0044 | 0.0028 | 0.0016 |
| 131 | 0.0045 | 0.0028 | 0.0016 |
| 132 | 0.0045 | 0.0029 | 0.0016 |
| 133 | 0.0046 | 0.0029 | 0.0017 |
| 134 | 0.0046 | 0.0029 | 0.0017 |
| 135 | 0.0047 | 0.0030 | 0.0017 |
| 136 | 0.0047 | 0.0030 | 0.0017 |
| 137 | 0.0048 | 0.0031 | 0.0018 |
| 138 | 0.0049 | 0.0031 | 0.0018 |
| 139 | 0.0050 | 0.0032 | 0.0018 |
| 140 | 0.0050 | 0.0032 | 0.0018 |
| 141 | 0.0051 | 0.0033 | 0.0019 |
| 142 | 0.0052 | 0.0033 | 0.0019 |
| 143 | 0.0053 | 0.0034 | 0.0019 |
| 144 | 0.0053 | 0.0034 | 0.0019 |
| 145 | 0.0043 | 0.0028 | 0.0016 |
| 146 | 0.0044 | 0.0028 | 0.0016 |
| 147 | 0.0045 | 0.0029 | 0.0016 |
| 148 | 0.0045 | 0.0029 | 0.0017 |
| 149 | 0.0047 | 0.0030 | 0.0017 |
| 150 | 0.0047 | 0.0030 | 0.0017 |
| 151 | 0.0048 | 0.0031 | 0.0018 |
| 152 | 0.0049 | 0.0031 | 0.0018 |
| 153 | 0.0051 | 0.0032 | 0.0018 |
| 154 | 0.0051 | 0.0033 | 0.0019 |
| 155 | 0.0053 | 0.0034 | 0.0019 |
| 156 | 0.0054 | 0.0034 | 0.0019 |
| 157 | 0.0055 | 0.0035 | 0.0020 |
| 158 | 0.0056 | 0.0036 | 0.0020 |
| 159 | 0.0058 | 0.0037 | 0.0021 |
| 160 | 0.0059 | 0.0037 | 0.0021 |

| | | | |
|---|---|---|---|
| 161 | 0.0061 | 0.0039 | 0.0022 |
| 162 | 0.0062 | 0.0039 | 0.0023 |
| 163 | 0.0064 | 0.0041 | 0.0023 |
| 164 | 0.0066 | 0.0042 | 0.0024 |
| 165 | 0.0068 | 0.0043 | 0.0025 |
| 166 | 0.0070 | 0.0044 | 0.0025 |
| 167 | 0.0073 | 0.0046 | 0.0026 |
| 168 | 0.0074 | 0.0047 | 0.0027 |
| 169 | 0.0078 | 0.0049 | 0.0028 |
| 170 | 0.0080 | 0.0051 | 0.0029 |
| 171 | 0.0084 | 0.0053 | 0.0030 |
| 172 | 0.0086 | 0.0055 | 0.0031 |
| 173 | 0.0091 | 0.0058 | 0.0033 |
| 174 | 0.0093 | 0.0059 | 0.0034 |
| 175 | 0.0099 | 0.0063 | 0.0036 |
| 176 | 0.0102 | 0.0065 | 0.0037 |
| 177 | 0.0109 | 0.0070 | 0.0040 |
| 178 | 0.0113 | 0.0072 | 0.0041 |
| 179 | 0.0123 | 0.0078 | 0.0045 |
| 180 | 0.0128 | 0.0081 | 0.0047 |
| 181 | 0.0140 | 0.0089 | 0.0051 |
| 182 | 0.0147 | 0.0093 | 0.0053 |
| 183 | 0.0164 | 0.0104 | 0.0060 |
| 184 | 0.0174 | 0.0110 | 0.0063 |
| 185 | 0.0350 | 0.0223 | 0.0128 |
| 186 | 0.0373 | 0.0237 | 0.0136 |
| 187 | 0.0433 | 0.0275 | 0.0158 |
| 188 | 0.0473 | 0.0300 | 0.0173 |
| 189 | 0.0588 | 0.0300 | 0.0288 |
| 190 | 0.0677 | 0.0300 | 0.0377 |
| 191 | 0.1027 | 0.0300 | 0.0728 |
| 192 | 0.1491 | 0.0300 | 0.1192 |
| 193 | 0.6452 | 0.0300 | 0.6153 |
| 194 | 0.0809 | 0.0300 | 0.0509 |
| 195 | 0.0523 | 0.0300 | 0.0223 |
| 196 | 0.0401 | 0.0255 | 0.0146 |
| 197 | 0.0185 | 0.0118 | 0.0067 |
| 198 | 0.0155 | 0.0098 | 0.0056 |
| 199 | 0.0134 | 0.0085 | 0.0049 |
| 200 | 0.0118 | 0.0075 | 0.0043 |
| 201 | 0.0106 | 0.0067 | 0.0039 |
| 202 | 0.0096 | 0.0061 | 0.0035 |
| 203 | 0.0088 | 0.0056 | 0.0032 |
| 204 | 0.0082 | 0.0052 | 0.0030 |
| 205 | 0.0076 | 0.0048 | 0.0028 |
| 206 | 0.0071 | 0.0045 | 0.0026 |
| 207 | 0.0067 | 0.0042 | 0.0024 |
| 208 | 0.0063 | 0.0040 | 0.0023 |
| 209 | 0.0060 | 0.0038 | 0.0022 |
| 210 | 0.0057 | 0.0036 | 0.0021 |
| 211 | 0.0054 | 0.0035 | 0.0020 |
| 212 | 0.0052 | 0.0033 | 0.0019 |
| 213 | 0.0050 | 0.0032 | 0.0018 |
| 214 | 0.0048 | 0.0030 | 0.0017 |
| 215 | 0.0046 | 0.0029 | 0.0017 |
| 216 | 0.0044 | 0.0028 | 0.0016 |
| 217 | 0.0054 | 0.0034 | 0.0020 |
| 218 | 0.0052 | 0.0033 | 0.0019 |
| 219 | 0.0051 | 0.0032 | 0.0018 |

| | | | |
|---|---|---|---|
| 220 | 0.0049 | 0.0031 | 0.0018 |
| 221 | 0.0048 | 0.0030 | 0.0017 |
| 222 | 0.0047 | 0.0030 | 0.0017 |
| 223 | 0.0045 | 0.0029 | 0.0017 |
| 224 | 0.0044 | 0.0028 | 0.0016 |
| 225 | 0.0043 | 0.0027 | 0.0016 |
| 226 | 0.0042 | 0.0027 | 0.0015 |
| 227 | 0.0041 | 0.0026 | 0.0015 |
| 228 | 0.0040 | 0.0026 | 0.0015 |
| 229 | 0.0039 | 0.0025 | 0.0014 |
| 230 | 0.0038 | 0.0024 | 0.0014 |
| 231 | 0.0038 | 0.0024 | 0.0014 |
| 232 | 0.0037 | 0.0023 | 0.0013 |
| 233 | 0.0036 | 0.0023 | 0.0013 |
| 234 | 0.0035 | 0.0023 | 0.0013 |
| 235 | 0.0035 | 0.0022 | 0.0013 |
| 236 | 0.0034 | 0.0022 | 0.0012 |
| 237 | 0.0034 | 0.0021 | 0.0012 |
| 238 | 0.0033 | 0.0021 | 0.0012 |
| 239 | 0.0032 | 0.0021 | 0.0012 |
| 240 | 0.0032 | 0.0020 | 0.0012 |
| 241 | 0.0031 | 0.0020 | 0.0011 |
| 242 | 0.0031 | 0.0020 | 0.0011 |
| 243 | 0.0030 | 0.0019 | 0.0011 |
| 244 | 0.0030 | 0.0019 | 0.0011 |
| 245 | 0.0029 | 0.0019 | 0.0011 |
| 246 | 0.0029 | 0.0018 | 0.0011 |
| 247 | 0.0029 | 0.0018 | 0.0010 |
| 248 | 0.0028 | 0.0018 | 0.0010 |
| 249 | 0.0028 | 0.0018 | 0.0010 |
| 250 | 0.0027 | 0.0017 | 0.0010 |
| 251 | 0.0027 | 0.0017 | 0.0010 |
| 252 | 0.0027 | 0.0017 | 0.0010 |
| 253 | 0.0026 | 0.0017 | 0.0010 |
| 254 | 0.0026 | 0.0017 | 0.0009 |
| 255 | 0.0026 | 0.0016 | 0.0009 |
| 256 | 0.0025 | 0.0016 | 0.0009 |
| 257 | 0.0025 | 0.0016 | 0.0009 |
| 258 | 0.0025 | 0.0016 | 0.0009 |
| 259 | 0.0024 | 0.0016 | 0.0009 |
| 260 | 0.0024 | 0.0015 | 0.0009 |
| 261 | 0.0024 | 0.0015 | 0.0009 |
| 262 | 0.0024 | 0.0015 | 0.0009 |
| 263 | 0.0023 | 0.0015 | 0.0008 |
| 264 | 0.0023 | 0.0015 | 0.0008 |
| 265 | 0.0023 | 0.0015 | 0.0008 |
| 266 | 0.0023 | 0.0014 | 0.0008 |
| 267 | 0.0022 | 0.0014 | 0.0008 |
| 268 | 0.0022 | 0.0014 | 0.0008 |
| 269 | 0.0022 | 0.0014 | 0.0008 |
| 270 | 0.0022 | 0.0014 | 0.0008 |
| 271 | 0.0021 | 0.0014 | 0.0008 |
| 272 | 0.0021 | 0.0013 | 0.0008 |
| 273 | 0.0021 | 0.0013 | 0.0008 |
| 274 | 0.0021 | 0.0013 | 0.0008 |
| 275 | 0.0021 | 0.0013 | 0.0008 |
| 276 | 0.0020 | 0.0013 | 0.0007 |
| 277 | 0.0020 | 0.0013 | 0.0007 |
| 278 | 0.0020 | 0.0013 | 0.0007 |

| | | | |
|---|---|---|---|
| 279 | 0.0020 | 0.0013 | 0.0007 |
| 280 | 0.0020 | 0.0012 | 0.0007 |
| 281 | 0.0019 | 0.0012 | 0.0007 |
| 282 | 0.0019 | 0.0012 | 0.0007 |
| 283 | 0.0019 | 0.0012 | 0.0007 |
| 284 | 0.0019 | 0.0012 | 0.0007 |
| 285 | 0.0019 | 0.0012 | 0.0007 |
| 286 | 0.0019 | 0.0012 | 0.0007 |
| 287 | 0.0018 | 0.0012 | 0.0007 |
| 288 | 0.0018 | 0.0012 | 0.0007 |

Total soil rain loss = 1.04(In)
Total effective rainfall = 1.43(In)
Peak flow rate in flood hydrograph = 7.85(CFS)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 2.5 | 5.0 | 7.5 | 10.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0000 | 0.00 | Q | | | | |
| 0+15 | 0.0001 | 0.01 | Q | | | | |
| 0+20 | 0.0002 | 0.01 | Q | | | | |
| 0+25 | 0.0003 | 0.02 | Q | | | | |
| 0+30 | 0.0004 | 0.02 | Q | | | | |
| 0+35 | 0.0006 | 0.02 | Q | | | | |
| 0+40 | 0.0007 | 0.02 | Q | | | | |
| 0+45 | 0.0009 | 0.02 | Q | | | | |
| 0+50 | 0.0011 | 0.03 | Q | | | | |
| 0+55 | 0.0013 | 0.03 | Q | | | | |
| 1+ 0 | 0.0015 | 0.03 | Q | | | | |
| 1+ 5 | 0.0017 | 0.03 | Q | | | | |
| 1+10 | 0.0019 | 0.03 | Q | | | | |
| 1+15 | 0.0021 | 0.03 | Q | | | | |
| 1+20 | 0.0023 | 0.03 | Q | | | | |
| 1+25 | 0.0025 | 0.03 | Q | | | | |
| 1+30 | 0.0027 | 0.03 | Q | | | | |
| 1+35 | 0.0029 | 0.03 | Q | | | | |
| 1+40 | 0.0031 | 0.03 | Q | | | | |
| 1+45 | 0.0033 | 0.03 | Q | | | | |
| 1+50 | 0.0035 | 0.03 | Q | | | | |
| 1+55 | 0.0037 | 0.03 | Q | | | | |
| 2+ 0 | 0.0040 | 0.03 | Q | | | | |
| 2+ 5 | 0.0042 | 0.03 | Q | | | | |
| 2+10 | 0.0044 | 0.03 | Q | | | | |
| 2+15 | 0.0046 | 0.03 | Q | | | | |
| 2+20 | 0.0049 | 0.03 | Q | | | | |
| 2+25 | 0.0051 | 0.03 | Q | | | | |
| 2+30 | 0.0053 | 0.03 | Q | | | | |
| 2+35 | 0.0055 | 0.03 | Q | | | | |
| 2+40 | 0.0058 | 0.03 | Q | | | | |
| 2+45 | 0.0060 | 0.03 | Q | | | | |
| 2+50 | 0.0062 | 0.03 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+55 | 0.0065 | 0.03 | Q | | | | |
| 3+ 0 | 0.0067 | 0.03 | Q | | | | |
| 3+ 5 | 0.0070 | 0.03 | Q | | | | |
| 3+10 | 0.0072 | 0.03 | Q | | | | |
| 3+15 | 0.0074 | 0.03 | Q | | | | |
| 3+20 | 0.0077 | 0.03 | Q | | | | |
| 3+25 | 0.0079 | 0.04 | Q | | | | |
| 3+30 | 0.0082 | 0.04 | Q | | | | |
| 3+35 | 0.0084 | 0.04 | Q | | | | |
| 3+40 | 0.0086 | 0.04 | Q | | | | |
| 3+45 | 0.0089 | 0.04 | Q | | | | |
| 3+50 | 0.0091 | 0.04 | Q | | | | |
| 3+55 | 0.0094 | 0.04 | Q | | | | |
| 4+ 0 | 0.0096 | 0.04 | Q | | | | |
| 4+ 5 | 0.0099 | 0.04 | Q | | | | |
| 4+10 | 0.0101 | 0.04 | Q | | | | |
| 4+15 | 0.0104 | 0.04 | Q | | | | |
| 4+20 | 0.0106 | 0.04 | Q | | | | |
| 4+25 | 0.0109 | 0.04 | Q | | | | |
| 4+30 | 0.0112 | 0.04 | QV | | | | |
| 4+35 | 0.0114 | 0.04 | QV | | | | |
| 4+40 | 0.0117 | 0.04 | QV | | | | |
| 4+45 | 0.0119 | 0.04 | QV | | | | |
| 4+50 | 0.0122 | 0.04 | QV | | | | |
| 4+55 | 0.0125 | 0.04 | QV | | | | |
| 5+ 0 | 0.0127 | 0.04 | QV | | | | |
| 5+ 5 | 0.0130 | 0.04 | QV | | | | |
| 5+10 | 0.0133 | 0.04 | QV | | | | |
| 5+15 | 0.0136 | 0.04 | QV | | | | |
| 5+20 | 0.0138 | 0.04 | QV | | | | |
| 5+25 | 0.0141 | 0.04 | QV | | | | |
| 5+30 | 0.0144 | 0.04 | QV | | | | |
| 5+35 | 0.0147 | 0.04 | QV | | | | |
| 5+40 | 0.0149 | 0.04 | QV | | | | |
| 5+45 | 0.0152 | 0.04 | QV | | | | |
| 5+50 | 0.0155 | 0.04 | QV | | | | |
| 5+55 | 0.0158 | 0.04 | QV | | | | |
| 6+ 0 | 0.0161 | 0.04 | QV | | | | |
| 6+ 5 | 0.0164 | 0.04 | QV | | | | |
| 6+10 | 0.0166 | 0.04 | QV | | | | |
| 6+15 | 0.0169 | 0.04 | QV | | | | |
| 6+20 | 0.0172 | 0.04 | QV | | | | |
| 6+25 | 0.0175 | 0.04 | QV | | | | |
| 6+30 | 0.0178 | 0.04 | QV | | | | |
| 6+35 | 0.0181 | 0.04 | QV | | | | |
| 6+40 | 0.0184 | 0.04 | QV | | | | |
| 6+45 | 0.0187 | 0.04 | QV | | | | |
| 6+50 | 0.0190 | 0.04 | QV | | | | |
| 6+55 | 0.0194 | 0.04 | QV | | | | |
| 7+ 0 | 0.0197 | 0.05 | QV | | | | |
| 7+ 5 | 0.0200 | 0.05 | QV | | | | |
| 7+10 | 0.0203 | 0.05 | QV | | | | |
| 7+15 | 0.0206 | 0.05 | QV | | | | |
| 7+20 | 0.0209 | 0.05 | QV | | | | |
| 7+25 | 0.0212 | 0.05 | QV | | | | |
| 7+30 | 0.0216 | 0.05 | QV | | | | |
| 7+35 | 0.0219 | 0.05 | QV | | | | |
| 7+40 | 0.0222 | 0.05 | Q V | | | | |
| 7+45 | 0.0226 | 0.05 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7+50 | 0.0229 | 0.05 | Q V | \| | \| | \| | \| |
| 7+55 | 0.0232 | 0.05 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.0236 | 0.05 | Q V | \| | \| | \| | \| |
| 8+ 5 | 0.0239 | 0.05 | Q V | \| | \| | \| | \| |
| 8+10 | 0.0242 | 0.05 | Q V | \| | \| | \| | \| |
| 8+15 | 0.0246 | 0.05 | Q V | \| | \| | \| | \| |
| 8+20 | 0.0249 | 0.05 | Q V | \| | \| | \| | \| |
| 8+25 | 0.0253 | 0.05 | Q V | \| | \| | \| | \| |
| 8+30 | 0.0257 | 0.05 | Q V | \| | \| | \| | \| |
| 8+35 | 0.0260 | 0.05 | Q V | \| | \| | \| | \| |
| 8+40 | 0.0264 | 0.05 | Q V | \| | \| | \| | \| |
| 8+45 | 0.0267 | 0.05 | Q V | \| | \| | \| | \| |
| 8+50 | 0.0271 | 0.05 | Q V | \| | \| | \| | \| |
| 8+55 | 0.0275 | 0.05 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.0278 | 0.05 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.0282 | 0.05 | Q V | \| | \| | \| | \| |
| 9+10 | 0.0286 | 0.06 | Q V | \| | \| | \| | \| |
| 9+15 | 0.0290 | 0.06 | Q V | \| | \| | \| | \| |
| 9+20 | 0.0294 | 0.06 | Q V | \| | \| | \| | \| |
| 9+25 | 0.0298 | 0.06 | Q V | \| | \| | \| | \| |
| 9+30 | 0.0302 | 0.06 | Q V | \| | \| | \| | \| |
| 9+35 | 0.0306 | 0.06 | Q V | \| | \| | \| | \| |
| 9+40 | 0.0310 | 0.06 | Q V | \| | \| | \| | \| |
| 9+45 | 0.0314 | 0.06 | Q V | \| | \| | \| | \| |
| 9+50 | 0.0318 | 0.06 | Q V | \| | \| | \| | \| |
| 9+55 | 0.0322 | 0.06 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.0326 | 0.06 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.0330 | 0.06 | Q V | \| | \| | \| | \| |
| 10+10 | 0.0335 | 0.06 | Q  V | \| | \| | \| | \| |
| 10+15 | 0.0339 | 0.06 | Q  V | \| | \| | \| | \| |
| 10+20 | 0.0343 | 0.06 | Q  V | \| | \| | \| | \| |
| 10+25 | 0.0348 | 0.06 | Q  V | \| | \| | \| | \| |
| 10+30 | 0.0352 | 0.06 | Q  V | \| | \| | \| | \| |
| 10+35 | 0.0357 | 0.07 | Q  V | \| | \| | \| | \| |
| 10+40 | 0.0361 | 0.07 | Q  V | \| | \| | \| | \| |
| 10+45 | 0.0366 | 0.07 | Q  V | \| | \| | \| | \| |
| 10+50 | 0.0371 | 0.07 | Q  V | \| | \| | \| | \| |
| 10+55 | 0.0375 | 0.07 | Q  V | \| | \| | \| | \| |
| 11+ 0 | 0.0380 | 0.07 | Q  V | \| | \| | \| | \| |
| 11+ 5 | 0.0385 | 0.07 | Q  V | \| | \| | \| | \| |
| 11+10 | 0.0390 | 0.07 | Q  V | \| | \| | \| | \| |
| 11+15 | 0.0395 | 0.07 | Q  V | \| | \| | \| | \| |
| 11+20 | 0.0400 | 0.07 | Q  V | \| | \| | \| | \| |
| 11+25 | 0.0405 | 0.07 | Q  V | \| | \| | \| | \| |
| 11+30 | 0.0410 | 0.07 | Q  V | \| | \| | \| | \| |
| 11+35 | 0.0415 | 0.08 | Q  V | \| | \| | \| | \| |
| 11+40 | 0.0420 | 0.08 | Q  V | \| | \| | \| | \| |
| 11+45 | 0.0426 | 0.08 | Q  V | \| | \| | \| | \| |
| 11+50 | 0.0431 | 0.08 | Q  V | \| | \| | \| | \| |
| 11+55 | 0.0437 | 0.08 | Q  V | \| | \| | \| | \| |
| 12+ 0 | 0.0442 | 0.08 | Q  V | \| | \| | \| | \| |
| 12+ 5 | 0.0448 | 0.08 | Q   V | \| | \| | \| | \| |
| 12+10 | 0.0454 | 0.08 | Q   V | \| | \| | \| | \| |
| 12+15 | 0.0459 | 0.08 | Q   V | \| | \| | \| | \| |
| 12+20 | 0.0465 | 0.08 | Q   V | \| | \| | \| | \| |
| 12+25 | 0.0470 | 0.08 | Q   V | \| | \| | \| | \| |
| 12+30 | 0.0475 | 0.08 | Q   V | \| | \| | \| | \| |
| 12+35 | 0.0480 | 0.08 | Q   V | \| | \| | \| | \| |
| 12+40 | 0.0486 | 0.08 | Q   V | \| | \| | \| | \| |

```
12+45       0.0491      0.08  Q   V     |          |          |          |
12+50       0.0497      0.08  Q   V     |          |          |          |
12+55       0.0502      0.08  Q   V     |          |          |          |
13+ 0       0.0508      0.08  Q   V     |          |          |          |
13+ 5       0.0513      0.08  Q   V     |          |          |          |
13+10       0.0519      0.08  Q   V     |          |          |          |
13+15       0.0525      0.09  Q   V     |          |          |          |
13+20       0.0531      0.09  Q   V     |          |          |          |
13+25       0.0537      0.09  Q   V     |          |          |          |
13+30       0.0543      0.09  Q   V     |          |          |          |
13+35       0.0550      0.09  Q   V     |          |          |          |
13+40       0.0556      0.10  Q    V    |          |          |          |
13+45       0.0563      0.10  Q    V    |          |          |          |
13+50       0.0570      0.10  Q    V    |          |          |          |
13+55       0.0577      0.10  Q    V    |          |          |          |
14+ 0       0.0584      0.11  Q    V    |          |          |          |
14+ 5       0.0592      0.11  Q    V    |          |          |          |
14+10       0.0599      0.11  Q    V    |          |          |          |
14+15       0.0607      0.12  Q    V    |          |          |          |
14+20       0.0616      0.12  Q    V    |          |          |          |
14+25       0.0624      0.12  Q    V    |          |          |          |
14+30       0.0633      0.13  Q    V    |          |          |          |
14+35       0.0642      0.13  Q    V    |          |          |          |
14+40       0.0651      0.14  Q    V    |          |          |          |
14+45       0.0661      0.14  Q    V    |          |          |          |
14+50       0.0671      0.15  Q     V   |          |          |          |
14+55       0.0682      0.16  Q     V   |          |          |          |
15+ 0       0.0694      0.16  Q     V   |          |          |          |
15+ 5       0.0705      0.17  Q     V   |          |          |          |
15+10       0.0718      0.18  Q     V   |          |          |          |
15+15       0.0731      0.19  Q     V   |          |          |          |
15+20       0.0745      0.21  Q     V   |          |          |          |
15+25       0.0761      0.22  Q     V   |          |          |          |
15+30       0.0778      0.26  |Q     V  |          |          |          |
15+35       0.0800      0.32  |Q     V  |          |          |          |
15+40       0.0828      0.40  |Q     V  |          |          |          |
15+45       0.0861      0.48  |Q     V  |          |          |          |
15+50       0.0902      0.59  | Q     V |          |          |          |
15+55       0.0955      0.77  |  Q    V |          |          |          |
16+ 0       0.1031      1.11  |   Q    V|          |          |          |
16+ 5       0.1170      2.01  |       Q V          |          |          |
16+10       0.1428      3.76  |          | V  Q    |          |          |
16+15       0.1881      6.56  |          |     V   |     Q    |          |
16+20       0.2421      7.85  |          |         |V         |Q         |
16+25       0.2792      5.39  |          |         |Q   V     |          |
16+30       0.3042      3.62  |          |   Q     |      V   |          |
16+35       0.3229      2.72  |          Q         |        V |          |
16+40       0.3374      2.11  |        Q |         |          V          |
16+45       0.3490      1.68  |      Q   |         |          |V         |
16+50       0.3586      1.40  |     Q    |         |          | V        |
16+55       0.3669      1.20  |   Q      |         |          |  V       |
17+ 0       0.3738      1.00  |   Q      |         |          |  V       |
17+ 5       0.3796      0.84  |  Q       |         |          |   V      |
17+10       0.3847      0.75  | Q        |         |          |   V      |
17+15       0.3892      0.66  | Q        |         |          |    V     |
17+20       0.3932      0.57  | Q        |         |          |    V     |
17+25       0.3967      0.51  | Q        |         |          |    V     |
17+30       0.3998      0.45  |Q         |         |          |     V    |
17+35       0.4025      0.40  |Q         |         |          |     V    |
```

```
17+40       0.4049      0.34  |Q        |         |         |     V   |
17+45       0.4069      0.30  |Q        |         |         |     V   |
17+50       0.4086      0.24  Q         |         |         |     V   |
17+55       0.4102      0.23  Q         |         |         |      V  |
18+ 0       0.4117      0.23  Q         |         |         |      V  |
18+ 5       0.4133      0.22  Q         |         |         |      V  |
18+10       0.4147      0.21  Q         |         |         |      V  |
18+15       0.4161      0.19  Q         |         |         |      V  |
18+20       0.4172      0.16  Q         |         |         |      V  |
18+25       0.4182      0.15  Q         |         |         |      V  |
18+30       0.4191      0.13  Q         |         |         |      V  |
18+35       0.4197      0.09  Q         |         |         |      V  |
18+40       0.4203      0.09  Q         |         |         |      V  |
18+45       0.4208      0.08  Q         |         |         |       V |
18+50       0.4214      0.08  Q         |         |         |       V |
18+55       0.4219      0.08  Q         |         |         |       V |
19+ 0       0.4224      0.08  Q         |         |         |       V |
19+ 5       0.4230      0.07  Q         |         |         |       V |
19+10       0.4234      0.07  Q         |         |         |       V |
19+15       0.4239      0.07  Q         |         |         |       V |
19+20       0.4244      0.07  Q         |         |         |       V |
19+25       0.4249      0.07  Q         |         |         |       V |
19+30       0.4253      0.07  Q         |         |         |       V |
19+35       0.4258      0.06  Q         |         |         |       V |
19+40       0.4262      0.06  Q         |         |         |       V |
19+45       0.4266      0.06  Q         |         |         |       V |
19+50       0.4270      0.06  Q         |         |         |       V |
19+55       0.4275      0.06  Q         |         |         |       V |
20+ 0       0.4279      0.06  Q         |         |         |       V |
20+ 5       0.4282      0.06  Q         |         |         |       V |
20+10       0.4286      0.06  Q         |         |         |       V |
20+15       0.4290      0.06  Q         |         |         |       V |
20+20       0.4294      0.05  Q         |         |         |       V |
20+25       0.4298      0.05  Q         |         |         |       V |
20+30       0.4301      0.05  Q         |         |         |       V |
20+35       0.4305      0.05  Q         |         |         |       V |
20+40       0.4308      0.05  Q         |         |         |       V |
20+45       0.4312      0.05  Q         |         |         |       V |
20+50       0.4315      0.05  Q         |         |         |       V |
20+55       0.4318      0.05  Q         |         |         |        V|
21+ 0       0.4322      0.05  Q         |         |         |        V|
21+ 5       0.4325      0.05  Q         |         |         |        V|
21+10       0.4328      0.05  Q         |         |         |        V|
21+15       0.4331      0.05  Q         |         |         |        V|
21+20       0.4334      0.05  Q         |         |         |        V|
21+25       0.4337      0.04  Q         |         |         |        V|
21+30       0.4340      0.04  Q         |         |         |        V|
21+35       0.4343      0.04  Q         |         |         |        V|
21+40       0.4346      0.04  Q         |         |         |        V|
21+45       0.4349      0.04  Q         |         |         |        V|
21+50       0.4352      0.04  Q         |         |         |        V|
21+55       0.4355      0.04  Q         |         |         |        V|
22+ 0       0.4358      0.04  Q         |         |         |        V|
22+ 5       0.4361      0.04  Q         |         |         |        V|
22+10       0.4363      0.04  Q         |         |         |        V|
22+15       0.4366      0.04  Q         |         |         |        V|
22+20       0.4369      0.04  Q         |         |         |        V|
22+25       0.4371      0.04  Q         |         |         |        V|
22+30       0.4374      0.04  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+35 | 0.4376 | 0.04 | Q | \| | \| | \| | V\| |
| 22+40 | 0.4379 | 0.04 | Q | \| | \| | \| | V\| |
| 22+45 | 0.4381 | 0.04 | Q | \| | \| | \| | V\| |
| 22+50 | 0.4384 | 0.04 | Q | \| | \| | \| | V\| |
| 22+55 | 0.4386 | 0.04 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.4389 | 0.04 | Q | \| | \| | \| | V\| |
| 23+ 5 | 0.4391 | 0.04 | Q | \| | \| | \| | V\| |
| 23+10 | 0.4394 | 0.03 | Q | \| | \| | \| | V\| |
| 23+15 | 0.4396 | 0.03 | Q | \| | \| | \| | V\| |
| 23+20 | 0.4398 | 0.03 | Q | \| | \| | \| | V\| |
| 23+25 | 0.4401 | 0.03 | Q | \| | \| | \| | V\| |
| 23+30 | 0.4403 | 0.03 | Q | \| | \| | \| | V\| |
| 23+35 | 0.4405 | 0.03 | Q | \| | \| | \| | V\| |
| 23+40 | 0.4408 | 0.03 | Q | \| | \| | \| | V\| |
| 23+45 | 0.4410 | 0.03 | Q | \| | \| | \| | V\| |
| 23+50 | 0.4412 | 0.03 | Q | \| | \| | \| | V\| |
| 23+55 | 0.4414 | 0.03 | Q | \| | \| | \| | V\| |
| 24+ 0 | 0.4416 | 0.03 | Q | \| | \| | \| | V\| |
| 24+ 5 | 0.4419 | 0.03 | Q | \| | \| | \| | V\| |
| 24+10 | 0.4421 | 0.03 | Q | \| | \| | \| | V\| |
| 24+15 | 0.4422 | 0.02 | Q | \| | \| | \| | V\| |
| 24+20 | 0.4423 | 0.02 | Q | \| | \| | \| | V\| |
| 24+25 | 0.4424 | 0.01 | Q | \| | \| | \| | V\| |
| 24+30 | 0.4425 | 0.01 | Q | \| | \| | \| | V\| |
| 24+35 | 0.4426 | 0.01 | Q | \| | \| | \| | V\| |
| 24+40 | 0.4426 | 0.01 | Q | \| | \| | \| | V\| |
| 24+45 | 0.4426 | 0.01 | Q | \| | \| | \| | V\| |
| 24+50 | 0.4427 | 0.00 | Q | \| | \| | \| | V\| |
| 24+55 | 0.4427 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 0 | 0.4427 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 5 | 0.4427 | 0.00 | Q | \| | \| | \| | V\| |
| 25+10 | 0.4428 | 0.00 | Q | \| | \| | \| | V\| |
| 25+15 | 0.4428 | 0.00 | Q | \| | \| | \| | V\| |
| 25+20 | 0.4428 | 0.00 | Q | \| | \| | \| | V\| |
| 25+25 | 0.4428 | 0.00 | Q | \| | \| | \| | V\| |
| 25+30 | 0.4428 | 0.00 | Q | \| | \| | \| | V\| |
| 25+35 | 0.4428 | 0.00 | Q | \| | \| | \| | V\| |
| 25+40 | 0.4428 | 0.00 | Q | \| | \| | \| | V\| |
| 25+45 | 0.4428 | 0.00 | Q | \| | \| | \| | V\| |
| 25+50 | 0.4428 | 0.00 | Q | \| | \| | \| | V\| |
| 25+55 | 0.4428 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 0 | 0.4428 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 0.4428 | 0.00 | Q | \| | \| | \| | V\| |
| 26+10 | 0.4428 | 0.00 | Q | \| | \| | \| | V\| |
| 26+15 | 0.4428 | 0.00 | Q | \| | \| | \| | V\| |
| 26+20 | 0.4428 | 0.00 | Q | \| | \| | \| | V\| |
| 26+25 | 0.4428 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 23
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 69.41 | 1 | 1.36 |
| Rainfall data for year 100 | | |
| 69.41 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 69.41 | 24 | 2.48 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 60.2 | 79.2 | 69.41 | 1.000 | 0.384 | 1.000 | 0.384 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.384

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 69.41 | 1.000 | 60.2 | 79.2 | 2.63 | 0.336 |

Area-averaged catchment yield fraction, Y = 0.336
Area-averaged low loss fraction, Yb = 0.664
User entry of time of concentration = 1.280 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 69.41(Ac.)
Catchment Lag time = 1.024 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 8.1380
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.384(In/Hr)
Average low loss rate fraction (Yb) = 0.664 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.645(In)
Computed peak 30-minute rainfall = 1.105(In)
Specified peak 1-hour rainfall = 1.360(In)
Computed peak 3-hour rainfall = 1.637(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.480(In)

Rainfall depth area reduction factors:
Using a total area of 69.41(Ac.) (Ref: fig. E-4)

5-minute factor = 0.997 Adjusted rainfall = 0.643(In)
30-minute factor = 0.997 Adjusted rainfall = 1.101(In)
1-hour factor = 0.997 Adjusted rainfall = 1.356(In)
3-hour factor = 1.000 Adjusted rainfall = 1.636(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.480(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 839.43 (CFS)) | |
| 1 | 0.358 | 3.006 |
| 2 | 1.144 | 6.600 |
| 3 | 2.418 | 10.692 |
| 4 | 4.065 | 13.830 |
| 5 | 6.137 | 17.389 |
| 6 | 8.739 | 21.842 |
| 7 | 12.380 | 30.561 |
| 8 | 17.723 | 44.848 |
| 9 | 25.333 | 63.887 |
| 10 | 33.246 | 66.425 |
| 11 | 40.190 | 58.290 |
| 12 | 45.896 | 47.892 |
| 13 | 50.857 | 41.642 |
| 14 | 55.112 | 35.719 |

| | | |
|---|---|---|
| 15 | 58.612 | 29.386 |
| 16 | 61.618 | 25.225 |
| 17 | 64.192 | 21.615 |
| 18 | 66.498 | 19.351 |
| 19 | 68.615 | 17.770 |
| 20 | 70.586 | 16.547 |
| 21 | 72.366 | 14.943 |
| 22 | 73.969 | 13.461 |
| 23 | 75.427 | 12.231 |
| 24 | 76.829 | 11.771 |
| 25 | 78.170 | 11.256 |
| 26 | 79.293 | 9.425 |
| 27 | 80.367 | 9.017 |
| 28 | 81.429 | 8.916 |
| 29 | 82.349 | 7.722 |
| 30 | 83.228 | 7.378 |
| 31 | 84.103 | 7.346 |
| 32 | 84.909 | 6.771 |
| 33 | 85.691 | 6.558 |
| 34 | 86.469 | 6.534 |
| 35 | 87.161 | 5.808 |
| 36 | 87.812 | 5.465 |
| 37 | 88.462 | 5.452 |
| 38 | 89.011 | 4.609 |
| 39 | 89.499 | 4.099 |
| 40 | 89.987 | 4.098 |
| 41 | 90.457 | 3.945 |
| 42 | 90.913 | 3.826 |
| 43 | 91.368 | 3.826 |
| 44 | 91.792 | 3.557 |
| 45 | 92.183 | 3.279 |
| 46 | 92.573 | 3.279 |
| 47 | 92.950 | 3.163 |
| 48 | 93.308 | 3.007 |
| 49 | 93.667 | 3.006 |
| 50 | 93.995 | 2.760 |
| 51 | 94.273 | 2.331 |
| 52 | 94.550 | 2.323 |
| 53 | 94.826 | 2.323 |
| 54 | 95.103 | 2.323 |
| 55 | 95.380 | 2.323 |
| 56 | 95.640 | 2.187 |
| 57 | 95.855 | 1.800 |
| 58 | 96.066 | 1.776 |
| 59 | 96.278 | 1.776 |
| 60 | 96.490 | 1.776 |
| 61 | 96.701 | 1.776 |
| 62 | 96.902 | 1.690 |
| 63 | 97.055 | 1.283 |
| 64 | 97.202 | 1.230 |
| 65 | 97.348 | 1.230 |
| 66 | 97.495 | 1.230 |
| 67 | 97.641 | 1.230 |
| 68 | 97.782 | 1.182 |
| 69 | 97.875 | 0.776 |
| 70 | 97.956 | 0.683 |
| 71 | 98.037 | 0.683 |
| 72 | 98.119 | 0.683 |
| 73 | 98.200 | 0.683 |

| | | |
|---|---|---|
| 74 | 98.282 | 0.688 |
| 75 | 98.375 | 0.784 |
| 76 | 98.473 | 0.820 |
| 77 | 98.571 | 0.820 |
| 78 | 98.668 | 0.820 |
| 79 | 98.766 | 0.820 |
| 80 | 98.864 | 0.820 |
| 81 | 98.961 | 0.820 |
| 82 | 99.059 | 0.820 |
| 83 | 99.157 | 0.820 |
| 84 | 99.254 | 0.820 |
| 85 | 99.352 | 0.820 |
| 86 | 99.450 | 0.820 |
| 87 | 99.525 | 0.630 |
| 88 | 99.575 | 0.427 |
| 89 | 99.626 | 0.427 |
| 90 | 99.677 | 0.427 |
| 91 | 99.728 | 0.427 |
| 92 | 99.779 | 0.427 |
| 93 | 99.830 | 0.427 |
| 94 | 99.881 | 0.427 |
| 95 | 99.932 | 0.427 |
| 96 | 100.000 | 0.213 |

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| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6432 | 0.6432 |
| 2 | 0.7919 | 0.1487 |
| 3 | 0.8943 | 0.1024 |
| 4 | 0.9750 | 0.0806 |
| 5 | 1.0425 | 0.0675 |
| 6 | 1.1011 | 0.0586 |
| 7 | 1.1532 | 0.0521 |
| 8 | 1.2003 | 0.0471 |
| 9 | 1.2435 | 0.0432 |
| 10 | 1.2834 | 0.0399 |
| 11 | 1.3206 | 0.0372 |
| 12 | 1.3556 | 0.0349 |
| 13 | 1.3743 | 0.0187 |
| 14 | 1.3918 | 0.0176 |
| 15 | 1.4084 | 0.0165 |
| 16 | 1.4241 | 0.0157 |
| 17 | 1.4389 | 0.0149 |
| 18 | 1.4531 | 0.0142 |
| 19 | 1.4666 | 0.0135 |
| 20 | 1.4795 | 0.0129 |
| 21 | 1.4920 | 0.0124 |
| 22 | 1.5039 | 0.0119 |
| 23 | 1.5154 | 0.0115 |
| 24 | 1.5265 | 0.0111 |
| 25 | 1.5372 | 0.0107 |
| 26 | 1.5475 | 0.0104 |
| 27 | 1.5576 | 0.0100 |
| 28 | 1.5673 | 0.0097 |
| 29 | 1.5768 | 0.0094 |
| 30 | 1.5860 | 0.0092 |
| 31 | 1.5949 | 0.0089 |
| 32 | 1.6036 | 0.0087 |
| 33 | 1.6121 | 0.0085 |

| | | |
|---|---|---|
| 34 | 1.6203 | 0.0083 |
| 35 | 1.6284 | 0.0081 |
| 36 | 1.6363 | 0.0079 |
| 37 | 1.6439 | 0.0076 |
| 38 | 1.6513 | 0.0074 |
| 39 | 1.6585 | 0.0073 |
| 40 | 1.6657 | 0.0071 |
| 41 | 1.6726 | 0.0070 |
| 42 | 1.6794 | 0.0068 |
| 43 | 1.6861 | 0.0067 |
| 44 | 1.6927 | 0.0066 |
| 45 | 1.6991 | 0.0064 |
| 46 | 1.7055 | 0.0063 |
| 47 | 1.7117 | 0.0062 |
| 48 | 1.7178 | 0.0061 |
| 49 | 1.7238 | 0.0060 |
| 50 | 1.7297 | 0.0059 |
| 51 | 1.7355 | 0.0058 |
| 52 | 1.7412 | 0.0057 |
| 53 | 1.7468 | 0.0056 |
| 54 | 1.7523 | 0.0055 |
| 55 | 1.7578 | 0.0054 |
| 56 | 1.7631 | 0.0054 |
| 57 | 1.7684 | 0.0053 |
| 58 | 1.7736 | 0.0052 |
| 59 | 1.7787 | 0.0051 |
| 60 | 1.7838 | 0.0051 |
| 61 | 1.7888 | 0.0050 |
| 62 | 1.7937 | 0.0049 |
| 63 | 1.7986 | 0.0049 |
| 64 | 1.8033 | 0.0048 |
| 65 | 1.8081 | 0.0047 |
| 66 | 1.8127 | 0.0047 |
| 67 | 1.8174 | 0.0046 |
| 68 | 1.8219 | 0.0046 |
| 69 | 1.8264 | 0.0045 |
| 70 | 1.8309 | 0.0044 |
| 71 | 1.8353 | 0.0044 |
| 72 | 1.8396 | 0.0043 |
| 73 | 1.8451 | 0.0055 |
| 74 | 1.8505 | 0.0054 |
| 75 | 1.8558 | 0.0054 |
| 76 | 1.8612 | 0.0053 |
| 77 | 1.8664 | 0.0052 |
| 78 | 1.8716 | 0.0052 |
| 79 | 1.8767 | 0.0051 |
| 80 | 1.8818 | 0.0051 |
| 81 | 1.8869 | 0.0050 |
| 82 | 1.8919 | 0.0050 |
| 83 | 1.8968 | 0.0049 |
| 84 | 1.9017 | 0.0049 |
| 85 | 1.9066 | 0.0049 |
| 86 | 1.9114 | 0.0048 |
| 87 | 1.9161 | 0.0048 |
| 88 | 1.9209 | 0.0047 |
| 89 | 1.9255 | 0.0047 |
| 90 | 1.9302 | 0.0046 |
| 91 | 1.9348 | 0.0046 |
| 92 | 1.9393 | 0.0046 |

| | | |
|---|---|---|
| 93 | 1.9439 | 0.0045 |
| 94 | 1.9484 | 0.0045 |
| 95 | 1.9528 | 0.0044 |
| 96 | 1.9572 | 0.0044 |
| 97 | 1.9616 | 0.0044 |
| 98 | 1.9659 | 0.0043 |
| 99 | 1.9702 | 0.0043 |
| 100 | 1.9745 | 0.0043 |
| 101 | 1.9787 | 0.0042 |
| 102 | 1.9829 | 0.0042 |
| 103 | 1.9871 | 0.0042 |
| 104 | 1.9912 | 0.0041 |
| 105 | 1.9954 | 0.0041 |
| 106 | 1.9994 | 0.0041 |
| 107 | 2.0035 | 0.0040 |
| 108 | 2.0075 | 0.0040 |
| 109 | 2.0115 | 0.0040 |
| 110 | 2.0155 | 0.0040 |
| 111 | 2.0194 | 0.0039 |
| 112 | 2.0233 | 0.0039 |
| 113 | 2.0272 | 0.0039 |
| 114 | 2.0310 | 0.0039 |
| 115 | 2.0348 | 0.0038 |
| 116 | 2.0386 | 0.0038 |
| 117 | 2.0424 | 0.0038 |
| 118 | 2.0462 | 0.0037 |
| 119 | 2.0499 | 0.0037 |
| 120 | 2.0536 | 0.0037 |
| 121 | 2.0573 | 0.0037 |
| 122 | 2.0609 | 0.0037 |
| 123 | 2.0645 | 0.0036 |
| 124 | 2.0681 | 0.0036 |
| 125 | 2.0717 | 0.0036 |
| 126 | 2.0753 | 0.0036 |
| 127 | 2.0788 | 0.0035 |
| 128 | 2.0823 | 0.0035 |
| 129 | 2.0858 | 0.0035 |
| 130 | 2.0893 | 0.0035 |
| 131 | 2.0927 | 0.0035 |
| 132 | 2.0962 | 0.0034 |
| 133 | 2.0996 | 0.0034 |
| 134 | 2.1030 | 0.0034 |
| 135 | 2.1064 | 0.0034 |
| 136 | 2.1097 | 0.0034 |
| 137 | 2.1130 | 0.0033 |
| 138 | 2.1163 | 0.0033 |
| 139 | 2.1196 | 0.0033 |
| 140 | 2.1229 | 0.0033 |
| 141 | 2.1262 | 0.0033 |
| 142 | 2.1294 | 0.0032 |
| 143 | 2.1326 | 0.0032 |
| 144 | 2.1358 | 0.0032 |
| 145 | 2.1390 | 0.0032 |
| 146 | 2.1422 | 0.0032 |
| 147 | 2.1453 | 0.0032 |
| 148 | 2.1485 | 0.0031 |
| 149 | 2.1516 | 0.0031 |
| 150 | 2.1547 | 0.0031 |
| 151 | 2.1578 | 0.0031 |

| | | |
|---|---|---|
| 152 | 2.1609 | 0.0031 |
| 153 | 2.1639 | 0.0031 |
| 154 | 2.1670 | 0.0030 |
| 155 | 2.1700 | 0.0030 |
| 156 | 2.1730 | 0.0030 |
| 157 | 2.1760 | 0.0030 |
| 158 | 2.1790 | 0.0030 |
| 159 | 2.1819 | 0.0030 |
| 160 | 2.1849 | 0.0029 |
| 161 | 2.1878 | 0.0029 |
| 162 | 2.1907 | 0.0029 |
| 163 | 2.1936 | 0.0029 |
| 164 | 2.1965 | 0.0029 |
| 165 | 2.1994 | 0.0029 |
| 166 | 2.2023 | 0.0029 |
| 167 | 2.2051 | 0.0029 |
| 168 | 2.2080 | 0.0028 |
| 169 | 2.2108 | 0.0028 |
| 170 | 2.2136 | 0.0028 |
| 171 | 2.2164 | 0.0028 |
| 172 | 2.2192 | 0.0028 |
| 173 | 2.2219 | 0.0028 |
| 174 | 2.2247 | 0.0028 |
| 175 | 2.2275 | 0.0027 |
| 176 | 2.2302 | 0.0027 |
| 177 | 2.2329 | 0.0027 |
| 178 | 2.2356 | 0.0027 |
| 179 | 2.2383 | 0.0027 |
| 180 | 2.2410 | 0.0027 |
| 181 | 2.2437 | 0.0027 |
| 182 | 2.2464 | 0.0027 |
| 183 | 2.2490 | 0.0027 |
| 184 | 2.2516 | 0.0026 |
| 185 | 2.2543 | 0.0026 |
| 186 | 2.2569 | 0.0026 |
| 187 | 2.2595 | 0.0026 |
| 188 | 2.2621 | 0.0026 |
| 189 | 2.2647 | 0.0026 |
| 190 | 2.2673 | 0.0026 |
| 191 | 2.2698 | 0.0026 |
| 192 | 2.2724 | 0.0026 |
| 193 | 2.2749 | 0.0025 |
| 194 | 2.2775 | 0.0025 |
| 195 | 2.2800 | 0.0025 |
| 196 | 2.2825 | 0.0025 |
| 197 | 2.2850 | 0.0025 |
| 198 | 2.2875 | 0.0025 |
| 199 | 2.2900 | 0.0025 |
| 200 | 2.2925 | 0.0025 |
| 201 | 2.2949 | 0.0025 |
| 202 | 2.2974 | 0.0025 |
| 203 | 2.2998 | 0.0024 |
| 204 | 2.3023 | 0.0024 |
| 205 | 2.3047 | 0.0024 |
| 206 | 2.3071 | 0.0024 |
| 207 | 2.3095 | 0.0024 |
| 208 | 2.3119 | 0.0024 |
| 209 | 2.3143 | 0.0024 |
| 210 | 2.3167 | 0.0024 |

| | | |
|---|---|---|
| 211 | 2.3190 | 0.0024 |
| 212 | 2.3214 | 0.0024 |
| 213 | 2.3238 | 0.0024 |
| 214 | 2.3261 | 0.0023 |
| 215 | 2.3284 | 0.0023 |
| 216 | 2.3308 | 0.0023 |
| 217 | 2.3331 | 0.0023 |
| 218 | 2.3354 | 0.0023 |
| 219 | 2.3377 | 0.0023 |
| 220 | 2.3400 | 0.0023 |
| 221 | 2.3423 | 0.0023 |
| 222 | 2.3446 | 0.0023 |
| 223 | 2.3468 | 0.0023 |
| 224 | 2.3491 | 0.0023 |
| 225 | 2.3514 | 0.0023 |
| 226 | 2.3536 | 0.0022 |
| 227 | 2.3559 | 0.0022 |
| 228 | 2.3581 | 0.0022 |
| 229 | 2.3603 | 0.0022 |
| 230 | 2.3625 | 0.0022 |
| 231 | 2.3647 | 0.0022 |
| 232 | 2.3669 | 0.0022 |
| 233 | 2.3691 | 0.0022 |
| 234 | 2.3713 | 0.0022 |
| 235 | 2.3735 | 0.0022 |
| 236 | 2.3757 | 0.0022 |
| 237 | 2.3778 | 0.0022 |
| 238 | 2.3800 | 0.0022 |
| 239 | 2.3821 | 0.0022 |
| 240 | 2.3843 | 0.0021 |
| 241 | 2.3864 | 0.0021 |
| 242 | 2.3885 | 0.0021 |
| 243 | 2.3907 | 0.0021 |
| 244 | 2.3928 | 0.0021 |
| 245 | 2.3949 | 0.0021 |
| 246 | 2.3970 | 0.0021 |
| 247 | 2.3991 | 0.0021 |
| 248 | 2.4012 | 0.0021 |
| 249 | 2.4033 | 0.0021 |
| 250 | 2.4053 | 0.0021 |
| 251 | 2.4074 | 0.0021 |
| 252 | 2.4095 | 0.0021 |
| 253 | 2.4115 | 0.0021 |
| 254 | 2.4136 | 0.0021 |
| 255 | 2.4156 | 0.0020 |
| 256 | 2.4177 | 0.0020 |
| 257 | 2.4197 | 0.0020 |
| 258 | 2.4217 | 0.0020 |
| 259 | 2.4237 | 0.0020 |
| 260 | 2.4257 | 0.0020 |
| 261 | 2.4278 | 0.0020 |
| 262 | 2.4298 | 0.0020 |
| 263 | 2.4317 | 0.0020 |
| 264 | 2.4337 | 0.0020 |
| 265 | 2.4357 | 0.0020 |
| 266 | 2.4377 | 0.0020 |
| 267 | 2.4397 | 0.0020 |
| 268 | 2.4416 | 0.0020 |
| 269 | 2.4436 | 0.0020 |

| | | |
|---|---|---|
| 270 | 2.4455 | 0.0020 |
| 271 | 2.4475 | 0.0019 |
| 272 | 2.4494 | 0.0019 |
| 273 | 2.4514 | 0.0019 |
| 274 | 2.4533 | 0.0019 |
| 275 | 2.4552 | 0.0019 |
| 276 | 2.4572 | 0.0019 |
| 277 | 2.4591 | 0.0019 |
| 278 | 2.4610 | 0.0019 |
| 279 | 2.4629 | 0.0019 |
| 280 | 2.4648 | 0.0019 |
| 281 | 2.4667 | 0.0019 |
| 282 | 2.4686 | 0.0019 |
| 283 | 2.4704 | 0.0019 |
| 284 | 2.4723 | 0.0019 |
| 285 | 2.4742 | 0.0019 |
| 286 | 2.4761 | 0.0019 |
| 287 | 2.4779 | 0.0019 |
| 288 | 2.4798 | 0.0019 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0019 | 0.0012 | 0.0006 |
| 2 | 0.0019 | 0.0012 | 0.0006 |
| 3 | 0.0019 | 0.0012 | 0.0006 |
| 4 | 0.0019 | 0.0012 | 0.0006 |
| 5 | 0.0019 | 0.0013 | 0.0006 |
| 6 | 0.0019 | 0.0013 | 0.0006 |
| 7 | 0.0019 | 0.0013 | 0.0006 |
| 8 | 0.0019 | 0.0013 | 0.0006 |
| 9 | 0.0019 | 0.0013 | 0.0006 |
| 10 | 0.0019 | 0.0013 | 0.0006 |
| 11 | 0.0019 | 0.0013 | 0.0006 |
| 12 | 0.0019 | 0.0013 | 0.0007 |
| 13 | 0.0020 | 0.0013 | 0.0007 |
| 14 | 0.0020 | 0.0013 | 0.0007 |
| 15 | 0.0020 | 0.0013 | 0.0007 |
| 16 | 0.0020 | 0.0013 | 0.0007 |
| 17 | 0.0020 | 0.0013 | 0.0007 |
| 18 | 0.0020 | 0.0013 | 0.0007 |
| 19 | 0.0020 | 0.0013 | 0.0007 |
| 20 | 0.0020 | 0.0013 | 0.0007 |
| 21 | 0.0020 | 0.0013 | 0.0007 |
| 22 | 0.0020 | 0.0013 | 0.0007 |
| 23 | 0.0020 | 0.0014 | 0.0007 |
| 24 | 0.0021 | 0.0014 | 0.0007 |
| 25 | 0.0021 | 0.0014 | 0.0007 |
| 26 | 0.0021 | 0.0014 | 0.0007 |
| 27 | 0.0021 | 0.0014 | 0.0007 |
| 28 | 0.0021 | 0.0014 | 0.0007 |
| 29 | 0.0021 | 0.0014 | 0.0007 |
| 30 | 0.0021 | 0.0014 | 0.0007 |
| 31 | 0.0021 | 0.0014 | 0.0007 |
| 32 | 0.0021 | 0.0014 | 0.0007 |
| 33 | 0.0021 | 0.0014 | 0.0007 |
| 34 | 0.0022 | 0.0014 | 0.0007 |
| 35 | 0.0022 | 0.0014 | 0.0007 |

| | | | |
|---|---|---|---|
| 36 | 0.0022 | 0.0014 | 0.0007 |
| 37 | 0.0022 | 0.0015 | 0.0007 |
| 38 | 0.0022 | 0.0015 | 0.0007 |
| 39 | 0.0022 | 0.0015 | 0.0007 |
| 40 | 0.0022 | 0.0015 | 0.0007 |
| 41 | 0.0022 | 0.0015 | 0.0007 |
| 42 | 0.0022 | 0.0015 | 0.0008 |
| 43 | 0.0023 | 0.0015 | 0.0008 |
| 44 | 0.0023 | 0.0015 | 0.0008 |
| 45 | 0.0023 | 0.0015 | 0.0008 |
| 46 | 0.0023 | 0.0015 | 0.0008 |
| 47 | 0.0023 | 0.0015 | 0.0008 |
| 48 | 0.0023 | 0.0015 | 0.0008 |
| 49 | 0.0023 | 0.0015 | 0.0008 |
| 50 | 0.0023 | 0.0016 | 0.0008 |
| 51 | 0.0024 | 0.0016 | 0.0008 |
| 52 | 0.0024 | 0.0016 | 0.0008 |
| 53 | 0.0024 | 0.0016 | 0.0008 |
| 54 | 0.0024 | 0.0016 | 0.0008 |
| 55 | 0.0024 | 0.0016 | 0.0008 |
| 56 | 0.0024 | 0.0016 | 0.0008 |
| 57 | 0.0024 | 0.0016 | 0.0008 |
| 58 | 0.0024 | 0.0016 | 0.0008 |
| 59 | 0.0025 | 0.0016 | 0.0008 |
| 60 | 0.0025 | 0.0016 | 0.0008 |
| 61 | 0.0025 | 0.0017 | 0.0008 |
| 62 | 0.0025 | 0.0017 | 0.0008 |
| 63 | 0.0025 | 0.0017 | 0.0008 |
| 64 | 0.0025 | 0.0017 | 0.0009 |
| 65 | 0.0026 | 0.0017 | 0.0009 |
| 66 | 0.0026 | 0.0017 | 0.0009 |
| 67 | 0.0026 | 0.0017 | 0.0009 |
| 68 | 0.0026 | 0.0017 | 0.0009 |
| 69 | 0.0026 | 0.0017 | 0.0009 |
| 70 | 0.0026 | 0.0017 | 0.0009 |
| 71 | 0.0027 | 0.0018 | 0.0009 |
| 72 | 0.0027 | 0.0018 | 0.0009 |
| 73 | 0.0027 | 0.0018 | 0.0009 |
| 74 | 0.0027 | 0.0018 | 0.0009 |
| 75 | 0.0027 | 0.0018 | 0.0009 |
| 76 | 0.0027 | 0.0018 | 0.0009 |
| 77 | 0.0028 | 0.0018 | 0.0009 |
| 78 | 0.0028 | 0.0018 | 0.0009 |
| 79 | 0.0028 | 0.0019 | 0.0009 |
| 80 | 0.0028 | 0.0019 | 0.0009 |
| 81 | 0.0028 | 0.0019 | 0.0010 |
| 82 | 0.0029 | 0.0019 | 0.0010 |
| 83 | 0.0029 | 0.0019 | 0.0010 |
| 84 | 0.0029 | 0.0019 | 0.0010 |
| 85 | 0.0029 | 0.0019 | 0.0010 |
| 86 | 0.0029 | 0.0019 | 0.0010 |
| 87 | 0.0030 | 0.0020 | 0.0010 |
| 88 | 0.0030 | 0.0020 | 0.0010 |
| 89 | 0.0030 | 0.0020 | 0.0010 |
| 90 | 0.0030 | 0.0020 | 0.0010 |
| 91 | 0.0031 | 0.0020 | 0.0010 |
| 92 | 0.0031 | 0.0020 | 0.0010 |
| 93 | 0.0031 | 0.0021 | 0.0010 |
| 94 | 0.0031 | 0.0021 | 0.0010 |

| | | | |
|---|---|---|---|
| 95 | 0.0032 | 0.0021 | 0.0011 |
| 96 | 0.0032 | 0.0021 | 0.0011 |
| 97 | 0.0032 | 0.0021 | 0.0011 |
| 98 | 0.0032 | 0.0021 | 0.0011 |
| 99 | 0.0033 | 0.0022 | 0.0011 |
| 100 | 0.0033 | 0.0022 | 0.0011 |
| 101 | 0.0033 | 0.0022 | 0.0011 |
| 102 | 0.0033 | 0.0022 | 0.0011 |
| 103 | 0.0034 | 0.0022 | 0.0011 |
| 104 | 0.0034 | 0.0023 | 0.0011 |
| 105 | 0.0034 | 0.0023 | 0.0012 |
| 106 | 0.0035 | 0.0023 | 0.0012 |
| 107 | 0.0035 | 0.0023 | 0.0012 |
| 108 | 0.0035 | 0.0023 | 0.0012 |
| 109 | 0.0036 | 0.0024 | 0.0012 |
| 110 | 0.0036 | 0.0024 | 0.0012 |
| 111 | 0.0036 | 0.0024 | 0.0012 |
| 112 | 0.0037 | 0.0024 | 0.0012 |
| 113 | 0.0037 | 0.0025 | 0.0012 |
| 114 | 0.0037 | 0.0025 | 0.0012 |
| 115 | 0.0038 | 0.0025 | 0.0013 |
| 116 | 0.0038 | 0.0025 | 0.0013 |
| 117 | 0.0039 | 0.0026 | 0.0013 |
| 118 | 0.0039 | 0.0026 | 0.0013 |
| 119 | 0.0039 | 0.0026 | 0.0013 |
| 120 | 0.0040 | 0.0026 | 0.0013 |
| 121 | 0.0040 | 0.0027 | 0.0013 |
| 122 | 0.0040 | 0.0027 | 0.0014 |
| 123 | 0.0041 | 0.0027 | 0.0014 |
| 124 | 0.0041 | 0.0028 | 0.0014 |
| 125 | 0.0042 | 0.0028 | 0.0014 |
| 126 | 0.0042 | 0.0028 | 0.0014 |
| 127 | 0.0043 | 0.0029 | 0.0014 |
| 128 | 0.0043 | 0.0029 | 0.0015 |
| 129 | 0.0044 | 0.0029 | 0.0015 |
| 130 | 0.0044 | 0.0030 | 0.0015 |
| 131 | 0.0045 | 0.0030 | 0.0015 |
| 132 | 0.0046 | 0.0030 | 0.0015 |
| 133 | 0.0046 | 0.0031 | 0.0016 |
| 134 | 0.0047 | 0.0031 | 0.0016 |
| 135 | 0.0048 | 0.0032 | 0.0016 |
| 136 | 0.0048 | 0.0032 | 0.0016 |
| 137 | 0.0049 | 0.0033 | 0.0016 |
| 138 | 0.0049 | 0.0033 | 0.0017 |
| 139 | 0.0050 | 0.0034 | 0.0017 |
| 140 | 0.0051 | 0.0034 | 0.0017 |
| 141 | 0.0052 | 0.0035 | 0.0017 |
| 142 | 0.0052 | 0.0035 | 0.0018 |
| 143 | 0.0054 | 0.0036 | 0.0018 |
| 144 | 0.0054 | 0.0036 | 0.0018 |
| 145 | 0.0043 | 0.0029 | 0.0015 |
| 146 | 0.0044 | 0.0029 | 0.0015 |
| 147 | 0.0045 | 0.0030 | 0.0015 |
| 148 | 0.0046 | 0.0030 | 0.0015 |
| 149 | 0.0047 | 0.0031 | 0.0016 |
| 150 | 0.0047 | 0.0031 | 0.0016 |
| 151 | 0.0049 | 0.0032 | 0.0016 |
| 152 | 0.0049 | 0.0033 | 0.0017 |
| 153 | 0.0051 | 0.0034 | 0.0017 |

| | | | |
|---|---|---|---|
| 154 | 0.0051 | 0.0034 | 0.0017 |
| 155 | 0.0053 | 0.0035 | 0.0018 |
| 156 | 0.0054 | 0.0036 | 0.0018 |
| 157 | 0.0055 | 0.0037 | 0.0019 |
| 158 | 0.0056 | 0.0037 | 0.0019 |
| 159 | 0.0058 | 0.0039 | 0.0019 |
| 160 | 0.0059 | 0.0039 | 0.0020 |
| 161 | 0.0061 | 0.0041 | 0.0020 |
| 162 | 0.0062 | 0.0041 | 0.0021 |
| 163 | 0.0064 | 0.0043 | 0.0022 |
| 164 | 0.0066 | 0.0044 | 0.0022 |
| 165 | 0.0068 | 0.0045 | 0.0023 |
| 166 | 0.0070 | 0.0046 | 0.0023 |
| 167 | 0.0073 | 0.0048 | 0.0024 |
| 168 | 0.0074 | 0.0049 | 0.0025 |
| 169 | 0.0079 | 0.0052 | 0.0026 |
| 170 | 0.0081 | 0.0054 | 0.0027 |
| 171 | 0.0085 | 0.0056 | 0.0028 |
| 172 | 0.0087 | 0.0058 | 0.0029 |
| 173 | 0.0092 | 0.0061 | 0.0031 |
| 174 | 0.0094 | 0.0063 | 0.0032 |
| 175 | 0.0100 | 0.0067 | 0.0034 |
| 176 | 0.0104 | 0.0069 | 0.0035 |
| 177 | 0.0111 | 0.0074 | 0.0037 |
| 178 | 0.0115 | 0.0076 | 0.0039 |
| 179 | 0.0124 | 0.0083 | 0.0042 |
| 180 | 0.0129 | 0.0086 | 0.0043 |
| 181 | 0.0142 | 0.0094 | 0.0048 |
| 182 | 0.0149 | 0.0099 | 0.0050 |
| 183 | 0.0165 | 0.0110 | 0.0056 |
| 184 | 0.0176 | 0.0117 | 0.0059 |
| 185 | 0.0349 | 0.0232 | 0.0117 |
| 186 | 0.0372 | 0.0247 | 0.0125 |
| 187 | 0.0432 | 0.0287 | 0.0145 |
| 188 | 0.0471 | 0.0313 | 0.0158 |
| 189 | 0.0586 | 0.0320 | 0.0266 |
| 190 | 0.0675 | 0.0320 | 0.0355 |
| 191 | 0.1024 | 0.0320 | 0.0704 |
| 192 | 0.1487 | 0.0320 | 0.1167 |
| 193 | 0.6432 | 0.0320 | 0.6112 |
| 194 | 0.0806 | 0.0320 | 0.0486 |
| 195 | 0.0521 | 0.0320 | 0.0201 |
| 196 | 0.0399 | 0.0265 | 0.0134 |
| 197 | 0.0187 | 0.0124 | 0.0063 |
| 198 | 0.0157 | 0.0104 | 0.0053 |
| 199 | 0.0135 | 0.0090 | 0.0045 |
| 200 | 0.0119 | 0.0079 | 0.0040 |
| 201 | 0.0107 | 0.0071 | 0.0036 |
| 202 | 0.0097 | 0.0065 | 0.0033 |
| 203 | 0.0089 | 0.0059 | 0.0030 |
| 204 | 0.0083 | 0.0055 | 0.0028 |
| 205 | 0.0076 | 0.0050 | 0.0025 |
| 206 | 0.0071 | 0.0047 | 0.0024 |
| 207 | 0.0067 | 0.0044 | 0.0022 |
| 208 | 0.0063 | 0.0042 | 0.0021 |
| 209 | 0.0060 | 0.0040 | 0.0020 |
| 210 | 0.0057 | 0.0038 | 0.0019 |
| 211 | 0.0054 | 0.0036 | 0.0018 |
| 212 | 0.0052 | 0.0035 | 0.0017 |

| | | | |
|---|---|---|---|
| 213 | 0.0050 | 0.0033 | 0.0017 |
| 214 | 0.0048 | 0.0032 | 0.0016 |
| 215 | 0.0046 | 0.0031 | 0.0015 |
| 216 | 0.0044 | 0.0030 | 0.0015 |
| 217 | 0.0055 | 0.0036 | 0.0018 |
| 218 | 0.0053 | 0.0035 | 0.0018 |
| 219 | 0.0051 | 0.0034 | 0.0017 |
| 220 | 0.0050 | 0.0033 | 0.0017 |
| 221 | 0.0049 | 0.0032 | 0.0016 |
| 222 | 0.0047 | 0.0031 | 0.0016 |
| 223 | 0.0046 | 0.0031 | 0.0015 |
| 224 | 0.0045 | 0.0030 | 0.0015 |
| 225 | 0.0044 | 0.0029 | 0.0015 |
| 226 | 0.0043 | 0.0028 | 0.0014 |
| 227 | 0.0042 | 0.0028 | 0.0014 |
| 228 | 0.0041 | 0.0027 | 0.0014 |
| 229 | 0.0040 | 0.0027 | 0.0013 |
| 230 | 0.0039 | 0.0026 | 0.0013 |
| 231 | 0.0038 | 0.0025 | 0.0013 |
| 232 | 0.0037 | 0.0025 | 0.0013 |
| 233 | 0.0037 | 0.0024 | 0.0012 |
| 234 | 0.0036 | 0.0024 | 0.0012 |
| 235 | 0.0035 | 0.0024 | 0.0012 |
| 236 | 0.0035 | 0.0023 | 0.0012 |
| 237 | 0.0034 | 0.0023 | 0.0011 |
| 238 | 0.0034 | 0.0022 | 0.0011 |
| 239 | 0.0033 | 0.0022 | 0.0011 |
| 240 | 0.0032 | 0.0022 | 0.0011 |
| 241 | 0.0032 | 0.0021 | 0.0011 |
| 242 | 0.0031 | 0.0021 | 0.0011 |
| 243 | 0.0031 | 0.0021 | 0.0010 |
| 244 | 0.0030 | 0.0020 | 0.0010 |
| 245 | 0.0030 | 0.0020 | 0.0010 |
| 246 | 0.0029 | 0.0020 | 0.0010 |
| 247 | 0.0029 | 0.0019 | 0.0010 |
| 248 | 0.0029 | 0.0019 | 0.0010 |
| 249 | 0.0028 | 0.0019 | 0.0009 |
| 250 | 0.0028 | 0.0019 | 0.0009 |
| 251 | 0.0027 | 0.0018 | 0.0009 |
| 252 | 0.0027 | 0.0018 | 0.0009 |
| 253 | 0.0027 | 0.0018 | 0.0009 |
| 254 | 0.0026 | 0.0018 | 0.0009 |
| 255 | 0.0026 | 0.0017 | 0.0009 |
| 256 | 0.0026 | 0.0017 | 0.0009 |
| 257 | 0.0025 | 0.0017 | 0.0009 |
| 258 | 0.0025 | 0.0017 | 0.0008 |
| 259 | 0.0025 | 0.0017 | 0.0008 |
| 260 | 0.0025 | 0.0016 | 0.0008 |
| 261 | 0.0024 | 0.0016 | 0.0008 |
| 262 | 0.0024 | 0.0016 | 0.0008 |
| 263 | 0.0024 | 0.0016 | 0.0008 |
| 264 | 0.0023 | 0.0016 | 0.0008 |
| 265 | 0.0023 | 0.0015 | 0.0008 |
| 266 | 0.0023 | 0.0015 | 0.0008 |
| 267 | 0.0023 | 0.0015 | 0.0008 |
| 268 | 0.0022 | 0.0015 | 0.0008 |
| 269 | 0.0022 | 0.0015 | 0.0007 |
| 270 | 0.0022 | 0.0015 | 0.0007 |
| 271 | 0.0022 | 0.0014 | 0.0007 |

| | | | |
|---|---|---|---|
| 272 | 0.0022 | 0.0014 | 0.0007 |
| 273 | 0.0021 | 0.0014 | 0.0007 |
| 274 | 0.0021 | 0.0014 | 0.0007 |
| 275 | 0.0021 | 0.0014 | 0.0007 |
| 276 | 0.0021 | 0.0014 | 0.0007 |
| 277 | 0.0021 | 0.0014 | 0.0007 |
| 278 | 0.0020 | 0.0014 | 0.0007 |
| 279 | 0.0020 | 0.0013 | 0.0007 |
| 280 | 0.0020 | 0.0013 | 0.0007 |
| 281 | 0.0020 | 0.0013 | 0.0007 |
| 282 | 0.0020 | 0.0013 | 0.0007 |
| 283 | 0.0019 | 0.0013 | 0.0007 |
| 284 | 0.0019 | 0.0013 | 0.0006 |
| 285 | 0.0019 | 0.0013 | 0.0006 |
| 286 | 0.0019 | 0.0013 | 0.0006 |
| 287 | 0.0019 | 0.0013 | 0.0006 |
| 288 | 0.0019 | 0.0012 | 0.0006 |

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Total soil rain loss = 1.11(In)
Total effective rainfall = 1.37(In)
Peak flow rate in flood hydrograph = 60.22(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

---

Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 17.5 | 35.0 | 52.5 | 70.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+15 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+20 | 0.0003 | 0.02 | Q | \| | \| | \| | \| |
| 0+25 | 0.0005 | 0.03 | Q | \| | \| | \| | \| |
| 0+30 | 0.0008 | 0.05 | Q | \| | \| | \| | \| |
| 0+35 | 0.0013 | 0.07 | Q | \| | \| | \| | \| |
| 0+40 | 0.0019 | 0.09 | Q | \| | \| | \| | \| |
| 0+45 | 0.0028 | 0.13 | Q | \| | \| | \| | \| |
| 0+50 | 0.0040 | 0.18 | Q | \| | \| | \| | \| |
| 0+55 | 0.0055 | 0.21 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0072 | 0.24 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0090 | 0.27 | Q | \| | \| | \| | \| |
| 1+10 | 0.0111 | 0.29 | Q | \| | \| | \| | \| |
| 1+15 | 0.0132 | 0.31 | Q | \| | \| | \| | \| |
| 1+20 | 0.0155 | 0.33 | Q | \| | \| | \| | \| |
| 1+25 | 0.0179 | 0.35 | Q | \| | \| | \| | \| |
| 1+30 | 0.0203 | 0.36 | Q | \| | \| | \| | \| |
| 1+35 | 0.0229 | 0.37 | Q | \| | \| | \| | \| |
| 1+40 | 0.0255 | 0.38 | Q | \| | \| | \| | \| |
| 1+45 | 0.0283 | 0.39 | Q | \| | \| | \| | \| |
| 1+50 | 0.0310 | 0.40 | Q | \| | \| | \| | \| |
| 1+55 | 0.0339 | 0.41 | Q | \| | \| | \| | \| |
| 2+ 0 | 0.0368 | 0.42 | Q | \| | \| | \| | \| |
| 2+ 5 | 0.0398 | 0.43 | Q | \| | \| | \| | \| |
| 2+10 | 0.0428 | 0.44 | Q | \| | \| | \| | \| |
| 2+15 | 0.0459 | 0.45 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+20 | 0.0490 | 0.45 | Q | | | | |
| 2+25 | 0.0522 | 0.46 | Q | | | | |
| 2+30 | 0.0554 | 0.47 | Q | | | | |
| 2+35 | 0.0587 | 0.47 | Q | | | | |
| 2+40 | 0.0620 | 0.48 | Q | | | | |
| 2+45 | 0.0653 | 0.49 | Q | | | | |
| 2+50 | 0.0687 | 0.49 | Q | | | | |
| 2+55 | 0.0722 | 0.50 | Q | | | | |
| 3+ 0 | 0.0756 | 0.51 | Q | | | | |
| 3+ 5 | 0.0792 | 0.51 | Q | | | | |
| 3+10 | 0.0827 | 0.52 | Q | | | | |
| 3+15 | 0.0863 | 0.52 | Q | | | | |
| 3+20 | 0.0899 | 0.53 | Q | | | | |
| 3+25 | 0.0936 | 0.53 | Q | | | | |
| 3+30 | 0.0973 | 0.54 | Q | | | | |
| 3+35 | 0.1010 | 0.54 | Q | | | | |
| 3+40 | 0.1048 | 0.55 | Q | | | | |
| 3+45 | 0.1085 | 0.55 | Q | | | | |
| 3+50 | 0.1124 | 0.56 | Q | | | | |
| 3+55 | 0.1162 | 0.56 | Q | | | | |
| 4+ 0 | 0.1201 | 0.56 | Q | | | | |
| 4+ 5 | 0.1240 | 0.57 | Q | | | | |
| 4+10 | 0.1280 | 0.57 | Q | | | | |
| 4+15 | 0.1320 | 0.58 | Q | | | | |
| 4+20 | 0.1360 | 0.58 | Q | | | | |
| 4+25 | 0.1400 | 0.59 | Q | | | | |
| 4+30 | 0.1441 | 0.59 | Q | | | | |
| 4+35 | 0.1482 | 0.60 | Q | | | | |
| 4+40 | 0.1523 | 0.60 | Q | | | | |
| 4+45 | 0.1565 | 0.60 | Q | | | | |
| 4+50 | 0.1607 | 0.61 | Q | | | | |
| 4+55 | 0.1649 | 0.61 | Q | | | | |
| 5+ 0 | 0.1692 | 0.62 | Q | | | | |
| 5+ 5 | 0.1734 | 0.62 | Q | | | | |
| 5+10 | 0.1778 | 0.63 | Q | | | | |
| 5+15 | 0.1821 | 0.63 | Q | | | | |
| 5+20 | 0.1865 | 0.63 | Q | | | | |
| 5+25 | 0.1909 | 0.64 | Q | | | | |
| 5+30 | 0.1953 | 0.64 | Q | | | | |
| 5+35 | 0.1998 | 0.65 | QV | | | | |
| 5+40 | 0.2042 | 0.65 | QV | | | | |
| 5+45 | 0.2088 | 0.66 | QV | | | | |
| 5+50 | 0.2133 | 0.66 | QV | | | | |
| 5+55 | 0.2179 | 0.66 | QV | | | | |
| 6+ 0 | 0.2225 | 0.67 | QV | | | | |
| 6+ 5 | 0.2271 | 0.67 | QV | | | | |
| 6+10 | 0.2318 | 0.68 | QV | | | | |
| 6+15 | 0.2365 | 0.68 | QV | | | | |
| 6+20 | 0.2412 | 0.69 | QV | | | | |
| 6+25 | 0.2460 | 0.69 | QV | | | | |
| 6+30 | 0.2508 | 0.70 | QV | | | | |
| 6+35 | 0.2556 | 0.70 | QV | | | | |
| 6+40 | 0.2604 | 0.71 | QV | | | | |
| 6+45 | 0.2653 | 0.71 | QV | | | | |
| 6+50 | 0.2703 | 0.72 | QV | | | | |
| 6+55 | 0.2752 | 0.72 | QV | | | | |
| 7+ 0 | 0.2802 | 0.73 | QV | | | | |
| 7+ 5 | 0.2852 | 0.73 | QV | | | | |
| 7+10 | 0.2903 | 0.74 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7+15 | 0.2954 | 0.74 | QV | \| | \| | \| | \| |
| 7+20 | 0.3005 | 0.75 | QV | \| | \| | \| | \| |
| 7+25 | 0.3057 | 0.75 | QV | \| | \| | \| | \| |
| 7+30 | 0.3109 | 0.76 | QV | \| | \| | \| | \| |
| 7+35 | 0.3162 | 0.76 | QV | \| | \| | \| | \| |
| 7+40 | 0.3214 | 0.77 | QV | \| | \| | \| | \| |
| 7+45 | 0.3268 | 0.77 | QV | \| | \| | \| | \| |
| 7+50 | 0.3321 | 0.78 | QV | \| | \| | \| | \| |
| 7+55 | 0.3375 | 0.78 | QV | \| | \| | \| | \| |
| 8+ 0 | 0.3430 | 0.79 | QV | \| | \| | \| | \| |
| 8+ 5 | 0.3484 | 0.79 | QV | \| | \| | \| | \| |
| 8+10 | 0.3539 | 0.80 | QV | \| | \| | \| | \| |
| 8+15 | 0.3595 | 0.81 | QV | \| | \| | \| | \| |
| 8+20 | 0.3651 | 0.81 | QV | \| | \| | \| | \| |
| 8+25 | 0.3707 | 0.82 | QV | \| | \| | \| | \| |
| 8+30 | 0.3764 | 0.82 | QV | \| | \| | \| | \| |
| 8+35 | 0.3821 | 0.83 | QV | \| | \| | \| | \| |
| 8+40 | 0.3879 | 0.84 | QV | \| | \| | \| | \| |
| 8+45 | 0.3937 | 0.84 | QV | \| | \| | \| | \| |
| 8+50 | 0.3995 | 0.85 | Q V | \| | \| | \| | \| |
| 8+55 | 0.4054 | 0.86 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.4114 | 0.86 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.4173 | 0.87 | Q V | \| | \| | \| | \| |
| 9+10 | 0.4234 | 0.88 | Q V | \| | \| | \| | \| |
| 9+15 | 0.4295 | 0.88 | Q V | \| | \| | \| | \| |
| 9+20 | 0.4356 | 0.89 | Q V | \| | \| | \| | \| |
| 9+25 | 0.4418 | 0.90 | Q V | \| | \| | \| | \| |
| 9+30 | 0.4480 | 0.91 | Q V | \| | \| | \| | \| |
| 9+35 | 0.4543 | 0.91 | Q V | \| | \| | \| | \| |
| 9+40 | 0.4606 | 0.92 | Q V | \| | \| | \| | \| |
| 9+45 | 0.4670 | 0.93 | Q V | \| | \| | \| | \| |
| 9+50 | 0.4735 | 0.94 | Q V | \| | \| | \| | \| |
| 9+55 | 0.4800 | 0.95 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.4866 | 0.95 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.4932 | 0.96 | Q V | \| | \| | \| | \| |
| 10+10 | 0.4999 | 0.97 | Q V | \| | \| | \| | \| |
| 10+15 | 0.5066 | 0.98 | Q V | \| | \| | \| | \| |
| 10+20 | 0.5135 | 0.99 | Q V | \| | \| | \| | \| |
| 10+25 | 0.5203 | 1.00 | Q V | \| | \| | \| | \| |
| 10+30 | 0.5273 | 1.01 | Q V | \| | \| | \| | \| |
| 10+35 | 0.5343 | 1.02 | Q V | \| | \| | \| | \| |
| 10+40 | 0.5414 | 1.03 | Q V | \| | \| | \| | \| |
| 10+45 | 0.5485 | 1.04 | Q V | \| | \| | \| | \| |
| 10+50 | 0.5558 | 1.05 | Q V | \| | \| | \| | \| |
| 10+55 | 0.5631 | 1.06 | Q V | \| | \| | \| | \| |
| 11+ 0 | 0.5704 | 1.07 | Q V | \| | \| | \| | \| |
| 11+ 5 | 0.5779 | 1.08 | Q V | \| | \| | \| | \| |
| 11+10 | 0.5854 | 1.09 | Q V | \| | \| | \| | \| |
| 11+15 | 0.5930 | 1.11 | Q V | \| | \| | \| | \| |
| 11+20 | 0.6007 | 1.12 | Q  V | \| | \| | \| | \| |
| 11+25 | 0.6085 | 1.13 | Q  V | \| | \| | \| | \| |
| 11+30 | 0.6164 | 1.14 | Q  V | \| | \| | \| | \| |
| 11+35 | 0.6244 | 1.16 | Q  V | \| | \| | \| | \| |
| 11+40 | 0.6324 | 1.17 | Q  V | \| | \| | \| | \| |
| 11+45 | 0.6406 | 1.18 | Q  V | \| | \| | \| | \| |
| 11+50 | 0.6488 | 1.20 | Q  V | \| | \| | \| | \| |
| 11+55 | 0.6572 | 1.21 | Q  V | \| | \| | \| | \| |
| 12+ 0 | 0.6656 | 1.23 | Q  V | \| | \| | \| | \| |
| 12+ 5 | 0.6742 | 1.24 | Q  V | \| | \| | \| | \| |

```
12+10       0.6828      1.26  Q  V      |          |          |          |
12+15       0.6916      1.27  Q  V      |          |          |          |
12+20       0.7004      1.28  Q  V      |          |          |          |
12+25       0.7093      1.29  Q  V      |          |          |          |
12+30       0.7182      1.30  Q  V      |          |          |          |
12+35       0.7272      1.31  Q  V      |          |          |          |
12+40       0.7362      1.31  Q  V      |          |          |          |
12+45       0.7451      1.30  Q  V      |          |          |          |
12+50       0.7541      1.29  Q  V      |          |          |          |
12+55       0.7629      1.29  Q  V      |          |          |          |
13+ 0       0.7718      1.29  Q  V      |          |          |          |
13+ 5       0.7807      1.30  Q  V      |          |          |          |
13+10       0.7897      1.30  Q  V      |          |          |          |
13+15       0.7988      1.31  Q   V     |          |          |          |
13+20       0.8079      1.33  Q   V     |          |          |          |
13+25       0.8171      1.34  Q   V     |          |          |          |
13+30       0.8265      1.36  Q   V     |          |          |          |
13+35       0.8360      1.38  Q   V     |          |          |          |
13+40       0.8456      1.40  Q   V     |          |          |          |
13+45       0.8553      1.42  Q   V     |          |          |          |
13+50       0.8653      1.44  Q   V     |          |          |          |
13+55       0.8754      1.47  Q   V     |          |          |          |
14+ 0       0.8857      1.49  Q   V     |          |          |          |
14+ 5       0.8962      1.52  Q   V     |          |          |          |
14+10       0.9069      1.56  Q   V     |          |          |          |
14+15       0.9178      1.59  Q   V     |          |          |          |
14+20       0.9290      1.63  Q   V     |          |          |          |
14+25       0.9405      1.66  Q   V     |          |          |          |
14+30       0.9522      1.71  Q   V     |          |          |          |
14+35       0.9643      1.75 |Q  V      |          |          |          |
14+40       0.9767      1.80 |Q  V      |          |          |          |
14+45       0.9895      1.85 |Q  V      |          |          |          |
14+50       1.0026      1.91 |Q   V     |          |          |          |
14+55       1.0162      1.97 |Q   V     |          |          |          |
15+ 0       1.0303      2.04 |Q   V     |          |          |          |
15+ 5       1.0449      2.12 |Q   V     |          |          |          |
15+10       1.0600      2.20 |Q   V     |          |          |          |
15+15       1.0757      2.28 |Q   V     |          |          |          |
15+20       1.0921      2.38 |Q   V     |          |          |          |
15+25       1.1094      2.50 |Q   V     |          |          |          |
15+30       1.1277      2.66 |Q   V     |          |          |          |
15+35       1.1473      2.86 |Q   V     |          |          |          |
15+40       1.1686      3.09 |Q   V     |          |          |          |
15+45       1.1921      3.41 |Q    V    |          |          |          |
15+50       1.2185      3.83 | Q   V    |          |          |          |
15+55       1.2495      4.51 | Q   V    |          |          |          |
16+ 0       1.2882      5.62 |  Q  V    |          |          |          |
16+ 5       1.3482      8.72 |   Q V    |          |          |          |
16+10       1.4332     12.34 |      Q   |          |          |          |
16+15       1.5452     16.27 |      V Q |          |          |          |
16+20       1.6818     19.84 |       V |Q         |          |          |
16+25       1.8472     24.01 |        V|  Q       |          |          |
16+30       2.0487     29.25 |         V     Q    |          |          |
16+35       2.3058     37.34 |         |V         |Q         |          |
16+40       2.6372     48.13 |         |  V       |      Q   |          |
16+45       3.0478     59.61 |         |    V     |          |   Q      |
16+50       3.4625     60.22 |         |      V   |          |   Q      |
16+55       3.8333     53.83 |         |        V |          Q          |
17+ 0       4.1496     45.94 |         |          V     Q     |          |
```

| | | | |
|---|---|---|---|
| 17+ 5 | 4.4269 | 40.26 | \| \| \| VQ \| \| |
| 17+10 | 4.6676 | 34.95 | \| \| Q\| V \| \| |
| 17+15 | 4.8725 | 29.75 | \| Q \| V \| \| |
| 17+20 | 5.0518 | 26.03 | \| Q \| V \| \| |
| 17+25 | 5.2098 | 22.93 | \| Q \| V \| \| |
| 17+30 | 5.3530 | 20.79 | \|Q \| V \| \| |
| 17+35 | 5.4851 | 19.18 | \| Q \| V \| \| |
| 17+40 | 5.6079 | 17.83 | \| Q \| V \| \| |
| 17+45 | 5.7204 | 16.34 | \| Q\| \| V \| \| |
| 17+50 | 5.8236 | 14.99 | \| Q \| \| V\| \| |
| 17+55 | 5.9191 | 13.87 | \| Q \| \| V\| \| |
| 18+ 0 | 6.0099 | 13.19 | \| Q \| \| V \| |
| 18+ 5 | 6.0958 | 12.46 | \| Q \| \| V \| |
| 18+10 | 6.1724 | 11.12 | \| Q \| \| \|V \| |
| 18+15 | 6.2453 | 10.59 | \| Q \| \| \|V \| |
| 18+20 | 6.3157 | 10.22 | \| Q \| \| \|V \| |
| 18+25 | 6.3800 | 9.33 | \| Q \| \| \| V \| |
| 18+30 | 6.4415 | 8.94 | \| Q \| \| \| V \| |
| 18+35 | 6.5016 | 8.72 | \| Q \| \| \| V \| |
| 18+40 | 6.5583 | 8.24 | \| Q \| \| \| V \| |
| 18+45 | 6.6132 | 7.97 | \| Q \| \| \| V \| |
| 18+50 | 6.6668 | 7.77 | \| Q \| \| \| V \| |
| 18+55 | 6.7164 | 7.21 | \| Q \| \| \| V \| |
| 19+ 0 | 6.7637 | 6.86 | \| Q \| \| \| V \| |
| 19+ 5 | 6.8095 | 6.65 | \| Q \| \| \| V \| |
| 19+10 | 6.8510 | 6.02 | \| Q \| \| \| V \| |
| 19+15 | 6.8896 | 5.62 | \| Q \| \| \| V \| |
| 19+20 | 6.9276 | 5.51 | \| Q \| \| \| V \| |
| 19+25 | 6.9643 | 5.33 | \| Q \| \| \| V \| |
| 19+30 | 7.0000 | 5.18 | \| Q \| \| \| V \| |
| 19+35 | 7.0349 | 5.08 | \| Q \| \| \| V \| |
| 19+40 | 7.0682 | 4.84 | \| Q \| \| \| V \| |
| 19+45 | 7.0999 | 4.60 | \| Q \| \| \| V \| |
| 19+50 | 7.1311 | 4.52 | \| Q \| \| \| V \| |
| 19+55 | 7.1612 | 4.38 | \| Q \| \| \| V \| |
| 20+ 0 | 7.1902 | 4.21 | \| Q \| \| \| V \| |
| 20+ 5 | 7.2186 | 4.12 | \| Q \| \| \| V \| |
| 20+10 | 7.2453 | 3.88 | \| Q \| \| \| V \| |
| 20+15 | 7.2700 | 3.58 | \| Q \| \| \| V \| |
| 20+20 | 7.2942 | 3.51 | \| Q \| \| \| V \| |
| 20+25 | 7.3180 | 3.47 | \|Q \| \| \| V \| |
| 20+30 | 7.3416 | 3.41 | \|Q \| \| \| V \| |
| 20+35 | 7.3646 | 3.34 | \|Q \| \| \| V \| |
| 20+40 | 7.3865 | 3.19 | \|Q \| \| \| V \| |
| 20+45 | 7.4066 | 2.92 | \|Q \| \| \| V \| |
| 20+50 | 7.4263 | 2.85 | \|Q \| \| \| V \| |
| 20+55 | 7.4456 | 2.81 | \|Q \| \| \| V \| |
| 21+ 0 | 7.4647 | 2.77 | \|Q \| \| \| V \| |
| 21+ 5 | 7.4833 | 2.70 | \|Q \| \| \| V \| |
| 21+10 | 7.5011 | 2.58 | \|Q \| \| \| V \| |
| 21+15 | 7.5169 | 2.30 | \|Q \| \| \| V \| |
| 21+20 | 7.5322 | 2.22 | \|Q \| \| \| V \| |
| 21+25 | 7.5472 | 2.18 | \|Q \| \| \| V \| |
| 21+30 | 7.5620 | 2.14 | \|Q \| \| \| V \| |
| 21+35 | 7.5764 | 2.09 | \|Q \| \| \| V \| |
| 21+40 | 7.5901 | 1.99 | \|Q \| \| \| V \| |
| 21+45 | 7.6020 | 1.72 | Q \| \| \| V \| |
| 21+50 | 7.6132 | 1.63 | Q \| \| \| V \| |
| 21+55 | 7.6243 | 1.61 | Q \| \| \| V \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+ 0 | 7.6353 | 1.59 | Q | \| | \| | \| | V \| |
| 22+ 5 | 7.6462 | 1.58 | Q | \| | \| | \| | V \| |
| 22+10 | 7.6571 | 1.59 | Q | \| | \| | \| | V \| |
| 22+15 | 7.6683 | 1.63 | Q | \| | \| | \| | V \| |
| 22+20 | 7.6797 | 1.65 | Q | \| | \| | \| | V \| |
| 22+25 | 7.6910 | 1.64 | Q | \| | \| | \| | V \| |
| 22+30 | 7.7022 | 1.63 | Q | \| | \| | \| | V \| |
| 22+35 | 7.7133 | 1.61 | Q | \| | \| | \| | V \| |
| 22+40 | 7.7243 | 1.60 | Q | \| | \| | \| | V \| |
| 22+45 | 7.7352 | 1.58 | Q | \| | \| | \| | V \| |
| 22+50 | 7.7460 | 1.57 | Q | \| | \| | \| | V\| |
| 22+55 | 7.7567 | 1.55 | Q | \| | \| | \| | V\| |
| 23+ 0 | 7.7672 | 1.53 | Q | \| | \| | \| | V\| |
| 23+ 5 | 7.7775 | 1.50 | Q | \| | \| | \| | V\| |
| 23+10 | 7.7875 | 1.45 | Q | \| | \| | \| | V\| |
| 23+15 | 7.7965 | 1.30 | Q | \| | \| | \| | V\| |
| 23+20 | 7.8045 | 1.16 | Q | \| | \| | \| | V\| |
| 23+25 | 7.8123 | 1.14 | Q | \| | \| | \| | V\| |
| 23+30 | 7.8200 | 1.12 | Q | \| | \| | \| | V\| |
| 23+35 | 7.8276 | 1.10 | Q | \| | \| | \| | V\| |
| 23+40 | 7.8350 | 1.08 | Q | \| | \| | \| | V\| |
| 23+45 | 7.8423 | 1.06 | Q | \| | \| | \| | V\| |
| 23+50 | 7.8494 | 1.03 | Q | \| | \| | \| | V\| |
| 23+55 | 7.8562 | 0.98 | Q | \| | \| | \| | V\| |
| 24+ 0 | 7.8619 | 0.82 | Q | \| | \| | \| | V\| |
| 24+ 5 | 7.8665 | 0.67 | Q | \| | \| | \| | V\| |
| 24+10 | 7.8710 | 0.65 | Q | \| | \| | \| | V\| |
| 24+15 | 7.8753 | 0.63 | Q | \| | \| | \| | V\| |
| 24+20 | 7.8795 | 0.61 | Q | \| | \| | \| | V\| |
| 24+25 | 7.8836 | 0.59 | Q | \| | \| | \| | V\| |
| 24+30 | 7.8875 | 0.57 | Q | \| | \| | \| | V\| |
| 24+35 | 7.8912 | 0.54 | Q | \| | \| | \| | V\| |
| 24+40 | 7.8947 | 0.51 | Q | \| | \| | \| | V\| |
| 24+45 | 7.8979 | 0.46 | Q | \| | \| | \| | V\| |
| 24+50 | 7.9008 | 0.42 | Q | \| | \| | \| | V\| |
| 24+55 | 7.9034 | 0.38 | Q | \| | \| | \| | V\| |
| 25+ 0 | 7.9058 | 0.34 | Q | \| | \| | \| | V\| |
| 25+ 5 | 7.9079 | 0.31 | Q | \| | \| | \| | V\| |
| 25+10 | 7.9099 | 0.29 | Q | \| | \| | \| | V\| |
| 25+15 | 7.9117 | 0.27 | Q | \| | \| | \| | V\| |
| 25+20 | 7.9134 | 0.25 | Q | \| | \| | \| | V\| |
| 25+25 | 7.9150 | 0.23 | Q | \| | \| | \| | V\| |
| 25+30 | 7.9165 | 0.22 | Q | \| | \| | \| | V\| |
| 25+35 | 7.9179 | 0.20 | Q | \| | \| | \| | V\| |
| 25+40 | 7.9192 | 0.19 | Q | \| | \| | \| | V\| |
| 25+45 | 7.9204 | 0.18 | Q | \| | \| | \| | V\| |
| 25+50 | 7.9216 | 0.17 | Q | \| | \| | \| | V\| |
| 25+55 | 7.9227 | 0.16 | Q | \| | \| | \| | V\| |
| 26+ 0 | 7.9237 | 0.15 | Q | \| | \| | \| | V\| |
| 26+ 5 | 7.9247 | 0.14 | Q | \| | \| | \| | V\| |
| 26+10 | 7.9256 | 0.13 | Q | \| | \| | \| | V\| |
| 26+15 | 7.9265 | 0.13 | Q | \| | \| | \| | V\| |
| 26+20 | 7.9273 | 0.12 | Q | \| | \| | \| | V\| |
| 26+25 | 7.9281 | 0.11 | Q | \| | \| | \| | V\| |
| 26+30 | 7.9289 | 0.11 | Q | \| | \| | \| | V\| |
| 26+35 | 7.9296 | 0.10 | Q | \| | \| | \| | V\| |
| 26+40 | 7.9302 | 0.10 | Q | \| | \| | \| | V\| |
| 26+45 | 7.9309 | 0.09 | Q | \| | \| | \| | V\| |
| 26+50 | 7.9314 | 0.09 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+55 | 7.9320 | 0.08 | Q | \| | \| | \| | V\| |
| 27+ 0 | 7.9325 | 0.08 | Q | \| | \| | \| | V\| |
| 27+ 5 | 7.9330 | 0.07 | Q | \| | \| | \| | V\| |
| 27+10 | 7.9335 | 0.07 | Q | \| | \| | \| | V\| |
| 27+15 | 7.9340 | 0.07 | Q | \| | \| | \| | V\| |
| 27+20 | 7.9344 | 0.06 | Q | \| | \| | \| | V\| |
| 27+25 | 7.9348 | 0.06 | Q | \| | \| | \| | V\| |
| 27+30 | 7.9352 | 0.06 | Q | \| | \| | \| | V\| |
| 27+35 | 7.9356 | 0.05 | Q | \| | \| | \| | V\| |
| 27+40 | 7.9359 | 0.05 | Q | \| | \| | \| | V\| |
| 27+45 | 7.9363 | 0.05 | Q | \| | \| | \| | V\| |
| 27+50 | 7.9366 | 0.05 | Q | \| | \| | \| | V\| |
| 27+55 | 7.9369 | 0.04 | Q | \| | \| | \| | V\| |
| 28+ 0 | 7.9372 | 0.04 | Q | \| | \| | \| | V\| |
| 28+ 5 | 7.9374 | 0.04 | Q | \| | \| | \| | V\| |
| 28+10 | 7.9377 | 0.04 | Q | \| | \| | \| | V\| |
| 28+15 | 7.9379 | 0.03 | Q | \| | \| | \| | V\| |
| 28+20 | 7.9382 | 0.03 | Q | \| | \| | \| | V\| |
| 28+25 | 7.9384 | 0.03 | Q | \| | \| | \| | V\| |
| 28+30 | 7.9386 | 0.03 | Q | \| | \| | \| | V\| |
| 28+35 | 7.9388 | 0.03 | Q | \| | \| | \| | V\| |
| 28+40 | 7.9390 | 0.03 | Q | \| | \| | \| | V\| |
| 28+45 | 7.9391 | 0.02 | Q | \| | \| | \| | V\| |
| 28+50 | 7.9393 | 0.02 | Q | \| | \| | \| | V\| |
| 28+55 | 7.9394 | 0.02 | Q | \| | \| | \| | V\| |
| 29+ 0 | 7.9396 | 0.02 | Q | \| | \| | \| | V\| |
| 29+ 5 | 7.9397 | 0.02 | Q | \| | \| | \| | V\| |
| 29+10 | 7.9398 | 0.02 | Q | \| | \| | \| | V\| |
| 29+15 | 7.9400 | 0.02 | Q | \| | \| | \| | V\| |
| 29+20 | 7.9401 | 0.02 | Q | \| | \| | \| | V\| |
| 29+25 | 7.9402 | 0.02 | Q | \| | \| | \| | V\| |
| 29+30 | 7.9403 | 0.01 | Q | \| | \| | \| | V\| |
| 29+35 | 7.9404 | 0.01 | Q | \| | \| | \| | V\| |
| 29+40 | 7.9405 | 0.01 | Q | \| | \| | \| | V\| |
| 29+45 | 7.9406 | 0.01 | Q | \| | \| | \| | V\| |
| 29+50 | 7.9406 | 0.01 | Q | \| | \| | \| | V\| |
| 29+55 | 7.9407 | 0.01 | Q | \| | \| | \| | V\| |
| 30+ 0 | 7.9408 | 0.01 | Q | \| | \| | \| | V\| |
| 30+ 5 | 7.9409 | 0.01 | Q | \| | \| | \| | V\| |
| 30+10 | 7.9409 | 0.01 | Q | \| | \| | \| | V\| |
| 30+15 | 7.9410 | 0.01 | Q | \| | \| | \| | V\| |
| 30+20 | 7.9410 | 0.01 | Q | \| | \| | \| | V\| |
| 30+25 | 7.9411 | 0.01 | Q | \| | \| | \| | V\| |
| 30+30 | 7.9411 | 0.01 | Q | \| | \| | \| | V\| |
| 30+35 | 7.9412 | 0.01 | Q | \| | \| | \| | V\| |
| 30+40 | 7.9412 | 0.01 | Q | \| | \| | \| | V\| |
| 30+45 | 7.9413 | 0.01 | Q | \| | \| | \| | V\| |
| 30+50 | 7.9413 | 0.00 | Q | \| | \| | \| | V\| |
| 30+55 | 7.9413 | 0.00 | Q | \| | \| | \| | V\| |
| 31+ 0 | 7.9414 | 0.00 | Q | \| | \| | \| | V\| |
| 31+ 5 | 7.9414 | 0.00 | Q | \| | \| | \| | V\| |
| 31+10 | 7.9414 | 0.00 | Q | \| | \| | \| | V\| |
| 31+15 | 7.9414 | 0.00 | Q | \| | \| | \| | V\| |
| 31+20 | 7.9414 | 0.00 | Q | \| | \| | \| | V\| |
| 31+25 | 7.9414 | 0.00 | Q | \| | \| | \| | V\| |
| 31+30 | 7.9414 | 0.00 | Q | \| | \| | \| | V\| |
| 31+35 | 7.9415 | 0.00 | Q | \| | \| | \| | V\| |
| 31+40 | 7.9415 | 0.00 | Q | \| | \| | \| | V\| |
| 31+45 | 7.9415 | 0.00 | Q | \| | \| | \| | V\| |

```
   31+50       7.9415      0.00  Q         |         |         |        V|
   31+55       7.9415      0.00  Q         |         |         |        V|
-------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 24
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 293.06 | 1 | 1.35 |
| Rainfall data for year 100 | | |
| 293.06 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 293.06 | 24 | 2.49 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 60.0 | 79.0 | 293.06 | 1.000 | 0.387 | 0.999 | 0.386 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.386

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 292.77 | 0.999 | 60.0 | 79.0 | 2.66 | 0.334 |
| 0.29 | 0.001 | 98.0 | 98.0 | 0.20 | 0.908 |

Area-averaged catchment yield fraction, Y = 0.334
Area-averaged low loss fraction, Yb = 0.666
User entry of time of concentration = 2.190 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 293.06(Ac.)
Catchment Lag time = 1.752 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 4.7565
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.386(In/Hr)
Average low loss rate fraction (Yb) = 0.666 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.641(In)
Computed peak 30-minute rainfall = 1.097(In)
Specified peak 1-hour rainfall = 1.350(In)
Computed peak 3-hour rainfall = 1.632(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.490(In)

Rainfall depth area reduction factors:
Using a total area of 293.06(Ac.) (Ref: fig. E-4)

5-minute factor = 0.986 Adjusted rainfall = 0.632(In)
30-minute factor = 0.986 Adjusted rainfall = 1.081(In)
1-hour factor = 0.986 Adjusted rainfall = 1.331(In)
3-hour factor = 0.998 Adjusted rainfall = 1.629(In)
6-hour factor = 0.999 Adjusted rainfall = 1.838(In)
24-hour factor = 1.000 Adjusted rainfall = 2.489(In)
---

U n i t H y d r o g r a p h

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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 3544.19 (CFS)) | |
| 1 | 0.209 | 7.417 |
| 2 | 0.628 | 14.835 |
| 3 | 1.073 | 15.768 |
| 4 | 1.797 | 25.662 |
| 5 | 2.596 | 28.321 |
| 6 | 3.500 | 32.054 |
| 7 | 4.667 | 41.366 |
| 8 | 5.850 | 41.907 |
| 9 | 7.284 | 50.846 |
| 10 | 8.883 | 56.642 |
| 11 | 10.653 | 62.745 |
| 12 | 13.508 | 101.173 |
| 13 | 16.552 | 107.890 |

| | | |
|---|---|---|
| 14 | 20.271 | 131.829 |
| 15 | 25.124 | 171.990 |
| 16 | 29.973 | 171.862 |
| 17 | 34.280 | 152.655 |
| 18 | 38.352 | 144.303 |
| 19 | 42.236 | 137.661 |
| 20 | 45.361 | 110.745 |
| 21 | 48.405 | 107.890 |
| 22 | 51.177 | 98.255 |
| 23 | 53.651 | 87.667 |
| 24 | 56.085 | 86.273 |
| 25 | 58.049 | 69.607 |
| 26 | 59.875 | 64.734 |
| 27 | 61.613 | 61.588 |
| 28 | 63.111 | 53.072 |
| 29 | 64.594 | 52.562 |
| 30 | 65.943 | 47.840 |
| 31 | 67.199 | 44.505 |
| 32 | 68.443 | 44.069 |
| 33 | 69.600 | 41.040 |
| 34 | 70.742 | 40.459 |
| 35 | 71.817 | 38.102 |
| 36 | 72.771 | 33.806 |
| 37 | 73.720 | 33.628 |
| 38 | 74.593 | 30.939 |
| 39 | 75.430 | 29.670 |
| 40 | 76.261 | 29.443 |
| 41 | 77.063 | 28.440 |
| 42 | 77.862 | 28.321 |
| 43 | 78.584 | 25.571 |
| 44 | 79.212 | 22.259 |
| 45 | 79.839 | 22.252 |
| 46 | 80.467 | 22.252 |
| 47 | 81.095 | 22.252 |
| 48 | 81.695 | 21.272 |
| 49 | 82.214 | 18.393 |
| 50 | 82.728 | 18.206 |
| 51 | 83.242 | 18.206 |
| 52 | 83.755 | 18.206 |
| 53 | 84.264 | 18.011 |
| 54 | 84.729 | 16.501 |
| 55 | 85.186 | 16.184 |
| 56 | 85.642 | 16.184 |
| 57 | 86.099 | 16.184 |
| 58 | 86.554 | 16.138 |
| 59 | 86.960 | 14.384 |
| 60 | 87.341 | 13.486 |
| 61 | 87.721 | 13.486 |
| 62 | 88.102 | 13.486 |
| 63 | 88.482 | 13.486 |
| 64 | 88.822 | 12.035 |
| 65 | 89.108 | 10.123 |
| 66 | 89.393 | 10.115 |
| 67 | 89.678 | 10.115 |
| 68 | 89.964 | 10.115 |
| 69 | 90.245 | 9.962 |
| 70 | 90.512 | 9.477 |
| 71 | 90.779 | 9.440 |
| 72 | 91.045 | 9.440 |

| | | |
|---|---|---|
| 73 | 91.311 | 9.440 |
| 74 | 91.574 | 9.324 |
| 75 | 91.809 | 8.322 |
| 76 | 92.037 | 8.092 |
| 77 | 92.266 | 8.092 |
| 78 | 92.494 | 8.092 |
| 79 | 92.722 | 8.083 |
| 80 | 92.938 | 7.655 |
| 81 | 93.147 | 7.417 |
| 82 | 93.357 | 7.417 |
| 83 | 93.566 | 7.417 |
| 84 | 93.775 | 7.417 |
| 85 | 93.965 | 6.729 |
| 86 | 94.127 | 5.739 |
| 87 | 94.289 | 5.732 |
| 88 | 94.450 | 5.732 |
| 89 | 94.612 | 5.732 |
| 90 | 94.774 | 5.732 |
| 91 | 94.936 | 5.732 |
| 92 | 95.097 | 5.732 |
| 93 | 95.259 | 5.732 |
| 94 | 95.421 | 5.732 |
| 95 | 95.580 | 5.628 |
| 96 | 95.710 | 4.632 |
| 97 | 95.834 | 4.383 |
| 98 | 95.958 | 4.383 |
| 99 | 96.081 | 4.383 |
| 100 | 96.205 | 4.383 |
| 101 | 96.329 | 4.383 |
| 102 | 96.452 | 4.383 |
| 103 | 96.576 | 4.383 |
| 104 | 96.700 | 4.383 |
| 105 | 96.823 | 4.383 |
| 106 | 96.932 | 3.861 |
| 107 | 97.018 | 3.044 |
| 108 | 97.104 | 3.034 |
| 109 | 97.189 | 3.034 |
| 110 | 97.275 | 3.034 |
| 111 | 97.361 | 3.034 |
| 112 | 97.446 | 3.034 |
| 113 | 97.532 | 3.034 |
| 114 | 97.617 | 3.034 |
| 115 | 97.703 | 3.034 |
| 116 | 97.786 | 2.943 |
| 117 | 97.841 | 1.955 |
| 118 | 97.889 | 1.686 |
| 119 | 97.936 | 1.686 |
| 120 | 97.984 | 1.686 |
| 121 | 98.032 | 1.686 |
| 122 | 98.079 | 1.686 |
| 123 | 98.127 | 1.686 |
| 124 | 98.174 | 1.686 |
| 125 | 98.222 | 1.686 |
| 126 | 98.269 | 1.686 |
| 127 | 98.320 | 1.809 |
| 128 | 98.377 | 2.019 |
| 129 | 98.434 | 2.023 |
| 130 | 98.492 | 2.023 |
| 131 | 98.549 | 2.023 |

| | | |
|---|---|---|
| 132 | 98.606 | 2.023 |
| 133 | 98.663 | 2.023 |
| 134 | 98.720 | 2.023 |
| 135 | 98.777 | 2.023 |
| 136 | 98.834 | 2.023 |
| 137 | 98.891 | 2.023 |
| 138 | 98.948 | 2.023 |
| 139 | 99.005 | 2.023 |
| 140 | 99.062 | 2.023 |
| 141 | 99.119 | 2.023 |
| 142 | 99.176 | 2.023 |
| 143 | 99.234 | 2.023 |
| 144 | 99.291 | 2.023 |
| 145 | 99.348 | 2.023 |
| 146 | 99.405 | 2.023 |
| 147 | 99.462 | 2.023 |
| 148 | 99.509 | 1.687 |
| 149 | 99.540 | 1.067 |
| 150 | 99.569 | 1.054 |
| 151 | 99.599 | 1.054 |
| 152 | 99.629 | 1.054 |
| 153 | 99.659 | 1.054 |
| 154 | 99.688 | 1.054 |
| 155 | 99.718 | 1.054 |
| 156 | 99.748 | 1.054 |
| 157 | 99.777 | 1.054 |
| 158 | 99.807 | 1.054 |
| 159 | 99.837 | 1.054 |
| 160 | 99.867 | 1.054 |
| 161 | 99.896 | 1.054 |
| 162 | 99.926 | 1.054 |
| 163 | 99.956 | 1.054 |
| 164 | 100.000 | 0.527 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6318 | 0.6318 |
| 2 | 0.7778 | 0.1460 |
| 3 | 0.8784 | 0.1006 |
| 4 | 0.9576 | 0.0792 |
| 5 | 1.0239 | 0.0663 |
| 6 | 1.0815 | 0.0576 |
| 7 | 1.1327 | 0.0512 |
| 8 | 1.1790 | 0.0463 |
| 9 | 1.2214 | 0.0424 |
| 10 | 1.2606 | 0.0392 |
| 11 | 1.2971 | 0.0366 |
| 12 | 1.3315 | 0.0343 |
| 13 | 1.3512 | 0.0197 |
| 14 | 1.3697 | 0.0185 |
| 15 | 1.3872 | 0.0175 |
| 16 | 1.4038 | 0.0166 |
| 17 | 1.4195 | 0.0157 |
| 18 | 1.4345 | 0.0150 |
| 19 | 1.4488 | 0.0143 |
| 20 | 1.4625 | 0.0137 |
| 21 | 1.4757 | 0.0132 |
| 22 | 1.4884 | 0.0127 |
| 23 | 1.5006 | 0.0122 |

| | | |
|---|---|---|
| 24 | 1.5124 | 0.0118 |
| 25 | 1.5238 | 0.0114 |
| 26 | 1.5348 | 0.0110 |
| 27 | 1.5455 | 0.0107 |
| 28 | 1.5559 | 0.0104 |
| 29 | 1.5659 | 0.0101 |
| 30 | 1.5757 | 0.0098 |
| 31 | 1.5853 | 0.0095 |
| 32 | 1.5945 | 0.0093 |
| 33 | 1.6036 | 0.0090 |
| 34 | 1.6124 | 0.0088 |
| 35 | 1.6210 | 0.0086 |
| 36 | 1.6294 | 0.0084 |
| 37 | 1.6372 | 0.0078 |
| 38 | 1.6448 | 0.0076 |
| 39 | 1.6523 | 0.0075 |
| 40 | 1.6596 | 0.0073 |
| 41 | 1.6667 | 0.0071 |
| 42 | 1.6737 | 0.0070 |
| 43 | 1.6806 | 0.0069 |
| 44 | 1.6873 | 0.0067 |
| 45 | 1.6939 | 0.0066 |
| 46 | 1.7004 | 0.0065 |
| 47 | 1.7068 | 0.0064 |
| 48 | 1.7131 | 0.0063 |
| 49 | 1.7192 | 0.0062 |
| 50 | 1.7253 | 0.0061 |
| 51 | 1.7312 | 0.0060 |
| 52 | 1.7371 | 0.0059 |
| 53 | 1.7429 | 0.0058 |
| 54 | 1.7486 | 0.0057 |
| 55 | 1.7541 | 0.0056 |
| 56 | 1.7597 | 0.0055 |
| 57 | 1.7651 | 0.0054 |
| 58 | 1.7704 | 0.0053 |
| 59 | 1.7757 | 0.0053 |
| 60 | 1.7809 | 0.0052 |
| 61 | 1.7860 | 0.0051 |
| 62 | 1.7911 | 0.0051 |
| 63 | 1.7961 | 0.0050 |
| 64 | 1.8010 | 0.0049 |
| 65 | 1.8059 | 0.0049 |
| 66 | 1.8107 | 0.0048 |
| 67 | 1.8154 | 0.0047 |
| 68 | 1.8201 | 0.0047 |
| 69 | 1.8248 | 0.0046 |
| 70 | 1.8293 | 0.0046 |
| 71 | 1.8338 | 0.0045 |
| 72 | 1.8383 | 0.0045 |
| 73 | 1.8439 | 0.0056 |
| 74 | 1.8494 | 0.0055 |
| 75 | 1.8548 | 0.0054 |
| 76 | 1.8602 | 0.0054 |
| 77 | 1.8655 | 0.0053 |
| 78 | 1.8708 | 0.0053 |
| 79 | 1.8760 | 0.0052 |
| 80 | 1.8811 | 0.0052 |
| 81 | 1.8863 | 0.0051 |
| 82 | 1.8913 | 0.0051 |

| | | |
|---|---|---|
| 83 | 1.8964 | 0.0050 |
| 84 | 1.9013 | 0.0050 |
| 85 | 1.9062 | 0.0049 |
| 86 | 1.9111 | 0.0049 |
| 87 | 1.9160 | 0.0048 |
| 88 | 1.9208 | 0.0048 |
| 89 | 1.9255 | 0.0048 |
| 90 | 1.9302 | 0.0047 |
| 91 | 1.9349 | 0.0047 |
| 92 | 1.9395 | 0.0046 |
| 93 | 1.9441 | 0.0046 |
| 94 | 1.9487 | 0.0046 |
| 95 | 1.9532 | 0.0045 |
| 96 | 1.9576 | 0.0045 |
| 97 | 1.9621 | 0.0044 |
| 98 | 1.9665 | 0.0044 |
| 99 | 1.9709 | 0.0044 |
| 100 | 1.9752 | 0.0043 |
| 101 | 1.9795 | 0.0043 |
| 102 | 1.9838 | 0.0043 |
| 103 | 1.9880 | 0.0042 |
| 104 | 1.9922 | 0.0042 |
| 105 | 1.9964 | 0.0042 |
| 106 | 2.0005 | 0.0041 |
| 107 | 2.0046 | 0.0041 |
| 108 | 2.0087 | 0.0041 |
| 109 | 2.0128 | 0.0041 |
| 110 | 2.0168 | 0.0040 |
| 111 | 2.0208 | 0.0040 |
| 112 | 2.0247 | 0.0040 |
| 113 | 2.0287 | 0.0039 |
| 114 | 2.0326 | 0.0039 |
| 115 | 2.0365 | 0.0039 |
| 116 | 2.0403 | 0.0039 |
| 117 | 2.0442 | 0.0038 |
| 118 | 2.0480 | 0.0038 |
| 119 | 2.0518 | 0.0038 |
| 120 | 2.0555 | 0.0038 |
| 121 | 2.0592 | 0.0037 |
| 122 | 2.0630 | 0.0037 |
| 123 | 2.0666 | 0.0037 |
| 124 | 2.0703 | 0.0037 |
| 125 | 2.0739 | 0.0036 |
| 126 | 2.0776 | 0.0036 |
| 127 | 2.0811 | 0.0036 |
| 128 | 2.0847 | 0.0036 |
| 129 | 2.0883 | 0.0035 |
| 130 | 2.0918 | 0.0035 |
| 131 | 2.0953 | 0.0035 |
| 132 | 2.0988 | 0.0035 |
| 133 | 2.1023 | 0.0035 |
| 134 | 2.1057 | 0.0034 |
| 135 | 2.1091 | 0.0034 |
| 136 | 2.1125 | 0.0034 |
| 137 | 2.1159 | 0.0034 |
| 138 | 2.1193 | 0.0034 |
| 139 | 2.1226 | 0.0033 |
| 140 | 2.1260 | 0.0033 |
| 141 | 2.1293 | 0.0033 |

| | | |
|---|---|---|
| 142 | 2.1326 | 0.0033 |
| 143 | 2.1358 | 0.0033 |
| 144 | 2.1391 | 0.0033 |
| 145 | 2.1423 | 0.0032 |
| 146 | 2.1456 | 0.0032 |
| 147 | 2.1488 | 0.0032 |
| 148 | 2.1519 | 0.0032 |
| 149 | 2.1551 | 0.0032 |
| 150 | 2.1583 | 0.0032 |
| 151 | 2.1614 | 0.0031 |
| 152 | 2.1645 | 0.0031 |
| 153 | 2.1676 | 0.0031 |
| 154 | 2.1707 | 0.0031 |
| 155 | 2.1738 | 0.0031 |
| 156 | 2.1769 | 0.0031 |
| 157 | 2.1799 | 0.0030 |
| 158 | 2.1829 | 0.0030 |
| 159 | 2.1859 | 0.0030 |
| 160 | 2.1889 | 0.0030 |
| 161 | 2.1919 | 0.0030 |
| 162 | 2.1949 | 0.0030 |
| 163 | 2.1978 | 0.0030 |
| 164 | 2.2008 | 0.0029 |
| 165 | 2.2037 | 0.0029 |
| 166 | 2.2066 | 0.0029 |
| 167 | 2.2095 | 0.0029 |
| 168 | 2.2124 | 0.0029 |
| 169 | 2.2153 | 0.0029 |
| 170 | 2.2181 | 0.0029 |
| 171 | 2.2210 | 0.0028 |
| 172 | 2.2238 | 0.0028 |
| 173 | 2.2266 | 0.0028 |
| 174 | 2.2294 | 0.0028 |
| 175 | 2.2322 | 0.0028 |
| 176 | 2.2350 | 0.0028 |
| 177 | 2.2378 | 0.0028 |
| 178 | 2.2406 | 0.0028 |
| 179 | 2.2433 | 0.0027 |
| 180 | 2.2460 | 0.0027 |
| 181 | 2.2488 | 0.0027 |
| 182 | 2.2515 | 0.0027 |
| 183 | 2.2542 | 0.0027 |
| 184 | 2.2569 | 0.0027 |
| 185 | 2.2595 | 0.0027 |
| 186 | 2.2622 | 0.0027 |
| 187 | 2.2648 | 0.0027 |
| 188 | 2.2675 | 0.0026 |
| 189 | 2.2701 | 0.0026 |
| 190 | 2.2727 | 0.0026 |
| 191 | 2.2753 | 0.0026 |
| 192 | 2.2779 | 0.0026 |
| 193 | 2.2805 | 0.0026 |
| 194 | 2.2831 | 0.0026 |
| 195 | 2.2857 | 0.0026 |
| 196 | 2.2882 | 0.0026 |
| 197 | 2.2908 | 0.0025 |
| 198 | 2.2933 | 0.0025 |
| 199 | 2.2959 | 0.0025 |
| 200 | 2.2984 | 0.0025 |

| | | |
|---|---|---|
| 201 | 2.3009 | 0.0025 |
| 202 | 2.3034 | 0.0025 |
| 203 | 2.3059 | 0.0025 |
| 204 | 2.3083 | 0.0025 |
| 205 | 2.3108 | 0.0025 |
| 206 | 2.3133 | 0.0025 |
| 207 | 2.3157 | 0.0025 |
| 208 | 2.3182 | 0.0024 |
| 209 | 2.3206 | 0.0024 |
| 210 | 2.3230 | 0.0024 |
| 211 | 2.3254 | 0.0024 |
| 212 | 2.3278 | 0.0024 |
| 213 | 2.3302 | 0.0024 |
| 214 | 2.3326 | 0.0024 |
| 215 | 2.3350 | 0.0024 |
| 216 | 2.3374 | 0.0024 |
| 217 | 2.3397 | 0.0024 |
| 218 | 2.3421 | 0.0024 |
| 219 | 2.3444 | 0.0023 |
| 220 | 2.3468 | 0.0023 |
| 221 | 2.3491 | 0.0023 |
| 222 | 2.3514 | 0.0023 |
| 223 | 2.3537 | 0.0023 |
| 224 | 2.3560 | 0.0023 |
| 225 | 2.3583 | 0.0023 |
| 226 | 2.3606 | 0.0023 |
| 227 | 2.3629 | 0.0023 |
| 228 | 2.3652 | 0.0023 |
| 229 | 2.3674 | 0.0023 |
| 230 | 2.3697 | 0.0023 |
| 231 | 2.3719 | 0.0022 |
| 232 | 2.3742 | 0.0022 |
| 233 | 2.3764 | 0.0022 |
| 234 | 2.3786 | 0.0022 |
| 235 | 2.3808 | 0.0022 |
| 236 | 2.3831 | 0.0022 |
| 237 | 2.3853 | 0.0022 |
| 238 | 2.3875 | 0.0022 |
| 239 | 2.3896 | 0.0022 |
| 240 | 2.3918 | 0.0022 |
| 241 | 2.3940 | 0.0022 |
| 242 | 2.3962 | 0.0022 |
| 243 | 2.3983 | 0.0022 |
| 244 | 2.4005 | 0.0022 |
| 245 | 2.4026 | 0.0021 |
| 246 | 2.4048 | 0.0021 |
| 247 | 2.4069 | 0.0021 |
| 248 | 2.4090 | 0.0021 |
| 249 | 2.4112 | 0.0021 |
| 250 | 2.4133 | 0.0021 |
| 251 | 2.4154 | 0.0021 |
| 252 | 2.4175 | 0.0021 |
| 253 | 2.4196 | 0.0021 |
| 254 | 2.4217 | 0.0021 |
| 255 | 2.4237 | 0.0021 |
| 256 | 2.4258 | 0.0021 |
| 257 | 2.4279 | 0.0021 |
| 258 | 2.4299 | 0.0021 |
| 259 | 2.4320 | 0.0021 |

| | | |
|---|---|---|
| 260 | 2.4340 | 0.0020 |
| 261 | 2.4361 | 0.0020 |
| 262 | 2.4381 | 0.0020 |
| 263 | 2.4402 | 0.0020 |
| 264 | 2.4422 | 0.0020 |
| 265 | 2.4442 | 0.0020 |
| 266 | 2.4462 | 0.0020 |
| 267 | 2.4482 | 0.0020 |
| 268 | 2.4502 | 0.0020 |
| 269 | 2.4522 | 0.0020 |
| 270 | 2.4542 | 0.0020 |
| 271 | 2.4562 | 0.0020 |
| 272 | 2.4582 | 0.0020 |
| 273 | 2.4602 | 0.0020 |
| 274 | 2.4621 | 0.0020 |
| 275 | 2.4641 | 0.0020 |
| 276 | 2.4660 | 0.0020 |
| 277 | 2.4680 | 0.0020 |
| 278 | 2.4699 | 0.0019 |
| 279 | 2.4719 | 0.0019 |
| 280 | 2.4738 | 0.0019 |
| 281 | 2.4757 | 0.0019 |
| 282 | 2.4777 | 0.0019 |
| 283 | 2.4796 | 0.0019 |
| 284 | 2.4815 | 0.0019 |
| 285 | 2.4834 | 0.0019 |
| 286 | 2.4853 | 0.0019 |
| 287 | 2.4872 | 0.0019 |
| 288 | 2.4891 | 0.0019 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0019 | 0.0013 | 0.0006 |
| 2 | 0.0019 | 0.0013 | 0.0006 |
| 3 | 0.0019 | 0.0013 | 0.0006 |
| 4 | 0.0019 | 0.0013 | 0.0006 |
| 5 | 0.0019 | 0.0013 | 0.0006 |
| 6 | 0.0019 | 0.0013 | 0.0006 |
| 7 | 0.0019 | 0.0013 | 0.0006 |
| 8 | 0.0019 | 0.0013 | 0.0007 |
| 9 | 0.0020 | 0.0013 | 0.0007 |
| 10 | 0.0020 | 0.0013 | 0.0007 |
| 11 | 0.0020 | 0.0013 | 0.0007 |
| 12 | 0.0020 | 0.0013 | 0.0007 |
| 13 | 0.0020 | 0.0013 | 0.0007 |
| 14 | 0.0020 | 0.0013 | 0.0007 |
| 15 | 0.0020 | 0.0013 | 0.0007 |
| 16 | 0.0020 | 0.0013 | 0.0007 |
| 17 | 0.0020 | 0.0013 | 0.0007 |
| 18 | 0.0020 | 0.0014 | 0.0007 |
| 19 | 0.0020 | 0.0014 | 0.0007 |
| 20 | 0.0020 | 0.0014 | 0.0007 |
| 21 | 0.0021 | 0.0014 | 0.0007 |
| 22 | 0.0021 | 0.0014 | 0.0007 |
| 23 | 0.0021 | 0.0014 | 0.0007 |
| 24 | 0.0021 | 0.0014 | 0.0007 |
| 25 | 0.0021 | 0.0014 | 0.0007 |

| | | | |
|---|---|---|---|
| 26 | 0.0021 | 0.0014 | 0.0007 |
| 27 | 0.0021 | 0.0014 | 0.0007 |
| 28 | 0.0021 | 0.0014 | 0.0007 |
| 29 | 0.0021 | 0.0014 | 0.0007 |
| 30 | 0.0021 | 0.0014 | 0.0007 |
| 31 | 0.0022 | 0.0014 | 0.0007 |
| 32 | 0.0022 | 0.0014 | 0.0007 |
| 33 | 0.0022 | 0.0015 | 0.0007 |
| 34 | 0.0022 | 0.0015 | 0.0007 |
| 35 | 0.0022 | 0.0015 | 0.0007 |
| 36 | 0.0022 | 0.0015 | 0.0007 |
| 37 | 0.0022 | 0.0015 | 0.0007 |
| 38 | 0.0022 | 0.0015 | 0.0007 |
| 39 | 0.0022 | 0.0015 | 0.0008 |
| 40 | 0.0023 | 0.0015 | 0.0008 |
| 41 | 0.0023 | 0.0015 | 0.0008 |
| 42 | 0.0023 | 0.0015 | 0.0008 |
| 43 | 0.0023 | 0.0015 | 0.0008 |
| 44 | 0.0023 | 0.0015 | 0.0008 |
| 45 | 0.0023 | 0.0015 | 0.0008 |
| 46 | 0.0023 | 0.0015 | 0.0008 |
| 47 | 0.0023 | 0.0016 | 0.0008 |
| 48 | 0.0024 | 0.0016 | 0.0008 |
| 49 | 0.0024 | 0.0016 | 0.0008 |
| 50 | 0.0024 | 0.0016 | 0.0008 |
| 51 | 0.0024 | 0.0016 | 0.0008 |
| 52 | 0.0024 | 0.0016 | 0.0008 |
| 53 | 0.0024 | 0.0016 | 0.0008 |
| 54 | 0.0024 | 0.0016 | 0.0008 |
| 55 | 0.0025 | 0.0016 | 0.0008 |
| 56 | 0.0025 | 0.0016 | 0.0008 |
| 57 | 0.0025 | 0.0017 | 0.0008 |
| 58 | 0.0025 | 0.0017 | 0.0008 |
| 59 | 0.0025 | 0.0017 | 0.0008 |
| 60 | 0.0025 | 0.0017 | 0.0008 |
| 61 | 0.0025 | 0.0017 | 0.0008 |
| 62 | 0.0025 | 0.0017 | 0.0009 |
| 63 | 0.0026 | 0.0017 | 0.0009 |
| 64 | 0.0026 | 0.0017 | 0.0009 |
| 65 | 0.0026 | 0.0017 | 0.0009 |
| 66 | 0.0026 | 0.0017 | 0.0009 |
| 67 | 0.0026 | 0.0018 | 0.0009 |
| 68 | 0.0026 | 0.0018 | 0.0009 |
| 69 | 0.0027 | 0.0018 | 0.0009 |
| 70 | 0.0027 | 0.0018 | 0.0009 |
| 71 | 0.0027 | 0.0018 | 0.0009 |
| 72 | 0.0027 | 0.0018 | 0.0009 |
| 73 | 0.0027 | 0.0018 | 0.0009 |
| 74 | 0.0027 | 0.0018 | 0.0009 |
| 75 | 0.0028 | 0.0018 | 0.0009 |
| 76 | 0.0028 | 0.0019 | 0.0009 |
| 77 | 0.0028 | 0.0019 | 0.0009 |
| 78 | 0.0028 | 0.0019 | 0.0009 |
| 79 | 0.0028 | 0.0019 | 0.0010 |
| 80 | 0.0029 | 0.0019 | 0.0010 |
| 81 | 0.0029 | 0.0019 | 0.0010 |
| 82 | 0.0029 | 0.0019 | 0.0010 |
| 83 | 0.0029 | 0.0019 | 0.0010 |
| 84 | 0.0029 | 0.0020 | 0.0010 |

| | | | |
|---|---|---|---|
| 85 | 0.0030 | 0.0020 | 0.0010 |
| 86 | 0.0030 | 0.0020 | 0.0010 |
| 87 | 0.0030 | 0.0020 | 0.0010 |
| 88 | 0.0030 | 0.0020 | 0.0010 |
| 89 | 0.0031 | 0.0020 | 0.0010 |
| 90 | 0.0031 | 0.0020 | 0.0010 |
| 91 | 0.0031 | 0.0021 | 0.0010 |
| 92 | 0.0031 | 0.0021 | 0.0010 |
| 93 | 0.0032 | 0.0021 | 0.0011 |
| 94 | 0.0032 | 0.0021 | 0.0011 |
| 95 | 0.0032 | 0.0021 | 0.0011 |
| 96 | 0.0032 | 0.0021 | 0.0011 |
| 97 | 0.0033 | 0.0022 | 0.0011 |
| 98 | 0.0033 | 0.0022 | 0.0011 |
| 99 | 0.0033 | 0.0022 | 0.0011 |
| 100 | 0.0033 | 0.0022 | 0.0011 |
| 101 | 0.0034 | 0.0022 | 0.0011 |
| 102 | 0.0034 | 0.0023 | 0.0011 |
| 103 | 0.0034 | 0.0023 | 0.0011 |
| 104 | 0.0034 | 0.0023 | 0.0012 |
| 105 | 0.0035 | 0.0023 | 0.0012 |
| 106 | 0.0035 | 0.0023 | 0.0012 |
| 107 | 0.0035 | 0.0024 | 0.0012 |
| 108 | 0.0036 | 0.0024 | 0.0012 |
| 109 | 0.0036 | 0.0024 | 0.0012 |
| 110 | 0.0036 | 0.0024 | 0.0012 |
| 111 | 0.0037 | 0.0025 | 0.0012 |
| 112 | 0.0037 | 0.0025 | 0.0012 |
| 113 | 0.0038 | 0.0025 | 0.0013 |
| 114 | 0.0038 | 0.0025 | 0.0013 |
| 115 | 0.0038 | 0.0026 | 0.0013 |
| 116 | 0.0039 | 0.0026 | 0.0013 |
| 117 | 0.0039 | 0.0026 | 0.0013 |
| 118 | 0.0039 | 0.0026 | 0.0013 |
| 119 | 0.0040 | 0.0027 | 0.0013 |
| 120 | 0.0040 | 0.0027 | 0.0013 |
| 121 | 0.0041 | 0.0027 | 0.0014 |
| 122 | 0.0041 | 0.0027 | 0.0014 |
| 123 | 0.0042 | 0.0028 | 0.0014 |
| 124 | 0.0042 | 0.0028 | 0.0014 |
| 125 | 0.0043 | 0.0028 | 0.0014 |
| 126 | 0.0043 | 0.0029 | 0.0014 |
| 127 | 0.0044 | 0.0029 | 0.0015 |
| 128 | 0.0044 | 0.0029 | 0.0015 |
| 129 | 0.0045 | 0.0030 | 0.0015 |
| 130 | 0.0045 | 0.0030 | 0.0015 |
| 131 | 0.0046 | 0.0031 | 0.0015 |
| 132 | 0.0046 | 0.0031 | 0.0015 |
| 133 | 0.0047 | 0.0031 | 0.0016 |
| 134 | 0.0048 | 0.0032 | 0.0016 |
| 135 | 0.0048 | 0.0032 | 0.0016 |
| 136 | 0.0049 | 0.0032 | 0.0016 |
| 137 | 0.0050 | 0.0033 | 0.0017 |
| 138 | 0.0050 | 0.0033 | 0.0017 |
| 139 | 0.0051 | 0.0034 | 0.0017 |
| 140 | 0.0052 | 0.0034 | 0.0017 |
| 141 | 0.0053 | 0.0035 | 0.0018 |
| 142 | 0.0053 | 0.0035 | 0.0018 |
| 143 | 0.0054 | 0.0036 | 0.0018 |

| | | | |
|---|---|---|---|
| 144 | 0.0055 | 0.0037 | 0.0018 |
| 145 | 0.0045 | 0.0030 | 0.0015 |
| 146 | 0.0045 | 0.0030 | 0.0015 |
| 147 | 0.0046 | 0.0031 | 0.0015 |
| 148 | 0.0047 | 0.0031 | 0.0016 |
| 149 | 0.0048 | 0.0032 | 0.0016 |
| 150 | 0.0049 | 0.0032 | 0.0016 |
| 151 | 0.0050 | 0.0033 | 0.0017 |
| 152 | 0.0051 | 0.0034 | 0.0017 |
| 153 | 0.0052 | 0.0035 | 0.0017 |
| 154 | 0.0053 | 0.0035 | 0.0018 |
| 155 | 0.0054 | 0.0036 | 0.0018 |
| 156 | 0.0055 | 0.0037 | 0.0018 |
| 157 | 0.0057 | 0.0038 | 0.0019 |
| 158 | 0.0058 | 0.0038 | 0.0019 |
| 159 | 0.0060 | 0.0040 | 0.0020 |
| 160 | 0.0061 | 0.0040 | 0.0020 |
| 161 | 0.0063 | 0.0042 | 0.0021 |
| 162 | 0.0064 | 0.0042 | 0.0021 |
| 163 | 0.0066 | 0.0044 | 0.0022 |
| 164 | 0.0067 | 0.0045 | 0.0023 |
| 165 | 0.0070 | 0.0047 | 0.0023 |
| 166 | 0.0071 | 0.0048 | 0.0024 |
| 167 | 0.0075 | 0.0050 | 0.0025 |
| 168 | 0.0076 | 0.0051 | 0.0025 |
| 169 | 0.0084 | 0.0056 | 0.0028 |
| 170 | 0.0086 | 0.0057 | 0.0029 |
| 171 | 0.0090 | 0.0060 | 0.0030 |
| 172 | 0.0093 | 0.0062 | 0.0031 |
| 173 | 0.0098 | 0.0065 | 0.0033 |
| 174 | 0.0101 | 0.0067 | 0.0034 |
| 175 | 0.0107 | 0.0071 | 0.0036 |
| 176 | 0.0110 | 0.0073 | 0.0037 |
| 177 | 0.0118 | 0.0078 | 0.0039 |
| 178 | 0.0122 | 0.0081 | 0.0041 |
| 179 | 0.0132 | 0.0088 | 0.0044 |
| 180 | 0.0137 | 0.0091 | 0.0046 |
| 181 | 0.0150 | 0.0100 | 0.0050 |
| 182 | 0.0157 | 0.0105 | 0.0053 |
| 183 | 0.0175 | 0.0116 | 0.0058 |
| 184 | 0.0185 | 0.0123 | 0.0062 |
| 185 | 0.0343 | 0.0228 | 0.0115 |
| 186 | 0.0366 | 0.0243 | 0.0122 |
| 187 | 0.0424 | 0.0282 | 0.0142 |
| 188 | 0.0463 | 0.0308 | 0.0155 |
| 189 | 0.0576 | 0.0322 | 0.0254 |
| 190 | 0.0663 | 0.0322 | 0.0341 |
| 191 | 0.1006 | 0.0322 | 0.0684 |
| 192 | 0.1460 | 0.0322 | 0.1138 |
| 193 | 0.6318 | 0.0322 | 0.5996 |
| 194 | 0.0792 | 0.0322 | 0.0470 |
| 195 | 0.0512 | 0.0322 | 0.0190 |
| 196 | 0.0392 | 0.0261 | 0.0131 |
| 197 | 0.0197 | 0.0131 | 0.0066 |
| 198 | 0.0166 | 0.0110 | 0.0055 |
| 199 | 0.0143 | 0.0095 | 0.0048 |
| 200 | 0.0127 | 0.0084 | 0.0042 |
| 201 | 0.0114 | 0.0076 | 0.0038 |
| 202 | 0.0104 | 0.0069 | 0.0035 |

| | | | |
|---|---|---|---|
| 203 | 0.0095 | 0.0063 | 0.0032 |
| 204 | 0.0088 | 0.0059 | 0.0029 |
| 205 | 0.0078 | 0.0052 | 0.0026 |
| 206 | 0.0073 | 0.0049 | 0.0024 |
| 207 | 0.0069 | 0.0046 | 0.0023 |
| 208 | 0.0065 | 0.0043 | 0.0022 |
| 209 | 0.0062 | 0.0041 | 0.0021 |
| 210 | 0.0059 | 0.0039 | 0.0020 |
| 211 | 0.0056 | 0.0037 | 0.0019 |
| 212 | 0.0053 | 0.0036 | 0.0018 |
| 213 | 0.0051 | 0.0034 | 0.0017 |
| 214 | 0.0049 | 0.0033 | 0.0016 |
| 215 | 0.0047 | 0.0032 | 0.0016 |
| 216 | 0.0046 | 0.0030 | 0.0015 |
| 217 | 0.0056 | 0.0037 | 0.0019 |
| 218 | 0.0054 | 0.0036 | 0.0018 |
| 219 | 0.0052 | 0.0035 | 0.0017 |
| 220 | 0.0051 | 0.0034 | 0.0017 |
| 221 | 0.0049 | 0.0033 | 0.0016 |
| 222 | 0.0048 | 0.0032 | 0.0016 |
| 223 | 0.0047 | 0.0031 | 0.0016 |
| 224 | 0.0046 | 0.0030 | 0.0015 |
| 225 | 0.0044 | 0.0030 | 0.0015 |
| 226 | 0.0043 | 0.0029 | 0.0014 |
| 227 | 0.0042 | 0.0028 | 0.0014 |
| 228 | 0.0041 | 0.0028 | 0.0014 |
| 229 | 0.0041 | 0.0027 | 0.0014 |
| 230 | 0.0040 | 0.0026 | 0.0013 |
| 231 | 0.0039 | 0.0026 | 0.0013 |
| 232 | 0.0038 | 0.0025 | 0.0013 |
| 233 | 0.0037 | 0.0025 | 0.0012 |
| 234 | 0.0037 | 0.0024 | 0.0012 |
| 235 | 0.0036 | 0.0024 | 0.0012 |
| 236 | 0.0035 | 0.0023 | 0.0012 |
| 237 | 0.0035 | 0.0023 | 0.0012 |
| 238 | 0.0034 | 0.0023 | 0.0011 |
| 239 | 0.0033 | 0.0022 | 0.0011 |
| 240 | 0.0033 | 0.0022 | 0.0011 |
| 241 | 0.0032 | 0.0022 | 0.0011 |
| 242 | 0.0032 | 0.0021 | 0.0011 |
| 243 | 0.0031 | 0.0021 | 0.0010 |
| 244 | 0.0031 | 0.0021 | 0.0010 |
| 245 | 0.0030 | 0.0020 | 0.0010 |
| 246 | 0.0030 | 0.0020 | 0.0010 |
| 247 | 0.0030 | 0.0020 | 0.0010 |
| 248 | 0.0029 | 0.0019 | 0.0010 |
| 249 | 0.0029 | 0.0019 | 0.0010 |
| 250 | 0.0028 | 0.0019 | 0.0009 |
| 251 | 0.0028 | 0.0019 | 0.0009 |
| 252 | 0.0028 | 0.0018 | 0.0009 |
| 253 | 0.0027 | 0.0018 | 0.0009 |
| 254 | 0.0027 | 0.0018 | 0.0009 |
| 255 | 0.0027 | 0.0018 | 0.0009 |
| 256 | 0.0026 | 0.0017 | 0.0009 |
| 257 | 0.0026 | 0.0017 | 0.0009 |
| 258 | 0.0026 | 0.0017 | 0.0009 |
| 259 | 0.0025 | 0.0017 | 0.0008 |
| 260 | 0.0025 | 0.0017 | 0.0008 |
| 261 | 0.0025 | 0.0016 | 0.0008 |

| | | | |
|---|---|---|---|
| 262 | 0.0024 | 0.0016 | 0.0008 |
| 263 | 0.0024 | 0.0016 | 0.0008 |
| 264 | 0.0024 | 0.0016 | 0.0008 |
| 265 | 0.0024 | 0.0016 | 0.0008 |
| 266 | 0.0023 | 0.0016 | 0.0008 |
| 267 | 0.0023 | 0.0015 | 0.0008 |
| 268 | 0.0023 | 0.0015 | 0.0008 |
| 269 | 0.0023 | 0.0015 | 0.0008 |
| 270 | 0.0022 | 0.0015 | 0.0007 |
| 271 | 0.0022 | 0.0015 | 0.0007 |
| 272 | 0.0022 | 0.0015 | 0.0007 |
| 273 | 0.0022 | 0.0014 | 0.0007 |
| 274 | 0.0022 | 0.0014 | 0.0007 |
| 275 | 0.0021 | 0.0014 | 0.0007 |
| 276 | 0.0021 | 0.0014 | 0.0007 |
| 277 | 0.0021 | 0.0014 | 0.0007 |
| 278 | 0.0021 | 0.0014 | 0.0007 |
| 279 | 0.0021 | 0.0014 | 0.0007 |
| 280 | 0.0020 | 0.0014 | 0.0007 |
| 281 | 0.0020 | 0.0013 | 0.0007 |
| 282 | 0.0020 | 0.0013 | 0.0007 |
| 283 | 0.0020 | 0.0013 | 0.0007 |
| 284 | 0.0020 | 0.0013 | 0.0007 |
| 285 | 0.0020 | 0.0013 | 0.0007 |
| 286 | 0.0019 | 0.0013 | 0.0006 |
| 287 | 0.0019 | 0.0013 | 0.0006 |
| 288 | 0.0019 | 0.0013 | 0.0006 |

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Total soil rain loss = 1.13(In)
Total effective rainfall = 1.36(In)
Peak flow rate in flood hydrograph = 163.10(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 50.0 | 100.0 | 150.0 | 200.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+15 | 0.0003 | 0.02 | Q | \| | \| | \| | \| |
| 0+20 | 0.0006 | 0.04 | Q | \| | \| | \| | \| |
| 0+25 | 0.0010 | 0.06 | Q | \| | \| | \| | \| |
| 0+30 | 0.0015 | 0.08 | Q | \| | \| | \| | \| |
| 0+35 | 0.0022 | 0.11 | Q | \| | \| | \| | \| |
| 0+40 | 0.0032 | 0.13 | Q | \| | \| | \| | \| |
| 0+45 | 0.0043 | 0.17 | Q | \| | \| | \| | \| |
| 0+50 | 0.0057 | 0.20 | Q | \| | \| | \| | \| |
| 0+55 | 0.0073 | 0.24 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0095 | 0.31 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0121 | 0.38 | Q | \| | \| | \| | \| |
| 1+10 | 0.0152 | 0.46 | Q | \| | \| | \| | \| |
| 1+15 | 0.0192 | 0.57 | Q | \| | \| | \| | \| |
| 1+20 | 0.0239 | 0.68 | Q | \| | \| | \| | \| |
| 1+25 | 0.0293 | 0.78 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+30 | 0.0353 | 0.88 | Q | | | | |
| 1+35 | 0.0420 | 0.97 | Q | | | | |
| 1+40 | 0.0491 | 1.04 | Q | | | | |
| 1+45 | 0.0568 | 1.11 | Q | | | | |
| 1+50 | 0.0649 | 1.18 | Q | | | | |
| 1+55 | 0.0735 | 1.24 | Q | | | | |
| 2+ 0 | 0.0824 | 1.30 | Q | | | | |
| 2+ 5 | 0.0917 | 1.35 | Q | | | | |
| 2+10 | 0.1014 | 1.40 | Q | | | | |
| 2+15 | 0.1113 | 1.44 | Q | | | | |
| 2+20 | 0.1215 | 1.48 | Q | | | | |
| 2+25 | 0.1320 | 1.52 | Q | | | | |
| 2+30 | 0.1427 | 1.56 | Q | | | | |
| 2+35 | 0.1537 | 1.59 | Q | | | | |
| 2+40 | 0.1649 | 1.63 | Q | | | | |
| 2+45 | 0.1764 | 1.66 | Q | | | | |
| 2+50 | 0.1880 | 1.69 | Q | | | | |
| 2+55 | 0.1999 | 1.73 | Q | | | | |
| 3+ 0 | 0.2120 | 1.76 | Q | | | | |
| 3+ 5 | 0.2243 | 1.78 | Q | | | | |
| 3+10 | 0.2368 | 1.81 | Q | | | | |
| 3+15 | 0.2494 | 1.84 | Q | | | | |
| 3+20 | 0.2623 | 1.87 | Q | | | | |
| 3+25 | 0.2753 | 1.89 | Q | | | | |
| 3+30 | 0.2885 | 1.92 | Q | | | | |
| 3+35 | 0.3019 | 1.94 | Q | | | | |
| 3+40 | 0.3155 | 1.97 | Q | | | | |
| 3+45 | 0.3292 | 1.99 | Q | | | | |
| 3+50 | 0.3431 | 2.01 | Q | | | | |
| 3+55 | 0.3571 | 2.04 | Q | | | | |
| 4+ 0 | 0.3713 | 2.06 | Q | | | | |
| 4+ 5 | 0.3856 | 2.08 | Q | | | | |
| 4+10 | 0.4001 | 2.10 | Q | | | | |
| 4+15 | 0.4148 | 2.13 | Q | | | | |
| 4+20 | 0.4295 | 2.15 | Q | | | | |
| 4+25 | 0.4445 | 2.17 | Q | | | | |
| 4+30 | 0.4596 | 2.19 | Q | | | | |
| 4+35 | 0.4748 | 2.21 | Q | | | | |
| 4+40 | 0.4902 | 2.23 | Q | | | | |
| 4+45 | 0.5057 | 2.25 | Q | | | | |
| 4+50 | 0.5214 | 2.28 | Q | | | | |
| 4+55 | 0.5372 | 2.30 | Q | | | | |
| 5+ 0 | 0.5531 | 2.32 | Q | | | | |
| 5+ 5 | 0.5692 | 2.34 | Q | | | | |
| 5+10 | 0.5855 | 2.36 | Q | | | | |
| 5+15 | 0.6018 | 2.38 | Q | | | | |
| 5+20 | 0.6184 | 2.40 | Q | | | | |
| 5+25 | 0.6350 | 2.42 | Q | | | | |
| 5+30 | 0.6518 | 2.44 | Q | | | | |
| 5+35 | 0.6687 | 2.46 | Q | | | | |
| 5+40 | 0.6857 | 2.47 | Q | | | | |
| 5+45 | 0.7029 | 2.49 | Q | | | | |
| 5+50 | 0.7202 | 2.51 | Q | | | | |
| 5+55 | 0.7377 | 2.53 | Q | | | | |
| 6+ 0 | 0.7553 | 2.55 | Q | | | | |
| 6+ 5 | 0.7730 | 2.57 | Q | | | | |
| 6+10 | 0.7908 | 2.59 | Q | | | | |
| 6+15 | 0.8088 | 2.61 | Q | | | | |
| 6+20 | 0.8270 | 2.63 | Q | | | | |

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|---|---|---|---|---|---|---|---|
| 6+25 | 0.8453 | 2.65 | QV | | | | |
| 6+30 | 0.8637 | 2.67 | QV | | | | |
| 6+35 | 0.8822 | 2.69 | QV | | | | |
| 6+40 | 0.9009 | 2.71 | QV | | | | |
| 6+45 | 0.9197 | 2.73 | QV | | | | |
| 6+50 | 0.9387 | 2.76 | QV | | | | |
| 6+55 | 0.9578 | 2.78 | QV | | | | |
| 7+ 0 | 0.9771 | 2.80 | QV | | | | |
| 7+ 5 | 0.9965 | 2.82 | QV | | | | |
| 7+10 | 1.0161 | 2.84 | QV | | | | |
| 7+15 | 1.0358 | 2.86 | QV | | | | |
| 7+20 | 1.0556 | 2.88 | QV | | | | |
| 7+25 | 1.0756 | 2.90 | QV | | | | |
| 7+30 | 1.0958 | 2.92 | QV | | | | |
| 7+35 | 1.1160 | 2.95 | QV | | | | |
| 7+40 | 1.1365 | 2.97 | QV | | | | |
| 7+45 | 1.1571 | 2.99 | QV | | | | |
| 7+50 | 1.1778 | 3.01 | QV | | | | |
| 7+55 | 1.1988 | 3.04 | QV | | | | |
| 8+ 0 | 1.2198 | 3.06 | QV | | | | |
| 8+ 5 | 1.2411 | 3.08 | QV | | | | |
| 8+10 | 1.2625 | 3.11 | QV | | | | |
| 8+15 | 1.2840 | 3.13 | QV | | | | |
| 8+20 | 1.3057 | 3.15 | QV | | | | |
| 8+25 | 1.3276 | 3.18 | QV | | | | |
| 8+30 | 1.3497 | 3.20 | QV | | | | |
| 8+35 | 1.3719 | 3.23 | QV | | | | |
| 8+40 | 1.3943 | 3.25 | QV | | | | |
| 8+45 | 1.4169 | 3.28 | QV | | | | |
| 8+50 | 1.4396 | 3.30 | QV | | | | |
| 8+55 | 1.4625 | 3.33 | QV | | | | |
| 9+ 0 | 1.4856 | 3.36 | QV | | | | |
| 9+ 5 | 1.5089 | 3.38 | QV | | | | |
| 9+10 | 1.5324 | 3.41 | QV | | | | |
| 9+15 | 1.5561 | 3.44 | QV | | | | |
| 9+20 | 1.5799 | 3.46 | QV | | | | |
| 9+25 | 1.6040 | 3.49 | QV | | | | |
| 9+30 | 1.6282 | 3.52 | QV | | | | |
| 9+35 | 1.6527 | 3.55 | QV | | | | |
| 9+40 | 1.6773 | 3.58 | Q V | | | | |
| 9+45 | 1.7022 | 3.61 | Q V | | | | |
| 9+50 | 1.7272 | 3.64 | Q V | | | | |
| 9+55 | 1.7525 | 3.67 | Q V | | | | |
| 10+ 0 | 1.7780 | 3.70 | Q V | | | | |
| 10+ 5 | 1.8037 | 3.73 | Q V | | | | |
| 10+10 | 1.8296 | 3.76 | Q V | | | | |
| 10+15 | 1.8558 | 3.80 | Q V | | | | |
| 10+20 | 1.8822 | 3.83 | Q V | | | | |
| 10+25 | 1.9088 | 3.86 | Q V | | | | |
| 10+30 | 1.9356 | 3.90 | Q V | | | | |
| 10+35 | 1.9627 | 3.94 | Q V | | | | |
| 10+40 | 1.9901 | 3.97 | Q V | | | | |
| 10+45 | 2.0177 | 4.01 | Q V | | | | |
| 10+50 | 2.0456 | 4.05 | Q V | | | | |
| 10+55 | 2.0737 | 4.09 | Q V | | | | |
| 11+ 0 | 2.1021 | 4.13 | Q V | | | | |
| 11+ 5 | 2.1308 | 4.17 | Q V | | | | |
| 11+10 | 2.1598 | 4.21 | Q V | | | | |
| 11+15 | 2.1890 | 4.25 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 11+20 | 2.2186 | 4.29 | Q V | \| | \| | \| | \| |
| 11+25 | 2.2485 | 4.34 | Q V | \| | \| | \| | \| |
| 11+30 | 2.2787 | 4.38 | Q V | \| | \| | \| | \| |
| 11+35 | 2.3092 | 4.43 | Q V | \| | \| | \| | \| |
| 11+40 | 2.3400 | 4.48 | Q V | \| | \| | \| | \| |
| 11+45 | 2.3711 | 4.52 | Q V | \| | \| | \| | \| |
| 11+50 | 2.4027 | 4.57 | Q V | \| | \| | \| | \| |
| 11+55 | 2.4345 | 4.63 | Q V | \| | \| | \| | \| |
| 12+ 0 | 2.4667 | 4.68 | Q V | \| | \| | \| | \| |
| 12+ 5 | 2.4993 | 4.73 | Q V | \| | \| | \| | \| |
| 12+10 | 2.5322 | 4.78 | Q V | \| | \| | \| | \| |
| 12+15 | 2.5655 | 4.83 | Q V | \| | \| | \| | \| |
| 12+20 | 2.5991 | 4.88 | Q V | \| | \| | \| | \| |
| 12+25 | 2.6330 | 4.93 | Q V | \| | \| | \| | \| |
| 12+30 | 2.6672 | 4.97 | Q V | \| | \| | \| | \| |
| 12+35 | 2.7018 | 5.02 | \|Q V | \| | \| | \| | \| |
| 12+40 | 2.7367 | 5.07 | \|Q V | \| | \| | \| | \| |
| 12+45 | 2.7720 | 5.11 | \|Q V | \| | \| | \| | \| |
| 12+50 | 2.8075 | 5.16 | \|Q V | \| | \| | \| | \| |
| 12+55 | 2.8433 | 5.21 | \|Q V | \| | \| | \| | \| |
| 13+ 0 | 2.8794 | 5.24 | \|Q V | \| | \| | \| | \| |
| 13+ 5 | 2.9157 | 5.27 | \|Q V | \| | \| | \| | \| |
| 13+10 | 2.9522 | 5.29 | \|Q V | \| | \| | \| | \| |
| 13+15 | 2.9887 | 5.31 | \|Q V | \| | \| | \| | \| |
| 13+20 | 3.0253 | 5.32 | \|Q V | \| | \| | \| | \| |
| 13+25 | 3.0621 | 5.34 | \|Q V | \| | \| | \| | \| |
| 13+30 | 3.0991 | 5.37 | \|Q V | \| | \| | \| | \| |
| 13+35 | 3.1363 | 5.40 | \|Q V | \| | \| | \| | \| |
| 13+40 | 3.1738 | 5.45 | \|Q V | \| | \| | \| | \| |
| 13+45 | 3.2116 | 5.50 | \|Q V | \| | \| | \| | \| |
| 13+50 | 3.2499 | 5.55 | \|Q V | \| | \| | \| | \| |
| 13+55 | 3.2886 | 5.61 | \|Q V | \| | \| | \| | \| |
| 14+ 0 | 3.3277 | 5.68 | \|Q V | \| | \| | \| | \| |
| 14+ 5 | 3.3674 | 5.76 | \|Q V | \| | \| | \| | \| |
| 14+10 | 3.4076 | 5.85 | \|Q V | \| | \| | \| | \| |
| 14+15 | 3.4486 | 5.94 | \|Q V | \| | \| | \| | \| |
| 14+20 | 3.4902 | 6.04 | \|Q V | \| | \| | \| | \| |
| 14+25 | 3.5326 | 6.15 | \|Q V | \| | \| | \| | \| |
| 14+30 | 3.5758 | 6.27 | \|Q V | \| | \| | \| | \| |
| 14+35 | 3.6199 | 6.40 | \|Q V | \| | \| | \| | \| |
| 14+40 | 3.6649 | 6.54 | \|Q V | \| | \| | \| | \| |
| 14+45 | 3.7109 | 6.69 | \|Q V | \| | \| | \| | \| |
| 14+50 | 3.7581 | 6.84 | \|Q V | \| | \| | \| | \| |
| 14+55 | 3.8064 | 7.02 | \|Q V | \| | \| | \| | \| |
| 15+ 0 | 3.8560 | 7.21 | \|Q V | \| | \| | \| | \| |
| 15+ 5 | 3.9071 | 7.41 | \|Q V | \| | \| | \| | \| |
| 15+10 | 3.9597 | 7.64 | \|Q V | \| | \| | \| | \| |
| 15+15 | 4.0141 | 7.89 | \|Q V | \| | \| | \| | \| |
| 15+20 | 4.0703 | 8.16 | \|Q V | \| | \| | \| | \| |
| 15+25 | 4.1288 | 8.49 | \|Q V | \| | \| | \| | \| |
| 15+30 | 4.1899 | 8.88 | \|Q V | \| | \| | \| | \| |
| 15+35 | 4.2541 | 9.32 | \|Q V | \| | \| | \| | \| |
| 15+40 | 4.3219 | 9.84 | \|Q V | \| | \| | \| | \| |
| 15+45 | 4.3941 | 10.49 | \| Q V | \| | \| | \| | \| |
| 15+50 | 4.4723 | 11.34 | \| Q V | \| | \| | \| | \| |
| 15+55 | 4.5591 | 12.61 | \| Q V | \| | \| | \| | \| |
| 16+ 0 | 4.6598 | 14.62 | \| Q V | \| | \| | \| | \| |
| 16+ 5 | 4.8030 | 20.80 | \| QV | \| | \| | \| | \| |
| 16+10 | 4.9889 | 27.00 | \| QV | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 16+15 | 5.1961 | 30.08 | Q | | | | |
| 16+20 | 5.4563 | 37.77 | VQ | | | | |
| 16+25 | 5.7444 | 41.84 | V Q | | | | |
| 16+30 | 6.0660 | 46.70 | V Q | | | | |
| 16+35 | 6.4418 | 54.56 | V Q | | | | |
| 16+40 | 6.8441 | 58.43 | V Q | | | | |
| 16+45 | 7.3047 | 66.87 | V Q | | | | |
| 16+50 | 7.8208 | 74.93 | V Q | | | | |
| 16+55 | 8.4055 | 84.90 | V Q | | | | |
| 17+ 0 | 9.1713 | 111.19 | V | Q | | | |
| 17+ 5 | 10.0075 | 121.42 | V | Q | | | |
| 17+10 | 10.9704 | 139.82 | V | Q | | | |
| 17+15 | 12.0937 | 163.10 | V | | | Q | |
| 17+20 | 13.2066 | 161.60 | V | | | Q | |
| 17+25 | 14.2291 | 148.46 | V | | Q | | |
| 17+30 | 15.1935 | 140.03 | V | Q | | | |
| 17+35 | 16.1001 | 131.63 | V | Q | | | |
| 17+40 | 16.8812 | 113.42 | V Q | | | | |
| 17+45 | 17.6249 | 107.99 | Q | | | | |
| 17+50 | 18.3101 | 99.48 | Q | V | | | |
| 17+55 | 18.9346 | 90.68 | Q | V | | | |
| 18+ 0 | 19.5298 | 86.43 | Q | V | | | |
| 18+ 5 | 20.0450 | 74.80 | Q | V | | | |
| 18+10 | 20.5249 | 69.69 | Q | V | | | |
| 18+15 | 20.9780 | 65.79 | Q | V | | | |
| 18+20 | 21.3879 | 59.51 | Q | V | | | |
| 18+25 | 21.7843 | 57.56 | Q | V | | | |
| 18+30 | 22.1541 | 53.68 | Q | V | | | |
| 18+35 | 22.5035 | 50.74 | Q | V | | | |
| 18+40 | 22.8439 | 49.42 | Q | V | | | |
| 18+45 | 23.1665 | 46.85 | Q | V | | | |
| 18+50 | 23.4797 | 45.47 | Q | V | | | |
| 18+55 | 23.7768 | 43.14 | Q | V | | | |
| 19+ 0 | 24.0520 | 39.96 | Q | V | | | |
| 19+ 5 | 24.3204 | 38.98 | Q | V | | | |
| 19+10 | 24.5744 | 36.87 | Q | V | | | |
| 19+15 | 24.8198 | 35.63 | Q | V | | | |
| 19+20 | 25.0606 | 34.97 | Q | V | | | |
| 19+25 | 25.2939 | 33.87 | Q | V | | | |
| 19+30 | 25.5215 | 33.05 | Q | V | | | |
| 19+35 | 25.7340 | 30.86 | Q | V | | | |
| 19+40 | 25.9308 | 28.56 | Q | V | | | |
| 19+45 | 26.1246 | 28.15 | Q | V | | | |
| 19+50 | 26.3160 | 27.78 | Q | V | | | |
| 19+55 | 26.5041 | 27.31 | Q | V | | | |
| 20+ 0 | 26.6848 | 26.25 | Q | V | | | |
| 20+ 5 | 26.8523 | 24.31 | Q | V | | | |
| 20+10 | 27.0168 | 23.90 | Q | V | | | |
| 20+15 | 27.1797 | 23.64 | Q | V | | | |
| 20+20 | 27.3404 | 23.35 | Q | V | | | |
| 20+25 | 27.4981 | 22.89 | Q | V | | | |
| 20+30 | 27.6483 | 21.81 | Q | V | | | |
| 20+35 | 27.7956 | 21.39 | Q | V | | | |
| 20+40 | 27.9413 | 21.16 | Q | V | | | |
| 20+45 | 28.0850 | 20.87 | Q | V | | | |
| 20+50 | 28.2259 | 20.46 | Q | V | | | |
| 20+55 | 28.3580 | 19.18 | Q | V | | | |
| 21+ 0 | 28.4849 | 18.42 | Q | V | | | |
| 21+ 5 | 28.6101 | 18.18 | Q | V | | | |

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21+10     28.7335     17.91  |  Q      |         |         |   V     |
21+15     28.8541     17.52  |  Q      |         |         |   V     |
21+20     28.9667     16.35  |  Q      |         |         |   V     |
21+25     29.0704     15.05  |  Q      |         |         |    V    |
21+30     29.1726     14.84  | Q       |         |         |    V    |
21+35     29.2738     14.69  | Q       |         |         |    V    |
21+40     29.3738     14.53  | Q       |         |         |    V    |
21+45     29.4722     14.28  | Q       |         |         |    V    |
21+50     29.5679     13.89  | Q       |         |         |    V    |
21+55     29.6625     13.74  | Q       |         |         |    V    |
22+ 0     29.7563     13.61  | Q       |         |         |    V    |
22+ 5     29.8489     13.45  | Q       |         |         |    V    |
22+10     29.9397     13.18  | Q       |         |         |     V   |
22+15     30.0256     12.48  | Q       |         |         |     V   |
22+20     30.1097     12.22  | Q       |         |         |     V   |
22+25     30.1931     12.10  | Q       |         |         |     V   |
22+30     30.2756     11.98  | Q       |         |         |     V   |
22+35     30.3571     11.84  | Q       |         |         |     V   |
22+40     30.4362     11.48  | Q       |         |         |     V   |
22+45     30.5135     11.23  | Q       |         |         |     V   |
22+50     30.5901     11.12  | Q       |         |         |     V   |
22+55     30.6657     10.98  | Q       |         |         |     V   |
23+ 0     30.7400     10.78  | Q       |         |         |      V  |
23+ 5     30.8103     10.21  | Q       |         |         |      V  |
23+10     30.8759      9.53  |Q        |         |         |      V  |
23+15     30.9408      9.42  |Q        |         |         |      V  |
23+20     31.0051      9.34  |Q        |         |         |      V  |
23+25     31.0690      9.27  |Q        |         |         |      V  |
23+30     31.1323      9.20  |Q        |         |         |      V  |
23+35     31.1953      9.14  |Q        |         |         |      V  |
23+40     31.2577      9.06  |Q        |         |         |      V  |
23+45     31.3194      8.97  |Q        |         |         |      V  |
23+50     31.3803      8.84  |Q        |         |         |      V  |
23+55     31.4396      8.61  |Q        |         |         |      V  |
24+ 0     31.4943      7.94  |Q        |         |         |      V  |
24+ 5     31.5473      7.70  |Q        |         |         |       V |
24+10     31.5997      7.61  |Q        |         |         |       V |
24+15     31.6516      7.54  |Q        |         |         |       V |
24+20     31.7030      7.46  |Q        |         |         |       V |
24+25     31.7539      7.39  |Q        |         |         |       V |
24+30     31.8043      7.31  |Q        |         |         |       V |
24+35     31.8539      7.21  |Q        |         |         |       V |
24+40     31.9027      7.09  |Q        |         |         |       V |
24+45     31.9503      6.91  |Q        |         |         |       V |
24+50     31.9946      6.44  |Q        |         |         |       V |
24+55     32.0349      5.85  |Q        |         |         |       V |
25+ 0     32.0742      5.70  |Q        |         |         |       V |
25+ 5     32.1126      5.58  |Q        |         |         |       V |
25+10     32.1501      5.44  |Q        |         |         |       V |
25+15     32.1865      5.29  |Q        |         |         |       V |
25+20     32.2219      5.13  |Q        |         |         |       V |
25+25     32.2562      4.98  Q        |         |         |       V |
25+30     32.2894      4.83  Q        |         |         |       V |
25+35     32.3214      4.63  Q        |         |         |       V |
25+40     32.3514      4.36  Q        |         |         |       V |
25+45     32.3766      3.65  Q        |         |         |        V|
25+50     32.3998      3.37  Q        |         |         |        V|
25+55     32.4223      3.27  Q        |         |         |        V|
26+ 0     32.4442      3.18  Q        |         |         |        V|
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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+ 5 | 32.4657 | 3.12 | Q | \| | \| | \| | V\| |
| 26+10 | 32.4868 | 3.06 | Q | \| | \| | \| | V\| |
| 26+15 | 32.5075 | 3.01 | Q | \| | \| | \| | V\| |
| 26+20 | 32.5280 | 2.97 | Q | \| | \| | \| | V\| |
| 26+25 | 32.5483 | 2.94 | Q | \| | \| | \| | V\| |
| 26+30 | 32.5684 | 2.92 | Q | \| | \| | \| | V\| |
| 26+35 | 32.5889 | 2.98 | Q | \| | \| | \| | V\| |
| 26+40 | 32.6100 | 3.07 | Q | \| | \| | \| | V\| |
| 26+45 | 32.6309 | 3.04 | Q | \| | \| | \| | V\| |
| 26+50 | 32.6516 | 3.01 | Q | \| | \| | \| | V\| |
| 26+55 | 32.6721 | 2.97 | Q | \| | \| | \| | V\| |
| 27+ 0 | 32.6924 | 2.94 | Q | \| | \| | \| | V\| |
| 27+ 5 | 32.7124 | 2.91 | Q | \| | \| | \| | V\| |
| 27+10 | 32.7322 | 2.88 | Q | \| | \| | \| | V\| |
| 27+15 | 32.7519 | 2.85 | Q | \| | \| | \| | V\| |
| 27+20 | 32.7713 | 2.82 | Q | \| | \| | \| | V\| |
| 27+25 | 32.7905 | 2.79 | Q | \| | \| | \| | V\| |
| 27+30 | 32.8095 | 2.76 | Q | \| | \| | \| | V\| |
| 27+35 | 32.8283 | 2.73 | Q | \| | \| | \| | V\| |
| 27+40 | 32.8469 | 2.70 | Q | \| | \| | \| | V\| |
| 27+45 | 32.8653 | 2.67 | Q | \| | \| | \| | V\| |
| 27+50 | 32.8835 | 2.64 | Q | \| | \| | \| | V\| |
| 27+55 | 32.9015 | 2.61 | Q | \| | \| | \| | V\| |
| 28+ 0 | 32.9192 | 2.57 | Q | \| | \| | \| | V\| |
| 28+ 5 | 32.9365 | 2.52 | Q | \| | \| | \| | V\| |
| 28+10 | 32.9535 | 2.46 | Q | \| | \| | \| | V\| |
| 28+15 | 32.9697 | 2.36 | Q | \| | \| | \| | V\| |
| 28+20 | 32.9840 | 2.07 | Q | \| | \| | \| | V\| |
| 28+25 | 32.9955 | 1.66 | Q | \| | \| | \| | V\| |
| 28+30 | 33.0065 | 1.60 | Q | \| | \| | \| | V\| |
| 28+35 | 33.0173 | 1.57 | Q | \| | \| | \| | V\| |
| 28+40 | 33.0280 | 1.54 | Q | \| | \| | \| | V\| |
| 28+45 | 33.0385 | 1.52 | Q | \| | \| | \| | V\| |
| 28+50 | 33.0488 | 1.50 | Q | \| | \| | \| | V\| |
| 28+55 | 33.0590 | 1.48 | Q | \| | \| | \| | V\| |
| 29+ 0 | 33.0690 | 1.46 | Q | \| | \| | \| | V\| |
| 29+ 5 | 33.0788 | 1.43 | Q | \| | \| | \| | V\| |
| 29+10 | 33.0885 | 1.40 | Q | \| | \| | \| | V\| |
| 29+15 | 33.0980 | 1.38 | Q | \| | \| | \| | V\| |
| 29+20 | 33.1072 | 1.34 | Q | \| | \| | \| | V\| |
| 29+25 | 33.1162 | 1.30 | Q | \| | \| | \| | V\| |
| 29+30 | 33.1247 | 1.24 | Q | \| | \| | \| | V\| |
| 29+35 | 33.1326 | 1.14 | Q | \| | \| | \| | V\| |
| 29+40 | 33.1377 | 0.75 | Q | \| | \| | \| | V\| |
| 29+45 | 33.1405 | 0.40 | Q | \| | \| | \| | V\| |
| 29+50 | 33.1430 | 0.36 | Q | \| | \| | \| | V\| |
| 29+55 | 33.1453 | 0.34 | Q | \| | \| | \| | V\| |
| 30+ 0 | 33.1475 | 0.32 | Q | \| | \| | \| | V\| |
| 30+ 5 | 33.1496 | 0.30 | Q | \| | \| | \| | V\| |
| 30+10 | 33.1516 | 0.29 | Q | \| | \| | \| | V\| |
| 30+15 | 33.1535 | 0.28 | Q | \| | \| | \| | V\| |
| 30+20 | 33.1554 | 0.27 | Q | \| | \| | \| | V\| |
| 30+25 | 33.1572 | 0.26 | Q | \| | \| | \| | V\| |
| 30+30 | 33.1589 | 0.25 | Q | \| | \| | \| | V\| |
| 30+35 | 33.1605 | 0.24 | Q | \| | \| | \| | V\| |
| 30+40 | 33.1621 | 0.23 | Q | \| | \| | \| | V\| |
| 30+45 | 33.1637 | 0.22 | Q | \| | \| | \| | V\| |
| 30+50 | 33.1651 | 0.21 | Q | \| | \| | \| | V\| |
| 30+55 | 33.1666 | 0.21 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 31+ 0 | 33.1679 | 0.20 | Q | \| | \| | \| | V\| |
| 31+ 5 | 33.1693 | 0.19 | Q | \| | \| | \| | V\| |
| 31+10 | 33.1705 | 0.19 | Q | \| | \| | \| | V\| |
| 31+15 | 33.1718 | 0.18 | Q | \| | \| | \| | V\| |
| 31+20 | 33.1730 | 0.17 | Q | \| | \| | \| | V\| |
| 31+25 | 33.1741 | 0.17 | Q | \| | \| | \| | V\| |
| 31+30 | 33.1753 | 0.16 | Q | \| | \| | \| | V\| |
| 31+35 | 33.1763 | 0.16 | Q | \| | \| | \| | V\| |
| 31+40 | 33.1774 | 0.15 | Q | \| | \| | \| | V\| |
| 31+45 | 33.1784 | 0.15 | Q | \| | \| | \| | V\| |
| 31+50 | 33.1794 | 0.14 | Q | \| | \| | \| | V\| |
| 31+55 | 33.1803 | 0.13 | Q | \| | \| | \| | V\| |
| 32+ 0 | 33.1812 | 0.13 | Q | \| | \| | \| | V\| |
| 32+ 5 | 33.1821 | 0.13 | Q | \| | \| | \| | V\| |
| 32+10 | 33.1829 | 0.12 | Q | \| | \| | \| | V\| |
| 32+15 | 33.1837 | 0.12 | Q | \| | \| | \| | V\| |
| 32+20 | 33.1845 | 0.11 | Q | \| | \| | \| | V\| |
| 32+25 | 33.1852 | 0.11 | Q | \| | \| | \| | V\| |
| 32+30 | 33.1859 | 0.10 | Q | \| | \| | \| | V\| |
| 32+35 | 33.1866 | 0.10 | Q | \| | \| | \| | V\| |
| 32+40 | 33.1873 | 0.10 | Q | \| | \| | \| | V\| |
| 32+45 | 33.1879 | 0.09 | Q | \| | \| | \| | V\| |
| 32+50 | 33.1885 | 0.09 | Q | \| | \| | \| | V\| |
| 32+55 | 33.1891 | 0.09 | Q | \| | \| | \| | V\| |
| 33+ 0 | 33.1897 | 0.08 | Q | \| | \| | \| | V\| |
| 33+ 5 | 33.1903 | 0.08 | Q | \| | \| | \| | V\| |
| 33+10 | 33.1908 | 0.08 | Q | \| | \| | \| | V\| |
| 33+15 | 33.1913 | 0.07 | Q | \| | \| | \| | V\| |
| 33+20 | 33.1918 | 0.07 | Q | \| | \| | \| | V\| |
| 33+25 | 33.1923 | 0.07 | Q | \| | \| | \| | V\| |
| 33+30 | 33.1927 | 0.07 | Q | \| | \| | \| | V\| |
| 33+35 | 33.1932 | 0.06 | Q | \| | \| | \| | V\| |
| 33+40 | 33.1936 | 0.06 | Q | \| | \| | \| | V\| |
| 33+45 | 33.1940 | 0.06 | Q | \| | \| | \| | V\| |
| 33+50 | 33.1944 | 0.06 | Q | \| | \| | \| | V\| |
| 33+55 | 33.1948 | 0.06 | Q | \| | \| | \| | V\| |
| 34+ 0 | 33.1952 | 0.05 | Q | \| | \| | \| | V\| |
| 34+ 5 | 33.1955 | 0.05 | Q | \| | \| | \| | V\| |
| 34+10 | 33.1959 | 0.05 | Q | \| | \| | \| | V\| |
| 34+15 | 33.1962 | 0.05 | Q | \| | \| | \| | V\| |
| 34+20 | 33.1965 | 0.05 | Q | \| | \| | \| | V\| |
| 34+25 | 33.1968 | 0.05 | Q | \| | \| | \| | V\| |
| 34+30 | 33.1972 | 0.04 | Q | \| | \| | \| | V\| |
| 34+35 | 33.1975 | 0.04 | Q | \| | \| | \| | V\| |
| 34+40 | 33.1977 | 0.04 | Q | \| | \| | \| | V\| |
| 34+45 | 33.1980 | 0.04 | Q | \| | \| | \| | V\| |
| 34+50 | 33.1983 | 0.04 | Q | \| | \| | \| | V\| |
| 34+55 | 33.1985 | 0.04 | Q | \| | \| | \| | V\| |
| 35+ 0 | 33.1988 | 0.03 | Q | \| | \| | \| | V\| |
| 35+ 5 | 33.1990 | 0.03 | Q | \| | \| | \| | V\| |
| 35+10 | 33.1992 | 0.03 | Q | \| | \| | \| | V\| |
| 35+15 | 33.1994 | 0.03 | Q | \| | \| | \| | V\| |
| 35+20 | 33.1996 | 0.03 | Q | \| | \| | \| | V\| |
| 35+25 | 33.1998 | 0.03 | Q | \| | \| | \| | V\| |
| 35+30 | 33.2000 | 0.03 | Q | \| | \| | \| | V\| |
| 35+35 | 33.2001 | 0.02 | Q | \| | \| | \| | V\| |
| 35+40 | 33.2003 | 0.02 | Q | \| | \| | \| | V\| |
| 35+45 | 33.2004 | 0.02 | Q | \| | \| | \| | V\| |
| 35+50 | 33.2006 | 0.02 | Q | \| | \| | \| | V\| |

```
   35+55      33.2007      0.02  Q         |         |         |        V|
   36+ 0      33.2008      0.02  Q         |         |         |        V|
-----------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 25
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 279.91 | 1 | 1.36 |
| Rainfall data for year 100 | | |
| 279.91 | 6 | 1.83 |
| Rainfall data for year 100 | | |
| 279.91 | 24 | 2.51 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 61.5 | 80.2 | 279.91 | 1.000 | 0.366 | 0.999 | 0.366 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.366

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 279.63 | 0.999 | 61.5 | 80.2 | 2.47 | 0.361 |
| 0.28 | 0.001 | 98.0 | 98.0 | 0.20 | 0.909 |

Area-averaged catchment yield fraction, Y = 0.362
Area-averaged low loss fraction, Yb = 0.638
User entry of time of concentration = 2.170 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 279.91(Ac.)
Catchment Lag time = 1.736 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 4.8003
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.366(In/Hr)
Average low loss rate fraction (Yb) = 0.638 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.645(In)
Computed peak 30-minute rainfall = 1.105(In)
Specified peak 1-hour rainfall = 1.360(In)
Computed peak 3-hour rainfall = 1.631(In)
Specified peak 6-hour rainfall = 1.830(In)
Specified peak 24-hour rainfall = 2.510(In)

Rainfall depth area reduction factors:
Using a total area of 279.91(Ac.) (Ref: fig. E-4)

5-minute factor = 0.987 Adjusted rainfall = 0.637(In)
30-minute factor = 0.987 Adjusted rainfall = 1.090(In)
1-hour factor = 0.987 Adjusted rainfall = 1.342(In)
3-hour factor = 0.998 Adjusted rainfall = 1.629(In)
6-hour factor = 0.999 Adjusted rainfall = 1.828(In)
24-hour factor = 1.000 Adjusted rainfall = 2.509(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 3385.16 (CFS)) | |
| 1 | 0.211 | 7.150 |
| 2 | 0.634 | 14.300 |
| 3 | 1.086 | 15.319 |
| 4 | 1.823 | 24.928 |
| 5 | 2.629 | 27.300 |
| 6 | 3.556 | 31.377 |
| 7 | 4.738 | 40.018 |
| 8 | 5.936 | 40.552 |
| 9 | 7.410 | 49.885 |
| 10 | 9.023 | 54.599 |
| 11 | 10.884 | 63.023 |
| 12 | 13.830 | 99.724 |
| 13 | 16.902 | 103.999 |

| | | |
|---|---|---|
| 14 | 20.860 | 133.963 |
| 15 | 25.775 | 166.386 |
| 16 | 30.633 | 164.468 |
| 17 | 34.900 | 144.413 |
| 18 | 39.009 | 139.098 |
| 19 | 42.809 | 128.639 |
| 20 | 45.908 | 104.911 |
| 21 | 48.972 | 103.724 |
| 22 | 51.667 | 91.248 |
| 23 | 54.164 | 84.499 |
| 24 | 56.556 | 80.984 |
| 25 | 58.461 | 64.500 |
| 26 | 60.305 | 62.399 |
| 27 | 61.989 | 57.008 |
| 28 | 63.487 | 50.709 |
| 29 | 64.970 | 50.205 |
| 30 | 66.285 | 44.517 |
| 31 | 67.552 | 42.900 |
| 32 | 68.787 | 41.797 |
| 33 | 69.942 | 39.119 |
| 34 | 71.092 | 38.928 |
| 35 | 72.122 | 34.859 |
| 36 | 73.082 | 32.500 |
| 37 | 74.025 | 31.923 |
| 38 | 74.882 | 29.005 |
| 39 | 75.727 | 28.600 |
| 40 | 76.555 | 28.025 |
| 41 | 77.361 | 27.302 |
| 42 | 78.158 | 26.969 |
| 43 | 78.830 | 22.739 |
| 44 | 79.463 | 21.450 |
| 45 | 80.097 | 21.450 |
| 46 | 80.731 | 21.450 |
| 47 | 81.363 | 21.418 |
| 48 | 81.926 | 19.033 |
| 49 | 82.444 | 17.550 |
| 50 | 82.962 | 17.550 |
| 51 | 83.481 | 17.550 |
| 52 | 83.999 | 17.550 |
| 53 | 84.493 | 16.725 |
| 54 | 84.954 | 15.606 |
| 55 | 85.415 | 15.600 |
| 56 | 85.876 | 15.600 |
| 57 | 86.337 | 15.600 |
| 58 | 86.778 | 14.941 |
| 59 | 87.165 | 13.108 |
| 60 | 87.549 | 13.000 |
| 61 | 87.933 | 13.000 |
| 62 | 88.318 | 13.000 |
| 63 | 88.689 | 12.587 |
| 64 | 88.989 | 10.150 |
| 65 | 89.277 | 9.750 |
| 66 | 89.565 | 9.750 |
| 67 | 89.853 | 9.750 |
| 68 | 90.140 | 9.721 |
| 69 | 90.414 | 9.261 |
| 70 | 90.683 | 9.100 |
| 71 | 90.952 | 9.100 |
| 72 | 91.220 | 9.100 |

| | | |
|---|---|---|
| 73 | 91.489 | 9.095 |
| 74 | 91.735 | 8.341 |
| 75 | 91.966 | 7.800 |
| 76 | 92.196 | 7.800 |
| 77 | 92.427 | 7.800 |
| 78 | 92.657 | 7.800 |
| 79 | 92.880 | 7.548 |
| 80 | 93.091 | 7.155 |
| 81 | 93.303 | 7.150 |
| 82 | 93.514 | 7.150 |
| 83 | 93.725 | 7.150 |
| 84 | 93.925 | 6.783 |
| 85 | 94.091 | 5.612 |
| 86 | 94.254 | 5.525 |
| 87 | 94.418 | 5.525 |
| 88 | 94.581 | 5.525 |
| 89 | 94.744 | 5.525 |
| 90 | 94.907 | 5.525 |
| 91 | 95.071 | 5.525 |
| 92 | 95.234 | 5.525 |
| 93 | 95.397 | 5.525 |
| 94 | 95.559 | 5.482 |
| 95 | 95.694 | 4.585 |
| 96 | 95.819 | 4.225 |
| 97 | 95.944 | 4.225 |
| 98 | 96.069 | 4.225 |
| 99 | 96.194 | 4.225 |
| 100 | 96.318 | 4.225 |
| 101 | 96.443 | 4.225 |
| 102 | 96.568 | 4.225 |
| 103 | 96.693 | 4.225 |
| 104 | 96.818 | 4.225 |
| 105 | 96.929 | 3.766 |
| 106 | 97.016 | 2.942 |
| 107 | 97.102 | 2.925 |
| 108 | 97.189 | 2.925 |
| 109 | 97.275 | 2.925 |
| 110 | 97.361 | 2.925 |
| 111 | 97.448 | 2.925 |
| 112 | 97.534 | 2.925 |
| 113 | 97.621 | 2.925 |
| 114 | 97.707 | 2.925 |
| 115 | 97.790 | 2.808 |
| 116 | 97.844 | 1.841 |
| 117 | 97.892 | 1.625 |
| 118 | 97.940 | 1.625 |
| 119 | 97.988 | 1.625 |
| 120 | 98.036 | 1.625 |
| 121 | 98.084 | 1.625 |
| 122 | 98.132 | 1.625 |
| 123 | 98.180 | 1.625 |
| 124 | 98.228 | 1.625 |
| 125 | 98.276 | 1.625 |
| 126 | 98.329 | 1.790 |
| 127 | 98.387 | 1.950 |
| 128 | 98.444 | 1.950 |
| 129 | 98.502 | 1.950 |
| 130 | 98.560 | 1.950 |
| 131 | 98.617 | 1.950 |

| | | |
|---|---|---|
| 132 | 98.675 | 1.950 |
| 133 | 98.732 | 1.950 |
| 134 | 98.790 | 1.950 |
| 135 | 98.848 | 1.950 |
| 136 | 98.905 | 1.950 |
| 137 | 98.963 | 1.950 |
| 138 | 99.021 | 1.950 |
| 139 | 99.078 | 1.950 |
| 140 | 99.136 | 1.950 |
| 141 | 99.193 | 1.950 |
| 142 | 99.251 | 1.950 |
| 143 | 99.309 | 1.950 |
| 144 | 99.366 | 1.950 |
| 145 | 99.424 | 1.950 |
| 146 | 99.481 | 1.936 |
| 147 | 99.520 | 1.333 |
| 148 | 99.550 | 1.016 |
| 149 | 99.580 | 1.016 |
| 150 | 99.610 | 1.016 |
| 151 | 99.640 | 1.016 |
| 152 | 99.670 | 1.016 |
| 153 | 99.700 | 1.016 |
| 154 | 99.730 | 1.016 |
| 155 | 99.760 | 1.016 |
| 156 | 99.790 | 1.016 |
| 157 | 99.820 | 1.016 |
| 158 | 99.850 | 1.016 |
| 159 | 99.880 | 1.016 |
| 160 | 99.910 | 1.016 |
| 161 | 99.940 | 1.016 |
| 162 | 99.970 | 1.016 |
| 163 | 100.000 | 1.005 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6369 | 0.6369 |
| 2 | 0.7841 | 0.1472 |
| 3 | 0.8855 | 0.1014 |
| 4 | 0.9653 | 0.0798 |
| 5 | 1.0321 | 0.0668 |
| 6 | 1.0902 | 0.0580 |
| 7 | 1.1418 | 0.0516 |
| 8 | 1.1884 | 0.0467 |
| 9 | 1.2312 | 0.0427 |
| 10 | 1.2707 | 0.0395 |
| 11 | 1.3076 | 0.0369 |
| 12 | 1.3422 | 0.0346 |
| 13 | 1.3612 | 0.0191 |
| 14 | 1.3791 | 0.0179 |
| 15 | 1.3960 | 0.0169 |
| 16 | 1.4119 | 0.0160 |
| 17 | 1.4271 | 0.0152 |
| 18 | 1.4415 | 0.0144 |
| 19 | 1.4553 | 0.0138 |
| 20 | 1.4685 | 0.0132 |
| 21 | 1.4812 | 0.0127 |
| 22 | 1.4934 | 0.0122 |
| 23 | 1.5052 | 0.0117 |
| 24 | 1.5165 | 0.0113 |

| | | |
|---|---|---|
| 25 | 1.5274 | 0.0109 |
| 26 | 1.5380 | 0.0106 |
| 27 | 1.5483 | 0.0103 |
| 28 | 1.5582 | 0.0100 |
| 29 | 1.5679 | 0.0097 |
| 30 | 1.5773 | 0.0094 |
| 31 | 1.5864 | 0.0091 |
| 32 | 1.5953 | 0.0089 |
| 33 | 1.6040 | 0.0087 |
| 34 | 1.6124 | 0.0085 |
| 35 | 1.6207 | 0.0083 |
| 36 | 1.6288 | 0.0081 |
| 37 | 1.6362 | 0.0075 |
| 38 | 1.6435 | 0.0073 |
| 39 | 1.6507 | 0.0071 |
| 40 | 1.6576 | 0.0070 |
| 41 | 1.6645 | 0.0068 |
| 42 | 1.6712 | 0.0067 |
| 43 | 1.6778 | 0.0066 |
| 44 | 1.6842 | 0.0064 |
| 45 | 1.6905 | 0.0063 |
| 46 | 1.6967 | 0.0062 |
| 47 | 1.7028 | 0.0061 |
| 48 | 1.7088 | 0.0060 |
| 49 | 1.7147 | 0.0059 |
| 50 | 1.7205 | 0.0058 |
| 51 | 1.7262 | 0.0057 |
| 52 | 1.7318 | 0.0056 |
| 53 | 1.7373 | 0.0055 |
| 54 | 1.7427 | 0.0054 |
| 55 | 1.7481 | 0.0053 |
| 56 | 1.7533 | 0.0053 |
| 57 | 1.7585 | 0.0052 |
| 58 | 1.7636 | 0.0051 |
| 59 | 1.7687 | 0.0050 |
| 60 | 1.7736 | 0.0050 |
| 61 | 1.7785 | 0.0049 |
| 62 | 1.7834 | 0.0048 |
| 63 | 1.7881 | 0.0048 |
| 64 | 1.7928 | 0.0047 |
| 65 | 1.7975 | 0.0046 |
| 66 | 1.8021 | 0.0046 |
| 67 | 1.8066 | 0.0045 |
| 68 | 1.8110 | 0.0045 |
| 69 | 1.8155 | 0.0044 |
| 70 | 1.8198 | 0.0044 |
| 71 | 1.8241 | 0.0043 |
| 72 | 1.8284 | 0.0043 |
| 73 | 1.8342 | 0.0058 |
| 74 | 1.8399 | 0.0057 |
| 75 | 1.8455 | 0.0056 |
| 76 | 1.8511 | 0.0056 |
| 77 | 1.8566 | 0.0055 |
| 78 | 1.8621 | 0.0055 |
| 79 | 1.8675 | 0.0054 |
| 80 | 1.8729 | 0.0054 |
| 81 | 1.8782 | 0.0053 |
| 82 | 1.8835 | 0.0053 |
| 83 | 1.8887 | 0.0052 |

| | | |
|---|---|---|
| 84 | 1.8939 | 0.0052 |
| 85 | 1.8990 | 0.0051 |
| 86 | 1.9041 | 0.0051 |
| 87 | 1.9091 | 0.0050 |
| 88 | 1.9141 | 0.0050 |
| 89 | 1.9191 | 0.0049 |
| 90 | 1.9240 | 0.0049 |
| 91 | 1.9288 | 0.0049 |
| 92 | 1.9336 | 0.0048 |
| 93 | 1.9384 | 0.0048 |
| 94 | 1.9432 | 0.0047 |
| 95 | 1.9479 | 0.0047 |
| 96 | 1.9525 | 0.0047 |
| 97 | 1.9571 | 0.0046 |
| 98 | 1.9617 | 0.0046 |
| 99 | 1.9663 | 0.0046 |
| 100 | 1.9708 | 0.0045 |
| 101 | 1.9753 | 0.0045 |
| 102 | 1.9797 | 0.0044 |
| 103 | 1.9841 | 0.0044 |
| 104 | 1.9885 | 0.0044 |
| 105 | 1.9929 | 0.0043 |
| 106 | 1.9972 | 0.0043 |
| 107 | 2.0015 | 0.0043 |
| 108 | 2.0057 | 0.0043 |
| 109 | 2.0100 | 0.0042 |
| 110 | 2.0142 | 0.0042 |
| 111 | 2.0183 | 0.0042 |
| 112 | 2.0225 | 0.0041 |
| 113 | 2.0266 | 0.0041 |
| 114 | 2.0306 | 0.0041 |
| 115 | 2.0347 | 0.0041 |
| 116 | 2.0387 | 0.0040 |
| 117 | 2.0427 | 0.0040 |
| 118 | 2.0467 | 0.0040 |
| 119 | 2.0506 | 0.0039 |
| 120 | 2.0546 | 0.0039 |
| 121 | 2.0585 | 0.0039 |
| 122 | 2.0623 | 0.0039 |
| 123 | 2.0662 | 0.0038 |
| 124 | 2.0700 | 0.0038 |
| 125 | 2.0738 | 0.0038 |
| 126 | 2.0776 | 0.0038 |
| 127 | 2.0813 | 0.0038 |
| 128 | 2.0851 | 0.0037 |
| 129 | 2.0888 | 0.0037 |
| 130 | 2.0925 | 0.0037 |
| 131 | 2.0961 | 0.0037 |
| 132 | 2.0998 | 0.0036 |
| 133 | 2.1034 | 0.0036 |
| 134 | 2.1070 | 0.0036 |
| 135 | 2.1106 | 0.0036 |
| 136 | 2.1141 | 0.0036 |
| 137 | 2.1177 | 0.0035 |
| 138 | 2.1212 | 0.0035 |
| 139 | 2.1247 | 0.0035 |
| 140 | 2.1282 | 0.0035 |
| 141 | 2.1316 | 0.0035 |
| 142 | 2.1351 | 0.0034 |

| | | |
|---|---|---|
| 143 | 2.1385 | 0.0034 |
| 144 | 2.1419 | 0.0034 |
| 145 | 2.1453 | 0.0034 |
| 146 | 2.1486 | 0.0034 |
| 147 | 2.1520 | 0.0034 |
| 148 | 2.1553 | 0.0033 |
| 149 | 2.1586 | 0.0033 |
| 150 | 2.1619 | 0.0033 |
| 151 | 2.1652 | 0.0033 |
| 152 | 2.1685 | 0.0033 |
| 153 | 2.1717 | 0.0032 |
| 154 | 2.1750 | 0.0032 |
| 155 | 2.1782 | 0.0032 |
| 156 | 2.1814 | 0.0032 |
| 157 | 2.1846 | 0.0032 |
| 158 | 2.1877 | 0.0032 |
| 159 | 2.1909 | 0.0032 |
| 160 | 2.1940 | 0.0031 |
| 161 | 2.1972 | 0.0031 |
| 162 | 2.2003 | 0.0031 |
| 163 | 2.2034 | 0.0031 |
| 164 | 2.2064 | 0.0031 |
| 165 | 2.2095 | 0.0031 |
| 166 | 2.2125 | 0.0031 |
| 167 | 2.2156 | 0.0030 |
| 168 | 2.2186 | 0.0030 |
| 169 | 2.2216 | 0.0030 |
| 170 | 2.2246 | 0.0030 |
| 171 | 2.2276 | 0.0030 |
| 172 | 2.2306 | 0.0030 |
| 173 | 2.2335 | 0.0030 |
| 174 | 2.2365 | 0.0029 |
| 175 | 2.2394 | 0.0029 |
| 176 | 2.2423 | 0.0029 |
| 177 | 2.2452 | 0.0029 |
| 178 | 2.2481 | 0.0029 |
| 179 | 2.2510 | 0.0029 |
| 180 | 2.2538 | 0.0029 |
| 181 | 2.2567 | 0.0029 |
| 182 | 2.2595 | 0.0028 |
| 183 | 2.2624 | 0.0028 |
| 184 | 2.2652 | 0.0028 |
| 185 | 2.2680 | 0.0028 |
| 186 | 2.2708 | 0.0028 |
| 187 | 2.2735 | 0.0028 |
| 188 | 2.2763 | 0.0028 |
| 189 | 2.2791 | 0.0028 |
| 190 | 2.2818 | 0.0027 |
| 191 | 2.2846 | 0.0027 |
| 192 | 2.2873 | 0.0027 |
| 193 | 2.2900 | 0.0027 |
| 194 | 2.2927 | 0.0027 |
| 195 | 2.2954 | 0.0027 |
| 196 | 2.2981 | 0.0027 |
| 197 | 2.3007 | 0.0027 |
| 198 | 2.3034 | 0.0027 |
| 199 | 2.3061 | 0.0027 |
| 200 | 2.3087 | 0.0026 |
| 201 | 2.3113 | 0.0026 |

| | | |
|---|---|---|
| 202 | 2.3140 | 0.0026 |
| 203 | 2.3166 | 0.0026 |
| 204 | 2.3192 | 0.0026 |
| 205 | 2.3218 | 0.0026 |
| 206 | 2.3243 | 0.0026 |
| 207 | 2.3269 | 0.0026 |
| 208 | 2.3295 | 0.0026 |
| 209 | 2.3320 | 0.0026 |
| 210 | 2.3346 | 0.0025 |
| 211 | 2.3371 | 0.0025 |
| 212 | 2.3396 | 0.0025 |
| 213 | 2.3421 | 0.0025 |
| 214 | 2.3446 | 0.0025 |
| 215 | 2.3471 | 0.0025 |
| 216 | 2.3496 | 0.0025 |
| 217 | 2.3521 | 0.0025 |
| 218 | 2.3546 | 0.0025 |
| 219 | 2.3570 | 0.0025 |
| 220 | 2.3595 | 0.0025 |
| 221 | 2.3619 | 0.0024 |
| 222 | 2.3644 | 0.0024 |
| 223 | 2.3668 | 0.0024 |
| 224 | 2.3692 | 0.0024 |
| 225 | 2.3716 | 0.0024 |
| 226 | 2.3740 | 0.0024 |
| 227 | 2.3764 | 0.0024 |
| 228 | 2.3788 | 0.0024 |
| 229 | 2.3812 | 0.0024 |
| 230 | 2.3836 | 0.0024 |
| 231 | 2.3859 | 0.0024 |
| 232 | 2.3883 | 0.0024 |
| 233 | 2.3906 | 0.0023 |
| 234 | 2.3930 | 0.0023 |
| 235 | 2.3953 | 0.0023 |
| 236 | 2.3976 | 0.0023 |
| 237 | 2.3999 | 0.0023 |
| 238 | 2.4022 | 0.0023 |
| 239 | 2.4045 | 0.0023 |
| 240 | 2.4068 | 0.0023 |
| 241 | 2.4091 | 0.0023 |
| 242 | 2.4114 | 0.0023 |
| 243 | 2.4137 | 0.0023 |
| 244 | 2.4159 | 0.0023 |
| 245 | 2.4182 | 0.0023 |
| 246 | 2.4204 | 0.0022 |
| 247 | 2.4227 | 0.0022 |
| 248 | 2.4249 | 0.0022 |
| 249 | 2.4271 | 0.0022 |
| 250 | 2.4294 | 0.0022 |
| 251 | 2.4316 | 0.0022 |
| 252 | 2.4338 | 0.0022 |
| 253 | 2.4360 | 0.0022 |
| 254 | 2.4382 | 0.0022 |
| 255 | 2.4404 | 0.0022 |
| 256 | 2.4426 | 0.0022 |
| 257 | 2.4447 | 0.0022 |
| 258 | 2.4469 | 0.0022 |
| 259 | 2.4491 | 0.0022 |
| 260 | 2.4512 | 0.0022 |

| | | |
|---|---|---|
| 261 | 2.4534 | 0.0021 |
| 262 | 2.4555 | 0.0021 |
| 263 | 2.4576 | 0.0021 |
| 264 | 2.4598 | 0.0021 |
| 265 | 2.4619 | 0.0021 |
| 266 | 2.4640 | 0.0021 |
| 267 | 2.4661 | 0.0021 |
| 268 | 2.4682 | 0.0021 |
| 269 | 2.4703 | 0.0021 |
| 270 | 2.4724 | 0.0021 |
| 271 | 2.4745 | 0.0021 |
| 272 | 2.4766 | 0.0021 |
| 273 | 2.4787 | 0.0021 |
| 274 | 2.4807 | 0.0021 |
| 275 | 2.4828 | 0.0021 |
| 276 | 2.4849 | 0.0021 |
| 277 | 2.4869 | 0.0021 |
| 278 | 2.4890 | 0.0020 |
| 279 | 2.4910 | 0.0020 |
| 280 | 2.4930 | 0.0020 |
| 281 | 2.4951 | 0.0020 |
| 282 | 2.4971 | 0.0020 |
| 283 | 2.4991 | 0.0020 |
| 284 | 2.5011 | 0.0020 |
| 285 | 2.5031 | 0.0020 |
| 286 | 2.5051 | 0.0020 |
| 287 | 2.5071 | 0.0020 |
| 288 | 2.5091 | 0.0020 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0020 | 0.0013 | 0.0007 |
| 2 | 0.0020 | 0.0013 | 0.0007 |
| 3 | 0.0020 | 0.0013 | 0.0007 |
| 4 | 0.0020 | 0.0013 | 0.0007 |
| 5 | 0.0020 | 0.0013 | 0.0007 |
| 6 | 0.0020 | 0.0013 | 0.0007 |
| 7 | 0.0020 | 0.0013 | 0.0007 |
| 8 | 0.0020 | 0.0013 | 0.0007 |
| 9 | 0.0021 | 0.0013 | 0.0007 |
| 10 | 0.0021 | 0.0013 | 0.0007 |
| 11 | 0.0021 | 0.0013 | 0.0008 |
| 12 | 0.0021 | 0.0013 | 0.0008 |
| 13 | 0.0021 | 0.0013 | 0.0008 |
| 14 | 0.0021 | 0.0013 | 0.0008 |
| 15 | 0.0021 | 0.0013 | 0.0008 |
| 16 | 0.0021 | 0.0014 | 0.0008 |
| 17 | 0.0021 | 0.0014 | 0.0008 |
| 18 | 0.0021 | 0.0014 | 0.0008 |
| 19 | 0.0021 | 0.0014 | 0.0008 |
| 20 | 0.0022 | 0.0014 | 0.0008 |
| 21 | 0.0022 | 0.0014 | 0.0008 |
| 22 | 0.0022 | 0.0014 | 0.0008 |
| 23 | 0.0022 | 0.0014 | 0.0008 |
| 24 | 0.0022 | 0.0014 | 0.0008 |
| 25 | 0.0022 | 0.0014 | 0.0008 |
| 26 | 0.0022 | 0.0014 | 0.0008 |

| | | | |
|---|---|---|---|
| 27 | 0.0022 | 0.0014 | 0.0008 |
| 28 | 0.0022 | 0.0014 | 0.0008 |
| 29 | 0.0022 | 0.0014 | 0.0008 |
| 30 | 0.0023 | 0.0014 | 0.0008 |
| 31 | 0.0023 | 0.0014 | 0.0008 |
| 32 | 0.0023 | 0.0015 | 0.0008 |
| 33 | 0.0023 | 0.0015 | 0.0008 |
| 34 | 0.0023 | 0.0015 | 0.0008 |
| 35 | 0.0023 | 0.0015 | 0.0008 |
| 36 | 0.0023 | 0.0015 | 0.0008 |
| 37 | 0.0023 | 0.0015 | 0.0008 |
| 38 | 0.0023 | 0.0015 | 0.0008 |
| 39 | 0.0024 | 0.0015 | 0.0009 |
| 40 | 0.0024 | 0.0015 | 0.0009 |
| 41 | 0.0024 | 0.0015 | 0.0009 |
| 42 | 0.0024 | 0.0015 | 0.0009 |
| 43 | 0.0024 | 0.0015 | 0.0009 |
| 44 | 0.0024 | 0.0015 | 0.0009 |
| 45 | 0.0024 | 0.0016 | 0.0009 |
| 46 | 0.0024 | 0.0016 | 0.0009 |
| 47 | 0.0025 | 0.0016 | 0.0009 |
| 48 | 0.0025 | 0.0016 | 0.0009 |
| 49 | 0.0025 | 0.0016 | 0.0009 |
| 50 | 0.0025 | 0.0016 | 0.0009 |
| 51 | 0.0025 | 0.0016 | 0.0009 |
| 52 | 0.0025 | 0.0016 | 0.0009 |
| 53 | 0.0025 | 0.0016 | 0.0009 |
| 54 | 0.0026 | 0.0016 | 0.0009 |
| 55 | 0.0026 | 0.0016 | 0.0009 |
| 56 | 0.0026 | 0.0016 | 0.0009 |
| 57 | 0.0026 | 0.0017 | 0.0009 |
| 58 | 0.0026 | 0.0017 | 0.0009 |
| 59 | 0.0026 | 0.0017 | 0.0010 |
| 60 | 0.0026 | 0.0017 | 0.0010 |
| 61 | 0.0027 | 0.0017 | 0.0010 |
| 62 | 0.0027 | 0.0017 | 0.0010 |
| 63 | 0.0027 | 0.0017 | 0.0010 |
| 64 | 0.0027 | 0.0017 | 0.0010 |
| 65 | 0.0027 | 0.0017 | 0.0010 |
| 66 | 0.0027 | 0.0017 | 0.0010 |
| 67 | 0.0028 | 0.0018 | 0.0010 |
| 68 | 0.0028 | 0.0018 | 0.0010 |
| 69 | 0.0028 | 0.0018 | 0.0010 |
| 70 | 0.0028 | 0.0018 | 0.0010 |
| 71 | 0.0028 | 0.0018 | 0.0010 |
| 72 | 0.0028 | 0.0018 | 0.0010 |
| 73 | 0.0029 | 0.0018 | 0.0010 |
| 74 | 0.0029 | 0.0018 | 0.0010 |
| 75 | 0.0029 | 0.0019 | 0.0010 |
| 76 | 0.0029 | 0.0019 | 0.0011 |
| 77 | 0.0029 | 0.0019 | 0.0011 |
| 78 | 0.0030 | 0.0019 | 0.0011 |
| 79 | 0.0030 | 0.0019 | 0.0011 |
| 80 | 0.0030 | 0.0019 | 0.0011 |
| 81 | 0.0030 | 0.0019 | 0.0011 |
| 82 | 0.0030 | 0.0019 | 0.0011 |
| 83 | 0.0031 | 0.0020 | 0.0011 |
| 84 | 0.0031 | 0.0020 | 0.0011 |
| 85 | 0.0031 | 0.0020 | 0.0011 |

| | | | |
|---|---|---|---|
| 86 | 0.0031 | 0.0020 | 0.0011 |
| 87 | 0.0032 | 0.0020 | 0.0011 |
| 88 | 0.0032 | 0.0020 | 0.0011 |
| 89 | 0.0032 | 0.0020 | 0.0012 |
| 90 | 0.0032 | 0.0021 | 0.0012 |
| 91 | 0.0032 | 0.0021 | 0.0012 |
| 92 | 0.0033 | 0.0021 | 0.0012 |
| 93 | 0.0033 | 0.0021 | 0.0012 |
| 94 | 0.0033 | 0.0021 | 0.0012 |
| 95 | 0.0034 | 0.0021 | 0.0012 |
| 96 | 0.0034 | 0.0022 | 0.0012 |
| 97 | 0.0034 | 0.0022 | 0.0012 |
| 98 | 0.0034 | 0.0022 | 0.0012 |
| 99 | 0.0035 | 0.0022 | 0.0013 |
| 100 | 0.0035 | 0.0022 | 0.0013 |
| 101 | 0.0035 | 0.0022 | 0.0013 |
| 102 | 0.0035 | 0.0023 | 0.0013 |
| 103 | 0.0036 | 0.0023 | 0.0013 |
| 104 | 0.0036 | 0.0023 | 0.0013 |
| 105 | 0.0036 | 0.0023 | 0.0013 |
| 106 | 0.0037 | 0.0023 | 0.0013 |
| 107 | 0.0037 | 0.0024 | 0.0013 |
| 108 | 0.0037 | 0.0024 | 0.0013 |
| 109 | 0.0038 | 0.0024 | 0.0014 |
| 110 | 0.0038 | 0.0024 | 0.0014 |
| 111 | 0.0038 | 0.0025 | 0.0014 |
| 112 | 0.0039 | 0.0025 | 0.0014 |
| 113 | 0.0039 | 0.0025 | 0.0014 |
| 114 | 0.0039 | 0.0025 | 0.0014 |
| 115 | 0.0040 | 0.0026 | 0.0014 |
| 116 | 0.0040 | 0.0026 | 0.0015 |
| 117 | 0.0041 | 0.0026 | 0.0015 |
| 118 | 0.0041 | 0.0026 | 0.0015 |
| 119 | 0.0042 | 0.0027 | 0.0015 |
| 120 | 0.0042 | 0.0027 | 0.0015 |
| 121 | 0.0043 | 0.0027 | 0.0015 |
| 122 | 0.0043 | 0.0027 | 0.0016 |
| 123 | 0.0043 | 0.0028 | 0.0016 |
| 124 | 0.0044 | 0.0028 | 0.0016 |
| 125 | 0.0044 | 0.0028 | 0.0016 |
| 126 | 0.0045 | 0.0029 | 0.0016 |
| 127 | 0.0046 | 0.0029 | 0.0016 |
| 128 | 0.0046 | 0.0029 | 0.0017 |
| 129 | 0.0047 | 0.0030 | 0.0017 |
| 130 | 0.0047 | 0.0030 | 0.0017 |
| 131 | 0.0048 | 0.0031 | 0.0017 |
| 132 | 0.0048 | 0.0031 | 0.0017 |
| 133 | 0.0049 | 0.0031 | 0.0018 |
| 134 | 0.0049 | 0.0032 | 0.0018 |
| 135 | 0.0050 | 0.0032 | 0.0018 |
| 136 | 0.0051 | 0.0032 | 0.0018 |
| 137 | 0.0052 | 0.0033 | 0.0019 |
| 138 | 0.0052 | 0.0033 | 0.0019 |
| 139 | 0.0053 | 0.0034 | 0.0019 |
| 140 | 0.0054 | 0.0034 | 0.0019 |
| 141 | 0.0055 | 0.0035 | 0.0020 |
| 142 | 0.0055 | 0.0035 | 0.0020 |
| 143 | 0.0056 | 0.0036 | 0.0020 |
| 144 | 0.0057 | 0.0036 | 0.0021 |

| | | | |
|---|---|---|---|
| 145 | 0.0043 | 0.0027 | 0.0015 |
| 146 | 0.0043 | 0.0028 | 0.0016 |
| 147 | 0.0044 | 0.0028 | 0.0016 |
| 148 | 0.0045 | 0.0029 | 0.0016 |
| 149 | 0.0046 | 0.0029 | 0.0017 |
| 150 | 0.0046 | 0.0030 | 0.0017 |
| 151 | 0.0048 | 0.0030 | 0.0017 |
| 152 | 0.0048 | 0.0031 | 0.0017 |
| 153 | 0.0050 | 0.0032 | 0.0018 |
| 154 | 0.0050 | 0.0032 | 0.0018 |
| 155 | 0.0052 | 0.0033 | 0.0019 |
| 156 | 0.0053 | 0.0034 | 0.0019 |
| 157 | 0.0054 | 0.0035 | 0.0020 |
| 158 | 0.0055 | 0.0035 | 0.0020 |
| 159 | 0.0057 | 0.0036 | 0.0021 |
| 160 | 0.0058 | 0.0037 | 0.0021 |
| 161 | 0.0060 | 0.0038 | 0.0022 |
| 162 | 0.0061 | 0.0039 | 0.0022 |
| 163 | 0.0063 | 0.0040 | 0.0023 |
| 164 | 0.0064 | 0.0041 | 0.0023 |
| 165 | 0.0067 | 0.0043 | 0.0024 |
| 166 | 0.0068 | 0.0044 | 0.0025 |
| 167 | 0.0071 | 0.0046 | 0.0026 |
| 168 | 0.0073 | 0.0047 | 0.0026 |
| 169 | 0.0081 | 0.0051 | 0.0029 |
| 170 | 0.0083 | 0.0053 | 0.0030 |
| 171 | 0.0087 | 0.0055 | 0.0031 |
| 172 | 0.0089 | 0.0057 | 0.0032 |
| 173 | 0.0094 | 0.0060 | 0.0034 |
| 174 | 0.0097 | 0.0062 | 0.0035 |
| 175 | 0.0103 | 0.0065 | 0.0037 |
| 176 | 0.0106 | 0.0068 | 0.0038 |
| 177 | 0.0113 | 0.0072 | 0.0041 |
| 178 | 0.0117 | 0.0075 | 0.0042 |
| 179 | 0.0127 | 0.0081 | 0.0046 |
| 180 | 0.0132 | 0.0084 | 0.0048 |
| 181 | 0.0144 | 0.0092 | 0.0052 |
| 182 | 0.0152 | 0.0097 | 0.0055 |
| 183 | 0.0169 | 0.0108 | 0.0061 |
| 184 | 0.0179 | 0.0114 | 0.0065 |
| 185 | 0.0346 | 0.0221 | 0.0125 |
| 186 | 0.0369 | 0.0235 | 0.0133 |
| 187 | 0.0427 | 0.0273 | 0.0155 |
| 188 | 0.0467 | 0.0298 | 0.0169 |
| 189 | 0.0580 | 0.0305 | 0.0275 |
| 190 | 0.0668 | 0.0305 | 0.0363 |
| 191 | 0.1014 | 0.0305 | 0.0709 |
| 192 | 0.1472 | 0.0305 | 0.1167 |
| 193 | 0.6369 | 0.0305 | 0.6064 |
| 194 | 0.0798 | 0.0305 | 0.0493 |
| 195 | 0.0516 | 0.0305 | 0.0211 |
| 196 | 0.0395 | 0.0252 | 0.0143 |
| 197 | 0.0191 | 0.0122 | 0.0069 |
| 198 | 0.0160 | 0.0102 | 0.0058 |
| 199 | 0.0138 | 0.0088 | 0.0050 |
| 200 | 0.0122 | 0.0078 | 0.0044 |
| 201 | 0.0109 | 0.0070 | 0.0040 |
| 202 | 0.0100 | 0.0064 | 0.0036 |
| 203 | 0.0091 | 0.0058 | 0.0033 |

| | | | |
|---|---|---|---|
| 204 | 0.0085 | 0.0054 | 0.0031 |
| 205 | 0.0075 | 0.0048 | 0.0027 |
| 206 | 0.0070 | 0.0045 | 0.0025 |
| 207 | 0.0066 | 0.0042 | 0.0024 |
| 208 | 0.0062 | 0.0040 | 0.0022 |
| 209 | 0.0059 | 0.0038 | 0.0021 |
| 210 | 0.0056 | 0.0036 | 0.0020 |
| 211 | 0.0053 | 0.0034 | 0.0019 |
| 212 | 0.0051 | 0.0033 | 0.0018 |
| 213 | 0.0049 | 0.0031 | 0.0018 |
| 214 | 0.0047 | 0.0030 | 0.0017 |
| 215 | 0.0045 | 0.0029 | 0.0016 |
| 216 | 0.0044 | 0.0028 | 0.0016 |
| 217 | 0.0058 | 0.0037 | 0.0021 |
| 218 | 0.0056 | 0.0036 | 0.0020 |
| 219 | 0.0054 | 0.0035 | 0.0020 |
| 220 | 0.0053 | 0.0034 | 0.0019 |
| 221 | 0.0051 | 0.0033 | 0.0019 |
| 222 | 0.0050 | 0.0032 | 0.0018 |
| 223 | 0.0049 | 0.0031 | 0.0018 |
| 224 | 0.0047 | 0.0030 | 0.0017 |
| 225 | 0.0046 | 0.0030 | 0.0017 |
| 226 | 0.0045 | 0.0029 | 0.0016 |
| 227 | 0.0044 | 0.0028 | 0.0016 |
| 228 | 0.0043 | 0.0028 | 0.0016 |
| 229 | 0.0042 | 0.0027 | 0.0015 |
| 230 | 0.0041 | 0.0026 | 0.0015 |
| 231 | 0.0041 | 0.0026 | 0.0015 |
| 232 | 0.0040 | 0.0025 | 0.0014 |
| 233 | 0.0039 | 0.0025 | 0.0014 |
| 234 | 0.0038 | 0.0024 | 0.0014 |
| 235 | 0.0038 | 0.0024 | 0.0014 |
| 236 | 0.0037 | 0.0024 | 0.0013 |
| 237 | 0.0036 | 0.0023 | 0.0013 |
| 238 | 0.0036 | 0.0023 | 0.0013 |
| 239 | 0.0035 | 0.0022 | 0.0013 |
| 240 | 0.0034 | 0.0022 | 0.0012 |
| 241 | 0.0034 | 0.0022 | 0.0012 |
| 242 | 0.0033 | 0.0021 | 0.0012 |
| 243 | 0.0033 | 0.0021 | 0.0012 |
| 244 | 0.0032 | 0.0021 | 0.0012 |
| 245 | 0.0032 | 0.0020 | 0.0012 |
| 246 | 0.0031 | 0.0020 | 0.0011 |
| 247 | 0.0031 | 0.0020 | 0.0011 |
| 248 | 0.0031 | 0.0019 | 0.0011 |
| 249 | 0.0030 | 0.0019 | 0.0011 |
| 250 | 0.0030 | 0.0019 | 0.0011 |
| 251 | 0.0029 | 0.0019 | 0.0011 |
| 252 | 0.0029 | 0.0018 | 0.0010 |
| 253 | 0.0029 | 0.0018 | 0.0010 |
| 254 | 0.0028 | 0.0018 | 0.0010 |
| 255 | 0.0028 | 0.0018 | 0.0010 |
| 256 | 0.0027 | 0.0018 | 0.0010 |
| 257 | 0.0027 | 0.0017 | 0.0010 |
| 258 | 0.0027 | 0.0017 | 0.0010 |
| 259 | 0.0027 | 0.0017 | 0.0010 |
| 260 | 0.0026 | 0.0017 | 0.0009 |
| 261 | 0.0026 | 0.0017 | 0.0009 |
| 262 | 0.0026 | 0.0016 | 0.0009 |

| | | | |
|---|---|---|---|
| 263 | 0.0025 | 0.0016 | 0.0009 |
| 264 | 0.0025 | 0.0016 | 0.0009 |
| 265 | 0.0025 | 0.0016 | 0.0009 |
| 266 | 0.0025 | 0.0016 | 0.0009 |
| 267 | 0.0024 | 0.0015 | 0.0009 |
| 268 | 0.0024 | 0.0015 | 0.0009 |
| 269 | 0.0024 | 0.0015 | 0.0009 |
| 270 | 0.0024 | 0.0015 | 0.0009 |
| 271 | 0.0023 | 0.0015 | 0.0008 |
| 272 | 0.0023 | 0.0015 | 0.0008 |
| 273 | 0.0023 | 0.0015 | 0.0008 |
| 274 | 0.0023 | 0.0014 | 0.0008 |
| 275 | 0.0022 | 0.0014 | 0.0008 |
| 276 | 0.0022 | 0.0014 | 0.0008 |
| 277 | 0.0022 | 0.0014 | 0.0008 |
| 278 | 0.0022 | 0.0014 | 0.0008 |
| 279 | 0.0022 | 0.0014 | 0.0008 |
| 280 | 0.0021 | 0.0014 | 0.0008 |
| 281 | 0.0021 | 0.0014 | 0.0008 |
| 282 | 0.0021 | 0.0013 | 0.0008 |
| 283 | 0.0021 | 0.0013 | 0.0008 |
| 284 | 0.0021 | 0.0013 | 0.0007 |
| 285 | 0.0021 | 0.0013 | 0.0007 |
| 286 | 0.0020 | 0.0013 | 0.0007 |
| 287 | 0.0020 | 0.0013 | 0.0007 |
| 288 | 0.0020 | 0.0013 | 0.0007 |

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Total soil rain loss = 1.09(In)
Total effective rainfall = 1.42(In)
Peak flow rate in flood hydrograph = 161.32(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 50.0 | 100.0 | 150.0 | 200.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.01 | Q | \| | \| | \| | \| |
| 0+10 | 0.0001 | 0.02 | Q | \| | \| | \| | \| |
| 0+15 | 0.0003 | 0.03 | Q | \| | \| | \| | \| |
| 0+20 | 0.0006 | 0.04 | Q | \| | \| | \| | \| |
| 0+25 | 0.0011 | 0.06 | Q | \| | \| | \| | \| |
| 0+30 | 0.0017 | 0.09 | Q | \| | \| | \| | \| |
| 0+35 | 0.0025 | 0.12 | Q | \| | \| | \| | \| |
| 0+40 | 0.0035 | 0.15 | Q | \| | \| | \| | \| |
| 0+45 | 0.0047 | 0.18 | Q | \| | \| | \| | \| |
| 0+50 | 0.0063 | 0.22 | Q | \| | \| | \| | \| |
| 0+55 | 0.0081 | 0.27 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0105 | 0.34 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0134 | 0.42 | Q | \| | \| | \| | \| |
| 1+10 | 0.0169 | 0.52 | Q | \| | \| | \| | \| |
| 1+15 | 0.0213 | 0.64 | Q | \| | \| | \| | \| |
| 1+20 | 0.0265 | 0.76 | Q | \| | \| | \| | \| |
| 1+25 | 0.0325 | 0.87 | Q | \| | \| | \| | \| |
| 1+30 | 0.0392 | 0.97 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+35 | 0.0465 | 1.07 | Q | | | | |
| 1+40 | 0.0544 | 1.15 | Q | | | | |
| 1+45 | 0.0629 | 1.23 | Q | | | | |
| 1+50 | 0.0718 | 1.30 | Q | | | | |
| 1+55 | 0.0812 | 1.36 | Q | | | | |
| 2+ 0 | 0.0910 | 1.43 | Q | | | | |
| 2+ 5 | 0.1012 | 1.48 | Q | | | | |
| 2+10 | 0.1118 | 1.53 | Q | | | | |
| 2+15 | 0.1226 | 1.58 | Q | | | | |
| 2+20 | 0.1338 | 1.62 | Q | | | | |
| 2+25 | 0.1453 | 1.66 | Q | | | | |
| 2+30 | 0.1570 | 1.70 | Q | | | | |
| 2+35 | 0.1690 | 1.74 | Q | | | | |
| 2+40 | 0.1813 | 1.78 | Q | | | | |
| 2+45 | 0.1938 | 1.82 | Q | | | | |
| 2+50 | 0.2065 | 1.85 | Q | | | | |
| 2+55 | 0.2195 | 1.89 | Q | | | | |
| 3+ 0 | 0.2327 | 1.92 | Q | | | | |
| 3+ 5 | 0.2461 | 1.95 | Q | | | | |
| 3+10 | 0.2597 | 1.98 | Q | | | | |
| 3+15 | 0.2736 | 2.01 | Q | | | | |
| 3+20 | 0.2876 | 2.04 | Q | | | | |
| 3+25 | 0.3018 | 2.07 | Q | | | | |
| 3+30 | 0.3162 | 2.09 | Q | | | | |
| 3+35 | 0.3309 | 2.12 | Q | | | | |
| 3+40 | 0.3456 | 2.15 | Q | | | | |
| 3+45 | 0.3606 | 2.17 | Q | | | | |
| 3+50 | 0.3757 | 2.20 | Q | | | | |
| 3+55 | 0.3910 | 2.22 | Q | | | | |
| 4+ 0 | 0.4065 | 2.25 | Q | | | | |
| 4+ 5 | 0.4221 | 2.27 | Q | | | | |
| 4+10 | 0.4379 | 2.29 | Q | | | | |
| 4+15 | 0.4539 | 2.32 | Q | | | | |
| 4+20 | 0.4700 | 2.34 | Q | | | | |
| 4+25 | 0.4863 | 2.36 | Q | | | | |
| 4+30 | 0.5027 | 2.39 | Q | | | | |
| 4+35 | 0.5193 | 2.41 | Q | | | | |
| 4+40 | 0.5361 | 2.43 | Q | | | | |
| 4+45 | 0.5530 | 2.46 | Q | | | | |
| 4+50 | 0.5700 | 2.48 | Q | | | | |
| 4+55 | 0.5873 | 2.50 | Q | | | | |
| 5+ 0 | 0.6046 | 2.52 | Q | | | | |
| 5+ 5 | 0.6222 | 2.54 | Q | | | | |
| 5+10 | 0.6398 | 2.57 | Q | | | | |
| 5+15 | 0.6577 | 2.59 | Q | | | | |
| 5+20 | 0.6756 | 2.61 | Q | | | | |
| 5+25 | 0.6938 | 2.63 | Q | | | | |
| 5+30 | 0.7120 | 2.65 | Q | | | | |
| 5+35 | 0.7304 | 2.67 | Q | | | | |
| 5+40 | 0.7490 | 2.69 | Q | | | | |
| 5+45 | 0.7676 | 2.71 | Q | | | | |
| 5+50 | 0.7865 | 2.73 | Q | | | | |
| 5+55 | 0.8055 | 2.76 | Q | | | | |
| 6+ 0 | 0.8246 | 2.78 | Q | | | | |
| 6+ 5 | 0.8439 | 2.80 | QV | | | | |
| 6+10 | 0.8633 | 2.82 | QV | | | | |
| 6+15 | 0.8829 | 2.84 | QV | | | | |
| 6+20 | 0.9026 | 2.86 | QV | | | | |
| 6+25 | 0.9225 | 2.88 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+30 | 0.9425 | 2.91 | QV | | | | |
| 6+35 | 0.9627 | 2.93 | QV | | | | |
| 6+40 | 0.9830 | 2.95 | QV | | | | |
| 6+45 | 1.0034 | 2.97 | QV | | | | |
| 6+50 | 1.0241 | 3.00 | QV | | | | |
| 6+55 | 1.0449 | 3.02 | QV | | | | |
| 7+ 0 | 1.0658 | 3.04 | QV | | | | |
| 7+ 5 | 1.0869 | 3.06 | QV | | | | |
| 7+10 | 1.1081 | 3.08 | QV | | | | |
| 7+15 | 1.1295 | 3.11 | QV | | | | |
| 7+20 | 1.1511 | 3.13 | QV | | | | |
| 7+25 | 1.1728 | 3.15 | QV | | | | |
| 7+30 | 1.1947 | 3.18 | QV | | | | |
| 7+35 | 1.2167 | 3.20 | QV | | | | |
| 7+40 | 1.2389 | 3.22 | QV | | | | |
| 7+45 | 1.2613 | 3.25 | QV | | | | |
| 7+50 | 1.2838 | 3.27 | QV | | | | |
| 7+55 | 1.3065 | 3.30 | QV | | | | |
| 8+ 0 | 1.3294 | 3.32 | QV | | | | |
| 8+ 5 | 1.3525 | 3.35 | QV | | | | |
| 8+10 | 1.3757 | 3.37 | QV | | | | |
| 8+15 | 1.3991 | 3.40 | QV | | | | |
| 8+20 | 1.4226 | 3.42 | QV | | | | |
| 8+25 | 1.4464 | 3.45 | QV | | | | |
| 8+30 | 1.4703 | 3.47 | QV | | | | |
| 8+35 | 1.4944 | 3.50 | QV | | | | |
| 8+40 | 1.5187 | 3.53 | QV | | | | |
| 8+45 | 1.5432 | 3.56 | QV | | | | |
| 8+50 | 1.5679 | 3.58 | QV | | | | |
| 8+55 | 1.5927 | 3.61 | QV | | | | |
| 9+ 0 | 1.6178 | 3.64 | QV | | | | |
| 9+ 5 | 1.6431 | 3.67 | QV | | | | |
| 9+10 | 1.6685 | 3.70 | Q V | | | | |
| 9+15 | 1.6942 | 3.72 | Q V | | | | |
| 9+20 | 1.7200 | 3.75 | Q V | | | | |
| 9+25 | 1.7461 | 3.79 | Q V | | | | |
| 9+30 | 1.7724 | 3.82 | Q V | | | | |
| 9+35 | 1.7989 | 3.85 | Q V | | | | |
| 9+40 | 1.8256 | 3.88 | Q V | | | | |
| 9+45 | 1.8525 | 3.91 | Q V | | | | |
| 9+50 | 1.8797 | 3.94 | Q V | | | | |
| 9+55 | 1.9070 | 3.97 | Q V | | | | |
| 10+ 0 | 1.9346 | 4.01 | Q V | | | | |
| 10+ 5 | 1.9625 | 4.04 | Q V | | | | |
| 10+10 | 1.9905 | 4.08 | Q V | | | | |
| 10+15 | 2.0189 | 4.11 | Q V | | | | |
| 10+20 | 2.0474 | 4.15 | Q V | | | | |
| 10+25 | 2.0762 | 4.18 | Q V | | | | |
| 10+30 | 2.1053 | 4.22 | Q V | | | | |
| 10+35 | 2.1346 | 4.26 | Q V | | | | |
| 10+40 | 2.1643 | 4.30 | Q V | | | | |
| 10+45 | 2.1941 | 4.34 | Q V | | | | |
| 10+50 | 2.2243 | 4.38 | Q V | | | | |
| 10+55 | 2.2547 | 4.42 | Q V | | | | |
| 11+ 0 | 2.2855 | 4.46 | Q V | | | | |
| 11+ 5 | 2.3165 | 4.51 | Q V | | | | |
| 11+10 | 2.3479 | 4.55 | Q V | | | | |
| 11+15 | 2.3795 | 4.60 | Q V | | | | |
| 11+20 | 2.4115 | 4.64 | Q V | | | | |

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11+25       2.4438      4.69  Q V       |          |          |          |
11+30       2.4764      4.74  Q V       |          |          |          |
11+35       2.5094      4.79  Q  V      |          |          |          |
11+40       2.5427      4.84  Q  V      |          |          |          |
11+45       2.5764      4.89  Q  V      |          |          |          |
11+50       2.6105      4.94  Q  V      |          |          |          |
11+55       2.6449      5.00  Q  V      |          |          |          |
12+ 0       2.6797      5.06  |Q V      |          |          |          |
12+ 5       2.7149      5.11  |Q V      |          |          |          |
12+10       2.7504      5.16  |Q V      |          |          |          |
12+15       2.7863      5.21  |Q V      |          |          |          |
12+20       2.8225      5.26  |Q V      |          |          |          |
12+25       2.8591      5.31  |Q V      |          |          |          |
12+30       2.8959      5.35  |Q V      |          |          |          |
12+35       2.9331      5.40  |Q V      |          |          |          |
12+40       2.9706      5.44  |Q V      |          |          |          |
12+45       3.0083      5.48  |Q V      |          |          |          |
12+50       3.0464      5.52  |Q V      |          |          |          |
12+55       3.0846      5.56  |Q V      |          |          |          |
13+ 0       3.1231      5.58  |Q V      |          |          |          |
13+ 5       3.1616      5.60  |Q V      |          |          |          |
13+10       3.2002      5.60  |Q V      |          |          |          |
13+15       3.2387      5.59  |Q V      |          |          |          |
13+20       3.2771      5.57  |Q V      |          |          |          |
13+25       3.3155      5.58  |Q V      |          |          |          |
13+30       3.3539      5.58  |Q  V     |          |          |          |
13+35       3.3925      5.60  |Q  V     |          |          |          |
13+40       3.4312      5.63  |Q  V     |          |          |          |
13+45       3.4702      5.66  |Q  V     |          |          |          |
13+50       3.5096      5.71  |Q  V     |          |          |          |
13+55       3.5492      5.76  |Q  V     |          |          |          |
14+ 0       3.5893      5.81  |Q  V     |          |          |          |
14+ 5       3.6298      5.89  |Q  V     |          |          |          |
14+10       3.6709      5.96  |Q  V     |          |          |          |
14+15       3.7125      6.05  |Q  V     |          |          |          |
14+20       3.7549      6.15  |Q  V     |          |          |          |
14+25       3.7979      6.25  |Q  V     |          |          |          |
14+30       3.8417      6.36  |Q  V     |          |          |          |
14+35       3.8864      6.49  |Q  V     |          |          |          |
14+40       3.9320      6.62  |Q  V     |          |          |          |
14+45       3.9786      6.76  |Q  V     |          |          |          |
14+50       4.0262      6.92  |Q  V     |          |          |          |
14+55       4.0750      7.08  |Q  V     |          |          |          |
15+ 0       4.1251      7.27  |Q  V     |          |          |          |
15+ 5       4.1766      7.48  |Q   V    |          |          |          |
15+10       4.2296      7.70  |Q   V    |          |          |          |
15+15       4.2844      7.95  |Q   V    |          |          |          |
15+20       4.3410      8.22  |Q   V    |          |          |          |
15+25       4.3999      8.55  |Q   V    |          |          |          |
15+30       4.4615      8.95  |Q   V    |          |          |          |
15+35       4.5262      9.40  |Q   V    |          |          |          |
15+40       4.5947      9.94  |Q   V    |          |          |          |
15+45       4.6678     10.62  | Q  V    |          |          |          |
15+50       4.7470     11.50  | Q  V    |          |          |          |
15+55       4.8351     12.79  | Q  V    |          |          |          |
16+ 0       4.9371     14.82  | Q  V    |          |          |          |
16+ 5       5.0812     20.91  |   Q V   |          |          |          |
16+10       5.2675     27.05  |    QV   |          |          |          |
16+15       5.4757     30.24  |     Q   |          |          |          |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 16+20 | 5.7368 | 37.90 | VQ | | | | |
| 16+25 | 6.0255 | 41.92 | VQ | | | | |
| 16+30 | 6.3497 | 47.08 | V Q | | | | |
| 16+35 | 6.7268 | 54.76 | V Q | | | | |
| 16+40 | 7.1317 | 58.79 | V \|Q | | | | |
| 16+45 | 7.5973 | 67.61 | V\| Q | | | | |
| 16+50 | 8.1165 | 75.39 | V\| Q | | | | |
| 16+55 | 8.7131 | 86.62 | V Q | | | | |
| 17+ 0 | 9.4857 | 112.19 | \|V | Q | | | |
| 17+ 5 | 10.3207 | 121.23 | V | Q | | | |
| 17+10 | 11.3016 | 142.44 | V | Q | | | |
| 17+15 | 12.4127 | 161.32 | V | | Q | | |
| 17+20 | 13.5044 | 158.52 | V | | \|Q | | |
| 17+25 | 14.5014 | 144.77 | V | Q | | | |
| 17+30 | 15.4495 | 137.66 | V \| | Q | | | |
| 17+35 | 16.3259 | 127.26 | V\| | Q | | | |
| 17+40 | 17.0877 | 110.61 | V Q | | | | |
| 17+45 | 17.8175 | 105.97 | \|Q | | | | |
| 17+50 | 18.4785 | 95.97 | Q\| V | | | | |
| 17+55 | 19.0916 | 89.03 | Q | V | | | |
| 18+ 0 | 19.6680 | 83.68 | Q | V | | | |
| 18+ 5 | 20.1648 | 72.15 | Q | V | | | |
| 18+10 | 20.6364 | 68.47 | Q | V | | | |
| 18+15 | 21.0735 | 63.46 | Q | V | | | |
| 18+20 | 21.4752 | 58.33 | \|Q | V | | | |
| 18+25 | 21.8636 | 56.39 | \|Q | V | | | |
| 18+30 | 22.2220 | 52.05 | Q | V | | | |
| 18+35 | 22.5664 | 50.00 | Q\| | V | | | |
| 18+40 | 22.8993 | 48.35 | Q\| | V | | | |
| 18+45 | 23.2156 | 45.92 | Q\| | V | | | |
| 18+50 | 23.5234 | 44.69 | Q | V | | | |
| 18+55 | 23.8092 | 41.50 | Q | V | | | |
| 19+ 0 | 24.0802 | 39.35 | Q | V\| | | | |
| 19+ 5 | 24.3433 | 38.20 | Q | V\| | | | |
| 19+10 | 24.5913 | 36.02 | Q | V\| | | | |
| 19+15 | 24.8340 | 35.24 | Q | V\| | | | |
| 19+20 | 25.0711 | 34.42 | Q | V | | | |
| 19+25 | 25.3012 | 33.41 | Q | V | | | |
| 19+30 | 25.5247 | 32.45 | Q | V | | | |
| 19+35 | 25.7282 | 29.56 | Q | \|V | | | |
| 19+40 | 25.9237 | 28.38 | Q | \|V | | | |
| 19+45 | 26.1166 | 28.01 | Q | \|V | | | |
| 19+50 | 26.3067 | 27.60 | Q | \|V | | | |
| 19+55 | 26.4930 | 27.06 | Q | \|V | | | |
| 20+ 0 | 26.6673 | 25.31 | Q | V | | | |
| 20+ 5 | 26.8337 | 24.15 | Q | V | | | |
| 20+10 | 26.9980 | 23.87 | Q | V | | | |
| 20+15 | 27.1605 | 23.59 | Q | V | | | |
| 20+20 | 27.3208 | 23.27 | Q | V | | | |
| 20+25 | 27.4757 | 22.50 | Q | V | | | |
| 20+30 | 27.6247 | 21.63 | Q | V | | | |
| 20+35 | 27.7720 | 21.39 | Q | V | | | |
| 20+40 | 27.9175 | 21.13 | Q | V | | | |
| 20+45 | 28.0607 | 20.79 | Q | V | | | |
| 20+50 | 28.1987 | 20.04 | Q | V | | | |
| 20+55 | 28.3279 | 18.76 | Q | V | | | |
| 21+ 0 | 28.4548 | 18.43 | Q | V | | | |
| 21+ 5 | 28.5800 | 18.18 | Q | V | | | |
| 21+10 | 28.7029 | 17.84 | Q | V | | | |

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21+15      28.8213     17.19  |  Q      |         |         |   V     |
21+20      28.9285     15.56  |  Q      |         |         |   V     |
21+25      29.0326     15.11  |  Q      |         |         |    V    |
21+30      29.1354     14.94  | Q       |         |         |    V    |
21+35      29.2372     14.77  | Q       |         |         |    V    |
21+40      29.3376     14.59  | Q       |         |         |    V    |
21+45      29.4354     14.20  | Q       |         |         |    V    |
21+50      29.5316     13.97  | Q       |         |         |    V    |
21+55      29.6270     13.85  | Q       |         |         |    V    |
22+ 0      29.7213     13.69  | Q       |         |         |    V    |
22+ 5      29.8142     13.49  | Q       |         |         |    V    |
22+10      29.9030     12.89  | Q       |         |         |     V   |
22+15      29.9888     12.46  | Q       |         |         |     V   |
22+20      30.0737     12.33  | Q       |         |         |     V   |
22+25      30.1578     12.21  | Q       |         |         |     V   |
22+30      30.2409     12.07  | Q       |         |         |     V   |
22+35      30.3222     11.80  | Q       |         |         |     V   |
22+40      30.4011     11.46  | Q       |         |         |     V   |
22+45      30.4792     11.34  | Q       |         |         |     V   |
22+50      30.5564     11.21  | Q       |         |         |     V   |
22+55      30.6323     11.02  | Q       |         |         |     V   |
23+ 0      30.7054     10.61  | Q       |         |         |      V  |
23+ 5      30.7730      9.82  |Q        |         |         |      V  |
23+10      30.8395      9.65  |Q        |         |         |      V  |
23+15      30.9053      9.56  |Q        |         |         |      V  |
23+20      30.9707      9.49  |Q        |         |         |      V  |
23+25      31.0355      9.42  |Q        |         |         |      V  |
23+30      31.0999      9.35  |Q        |         |         |      V  |
23+35      31.1637      9.27  |Q        |         |         |      V  |
23+40      31.2270      9.18  |Q        |         |         |      V  |
23+45      31.2893      9.05  |Q        |         |         |      V  |
23+50      31.3503      8.86  |Q        |         |         |      V  |
23+55      31.4070      8.23  |Q        |         |         |      V  |
24+ 0      31.4615      7.92  |Q        |         |         |      V  |
24+ 5      31.5155      7.83  |Q        |         |         |       V |
24+10      31.5689      7.75  |Q        |         |         |       V |
24+15      31.6218      7.68  |Q        |         |         |       V |
24+20      31.6742      7.61  |Q        |         |         |       V |
24+25      31.7260      7.52  |Q        |         |         |       V |
24+30      31.7771      7.43  |Q        |         |         |       V |
24+35      31.8274      7.30  |Q        |         |         |       V |
24+40      31.8764      7.12  |Q        |         |         |       V |
24+45      31.9224      6.68  |Q        |         |         |       V |
24+50      31.9644      6.08  |Q        |         |         |       V |
24+55      32.0053      5.95  |Q        |         |         |       V |
25+ 0      32.0453      5.81  |Q        |         |         |       V |
25+ 5      32.0845      5.68  |Q        |         |         |       V |
25+10      32.1226      5.54  |Q        |         |         |       V |
25+15      32.1596      5.37  |Q        |         |         |       V |
25+20      32.1954      5.19  |Q        |         |         |       V |
25+25      32.2300      5.02  |Q        |         |         |       V |
25+30      32.2631      4.81  Q        |         |         |       V |
25+35      32.2941      4.50  Q        |         |         |       V |
25+40      32.3202      3.79  Q        |         |         |       V |
25+45      32.3444      3.52  Q        |         |         |        V|
25+50      32.3679      3.41  Q        |         |         |        V|
25+55      32.3908      3.32  Q        |         |         |        V|
26+ 0      32.4131      3.24  Q        |         |         |        V|
26+ 5      32.4350      3.18  Q        |         |         |        V|
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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+10 | 32.4565 | 3.12 | Q | \| | \| | \| | V\| |
| 26+15 | 32.4777 | 3.07 | Q | \| | \| | \| | V\| |
| 26+20 | 32.4986 | 3.04 | Q | \| | \| | \| | V\| |
| 26+25 | 32.5194 | 3.02 | Q | \| | \| | \| | V\| |
| 26+30 | 32.5407 | 3.09 | Q | \| | \| | \| | V\| |
| 26+35 | 32.5623 | 3.15 | Q | \| | \| | \| | V\| |
| 26+40 | 32.5838 | 3.11 | Q | \| | \| | \| | V\| |
| 26+45 | 32.6050 | 3.08 | Q | \| | \| | \| | V\| |
| 26+50 | 32.6259 | 3.04 | Q | \| | \| | \| | V\| |
| 26+55 | 32.6466 | 3.00 | Q | \| | \| | \| | V\| |
| 27+ 0 | 32.6671 | 2.97 | Q | \| | \| | \| | V\| |
| 27+ 5 | 32.6873 | 2.93 | Q | \| | \| | \| | V\| |
| 27+10 | 32.7073 | 2.90 | Q | \| | \| | \| | V\| |
| 27+15 | 32.7270 | 2.87 | Q | \| | \| | \| | V\| |
| 27+20 | 32.7466 | 2.84 | Q | \| | \| | \| | V\| |
| 27+25 | 32.7659 | 2.81 | Q | \| | \| | \| | V\| |
| 27+30 | 32.7850 | 2.77 | Q | \| | \| | \| | V\| |
| 27+35 | 32.8039 | 2.74 | Q | \| | \| | \| | V\| |
| 27+40 | 32.8225 | 2.71 | Q | \| | \| | \| | V\| |
| 27+45 | 32.8409 | 2.67 | Q | \| | \| | \| | V\| |
| 27+50 | 32.8591 | 2.63 | Q | \| | \| | \| | V\| |
| 27+55 | 32.8769 | 2.59 | Q | \| | \| | \| | V\| |
| 28+ 0 | 32.8944 | 2.54 | Q | \| | \| | \| | V\| |
| 28+ 5 | 32.9114 | 2.46 | Q | \| | \| | \| | V\| |
| 28+10 | 32.9275 | 2.34 | Q | \| | \| | \| | V\| |
| 28+15 | 32.9408 | 1.92 | Q | \| | \| | \| | V\| |
| 28+20 | 32.9523 | 1.68 | Q | \| | \| | \| | V\| |
| 28+25 | 32.9636 | 1.63 | Q | \| | \| | \| | V\| |
| 28+30 | 32.9746 | 1.60 | Q | \| | \| | \| | V\| |
| 28+35 | 32.9854 | 1.57 | Q | \| | \| | \| | V\| |
| 28+40 | 32.9961 | 1.55 | Q | \| | \| | \| | V\| |
| 28+45 | 33.0066 | 1.53 | Q | \| | \| | \| | V\| |
| 28+50 | 33.0170 | 1.51 | Q | \| | \| | \| | V\| |
| 28+55 | 33.0272 | 1.48 | Q | \| | \| | \| | V\| |
| 29+ 0 | 33.0373 | 1.46 | Q | \| | \| | \| | V\| |
| 29+ 5 | 33.0471 | 1.43 | Q | \| | \| | \| | V\| |
| 29+10 | 33.0568 | 1.40 | Q | \| | \| | \| | V\| |
| 29+15 | 33.0662 | 1.37 | Q | \| | \| | \| | V\| |
| 29+20 | 33.0754 | 1.34 | Q | \| | \| | \| | V\| |
| 29+25 | 33.0843 | 1.29 | Q | \| | \| | \| | V\| |
| 29+30 | 33.0926 | 1.21 | Q | \| | \| | \| | V\| |
| 29+35 | 33.1000 | 1.07 | Q | \| | \| | \| | V\| |
| 29+40 | 33.1032 | 0.46 | Q | \| | \| | \| | V\| |
| 29+45 | 33.1059 | 0.40 | Q | \| | \| | \| | V\| |
| 29+50 | 33.1084 | 0.37 | Q | \| | \| | \| | V\| |
| 29+55 | 33.1108 | 0.34 | Q | \| | \| | \| | V\| |
| 30+ 0 | 33.1131 | 0.33 | Q | \| | \| | \| | V\| |
| 30+ 5 | 33.1153 | 0.32 | Q | \| | \| | \| | V\| |
| 30+10 | 33.1173 | 0.30 | Q | \| | \| | \| | V\| |
| 30+15 | 33.1194 | 0.29 | Q | \| | \| | \| | V\| |
| 30+20 | 33.1213 | 0.28 | Q | \| | \| | \| | V\| |
| 30+25 | 33.1232 | 0.27 | Q | \| | \| | \| | V\| |
| 30+30 | 33.1250 | 0.26 | Q | \| | \| | \| | V\| |
| 30+35 | 33.1267 | 0.25 | Q | \| | \| | \| | V\| |
| 30+40 | 33.1284 | 0.24 | Q | \| | \| | \| | V\| |
| 30+45 | 33.1300 | 0.23 | Q | \| | \| | \| | V\| |
| 30+50 | 33.1315 | 0.23 | Q | \| | \| | \| | V\| |
| 30+55 | 33.1330 | 0.22 | Q | \| | \| | \| | V\| |
| 31+ 0 | 33.1345 | 0.21 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 31+ 5 | 33.1359 | 0.20 | Q | \| | \| | \| | V\| |
| 31+10 | 33.1372 | 0.20 | Q | \| | \| | \| | V\| |
| 31+15 | 33.1386 | 0.19 | Q | \| | \| | \| | V\| |
| 31+20 | 33.1398 | 0.18 | Q | \| | \| | \| | V\| |
| 31+25 | 33.1411 | 0.18 | Q | \| | \| | \| | V\| |
| 31+30 | 33.1422 | 0.17 | Q | \| | \| | \| | V\| |
| 31+35 | 33.1434 | 0.17 | Q | \| | \| | \| | V\| |
| 31+40 | 33.1445 | 0.16 | Q | \| | \| | \| | V\| |
| 31+45 | 33.1456 | 0.15 | Q | \| | \| | \| | V\| |
| 31+50 | 33.1466 | 0.15 | Q | \| | \| | \| | V\| |
| 31+55 | 33.1476 | 0.14 | Q | \| | \| | \| | V\| |
| 32+ 0 | 33.1485 | 0.14 | Q | \| | \| | \| | V\| |
| 32+ 5 | 33.1494 | 0.13 | Q | \| | \| | \| | V\| |
| 32+10 | 33.1503 | 0.13 | Q | \| | \| | \| | V\| |
| 32+15 | 33.1512 | 0.12 | Q | \| | \| | \| | V\| |
| 32+20 | 33.1520 | 0.12 | Q | \| | \| | \| | V\| |
| 32+25 | 33.1528 | 0.11 | Q | \| | \| | \| | V\| |
| 32+30 | 33.1535 | 0.11 | Q | \| | \| | \| | V\| |
| 32+35 | 33.1543 | 0.11 | Q | \| | \| | \| | V\| |
| 32+40 | 33.1550 | 0.10 | Q | \| | \| | \| | V\| |
| 32+45 | 33.1556 | 0.10 | Q | \| | \| | \| | V\| |
| 32+50 | 33.1563 | 0.09 | Q | \| | \| | \| | V\| |
| 32+55 | 33.1569 | 0.09 | Q | \| | \| | \| | V\| |
| 33+ 0 | 33.1575 | 0.09 | Q | \| | \| | \| | V\| |
| 33+ 5 | 33.1581 | 0.08 | Q | \| | \| | \| | V\| |
| 33+10 | 33.1587 | 0.08 | Q | \| | \| | \| | V\| |
| 33+15 | 33.1592 | 0.08 | Q | \| | \| | \| | V\| |
| 33+20 | 33.1597 | 0.08 | Q | \| | \| | \| | V\| |
| 33+25 | 33.1602 | 0.07 | Q | \| | \| | \| | V\| |
| 33+30 | 33.1607 | 0.07 | Q | \| | \| | \| | V\| |
| 33+35 | 33.1612 | 0.07 | Q | \| | \| | \| | V\| |
| 33+40 | 33.1616 | 0.07 | Q | \| | \| | \| | V\| |
| 33+45 | 33.1621 | 0.06 | Q | \| | \| | \| | V\| |
| 33+50 | 33.1625 | 0.06 | Q | \| | \| | \| | V\| |
| 33+55 | 33.1629 | 0.06 | Q | \| | \| | \| | V\| |
| 34+ 0 | 33.1633 | 0.06 | Q | \| | \| | \| | V\| |
| 34+ 5 | 33.1637 | 0.06 | Q | \| | \| | \| | V\| |
| 34+10 | 33.1641 | 0.05 | Q | \| | \| | \| | V\| |
| 34+15 | 33.1644 | 0.05 | Q | \| | \| | \| | V\| |
| 34+20 | 33.1648 | 0.05 | Q | \| | \| | \| | V\| |
| 34+25 | 33.1651 | 0.05 | Q | \| | \| | \| | V\| |
| 34+30 | 33.1654 | 0.05 | Q | \| | \| | \| | V\| |
| 34+35 | 33.1657 | 0.05 | Q | \| | \| | \| | V\| |
| 34+40 | 33.1660 | 0.04 | Q | \| | \| | \| | V\| |
| 34+45 | 33.1663 | 0.04 | Q | \| | \| | \| | V\| |
| 34+50 | 33.1666 | 0.04 | Q | \| | \| | \| | V\| |
| 34+55 | 33.1669 | 0.04 | Q | \| | \| | \| | V\| |
| 35+ 0 | 33.1671 | 0.04 | Q | \| | \| | \| | V\| |
| 35+ 5 | 33.1674 | 0.03 | Q | \| | \| | \| | V\| |
| 35+10 | 33.1676 | 0.03 | Q | \| | \| | \| | V\| |
| 35+15 | 33.1678 | 0.03 | Q | \| | \| | \| | V\| |
| 35+20 | 33.1680 | 0.03 | Q | \| | \| | \| | V\| |
| 35+25 | 33.1682 | 0.03 | Q | \| | \| | \| | V\| |
| 35+30 | 33.1684 | 0.03 | Q | \| | \| | \| | V\| |
| 35+35 | 33.1686 | 0.02 | Q | \| | \| | \| | V\| |
| 35+40 | 33.1687 | 0.02 | Q | \| | \| | \| | V\| |
| 35+45 | 33.1689 | 0.02 | Q | \| | \| | \| | V\| |
| 35+50 | 33.1690 | 0.02 | Q | \| | \| | \| | V\| |
| 35+55 | 33.1691 | 0.02 | Q | \| | \| | \| | V\| |

```
   36+ 0      33.1692      0.02  Q         |         |         |        V|
-----------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 26
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 342.06 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 342.06 | 6 | 1.82 |
| Rainfall data for year 100 | | |
| 342.06 | 24 | 2.52 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 61.9 | 80.5 | 342.06 | 1.000 | 0.361 | 0.997 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 341.03 | 0.997 | 61.9 | 80.5 | 2.42 | 0.369 |
| 1.03 | 0.003 | 98.0 | 98.0 | 0.20 | 0.909 |

Area-averaged catchment yield fraction, Y = 0.371
Area-averaged low loss fraction, Yb = 0.629
User entry of time of concentration = 2.190 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 342.06(Ac.)
Catchment Lag time = 1.752 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 4.7565
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.629 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.640(In)
Specified peak 6-hour rainfall = 1.820(In)
Specified peak 24-hour rainfall = 2.520(In)

Rainfall depth area reduction factors:
Using a total area of 342.06(Ac.) (Ref: fig. E-4)

5-minute factor = 0.984 Adjusted rainfall = 0.649(In)
30-minute factor = 0.984 Adjusted rainfall = 1.111(In)
1-hour factor = 0.984 Adjusted rainfall = 1.368(In)
3-hour factor = 0.998 Adjusted rainfall = 1.636(In)
6-hour factor = 0.999 Adjusted rainfall = 1.818(In)
24-hour factor = 1.000 Adjusted rainfall = 2.519(In)
---

U n i t H y d r o g r a p h

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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 4136.79 (CFS)) | |
| 1 | 0.209 | 8.658 |
| 2 | 0.628 | 17.315 |
| 3 | 1.073 | 18.404 |
| 4 | 1.797 | 29.952 |
| 5 | 2.596 | 33.057 |
| 6 | 3.500 | 37.413 |
| 7 | 4.667 | 48.282 |
| 8 | 5.850 | 48.914 |
| 9 | 7.284 | 59.347 |
| 10 | 8.883 | 66.113 |
| 11 | 10.653 | 73.236 |
| 12 | 13.508 | 118.089 |
| 13 | 16.552 | 125.930 |

| | | |
|---|---|---|
| 14 | 20.271 | 153.871 |
| 15 | 25.124 | 200.747 |
| 16 | 29.973 | 200.598 |
| 17 | 34.280 | 178.180 |
| 18 | 38.352 | 168.431 |
| 19 | 42.236 | 160.678 |
| 20 | 45.361 | 129.262 |
| 21 | 48.405 | 125.930 |
| 22 | 51.177 | 114.684 |
| 23 | 53.651 | 102.325 |
| 24 | 56.085 | 100.697 |
| 25 | 58.049 | 81.246 |
| 26 | 59.875 | 75.558 |
| 27 | 61.613 | 71.886 |
| 28 | 63.111 | 61.946 |
| 29 | 64.594 | 61.351 |
| 30 | 65.943 | 55.839 |
| 31 | 67.199 | 51.946 |
| 32 | 68.443 | 51.438 |
| 33 | 69.600 | 47.902 |
| 34 | 70.742 | 47.224 |
| 35 | 71.817 | 44.473 |
| 36 | 72.771 | 39.459 |
| 37 | 73.720 | 39.251 |
| 38 | 74.593 | 36.112 |
| 39 | 75.430 | 34.631 |
| 40 | 76.261 | 34.366 |
| 41 | 77.063 | 33.195 |
| 42 | 77.862 | 33.057 |
| 43 | 78.584 | 29.847 |
| 44 | 79.212 | 25.981 |
| 45 | 79.839 | 25.973 |
| 46 | 80.467 | 25.973 |
| 47 | 81.095 | 25.973 |
| 48 | 81.695 | 24.829 |
| 49 | 82.214 | 21.469 |
| 50 | 82.728 | 21.251 |
| 51 | 83.242 | 21.251 |
| 52 | 83.755 | 21.251 |
| 53 | 84.264 | 21.022 |
| 54 | 84.729 | 19.260 |
| 55 | 85.186 | 18.889 |
| 56 | 85.642 | 18.889 |
| 57 | 86.099 | 18.889 |
| 58 | 86.554 | 18.836 |
| 59 | 86.960 | 16.789 |
| 60 | 87.341 | 15.741 |
| 61 | 87.721 | 15.741 |
| 62 | 88.102 | 15.741 |
| 63 | 88.482 | 15.741 |
| 64 | 88.822 | 14.047 |
| 65 | 89.108 | 11.816 |
| 66 | 89.393 | 11.806 |
| 67 | 89.678 | 11.806 |
| 68 | 89.964 | 11.806 |
| 69 | 90.245 | 11.628 |
| 70 | 90.512 | 11.061 |
| 71 | 90.779 | 11.019 |
| 72 | 91.045 | 11.019 |

| | | |
|---|---|---|
| 73 | 91.311 | 11.019 |
| 74 | 91.574 | 10.883 |
| 75 | 91.809 | 9.713 |
| 76 | 92.037 | 9.445 |
| 77 | 92.266 | 9.445 |
| 78 | 92.494 | 9.445 |
| 79 | 92.722 | 9.435 |
| 80 | 92.938 | 8.935 |
| 81 | 93.147 | 8.658 |
| 82 | 93.357 | 8.658 |
| 83 | 93.566 | 8.658 |
| 84 | 93.775 | 8.658 |
| 85 | 93.965 | 7.854 |
| 86 | 94.127 | 6.699 |
| 87 | 94.289 | 6.690 |
| 88 | 94.450 | 6.690 |
| 89 | 94.612 | 6.690 |
| 90 | 94.774 | 6.690 |
| 91 | 94.936 | 6.690 |
| 92 | 95.097 | 6.690 |
| 93 | 95.259 | 6.690 |
| 94 | 95.421 | 6.690 |
| 95 | 95.580 | 6.569 |
| 96 | 95.710 | 5.407 |
| 97 | 95.834 | 5.116 |
| 98 | 95.958 | 5.116 |
| 99 | 96.081 | 5.116 |
| 100 | 96.205 | 5.116 |
| 101 | 96.329 | 5.116 |
| 102 | 96.452 | 5.116 |
| 103 | 96.576 | 5.116 |
| 104 | 96.700 | 5.116 |
| 105 | 96.823 | 5.116 |
| 106 | 96.932 | 4.506 |
| 107 | 97.018 | 3.553 |
| 108 | 97.104 | 3.542 |
| 109 | 97.189 | 3.542 |
| 110 | 97.275 | 3.542 |
| 111 | 97.361 | 3.542 |
| 112 | 97.446 | 3.542 |
| 113 | 97.532 | 3.542 |
| 114 | 97.617 | 3.542 |
| 115 | 97.703 | 3.542 |
| 116 | 97.786 | 3.435 |
| 117 | 97.841 | 2.282 |
| 118 | 97.889 | 1.968 |
| 119 | 97.936 | 1.968 |
| 120 | 97.984 | 1.968 |
| 121 | 98.032 | 1.968 |
| 122 | 98.079 | 1.968 |
| 123 | 98.127 | 1.968 |
| 124 | 98.174 | 1.968 |
| 125 | 98.222 | 1.968 |
| 126 | 98.269 | 1.968 |
| 127 | 98.320 | 2.112 |
| 128 | 98.377 | 2.357 |
| 129 | 98.434 | 2.361 |
| 130 | 98.492 | 2.361 |
| 131 | 98.549 | 2.361 |

| | | |
|---|---|---|
| 132 | 98.606 | 2.361 |
| 133 | 98.663 | 2.361 |
| 134 | 98.720 | 2.361 |
| 135 | 98.777 | 2.361 |
| 136 | 98.834 | 2.361 |
| 137 | 98.891 | 2.361 |
| 138 | 98.948 | 2.361 |
| 139 | 99.005 | 2.361 |
| 140 | 99.062 | 2.361 |
| 141 | 99.119 | 2.361 |
| 142 | 99.176 | 2.361 |
| 143 | 99.234 | 2.361 |
| 144 | 99.291 | 2.361 |
| 145 | 99.348 | 2.361 |
| 146 | 99.405 | 2.361 |
| 147 | 99.462 | 2.361 |
| 148 | 99.509 | 1.970 |
| 149 | 99.540 | 1.246 |
| 150 | 99.569 | 1.230 |
| 151 | 99.599 | 1.230 |
| 152 | 99.629 | 1.230 |
| 153 | 99.659 | 1.230 |
| 154 | 99.688 | 1.230 |
| 155 | 99.718 | 1.230 |
| 156 | 99.748 | 1.230 |
| 157 | 99.777 | 1.230 |
| 158 | 99.807 | 1.230 |
| 159 | 99.837 | 1.230 |
| 160 | 99.867 | 1.230 |
| 161 | 99.896 | 1.230 |
| 162 | 99.926 | 1.230 |
| 163 | 99.956 | 1.230 |
| 164 | 100.000 | 0.615 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6490 | 0.6490 |
| 2 | 0.7990 | 0.1500 |
| 3 | 0.9024 | 0.1033 |
| 4 | 0.9837 | 0.0813 |
| 5 | 1.0518 | 0.0681 |
| 6 | 1.1109 | 0.0591 |
| 7 | 1.1635 | 0.0526 |
| 8 | 1.2111 | 0.0476 |
| 9 | 1.2546 | 0.0436 |
| 10 | 1.2949 | 0.0403 |
| 11 | 1.3325 | 0.0376 |
| 12 | 1.3677 | 0.0352 |
| 13 | 1.3857 | 0.0180 |
| 14 | 1.4026 | 0.0169 |
| 15 | 1.4185 | 0.0159 |
| 16 | 1.4335 | 0.0150 |
| 17 | 1.4478 | 0.0143 |
| 18 | 1.4613 | 0.0136 |
| 19 | 1.4743 | 0.0130 |
| 20 | 1.4867 | 0.0124 |
| 21 | 1.4986 | 0.0119 |
| 22 | 1.5100 | 0.0114 |
| 23 | 1.5210 | 0.0110 |

| | | |
|---|---|---|
| 24 | 1.5316 | 0.0106 |
| 25 | 1.5419 | 0.0102 |
| 26 | 1.5518 | 0.0099 |
| 27 | 1.5614 | 0.0096 |
| 28 | 1.5707 | 0.0093 |
| 29 | 1.5797 | 0.0090 |
| 30 | 1.5885 | 0.0088 |
| 31 | 1.5970 | 0.0085 |
| 32 | 1.6053 | 0.0083 |
| 33 | 1.6134 | 0.0081 |
| 34 | 1.6213 | 0.0079 |
| 35 | 1.6289 | 0.0077 |
| 36 | 1.6365 | 0.0075 |
| 37 | 1.6433 | 0.0068 |
| 38 | 1.6499 | 0.0067 |
| 39 | 1.6565 | 0.0065 |
| 40 | 1.6628 | 0.0064 |
| 41 | 1.6691 | 0.0062 |
| 42 | 1.6752 | 0.0061 |
| 43 | 1.6812 | 0.0060 |
| 44 | 1.6871 | 0.0059 |
| 45 | 1.6928 | 0.0058 |
| 46 | 1.6985 | 0.0057 |
| 47 | 1.7041 | 0.0056 |
| 48 | 1.7095 | 0.0055 |
| 49 | 1.7149 | 0.0054 |
| 50 | 1.7201 | 0.0053 |
| 51 | 1.7253 | 0.0052 |
| 52 | 1.7304 | 0.0051 |
| 53 | 1.7354 | 0.0050 |
| 54 | 1.7404 | 0.0049 |
| 55 | 1.7452 | 0.0049 |
| 56 | 1.7500 | 0.0048 |
| 57 | 1.7547 | 0.0047 |
| 58 | 1.7593 | 0.0046 |
| 59 | 1.7639 | 0.0046 |
| 60 | 1.7684 | 0.0045 |
| 61 | 1.7729 | 0.0044 |
| 62 | 1.7772 | 0.0044 |
| 63 | 1.7816 | 0.0043 |
| 64 | 1.7858 | 0.0043 |
| 65 | 1.7900 | 0.0042 |
| 66 | 1.7942 | 0.0042 |
| 67 | 1.7983 | 0.0041 |
| 68 | 1.8023 | 0.0040 |
| 69 | 1.8063 | 0.0040 |
| 70 | 1.8103 | 0.0040 |
| 71 | 1.8142 | 0.0039 |
| 72 | 1.8181 | 0.0039 |
| 73 | 1.8240 | 0.0059 |
| 74 | 1.8298 | 0.0058 |
| 75 | 1.8356 | 0.0058 |
| 76 | 1.8413 | 0.0057 |
| 77 | 1.8470 | 0.0057 |
| 78 | 1.8526 | 0.0056 |
| 79 | 1.8582 | 0.0056 |
| 80 | 1.8637 | 0.0055 |
| 81 | 1.8691 | 0.0055 |
| 82 | 1.8745 | 0.0054 |

| | | |
|---|---|---|
| 83 | 1.8799 | 0.0054 |
| 84 | 1.8852 | 0.0053 |
| 85 | 1.8904 | 0.0053 |
| 86 | 1.8956 | 0.0052 |
| 87 | 1.9008 | 0.0052 |
| 88 | 1.9059 | 0.0051 |
| 89 | 1.9110 | 0.0051 |
| 90 | 1.9160 | 0.0050 |
| 91 | 1.9210 | 0.0050 |
| 92 | 1.9260 | 0.0049 |
| 93 | 1.9309 | 0.0049 |
| 94 | 1.9357 | 0.0049 |
| 95 | 1.9405 | 0.0048 |
| 96 | 1.9453 | 0.0048 |
| 97 | 1.9501 | 0.0047 |
| 98 | 1.9548 | 0.0047 |
| 99 | 1.9595 | 0.0047 |
| 100 | 1.9641 | 0.0046 |
| 101 | 1.9687 | 0.0046 |
| 102 | 1.9733 | 0.0046 |
| 103 | 1.9778 | 0.0045 |
| 104 | 1.9823 | 0.0045 |
| 105 | 1.9868 | 0.0045 |
| 106 | 1.9912 | 0.0044 |
| 107 | 1.9956 | 0.0044 |
| 108 | 2.0000 | 0.0044 |
| 109 | 2.0043 | 0.0043 |
| 110 | 2.0086 | 0.0043 |
| 111 | 2.0129 | 0.0043 |
| 112 | 2.0172 | 0.0043 |
| 113 | 2.0214 | 0.0042 |
| 114 | 2.0256 | 0.0042 |
| 115 | 2.0297 | 0.0042 |
| 116 | 2.0339 | 0.0041 |
| 117 | 2.0380 | 0.0041 |
| 118 | 2.0421 | 0.0041 |
| 119 | 2.0461 | 0.0041 |
| 120 | 2.0502 | 0.0040 |
| 121 | 2.0542 | 0.0040 |
| 122 | 2.0581 | 0.0040 |
| 123 | 2.0621 | 0.0040 |
| 124 | 2.0660 | 0.0039 |
| 125 | 2.0699 | 0.0039 |
| 126 | 2.0738 | 0.0039 |
| 127 | 2.0777 | 0.0039 |
| 128 | 2.0815 | 0.0038 |
| 129 | 2.0853 | 0.0038 |
| 130 | 2.0891 | 0.0038 |
| 131 | 2.0929 | 0.0038 |
| 132 | 2.0966 | 0.0037 |
| 133 | 2.1004 | 0.0037 |
| 134 | 2.1041 | 0.0037 |
| 135 | 2.1077 | 0.0037 |
| 136 | 2.1114 | 0.0037 |
| 137 | 2.1150 | 0.0036 |
| 138 | 2.1187 | 0.0036 |
| 139 | 2.1223 | 0.0036 |
| 140 | 2.1259 | 0.0036 |
| 141 | 2.1294 | 0.0036 |

| | | |
|---|---|---|
| 142 | 2.1330 | 0.0035 |
| 143 | 2.1365 | 0.0035 |
| 144 | 2.1400 | 0.0035 |
| 145 | 2.1435 | 0.0035 |
| 146 | 2.1469 | 0.0035 |
| 147 | 2.1504 | 0.0034 |
| 148 | 2.1538 | 0.0034 |
| 149 | 2.1572 | 0.0034 |
| 150 | 2.1606 | 0.0034 |
| 151 | 2.1640 | 0.0034 |
| 152 | 2.1674 | 0.0034 |
| 153 | 2.1707 | 0.0033 |
| 154 | 2.1740 | 0.0033 |
| 155 | 2.1774 | 0.0033 |
| 156 | 2.1807 | 0.0033 |
| 157 | 2.1839 | 0.0033 |
| 158 | 2.1872 | 0.0033 |
| 159 | 2.1904 | 0.0032 |
| 160 | 2.1937 | 0.0032 |
| 161 | 2.1969 | 0.0032 |
| 162 | 2.2001 | 0.0032 |
| 163 | 2.2033 | 0.0032 |
| 164 | 2.2065 | 0.0032 |
| 165 | 2.2096 | 0.0032 |
| 166 | 2.2128 | 0.0031 |
| 167 | 2.2159 | 0.0031 |
| 168 | 2.2190 | 0.0031 |
| 169 | 2.2221 | 0.0031 |
| 170 | 2.2252 | 0.0031 |
| 171 | 2.2283 | 0.0031 |
| 172 | 2.2313 | 0.0031 |
| 173 | 2.2344 | 0.0030 |
| 174 | 2.2374 | 0.0030 |
| 175 | 2.2404 | 0.0030 |
| 176 | 2.2434 | 0.0030 |
| 177 | 2.2464 | 0.0030 |
| 178 | 2.2494 | 0.0030 |
| 179 | 2.2523 | 0.0030 |
| 180 | 2.2553 | 0.0030 |
| 181 | 2.2582 | 0.0029 |
| 182 | 2.2612 | 0.0029 |
| 183 | 2.2641 | 0.0029 |
| 184 | 2.2670 | 0.0029 |
| 185 | 2.2699 | 0.0029 |
| 186 | 2.2728 | 0.0029 |
| 187 | 2.2756 | 0.0029 |
| 188 | 2.2785 | 0.0029 |
| 189 | 2.2813 | 0.0028 |
| 190 | 2.2842 | 0.0028 |
| 191 | 2.2870 | 0.0028 |
| 192 | 2.2898 | 0.0028 |
| 193 | 2.2926 | 0.0028 |
| 194 | 2.2954 | 0.0028 |
| 195 | 2.2982 | 0.0028 |
| 196 | 2.3009 | 0.0028 |
| 197 | 2.3037 | 0.0028 |
| 198 | 2.3064 | 0.0027 |
| 199 | 2.3092 | 0.0027 |
| 200 | 2.3119 | 0.0027 |

| | | |
|---|---|---|
| 201 | 2.3146 | 0.0027 |
| 202 | 2.3173 | 0.0027 |
| 203 | 2.3200 | 0.0027 |
| 204 | 2.3227 | 0.0027 |
| 205 | 2.3254 | 0.0027 |
| 206 | 2.3280 | 0.0027 |
| 207 | 2.3307 | 0.0027 |
| 208 | 2.3333 | 0.0026 |
| 209 | 2.3359 | 0.0026 |
| 210 | 2.3386 | 0.0026 |
| 211 | 2.3412 | 0.0026 |
| 212 | 2.3438 | 0.0026 |
| 213 | 2.3464 | 0.0026 |
| 214 | 2.3490 | 0.0026 |
| 215 | 2.3516 | 0.0026 |
| 216 | 2.3541 | 0.0026 |
| 217 | 2.3567 | 0.0026 |
| 218 | 2.3592 | 0.0025 |
| 219 | 2.3618 | 0.0025 |
| 220 | 2.3643 | 0.0025 |
| 221 | 2.3668 | 0.0025 |
| 222 | 2.3693 | 0.0025 |
| 223 | 2.3718 | 0.0025 |
| 224 | 2.3743 | 0.0025 |
| 225 | 2.3768 | 0.0025 |
| 226 | 2.3793 | 0.0025 |
| 227 | 2.3818 | 0.0025 |
| 228 | 2.3842 | 0.0025 |
| 229 | 2.3867 | 0.0025 |
| 230 | 2.3892 | 0.0024 |
| 231 | 2.3916 | 0.0024 |
| 232 | 2.3940 | 0.0024 |
| 233 | 2.3964 | 0.0024 |
| 234 | 2.3989 | 0.0024 |
| 235 | 2.4013 | 0.0024 |
| 236 | 2.4037 | 0.0024 |
| 237 | 2.4061 | 0.0024 |
| 238 | 2.4084 | 0.0024 |
| 239 | 2.4108 | 0.0024 |
| 240 | 2.4132 | 0.0024 |
| 241 | 2.4155 | 0.0024 |
| 242 | 2.4179 | 0.0024 |
| 243 | 2.4202 | 0.0023 |
| 244 | 2.4226 | 0.0023 |
| 245 | 2.4249 | 0.0023 |
| 246 | 2.4272 | 0.0023 |
| 247 | 2.4296 | 0.0023 |
| 248 | 2.4319 | 0.0023 |
| 249 | 2.4342 | 0.0023 |
| 250 | 2.4365 | 0.0023 |
| 251 | 2.4388 | 0.0023 |
| 252 | 2.4410 | 0.0023 |
| 253 | 2.4433 | 0.0023 |
| 254 | 2.4456 | 0.0023 |
| 255 | 2.4478 | 0.0023 |
| 256 | 2.4501 | 0.0023 |
| 257 | 2.4523 | 0.0022 |
| 258 | 2.4546 | 0.0022 |
| 259 | 2.4568 | 0.0022 |

| | | |
|---|---|---|
| 260 | 2.4590 | 0.0022 |
| 261 | 2.4613 | 0.0022 |
| 262 | 2.4635 | 0.0022 |
| 263 | 2.4657 | 0.0022 |
| 264 | 2.4679 | 0.0022 |
| 265 | 2.4701 | 0.0022 |
| 266 | 2.4723 | 0.0022 |
| 267 | 2.4745 | 0.0022 |
| 268 | 2.4766 | 0.0022 |
| 269 | 2.4788 | 0.0022 |
| 270 | 2.4810 | 0.0022 |
| 271 | 2.4831 | 0.0022 |
| 272 | 2.4853 | 0.0022 |
| 273 | 2.4874 | 0.0021 |
| 274 | 2.4896 | 0.0021 |
| 275 | 2.4917 | 0.0021 |
| 276 | 2.4938 | 0.0021 |
| 277 | 2.4960 | 0.0021 |
| 278 | 2.4981 | 0.0021 |
| 279 | 2.5002 | 0.0021 |
| 280 | 2.5023 | 0.0021 |
| 281 | 2.5044 | 0.0021 |
| 282 | 2.5065 | 0.0021 |
| 283 | 2.5086 | 0.0021 |
| 284 | 2.5106 | 0.0021 |
| 285 | 2.5127 | 0.0021 |
| 286 | 2.5148 | 0.0021 |
| 287 | 2.5169 | 0.0021 |
| 288 | 2.5189 | 0.0021 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0021 | 0.0013 | 0.0008 |
| 2 | 0.0021 | 0.0013 | 0.0008 |
| 3 | 0.0021 | 0.0013 | 0.0008 |
| 4 | 0.0021 | 0.0013 | 0.0008 |
| 5 | 0.0021 | 0.0013 | 0.0008 |
| 6 | 0.0021 | 0.0013 | 0.0008 |
| 7 | 0.0021 | 0.0013 | 0.0008 |
| 8 | 0.0021 | 0.0013 | 0.0008 |
| 9 | 0.0021 | 0.0013 | 0.0008 |
| 10 | 0.0021 | 0.0013 | 0.0008 |
| 11 | 0.0021 | 0.0014 | 0.0008 |
| 12 | 0.0022 | 0.0014 | 0.0008 |
| 13 | 0.0022 | 0.0014 | 0.0008 |
| 14 | 0.0022 | 0.0014 | 0.0008 |
| 15 | 0.0022 | 0.0014 | 0.0008 |
| 16 | 0.0022 | 0.0014 | 0.0008 |
| 17 | 0.0022 | 0.0014 | 0.0008 |
| 18 | 0.0022 | 0.0014 | 0.0008 |
| 19 | 0.0022 | 0.0014 | 0.0008 |
| 20 | 0.0022 | 0.0014 | 0.0008 |
| 21 | 0.0022 | 0.0014 | 0.0008 |
| 22 | 0.0022 | 0.0014 | 0.0008 |
| 23 | 0.0023 | 0.0014 | 0.0008 |
| 24 | 0.0023 | 0.0014 | 0.0008 |
| 25 | 0.0023 | 0.0014 | 0.0008 |

| | | | |
|---|---|---|---|
| 26 | 0.0023 | 0.0014 | 0.0008 |
| 27 | 0.0023 | 0.0014 | 0.0009 |
| 28 | 0.0023 | 0.0015 | 0.0009 |
| 29 | 0.0023 | 0.0015 | 0.0009 |
| 30 | 0.0023 | 0.0015 | 0.0009 |
| 31 | 0.0023 | 0.0015 | 0.0009 |
| 32 | 0.0024 | 0.0015 | 0.0009 |
| 33 | 0.0024 | 0.0015 | 0.0009 |
| 34 | 0.0024 | 0.0015 | 0.0009 |
| 35 | 0.0024 | 0.0015 | 0.0009 |
| 36 | 0.0024 | 0.0015 | 0.0009 |
| 37 | 0.0024 | 0.0015 | 0.0009 |
| 38 | 0.0024 | 0.0015 | 0.0009 |
| 39 | 0.0024 | 0.0015 | 0.0009 |
| 40 | 0.0024 | 0.0015 | 0.0009 |
| 41 | 0.0025 | 0.0015 | 0.0009 |
| 42 | 0.0025 | 0.0016 | 0.0009 |
| 43 | 0.0025 | 0.0016 | 0.0009 |
| 44 | 0.0025 | 0.0016 | 0.0009 |
| 45 | 0.0025 | 0.0016 | 0.0009 |
| 46 | 0.0025 | 0.0016 | 0.0009 |
| 47 | 0.0025 | 0.0016 | 0.0009 |
| 48 | 0.0025 | 0.0016 | 0.0009 |
| 49 | 0.0026 | 0.0016 | 0.0010 |
| 50 | 0.0026 | 0.0016 | 0.0010 |
| 51 | 0.0026 | 0.0016 | 0.0010 |
| 52 | 0.0026 | 0.0016 | 0.0010 |
| 53 | 0.0026 | 0.0017 | 0.0010 |
| 54 | 0.0026 | 0.0017 | 0.0010 |
| 55 | 0.0027 | 0.0017 | 0.0010 |
| 56 | 0.0027 | 0.0017 | 0.0010 |
| 57 | 0.0027 | 0.0017 | 0.0010 |
| 58 | 0.0027 | 0.0017 | 0.0010 |
| 59 | 0.0027 | 0.0017 | 0.0010 |
| 60 | 0.0027 | 0.0017 | 0.0010 |
| 61 | 0.0027 | 0.0017 | 0.0010 |
| 62 | 0.0028 | 0.0017 | 0.0010 |
| 63 | 0.0028 | 0.0017 | 0.0010 |
| 64 | 0.0028 | 0.0018 | 0.0010 |
| 65 | 0.0028 | 0.0018 | 0.0010 |
| 66 | 0.0028 | 0.0018 | 0.0010 |
| 67 | 0.0028 | 0.0018 | 0.0011 |
| 68 | 0.0029 | 0.0018 | 0.0011 |
| 69 | 0.0029 | 0.0018 | 0.0011 |
| 70 | 0.0029 | 0.0018 | 0.0011 |
| 71 | 0.0029 | 0.0018 | 0.0011 |
| 72 | 0.0029 | 0.0018 | 0.0011 |
| 73 | 0.0030 | 0.0019 | 0.0011 |
| 74 | 0.0030 | 0.0019 | 0.0011 |
| 75 | 0.0030 | 0.0019 | 0.0011 |
| 76 | 0.0030 | 0.0019 | 0.0011 |
| 77 | 0.0030 | 0.0019 | 0.0011 |
| 78 | 0.0030 | 0.0019 | 0.0011 |
| 79 | 0.0031 | 0.0019 | 0.0011 |
| 80 | 0.0031 | 0.0019 | 0.0011 |
| 81 | 0.0031 | 0.0020 | 0.0012 |
| 82 | 0.0031 | 0.0020 | 0.0012 |
| 83 | 0.0032 | 0.0020 | 0.0012 |
| 84 | 0.0032 | 0.0020 | 0.0012 |

| | | | |
|---|---|---|---|
| 85 | 0.0032 | 0.0020 | 0.0012 |
| 86 | 0.0032 | 0.0020 | 0.0012 |
| 87 | 0.0032 | 0.0020 | 0.0012 |
| 88 | 0.0033 | 0.0021 | 0.0012 |
| 89 | 0.0033 | 0.0021 | 0.0012 |
| 90 | 0.0033 | 0.0021 | 0.0012 |
| 91 | 0.0033 | 0.0021 | 0.0012 |
| 92 | 0.0034 | 0.0021 | 0.0012 |
| 93 | 0.0034 | 0.0021 | 0.0013 |
| 94 | 0.0034 | 0.0021 | 0.0013 |
| 95 | 0.0034 | 0.0022 | 0.0013 |
| 96 | 0.0035 | 0.0022 | 0.0013 |
| 97 | 0.0035 | 0.0022 | 0.0013 |
| 98 | 0.0035 | 0.0022 | 0.0013 |
| 99 | 0.0036 | 0.0022 | 0.0013 |
| 100 | 0.0036 | 0.0023 | 0.0013 |
| 101 | 0.0036 | 0.0023 | 0.0013 |
| 102 | 0.0036 | 0.0023 | 0.0014 |
| 103 | 0.0037 | 0.0023 | 0.0014 |
| 104 | 0.0037 | 0.0023 | 0.0014 |
| 105 | 0.0037 | 0.0024 | 0.0014 |
| 106 | 0.0038 | 0.0024 | 0.0014 |
| 107 | 0.0038 | 0.0024 | 0.0014 |
| 108 | 0.0038 | 0.0024 | 0.0014 |
| 109 | 0.0039 | 0.0024 | 0.0014 |
| 110 | 0.0039 | 0.0025 | 0.0014 |
| 111 | 0.0040 | 0.0025 | 0.0015 |
| 112 | 0.0040 | 0.0025 | 0.0015 |
| 113 | 0.0040 | 0.0025 | 0.0015 |
| 114 | 0.0041 | 0.0026 | 0.0015 |
| 115 | 0.0041 | 0.0026 | 0.0015 |
| 116 | 0.0041 | 0.0026 | 0.0015 |
| 117 | 0.0042 | 0.0026 | 0.0016 |
| 118 | 0.0042 | 0.0027 | 0.0016 |
| 119 | 0.0043 | 0.0027 | 0.0016 |
| 120 | 0.0043 | 0.0027 | 0.0016 |
| 121 | 0.0044 | 0.0027 | 0.0016 |
| 122 | 0.0044 | 0.0028 | 0.0016 |
| 123 | 0.0045 | 0.0028 | 0.0017 |
| 124 | 0.0045 | 0.0028 | 0.0017 |
| 125 | 0.0046 | 0.0029 | 0.0017 |
| 126 | 0.0046 | 0.0029 | 0.0017 |
| 127 | 0.0047 | 0.0029 | 0.0017 |
| 128 | 0.0047 | 0.0030 | 0.0017 |
| 129 | 0.0048 | 0.0030 | 0.0018 |
| 130 | 0.0048 | 0.0030 | 0.0018 |
| 131 | 0.0049 | 0.0031 | 0.0018 |
| 132 | 0.0049 | 0.0031 | 0.0018 |
| 133 | 0.0050 | 0.0032 | 0.0019 |
| 134 | 0.0051 | 0.0032 | 0.0019 |
| 135 | 0.0052 | 0.0032 | 0.0019 |
| 136 | 0.0052 | 0.0033 | 0.0019 |
| 137 | 0.0053 | 0.0033 | 0.0020 |
| 138 | 0.0054 | 0.0034 | 0.0020 |
| 139 | 0.0055 | 0.0034 | 0.0020 |
| 140 | 0.0055 | 0.0035 | 0.0020 |
| 141 | 0.0056 | 0.0035 | 0.0021 |
| 142 | 0.0057 | 0.0036 | 0.0021 |
| 143 | 0.0058 | 0.0036 | 0.0021 |

| | | | |
|---|---|---|---|
| 144 | 0.0058 | 0.0037 | 0.0022 |
| 145 | 0.0039 | 0.0024 | 0.0014 |
| 146 | 0.0039 | 0.0025 | 0.0014 |
| 147 | 0.0040 | 0.0025 | 0.0015 |
| 148 | 0.0040 | 0.0025 | 0.0015 |
| 149 | 0.0042 | 0.0026 | 0.0015 |
| 150 | 0.0042 | 0.0026 | 0.0016 |
| 151 | 0.0043 | 0.0027 | 0.0016 |
| 152 | 0.0044 | 0.0028 | 0.0016 |
| 153 | 0.0045 | 0.0028 | 0.0017 |
| 154 | 0.0046 | 0.0029 | 0.0017 |
| 155 | 0.0047 | 0.0030 | 0.0017 |
| 156 | 0.0048 | 0.0030 | 0.0018 |
| 157 | 0.0049 | 0.0031 | 0.0018 |
| 158 | 0.0050 | 0.0032 | 0.0019 |
| 159 | 0.0052 | 0.0033 | 0.0019 |
| 160 | 0.0053 | 0.0033 | 0.0020 |
| 161 | 0.0055 | 0.0034 | 0.0020 |
| 162 | 0.0056 | 0.0035 | 0.0021 |
| 163 | 0.0058 | 0.0036 | 0.0021 |
| 164 | 0.0059 | 0.0037 | 0.0022 |
| 165 | 0.0061 | 0.0038 | 0.0023 |
| 166 | 0.0062 | 0.0039 | 0.0023 |
| 167 | 0.0065 | 0.0041 | 0.0024 |
| 168 | 0.0067 | 0.0042 | 0.0025 |
| 169 | 0.0075 | 0.0047 | 0.0028 |
| 170 | 0.0077 | 0.0048 | 0.0029 |
| 171 | 0.0081 | 0.0051 | 0.0030 |
| 172 | 0.0083 | 0.0052 | 0.0031 |
| 173 | 0.0088 | 0.0055 | 0.0033 |
| 174 | 0.0090 | 0.0057 | 0.0033 |
| 175 | 0.0096 | 0.0060 | 0.0036 |
| 176 | 0.0099 | 0.0062 | 0.0037 |
| 177 | 0.0106 | 0.0067 | 0.0039 |
| 178 | 0.0110 | 0.0069 | 0.0041 |
| 179 | 0.0119 | 0.0075 | 0.0044 |
| 180 | 0.0124 | 0.0078 | 0.0046 |
| 181 | 0.0136 | 0.0085 | 0.0050 |
| 182 | 0.0143 | 0.0090 | 0.0053 |
| 183 | 0.0159 | 0.0100 | 0.0059 |
| 184 | 0.0169 | 0.0106 | 0.0063 |
| 185 | 0.0352 | 0.0222 | 0.0131 |
| 186 | 0.0376 | 0.0236 | 0.0139 |
| 187 | 0.0436 | 0.0274 | 0.0162 |
| 188 | 0.0476 | 0.0299 | 0.0176 |
| 189 | 0.0591 | 0.0300 | 0.0291 |
| 190 | 0.0681 | 0.0300 | 0.0381 |
| 191 | 0.1033 | 0.0300 | 0.0734 |
| 192 | 0.1500 | 0.0300 | 0.1200 |
| 193 | 0.6490 | 0.0300 | 0.6190 |
| 194 | 0.0813 | 0.0300 | 0.0513 |
| 195 | 0.0526 | 0.0300 | 0.0226 |
| 196 | 0.0403 | 0.0253 | 0.0149 |
| 197 | 0.0180 | 0.0113 | 0.0067 |
| 198 | 0.0150 | 0.0095 | 0.0056 |
| 199 | 0.0130 | 0.0082 | 0.0048 |
| 200 | 0.0114 | 0.0072 | 0.0042 |
| 201 | 0.0102 | 0.0064 | 0.0038 |
| 202 | 0.0093 | 0.0059 | 0.0034 |

| | | | |
|---|---|---|---|
| 203 | 0.0085 | 0.0054 | 0.0032 |
| 204 | 0.0079 | 0.0050 | 0.0029 |
| 205 | 0.0068 | 0.0043 | 0.0025 |
| 206 | 0.0064 | 0.0040 | 0.0024 |
| 207 | 0.0060 | 0.0038 | 0.0022 |
| 208 | 0.0057 | 0.0036 | 0.0021 |
| 209 | 0.0054 | 0.0034 | 0.0020 |
| 210 | 0.0051 | 0.0032 | 0.0019 |
| 211 | 0.0049 | 0.0031 | 0.0018 |
| 212 | 0.0046 | 0.0029 | 0.0017 |
| 213 | 0.0044 | 0.0028 | 0.0016 |
| 214 | 0.0043 | 0.0027 | 0.0016 |
| 215 | 0.0041 | 0.0026 | 0.0015 |
| 216 | 0.0040 | 0.0025 | 0.0015 |
| 217 | 0.0059 | 0.0037 | 0.0022 |
| 218 | 0.0057 | 0.0036 | 0.0021 |
| 219 | 0.0056 | 0.0035 | 0.0021 |
| 220 | 0.0054 | 0.0034 | 0.0020 |
| 221 | 0.0053 | 0.0033 | 0.0019 |
| 222 | 0.0051 | 0.0032 | 0.0019 |
| 223 | 0.0050 | 0.0031 | 0.0018 |
| 224 | 0.0049 | 0.0031 | 0.0018 |
| 225 | 0.0047 | 0.0030 | 0.0018 |
| 226 | 0.0046 | 0.0029 | 0.0017 |
| 227 | 0.0045 | 0.0029 | 0.0017 |
| 228 | 0.0044 | 0.0028 | 0.0016 |
| 229 | 0.0043 | 0.0027 | 0.0016 |
| 230 | 0.0043 | 0.0027 | 0.0016 |
| 231 | 0.0042 | 0.0026 | 0.0015 |
| 232 | 0.0041 | 0.0026 | 0.0015 |
| 233 | 0.0040 | 0.0025 | 0.0015 |
| 234 | 0.0039 | 0.0025 | 0.0015 |
| 235 | 0.0039 | 0.0024 | 0.0014 |
| 236 | 0.0038 | 0.0024 | 0.0014 |
| 237 | 0.0037 | 0.0023 | 0.0014 |
| 238 | 0.0037 | 0.0023 | 0.0014 |
| 239 | 0.0036 | 0.0023 | 0.0013 |
| 240 | 0.0035 | 0.0022 | 0.0013 |
| 241 | 0.0035 | 0.0022 | 0.0013 |
| 242 | 0.0034 | 0.0022 | 0.0013 |
| 243 | 0.0034 | 0.0021 | 0.0013 |
| 244 | 0.0033 | 0.0021 | 0.0012 |
| 245 | 0.0033 | 0.0021 | 0.0012 |
| 246 | 0.0032 | 0.0020 | 0.0012 |
| 247 | 0.0032 | 0.0020 | 0.0012 |
| 248 | 0.0031 | 0.0020 | 0.0012 |
| 249 | 0.0031 | 0.0020 | 0.0011 |
| 250 | 0.0031 | 0.0019 | 0.0011 |
| 251 | 0.0030 | 0.0019 | 0.0011 |
| 252 | 0.0030 | 0.0019 | 0.0011 |
| 253 | 0.0029 | 0.0019 | 0.0011 |
| 254 | 0.0029 | 0.0018 | 0.0011 |
| 255 | 0.0029 | 0.0018 | 0.0011 |
| 256 | 0.0028 | 0.0018 | 0.0011 |
| 257 | 0.0028 | 0.0018 | 0.0010 |
| 258 | 0.0028 | 0.0017 | 0.0010 |
| 259 | 0.0027 | 0.0017 | 0.0010 |
| 260 | 0.0027 | 0.0017 | 0.0010 |
| 261 | 0.0027 | 0.0017 | 0.0010 |

| | | | |
|---|---|---|---|
| 262 | 0.0026 | 0.0017 | 0.0010 |
| 263 | 0.0026 | 0.0016 | 0.0010 |
| 264 | 0.0026 | 0.0016 | 0.0010 |
| 265 | 0.0026 | 0.0016 | 0.0009 |
| 266 | 0.0025 | 0.0016 | 0.0009 |
| 267 | 0.0025 | 0.0016 | 0.0009 |
| 268 | 0.0025 | 0.0016 | 0.0009 |
| 269 | 0.0025 | 0.0015 | 0.0009 |
| 270 | 0.0024 | 0.0015 | 0.0009 |
| 271 | 0.0024 | 0.0015 | 0.0009 |
| 272 | 0.0024 | 0.0015 | 0.0009 |
| 273 | 0.0024 | 0.0015 | 0.0009 |
| 274 | 0.0023 | 0.0015 | 0.0009 |
| 275 | 0.0023 | 0.0015 | 0.0009 |
| 276 | 0.0023 | 0.0014 | 0.0009 |
| 277 | 0.0023 | 0.0014 | 0.0008 |
| 278 | 0.0023 | 0.0014 | 0.0008 |
| 279 | 0.0022 | 0.0014 | 0.0008 |
| 280 | 0.0022 | 0.0014 | 0.0008 |
| 281 | 0.0022 | 0.0014 | 0.0008 |
| 282 | 0.0022 | 0.0014 | 0.0008 |
| 283 | 0.0022 | 0.0014 | 0.0008 |
| 284 | 0.0021 | 0.0013 | 0.0008 |
| 285 | 0.0021 | 0.0013 | 0.0008 |
| 286 | 0.0021 | 0.0013 | 0.0008 |
| 287 | 0.0021 | 0.0013 | 0.0008 |
| 288 | 0.0021 | 0.0013 | 0.0008 |

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Total soil rain loss = 1.06(In)
Total effective rainfall = 1.46(In)
Peak flow rate in flood hydrograph = 200.00(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 50.0 | 100.0 | 150.0 | 200.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.01 | Q | \| | \| | \| | \| |
| 0+10 | 0.0002 | 0.02 | Q | \| | \| | \| | \| |
| 0+15 | 0.0004 | 0.03 | Q | \| | \| | \| | \| |
| 0+20 | 0.0008 | 0.06 | Q | \| | \| | \| | \| |
| 0+25 | 0.0014 | 0.08 | Q | \| | \| | \| | \| |
| 0+30 | 0.0021 | 0.11 | Q | \| | \| | \| | \| |
| 0+35 | 0.0032 | 0.15 | Q | \| | \| | \| | \| |
| 0+40 | 0.0045 | 0.19 | Q | \| | \| | \| | \| |
| 0+45 | 0.0061 | 0.23 | Q | \| | \| | \| | \| |
| 0+50 | 0.0080 | 0.28 | Q | \| | \| | \| | \| |
| 0+55 | 0.0104 | 0.34 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0133 | 0.43 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0170 | 0.53 | Q | \| | \| | \| | \| |
| 1+10 | 0.0215 | 0.65 | Q | \| | \| | \| | \| |
| 1+15 | 0.0270 | 0.81 | Q | \| | \| | \| | \| |
| 1+20 | 0.0337 | 0.96 | Q | \| | \| | \| | \| |
| 1+25 | 0.0413 | 1.10 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+30 | 0.0498 | 1.24 | Q | | | | |
| 1+35 | 0.0592 | 1.36 | Q | | | | |
| 1+40 | 0.0693 | 1.47 | Q | | | | |
| 1+45 | 0.0801 | 1.57 | Q | | | | |
| 1+50 | 0.0915 | 1.66 | Q | | | | |
| 1+55 | 0.1036 | 1.75 | Q | | | | |
| 2+ 0 | 0.1162 | 1.83 | Q | | | | |
| 2+ 5 | 0.1293 | 1.90 | Q | | | | |
| 2+10 | 0.1429 | 1.97 | Q | | | | |
| 2+15 | 0.1569 | 2.03 | Q | | | | |
| 2+20 | 0.1712 | 2.09 | Q | | | | |
| 2+25 | 0.1860 | 2.14 | Q | | | | |
| 2+30 | 0.2011 | 2.20 | Q | | | | |
| 2+35 | 0.2166 | 2.24 | Q | | | | |
| 2+40 | 0.2324 | 2.29 | Q | | | | |
| 2+45 | 0.2485 | 2.34 | Q | | | | |
| 2+50 | 0.2649 | 2.39 | Q | | | | |
| 2+55 | 0.2817 | 2.43 | Q | | | | |
| 3+ 0 | 0.2987 | 2.47 | Q | | | | |
| 3+ 5 | 0.3160 | 2.51 | Q | | | | |
| 3+10 | 0.3336 | 2.55 | Q | | | | |
| 3+15 | 0.3514 | 2.59 | Q | | | | |
| 3+20 | 0.3695 | 2.63 | Q | | | | |
| 3+25 | 0.3878 | 2.66 | Q | | | | |
| 3+30 | 0.4064 | 2.70 | Q | | | | |
| 3+35 | 0.4253 | 2.74 | Q | | | | |
| 3+40 | 0.4443 | 2.77 | Q | | | | |
| 3+45 | 0.4636 | 2.80 | Q | | | | |
| 3+50 | 0.4831 | 2.83 | Q | | | | |
| 3+55 | 0.5029 | 2.87 | Q | | | | |
| 4+ 0 | 0.5229 | 2.90 | Q | | | | |
| 4+ 5 | 0.5430 | 2.93 | Q | | | | |
| 4+10 | 0.5634 | 2.96 | Q | | | | |
| 4+15 | 0.5840 | 2.99 | Q | | | | |
| 4+20 | 0.6048 | 3.02 | Q | | | | |
| 4+25 | 0.6258 | 3.05 | Q | | | | |
| 4+30 | 0.6470 | 3.08 | Q | | | | |
| 4+35 | 0.6684 | 3.11 | Q | | | | |
| 4+40 | 0.6900 | 3.14 | Q | | | | |
| 4+45 | 0.7118 | 3.17 | Q | | | | |
| 4+50 | 0.7339 | 3.20 | Q | | | | |
| 4+55 | 0.7561 | 3.23 | Q | | | | |
| 5+ 0 | 0.7785 | 3.25 | Q | | | | |
| 5+ 5 | 0.8011 | 3.28 | Q | | | | |
| 5+10 | 0.8239 | 3.31 | Q | | | | |
| 5+15 | 0.8469 | 3.34 | Q | | | | |
| 5+20 | 0.8701 | 3.37 | Q | | | | |
| 5+25 | 0.8935 | 3.39 | Q | | | | |
| 5+30 | 0.9171 | 3.42 | Q | | | | |
| 5+35 | 0.9408 | 3.45 | Q | | | | |
| 5+40 | 0.9647 | 3.47 | Q | | | | |
| 5+45 | 0.9889 | 3.50 | Q | | | | |
| 5+50 | 1.0132 | 3.53 | Q | | | | |
| 5+55 | 1.0377 | 3.56 | QV | | | | |
| 6+ 0 | 1.0623 | 3.58 | QV | | | | |
| 6+ 5 | 1.0872 | 3.61 | QV | | | | |
| 6+10 | 1.1123 | 3.64 | QV | | | | |
| 6+15 | 1.1375 | 3.67 | QV | | | | |
| 6+20 | 1.1630 | 3.69 | QV | | | | |

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|---|---|---|---|---|---|---|---|
| 6+25 | 1.1886 | 3.72 | QV | | | | |
| 6+30 | 1.2144 | 3.75 | QV | | | | |
| 6+35 | 1.2404 | 3.78 | QV | | | | |
| 6+40 | 1.2667 | 3.81 | QV | | | | |
| 6+45 | 1.2931 | 3.83 | QV | | | | |
| 6+50 | 1.3197 | 3.86 | QV | | | | |
| 6+55 | 1.3465 | 3.89 | QV | | | | |
| 7+ 0 | 1.3735 | 3.92 | QV | | | | |
| 7+ 5 | 1.4007 | 3.95 | QV | | | | |
| 7+10 | 1.4281 | 3.98 | QV | | | | |
| 7+15 | 1.4557 | 4.01 | QV | | | | |
| 7+20 | 1.4835 | 4.04 | QV | | | | |
| 7+25 | 1.5115 | 4.07 | QV | | | | |
| 7+30 | 1.5397 | 4.10 | QV | | | | |
| 7+35 | 1.5681 | 4.13 | QV | | | | |
| 7+40 | 1.5967 | 4.16 | QV | | | | |
| 7+45 | 1.6256 | 4.19 | QV | | | | |
| 7+50 | 1.6546 | 4.22 | QV | | | | |
| 7+55 | 1.6839 | 4.25 | QV | | | | |
| 8+ 0 | 1.7134 | 4.28 | QV | | | | |
| 8+ 5 | 1.7431 | 4.31 | QV | | | | |
| 8+10 | 1.7730 | 4.35 | QV | | | | |
| 8+15 | 1.8032 | 4.38 | QV | | | | |
| 8+20 | 1.8335 | 4.41 | QV | | | | |
| 8+25 | 1.8641 | 4.44 | QV | | | | |
| 8+30 | 1.8950 | 4.48 | QV | | | | |
| 8+35 | 1.9260 | 4.51 | QV | | | | |
| 8+40 | 1.9574 | 4.55 | QV | | | | |
| 8+45 | 1.9889 | 4.58 | QV | | | | |
| 8+50 | 2.0207 | 4.62 | QV | | | | |
| 8+55 | 2.0527 | 4.65 | QV | | | | |
| 9+ 0 | 2.0850 | 4.69 | Q V | | | | |
| 9+ 5 | 2.1176 | 4.72 | Q V | | | | |
| 9+10 | 2.1504 | 4.76 | Q V | | | | |
| 9+15 | 2.1834 | 4.80 | Q V | | | | |
| 9+20 | 2.2167 | 4.84 | Q V | | | | |
| 9+25 | 2.2503 | 4.87 | Q V | | | | |
| 9+30 | 2.2841 | 4.91 | Q V | | | | |
| 9+35 | 2.3182 | 4.95 | Q V | | | | |
| 9+40 | 2.3526 | 4.99 | Q V | | | | |
| 9+45 | 2.3873 | 5.04 | \|QV | | | | |
| 9+50 | 2.4223 | 5.08 | \|QV | | | | |
| 9+55 | 2.4575 | 5.12 | \|QV | | | | |
| 10+ 0 | 2.4931 | 5.16 | \|QV | | | | |
| 10+ 5 | 2.5289 | 5.20 | \|QV | | | | |
| 10+10 | 2.5650 | 5.25 | \|QV | | | | |
| 10+15 | 2.6015 | 5.29 | \|QV | | | | |
| 10+20 | 2.6382 | 5.34 | \|QV | | | | |
| 10+25 | 2.6753 | 5.38 | \|QV | | | | |
| 10+30 | 2.7127 | 5.43 | \|QV | | | | |
| 10+35 | 2.7505 | 5.48 | \|QV | | | | |
| 10+40 | 2.7886 | 5.53 | \|QV | | | | |
| 10+45 | 2.8270 | 5.58 | \|QV | | | | |
| 10+50 | 2.8658 | 5.63 | \|QV | | | | |
| 10+55 | 2.9049 | 5.69 | \|QV | | | | |
| 11+ 0 | 2.9445 | 5.74 | \|QV | | | | |
| 11+ 5 | 2.9844 | 5.79 | \|QV | | | | |
| 11+10 | 3.0247 | 5.85 | \|QV | | | | |
| 11+15 | 3.0654 | 5.91 | \|QV | | | | |

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|---|---|---|---|---|---|---|---|
| 11+20 | 3.1065 | 5.97 | QV | | | | |
| 11+25 | 3.1480 | 6.03 | Q V | | | | |
| 11+30 | 3.1899 | 6.09 | Q V | | | | |
| 11+35 | 3.2323 | 6.15 | Q V | | | | |
| 11+40 | 3.2751 | 6.22 | Q V | | | | |
| 11+45 | 3.3184 | 6.28 | Q V | | | | |
| 11+50 | 3.3621 | 6.35 | Q V | | | | |
| 11+55 | 3.4063 | 6.42 | Q V | | | | |
| 12+ 0 | 3.4510 | 6.49 | Q V | | | | |
| 12+ 5 | 3.4962 | 6.56 | Q V | | | | |
| 12+10 | 3.5418 | 6.62 | Q V | | | | |
| 12+15 | 3.5878 | 6.68 | Q V | | | | |
| 12+20 | 3.6342 | 6.74 | Q V | | | | |
| 12+25 | 3.6810 | 6.79 | Q V | | | | |
| 12+30 | 3.7281 | 6.84 | Q V | | | | |
| 12+35 | 3.7755 | 6.89 | Q V | | | | |
| 12+40 | 3.8233 | 6.94 | Q V | | | | |
| 12+45 | 3.8713 | 6.98 | Q V | | | | |
| 12+50 | 3.9197 | 7.01 | Q V | | | | |
| 12+55 | 3.9682 | 7.05 | Q V | | | | |
| 13+ 0 | 4.0168 | 7.05 | Q V | | | | |
| 13+ 5 | 4.0653 | 7.05 | Q V | | | | |
| 13+10 | 4.1137 | 7.03 | Q V | | | | |
| 13+15 | 4.1617 | 6.97 | Q  V | | | | |
| 13+20 | 4.2093 | 6.91 | Q  V | | | | |
| 13+25 | 4.2566 | 6.87 | Q  V | | | | |
| 13+30 | 4.3038 | 6.85 | Q  V | | | | |
| 13+35 | 4.3508 | 6.83 | Q  V | | | | |
| 13+40 | 4.3978 | 6.83 | Q  V | | | | |
| 13+45 | 4.4450 | 6.85 | Q  V | | | | |
| 13+50 | 4.4923 | 6.87 | Q  V | | | | |
| 13+55 | 4.5399 | 6.91 | Q  V | | | | |
| 14+ 0 | 4.5878 | 6.95 | Q  V | | | | |
| 14+ 5 | 4.6361 | 7.02 | Q  V | | | | |
| 14+10 | 4.6849 | 7.09 | Q  V | | | | |
| 14+15 | 4.7344 | 7.18 | Q  V | | | | |
| 14+20 | 4.7845 | 7.28 | Q  V | | | | |
| 14+25 | 4.8353 | 7.38 | Q  V | | | | |
| 14+30 | 4.8870 | 7.50 | Q  V | | | | |
| 14+35 | 4.9396 | 7.64 | Q  V | | | | |
| 14+40 | 4.9932 | 7.78 | Q  V | | | | |
| 14+45 | 5.0479 | 7.94 | Q  V | | | | |
| 14+50 | 5.1038 | 8.11 | Q  V | | | | |
| 14+55 | 5.1610 | 8.30 | Q  V | | | | |
| 15+ 0 | 5.2196 | 8.52 | Q   V | | | | |
| 15+ 5 | 5.2799 | 8.75 | Q   V | | | | |
| 15+10 | 5.3420 | 9.01 | Q   V | | | | |
| 15+15 | 5.4061 | 9.31 | Q   V | | | | |
| 15+20 | 5.4724 | 9.63 | Q   V | | | | |
| 15+25 | 5.5414 | 10.02 | Q  V | | | | |
| 15+30 | 5.6137 | 10.51 | Q  V | | | | |
| 15+35 | 5.6898 | 11.05 | Q  V | | | | |
| 15+40 | 5.7706 | 11.72 | Q  V | | | | |
| 15+45 | 5.8571 | 12.56 | Q  V | | | | |
| 15+50 | 5.9512 | 13.66 | Q  V | | | | |
| 15+55 | 6.0564 | 15.28 | Q V | | | | |
| 16+ 0 | 6.1791 | 17.81 | Q V | | | | |
| 16+ 5 | 6.3537 | 25.36 | QV | | | | |
| 16+10 | 6.5806 | 32.95 | Q | | | | |

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|---|---|---|---|---|---|---|---|
| 16+15 | 6.8343 | 36.84 | VQ | | | | |
| 16+20 | 7.1531 | 46.30 | V Q | | | | |
| 16+25 | 7.5073 | 51.42 | V Q | | | | |
| 16+30 | 7.9035 | 57.53 | V Q | | | | |
| 16+35 | 8.3671 | 67.31 | V Q | | | | |
| 16+40 | 8.8654 | 72.35 | V Q | | | | |
| 16+45 | 9.4360 | 82.86 | V Q | | | | |
| 16+50 | 10.0760 | 92.92 | V Q | | | | |
| 16+55 | 10.8011 | 105.29 | V | Q | | | |
| 17+ 0 | 11.7457 | 137.16 | V | Q | | | |
| 17+ 5 | 12.7767 | 149.70 | V | Q | | | |
| 17+10 | 13.9611 | 171.98 | V | | Q | | |
| 17+15 | 15.3385 | 200.00 | V | | | Q | |
| 17+20 | 16.7033 | 198.17 | V | | | Q | |
| 17+25 | 17.9588 | 182.30 | V | | Q | | |
| 17+30 | 19.1429 | 171.93 | V | | Q | | |
| 17+35 | 20.2551 | 161.48 | V | Q | | | |
| 17+40 | 21.2144 | 139.30 | V | Q | | | |
| 17+45 | 22.1266 | 132.45 | V | Q | | | |
| 17+50 | 22.9664 | 121.94 | V Q | | | | |
| 17+55 | 23.7316 | 111.11 | Q | | | | |
| 18+ 0 | 24.4601 | 105.78 | Q V | | | | |
| 18+ 5 | 25.0912 | 91.63 | Q | V | | | |
| 18+10 | 25.6787 | 85.32 | Q | V | | | |
| 18+15 | 26.2330 | 80.47 | Q | V | | | |
| 18+20 | 26.7344 | 72.80 | Q | V | | | |
| 18+25 | 27.2189 | 70.36 | Q | V | | | |
| 18+30 | 27.6709 | 65.62 | Q | V | | | |
| 18+35 | 28.0980 | 62.02 | Q | V | | | |
| 18+40 | 28.5138 | 60.37 | Q | V | | | |
| 18+45 | 28.9080 | 57.24 | Q | V | | | |
| 18+50 | 29.2905 | 55.54 | Q | V | | | |
| 18+55 | 29.6535 | 52.71 | Q | V | | | |
| 19+ 0 | 29.9902 | 48.88 | Q | V | | | |
| 19+ 5 | 30.3187 | 47.70 | Q | V | | | |
| 19+10 | 30.6298 | 45.18 | Q | V | | | |
| 19+15 | 30.9308 | 43.71 | Q | V | | | |
| 19+20 | 31.2266 | 42.95 | Q | V | | | |
| 19+25 | 31.5135 | 41.64 | Q | V | | | |
| 19+30 | 31.7937 | 40.69 | Q | V | | | |
| 19+35 | 32.0559 | 38.07 | Q | V | | | |
| 19+40 | 32.2992 | 35.33 | Q | V | | | |
| 19+45 | 32.5391 | 34.83 | Q | V | | | |
| 19+50 | 32.7759 | 34.39 | Q | V | | | |
| 19+55 | 33.0088 | 33.82 | Q | V | | | |
| 20+ 0 | 33.2331 | 32.56 | Q | V | | | |
| 20+ 5 | 33.4413 | 30.24 | Q | V | | | |
| 20+10 | 33.6461 | 29.73 | Q | V | | | |
| 20+15 | 33.8487 | 29.42 | Q | V | | | |
| 20+20 | 34.0488 | 29.06 | Q | V | | | |
| 20+25 | 34.2452 | 28.52 | Q | V | | | |
| 20+30 | 34.4326 | 27.21 | Q | V | | | |
| 20+35 | 34.6165 | 26.70 | Q | V | | | |
| 20+40 | 34.7984 | 26.41 | Q | V | | | |
| 20+45 | 34.9778 | 26.05 | Q | V | | | |
| 20+50 | 35.1538 | 25.55 | Q | V | | | |
| 20+55 | 35.3191 | 24.01 | Q | V | | | |
| 21+ 0 | 35.4781 | 23.08 | Q | V | | | |
| 21+ 5 | 35.6349 | 22.77 | Q | V | | | |

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21+10      35.7894     22.43  |   Q     |         |         |   V     |
21+15      35.9406     21.95  |   Q     |         |         |   V     |
21+20      36.0820     20.54  |   Q     |         |         |   V     |
21+25      36.2126     18.97  |  Q      |         |         |   V     |
21+30      36.3415     18.71  |  Q      |         |         |    V    |
21+35      36.4689     18.51  |  Q      |         |         |    V    |
21+40      36.5950     18.31  |  Q      |         |         |    V    |
21+45      36.7190     18.01  |  Q      |         |         |    V    |
21+50      36.8398     17.53  |  Q      |         |         |    V    |
21+55      36.9593     17.35  |  Q      |         |         |    V    |
22+ 0      37.0776     17.19  |  Q      |         |         |    V    |
22+ 5      37.1946     16.98  |  Q      |         |         |    V    |
22+10      37.3093     16.65  |  Q      |         |         |    V    |
22+15      37.4181     15.80  |  Q      |         |         |     V   |
22+20      37.5247     15.48  |  Q      |         |         |     V   |
22+25      37.6304     15.34  |  Q      |         |         |     V   |
22+30      37.7350     15.18  |  Q      |         |         |     V   |
22+35      37.8383     15.00  |  Q      |         |         |     V   |
22+40      37.9386     14.56  | Q       |         |         |     V   |
22+45      38.0368     14.26  | Q       |         |         |     V   |
22+50      38.1340     14.12  | Q       |         |         |     V   |
22+55      38.2301     13.94  | Q       |         |         |     V   |
23+ 0      38.3244     13.70  | Q       |         |         |     V   |
23+ 5      38.4139     13.00  | Q       |         |         |      V  |
23+10      38.4978     12.18  | Q       |         |         |      V  |
23+15      38.5808     12.04  | Q       |         |         |      V  |
23+20      38.6630     11.94  | Q       |         |         |      V  |
23+25      38.7446     11.84  | Q       |         |         |      V  |
23+30      38.8255     11.76  | Q       |         |         |      V  |
23+35      38.9060     11.67  | Q       |         |         |      V  |
23+40      38.9857     11.58  | Q       |         |         |      V  |
23+45      39.0646     11.46  | Q       |         |         |      V  |
23+50      39.1424     11.30  | Q       |         |         |      V  |
23+55      39.2183     11.01  | Q       |         |         |      V  |
24+ 0      39.2885     10.20  | Q       |         |         |      V  |
24+ 5      39.3567      9.90  |Q        |         |         |      V  |
24+10      39.4242      9.79  |Q        |         |         |       V |
24+15      39.4909      9.69  |Q        |         |         |       V |
24+20      39.5570      9.60  |Q        |         |         |       V |
24+25      39.6224      9.50  |Q        |         |         |       V |
24+30      39.6871      9.39  |Q        |         |         |       V |
24+35      39.7509      9.26  |Q        |         |         |       V |
24+40      39.8136      9.10  |Q        |         |         |       V |
24+45      39.8747      8.87  |Q        |         |         |       V |
24+50      39.9318      8.29  |Q        |         |         |       V |
24+55      39.9839      7.57  |Q        |         |         |       V |
25+ 0      40.0347      7.38  |Q        |         |         |       V |
25+ 5      40.0843      7.20  |Q        |         |         |       V |
25+10      40.1327      7.02  |Q        |         |         |       V |
25+15      40.1796      6.81  |Q        |         |         |       V |
25+20      40.2250      6.60  |Q        |         |         |       V |
25+25      40.2690      6.39  |Q        |         |         |       V |
25+30      40.3115      6.17  |Q        |         |         |       V |
25+35      40.3523      5.92  |Q        |         |         |       V |
25+40      40.3907      5.57  |Q        |         |         |       V |
25+45      40.4231      4.70  Q         |         |         |       V |
25+50      40.4530      4.34  Q         |         |         |        V|
25+55      40.4819      4.21  Q         |         |         |        V|
26+ 0      40.5101      4.09  Q         |         |         |        V|
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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+ 5 | 40.5377 | 4.01 | Q | \| | \| | \| | V\| |
| 26+10 | 40.5648 | 3.93 | Q | \| | \| | \| | V\| |
| 26+15 | 40.5914 | 3.86 | Q | \| | \| | \| | V\| |
| 26+20 | 40.6176 | 3.81 | Q | \| | \| | \| | V\| |
| 26+25 | 40.6435 | 3.76 | Q | \| | \| | \| | V\| |
| 26+30 | 40.6692 | 3.73 | Q | \| | \| | \| | V\| |
| 26+35 | 40.6953 | 3.80 | Q | \| | \| | \| | V\| |
| 26+40 | 40.7222 | 3.90 | Q | \| | \| | \| | V\| |
| 26+45 | 40.7488 | 3.86 | Q | \| | \| | \| | V\| |
| 26+50 | 40.7751 | 3.82 | Q | \| | \| | \| | V\| |
| 26+55 | 40.8011 | 3.77 | Q | \| | \| | \| | V\| |
| 27+ 0 | 40.8268 | 3.73 | Q | \| | \| | \| | V\| |
| 27+ 5 | 40.8522 | 3.69 | Q | \| | \| | \| | V\| |
| 27+10 | 40.8773 | 3.65 | Q | \| | \| | \| | V\| |
| 27+15 | 40.9022 | 3.61 | Q | \| | \| | \| | V\| |
| 27+20 | 40.9268 | 3.57 | Q | \| | \| | \| | V\| |
| 27+25 | 40.9511 | 3.53 | Q | \| | \| | \| | V\| |
| 27+30 | 40.9751 | 3.49 | Q | \| | \| | \| | V\| |
| 27+35 | 40.9989 | 3.45 | Q | \| | \| | \| | V\| |
| 27+40 | 41.0224 | 3.42 | Q | \| | \| | \| | V\| |
| 27+45 | 41.0457 | 3.37 | Q | \| | \| | \| | V\| |
| 27+50 | 41.0686 | 3.33 | Q | \| | \| | \| | V\| |
| 27+55 | 41.0912 | 3.28 | Q | \| | \| | \| | V\| |
| 28+ 0 | 41.1134 | 3.23 | Q | \| | \| | \| | V\| |
| 28+ 5 | 41.1353 | 3.17 | Q | \| | \| | \| | V\| |
| 28+10 | 41.1566 | 3.09 | Q | \| | \| | \| | V\| |
| 28+15 | 41.1770 | 2.97 | Q | \| | \| | \| | V\| |
| 28+20 | 41.1950 | 2.61 | Q | \| | \| | \| | V\| |
| 28+25 | 41.2095 | 2.12 | Q | \| | \| | \| | V\| |
| 28+30 | 41.2236 | 2.04 | Q | \| | \| | \| | V\| |
| 28+35 | 41.2373 | 1.99 | Q | \| | \| | \| | V\| |
| 28+40 | 41.2508 | 1.96 | Q | \| | \| | \| | V\| |
| 28+45 | 41.2641 | 1.93 | Q | \| | \| | \| | V\| |
| 28+50 | 41.2772 | 1.90 | Q | \| | \| | \| | V\| |
| 28+55 | 41.2901 | 1.87 | Q | \| | \| | \| | V\| |
| 29+ 0 | 41.3028 | 1.84 | Q | \| | \| | \| | V\| |
| 29+ 5 | 41.3152 | 1.81 | Q | \| | \| | \| | V\| |
| 29+10 | 41.3274 | 1.77 | Q | \| | \| | \| | V\| |
| 29+15 | 41.3394 | 1.74 | Q | \| | \| | \| | V\| |
| 29+20 | 41.3511 | 1.69 | Q | \| | \| | \| | V\| |
| 29+25 | 41.3624 | 1.64 | Q | \| | \| | \| | V\| |
| 29+30 | 41.3731 | 1.56 | Q | \| | \| | \| | V\| |
| 29+35 | 41.3830 | 1.43 | Q | \| | \| | \| | V\| |
| 29+40 | 41.3896 | 0.96 | Q | \| | \| | \| | V\| |
| 29+45 | 41.3933 | 0.54 | Q | \| | \| | \| | V\| |
| 29+50 | 41.3967 | 0.48 | Q | \| | \| | \| | V\| |
| 29+55 | 41.3998 | 0.45 | Q | \| | \| | \| | V\| |
| 30+ 0 | 41.4027 | 0.43 | Q | \| | \| | \| | V\| |
| 30+ 5 | 41.4056 | 0.41 | Q | \| | \| | \| | V\| |
| 30+10 | 41.4083 | 0.39 | Q | \| | \| | \| | V\| |
| 30+15 | 41.4109 | 0.38 | Q | \| | \| | \| | V\| |
| 30+20 | 41.4134 | 0.37 | Q | \| | \| | \| | V\| |
| 30+25 | 41.4159 | 0.35 | Q | \| | \| | \| | V\| |
| 30+30 | 41.4182 | 0.34 | Q | \| | \| | \| | V\| |
| 30+35 | 41.4205 | 0.33 | Q | \| | \| | \| | V\| |
| 30+40 | 41.4227 | 0.32 | Q | \| | \| | \| | V\| |
| 30+45 | 41.4248 | 0.31 | Q | \| | \| | \| | V\| |
| 30+50 | 41.4268 | 0.30 | Q | \| | \| | \| | V\| |
| 30+55 | 41.4288 | 0.29 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 31+ 0 | 41.4307 | 0.28 | Q | \| | \| | \| | V\| |
| 31+ 5 | 41.4325 | 0.27 | Q | \| | \| | \| | V\| |
| 31+10 | 41.4343 | 0.26 | Q | \| | \| | \| | V\| |
| 31+15 | 41.4360 | 0.25 | Q | \| | \| | \| | V\| |
| 31+20 | 41.4377 | 0.24 | Q | \| | \| | \| | V\| |
| 31+25 | 41.4393 | 0.23 | Q | \| | \| | \| | V\| |
| 31+30 | 41.4409 | 0.23 | Q | \| | \| | \| | V\| |
| 31+35 | 41.4424 | 0.22 | Q | \| | \| | \| | V\| |
| 31+40 | 41.4438 | 0.21 | Q | \| | \| | \| | V\| |
| 31+45 | 41.4452 | 0.20 | Q | \| | \| | \| | V\| |
| 31+50 | 41.4466 | 0.20 | Q | \| | \| | \| | V\| |
| 31+55 | 41.4479 | 0.19 | Q | \| | \| | \| | V\| |
| 32+ 0 | 41.4492 | 0.18 | Q | \| | \| | \| | V\| |
| 32+ 5 | 41.4504 | 0.18 | Q | \| | \| | \| | V\| |
| 32+10 | 41.4515 | 0.17 | Q | \| | \| | \| | V\| |
| 32+15 | 41.4527 | 0.16 | Q | \| | \| | \| | V\| |
| 32+20 | 41.4538 | 0.16 | Q | \| | \| | \| | V\| |
| 32+25 | 41.4548 | 0.15 | Q | \| | \| | \| | V\| |
| 32+30 | 41.4558 | 0.15 | Q | \| | \| | \| | V\| |
| 32+35 | 41.4568 | 0.14 | Q | \| | \| | \| | V\| |
| 32+40 | 41.4577 | 0.14 | Q | \| | \| | \| | V\| |
| 32+45 | 41.4586 | 0.13 | Q | \| | \| | \| | V\| |
| 32+50 | 41.4595 | 0.12 | Q | \| | \| | \| | V\| |
| 32+55 | 41.4603 | 0.12 | Q | \| | \| | \| | V\| |
| 33+ 0 | 41.4611 | 0.12 | Q | \| | \| | \| | V\| |
| 33+ 5 | 41.4619 | 0.11 | Q | \| | \| | \| | V\| |
| 33+10 | 41.4626 | 0.11 | Q | \| | \| | \| | V\| |
| 33+15 | 41.4633 | 0.10 | Q | \| | \| | \| | V\| |
| 33+20 | 41.4640 | 0.10 | Q | \| | \| | \| | V\| |
| 33+25 | 41.4647 | 0.10 | Q | \| | \| | \| | V\| |
| 33+30 | 41.4653 | 0.09 | Q | \| | \| | \| | V\| |
| 33+35 | 41.4659 | 0.09 | Q | \| | \| | \| | V\| |
| 33+40 | 41.4665 | 0.09 | Q | \| | \| | \| | V\| |
| 33+45 | 41.4671 | 0.08 | Q | \| | \| | \| | V\| |
| 33+50 | 41.4677 | 0.08 | Q | \| | \| | \| | V\| |
| 33+55 | 41.4682 | 0.08 | Q | \| | \| | \| | V\| |
| 34+ 0 | 41.4687 | 0.08 | Q | \| | \| | \| | V\| |
| 34+ 5 | 41.4692 | 0.07 | Q | \| | \| | \| | V\| |
| 34+10 | 41.4697 | 0.07 | Q | \| | \| | \| | V\| |
| 34+15 | 41.4702 | 0.07 | Q | \| | \| | \| | V\| |
| 34+20 | 41.4707 | 0.07 | Q | \| | \| | \| | V\| |
| 34+25 | 41.4711 | 0.06 | Q | \| | \| | \| | V\| |
| 34+30 | 41.4715 | 0.06 | Q | \| | \| | \| | V\| |
| 34+35 | 41.4720 | 0.06 | Q | \| | \| | \| | V\| |
| 34+40 | 41.4724 | 0.06 | Q | \| | \| | \| | V\| |
| 34+45 | 41.4727 | 0.06 | Q | \| | \| | \| | V\| |
| 34+50 | 41.4731 | 0.05 | Q | \| | \| | \| | V\| |
| 34+55 | 41.4735 | 0.05 | Q | \| | \| | \| | V\| |
| 35+ 0 | 41.4738 | 0.05 | Q | \| | \| | \| | V\| |
| 35+ 5 | 41.4741 | 0.05 | Q | \| | \| | \| | V\| |
| 35+10 | 41.4744 | 0.04 | Q | \| | \| | \| | V\| |
| 35+15 | 41.4747 | 0.04 | Q | \| | \| | \| | V\| |
| 35+20 | 41.4750 | 0.04 | Q | \| | \| | \| | V\| |
| 35+25 | 41.4752 | 0.04 | Q | \| | \| | \| | V\| |
| 35+30 | 41.4755 | 0.04 | Q | \| | \| | \| | V\| |
| 35+35 | 41.4757 | 0.03 | Q | \| | \| | \| | V\| |
| 35+40 | 41.4759 | 0.03 | Q | \| | \| | \| | V\| |
| 35+45 | 41.4761 | 0.03 | Q | \| | \| | \| | V\| |
| 35+50 | 41.4763 | 0.03 | Q | \| | \| | \| | V\| |

```
   35+55      41.4765      0.03  Q         |         |         |        V|
   36+ 0      41.4767      0.02  Q         |         |         |        V|
-----------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 27
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 6.15 | 1 | 1.38 |
| Rainfall data for year 100 | | |
| 6.15 | 6 | 1.82 |
| Rainfall data for year 100 | | |
| 6.15 | 24 | 2.51 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 6.15 | 1.000 | 0.360 | 1.000 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 6.15 | 1.000 | 62.0 | 80.6 | 2.41 | 0.370 |

Area-averaged catchment yield fraction, Y = 0.370
Area-averaged low loss fraction, Yb = 0.630
User entry of time of concentration = 0.470 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 6.15(Ac.)
Catchment Lag time = 0.376 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 22.1631
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.630 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.655(In)
Computed peak 30-minute rainfall = 1.121(In)
Specified peak 1-hour rainfall = 1.380(In)
Computed peak 3-hour rainfall = 1.635(In)
Specified peak 6-hour rainfall = 1.820(In)
Specified peak 24-hour rainfall = 2.510(In)

Rainfall depth area reduction factors:
Using a total area of 6.15(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.655(In)
30-minute factor = 1.000 Adjusted rainfall = 1.121(In)
1-hour factor = 1.000 Adjusted rainfall = 1.380(In)
3-hour factor = 1.000 Adjusted rainfall = 1.635(In)
6-hour factor = 1.000 Adjusted rainfall = 1.820(In)
24-hour factor = 1.000 Adjusted rainfall = 2.510(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 74.38 (CFS)) | |
| 1 | 1.144 | 0.851 |
| 2 | 5.352 | 3.130 |
| 3 | 14.320 | 6.670 |
| 4 | 33.220 | 14.057 |
| 5 | 49.513 | 12.118 |
| 6 | 59.996 | 7.797 |
| 7 | 66.895 | 5.131 |
| 8 | 72.193 | 3.940 |
| 9 | 76.330 | 3.077 |
| 10 | 79.692 | 2.501 |
| 11 | 82.427 | 2.034 |
| 12 | 84.758 | 1.734 |
| 13 | 86.834 | 1.544 |
| 14 | 88.588 | 1.305 |

| | | |
|---|---|---|
| 15 | 89.977 | 1.033 |
| 16 | 91.234 | 0.935 |
| 17 | 92.353 | 0.832 |
| 18 | 93.366 | 0.753 |
| 19 | 94.240 | 0.651 |
| 20 | 94.994 | 0.561 |
| 21 | 95.705 | 0.529 |
| 22 | 96.289 | 0.435 |
| 23 | 96.848 | 0.416 |
| 24 | 97.275 | 0.317 |
| 25 | 97.671 | 0.294 |
| 26 | 97.952 | 0.209 |
| 27 | 98.173 | 0.165 |
| 28 | 98.414 | 0.179 |
| 29 | 98.680 | 0.198 |
| 30 | 98.946 | 0.198 |
| 31 | 99.212 | 0.198 |
| 32 | 99.467 | 0.190 |
| 33 | 99.627 | 0.119 |
| 34 | 99.765 | 0.103 |
| 35 | 99.904 | 0.103 |
| 36 | 100.000 | 0.071 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6546 | 0.6546 |
| 2 | 0.8060 | 0.1513 |
| 3 | 0.9102 | 0.1042 |
| 4 | 0.9922 | 0.0820 |
| 5 | 1.0609 | 0.0687 |
| 6 | 1.1206 | 0.0596 |
| 7 | 1.1736 | 0.0530 |
| 8 | 1.2216 | 0.0480 |
| 9 | 1.2655 | 0.0439 |
| 10 | 1.3062 | 0.0406 |
| 11 | 1.3441 | 0.0379 |
| 12 | 1.3796 | 0.0355 |
| 13 | 1.3968 | 0.0172 |
| 14 | 1.4129 | 0.0161 |
| 15 | 1.4281 | 0.0152 |
| 16 | 1.4424 | 0.0143 |
| 17 | 1.4560 | 0.0136 |
| 18 | 1.4689 | 0.0129 |
| 19 | 1.4812 | 0.0123 |
| 20 | 1.4930 | 0.0118 |
| 21 | 1.5044 | 0.0113 |
| 22 | 1.5152 | 0.0109 |
| 23 | 1.5257 | 0.0105 |
| 24 | 1.5357 | 0.0101 |
| 25 | 1.5455 | 0.0097 |
| 26 | 1.5549 | 0.0094 |
| 27 | 1.5640 | 0.0091 |
| 28 | 1.5728 | 0.0088 |
| 29 | 1.5814 | 0.0086 |
| 30 | 1.5897 | 0.0083 |
| 31 | 1.5978 | 0.0081 |
| 32 | 1.6056 | 0.0079 |
| 33 | 1.6133 | 0.0077 |
| 34 | 1.6208 | 0.0075 |

| | | |
|---|---|---|
| 35 | 1.6280 | 0.0073 |
| 36 | 1.6352 | 0.0071 |
| 37 | 1.6421 | 0.0069 |
| 38 | 1.6489 | 0.0068 |
| 39 | 1.6555 | 0.0066 |
| 40 | 1.6620 | 0.0065 |
| 41 | 1.6683 | 0.0064 |
| 42 | 1.6746 | 0.0062 |
| 43 | 1.6807 | 0.0061 |
| 44 | 1.6866 | 0.0060 |
| 45 | 1.6925 | 0.0059 |
| 46 | 1.6983 | 0.0058 |
| 47 | 1.7039 | 0.0057 |
| 48 | 1.7095 | 0.0056 |
| 49 | 1.7149 | 0.0055 |
| 50 | 1.7203 | 0.0054 |
| 51 | 1.7255 | 0.0053 |
| 52 | 1.7307 | 0.0052 |
| 53 | 1.7358 | 0.0051 |
| 54 | 1.7409 | 0.0050 |
| 55 | 1.7458 | 0.0049 |
| 56 | 1.7507 | 0.0049 |
| 57 | 1.7555 | 0.0048 |
| 58 | 1.7602 | 0.0047 |
| 59 | 1.7648 | 0.0047 |
| 60 | 1.7694 | 0.0046 |
| 61 | 1.7739 | 0.0045 |
| 62 | 1.7784 | 0.0045 |
| 63 | 1.7828 | 0.0044 |
| 64 | 1.7871 | 0.0043 |
| 65 | 1.7914 | 0.0043 |
| 66 | 1.7957 | 0.0042 |
| 67 | 1.7998 | 0.0042 |
| 68 | 1.8040 | 0.0041 |
| 69 | 1.8080 | 0.0041 |
| 70 | 1.8121 | 0.0040 |
| 71 | 1.8160 | 0.0040 |
| 72 | 1.8200 | 0.0039 |
| 73 | 1.8258 | 0.0058 |
| 74 | 1.8316 | 0.0058 |
| 75 | 1.8373 | 0.0057 |
| 76 | 1.8429 | 0.0057 |
| 77 | 1.8485 | 0.0056 |
| 78 | 1.8541 | 0.0055 |
| 79 | 1.8595 | 0.0055 |
| 80 | 1.8650 | 0.0054 |
| 81 | 1.8704 | 0.0054 |
| 82 | 1.8757 | 0.0053 |
| 83 | 1.8810 | 0.0053 |
| 84 | 1.8862 | 0.0052 |
| 85 | 1.8914 | 0.0052 |
| 86 | 1.8965 | 0.0051 |
| 87 | 1.9016 | 0.0051 |
| 88 | 1.9067 | 0.0050 |
| 89 | 1.9117 | 0.0050 |
| 90 | 1.9166 | 0.0050 |
| 91 | 1.9215 | 0.0049 |
| 92 | 1.9264 | 0.0049 |
| 93 | 1.9312 | 0.0048 |

| | | |
|---|---|---|
| 94 | 1.9360 | 0.0048 |
| 95 | 1.9408 | 0.0048 |
| 96 | 1.9455 | 0.0047 |
| 97 | 1.9502 | 0.0047 |
| 98 | 1.9548 | 0.0046 |
| 99 | 1.9594 | 0.0046 |
| 100 | 1.9640 | 0.0046 |
| 101 | 1.9686 | 0.0045 |
| 102 | 1.9731 | 0.0045 |
| 103 | 1.9775 | 0.0045 |
| 104 | 1.9820 | 0.0044 |
| 105 | 1.9864 | 0.0044 |
| 106 | 1.9907 | 0.0044 |
| 107 | 1.9951 | 0.0043 |
| 108 | 1.9994 | 0.0043 |
| 109 | 2.0037 | 0.0043 |
| 110 | 2.0079 | 0.0042 |
| 111 | 2.0121 | 0.0042 |
| 112 | 2.0163 | 0.0042 |
| 113 | 2.0205 | 0.0042 |
| 114 | 2.0246 | 0.0041 |
| 115 | 2.0287 | 0.0041 |
| 116 | 2.0328 | 0.0041 |
| 117 | 2.0368 | 0.0041 |
| 118 | 2.0409 | 0.0040 |
| 119 | 2.0449 | 0.0040 |
| 120 | 2.0488 | 0.0040 |
| 121 | 2.0528 | 0.0039 |
| 122 | 2.0567 | 0.0039 |
| 123 | 2.0606 | 0.0039 |
| 124 | 2.0645 | 0.0039 |
| 125 | 2.0683 | 0.0038 |
| 126 | 2.0721 | 0.0038 |
| 127 | 2.0759 | 0.0038 |
| 128 | 2.0797 | 0.0038 |
| 129 | 2.0835 | 0.0038 |
| 130 | 2.0872 | 0.0037 |
| 131 | 2.0909 | 0.0037 |
| 132 | 2.0946 | 0.0037 |
| 133 | 2.0983 | 0.0037 |
| 134 | 2.1019 | 0.0036 |
| 135 | 2.1056 | 0.0036 |
| 136 | 2.1092 | 0.0036 |
| 137 | 2.1128 | 0.0036 |
| 138 | 2.1163 | 0.0036 |
| 139 | 2.1199 | 0.0035 |
| 140 | 2.1234 | 0.0035 |
| 141 | 2.1269 | 0.0035 |
| 142 | 2.1304 | 0.0035 |
| 143 | 2.1339 | 0.0035 |
| 144 | 2.1373 | 0.0035 |
| 145 | 2.1407 | 0.0034 |
| 146 | 2.1442 | 0.0034 |
| 147 | 2.1475 | 0.0034 |
| 148 | 2.1509 | 0.0034 |
| 149 | 2.1543 | 0.0034 |
| 150 | 2.1576 | 0.0033 |
| 151 | 2.1610 | 0.0033 |
| 152 | 2.1643 | 0.0033 |

| | | |
|---|---|---|
| 153 | 2.1676 | 0.0033 |
| 154 | 2.1708 | 0.0033 |
| 155 | 2.1741 | 0.0033 |
| 156 | 2.1773 | 0.0032 |
| 157 | 2.1806 | 0.0032 |
| 158 | 2.1838 | 0.0032 |
| 159 | 2.1870 | 0.0032 |
| 160 | 2.1902 | 0.0032 |
| 161 | 2.1933 | 0.0032 |
| 162 | 2.1965 | 0.0032 |
| 163 | 2.1996 | 0.0031 |
| 164 | 2.2027 | 0.0031 |
| 165 | 2.2058 | 0.0031 |
| 166 | 2.2089 | 0.0031 |
| 167 | 2.2120 | 0.0031 |
| 168 | 2.2151 | 0.0031 |
| 169 | 2.2181 | 0.0031 |
| 170 | 2.2212 | 0.0030 |
| 171 | 2.2242 | 0.0030 |
| 172 | 2.2272 | 0.0030 |
| 173 | 2.2302 | 0.0030 |
| 174 | 2.2332 | 0.0030 |
| 175 | 2.2362 | 0.0030 |
| 176 | 2.2391 | 0.0030 |
| 177 | 2.2421 | 0.0029 |
| 178 | 2.2450 | 0.0029 |
| 179 | 2.2479 | 0.0029 |
| 180 | 2.2508 | 0.0029 |
| 181 | 2.2537 | 0.0029 |
| 182 | 2.2566 | 0.0029 |
| 183 | 2.2595 | 0.0029 |
| 184 | 2.2623 | 0.0029 |
| 185 | 2.2652 | 0.0028 |
| 186 | 2.2680 | 0.0028 |
| 187 | 2.2708 | 0.0028 |
| 188 | 2.2736 | 0.0028 |
| 189 | 2.2764 | 0.0028 |
| 190 | 2.2792 | 0.0028 |
| 191 | 2.2820 | 0.0028 |
| 192 | 2.2847 | 0.0028 |
| 193 | 2.2875 | 0.0028 |
| 194 | 2.2902 | 0.0027 |
| 195 | 2.2930 | 0.0027 |
| 196 | 2.2957 | 0.0027 |
| 197 | 2.2984 | 0.0027 |
| 198 | 2.3011 | 0.0027 |
| 199 | 2.3038 | 0.0027 |
| 200 | 2.3065 | 0.0027 |
| 201 | 2.3091 | 0.0027 |
| 202 | 2.3118 | 0.0027 |
| 203 | 2.3145 | 0.0026 |
| 204 | 2.3171 | 0.0026 |
| 205 | 2.3197 | 0.0026 |
| 206 | 2.3223 | 0.0026 |
| 207 | 2.3249 | 0.0026 |
| 208 | 2.3275 | 0.0026 |
| 209 | 2.3301 | 0.0026 |
| 210 | 2.3327 | 0.0026 |
| 211 | 2.3353 | 0.0026 |

| | | |
|---|---|---|
| 212 | 2.3379 | 0.0026 |
| 213 | 2.3404 | 0.0026 |
| 214 | 2.3429 | 0.0025 |
| 215 | 2.3455 | 0.0025 |
| 216 | 2.3480 | 0.0025 |
| 217 | 2.3505 | 0.0025 |
| 218 | 2.3530 | 0.0025 |
| 219 | 2.3555 | 0.0025 |
| 220 | 2.3580 | 0.0025 |
| 221 | 2.3605 | 0.0025 |
| 222 | 2.3630 | 0.0025 |
| 223 | 2.3654 | 0.0025 |
| 224 | 2.3679 | 0.0025 |
| 225 | 2.3703 | 0.0024 |
| 226 | 2.3728 | 0.0024 |
| 227 | 2.3752 | 0.0024 |
| 228 | 2.3776 | 0.0024 |
| 229 | 2.3800 | 0.0024 |
| 230 | 2.3824 | 0.0024 |
| 231 | 2.3848 | 0.0024 |
| 232 | 2.3872 | 0.0024 |
| 233 | 2.3896 | 0.0024 |
| 234 | 2.3920 | 0.0024 |
| 235 | 2.3944 | 0.0024 |
| 236 | 2.3967 | 0.0024 |
| 237 | 2.3991 | 0.0024 |
| 238 | 2.4014 | 0.0023 |
| 239 | 2.4037 | 0.0023 |
| 240 | 2.4061 | 0.0023 |
| 241 | 2.4084 | 0.0023 |
| 242 | 2.4107 | 0.0023 |
| 243 | 2.4130 | 0.0023 |
| 244 | 2.4153 | 0.0023 |
| 245 | 2.4176 | 0.0023 |
| 246 | 2.4199 | 0.0023 |
| 247 | 2.4222 | 0.0023 |
| 248 | 2.4244 | 0.0023 |
| 249 | 2.4267 | 0.0023 |
| 250 | 2.4290 | 0.0023 |
| 251 | 2.4312 | 0.0022 |
| 252 | 2.4335 | 0.0022 |
| 253 | 2.4357 | 0.0022 |
| 254 | 2.4379 | 0.0022 |
| 255 | 2.4401 | 0.0022 |
| 256 | 2.4424 | 0.0022 |
| 257 | 2.4446 | 0.0022 |
| 258 | 2.4468 | 0.0022 |
| 259 | 2.4490 | 0.0022 |
| 260 | 2.4512 | 0.0022 |
| 261 | 2.4533 | 0.0022 |
| 262 | 2.4555 | 0.0022 |
| 263 | 2.4577 | 0.0022 |
| 264 | 2.4598 | 0.0022 |
| 265 | 2.4620 | 0.0022 |
| 266 | 2.4642 | 0.0022 |
| 267 | 2.4663 | 0.0021 |
| 268 | 2.4684 | 0.0021 |
| 269 | 2.4706 | 0.0021 |
| 270 | 2.4727 | 0.0021 |

| | | |
|---|---|---|
| 271 | 2.4748 | 0.0021 |
| 272 | 2.4769 | 0.0021 |
| 273 | 2.4790 | 0.0021 |
| 274 | 2.4811 | 0.0021 |
| 275 | 2.4832 | 0.0021 |
| 276 | 2.4853 | 0.0021 |
| 277 | 2.4874 | 0.0021 |
| 278 | 2.4895 | 0.0021 |
| 279 | 2.4916 | 0.0021 |
| 280 | 2.4936 | 0.0021 |
| 281 | 2.4957 | 0.0021 |
| 282 | 2.4978 | 0.0021 |
| 283 | 2.4998 | 0.0021 |
| 284 | 2.5019 | 0.0020 |
| 285 | 2.5039 | 0.0020 |
| 286 | 2.5059 | 0.0020 |
| 287 | 2.5080 | 0.0020 |
| 288 | 2.5100 | 0.0020 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0020 | 0.0013 | 0.0007 |
| 2 | 0.0020 | 0.0013 | 0.0008 |
| 3 | 0.0020 | 0.0013 | 0.0008 |
| 4 | 0.0020 | 0.0013 | 0.0008 |
| 5 | 0.0021 | 0.0013 | 0.0008 |
| 6 | 0.0021 | 0.0013 | 0.0008 |
| 7 | 0.0021 | 0.0013 | 0.0008 |
| 8 | 0.0021 | 0.0013 | 0.0008 |
| 9 | 0.0021 | 0.0013 | 0.0008 |
| 10 | 0.0021 | 0.0013 | 0.0008 |
| 11 | 0.0021 | 0.0013 | 0.0008 |
| 12 | 0.0021 | 0.0013 | 0.0008 |
| 13 | 0.0021 | 0.0013 | 0.0008 |
| 14 | 0.0021 | 0.0013 | 0.0008 |
| 15 | 0.0021 | 0.0014 | 0.0008 |
| 16 | 0.0022 | 0.0014 | 0.0008 |
| 17 | 0.0022 | 0.0014 | 0.0008 |
| 18 | 0.0022 | 0.0014 | 0.0008 |
| 19 | 0.0022 | 0.0014 | 0.0008 |
| 20 | 0.0022 | 0.0014 | 0.0008 |
| 21 | 0.0022 | 0.0014 | 0.0008 |
| 22 | 0.0022 | 0.0014 | 0.0008 |
| 23 | 0.0022 | 0.0014 | 0.0008 |
| 24 | 0.0022 | 0.0014 | 0.0008 |
| 25 | 0.0022 | 0.0014 | 0.0008 |
| 26 | 0.0022 | 0.0014 | 0.0008 |
| 27 | 0.0023 | 0.0014 | 0.0008 |
| 28 | 0.0023 | 0.0014 | 0.0008 |
| 29 | 0.0023 | 0.0014 | 0.0008 |
| 30 | 0.0023 | 0.0014 | 0.0008 |
| 31 | 0.0023 | 0.0015 | 0.0009 |
| 32 | 0.0023 | 0.0015 | 0.0009 |
| 33 | 0.0023 | 0.0015 | 0.0009 |
| 34 | 0.0023 | 0.0015 | 0.0009 |
| 35 | 0.0024 | 0.0015 | 0.0009 |
| 36 | 0.0024 | 0.0015 | 0.0009 |

| | | | |
|---|---|---|---|
| 37 | 0.0024 | 0.0015 | 0.0009 |
| 38 | 0.0024 | 0.0015 | 0.0009 |
| 39 | 0.0024 | 0.0015 | 0.0009 |
| 40 | 0.0024 | 0.0015 | 0.0009 |
| 41 | 0.0024 | 0.0015 | 0.0009 |
| 42 | 0.0024 | 0.0015 | 0.0009 |
| 43 | 0.0024 | 0.0015 | 0.0009 |
| 44 | 0.0025 | 0.0015 | 0.0009 |
| 45 | 0.0025 | 0.0016 | 0.0009 |
| 46 | 0.0025 | 0.0016 | 0.0009 |
| 47 | 0.0025 | 0.0016 | 0.0009 |
| 48 | 0.0025 | 0.0016 | 0.0009 |
| 49 | 0.0025 | 0.0016 | 0.0009 |
| 50 | 0.0025 | 0.0016 | 0.0009 |
| 51 | 0.0026 | 0.0016 | 0.0009 |
| 52 | 0.0026 | 0.0016 | 0.0009 |
| 53 | 0.0026 | 0.0016 | 0.0010 |
| 54 | 0.0026 | 0.0016 | 0.0010 |
| 55 | 0.0026 | 0.0016 | 0.0010 |
| 56 | 0.0026 | 0.0017 | 0.0010 |
| 57 | 0.0026 | 0.0017 | 0.0010 |
| 58 | 0.0026 | 0.0017 | 0.0010 |
| 59 | 0.0027 | 0.0017 | 0.0010 |
| 60 | 0.0027 | 0.0017 | 0.0010 |
| 61 | 0.0027 | 0.0017 | 0.0010 |
| 62 | 0.0027 | 0.0017 | 0.0010 |
| 63 | 0.0027 | 0.0017 | 0.0010 |
| 64 | 0.0027 | 0.0017 | 0.0010 |
| 65 | 0.0028 | 0.0017 | 0.0010 |
| 66 | 0.0028 | 0.0017 | 0.0010 |
| 67 | 0.0028 | 0.0018 | 0.0010 |
| 68 | 0.0028 | 0.0018 | 0.0010 |
| 69 | 0.0028 | 0.0018 | 0.0010 |
| 70 | 0.0028 | 0.0018 | 0.0011 |
| 71 | 0.0029 | 0.0018 | 0.0011 |
| 72 | 0.0029 | 0.0018 | 0.0011 |
| 73 | 0.0029 | 0.0018 | 0.0011 |
| 74 | 0.0029 | 0.0018 | 0.0011 |
| 75 | 0.0029 | 0.0019 | 0.0011 |
| 76 | 0.0030 | 0.0019 | 0.0011 |
| 77 | 0.0030 | 0.0019 | 0.0011 |
| 78 | 0.0030 | 0.0019 | 0.0011 |
| 79 | 0.0030 | 0.0019 | 0.0011 |
| 80 | 0.0030 | 0.0019 | 0.0011 |
| 81 | 0.0031 | 0.0019 | 0.0011 |
| 82 | 0.0031 | 0.0019 | 0.0011 |
| 83 | 0.0031 | 0.0020 | 0.0011 |
| 84 | 0.0031 | 0.0020 | 0.0012 |
| 85 | 0.0032 | 0.0020 | 0.0012 |
| 86 | 0.0032 | 0.0020 | 0.0012 |
| 87 | 0.0032 | 0.0020 | 0.0012 |
| 88 | 0.0032 | 0.0020 | 0.0012 |
| 89 | 0.0032 | 0.0020 | 0.0012 |
| 90 | 0.0033 | 0.0021 | 0.0012 |
| 91 | 0.0033 | 0.0021 | 0.0012 |
| 92 | 0.0033 | 0.0021 | 0.0012 |
| 93 | 0.0033 | 0.0021 | 0.0012 |
| 94 | 0.0034 | 0.0021 | 0.0012 |
| 95 | 0.0034 | 0.0021 | 0.0013 |

| | | | |
|---|---|---|---|
| 96 | 0.0034 | 0.0022 | 0.0013 |
| 97 | 0.0035 | 0.0022 | 0.0013 |
| 98 | 0.0035 | 0.0022 | 0.0013 |
| 99 | 0.0035 | 0.0022 | 0.0013 |
| 100 | 0.0035 | 0.0022 | 0.0013 |
| 101 | 0.0036 | 0.0022 | 0.0013 |
| 102 | 0.0036 | 0.0023 | 0.0013 |
| 103 | 0.0036 | 0.0023 | 0.0013 |
| 104 | 0.0036 | 0.0023 | 0.0013 |
| 105 | 0.0037 | 0.0023 | 0.0014 |
| 106 | 0.0037 | 0.0023 | 0.0014 |
| 107 | 0.0038 | 0.0024 | 0.0014 |
| 108 | 0.0038 | 0.0024 | 0.0014 |
| 109 | 0.0038 | 0.0024 | 0.0014 |
| 110 | 0.0038 | 0.0024 | 0.0014 |
| 111 | 0.0039 | 0.0025 | 0.0014 |
| 112 | 0.0039 | 0.0025 | 0.0014 |
| 113 | 0.0040 | 0.0025 | 0.0015 |
| 114 | 0.0040 | 0.0025 | 0.0015 |
| 115 | 0.0041 | 0.0026 | 0.0015 |
| 116 | 0.0041 | 0.0026 | 0.0015 |
| 117 | 0.0041 | 0.0026 | 0.0015 |
| 118 | 0.0042 | 0.0026 | 0.0015 |
| 119 | 0.0042 | 0.0027 | 0.0016 |
| 120 | 0.0042 | 0.0027 | 0.0016 |
| 121 | 0.0043 | 0.0027 | 0.0016 |
| 122 | 0.0043 | 0.0027 | 0.0016 |
| 123 | 0.0044 | 0.0028 | 0.0016 |
| 124 | 0.0044 | 0.0028 | 0.0016 |
| 125 | 0.0045 | 0.0028 | 0.0017 |
| 126 | 0.0045 | 0.0029 | 0.0017 |
| 127 | 0.0046 | 0.0029 | 0.0017 |
| 128 | 0.0046 | 0.0029 | 0.0017 |
| 129 | 0.0047 | 0.0030 | 0.0017 |
| 130 | 0.0048 | 0.0030 | 0.0018 |
| 131 | 0.0048 | 0.0030 | 0.0018 |
| 132 | 0.0049 | 0.0031 | 0.0018 |
| 133 | 0.0050 | 0.0031 | 0.0018 |
| 134 | 0.0050 | 0.0032 | 0.0018 |
| 135 | 0.0051 | 0.0032 | 0.0019 |
| 136 | 0.0051 | 0.0032 | 0.0019 |
| 137 | 0.0052 | 0.0033 | 0.0019 |
| 138 | 0.0053 | 0.0033 | 0.0020 |
| 139 | 0.0054 | 0.0034 | 0.0020 |
| 140 | 0.0054 | 0.0034 | 0.0020 |
| 141 | 0.0055 | 0.0035 | 0.0020 |
| 142 | 0.0056 | 0.0035 | 0.0021 |
| 143 | 0.0057 | 0.0036 | 0.0021 |
| 144 | 0.0058 | 0.0036 | 0.0021 |
| 145 | 0.0039 | 0.0025 | 0.0015 |
| 146 | 0.0040 | 0.0025 | 0.0015 |
| 147 | 0.0041 | 0.0026 | 0.0015 |
| 148 | 0.0041 | 0.0026 | 0.0015 |
| 149 | 0.0042 | 0.0027 | 0.0016 |
| 150 | 0.0043 | 0.0027 | 0.0016 |
| 151 | 0.0044 | 0.0028 | 0.0016 |
| 152 | 0.0045 | 0.0028 | 0.0016 |
| 153 | 0.0046 | 0.0029 | 0.0017 |
| 154 | 0.0047 | 0.0029 | 0.0017 |

| | | | |
|---|---|---|---|
| 155 | 0.0048 | 0.0030 | 0.0018 |
| 156 | 0.0049 | 0.0031 | 0.0018 |
| 157 | 0.0050 | 0.0032 | 0.0019 |
| 158 | 0.0051 | 0.0032 | 0.0019 |
| 159 | 0.0053 | 0.0033 | 0.0019 |
| 160 | 0.0054 | 0.0034 | 0.0020 |
| 161 | 0.0056 | 0.0035 | 0.0021 |
| 162 | 0.0057 | 0.0036 | 0.0021 |
| 163 | 0.0059 | 0.0037 | 0.0022 |
| 164 | 0.0060 | 0.0038 | 0.0022 |
| 165 | 0.0062 | 0.0039 | 0.0023 |
| 166 | 0.0064 | 0.0040 | 0.0023 |
| 167 | 0.0066 | 0.0042 | 0.0025 |
| 168 | 0.0068 | 0.0043 | 0.0025 |
| 169 | 0.0071 | 0.0045 | 0.0026 |
| 170 | 0.0073 | 0.0046 | 0.0027 |
| 171 | 0.0077 | 0.0048 | 0.0028 |
| 172 | 0.0079 | 0.0050 | 0.0029 |
| 173 | 0.0083 | 0.0052 | 0.0031 |
| 174 | 0.0086 | 0.0054 | 0.0032 |
| 175 | 0.0091 | 0.0057 | 0.0034 |
| 176 | 0.0094 | 0.0059 | 0.0035 |
| 177 | 0.0101 | 0.0064 | 0.0037 |
| 178 | 0.0105 | 0.0066 | 0.0039 |
| 179 | 0.0113 | 0.0071 | 0.0042 |
| 180 | 0.0118 | 0.0074 | 0.0044 |
| 181 | 0.0129 | 0.0082 | 0.0048 |
| 182 | 0.0136 | 0.0086 | 0.0050 |
| 183 | 0.0152 | 0.0096 | 0.0056 |
| 184 | 0.0161 | 0.0102 | 0.0060 |
| 185 | 0.0355 | 0.0224 | 0.0131 |
| 186 | 0.0379 | 0.0239 | 0.0140 |
| 187 | 0.0439 | 0.0277 | 0.0162 |
| 188 | 0.0480 | 0.0300 | 0.0180 |
| 189 | 0.0596 | 0.0300 | 0.0297 |
| 190 | 0.0687 | 0.0300 | 0.0387 |
| 191 | 0.1042 | 0.0300 | 0.0743 |
| 192 | 0.1513 | 0.0300 | 0.1214 |
| 193 | 0.6546 | 0.0300 | 0.6247 |
| 194 | 0.0820 | 0.0300 | 0.0521 |
| 195 | 0.0530 | 0.0300 | 0.0231 |
| 196 | 0.0406 | 0.0256 | 0.0150 |
| 197 | 0.0172 | 0.0108 | 0.0064 |
| 198 | 0.0143 | 0.0090 | 0.0053 |
| 199 | 0.0123 | 0.0078 | 0.0046 |
| 200 | 0.0109 | 0.0068 | 0.0040 |
| 201 | 0.0097 | 0.0061 | 0.0036 |
| 202 | 0.0088 | 0.0056 | 0.0033 |
| 203 | 0.0081 | 0.0051 | 0.0030 |
| 204 | 0.0075 | 0.0047 | 0.0028 |
| 205 | 0.0069 | 0.0044 | 0.0026 |
| 206 | 0.0065 | 0.0041 | 0.0024 |
| 207 | 0.0061 | 0.0038 | 0.0023 |
| 208 | 0.0058 | 0.0036 | 0.0021 |
| 209 | 0.0055 | 0.0034 | 0.0020 |
| 210 | 0.0052 | 0.0033 | 0.0019 |
| 211 | 0.0049 | 0.0031 | 0.0018 |
| 212 | 0.0047 | 0.0030 | 0.0017 |
| 213 | 0.0045 | 0.0029 | 0.0017 |

| | | | |
|---|---|---|---|
| 214 | 0.0043 | 0.0027 | 0.0016 |
| 215 | 0.0042 | 0.0026 | 0.0015 |
| 216 | 0.0040 | 0.0025 | 0.0015 |
| 217 | 0.0058 | 0.0037 | 0.0022 |
| 218 | 0.0057 | 0.0036 | 0.0021 |
| 219 | 0.0055 | 0.0035 | 0.0020 |
| 220 | 0.0053 | 0.0034 | 0.0020 |
| 221 | 0.0052 | 0.0033 | 0.0019 |
| 222 | 0.0050 | 0.0032 | 0.0019 |
| 223 | 0.0049 | 0.0031 | 0.0018 |
| 224 | 0.0048 | 0.0030 | 0.0018 |
| 225 | 0.0047 | 0.0030 | 0.0017 |
| 226 | 0.0046 | 0.0029 | 0.0017 |
| 227 | 0.0045 | 0.0028 | 0.0017 |
| 228 | 0.0044 | 0.0028 | 0.0016 |
| 229 | 0.0043 | 0.0027 | 0.0016 |
| 230 | 0.0042 | 0.0026 | 0.0015 |
| 231 | 0.0041 | 0.0026 | 0.0015 |
| 232 | 0.0040 | 0.0025 | 0.0015 |
| 233 | 0.0039 | 0.0025 | 0.0015 |
| 234 | 0.0039 | 0.0024 | 0.0014 |
| 235 | 0.0038 | 0.0024 | 0.0014 |
| 236 | 0.0037 | 0.0024 | 0.0014 |
| 237 | 0.0037 | 0.0023 | 0.0014 |
| 238 | 0.0036 | 0.0023 | 0.0013 |
| 239 | 0.0035 | 0.0022 | 0.0013 |
| 240 | 0.0035 | 0.0022 | 0.0013 |
| 241 | 0.0034 | 0.0022 | 0.0013 |
| 242 | 0.0034 | 0.0021 | 0.0012 |
| 243 | 0.0033 | 0.0021 | 0.0012 |
| 244 | 0.0033 | 0.0021 | 0.0012 |
| 245 | 0.0032 | 0.0020 | 0.0012 |
| 246 | 0.0032 | 0.0020 | 0.0012 |
| 247 | 0.0031 | 0.0020 | 0.0012 |
| 248 | 0.0031 | 0.0019 | 0.0011 |
| 249 | 0.0031 | 0.0019 | 0.0011 |
| 250 | 0.0030 | 0.0019 | 0.0011 |
| 251 | 0.0030 | 0.0019 | 0.0011 |
| 252 | 0.0029 | 0.0018 | 0.0011 |
| 253 | 0.0029 | 0.0018 | 0.0011 |
| 254 | 0.0029 | 0.0018 | 0.0011 |
| 255 | 0.0028 | 0.0018 | 0.0010 |
| 256 | 0.0028 | 0.0018 | 0.0010 |
| 257 | 0.0028 | 0.0017 | 0.0010 |
| 258 | 0.0027 | 0.0017 | 0.0010 |
| 259 | 0.0027 | 0.0017 | 0.0010 |
| 260 | 0.0027 | 0.0017 | 0.0010 |
| 261 | 0.0026 | 0.0017 | 0.0010 |
| 262 | 0.0026 | 0.0016 | 0.0010 |
| 263 | 0.0026 | 0.0016 | 0.0010 |
| 264 | 0.0025 | 0.0016 | 0.0009 |
| 265 | 0.0025 | 0.0016 | 0.0009 |
| 266 | 0.0025 | 0.0016 | 0.0009 |
| 267 | 0.0025 | 0.0016 | 0.0009 |
| 268 | 0.0024 | 0.0015 | 0.0009 |
| 269 | 0.0024 | 0.0015 | 0.0009 |
| 270 | 0.0024 | 0.0015 | 0.0009 |
| 271 | 0.0024 | 0.0015 | 0.0009 |
| 272 | 0.0023 | 0.0015 | 0.0009 |

| | | | |
|---|---|---|---|
| 273 | 0.0023 | 0.0015 | 0.0009 |
| 274 | 0.0023 | 0.0014 | 0.0008 |
| 275 | 0.0023 | 0.0014 | 0.0008 |
| 276 | 0.0023 | 0.0014 | 0.0008 |
| 277 | 0.0022 | 0.0014 | 0.0008 |
| 278 | 0.0022 | 0.0014 | 0.0008 |
| 279 | 0.0022 | 0.0014 | 0.0008 |
| 280 | 0.0022 | 0.0014 | 0.0008 |
| 281 | 0.0022 | 0.0014 | 0.0008 |
| 282 | 0.0021 | 0.0013 | 0.0008 |
| 283 | 0.0021 | 0.0013 | 0.0008 |
| 284 | 0.0021 | 0.0013 | 0.0008 |
| 285 | 0.0021 | 0.0013 | 0.0008 |
| 286 | 0.0021 | 0.0013 | 0.0008 |
| 287 | 0.0021 | 0.0013 | 0.0008 |
| 288 | 0.0020 | 0.0013 | 0.0008 |

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Total soil rain loss = 1.05(In)
Total effective rainfall = 1.46(In)
Peak flow rate in flood hydrograph = 11.77(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0000 | 0.00 | Q | | | | |
| 0+15 | 0.0001 | 0.01 | Q | | | | |
| 0+20 | 0.0002 | 0.02 | Q | | | | |
| 0+25 | 0.0004 | 0.03 | Q | | | | |
| 0+30 | 0.0006 | 0.03 | Q | | | | |
| 0+35 | 0.0009 | 0.04 | Q | | | | |
| 0+40 | 0.0012 | 0.04 | Q | | | | |
| 0+45 | 0.0015 | 0.04 | Q | | | | |
| 0+50 | 0.0018 | 0.05 | Q | | | | |
| 0+55 | 0.0021 | 0.05 | Q | | | | |
| 1+ 0 | 0.0024 | 0.05 | Q | | | | |
| 1+ 5 | 0.0028 | 0.05 | Q | | | | |
| 1+10 | 0.0031 | 0.05 | Q | | | | |
| 1+15 | 0.0035 | 0.05 | Q | | | | |
| 1+20 | 0.0038 | 0.05 | Q | | | | |
| 1+25 | 0.0042 | 0.05 | Q | | | | |
| 1+30 | 0.0046 | 0.05 | Q | | | | |
| 1+35 | 0.0050 | 0.06 | Q | | | | |
| 1+40 | 0.0054 | 0.06 | Q | | | | |
| 1+45 | 0.0057 | 0.06 | Q | | | | |
| 1+50 | 0.0061 | 0.06 | Q | | | | |
| 1+55 | 0.0065 | 0.06 | Q | | | | |
| 2+ 0 | 0.0069 | 0.06 | Q | | | | |
| 2+ 5 | 0.0073 | 0.06 | Q | | | | |
| 2+10 | 0.0077 | 0.06 | Q | | | | |
| 2+15 | 0.0082 | 0.06 | Q | | | | |
| 2+20 | 0.0086 | 0.06 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+25 | 0.0090 | 0.06 | Q | | | | |
| 2+30 | 0.0094 | 0.06 | Q | | | | |
| 2+35 | 0.0098 | 0.06 | Q | | | | |
| 2+40 | 0.0102 | 0.06 | Q | | | | |
| 2+45 | 0.0107 | 0.06 | Q | | | | |
| 2+50 | 0.0111 | 0.06 | Q | | | | |
| 2+55 | 0.0115 | 0.06 | Q | | | | |
| 3+ 0 | 0.0120 | 0.06 | Q | | | | |
| 3+ 5 | 0.0124 | 0.06 | Q | | | | |
| 3+10 | 0.0128 | 0.06 | Q | | | | |
| 3+15 | 0.0133 | 0.06 | Q | | | | |
| 3+20 | 0.0137 | 0.06 | Q | | | | |
| 3+25 | 0.0142 | 0.06 | Q | | | | |
| 3+30 | 0.0146 | 0.06 | Q | | | | |
| 3+35 | 0.0150 | 0.07 | Q | | | | |
| 3+40 | 0.0155 | 0.07 | Q | | | | |
| 3+45 | 0.0160 | 0.07 | Q | | | | |
| 3+50 | 0.0164 | 0.07 | Q | | | | |
| 3+55 | 0.0169 | 0.07 | Q | | | | |
| 4+ 0 | 0.0173 | 0.07 | Q | | | | |
| 4+ 5 | 0.0178 | 0.07 | Q | | | | |
| 4+10 | 0.0182 | 0.07 | Q | | | | |
| 4+15 | 0.0187 | 0.07 | QV | | | | |
| 4+20 | 0.0192 | 0.07 | QV | | | | |
| 4+25 | 0.0197 | 0.07 | QV | | | | |
| 4+30 | 0.0201 | 0.07 | QV | | | | |
| 4+35 | 0.0206 | 0.07 | QV | | | | |
| 4+40 | 0.0211 | 0.07 | QV | | | | |
| 4+45 | 0.0216 | 0.07 | QV | | | | |
| 4+50 | 0.0221 | 0.07 | QV | | | | |
| 4+55 | 0.0225 | 0.07 | QV | | | | |
| 5+ 0 | 0.0230 | 0.07 | QV | | | | |
| 5+ 5 | 0.0235 | 0.07 | QV | | | | |
| 5+10 | 0.0240 | 0.07 | QV | | | | |
| 5+15 | 0.0245 | 0.07 | QV | | | | |
| 5+20 | 0.0250 | 0.07 | QV | | | | |
| 5+25 | 0.0255 | 0.07 | QV | | | | |
| 5+30 | 0.0260 | 0.07 | QV | | | | |
| 5+35 | 0.0265 | 0.07 | QV | | | | |
| 5+40 | 0.0270 | 0.07 | QV | | | | |
| 5+45 | 0.0276 | 0.07 | QV | | | | |
| 5+50 | 0.0281 | 0.08 | QV | | | | |
| 5+55 | 0.0286 | 0.08 | QV | | | | |
| 6+ 0 | 0.0291 | 0.08 | QV | | | | |
| 6+ 5 | 0.0297 | 0.08 | QV | | | | |
| 6+10 | 0.0302 | 0.08 | QV | | | | |
| 6+15 | 0.0307 | 0.08 | QV | | | | |
| 6+20 | 0.0313 | 0.08 | QV | | | | |
| 6+25 | 0.0318 | 0.08 | QV | | | | |
| 6+30 | 0.0323 | 0.08 | QV | | | | |
| 6+35 | 0.0329 | 0.08 | QV | | | | |
| 6+40 | 0.0334 | 0.08 | QV | | | | |
| 6+45 | 0.0340 | 0.08 | QV | | | | |
| 6+50 | 0.0346 | 0.08 | QV | | | | |
| 6+55 | 0.0351 | 0.08 | QV | | | | |
| 7+ 0 | 0.0357 | 0.08 | QV | | | | |
| 7+ 5 | 0.0363 | 0.08 | QV | | | | |
| 7+10 | 0.0368 | 0.08 | QV | | | | |
| 7+15 | 0.0374 | 0.08 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7+20 | 0.0380 | 0.08 | Q V | \| | \| | \| | \| |
| 7+25 | 0.0386 | 0.09 | Q V | \| | \| | \| | \| |
| 7+30 | 0.0392 | 0.09 | Q V | \| | \| | \| | \| |
| 7+35 | 0.0398 | 0.09 | Q V | \| | \| | \| | \| |
| 7+40 | 0.0404 | 0.09 | Q V | \| | \| | \| | \| |
| 7+45 | 0.0410 | 0.09 | Q V | \| | \| | \| | \| |
| 7+50 | 0.0416 | 0.09 | Q V | \| | \| | \| | \| |
| 7+55 | 0.0422 | 0.09 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.0428 | 0.09 | Q V | \| | \| | \| | \| |
| 8+ 5 | 0.0434 | 0.09 | Q V | \| | \| | \| | \| |
| 8+10 | 0.0440 | 0.09 | Q V | \| | \| | \| | \| |
| 8+15 | 0.0447 | 0.09 | Q V | \| | \| | \| | \| |
| 8+20 | 0.0453 | 0.09 | Q V | \| | \| | \| | \| |
| 8+25 | 0.0459 | 0.09 | Q V | \| | \| | \| | \| |
| 8+30 | 0.0466 | 0.09 | Q V | \| | \| | \| | \| |
| 8+35 | 0.0472 | 0.09 | Q V | \| | \| | \| | \| |
| 8+40 | 0.0479 | 0.10 | Q V | \| | \| | \| | \| |
| 8+45 | 0.0486 | 0.10 | Q V | \| | \| | \| | \| |
| 8+50 | 0.0492 | 0.10 | Q V | \| | \| | \| | \| |
| 8+55 | 0.0499 | 0.10 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.0506 | 0.10 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.0513 | 0.10 | Q V | \| | \| | \| | \| |
| 9+10 | 0.0519 | 0.10 | Q V | \| | \| | \| | \| |
| 9+15 | 0.0526 | 0.10 | Q V | \| | \| | \| | \| |
| 9+20 | 0.0533 | 0.10 | Q V | \| | \| | \| | \| |
| 9+25 | 0.0541 | 0.10 | Q V | \| | \| | \| | \| |
| 9+30 | 0.0548 | 0.10 | Q V | \| | \| | \| | \| |
| 9+35 | 0.0555 | 0.10 | Q V | \| | \| | \| | \| |
| 9+40 | 0.0562 | 0.11 | Q  V | \| | \| | \| | \| |
| 9+45 | 0.0569 | 0.11 | Q  V | \| | \| | \| | \| |
| 9+50 | 0.0577 | 0.11 | Q  V | \| | \| | \| | \| |
| 9+55 | 0.0584 | 0.11 | Q  V | \| | \| | \| | \| |
| 10+ 0 | 0.0592 | 0.11 | Q  V | \| | \| | \| | \| |
| 10+ 5 | 0.0600 | 0.11 | Q  V | \| | \| | \| | \| |
| 10+10 | 0.0607 | 0.11 | Q  V | \| | \| | \| | \| |
| 10+15 | 0.0615 | 0.11 | Q  V | \| | \| | \| | \| |
| 10+20 | 0.0623 | 0.11 | Q  V | \| | \| | \| | \| |
| 10+25 | 0.0631 | 0.12 | Q  V | \| | \| | \| | \| |
| 10+30 | 0.0639 | 0.12 | Q  V | \| | \| | \| | \| |
| 10+35 | 0.0647 | 0.12 | Q  V | \| | \| | \| | \| |
| 10+40 | 0.0655 | 0.12 | Q  V | \| | \| | \| | \| |
| 10+45 | 0.0663 | 0.12 | Q  V | \| | \| | \| | \| |
| 10+50 | 0.0672 | 0.12 | Q  V | \| | \| | \| | \| |
| 10+55 | 0.0680 | 0.12 | Q  V | \| | \| | \| | \| |
| 11+ 0 | 0.0689 | 0.12 | Q  V | \| | \| | \| | \| |
| 11+ 5 | 0.0698 | 0.13 | Q  V | \| | \| | \| | \| |
| 11+10 | 0.0706 | 0.13 | Q  V | \| | \| | \| | \| |
| 11+15 | 0.0715 | 0.13 | Q  V | \| | \| | \| | \| |
| 11+20 | 0.0724 | 0.13 | Q  V | \| | \| | \| | \| |
| 11+25 | 0.0733 | 0.13 | Q  V | \| | \| | \| | \| |
| 11+30 | 0.0743 | 0.13 | Q  V | \| | \| | \| | \| |
| 11+35 | 0.0752 | 0.14 | Q   V | \| | \| | \| | \| |
| 11+40 | 0.0761 | 0.14 | Q   V | \| | \| | \| | \| |
| 11+45 | 0.0771 | 0.14 | Q   V | \| | \| | \| | \| |
| 11+50 | 0.0781 | 0.14 | Q   V | \| | \| | \| | \| |
| 11+55 | 0.0791 | 0.14 | Q   V | \| | \| | \| | \| |
| 12+ 0 | 0.0801 | 0.15 | Q   V | \| | \| | \| | \| |
| 12+ 5 | 0.0811 | 0.15 | Q   V | \| | \| | \| | \| |
| 12+10 | 0.0821 | 0.15 | Q   V | \| | \| | \| | \| |

```
12+15       0.0831      0.14  Q   V     |          |          |          |
12+20       0.0840      0.14  Q   V     |          |          |          |
12+25       0.0849      0.13  Q   V     |          |          |          |
12+30       0.0857      0.13  Q   V     |          |          |          |
12+35       0.0866      0.12  Q   V     |          |          |          |
12+40       0.0874      0.12  Q   V     |          |          |          |
12+45       0.0883      0.12  Q   V     |          |          |          |
12+50       0.0891      0.12  Q   V     |          |          |          |
12+55       0.0900      0.12  Q   V     |          |          |          |
13+ 0       0.0909      0.13  Q   V     |          |          |          |
13+ 5       0.0917      0.13  Q   V     |          |          |          |
13+10       0.0926      0.13  Q   V     |          |          |          |
13+15       0.0935      0.13  Q    V    |          |          |          |
13+20       0.0944      0.13  Q    V    |          |          |          |
13+25       0.0954      0.13  Q    V    |          |          |          |
13+30       0.0963      0.14  Q    V    |          |          |          |
13+35       0.0973      0.14  Q    V    |          |          |          |
13+40       0.0983      0.14  Q    V    |          |          |          |
13+45       0.0993      0.15  Q    V    |          |          |          |
13+50       0.1003      0.15  Q    V    |          |          |          |
13+55       0.1014      0.15  Q    V    |          |          |          |
14+ 0       0.1025      0.16  Q    V    |          |          |          |
14+ 5       0.1036      0.16  Q    V    |          |          |          |
14+10       0.1047      0.17  Q    V    |          |          |          |
14+15       0.1059      0.17  Q    V    |          |          |          |
14+20       0.1071      0.18  Q    V    |          |          |          |
14+25       0.1084      0.18  Q    V    |          |          |          |
14+30       0.1097      0.19  Q    V    |          |          |          |
14+35       0.1111      0.20  Q    V    |          |          |          |
14+40       0.1125      0.20  Q     V   |          |          |          |
14+45       0.1139      0.21  Q     V   |          |          |          |
14+50       0.1154      0.22  Q     V   |          |          |          |
14+55       0.1170      0.23  Q     V   |          |          |          |
15+ 0       0.1187      0.24  Q     V   |          |          |          |
15+ 5       0.1204      0.25  Q     V   |          |          |          |
15+10       0.1223      0.27  Q     V   |          |          |          |
15+15       0.1242      0.28  Q     V   |          |          |          |
15+20       0.1263      0.30  Q     V   |          |          |          |
15+25       0.1286      0.33  Q     V   |          |          |          |
15+30       0.1311      0.37  Q      V  |          |          |          |
15+35       0.1342      0.44  Q      V  |          |          |          |
15+40       0.1382      0.57  |Q     V  |          |          |          |
15+45       0.1431      0.71  |Q     V  |          |          |          |
15+50       0.1491      0.88  |Q     V  |          |          |          |
15+55       0.1568      1.12  | Q     V |          |          |          |
16+ 0       0.1676      1.57  |  Q    V |          |          |          |
16+ 5       0.1862      2.71  |    Q   V|          |          |          |
16+10       0.2196      4.85  |        Q|V         |          |          |
16+15       0.2723      7.65  |         |   VQ     |          |          |
16+20       0.3534     11.77  |         |       V |  Q       |          |
16+25       0.4240     10.24  |         |         Q V        |          |
16+30       0.4735      7.20  |         |   Q      |    V     |          |
16+35       0.5090      5.15  |         Q          |      V   |          |
16+40       0.5367      4.03  |       Q |          |       V  |          |
16+45       0.5589      3.22  |     Q   |          |        V |          |
16+50       0.5772      2.66  |    Q    |          |         V|          |
16+55       0.5925      2.23  |   Q     |          |          |V         |
17+ 0       0.6058      1.93  |  Q      |          |          | V        |
17+ 5       0.6175      1.70  |  Q      |          |          |  V       |
```

```
17+10       0.6277      1.47  | Q       |         |         |  V      |
17+15       0.6362      1.24  | Q       |         |         |   V     |
17+20       0.6439      1.12  | Q       |         |         |   V     |
17+25       0.6509      1.01  | Q       |         |         |   V     |
17+30       0.6571      0.91  |Q        |         |         |    V    |
17+35       0.6627      0.81  |Q        |         |         |    V    |
17+40       0.6677      0.72  |Q        |         |         |    V    |
17+45       0.6723      0.67  |Q        |         |         |     V   |
17+50       0.6763      0.58  |Q        |         |         |     V   |
17+55       0.6800      0.54  |Q        |         |         |     V   |
18+ 0       0.6832      0.46  Q         |         |         |     V   |
18+ 5       0.6861      0.42  Q         |         |         |     V   |
18+10       0.6885      0.35  Q         |         |         |     V   |
18+15       0.6907      0.32  Q         |         |         |     V   |
18+20       0.6930      0.33  Q         |         |         |      V  |
18+25       0.6953      0.34  Q         |         |         |      V  |
18+30       0.6977      0.34  Q         |         |         |      V  |
18+35       0.6999      0.33  Q         |         |         |      V  |
18+40       0.7020      0.31  Q         |         |         |      V  |
18+45       0.7038      0.26  Q         |         |         |      V  |
18+50       0.7054      0.24  Q         |         |         |      V  |
18+55       0.7070      0.22  Q         |         |         |      V  |
19+ 0       0.7083      0.19  Q         |         |         |      V  |
19+ 5       0.7093      0.14  Q         |         |         |      V  |
19+10       0.7102      0.14  Q         |         |         |       V |
19+15       0.7111      0.13  Q         |         |         |       V |
19+20       0.7120      0.13  Q         |         |         |       V |
19+25       0.7129      0.12  Q         |         |         |       V |
19+30       0.7137      0.12  Q         |         |         |       V |
19+35       0.7145      0.12  Q         |         |         |       V |
19+40       0.7153      0.12  Q         |         |         |       V |
19+45       0.7161      0.11  Q         |         |         |       V |
19+50       0.7169      0.11  Q         |         |         |       V |
19+55       0.7177      0.11  Q         |         |         |       V |
20+ 0       0.7184      0.11  Q         |         |         |       V |
20+ 5       0.7191      0.11  Q         |         |         |       V |
20+10       0.7199      0.10  Q         |         |         |       V |
20+15       0.7206      0.10  Q         |         |         |       V |
20+20       0.7213      0.10  Q         |         |         |       V |
20+25       0.7219      0.10  Q         |         |         |       V |
20+30       0.7226      0.10  Q         |         |         |       V |
20+35       0.7233      0.10  Q         |         |         |       V |
20+40       0.7239      0.09  Q         |         |         |       V |
20+45       0.7246      0.09  Q         |         |         |       V |
20+50       0.7252      0.09  Q         |         |         |       V |
20+55       0.7258      0.09  Q         |         |         |       V |
21+ 0       0.7265      0.09  Q         |         |         |       V |
21+ 5       0.7271      0.09  Q         |         |         |       V |
21+10       0.7277      0.09  Q         |         |         |       V |
21+15       0.7282      0.09  Q         |         |         |        V|
21+20       0.7288      0.08  Q         |         |         |        V|
21+25       0.7294      0.08  Q         |         |         |        V|
21+30       0.7300      0.08  Q         |         |         |        V|
21+35       0.7305      0.08  Q         |         |         |        V|
21+40       0.7311      0.08  Q         |         |         |        V|
21+45       0.7316      0.08  Q         |         |         |        V|
21+50       0.7322      0.08  Q         |         |         |        V|
21+55       0.7327      0.08  Q         |         |         |        V|
22+ 0       0.7332      0.08  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+ 5 | 0.7337 | 0.08 | Q | \| | \| | \| | V\| |
| 22+10 | 0.7342 | 0.07 | Q | \| | \| | \| | V\| |
| 22+15 | 0.7347 | 0.07 | Q | \| | \| | \| | V\| |
| 22+20 | 0.7352 | 0.07 | Q | \| | \| | \| | V\| |
| 22+25 | 0.7357 | 0.07 | Q | \| | \| | \| | V\| |
| 22+30 | 0.7362 | 0.07 | Q | \| | \| | \| | V\| |
| 22+35 | 0.7367 | 0.07 | Q | \| | \| | \| | V\| |
| 22+40 | 0.7372 | 0.07 | Q | \| | \| | \| | V\| |
| 22+45 | 0.7376 | 0.07 | Q | \| | \| | \| | V\| |
| 22+50 | 0.7381 | 0.07 | Q | \| | \| | \| | V\| |
| 22+55 | 0.7386 | 0.07 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.7390 | 0.07 | Q | \| | \| | \| | V\| |
| 23+ 5 | 0.7395 | 0.07 | Q | \| | \| | \| | V\| |
| 23+10 | 0.7399 | 0.07 | Q | \| | \| | \| | V\| |
| 23+15 | 0.7404 | 0.06 | Q | \| | \| | \| | V\| |
| 23+20 | 0.7408 | 0.06 | Q | \| | \| | \| | V\| |
| 23+25 | 0.7413 | 0.06 | Q | \| | \| | \| | V\| |
| 23+30 | 0.7417 | 0.06 | Q | \| | \| | \| | V\| |
| 23+35 | 0.7421 | 0.06 | Q | \| | \| | \| | V\| |
| 23+40 | 0.7425 | 0.06 | Q | \| | \| | \| | V\| |
| 23+45 | 0.7430 | 0.06 | Q | \| | \| | \| | V\| |
| 23+50 | 0.7434 | 0.06 | Q | \| | \| | \| | V\| |
| 23+55 | 0.7438 | 0.06 | Q | \| | \| | \| | V\| |
| 24+ 0 | 0.7442 | 0.06 | Q | \| | \| | \| | V\| |
| 24+ 5 | 0.7446 | 0.06 | Q | \| | \| | \| | V\| |
| 24+10 | 0.7450 | 0.06 | Q | \| | \| | \| | V\| |
| 24+15 | 0.7453 | 0.05 | Q | \| | \| | \| | V\| |
| 24+20 | 0.7456 | 0.04 | Q | \| | \| | \| | V\| |
| 24+25 | 0.7458 | 0.03 | Q | \| | \| | \| | V\| |
| 24+30 | 0.7460 | 0.02 | Q | \| | \| | \| | V\| |
| 24+35 | 0.7461 | 0.02 | Q | \| | \| | \| | V\| |
| 24+40 | 0.7462 | 0.02 | Q | \| | \| | \| | V\| |
| 24+45 | 0.7463 | 0.01 | Q | \| | \| | \| | V\| |
| 24+50 | 0.7464 | 0.01 | Q | \| | \| | \| | V\| |
| 24+55 | 0.7465 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 0 | 0.7465 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 5 | 0.7466 | 0.01 | Q | \| | \| | \| | V\| |
| 25+10 | 0.7466 | 0.01 | Q | \| | \| | \| | V\| |
| 25+15 | 0.7467 | 0.01 | Q | \| | \| | \| | V\| |
| 25+20 | 0.7467 | 0.01 | Q | \| | \| | \| | V\| |
| 25+25 | 0.7467 | 0.00 | Q | \| | \| | \| | V\| |
| 25+30 | 0.7468 | 0.00 | Q | \| | \| | \| | V\| |
| 25+35 | 0.7468 | 0.00 | Q | \| | \| | \| | V\| |
| 25+40 | 0.7468 | 0.00 | Q | \| | \| | \| | V\| |
| 25+45 | 0.7468 | 0.00 | Q | \| | \| | \| | V\| |
| 25+50 | 0.7468 | 0.00 | Q | \| | \| | \| | V\| |
| 25+55 | 0.7468 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 0 | 0.7469 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 0.7469 | 0.00 | Q | \| | \| | \| | V\| |
| 26+10 | 0.7469 | 0.00 | Q | \| | \| | \| | V\| |
| 26+15 | 0.7469 | 0.00 | Q | \| | \| | \| | V\| |
| 26+20 | 0.7469 | 0.00 | Q | \| | \| | \| | V\| |
| 26+25 | 0.7469 | 0.00 | Q | \| | \| | \| | V\| |
| 26+30 | 0.7469 | 0.00 | Q | \| | \| | \| | V\| |
| 26+35 | 0.7469 | 0.00 | Q | \| | \| | \| | V\| |
| 26+40 | 0.7469 | 0.00 | Q | \| | \| | \| | V\| |
| 26+45 | 0.7469 | 0.00 | Q | \| | \| | \| | V\| |
| 26+50 | 0.7469 | 0.00 | Q | \| | \| | \| | V\| |
| 26+55 | 0.7469 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 28
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 61.39 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 61.39 | 6 | 1.81 |
| Rainfall data for year 100 | | |
| 61.39 | 24 | 2.53 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 58.5 | 77.8 | 61.39 | 1.000 | 0.407 | 0.998 | 0.406 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.406

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 61.27 | 0.998 | 58.5 | 77.8 | 2.85 | 0.315 |
| 0.12 | 0.002 | 98.0 | 98.0 | 0.20 | 0.909 |

Area-averaged catchment yield fraction, Y = 0.316
Area-averaged low loss fraction, Yb = 0.684
User entry of time of concentration = 1.270 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 61.39(Ac.)
Catchment Lag time = 1.016 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 8.2021
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.406(In/Hr)
Average low loss rate fraction (Yb) = 0.684 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.634(In)
Specified peak 6-hour rainfall = 1.810(In)
Specified peak 24-hour rainfall = 2.530(In)

Rainfall depth area reduction factors:
Using a total area of 61.39(Ac.) (Ref: fig. E-4)

5-minute factor = 0.997 Adjusted rainfall = 0.658(In)
30-minute factor = 0.997 Adjusted rainfall = 1.126(In)
1-hour factor = 0.997 Adjusted rainfall = 1.386(In)
3-hour factor = 1.000 Adjusted rainfall = 1.634(In)
6-hour factor = 1.000 Adjusted rainfall = 1.810(In)
24-hour factor = 1.000 Adjusted rainfall = 2.530(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 742.44 (CFS)) | |
| 1 | 0.361 | 2.679 |
| 2 | 1.157 | 5.911 |
| 3 | 2.445 | 9.562 |
| 4 | 4.120 | 12.438 |
| 5 | 6.220 | 15.587 |
| 6 | 8.857 | 19.584 |
| 7 | 12.632 | 28.025 |
| 8 | 18.097 | 40.576 |
| 9 | 25.891 | 57.862 |
| 10 | 33.785 | 58.609 |
| 11 | 40.723 | 51.508 |
| 12 | 46.367 | 41.908 |
| 13 | 51.296 | 36.588 |

| | | |
|---|---|---|
| 14 | 55.534 | 31.466 |
| 15 | 58.969 | 25.507 |
| 16 | 61.948 | 22.118 |
| 17 | 64.513 | 19.044 |
| 18 | 66.794 | 16.929 |
| 19 | 68.909 | 15.706 |
| 20 | 70.880 | 14.632 |
| 21 | 72.629 | 12.982 |
| 22 | 74.226 | 11.857 |
| 23 | 75.680 | 10.795 |
| 24 | 77.082 | 10.411 |
| 25 | 78.404 | 9.814 |
| 26 | 79.508 | 8.200 |
| 27 | 80.591 | 8.038 |
| 28 | 81.642 | 7.802 |
| 29 | 82.546 | 6.713 |
| 30 | 83.432 | 6.577 |
| 31 | 84.304 | 6.478 |
| 32 | 85.103 | 5.930 |
| 33 | 85.891 | 5.846 |
| 34 | 86.663 | 5.737 |
| 35 | 87.338 | 5.007 |
| 36 | 87.994 | 4.872 |
| 37 | 88.635 | 4.762 |
| 38 | 89.155 | 3.856 |
| 39 | 89.647 | 3.654 |
| 40 | 90.137 | 3.636 |
| 41 | 90.602 | 3.458 |
| 42 | 91.062 | 3.410 |
| 43 | 91.517 | 3.384 |
| 44 | 91.926 | 3.033 |
| 45 | 92.320 | 2.923 |
| 46 | 92.712 | 2.913 |
| 47 | 93.081 | 2.743 |
| 48 | 93.442 | 2.679 |
| 49 | 93.801 | 2.663 |
| 50 | 94.104 | 2.250 |
| 51 | 94.383 | 2.070 |
| 52 | 94.662 | 2.070 |
| 53 | 94.941 | 2.070 |
| 54 | 95.220 | 2.070 |
| 55 | 95.498 | 2.066 |
| 56 | 95.736 | 1.765 |
| 57 | 95.949 | 1.583 |
| 58 | 96.162 | 1.583 |
| 59 | 96.375 | 1.583 |
| 60 | 96.589 | 1.583 |
| 61 | 96.802 | 1.583 |
| 62 | 96.980 | 1.321 |
| 63 | 97.127 | 1.096 |
| 64 | 97.275 | 1.096 |
| 65 | 97.423 | 1.096 |
| 66 | 97.570 | 1.096 |
| 67 | 97.718 | 1.096 |
| 68 | 97.836 | 0.879 |
| 69 | 97.918 | 0.610 |
| 70 | 98.000 | 0.609 |
| 71 | 98.082 | 0.609 |
| 72 | 98.165 | 0.609 |

| | | |
|---|---|---|
| 73 | 98.247 | 0.609 |
| 74 | 98.334 | 0.653 |
| 75 | 98.433 | 0.729 |
| 76 | 98.531 | 0.731 |
| 77 | 98.630 | 0.731 |
| 78 | 98.728 | 0.731 |
| 79 | 98.826 | 0.731 |
| 80 | 98.925 | 0.731 |
| 81 | 99.023 | 0.731 |
| 82 | 99.122 | 0.731 |
| 83 | 99.220 | 0.731 |
| 84 | 99.319 | 0.731 |
| 85 | 99.417 | 0.731 |
| 86 | 99.505 | 0.655 |
| 87 | 99.559 | 0.401 |
| 88 | 99.611 | 0.381 |
| 89 | 99.662 | 0.381 |
| 90 | 99.713 | 0.381 |
| 91 | 99.764 | 0.381 |
| 92 | 99.816 | 0.381 |
| 93 | 99.867 | 0.381 |
| 94 | 99.918 | 0.381 |
| 95 | 99.969 | 0.381 |
| 96 | 100.000 | 0.227 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6577 | 0.6577 |
| 2 | 0.8097 | 0.1520 |
| 3 | 0.9144 | 0.1047 |
| 4 | 0.9968 | 0.0824 |
| 5 | 1.0659 | 0.0690 |
| 6 | 1.1258 | 0.0599 |
| 7 | 1.1791 | 0.0533 |
| 8 | 1.2273 | 0.0482 |
| 9 | 1.2714 | 0.0441 |
| 10 | 1.3122 | 0.0408 |
| 11 | 1.3503 | 0.0381 |
| 12 | 1.3860 | 0.0357 |
| 13 | 1.4027 | 0.0167 |
| 14 | 1.4183 | 0.0156 |
| 15 | 1.4331 | 0.0147 |
| 16 | 1.4470 | 0.0139 |
| 17 | 1.4602 | 0.0132 |
| 18 | 1.4727 | 0.0125 |
| 19 | 1.4847 | 0.0120 |
| 20 | 1.4961 | 0.0114 |
| 21 | 1.5071 | 0.0110 |
| 22 | 1.5176 | 0.0105 |
| 23 | 1.5277 | 0.0101 |
| 24 | 1.5375 | 0.0098 |
| 25 | 1.5469 | 0.0094 |
| 26 | 1.5560 | 0.0091 |
| 27 | 1.5648 | 0.0088 |
| 28 | 1.5734 | 0.0085 |
| 29 | 1.5816 | 0.0083 |
| 30 | 1.5897 | 0.0080 |
| 31 | 1.5975 | 0.0078 |
| 32 | 1.6051 | 0.0076 |

| | | |
|---|---|---|
| 33 | 1.6125 | 0.0074 |
| 34 | 1.6197 | 0.0072 |
| 35 | 1.6268 | 0.0070 |
| 36 | 1.6337 | 0.0069 |
| 37 | 1.6403 | 0.0066 |
| 38 | 1.6468 | 0.0065 |
| 39 | 1.6531 | 0.0063 |
| 40 | 1.6593 | 0.0062 |
| 41 | 1.6653 | 0.0061 |
| 42 | 1.6713 | 0.0059 |
| 43 | 1.6771 | 0.0058 |
| 44 | 1.6828 | 0.0057 |
| 45 | 1.6884 | 0.0056 |
| 46 | 1.6939 | 0.0055 |
| 47 | 1.6992 | 0.0054 |
| 48 | 1.7045 | 0.0053 |
| 49 | 1.7097 | 0.0052 |
| 50 | 1.7148 | 0.0051 |
| 51 | 1.7198 | 0.0050 |
| 52 | 1.7248 | 0.0049 |
| 53 | 1.7296 | 0.0049 |
| 54 | 1.7344 | 0.0048 |
| 55 | 1.7391 | 0.0047 |
| 56 | 1.7438 | 0.0046 |
| 57 | 1.7483 | 0.0046 |
| 58 | 1.7528 | 0.0045 |
| 59 | 1.7572 | 0.0044 |
| 60 | 1.7616 | 0.0044 |
| 61 | 1.7659 | 0.0043 |
| 62 | 1.7701 | 0.0042 |
| 63 | 1.7743 | 0.0042 |
| 64 | 1.7785 | 0.0041 |
| 65 | 1.7825 | 0.0041 |
| 66 | 1.7866 | 0.0040 |
| 67 | 1.7905 | 0.0040 |
| 68 | 1.7944 | 0.0039 |
| 69 | 1.7983 | 0.0039 |
| 70 | 1.8021 | 0.0038 |
| 71 | 1.8059 | 0.0038 |
| 72 | 1.8097 | 0.0037 |
| 73 | 1.8157 | 0.0060 |
| 74 | 1.8217 | 0.0060 |
| 75 | 1.8276 | 0.0059 |
| 76 | 1.8335 | 0.0059 |
| 77 | 1.8393 | 0.0058 |
| 78 | 1.8450 | 0.0057 |
| 79 | 1.8507 | 0.0057 |
| 80 | 1.8563 | 0.0056 |
| 81 | 1.8619 | 0.0056 |
| 82 | 1.8674 | 0.0055 |
| 83 | 1.8729 | 0.0055 |
| 84 | 1.8783 | 0.0054 |
| 85 | 1.8837 | 0.0054 |
| 86 | 1.8890 | 0.0053 |
| 87 | 1.8943 | 0.0053 |
| 88 | 1.8996 | 0.0052 |
| 89 | 1.9048 | 0.0052 |
| 90 | 1.9099 | 0.0052 |
| 91 | 1.9150 | 0.0051 |

| | | |
|---|---|---|
| 92 | 1.9201 | 0.0051 |
| 93 | 1.9251 | 0.0050 |
| 94 | 1.9301 | 0.0050 |
| 95 | 1.9350 | 0.0049 |
| 96 | 1.9399 | 0.0049 |
| 97 | 1.9448 | 0.0049 |
| 98 | 1.9496 | 0.0048 |
| 99 | 1.9544 | 0.0048 |
| 100 | 1.9592 | 0.0048 |
| 101 | 1.9639 | 0.0047 |
| 102 | 1.9686 | 0.0047 |
| 103 | 1.9732 | 0.0046 |
| 104 | 1.9778 | 0.0046 |
| 105 | 1.9824 | 0.0046 |
| 106 | 1.9870 | 0.0045 |
| 107 | 1.9915 | 0.0045 |
| 108 | 1.9959 | 0.0045 |
| 109 | 2.0004 | 0.0045 |
| 110 | 2.0048 | 0.0044 |
| 111 | 2.0092 | 0.0044 |
| 112 | 2.0136 | 0.0044 |
| 113 | 2.0179 | 0.0043 |
| 114 | 2.0222 | 0.0043 |
| 115 | 2.0265 | 0.0043 |
| 116 | 2.0307 | 0.0042 |
| 117 | 2.0349 | 0.0042 |
| 118 | 2.0391 | 0.0042 |
| 119 | 2.0433 | 0.0042 |
| 120 | 2.0474 | 0.0041 |
| 121 | 2.0515 | 0.0041 |
| 122 | 2.0556 | 0.0041 |
| 123 | 2.0597 | 0.0041 |
| 124 | 2.0637 | 0.0040 |
| 125 | 2.0677 | 0.0040 |
| 126 | 2.0717 | 0.0040 |
| 127 | 2.0757 | 0.0040 |
| 128 | 2.0796 | 0.0039 |
| 129 | 2.0835 | 0.0039 |
| 130 | 2.0874 | 0.0039 |
| 131 | 2.0913 | 0.0039 |
| 132 | 2.0951 | 0.0038 |
| 133 | 2.0989 | 0.0038 |
| 134 | 2.1027 | 0.0038 |
| 135 | 2.1065 | 0.0038 |
| 136 | 2.1103 | 0.0038 |
| 137 | 2.1140 | 0.0037 |
| 138 | 2.1177 | 0.0037 |
| 139 | 2.1214 | 0.0037 |
| 140 | 2.1251 | 0.0037 |
| 141 | 2.1288 | 0.0037 |
| 142 | 2.1324 | 0.0036 |
| 143 | 2.1360 | 0.0036 |
| 144 | 2.1396 | 0.0036 |
| 145 | 2.1432 | 0.0036 |
| 146 | 2.1468 | 0.0036 |
| 147 | 2.1503 | 0.0035 |
| 148 | 2.1539 | 0.0035 |
| 149 | 2.1574 | 0.0035 |
| 150 | 2.1609 | 0.0035 |

| | | |
|---|---|---|
| 151 | 2.1643 | 0.0035 |
| 152 | 2.1678 | 0.0035 |
| 153 | 2.1712 | 0.0034 |
| 154 | 2.1746 | 0.0034 |
| 155 | 2.1780 | 0.0034 |
| 156 | 2.1814 | 0.0034 |
| 157 | 2.1848 | 0.0034 |
| 158 | 2.1882 | 0.0034 |
| 159 | 2.1915 | 0.0033 |
| 160 | 2.1948 | 0.0033 |
| 161 | 2.1981 | 0.0033 |
| 162 | 2.2014 | 0.0033 |
| 163 | 2.2047 | 0.0033 |
| 164 | 2.2080 | 0.0033 |
| 165 | 2.2112 | 0.0032 |
| 166 | 2.2144 | 0.0032 |
| 167 | 2.2176 | 0.0032 |
| 168 | 2.2209 | 0.0032 |
| 169 | 2.2240 | 0.0032 |
| 170 | 2.2272 | 0.0032 |
| 171 | 2.2304 | 0.0032 |
| 172 | 2.2335 | 0.0031 |
| 173 | 2.2366 | 0.0031 |
| 174 | 2.2398 | 0.0031 |
| 175 | 2.2429 | 0.0031 |
| 176 | 2.2460 | 0.0031 |
| 177 | 2.2490 | 0.0031 |
| 178 | 2.2521 | 0.0031 |
| 179 | 2.2552 | 0.0031 |
| 180 | 2.2582 | 0.0030 |
| 181 | 2.2612 | 0.0030 |
| 182 | 2.2642 | 0.0030 |
| 183 | 2.2672 | 0.0030 |
| 184 | 2.2702 | 0.0030 |
| 185 | 2.2732 | 0.0030 |
| 186 | 2.2762 | 0.0030 |
| 187 | 2.2791 | 0.0030 |
| 188 | 2.2820 | 0.0029 |
| 189 | 2.2850 | 0.0029 |
| 190 | 2.2879 | 0.0029 |
| 191 | 2.2908 | 0.0029 |
| 192 | 2.2937 | 0.0029 |
| 193 | 2.2966 | 0.0029 |
| 194 | 2.2994 | 0.0029 |
| 195 | 2.3023 | 0.0029 |
| 196 | 2.3051 | 0.0028 |
| 197 | 2.3080 | 0.0028 |
| 198 | 2.3108 | 0.0028 |
| 199 | 2.3136 | 0.0028 |
| 200 | 2.3164 | 0.0028 |
| 201 | 2.3192 | 0.0028 |
| 202 | 2.3220 | 0.0028 |
| 203 | 2.3248 | 0.0028 |
| 204 | 2.3275 | 0.0028 |
| 205 | 2.3303 | 0.0028 |
| 206 | 2.3330 | 0.0027 |
| 207 | 2.3358 | 0.0027 |
| 208 | 2.3385 | 0.0027 |
| 209 | 2.3412 | 0.0027 |

| | | |
|---|---|---|
| 210 | 2.3439 | 0.0027 |
| 211 | 2.3466 | 0.0027 |
| 212 | 2.3493 | 0.0027 |
| 213 | 2.3519 | 0.0027 |
| 214 | 2.3546 | 0.0027 |
| 215 | 2.3573 | 0.0027 |
| 216 | 2.3599 | 0.0026 |
| 217 | 2.3625 | 0.0026 |
| 218 | 2.3652 | 0.0026 |
| 219 | 2.3678 | 0.0026 |
| 220 | 2.3704 | 0.0026 |
| 221 | 2.3730 | 0.0026 |
| 222 | 2.3756 | 0.0026 |
| 223 | 2.3782 | 0.0026 |
| 224 | 2.3807 | 0.0026 |
| 225 | 2.3833 | 0.0026 |
| 226 | 2.3859 | 0.0026 |
| 227 | 2.3884 | 0.0025 |
| 228 | 2.3909 | 0.0025 |
| 229 | 2.3935 | 0.0025 |
| 230 | 2.3960 | 0.0025 |
| 231 | 2.3985 | 0.0025 |
| 232 | 2.4010 | 0.0025 |
| 233 | 2.4035 | 0.0025 |
| 234 | 2.4060 | 0.0025 |
| 235 | 2.4085 | 0.0025 |
| 236 | 2.4110 | 0.0025 |
| 237 | 2.4134 | 0.0025 |
| 238 | 2.4159 | 0.0025 |
| 239 | 2.4183 | 0.0024 |
| 240 | 2.4208 | 0.0024 |
| 241 | 2.4232 | 0.0024 |
| 242 | 2.4256 | 0.0024 |
| 243 | 2.4280 | 0.0024 |
| 244 | 2.4305 | 0.0024 |
| 245 | 2.4329 | 0.0024 |
| 246 | 2.4353 | 0.0024 |
| 247 | 2.4376 | 0.0024 |
| 248 | 2.4400 | 0.0024 |
| 249 | 2.4424 | 0.0024 |
| 250 | 2.4448 | 0.0024 |
| 251 | 2.4471 | 0.0024 |
| 252 | 2.4495 | 0.0024 |
| 253 | 2.4518 | 0.0023 |
| 254 | 2.4542 | 0.0023 |
| 255 | 2.4565 | 0.0023 |
| 256 | 2.4588 | 0.0023 |
| 257 | 2.4611 | 0.0023 |
| 258 | 2.4634 | 0.0023 |
| 259 | 2.4657 | 0.0023 |
| 260 | 2.4680 | 0.0023 |
| 261 | 2.4703 | 0.0023 |
| 262 | 2.4726 | 0.0023 |
| 263 | 2.4749 | 0.0023 |
| 264 | 2.4772 | 0.0023 |
| 265 | 2.4794 | 0.0023 |
| 266 | 2.4817 | 0.0023 |
| 267 | 2.4839 | 0.0023 |
| 268 | 2.4862 | 0.0022 |

| | | |
|---|---|---|
| 269 | 2.4884 | 0.0022 |
| 270 | 2.4907 | 0.0022 |
| 271 | 2.4929 | 0.0022 |
| 272 | 2.4951 | 0.0022 |
| 273 | 2.4973 | 0.0022 |
| 274 | 2.4995 | 0.0022 |
| 275 | 2.5017 | 0.0022 |
| 276 | 2.5039 | 0.0022 |
| 277 | 2.5061 | 0.0022 |
| 278 | 2.5083 | 0.0022 |
| 279 | 2.5105 | 0.0022 |
| 280 | 2.5126 | 0.0022 |
| 281 | 2.5148 | 0.0022 |
| 282 | 2.5170 | 0.0022 |
| 283 | 2.5191 | 0.0022 |
| 284 | 2.5213 | 0.0021 |
| 285 | 2.5234 | 0.0021 |
| 286 | 2.5255 | 0.0021 |
| 287 | 2.5277 | 0.0021 |
| 288 | 2.5298 | 0.0021 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0021 | 0.0015 | 0.0007 |
| 2 | 0.0021 | 0.0015 | 0.0007 |
| 3 | 0.0021 | 0.0015 | 0.0007 |
| 4 | 0.0021 | 0.0015 | 0.0007 |
| 5 | 0.0022 | 0.0015 | 0.0007 |
| 6 | 0.0022 | 0.0015 | 0.0007 |
| 7 | 0.0022 | 0.0015 | 0.0007 |
| 8 | 0.0022 | 0.0015 | 0.0007 |
| 9 | 0.0022 | 0.0015 | 0.0007 |
| 10 | 0.0022 | 0.0015 | 0.0007 |
| 11 | 0.0022 | 0.0015 | 0.0007 |
| 12 | 0.0022 | 0.0015 | 0.0007 |
| 13 | 0.0022 | 0.0015 | 0.0007 |
| 14 | 0.0022 | 0.0015 | 0.0007 |
| 15 | 0.0023 | 0.0015 | 0.0007 |
| 16 | 0.0023 | 0.0015 | 0.0007 |
| 17 | 0.0023 | 0.0016 | 0.0007 |
| 18 | 0.0023 | 0.0016 | 0.0007 |
| 19 | 0.0023 | 0.0016 | 0.0007 |
| 20 | 0.0023 | 0.0016 | 0.0007 |
| 21 | 0.0023 | 0.0016 | 0.0007 |
| 22 | 0.0023 | 0.0016 | 0.0007 |
| 23 | 0.0023 | 0.0016 | 0.0007 |
| 24 | 0.0023 | 0.0016 | 0.0007 |
| 25 | 0.0024 | 0.0016 | 0.0007 |
| 26 | 0.0024 | 0.0016 | 0.0007 |
| 27 | 0.0024 | 0.0016 | 0.0008 |
| 28 | 0.0024 | 0.0016 | 0.0008 |
| 29 | 0.0024 | 0.0016 | 0.0008 |
| 30 | 0.0024 | 0.0016 | 0.0008 |
| 31 | 0.0024 | 0.0017 | 0.0008 |
| 32 | 0.0024 | 0.0017 | 0.0008 |
| 33 | 0.0024 | 0.0017 | 0.0008 |
| 34 | 0.0024 | 0.0017 | 0.0008 |

| | | | |
|---|---|---|---|
| 35 | 0.0025 | 0.0017 | 0.0008 |
| 36 | 0.0025 | 0.0017 | 0.0008 |
| 37 | 0.0025 | 0.0017 | 0.0008 |
| 38 | 0.0025 | 0.0017 | 0.0008 |
| 39 | 0.0025 | 0.0017 | 0.0008 |
| 40 | 0.0025 | 0.0017 | 0.0008 |
| 41 | 0.0025 | 0.0017 | 0.0008 |
| 42 | 0.0025 | 0.0017 | 0.0008 |
| 43 | 0.0026 | 0.0018 | 0.0008 |
| 44 | 0.0026 | 0.0018 | 0.0008 |
| 45 | 0.0026 | 0.0018 | 0.0008 |
| 46 | 0.0026 | 0.0018 | 0.0008 |
| 47 | 0.0026 | 0.0018 | 0.0008 |
| 48 | 0.0026 | 0.0018 | 0.0008 |
| 49 | 0.0026 | 0.0018 | 0.0008 |
| 50 | 0.0027 | 0.0018 | 0.0008 |
| 51 | 0.0027 | 0.0018 | 0.0008 |
| 52 | 0.0027 | 0.0018 | 0.0008 |
| 53 | 0.0027 | 0.0018 | 0.0009 |
| 54 | 0.0027 | 0.0019 | 0.0009 |
| 55 | 0.0027 | 0.0019 | 0.0009 |
| 56 | 0.0027 | 0.0019 | 0.0009 |
| 57 | 0.0028 | 0.0019 | 0.0009 |
| 58 | 0.0028 | 0.0019 | 0.0009 |
| 59 | 0.0028 | 0.0019 | 0.0009 |
| 60 | 0.0028 | 0.0019 | 0.0009 |
| 61 | 0.0028 | 0.0019 | 0.0009 |
| 62 | 0.0028 | 0.0019 | 0.0009 |
| 63 | 0.0029 | 0.0020 | 0.0009 |
| 64 | 0.0029 | 0.0020 | 0.0009 |
| 65 | 0.0029 | 0.0020 | 0.0009 |
| 66 | 0.0029 | 0.0020 | 0.0009 |
| 67 | 0.0029 | 0.0020 | 0.0009 |
| 68 | 0.0029 | 0.0020 | 0.0009 |
| 69 | 0.0030 | 0.0020 | 0.0009 |
| 70 | 0.0030 | 0.0020 | 0.0009 |
| 71 | 0.0030 | 0.0021 | 0.0009 |
| 72 | 0.0030 | 0.0021 | 0.0010 |
| 73 | 0.0030 | 0.0021 | 0.0010 |
| 74 | 0.0031 | 0.0021 | 0.0010 |
| 75 | 0.0031 | 0.0021 | 0.0010 |
| 76 | 0.0031 | 0.0021 | 0.0010 |
| 77 | 0.0031 | 0.0021 | 0.0010 |
| 78 | 0.0031 | 0.0021 | 0.0010 |
| 79 | 0.0032 | 0.0022 | 0.0010 |
| 80 | 0.0032 | 0.0022 | 0.0010 |
| 81 | 0.0032 | 0.0022 | 0.0010 |
| 82 | 0.0032 | 0.0022 | 0.0010 |
| 83 | 0.0032 | 0.0022 | 0.0010 |
| 84 | 0.0033 | 0.0022 | 0.0010 |
| 85 | 0.0033 | 0.0022 | 0.0010 |
| 86 | 0.0033 | 0.0023 | 0.0010 |
| 87 | 0.0033 | 0.0023 | 0.0011 |
| 88 | 0.0034 | 0.0023 | 0.0011 |
| 89 | 0.0034 | 0.0023 | 0.0011 |
| 90 | 0.0034 | 0.0023 | 0.0011 |
| 91 | 0.0034 | 0.0023 | 0.0011 |
| 92 | 0.0035 | 0.0024 | 0.0011 |
| 93 | 0.0035 | 0.0024 | 0.0011 |

| | | | |
|---|---|---|---|
| 94 | 0.0035 | 0.0024 | 0.0011 |
| 95 | 0.0035 | 0.0024 | 0.0011 |
| 96 | 0.0036 | 0.0024 | 0.0011 |
| 97 | 0.0036 | 0.0025 | 0.0011 |
| 98 | 0.0036 | 0.0025 | 0.0011 |
| 99 | 0.0037 | 0.0025 | 0.0012 |
| 100 | 0.0037 | 0.0025 | 0.0012 |
| 101 | 0.0037 | 0.0025 | 0.0012 |
| 102 | 0.0037 | 0.0026 | 0.0012 |
| 103 | 0.0038 | 0.0026 | 0.0012 |
| 104 | 0.0038 | 0.0026 | 0.0012 |
| 105 | 0.0038 | 0.0026 | 0.0012 |
| 106 | 0.0039 | 0.0026 | 0.0012 |
| 107 | 0.0039 | 0.0027 | 0.0012 |
| 108 | 0.0039 | 0.0027 | 0.0012 |
| 109 | 0.0040 | 0.0027 | 0.0013 |
| 110 | 0.0040 | 0.0027 | 0.0013 |
| 111 | 0.0041 | 0.0028 | 0.0013 |
| 112 | 0.0041 | 0.0028 | 0.0013 |
| 113 | 0.0041 | 0.0028 | 0.0013 |
| 114 | 0.0042 | 0.0028 | 0.0013 |
| 115 | 0.0042 | 0.0029 | 0.0013 |
| 116 | 0.0042 | 0.0029 | 0.0013 |
| 117 | 0.0043 | 0.0029 | 0.0014 |
| 118 | 0.0043 | 0.0030 | 0.0014 |
| 119 | 0.0044 | 0.0030 | 0.0014 |
| 120 | 0.0044 | 0.0030 | 0.0014 |
| 121 | 0.0045 | 0.0031 | 0.0014 |
| 122 | 0.0045 | 0.0031 | 0.0014 |
| 123 | 0.0046 | 0.0031 | 0.0014 |
| 124 | 0.0046 | 0.0032 | 0.0015 |
| 125 | 0.0047 | 0.0032 | 0.0015 |
| 126 | 0.0047 | 0.0032 | 0.0015 |
| 127 | 0.0048 | 0.0033 | 0.0015 |
| 128 | 0.0048 | 0.0033 | 0.0015 |
| 129 | 0.0049 | 0.0034 | 0.0016 |
| 130 | 0.0049 | 0.0034 | 0.0016 |
| 131 | 0.0050 | 0.0034 | 0.0016 |
| 132 | 0.0051 | 0.0035 | 0.0016 |
| 133 | 0.0052 | 0.0035 | 0.0016 |
| 134 | 0.0052 | 0.0036 | 0.0016 |
| 135 | 0.0053 | 0.0036 | 0.0017 |
| 136 | 0.0053 | 0.0036 | 0.0017 |
| 137 | 0.0054 | 0.0037 | 0.0017 |
| 138 | 0.0055 | 0.0037 | 0.0017 |
| 139 | 0.0056 | 0.0038 | 0.0018 |
| 140 | 0.0056 | 0.0039 | 0.0018 |
| 141 | 0.0057 | 0.0039 | 0.0018 |
| 142 | 0.0058 | 0.0040 | 0.0018 |
| 143 | 0.0059 | 0.0040 | 0.0019 |
| 144 | 0.0060 | 0.0041 | 0.0019 |
| 145 | 0.0037 | 0.0026 | 0.0012 |
| 146 | 0.0038 | 0.0026 | 0.0012 |
| 147 | 0.0039 | 0.0026 | 0.0012 |
| 148 | 0.0039 | 0.0027 | 0.0012 |
| 149 | 0.0040 | 0.0027 | 0.0013 |
| 150 | 0.0041 | 0.0028 | 0.0013 |
| 151 | 0.0042 | 0.0029 | 0.0013 |
| 152 | 0.0042 | 0.0029 | 0.0013 |

| | | | |
|---|---|---|---|
| 153 | 0.0044 | 0.0030 | 0.0014 |
| 154 | 0.0044 | 0.0030 | 0.0014 |
| 155 | 0.0046 | 0.0031 | 0.0014 |
| 156 | 0.0046 | 0.0032 | 0.0015 |
| 157 | 0.0048 | 0.0033 | 0.0015 |
| 158 | 0.0049 | 0.0033 | 0.0015 |
| 159 | 0.0050 | 0.0034 | 0.0016 |
| 160 | 0.0051 | 0.0035 | 0.0016 |
| 161 | 0.0053 | 0.0036 | 0.0017 |
| 162 | 0.0054 | 0.0037 | 0.0017 |
| 163 | 0.0056 | 0.0038 | 0.0018 |
| 164 | 0.0057 | 0.0039 | 0.0018 |
| 165 | 0.0059 | 0.0041 | 0.0019 |
| 166 | 0.0061 | 0.0041 | 0.0019 |
| 167 | 0.0063 | 0.0043 | 0.0020 |
| 168 | 0.0065 | 0.0044 | 0.0020 |
| 169 | 0.0069 | 0.0047 | 0.0022 |
| 170 | 0.0070 | 0.0048 | 0.0022 |
| 171 | 0.0074 | 0.0051 | 0.0023 |
| 172 | 0.0076 | 0.0052 | 0.0024 |
| 173 | 0.0080 | 0.0055 | 0.0025 |
| 174 | 0.0083 | 0.0057 | 0.0026 |
| 175 | 0.0088 | 0.0060 | 0.0028 |
| 176 | 0.0091 | 0.0062 | 0.0029 |
| 177 | 0.0098 | 0.0067 | 0.0031 |
| 178 | 0.0101 | 0.0069 | 0.0032 |
| 179 | 0.0110 | 0.0075 | 0.0035 |
| 180 | 0.0114 | 0.0078 | 0.0036 |
| 181 | 0.0125 | 0.0086 | 0.0040 |
| 182 | 0.0132 | 0.0090 | 0.0042 |
| 183 | 0.0147 | 0.0101 | 0.0047 |
| 184 | 0.0156 | 0.0107 | 0.0050 |
| 185 | 0.0357 | 0.0244 | 0.0113 |
| 186 | 0.0381 | 0.0260 | 0.0120 |
| 187 | 0.0441 | 0.0302 | 0.0140 |
| 188 | 0.0482 | 0.0329 | 0.0153 |
| 189 | 0.0599 | 0.0338 | 0.0261 |
| 190 | 0.0690 | 0.0338 | 0.0352 |
| 191 | 0.1047 | 0.0338 | 0.0709 |
| 192 | 0.1520 | 0.0338 | 0.1182 |
| 193 | 0.6577 | 0.0338 | 0.6238 |
| 194 | 0.0824 | 0.0338 | 0.0486 |
| 195 | 0.0533 | 0.0338 | 0.0194 |
| 196 | 0.0408 | 0.0279 | 0.0129 |
| 197 | 0.0167 | 0.0114 | 0.0053 |
| 198 | 0.0139 | 0.0095 | 0.0044 |
| 199 | 0.0120 | 0.0082 | 0.0038 |
| 200 | 0.0105 | 0.0072 | 0.0033 |
| 201 | 0.0094 | 0.0064 | 0.0030 |
| 202 | 0.0085 | 0.0058 | 0.0027 |
| 203 | 0.0078 | 0.0053 | 0.0025 |
| 204 | 0.0072 | 0.0049 | 0.0023 |
| 205 | 0.0066 | 0.0045 | 0.0021 |
| 206 | 0.0062 | 0.0042 | 0.0020 |
| 207 | 0.0058 | 0.0040 | 0.0018 |
| 208 | 0.0055 | 0.0038 | 0.0017 |
| 209 | 0.0052 | 0.0036 | 0.0016 |
| 210 | 0.0049 | 0.0034 | 0.0016 |
| 211 | 0.0047 | 0.0032 | 0.0015 |

| | | | |
|---|---|---|---|
| 212 | 0.0045 | 0.0031 | 0.0014 |
| 213 | 0.0043 | 0.0029 | 0.0014 |
| 214 | 0.0041 | 0.0028 | 0.0013 |
| 215 | 0.0040 | 0.0027 | 0.0013 |
| 216 | 0.0038 | 0.0026 | 0.0012 |
| 217 | 0.0060 | 0.0041 | 0.0019 |
| 218 | 0.0059 | 0.0040 | 0.0019 |
| 219 | 0.0057 | 0.0039 | 0.0018 |
| 220 | 0.0055 | 0.0038 | 0.0017 |
| 221 | 0.0054 | 0.0037 | 0.0017 |
| 222 | 0.0052 | 0.0036 | 0.0017 |
| 223 | 0.0051 | 0.0035 | 0.0016 |
| 224 | 0.0050 | 0.0034 | 0.0016 |
| 225 | 0.0049 | 0.0033 | 0.0015 |
| 226 | 0.0048 | 0.0032 | 0.0015 |
| 227 | 0.0046 | 0.0032 | 0.0015 |
| 228 | 0.0045 | 0.0031 | 0.0014 |
| 229 | 0.0045 | 0.0030 | 0.0014 |
| 230 | 0.0044 | 0.0030 | 0.0014 |
| 231 | 0.0043 | 0.0029 | 0.0014 |
| 232 | 0.0042 | 0.0029 | 0.0013 |
| 233 | 0.0041 | 0.0028 | 0.0013 |
| 234 | 0.0040 | 0.0028 | 0.0013 |
| 235 | 0.0040 | 0.0027 | 0.0013 |
| 236 | 0.0039 | 0.0027 | 0.0012 |
| 237 | 0.0038 | 0.0026 | 0.0012 |
| 238 | 0.0038 | 0.0026 | 0.0012 |
| 239 | 0.0037 | 0.0025 | 0.0012 |
| 240 | 0.0036 | 0.0025 | 0.0012 |
| 241 | 0.0036 | 0.0024 | 0.0011 |
| 242 | 0.0035 | 0.0024 | 0.0011 |
| 243 | 0.0035 | 0.0024 | 0.0011 |
| 244 | 0.0034 | 0.0023 | 0.0011 |
| 245 | 0.0034 | 0.0023 | 0.0011 |
| 246 | 0.0033 | 0.0023 | 0.0011 |
| 247 | 0.0033 | 0.0022 | 0.0010 |
| 248 | 0.0032 | 0.0022 | 0.0010 |
| 249 | 0.0032 | 0.0022 | 0.0010 |
| 250 | 0.0031 | 0.0021 | 0.0010 |
| 251 | 0.0031 | 0.0021 | 0.0010 |
| 252 | 0.0031 | 0.0021 | 0.0010 |
| 253 | 0.0030 | 0.0021 | 0.0010 |
| 254 | 0.0030 | 0.0020 | 0.0009 |
| 255 | 0.0030 | 0.0020 | 0.0009 |
| 256 | 0.0029 | 0.0020 | 0.0009 |
| 257 | 0.0029 | 0.0020 | 0.0009 |
| 258 | 0.0028 | 0.0019 | 0.0009 |
| 259 | 0.0028 | 0.0019 | 0.0009 |
| 260 | 0.0028 | 0.0019 | 0.0009 |
| 261 | 0.0028 | 0.0019 | 0.0009 |
| 262 | 0.0027 | 0.0019 | 0.0009 |
| 263 | 0.0027 | 0.0018 | 0.0009 |
| 264 | 0.0027 | 0.0018 | 0.0008 |
| 265 | 0.0026 | 0.0018 | 0.0008 |
| 266 | 0.0026 | 0.0018 | 0.0008 |
| 267 | 0.0026 | 0.0018 | 0.0008 |
| 268 | 0.0026 | 0.0017 | 0.0008 |
| 269 | 0.0025 | 0.0017 | 0.0008 |
| 270 | 0.0025 | 0.0017 | 0.0008 |

| | | | |
|---|---|---|---|
| 271 | 0.0025 | 0.0017 | 0.0008 |
| 272 | 0.0025 | 0.0017 | 0.0008 |
| 273 | 0.0024 | 0.0017 | 0.0008 |
| 274 | 0.0024 | 0.0016 | 0.0008 |
| 275 | 0.0024 | 0.0016 | 0.0008 |
| 276 | 0.0024 | 0.0016 | 0.0007 |
| 277 | 0.0023 | 0.0016 | 0.0007 |
| 278 | 0.0023 | 0.0016 | 0.0007 |
| 279 | 0.0023 | 0.0016 | 0.0007 |
| 280 | 0.0023 | 0.0016 | 0.0007 |
| 281 | 0.0023 | 0.0015 | 0.0007 |
| 282 | 0.0022 | 0.0015 | 0.0007 |
| 283 | 0.0022 | 0.0015 | 0.0007 |
| 284 | 0.0022 | 0.0015 | 0.0007 |
| 285 | 0.0022 | 0.0015 | 0.0007 |
| 286 | 0.0022 | 0.0015 | 0.0007 |
| 287 | 0.0022 | 0.0015 | 0.0007 |
| 288 | 0.0021 | 0.0015 | 0.0007 |

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Total soil rain loss = 1.16(In)
Total effective rainfall = 1.37(In)
Peak flow rate in flood hydrograph = 54.11(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 15.0 | 30.0 | 45.0 | 60.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+15 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+20 | 0.0003 | 0.02 | Q | \| | \| | \| | \| |
| 0+25 | 0.0005 | 0.03 | Q | \| | \| | \| | \| |
| 0+30 | 0.0008 | 0.04 | Q | \| | \| | \| | \| |
| 0+35 | 0.0012 | 0.06 | Q | \| | \| | \| | \| |
| 0+40 | 0.0019 | 0.09 | Q | \| | \| | \| | \| |
| 0+45 | 0.0028 | 0.13 | Q | \| | \| | \| | \| |
| 0+50 | 0.0039 | 0.17 | Q | \| | \| | \| | \| |
| 0+55 | 0.0053 | 0.21 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0070 | 0.23 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0088 | 0.26 | Q | \| | \| | \| | \| |
| 1+10 | 0.0107 | 0.28 | Q | \| | \| | \| | \| |
| 1+15 | 0.0128 | 0.30 | Q | \| | \| | \| | \| |
| 1+20 | 0.0150 | 0.32 | Q | \| | \| | \| | \| |
| 1+25 | 0.0172 | 0.33 | Q | \| | \| | \| | \| |
| 1+30 | 0.0196 | 0.34 | Q | \| | \| | \| | \| |
| 1+35 | 0.0220 | 0.36 | Q | \| | \| | \| | \| |
| 1+40 | 0.0246 | 0.37 | Q | \| | \| | \| | \| |
| 1+45 | 0.0272 | 0.38 | Q | \| | \| | \| | \| |
| 1+50 | 0.0298 | 0.39 | Q | \| | \| | \| | \| |
| 1+55 | 0.0326 | 0.40 | Q | \| | \| | \| | \| |
| 2+ 0 | 0.0353 | 0.40 | Q | \| | \| | \| | \| |
| 2+ 5 | 0.0382 | 0.41 | Q | \| | \| | \| | \| |
| 2+10 | 0.0411 | 0.42 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+15 | 0.0440 | 0.43 | Q | | | | |
| 2+20 | 0.0470 | 0.43 | Q | | | | |
| 2+25 | 0.0500 | 0.44 | Q | | | | |
| 2+30 | 0.0531 | 0.45 | Q | | | | |
| 2+35 | 0.0562 | 0.45 | Q | | | | |
| 2+40 | 0.0594 | 0.46 | Q | | | | |
| 2+45 | 0.0626 | 0.46 | Q | | | | |
| 2+50 | 0.0658 | 0.47 | Q | | | | |
| 2+55 | 0.0691 | 0.48 | Q | | | | |
| 3+ 0 | 0.0724 | 0.48 | Q | | | | |
| 3+ 5 | 0.0758 | 0.49 | Q | | | | |
| 3+10 | 0.0792 | 0.49 | Q | | | | |
| 3+15 | 0.0826 | 0.50 | Q | | | | |
| 3+20 | 0.0860 | 0.50 | Q | | | | |
| 3+25 | 0.0895 | 0.51 | Q | | | | |
| 3+30 | 0.0930 | 0.51 | Q | | | | |
| 3+35 | 0.0966 | 0.52 | Q | | | | |
| 3+40 | 0.1002 | 0.52 | Q | | | | |
| 3+45 | 0.1038 | 0.52 | Q | | | | |
| 3+50 | 0.1074 | 0.53 | Q | | | | |
| 3+55 | 0.1111 | 0.53 | Q | | | | |
| 4+ 0 | 0.1148 | 0.54 | Q | | | | |
| 4+ 5 | 0.1185 | 0.54 | Q | | | | |
| 4+10 | 0.1223 | 0.55 | Q | | | | |
| 4+15 | 0.1261 | 0.55 | Q | | | | |
| 4+20 | 0.1299 | 0.55 | Q | | | | |
| 4+25 | 0.1337 | 0.56 | Q | | | | |
| 4+30 | 0.1376 | 0.56 | Q | | | | |
| 4+35 | 0.1415 | 0.57 | Q | | | | |
| 4+40 | 0.1454 | 0.57 | Q | | | | |
| 4+45 | 0.1494 | 0.57 | Q | | | | |
| 4+50 | 0.1534 | 0.58 | Q | | | | |
| 4+55 | 0.1574 | 0.58 | Q | | | | |
| 5+ 0 | 0.1614 | 0.59 | Q | | | | |
| 5+ 5 | 0.1655 | 0.59 | Q | | | | |
| 5+10 | 0.1696 | 0.59 | Q | | | | |
| 5+15 | 0.1737 | 0.60 | Q | | | | |
| 5+20 | 0.1778 | 0.60 | QV | | | | |
| 5+25 | 0.1820 | 0.61 | QV | | | | |
| 5+30 | 0.1862 | 0.61 | QV | | | | |
| 5+35 | 0.1904 | 0.61 | QV | | | | |
| 5+40 | 0.1947 | 0.62 | QV | | | | |
| 5+45 | 0.1990 | 0.62 | QV | | | | |
| 5+50 | 0.2033 | 0.63 | QV | | | | |
| 5+55 | 0.2076 | 0.63 | QV | | | | |
| 6+ 0 | 0.2120 | 0.63 | QV | | | | |
| 6+ 5 | 0.2164 | 0.64 | QV | | | | |
| 6+10 | 0.2208 | 0.64 | QV | | | | |
| 6+15 | 0.2252 | 0.65 | QV | | | | |
| 6+20 | 0.2297 | 0.65 | QV | | | | |
| 6+25 | 0.2342 | 0.65 | QV | | | | |
| 6+30 | 0.2387 | 0.66 | QV | | | | |
| 6+35 | 0.2433 | 0.66 | QV | | | | |
| 6+40 | 0.2479 | 0.67 | QV | | | | |
| 6+45 | 0.2525 | 0.67 | QV | | | | |
| 6+50 | 0.2572 | 0.68 | QV | | | | |
| 6+55 | 0.2619 | 0.68 | QV | | | | |
| 7+ 0 | 0.2666 | 0.69 | QV | | | | |
| 7+ 5 | 0.2713 | 0.69 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7+10 | 0.2761 | 0.69 | QV | | | | |
| 7+15 | 0.2809 | 0.70 | QV | | | | |
| 7+20 | 0.2858 | 0.70 | QV | | | | |
| 7+25 | 0.2907 | 0.71 | QV | | | | |
| 7+30 | 0.2956 | 0.71 | QV | | | | |
| 7+35 | 0.3005 | 0.72 | QV | | | | |
| 7+40 | 0.3055 | 0.72 | QV | | | | |
| 7+45 | 0.3105 | 0.73 | QV | | | | |
| 7+50 | 0.3156 | 0.73 | QV | | | | |
| 7+55 | 0.3207 | 0.74 | QV | | | | |
| 8+ 0 | 0.3258 | 0.74 | QV | | | | |
| 8+ 5 | 0.3310 | 0.75 | QV | | | | |
| 8+10 | 0.3361 | 0.75 | QV | | | | |
| 8+15 | 0.3414 | 0.76 | QV | | | | |
| 8+20 | 0.3466 | 0.76 | QV | | | | |
| 8+25 | 0.3519 | 0.77 | Q V | | | | |
| 8+30 | 0.3573 | 0.78 | Q V | | | | |
| 8+35 | 0.3627 | 0.78 | Q V | | | | |
| 8+40 | 0.3681 | 0.79 | Q V | | | | |
| 8+45 | 0.3735 | 0.79 | Q V | | | | |
| 8+50 | 0.3790 | 0.80 | Q V | | | | |
| 8+55 | 0.3846 | 0.80 | Q V | | | | |
| 9+ 0 | 0.3902 | 0.81 | Q V | | | | |
| 9+ 5 | 0.3958 | 0.82 | Q V | | | | |
| 9+10 | 0.4015 | 0.82 | Q V | | | | |
| 9+15 | 0.4072 | 0.83 | Q V | | | | |
| 9+20 | 0.4129 | 0.84 | Q V | | | | |
| 9+25 | 0.4187 | 0.84 | Q V | | | | |
| 9+30 | 0.4246 | 0.85 | Q V | | | | |
| 9+35 | 0.4305 | 0.86 | Q V | | | | |
| 9+40 | 0.4364 | 0.86 | Q V | | | | |
| 9+45 | 0.4424 | 0.87 | Q V | | | | |
| 9+50 | 0.4485 | 0.88 | Q V | | | | |
| 9+55 | 0.4546 | 0.89 | Q V | | | | |
| 10+ 0 | 0.4607 | 0.89 | Q V | | | | |
| 10+ 5 | 0.4669 | 0.90 | Q V | | | | |
| 10+10 | 0.4732 | 0.91 | Q V | | | | |
| 10+15 | 0.4795 | 0.92 | Q V | | | | |
| 10+20 | 0.4859 | 0.93 | Q V | | | | |
| 10+25 | 0.4923 | 0.93 | Q V | | | | |
| 10+30 | 0.4988 | 0.94 | Q V | | | | |
| 10+35 | 0.5054 | 0.95 | Q V | | | | |
| 10+40 | 0.5120 | 0.96 | Q V | | | | |
| 10+45 | 0.5187 | 0.97 | Q V | | | | |
| 10+50 | 0.5254 | 0.98 | Q  V | | | | |
| 10+55 | 0.5322 | 0.99 | Q  V | | | | |
| 11+ 0 | 0.5391 | 1.00 | Q  V | | | | |
| 11+ 5 | 0.5461 | 1.01 | Q  V | | | | |
| 11+10 | 0.5531 | 1.02 | Q  V | | | | |
| 11+15 | 0.5602 | 1.03 | Q  V | | | | |
| 11+20 | 0.5674 | 1.04 | Q  V | | | | |
| 11+25 | 0.5746 | 1.05 | Q  V | | | | |
| 11+30 | 0.5820 | 1.06 | Q  V | | | | |
| 11+35 | 0.5894 | 1.08 | Q  V | | | | |
| 11+40 | 0.5969 | 1.09 | Q  V | | | | |
| 11+45 | 0.6044 | 1.10 | Q  V | | | | |
| 11+50 | 0.6121 | 1.11 | Q  V | | | | |
| 11+55 | 0.6199 | 1.13 | Q  V | | | | |
| 12+ 0 | 0.6277 | 1.14 | Q  V | | | | |

```
12+ 5       0.6357      1.15  Q  V      |          |          |          |
12+10       0.6437      1.16  Q  V      |          |          |          |
12+15       0.6517      1.17  Q  V      |          |          |          |
12+20       0.6598      1.18  Q  V      |          |          |          |
12+25       0.6680      1.18  Q  V      |          |          |          |
12+30       0.6761      1.18  Q  V      |          |          |          |
12+35       0.6842      1.18  Q  V      |          |          |          |
12+40       0.6922      1.16  Q  V      |          |          |          |
12+45       0.7000      1.14  Q  V      |          |          |          |
12+50       0.7077      1.11  Q   V     |          |          |          |
12+55       0.7151      1.09  Q   V     |          |          |          |
13+ 0       0.7225      1.07  Q   V     |          |          |          |
13+ 5       0.7298      1.06  Q   V     |          |          |          |
13+10       0.7371      1.05  Q   V     |          |          |          |
13+15       0.7443      1.05  Q   V     |          |          |          |
13+20       0.7516      1.05  Q   V     |          |          |          |
13+25       0.7589      1.06  Q   V     |          |          |          |
13+30       0.7662      1.06  Q   V     |          |          |          |
13+35       0.7736      1.07  Q   V     |          |          |          |
13+40       0.7810      1.08  Q   V     |          |          |          |
13+45       0.7886      1.09  Q   V     |          |          |          |
13+50       0.7962      1.11  Q   V     |          |          |          |
13+55       0.8039      1.12  Q   V     |          |          |          |
14+ 0       0.8118      1.14  Q   V     |          |          |          |
14+ 5       0.8198      1.16  Q   V     |          |          |          |
14+10       0.8279      1.18  Q   V     |          |          |          |
14+15       0.8361      1.20  Q   V     |          |          |          |
14+20       0.8446      1.22  Q   V     |          |          |          |
14+25       0.8532      1.25  Q   V     |          |          |          |
14+30       0.8620      1.28  Q   V     |          |          |          |
14+35       0.8711      1.31  Q   V     |          |          |          |
14+40       0.8803      1.35  Q    V    |          |          |          |
14+45       0.8899      1.39  Q    V    |          |          |          |
14+50       0.8997      1.43  Q    V    |          |          |          |
14+55       0.9098      1.47  Q    V    |          |          |          |
15+ 0       0.9203      1.52  |Q   V    |          |          |          |
15+ 5       0.9311      1.57  |Q   V    |          |          |          |
15+10       0.9424      1.63  |Q   V    |          |          |          |
15+15       0.9541      1.70  |Q   V    |          |          |          |
15+20       0.9663      1.77  |Q   V    |          |          |          |
15+25       0.9791      1.87  |Q   V    |          |          |          |
15+30       0.9928      1.99  |Q   V    |          |          |          |
15+35       1.0077      2.15  |Q   V    |          |          |          |
15+40       1.0239      2.35  |Q   V    |          |          |          |
15+45       1.0419      2.62  |Q   V    |          |          |          |
15+50       1.0625      2.99  |Q    V   |          |          |          |
15+55       1.0873      3.59  | Q   V   |          |          |          |
16+ 0       1.1190      4.60  |  Q  V   |          |          |          |
16+ 5       1.1701      7.43  |   Q V   |          |          |          |
16+10       1.2441     10.74  |      Q  |          |          |          |
16+15       1.3427     14.33  |      V Q|          |          |          |
16+20       1.4640     17.61  |       V |Q         |          |          |
16+25       1.6115     21.42  |        V|   Q      |          |          |
16+30       1.7922     26.24  |         V      Q  |          |          |
16+35       2.0261     33.96  |         |V         | Q        |          |
16+40       2.3266     43.63  |         |  V       |        Q |          |
16+45       2.6993     54.11  |         |    V     |          |     Q    |
16+50       3.0695     53.76  |         |      V   |          |    Q     |
16+55       3.3997     47.95  |         |        V |          |Q         |
```

| | | | |
|---|---|---|---|
| 17+ 0 | 3.6791 | 40.57 | \|  \|  \|V  Q  \|  \| |
| 17+ 5 | 3.9239 | 35.55 | \|  \|  \| VQ  \|  \| |
| 17+10 | 4.1361 | 30.81 | \|  \|  Q  V  \|  \| |
| 17+15 | 4.3147 | 25.94 | \|  \|  Q  \|  V  \|  \| |
| 17+20 | 4.4716 | 22.77 | \|  \|  Q  \|  V  \|  \| |
| 17+25 | 4.6098 | 20.07 | \|  \|  Q  \|  V  \|  \| |
| 17+30 | 4.7345 | 18.11 | \|  \|  Q  \|  V  \|  \| |
| 17+35 | 4.8500 | 16.77 | \|  \| Q  \|  V  \|  \| |
| 17+40 | 4.9571 | 15.56 | \|  \|  Q  \|  V  \|  \| |
| 17+45 | 5.0543 | 14.11 | \|  \|  Q\|  \|  V  \|  \| |
| 17+50 | 5.1440 | 13.01 | \|  \|  Q  \|  \|  V\|  \| |
| 17+55 | 5.2269 | 12.04 | \|  \|  Q  \|  \|  V\|  \| |
| 18+ 0 | 5.3057 | 11.44 | \|  \|  Q  \|  \|  V  \|  \| |
| 18+ 5 | 5.3796 | 10.73 | \|  \|  Q  \|  \|  V  \|  \| |
| 18+10 | 5.4453 | 9.55 | \|  \|  Q  \|  \|  \|V  \| |
| 18+15 | 5.5086 | 9.19 | \|  \|  Q  \|  \|  \|V  \| |
| 18+20 | 5.5692 | 8.79 | \|  \|  Q  \|  \|  \|V  \| |
| 18+25 | 5.6242 | 8.00 | \|  \|  Q  \|  \|  \| V  \| |
| 18+30 | 5.6776 | 7.75 | \|  \|  Q  \|  \|  \| V  \| |
| 18+35 | 5.7295 | 7.53 | \|  \|  Q  \|  \|  \| V  \| |
| 18+40 | 5.7784 | 7.10 | \|  \|  Q  \|  \|  \|  V  \| |
| 18+45 | 5.8262 | 6.94 | \|  \|  Q  \|  \|  \|  V  \| |
| 18+50 | 5.8726 | 6.74 | \|  \|  Q  \|  \|  \|  V  \| |
| 18+55 | 5.9154 | 6.21 | \|  \|  Q  \|  \|  \|  V  \| |
| 19+ 0 | 5.9566 | 5.99 | \|  \|  Q  \|  \|  \|  \|  V  \| |
| 19+ 5 | 5.9963 | 5.77 | \|  \|  Q  \|  \|  \|  \|  V  \| |
| 19+10 | 6.0317 | 5.14 | \|  \|  Q  \|  \|  \|  \|  V  \| |
| 19+15 | 6.0657 | 4.93 | \|  \|  Q  \|  \|  \|  \|  V  \| |
| 19+20 | 6.0990 | 4.83 | \|  \|  Q  \|  \|  \|  \|  V  \| |
| 19+25 | 6.1311 | 4.67 | \|  \|  Q  \|  \|  \|  \|  V  \| |
| 19+30 | 6.1625 | 4.57 | \|  \|  Q  \|  \|  \|  \|  V  \| |
| 19+35 | 6.1933 | 4.46 | \| Q  \|  \|  \|  \|  V  \| |
| 19+40 | 6.2222 | 4.20 | \| Q  \|  \|  \|  \|  V  \| |
| 19+45 | 6.2502 | 4.07 | \| Q  \|  \|  \|  \|  V  \| |
| 19+50 | 6.2777 | 3.99 | \| Q  \|  \|  \|  \|  V  \| |
| 19+55 | 6.3041 | 3.83 | \| Q  \|  \|  \|  \|  V  \| |
| 20+ 0 | 6.3298 | 3.73 | \| Q  \|  \|  \|  \|  V  \| |
| 20+ 5 | 6.3547 | 3.63 | \| Q  \|  \|  \|  \|  V  \| |
| 20+10 | 6.3776 | 3.32 | \| Q  \|  \|  \|  \|  V  \| |
| 20+15 | 6.3995 | 3.17 | \| Q  \|  \|  \|  \|  V  \| |
| 20+20 | 6.4210 | 3.12 | \| Q  \|  \|  \|  \|  V  \| |
| 20+25 | 6.4422 | 3.08 | \| Q  \|  \|  \|  \|  V  \| |
| 20+30 | 6.4631 | 3.03 | \| Q  \|  \|  \|  \|  V  \| |
| 20+35 | 6.4835 | 2.96 | \|Q  \|  \|  \|  \|  V  \| |
| 20+40 | 6.5023 | 2.73 | \|Q  \|  \|  \|  \|  V  \| |
| 20+45 | 6.5201 | 2.58 | \|Q  \|  \|  \|  \|  V  \| |
| 20+50 | 6.5377 | 2.55 | \|Q  \|  \|  \|  \|  V  \| |
| 20+55 | 6.5550 | 2.51 | \|Q  \|  \|  \|  \|  V  \| |
| 21+ 0 | 6.5720 | 2.47 | \|Q  \|  \|  \|  \|  V  \| |
| 21+ 5 | 6.5885 | 2.40 | \|Q  \|  \|  \|  \|  V  \| |
| 21+10 | 6.6036 | 2.19 | \|Q  \|  \|  \|  \|  V  \| |
| 21+15 | 6.6175 | 2.02 | \|Q  \|  \|  \|  \|  V  \| |
| 21+20 | 6.6312 | 1.99 | \|Q  \|  \|  \|  \|  V  \| |
| 21+25 | 6.6447 | 1.95 | \|Q  \|  \|  \|  \|  V  \| |
| 21+30 | 6.6579 | 1.91 | \|Q  \|  \|  \|  \|  V  \| |
| 21+35 | 6.6707 | 1.86 | \|Q  \|  \|  \|  \|  V  \| |
| 21+40 | 6.6823 | 1.68 | \|Q  \|  \|  \|  \|  V  \| |
| 21+45 | 6.6925 | 1.49 | Q  \|  \|  \|  \|  V  \| |
| 21+50 | 6.7026 | 1.47 | Q  \|  \|  \|  \|  V  \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+55 | 6.7126 | 1.45 | Q | \| | \| | \| | V \| |
| 22+ 0 | 6.7226 | 1.44 | Q | \| | \| | \| | V \| |
| 22+ 5 | 6.7325 | 1.44 | Q | \| | \| | \| | V \| |
| 22+10 | 6.7426 | 1.47 | Q | \| | \| | \| | V \| |
| 22+15 | 6.7530 | 1.50 | \|Q | \| | \| | \| | V \| |
| 22+20 | 6.7633 | 1.50 | Q | \| | \| | \| | V \| |
| 22+25 | 6.7735 | 1.49 | Q | \| | \| | \| | V \| |
| 22+30 | 6.7837 | 1.48 | Q | \| | \| | \| | V \| |
| 22+35 | 6.7938 | 1.47 | Q | \| | \| | \| | V \| |
| 22+40 | 6.8038 | 1.45 | Q | \| | \| | \| | V \| |
| 22+45 | 6.8138 | 1.44 | Q | \| | \| | \| | V \| |
| 22+50 | 6.8236 | 1.43 | Q | \| | \| | \| | V \| |
| 22+55 | 6.8333 | 1.41 | Q | \| | \| | \| | V\| |
| 23+ 0 | 6.8428 | 1.39 | Q | \| | \| | \| | V\| |
| 23+ 5 | 6.8522 | 1.35 | Q | \| | \| | \| | V\| |
| 23+10 | 6.8609 | 1.27 | Q | \| | \| | \| | V\| |
| 23+15 | 6.8684 | 1.09 | Q | \| | \| | \| | V\| |
| 23+20 | 6.8757 | 1.06 | Q | \| | \| | \| | V\| |
| 23+25 | 6.8829 | 1.04 | Q | \| | \| | \| | V\| |
| 23+30 | 6.8899 | 1.03 | Q | \| | \| | \| | V\| |
| 23+35 | 6.8969 | 1.01 | Q | \| | \| | \| | V\| |
| 23+40 | 6.9038 | 1.00 | Q | \| | \| | \| | V\| |
| 23+45 | 6.9105 | 0.98 | Q | \| | \| | \| | V\| |
| 23+50 | 6.9171 | 0.96 | Q | \| | \| | \| | V\| |
| 23+55 | 6.9234 | 0.91 | Q | \| | \| | \| | V\| |
| 24+ 0 | 6.9288 | 0.79 | Q | \| | \| | \| | V\| |
| 24+ 5 | 6.9332 | 0.63 | Q | \| | \| | \| | V\| |
| 24+10 | 6.9373 | 0.61 | Q | \| | \| | \| | V\| |
| 24+15 | 6.9414 | 0.59 | Q | \| | \| | \| | V\| |
| 24+20 | 6.9453 | 0.57 | Q | \| | \| | \| | V\| |
| 24+25 | 6.9491 | 0.55 | Q | \| | \| | \| | V\| |
| 24+30 | 6.9528 | 0.53 | Q | \| | \| | \| | V\| |
| 24+35 | 6.9563 | 0.51 | Q | \| | \| | \| | V\| |
| 24+40 | 6.9596 | 0.48 | Q | \| | \| | \| | V\| |
| 24+45 | 6.9626 | 0.43 | Q | \| | \| | \| | V\| |
| 24+50 | 6.9653 | 0.39 | Q | \| | \| | \| | V\| |
| 24+55 | 6.9677 | 0.35 | Q | \| | \| | \| | V\| |
| 25+ 0 | 6.9699 | 0.32 | Q | \| | \| | \| | V\| |
| 25+ 5 | 6.9719 | 0.29 | Q | \| | \| | \| | V\| |
| 25+10 | 6.9738 | 0.27 | Q | \| | \| | \| | V\| |
| 25+15 | 6.9755 | 0.25 | Q | \| | \| | \| | V\| |
| 25+20 | 6.9771 | 0.23 | Q | \| | \| | \| | V\| |
| 25+25 | 6.9786 | 0.22 | Q | \| | \| | \| | V\| |
| 25+30 | 6.9800 | 0.20 | Q | \| | \| | \| | V\| |
| 25+35 | 6.9813 | 0.19 | Q | \| | \| | \| | V\| |
| 25+40 | 6.9825 | 0.18 | Q | \| | \| | \| | V\| |
| 25+45 | 6.9836 | 0.17 | Q | \| | \| | \| | V\| |
| 25+50 | 6.9847 | 0.16 | Q | \| | \| | \| | V\| |
| 25+55 | 6.9858 | 0.15 | Q | \| | \| | \| | V\| |
| 26+ 0 | 6.9867 | 0.14 | Q | \| | \| | \| | V\| |
| 26+ 5 | 6.9876 | 0.13 | Q | \| | \| | \| | V\| |
| 26+10 | 6.9885 | 0.13 | Q | \| | \| | \| | V\| |
| 26+15 | 6.9893 | 0.12 | Q | \| | \| | \| | V\| |
| 26+20 | 6.9901 | 0.11 | Q | \| | \| | \| | V\| |
| 26+25 | 6.9908 | 0.11 | Q | \| | \| | \| | V\| |
| 26+30 | 6.9915 | 0.10 | Q | \| | \| | \| | V\| |
| 26+35 | 6.9922 | 0.10 | Q | \| | \| | \| | V\| |
| 26+40 | 6.9928 | 0.09 | Q | \| | \| | \| | V\| |
| 26+45 | 6.9934 | 0.09 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+50 | 6.9940 | 0.08 | Q | \| | \| | \| | V\| |
| 26+55 | 6.9945 | 0.08 | Q | \| | \| | \| | V\| |
| 27+ 0 | 6.9950 | 0.07 | Q | \| | \| | \| | V\| |
| 27+ 5 | 6.9955 | 0.07 | Q | \| | \| | \| | V\| |
| 27+10 | 6.9959 | 0.07 | Q | \| | \| | \| | V\| |
| 27+15 | 6.9963 | 0.06 | Q | \| | \| | \| | V\| |
| 27+20 | 6.9967 | 0.06 | Q | \| | \| | \| | V\| |
| 27+25 | 6.9971 | 0.06 | Q | \| | \| | \| | V\| |
| 27+30 | 6.9975 | 0.05 | Q | \| | \| | \| | V\| |
| 27+35 | 6.9978 | 0.05 | Q | \| | \| | \| | V\| |
| 27+40 | 6.9982 | 0.05 | Q | \| | \| | \| | V\| |
| 27+45 | 6.9985 | 0.05 | Q | \| | \| | \| | V\| |
| 27+50 | 6.9988 | 0.04 | Q | \| | \| | \| | V\| |
| 27+55 | 6.9991 | 0.04 | Q | \| | \| | \| | V\| |
| 28+ 0 | 6.9993 | 0.04 | Q | \| | \| | \| | V\| |
| 28+ 5 | 6.9996 | 0.04 | Q | \| | \| | \| | V\| |
| 28+10 | 6.9998 | 0.03 | Q | \| | \| | \| | V\| |
| 28+15 | 7.0000 | 0.03 | Q | \| | \| | \| | V\| |
| 28+20 | 7.0003 | 0.03 | Q | \| | \| | \| | V\| |
| 28+25 | 7.0005 | 0.03 | Q | \| | \| | \| | V\| |
| 28+30 | 7.0007 | 0.03 | Q | \| | \| | \| | V\| |
| 28+35 | 7.0008 | 0.03 | Q | \| | \| | \| | V\| |
| 28+40 | 7.0010 | 0.02 | Q | \| | \| | \| | V\| |
| 28+45 | 7.0012 | 0.02 | Q | \| | \| | \| | V\| |
| 28+50 | 7.0013 | 0.02 | Q | \| | \| | \| | V\| |
| 28+55 | 7.0015 | 0.02 | Q | \| | \| | \| | V\| |
| 29+ 0 | 7.0016 | 0.02 | Q | \| | \| | \| | V\| |
| 29+ 5 | 7.0017 | 0.02 | Q | \| | \| | \| | V\| |
| 29+10 | 7.0018 | 0.02 | Q | \| | \| | \| | V\| |
| 29+15 | 7.0019 | 0.02 | Q | \| | \| | \| | V\| |
| 29+20 | 7.0021 | 0.02 | Q | \| | \| | \| | V\| |
| 29+25 | 7.0022 | 0.01 | Q | \| | \| | \| | V\| |
| 29+30 | 7.0022 | 0.01 | Q | \| | \| | \| | V\| |
| 29+35 | 7.0023 | 0.01 | Q | \| | \| | \| | V\| |
| 29+40 | 7.0024 | 0.01 | Q | \| | \| | \| | V\| |
| 29+45 | 7.0025 | 0.01 | Q | \| | \| | \| | V\| |
| 29+50 | 7.0026 | 0.01 | Q | \| | \| | \| | V\| |
| 29+55 | 7.0026 | 0.01 | Q | \| | \| | \| | V\| |
| 30+ 0 | 7.0027 | 0.01 | Q | \| | \| | \| | V\| |
| 30+ 5 | 7.0028 | 0.01 | Q | \| | \| | \| | V\| |
| 30+10 | 7.0028 | 0.01 | Q | \| | \| | \| | V\| |
| 30+15 | 7.0029 | 0.01 | Q | \| | \| | \| | V\| |
| 30+20 | 7.0030 | 0.01 | Q | \| | \| | \| | V\| |
| 30+25 | 7.0030 | 0.01 | Q | \| | \| | \| | V\| |
| 30+30 | 7.0031 | 0.01 | Q | \| | \| | \| | V\| |
| 30+35 | 7.0031 | 0.01 | Q | \| | \| | \| | V\| |
| 30+40 | 7.0031 | 0.01 | Q | \| | \| | \| | V\| |
| 30+45 | 7.0032 | 0.01 | Q | \| | \| | \| | V\| |
| 30+50 | 7.0032 | 0.00 | Q | \| | \| | \| | V\| |
| 30+55 | 7.0032 | 0.00 | Q | \| | \| | \| | V\| |
| 31+ 0 | 7.0033 | 0.00 | Q | \| | \| | \| | V\| |
| 31+ 5 | 7.0033 | 0.00 | Q | \| | \| | \| | V\| |
| 31+10 | 7.0033 | 0.00 | Q | \| | \| | \| | V\| |
| 31+15 | 7.0033 | 0.00 | Q | \| | \| | \| | V\| |
| 31+20 | 7.0033 | 0.00 | Q | \| | \| | \| | V\| |
| 31+25 | 7.0033 | 0.00 | Q | \| | \| | \| | V\| |
| 31+30 | 7.0033 | 0.00 | Q | \| | \| | \| | V\| |
| 31+35 | 7.0034 | 0.00 | Q | \| | \| | \| | V\| |
| 31+40 | 7.0034 | 0.00 | Q | \| | \| | \| | V\| |

```
   31+45       7.0034      0.00  Q         |         |         |        V|
   31+50       7.0034      0.00  Q         |         |         |        V|
   31+55       7.0034      0.00  Q         |         |         |         V
------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 29
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 15.24 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 15.24 | 6 | 1.81 |
| Rainfall data for year 100 | | |
| 15.24 | 24 | 2.54 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 58.5 | 77.8 | 15.24 | 1.000 | 0.407 | 1.000 | 0.407 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.407

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 15.24 | 1.000 | 58.5 | 77.8 | 2.85 | 0.317 |

Area-averaged catchment yield fraction, Y = 0.317
Area-averaged low loss fraction, Yb = 0.683
User entry of time of concentration = 0.910 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 15.24(Ac.)
Catchment Lag time = 0.728 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 11.4469
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.407(In/Hr)
Average low loss rate fraction (Yb) = 0.683 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.634(In)
Specified peak 6-hour rainfall = 1.810(In)
Specified peak 24-hour rainfall = 2.540(In)

Rainfall depth area reduction factors:
Using a total area of 15.24(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.659(In)
30-minute factor = 0.999 Adjusted rainfall = 1.128(In)
1-hour factor = 0.999 Adjusted rainfall = 1.389(In)
3-hour factor = 1.000 Adjusted rainfall = 1.634(In)
6-hour factor = 1.000 Adjusted rainfall = 1.810(In)
24-hour factor = 1.000 Adjusted rainfall = 2.540(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 184.31 (CFS)) | |
| 1 | 0.504 | 0.928 |
| 2 | 1.888 | 2.552 |
| 3 | 4.113 | 4.099 |
| 4 | 7.200 | 5.690 |
| 5 | 11.703 | 8.299 |
| 6 | 19.434 | 14.249 |
| 7 | 30.497 | 20.391 |
| 8 | 40.432 | 18.311 |
| 9 | 48.223 | 14.359 |
| 10 | 54.525 | 11.614 |
| 11 | 59.451 | 9.080 |
| 12 | 63.371 | 7.225 |
| 13 | 66.675 | 6.088 |
| 14 | 69.586 | 5.367 |

| | | |
|---|---|---|
| 15 | 72.187 | 4.793 |
| 16 | 74.416 | 4.107 |
| 17 | 76.424 | 3.702 |
| 18 | 78.296 | 3.451 |
| 19 | 79.853 | 2.869 |
| 20 | 81.348 | 2.755 |
| 21 | 82.643 | 2.387 |
| 22 | 83.878 | 2.275 |
| 23 | 85.025 | 2.115 |
| 24 | 86.124 | 2.025 |
| 25 | 87.136 | 1.865 |
| 26 | 88.052 | 1.688 |
| 27 | 88.896 | 1.555 |
| 28 | 89.587 | 1.275 |
| 29 | 90.266 | 1.250 |
| 30 | 90.910 | 1.188 |
| 31 | 91.543 | 1.166 |
| 32 | 92.108 | 1.041 |
| 33 | 92.656 | 1.010 |
| 34 | 93.173 | 0.953 |
| 35 | 93.676 | 0.928 |
| 36 | 94.116 | 0.811 |
| 37 | 94.506 | 0.717 |
| 38 | 94.895 | 0.717 |
| 39 | 95.284 | 0.717 |
| 40 | 95.651 | 0.677 |
| 41 | 95.954 | 0.557 |
| 42 | 96.251 | 0.549 |
| 43 | 96.549 | 0.549 |
| 44 | 96.842 | 0.540 |
| 45 | 97.069 | 0.419 |
| 46 | 97.275 | 0.380 |
| 47 | 97.481 | 0.380 |
| 48 | 97.687 | 0.380 |
| 49 | 97.852 | 0.303 |
| 50 | 97.966 | 0.211 |
| 51 | 98.081 | 0.211 |
| 52 | 98.195 | 0.211 |
| 53 | 98.314 | 0.218 |
| 54 | 98.449 | 0.250 |
| 55 | 98.586 | 0.253 |
| 56 | 98.724 | 0.253 |
| 57 | 98.861 | 0.253 |
| 58 | 98.998 | 0.253 |
| 59 | 99.136 | 0.253 |
| 60 | 99.273 | 0.253 |
| 61 | 99.410 | 0.253 |
| 62 | 99.524 | 0.210 |
| 63 | 99.596 | 0.133 |
| 64 | 99.668 | 0.132 |
| 65 | 99.740 | 0.132 |
| 66 | 99.811 | 0.132 |
| 67 | 99.883 | 0.132 |
| 68 | 99.954 | 0.132 |
| 69 | 100.000 | 0.084 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6591 | 0.6591 |

| | | |
|---|---|---|
| 2 | 0.8114 | 0.1523 |
| 3 | 0.9164 | 0.1050 |
| 4 | 0.9990 | 0.0826 |
| 5 | 1.0682 | 0.0692 |
| 6 | 1.1282 | 0.0601 |
| 7 | 1.1816 | 0.0534 |
| 8 | 1.2299 | 0.0483 |
| 9 | 1.2742 | 0.0442 |
| 10 | 1.3151 | 0.0409 |
| 11 | 1.3532 | 0.0381 |
| 12 | 1.3890 | 0.0358 |
| 13 | 1.4056 | 0.0165 |
| 14 | 1.4210 | 0.0155 |
| 15 | 1.4356 | 0.0146 |
| 16 | 1.4494 | 0.0138 |
| 17 | 1.4624 | 0.0131 |
| 18 | 1.4749 | 0.0124 |
| 19 | 1.4867 | 0.0118 |
| 20 | 1.4980 | 0.0113 |
| 21 | 1.5089 | 0.0109 |
| 22 | 1.5193 | 0.0104 |
| 23 | 1.5293 | 0.0100 |
| 24 | 1.5390 | 0.0097 |
| 25 | 1.5483 | 0.0093 |
| 26 | 1.5573 | 0.0090 |
| 27 | 1.5660 | 0.0087 |
| 28 | 1.5745 | 0.0084 |
| 29 | 1.5827 | 0.0082 |
| 30 | 1.5906 | 0.0080 |
| 31 | 1.5984 | 0.0077 |
| 32 | 1.6059 | 0.0075 |
| 33 | 1.6132 | 0.0073 |
| 34 | 1.6204 | 0.0071 |
| 35 | 1.6273 | 0.0070 |
| 36 | 1.6341 | 0.0068 |
| 37 | 1.6407 | 0.0066 |
| 38 | 1.6472 | 0.0065 |
| 39 | 1.6535 | 0.0063 |
| 40 | 1.6597 | 0.0062 |
| 41 | 1.6657 | 0.0061 |
| 42 | 1.6717 | 0.0059 |
| 43 | 1.6775 | 0.0058 |
| 44 | 1.6832 | 0.0057 |
| 45 | 1.6888 | 0.0056 |
| 46 | 1.6942 | 0.0055 |
| 47 | 1.6996 | 0.0054 |
| 48 | 1.7049 | 0.0053 |
| 49 | 1.7101 | 0.0052 |
| 50 | 1.7152 | 0.0051 |
| 51 | 1.7202 | 0.0050 |
| 52 | 1.7251 | 0.0049 |
| 53 | 1.7300 | 0.0049 |
| 54 | 1.7348 | 0.0048 |
| 55 | 1.7395 | 0.0047 |
| 56 | 1.7441 | 0.0046 |
| 57 | 1.7486 | 0.0046 |
| 58 | 1.7531 | 0.0045 |
| 59 | 1.7576 | 0.0044 |
| 60 | 1.7619 | 0.0044 |

| | | |
|---|---|---|
| 61 | 1.7662 | 0.0043 |
| 62 | 1.7705 | 0.0042 |
| 63 | 1.7746 | 0.0042 |
| 64 | 1.7788 | 0.0041 |
| 65 | 1.7828 | 0.0041 |
| 66 | 1.7868 | 0.0040 |
| 67 | 1.7908 | 0.0040 |
| 68 | 1.7947 | 0.0039 |
| 69 | 1.7986 | 0.0039 |
| 70 | 1.8024 | 0.0038 |
| 71 | 1.8062 | 0.0038 |
| 72 | 1.8099 | 0.0037 |
| 73 | 1.8160 | 0.0061 |
| 74 | 1.8221 | 0.0060 |
| 75 | 1.8281 | 0.0060 |
| 76 | 1.8340 | 0.0059 |
| 77 | 1.8399 | 0.0059 |
| 78 | 1.8457 | 0.0058 |
| 79 | 1.8514 | 0.0058 |
| 80 | 1.8571 | 0.0057 |
| 81 | 1.8628 | 0.0056 |
| 82 | 1.8684 | 0.0056 |
| 83 | 1.8739 | 0.0055 |
| 84 | 1.8794 | 0.0055 |
| 85 | 1.8849 | 0.0054 |
| 86 | 1.8903 | 0.0054 |
| 87 | 1.8956 | 0.0053 |
| 88 | 1.9009 | 0.0053 |
| 89 | 1.9062 | 0.0053 |
| 90 | 1.9114 | 0.0052 |
| 91 | 1.9165 | 0.0052 |
| 92 | 1.9217 | 0.0051 |
| 93 | 1.9268 | 0.0051 |
| 94 | 1.9318 | 0.0050 |
| 95 | 1.9368 | 0.0050 |
| 96 | 1.9418 | 0.0050 |
| 97 | 1.9467 | 0.0049 |
| 98 | 1.9516 | 0.0049 |
| 99 | 1.9564 | 0.0048 |
| 100 | 1.9612 | 0.0048 |
| 101 | 1.9660 | 0.0048 |
| 102 | 1.9708 | 0.0047 |
| 103 | 1.9755 | 0.0047 |
| 104 | 1.9801 | 0.0047 |
| 105 | 1.9848 | 0.0046 |
| 106 | 1.9894 | 0.0046 |
| 107 | 1.9939 | 0.0046 |
| 108 | 1.9985 | 0.0045 |
| 109 | 2.0030 | 0.0045 |
| 110 | 2.0075 | 0.0045 |
| 111 | 2.0119 | 0.0044 |
| 112 | 2.0163 | 0.0044 |
| 113 | 2.0207 | 0.0044 |
| 114 | 2.0251 | 0.0044 |
| 115 | 2.0294 | 0.0043 |
| 116 | 2.0337 | 0.0043 |
| 117 | 2.0380 | 0.0043 |
| 118 | 2.0422 | 0.0042 |
| 119 | 2.0464 | 0.0042 |

| | | |
|---|---|---|
| 120 | 2.0506 | 0.0042 |
| 121 | 2.0548 | 0.0042 |
| 122 | 2.0589 | 0.0041 |
| 123 | 2.0630 | 0.0041 |
| 124 | 2.0671 | 0.0041 |
| 125 | 2.0712 | 0.0041 |
| 126 | 2.0752 | 0.0040 |
| 127 | 2.0792 | 0.0040 |
| 128 | 2.0832 | 0.0040 |
| 129 | 2.0872 | 0.0040 |
| 130 | 2.0911 | 0.0039 |
| 131 | 2.0951 | 0.0039 |
| 132 | 2.0990 | 0.0039 |
| 133 | 2.1028 | 0.0039 |
| 134 | 2.1067 | 0.0039 |
| 135 | 2.1105 | 0.0038 |
| 136 | 2.1143 | 0.0038 |
| 137 | 2.1181 | 0.0038 |
| 138 | 2.1219 | 0.0038 |
| 139 | 2.1256 | 0.0037 |
| 140 | 2.1294 | 0.0037 |
| 141 | 2.1331 | 0.0037 |
| 142 | 2.1368 | 0.0037 |
| 143 | 2.1404 | 0.0037 |
| 144 | 2.1441 | 0.0036 |
| 145 | 2.1477 | 0.0036 |
| 146 | 2.1513 | 0.0036 |
| 147 | 2.1549 | 0.0036 |
| 148 | 2.1585 | 0.0036 |
| 149 | 2.1620 | 0.0036 |
| 150 | 2.1656 | 0.0035 |
| 151 | 2.1691 | 0.0035 |
| 152 | 2.1726 | 0.0035 |
| 153 | 2.1761 | 0.0035 |
| 154 | 2.1796 | 0.0035 |
| 155 | 2.1830 | 0.0035 |
| 156 | 2.1864 | 0.0034 |
| 157 | 2.1899 | 0.0034 |
| 158 | 2.1933 | 0.0034 |
| 159 | 2.1967 | 0.0034 |
| 160 | 2.2000 | 0.0034 |
| 161 | 2.2034 | 0.0034 |
| 162 | 2.2067 | 0.0033 |
| 163 | 2.2100 | 0.0033 |
| 164 | 2.2133 | 0.0033 |
| 165 | 2.2166 | 0.0033 |
| 166 | 2.2199 | 0.0033 |
| 167 | 2.2232 | 0.0033 |
| 168 | 2.2264 | 0.0032 |
| 169 | 2.2296 | 0.0032 |
| 170 | 2.2329 | 0.0032 |
| 171 | 2.2361 | 0.0032 |
| 172 | 2.2393 | 0.0032 |
| 173 | 2.2424 | 0.0032 |
| 174 | 2.2456 | 0.0032 |
| 175 | 2.2487 | 0.0031 |
| 176 | 2.2519 | 0.0031 |
| 177 | 2.2550 | 0.0031 |
| 178 | 2.2581 | 0.0031 |

| | | |
|---|---|---|
| 179 | 2.2612 | 0.0031 |
| 180 | 2.2643 | 0.0031 |
| 181 | 2.2673 | 0.0031 |
| 182 | 2.2704 | 0.0031 |
| 183 | 2.2734 | 0.0030 |
| 184 | 2.2765 | 0.0030 |
| 185 | 2.2795 | 0.0030 |
| 186 | 2.2825 | 0.0030 |
| 187 | 2.2855 | 0.0030 |
| 188 | 2.2885 | 0.0030 |
| 189 | 2.2914 | 0.0030 |
| 190 | 2.2944 | 0.0030 |
| 191 | 2.2974 | 0.0029 |
| 192 | 2.3003 | 0.0029 |
| 193 | 2.3032 | 0.0029 |
| 194 | 2.3061 | 0.0029 |
| 195 | 2.3090 | 0.0029 |
| 196 | 2.3119 | 0.0029 |
| 197 | 2.3148 | 0.0029 |
| 198 | 2.3177 | 0.0029 |
| 199 | 2.3205 | 0.0029 |
| 200 | 2.3234 | 0.0028 |
| 201 | 2.3262 | 0.0028 |
| 202 | 2.3290 | 0.0028 |
| 203 | 2.3318 | 0.0028 |
| 204 | 2.3346 | 0.0028 |
| 205 | 2.3374 | 0.0028 |
| 206 | 2.3402 | 0.0028 |
| 207 | 2.3430 | 0.0028 |
| 208 | 2.3457 | 0.0028 |
| 209 | 2.3485 | 0.0028 |
| 210 | 2.3512 | 0.0027 |
| 211 | 2.3540 | 0.0027 |
| 212 | 2.3567 | 0.0027 |
| 213 | 2.3594 | 0.0027 |
| 214 | 2.3621 | 0.0027 |
| 215 | 2.3648 | 0.0027 |
| 216 | 2.3675 | 0.0027 |
| 217 | 2.3701 | 0.0027 |
| 218 | 2.3728 | 0.0027 |
| 219 | 2.3755 | 0.0027 |
| 220 | 2.3781 | 0.0026 |
| 221 | 2.3808 | 0.0026 |
| 222 | 2.3834 | 0.0026 |
| 223 | 2.3860 | 0.0026 |
| 224 | 2.3886 | 0.0026 |
| 225 | 2.3912 | 0.0026 |
| 226 | 2.3938 | 0.0026 |
| 227 | 2.3964 | 0.0026 |
| 228 | 2.3990 | 0.0026 |
| 229 | 2.4015 | 0.0026 |
| 230 | 2.4041 | 0.0026 |
| 231 | 2.4066 | 0.0026 |
| 232 | 2.4092 | 0.0025 |
| 233 | 2.4117 | 0.0025 |
| 234 | 2.4143 | 0.0025 |
| 235 | 2.4168 | 0.0025 |
| 236 | 2.4193 | 0.0025 |
| 237 | 2.4218 | 0.0025 |

| | | |
|---|---|---|
| 238 | 2.4243 | 0.0025 |
| 239 | 2.4268 | 0.0025 |
| 240 | 2.4292 | 0.0025 |
| 241 | 2.4317 | 0.0025 |
| 242 | 2.4342 | 0.0025 |
| 243 | 2.4366 | 0.0025 |
| 244 | 2.4391 | 0.0024 |
| 245 | 2.4415 | 0.0024 |
| 246 | 2.4439 | 0.0024 |
| 247 | 2.4464 | 0.0024 |
| 248 | 2.4488 | 0.0024 |
| 249 | 2.4512 | 0.0024 |
| 250 | 2.4536 | 0.0024 |
| 251 | 2.4560 | 0.0024 |
| 252 | 2.4584 | 0.0024 |
| 253 | 2.4608 | 0.0024 |
| 254 | 2.4631 | 0.0024 |
| 255 | 2.4655 | 0.0024 |
| 256 | 2.4679 | 0.0024 |
| 257 | 2.4702 | 0.0024 |
| 258 | 2.4726 | 0.0023 |
| 259 | 2.4749 | 0.0023 |
| 260 | 2.4772 | 0.0023 |
| 261 | 2.4796 | 0.0023 |
| 262 | 2.4819 | 0.0023 |
| 263 | 2.4842 | 0.0023 |
| 264 | 2.4865 | 0.0023 |
| 265 | 2.4888 | 0.0023 |
| 266 | 2.4911 | 0.0023 |
| 267 | 2.4934 | 0.0023 |
| 268 | 2.4957 | 0.0023 |
| 269 | 2.4979 | 0.0023 |
| 270 | 2.5002 | 0.0023 |
| 271 | 2.5025 | 0.0023 |
| 272 | 2.5047 | 0.0023 |
| 273 | 2.5070 | 0.0022 |
| 274 | 2.5092 | 0.0022 |
| 275 | 2.5114 | 0.0022 |
| 276 | 2.5137 | 0.0022 |
| 277 | 2.5159 | 0.0022 |
| 278 | 2.5181 | 0.0022 |
| 279 | 2.5203 | 0.0022 |
| 280 | 2.5225 | 0.0022 |
| 281 | 2.5247 | 0.0022 |
| 282 | 2.5269 | 0.0022 |
| 283 | 2.5291 | 0.0022 |
| 284 | 2.5313 | 0.0022 |
| 285 | 2.5335 | 0.0022 |
| 286 | 2.5356 | 0.0022 |
| 287 | 2.5378 | 0.0022 |
| 288 | 2.5400 | 0.0022 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0022 | 0.0015 | 0.0007 |
| 2 | 0.0022 | 0.0015 | 0.0007 |
| 3 | 0.0022 | 0.0015 | 0.0007 |

| | | | |
|---|---|---|---|
| 4 | 0.0022 | 0.0015 | 0.0007 |
| 5 | 0.0022 | 0.0015 | 0.0007 |
| 6 | 0.0022 | 0.0015 | 0.0007 |
| 7 | 0.0022 | 0.0015 | 0.0007 |
| 8 | 0.0022 | 0.0015 | 0.0007 |
| 9 | 0.0022 | 0.0015 | 0.0007 |
| 10 | 0.0022 | 0.0015 | 0.0007 |
| 11 | 0.0022 | 0.0015 | 0.0007 |
| 12 | 0.0023 | 0.0015 | 0.0007 |
| 13 | 0.0023 | 0.0015 | 0.0007 |
| 14 | 0.0023 | 0.0016 | 0.0007 |
| 15 | 0.0023 | 0.0016 | 0.0007 |
| 16 | 0.0023 | 0.0016 | 0.0007 |
| 17 | 0.0023 | 0.0016 | 0.0007 |
| 18 | 0.0023 | 0.0016 | 0.0007 |
| 19 | 0.0023 | 0.0016 | 0.0007 |
| 20 | 0.0023 | 0.0016 | 0.0007 |
| 21 | 0.0023 | 0.0016 | 0.0007 |
| 22 | 0.0024 | 0.0016 | 0.0007 |
| 23 | 0.0024 | 0.0016 | 0.0007 |
| 24 | 0.0024 | 0.0016 | 0.0008 |
| 25 | 0.0024 | 0.0016 | 0.0008 |
| 26 | 0.0024 | 0.0016 | 0.0008 |
| 27 | 0.0024 | 0.0016 | 0.0008 |
| 28 | 0.0024 | 0.0017 | 0.0008 |
| 29 | 0.0024 | 0.0017 | 0.0008 |
| 30 | 0.0024 | 0.0017 | 0.0008 |
| 31 | 0.0025 | 0.0017 | 0.0008 |
| 32 | 0.0025 | 0.0017 | 0.0008 |
| 33 | 0.0025 | 0.0017 | 0.0008 |
| 34 | 0.0025 | 0.0017 | 0.0008 |
| 35 | 0.0025 | 0.0017 | 0.0008 |
| 36 | 0.0025 | 0.0017 | 0.0008 |
| 37 | 0.0025 | 0.0017 | 0.0008 |
| 38 | 0.0025 | 0.0017 | 0.0008 |
| 39 | 0.0026 | 0.0017 | 0.0008 |
| 40 | 0.0026 | 0.0017 | 0.0008 |
| 41 | 0.0026 | 0.0018 | 0.0008 |
| 42 | 0.0026 | 0.0018 | 0.0008 |
| 43 | 0.0026 | 0.0018 | 0.0008 |
| 44 | 0.0026 | 0.0018 | 0.0008 |
| 45 | 0.0026 | 0.0018 | 0.0008 |
| 46 | 0.0026 | 0.0018 | 0.0008 |
| 47 | 0.0027 | 0.0018 | 0.0008 |
| 48 | 0.0027 | 0.0018 | 0.0008 |
| 49 | 0.0027 | 0.0018 | 0.0008 |
| 50 | 0.0027 | 0.0018 | 0.0009 |
| 51 | 0.0027 | 0.0019 | 0.0009 |
| 52 | 0.0027 | 0.0019 | 0.0009 |
| 53 | 0.0027 | 0.0019 | 0.0009 |
| 54 | 0.0028 | 0.0019 | 0.0009 |
| 55 | 0.0028 | 0.0019 | 0.0009 |
| 56 | 0.0028 | 0.0019 | 0.0009 |
| 57 | 0.0028 | 0.0019 | 0.0009 |
| 58 | 0.0028 | 0.0019 | 0.0009 |
| 59 | 0.0028 | 0.0019 | 0.0009 |
| 60 | 0.0028 | 0.0019 | 0.0009 |
| 61 | 0.0029 | 0.0020 | 0.0009 |
| 62 | 0.0029 | 0.0020 | 0.0009 |

| | | | |
|---|---|---|---|
| 63 | 0.0029 | 0.0020 | 0.0009 |
| 64 | 0.0029 | 0.0020 | 0.0009 |
| 65 | 0.0029 | 0.0020 | 0.0009 |
| 66 | 0.0029 | 0.0020 | 0.0009 |
| 67 | 0.0030 | 0.0020 | 0.0009 |
| 68 | 0.0030 | 0.0020 | 0.0009 |
| 69 | 0.0030 | 0.0021 | 0.0010 |
| 70 | 0.0030 | 0.0021 | 0.0010 |
| 71 | 0.0030 | 0.0021 | 0.0010 |
| 72 | 0.0031 | 0.0021 | 0.0010 |
| 73 | 0.0031 | 0.0021 | 0.0010 |
| 74 | 0.0031 | 0.0021 | 0.0010 |
| 75 | 0.0031 | 0.0021 | 0.0010 |
| 76 | 0.0031 | 0.0021 | 0.0010 |
| 77 | 0.0032 | 0.0022 | 0.0010 |
| 78 | 0.0032 | 0.0022 | 0.0010 |
| 79 | 0.0032 | 0.0022 | 0.0010 |
| 80 | 0.0032 | 0.0022 | 0.0010 |
| 81 | 0.0032 | 0.0022 | 0.0010 |
| 82 | 0.0033 | 0.0022 | 0.0010 |
| 83 | 0.0033 | 0.0022 | 0.0010 |
| 84 | 0.0033 | 0.0023 | 0.0010 |
| 85 | 0.0033 | 0.0023 | 0.0011 |
| 86 | 0.0034 | 0.0023 | 0.0011 |
| 87 | 0.0034 | 0.0023 | 0.0011 |
| 88 | 0.0034 | 0.0023 | 0.0011 |
| 89 | 0.0034 | 0.0023 | 0.0011 |
| 90 | 0.0035 | 0.0024 | 0.0011 |
| 91 | 0.0035 | 0.0024 | 0.0011 |
| 92 | 0.0035 | 0.0024 | 0.0011 |
| 93 | 0.0035 | 0.0024 | 0.0011 |
| 94 | 0.0036 | 0.0024 | 0.0011 |
| 95 | 0.0036 | 0.0025 | 0.0011 |
| 96 | 0.0036 | 0.0025 | 0.0011 |
| 97 | 0.0036 | 0.0025 | 0.0012 |
| 98 | 0.0037 | 0.0025 | 0.0012 |
| 99 | 0.0037 | 0.0025 | 0.0012 |
| 100 | 0.0037 | 0.0025 | 0.0012 |
| 101 | 0.0038 | 0.0026 | 0.0012 |
| 102 | 0.0038 | 0.0026 | 0.0012 |
| 103 | 0.0038 | 0.0026 | 0.0012 |
| 104 | 0.0039 | 0.0026 | 0.0012 |
| 105 | 0.0039 | 0.0027 | 0.0012 |
| 106 | 0.0039 | 0.0027 | 0.0012 |
| 107 | 0.0040 | 0.0027 | 0.0013 |
| 108 | 0.0040 | 0.0027 | 0.0013 |
| 109 | 0.0040 | 0.0028 | 0.0013 |
| 110 | 0.0041 | 0.0028 | 0.0013 |
| 111 | 0.0041 | 0.0028 | 0.0013 |
| 112 | 0.0041 | 0.0028 | 0.0013 |
| 113 | 0.0042 | 0.0029 | 0.0013 |
| 114 | 0.0042 | 0.0029 | 0.0013 |
| 115 | 0.0043 | 0.0029 | 0.0014 |
| 116 | 0.0043 | 0.0029 | 0.0014 |
| 117 | 0.0044 | 0.0030 | 0.0014 |
| 118 | 0.0044 | 0.0030 | 0.0014 |
| 119 | 0.0044 | 0.0030 | 0.0014 |
| 120 | 0.0045 | 0.0031 | 0.0014 |
| 121 | 0.0045 | 0.0031 | 0.0014 |

| | | | |
|---|---|---|---|
| 122 | 0.0046 | 0.0031 | 0.0014 |
| 123 | 0.0046 | 0.0032 | 0.0015 |
| 124 | 0.0047 | 0.0032 | 0.0015 |
| 125 | 0.0047 | 0.0032 | 0.0015 |
| 126 | 0.0048 | 0.0033 | 0.0015 |
| 127 | 0.0048 | 0.0033 | 0.0015 |
| 128 | 0.0049 | 0.0033 | 0.0015 |
| 129 | 0.0050 | 0.0034 | 0.0016 |
| 130 | 0.0050 | 0.0034 | 0.0016 |
| 131 | 0.0051 | 0.0035 | 0.0016 |
| 132 | 0.0051 | 0.0035 | 0.0016 |
| 133 | 0.0052 | 0.0036 | 0.0017 |
| 134 | 0.0053 | 0.0036 | 0.0017 |
| 135 | 0.0053 | 0.0037 | 0.0017 |
| 136 | 0.0054 | 0.0037 | 0.0017 |
| 137 | 0.0055 | 0.0038 | 0.0017 |
| 138 | 0.0055 | 0.0038 | 0.0018 |
| 139 | 0.0056 | 0.0039 | 0.0018 |
| 140 | 0.0057 | 0.0039 | 0.0018 |
| 141 | 0.0058 | 0.0040 | 0.0018 |
| 142 | 0.0059 | 0.0040 | 0.0019 |
| 143 | 0.0060 | 0.0041 | 0.0019 |
| 144 | 0.0060 | 0.0041 | 0.0019 |
| 145 | 0.0037 | 0.0025 | 0.0012 |
| 146 | 0.0038 | 0.0026 | 0.0012 |
| 147 | 0.0039 | 0.0026 | 0.0012 |
| 148 | 0.0039 | 0.0027 | 0.0012 |
| 149 | 0.0040 | 0.0027 | 0.0013 |
| 150 | 0.0041 | 0.0028 | 0.0013 |
| 151 | 0.0042 | 0.0029 | 0.0013 |
| 152 | 0.0042 | 0.0029 | 0.0013 |
| 153 | 0.0044 | 0.0030 | 0.0014 |
| 154 | 0.0044 | 0.0030 | 0.0014 |
| 155 | 0.0046 | 0.0031 | 0.0014 |
| 156 | 0.0046 | 0.0032 | 0.0015 |
| 157 | 0.0048 | 0.0033 | 0.0015 |
| 158 | 0.0049 | 0.0033 | 0.0015 |
| 159 | 0.0050 | 0.0034 | 0.0016 |
| 160 | 0.0051 | 0.0035 | 0.0016 |
| 161 | 0.0053 | 0.0036 | 0.0017 |
| 162 | 0.0054 | 0.0037 | 0.0017 |
| 163 | 0.0056 | 0.0038 | 0.0018 |
| 164 | 0.0057 | 0.0039 | 0.0018 |
| 165 | 0.0059 | 0.0041 | 0.0019 |
| 166 | 0.0061 | 0.0041 | 0.0019 |
| 167 | 0.0063 | 0.0043 | 0.0020 |
| 168 | 0.0065 | 0.0044 | 0.0020 |
| 169 | 0.0068 | 0.0046 | 0.0022 |
| 170 | 0.0070 | 0.0048 | 0.0022 |
| 171 | 0.0073 | 0.0050 | 0.0023 |
| 172 | 0.0075 | 0.0051 | 0.0024 |
| 173 | 0.0080 | 0.0054 | 0.0025 |
| 174 | 0.0082 | 0.0056 | 0.0026 |
| 175 | 0.0087 | 0.0060 | 0.0028 |
| 176 | 0.0090 | 0.0062 | 0.0029 |
| 177 | 0.0097 | 0.0066 | 0.0031 |
| 178 | 0.0100 | 0.0068 | 0.0032 |
| 179 | 0.0109 | 0.0074 | 0.0034 |
| 180 | 0.0113 | 0.0077 | 0.0036 |

| | | | |
|---|---|---|---|
| 181 | 0.0124 | 0.0085 | 0.0039 |
| 182 | 0.0131 | 0.0089 | 0.0041 |
| 183 | 0.0146 | 0.0100 | 0.0046 |
| 184 | 0.0155 | 0.0106 | 0.0049 |
| 185 | 0.0358 | 0.0245 | 0.0113 |
| 186 | 0.0381 | 0.0261 | 0.0121 |
| 187 | 0.0442 | 0.0302 | 0.0140 |
| 188 | 0.0483 | 0.0330 | 0.0153 |
| 189 | 0.0601 | 0.0339 | 0.0261 |
| 190 | 0.0692 | 0.0339 | 0.0353 |
| 191 | 0.1050 | 0.0339 | 0.0711 |
| 192 | 0.1523 | 0.0339 | 0.1184 |
| 193 | 0.6591 | 0.0339 | 0.6252 |
| 194 | 0.0826 | 0.0339 | 0.0487 |
| 195 | 0.0534 | 0.0339 | 0.0195 |
| 196 | 0.0409 | 0.0280 | 0.0130 |
| 197 | 0.0165 | 0.0113 | 0.0052 |
| 198 | 0.0138 | 0.0094 | 0.0044 |
| 199 | 0.0118 | 0.0081 | 0.0037 |
| 200 | 0.0104 | 0.0071 | 0.0033 |
| 201 | 0.0093 | 0.0064 | 0.0030 |
| 202 | 0.0084 | 0.0058 | 0.0027 |
| 203 | 0.0077 | 0.0053 | 0.0024 |
| 204 | 0.0071 | 0.0049 | 0.0023 |
| 205 | 0.0066 | 0.0045 | 0.0021 |
| 206 | 0.0062 | 0.0042 | 0.0020 |
| 207 | 0.0058 | 0.0040 | 0.0018 |
| 208 | 0.0055 | 0.0037 | 0.0017 |
| 209 | 0.0052 | 0.0035 | 0.0016 |
| 210 | 0.0049 | 0.0034 | 0.0016 |
| 211 | 0.0047 | 0.0032 | 0.0015 |
| 212 | 0.0045 | 0.0031 | 0.0014 |
| 213 | 0.0043 | 0.0029 | 0.0014 |
| 214 | 0.0041 | 0.0028 | 0.0013 |
| 215 | 0.0040 | 0.0027 | 0.0013 |
| 216 | 0.0038 | 0.0026 | 0.0012 |
| 217 | 0.0061 | 0.0042 | 0.0019 |
| 218 | 0.0059 | 0.0041 | 0.0019 |
| 219 | 0.0058 | 0.0039 | 0.0018 |
| 220 | 0.0056 | 0.0038 | 0.0018 |
| 221 | 0.0054 | 0.0037 | 0.0017 |
| 222 | 0.0053 | 0.0036 | 0.0017 |
| 223 | 0.0052 | 0.0035 | 0.0016 |
| 224 | 0.0050 | 0.0034 | 0.0016 |
| 225 | 0.0049 | 0.0034 | 0.0016 |
| 226 | 0.0048 | 0.0033 | 0.0015 |
| 227 | 0.0047 | 0.0032 | 0.0015 |
| 228 | 0.0046 | 0.0031 | 0.0015 |
| 229 | 0.0045 | 0.0031 | 0.0014 |
| 230 | 0.0044 | 0.0030 | 0.0014 |
| 231 | 0.0043 | 0.0030 | 0.0014 |
| 232 | 0.0042 | 0.0029 | 0.0013 |
| 233 | 0.0042 | 0.0028 | 0.0013 |
| 234 | 0.0041 | 0.0028 | 0.0013 |
| 235 | 0.0040 | 0.0027 | 0.0013 |
| 236 | 0.0039 | 0.0027 | 0.0012 |
| 237 | 0.0039 | 0.0026 | 0.0012 |
| 238 | 0.0038 | 0.0026 | 0.0012 |
| 239 | 0.0037 | 0.0026 | 0.0012 |

| | | | |
|---|---|---|---|
| 240 | 0.0037 | 0.0025 | 0.0012 |
| 241 | 0.0036 | 0.0025 | 0.0011 |
| 242 | 0.0036 | 0.0024 | 0.0011 |
| 243 | 0.0035 | 0.0024 | 0.0011 |
| 244 | 0.0035 | 0.0024 | 0.0011 |
| 245 | 0.0034 | 0.0023 | 0.0011 |
| 246 | 0.0034 | 0.0023 | 0.0011 |
| 247 | 0.0033 | 0.0023 | 0.0011 |
| 248 | 0.0033 | 0.0022 | 0.0010 |
| 249 | 0.0032 | 0.0022 | 0.0010 |
| 250 | 0.0032 | 0.0022 | 0.0010 |
| 251 | 0.0031 | 0.0022 | 0.0010 |
| 252 | 0.0031 | 0.0021 | 0.0010 |
| 253 | 0.0031 | 0.0021 | 0.0010 |
| 254 | 0.0030 | 0.0021 | 0.0010 |
| 255 | 0.0030 | 0.0020 | 0.0009 |
| 256 | 0.0030 | 0.0020 | 0.0009 |
| 257 | 0.0029 | 0.0020 | 0.0009 |
| 258 | 0.0029 | 0.0020 | 0.0009 |
| 259 | 0.0029 | 0.0020 | 0.0009 |
| 260 | 0.0028 | 0.0019 | 0.0009 |
| 261 | 0.0028 | 0.0019 | 0.0009 |
| 262 | 0.0028 | 0.0019 | 0.0009 |
| 263 | 0.0027 | 0.0019 | 0.0009 |
| 264 | 0.0027 | 0.0018 | 0.0009 |
| 265 | 0.0027 | 0.0018 | 0.0008 |
| 266 | 0.0026 | 0.0018 | 0.0008 |
| 267 | 0.0026 | 0.0018 | 0.0008 |
| 268 | 0.0026 | 0.0018 | 0.0008 |
| 269 | 0.0026 | 0.0018 | 0.0008 |
| 270 | 0.0025 | 0.0017 | 0.0008 |
| 271 | 0.0025 | 0.0017 | 0.0008 |
| 272 | 0.0025 | 0.0017 | 0.0008 |
| 273 | 0.0025 | 0.0017 | 0.0008 |
| 274 | 0.0024 | 0.0017 | 0.0008 |
| 275 | 0.0024 | 0.0017 | 0.0008 |
| 276 | 0.0024 | 0.0016 | 0.0008 |
| 277 | 0.0024 | 0.0016 | 0.0008 |
| 278 | 0.0024 | 0.0016 | 0.0007 |
| 279 | 0.0023 | 0.0016 | 0.0007 |
| 280 | 0.0023 | 0.0016 | 0.0007 |
| 281 | 0.0023 | 0.0016 | 0.0007 |
| 282 | 0.0023 | 0.0016 | 0.0007 |
| 283 | 0.0023 | 0.0015 | 0.0007 |
| 284 | 0.0022 | 0.0015 | 0.0007 |
| 285 | 0.0022 | 0.0015 | 0.0007 |
| 286 | 0.0022 | 0.0015 | 0.0007 |
| 287 | 0.0022 | 0.0015 | 0.0007 |
| 288 | 0.0022 | 0.0015 | 0.0007 |

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Total soil rain loss = 1.17(In)
Total effective rainfall = 1.37(In)
Peak flow rate in flood hydrograph = 18.02(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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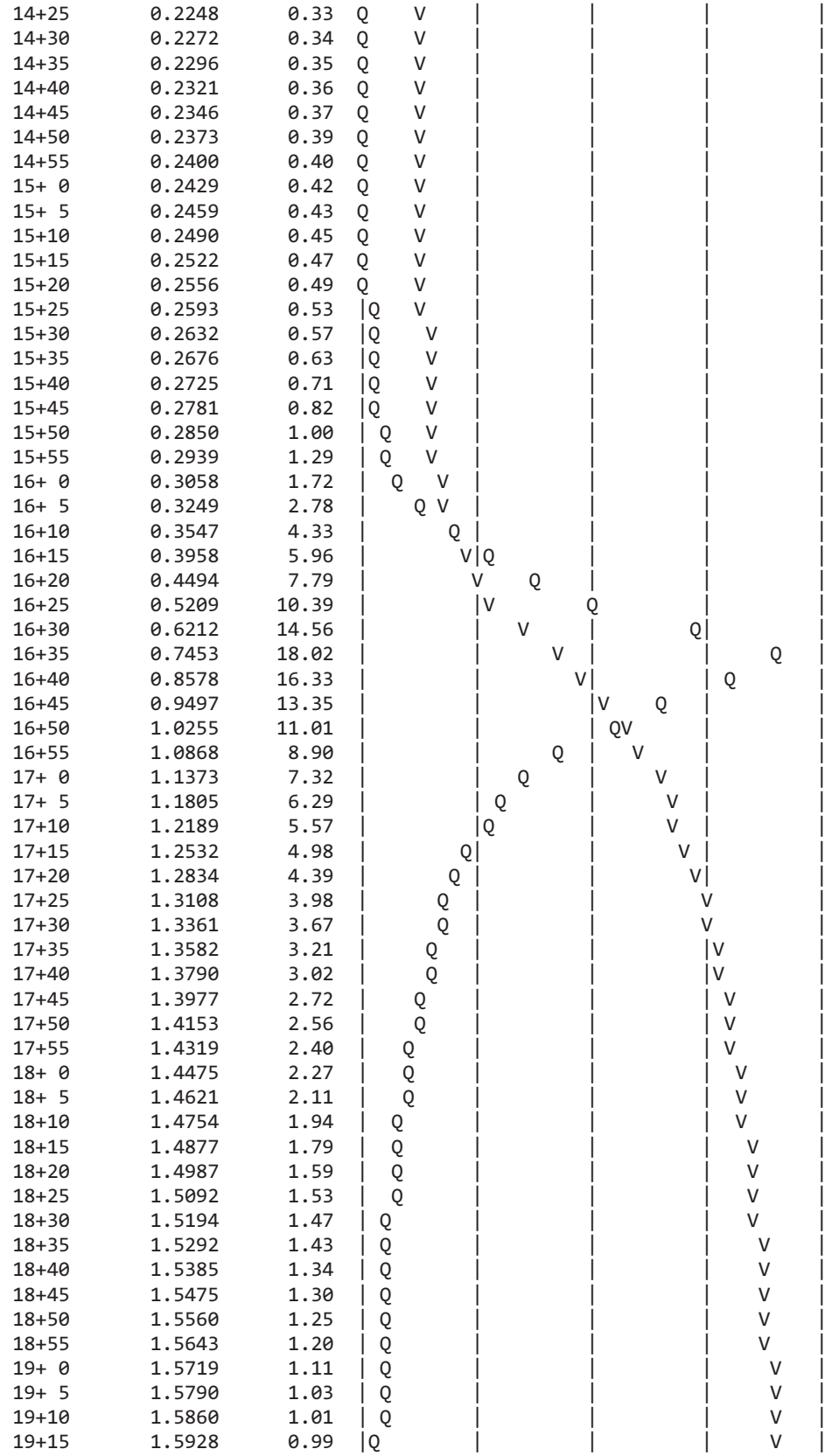
Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0000 | 0.00 | Q | | | | |
| 0+15 | 0.0001 | 0.01 | Q | | | | |
| 0+20 | 0.0001 | 0.01 | Q | | | | |
| 0+25 | 0.0002 | 0.01 | Q | | | | |
| 0+30 | 0.0004 | 0.02 | Q | | | | |
| 0+35 | 0.0007 | 0.04 | Q | | | | |
| 0+40 | 0.0010 | 0.05 | Q | | | | |
| 0+45 | 0.0014 | 0.06 | Q | | | | |
| 0+50 | 0.0019 | 0.07 | Q | | | | |
| 0+55 | 0.0024 | 0.08 | Q | | | | |
| 1+ 0 | 0.0030 | 0.08 | Q | | | | |
| 1+ 5 | 0.0036 | 0.09 | Q | | | | |
| 1+10 | 0.0042 | 0.09 | Q | | | | |
| 1+15 | 0.0048 | 0.09 | Q | | | | |
| 1+20 | 0.0055 | 0.10 | Q | | | | |
| 1+25 | 0.0062 | 0.10 | Q | | | | |
| 1+30 | 0.0069 | 0.10 | Q | | | | |
| 1+35 | 0.0076 | 0.10 | Q | | | | |
| 1+40 | 0.0084 | 0.11 | Q | | | | |
| 1+45 | 0.0091 | 0.11 | Q | | | | |
| 1+50 | 0.0099 | 0.11 | Q | | | | |
| 1+55 | 0.0106 | 0.11 | Q | | | | |
| 2+ 0 | 0.0114 | 0.11 | Q | | | | |
| 2+ 5 | 0.0122 | 0.12 | Q | | | | |
| 2+10 | 0.0131 | 0.12 | Q | | | | |
| 2+15 | 0.0139 | 0.12 | Q | | | | |
| 2+20 | 0.0147 | 0.12 | Q | | | | |
| 2+25 | 0.0156 | 0.12 | Q | | | | |
| 2+30 | 0.0164 | 0.12 | Q | | | | |
| 2+35 | 0.0173 | 0.13 | Q | | | | |
| 2+40 | 0.0181 | 0.13 | Q | | | | |
| 2+45 | 0.0190 | 0.13 | Q | | | | |
| 2+50 | 0.0199 | 0.13 | Q | | | | |
| 2+55 | 0.0208 | 0.13 | Q | | | | |
| 3+ 0 | 0.0217 | 0.13 | Q | | | | |
| 3+ 5 | 0.0226 | 0.13 | Q | | | | |
| 3+10 | 0.0235 | 0.13 | Q | | | | |
| 3+15 | 0.0245 | 0.13 | Q | | | | |
| 3+20 | 0.0254 | 0.14 | Q | | | | |
| 3+25 | 0.0263 | 0.14 | Q | | | | |
| 3+30 | 0.0273 | 0.14 | Q | | | | |
| 3+35 | 0.0282 | 0.14 | Q | | | | |
| 3+40 | 0.0292 | 0.14 | Q | | | | |
| 3+45 | 0.0302 | 0.14 | Q | | | | |
| 3+50 | 0.0312 | 0.14 | Q | | | | |
| 3+55 | 0.0321 | 0.14 | Q | | | | |
| 4+ 0 | 0.0331 | 0.14 | Q | | | | |
| 4+ 5 | 0.0341 | 0.14 | Q | | | | |
| 4+10 | 0.0351 | 0.15 | Q | | | | |
| 4+15 | 0.0361 | 0.15 | Q | | | | |
| 4+20 | 0.0371 | 0.15 | Q | | | | |
| 4+25 | 0.0382 | 0.15 | Q | | | | |
| 4+30 | 0.0392 | 0.15 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4+35 | 0.0402 | 0.15 | Q | | | | |
| 4+40 | 0.0413 | 0.15 | Q | | | | |
| 4+45 | 0.0423 | 0.15 | Q | | | | |
| 4+50 | 0.0434 | 0.15 | Q | | | | |
| 4+55 | 0.0444 | 0.15 | QV | | | | |
| 5+ 0 | 0.0455 | 0.15 | QV | | | | |
| 5+ 5 | 0.0465 | 0.16 | QV | | | | |
| 5+10 | 0.0476 | 0.16 | QV | | | | |
| 5+15 | 0.0487 | 0.16 | QV | | | | |
| 5+20 | 0.0498 | 0.16 | QV | | | | |
| 5+25 | 0.0509 | 0.16 | QV | | | | |
| 5+30 | 0.0520 | 0.16 | QV | | | | |
| 5+35 | 0.0531 | 0.16 | QV | | | | |
| 5+40 | 0.0542 | 0.16 | QV | | | | |
| 5+45 | 0.0553 | 0.16 | QV | | | | |
| 5+50 | 0.0565 | 0.16 | QV | | | | |
| 5+55 | 0.0576 | 0.17 | QV | | | | |
| 6+ 0 | 0.0588 | 0.17 | QV | | | | |
| 6+ 5 | 0.0599 | 0.17 | QV | | | | |
| 6+10 | 0.0611 | 0.17 | QV | | | | |
| 6+15 | 0.0622 | 0.17 | QV | | | | |
| 6+20 | 0.0634 | 0.17 | QV | | | | |
| 6+25 | 0.0646 | 0.17 | QV | | | | |
| 6+30 | 0.0658 | 0.17 | QV | | | | |
| 6+35 | 0.0669 | 0.17 | QV | | | | |
| 6+40 | 0.0681 | 0.17 | QV | | | | |
| 6+45 | 0.0694 | 0.18 | QV | | | | |
| 6+50 | 0.0706 | 0.18 | QV | | | | |
| 6+55 | 0.0718 | 0.18 | QV | | | | |
| 7+ 0 | 0.0730 | 0.18 | QV | | | | |
| 7+ 5 | 0.0742 | 0.18 | QV | | | | |
| 7+10 | 0.0755 | 0.18 | QV | | | | |
| 7+15 | 0.0767 | 0.18 | QV | | | | |
| 7+20 | 0.0780 | 0.18 | QV | | | | |
| 7+25 | 0.0793 | 0.18 | QV | | | | |
| 7+30 | 0.0805 | 0.19 | QV | | | | |
| 7+35 | 0.0818 | 0.19 | QV | | | | |
| 7+40 | 0.0831 | 0.19 | QV | | | | |
| 7+45 | 0.0844 | 0.19 | QV | | | | |
| 7+50 | 0.0857 | 0.19 | QV | | | | |
| 7+55 | 0.0871 | 0.19 | QV | | | | |
| 8+ 0 | 0.0884 | 0.19 | Q V | | | | |
| 8+ 5 | 0.0897 | 0.19 | Q V | | | | |
| 8+10 | 0.0911 | 0.20 | Q V | | | | |
| 8+15 | 0.0924 | 0.20 | Q V | | | | |
| 8+20 | 0.0938 | 0.20 | Q V | | | | |
| 8+25 | 0.0952 | 0.20 | Q V | | | | |
| 8+30 | 0.0966 | 0.20 | Q V | | | | |
| 8+35 | 0.0980 | 0.20 | Q V | | | | |
| 8+40 | 0.0994 | 0.20 | Q V | | | | |
| 8+45 | 0.1008 | 0.21 | Q V | | | | |
| 8+50 | 0.1022 | 0.21 | Q V | | | | |
| 8+55 | 0.1037 | 0.21 | Q V | | | | |
| 9+ 0 | 0.1051 | 0.21 | Q V | | | | |
| 9+ 5 | 0.1066 | 0.21 | Q V | | | | |
| 9+10 | 0.1081 | 0.21 | Q V | | | | |
| 9+15 | 0.1096 | 0.22 | Q V | | | | |
| 9+20 | 0.1111 | 0.22 | Q V | | | | |
| 9+25 | 0.1126 | 0.22 | Q V | | | | |

```
 9+30      0.1141     0.22  Q V      |         |         |         |
 9+35      0.1156     0.22  Q V      |         |         |         |
 9+40      0.1172     0.23  Q V      |         |         |         |
 9+45      0.1188     0.23  Q V      |         |         |         |
 9+50      0.1203     0.23  Q V      |         |         |         |
 9+55      0.1219     0.23  Q V      |         |         |         |
10+ 0      0.1235     0.23  Q V      |         |         |         |
10+ 5      0.1252     0.24  Q V      |         |         |         |
10+10      0.1268     0.24  Q V      |         |         |         |
10+15      0.1284     0.24  Q V      |         |         |         |
10+20      0.1301     0.24  Q V      |         |         |         |
10+25      0.1318     0.24  Q  V     |         |         |         |
10+30      0.1335     0.25  Q  V     |         |         |         |
10+35      0.1352     0.25  Q  V     |         |         |         |
10+40      0.1369     0.25  Q  V     |         |         |         |
10+45      0.1387     0.25  Q  V     |         |         |         |
10+50      0.1405     0.26  Q  V     |         |         |         |
10+55      0.1423     0.26  Q  V     |         |         |         |
11+ 0      0.1441     0.26  Q  V     |         |         |         |
11+ 5      0.1459     0.27  Q  V     |         |         |         |
11+10      0.1477     0.27  Q  V     |         |         |         |
11+15      0.1496     0.27  Q  V     |         |         |         |
11+20      0.1515     0.27  Q  V     |         |         |         |
11+25      0.1534     0.28  Q  V     |         |         |         |
11+30      0.1553     0.28  Q  V     |         |         |         |
11+35      0.1573     0.28  Q  V     |         |         |         |
11+40      0.1593     0.29  Q  V     |         |         |         |
11+45      0.1613     0.29  Q  V     |         |         |         |
11+50      0.1633     0.29  Q  V     |         |         |         |
11+55      0.1653     0.30  Q  V     |         |         |         |
12+ 0      0.1674     0.30  Q  V     |         |         |         |
12+ 5      0.1695     0.30  Q  V     |         |         |         |
12+10      0.1716     0.31  Q  V     |         |         |         |
12+15      0.1737     0.31  Q  V     |         |         |         |
12+20      0.1759     0.31  Q   V    |         |         |         |
12+25      0.1780     0.31  Q   V    |         |         |         |
12+30      0.1800     0.30  Q   V    |         |         |         |
12+35      0.1820     0.29  Q   V    |         |         |         |
12+40      0.1839     0.28  Q   V    |         |         |         |
12+45      0.1858     0.27  Q   V    |         |         |         |
12+50      0.1876     0.27  Q   V    |         |         |         |
12+55      0.1894     0.26  Q   V    |         |         |         |
13+ 0      0.1912     0.26  Q   V    |         |         |         |
13+ 5      0.1930     0.26  Q   V    |         |         |         |
13+10      0.1948     0.26  Q   V    |         |         |         |
13+15      0.1966     0.26  Q   V    |         |         |         |
13+20      0.1985     0.27  Q   V    |         |         |         |
13+25      0.2003     0.27  Q   V    |         |         |         |
13+30      0.2022     0.27  Q   V    |         |         |         |
13+35      0.2041     0.27  Q   V    |         |         |         |
13+40      0.2060     0.28  Q   V    |         |         |         |
13+45      0.2079     0.28  Q   V    |         |         |         |
13+50      0.2099     0.29  Q   V    |         |         |         |
13+55      0.2119     0.29  Q   V    |         |         |         |
14+ 0      0.2139     0.30  Q   V    |         |         |         |
14+ 5      0.2160     0.30  Q   V    |         |         |         |
14+10      0.2181     0.31  Q    V   |         |         |         |
14+15      0.2203     0.32  Q    V   |         |         |         |
14+20      0.2225     0.32  Q    V   |         |         |         |
```



| | | | |
|---|---|---|---|
| 14+25 | 0.2248 | 0.33 | Q V \| \| \| \| |
| 14+30 | 0.2272 | 0.34 | Q V \| \| \| \| |
| 14+35 | 0.2296 | 0.35 | Q V \| \| \| \| |
| 14+40 | 0.2321 | 0.36 | Q V \| \| \| \| |
| 14+45 | 0.2346 | 0.37 | Q V \| \| \| \| |
| 14+50 | 0.2373 | 0.39 | Q V \| \| \| \| |
| 14+55 | 0.2400 | 0.40 | Q V \| \| \| \| |
| 15+ 0 | 0.2429 | 0.42 | Q V \| \| \| \| |
| 15+ 5 | 0.2459 | 0.43 | Q V \| \| \| \| |
| 15+10 | 0.2490 | 0.45 | Q V \| \| \| \| |
| 15+15 | 0.2522 | 0.47 | Q V \| \| \| \| |
| 15+20 | 0.2556 | 0.49 | Q V \| \| \| \| |
| 15+25 | 0.2593 | 0.53 | \|Q V \| \| \| \| |
| 15+30 | 0.2632 | 0.57 | \|Q V \| \| \| \| |
| 15+35 | 0.2676 | 0.63 | \|Q V \| \| \| \| |
| 15+40 | 0.2725 | 0.71 | \|Q V \| \| \| \| |
| 15+45 | 0.2781 | 0.82 | \|Q V \| \| \| \| |
| 15+50 | 0.2850 | 1.00 | \| Q V \| \| \| \| |
| 15+55 | 0.2939 | 1.29 | \| Q V \| \| \| \| |
| 16+ 0 | 0.3058 | 1.72 | \| Q V \| \| \| \| |
| 16+ 5 | 0.3249 | 2.78 | \| Q V \| \| \| \| |
| 16+10 | 0.3547 | 4.33 | \| Q \| \| \| \| |
| 16+15 | 0.3958 | 5.96 | \| V\|Q \| \| \| |
| 16+20 | 0.4494 | 7.79 | \| V Q \| \| \| |
| 16+25 | 0.5209 | 10.39 | \| \|V Q \| \| |
| 16+30 | 0.6212 | 14.56 | \| V \| Q\| \| |
| 16+35 | 0.7453 | 18.02 | \| V \| \| Q \| |
| 16+40 | 0.8578 | 16.33 | \| V\| \| Q \| |
| 16+45 | 0.9497 | 13.35 | \| \|V Q \| \| |
| 16+50 | 1.0255 | 11.01 | \| \| QV \| \| |
| 16+55 | 1.0868 | 8.90 | \| Q \| V \| \| |
| 17+ 0 | 1.1373 | 7.32 | \| Q \| V \| \| |
| 17+ 5 | 1.1805 | 6.29 | \| Q \| V \| \| |
| 17+10 | 1.2189 | 5.57 | \| \|Q \| V \| \| |
| 17+15 | 1.2532 | 4.98 | \| Q\| \| V \| \| |
| 17+20 | 1.2834 | 4.39 | \| Q \| \| V\| \| |
| 17+25 | 1.3108 | 3.98 | \| Q \| \| V \| |
| 17+30 | 1.3361 | 3.67 | \| Q \| \| V \| |
| 17+35 | 1.3582 | 3.21 | \| Q \| \| \|V \| |
| 17+40 | 1.3790 | 3.02 | \| Q \| \| \|V \| |
| 17+45 | 1.3977 | 2.72 | \| Q \| \| \| V \| |
| 17+50 | 1.4153 | 2.56 | \| Q \| \| \| V \| |
| 17+55 | 1.4319 | 2.40 | \| Q \| \| \| V \| |
| 18+ 0 | 1.4475 | 2.27 | \| Q \| \| \| V \| |
| 18+ 5 | 1.4621 | 2.11 | \| Q \| \| \| V \| |
| 18+10 | 1.4754 | 1.94 | \| Q \| \| \| V \| |
| 18+15 | 1.4877 | 1.79 | \| Q \| \| \| V \| |
| 18+20 | 1.4987 | 1.59 | \| Q \| \| \| V \| |
| 18+25 | 1.5092 | 1.53 | \| Q \| \| \| V \| |
| 18+30 | 1.5194 | 1.47 | \| Q \| \| \| V \| |
| 18+35 | 1.5292 | 1.43 | \| Q \| \| \| V \| |
| 18+40 | 1.5385 | 1.34 | \| Q \| \| \| V \| |
| 18+45 | 1.5475 | 1.30 | \| Q \| \| \| V \| |
| 18+50 | 1.5560 | 1.25 | \| Q \| \| \| V \| |
| 18+55 | 1.5643 | 1.20 | \| Q \| \| \| V \| |
| 19+ 0 | 1.5719 | 1.11 | \| Q \| \| \| V \| |
| 19+ 5 | 1.5790 | 1.03 | \| Q \| \| \| V \| |
| 19+10 | 1.5860 | 1.01 | \| Q \| \| \| V \| |
| 19+15 | 1.5928 | 0.99 | \|Q \| \| \| V \| |

```
19+20       1.5993      0.94  |Q        |         |         |     V   |
19+25       1.6052      0.85  |Q        |         |         |     V   |
19+30       1.6109      0.83  |Q        |         |         |     V   |
19+35       1.6165      0.81  |Q        |         |         |      V  |
19+40       1.6218      0.78  |Q        |         |         |      V  |
19+45       1.6266      0.69  |Q        |         |         |      V  |
19+50       1.6311      0.65  |Q        |         |         |      V  |
19+55       1.6355      0.64  |Q        |         |         |      V  |
20+ 0       1.6397      0.61  |Q        |         |         |      V  |
20+ 5       1.6435      0.55  |Q        |         |         |      V  |
20+10       1.6468      0.49  Q        |         |         |      V  |
20+15       1.6501      0.48  Q        |         |         |      V  |
20+20       1.6534      0.47  Q        |         |         |      V  |
20+25       1.6566      0.48  Q        |         |         |      V  |
20+30       1.6600      0.49  Q        |         |         |       V |
20+35       1.6634      0.49  Q        |         |         |       V |
20+40       1.6667      0.49  Q        |         |         |       V |
20+45       1.6701      0.48  Q        |         |         |       V |
20+50       1.6733      0.47  Q        |         |         |       V |
20+55       1.6765      0.47  Q        |         |         |       V |
21+ 0       1.6797      0.46  Q        |         |         |       V |
21+ 5       1.6828      0.44  Q        |         |         |       V |
21+10       1.6855      0.40  Q        |         |         |       V |
21+15       1.6879      0.35  Q        |         |         |       V |
21+20       1.6903      0.34  Q        |         |         |       V |
21+25       1.6926      0.33  Q        |         |         |       V |
21+30       1.6948      0.33  Q        |         |         |       V |
21+35       1.6970      0.32  Q        |         |         |       V |
21+40       1.6991      0.30  Q        |         |         |       V |
21+45       1.7009      0.26  Q        |         |         |       V |
21+50       1.7023      0.20  Q        |         |         |        V|
21+55       1.7036      0.20  Q        |         |         |        V|
22+ 0       1.7049      0.19  Q        |         |         |        V|
22+ 5       1.7062      0.19  Q        |         |         |        V|
22+10       1.7075      0.18  Q        |         |         |        V|
22+15       1.7087      0.18  Q        |         |         |        V|
22+20       1.7100      0.18  Q        |         |         |        V|
22+25       1.7112      0.18  Q        |         |         |        V|
22+30       1.7124      0.17  Q        |         |         |        V|
22+35       1.7136      0.17  Q        |         |         |        V|
22+40       1.7147      0.17  Q        |         |         |        V|
22+45       1.7159      0.17  Q        |         |         |        V|
22+50       1.7171      0.17  Q        |         |         |        V|
22+55       1.7182      0.16  Q        |         |         |        V|
23+ 0       1.7193      0.16  Q        |         |         |        V|
23+ 5       1.7204      0.16  Q        |         |         |        V|
23+10       1.7215      0.16  Q        |         |         |        V|
23+15       1.7226      0.16  Q        |         |         |        V|
23+20       1.7237      0.16  Q        |         |         |        V|
23+25       1.7247      0.15  Q        |         |         |        V|
23+30       1.7258      0.15  Q        |         |         |        V|
23+35       1.7268      0.15  Q        |         |         |        V|
23+40       1.7279      0.15  Q        |         |         |        V|
23+45       1.7289      0.15  Q        |         |         |        V|
23+50       1.7299      0.15  Q        |         |         |        V|
23+55       1.7309      0.15  Q        |         |         |        V|
24+ 0       1.7319      0.14  Q        |         |         |        V|
24+ 5       1.7329      0.14  Q        |         |         |        V|
24+10       1.7338      0.14  Q        |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24+15 | 1.7348 | 0.13 | Q | \| | \| | \| | V\| |
| 24+20 | 1.7357 | 0.13 | Q | \| | \| | \| | V\| |
| 24+25 | 1.7365 | 0.12 | Q | \| | \| | \| | V\| |
| 24+30 | 1.7373 | 0.11 | Q | \| | \| | \| | V\| |
| 24+35 | 1.7380 | 0.10 | Q | \| | \| | \| | V\| |
| 24+40 | 1.7385 | 0.08 | Q | \| | \| | \| | V\| |
| 24+45 | 1.7390 | 0.07 | Q | \| | \| | \| | V\| |
| 24+50 | 1.7395 | 0.06 | Q | \| | \| | \| | V\| |
| 24+55 | 1.7399 | 0.06 | Q | \| | \| | \| | V\| |
| 25+ 0 | 1.7402 | 0.05 | Q | \| | \| | \| | V\| |
| 25+ 5 | 1.7406 | 0.05 | Q | \| | \| | \| | V\| |
| 25+10 | 1.7409 | 0.04 | Q | \| | \| | \| | V\| |
| 25+15 | 1.7411 | 0.04 | Q | \| | \| | \| | V\| |
| 25+20 | 1.7414 | 0.04 | Q | \| | \| | \| | V\| |
| 25+25 | 1.7416 | 0.03 | Q | \| | \| | \| | V\| |
| 25+30 | 1.7418 | 0.03 | Q | \| | \| | \| | V\| |
| 25+35 | 1.7420 | 0.03 | Q | \| | \| | \| | V\| |
| 25+40 | 1.7422 | 0.03 | Q | \| | \| | \| | V\| |
| 25+45 | 1.7424 | 0.02 | Q | \| | \| | \| | V\| |
| 25+50 | 1.7425 | 0.02 | Q | \| | \| | \| | V\| |
| 25+55 | 1.7427 | 0.02 | Q | \| | \| | \| | V\| |
| 26+ 0 | 1.7428 | 0.02 | Q | \| | \| | \| | V\| |
| 26+ 5 | 1.7430 | 0.02 | Q | \| | \| | \| | V\| |
| 26+10 | 1.7431 | 0.02 | Q | \| | \| | \| | V\| |
| 26+15 | 1.7432 | 0.02 | Q | \| | \| | \| | V\| |
| 26+20 | 1.7433 | 0.01 | Q | \| | \| | \| | V\| |
| 26+25 | 1.7434 | 0.01 | Q | \| | \| | \| | V\| |
| 26+30 | 1.7435 | 0.01 | Q | \| | \| | \| | V\| |
| 26+35 | 1.7436 | 0.01 | Q | \| | \| | \| | V\| |
| 26+40 | 1.7436 | 0.01 | Q | \| | \| | \| | V\| |
| 26+45 | 1.7437 | 0.01 | Q | \| | \| | \| | V\| |
| 26+50 | 1.7438 | 0.01 | Q | \| | \| | \| | V\| |
| 26+55 | 1.7438 | 0.01 | Q | \| | \| | \| | V\| |
| 27+ 0 | 1.7439 | 0.01 | Q | \| | \| | \| | V\| |
| 27+ 5 | 1.7439 | 0.01 | Q | \| | \| | \| | V\| |
| 27+10 | 1.7440 | 0.01 | Q | \| | \| | \| | V\| |
| 27+15 | 1.7440 | 0.01 | Q | \| | \| | \| | V\| |
| 27+20 | 1.7441 | 0.01 | Q | \| | \| | \| | V\| |
| 27+25 | 1.7441 | 0.01 | Q | \| | \| | \| | V\| |
| 27+30 | 1.7441 | 0.01 | Q | \| | \| | \| | V\| |
| 27+35 | 1.7442 | 0.00 | Q | \| | \| | \| | V\| |
| 27+40 | 1.7442 | 0.00 | Q | \| | \| | \| | V\| |
| 27+45 | 1.7442 | 0.00 | Q | \| | \| | \| | V\| |
| 27+50 | 1.7443 | 0.00 | Q | \| | \| | \| | V\| |
| 27+55 | 1.7443 | 0.00 | Q | \| | \| | \| | V\| |
| 28+ 0 | 1.7443 | 0.00 | Q | \| | \| | \| | V\| |
| 28+ 5 | 1.7443 | 0.00 | Q | \| | \| | \| | V\| |
| 28+10 | 1.7443 | 0.00 | Q | \| | \| | \| | V\| |
| 28+15 | 1.7444 | 0.00 | Q | \| | \| | \| | V\| |
| 28+20 | 1.7444 | 0.00 | Q | \| | \| | \| | V\| |
| 28+25 | 1.7444 | 0.00 | Q | \| | \| | \| | V\| |
| 28+30 | 1.7444 | 0.00 | Q | \| | \| | \| | V\| |
| 28+35 | 1.7444 | 0.00 | Q | \| | \| | \| | V\| |
| 28+40 | 1.7444 | 0.00 | Q | \| | \| | \| | V\| |
| 28+45 | 1.7444 | 0.00 | Q | \| | \| | \| | V\| |
| 28+50 | 1.7445 | 0.00 | Q | \| | \| | \| | V\| |
| 28+55 | 1.7445 | 0.00 | Q | \| | \| | \| | V\| |
| 29+ 0 | 1.7445 | 0.00 | Q | \| | \| | \| | V\| |
| 29+ 5 | 1.7445 | 0.00 | Q | \| | \| | \| | V\| |

```
   29+10       1.7445      0.00  Q         |          |         |        V|
   29+15       1.7445      0.00  Q         |          |         |        V|
   29+20       1.7445      0.00  Q         |          |         |        V|
   29+25       1.7445      0.00  Q         |          |         |        V|
   29+30       1.7445      0.00  Q         |          |         |        V|
   29+35       1.7445      0.00  Q         |          |         |        V|
   29+40       1.7445      0.00  Q         |          |         |         V
-------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 30
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 135.00 | 1 | 1.40 |
| Rainfall data for year 100 | | |
| 135.00 | 6 | 1.82 |
| Rainfall data for year 100 | | |
| 135.00 | 24 | 2.57 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 76.5 | 91.9 | 135.00 | 1.000 | 0.157 | 0.985 | 0.155 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.155

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 132.97 | 0.985 | 76.5 | 91.9 | 0.88 | 0.681 |
| 2.03 | 0.015 | 98.0 | 98.0 | 0.20 | 0.911 |

Area-averaged catchment yield fraction, Y = 0.684
Area-averaged low loss fraction, Yb = 0.316
User entry of time of concentration = 1.120 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 135.00(Ac.)
Catchment Lag time = 0.896 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 9.3006
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.155(In/Hr)
Average low loss rate fraction (Yb) = 0.316 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.664(In)
Computed peak 30-minute rainfall = 1.137(In)
Specified peak 1-hour rainfall = 1.400(In)
Computed peak 3-hour rainfall = 1.644(In)
Specified peak 6-hour rainfall = 1.820(In)
Specified peak 24-hour rainfall = 2.570(In)

Rainfall depth area reduction factors:
Using a total area of 135.00(Ac.) (Ref: fig. E-4)

5-minute factor = 0.994 Adjusted rainfall = 0.660(In)
30-minute factor = 0.994 Adjusted rainfall = 1.130(In)
1-hour factor = 0.994 Adjusted rainfall = 1.391(In)
3-hour factor = 0.999 Adjusted rainfall = 1.643(In)
6-hour factor = 1.000 Adjusted rainfall = 1.819(In)
24-hour factor = 1.000 Adjusted rainfall = 2.570(In)
---

U n i t H y d r o g r a p h

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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 1632.66 (CFS)) | |
| 1 | 0.409 | 6.681 |
| 2 | 1.388 | 15.976 |
| 3 | 2.942 | 25.383 |
| 4 | 5.073 | 34.783 |
| 5 | 7.763 | 43.918 |
| 6 | 11.438 | 60.001 |
| 7 | 17.330 | 96.205 |
| 8 | 25.929 | 140.377 |
| 9 | 34.768 | 144.316 |
| 10 | 42.380 | 124.286 |
| 11 | 48.466 | 99.351 |
| 12 | 53.618 | 84.113 |
| 13 | 57.937 | 70.522 |

| | | |
|---|---|---|
| 14 | 61.409 | 56.690 |
| 15 | 64.365 | 48.264 |
| 16 | 66.958 | 42.328 |
| 17 | 69.329 | 38.702 |
| 18 | 71.511 | 35.626 |
| 19 | 73.408 | 30.984 |
| 20 | 75.120 | 27.938 |
| 21 | 76.730 | 26.296 |
| 22 | 78.253 | 24.853 |
| 23 | 79.523 | 20.738 |
| 24 | 80.750 | 20.044 |
| 25 | 81.905 | 18.854 |
| 26 | 82.914 | 16.467 |
| 27 | 83.917 | 16.386 |
| 28 | 84.854 | 15.283 |
| 29 | 85.746 | 14.577 |
| 30 | 86.625 | 14.351 |
| 31 | 87.393 | 12.540 |
| 32 | 88.138 | 12.148 |
| 33 | 88.830 | 11.307 |
| 34 | 89.394 | 9.210 |
| 35 | 89.952 | 9.110 |
| 36 | 90.490 | 8.774 |
| 37 | 91.010 | 8.503 |
| 38 | 91.526 | 8.421 |
| 39 | 91.988 | 7.531 |
| 40 | 92.434 | 7.289 |
| 41 | 92.872 | 7.148 |
| 42 | 93.283 | 6.712 |
| 43 | 93.692 | 6.681 |
| 44 | 94.056 | 5.934 |
| 45 | 94.372 | 5.163 |
| 46 | 94.688 | 5.163 |
| 47 | 95.004 | 5.163 |
| 48 | 95.320 | 5.163 |
| 49 | 95.623 | 4.932 |
| 50 | 95.870 | 4.038 |
| 51 | 96.112 | 3.948 |
| 52 | 96.353 | 3.948 |
| 53 | 96.595 | 3.948 |
| 54 | 96.835 | 3.913 |
| 55 | 97.024 | 3.084 |
| 56 | 97.191 | 2.733 |
| 57 | 97.359 | 2.733 |
| 58 | 97.526 | 2.733 |
| 59 | 97.694 | 2.733 |
| 60 | 97.833 | 2.280 |
| 61 | 97.927 | 1.530 |
| 62 | 98.020 | 1.518 |
| 63 | 98.113 | 1.518 |
| 64 | 98.206 | 1.518 |
| 65 | 98.301 | 1.555 |
| 66 | 98.410 | 1.782 |
| 67 | 98.522 | 1.822 |
| 68 | 98.633 | 1.822 |
| 69 | 98.745 | 1.822 |
| 70 | 98.857 | 1.822 |
| 71 | 98.968 | 1.822 |
| 72 | 99.080 | 1.822 |

| | | |
|---|---|---|
| 73 | 99.192 | 1.822 |
| 74 | 99.303 | 1.822 |
| 75 | 99.415 | 1.822 |
| 76 | 99.512 | 1.586 |
| 77 | 99.572 | 0.979 |
| 78 | 99.630 | 0.949 |
| 79 | 99.688 | 0.949 |
| 80 | 99.746 | 0.949 |
| 81 | 99.804 | 0.949 |
| 82 | 99.862 | 0.949 |
| 83 | 99.921 | 0.949 |
| 84 | 100.000 | 0.475 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6601 | 0.6601 |
| 2 | 0.8127 | 0.1526 |
| 3 | 0.9178 | 0.1051 |
| 4 | 1.0005 | 0.0827 |
| 5 | 1.0698 | 0.0693 |
| 6 | 1.1300 | 0.0601 |
| 7 | 1.1834 | 0.0535 |
| 8 | 1.2318 | 0.0484 |
| 9 | 1.2761 | 0.0443 |
| 10 | 1.3171 | 0.0410 |
| 11 | 1.3553 | 0.0382 |
| 12 | 1.3911 | 0.0358 |
| 13 | 1.4081 | 0.0170 |
| 14 | 1.4240 | 0.0159 |
| 15 | 1.4390 | 0.0150 |
| 16 | 1.4531 | 0.0141 |
| 17 | 1.4665 | 0.0134 |
| 18 | 1.4793 | 0.0128 |
| 19 | 1.4914 | 0.0122 |
| 20 | 1.5031 | 0.0116 |
| 21 | 1.5142 | 0.0111 |
| 22 | 1.5249 | 0.0107 |
| 23 | 1.5352 | 0.0103 |
| 24 | 1.5451 | 0.0099 |
| 25 | 1.5547 | 0.0096 |
| 26 | 1.5640 | 0.0093 |
| 27 | 1.5730 | 0.0090 |
| 28 | 1.5817 | 0.0087 |
| 29 | 1.5901 | 0.0084 |
| 30 | 1.5983 | 0.0082 |
| 31 | 1.6062 | 0.0080 |
| 32 | 1.6140 | 0.0077 |
| 33 | 1.6215 | 0.0075 |
| 34 | 1.6289 | 0.0073 |
| 35 | 1.6360 | 0.0072 |
| 36 | 1.6430 | 0.0070 |
| 37 | 1.6497 | 0.0066 |
| 38 | 1.6561 | 0.0065 |
| 39 | 1.6625 | 0.0063 |
| 40 | 1.6687 | 0.0062 |
| 41 | 1.6747 | 0.0061 |
| 42 | 1.6807 | 0.0059 |
| 43 | 1.6865 | 0.0058 |
| 44 | 1.6922 | 0.0057 |

| | | |
|---|---|---|
| 45 | 1.6978 | 0.0056 |
| 46 | 1.7033 | 0.0055 |
| 47 | 1.7087 | 0.0054 |
| 48 | 1.7140 | 0.0053 |
| 49 | 1.7192 | 0.0052 |
| 50 | 1.7243 | 0.0051 |
| 51 | 1.7293 | 0.0050 |
| 52 | 1.7343 | 0.0049 |
| 53 | 1.7391 | 0.0049 |
| 54 | 1.7439 | 0.0048 |
| 55 | 1.7486 | 0.0047 |
| 56 | 1.7533 | 0.0046 |
| 57 | 1.7578 | 0.0046 |
| 58 | 1.7623 | 0.0045 |
| 59 | 1.7668 | 0.0044 |
| 60 | 1.7711 | 0.0044 |
| 61 | 1.7754 | 0.0043 |
| 62 | 1.7797 | 0.0042 |
| 63 | 1.7839 | 0.0042 |
| 64 | 1.7880 | 0.0041 |
| 65 | 1.7921 | 0.0041 |
| 66 | 1.7961 | 0.0040 |
| 67 | 1.8001 | 0.0040 |
| 68 | 1.8040 | 0.0039 |
| 69 | 1.8079 | 0.0039 |
| 70 | 1.8117 | 0.0038 |
| 71 | 1.8155 | 0.0038 |
| 72 | 1.8192 | 0.0037 |
| 73 | 1.8255 | 0.0063 |
| 74 | 1.8317 | 0.0062 |
| 75 | 1.8378 | 0.0061 |
| 76 | 1.8439 | 0.0061 |
| 77 | 1.8499 | 0.0060 |
| 78 | 1.8559 | 0.0060 |
| 79 | 1.8618 | 0.0059 |
| 80 | 1.8676 | 0.0058 |
| 81 | 1.8734 | 0.0058 |
| 82 | 1.8791 | 0.0057 |
| 83 | 1.8848 | 0.0057 |
| 84 | 1.8904 | 0.0056 |
| 85 | 1.8960 | 0.0056 |
| 86 | 1.9016 | 0.0055 |
| 87 | 1.9070 | 0.0055 |
| 88 | 1.9125 | 0.0054 |
| 89 | 1.9179 | 0.0054 |
| 90 | 1.9232 | 0.0053 |
| 91 | 1.9285 | 0.0053 |
| 92 | 1.9338 | 0.0053 |
| 93 | 1.9390 | 0.0052 |
| 94 | 1.9442 | 0.0052 |
| 95 | 1.9493 | 0.0051 |
| 96 | 1.9544 | 0.0051 |
| 97 | 1.9594 | 0.0051 |
| 98 | 1.9644 | 0.0050 |
| 99 | 1.9694 | 0.0050 |
| 100 | 1.9744 | 0.0049 |
| 101 | 1.9793 | 0.0049 |
| 102 | 1.9841 | 0.0049 |
| 103 | 1.9890 | 0.0048 |

| | | |
|---|---|---|
| 104 | 1.9937 | 0.0048 |
| 105 | 1.9985 | 0.0048 |
| 106 | 2.0032 | 0.0047 |
| 107 | 2.0079 | 0.0047 |
| 108 | 2.0126 | 0.0047 |
| 109 | 2.0172 | 0.0046 |
| 110 | 2.0218 | 0.0046 |
| 111 | 2.0264 | 0.0046 |
| 112 | 2.0309 | 0.0045 |
| 113 | 2.0354 | 0.0045 |
| 114 | 2.0399 | 0.0045 |
| 115 | 2.0443 | 0.0044 |
| 116 | 2.0487 | 0.0044 |
| 117 | 2.0531 | 0.0044 |
| 118 | 2.0575 | 0.0044 |
| 119 | 2.0618 | 0.0043 |
| 120 | 2.0661 | 0.0043 |
| 121 | 2.0704 | 0.0043 |
| 122 | 2.0746 | 0.0042 |
| 123 | 2.0788 | 0.0042 |
| 124 | 2.0830 | 0.0042 |
| 125 | 2.0872 | 0.0042 |
| 126 | 2.0914 | 0.0041 |
| 127 | 2.0955 | 0.0041 |
| 128 | 2.0996 | 0.0041 |
| 129 | 2.1037 | 0.0041 |
| 130 | 2.1077 | 0.0041 |
| 131 | 2.1117 | 0.0040 |
| 132 | 2.1157 | 0.0040 |
| 133 | 2.1197 | 0.0040 |
| 134 | 2.1237 | 0.0040 |
| 135 | 2.1276 | 0.0039 |
| 136 | 2.1315 | 0.0039 |
| 137 | 2.1354 | 0.0039 |
| 138 | 2.1393 | 0.0039 |
| 139 | 2.1431 | 0.0039 |
| 140 | 2.1470 | 0.0038 |
| 141 | 2.1508 | 0.0038 |
| 142 | 2.1546 | 0.0038 |
| 143 | 2.1583 | 0.0038 |
| 144 | 2.1621 | 0.0037 |
| 145 | 2.1658 | 0.0037 |
| 146 | 2.1695 | 0.0037 |
| 147 | 2.1732 | 0.0037 |
| 148 | 2.1769 | 0.0037 |
| 149 | 2.1806 | 0.0037 |
| 150 | 2.1842 | 0.0036 |
| 151 | 2.1878 | 0.0036 |
| 152 | 2.1914 | 0.0036 |
| 153 | 2.1950 | 0.0036 |
| 154 | 2.1986 | 0.0036 |
| 155 | 2.2021 | 0.0035 |
| 156 | 2.2056 | 0.0035 |
| 157 | 2.2091 | 0.0035 |
| 158 | 2.2126 | 0.0035 |
| 159 | 2.2161 | 0.0035 |
| 160 | 2.2196 | 0.0035 |
| 161 | 2.2230 | 0.0034 |
| 162 | 2.2265 | 0.0034 |

| | | |
|---|---|---|
| 163 | 2.2299 | 0.0034 |
| 164 | 2.2333 | 0.0034 |
| 165 | 2.2367 | 0.0034 |
| 166 | 2.2400 | 0.0034 |
| 167 | 2.2434 | 0.0034 |
| 168 | 2.2467 | 0.0033 |
| 169 | 2.2501 | 0.0033 |
| 170 | 2.2534 | 0.0033 |
| 171 | 2.2567 | 0.0033 |
| 172 | 2.2599 | 0.0033 |
| 173 | 2.2632 | 0.0033 |
| 174 | 2.2665 | 0.0033 |
| 175 | 2.2697 | 0.0032 |
| 176 | 2.2729 | 0.0032 |
| 177 | 2.2761 | 0.0032 |
| 178 | 2.2793 | 0.0032 |
| 179 | 2.2825 | 0.0032 |
| 180 | 2.2857 | 0.0032 |
| 181 | 2.2888 | 0.0032 |
| 182 | 2.2920 | 0.0031 |
| 183 | 2.2951 | 0.0031 |
| 184 | 2.2982 | 0.0031 |
| 185 | 2.3013 | 0.0031 |
| 186 | 2.3044 | 0.0031 |
| 187 | 2.3075 | 0.0031 |
| 188 | 2.3106 | 0.0031 |
| 189 | 2.3136 | 0.0031 |
| 190 | 2.3167 | 0.0030 |
| 191 | 2.3197 | 0.0030 |
| 192 | 2.3227 | 0.0030 |
| 193 | 2.3257 | 0.0030 |
| 194 | 2.3287 | 0.0030 |
| 195 | 2.3317 | 0.0030 |
| 196 | 2.3347 | 0.0030 |
| 197 | 2.3376 | 0.0030 |
| 198 | 2.3406 | 0.0030 |
| 199 | 2.3435 | 0.0029 |
| 200 | 2.3465 | 0.0029 |
| 201 | 2.3494 | 0.0029 |
| 202 | 2.3523 | 0.0029 |
| 203 | 2.3552 | 0.0029 |
| 204 | 2.3581 | 0.0029 |
| 205 | 2.3609 | 0.0029 |
| 206 | 2.3638 | 0.0029 |
| 207 | 2.3666 | 0.0029 |
| 208 | 2.3695 | 0.0028 |
| 209 | 2.3723 | 0.0028 |
| 210 | 2.3751 | 0.0028 |
| 211 | 2.3780 | 0.0028 |
| 212 | 2.3808 | 0.0028 |
| 213 | 2.3836 | 0.0028 |
| 214 | 2.3863 | 0.0028 |
| 215 | 2.3891 | 0.0028 |
| 216 | 2.3919 | 0.0028 |
| 217 | 2.3946 | 0.0028 |
| 218 | 2.3974 | 0.0027 |
| 219 | 2.4001 | 0.0027 |
| 220 | 2.4028 | 0.0027 |
| 221 | 2.4055 | 0.0027 |

| | | |
|---|---|---|
| 222 | 2.4083 | 0.0027 |
| 223 | 2.4109 | 0.0027 |
| 224 | 2.4136 | 0.0027 |
| 225 | 2.4163 | 0.0027 |
| 226 | 2.4190 | 0.0027 |
| 227 | 2.4217 | 0.0027 |
| 228 | 2.4243 | 0.0027 |
| 229 | 2.4269 | 0.0026 |
| 230 | 2.4296 | 0.0026 |
| 231 | 2.4322 | 0.0026 |
| 232 | 2.4348 | 0.0026 |
| 233 | 2.4374 | 0.0026 |
| 234 | 2.4400 | 0.0026 |
| 235 | 2.4426 | 0.0026 |
| 236 | 2.4452 | 0.0026 |
| 237 | 2.4478 | 0.0026 |
| 238 | 2.4504 | 0.0026 |
| 239 | 2.4529 | 0.0026 |
| 240 | 2.4555 | 0.0026 |
| 241 | 2.4580 | 0.0025 |
| 242 | 2.4606 | 0.0025 |
| 243 | 2.4631 | 0.0025 |
| 244 | 2.4656 | 0.0025 |
| 245 | 2.4681 | 0.0025 |
| 246 | 2.4706 | 0.0025 |
| 247 | 2.4731 | 0.0025 |
| 248 | 2.4756 | 0.0025 |
| 249 | 2.4781 | 0.0025 |
| 250 | 2.4806 | 0.0025 |
| 251 | 2.4830 | 0.0025 |
| 252 | 2.4855 | 0.0025 |
| 253 | 2.4880 | 0.0025 |
| 254 | 2.4904 | 0.0024 |
| 255 | 2.4928 | 0.0024 |
| 256 | 2.4953 | 0.0024 |
| 257 | 2.4977 | 0.0024 |
| 258 | 2.5001 | 0.0024 |
| 259 | 2.5025 | 0.0024 |
| 260 | 2.5049 | 0.0024 |
| 261 | 2.5073 | 0.0024 |
| 262 | 2.5097 | 0.0024 |
| 263 | 2.5121 | 0.0024 |
| 264 | 2.5145 | 0.0024 |
| 265 | 2.5168 | 0.0024 |
| 266 | 2.5192 | 0.0024 |
| 267 | 2.5216 | 0.0024 |
| 268 | 2.5239 | 0.0023 |
| 269 | 2.5263 | 0.0023 |
| 270 | 2.5286 | 0.0023 |
| 271 | 2.5309 | 0.0023 |
| 272 | 2.5332 | 0.0023 |
| 273 | 2.5356 | 0.0023 |
| 274 | 2.5379 | 0.0023 |
| 275 | 2.5402 | 0.0023 |
| 276 | 2.5425 | 0.0023 |
| 277 | 2.5448 | 0.0023 |
| 278 | 2.5470 | 0.0023 |
| 279 | 2.5493 | 0.0023 |
| 280 | 2.5516 | 0.0023 |

| | | |
|---|---|---|
| 281 | 2.5539 | 0.0023 |
| 282 | 2.5561 | 0.0023 |
| 283 | 2.5584 | 0.0023 |
| 284 | 2.5606 | 0.0022 |
| 285 | 2.5629 | 0.0022 |
| 286 | 2.5651 | 0.0022 |
| 287 | 2.5673 | 0.0022 |
| 288 | 2.5696 | 0.0022 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0022 | 0.0007 | 0.0015 |
| 2 | 0.0022 | 0.0007 | 0.0015 |
| 3 | 0.0022 | 0.0007 | 0.0015 |
| 4 | 0.0022 | 0.0007 | 0.0015 |
| 5 | 0.0023 | 0.0007 | 0.0015 |
| 6 | 0.0023 | 0.0007 | 0.0016 |
| 7 | 0.0023 | 0.0007 | 0.0016 |
| 8 | 0.0023 | 0.0007 | 0.0016 |
| 9 | 0.0023 | 0.0007 | 0.0016 |
| 10 | 0.0023 | 0.0007 | 0.0016 |
| 11 | 0.0023 | 0.0007 | 0.0016 |
| 12 | 0.0023 | 0.0007 | 0.0016 |
| 13 | 0.0023 | 0.0007 | 0.0016 |
| 14 | 0.0023 | 0.0007 | 0.0016 |
| 15 | 0.0024 | 0.0007 | 0.0016 |
| 16 | 0.0024 | 0.0007 | 0.0016 |
| 17 | 0.0024 | 0.0008 | 0.0016 |
| 18 | 0.0024 | 0.0008 | 0.0016 |
| 19 | 0.0024 | 0.0008 | 0.0016 |
| 20 | 0.0024 | 0.0008 | 0.0016 |
| 21 | 0.0024 | 0.0008 | 0.0017 |
| 22 | 0.0024 | 0.0008 | 0.0017 |
| 23 | 0.0024 | 0.0008 | 0.0017 |
| 24 | 0.0024 | 0.0008 | 0.0017 |
| 25 | 0.0025 | 0.0008 | 0.0017 |
| 26 | 0.0025 | 0.0008 | 0.0017 |
| 27 | 0.0025 | 0.0008 | 0.0017 |
| 28 | 0.0025 | 0.0008 | 0.0017 |
| 29 | 0.0025 | 0.0008 | 0.0017 |
| 30 | 0.0025 | 0.0008 | 0.0017 |
| 31 | 0.0025 | 0.0008 | 0.0017 |
| 32 | 0.0025 | 0.0008 | 0.0017 |
| 33 | 0.0026 | 0.0008 | 0.0017 |
| 34 | 0.0026 | 0.0008 | 0.0018 |
| 35 | 0.0026 | 0.0008 | 0.0018 |
| 36 | 0.0026 | 0.0008 | 0.0018 |
| 37 | 0.0026 | 0.0008 | 0.0018 |
| 38 | 0.0026 | 0.0008 | 0.0018 |
| 39 | 0.0026 | 0.0008 | 0.0018 |
| 40 | 0.0026 | 0.0008 | 0.0018 |
| 41 | 0.0027 | 0.0008 | 0.0018 |
| 42 | 0.0027 | 0.0008 | 0.0018 |
| 43 | 0.0027 | 0.0008 | 0.0018 |
| 44 | 0.0027 | 0.0008 | 0.0018 |
| 45 | 0.0027 | 0.0009 | 0.0019 |
| 46 | 0.0027 | 0.0009 | 0.0019 |

| | | | |
|---|---|---|---|
| 47 | 0.0027 | 0.0009 | 0.0019 |
| 48 | 0.0027 | 0.0009 | 0.0019 |
| 49 | 0.0028 | 0.0009 | 0.0019 |
| 50 | 0.0028 | 0.0009 | 0.0019 |
| 51 | 0.0028 | 0.0009 | 0.0019 |
| 52 | 0.0028 | 0.0009 | 0.0019 |
| 53 | 0.0028 | 0.0009 | 0.0019 |
| 54 | 0.0028 | 0.0009 | 0.0019 |
| 55 | 0.0029 | 0.0009 | 0.0020 |
| 56 | 0.0029 | 0.0009 | 0.0020 |
| 57 | 0.0029 | 0.0009 | 0.0020 |
| 58 | 0.0029 | 0.0009 | 0.0020 |
| 59 | 0.0029 | 0.0009 | 0.0020 |
| 60 | 0.0029 | 0.0009 | 0.0020 |
| 61 | 0.0030 | 0.0009 | 0.0020 |
| 62 | 0.0030 | 0.0009 | 0.0020 |
| 63 | 0.0030 | 0.0009 | 0.0020 |
| 64 | 0.0030 | 0.0009 | 0.0020 |
| 65 | 0.0030 | 0.0010 | 0.0021 |
| 66 | 0.0030 | 0.0010 | 0.0021 |
| 67 | 0.0031 | 0.0010 | 0.0021 |
| 68 | 0.0031 | 0.0010 | 0.0021 |
| 69 | 0.0031 | 0.0010 | 0.0021 |
| 70 | 0.0031 | 0.0010 | 0.0021 |
| 71 | 0.0031 | 0.0010 | 0.0021 |
| 72 | 0.0031 | 0.0010 | 0.0022 |
| 73 | 0.0032 | 0.0010 | 0.0022 |
| 74 | 0.0032 | 0.0010 | 0.0022 |
| 75 | 0.0032 | 0.0010 | 0.0022 |
| 76 | 0.0032 | 0.0010 | 0.0022 |
| 77 | 0.0033 | 0.0010 | 0.0022 |
| 78 | 0.0033 | 0.0010 | 0.0022 |
| 79 | 0.0033 | 0.0010 | 0.0023 |
| 80 | 0.0033 | 0.0010 | 0.0023 |
| 81 | 0.0033 | 0.0011 | 0.0023 |
| 82 | 0.0034 | 0.0011 | 0.0023 |
| 83 | 0.0034 | 0.0011 | 0.0023 |
| 84 | 0.0034 | 0.0011 | 0.0023 |
| 85 | 0.0034 | 0.0011 | 0.0023 |
| 86 | 0.0034 | 0.0011 | 0.0024 |
| 87 | 0.0035 | 0.0011 | 0.0024 |
| 88 | 0.0035 | 0.0011 | 0.0024 |
| 89 | 0.0035 | 0.0011 | 0.0024 |
| 90 | 0.0035 | 0.0011 | 0.0024 |
| 91 | 0.0036 | 0.0011 | 0.0025 |
| 92 | 0.0036 | 0.0011 | 0.0025 |
| 93 | 0.0036 | 0.0011 | 0.0025 |
| 94 | 0.0037 | 0.0012 | 0.0025 |
| 95 | 0.0037 | 0.0012 | 0.0025 |
| 96 | 0.0037 | 0.0012 | 0.0025 |
| 97 | 0.0037 | 0.0012 | 0.0026 |
| 98 | 0.0038 | 0.0012 | 0.0026 |
| 99 | 0.0038 | 0.0012 | 0.0026 |
| 100 | 0.0038 | 0.0012 | 0.0026 |
| 101 | 0.0039 | 0.0012 | 0.0026 |
| 102 | 0.0039 | 0.0012 | 0.0027 |
| 103 | 0.0039 | 0.0012 | 0.0027 |
| 104 | 0.0040 | 0.0013 | 0.0027 |
| 105 | 0.0040 | 0.0013 | 0.0027 |

| | | | |
|---|---|---|---|
| 106 | 0.0040 | 0.0013 | 0.0028 |
| 107 | 0.0041 | 0.0013 | 0.0028 |
| 108 | 0.0041 | 0.0013 | 0.0028 |
| 109 | 0.0041 | 0.0013 | 0.0028 |
| 110 | 0.0042 | 0.0013 | 0.0029 |
| 111 | 0.0042 | 0.0013 | 0.0029 |
| 112 | 0.0042 | 0.0013 | 0.0029 |
| 113 | 0.0043 | 0.0014 | 0.0029 |
| 114 | 0.0043 | 0.0014 | 0.0030 |
| 115 | 0.0044 | 0.0014 | 0.0030 |
| 116 | 0.0044 | 0.0014 | 0.0030 |
| 117 | 0.0045 | 0.0014 | 0.0031 |
| 118 | 0.0045 | 0.0014 | 0.0031 |
| 119 | 0.0046 | 0.0014 | 0.0031 |
| 120 | 0.0046 | 0.0015 | 0.0031 |
| 121 | 0.0047 | 0.0015 | 0.0032 |
| 122 | 0.0047 | 0.0015 | 0.0032 |
| 123 | 0.0048 | 0.0015 | 0.0033 |
| 124 | 0.0048 | 0.0015 | 0.0033 |
| 125 | 0.0049 | 0.0015 | 0.0033 |
| 126 | 0.0049 | 0.0015 | 0.0034 |
| 127 | 0.0050 | 0.0016 | 0.0034 |
| 128 | 0.0050 | 0.0016 | 0.0034 |
| 129 | 0.0051 | 0.0016 | 0.0035 |
| 130 | 0.0051 | 0.0016 | 0.0035 |
| 131 | 0.0052 | 0.0016 | 0.0036 |
| 132 | 0.0053 | 0.0017 | 0.0036 |
| 133 | 0.0053 | 0.0017 | 0.0037 |
| 134 | 0.0054 | 0.0017 | 0.0037 |
| 135 | 0.0055 | 0.0017 | 0.0038 |
| 136 | 0.0055 | 0.0017 | 0.0038 |
| 137 | 0.0056 | 0.0018 | 0.0039 |
| 138 | 0.0057 | 0.0018 | 0.0039 |
| 139 | 0.0058 | 0.0018 | 0.0040 |
| 140 | 0.0058 | 0.0018 | 0.0040 |
| 141 | 0.0060 | 0.0019 | 0.0041 |
| 142 | 0.0060 | 0.0019 | 0.0041 |
| 143 | 0.0061 | 0.0019 | 0.0042 |
| 144 | 0.0062 | 0.0020 | 0.0042 |
| 145 | 0.0037 | 0.0012 | 0.0026 |
| 146 | 0.0038 | 0.0012 | 0.0026 |
| 147 | 0.0039 | 0.0012 | 0.0027 |
| 148 | 0.0039 | 0.0012 | 0.0027 |
| 149 | 0.0040 | 0.0013 | 0.0028 |
| 150 | 0.0041 | 0.0013 | 0.0028 |
| 151 | 0.0042 | 0.0013 | 0.0029 |
| 152 | 0.0042 | 0.0013 | 0.0029 |
| 153 | 0.0044 | 0.0014 | 0.0030 |
| 154 | 0.0044 | 0.0014 | 0.0030 |
| 155 | 0.0046 | 0.0014 | 0.0031 |
| 156 | 0.0046 | 0.0015 | 0.0032 |
| 157 | 0.0048 | 0.0015 | 0.0033 |
| 158 | 0.0049 | 0.0015 | 0.0033 |
| 159 | 0.0050 | 0.0016 | 0.0034 |
| 160 | 0.0051 | 0.0016 | 0.0035 |
| 161 | 0.0053 | 0.0017 | 0.0036 |
| 162 | 0.0054 | 0.0017 | 0.0037 |
| 163 | 0.0056 | 0.0018 | 0.0038 |
| 164 | 0.0057 | 0.0018 | 0.0039 |

| | | | |
|---|---|---|---|
| 165 | 0.0059 | 0.0019 | 0.0041 |
| 166 | 0.0061 | 0.0019 | 0.0042 |
| 167 | 0.0063 | 0.0020 | 0.0043 |
| 168 | 0.0065 | 0.0020 | 0.0044 |
| 169 | 0.0070 | 0.0022 | 0.0048 |
| 170 | 0.0072 | 0.0023 | 0.0049 |
| 171 | 0.0075 | 0.0024 | 0.0052 |
| 172 | 0.0077 | 0.0024 | 0.0053 |
| 173 | 0.0082 | 0.0026 | 0.0056 |
| 174 | 0.0084 | 0.0027 | 0.0058 |
| 175 | 0.0090 | 0.0028 | 0.0061 |
| 176 | 0.0093 | 0.0029 | 0.0063 |
| 177 | 0.0099 | 0.0031 | 0.0068 |
| 178 | 0.0103 | 0.0033 | 0.0070 |
| 179 | 0.0111 | 0.0035 | 0.0076 |
| 180 | 0.0116 | 0.0037 | 0.0080 |
| 181 | 0.0128 | 0.0040 | 0.0087 |
| 182 | 0.0134 | 0.0042 | 0.0092 |
| 183 | 0.0150 | 0.0047 | 0.0102 |
| 184 | 0.0159 | 0.0050 | 0.0109 |
| 185 | 0.0358 | 0.0113 | 0.0245 |
| 186 | 0.0382 | 0.0121 | 0.0261 |
| 187 | 0.0443 | 0.0129 | 0.0314 |
| 188 | 0.0484 | 0.0129 | 0.0355 |
| 189 | 0.0601 | 0.0129 | 0.0473 |
| 190 | 0.0693 | 0.0129 | 0.0564 |
| 191 | 0.1051 | 0.0129 | 0.0922 |
| 192 | 0.1526 | 0.0129 | 0.1397 |
| 193 | 0.6601 | 0.0129 | 0.6472 |
| 194 | 0.0827 | 0.0129 | 0.0698 |
| 195 | 0.0535 | 0.0129 | 0.0406 |
| 196 | 0.0410 | 0.0129 | 0.0281 |
| 197 | 0.0170 | 0.0054 | 0.0116 |
| 198 | 0.0141 | 0.0045 | 0.0097 |
| 199 | 0.0122 | 0.0038 | 0.0083 |
| 200 | 0.0107 | 0.0034 | 0.0073 |
| 201 | 0.0096 | 0.0030 | 0.0066 |
| 202 | 0.0087 | 0.0027 | 0.0059 |
| 203 | 0.0080 | 0.0025 | 0.0054 |
| 204 | 0.0073 | 0.0023 | 0.0050 |
| 205 | 0.0066 | 0.0021 | 0.0045 |
| 206 | 0.0062 | 0.0020 | 0.0042 |
| 207 | 0.0058 | 0.0018 | 0.0040 |
| 208 | 0.0055 | 0.0017 | 0.0038 |
| 209 | 0.0052 | 0.0016 | 0.0036 |
| 210 | 0.0049 | 0.0016 | 0.0034 |
| 211 | 0.0047 | 0.0015 | 0.0032 |
| 212 | 0.0045 | 0.0014 | 0.0031 |
| 213 | 0.0043 | 0.0014 | 0.0029 |
| 214 | 0.0041 | 0.0013 | 0.0028 |
| 215 | 0.0040 | 0.0013 | 0.0027 |
| 216 | 0.0038 | 0.0012 | 0.0026 |
| 217 | 0.0063 | 0.0020 | 0.0043 |
| 218 | 0.0061 | 0.0019 | 0.0042 |
| 219 | 0.0059 | 0.0019 | 0.0040 |
| 220 | 0.0057 | 0.0018 | 0.0039 |
| 221 | 0.0056 | 0.0018 | 0.0038 |
| 222 | 0.0054 | 0.0017 | 0.0037 |
| 223 | 0.0053 | 0.0017 | 0.0036 |

| | | | |
|---|---|---|---|
| 224 | 0.0052 | 0.0016 | 0.0035 |
| 225 | 0.0051 | 0.0016 | 0.0035 |
| 226 | 0.0049 | 0.0016 | 0.0034 |
| 227 | 0.0048 | 0.0015 | 0.0033 |
| 228 | 0.0047 | 0.0015 | 0.0032 |
| 229 | 0.0046 | 0.0015 | 0.0032 |
| 230 | 0.0045 | 0.0014 | 0.0031 |
| 231 | 0.0044 | 0.0014 | 0.0030 |
| 232 | 0.0044 | 0.0014 | 0.0030 |
| 233 | 0.0043 | 0.0014 | 0.0029 |
| 234 | 0.0042 | 0.0013 | 0.0029 |
| 235 | 0.0041 | 0.0013 | 0.0028 |
| 236 | 0.0041 | 0.0013 | 0.0028 |
| 237 | 0.0040 | 0.0013 | 0.0027 |
| 238 | 0.0039 | 0.0012 | 0.0027 |
| 239 | 0.0039 | 0.0012 | 0.0026 |
| 240 | 0.0038 | 0.0012 | 0.0026 |
| 241 | 0.0037 | 0.0012 | 0.0026 |
| 242 | 0.0037 | 0.0012 | 0.0025 |
| 243 | 0.0036 | 0.0011 | 0.0025 |
| 244 | 0.0036 | 0.0011 | 0.0024 |
| 245 | 0.0035 | 0.0011 | 0.0024 |
| 246 | 0.0035 | 0.0011 | 0.0024 |
| 247 | 0.0034 | 0.0011 | 0.0023 |
| 248 | 0.0034 | 0.0011 | 0.0023 |
| 249 | 0.0033 | 0.0010 | 0.0023 |
| 250 | 0.0033 | 0.0010 | 0.0022 |
| 251 | 0.0032 | 0.0010 | 0.0022 |
| 252 | 0.0032 | 0.0010 | 0.0022 |
| 253 | 0.0032 | 0.0010 | 0.0022 |
| 254 | 0.0031 | 0.0010 | 0.0021 |
| 255 | 0.0031 | 0.0010 | 0.0021 |
| 256 | 0.0030 | 0.0010 | 0.0021 |
| 257 | 0.0030 | 0.0009 | 0.0021 |
| 258 | 0.0030 | 0.0009 | 0.0020 |
| 259 | 0.0029 | 0.0009 | 0.0020 |
| 260 | 0.0029 | 0.0009 | 0.0020 |
| 261 | 0.0029 | 0.0009 | 0.0020 |
| 262 | 0.0028 | 0.0009 | 0.0019 |
| 263 | 0.0028 | 0.0009 | 0.0019 |
| 264 | 0.0028 | 0.0009 | 0.0019 |
| 265 | 0.0028 | 0.0009 | 0.0019 |
| 266 | 0.0027 | 0.0009 | 0.0019 |
| 267 | 0.0027 | 0.0009 | 0.0018 |
| 268 | 0.0027 | 0.0008 | 0.0018 |
| 269 | 0.0026 | 0.0008 | 0.0018 |
| 270 | 0.0026 | 0.0008 | 0.0018 |
| 271 | 0.0026 | 0.0008 | 0.0018 |
| 272 | 0.0026 | 0.0008 | 0.0018 |
| 273 | 0.0025 | 0.0008 | 0.0017 |
| 274 | 0.0025 | 0.0008 | 0.0017 |
| 275 | 0.0025 | 0.0008 | 0.0017 |
| 276 | 0.0025 | 0.0008 | 0.0017 |
| 277 | 0.0025 | 0.0008 | 0.0017 |
| 278 | 0.0024 | 0.0008 | 0.0017 |
| 279 | 0.0024 | 0.0008 | 0.0016 |
| 280 | 0.0024 | 0.0008 | 0.0016 |
| 281 | 0.0024 | 0.0007 | 0.0016 |
| 282 | 0.0023 | 0.0007 | 0.0016 |

| | | | |
|---|---|---|---|
| 283 | 0.0023 | 0.0007 | 0.0016 |
| 284 | 0.0023 | 0.0007 | 0.0016 |
| 285 | 0.0023 | 0.0007 | 0.0016 |
| 286 | 0.0023 | 0.0007 | 0.0016 |
| 287 | 0.0023 | 0.0007 | 0.0015 |
| 288 | 0.0022 | 0.0007 | 0.0015 |

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Total soil rain loss = 0.52(In)
Total effective rainfall = 2.05(In)
Peak flow rate in flood hydrograph = 153.30(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 50.0 | 100.0 | 150.0 | 200.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0001 | 0.01 | Q | | | | |
| 0+10 | 0.0003 | 0.03 | Q | | | | |
| 0+15 | 0.0008 | 0.07 | Q | | | | |
| 0+20 | 0.0017 | 0.13 | Q | | | | |
| 0+25 | 0.0030 | 0.19 | Q | | | | |
| 0+30 | 0.0050 | 0.29 | Q | | | | |
| 0+35 | 0.0080 | 0.43 | Q | | | | |
| 0+40 | 0.0124 | 0.65 | Q | | | | |
| 0+45 | 0.0184 | 0.87 | Q | | | | |
| 0+50 | 0.0258 | 1.06 | Q | | | | |
| 0+55 | 0.0342 | 1.22 | Q | | | | |
| 1+ 0 | 0.0435 | 1.35 | Q | | | | |
| 1+ 5 | 0.0536 | 1.46 | Q | | | | |
| 1+10 | 0.0643 | 1.56 | Q | | | | |
| 1+15 | 0.0755 | 1.64 | Q | | | | |
| 1+20 | 0.0873 | 1.71 | Q | | | | |
| 1+25 | 0.0995 | 1.77 | Q | | | | |
| 1+30 | 0.1122 | 1.83 | Q | | | | |
| 1+35 | 0.1252 | 1.89 | Q | | | | |
| 1+40 | 0.1385 | 1.94 | Q | | | | |
| 1+45 | 0.1522 | 1.99 | Q | | | | |
| 1+50 | 0.1662 | 2.03 | Q | | | | |
| 1+55 | 0.1805 | 2.07 | Q | | | | |
| 2+ 0 | 0.1951 | 2.11 | Q | | | | |
| 2+ 5 | 0.2099 | 2.15 | Q | | | | |
| 2+10 | 0.2249 | 2.18 | Q | | | | |
| 2+15 | 0.2402 | 2.22 | Q | | | | |
| 2+20 | 0.2557 | 2.25 | Q | | | | |
| 2+25 | 0.2714 | 2.28 | Q | | | | |
| 2+30 | 0.2874 | 2.32 | Q | | | | |
| 2+35 | 0.3035 | 2.34 | Q | | | | |
| 2+40 | 0.3199 | 2.37 | Q | | | | |
| 2+45 | 0.3364 | 2.40 | Q | | | | |
| 2+50 | 0.3531 | 2.43 | Q | | | | |
| 2+55 | 0.3700 | 2.45 | Q | | | | |
| 3+ 0 | 0.3870 | 2.47 | Q | | | | |
| 3+ 5 | 0.4042 | 2.50 | Q | | | | |
| 3+10 | 0.4216 | 2.52 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+15 | 0.4391 | 2.55 | Q | | | | |
| 3+20 | 0.4568 | 2.57 | Q | | | | |
| 3+25 | 0.4747 | 2.59 | Q | | | | |
| 3+30 | 0.4927 | 2.61 | Q | | | | |
| 3+35 | 0.5108 | 2.63 | Q | | | | |
| 3+40 | 0.5291 | 2.66 | Q | | | | |
| 3+45 | 0.5475 | 2.68 | Q | | | | |
| 3+50 | 0.5661 | 2.70 | Q | | | | |
| 3+55 | 0.5848 | 2.72 | QV | | | | |
| 4+ 0 | 0.6037 | 2.74 | QV | | | | |
| 4+ 5 | 0.6227 | 2.76 | QV | | | | |
| 4+10 | 0.6418 | 2.78 | QV | | | | |
| 4+15 | 0.6611 | 2.80 | QV | | | | |
| 4+20 | 0.6805 | 2.82 | QV | | | | |
| 4+25 | 0.7000 | 2.84 | QV | | | | |
| 4+30 | 0.7197 | 2.86 | QV | | | | |
| 4+35 | 0.7395 | 2.88 | QV | | | | |
| 4+40 | 0.7595 | 2.89 | QV | | | | |
| 4+45 | 0.7795 | 2.91 | QV | | | | |
| 4+50 | 0.7997 | 2.93 | QV | | | | |
| 4+55 | 0.8201 | 2.95 | QV | | | | |
| 5+ 0 | 0.8405 | 2.97 | QV | | | | |
| 5+ 5 | 0.8611 | 2.99 | QV | | | | |
| 5+10 | 0.8818 | 3.01 | QV | | | | |
| 5+15 | 0.9026 | 3.02 | QV | | | | |
| 5+20 | 0.9236 | 3.04 | QV | | | | |
| 5+25 | 0.9446 | 3.06 | QV | | | | |
| 5+30 | 0.9659 | 3.08 | QV | | | | |
| 5+35 | 0.9872 | 3.10 | QV | | | | |
| 5+40 | 1.0087 | 3.12 | QV | | | | |
| 5+45 | 1.0303 | 3.14 | QV | | | | |
| 5+50 | 1.0520 | 3.16 | QV | | | | |
| 5+55 | 1.0739 | 3.18 | QV | | | | |
| 6+ 0 | 1.0960 | 3.20 | QV | | | | |
| 6+ 5 | 1.1181 | 3.22 | QV | | | | |
| 6+10 | 1.1405 | 3.24 | QV | | | | |
| 6+15 | 1.1629 | 3.26 | Q V | | | | |
| 6+20 | 1.1855 | 3.28 | Q V | | | | |
| 6+25 | 1.2083 | 3.30 | Q V | | | | |
| 6+30 | 1.2312 | 3.32 | Q V | | | | |
| 6+35 | 1.2542 | 3.35 | Q V | | | | |
| 6+40 | 1.2774 | 3.37 | Q V | | | | |
| 6+45 | 1.3008 | 3.39 | Q V | | | | |
| 6+50 | 1.3242 | 3.41 | Q V | | | | |
| 6+55 | 1.3479 | 3.43 | Q V | | | | |
| 7+ 0 | 1.3717 | 3.45 | Q V | | | | |
| 7+ 5 | 1.3956 | 3.48 | Q V | | | | |
| 7+10 | 1.4197 | 3.50 | Q V | | | | |
| 7+15 | 1.4439 | 3.52 | Q V | | | | |
| 7+20 | 1.4683 | 3.54 | Q V | | | | |
| 7+25 | 1.4929 | 3.56 | Q V | | | | |
| 7+30 | 1.5176 | 3.59 | Q V | | | | |
| 7+35 | 1.5424 | 3.61 | Q V | | | | |
| 7+40 | 1.5674 | 3.63 | Q V | | | | |
| 7+45 | 1.5926 | 3.66 | Q V | | | | |
| 7+50 | 1.6180 | 3.68 | Q V | | | | |
| 7+55 | 1.6435 | 3.71 | Q V | | | | |
| 8+ 0 | 1.6692 | 3.73 | Q V | | | | |
| 8+ 5 | 1.6951 | 3.76 | Q V | | | | |

```
 8+10       1.7212      3.78  Q V       |          |          |          |
 8+15       1.7474      3.81  Q  V      |          |          |          |
 8+20       1.7738      3.84  Q  V      |          |          |          |
 8+25       1.8004      3.86  Q  V      |          |          |          |
 8+30       1.8272      3.89  Q  V      |          |          |          |
 8+35       1.8542      3.92  Q  V      |          |          |          |
 8+40       1.8814      3.95  Q  V      |          |          |          |
 8+45       1.9088      3.98  Q  V      |          |          |          |
 8+50       1.9364      4.01  Q  V      |          |          |          |
 8+55       1.9642      4.04  Q  V      |          |          |          |
 9+ 0       1.9923      4.07  Q  V      |          |          |          |
 9+ 5       2.0205      4.10  Q  V      |          |          |          |
 9+10       2.0490      4.13  Q  V      |          |          |          |
 9+15       2.0777      4.16  Q  V      |          |          |          |
 9+20       2.1066      4.20  Q  V      |          |          |          |
 9+25       2.1357      4.23  Q  V      |          |          |          |
 9+30       2.1651      4.27  Q  V      |          |          |          |
 9+35       2.1947      4.30  Q  V      |          |          |          |
 9+40       2.2246      4.34  Q  V      |          |          |          |
 9+45       2.2547      4.37  Q  V      |          |          |          |
 9+50       2.2851      4.41  Q  V      |          |          |          |
 9+55       2.3157      4.45  Q   V     |          |          |          |
10+ 0       2.3466      4.49  Q   V     |          |          |          |
10+ 5       2.3778      4.53  Q   V     |          |          |          |
10+10       2.4093      4.57  Q   V     |          |          |          |
10+15       2.4410      4.61  Q   V     |          |          |          |
10+20       2.4730      4.65  Q   V     |          |          |          |
10+25       2.5054      4.69  Q   V     |          |          |          |
10+30       2.5380      4.74  Q   V     |          |          |          |
10+35       2.5709      4.78  Q   V     |          |          |          |
10+40       2.6042      4.83  Q   V     |          |          |          |
10+45       2.6378      4.88  Q   V     |          |          |          |
10+50       2.6717      4.92  Q   V     |          |          |          |
10+55       2.7060      4.97  Q   V     |          |          |          |
11+ 0       2.7406      5.02  |Q  V      |          |          |          |
11+ 5       2.7755      5.08  |Q  V      |          |          |          |
11+10       2.8109      5.13  |Q  V      |          |          |          |
11+15       2.8466      5.18  |Q  V      |          |          |          |
11+20       2.8826      5.24  |Q   V     |          |          |          |
11+25       2.9191      5.30  |Q   V     |          |          |          |
11+30       2.9560      5.36  |Q   V     |          |          |          |
11+35       2.9933      5.42  |Q   V     |          |          |          |
11+40       3.0310      5.48  |Q   V     |          |          |          |
11+45       3.0692      5.54  |Q   V     |          |          |          |
11+50       3.1078      5.61  |Q   V     |          |          |          |
11+55       3.1469      5.67  |Q   V     |          |          |          |
12+ 0       3.1865      5.74  |Q   V     |          |          |          |
12+ 5       3.2265      5.80  |Q   V     |          |          |          |
12+10       3.2667      5.85  |Q   V     |          |          |          |
12+15       3.3072      5.88  |Q   V     |          |          |          |
12+20       3.3478      5.89  |Q   V     |          |          |          |
12+25       3.3884      5.90  |Q   V     |          |          |          |
12+30       3.4289      5.87  |Q   V     |          |          |          |
12+35       3.4687      5.78  |Q    V    |          |          |          |
12+40       3.5073      5.62  |Q    V    |          |          |          |
12+45       3.5448      5.44  |Q    V    |          |          |          |
12+50       3.5813      5.30  |Q    V    |          |          |          |
12+55       3.6172      5.21  |Q    V    |          |          |          |
13+ 0       3.6526      5.14  |Q    V    |          |          |          |
```

| | | | |
|---|---|---|---|
| 13+ 5 | 3.6878 | 5.10 | |
| 13+10 | 3.7228 | 5.09 | |
| 13+15 | 3.7578 | 5.09 | |
| 13+20 | 3.7930 | 5.10 | |
| 13+25 | 3.8283 | 5.13 | |
| 13+30 | 3.8638 | 5.16 | |
| 13+35 | 3.8997 | 5.20 | |
| 13+40 | 3.9359 | 5.26 | |
| 13+45 | 3.9725 | 5.32 | |
| 13+50 | 4.0096 | 5.39 | |
| 13+55 | 4.0473 | 5.47 | |
| 14+ 0 | 4.0856 | 5.56 | |
| 14+ 5 | 4.1245 | 5.65 | |
| 14+10 | 4.1642 | 5.76 | |
| 14+15 | 4.2047 | 5.88 | |
| 14+20 | 4.2461 | 6.01 | |
| 14+25 | 4.2884 | 6.15 | |
| 14+30 | 4.3319 | 6.31 | |
| 14+35 | 4.3765 | 6.48 | |
| 14+40 | 4.4225 | 6.68 | |
| 14+45 | 4.4699 | 6.89 | |
| 14+50 | 4.5190 | 7.12 | |
| 14+55 | 4.5697 | 7.36 | |
| 15+ 0 | 4.6222 | 7.63 | |
| 15+ 5 | 4.6768 | 7.92 | |
| 15+10 | 4.7335 | 8.24 | |
| 15+15 | 4.7926 | 8.59 | |
| 15+20 | 4.8545 | 8.98 | |
| 15+25 | 4.9199 | 9.50 | |
| 15+30 | 4.9901 | 10.19 | |
| 15+35 | 5.0666 | 11.10 | |
| 15+40 | 5.1510 | 12.26 | |
| 15+45 | 5.2457 | 13.75 | |
| 15+50 | 5.3543 | 15.76 | |
| 15+55 | 5.4836 | 18.79 | |
| 16+ 0 | 5.6446 | 23.37 | |
| 16+ 5 | 5.8694 | 32.63 | |
| 16+10 | 6.1714 | 43.86 | |
| 16+15 | 6.5531 | 55.42 | |
| 16+20 | 7.0177 | 67.45 | |
| 16+25 | 7.5703 | 80.24 | |
| 16+30 | 8.2456 | 98.05 | |
| 16+35 | 9.1123 | 125.85 | |
| 16+40 | 10.1675 | 153.21 | |
| 16+45 | 11.2233 | 153.30 | |
| 16+50 | 12.1650 | 136.73 | |
| 16+55 | 12.9652 | 116.19 | |
| 17+ 0 | 13.6581 | 100.62 | |
| 17+ 5 | 14.2543 | 86.56 | |
| 17+10 | 14.7607 | 73.53 | |
| 17+15 | 15.2053 | 64.56 | |
| 17+20 | 15.6038 | 57.87 | |
| 17+25 | 15.9689 | 53.01 | |
| 17+30 | 16.3050 | 48.80 | |
| 17+35 | 16.6086 | 44.08 | |
| 17+40 | 16.8879 | 40.56 | |
| 17+45 | 17.1494 | 37.97 | |
| 17+50 | 17.3944 | 35.57 | |
| 17+55 | 17.6146 | 31.97 | |

```
18+ 0      17.8237     30.37  |     Q   |         |         |V        |
18+ 5      18.0208     28.62  |    Q    |         |         |V        |
18+10      18.2025     26.38  |    Q    |         |         |V        |
18+15      18.3783     25.53  |    Q    |         |         |V        |
18+20      18.5451     24.21  |   Q     |         |         | V       |
18+25      18.7045     23.15  |   Q     |         |         | V       |
18+30      18.8586     22.37  |   Q     |         |         | V       |
18+35      19.0020     20.83  |   Q     |         |         |  V      |
18+40      19.1407     20.13  |   Q     |         |         |  V      |
18+45      19.2729     19.20  |  Q      |         |         |  V      |
18+50      19.3945     17.66  |  Q      |         |         |  V      |
18+55      19.5134     17.27  |  Q      |         |         |  V      |
19+ 0      19.6290     16.78  |  Q      |         |         |   V     |
19+ 5      19.7414     16.32  |  Q      |         |         |   V     |
19+10      19.8512     15.95  |  Q      |         |         |   V     |
19+15      19.9555     15.15  |  Q      |         |         |   V     |
19+20      20.0569     14.72  | Q       |         |         |   V     |
19+25      20.1557     14.34  | Q       |         |         |    V    |
19+30      20.2508     13.81  | Q       |         |         |    V    |
19+35      20.3434     13.46  | Q       |         |         |    V    |
19+40      20.4311     12.72  | Q       |         |         |    V    |
19+45      20.5139     12.03  | Q       |         |         |    V    |
19+50      20.5952     11.81  | Q       |         |         |    V    |
19+55      20.6750     11.58  | Q       |         |         |    V    |
20+ 0      20.7530     11.33  | Q       |         |         |     V   |
20+ 5      20.8283     10.93  | Q       |         |         |     V   |
20+10      20.8986     10.20  | Q       |         |         |     V   |
20+15      20.9671      9.94  |Q        |         |         |     V   |
20+20      21.0342      9.75  |Q        |         |         |     V   |
20+25      21.0998      9.53  |Q        |         |         |     V   |
20+30      21.1636      9.25  |Q        |         |         |     V   |
20+35      21.2225      8.56  |Q        |         |         |     V   |
20+40      21.2788      8.16  |Q        |         |         |      V  |
20+45      21.3338      7.99  |Q        |         |         |      V  |
20+50      21.3875      7.81  |Q        |         |         |      V  |
20+55      21.4399      7.60  |Q        |         |         |      V  |
21+ 0      21.4891      7.14  |Q        |         |         |      V  |
21+ 5      21.5343      6.57  |Q        |         |         |      V  |
21+10      21.5787      6.44  |Q        |         |         |      V  |
21+15      21.6224      6.35  |Q        |         |         |      V  |
21+20      21.6657      6.29  |Q        |         |         |      V  |
21+25      21.7090      6.28  |Q        |         |         |      V  |
21+30      21.7528      6.36  |Q        |         |         |      V  |
21+35      21.7965      6.34  |Q        |         |         |      V  |
21+40      21.8398      6.28  |Q        |         |         |       V |
21+45      21.8826      6.22  |Q        |         |         |       V |
21+50      21.9249      6.14  |Q        |         |         |       V |
21+55      21.9666      6.07  |Q        |         |         |       V |
22+ 0      22.0078      5.98  |Q        |         |         |       V |
22+ 5      22.0484      5.89  |Q        |         |         |       V |
22+10      22.0883      5.79  |Q        |         |         |       V |
22+15      22.1272      5.65  |Q        |         |         |       V |
22+20      22.1641      5.36  |Q        |         |         |       V |
22+25      22.1978      4.89  Q        |         |         |       V |
22+30      22.2305      4.75  Q        |         |         |       V |
22+35      22.2626      4.65  Q        |         |         |       V |
22+40      22.2940      4.56  Q        |         |         |       V |
22+45      22.3248      4.47  Q        |         |         |       V |
22+50      22.3548      4.36  Q        |         |         |       V |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+55 | 22.3838 | 4.21 | Q | \| | \| | \| | V \| |
| 23+ 0 | 22.4100 | 3.80 | Q | \| | \| | \| | V \| |
| 23+ 5 | 22.4335 | 3.43 | Q | \| | \| | \| | V\| |
| 23+10 | 22.4565 | 3.34 | Q | \| | \| | \| | V\| |
| 23+15 | 22.4791 | 3.27 | Q | \| | \| | \| | V\| |
| 23+20 | 22.5012 | 3.22 | Q | \| | \| | \| | V\| |
| 23+25 | 22.5231 | 3.18 | Q | \| | \| | \| | V\| |
| 23+30 | 22.5448 | 3.14 | Q | \| | \| | \| | V\| |
| 23+35 | 22.5662 | 3.10 | Q | \| | \| | \| | V\| |
| 23+40 | 22.5873 | 3.07 | Q | \| | \| | \| | V\| |
| 23+45 | 22.6082 | 3.04 | Q | \| | \| | \| | V\| |
| 23+50 | 22.6289 | 3.01 | Q | \| | \| | \| | V\| |
| 23+55 | 22.6494 | 2.97 | Q | \| | \| | \| | V\| |
| 24+ 0 | 22.6697 | 2.95 | Q | \| | \| | \| | V\| |
| 24+ 5 | 22.6897 | 2.91 | Q | \| | \| | \| | V\| |
| 24+10 | 22.7094 | 2.86 | Q | \| | \| | \| | V\| |
| 24+15 | 22.7286 | 2.79 | Q | \| | \| | \| | V\| |
| 24+20 | 22.7473 | 2.71 | Q | \| | \| | \| | V\| |
| 24+25 | 22.7653 | 2.62 | Q | \| | \| | \| | V\| |
| 24+30 | 22.7825 | 2.50 | Q | \| | \| | \| | V\| |
| 24+35 | 22.7986 | 2.33 | Q | \| | \| | \| | V\| |
| 24+40 | 22.8131 | 2.10 | Q | \| | \| | \| | V\| |
| 24+45 | 22.8259 | 1.86 | Q | \| | \| | \| | V\| |
| 24+50 | 22.8373 | 1.66 | Q | \| | \| | \| | V\| |
| 24+55 | 22.8476 | 1.49 | Q | \| | \| | \| | V\| |
| 25+ 0 | 22.8569 | 1.35 | Q | \| | \| | \| | V\| |
| 25+ 5 | 22.8653 | 1.23 | Q | \| | \| | \| | V\| |
| 25+10 | 22.8731 | 1.13 | Q | \| | \| | \| | V\| |
| 25+15 | 22.8803 | 1.04 | Q | \| | \| | \| | V\| |
| 25+20 | 22.8869 | 0.97 | Q | \| | \| | \| | V\| |
| 25+25 | 22.8931 | 0.90 | Q | \| | \| | \| | V\| |
| 25+30 | 22.8989 | 0.84 | Q | \| | \| | \| | V\| |
| 25+35 | 22.9043 | 0.78 | Q | \| | \| | \| | V\| |
| 25+40 | 22.9093 | 0.73 | Q | \| | \| | \| | V\| |
| 25+45 | 22.9140 | 0.68 | Q | \| | \| | \| | V\| |
| 25+50 | 22.9184 | 0.64 | Q | \| | \| | \| | V\| |
| 25+55 | 22.9225 | 0.60 | Q | \| | \| | \| | V\| |
| 26+ 0 | 22.9264 | 0.56 | Q | \| | \| | \| | V\| |
| 26+ 5 | 22.9300 | 0.53 | Q | \| | \| | \| | V\| |
| 26+10 | 22.9335 | 0.50 | Q | \| | \| | \| | V\| |
| 26+15 | 22.9367 | 0.47 | Q | \| | \| | \| | V\| |
| 26+20 | 22.9397 | 0.44 | Q | \| | \| | \| | V\| |
| 26+25 | 22.9426 | 0.41 | Q | \| | \| | \| | V\| |
| 26+30 | 22.9453 | 0.39 | Q | \| | \| | \| | V\| |
| 26+35 | 22.9478 | 0.37 | Q | \| | \| | \| | V\| |
| 26+40 | 22.9501 | 0.34 | Q | \| | \| | \| | V\| |
| 26+45 | 22.9524 | 0.32 | Q | \| | \| | \| | V\| |
| 26+50 | 22.9545 | 0.31 | Q | \| | \| | \| | V\| |
| 26+55 | 22.9565 | 0.29 | Q | \| | \| | \| | V\| |
| 27+ 0 | 22.9583 | 0.27 | Q | \| | \| | \| | V\| |
| 27+ 5 | 22.9601 | 0.26 | Q | \| | \| | \| | V\| |
| 27+10 | 22.9618 | 0.24 | Q | \| | \| | \| | V\| |
| 27+15 | 22.9634 | 0.23 | Q | \| | \| | \| | V\| |
| 27+20 | 22.9648 | 0.21 | Q | \| | \| | \| | V\| |
| 27+25 | 22.9662 | 0.20 | Q | \| | \| | \| | V\| |
| 27+30 | 22.9675 | 0.19 | Q | \| | \| | \| | V\| |
| 27+35 | 22.9688 | 0.18 | Q | \| | \| | \| | V\| |
| 27+40 | 22.9699 | 0.17 | Q | \| | \| | \| | V\| |
| 27+45 | 22.9710 | 0.16 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 27+50 | 22.9720 | 0.15 | Q | \| | \| | \| | V\| |
| 27+55 | 22.9730 | 0.14 | Q | \| | \| | \| | V\| |
| 28+ 0 | 22.9739 | 0.13 | Q | \| | \| | \| | V\| |
| 28+ 5 | 22.9747 | 0.12 | Q | \| | \| | \| | V\| |
| 28+10 | 22.9755 | 0.11 | Q | \| | \| | \| | V\| |
| 28+15 | 22.9762 | 0.11 | Q | \| | \| | \| | V\| |
| 28+20 | 22.9769 | 0.10 | Q | \| | \| | \| | V\| |
| 28+25 | 22.9776 | 0.09 | Q | \| | \| | \| | V\| |
| 28+30 | 22.9782 | 0.09 | Q | \| | \| | \| | V\| |
| 28+35 | 22.9787 | 0.08 | Q | \| | \| | \| | V\| |
| 28+40 | 22.9792 | 0.08 | Q | \| | \| | \| | V\| |
| 28+45 | 22.9797 | 0.07 | Q | \| | \| | \| | V\| |
| 28+50 | 22.9802 | 0.07 | Q | \| | \| | \| | V\| |
| 28+55 | 22.9806 | 0.06 | Q | \| | \| | \| | V\| |
| 29+ 0 | 22.9810 | 0.06 | Q | \| | \| | \| | V\| |
| 29+ 5 | 22.9814 | 0.05 | Q | \| | \| | \| | V\| |
| 29+10 | 22.9818 | 0.05 | Q | \| | \| | \| | V\| |
| 29+15 | 22.9821 | 0.05 | Q | \| | \| | \| | V\| |
| 29+20 | 22.9824 | 0.05 | Q | \| | \| | \| | V\| |
| 29+25 | 22.9827 | 0.04 | Q | \| | \| | \| | V\| |
| 29+30 | 22.9830 | 0.04 | Q | \| | \| | \| | V\| |
| 29+35 | 22.9833 | 0.04 | Q | \| | \| | \| | V\| |
| 29+40 | 22.9835 | 0.03 | Q | \| | \| | \| | V\| |
| 29+45 | 22.9837 | 0.03 | Q | \| | \| | \| | V\| |
| 29+50 | 22.9839 | 0.03 | Q | \| | \| | \| | V\| |
| 29+55 | 22.9841 | 0.03 | Q | \| | \| | \| | V\| |
| 30+ 0 | 22.9842 | 0.02 | Q | \| | \| | \| | V\| |
| 30+ 5 | 22.9844 | 0.02 | Q | \| | \| | \| | V\| |
| 30+10 | 22.9845 | 0.02 | Q | \| | \| | \| | V\| |
| 30+15 | 22.9846 | 0.01 | Q | \| | \| | \| | V\| |
| 30+20 | 22.9847 | 0.01 | Q | \| | \| | \| | V\| |
| 30+25 | 22.9847 | 0.01 | Q | \| | \| | \| | V\| |
| 30+30 | 22.9848 | 0.01 | Q | \| | \| | \| | V\| |
| 30+35 | 22.9848 | 0.01 | Q | \| | \| | \| | V\| |
| 30+40 | 22.9849 | 0.01 | Q | \| | \| | \| | V\| |
| 30+45 | 22.9849 | 0.00 | Q | \| | \| | \| | V\| |
| 30+50 | 22.9849 | 0.00 | Q | \| | \| | \| | V\| |
| 30+55 | 22.9849 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 31
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 634.87 | 1 | 1.40 |
| Rainfall data for year 100 | | |
| 634.87 | 6 | 1.83 |
| Rainfall data for year 100 | | |
| 634.87 | 24 | 2.60 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 69.0 | 86.2 | 634.87 | 1.000 | 0.262 | 0.949 | 0.248 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.248

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 602.49 | 0.949 | 69.0 | 86.2 | 1.60 | 0.515 |
| 32.38 | 0.051 | 98.0 | 98.0 | 0.20 | 0.912 |

Area-averaged catchment yield fraction, Y = 0.535
Area-averaged low loss fraction, Yb = 0.465
User entry of time of concentration = 2.040 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 634.87(Ac.)
Catchment Lag time = 1.632 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 5.1062
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.248(In/Hr)
Average low loss rate fraction (Yb) = 0.465 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.664(In)
Computed peak 30-minute rainfall = 1.137(In)
Specified peak 1-hour rainfall = 1.400(In)
Computed peak 3-hour rainfall = 1.650(In)
Specified peak 6-hour rainfall = 1.830(In)
Specified peak 24-hour rainfall = 2.600(In)

Rainfall depth area reduction factors:
Using a total area of 634.87(Ac.) (Ref: fig. E-4)

5-minute factor = 0.970 Adjusted rainfall = 0.645(In)
30-minute factor = 0.970 Adjusted rainfall = 1.103(In)
1-hour factor = 0.970 Adjusted rainfall = 1.358(In)
3-hour factor = 0.996 Adjusted rainfall = 1.644(In)
6-hour factor = 0.998 Adjusted rainfall = 1.826(In)
24-hour factor = 0.999 Adjusted rainfall = 2.598(In)
---------------------------------------------------------------------

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 7677.96 (CFS)) | |
| 1 | 0.225 | 17.250 |
| 2 | 0.674 | 34.501 |
| 3 | 1.186 | 39.279 |
| 4 | 2.002 | 62.717 |
| 5 | 2.863 | 66.034 |
| 6 | 3.965 | 84.639 |
| 7 | 5.231 | 97.229 |
| 8 | 6.594 | 104.652 |
| 9 | 8.283 | 129.688 |
| 10 | 10.033 | 134.308 |
| 11 | 12.814 | 213.534 |
| 12 | 16.082 | 250.914 |
| 13 | 19.916 | 294.392 |

| | | |
|---|---|---|
| 14 | 25.088 | 397.126 |
| 15 | 30.275 | 398.256 |
| 16 | 34.849 | 351.185 |
| 17 | 39.220 | 335.597 |
| 18 | 43.179 | 303.989 |
| 19 | 46.458 | 251.697 |
| 20 | 49.672 | 246.843 |
| 21 | 52.432 | 211.890 |
| 22 | 55.087 | 203.867 |
| 23 | 57.417 | 178.887 |
| 24 | 59.378 | 150.576 |
| 25 | 61.290 | 146.732 |
| 26 | 62.925 | 125.572 |
| 27 | 64.518 | 122.272 |
| 28 | 65.971 | 111.605 |
| 29 | 67.319 | 103.502 |
| 30 | 68.643 | 101.670 |
| 31 | 69.877 | 94.758 |
| 32 | 71.100 | 93.850 |
| 33 | 72.190 | 83.734 |
| 34 | 73.212 | 78.411 |
| 35 | 74.200 | 75.917 |
| 36 | 75.104 | 69.349 |
| 37 | 76.001 | 68.878 |
| 38 | 76.869 | 66.678 |
| 39 | 77.727 | 65.865 |
| 40 | 78.521 | 60.980 |
| 41 | 79.198 | 51.950 |
| 42 | 79.872 | 51.751 |
| 43 | 80.546 | 51.751 |
| 44 | 81.220 | 51.751 |
| 45 | 81.840 | 47.629 |
| 46 | 82.392 | 42.361 |
| 47 | 82.943 | 42.342 |
| 48 | 83.495 | 42.342 |
| 49 | 84.046 | 42.338 |
| 50 | 84.565 | 39.805 |
| 51 | 85.055 | 37.637 |
| 52 | 85.545 | 37.637 |
| 53 | 86.035 | 37.637 |
| 54 | 86.525 | 37.572 |
| 55 | 86.963 | 33.662 |
| 56 | 87.372 | 31.364 |
| 57 | 87.780 | 31.364 |
| 58 | 88.189 | 31.364 |
| 59 | 88.594 | 31.123 |
| 60 | 88.929 | 25.740 |
| 61 | 89.236 | 23.523 |
| 62 | 89.542 | 23.523 |
| 63 | 89.848 | 23.523 |
| 64 | 90.153 | 23.426 |
| 65 | 90.444 | 22.284 |
| 66 | 90.730 | 21.955 |
| 67 | 91.016 | 21.955 |
| 68 | 91.301 | 21.955 |
| 69 | 91.583 | 21.629 |
| 70 | 91.834 | 19.283 |
| 71 | 92.079 | 18.819 |
| 72 | 92.325 | 18.819 |

| | | |
|---|---|---|
| 73 | 92.570 | 18.819 |
| 74 | 92.812 | 18.573 |
| 75 | 93.038 | 17.402 |
| 76 | 93.263 | 17.250 |
| 77 | 93.487 | 17.250 |
| 78 | 93.712 | 17.250 |
| 79 | 93.926 | 16.386 |
| 80 | 94.102 | 13.551 |
| 81 | 94.276 | 13.330 |
| 82 | 94.449 | 13.330 |
| 83 | 94.623 | 13.330 |
| 84 | 94.797 | 13.330 |
| 85 | 94.970 | 13.330 |
| 86 | 95.144 | 13.330 |
| 87 | 95.317 | 13.330 |
| 88 | 95.491 | 13.330 |
| 89 | 95.649 | 12.137 |
| 90 | 95.782 | 10.219 |
| 91 | 95.915 | 10.193 |
| 92 | 96.048 | 10.193 |
| 93 | 96.180 | 10.193 |
| 94 | 96.313 | 10.193 |
| 95 | 96.446 | 10.193 |
| 96 | 96.579 | 10.193 |
| 97 | 96.711 | 10.193 |
| 98 | 96.844 | 10.183 |
| 99 | 96.953 | 8.384 |
| 100 | 97.045 | 7.057 |
| 101 | 97.137 | 7.057 |
| 102 | 97.229 | 7.057 |
| 103 | 97.321 | 7.057 |
| 104 | 97.413 | 7.057 |
| 105 | 97.505 | 7.057 |
| 106 | 97.597 | 7.057 |
| 107 | 97.689 | 7.057 |
| 108 | 97.779 | 6.927 |
| 109 | 97.840 | 4.716 |
| 110 | 97.891 | 3.921 |
| 111 | 97.942 | 3.921 |
| 112 | 97.993 | 3.921 |
| 113 | 98.044 | 3.921 |
| 114 | 98.096 | 3.921 |
| 115 | 98.147 | 3.921 |
| 116 | 98.198 | 3.921 |
| 117 | 98.249 | 3.921 |
| 118 | 98.301 | 4.017 |
| 119 | 98.361 | 4.605 |
| 120 | 98.422 | 4.705 |
| 121 | 98.484 | 4.705 |
| 122 | 98.545 | 4.705 |
| 123 | 98.606 | 4.705 |
| 124 | 98.667 | 4.705 |
| 125 | 98.729 | 4.705 |
| 126 | 98.790 | 4.705 |
| 127 | 98.851 | 4.705 |
| 128 | 98.912 | 4.705 |
| 129 | 98.974 | 4.705 |
| 130 | 99.035 | 4.705 |
| 131 | 99.096 | 4.705 |

| | | |
|---|---|---|
| 132 | 99.158 | 4.705 |
| 133 | 99.219 | 4.705 |
| 134 | 99.280 | 4.705 |
| 135 | 99.341 | 4.705 |
| 136 | 99.403 | 4.705 |
| 137 | 99.464 | 4.705 |
| 138 | 99.513 | 3.767 |
| 139 | 99.545 | 2.459 |
| 140 | 99.577 | 2.450 |
| 141 | 99.609 | 2.450 |
| 142 | 99.641 | 2.450 |
| 143 | 99.673 | 2.450 |
| 144 | 99.705 | 2.450 |
| 145 | 99.737 | 2.450 |
| 146 | 99.768 | 2.450 |
| 147 | 99.800 | 2.450 |
| 148 | 99.832 | 2.450 |
| 149 | 99.864 | 2.450 |
| 150 | 99.896 | 2.450 |
| 151 | 99.928 | 2.450 |
| 152 | 99.960 | 2.450 |
| 153 | 100.000 | 1.225 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6445 | 0.6445 |
| 2 | 0.7935 | 0.1490 |
| 3 | 0.8962 | 0.1026 |
| 4 | 0.9769 | 0.0808 |
| 5 | 1.0446 | 0.0676 |
| 6 | 1.1033 | 0.0587 |
| 7 | 1.1555 | 0.0522 |
| 8 | 1.2028 | 0.0472 |
| 9 | 1.2460 | 0.0433 |
| 10 | 1.2860 | 0.0400 |
| 11 | 1.3233 | 0.0373 |
| 12 | 1.3583 | 0.0350 |
| 13 | 1.3773 | 0.0190 |
| 14 | 1.3952 | 0.0178 |
| 15 | 1.4120 | 0.0168 |
| 16 | 1.4279 | 0.0159 |
| 17 | 1.4430 | 0.0151 |
| 18 | 1.4574 | 0.0144 |
| 19 | 1.4711 | 0.0137 |
| 20 | 1.4843 | 0.0132 |
| 21 | 1.4969 | 0.0126 |
| 22 | 1.5090 | 0.0121 |
| 23 | 1.5207 | 0.0117 |
| 24 | 1.5320 | 0.0113 |
| 25 | 1.5429 | 0.0109 |
| 26 | 1.5534 | 0.0105 |
| 27 | 1.5636 | 0.0102 |
| 28 | 1.5735 | 0.0099 |
| 29 | 1.5831 | 0.0096 |
| 30 | 1.5925 | 0.0093 |
| 31 | 1.6016 | 0.0091 |
| 32 | 1.6104 | 0.0088 |
| 33 | 1.6190 | 0.0086 |
| 34 | 1.6274 | 0.0084 |

| | | |
|---|---|---|
| 35 | 1.6356 | 0.0082 |
| 36 | 1.6437 | 0.0080 |
| 37 | 1.6505 | 0.0069 |
| 38 | 1.6572 | 0.0067 |
| 39 | 1.6638 | 0.0066 |
| 40 | 1.6702 | 0.0064 |
| 41 | 1.6765 | 0.0063 |
| 42 | 1.6826 | 0.0062 |
| 43 | 1.6887 | 0.0060 |
| 44 | 1.6946 | 0.0059 |
| 45 | 1.7004 | 0.0058 |
| 46 | 1.7061 | 0.0057 |
| 47 | 1.7117 | 0.0056 |
| 48 | 1.7172 | 0.0055 |
| 49 | 1.7226 | 0.0054 |
| 50 | 1.7279 | 0.0053 |
| 51 | 1.7331 | 0.0052 |
| 52 | 1.7382 | 0.0051 |
| 53 | 1.7432 | 0.0050 |
| 54 | 1.7482 | 0.0050 |
| 55 | 1.7531 | 0.0049 |
| 56 | 1.7579 | 0.0048 |
| 57 | 1.7626 | 0.0047 |
| 58 | 1.7673 | 0.0047 |
| 59 | 1.7719 | 0.0046 |
| 60 | 1.7764 | 0.0045 |
| 61 | 1.7809 | 0.0045 |
| 62 | 1.7853 | 0.0044 |
| 63 | 1.7897 | 0.0043 |
| 64 | 1.7939 | 0.0043 |
| 65 | 1.7982 | 0.0042 |
| 66 | 1.8024 | 0.0042 |
| 67 | 1.8065 | 0.0041 |
| 68 | 1.8106 | 0.0041 |
| 69 | 1.8146 | 0.0040 |
| 70 | 1.8186 | 0.0040 |
| 71 | 1.8225 | 0.0039 |
| 72 | 1.8264 | 0.0039 |
| 73 | 1.8328 | 0.0064 |
| 74 | 1.8391 | 0.0063 |
| 75 | 1.8454 | 0.0063 |
| 76 | 1.8516 | 0.0062 |
| 77 | 1.8578 | 0.0062 |
| 78 | 1.8639 | 0.0061 |
| 79 | 1.8700 | 0.0060 |
| 80 | 1.8759 | 0.0060 |
| 81 | 1.8819 | 0.0059 |
| 82 | 1.8878 | 0.0059 |
| 83 | 1.8936 | 0.0058 |
| 84 | 1.8994 | 0.0058 |
| 85 | 1.9051 | 0.0057 |
| 86 | 1.9107 | 0.0057 |
| 87 | 1.9164 | 0.0056 |
| 88 | 1.9219 | 0.0056 |
| 89 | 1.9275 | 0.0055 |
| 90 | 1.9330 | 0.0055 |
| 91 | 1.9384 | 0.0054 |
| 92 | 1.9438 | 0.0054 |
| 93 | 1.9491 | 0.0053 |

| | | |
|---|---|---|
| 94 | 1.9544 | 0.0053 |
| 95 | 1.9597 | 0.0053 |
| 96 | 1.9649 | 0.0052 |
| 97 | 1.9701 | 0.0052 |
| 98 | 1.9753 | 0.0051 |
| 99 | 1.9804 | 0.0051 |
| 100 | 1.9854 | 0.0051 |
| 101 | 1.9905 | 0.0050 |
| 102 | 1.9954 | 0.0050 |
| 103 | 2.0004 | 0.0050 |
| 104 | 2.0053 | 0.0049 |
| 105 | 2.0102 | 0.0049 |
| 106 | 2.0151 | 0.0048 |
| 107 | 2.0199 | 0.0048 |
| 108 | 2.0246 | 0.0048 |
| 109 | 2.0294 | 0.0047 |
| 110 | 2.0341 | 0.0047 |
| 111 | 2.0388 | 0.0047 |
| 112 | 2.0435 | 0.0047 |
| 113 | 2.0481 | 0.0046 |
| 114 | 2.0527 | 0.0046 |
| 115 | 2.0572 | 0.0046 |
| 116 | 2.0618 | 0.0045 |
| 117 | 2.0663 | 0.0045 |
| 118 | 2.0707 | 0.0045 |
| 119 | 2.0752 | 0.0044 |
| 120 | 2.0796 | 0.0044 |
| 121 | 2.0840 | 0.0044 |
| 122 | 2.0884 | 0.0044 |
| 123 | 2.0927 | 0.0043 |
| 124 | 2.0970 | 0.0043 |
| 125 | 2.1013 | 0.0043 |
| 126 | 2.1056 | 0.0043 |
| 127 | 2.1098 | 0.0042 |
| 128 | 2.1140 | 0.0042 |
| 129 | 2.1182 | 0.0042 |
| 130 | 2.1224 | 0.0042 |
| 131 | 2.1265 | 0.0041 |
| 132 | 2.1306 | 0.0041 |
| 133 | 2.1347 | 0.0041 |
| 134 | 2.1388 | 0.0041 |
| 135 | 2.1428 | 0.0040 |
| 136 | 2.1468 | 0.0040 |
| 137 | 2.1508 | 0.0040 |
| 138 | 2.1548 | 0.0040 |
| 139 | 2.1588 | 0.0040 |
| 140 | 2.1627 | 0.0039 |
| 141 | 2.1666 | 0.0039 |
| 142 | 2.1705 | 0.0039 |
| 143 | 2.1744 | 0.0039 |
| 144 | 2.1783 | 0.0039 |
| 145 | 2.1821 | 0.0038 |
| 146 | 2.1859 | 0.0038 |
| 147 | 2.1897 | 0.0038 |
| 148 | 2.1935 | 0.0038 |
| 149 | 2.1972 | 0.0038 |
| 150 | 2.2010 | 0.0037 |
| 151 | 2.2047 | 0.0037 |
| 152 | 2.2084 | 0.0037 |

| | | |
|---|---|---|
| 153 | 2.2121 | 0.0037 |
| 154 | 2.2157 | 0.0037 |
| 155 | 2.2194 | 0.0036 |
| 156 | 2.2230 | 0.0036 |
| 157 | 2.2266 | 0.0036 |
| 158 | 2.2302 | 0.0036 |
| 159 | 2.2338 | 0.0036 |
| 160 | 2.2374 | 0.0036 |
| 161 | 2.2409 | 0.0035 |
| 162 | 2.2445 | 0.0035 |
| 163 | 2.2480 | 0.0035 |
| 164 | 2.2515 | 0.0035 |
| 165 | 2.2549 | 0.0035 |
| 166 | 2.2584 | 0.0035 |
| 167 | 2.2619 | 0.0035 |
| 168 | 2.2653 | 0.0034 |
| 169 | 2.2687 | 0.0034 |
| 170 | 2.2721 | 0.0034 |
| 171 | 2.2755 | 0.0034 |
| 172 | 2.2789 | 0.0034 |
| 173 | 2.2823 | 0.0034 |
| 174 | 2.2856 | 0.0033 |
| 175 | 2.2889 | 0.0033 |
| 176 | 2.2922 | 0.0033 |
| 177 | 2.2956 | 0.0033 |
| 178 | 2.2988 | 0.0033 |
| 179 | 2.3021 | 0.0033 |
| 180 | 2.3054 | 0.0033 |
| 181 | 2.3086 | 0.0032 |
| 182 | 2.3119 | 0.0032 |
| 183 | 2.3151 | 0.0032 |
| 184 | 2.3183 | 0.0032 |
| 185 | 2.3215 | 0.0032 |
| 186 | 2.3247 | 0.0032 |
| 187 | 2.3278 | 0.0032 |
| 188 | 2.3310 | 0.0032 |
| 189 | 2.3341 | 0.0031 |
| 190 | 2.3373 | 0.0031 |
| 191 | 2.3404 | 0.0031 |
| 192 | 2.3435 | 0.0031 |
| 193 | 2.3466 | 0.0031 |
| 194 | 2.3497 | 0.0031 |
| 195 | 2.3528 | 0.0031 |
| 196 | 2.3558 | 0.0031 |
| 197 | 2.3589 | 0.0030 |
| 198 | 2.3619 | 0.0030 |
| 199 | 2.3649 | 0.0030 |
| 200 | 2.3680 | 0.0030 |
| 201 | 2.3710 | 0.0030 |
| 202 | 2.3740 | 0.0030 |
| 203 | 2.3769 | 0.0030 |
| 204 | 2.3799 | 0.0030 |
| 205 | 2.3829 | 0.0030 |
| 206 | 2.3858 | 0.0029 |
| 207 | 2.3888 | 0.0029 |
| 208 | 2.3917 | 0.0029 |
| 209 | 2.3946 | 0.0029 |
| 210 | 2.3975 | 0.0029 |
| 211 | 2.4004 | 0.0029 |

| | | |
|---|---|---|
| 212 | 2.4033 | 0.0029 |
| 213 | 2.4062 | 0.0029 |
| 214 | 2.4090 | 0.0029 |
| 215 | 2.4119 | 0.0029 |
| 216 | 2.4147 | 0.0028 |
| 217 | 2.4176 | 0.0028 |
| 218 | 2.4204 | 0.0028 |
| 219 | 2.4232 | 0.0028 |
| 220 | 2.4260 | 0.0028 |
| 221 | 2.4288 | 0.0028 |
| 222 | 2.4316 | 0.0028 |
| 223 | 2.4344 | 0.0028 |
| 224 | 2.4372 | 0.0028 |
| 225 | 2.4399 | 0.0028 |
| 226 | 2.4427 | 0.0028 |
| 227 | 2.4454 | 0.0027 |
| 228 | 2.4482 | 0.0027 |
| 229 | 2.4509 | 0.0027 |
| 230 | 2.4536 | 0.0027 |
| 231 | 2.4563 | 0.0027 |
| 232 | 2.4590 | 0.0027 |
| 233 | 2.4617 | 0.0027 |
| 234 | 2.4644 | 0.0027 |
| 235 | 2.4670 | 0.0027 |
| 236 | 2.4697 | 0.0027 |
| 237 | 2.4724 | 0.0027 |
| 238 | 2.4750 | 0.0026 |
| 239 | 2.4777 | 0.0026 |
| 240 | 2.4803 | 0.0026 |
| 241 | 2.4829 | 0.0026 |
| 242 | 2.4855 | 0.0026 |
| 243 | 2.4881 | 0.0026 |
| 244 | 2.4907 | 0.0026 |
| 245 | 2.4933 | 0.0026 |
| 246 | 2.4959 | 0.0026 |
| 247 | 2.4985 | 0.0026 |
| 248 | 2.5010 | 0.0026 |
| 249 | 2.5036 | 0.0026 |
| 250 | 2.5062 | 0.0026 |
| 251 | 2.5087 | 0.0025 |
| 252 | 2.5112 | 0.0025 |
| 253 | 2.5138 | 0.0025 |
| 254 | 2.5163 | 0.0025 |
| 255 | 2.5188 | 0.0025 |
| 256 | 2.5213 | 0.0025 |
| 257 | 2.5238 | 0.0025 |
| 258 | 2.5263 | 0.0025 |
| 259 | 2.5288 | 0.0025 |
| 260 | 2.5313 | 0.0025 |
| 261 | 2.5337 | 0.0025 |
| 262 | 2.5362 | 0.0025 |
| 263 | 2.5387 | 0.0025 |
| 264 | 2.5411 | 0.0025 |
| 265 | 2.5436 | 0.0024 |
| 266 | 2.5460 | 0.0024 |
| 267 | 2.5484 | 0.0024 |
| 268 | 2.5508 | 0.0024 |
| 269 | 2.5533 | 0.0024 |
| 270 | 2.5557 | 0.0024 |

| | | |
|---|---|---|
| 271 | 2.5581 | 0.0024 |
| 272 | 2.5605 | 0.0024 |
| 273 | 2.5629 | 0.0024 |
| 274 | 2.5652 | 0.0024 |
| 275 | 2.5676 | 0.0024 |
| 276 | 2.5700 | 0.0024 |
| 277 | 2.5723 | 0.0024 |
| 278 | 2.5747 | 0.0024 |
| 279 | 2.5771 | 0.0024 |
| 280 | 2.5794 | 0.0023 |
| 281 | 2.5817 | 0.0023 |
| 282 | 2.5841 | 0.0023 |
| 283 | 2.5864 | 0.0023 |
| 284 | 2.5887 | 0.0023 |
| 285 | 2.5910 | 0.0023 |
| 286 | 2.5933 | 0.0023 |
| 287 | 2.5956 | 0.0023 |
| 288 | 2.5979 | 0.0023 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0023 | 0.0011 | 0.0012 |
| 2 | 0.0023 | 0.0011 | 0.0012 |
| 3 | 0.0023 | 0.0011 | 0.0012 |
| 4 | 0.0023 | 0.0011 | 0.0012 |
| 5 | 0.0023 | 0.0011 | 0.0012 |
| 6 | 0.0023 | 0.0011 | 0.0013 |
| 7 | 0.0024 | 0.0011 | 0.0013 |
| 8 | 0.0024 | 0.0011 | 0.0013 |
| 9 | 0.0024 | 0.0011 | 0.0013 |
| 10 | 0.0024 | 0.0011 | 0.0013 |
| 11 | 0.0024 | 0.0011 | 0.0013 |
| 12 | 0.0024 | 0.0011 | 0.0013 |
| 13 | 0.0024 | 0.0011 | 0.0013 |
| 14 | 0.0024 | 0.0011 | 0.0013 |
| 15 | 0.0024 | 0.0011 | 0.0013 |
| 16 | 0.0024 | 0.0011 | 0.0013 |
| 17 | 0.0025 | 0.0011 | 0.0013 |
| 18 | 0.0025 | 0.0011 | 0.0013 |
| 19 | 0.0025 | 0.0011 | 0.0013 |
| 20 | 0.0025 | 0.0012 | 0.0013 |
| 21 | 0.0025 | 0.0012 | 0.0013 |
| 22 | 0.0025 | 0.0012 | 0.0013 |
| 23 | 0.0025 | 0.0012 | 0.0013 |
| 24 | 0.0025 | 0.0012 | 0.0014 |
| 25 | 0.0025 | 0.0012 | 0.0014 |
| 26 | 0.0025 | 0.0012 | 0.0014 |
| 27 | 0.0026 | 0.0012 | 0.0014 |
| 28 | 0.0026 | 0.0012 | 0.0014 |
| 29 | 0.0026 | 0.0012 | 0.0014 |
| 30 | 0.0026 | 0.0012 | 0.0014 |
| 31 | 0.0026 | 0.0012 | 0.0014 |
| 32 | 0.0026 | 0.0012 | 0.0014 |
| 33 | 0.0026 | 0.0012 | 0.0014 |
| 34 | 0.0026 | 0.0012 | 0.0014 |
| 35 | 0.0027 | 0.0012 | 0.0014 |
| 36 | 0.0027 | 0.0012 | 0.0014 |

| | | | |
|---|---|---|---|
| 37 | 0.0027 | 0.0012 | 0.0014 |
| 38 | 0.0027 | 0.0012 | 0.0014 |
| 39 | 0.0027 | 0.0013 | 0.0014 |
| 40 | 0.0027 | 0.0013 | 0.0015 |
| 41 | 0.0027 | 0.0013 | 0.0015 |
| 42 | 0.0027 | 0.0013 | 0.0015 |
| 43 | 0.0028 | 0.0013 | 0.0015 |
| 44 | 0.0028 | 0.0013 | 0.0015 |
| 45 | 0.0028 | 0.0013 | 0.0015 |
| 46 | 0.0028 | 0.0013 | 0.0015 |
| 47 | 0.0028 | 0.0013 | 0.0015 |
| 48 | 0.0028 | 0.0013 | 0.0015 |
| 49 | 0.0028 | 0.0013 | 0.0015 |
| 50 | 0.0029 | 0.0013 | 0.0015 |
| 51 | 0.0029 | 0.0013 | 0.0015 |
| 52 | 0.0029 | 0.0013 | 0.0015 |
| 53 | 0.0029 | 0.0014 | 0.0016 |
| 54 | 0.0029 | 0.0014 | 0.0016 |
| 55 | 0.0029 | 0.0014 | 0.0016 |
| 56 | 0.0029 | 0.0014 | 0.0016 |
| 57 | 0.0030 | 0.0014 | 0.0016 |
| 58 | 0.0030 | 0.0014 | 0.0016 |
| 59 | 0.0030 | 0.0014 | 0.0016 |
| 60 | 0.0030 | 0.0014 | 0.0016 |
| 61 | 0.0030 | 0.0014 | 0.0016 |
| 62 | 0.0030 | 0.0014 | 0.0016 |
| 63 | 0.0031 | 0.0014 | 0.0016 |
| 64 | 0.0031 | 0.0014 | 0.0017 |
| 65 | 0.0031 | 0.0014 | 0.0017 |
| 66 | 0.0031 | 0.0015 | 0.0017 |
| 67 | 0.0031 | 0.0015 | 0.0017 |
| 68 | 0.0032 | 0.0015 | 0.0017 |
| 69 | 0.0032 | 0.0015 | 0.0017 |
| 70 | 0.0032 | 0.0015 | 0.0017 |
| 71 | 0.0032 | 0.0015 | 0.0017 |
| 72 | 0.0032 | 0.0015 | 0.0017 |
| 73 | 0.0033 | 0.0015 | 0.0017 |
| 74 | 0.0033 | 0.0015 | 0.0018 |
| 75 | 0.0033 | 0.0015 | 0.0018 |
| 76 | 0.0033 | 0.0015 | 0.0018 |
| 77 | 0.0033 | 0.0016 | 0.0018 |
| 78 | 0.0034 | 0.0016 | 0.0018 |
| 79 | 0.0034 | 0.0016 | 0.0018 |
| 80 | 0.0034 | 0.0016 | 0.0018 |
| 81 | 0.0034 | 0.0016 | 0.0018 |
| 82 | 0.0035 | 0.0016 | 0.0018 |
| 83 | 0.0035 | 0.0016 | 0.0019 |
| 84 | 0.0035 | 0.0016 | 0.0019 |
| 85 | 0.0035 | 0.0016 | 0.0019 |
| 86 | 0.0035 | 0.0016 | 0.0019 |
| 87 | 0.0036 | 0.0017 | 0.0019 |
| 88 | 0.0036 | 0.0017 | 0.0019 |
| 89 | 0.0036 | 0.0017 | 0.0019 |
| 90 | 0.0036 | 0.0017 | 0.0020 |
| 91 | 0.0037 | 0.0017 | 0.0020 |
| 92 | 0.0037 | 0.0017 | 0.0020 |
| 93 | 0.0037 | 0.0017 | 0.0020 |
| 94 | 0.0038 | 0.0017 | 0.0020 |
| 95 | 0.0038 | 0.0018 | 0.0020 |

| | | | |
|---|---|---|---|
| 96 | 0.0038 | 0.0018 | 0.0020 |
| 97 | 0.0039 | 0.0018 | 0.0021 |
| 98 | 0.0039 | 0.0018 | 0.0021 |
| 99 | 0.0039 | 0.0018 | 0.0021 |
| 100 | 0.0039 | 0.0018 | 0.0021 |
| 101 | 0.0040 | 0.0018 | 0.0021 |
| 102 | 0.0040 | 0.0019 | 0.0021 |
| 103 | 0.0040 | 0.0019 | 0.0022 |
| 104 | 0.0041 | 0.0019 | 0.0022 |
| 105 | 0.0041 | 0.0019 | 0.0022 |
| 106 | 0.0041 | 0.0019 | 0.0022 |
| 107 | 0.0042 | 0.0019 | 0.0022 |
| 108 | 0.0042 | 0.0020 | 0.0023 |
| 109 | 0.0043 | 0.0020 | 0.0023 |
| 110 | 0.0043 | 0.0020 | 0.0023 |
| 111 | 0.0043 | 0.0020 | 0.0023 |
| 112 | 0.0044 | 0.0020 | 0.0023 |
| 113 | 0.0044 | 0.0021 | 0.0024 |
| 114 | 0.0044 | 0.0021 | 0.0024 |
| 115 | 0.0045 | 0.0021 | 0.0024 |
| 116 | 0.0045 | 0.0021 | 0.0024 |
| 117 | 0.0046 | 0.0021 | 0.0025 |
| 118 | 0.0046 | 0.0021 | 0.0025 |
| 119 | 0.0047 | 0.0022 | 0.0025 |
| 120 | 0.0047 | 0.0022 | 0.0025 |
| 121 | 0.0048 | 0.0022 | 0.0026 |
| 122 | 0.0048 | 0.0022 | 0.0026 |
| 123 | 0.0049 | 0.0023 | 0.0026 |
| 124 | 0.0049 | 0.0023 | 0.0026 |
| 125 | 0.0050 | 0.0023 | 0.0027 |
| 126 | 0.0050 | 0.0023 | 0.0027 |
| 127 | 0.0051 | 0.0024 | 0.0027 |
| 128 | 0.0051 | 0.0024 | 0.0028 |
| 129 | 0.0052 | 0.0024 | 0.0028 |
| 130 | 0.0053 | 0.0024 | 0.0028 |
| 131 | 0.0053 | 0.0025 | 0.0029 |
| 132 | 0.0054 | 0.0025 | 0.0029 |
| 133 | 0.0055 | 0.0025 | 0.0029 |
| 134 | 0.0055 | 0.0026 | 0.0030 |
| 135 | 0.0056 | 0.0026 | 0.0030 |
| 136 | 0.0057 | 0.0026 | 0.0030 |
| 137 | 0.0058 | 0.0027 | 0.0031 |
| 138 | 0.0058 | 0.0027 | 0.0031 |
| 139 | 0.0059 | 0.0028 | 0.0032 |
| 140 | 0.0060 | 0.0028 | 0.0032 |
| 141 | 0.0061 | 0.0028 | 0.0033 |
| 142 | 0.0062 | 0.0029 | 0.0033 |
| 143 | 0.0063 | 0.0029 | 0.0034 |
| 144 | 0.0063 | 0.0030 | 0.0034 |
| 145 | 0.0039 | 0.0018 | 0.0021 |
| 146 | 0.0039 | 0.0018 | 0.0021 |
| 147 | 0.0040 | 0.0019 | 0.0022 |
| 148 | 0.0041 | 0.0019 | 0.0022 |
| 149 | 0.0042 | 0.0019 | 0.0022 |
| 150 | 0.0042 | 0.0020 | 0.0023 |
| 151 | 0.0043 | 0.0020 | 0.0023 |
| 152 | 0.0044 | 0.0020 | 0.0024 |
| 153 | 0.0045 | 0.0021 | 0.0024 |
| 154 | 0.0046 | 0.0021 | 0.0025 |

| | | | |
|---|---|---|---|
| 155 | 0.0047 | 0.0022 | 0.0025 |
| 156 | 0.0048 | 0.0022 | 0.0026 |
| 157 | 0.0050 | 0.0023 | 0.0027 |
| 158 | 0.0050 | 0.0023 | 0.0027 |
| 159 | 0.0052 | 0.0024 | 0.0028 |
| 160 | 0.0053 | 0.0025 | 0.0028 |
| 161 | 0.0055 | 0.0026 | 0.0029 |
| 162 | 0.0056 | 0.0026 | 0.0030 |
| 163 | 0.0058 | 0.0027 | 0.0031 |
| 164 | 0.0059 | 0.0027 | 0.0032 |
| 165 | 0.0062 | 0.0029 | 0.0033 |
| 166 | 0.0063 | 0.0029 | 0.0034 |
| 167 | 0.0066 | 0.0030 | 0.0035 |
| 168 | 0.0067 | 0.0031 | 0.0036 |
| 169 | 0.0080 | 0.0037 | 0.0043 |
| 170 | 0.0082 | 0.0038 | 0.0044 |
| 171 | 0.0086 | 0.0040 | 0.0046 |
| 172 | 0.0088 | 0.0041 | 0.0047 |
| 173 | 0.0093 | 0.0043 | 0.0050 |
| 174 | 0.0096 | 0.0045 | 0.0051 |
| 175 | 0.0102 | 0.0047 | 0.0055 |
| 176 | 0.0105 | 0.0049 | 0.0056 |
| 177 | 0.0113 | 0.0052 | 0.0060 |
| 178 | 0.0117 | 0.0054 | 0.0063 |
| 179 | 0.0126 | 0.0059 | 0.0068 |
| 180 | 0.0132 | 0.0061 | 0.0070 |
| 181 | 0.0144 | 0.0067 | 0.0077 |
| 182 | 0.0151 | 0.0070 | 0.0081 |
| 183 | 0.0168 | 0.0078 | 0.0090 |
| 184 | 0.0178 | 0.0083 | 0.0095 |
| 185 | 0.0350 | 0.0163 | 0.0187 |
| 186 | 0.0373 | 0.0173 | 0.0200 |
| 187 | 0.0433 | 0.0201 | 0.0232 |
| 188 | 0.0472 | 0.0207 | 0.0265 |
| 189 | 0.0587 | 0.0207 | 0.0380 |
| 190 | 0.0676 | 0.0207 | 0.0470 |
| 191 | 0.1026 | 0.0207 | 0.0820 |
| 192 | 0.1490 | 0.0207 | 0.1283 |
| 193 | 0.6445 | 0.0207 | 0.6239 |
| 194 | 0.0808 | 0.0207 | 0.0601 |
| 195 | 0.0522 | 0.0207 | 0.0315 |
| 196 | 0.0400 | 0.0186 | 0.0214 |
| 197 | 0.0190 | 0.0088 | 0.0102 |
| 198 | 0.0159 | 0.0074 | 0.0085 |
| 199 | 0.0137 | 0.0064 | 0.0074 |
| 200 | 0.0121 | 0.0056 | 0.0065 |
| 201 | 0.0109 | 0.0051 | 0.0058 |
| 202 | 0.0099 | 0.0046 | 0.0053 |
| 203 | 0.0091 | 0.0042 | 0.0049 |
| 204 | 0.0084 | 0.0039 | 0.0045 |
| 205 | 0.0069 | 0.0032 | 0.0037 |
| 206 | 0.0064 | 0.0030 | 0.0034 |
| 207 | 0.0060 | 0.0028 | 0.0032 |
| 208 | 0.0057 | 0.0026 | 0.0030 |
| 209 | 0.0054 | 0.0025 | 0.0029 |
| 210 | 0.0051 | 0.0024 | 0.0027 |
| 211 | 0.0049 | 0.0023 | 0.0026 |
| 212 | 0.0047 | 0.0022 | 0.0025 |
| 213 | 0.0045 | 0.0021 | 0.0024 |

| | | | |
|---|---|---|---|
| 214 | 0.0043 | 0.0020 | 0.0023 |
| 215 | 0.0041 | 0.0019 | 0.0022 |
| 216 | 0.0040 | 0.0018 | 0.0021 |
| 217 | 0.0064 | 0.0030 | 0.0034 |
| 218 | 0.0062 | 0.0029 | 0.0033 |
| 219 | 0.0060 | 0.0028 | 0.0032 |
| 220 | 0.0059 | 0.0027 | 0.0031 |
| 221 | 0.0057 | 0.0027 | 0.0031 |
| 222 | 0.0056 | 0.0026 | 0.0030 |
| 223 | 0.0054 | 0.0025 | 0.0029 |
| 224 | 0.0053 | 0.0025 | 0.0028 |
| 225 | 0.0052 | 0.0024 | 0.0028 |
| 226 | 0.0051 | 0.0024 | 0.0027 |
| 227 | 0.0050 | 0.0023 | 0.0027 |
| 228 | 0.0048 | 0.0023 | 0.0026 |
| 229 | 0.0047 | 0.0022 | 0.0025 |
| 230 | 0.0047 | 0.0022 | 0.0025 |
| 231 | 0.0046 | 0.0021 | 0.0024 |
| 232 | 0.0045 | 0.0021 | 0.0024 |
| 233 | 0.0044 | 0.0020 | 0.0024 |
| 234 | 0.0043 | 0.0020 | 0.0023 |
| 235 | 0.0042 | 0.0020 | 0.0023 |
| 236 | 0.0042 | 0.0019 | 0.0022 |
| 237 | 0.0041 | 0.0019 | 0.0022 |
| 238 | 0.0040 | 0.0019 | 0.0022 |
| 239 | 0.0040 | 0.0018 | 0.0021 |
| 240 | 0.0039 | 0.0018 | 0.0021 |
| 241 | 0.0038 | 0.0018 | 0.0021 |
| 242 | 0.0038 | 0.0018 | 0.0020 |
| 243 | 0.0037 | 0.0017 | 0.0020 |
| 244 | 0.0037 | 0.0017 | 0.0020 |
| 245 | 0.0036 | 0.0017 | 0.0019 |
| 246 | 0.0036 | 0.0017 | 0.0019 |
| 247 | 0.0035 | 0.0016 | 0.0019 |
| 248 | 0.0035 | 0.0016 | 0.0019 |
| 249 | 0.0034 | 0.0016 | 0.0018 |
| 250 | 0.0034 | 0.0016 | 0.0018 |
| 251 | 0.0033 | 0.0015 | 0.0018 |
| 252 | 0.0033 | 0.0015 | 0.0018 |
| 253 | 0.0032 | 0.0015 | 0.0017 |
| 254 | 0.0032 | 0.0015 | 0.0017 |
| 255 | 0.0032 | 0.0015 | 0.0017 |
| 256 | 0.0031 | 0.0015 | 0.0017 |
| 257 | 0.0031 | 0.0014 | 0.0017 |
| 258 | 0.0031 | 0.0014 | 0.0016 |
| 259 | 0.0030 | 0.0014 | 0.0016 |
| 260 | 0.0030 | 0.0014 | 0.0016 |
| 261 | 0.0030 | 0.0014 | 0.0016 |
| 262 | 0.0029 | 0.0014 | 0.0016 |
| 263 | 0.0029 | 0.0013 | 0.0016 |
| 264 | 0.0029 | 0.0013 | 0.0015 |
| 265 | 0.0028 | 0.0013 | 0.0015 |
| 266 | 0.0028 | 0.0013 | 0.0015 |
| 267 | 0.0028 | 0.0013 | 0.0015 |
| 268 | 0.0028 | 0.0013 | 0.0015 |
| 269 | 0.0027 | 0.0013 | 0.0015 |
| 270 | 0.0027 | 0.0013 | 0.0014 |
| 271 | 0.0027 | 0.0012 | 0.0014 |
| 272 | 0.0026 | 0.0012 | 0.0014 |

| | | | |
|---|---|---|---|
| 273 | 0.0026 | 0.0012 | 0.0014 |
| 274 | 0.0026 | 0.0012 | 0.0014 |
| 275 | 0.0026 | 0.0012 | 0.0014 |
| 276 | 0.0026 | 0.0012 | 0.0014 |
| 277 | 0.0025 | 0.0012 | 0.0014 |
| 278 | 0.0025 | 0.0012 | 0.0013 |
| 279 | 0.0025 | 0.0012 | 0.0013 |
| 280 | 0.0025 | 0.0011 | 0.0013 |
| 281 | 0.0024 | 0.0011 | 0.0013 |
| 282 | 0.0024 | 0.0011 | 0.0013 |
| 283 | 0.0024 | 0.0011 | 0.0013 |
| 284 | 0.0024 | 0.0011 | 0.0013 |
| 285 | 0.0024 | 0.0011 | 0.0013 |
| 286 | 0.0023 | 0.0011 | 0.0013 |
| 287 | 0.0023 | 0.0011 | 0.0012 |
| 288 | 0.0023 | 0.0011 | 0.0012 |

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Total soil rain loss = 0.81(In)
Total effective rainfall = 1.78(In)
Peak flow rate in flood hydrograph = 427.00(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 125.0 | 250.0 | 375.0 | 500.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0001 | 0.02 | Q | \| | \| | \| | \| |
| 0+10 | 0.0006 | 0.06 | Q | \| | \| | \| | \| |
| 0+15 | 0.0014 | 0.11 | Q | \| | \| | \| | \| |
| 0+20 | 0.0027 | 0.19 | Q | \| | \| | \| | \| |
| 0+25 | 0.0045 | 0.27 | Q | \| | \| | \| | \| |
| 0+30 | 0.0071 | 0.38 | Q | \| | \| | \| | \| |
| 0+35 | 0.0106 | 0.50 | Q | \| | \| | \| | \| |
| 0+40 | 0.0149 | 0.63 | Q | \| | \| | \| | \| |
| 0+45 | 0.0203 | 0.79 | Q | \| | \| | \| | \| |
| 0+50 | 0.0269 | 0.96 | Q | \| | \| | \| | \| |
| 0+55 | 0.0353 | 1.22 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0459 | 1.54 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0590 | 1.90 | Q | \| | \| | \| | \| |
| 1+10 | 0.0756 | 2.40 | Q | \| | \| | \| | \| |
| 1+15 | 0.0955 | 2.90 | Q | \| | \| | \| | \| |
| 1+20 | 0.1186 | 3.34 | Q | \| | \| | \| | \| |
| 1+25 | 0.1445 | 3.77 | Q | \| | \| | \| | \| |
| 1+30 | 0.1731 | 4.16 | Q | \| | \| | \| | \| |
| 1+35 | 0.2040 | 4.48 | Q | \| | \| | \| | \| |
| 1+40 | 0.2371 | 4.80 | Q | \| | \| | \| | \| |
| 1+45 | 0.2721 | 5.08 | Q | \| | \| | \| | \| |
| 1+50 | 0.3090 | 5.35 | Q | \| | \| | \| | \| |
| 1+55 | 0.3475 | 5.60 | Q | \| | \| | \| | \| |
| 2+ 0 | 0.3875 | 5.80 | Q | \| | \| | \| | \| |
| 2+ 5 | 0.4288 | 6.01 | Q | \| | \| | \| | \| |
| 2+10 | 0.4714 | 6.19 | Q | \| | \| | \| | \| |
| 2+15 | 0.5152 | 6.36 | Q | \| | \| | \| | \| |
| 2+20 | 0.5602 | 6.53 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+25 | 0.6062 | 6.68 | Q | | | | |
| 2+30 | 0.6532 | 6.83 | Q | | | | |
| 2+35 | 0.7013 | 6.98 | Q | | | | |
| 2+40 | 0.7503 | 7.12 | Q | | | | |
| 2+45 | 0.8003 | 7.26 | Q | | | | |
| 2+50 | 0.8512 | 7.38 | Q | | | | |
| 2+55 | 0.9029 | 7.51 | Q | | | | |
| 3+ 0 | 0.9554 | 7.62 | Q | | | | |
| 3+ 5 | 1.0087 | 7.74 | Q | | | | |
| 3+10 | 1.0628 | 7.86 | Q | | | | |
| 3+15 | 1.1177 | 7.97 | Q | | | | |
| 3+20 | 1.1734 | 8.08 | Q | | | | |
| 3+25 | 1.2297 | 8.18 | Q | | | | |
| 3+30 | 1.2868 | 8.28 | Q | | | | |
| 3+35 | 1.3445 | 8.38 | Q | | | | |
| 3+40 | 1.4029 | 8.48 | Q | | | | |
| 3+45 | 1.4620 | 8.58 | Q | | | | |
| 3+50 | 1.5218 | 8.67 | Q | | | | |
| 3+55 | 1.5821 | 8.76 | Q | | | | |
| 4+ 0 | 1.6431 | 8.85 | Q | | | | |
| 4+ 5 | 1.7047 | 8.95 | Q | | | | |
| 4+10 | 1.7669 | 9.04 | Q | | | | |
| 4+15 | 1.8298 | 9.13 | Q | | | | |
| 4+20 | 1.8933 | 9.21 | Q | | | | |
| 4+25 | 1.9573 | 9.30 | Q | | | | |
| 4+30 | 2.0220 | 9.39 | Q | | | | |
| 4+35 | 2.0873 | 9.48 | Q | | | | |
| 4+40 | 2.1532 | 9.56 | Q | | | | |
| 4+45 | 2.2196 | 9.65 | Q | | | | |
| 4+50 | 2.2866 | 9.73 | Q | | | | |
| 4+55 | 2.3543 | 9.82 | Q | | | | |
| 5+ 0 | 2.4224 | 9.90 | QV | | | | |
| 5+ 5 | 2.4911 | 9.98 | QV | | | | |
| 5+10 | 2.5604 | 10.05 | QV | | | | |
| 5+15 | 2.6301 | 10.13 | QV | | | | |
| 5+20 | 2.7005 | 10.21 | QV | | | | |
| 5+25 | 2.7713 | 10.29 | QV | | | | |
| 5+30 | 2.8428 | 10.37 | QV | | | | |
| 5+35 | 2.9147 | 10.45 | QV | | | | |
| 5+40 | 2.9872 | 10.53 | QV | | | | |
| 5+45 | 3.0603 | 10.61 | QV | | | | |
| 5+50 | 3.1339 | 10.69 | QV | | | | |
| 5+55 | 3.2081 | 10.77 | QV | | | | |
| 6+ 0 | 3.2828 | 10.85 | QV | | | | |
| 6+ 5 | 3.3581 | 10.93 | QV | | | | |
| 6+10 | 3.4339 | 11.01 | QV | | | | |
| 6+15 | 3.5103 | 11.09 | QV | | | | |
| 6+20 | 3.5872 | 11.17 | QV | | | | |
| 6+25 | 3.6647 | 11.25 | QV | | | | |
| 6+30 | 3.7428 | 11.34 | QV | | | | |
| 6+35 | 3.8214 | 11.42 | QV | | | | |
| 6+40 | 3.9006 | 11.50 | QV | | | | |
| 6+45 | 3.9804 | 11.58 | QV | | | | |
| 6+50 | 4.0607 | 11.66 | QV | | | | |
| 6+55 | 4.1415 | 11.74 | QV | | | | |
| 7+ 0 | 4.2230 | 11.83 | QV | | | | |
| 7+ 5 | 4.3050 | 11.91 | QV | | | | |
| 7+10 | 4.3877 | 12.00 | QV | | | | |
| 7+15 | 4.4709 | 12.08 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7+20 | 4.5547 | 12.17 | QV | \| | \| | \| | \| |
| 7+25 | 4.6391 | 12.26 | QV | \| | \| | \| | \| |
| 7+30 | 4.7241 | 12.34 | Q V | \| | \| | \| | \| |
| 7+35 | 4.8098 | 12.43 | Q V | \| | \| | \| | \| |
| 7+40 | 4.8960 | 12.52 | \|QV | \| | \| | \| | \| |
| 7+45 | 4.9828 | 12.61 | \|QV | \| | \| | \| | \| |
| 7+50 | 5.0703 | 12.70 | \|QV | \| | \| | \| | \| |
| 7+55 | 5.1584 | 12.79 | \|QV | \| | \| | \| | \| |
| 8+ 0 | 5.2471 | 12.88 | \|QV | \| | \| | \| | \| |
| 8+ 5 | 5.3365 | 12.98 | \|QV | \| | \| | \| | \| |
| 8+10 | 5.4265 | 13.07 | \|QV | \| | \| | \| | \| |
| 8+15 | 5.5172 | 13.17 | \|QV | \| | \| | \| | \| |
| 8+20 | 5.6085 | 13.26 | \|QV | \| | \| | \| | \| |
| 8+25 | 5.7005 | 13.36 | \|QV | \| | \| | \| | \| |
| 8+30 | 5.7932 | 13.45 | \|QV | \| | \| | \| | \| |
| 8+35 | 5.8865 | 13.55 | \|QV | \| | \| | \| | \| |
| 8+40 | 5.9805 | 13.65 | \|QV | \| | \| | \| | \| |
| 8+45 | 6.0752 | 13.75 | \|QV | \| | \| | \| | \| |
| 8+50 | 6.1707 | 13.86 | \|QV | \| | \| | \| | \| |
| 8+55 | 6.2668 | 13.96 | \|QV | \| | \| | \| | \| |
| 9+ 0 | 6.3637 | 14.07 | \|QV | \| | \| | \| | \| |
| 9+ 5 | 6.4613 | 14.17 | \|QV | \| | \| | \| | \| |
| 9+10 | 6.5596 | 14.28 | \|QV | \| | \| | \| | \| |
| 9+15 | 6.6587 | 14.39 | \|QV | \| | \| | \| | \| |
| 9+20 | 6.7585 | 14.49 | \|QV | \| | \| | \| | \| |
| 9+25 | 6.8591 | 14.61 | \|QV | \| | \| | \| | \| |
| 9+30 | 6.9605 | 14.72 | \|QV | \| | \| | \| | \| |
| 9+35 | 7.0626 | 14.83 | \|QV | \| | \| | \| | \| |
| 9+40 | 7.1656 | 14.95 | \|Q V | \| | \| | \| | \| |
| 9+45 | 7.2694 | 15.07 | \|Q V | \| | \| | \| | \| |
| 9+50 | 7.3740 | 15.19 | \|Q V | \| | \| | \| | \| |
| 9+55 | 7.4795 | 15.31 | \|Q V | \| | \| | \| | \| |
| 10+ 0 | 7.5858 | 15.44 | \|Q V | \| | \| | \| | \| |
| 10+ 5 | 7.6931 | 15.57 | \|Q V | \| | \| | \| | \| |
| 10+10 | 7.8012 | 15.70 | \|Q V | \| | \| | \| | \| |
| 10+15 | 7.9103 | 15.84 | \|Q V | \| | \| | \| | \| |
| 10+20 | 8.0202 | 15.97 | \|Q V | \| | \| | \| | \| |
| 10+25 | 8.1312 | 16.11 | \|Q V | \| | \| | \| | \| |
| 10+30 | 8.2431 | 16.25 | \|Q V | \| | \| | \| | \| |
| 10+35 | 8.3561 | 16.40 | \|Q V | \| | \| | \| | \| |
| 10+40 | 8.4700 | 16.54 | \|Q V | \| | \| | \| | \| |
| 10+45 | 8.5850 | 16.69 | \|Q V | \| | \| | \| | \| |
| 10+50 | 8.7010 | 16.85 | \|Q V | \| | \| | \| | \| |
| 10+55 | 8.8181 | 17.00 | \|Q V | \| | \| | \| | \| |
| 11+ 0 | 8.9363 | 17.16 | \|Q V | \| | \| | \| | \| |
| 11+ 5 | 9.0557 | 17.33 | \|Q V | \| | \| | \| | \| |
| 11+10 | 9.1762 | 17.50 | \|Q V | \| | \| | \| | \| |
| 11+15 | 9.2978 | 17.67 | \|Q V | \| | \| | \| | \| |
| 11+20 | 9.4207 | 17.84 | \|Q V | \| | \| | \| | \| |
| 11+25 | 9.5448 | 18.02 | \|Q  V | \| | \| | \| | \| |
| 11+30 | 9.6701 | 18.20 | \|Q  V | \| | \| | \| | \| |
| 11+35 | 9.7968 | 18.38 | \|Q  V | \| | \| | \| | \| |
| 11+40 | 9.9247 | 18.57 | \|Q  V | \| | \| | \| | \| |
| 11+45 | 10.0539 | 18.77 | \|Q  V | \| | \| | \| | \| |
| 11+50 | 10.1845 | 18.96 | \|Q  V | \| | \| | \| | \| |
| 11+55 | 10.3165 | 19.17 | \|Q  V | \| | \| | \| | \| |
| 12+ 0 | 10.4500 | 19.38 | \|Q  V | \| | \| | \| | \| |
| 12+ 5 | 10.5847 | 19.57 | \|Q  V | \| | \| | \| | \| |
| 12+10 | 10.7207 | 19.74 | \|Q  V | \| | \| | \| | \| |

```
12+15      10.8578     19.91  |Q  V     |          |          |          |
12+20      10.9959     20.05  |Q  V     |          |          |          |
12+25      11.1349     20.19  |Q  V     |          |          |          |
12+30      11.2749     20.32  |Q  V     |          |          |          |
12+35      11.4156     20.43  |Q  V     |          |          |          |
12+40      11.5570     20.53  |Q  V     |          |          |          |
12+45      11.6989     20.61  |Q  V     |          |          |          |
12+50      11.8414     20.68  |Q   V    |          |          |          |
12+55      11.9836     20.65  |Q   V    |          |          |          |
13+ 0      12.1253     20.58  |Q   V    |          |          |          |
13+ 5      12.2661     20.44  |Q   V    |          |          |          |
13+10      12.4050     20.17  |Q   V    |          |          |          |
13+15      12.5421     19.90  |Q   V    |          |          |          |
13+20      12.6777     19.70  |Q   V    |          |          |          |
13+25      12.8122     19.52  |Q   V    |          |          |          |
13+30      12.9457     19.39  |Q   V    |          |          |          |
13+35      13.0789     19.34  |Q   V    |          |          |          |
13+40      13.2119     19.31  |Q   V    |          |          |          |
13+45      13.3450     19.33  |Q   V    |          |          |          |
13+50      13.4784     19.37  |Q   V    |          |          |          |
13+55      13.6124     19.45  |Q   V    |          |          |          |
14+ 0      13.7473     19.59  |Q   V    |          |          |          |
14+ 5      13.8834     19.76  |Q   V    |          |          |          |
14+10      14.0209     19.97  |Q   V    |          |          |          |
14+15      14.1601     20.22  |Q    V   |          |          |          |
14+20      14.3013     20.50  |Q    V   |          |          |          |
14+25      14.4447     20.82  |Q    V   |          |          |          |
14+30      14.5906     21.18  |Q    V   |          |          |          |
14+35      14.7392     21.57  |Q    V   |          |          |          |
14+40      14.8907     22.00  |Q    V   |          |          |          |
14+45      15.0456     22.49  |Q    V   |          |          |          |
14+50      15.2041     23.02  |Q    V   |          |          |          |
14+55      15.3669     23.64  |Q    V   |          |          |          |
15+ 0      15.5344     24.33  |Q    V   |          |          |          |
15+ 5      15.7073     25.09  | Q   V   |          |          |          |
15+10      15.8861     25.98  | Q   V   |          |          |          |
15+15      16.0716     26.93  | Q   V   |          |          |          |
15+20      16.2641     27.94  | Q   V   |          |          |          |
15+25      16.4651     29.19  | Q   V   |          |          |          |
15+30      16.6764     30.68  | Q    V  |          |          |          |
15+35      16.8991     32.33  | Q    V  |          |          |          |
15+40      17.1359     34.38  | Q    V  |          |          |          |
15+45      17.3895     36.83  | Q    V  |          |          |          |
15+50      17.6647     39.96  |  Q   V  |          |          |          |
15+55      17.9691     44.20  |  Q   V  |          |          |          |
16+ 0      18.3160     50.37  |   Q  V  |          |          |          |
16+ 5      18.7756     66.72  |    Q V  |          |          |          |
16+10      19.3499     83.40  |     Q V |          |          |          |
16+15      20.0014     94.59  |      QV |          |          |          |
16+20      20.7975    115.60  |       VQ|          |          |          |
16+25      21.6712    126.85  |        VQ          |          |          |
16+30      22.6828    146.89  |        V|Q         |          |          |
16+35      23.8170    164.68  |         V  Q       |          |          |
16+40      25.0607    180.58  |         V   Q      |          |          |
16+45      26.4924    207.88  |         |V    Q    |          |          |
16+50      28.0678    228.74  |         |V      Q  |          |          |
16+55      30.0555    288.63  |         | V        |  Q       |          |
17+ 0      32.3046    326.56  |         |  V       |     Q    |          |
17+ 5      34.8241    365.83  |         |   V      |        Q |          |
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 17+10 | 37.7648 | 427.00 | \| | \| | V | \| | \| | Q | \| |
| 17+15 | 40.6862 | 424.18 | \| | \| | V | \| | \| | Q | \| |
| 17+20 | 43.3761 | 390.57 | \| | \| | V | \| | \| | Q | \| |
| 17+25 | 45.9246 | 370.04 | \| | \| | V | \| | Q | \| | \| |
| 17+30 | 48.2606 | 339.18 | \| | \| | V | \| | Q | \| | \| |
| 17+35 | 50.3183 | 298.78 | \| | \| | V | Q | \| | \| | \| |
| 17+40 | 52.2751 | 284.13 | \| | \| | Q | \| | \| | \| | \| |
| 17+45 | 54.0314 | 255.01 | \| | \| | Q | V | \| | \| | \| |
| 17+50 | 55.6846 | 240.05 | \| | \| | Q | \| | V | \| | \| |
| 17+55 | 57.1790 | 216.97 | \| | \| | Q | \| | V | \| | \| |
| 18+ 0 | 58.5115 | 193.48 | \| | \| | Q | \| | V | \| | \| |
| 18+ 5 | 59.7777 | 183.86 | \| | \| | Q | \| | V | \| | \| |
| 18+10 | 60.9236 | 166.38 | \| | \| | Q | \| | V | \| | \| |
| 18+15 | 62.0186 | 159.00 | \| | \| | Q | \| | V | \| | \| |
| 18+20 | 63.0424 | 148.65 | \| | \| | Q | \| | V | \| | \| |
| 18+25 | 64.0085 | 140.27 | \| | \| | Q | \| | V | \| | \| |
| 18+30 | 64.9429 | 135.68 | \| | \| | Q | \| | V | \| | \| |
| 18+35 | 65.8291 | 128.68 | \| | \| | Q | \| | V | \| | \| |
| 18+40 | 66.6876 | 124.65 | \| | \| | Q | \| | V | \| | \| |
| 18+45 | 67.4869 | 116.05 | \| | \| | Q | \| | V | \| | \| |
| 18+50 | 68.2464 | 110.29 | \| | \| | Q | \| | V | \| | \| |
| 18+55 | 68.9795 | 106.44 | \| | \| | Q | \| | V | \| | \| |
| 19+ 0 | 69.6744 | 100.91 | \| | \| | Q | \| | V | \| | \| |
| 19+ 5 | 70.3552 | 98.86 | \| | \| | Q | \| | V | \| | \| |
| 19+10 | 71.0171 | 96.10 | \| | \| | Q | \| | V | \| | \| |
| 19+15 | 71.6628 | 93.76 | \| | \| | Q | \| | V | \| | \| |
| 19+20 | 72.2765 | 89.10 | \| | \| | Q | \| | V | \| | \| |
| 19+25 | 72.8461 | 82.72 | \| | \| | Q | \| | V | \| | \| |
| 19+30 | 73.4064 | 81.35 | \| | \| | Q | \| | V | \| | \| |
| 19+35 | 73.9584 | 80.16 | \| | \| | Q | \| | V | \| | \| |
| 19+40 | 74.5007 | 78.73 | \| | \| | Q | \| | V | \| | \| |
| 19+45 | 75.0178 | 75.09 | \| | \| | Q | \| | V | \| | \| |
| 19+50 | 75.5078 | 71.14 | \| | \| | Q | \| | V | \| | \| |
| 19+55 | 75.9911 | 70.17 | \| | \| | Q | \| | V | \| | \| |
| 20+ 0 | 76.4681 | 69.26 | \| | \| | Q | \| | V | \| | \| |
| 20+ 5 | 76.9381 | 68.24 | \| | \| | Q | \| | V | \| | \| |
| 20+10 | 77.3919 | 65.90 | \| | \| | Q | \| | V | \| | \| |
| 20+15 | 77.8318 | 63.88 | \| | \| | Q | \| | V | \| | \| |
| 20+20 | 78.2660 | 63.04 | \| | \| | Q | \| | V | \| | \| |
| 20+25 | 78.6938 | 62.12 | \| | \| | Q | \| | V | \| | \| |
| 20+30 | 79.1135 | 60.94 | \| | \| | Q | \| | V | \| | \| |
| 20+35 | 79.5112 | 57.75 | \| | \| | Q | \| | V | \| | \| |
| 20+40 | 79.8940 | 55.58 | \| | \| | Q | \| | V | \| | \| |
| 20+45 | 80.2708 | 54.71 | \| | \| | Q | \| | V | \| | \| |
| 20+50 | 80.6409 | 53.74 | \| | \| | Q | \| | V | \| | \| |
| 20+55 | 81.0017 | 52.39 | \| | \| | Q | \| | V | \| | \| |
| 21+ 0 | 81.3352 | 48.43 | \| | \| | Q | \| | V | \| | \| |
| 21+ 5 | 81.6548 | 46.40 | \| | \| | Q | \| | V | \| | \| |
| 21+10 | 81.9700 | 45.76 | \| | \| | Q | \| | V | \| | \| |
| 21+15 | 82.2812 | 45.19 | \| | \| | Q | \| | V | \| | \| |
| 21+20 | 82.5883 | 44.59 | \| | \| | Q | \| | V | \| | \| |
| 21+25 | 82.8877 | 43.47 | \| | \| | Q | \| | V | \| | \| |
| 21+30 | 83.1826 | 42.82 | \| | \| | Q | \| | V | \| | \| |
| 21+35 | 83.4742 | 42.35 | \| | \| | Q | \| | V | \| | \| |
| 21+40 | 83.7621 | 41.81 | \| | \| | Q | \| | V | \| | \| |
| 21+45 | 84.0445 | 40.99 | \| | \| | Q | \| | V | \| | \| |
| 21+50 | 84.3143 | 39.18 | \| | \| | Q | \| | V | \| | \| |
| 21+55 | 84.5790 | 38.44 | \| | \| | Q | \| | V | \| | \| |
| 22+ 0 | 84.8408 | 38.01 | \| | \| | Q | \| | V | \| | \| |

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22+ 5      85.0994     37.55  |  Q      |         |         |     V   |
22+10      85.3538     36.94  | Q       |         |         |     V   |
22+15      85.6009     35.87  | Q       |         |         |     V   |
22+20      85.8444     35.36  | Q       |         |         |     V   |
22+25      86.0849     34.92  | Q       |         |         |     V   |
22+30      86.3215     34.36  | Q       |         |         |     V   |
22+35      86.5505     33.24  | Q       |         |         |     V   |
22+40      86.7654     31.20  | Q       |         |         |     V   |
22+45      86.9766     30.67  | Q       |         |         |     V   |
22+50      87.1856     30.34  | Q       |         |         |     V   |
22+55      87.3926     30.06  | Q       |         |         |      V  |
23+ 0      87.5978     29.79  | Q       |         |         |      V  |
23+ 5      87.8010     29.51  | Q       |         |         |      V  |
23+10      88.0022     29.21  | Q       |         |         |      V  |
23+15      88.2009     28.85  | Q       |         |         |      V  |
23+20      88.3963     28.37  | Q       |         |         |      V  |
23+25      88.5837     27.22  | Q       |         |         |      V  |
23+30      88.7613     25.78  | Q       |         |         |      V  |
23+35      88.9365     25.44  | Q       |         |         |      V  |
23+40      89.1099     25.17  | Q       |         |         |      V  |
23+45      89.2816     24.93  |Q        |         |         |      V  |
23+50      89.4517     24.70  |Q        |         |         |      V  |
23+55      89.6201     24.45  |Q        |         |         |       V |
24+ 0      89.7866     24.18  |Q        |         |         |       V |
24+ 5      89.9506     23.81  |Q        |         |         |       V |
24+10      90.1111     23.29  |Q        |         |         |       V |
24+15      90.2614     21.82  |Q        |         |         |       V |
24+20      90.4038     20.68  |Q        |         |         |       V |
24+25      90.5437     20.31  |Q        |         |         |       V |
24+30      90.6812     19.98  |Q        |         |         |       V |
24+35      90.8166     19.65  |Q        |         |         |       V |
24+40      90.9497     19.32  |Q        |         |         |       V |
24+45      91.0802     18.95  |Q        |         |         |       V |
24+50      91.2078     18.54  |Q        |         |         |       V |
24+55      91.3314     17.95  |Q        |         |         |       V |
25+ 0      91.4494     17.12  |Q        |         |         |       V |
25+ 5      91.5540     15.19  |Q        |         |         |       V |
25+10      91.6504     14.00  |Q        |         |         |       V |
25+15      91.7422     13.33  |Q        |         |         |       V |
25+20      91.8301     12.77  |Q        |         |         |       V |
25+25      91.9146     12.27  Q        |         |         |       V |
25+30      91.9961     11.83  Q        |         |         |        V|
25+35      92.0750     11.46  Q        |         |         |        V|
25+40      92.1516     11.12  Q        |         |         |        V|
25+45      92.2264     10.85  Q        |         |         |        V|
25+50      92.3000     10.68  Q        |         |         |        V|
25+55      92.3742     10.78  Q        |         |         |        V|
26+ 0      92.4475     10.64  Q        |         |         |        V|
26+ 5      92.5193     10.43  Q        |         |         |        V|
26+10      92.5898     10.24  Q        |         |         |        V|
26+15      92.6589     10.04  Q        |         |         |        V|
26+20      92.7268      9.85  Q        |         |         |        V|
26+25      92.7934      9.68  Q        |         |         |        V|
26+30      92.8589      9.51  Q        |         |         |        V|
26+35      92.9233      9.34  Q        |         |         |        V|
26+40      92.9865      9.18  Q        |         |         |        V|
26+45      93.0486      9.03  Q        |         |         |        V|
26+50      93.1098      8.87  Q        |         |         |        V|
26+55      93.1697      8.71  Q        |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 27+ 0 | 93.2286 | 8.55 | Q | \| | \| | \| | V\| |
| 27+ 5 | 93.2863 | 8.38 | Q | \| | \| | \| | V\| |
| 27+10 | 93.3428 | 8.20 | Q | \| | \| | \| | V\| |
| 27+15 | 93.3979 | 7.99 | Q | \| | \| | \| | V\| |
| 27+20 | 93.4512 | 7.75 | Q | \| | \| | \| | V\| |
| 27+25 | 93.5024 | 7.43 | Q | \| | \| | \| | V\| |
| 27+30 | 93.5478 | 6.59 | Q | \| | \| | \| | V\| |
| 27+35 | 93.5865 | 5.62 | Q | \| | \| | \| | V\| |
| 27+40 | 93.6239 | 5.42 | Q | \| | \| | \| | V\| |
| 27+45 | 93.6602 | 5.27 | Q | \| | \| | \| | V\| |
| 27+50 | 93.6956 | 5.15 | Q | \| | \| | \| | V\| |
| 27+55 | 93.7304 | 5.05 | Q | \| | \| | \| | V\| |
| 28+ 0 | 93.7645 | 4.95 | Q | \| | \| | \| | V\| |
| 28+ 5 | 93.7979 | 4.84 | Q | \| | \| | \| | V\| |
| 28+10 | 93.8304 | 4.73 | Q | \| | \| | \| | V\| |
| 28+15 | 93.8621 | 4.61 | Q | \| | \| | \| | V\| |
| 28+20 | 93.8930 | 4.49 | Q | \| | \| | \| | V\| |
| 28+25 | 93.9230 | 4.35 | Q | \| | \| | \| | V\| |
| 28+30 | 93.9518 | 4.18 | Q | \| | \| | \| | V\| |
| 28+35 | 93.9792 | 3.97 | Q | \| | \| | \| | V\| |
| 28+40 | 94.0044 | 3.67 | Q | \| | \| | \| | V\| |
| 28+45 | 94.0230 | 2.70 | Q | \| | \| | \| | V\| |
| 28+50 | 94.0355 | 1.81 | Q | \| | \| | \| | V\| |
| 28+55 | 94.0469 | 1.66 | Q | \| | \| | \| | V\| |
| 29+ 0 | 94.0576 | 1.55 | Q | \| | \| | \| | V\| |
| 29+ 5 | 94.0678 | 1.48 | Q | \| | \| | \| | V\| |
| 29+10 | 94.0776 | 1.42 | Q | \| | \| | \| | V\| |
| 29+15 | 94.0870 | 1.37 | Q | \| | \| | \| | V\| |
| 29+20 | 94.0961 | 1.32 | Q | \| | \| | \| | V\| |
| 29+25 | 94.1049 | 1.27 | Q | \| | \| | \| | V\| |
| 29+30 | 94.1133 | 1.23 | Q | \| | \| | \| | V\| |
| 29+35 | 94.1215 | 1.18 | Q | \| | \| | \| | V\| |
| 29+40 | 94.1293 | 1.14 | Q | \| | \| | \| | V\| |
| 29+45 | 94.1369 | 1.10 | Q | \| | \| | \| | V\| |
| 29+50 | 94.1441 | 1.06 | Q | \| | \| | \| | V\| |
| 29+55 | 94.1512 | 1.02 | Q | \| | \| | \| | V\| |
| 30+ 0 | 94.1580 | 0.99 | Q | \| | \| | \| | V\| |
| 30+ 5 | 94.1646 | 0.95 | Q | \| | \| | \| | V\| |
| 30+10 | 94.1709 | 0.92 | Q | \| | \| | \| | V\| |
| 30+15 | 94.1770 | 0.89 | Q | \| | \| | \| | V\| |
| 30+20 | 94.1830 | 0.86 | Q | \| | \| | \| | V\| |
| 30+25 | 94.1887 | 0.83 | Q | \| | \| | \| | V\| |
| 30+30 | 94.1942 | 0.80 | Q | \| | \| | \| | V\| |
| 30+35 | 94.1995 | 0.77 | Q | \| | \| | \| | V\| |
| 30+40 | 94.2047 | 0.75 | Q | \| | \| | \| | V\| |
| 30+45 | 94.2097 | 0.73 | Q | \| | \| | \| | V\| |
| 30+50 | 94.2145 | 0.70 | Q | \| | \| | \| | V\| |
| 30+55 | 94.2192 | 0.68 | Q | \| | \| | \| | V\| |
| 31+ 0 | 94.2237 | 0.65 | Q | \| | \| | \| | V\| |
| 31+ 5 | 94.2280 | 0.63 | Q | \| | \| | \| | V\| |
| 31+10 | 94.2321 | 0.60 | Q | \| | \| | \| | V\| |
| 31+15 | 94.2361 | 0.58 | Q | \| | \| | \| | V\| |
| 31+20 | 94.2399 | 0.55 | Q | \| | \| | \| | V\| |
| 31+25 | 94.2436 | 0.53 | Q | \| | \| | \| | V\| |
| 31+30 | 94.2471 | 0.51 | Q | \| | \| | \| | V\| |
| 31+35 | 94.2506 | 0.50 | Q | \| | \| | \| | V\| |
| 31+40 | 94.2538 | 0.48 | Q | \| | \| | \| | V\| |
| 31+45 | 94.2570 | 0.46 | Q | \| | \| | \| | V\| |
| 31+50 | 94.2601 | 0.44 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 31+55 | 94.2630 | 0.42 | Q | \| | \| | \| | V\| |
| 32+ 0 | 94.2658 | 0.41 | Q | \| | \| | \| | V\| |
| 32+ 5 | 94.2685 | 0.39 | Q | \| | \| | \| | V\| |
| 32+10 | 94.2710 | 0.37 | Q | \| | \| | \| | V\| |
| 32+15 | 94.2735 | 0.36 | Q | \| | \| | \| | V\| |
| 32+20 | 94.2759 | 0.35 | Q | \| | \| | \| | V\| |
| 32+25 | 94.2782 | 0.33 | Q | \| | \| | \| | V\| |
| 32+30 | 94.2804 | 0.32 | Q | \| | \| | \| | V\| |
| 32+35 | 94.2825 | 0.31 | Q | \| | \| | \| | V\| |
| 32+40 | 94.2846 | 0.30 | Q | \| | \| | \| | V\| |
| 32+45 | 94.2866 | 0.29 | Q | \| | \| | \| | V\| |
| 32+50 | 94.2885 | 0.27 | Q | \| | \| | \| | V\| |
| 32+55 | 94.2903 | 0.26 | Q | \| | \| | \| | V\| |
| 33+ 0 | 94.2920 | 0.25 | Q | \| | \| | \| | V\| |
| 33+ 5 | 94.2937 | 0.24 | Q | \| | \| | \| | V\| |
| 33+10 | 94.2953 | 0.24 | Q | \| | \| | \| | V\| |
| 33+15 | 94.2969 | 0.23 | Q | \| | \| | \| | V\| |
| 33+20 | 94.2984 | 0.22 | Q | \| | \| | \| | V\| |
| 33+25 | 94.2999 | 0.21 | Q | \| | \| | \| | V\| |
| 33+30 | 94.3013 | 0.21 | Q | \| | \| | \| | V\| |
| 33+35 | 94.3027 | 0.20 | Q | \| | \| | \| | V\| |
| 33+40 | 94.3040 | 0.19 | Q | \| | \| | \| | V\| |
| 33+45 | 94.3053 | 0.19 | Q | \| | \| | \| | V\| |
| 33+50 | 94.3066 | 0.18 | Q | \| | \| | \| | V\| |
| 33+55 | 94.3078 | 0.17 | Q | \| | \| | \| | V\| |
| 34+ 0 | 94.3089 | 0.17 | Q | \| | \| | \| | V\| |
| 34+ 5 | 94.3100 | 0.16 | Q | \| | \| | \| | V\| |
| 34+10 | 94.3110 | 0.15 | Q | \| | \| | \| | V\| |
| 34+15 | 94.3120 | 0.14 | Q | \| | \| | \| | V\| |
| 34+20 | 94.3130 | 0.14 | Q | \| | \| | \| | V\| |
| 34+25 | 94.3139 | 0.13 | Q | \| | \| | \| | V\| |
| 34+30 | 94.3147 | 0.12 | Q | \| | \| | \| | V\| |
| 34+35 | 94.3155 | 0.12 | Q | \| | \| | \| | V\| |
| 34+40 | 94.3163 | 0.11 | Q | \| | \| | \| | V\| |
| 34+45 | 94.3170 | 0.10 | Q | \| | \| | \| | V\| |
| 34+50 | 94.3177 | 0.10 | Q | \| | \| | \| | V\| |
| 34+55 | 94.3183 | 0.09 | Q | \| | \| | \| | V\| |
| 35+ 0 | 94.3189 | 0.08 | Q | \| | \| | \| | V\| |
| 35+ 5 | 94.3194 | 0.08 | Q | \| | \| | \| | V\| |
| 35+10 | 94.3199 | 0.07 | Q | \| | \| | \| | V\| |
| 35+15 | 94.3203 | 0.06 | Q | \| | \| | \| | V\| |
| 35+20 | 94.3207 | 0.06 | Q | \| | \| | \| | V\| |
| 35+25 | 94.3211 | 0.05 | Q | \| | \| | \| | V\| |
| 35+30 | 94.3214 | 0.05 | Q | \| | \| | \| | V\| |
| 35+35 | 94.3217 | 0.04 | Q | \| | \| | \| | V\| |
| 35+40 | 94.3220 | 0.04 | Q | \| | \| | \| | V\| |
| 35+45 | 94.3222 | 0.04 | Q | \| | \| | \| | V\| |
| 35+50 | 94.3224 | 0.03 | Q | \| | \| | \| | V\| |
| 35+55 | 94.3226 | 0.03 | Q | \| | \| | \| | V\| |
| 36+ 0 | 94.3228 | 0.03 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 32
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 24.36 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 24.36 | 6 | 1.83 |
| Rainfall data for year 100 | | |
| 24.36 | 24 | 2.60 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 81.2 | 94.7 | 24.36 | 1.000 | 0.103 | 1.000 | 0.103 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.103

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 24.36 | 1.000 | 81.2 | 94.7 | 0.56 | 0.782 |

Area-averaged catchment yield fraction, Y = 0.782
Area-averaged low loss fraction, Yb = 0.218
User entry of time of concentration = 0.720 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 24.36(Ac.)
Catchment Lag time = 0.576 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 14.4676
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.103(In/Hr)
Average low loss rate fraction (Yb) = 0.218 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.645(In)
Specified peak 6-hour rainfall = 1.830(In)
Specified peak 24-hour rainfall = 2.600(In)

Rainfall depth area reduction factors:
Using a total area of 24.36(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.659(In)
30-minute factor = 0.999 Adjusted rainfall = 1.128(In)
1-hour factor = 0.999 Adjusted rainfall = 1.388(In)
3-hour factor = 1.000 Adjusted rainfall = 1.645(In)
6-hour factor = 1.000 Adjusted rainfall = 1.830(In)
24-hour factor = 1.000 Adjusted rainfall = 2.600(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 294.60 (CFS)) | |
| 1 | 0.647 | 1.907 |
| 2 | 2.689 | 6.014 |
| 3 | 6.076 | 9.979 |
| 4 | 11.365 | 15.581 |
| 5 | 21.451 | 29.715 |
| 6 | 35.172 | 40.423 |
| 7 | 46.175 | 32.414 |
| 8 | 54.374 | 24.156 |
| 9 | 60.455 | 17.913 |
| 10 | 65.097 | 13.675 |
| 11 | 68.935 | 11.308 |
| 12 | 72.260 | 9.796 |
| 13 | 75.027 | 8.152 |
| 14 | 77.504 | 7.299 |

| | | |
|---|---|---|
| 15 | 79.591 | 6.147 |
| 16 | 81.466 | 5.523 |
| 17 | 83.081 | 4.759 |
| 18 | 84.599 | 4.471 |
| 19 | 85.994 | 4.112 |
| 20 | 87.269 | 3.756 |
| 21 | 88.417 | 3.380 |
| 22 | 89.363 | 2.788 |
| 23 | 90.223 | 2.533 |
| 24 | 91.039 | 2.405 |
| 25 | 91.812 | 2.276 |
| 26 | 92.508 | 2.052 |
| 27 | 93.169 | 1.948 |
| 28 | 93.797 | 1.849 |
| 29 | 94.319 | 1.539 |
| 30 | 94.811 | 1.449 |
| 31 | 95.303 | 1.449 |
| 32 | 95.748 | 1.312 |
| 33 | 96.125 | 1.110 |
| 34 | 96.501 | 1.108 |
| 35 | 96.866 | 1.075 |
| 36 | 97.145 | 0.821 |
| 37 | 97.405 | 0.767 |
| 38 | 97.666 | 0.767 |
| 39 | 97.870 | 0.602 |
| 40 | 98.015 | 0.426 |
| 41 | 98.159 | 0.426 |
| 42 | 98.308 | 0.438 |
| 43 | 98.478 | 0.502 |
| 44 | 98.652 | 0.511 |
| 45 | 98.826 | 0.511 |
| 46 | 98.999 | 0.511 |
| 47 | 99.173 | 0.511 |
| 48 | 99.347 | 0.511 |
| 49 | 99.504 | 0.465 |
| 50 | 99.601 | 0.284 |
| 51 | 99.691 | 0.266 |
| 52 | 99.782 | 0.266 |
| 53 | 99.872 | 0.266 |
| 54 | 100.000 | 0.133 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6588 | 0.6588 |
| 2 | 0.8111 | 0.1523 |
| 3 | 0.9160 | 0.1049 |
| 4 | 0.9986 | 0.0826 |
| 5 | 1.0677 | 0.0691 |
| 6 | 1.1277 | 0.0600 |
| 7 | 1.1811 | 0.0534 |
| 8 | 1.2294 | 0.0483 |
| 9 | 1.2736 | 0.0442 |
| 10 | 1.3145 | 0.0409 |
| 11 | 1.3526 | 0.0381 |
| 12 | 1.3884 | 0.0358 |
| 13 | 1.4057 | 0.0173 |
| 14 | 1.4219 | 0.0162 |
| 15 | 1.4371 | 0.0152 |
| 16 | 1.4515 | 0.0144 |

| | | |
|---|---|---|
| 17 | 1.4651 | 0.0136 |
| 18 | 1.4781 | 0.0130 |
| 19 | 1.4905 | 0.0124 |
| 20 | 1.5023 | 0.0119 |
| 21 | 1.5137 | 0.0114 |
| 22 | 1.5246 | 0.0109 |
| 23 | 1.5351 | 0.0105 |
| 24 | 1.5452 | 0.0101 |
| 25 | 1.5550 | 0.0098 |
| 26 | 1.5645 | 0.0094 |
| 27 | 1.5736 | 0.0091 |
| 28 | 1.5825 | 0.0089 |
| 29 | 1.5911 | 0.0086 |
| 30 | 1.5994 | 0.0083 |
| 31 | 1.6075 | 0.0081 |
| 32 | 1.6154 | 0.0079 |
| 33 | 1.6231 | 0.0077 |
| 34 | 1.6306 | 0.0075 |
| 35 | 1.6379 | 0.0073 |
| 36 | 1.6451 | 0.0071 |
| 37 | 1.6520 | 0.0069 |
| 38 | 1.6588 | 0.0068 |
| 39 | 1.6654 | 0.0066 |
| 40 | 1.6719 | 0.0065 |
| 41 | 1.6783 | 0.0064 |
| 42 | 1.6845 | 0.0062 |
| 43 | 1.6906 | 0.0061 |
| 44 | 1.6966 | 0.0060 |
| 45 | 1.7024 | 0.0059 |
| 46 | 1.7082 | 0.0058 |
| 47 | 1.7138 | 0.0057 |
| 48 | 1.7194 | 0.0056 |
| 49 | 1.7248 | 0.0055 |
| 50 | 1.7302 | 0.0054 |
| 51 | 1.7355 | 0.0053 |
| 52 | 1.7407 | 0.0052 |
| 53 | 1.7458 | 0.0051 |
| 54 | 1.7508 | 0.0050 |
| 55 | 1.7557 | 0.0049 |
| 56 | 1.7606 | 0.0049 |
| 57 | 1.7654 | 0.0048 |
| 58 | 1.7701 | 0.0047 |
| 59 | 1.7747 | 0.0047 |
| 60 | 1.7793 | 0.0046 |
| 61 | 1.7839 | 0.0045 |
| 62 | 1.7883 | 0.0045 |
| 63 | 1.7927 | 0.0044 |
| 64 | 1.7971 | 0.0043 |
| 65 | 1.8013 | 0.0043 |
| 66 | 1.8056 | 0.0042 |
| 67 | 1.8097 | 0.0042 |
| 68 | 1.8139 | 0.0041 |
| 69 | 1.8179 | 0.0041 |
| 70 | 1.8220 | 0.0040 |
| 71 | 1.8259 | 0.0040 |
| 72 | 1.8299 | 0.0039 |
| 73 | 1.8363 | 0.0064 |
| 74 | 1.8426 | 0.0063 |
| 75 | 1.8489 | 0.0063 |

| | | |
|---|---|---|
| 76 | 1.8551 | 0.0062 |
| 77 | 1.8613 | 0.0062 |
| 78 | 1.8673 | 0.0061 |
| 79 | 1.8734 | 0.0060 |
| 80 | 1.8794 | 0.0060 |
| 81 | 1.8853 | 0.0059 |
| 82 | 1.8912 | 0.0059 |
| 83 | 1.8970 | 0.0058 |
| 84 | 1.9027 | 0.0058 |
| 85 | 1.9085 | 0.0057 |
| 86 | 1.9141 | 0.0057 |
| 87 | 1.9197 | 0.0056 |
| 88 | 1.9253 | 0.0056 |
| 89 | 1.9308 | 0.0055 |
| 90 | 1.9363 | 0.0055 |
| 91 | 1.9417 | 0.0054 |
| 92 | 1.9471 | 0.0054 |
| 93 | 1.9524 | 0.0053 |
| 94 | 1.9577 | 0.0053 |
| 95 | 1.9630 | 0.0053 |
| 96 | 1.9682 | 0.0052 |
| 97 | 1.9734 | 0.0052 |
| 98 | 1.9785 | 0.0051 |
| 99 | 1.9836 | 0.0051 |
| 100 | 1.9887 | 0.0051 |
| 101 | 1.9937 | 0.0050 |
| 102 | 1.9987 | 0.0050 |
| 103 | 2.0036 | 0.0049 |
| 104 | 2.0085 | 0.0049 |
| 105 | 2.0134 | 0.0049 |
| 106 | 2.0183 | 0.0048 |
| 107 | 2.0231 | 0.0048 |
| 108 | 2.0278 | 0.0048 |
| 109 | 2.0326 | 0.0047 |
| 110 | 2.0373 | 0.0047 |
| 111 | 2.0420 | 0.0047 |
| 112 | 2.0466 | 0.0046 |
| 113 | 2.0512 | 0.0046 |
| 114 | 2.0558 | 0.0046 |
| 115 | 2.0604 | 0.0046 |
| 116 | 2.0649 | 0.0045 |
| 117 | 2.0694 | 0.0045 |
| 118 | 2.0739 | 0.0045 |
| 119 | 2.0783 | 0.0044 |
| 120 | 2.0827 | 0.0044 |
| 121 | 2.0871 | 0.0044 |
| 122 | 2.0914 | 0.0044 |
| 123 | 2.0958 | 0.0043 |
| 124 | 2.1001 | 0.0043 |
| 125 | 2.1044 | 0.0043 |
| 126 | 2.1086 | 0.0043 |
| 127 | 2.1128 | 0.0042 |
| 128 | 2.1170 | 0.0042 |
| 129 | 2.1212 | 0.0042 |
| 130 | 2.1254 | 0.0042 |
| 131 | 2.1295 | 0.0041 |
| 132 | 2.1336 | 0.0041 |
| 133 | 2.1377 | 0.0041 |
| 134 | 2.1418 | 0.0041 |

| | | |
|---|---|---|
| 135 | 2.1458 | 0.0040 |
| 136 | 2.1498 | 0.0040 |
| 137 | 2.1538 | 0.0040 |
| 138 | 2.1578 | 0.0040 |
| 139 | 2.1617 | 0.0040 |
| 140 | 2.1657 | 0.0039 |
| 141 | 2.1696 | 0.0039 |
| 142 | 2.1735 | 0.0039 |
| 143 | 2.1773 | 0.0039 |
| 144 | 2.1812 | 0.0038 |
| 145 | 2.1850 | 0.0038 |
| 146 | 2.1888 | 0.0038 |
| 147 | 2.1926 | 0.0038 |
| 148 | 2.1964 | 0.0038 |
| 149 | 2.2001 | 0.0038 |
| 150 | 2.2038 | 0.0037 |
| 151 | 2.2076 | 0.0037 |
| 152 | 2.2113 | 0.0037 |
| 153 | 2.2149 | 0.0037 |
| 154 | 2.2186 | 0.0037 |
| 155 | 2.2222 | 0.0036 |
| 156 | 2.2259 | 0.0036 |
| 157 | 2.2295 | 0.0036 |
| 158 | 2.2330 | 0.0036 |
| 159 | 2.2366 | 0.0036 |
| 160 | 2.2402 | 0.0036 |
| 161 | 2.2437 | 0.0035 |
| 162 | 2.2472 | 0.0035 |
| 163 | 2.2507 | 0.0035 |
| 164 | 2.2542 | 0.0035 |
| 165 | 2.2577 | 0.0035 |
| 166 | 2.2612 | 0.0035 |
| 167 | 2.2646 | 0.0034 |
| 168 | 2.2680 | 0.0034 |
| 169 | 2.2715 | 0.0034 |
| 170 | 2.2749 | 0.0034 |
| 171 | 2.2782 | 0.0034 |
| 172 | 2.2816 | 0.0034 |
| 173 | 2.2850 | 0.0034 |
| 174 | 2.2883 | 0.0033 |
| 175 | 2.2916 | 0.0033 |
| 176 | 2.2949 | 0.0033 |
| 177 | 2.2982 | 0.0033 |
| 178 | 2.3015 | 0.0033 |
| 179 | 2.3048 | 0.0033 |
| 180 | 2.3080 | 0.0033 |
| 181 | 2.3113 | 0.0032 |
| 182 | 2.3145 | 0.0032 |
| 183 | 2.3177 | 0.0032 |
| 184 | 2.3209 | 0.0032 |
| 185 | 2.3241 | 0.0032 |
| 186 | 2.3273 | 0.0032 |
| 187 | 2.3305 | 0.0032 |
| 188 | 2.3336 | 0.0032 |
| 189 | 2.3367 | 0.0031 |
| 190 | 2.3399 | 0.0031 |
| 191 | 2.3430 | 0.0031 |
| 192 | 2.3461 | 0.0031 |
| 193 | 2.3492 | 0.0031 |

| | | |
|---|---|---|
| 194 | 2.3523 | 0.0031 |
| 195 | 2.3553 | 0.0031 |
| 196 | 2.3584 | 0.0031 |
| 197 | 2.3614 | 0.0030 |
| 198 | 2.3645 | 0.0030 |
| 199 | 2.3675 | 0.0030 |
| 200 | 2.3705 | 0.0030 |
| 201 | 2.3735 | 0.0030 |
| 202 | 2.3765 | 0.0030 |
| 203 | 2.3794 | 0.0030 |
| 204 | 2.3824 | 0.0030 |
| 205 | 2.3854 | 0.0030 |
| 206 | 2.3883 | 0.0029 |
| 207 | 2.3912 | 0.0029 |
| 208 | 2.3942 | 0.0029 |
| 209 | 2.3971 | 0.0029 |
| 210 | 2.4000 | 0.0029 |
| 211 | 2.4029 | 0.0029 |
| 212 | 2.4057 | 0.0029 |
| 213 | 2.4086 | 0.0029 |
| 214 | 2.4115 | 0.0029 |
| 215 | 2.4143 | 0.0029 |
| 216 | 2.4172 | 0.0028 |
| 217 | 2.4200 | 0.0028 |
| 218 | 2.4228 | 0.0028 |
| 219 | 2.4256 | 0.0028 |
| 220 | 2.4284 | 0.0028 |
| 221 | 2.4312 | 0.0028 |
| 222 | 2.4340 | 0.0028 |
| 223 | 2.4368 | 0.0028 |
| 224 | 2.4395 | 0.0028 |
| 225 | 2.4423 | 0.0028 |
| 226 | 2.4450 | 0.0027 |
| 227 | 2.4478 | 0.0027 |
| 228 | 2.4505 | 0.0027 |
| 229 | 2.4532 | 0.0027 |
| 230 | 2.4559 | 0.0027 |
| 231 | 2.4586 | 0.0027 |
| 232 | 2.4613 | 0.0027 |
| 233 | 2.4640 | 0.0027 |
| 234 | 2.4667 | 0.0027 |
| 235 | 2.4693 | 0.0027 |
| 236 | 2.4720 | 0.0027 |
| 237 | 2.4747 | 0.0026 |
| 238 | 2.4773 | 0.0026 |
| 239 | 2.4799 | 0.0026 |
| 240 | 2.4826 | 0.0026 |
| 241 | 2.4852 | 0.0026 |
| 242 | 2.4878 | 0.0026 |
| 243 | 2.4904 | 0.0026 |
| 244 | 2.4930 | 0.0026 |
| 245 | 2.4956 | 0.0026 |
| 246 | 2.4981 | 0.0026 |
| 247 | 2.5007 | 0.0026 |
| 248 | 2.5033 | 0.0026 |
| 249 | 2.5058 | 0.0026 |
| 250 | 2.5084 | 0.0025 |
| 251 | 2.5109 | 0.0025 |
| 252 | 2.5134 | 0.0025 |

| | | |
|---|---|---|
| 253 | 2.5160 | 0.0025 |
| 254 | 2.5185 | 0.0025 |
| 255 | 2.5210 | 0.0025 |
| 256 | 2.5235 | 0.0025 |
| 257 | 2.5260 | 0.0025 |
| 258 | 2.5285 | 0.0025 |
| 259 | 2.5309 | 0.0025 |
| 260 | 2.5334 | 0.0025 |
| 261 | 2.5359 | 0.0025 |
| 262 | 2.5383 | 0.0025 |
| 263 | 2.5408 | 0.0025 |
| 264 | 2.5432 | 0.0024 |
| 265 | 2.5457 | 0.0024 |
| 266 | 2.5481 | 0.0024 |
| 267 | 2.5505 | 0.0024 |
| 268 | 2.5529 | 0.0024 |
| 269 | 2.5553 | 0.0024 |
| 270 | 2.5578 | 0.0024 |
| 271 | 2.5601 | 0.0024 |
| 272 | 2.5625 | 0.0024 |
| 273 | 2.5649 | 0.0024 |
| 274 | 2.5673 | 0.0024 |
| 275 | 2.5697 | 0.0024 |
| 276 | 2.5720 | 0.0024 |
| 277 | 2.5744 | 0.0024 |
| 278 | 2.5767 | 0.0024 |
| 279 | 2.5791 | 0.0023 |
| 280 | 2.5814 | 0.0023 |
| 281 | 2.5838 | 0.0023 |
| 282 | 2.5861 | 0.0023 |
| 283 | 2.5884 | 0.0023 |
| 284 | 2.5907 | 0.0023 |
| 285 | 2.5930 | 0.0023 |
| 286 | 2.5953 | 0.0023 |
| 287 | 2.5976 | 0.0023 |
| 288 | 2.5999 | 0.0023 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0023 | 0.0005 | 0.0018 |
| 2 | 0.0023 | 0.0005 | 0.0018 |
| 3 | 0.0023 | 0.0005 | 0.0018 |
| 4 | 0.0023 | 0.0005 | 0.0018 |
| 5 | 0.0023 | 0.0005 | 0.0018 |
| 6 | 0.0023 | 0.0005 | 0.0018 |
| 7 | 0.0023 | 0.0005 | 0.0018 |
| 8 | 0.0024 | 0.0005 | 0.0018 |
| 9 | 0.0024 | 0.0005 | 0.0018 |
| 10 | 0.0024 | 0.0005 | 0.0019 |
| 11 | 0.0024 | 0.0005 | 0.0019 |
| 12 | 0.0024 | 0.0005 | 0.0019 |
| 13 | 0.0024 | 0.0005 | 0.0019 |
| 14 | 0.0024 | 0.0005 | 0.0019 |
| 15 | 0.0024 | 0.0005 | 0.0019 |
| 16 | 0.0024 | 0.0005 | 0.0019 |
| 17 | 0.0024 | 0.0005 | 0.0019 |
| 18 | 0.0025 | 0.0005 | 0.0019 |

| | | | |
|---|---|---|---|
| 19 | 0.0025 | 0.0005 | 0.0019 |
| 20 | 0.0025 | 0.0005 | 0.0019 |
| 21 | 0.0025 | 0.0005 | 0.0019 |
| 22 | 0.0025 | 0.0005 | 0.0020 |
| 23 | 0.0025 | 0.0005 | 0.0020 |
| 24 | 0.0025 | 0.0005 | 0.0020 |
| 25 | 0.0025 | 0.0006 | 0.0020 |
| 26 | 0.0025 | 0.0006 | 0.0020 |
| 27 | 0.0026 | 0.0006 | 0.0020 |
| 28 | 0.0026 | 0.0006 | 0.0020 |
| 29 | 0.0026 | 0.0006 | 0.0020 |
| 30 | 0.0026 | 0.0006 | 0.0020 |
| 31 | 0.0026 | 0.0006 | 0.0020 |
| 32 | 0.0026 | 0.0006 | 0.0020 |
| 33 | 0.0026 | 0.0006 | 0.0021 |
| 34 | 0.0026 | 0.0006 | 0.0021 |
| 35 | 0.0026 | 0.0006 | 0.0021 |
| 36 | 0.0027 | 0.0006 | 0.0021 |
| 37 | 0.0027 | 0.0006 | 0.0021 |
| 38 | 0.0027 | 0.0006 | 0.0021 |
| 39 | 0.0027 | 0.0006 | 0.0021 |
| 40 | 0.0027 | 0.0006 | 0.0021 |
| 41 | 0.0027 | 0.0006 | 0.0021 |
| 42 | 0.0027 | 0.0006 | 0.0021 |
| 43 | 0.0028 | 0.0006 | 0.0022 |
| 44 | 0.0028 | 0.0006 | 0.0022 |
| 45 | 0.0028 | 0.0006 | 0.0022 |
| 46 | 0.0028 | 0.0006 | 0.0022 |
| 47 | 0.0028 | 0.0006 | 0.0022 |
| 48 | 0.0028 | 0.0006 | 0.0022 |
| 49 | 0.0028 | 0.0006 | 0.0022 |
| 50 | 0.0029 | 0.0006 | 0.0022 |
| 51 | 0.0029 | 0.0006 | 0.0022 |
| 52 | 0.0029 | 0.0006 | 0.0023 |
| 53 | 0.0029 | 0.0006 | 0.0023 |
| 54 | 0.0029 | 0.0006 | 0.0023 |
| 55 | 0.0029 | 0.0006 | 0.0023 |
| 56 | 0.0029 | 0.0006 | 0.0023 |
| 57 | 0.0030 | 0.0006 | 0.0023 |
| 58 | 0.0030 | 0.0006 | 0.0023 |
| 59 | 0.0030 | 0.0007 | 0.0023 |
| 60 | 0.0030 | 0.0007 | 0.0024 |
| 61 | 0.0030 | 0.0007 | 0.0024 |
| 62 | 0.0030 | 0.0007 | 0.0024 |
| 63 | 0.0031 | 0.0007 | 0.0024 |
| 64 | 0.0031 | 0.0007 | 0.0024 |
| 65 | 0.0031 | 0.0007 | 0.0024 |
| 66 | 0.0031 | 0.0007 | 0.0024 |
| 67 | 0.0031 | 0.0007 | 0.0025 |
| 68 | 0.0032 | 0.0007 | 0.0025 |
| 69 | 0.0032 | 0.0007 | 0.0025 |
| 70 | 0.0032 | 0.0007 | 0.0025 |
| 71 | 0.0032 | 0.0007 | 0.0025 |
| 72 | 0.0032 | 0.0007 | 0.0025 |
| 73 | 0.0033 | 0.0007 | 0.0025 |
| 74 | 0.0033 | 0.0007 | 0.0026 |
| 75 | 0.0033 | 0.0007 | 0.0026 |
| 76 | 0.0033 | 0.0007 | 0.0026 |
| 77 | 0.0033 | 0.0007 | 0.0026 |

| | | | |
|---|---|---|---|
| 78 | 0.0034 | 0.0007 | 0.0026 |
| 79 | 0.0034 | 0.0007 | 0.0026 |
| 80 | 0.0034 | 0.0007 | 0.0027 |
| 81 | 0.0034 | 0.0007 | 0.0027 |
| 82 | 0.0034 | 0.0008 | 0.0027 |
| 83 | 0.0035 | 0.0008 | 0.0027 |
| 84 | 0.0035 | 0.0008 | 0.0027 |
| 85 | 0.0035 | 0.0008 | 0.0028 |
| 86 | 0.0035 | 0.0008 | 0.0028 |
| 87 | 0.0036 | 0.0008 | 0.0028 |
| 88 | 0.0036 | 0.0008 | 0.0028 |
| 89 | 0.0036 | 0.0008 | 0.0028 |
| 90 | 0.0036 | 0.0008 | 0.0028 |
| 91 | 0.0037 | 0.0008 | 0.0029 |
| 92 | 0.0037 | 0.0008 | 0.0029 |
| 93 | 0.0037 | 0.0008 | 0.0029 |
| 94 | 0.0038 | 0.0008 | 0.0029 |
| 95 | 0.0038 | 0.0008 | 0.0030 |
| 96 | 0.0038 | 0.0008 | 0.0030 |
| 97 | 0.0038 | 0.0008 | 0.0030 |
| 98 | 0.0039 | 0.0008 | 0.0030 |
| 99 | 0.0039 | 0.0009 | 0.0031 |
| 100 | 0.0039 | 0.0009 | 0.0031 |
| 101 | 0.0040 | 0.0009 | 0.0031 |
| 102 | 0.0040 | 0.0009 | 0.0031 |
| 103 | 0.0040 | 0.0009 | 0.0032 |
| 104 | 0.0041 | 0.0009 | 0.0032 |
| 105 | 0.0041 | 0.0009 | 0.0032 |
| 106 | 0.0041 | 0.0009 | 0.0032 |
| 107 | 0.0042 | 0.0009 | 0.0033 |
| 108 | 0.0042 | 0.0009 | 0.0033 |
| 109 | 0.0043 | 0.0009 | 0.0033 |
| 110 | 0.0043 | 0.0009 | 0.0033 |
| 111 | 0.0043 | 0.0009 | 0.0034 |
| 112 | 0.0044 | 0.0009 | 0.0034 |
| 113 | 0.0044 | 0.0010 | 0.0034 |
| 114 | 0.0044 | 0.0010 | 0.0035 |
| 115 | 0.0045 | 0.0010 | 0.0035 |
| 116 | 0.0045 | 0.0010 | 0.0035 |
| 117 | 0.0046 | 0.0010 | 0.0036 |
| 118 | 0.0046 | 0.0010 | 0.0036 |
| 119 | 0.0047 | 0.0010 | 0.0037 |
| 120 | 0.0047 | 0.0010 | 0.0037 |
| 121 | 0.0048 | 0.0010 | 0.0037 |
| 122 | 0.0048 | 0.0010 | 0.0038 |
| 123 | 0.0049 | 0.0011 | 0.0038 |
| 124 | 0.0049 | 0.0011 | 0.0038 |
| 125 | 0.0050 | 0.0011 | 0.0039 |
| 126 | 0.0050 | 0.0011 | 0.0039 |
| 127 | 0.0051 | 0.0011 | 0.0040 |
| 128 | 0.0051 | 0.0011 | 0.0040 |
| 129 | 0.0052 | 0.0011 | 0.0041 |
| 130 | 0.0053 | 0.0011 | 0.0041 |
| 131 | 0.0053 | 0.0012 | 0.0042 |
| 132 | 0.0054 | 0.0012 | 0.0042 |
| 133 | 0.0055 | 0.0012 | 0.0043 |
| 134 | 0.0055 | 0.0012 | 0.0043 |
| 135 | 0.0056 | 0.0012 | 0.0044 |
| 136 | 0.0057 | 0.0012 | 0.0044 |

| | | | |
|---|---|---|---|
| 137 | 0.0058 | 0.0013 | 0.0045 |
| 138 | 0.0058 | 0.0013 | 0.0045 |
| 139 | 0.0059 | 0.0013 | 0.0046 |
| 140 | 0.0060 | 0.0013 | 0.0047 |
| 141 | 0.0061 | 0.0013 | 0.0048 |
| 142 | 0.0062 | 0.0013 | 0.0048 |
| 143 | 0.0063 | 0.0014 | 0.0049 |
| 144 | 0.0063 | 0.0014 | 0.0050 |
| 145 | 0.0039 | 0.0009 | 0.0031 |
| 146 | 0.0040 | 0.0009 | 0.0031 |
| 147 | 0.0041 | 0.0009 | 0.0032 |
| 148 | 0.0041 | 0.0009 | 0.0032 |
| 149 | 0.0042 | 0.0009 | 0.0033 |
| 150 | 0.0043 | 0.0009 | 0.0034 |
| 151 | 0.0044 | 0.0010 | 0.0034 |
| 152 | 0.0045 | 0.0010 | 0.0035 |
| 153 | 0.0046 | 0.0010 | 0.0036 |
| 154 | 0.0047 | 0.0010 | 0.0036 |
| 155 | 0.0048 | 0.0010 | 0.0037 |
| 156 | 0.0049 | 0.0011 | 0.0038 |
| 157 | 0.0050 | 0.0011 | 0.0039 |
| 158 | 0.0051 | 0.0011 | 0.0040 |
| 159 | 0.0053 | 0.0011 | 0.0041 |
| 160 | 0.0054 | 0.0012 | 0.0042 |
| 161 | 0.0056 | 0.0012 | 0.0043 |
| 162 | 0.0057 | 0.0012 | 0.0044 |
| 163 | 0.0059 | 0.0013 | 0.0046 |
| 164 | 0.0060 | 0.0013 | 0.0047 |
| 165 | 0.0062 | 0.0014 | 0.0049 |
| 166 | 0.0064 | 0.0014 | 0.0050 |
| 167 | 0.0066 | 0.0014 | 0.0052 |
| 168 | 0.0068 | 0.0015 | 0.0053 |
| 169 | 0.0071 | 0.0016 | 0.0056 |
| 170 | 0.0073 | 0.0016 | 0.0057 |
| 171 | 0.0077 | 0.0017 | 0.0060 |
| 172 | 0.0079 | 0.0017 | 0.0062 |
| 173 | 0.0083 | 0.0018 | 0.0065 |
| 174 | 0.0086 | 0.0019 | 0.0067 |
| 175 | 0.0091 | 0.0020 | 0.0071 |
| 176 | 0.0094 | 0.0021 | 0.0074 |
| 177 | 0.0101 | 0.0022 | 0.0079 |
| 178 | 0.0105 | 0.0023 | 0.0082 |
| 179 | 0.0114 | 0.0025 | 0.0089 |
| 180 | 0.0119 | 0.0026 | 0.0093 |
| 181 | 0.0130 | 0.0028 | 0.0102 |
| 182 | 0.0136 | 0.0030 | 0.0107 |
| 183 | 0.0152 | 0.0033 | 0.0119 |
| 184 | 0.0162 | 0.0035 | 0.0126 |
| 185 | 0.0358 | 0.0078 | 0.0280 |
| 186 | 0.0381 | 0.0083 | 0.0298 |
| 187 | 0.0442 | 0.0086 | 0.0356 |
| 188 | 0.0483 | 0.0086 | 0.0397 |
| 189 | 0.0600 | 0.0086 | 0.0514 |
| 190 | 0.0691 | 0.0086 | 0.0605 |
| 191 | 0.1049 | 0.0086 | 0.0963 |
| 192 | 0.1523 | 0.0086 | 0.1437 |
| 193 | 0.6588 | 0.0086 | 0.6502 |
| 194 | 0.0826 | 0.0086 | 0.0739 |
| 195 | 0.0534 | 0.0086 | 0.0448 |

| | | | |
|---|---|---|---|
| 196 | 0.0409 | 0.0086 | 0.0323 |
| 197 | 0.0173 | 0.0038 | 0.0135 |
| 198 | 0.0144 | 0.0031 | 0.0113 |
| 199 | 0.0124 | 0.0027 | 0.0097 |
| 200 | 0.0109 | 0.0024 | 0.0085 |
| 201 | 0.0098 | 0.0021 | 0.0076 |
| 202 | 0.0089 | 0.0019 | 0.0069 |
| 203 | 0.0081 | 0.0018 | 0.0063 |
| 204 | 0.0075 | 0.0016 | 0.0059 |
| 205 | 0.0069 | 0.0015 | 0.0054 |
| 206 | 0.0065 | 0.0014 | 0.0051 |
| 207 | 0.0061 | 0.0013 | 0.0048 |
| 208 | 0.0058 | 0.0013 | 0.0045 |
| 209 | 0.0055 | 0.0012 | 0.0043 |
| 210 | 0.0052 | 0.0011 | 0.0041 |
| 211 | 0.0049 | 0.0011 | 0.0039 |
| 212 | 0.0047 | 0.0010 | 0.0037 |
| 213 | 0.0045 | 0.0010 | 0.0035 |
| 214 | 0.0043 | 0.0009 | 0.0034 |
| 215 | 0.0042 | 0.0009 | 0.0033 |
| 216 | 0.0040 | 0.0009 | 0.0031 |
| 217 | 0.0064 | 0.0014 | 0.0050 |
| 218 | 0.0062 | 0.0014 | 0.0049 |
| 219 | 0.0060 | 0.0013 | 0.0047 |
| 220 | 0.0059 | 0.0013 | 0.0046 |
| 221 | 0.0057 | 0.0012 | 0.0045 |
| 222 | 0.0056 | 0.0012 | 0.0044 |
| 223 | 0.0054 | 0.0012 | 0.0042 |
| 224 | 0.0053 | 0.0012 | 0.0041 |
| 225 | 0.0052 | 0.0011 | 0.0040 |
| 226 | 0.0051 | 0.0011 | 0.0040 |
| 227 | 0.0049 | 0.0011 | 0.0039 |
| 228 | 0.0048 | 0.0011 | 0.0038 |
| 229 | 0.0047 | 0.0010 | 0.0037 |
| 230 | 0.0046 | 0.0010 | 0.0036 |
| 231 | 0.0046 | 0.0010 | 0.0036 |
| 232 | 0.0045 | 0.0010 | 0.0035 |
| 233 | 0.0044 | 0.0010 | 0.0034 |
| 234 | 0.0043 | 0.0009 | 0.0034 |
| 235 | 0.0042 | 0.0009 | 0.0033 |
| 236 | 0.0042 | 0.0009 | 0.0032 |
| 237 | 0.0041 | 0.0009 | 0.0032 |
| 238 | 0.0040 | 0.0009 | 0.0031 |
| 239 | 0.0040 | 0.0009 | 0.0031 |
| 240 | 0.0039 | 0.0008 | 0.0030 |
| 241 | 0.0038 | 0.0008 | 0.0030 |
| 242 | 0.0038 | 0.0008 | 0.0029 |
| 243 | 0.0037 | 0.0008 | 0.0029 |
| 244 | 0.0037 | 0.0008 | 0.0029 |
| 245 | 0.0036 | 0.0008 | 0.0028 |
| 246 | 0.0036 | 0.0008 | 0.0028 |
| 247 | 0.0035 | 0.0008 | 0.0027 |
| 248 | 0.0035 | 0.0008 | 0.0027 |
| 249 | 0.0034 | 0.0007 | 0.0027 |
| 250 | 0.0034 | 0.0007 | 0.0026 |
| 251 | 0.0033 | 0.0007 | 0.0026 |
| 252 | 0.0033 | 0.0007 | 0.0026 |
| 253 | 0.0032 | 0.0007 | 0.0025 |
| 254 | 0.0032 | 0.0007 | 0.0025 |

| | | | |
|---|---|---|---|
| 255 | 0.0032 | 0.0007 | 0.0025 |
| 256 | 0.0031 | 0.0007 | 0.0024 |
| 257 | 0.0031 | 0.0007 | 0.0024 |
| 258 | 0.0031 | 0.0007 | 0.0024 |
| 259 | 0.0030 | 0.0007 | 0.0024 |
| 260 | 0.0030 | 0.0007 | 0.0023 |
| 261 | 0.0030 | 0.0006 | 0.0023 |
| 262 | 0.0029 | 0.0006 | 0.0023 |
| 263 | 0.0029 | 0.0006 | 0.0023 |
| 264 | 0.0029 | 0.0006 | 0.0022 |
| 265 | 0.0028 | 0.0006 | 0.0022 |
| 266 | 0.0028 | 0.0006 | 0.0022 |
| 267 | 0.0028 | 0.0006 | 0.0022 |
| 268 | 0.0027 | 0.0006 | 0.0021 |
| 269 | 0.0027 | 0.0006 | 0.0021 |
| 270 | 0.0027 | 0.0006 | 0.0021 |
| 271 | 0.0027 | 0.0006 | 0.0021 |
| 272 | 0.0026 | 0.0006 | 0.0021 |
| 273 | 0.0026 | 0.0006 | 0.0020 |
| 274 | 0.0026 | 0.0006 | 0.0020 |
| 275 | 0.0026 | 0.0006 | 0.0020 |
| 276 | 0.0025 | 0.0006 | 0.0020 |
| 277 | 0.0025 | 0.0006 | 0.0020 |
| 278 | 0.0025 | 0.0005 | 0.0020 |
| 279 | 0.0025 | 0.0005 | 0.0019 |
| 280 | 0.0025 | 0.0005 | 0.0019 |
| 281 | 0.0024 | 0.0005 | 0.0019 |
| 282 | 0.0024 | 0.0005 | 0.0019 |
| 283 | 0.0024 | 0.0005 | 0.0019 |
| 284 | 0.0024 | 0.0005 | 0.0019 |
| 285 | 0.0024 | 0.0005 | 0.0018 |
| 286 | 0.0023 | 0.0005 | 0.0018 |
| 287 | 0.0023 | 0.0005 | 0.0018 |
| 288 | 0.0023 | 0.0005 | 0.0018 |

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Total soil rain loss = 0.37(In)
Total effective rainfall = 2.23(In)
Peak flow rate in flood hydrograph = 40.15(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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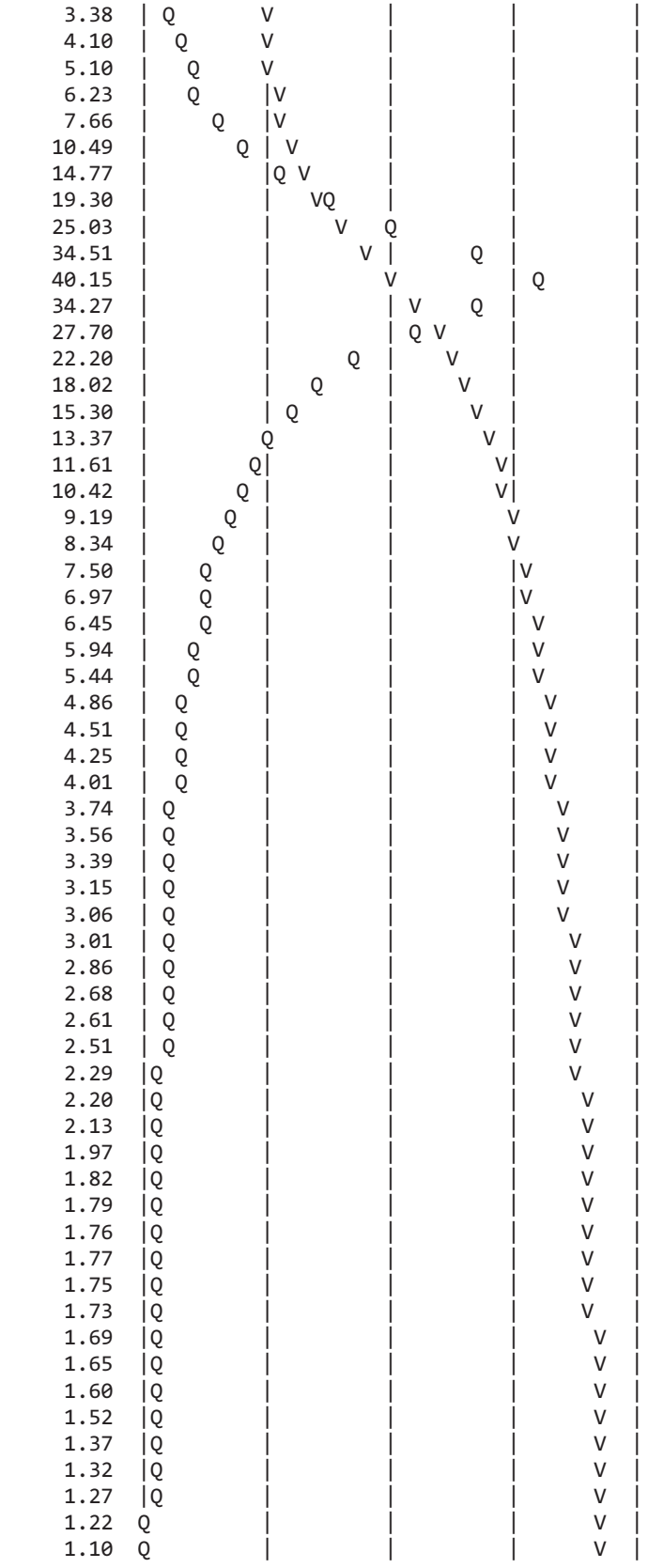
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 12.5 | 25.0 | 37.5 | 50.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+15 | 0.0003 | 0.03 | Q | \| | \| | \| | \| |
| 0+20 | 0.0008 | 0.06 | Q | \| | \| | \| | \| |
| 0+25 | 0.0015 | 0.11 | Q | \| | \| | \| | \| |
| 0+30 | 0.0028 | 0.19 | Q | \| | \| | \| | \| |
| 0+35 | 0.0045 | 0.25 | Q | \| | \| | \| | \| |
| 0+40 | 0.0065 | 0.29 | Q | \| | \| | \| | \| |
| 0+45 | 0.0087 | 0.32 | Q | \| | \| | \| | \| |
| 0+50 | 0.0111 | 0.35 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+55 | 0.0137 | 0.37 | Q | | | | |
| 1+ 0 | 0.0163 | 0.39 | Q | | | | |
| 1+ 5 | 0.0191 | 0.41 | Q | | | | |
| 1+10 | 0.0220 | 0.42 | Q | | | | |
| 1+15 | 0.0250 | 0.43 | Q | | | | |
| 1+20 | 0.0281 | 0.44 | Q | | | | |
| 1+25 | 0.0312 | 0.45 | Q | | | | |
| 1+30 | 0.0344 | 0.46 | Q | | | | |
| 1+35 | 0.0377 | 0.47 | Q | | | | |
| 1+40 | 0.0410 | 0.48 | Q | | | | |
| 1+45 | 0.0443 | 0.49 | Q | | | | |
| 1+50 | 0.0478 | 0.50 | Q | | | | |
| 1+55 | 0.0512 | 0.50 | Q | | | | |
| 2+ 0 | 0.0548 | 0.51 | Q | | | | |
| 2+ 5 | 0.0583 | 0.52 | Q | | | | |
| 2+10 | 0.0619 | 0.52 | Q | | | | |
| 2+15 | 0.0656 | 0.53 | Q | | | | |
| 2+20 | 0.0692 | 0.53 | Q | | | | |
| 2+25 | 0.0729 | 0.54 | Q | | | | |
| 2+30 | 0.0767 | 0.54 | Q | | | | |
| 2+35 | 0.0805 | 0.55 | Q | | | | |
| 2+40 | 0.0843 | 0.55 | Q | | | | |
| 2+45 | 0.0881 | 0.56 | Q | | | | |
| 2+50 | 0.0920 | 0.56 | Q | | | | |
| 2+55 | 0.0959 | 0.57 | Q | | | | |
| 3+ 0 | 0.0998 | 0.57 | Q | | | | |
| 3+ 5 | 0.1038 | 0.57 | Q | | | | |
| 3+10 | 0.1078 | 0.58 | Q | | | | |
| 3+15 | 0.1118 | 0.58 | Q | | | | |
| 3+20 | 0.1158 | 0.59 | QV | | | | |
| 3+25 | 0.1199 | 0.59 | QV | | | | |
| 3+30 | 0.1240 | 0.59 | QV | | | | |
| 3+35 | 0.1281 | 0.60 | QV | | | | |
| 3+40 | 0.1322 | 0.60 | QV | | | | |
| 3+45 | 0.1364 | 0.60 | QV | | | | |
| 3+50 | 0.1406 | 0.61 | QV | | | | |
| 3+55 | 0.1448 | 0.61 | QV | | | | |
| 4+ 0 | 0.1490 | 0.62 | QV | | | | |
| 4+ 5 | 0.1533 | 0.62 | QV | | | | |
| 4+10 | 0.1576 | 0.62 | QV | | | | |
| 4+15 | 0.1619 | 0.63 | QV | | | | |
| 4+20 | 0.1662 | 0.63 | QV | | | | |
| 4+25 | 0.1706 | 0.63 | QV | | | | |
| 4+30 | 0.1750 | 0.64 | QV | | | | |
| 4+35 | 0.1794 | 0.64 | QV | | | | |
| 4+40 | 0.1838 | 0.64 | QV | | | | |
| 4+45 | 0.1883 | 0.65 | QV | | | | |
| 4+50 | 0.1928 | 0.65 | QV | | | | |
| 4+55 | 0.1973 | 0.65 | QV | | | | |
| 5+ 0 | 0.2018 | 0.66 | QV | | | | |
| 5+ 5 | 0.2064 | 0.66 | QV | | | | |
| 5+10 | 0.2109 | 0.66 | QV | | | | |
| 5+15 | 0.2155 | 0.67 | QV | | | | |
| 5+20 | 0.2202 | 0.67 | QV | | | | |
| 5+25 | 0.2248 | 0.68 | QV | | | | |
| 5+30 | 0.2295 | 0.68 | Q V | | | | |
| 5+35 | 0.2342 | 0.68 | Q V | | | | |
| 5+40 | 0.2389 | 0.69 | Q V | | | | |
| 5+45 | 0.2437 | 0.69 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+50 | 0.2485 | 0.69 | Q V | \| | \| | \| | \| |
| 5+55 | 0.2533 | 0.70 | Q V | \| | \| | \| | \| |
| 6+ 0 | 0.2581 | 0.70 | Q V | \| | \| | \| | \| |
| 6+ 5 | 0.2630 | 0.71 | Q V | \| | \| | \| | \| |
| 6+10 | 0.2679 | 0.71 | Q V | \| | \| | \| | \| |
| 6+15 | 0.2728 | 0.71 | Q V | \| | \| | \| | \| |
| 6+20 | 0.2777 | 0.72 | Q V | \| | \| | \| | \| |
| 6+25 | 0.2827 | 0.72 | Q V | \| | \| | \| | \| |
| 6+30 | 0.2877 | 0.73 | Q V | \| | \| | \| | \| |
| 6+35 | 0.2928 | 0.73 | Q V | \| | \| | \| | \| |
| 6+40 | 0.2978 | 0.74 | Q V | \| | \| | \| | \| |
| 6+45 | 0.3029 | 0.74 | Q V | \| | \| | \| | \| |
| 6+50 | 0.3081 | 0.75 | Q V | \| | \| | \| | \| |
| 6+55 | 0.3132 | 0.75 | Q V | \| | \| | \| | \| |
| 7+ 0 | 0.3184 | 0.75 | Q V | \| | \| | \| | \| |
| 7+ 5 | 0.3237 | 0.76 | Q V | \| | \| | \| | \| |
| 7+10 | 0.3289 | 0.76 | Q V | \| | \| | \| | \| |
| 7+15 | 0.3342 | 0.77 | Q V | \| | \| | \| | \| |
| 7+20 | 0.3395 | 0.77 | Q V | \| | \| | \| | \| |
| 7+25 | 0.3449 | 0.78 | Q  V | \| | \| | \| | \| |
| 7+30 | 0.3503 | 0.78 | Q  V | \| | \| | \| | \| |
| 7+35 | 0.3558 | 0.79 | Q  V | \| | \| | \| | \| |
| 7+40 | 0.3612 | 0.80 | Q  V | \| | \| | \| | \| |
| 7+45 | 0.3668 | 0.80 | Q  V | \| | \| | \| | \| |
| 7+50 | 0.3723 | 0.81 | Q  V | \| | \| | \| | \| |
| 7+55 | 0.3779 | 0.81 | Q  V | \| | \| | \| | \| |
| 8+ 0 | 0.3835 | 0.82 | Q  V | \| | \| | \| | \| |
| 8+ 5 | 0.3892 | 0.82 | Q  V | \| | \| | \| | \| |
| 8+10 | 0.3949 | 0.83 | Q  V | \| | \| | \| | \| |
| 8+15 | 0.4007 | 0.84 | Q  V | \| | \| | \| | \| |
| 8+20 | 0.4065 | 0.84 | Q  V | \| | \| | \| | \| |
| 8+25 | 0.4123 | 0.85 | Q  V | \| | \| | \| | \| |
| 8+30 | 0.4182 | 0.85 | Q  V | \| | \| | \| | \| |
| 8+35 | 0.4241 | 0.86 | Q  V | \| | \| | \| | \| |
| 8+40 | 0.4301 | 0.87 | Q  V | \| | \| | \| | \| |
| 8+45 | 0.4361 | 0.87 | Q  V | \| | \| | \| | \| |
| 8+50 | 0.4422 | 0.88 | Q  V | \| | \| | \| | \| |
| 8+55 | 0.4483 | 0.89 | Q  V | \| | \| | \| | \| |
| 9+ 0 | 0.4544 | 0.89 | Q   V | \| | \| | \| | \| |
| 9+ 5 | 0.4606 | 0.90 | Q   V | \| | \| | \| | \| |
| 9+10 | 0.4669 | 0.91 | Q   V | \| | \| | \| | \| |
| 9+15 | 0.4732 | 0.92 | Q   V | \| | \| | \| | \| |
| 9+20 | 0.4796 | 0.92 | Q   V | \| | \| | \| | \| |
| 9+25 | 0.4860 | 0.93 | Q   V | \| | \| | \| | \| |
| 9+30 | 0.4925 | 0.94 | Q   V | \| | \| | \| | \| |
| 9+35 | 0.4990 | 0.95 | Q   V | \| | \| | \| | \| |
| 9+40 | 0.5056 | 0.96 | Q   V | \| | \| | \| | \| |
| 9+45 | 0.5122 | 0.96 | Q   V | \| | \| | \| | \| |
| 9+50 | 0.5189 | 0.97 | Q   V | \| | \| | \| | \| |
| 9+55 | 0.5257 | 0.98 | Q   V | \| | \| | \| | \| |
| 10+ 0 | 0.5325 | 0.99 | Q   V | \| | \| | \| | \| |
| 10+ 5 | 0.5394 | 1.00 | Q   V | \| | \| | \| | \| |
| 10+10 | 0.5463 | 1.01 | Q   V | \| | \| | \| | \| |
| 10+15 | 0.5533 | 1.02 | Q   V | \| | \| | \| | \| |
| 10+20 | 0.5604 | 1.03 | Q   V | \| | \| | \| | \| |
| 10+25 | 0.5676 | 1.04 | Q    V | \| | \| | \| | \| |
| 10+30 | 0.5748 | 1.05 | Q    V | \| | \| | \| | \| |
| 10+35 | 0.5821 | 1.06 | Q    V | \| | \| | \| | \| |
| 10+40 | 0.5895 | 1.07 | Q    V | \| | \| | \| | \| |

```
10+45       0.5969      1.08  Q    V    |          |          |          |
10+50       0.6044      1.09  Q    V    |          |          |          |
10+55       0.6120      1.10  Q    V    |          |          |          |
11+ 0       0.6197      1.12  Q    V    |          |          |          |
11+ 5       0.6275      1.13  Q    V    |          |          |          |
11+10       0.6353      1.14  Q    V    |          |          |          |
11+15       0.6433      1.15  Q    V    |          |          |          |
11+20       0.6513      1.17  Q    V    |          |          |          |
11+25       0.6594      1.18  Q    V    |          |          |          |
11+30       0.6676      1.19  Q    V    |          |          |          |
11+35       0.6760      1.21  Q    V    |          |          |          |
11+40       0.6844      1.22  Q     V   |          |          |          |
11+45       0.6929      1.24  Q     V   |          |          |          |
11+50       0.7015      1.25  |Q    V   |          |          |          |
11+55       0.7103      1.27  |Q    V   |          |          |          |
12+ 0       0.7191      1.29  |Q    V   |          |          |          |
12+ 5       0.7281      1.30  |Q    V   |          |          |          |
12+10       0.7370      1.30  |Q    V   |          |          |          |
12+15       0.7460      1.30  |Q    V   |          |          |          |
12+20       0.7549      1.29  |Q    V   |          |          |          |
12+25       0.7635      1.25  Q     V   |          |          |          |
12+30       0.7717      1.19  Q     V   |          |          |          |
12+35       0.7795      1.14  Q     V   |          |          |          |
12+40       0.7872      1.11  Q     V   |          |          |          |
12+45       0.7947      1.09  Q      V  |          |          |          |
12+50       0.8021      1.08  Q      V  |          |          |          |
12+55       0.8096      1.08  Q      V  |          |          |          |
13+ 0       0.8170      1.08  Q      V  |          |          |          |
13+ 5       0.8245      1.08  Q      V  |          |          |          |
13+10       0.8320      1.09  Q      V  |          |          |          |
13+15       0.8395      1.10  Q      V  |          |          |          |
13+20       0.8471      1.11  Q      V  |          |          |          |
13+25       0.8549      1.12  Q      V  |          |          |          |
13+30       0.8627      1.14  Q      V  |          |          |          |
13+35       0.8706      1.15  Q      V  |          |          |          |
13+40       0.8787      1.17  Q      V  |          |          |          |
13+45       0.8868      1.19  Q      V  |          |          |          |
13+50       0.8952      1.21  Q      V  |          |          |          |
13+55       0.9037      1.24  Q      V  |          |          |          |
14+ 0       0.9124      1.26  |Q      V |          |          |          |
14+ 5       0.9213      1.29  |Q      V |          |          |          |
14+10       0.9304      1.32  |Q      V |          |          |          |
14+15       0.9398      1.36  |Q      V |          |          |          |
14+20       0.9494      1.39  |Q      V |          |          |          |
14+25       0.9593      1.43  |Q      V |          |          |          |
14+30       0.9694      1.48  |Q      V |          |          |          |
14+35       0.9800      1.53  |Q      V |          |          |          |
14+40       0.9908      1.58  |Q      V |          |          |          |
14+45       1.0021      1.63  |Q      V |          |          |          |
14+50       1.0137      1.69  |Q      V |          |          |          |
14+55       1.0258      1.76  |Q       V|          |          |          |
15+ 0       1.0385      1.83  |Q       V|          |          |          |
15+ 5       1.0516      1.91  |Q       V|          |          |          |
15+10       1.0654      2.00  |Q       V|          |          |          |
15+15       1.0800      2.11  |Q       V|          |          |          |
15+20       1.0953      2.22  |Q       V|          |          |          |
15+25       1.1116      2.38  |Q       V|          |          |          |
15+30       1.1296      2.61  | Q      V|          |          |          |
15+35       1.1499      2.93  | Q       V          |          |          |
```

| | | | |
|---|---|---|---|
| 15+40 | 1.1732 | 3.38 |  |
| 15+45 | 1.2014 | 4.10 | |
| 15+50 | 1.2366 | 5.10 | |
| 15+55 | 1.2795 | 6.23 | |
| 16+ 0 | 1.3322 | 7.66 | |
| 16+ 5 | 1.4044 | 10.49 | |
| 16+10 | 1.5062 | 14.77 | |
| 16+15 | 1.6391 | 19.30 | |
| 16+20 | 1.8115 | 25.03 | |
| 16+25 | 2.0492 | 34.51 | |
| 16+30 | 2.3257 | 40.15 | |
| 16+35 | 2.5617 | 34.27 | |
| 16+40 | 2.7525 | 27.70 | |
| 16+45 | 2.9054 | 22.20 | |
| 16+50 | 3.0295 | 18.02 | |
| 16+55 | 3.1349 | 15.30 | |
| 17+ 0 | 3.2270 | 13.37 | |
| 17+ 5 | 3.3069 | 11.61 | |
| 17+10 | 3.3787 | 10.42 | |
| 17+15 | 3.4420 | 9.19 | |
| 17+20 | 3.4994 | 8.34 | |
| 17+25 | 3.5511 | 7.50 | |
| 17+30 | 3.5991 | 6.97 | |
| 17+35 | 3.6434 | 6.45 | |
| 17+40 | 3.6844 | 5.94 | |
| 17+45 | 3.7218 | 5.44 | |
| 17+50 | 3.7553 | 4.86 | |
| 17+55 | 3.7863 | 4.51 | |
| 18+ 0 | 3.8156 | 4.25 | |
| 18+ 5 | 3.8432 | 4.01 | |
| 18+10 | 3.8690 | 3.74 | |
| 18+15 | 3.8935 | 3.56 | |
| 18+20 | 3.9168 | 3.39 | |
| 18+25 | 3.9385 | 3.15 | |
| 18+30 | 3.9596 | 3.06 | |
| 18+35 | 3.9803 | 3.01 | |
| 18+40 | 4.0000 | 2.86 | |
| 18+45 | 4.0185 | 2.68 | |
| 18+50 | 4.0365 | 2.61 | |
| 18+55 | 4.0538 | 2.51 | |
| 19+ 0 | 4.0696 | 2.29 | |
| 19+ 5 | 4.0847 | 2.20 | |
| 19+10 | 4.0993 | 2.13 | |
| 19+15 | 4.1129 | 1.97 | |
| 19+20 | 4.1254 | 1.82 | |
| 19+25 | 4.1377 | 1.79 | |
| 19+30 | 4.1499 | 1.76 | |
| 19+35 | 4.1621 | 1.77 | |
| 19+40 | 4.1742 | 1.75 | |
| 19+45 | 4.1861 | 1.73 | |
| 19+50 | 4.1977 | 1.69 | |
| 19+55 | 4.2091 | 1.65 | |
| 20+ 0 | 4.2202 | 1.60 | |
| 20+ 5 | 4.2306 | 1.52 | |
| 20+10 | 4.2401 | 1.37 | |
| 20+15 | 4.2492 | 1.32 | |
| 20+20 | 4.2579 | 1.27 | |
| 20+25 | 4.2663 | 1.22 | |
| 20+30 | 4.2739 | 1.10 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20+35 | 4.2807 | 0.99 | Q | \| | \| | \| | V \| |
| 20+40 | 4.2873 | 0.96 | Q | \| | \| | \| | V \| |
| 20+45 | 4.2938 | 0.94 | Q | \| | \| | \| | V \| |
| 20+50 | 4.3001 | 0.92 | Q | \| | \| | \| | V \| |
| 20+55 | 4.3063 | 0.90 | Q | \| | \| | \| | V \| |
| 21+ 0 | 4.3124 | 0.89 | Q | \| | \| | \| | V \| |
| 21+ 5 | 4.3184 | 0.87 | Q | \| | \| | \| | V \| |
| 21+10 | 4.3243 | 0.86 | Q | \| | \| | \| | V \| |
| 21+15 | 4.3302 | 0.85 | Q | \| | \| | \| | V \| |
| 21+20 | 4.3359 | 0.83 | Q | \| | \| | \| | V \| |
| 21+25 | 4.3416 | 0.82 | Q | \| | \| | \| | V \| |
| 21+30 | 4.3472 | 0.81 | Q | \| | \| | \| | V \| |
| 21+35 | 4.3527 | 0.80 | Q | \| | \| | \| | V \| |
| 21+40 | 4.3581 | 0.79 | Q | \| | \| | \| | V \| |
| 21+45 | 4.3635 | 0.78 | Q | \| | \| | \| | V \| |
| 21+50 | 4.3688 | 0.77 | Q | \| | \| | \| | V \| |
| 21+55 | 4.3740 | 0.76 | Q | \| | \| | \| | V \| |
| 22+ 0 | 4.3792 | 0.75 | Q | \| | \| | \| | V \| |
| 22+ 5 | 4.3843 | 0.74 | Q | \| | \| | \| | V \| |
| 22+10 | 4.3893 | 0.73 | Q | \| | \| | \| | V \| |
| 22+15 | 4.3943 | 0.73 | Q | \| | \| | \| | V \| |
| 22+20 | 4.3993 | 0.72 | Q | \| | \| | \| | V \| |
| 22+25 | 4.4042 | 0.71 | Q | \| | \| | \| | V \| |
| 22+30 | 4.4090 | 0.70 | Q | \| | \| | \| | V \| |
| 22+35 | 4.4137 | 0.69 | Q | \| | \| | \| | V \| |
| 22+40 | 4.4185 | 0.68 | Q | \| | \| | \| | V\| |
| 22+45 | 4.4231 | 0.68 | Q | \| | \| | \| | V\| |
| 22+50 | 4.4277 | 0.67 | Q | \| | \| | \| | V\| |
| 22+55 | 4.4323 | 0.66 | Q | \| | \| | \| | V\| |
| 23+ 0 | 4.4368 | 0.65 | Q | \| | \| | \| | V\| |
| 23+ 5 | 4.4413 | 0.65 | Q | \| | \| | \| | V\| |
| 23+10 | 4.4457 | 0.64 | Q | \| | \| | \| | V\| |
| 23+15 | 4.4501 | 0.63 | Q | \| | \| | \| | V\| |
| 23+20 | 4.4544 | 0.63 | Q | \| | \| | \| | V\| |
| 23+25 | 4.4587 | 0.62 | Q | \| | \| | \| | V\| |
| 23+30 | 4.4629 | 0.62 | Q | \| | \| | \| | V\| |
| 23+35 | 4.4671 | 0.61 | Q | \| | \| | \| | V\| |
| 23+40 | 4.4713 | 0.60 | Q | \| | \| | \| | V\| |
| 23+45 | 4.4754 | 0.60 | Q | \| | \| | \| | V\| |
| 23+50 | 4.4795 | 0.59 | Q | \| | \| | \| | V\| |
| 23+55 | 4.4835 | 0.59 | Q | \| | \| | \| | V\| |
| 24+ 0 | 4.4875 | 0.58 | Q | \| | \| | \| | V\| |
| 24+ 5 | 4.4915 | 0.57 | Q | \| | \| | \| | V\| |
| 24+10 | 4.4953 | 0.56 | Q | \| | \| | \| | V\| |
| 24+15 | 4.4990 | 0.53 | Q | \| | \| | \| | V\| |
| 24+20 | 4.5025 | 0.50 | Q | \| | \| | \| | V\| |
| 24+25 | 4.5055 | 0.45 | Q | \| | \| | \| | V\| |
| 24+30 | 4.5081 | 0.37 | Q | \| | \| | \| | V\| |
| 24+35 | 4.5102 | 0.31 | Q | \| | \| | \| | V\| |
| 24+40 | 4.5120 | 0.26 | Q | \| | \| | \| | V\| |
| 24+45 | 4.5136 | 0.23 | Q | \| | \| | \| | V\| |
| 24+50 | 4.5149 | 0.20 | Q | \| | \| | \| | V\| |
| 24+55 | 4.5162 | 0.18 | Q | \| | \| | \| | V\| |
| 25+ 0 | 4.5173 | 0.16 | Q | \| | \| | \| | V\| |
| 25+ 5 | 4.5183 | 0.14 | Q | \| | \| | \| | V\| |
| 25+10 | 4.5192 | 0.13 | Q | \| | \| | \| | V\| |
| 25+15 | 4.5200 | 0.12 | Q | \| | \| | \| | V\| |
| 25+20 | 4.5207 | 0.11 | Q | \| | \| | \| | V\| |
| 25+25 | 4.5214 | 0.10 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+30 | 4.5220 | 0.09 | Q | \| | \| | \| | V\| |
| 25+35 | 4.5226 | 0.08 | Q | \| | \| | \| | V\| |
| 25+40 | 4.5231 | 0.07 | Q | \| | \| | \| | V\| |
| 25+45 | 4.5235 | 0.07 | Q | \| | \| | \| | V\| |
| 25+50 | 4.5239 | 0.06 | Q | \| | \| | \| | V\| |
| 25+55 | 4.5243 | 0.06 | Q | \| | \| | \| | V\| |
| 26+ 0 | 4.5247 | 0.05 | Q | \| | \| | \| | V\| |
| 26+ 5 | 4.5250 | 0.05 | Q | \| | \| | \| | V\| |
| 26+10 | 4.5253 | 0.04 | Q | \| | \| | \| | V\| |
| 26+15 | 4.5256 | 0.04 | Q | \| | \| | \| | V\| |
| 26+20 | 4.5258 | 0.03 | Q | \| | \| | \| | V\| |
| 26+25 | 4.5260 | 0.03 | Q | \| | \| | \| | V\| |
| 26+30 | 4.5262 | 0.03 | Q | \| | \| | \| | V\| |
| 26+35 | 4.5264 | 0.03 | Q | \| | \| | \| | V\| |
| 26+40 | 4.5266 | 0.02 | Q | \| | \| | \| | V\| |
| 26+45 | 4.5267 | 0.02 | Q | \| | \| | \| | V\| |
| 26+50 | 4.5268 | 0.02 | Q | \| | \| | \| | V\| |
| 26+55 | 4.5270 | 0.02 | Q | \| | \| | \| | V\| |
| 27+ 0 | 4.5271 | 0.02 | Q | \| | \| | \| | V\| |
| 27+ 5 | 4.5272 | 0.01 | Q | \| | \| | \| | V\| |
| 27+10 | 4.5273 | 0.01 | Q | \| | \| | \| | V\| |
| 27+15 | 4.5273 | 0.01 | Q | \| | \| | \| | V\| |
| 27+20 | 4.5274 | 0.01 | Q | \| | \| | \| | V\| |
| 27+25 | 4.5275 | 0.01 | Q | \| | \| | \| | V\| |
| 27+30 | 4.5275 | 0.01 | Q | \| | \| | \| | V\| |
| 27+35 | 4.5276 | 0.01 | Q | \| | \| | \| | V\| |
| 27+40 | 4.5276 | 0.01 | Q | \| | \| | \| | V\| |
| 27+45 | 4.5277 | 0.01 | Q | \| | \| | \| | V\| |
| 27+50 | 4.5277 | 0.00 | Q | \| | \| | \| | V\| |
| 27+55 | 4.5277 | 0.00 | Q | \| | \| | \| | V\| |
| 28+ 0 | 4.5278 | 0.00 | Q | \| | \| | \| | V\| |
| 28+ 5 | 4.5278 | 0.00 | Q | \| | \| | \| | V\| |
| 28+10 | 4.5278 | 0.00 | Q | \| | \| | \| | V\| |
| 28+15 | 4.5278 | 0.00 | Q | \| | \| | \| | V\| |
| 28+20 | 4.5278 | 0.00 | Q | \| | \| | \| | V\| |
| 28+25 | 4.5278 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 33
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 30.86 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 30.86 | 6 | 1.83 |
| Rainfall data for year 100 | | |
| 30.86 | 24 | 2.60 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 81.1 | 94.7 | 30.86 | 1.000 | 0.105 | 1.000 | 0.105 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.105

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 30.86 | 1.000 | 81.1 | 94.7 | 0.56 | 0.780 |

Area-averaged catchment yield fraction, Y = 0.780
Area-averaged low loss fraction, Yb = 0.220
User entry of time of concentration = 0.800 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 30.86(Ac.)
Catchment Lag time = 0.640 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 13.0208
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.105(In/Hr)
Average low loss rate fraction (Yb) = 0.220 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.645(In)
Specified peak 6-hour rainfall = 1.830(In)
Specified peak 24-hour rainfall = 2.600(In)

Rainfall depth area reduction factors:
Using a total area of 30.86(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.659(In)
30-minute factor = 0.999 Adjusted rainfall = 1.127(In)
1-hour factor = 0.999 Adjusted rainfall = 1.388(In)
3-hour factor = 1.000 Adjusted rainfall = 1.645(In)
6-hour factor = 1.000 Adjusted rainfall = 1.830(In)
24-hour factor = 1.000 Adjusted rainfall = 2.600(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 373.21 (CFS)) | |
| 1 | 0.574 | 2.141 |
| 2 | 2.285 | 6.385 |
| 3 | 5.081 | 10.437 |
| 4 | 9.063 | 14.861 |
| 5 | 16.100 | 26.262 |
| 6 | 27.770 | 43.555 |
| 7 | 39.438 | 43.544 |
| 8 | 48.420 | 33.523 |
| 9 | 55.437 | 26.190 |
| 10 | 60.725 | 19.734 |
| 11 | 64.896 | 15.566 |
| 12 | 68.395 | 13.061 |
| 13 | 71.492 | 11.558 |
| 14 | 74.107 | 9.760 |

| | | |
|---|---|---|
| 15 | 76.410 | 8.596 |
| 16 | 78.510 | 7.837 |
| 17 | 80.259 | 6.528 |
| 18 | 81.897 | 6.112 |
| 19 | 83.316 | 5.294 |
| 20 | 84.672 | 5.062 |
| 21 | 85.925 | 4.677 |
| 22 | 87.094 | 4.364 |
| 23 | 88.137 | 3.893 |
| 24 | 89.059 | 3.440 |
| 25 | 89.841 | 2.916 |
| 26 | 90.594 | 2.811 |
| 27 | 91.322 | 2.719 |
| 28 | 91.987 | 2.483 |
| 29 | 92.611 | 2.329 |
| 30 | 93.201 | 2.200 |
| 31 | 93.769 | 2.119 |
| 32 | 94.245 | 1.778 |
| 33 | 94.688 | 1.652 |
| 34 | 95.131 | 1.652 |
| 35 | 95.563 | 1.615 |
| 36 | 95.918 | 1.324 |
| 37 | 96.257 | 1.263 |
| 38 | 96.595 | 1.263 |
| 39 | 96.915 | 1.194 |
| 40 | 97.158 | 0.906 |
| 41 | 97.392 | 0.875 |
| 42 | 97.627 | 0.875 |
| 43 | 97.831 | 0.762 |
| 44 | 97.964 | 0.497 |
| 45 | 98.094 | 0.486 |
| 46 | 98.224 | 0.486 |
| 47 | 98.366 | 0.527 |
| 48 | 98.522 | 0.583 |
| 49 | 98.678 | 0.583 |
| 50 | 98.834 | 0.583 |
| 51 | 98.991 | 0.583 |
| 52 | 99.147 | 0.583 |
| 53 | 99.303 | 0.583 |
| 54 | 99.457 | 0.575 |
| 55 | 99.560 | 0.384 |
| 56 | 99.642 | 0.304 |
| 57 | 99.723 | 0.304 |
| 58 | 99.804 | 0.304 |
| 59 | 99.886 | 0.304 |
| 60 | 100.000 | 0.152 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6586 | 0.6586 |
| 2 | 0.8109 | 0.1522 |
| 3 | 0.9157 | 0.1049 |
| 4 | 0.9983 | 0.0825 |
| 5 | 1.0674 | 0.0691 |
| 6 | 1.1274 | 0.0600 |
| 7 | 1.1808 | 0.0534 |
| 8 | 1.2290 | 0.0483 |
| 9 | 1.2732 | 0.0442 |
| 10 | 1.3141 | 0.0409 |

| | | |
|---|---|---|
| 11 | 1.3522 | 0.0381 |
| 12 | 1.3880 | 0.0358 |
| 13 | 1.4053 | 0.0173 |
| 14 | 1.4215 | 0.0162 |
| 15 | 1.4367 | 0.0152 |
| 16 | 1.4511 | 0.0144 |
| 17 | 1.4648 | 0.0137 |
| 18 | 1.4778 | 0.0130 |
| 19 | 1.4902 | 0.0124 |
| 20 | 1.5021 | 0.0119 |
| 21 | 1.5135 | 0.0114 |
| 22 | 1.5244 | 0.0109 |
| 23 | 1.5349 | 0.0105 |
| 24 | 1.5450 | 0.0101 |
| 25 | 1.5548 | 0.0098 |
| 26 | 1.5643 | 0.0095 |
| 27 | 1.5734 | 0.0092 |
| 28 | 1.5823 | 0.0089 |
| 29 | 1.5909 | 0.0086 |
| 30 | 1.5993 | 0.0084 |
| 31 | 1.6074 | 0.0081 |
| 32 | 1.6153 | 0.0079 |
| 33 | 1.6230 | 0.0077 |
| 34 | 1.6305 | 0.0075 |
| 35 | 1.6379 | 0.0073 |
| 36 | 1.6450 | 0.0072 |
| 37 | 1.6519 | 0.0069 |
| 38 | 1.6587 | 0.0068 |
| 39 | 1.6654 | 0.0066 |
| 40 | 1.6718 | 0.0065 |
| 41 | 1.6782 | 0.0064 |
| 42 | 1.6844 | 0.0062 |
| 43 | 1.6905 | 0.0061 |
| 44 | 1.6965 | 0.0060 |
| 45 | 1.7024 | 0.0059 |
| 46 | 1.7081 | 0.0058 |
| 47 | 1.7138 | 0.0057 |
| 48 | 1.7193 | 0.0056 |
| 49 | 1.7248 | 0.0055 |
| 50 | 1.7301 | 0.0054 |
| 51 | 1.7354 | 0.0053 |
| 52 | 1.7406 | 0.0052 |
| 53 | 1.7457 | 0.0051 |
| 54 | 1.7507 | 0.0050 |
| 55 | 1.7557 | 0.0049 |
| 56 | 1.7605 | 0.0049 |
| 57 | 1.7653 | 0.0048 |
| 58 | 1.7700 | 0.0047 |
| 59 | 1.7747 | 0.0047 |
| 60 | 1.7793 | 0.0046 |
| 61 | 1.7838 | 0.0045 |
| 62 | 1.7883 | 0.0045 |
| 63 | 1.7927 | 0.0044 |
| 64 | 1.7970 | 0.0043 |
| 65 | 1.8013 | 0.0043 |
| 66 | 1.8055 | 0.0042 |
| 67 | 1.8097 | 0.0042 |
| 68 | 1.8138 | 0.0041 |
| 69 | 1.8179 | 0.0041 |

| | | |
|---|---|---|
| 70 | 1.8219 | 0.0040 |
| 71 | 1.8259 | 0.0040 |
| 72 | 1.8298 | 0.0039 |
| 73 | 1.8362 | 0.0064 |
| 74 | 1.8426 | 0.0063 |
| 75 | 1.8488 | 0.0063 |
| 76 | 1.8551 | 0.0062 |
| 77 | 1.8612 | 0.0062 |
| 78 | 1.8673 | 0.0061 |
| 79 | 1.8733 | 0.0060 |
| 80 | 1.8793 | 0.0060 |
| 81 | 1.8853 | 0.0059 |
| 82 | 1.8911 | 0.0059 |
| 83 | 1.8969 | 0.0058 |
| 84 | 1.9027 | 0.0058 |
| 85 | 1.9084 | 0.0057 |
| 86 | 1.9141 | 0.0057 |
| 87 | 1.9197 | 0.0056 |
| 88 | 1.9253 | 0.0056 |
| 89 | 1.9308 | 0.0055 |
| 90 | 1.9363 | 0.0055 |
| 91 | 1.9417 | 0.0054 |
| 92 | 1.9471 | 0.0054 |
| 93 | 1.9524 | 0.0053 |
| 94 | 1.9577 | 0.0053 |
| 95 | 1.9630 | 0.0053 |
| 96 | 1.9682 | 0.0052 |
| 97 | 1.9734 | 0.0052 |
| 98 | 1.9785 | 0.0051 |
| 99 | 1.9836 | 0.0051 |
| 100 | 1.9886 | 0.0051 |
| 101 | 1.9937 | 0.0050 |
| 102 | 1.9987 | 0.0050 |
| 103 | 2.0036 | 0.0049 |
| 104 | 2.0085 | 0.0049 |
| 105 | 2.0134 | 0.0049 |
| 106 | 2.0182 | 0.0048 |
| 107 | 2.0230 | 0.0048 |
| 108 | 2.0278 | 0.0048 |
| 109 | 2.0325 | 0.0047 |
| 110 | 2.0373 | 0.0047 |
| 111 | 2.0419 | 0.0047 |
| 112 | 2.0466 | 0.0046 |
| 113 | 2.0512 | 0.0046 |
| 114 | 2.0558 | 0.0046 |
| 115 | 2.0603 | 0.0046 |
| 116 | 2.0649 | 0.0045 |
| 117 | 2.0694 | 0.0045 |
| 118 | 2.0738 | 0.0045 |
| 119 | 2.0783 | 0.0044 |
| 120 | 2.0827 | 0.0044 |
| 121 | 2.0871 | 0.0044 |
| 122 | 2.0914 | 0.0044 |
| 123 | 2.0957 | 0.0043 |
| 124 | 2.1000 | 0.0043 |
| 125 | 2.1043 | 0.0043 |
| 126 | 2.1086 | 0.0043 |
| 127 | 2.1128 | 0.0042 |
| 128 | 2.1170 | 0.0042 |

| | | |
|---|---|---|
| 129 | 2.1212 | 0.0042 |
| 130 | 2.1253 | 0.0042 |
| 131 | 2.1295 | 0.0041 |
| 132 | 2.1336 | 0.0041 |
| 133 | 2.1377 | 0.0041 |
| 134 | 2.1417 | 0.0041 |
| 135 | 2.1458 | 0.0040 |
| 136 | 2.1498 | 0.0040 |
| 137 | 2.1538 | 0.0040 |
| 138 | 2.1577 | 0.0040 |
| 139 | 2.1617 | 0.0040 |
| 140 | 2.1656 | 0.0039 |
| 141 | 2.1695 | 0.0039 |
| 142 | 2.1734 | 0.0039 |
| 143 | 2.1773 | 0.0039 |
| 144 | 2.1811 | 0.0038 |
| 145 | 2.1850 | 0.0038 |
| 146 | 2.1888 | 0.0038 |
| 147 | 2.1926 | 0.0038 |
| 148 | 2.1963 | 0.0038 |
| 149 | 2.2001 | 0.0038 |
| 150 | 2.2038 | 0.0037 |
| 151 | 2.2075 | 0.0037 |
| 152 | 2.2112 | 0.0037 |
| 153 | 2.2149 | 0.0037 |
| 154 | 2.2186 | 0.0037 |
| 155 | 2.2222 | 0.0036 |
| 156 | 2.2258 | 0.0036 |
| 157 | 2.2294 | 0.0036 |
| 158 | 2.2330 | 0.0036 |
| 159 | 2.2366 | 0.0036 |
| 160 | 2.2401 | 0.0036 |
| 161 | 2.2437 | 0.0035 |
| 162 | 2.2472 | 0.0035 |
| 163 | 2.2507 | 0.0035 |
| 164 | 2.2542 | 0.0035 |
| 165 | 2.2577 | 0.0035 |
| 166 | 2.2611 | 0.0035 |
| 167 | 2.2646 | 0.0034 |
| 168 | 2.2680 | 0.0034 |
| 169 | 2.2714 | 0.0034 |
| 170 | 2.2748 | 0.0034 |
| 171 | 2.2782 | 0.0034 |
| 172 | 2.2816 | 0.0034 |
| 173 | 2.2849 | 0.0034 |
| 174 | 2.2883 | 0.0033 |
| 175 | 2.2916 | 0.0033 |
| 176 | 2.2949 | 0.0033 |
| 177 | 2.2982 | 0.0033 |
| 178 | 2.3015 | 0.0033 |
| 179 | 2.3048 | 0.0033 |
| 180 | 2.3080 | 0.0033 |
| 181 | 2.3113 | 0.0032 |
| 182 | 2.3145 | 0.0032 |
| 183 | 2.3177 | 0.0032 |
| 184 | 2.3209 | 0.0032 |
| 185 | 2.3241 | 0.0032 |
| 186 | 2.3273 | 0.0032 |
| 187 | 2.3304 | 0.0032 |

| | | |
|---|---|---|
| 188 | 2.3336 | 0.0032 |
| 189 | 2.3367 | 0.0031 |
| 190 | 2.3398 | 0.0031 |
| 191 | 2.3430 | 0.0031 |
| 192 | 2.3461 | 0.0031 |
| 193 | 2.3492 | 0.0031 |
| 194 | 2.3522 | 0.0031 |
| 195 | 2.3553 | 0.0031 |
| 196 | 2.3584 | 0.0031 |
| 197 | 2.3614 | 0.0030 |
| 198 | 2.3644 | 0.0030 |
| 199 | 2.3674 | 0.0030 |
| 200 | 2.3705 | 0.0030 |
| 201 | 2.3735 | 0.0030 |
| 202 | 2.3764 | 0.0030 |
| 203 | 2.3794 | 0.0030 |
| 204 | 2.3824 | 0.0030 |
| 205 | 2.3853 | 0.0030 |
| 206 | 2.3883 | 0.0029 |
| 207 | 2.3912 | 0.0029 |
| 208 | 2.3941 | 0.0029 |
| 209 | 2.3970 | 0.0029 |
| 210 | 2.3999 | 0.0029 |
| 211 | 2.4028 | 0.0029 |
| 212 | 2.4057 | 0.0029 |
| 213 | 2.4086 | 0.0029 |
| 214 | 2.4114 | 0.0029 |
| 215 | 2.4143 | 0.0029 |
| 216 | 2.4171 | 0.0028 |
| 217 | 2.4200 | 0.0028 |
| 218 | 2.4228 | 0.0028 |
| 219 | 2.4256 | 0.0028 |
| 220 | 2.4284 | 0.0028 |
| 221 | 2.4312 | 0.0028 |
| 222 | 2.4340 | 0.0028 |
| 223 | 2.4367 | 0.0028 |
| 224 | 2.4395 | 0.0028 |
| 225 | 2.4423 | 0.0028 |
| 226 | 2.4450 | 0.0027 |
| 227 | 2.4477 | 0.0027 |
| 228 | 2.4505 | 0.0027 |
| 229 | 2.4532 | 0.0027 |
| 230 | 2.4559 | 0.0027 |
| 231 | 2.4586 | 0.0027 |
| 232 | 2.4613 | 0.0027 |
| 233 | 2.4640 | 0.0027 |
| 234 | 2.4667 | 0.0027 |
| 235 | 2.4693 | 0.0027 |
| 236 | 2.4720 | 0.0027 |
| 237 | 2.4746 | 0.0026 |
| 238 | 2.4773 | 0.0026 |
| 239 | 2.4799 | 0.0026 |
| 240 | 2.4825 | 0.0026 |
| 241 | 2.4851 | 0.0026 |
| 242 | 2.4878 | 0.0026 |
| 243 | 2.4904 | 0.0026 |
| 244 | 2.4929 | 0.0026 |
| 245 | 2.4955 | 0.0026 |
| 246 | 2.4981 | 0.0026 |

| | | |
|---|---|---|
| 247 | 2.5007 | 0.0026 |
| 248 | 2.5032 | 0.0026 |
| 249 | 2.5058 | 0.0026 |
| 250 | 2.5083 | 0.0025 |
| 251 | 2.5109 | 0.0025 |
| 252 | 2.5134 | 0.0025 |
| 253 | 2.5159 | 0.0025 |
| 254 | 2.5184 | 0.0025 |
| 255 | 2.5210 | 0.0025 |
| 256 | 2.5235 | 0.0025 |
| 257 | 2.5260 | 0.0025 |
| 258 | 2.5284 | 0.0025 |
| 259 | 2.5309 | 0.0025 |
| 260 | 2.5334 | 0.0025 |
| 261 | 2.5359 | 0.0025 |
| 262 | 2.5383 | 0.0025 |
| 263 | 2.5408 | 0.0025 |
| 264 | 2.5432 | 0.0024 |
| 265 | 2.5456 | 0.0024 |
| 266 | 2.5481 | 0.0024 |
| 267 | 2.5505 | 0.0024 |
| 268 | 2.5529 | 0.0024 |
| 269 | 2.5553 | 0.0024 |
| 270 | 2.5577 | 0.0024 |
| 271 | 2.5601 | 0.0024 |
| 272 | 2.5625 | 0.0024 |
| 273 | 2.5649 | 0.0024 |
| 274 | 2.5673 | 0.0024 |
| 275 | 2.5696 | 0.0024 |
| 276 | 2.5720 | 0.0024 |
| 277 | 2.5744 | 0.0024 |
| 278 | 2.5767 | 0.0024 |
| 279 | 2.5791 | 0.0023 |
| 280 | 2.5814 | 0.0023 |
| 281 | 2.5837 | 0.0023 |
| 282 | 2.5861 | 0.0023 |
| 283 | 2.5884 | 0.0023 |
| 284 | 2.5907 | 0.0023 |
| 285 | 2.5930 | 0.0023 |
| 286 | 2.5953 | 0.0023 |
| 287 | 2.5976 | 0.0023 |
| 288 | 2.5999 | 0.0023 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0023 | 0.0005 | 0.0018 |
| 2 | 0.0023 | 0.0005 | 0.0018 |
| 3 | 0.0023 | 0.0005 | 0.0018 |
| 4 | 0.0023 | 0.0005 | 0.0018 |
| 5 | 0.0023 | 0.0005 | 0.0018 |
| 6 | 0.0023 | 0.0005 | 0.0018 |
| 7 | 0.0023 | 0.0005 | 0.0018 |
| 8 | 0.0024 | 0.0005 | 0.0018 |
| 9 | 0.0024 | 0.0005 | 0.0018 |
| 10 | 0.0024 | 0.0005 | 0.0018 |
| 11 | 0.0024 | 0.0005 | 0.0019 |
| 12 | 0.0024 | 0.0005 | 0.0019 |

| | | | |
|---|---|---|---|
| 13 | 0.0024 | 0.0005 | 0.0019 |
| 14 | 0.0024 | 0.0005 | 0.0019 |
| 15 | 0.0024 | 0.0005 | 0.0019 |
| 16 | 0.0024 | 0.0005 | 0.0019 |
| 17 | 0.0024 | 0.0005 | 0.0019 |
| 18 | 0.0025 | 0.0005 | 0.0019 |
| 19 | 0.0025 | 0.0005 | 0.0019 |
| 20 | 0.0025 | 0.0005 | 0.0019 |
| 21 | 0.0025 | 0.0005 | 0.0019 |
| 22 | 0.0025 | 0.0005 | 0.0019 |
| 23 | 0.0025 | 0.0006 | 0.0020 |
| 24 | 0.0025 | 0.0006 | 0.0020 |
| 25 | 0.0025 | 0.0006 | 0.0020 |
| 26 | 0.0025 | 0.0006 | 0.0020 |
| 27 | 0.0026 | 0.0006 | 0.0020 |
| 28 | 0.0026 | 0.0006 | 0.0020 |
| 29 | 0.0026 | 0.0006 | 0.0020 |
| 30 | 0.0026 | 0.0006 | 0.0020 |
| 31 | 0.0026 | 0.0006 | 0.0020 |
| 32 | 0.0026 | 0.0006 | 0.0020 |
| 33 | 0.0026 | 0.0006 | 0.0020 |
| 34 | 0.0026 | 0.0006 | 0.0021 |
| 35 | 0.0026 | 0.0006 | 0.0021 |
| 36 | 0.0027 | 0.0006 | 0.0021 |
| 37 | 0.0027 | 0.0006 | 0.0021 |
| 38 | 0.0027 | 0.0006 | 0.0021 |
| 39 | 0.0027 | 0.0006 | 0.0021 |
| 40 | 0.0027 | 0.0006 | 0.0021 |
| 41 | 0.0027 | 0.0006 | 0.0021 |
| 42 | 0.0027 | 0.0006 | 0.0021 |
| 43 | 0.0028 | 0.0006 | 0.0021 |
| 44 | 0.0028 | 0.0006 | 0.0022 |
| 45 | 0.0028 | 0.0006 | 0.0022 |
| 46 | 0.0028 | 0.0006 | 0.0022 |
| 47 | 0.0028 | 0.0006 | 0.0022 |
| 48 | 0.0028 | 0.0006 | 0.0022 |
| 49 | 0.0028 | 0.0006 | 0.0022 |
| 50 | 0.0029 | 0.0006 | 0.0022 |
| 51 | 0.0029 | 0.0006 | 0.0022 |
| 52 | 0.0029 | 0.0006 | 0.0022 |
| 53 | 0.0029 | 0.0006 | 0.0023 |
| 54 | 0.0029 | 0.0006 | 0.0023 |
| 55 | 0.0029 | 0.0006 | 0.0023 |
| 56 | 0.0029 | 0.0006 | 0.0023 |
| 57 | 0.0030 | 0.0007 | 0.0023 |
| 58 | 0.0030 | 0.0007 | 0.0023 |
| 59 | 0.0030 | 0.0007 | 0.0023 |
| 60 | 0.0030 | 0.0007 | 0.0023 |
| 61 | 0.0030 | 0.0007 | 0.0024 |
| 62 | 0.0030 | 0.0007 | 0.0024 |
| 63 | 0.0031 | 0.0007 | 0.0024 |
| 64 | 0.0031 | 0.0007 | 0.0024 |
| 65 | 0.0031 | 0.0007 | 0.0024 |
| 66 | 0.0031 | 0.0007 | 0.0024 |
| 67 | 0.0031 | 0.0007 | 0.0024 |
| 68 | 0.0032 | 0.0007 | 0.0025 |
| 69 | 0.0032 | 0.0007 | 0.0025 |
| 70 | 0.0032 | 0.0007 | 0.0025 |
| 71 | 0.0032 | 0.0007 | 0.0025 |

| | | | |
|---|---|---|---|
| 72 | 0.0032 | 0.0007 | 0.0025 |
| 73 | 0.0033 | 0.0007 | 0.0025 |
| 74 | 0.0033 | 0.0007 | 0.0025 |
| 75 | 0.0033 | 0.0007 | 0.0026 |
| 76 | 0.0033 | 0.0007 | 0.0026 |
| 77 | 0.0033 | 0.0007 | 0.0026 |
| 78 | 0.0034 | 0.0007 | 0.0026 |
| 79 | 0.0034 | 0.0007 | 0.0026 |
| 80 | 0.0034 | 0.0007 | 0.0026 |
| 81 | 0.0034 | 0.0008 | 0.0027 |
| 82 | 0.0034 | 0.0008 | 0.0027 |
| 83 | 0.0035 | 0.0008 | 0.0027 |
| 84 | 0.0035 | 0.0008 | 0.0027 |
| 85 | 0.0035 | 0.0008 | 0.0027 |
| 86 | 0.0035 | 0.0008 | 0.0028 |
| 87 | 0.0036 | 0.0008 | 0.0028 |
| 88 | 0.0036 | 0.0008 | 0.0028 |
| 89 | 0.0036 | 0.0008 | 0.0028 |
| 90 | 0.0036 | 0.0008 | 0.0028 |
| 91 | 0.0037 | 0.0008 | 0.0029 |
| 92 | 0.0037 | 0.0008 | 0.0029 |
| 93 | 0.0037 | 0.0008 | 0.0029 |
| 94 | 0.0038 | 0.0008 | 0.0029 |
| 95 | 0.0038 | 0.0008 | 0.0030 |
| 96 | 0.0038 | 0.0008 | 0.0030 |
| 97 | 0.0038 | 0.0008 | 0.0030 |
| 98 | 0.0039 | 0.0009 | 0.0030 |
| 99 | 0.0039 | 0.0009 | 0.0030 |
| 100 | 0.0039 | 0.0009 | 0.0031 |
| 101 | 0.0040 | 0.0009 | 0.0031 |
| 102 | 0.0040 | 0.0009 | 0.0031 |
| 103 | 0.0040 | 0.0009 | 0.0031 |
| 104 | 0.0041 | 0.0009 | 0.0032 |
| 105 | 0.0041 | 0.0009 | 0.0032 |
| 106 | 0.0041 | 0.0009 | 0.0032 |
| 107 | 0.0042 | 0.0009 | 0.0033 |
| 108 | 0.0042 | 0.0009 | 0.0033 |
| 109 | 0.0043 | 0.0009 | 0.0033 |
| 110 | 0.0043 | 0.0009 | 0.0033 |
| 111 | 0.0043 | 0.0010 | 0.0034 |
| 112 | 0.0044 | 0.0010 | 0.0034 |
| 113 | 0.0044 | 0.0010 | 0.0034 |
| 114 | 0.0044 | 0.0010 | 0.0035 |
| 115 | 0.0045 | 0.0010 | 0.0035 |
| 116 | 0.0045 | 0.0010 | 0.0035 |
| 117 | 0.0046 | 0.0010 | 0.0036 |
| 118 | 0.0046 | 0.0010 | 0.0036 |
| 119 | 0.0047 | 0.0010 | 0.0036 |
| 120 | 0.0047 | 0.0010 | 0.0037 |
| 121 | 0.0048 | 0.0011 | 0.0037 |
| 122 | 0.0048 | 0.0011 | 0.0037 |
| 123 | 0.0049 | 0.0011 | 0.0038 |
| 124 | 0.0049 | 0.0011 | 0.0038 |
| 125 | 0.0050 | 0.0011 | 0.0039 |
| 126 | 0.0050 | 0.0011 | 0.0039 |
| 127 | 0.0051 | 0.0011 | 0.0040 |
| 128 | 0.0051 | 0.0011 | 0.0040 |
| 129 | 0.0052 | 0.0011 | 0.0041 |
| 130 | 0.0053 | 0.0012 | 0.0041 |

| | | | |
|---|---|---|---|
| 131 | 0.0053 | 0.0012 | 0.0042 |
| 132 | 0.0054 | 0.0012 | 0.0042 |
| 133 | 0.0055 | 0.0012 | 0.0043 |
| 134 | 0.0055 | 0.0012 | 0.0043 |
| 135 | 0.0056 | 0.0012 | 0.0044 |
| 136 | 0.0057 | 0.0012 | 0.0044 |
| 137 | 0.0058 | 0.0013 | 0.0045 |
| 138 | 0.0058 | 0.0013 | 0.0045 |
| 139 | 0.0059 | 0.0013 | 0.0046 |
| 140 | 0.0060 | 0.0013 | 0.0047 |
| 141 | 0.0061 | 0.0013 | 0.0048 |
| 142 | 0.0062 | 0.0014 | 0.0048 |
| 143 | 0.0063 | 0.0014 | 0.0049 |
| 144 | 0.0063 | 0.0014 | 0.0049 |
| 145 | 0.0039 | 0.0009 | 0.0031 |
| 146 | 0.0040 | 0.0009 | 0.0031 |
| 147 | 0.0041 | 0.0009 | 0.0032 |
| 148 | 0.0041 | 0.0009 | 0.0032 |
| 149 | 0.0042 | 0.0009 | 0.0033 |
| 150 | 0.0043 | 0.0009 | 0.0033 |
| 151 | 0.0044 | 0.0010 | 0.0034 |
| 152 | 0.0045 | 0.0010 | 0.0035 |
| 153 | 0.0046 | 0.0010 | 0.0036 |
| 154 | 0.0047 | 0.0010 | 0.0036 |
| 155 | 0.0048 | 0.0011 | 0.0037 |
| 156 | 0.0049 | 0.0011 | 0.0038 |
| 157 | 0.0050 | 0.0011 | 0.0039 |
| 158 | 0.0051 | 0.0011 | 0.0040 |
| 159 | 0.0053 | 0.0012 | 0.0041 |
| 160 | 0.0054 | 0.0012 | 0.0042 |
| 161 | 0.0056 | 0.0012 | 0.0043 |
| 162 | 0.0057 | 0.0012 | 0.0044 |
| 163 | 0.0059 | 0.0013 | 0.0046 |
| 164 | 0.0060 | 0.0013 | 0.0047 |
| 165 | 0.0062 | 0.0014 | 0.0049 |
| 166 | 0.0064 | 0.0014 | 0.0050 |
| 167 | 0.0066 | 0.0015 | 0.0052 |
| 168 | 0.0068 | 0.0015 | 0.0053 |
| 169 | 0.0072 | 0.0016 | 0.0056 |
| 170 | 0.0073 | 0.0016 | 0.0057 |
| 171 | 0.0077 | 0.0017 | 0.0060 |
| 172 | 0.0079 | 0.0017 | 0.0062 |
| 173 | 0.0084 | 0.0018 | 0.0065 |
| 174 | 0.0086 | 0.0019 | 0.0067 |
| 175 | 0.0092 | 0.0020 | 0.0071 |
| 176 | 0.0095 | 0.0021 | 0.0074 |
| 177 | 0.0101 | 0.0022 | 0.0079 |
| 178 | 0.0105 | 0.0023 | 0.0082 |
| 179 | 0.0114 | 0.0025 | 0.0089 |
| 180 | 0.0119 | 0.0026 | 0.0093 |
| 181 | 0.0130 | 0.0029 | 0.0101 |
| 182 | 0.0137 | 0.0030 | 0.0107 |
| 183 | 0.0152 | 0.0034 | 0.0119 |
| 184 | 0.0162 | 0.0036 | 0.0126 |
| 185 | 0.0358 | 0.0079 | 0.0279 |
| 186 | 0.0381 | 0.0084 | 0.0297 |
| 187 | 0.0442 | 0.0087 | 0.0355 |
| 188 | 0.0483 | 0.0087 | 0.0395 |
| 189 | 0.0600 | 0.0087 | 0.0513 |

| | | | |
|---|---|---|---|
| 190 | 0.0691 | 0.0087 | 0.0604 |
| 191 | 0.1049 | 0.0087 | 0.0962 |
| 192 | 0.1522 | 0.0087 | 0.1435 |
| 193 | 0.6586 | 0.0087 | 0.6499 |
| 194 | 0.0825 | 0.0087 | 0.0738 |
| 195 | 0.0534 | 0.0087 | 0.0446 |
| 196 | 0.0409 | 0.0087 | 0.0322 |
| 197 | 0.0173 | 0.0038 | 0.0135 |
| 198 | 0.0144 | 0.0032 | 0.0112 |
| 199 | 0.0124 | 0.0027 | 0.0097 |
| 200 | 0.0109 | 0.0024 | 0.0085 |
| 201 | 0.0098 | 0.0022 | 0.0076 |
| 202 | 0.0089 | 0.0020 | 0.0069 |
| 203 | 0.0081 | 0.0018 | 0.0063 |
| 204 | 0.0075 | 0.0017 | 0.0059 |
| 205 | 0.0069 | 0.0015 | 0.0054 |
| 206 | 0.0065 | 0.0014 | 0.0051 |
| 207 | 0.0061 | 0.0013 | 0.0048 |
| 208 | 0.0058 | 0.0013 | 0.0045 |
| 209 | 0.0055 | 0.0012 | 0.0043 |
| 210 | 0.0052 | 0.0011 | 0.0040 |
| 211 | 0.0049 | 0.0011 | 0.0039 |
| 212 | 0.0047 | 0.0010 | 0.0037 |
| 213 | 0.0045 | 0.0010 | 0.0035 |
| 214 | 0.0043 | 0.0010 | 0.0034 |
| 215 | 0.0042 | 0.0009 | 0.0033 |
| 216 | 0.0040 | 0.0009 | 0.0031 |
| 217 | 0.0064 | 0.0014 | 0.0050 |
| 218 | 0.0062 | 0.0014 | 0.0048 |
| 219 | 0.0060 | 0.0013 | 0.0047 |
| 220 | 0.0059 | 0.0013 | 0.0046 |
| 221 | 0.0057 | 0.0013 | 0.0045 |
| 222 | 0.0056 | 0.0012 | 0.0043 |
| 223 | 0.0054 | 0.0012 | 0.0042 |
| 224 | 0.0053 | 0.0012 | 0.0041 |
| 225 | 0.0052 | 0.0011 | 0.0040 |
| 226 | 0.0051 | 0.0011 | 0.0039 |
| 227 | 0.0049 | 0.0011 | 0.0039 |
| 228 | 0.0048 | 0.0011 | 0.0038 |
| 229 | 0.0047 | 0.0010 | 0.0037 |
| 230 | 0.0046 | 0.0010 | 0.0036 |
| 231 | 0.0046 | 0.0010 | 0.0036 |
| 232 | 0.0045 | 0.0010 | 0.0035 |
| 233 | 0.0044 | 0.0010 | 0.0034 |
| 234 | 0.0043 | 0.0009 | 0.0034 |
| 235 | 0.0042 | 0.0009 | 0.0033 |
| 236 | 0.0042 | 0.0009 | 0.0032 |
| 237 | 0.0041 | 0.0009 | 0.0032 |
| 238 | 0.0040 | 0.0009 | 0.0031 |
| 239 | 0.0040 | 0.0009 | 0.0031 |
| 240 | 0.0039 | 0.0009 | 0.0030 |
| 241 | 0.0038 | 0.0008 | 0.0030 |
| 242 | 0.0038 | 0.0008 | 0.0029 |
| 243 | 0.0037 | 0.0008 | 0.0029 |
| 244 | 0.0037 | 0.0008 | 0.0029 |
| 245 | 0.0036 | 0.0008 | 0.0028 |
| 246 | 0.0036 | 0.0008 | 0.0028 |
| 247 | 0.0035 | 0.0008 | 0.0027 |
| 248 | 0.0035 | 0.0008 | 0.0027 |

| | | | |
|---|---|---|---|
| 249 | 0.0034 | 0.0008 | 0.0027 |
| 250 | 0.0034 | 0.0007 | 0.0026 |
| 251 | 0.0033 | 0.0007 | 0.0026 |
| 252 | 0.0033 | 0.0007 | 0.0026 |
| 253 | 0.0032 | 0.0007 | 0.0025 |
| 254 | 0.0032 | 0.0007 | 0.0025 |
| 255 | 0.0032 | 0.0007 | 0.0025 |
| 256 | 0.0031 | 0.0007 | 0.0024 |
| 257 | 0.0031 | 0.0007 | 0.0024 |
| 258 | 0.0031 | 0.0007 | 0.0024 |
| 259 | 0.0030 | 0.0007 | 0.0024 |
| 260 | 0.0030 | 0.0007 | 0.0023 |
| 261 | 0.0030 | 0.0007 | 0.0023 |
| 262 | 0.0029 | 0.0006 | 0.0023 |
| 263 | 0.0029 | 0.0006 | 0.0023 |
| 264 | 0.0029 | 0.0006 | 0.0022 |
| 265 | 0.0028 | 0.0006 | 0.0022 |
| 266 | 0.0028 | 0.0006 | 0.0022 |
| 267 | 0.0028 | 0.0006 | 0.0022 |
| 268 | 0.0027 | 0.0006 | 0.0021 |
| 269 | 0.0027 | 0.0006 | 0.0021 |
| 270 | 0.0027 | 0.0006 | 0.0021 |
| 271 | 0.0027 | 0.0006 | 0.0021 |
| 272 | 0.0026 | 0.0006 | 0.0021 |
| 273 | 0.0026 | 0.0006 | 0.0020 |
| 274 | 0.0026 | 0.0006 | 0.0020 |
| 275 | 0.0026 | 0.0006 | 0.0020 |
| 276 | 0.0025 | 0.0006 | 0.0020 |
| 277 | 0.0025 | 0.0006 | 0.0020 |
| 278 | 0.0025 | 0.0006 | 0.0020 |
| 279 | 0.0025 | 0.0005 | 0.0019 |
| 280 | 0.0025 | 0.0005 | 0.0019 |
| 281 | 0.0024 | 0.0005 | 0.0019 |
| 282 | 0.0024 | 0.0005 | 0.0019 |
| 283 | 0.0024 | 0.0005 | 0.0019 |
| 284 | 0.0024 | 0.0005 | 0.0019 |
| 285 | 0.0024 | 0.0005 | 0.0018 |
| 286 | 0.0023 | 0.0005 | 0.0018 |
| 287 | 0.0023 | 0.0005 | 0.0018 |
| 288 | 0.0023 | 0.0005 | 0.0018 |

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Total soil rain loss = 0.37(In)
Total effective rainfall = 2.23(In)
Peak flow rate in flood hydrograph = 45.87(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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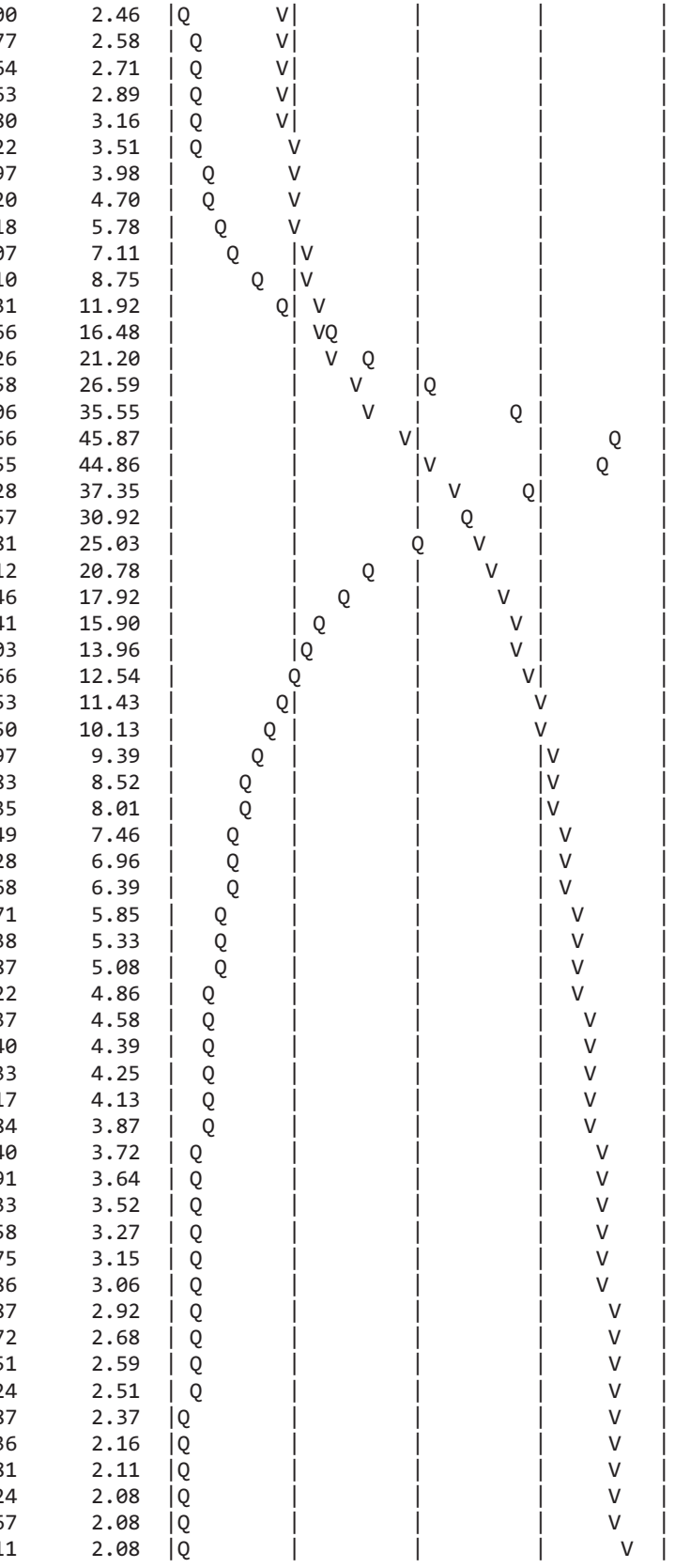
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 12.5 | 25.0 | 37.5 | 50.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0001 | 0.02 | Q | \| | \| | \| | \| |
| 0+15 | 0.0004 | 0.03 | Q | \| | \| | \| | \| |
| 0+20 | 0.0008 | 0.06 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+25 | 0.0015 | 0.11 | Q | | | | |
| 0+30 | 0.0028 | 0.19 | Q | | | | |
| 0+35 | 0.0046 | 0.26 | Q | | | | |
| 0+40 | 0.0069 | 0.33 | Q | | | | |
| 0+45 | 0.0094 | 0.37 | Q | | | | |
| 0+50 | 0.0123 | 0.41 | Q | | | | |
| 0+55 | 0.0153 | 0.44 | Q | | | | |
| 1+ 0 | 0.0185 | 0.46 | Q | | | | |
| 1+ 5 | 0.0218 | 0.49 | Q | | | | |
| 1+10 | 0.0253 | 0.51 | Q | | | | |
| 1+15 | 0.0289 | 0.52 | Q | | | | |
| 1+20 | 0.0326 | 0.54 | Q | | | | |
| 1+25 | 0.0365 | 0.55 | Q | | | | |
| 1+30 | 0.0404 | 0.57 | Q | | | | |
| 1+35 | 0.0443 | 0.58 | Q | | | | |
| 1+40 | 0.0484 | 0.59 | Q | | | | |
| 1+45 | 0.0525 | 0.60 | Q | | | | |
| 1+50 | 0.0568 | 0.61 | Q | | | | |
| 1+55 | 0.0610 | 0.62 | Q | | | | |
| 2+ 0 | 0.0654 | 0.63 | Q | | | | |
| 2+ 5 | 0.0697 | 0.64 | Q | | | | |
| 2+10 | 0.0742 | 0.64 | Q | | | | |
| 2+15 | 0.0787 | 0.65 | Q | | | | |
| 2+20 | 0.0832 | 0.66 | Q | | | | |
| 2+25 | 0.0878 | 0.67 | Q | | | | |
| 2+30 | 0.0925 | 0.67 | Q | | | | |
| 2+35 | 0.0971 | 0.68 | Q | | | | |
| 2+40 | 0.1019 | 0.69 | Q | | | | |
| 2+45 | 0.1066 | 0.69 | Q | | | | |
| 2+50 | 0.1115 | 0.70 | Q | | | | |
| 2+55 | 0.1163 | 0.70 | Q | | | | |
| 3+ 0 | 0.1212 | 0.71 | Q | | | | |
| 3+ 5 | 0.1261 | 0.72 | Q | | | | |
| 3+10 | 0.1311 | 0.72 | Q | | | | |
| 3+15 | 0.1361 | 0.73 | Q | | | | |
| 3+20 | 0.1411 | 0.73 | Q | | | | |
| 3+25 | 0.1462 | 0.74 | QV | | | | |
| 3+30 | 0.1513 | 0.74 | QV | | | | |
| 3+35 | 0.1564 | 0.75 | QV | | | | |
| 3+40 | 0.1616 | 0.75 | QV | | | | |
| 3+45 | 0.1668 | 0.75 | QV | | | | |
| 3+50 | 0.1720 | 0.76 | QV | | | | |
| 3+55 | 0.1773 | 0.76 | QV | | | | |
| 4+ 0 | 0.1826 | 0.77 | QV | | | | |
| 4+ 5 | 0.1879 | 0.77 | QV | | | | |
| 4+10 | 0.1933 | 0.78 | QV | | | | |
| 4+15 | 0.1987 | 0.78 | QV | | | | |
| 4+20 | 0.2041 | 0.79 | QV | | | | |
| 4+25 | 0.2096 | 0.79 | QV | | | | |
| 4+30 | 0.2151 | 0.80 | QV | | | | |
| 4+35 | 0.2206 | 0.80 | QV | | | | |
| 4+40 | 0.2262 | 0.81 | QV | | | | |
| 4+45 | 0.2317 | 0.81 | QV | | | | |
| 4+50 | 0.2374 | 0.82 | QV | | | | |
| 4+55 | 0.2430 | 0.82 | QV | | | | |
| 5+ 0 | 0.2487 | 0.83 | QV | | | | |
| 5+ 5 | 0.2544 | 0.83 | QV | | | | |
| 5+10 | 0.2602 | 0.83 | QV | | | | |
| 5+15 | 0.2660 | 0.84 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+20 | 0.2718 | 0.84 | QV | \| | \| | \| | \| |
| 5+25 | 0.2776 | 0.85 | QV | \| | \| | \| | \| |
| 5+30 | 0.2835 | 0.85 | QV | \| | \| | \| | \| |
| 5+35 | 0.2894 | 0.86 | Q V | \| | \| | \| | \| |
| 5+40 | 0.2953 | 0.86 | Q V | \| | \| | \| | \| |
| 5+45 | 0.3013 | 0.87 | Q V | \| | \| | \| | \| |
| 5+50 | 0.3073 | 0.87 | Q V | \| | \| | \| | \| |
| 5+55 | 0.3133 | 0.88 | Q V | \| | \| | \| | \| |
| 6+ 0 | 0.3194 | 0.88 | Q V | \| | \| | \| | \| |
| 6+ 5 | 0.3255 | 0.89 | Q V | \| | \| | \| | \| |
| 6+10 | 0.3317 | 0.89 | Q V | \| | \| | \| | \| |
| 6+15 | 0.3378 | 0.90 | Q V | \| | \| | \| | \| |
| 6+20 | 0.3441 | 0.90 | Q V | \| | \| | \| | \| |
| 6+25 | 0.3503 | 0.91 | Q V | \| | \| | \| | \| |
| 6+30 | 0.3566 | 0.91 | Q V | \| | \| | \| | \| |
| 6+35 | 0.3629 | 0.92 | Q V | \| | \| | \| | \| |
| 6+40 | 0.3693 | 0.92 | Q V | \| | \| | \| | \| |
| 6+45 | 0.3757 | 0.93 | Q V | \| | \| | \| | \| |
| 6+50 | 0.3821 | 0.94 | Q V | \| | \| | \| | \| |
| 6+55 | 0.3886 | 0.94 | Q V | \| | \| | \| | \| |
| 7+ 0 | 0.3952 | 0.95 | Q V | \| | \| | \| | \| |
| 7+ 5 | 0.4017 | 0.95 | Q V | \| | \| | \| | \| |
| 7+10 | 0.4083 | 0.96 | Q V | \| | \| | \| | \| |
| 7+15 | 0.4150 | 0.97 | Q V | \| | \| | \| | \| |
| 7+20 | 0.4217 | 0.97 | Q V | \| | \| | \| | \| |
| 7+25 | 0.4284 | 0.98 | Q V | \| | \| | \| | \| |
| 7+30 | 0.4352 | 0.98 | Q  V | \| | \| | \| | \| |
| 7+35 | 0.4420 | 0.99 | Q  V | \| | \| | \| | \| |
| 7+40 | 0.4489 | 1.00 | Q  V | \| | \| | \| | \| |
| 7+45 | 0.4558 | 1.00 | Q  V | \| | \| | \| | \| |
| 7+50 | 0.4628 | 1.01 | Q  V | \| | \| | \| | \| |
| 7+55 | 0.4698 | 1.02 | Q  V | \| | \| | \| | \| |
| 8+ 0 | 0.4769 | 1.03 | Q  V | \| | \| | \| | \| |
| 8+ 5 | 0.4840 | 1.03 | Q  V | \| | \| | \| | \| |
| 8+10 | 0.4911 | 1.04 | Q  V | \| | \| | \| | \| |
| 8+15 | 0.4983 | 1.05 | Q  V | \| | \| | \| | \| |
| 8+20 | 0.5056 | 1.06 | Q  V | \| | \| | \| | \| |
| 8+25 | 0.5129 | 1.06 | Q  V | \| | \| | \| | \| |
| 8+30 | 0.5203 | 1.07 | Q  V | \| | \| | \| | \| |
| 8+35 | 0.5277 | 1.08 | Q  V | \| | \| | \| | \| |
| 8+40 | 0.5352 | 1.09 | Q  V | \| | \| | \| | \| |
| 8+45 | 0.5428 | 1.10 | Q  V | \| | \| | \| | \| |
| 8+50 | 0.5504 | 1.10 | Q  V | \| | \| | \| | \| |
| 8+55 | 0.5580 | 1.11 | Q  V | \| | \| | \| | \| |
| 9+ 0 | 0.5658 | 1.12 | Q  V | \| | \| | \| | \| |
| 9+ 5 | 0.5735 | 1.13 | Q   V | \| | \| | \| | \| |
| 9+10 | 0.5814 | 1.14 | Q   V | \| | \| | \| | \| |
| 9+15 | 0.5893 | 1.15 | Q   V | \| | \| | \| | \| |
| 9+20 | 0.5973 | 1.16 | Q   V | \| | \| | \| | \| |
| 9+25 | 0.6053 | 1.17 | Q   V | \| | \| | \| | \| |
| 9+30 | 0.6134 | 1.18 | Q   V | \| | \| | \| | \| |
| 9+35 | 0.6216 | 1.19 | Q   V | \| | \| | \| | \| |
| 9+40 | 0.6298 | 1.20 | Q   V | \| | \| | \| | \| |
| 9+45 | 0.6381 | 1.21 | Q   V | \| | \| | \| | \| |
| 9+50 | 0.6465 | 1.22 | Q   V | \| | \| | \| | \| |
| 9+55 | 0.6550 | 1.23 | Q   V | \| | \| | \| | \| |
| 10+ 0 | 0.6635 | 1.24 | Q   V | \| | \| | \| | \| |
| 10+ 5 | 0.6722 | 1.25 | \|Q  V | \| | \| | \| | \| |
| 10+10 | 0.6809 | 1.26 | \|Q  V | \| | \| | \| | \| |

```
10+15       0.6897      1.28  |Q  V     |          |          |          |
10+20       0.6985      1.29  |Q  V     |          |          |          |
10+25       0.7075      1.30  |Q  V     |          |          |          |
10+30       0.7165      1.31  |Q   V    |          |          |          |
10+35       0.7256      1.33  |Q   V    |          |          |          |
10+40       0.7349      1.34  |Q   V    |          |          |          |
10+45       0.7442      1.35  |Q   V    |          |          |          |
10+50       0.7536      1.37  |Q   V    |          |          |          |
10+55       0.7631      1.38  |Q   V    |          |          |          |
11+ 0       0.7727      1.39  |Q   V    |          |          |          |
11+ 5       0.7824      1.41  |Q   V    |          |          |          |
11+10       0.7922      1.43  |Q   V    |          |          |          |
11+15       0.8021      1.44  |Q   V    |          |          |          |
11+20       0.8122      1.46  |Q   V    |          |          |          |
11+25       0.8223      1.47  |Q   V    |          |          |          |
11+30       0.8326      1.49  |Q   V    |          |          |          |
11+35       0.8430      1.51  |Q   V    |          |          |          |
11+40       0.8535      1.53  |Q   V    |          |          |          |
11+45       0.8641      1.54  |Q    V   |          |          |          |
11+50       0.8749      1.56  |Q    V   |          |          |          |
11+55       0.8858      1.58  |Q    V   |          |          |          |
12+ 0       0.8968      1.60  |Q    V   |          |          |          |
12+ 5       0.9080      1.62  |Q    V   |          |          |          |
12+10       0.9192      1.63  |Q    V   |          |          |          |
12+15       0.9305      1.63  |Q    V   |          |          |          |
12+20       0.9416      1.62  |Q    V   |          |          |          |
12+25       0.9526      1.59  |Q    V   |          |          |          |
12+30       0.9632      1.53  |Q    V   |          |          |          |
12+35       0.9733      1.47  |Q    V   |          |          |          |
12+40       0.9831      1.42  |Q    V   |          |          |          |
12+45       0.9927      1.39  |Q    V   |          |          |          |
12+50       1.0022      1.38  |Q     V  |          |          |          |
12+55       1.0116      1.37  |Q     V  |          |          |          |
13+ 0       1.0210      1.37  |Q     V  |          |          |          |
13+ 5       1.0305      1.37  |Q     V  |          |          |          |
13+10       1.0399      1.37  |Q     V  |          |          |          |
13+15       1.0495      1.38  |Q     V  |          |          |          |
13+20       1.0591      1.39  |Q     V  |          |          |          |
13+25       1.0688      1.41  |Q     V  |          |          |          |
13+30       1.0786      1.43  |Q     V  |          |          |          |
13+35       1.0886      1.45  |Q     V  |          |          |          |
13+40       1.0987      1.47  |Q     V  |          |          |          |
13+45       1.1089      1.49  |Q     V  |          |          |          |
13+50       1.1194      1.52  |Q     V  |          |          |          |
13+55       1.1300      1.54  |Q     V  |          |          |          |
14+ 0       1.1408      1.58  |Q     V  |          |          |          |
14+ 5       1.1519      1.61  |Q      V |          |          |          |
14+10       1.1633      1.65  |Q      V |          |          |          |
14+15       1.1749      1.69  |Q      V |          |          |          |
14+20       1.1868      1.73  |Q      V |          |          |          |
14+25       1.1991      1.78  |Q      V |          |          |          |
14+30       1.2117      1.83  |Q      V |          |          |          |
14+35       1.2247      1.89  |Q      V |          |          |          |
14+40       1.2381      1.95  |Q      V |          |          |          |
14+45       1.2520      2.02  |Q      V |          |          |          |
14+50       1.2664      2.09  |Q      V |          |          |          |
14+55       1.2813      2.17  |Q      V |          |          |          |
15+ 0       1.2969      2.25  |Q       V|          |          |          |
15+ 5       1.3130      2.35  |Q       V|          |          |          |
```

| | | | |
|---|---|---|---|
| 15+10 | 1.3300 | 2.46 |  |
| 15+15 | 1.3477 | 2.58 | |
| 15+20 | 1.3664 | 2.71 | |
| 15+25 | 1.3863 | 2.89 | |
| 15+30 | 1.4080 | 3.16 | |
| 15+35 | 1.4322 | 3.51 | |
| 15+40 | 1.4597 | 3.98 | |
| 15+45 | 1.4920 | 4.70 | |
| 15+50 | 1.5318 | 5.78 | |
| 15+55 | 1.5807 | 7.11 | |
| 16+ 0 | 1.6410 | 8.75 | |
| 16+ 5 | 1.7231 | 11.92 | |
| 16+10 | 1.8366 | 16.48 | |
| 16+15 | 1.9826 | 21.20 | |
| 16+20 | 2.1658 | 26.59 | |
| 16+25 | 2.4106 | 35.55 | |
| 16+30 | 2.7266 | 45.87 | |
| 16+35 | 3.0355 | 44.86 | |
| 16+40 | 3.2928 | 37.35 | |
| 16+45 | 3.5057 | 30.92 | |
| 16+50 | 3.6781 | 25.03 | |
| 16+55 | 3.8212 | 20.78 | |
| 17+ 0 | 3.9446 | 17.92 | |
| 17+ 5 | 4.0541 | 15.90 | |
| 17+10 | 4.1503 | 13.96 | |
| 17+15 | 4.2366 | 12.54 | |
| 17+20 | 4.3153 | 11.43 | |
| 17+25 | 4.3850 | 10.13 | |
| 17+30 | 4.4497 | 9.39 | |
| 17+35 | 4.5083 | 8.52 | |
| 17+40 | 4.5635 | 8.01 | |
| 17+45 | 4.6149 | 7.46 | |
| 17+50 | 4.6628 | 6.96 | |
| 17+55 | 4.7068 | 6.39 | |
| 18+ 0 | 4.7471 | 5.85 | |
| 18+ 5 | 4.7838 | 5.33 | |
| 18+10 | 4.8187 | 5.08 | |
| 18+15 | 4.8522 | 4.86 | |
| 18+20 | 4.8837 | 4.58 | |
| 18+25 | 4.9140 | 4.39 | |
| 18+30 | 4.9433 | 4.25 | |
| 18+35 | 4.9717 | 4.13 | |
| 18+40 | 4.9984 | 3.87 | |
| 18+45 | 5.0240 | 3.72 | |
| 18+50 | 5.0491 | 3.64 | |
| 18+55 | 5.0733 | 3.52 | |
| 19+ 0 | 5.0958 | 3.27 | |
| 19+ 5 | 5.1175 | 3.15 | |
| 19+10 | 5.1386 | 3.06 | |
| 19+15 | 5.1587 | 2.92 | |
| 19+20 | 5.1772 | 2.68 | |
| 19+25 | 5.1951 | 2.59 | |
| 19+30 | 5.2124 | 2.51 | |
| 19+35 | 5.2287 | 2.37 | |
| 19+40 | 5.2436 | 2.16 | |
| 19+45 | 5.2581 | 2.11 | |
| 19+50 | 5.2724 | 2.08 | |
| 19+55 | 5.2867 | 2.08 | |
| 20+ 0 | 5.3011 | 2.08 | |

```
20+ 5       5.3152      2.05  |Q        |          |          |      V  |
20+10       5.3292      2.02  |Q        |          |          |      V  |
20+15       5.3428      1.99  |Q        |          |          |      V  |
20+20       5.3563      1.95  |Q        |          |          |      V  |
20+25       5.3693      1.90  |Q        |          |          |      V  |
20+30       5.3820      1.83  |Q        |          |          |      V  |
20+35       5.3935      1.67  |Q        |          |          |      V  |
20+40       5.4043      1.57  |Q        |          |          |      V  |
20+45       5.4148      1.53  |Q        |          |          |      V  |
20+50       5.4250      1.48  |Q        |          |          |      V  |
20+55       5.4348      1.42  |Q        |          |          |      V  |
21+ 0       5.4437      1.29  |Q        |          |          |       V |
21+ 5       5.4517      1.16  Q        |          |          |       V |
21+10       5.4595      1.13  Q        |          |          |       V |
21+15       5.4670      1.10  Q        |          |          |       V |
21+20       5.4745      1.08  Q        |          |          |       V |
21+25       5.4818      1.06  Q        |          |          |       V |
21+30       5.4891      1.05  Q        |          |          |       V |
21+35       5.4962      1.03  Q        |          |          |       V |
21+40       5.5032      1.02  Q        |          |          |       V |
21+45       5.5101      1.00  Q        |          |          |       V |
21+50       5.5169      0.99  Q        |          |          |       V |
21+55       5.5236      0.98  Q        |          |          |       V |
22+ 0       5.5303      0.96  Q        |          |          |       V |
22+ 5       5.5368      0.95  Q        |          |          |       V |
22+10       5.5433      0.94  Q        |          |          |       V |
22+15       5.5497      0.93  Q        |          |          |       V |
22+20       5.5560      0.92  Q        |          |          |       V |
22+25       5.5623      0.91  Q        |          |          |       V |
22+30       5.5685      0.90  Q        |          |          |       V |
22+35       5.5746      0.89  Q        |          |          |       V |
22+40       5.5807      0.88  Q        |          |          |       V |
22+45       5.5866      0.87  Q        |          |          |        V|
22+50       5.5926      0.86  Q        |          |          |        V|
22+55       5.5984      0.85  Q        |          |          |        V|
23+ 0       5.6042      0.84  Q        |          |          |        V|
23+ 5       5.6099      0.83  Q        |          |          |        V|
23+10       5.6156      0.82  Q        |          |          |        V|
23+15       5.6212      0.81  Q        |          |          |        V|
23+20       5.6268      0.81  Q        |          |          |        V|
23+25       5.6323      0.80  Q        |          |          |        V|
23+30       5.6377      0.79  Q        |          |          |        V|
23+35       5.6431      0.78  Q        |          |          |        V|
23+40       5.6484      0.77  Q        |          |          |        V|
23+45       5.6537      0.77  Q        |          |          |        V|
23+50       5.6589      0.76  Q        |          |          |        V|
23+55       5.6641      0.75  Q        |          |          |        V|
24+ 0       5.6692      0.75  Q        |          |          |        V|
24+ 5       5.6743      0.73  Q        |          |          |        V|
24+10       5.6792      0.72  Q        |          |          |        V|
24+15       5.6840      0.69  Q        |          |          |        V|
24+20       5.6885      0.66  Q        |          |          |        V|
24+25       5.6927      0.61  Q        |          |          |        V|
24+30       5.6963      0.52  Q        |          |          |        V|
24+35       5.6994      0.44  Q        |          |          |        V|
24+40       5.7020      0.38  Q        |          |          |        V|
24+45       5.7042      0.33  Q        |          |          |        V|
24+50       5.7062      0.29  Q        |          |          |        V|
24+55       5.7080      0.26  Q        |          |          |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+ 0 | 5.7096 | 0.23 | Q | \| | \| | \| | V\| |
| 25+ 5 | 5.7110 | 0.21 | Q | \| | \| | \| | V\| |
| 25+10 | 5.7124 | 0.19 | Q | \| | \| | \| | V\| |
| 25+15 | 5.7136 | 0.17 | Q | \| | \| | \| | V\| |
| 25+20 | 5.7147 | 0.16 | Q | \| | \| | \| | V\| |
| 25+25 | 5.7157 | 0.15 | Q | \| | \| | \| | V\| |
| 25+30 | 5.7166 | 0.13 | Q | \| | \| | \| | V\| |
| 25+35 | 5.7174 | 0.12 | Q | \| | \| | \| | V\| |
| 25+40 | 5.7182 | 0.11 | Q | \| | \| | \| | V\| |
| 25+45 | 5.7189 | 0.10 | Q | \| | \| | \| | V\| |
| 25+50 | 5.7196 | 0.09 | Q | \| | \| | \| | V\| |
| 25+55 | 5.7202 | 0.09 | Q | \| | \| | \| | V\| |
| 26+ 0 | 5.7207 | 0.08 | Q | \| | \| | \| | V\| |
| 26+ 5 | 5.7212 | 0.07 | Q | \| | \| | \| | V\| |
| 26+10 | 5.7217 | 0.07 | Q | \| | \| | \| | V\| |
| 26+15 | 5.7221 | 0.06 | Q | \| | \| | \| | V\| |
| 26+20 | 5.7225 | 0.06 | Q | \| | \| | \| | V\| |
| 26+25 | 5.7229 | 0.05 | Q | \| | \| | \| | V\| |
| 26+30 | 5.7233 | 0.05 | Q | \| | \| | \| | V\| |
| 26+35 | 5.7236 | 0.04 | Q | \| | \| | \| | V\| |
| 26+40 | 5.7238 | 0.04 | Q | \| | \| | \| | V\| |
| 26+45 | 5.7241 | 0.04 | Q | \| | \| | \| | V\| |
| 26+50 | 5.7244 | 0.03 | Q | \| | \| | \| | V\| |
| 26+55 | 5.7246 | 0.03 | Q | \| | \| | \| | V\| |
| 27+ 0 | 5.7248 | 0.03 | Q | \| | \| | \| | V\| |
| 27+ 5 | 5.7249 | 0.03 | Q | \| | \| | \| | V\| |
| 27+10 | 5.7251 | 0.02 | Q | \| | \| | \| | V\| |
| 27+15 | 5.7253 | 0.02 | Q | \| | \| | \| | V\| |
| 27+20 | 5.7254 | 0.02 | Q | \| | \| | \| | V\| |
| 27+25 | 5.7255 | 0.02 | Q | \| | \| | \| | V\| |
| 27+30 | 5.7256 | 0.02 | Q | \| | \| | \| | V\| |
| 27+35 | 5.7257 | 0.01 | Q | \| | \| | \| | V\| |
| 27+40 | 5.7258 | 0.01 | Q | \| | \| | \| | V\| |
| 27+45 | 5.7259 | 0.01 | Q | \| | \| | \| | V\| |
| 27+50 | 5.7260 | 0.01 | Q | \| | \| | \| | V\| |
| 27+55 | 5.7261 | 0.01 | Q | \| | \| | \| | V\| |
| 28+ 0 | 5.7261 | 0.01 | Q | \| | \| | \| | V\| |
| 28+ 5 | 5.7262 | 0.01 | Q | \| | \| | \| | V\| |
| 28+10 | 5.7263 | 0.01 | Q | \| | \| | \| | V\| |
| 28+15 | 5.7263 | 0.01 | Q | \| | \| | \| | V\| |
| 28+20 | 5.7263 | 0.01 | Q | \| | \| | \| | V\| |
| 28+25 | 5.7264 | 0.00 | Q | \| | \| | \| | V\| |
| 28+30 | 5.7264 | 0.00 | Q | \| | \| | \| | V\| |
| 28+35 | 5.7264 | 0.00 | Q | \| | \| | \| | V\| |
| 28+40 | 5.7264 | 0.00 | Q | \| | \| | \| | V\| |
| 28+45 | 5.7264 | 0.00 | Q | \| | \| | \| | V\| |
| 28+50 | 5.7264 | 0.00 | Q | \| | \| | \| | V\| |
| 28+55 | 5.7264 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 34
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 107.23 | 1 | 1.40 |
| Rainfall data for year 100 | | |
| 107.23 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 107.23 | 24 | 2.61 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 82.0 | 95.2 | 107.23 | 1.000 | 0.094 | 0.969 | 0.091 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.091

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 103.91 | 0.969 | 82.0 | 95.2 | 0.50 | 0.801 |
| 3.32 | 0.031 | 98.0 | 98.0 | 0.20 | 0.912 |

Area-averaged catchment yield fraction, Y = 0.804
Area-averaged low loss fraction, Yb = 0.196
User entry of time of concentration = 1.220 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 107.23(Ac.)
Catchment Lag time = 0.976 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 8.5383
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.091(In/Hr)
Average low loss rate fraction (Yb) = 0.196 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.664(In)
Computed peak 30-minute rainfall = 1.137(In)
Specified peak 1-hour rainfall = 1.400(In)
Computed peak 3-hour rainfall = 1.655(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.610(In)

Rainfall depth area reduction factors:
Using a total area of 107.23(Ac.) (Ref: fig. E-4)

5-minute factor = 0.995 Adjusted rainfall = 0.661(In)
30-minute factor = 0.995 Adjusted rainfall = 1.131(In)
1-hour factor = 0.995 Adjusted rainfall = 1.393(In)
3-hour factor = 0.999 Adjusted rainfall = 1.654(In)
6-hour factor = 1.000 Adjusted rainfall = 1.839(In)
24-hour factor = 1.000 Adjusted rainfall = 2.610(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 1296.81 (CFS)) | |
| 1 | 0.376 | 4.872 |
| 2 | 1.225 | 11.016 |
| 3 | 2.588 | 17.671 |
| 4 | 4.411 | 23.646 |
| 5 | 6.668 | 29.261 |
| 6 | 9.506 | 36.804 |
| 7 | 14.019 | 58.532 |
| 8 | 20.242 | 80.694 |
| 9 | 28.783 | 110.772 |
| 10 | 36.533 | 100.498 |
| 11 | 43.320 | 88.018 |
| 12 | 48.799 | 71.049 |
| 13 | 53.499 | 60.945 |

| | | |
|---|---|---|
| 14 | 57.544 | 52.465 |
| 15 | 60.801 | 42.235 |
| 16 | 63.591 | 36.179 |
| 17 | 66.090 | 32.413 |
| 18 | 68.328 | 29.012 |
| 19 | 70.410 | 27.003 |
| 20 | 72.299 | 24.499 |
| 21 | 73.981 | 21.810 |
| 22 | 75.509 | 19.814 |
| 23 | 76.975 | 19.010 |
| 24 | 78.358 | 17.941 |
| 25 | 79.513 | 14.974 |
| 26 | 80.640 | 14.616 |
| 27 | 81.724 | 14.058 |
| 28 | 82.659 | 12.123 |
| 29 | 83.581 | 11.958 |
| 30 | 84.476 | 11.614 |
| 31 | 85.300 | 10.682 |
| 32 | 86.120 | 10.630 |
| 33 | 86.896 | 10.074 |
| 34 | 87.583 | 8.896 |
| 35 | 88.266 | 8.858 |
| 36 | 88.885 | 8.031 |
| 37 | 89.399 | 6.664 |
| 38 | 89.911 | 6.644 |
| 39 | 90.408 | 6.449 |
| 40 | 90.887 | 6.202 |
| 41 | 91.365 | 6.201 |
| 42 | 91.808 | 5.751 |
| 43 | 92.218 | 5.315 |
| 44 | 92.628 | 5.313 |
| 45 | 93.018 | 5.059 |
| 46 | 93.394 | 4.872 |
| 47 | 93.768 | 4.859 |
| 48 | 94.089 | 4.163 |
| 49 | 94.380 | 3.765 |
| 50 | 94.670 | 3.765 |
| 51 | 94.960 | 3.765 |
| 52 | 95.250 | 3.765 |
| 53 | 95.538 | 3.726 |
| 54 | 95.777 | 3.098 |
| 55 | 95.999 | 2.879 |
| 56 | 96.221 | 2.879 |
| 57 | 96.443 | 2.879 |
| 58 | 96.665 | 2.879 |
| 59 | 96.880 | 2.793 |
| 60 | 97.044 | 2.132 |
| 61 | 97.198 | 1.993 |
| 62 | 97.352 | 1.993 |
| 63 | 97.506 | 1.993 |
| 64 | 97.659 | 1.993 |
| 65 | 97.801 | 1.842 |
| 66 | 97.893 | 1.184 |
| 67 | 97.978 | 1.107 |
| 68 | 98.063 | 1.107 |
| 69 | 98.149 | 1.107 |
| 70 | 98.234 | 1.107 |
| 71 | 98.324 | 1.166 |
| 72 | 98.426 | 1.321 |

| | | |
|---|---|---|
| 73 | 98.528 | 1.329 |
| 74 | 98.631 | 1.329 |
| 75 | 98.733 | 1.329 |
| 76 | 98.836 | 1.329 |
| 77 | 98.938 | 1.329 |
| 78 | 99.041 | 1.329 |
| 79 | 99.143 | 1.329 |
| 80 | 99.245 | 1.329 |
| 81 | 99.348 | 1.329 |
| 82 | 99.450 | 1.329 |
| 83 | 99.528 | 1.000 |
| 84 | 99.581 | 0.692 |
| 85 | 99.634 | 0.692 |
| 86 | 99.688 | 0.692 |
| 87 | 99.741 | 0.692 |
| 88 | 99.794 | 0.692 |
| 89 | 99.848 | 0.692 |
| 90 | 99.901 | 0.692 |
| 91 | 99.954 | 0.692 |
| 92 | 100.000 | 0.591 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6610 | 0.6610 |
| 2 | 0.8138 | 0.1528 |
| 3 | 0.9190 | 0.1053 |
| 4 | 1.0019 | 0.0828 |
| 5 | 1.0712 | 0.0694 |
| 6 | 1.1314 | 0.0602 |
| 7 | 1.1850 | 0.0536 |
| 8 | 1.2334 | 0.0484 |
| 9 | 1.2778 | 0.0444 |
| 10 | 1.3188 | 0.0410 |
| 11 | 1.3571 | 0.0383 |
| 12 | 1.3930 | 0.0359 |
| 13 | 1.4105 | 0.0176 |
| 14 | 1.4270 | 0.0165 |
| 15 | 1.4425 | 0.0155 |
| 16 | 1.4571 | 0.0146 |
| 17 | 1.4710 | 0.0139 |
| 18 | 1.4842 | 0.0132 |
| 19 | 1.4969 | 0.0126 |
| 20 | 1.5089 | 0.0121 |
| 21 | 1.5205 | 0.0116 |
| 22 | 1.5316 | 0.0111 |
| 23 | 1.5423 | 0.0107 |
| 24 | 1.5526 | 0.0103 |
| 25 | 1.5626 | 0.0100 |
| 26 | 1.5722 | 0.0096 |
| 27 | 1.5815 | 0.0093 |
| 28 | 1.5905 | 0.0090 |
| 29 | 1.5993 | 0.0088 |
| 30 | 1.6078 | 0.0085 |
| 31 | 1.6161 | 0.0083 |
| 32 | 1.6241 | 0.0081 |
| 33 | 1.6320 | 0.0078 |
| 34 | 1.6396 | 0.0076 |
| 35 | 1.6471 | 0.0075 |
| 36 | 1.6543 | 0.0073 |

| | | |
|---|---|---|
| 37 | 1.6613 | 0.0069 |
| 38 | 1.6681 | 0.0068 |
| 39 | 1.6747 | 0.0066 |
| 40 | 1.6812 | 0.0065 |
| 41 | 1.6876 | 0.0064 |
| 42 | 1.6938 | 0.0062 |
| 43 | 1.6999 | 0.0061 |
| 44 | 1.7059 | 0.0060 |
| 45 | 1.7118 | 0.0059 |
| 46 | 1.7176 | 0.0058 |
| 47 | 1.7232 | 0.0057 |
| 48 | 1.7288 | 0.0056 |
| 49 | 1.7342 | 0.0055 |
| 50 | 1.7396 | 0.0054 |
| 51 | 1.7449 | 0.0053 |
| 52 | 1.7501 | 0.0052 |
| 53 | 1.7552 | 0.0051 |
| 54 | 1.7602 | 0.0050 |
| 55 | 1.7651 | 0.0049 |
| 56 | 1.7700 | 0.0049 |
| 57 | 1.7748 | 0.0048 |
| 58 | 1.7795 | 0.0047 |
| 59 | 1.7842 | 0.0047 |
| 60 | 1.7888 | 0.0046 |
| 61 | 1.7933 | 0.0045 |
| 62 | 1.7978 | 0.0045 |
| 63 | 1.8022 | 0.0044 |
| 64 | 1.8065 | 0.0043 |
| 65 | 1.8108 | 0.0043 |
| 66 | 1.8151 | 0.0042 |
| 67 | 1.8192 | 0.0042 |
| 68 | 1.8234 | 0.0041 |
| 69 | 1.8274 | 0.0041 |
| 70 | 1.8315 | 0.0040 |
| 71 | 1.8355 | 0.0040 |
| 72 | 1.8394 | 0.0039 |
| 73 | 1.8458 | 0.0064 |
| 74 | 1.8521 | 0.0063 |
| 75 | 1.8584 | 0.0063 |
| 76 | 1.8646 | 0.0062 |
| 77 | 1.8708 | 0.0062 |
| 78 | 1.8769 | 0.0061 |
| 79 | 1.8830 | 0.0060 |
| 80 | 1.8889 | 0.0060 |
| 81 | 1.8949 | 0.0059 |
| 82 | 1.9007 | 0.0059 |
| 83 | 1.9066 | 0.0058 |
| 84 | 1.9123 | 0.0058 |
| 85 | 1.9181 | 0.0057 |
| 86 | 1.9237 | 0.0057 |
| 87 | 1.9293 | 0.0056 |
| 88 | 1.9349 | 0.0056 |
| 89 | 1.9404 | 0.0055 |
| 90 | 1.9459 | 0.0055 |
| 91 | 1.9513 | 0.0054 |
| 92 | 1.9567 | 0.0054 |
| 93 | 1.9621 | 0.0053 |
| 94 | 1.9674 | 0.0053 |
| 95 | 1.9726 | 0.0053 |

| | | |
|---|---|---|
| 96 | 1.9779 | 0.0052 |
| 97 | 1.9830 | 0.0052 |
| 98 | 1.9882 | 0.0051 |
| 99 | 1.9933 | 0.0051 |
| 100 | 1.9983 | 0.0051 |
| 101 | 2.0034 | 0.0050 |
| 102 | 2.0084 | 0.0050 |
| 103 | 2.0133 | 0.0049 |
| 104 | 2.0182 | 0.0049 |
| 105 | 2.0231 | 0.0049 |
| 106 | 2.0279 | 0.0048 |
| 107 | 2.0327 | 0.0048 |
| 108 | 2.0375 | 0.0048 |
| 109 | 2.0423 | 0.0047 |
| 110 | 2.0470 | 0.0047 |
| 111 | 2.0517 | 0.0047 |
| 112 | 2.0563 | 0.0046 |
| 113 | 2.0609 | 0.0046 |
| 114 | 2.0655 | 0.0046 |
| 115 | 2.0701 | 0.0046 |
| 116 | 2.0746 | 0.0045 |
| 117 | 2.0791 | 0.0045 |
| 118 | 2.0836 | 0.0045 |
| 119 | 2.0880 | 0.0044 |
| 120 | 2.0924 | 0.0044 |
| 121 | 2.0968 | 0.0044 |
| 122 | 2.1012 | 0.0044 |
| 123 | 2.1055 | 0.0043 |
| 124 | 2.1098 | 0.0043 |
| 125 | 2.1141 | 0.0043 |
| 126 | 2.1183 | 0.0043 |
| 127 | 2.1226 | 0.0042 |
| 128 | 2.1268 | 0.0042 |
| 129 | 2.1310 | 0.0042 |
| 130 | 2.1351 | 0.0042 |
| 131 | 2.1392 | 0.0041 |
| 132 | 2.1433 | 0.0041 |
| 133 | 2.1474 | 0.0041 |
| 134 | 2.1515 | 0.0041 |
| 135 | 2.1555 | 0.0040 |
| 136 | 2.1596 | 0.0040 |
| 137 | 2.1635 | 0.0040 |
| 138 | 2.1675 | 0.0040 |
| 139 | 2.1715 | 0.0040 |
| 140 | 2.1754 | 0.0039 |
| 141 | 2.1793 | 0.0039 |
| 142 | 2.1832 | 0.0039 |
| 143 | 2.1871 | 0.0039 |
| 144 | 2.1909 | 0.0038 |
| 145 | 2.1948 | 0.0038 |
| 146 | 2.1986 | 0.0038 |
| 147 | 2.2024 | 0.0038 |
| 148 | 2.2061 | 0.0038 |
| 149 | 2.2099 | 0.0038 |
| 150 | 2.2136 | 0.0037 |
| 151 | 2.2173 | 0.0037 |
| 152 | 2.2210 | 0.0037 |
| 153 | 2.2247 | 0.0037 |
| 154 | 2.2284 | 0.0037 |

| | | |
|---|---|---|
| 155 | 2.2320 | 0.0036 |
| 156 | 2.2356 | 0.0036 |
| 157 | 2.2392 | 0.0036 |
| 158 | 2.2428 | 0.0036 |
| 159 | 2.2464 | 0.0036 |
| 160 | 2.2499 | 0.0036 |
| 161 | 2.2535 | 0.0035 |
| 162 | 2.2570 | 0.0035 |
| 163 | 2.2605 | 0.0035 |
| 164 | 2.2640 | 0.0035 |
| 165 | 2.2675 | 0.0035 |
| 166 | 2.2709 | 0.0035 |
| 167 | 2.2744 | 0.0034 |
| 168 | 2.2778 | 0.0034 |
| 169 | 2.2812 | 0.0034 |
| 170 | 2.2846 | 0.0034 |
| 171 | 2.2880 | 0.0034 |
| 172 | 2.2914 | 0.0034 |
| 173 | 2.2947 | 0.0034 |
| 174 | 2.2981 | 0.0033 |
| 175 | 2.3014 | 0.0033 |
| 176 | 2.3047 | 0.0033 |
| 177 | 2.3080 | 0.0033 |
| 178 | 2.3113 | 0.0033 |
| 179 | 2.3146 | 0.0033 |
| 180 | 2.3178 | 0.0033 |
| 181 | 2.3211 | 0.0032 |
| 182 | 2.3243 | 0.0032 |
| 183 | 2.3275 | 0.0032 |
| 184 | 2.3307 | 0.0032 |
| 185 | 2.3339 | 0.0032 |
| 186 | 2.3371 | 0.0032 |
| 187 | 2.3402 | 0.0032 |
| 188 | 2.3434 | 0.0032 |
| 189 | 2.3465 | 0.0031 |
| 190 | 2.3497 | 0.0031 |
| 191 | 2.3528 | 0.0031 |
| 192 | 2.3559 | 0.0031 |
| 193 | 2.3590 | 0.0031 |
| 194 | 2.3620 | 0.0031 |
| 195 | 2.3651 | 0.0031 |
| 196 | 2.3682 | 0.0031 |
| 197 | 2.3712 | 0.0030 |
| 198 | 2.3742 | 0.0030 |
| 199 | 2.3773 | 0.0030 |
| 200 | 2.3803 | 0.0030 |
| 201 | 2.3833 | 0.0030 |
| 202 | 2.3862 | 0.0030 |
| 203 | 2.3892 | 0.0030 |
| 204 | 2.3922 | 0.0030 |
| 205 | 2.3951 | 0.0030 |
| 206 | 2.3981 | 0.0029 |
| 207 | 2.4010 | 0.0029 |
| 208 | 2.4039 | 0.0029 |
| 209 | 2.4068 | 0.0029 |
| 210 | 2.4097 | 0.0029 |
| 211 | 2.4126 | 0.0029 |
| 212 | 2.4155 | 0.0029 |
| 213 | 2.4184 | 0.0029 |

| | | |
|---|---|---|
| 214 | 2.4212 | 0.0029 |
| 215 | 2.4241 | 0.0028 |
| 216 | 2.4269 | 0.0028 |
| 217 | 2.4298 | 0.0028 |
| 218 | 2.4326 | 0.0028 |
| 219 | 2.4354 | 0.0028 |
| 220 | 2.4382 | 0.0028 |
| 221 | 2.4410 | 0.0028 |
| 222 | 2.4438 | 0.0028 |
| 223 | 2.4465 | 0.0028 |
| 224 | 2.4493 | 0.0028 |
| 225 | 2.4521 | 0.0028 |
| 226 | 2.4548 | 0.0027 |
| 227 | 2.4575 | 0.0027 |
| 228 | 2.4603 | 0.0027 |
| 229 | 2.4630 | 0.0027 |
| 230 | 2.4657 | 0.0027 |
| 231 | 2.4684 | 0.0027 |
| 232 | 2.4711 | 0.0027 |
| 233 | 2.4738 | 0.0027 |
| 234 | 2.4764 | 0.0027 |
| 235 | 2.4791 | 0.0027 |
| 236 | 2.4818 | 0.0027 |
| 237 | 2.4844 | 0.0026 |
| 238 | 2.4871 | 0.0026 |
| 239 | 2.4897 | 0.0026 |
| 240 | 2.4923 | 0.0026 |
| 241 | 2.4949 | 0.0026 |
| 242 | 2.4975 | 0.0026 |
| 243 | 2.5001 | 0.0026 |
| 244 | 2.5027 | 0.0026 |
| 245 | 2.5053 | 0.0026 |
| 246 | 2.5079 | 0.0026 |
| 247 | 2.5105 | 0.0026 |
| 248 | 2.5130 | 0.0026 |
| 249 | 2.5156 | 0.0026 |
| 250 | 2.5181 | 0.0025 |
| 251 | 2.5207 | 0.0025 |
| 252 | 2.5232 | 0.0025 |
| 253 | 2.5257 | 0.0025 |
| 254 | 2.5282 | 0.0025 |
| 255 | 2.5307 | 0.0025 |
| 256 | 2.5332 | 0.0025 |
| 257 | 2.5357 | 0.0025 |
| 258 | 2.5382 | 0.0025 |
| 259 | 2.5407 | 0.0025 |
| 260 | 2.5432 | 0.0025 |
| 261 | 2.5456 | 0.0025 |
| 262 | 2.5481 | 0.0025 |
| 263 | 2.5505 | 0.0025 |
| 264 | 2.5530 | 0.0024 |
| 265 | 2.5554 | 0.0024 |
| 266 | 2.5578 | 0.0024 |
| 267 | 2.5603 | 0.0024 |
| 268 | 2.5627 | 0.0024 |
| 269 | 2.5651 | 0.0024 |
| 270 | 2.5675 | 0.0024 |
| 271 | 2.5699 | 0.0024 |
| 272 | 2.5723 | 0.0024 |

| | | |
|---|---|---|
| 273 | 2.5747 | 0.0024 |
| 274 | 2.5770 | 0.0024 |
| 275 | 2.5794 | 0.0024 |
| 276 | 2.5818 | 0.0024 |
| 277 | 2.5841 | 0.0024 |
| 278 | 2.5865 | 0.0024 |
| 279 | 2.5888 | 0.0023 |
| 280 | 2.5912 | 0.0023 |
| 281 | 2.5935 | 0.0023 |
| 282 | 2.5958 | 0.0023 |
| 283 | 2.5981 | 0.0023 |
| 284 | 2.6005 | 0.0023 |
| 285 | 2.6028 | 0.0023 |
| 286 | 2.6051 | 0.0023 |
| 287 | 2.6074 | 0.0023 |
| 288 | 2.6097 | 0.0023 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0023 | 0.0004 | 0.0018 |
| 2 | 0.0023 | 0.0004 | 0.0018 |
| 3 | 0.0023 | 0.0005 | 0.0019 |
| 4 | 0.0023 | 0.0005 | 0.0019 |
| 5 | 0.0023 | 0.0005 | 0.0019 |
| 6 | 0.0023 | 0.0005 | 0.0019 |
| 7 | 0.0023 | 0.0005 | 0.0019 |
| 8 | 0.0024 | 0.0005 | 0.0019 |
| 9 | 0.0024 | 0.0005 | 0.0019 |
| 10 | 0.0024 | 0.0005 | 0.0019 |
| 11 | 0.0024 | 0.0005 | 0.0019 |
| 12 | 0.0024 | 0.0005 | 0.0019 |
| 13 | 0.0024 | 0.0005 | 0.0019 |
| 14 | 0.0024 | 0.0005 | 0.0019 |
| 15 | 0.0024 | 0.0005 | 0.0019 |
| 16 | 0.0024 | 0.0005 | 0.0020 |
| 17 | 0.0024 | 0.0005 | 0.0020 |
| 18 | 0.0025 | 0.0005 | 0.0020 |
| 19 | 0.0025 | 0.0005 | 0.0020 |
| 20 | 0.0025 | 0.0005 | 0.0020 |
| 21 | 0.0025 | 0.0005 | 0.0020 |
| 22 | 0.0025 | 0.0005 | 0.0020 |
| 23 | 0.0025 | 0.0005 | 0.0020 |
| 24 | 0.0025 | 0.0005 | 0.0020 |
| 25 | 0.0025 | 0.0005 | 0.0020 |
| 26 | 0.0025 | 0.0005 | 0.0020 |
| 27 | 0.0026 | 0.0005 | 0.0021 |
| 28 | 0.0026 | 0.0005 | 0.0021 |
| 29 | 0.0026 | 0.0005 | 0.0021 |
| 30 | 0.0026 | 0.0005 | 0.0021 |
| 31 | 0.0026 | 0.0005 | 0.0021 |
| 32 | 0.0026 | 0.0005 | 0.0021 |
| 33 | 0.0026 | 0.0005 | 0.0021 |
| 34 | 0.0026 | 0.0005 | 0.0021 |
| 35 | 0.0026 | 0.0005 | 0.0021 |
| 36 | 0.0027 | 0.0005 | 0.0021 |
| 37 | 0.0027 | 0.0005 | 0.0022 |
| 38 | 0.0027 | 0.0005 | 0.0022 |

| | | | |
|---|---|---|---|
| 39 | 0.0027 | 0.0005 | 0.0022 |
| 40 | 0.0027 | 0.0005 | 0.0022 |
| 41 | 0.0027 | 0.0005 | 0.0022 |
| 42 | 0.0027 | 0.0005 | 0.0022 |
| 43 | 0.0028 | 0.0005 | 0.0022 |
| 44 | 0.0028 | 0.0005 | 0.0022 |
| 45 | 0.0028 | 0.0005 | 0.0022 |
| 46 | 0.0028 | 0.0005 | 0.0022 |
| 47 | 0.0028 | 0.0006 | 0.0023 |
| 48 | 0.0028 | 0.0006 | 0.0023 |
| 49 | 0.0028 | 0.0006 | 0.0023 |
| 50 | 0.0028 | 0.0006 | 0.0023 |
| 51 | 0.0029 | 0.0006 | 0.0023 |
| 52 | 0.0029 | 0.0006 | 0.0023 |
| 53 | 0.0029 | 0.0006 | 0.0023 |
| 54 | 0.0029 | 0.0006 | 0.0023 |
| 55 | 0.0029 | 0.0006 | 0.0024 |
| 56 | 0.0029 | 0.0006 | 0.0024 |
| 57 | 0.0030 | 0.0006 | 0.0024 |
| 58 | 0.0030 | 0.0006 | 0.0024 |
| 59 | 0.0030 | 0.0006 | 0.0024 |
| 60 | 0.0030 | 0.0006 | 0.0024 |
| 61 | 0.0030 | 0.0006 | 0.0024 |
| 62 | 0.0030 | 0.0006 | 0.0024 |
| 63 | 0.0031 | 0.0006 | 0.0025 |
| 64 | 0.0031 | 0.0006 | 0.0025 |
| 65 | 0.0031 | 0.0006 | 0.0025 |
| 66 | 0.0031 | 0.0006 | 0.0025 |
| 67 | 0.0031 | 0.0006 | 0.0025 |
| 68 | 0.0032 | 0.0006 | 0.0025 |
| 69 | 0.0032 | 0.0006 | 0.0026 |
| 70 | 0.0032 | 0.0006 | 0.0026 |
| 71 | 0.0032 | 0.0006 | 0.0026 |
| 72 | 0.0032 | 0.0006 | 0.0026 |
| 73 | 0.0033 | 0.0006 | 0.0026 |
| 74 | 0.0033 | 0.0006 | 0.0026 |
| 75 | 0.0033 | 0.0006 | 0.0027 |
| 76 | 0.0033 | 0.0006 | 0.0027 |
| 77 | 0.0033 | 0.0007 | 0.0027 |
| 78 | 0.0034 | 0.0007 | 0.0027 |
| 79 | 0.0034 | 0.0007 | 0.0027 |
| 80 | 0.0034 | 0.0007 | 0.0027 |
| 81 | 0.0034 | 0.0007 | 0.0028 |
| 82 | 0.0034 | 0.0007 | 0.0028 |
| 83 | 0.0035 | 0.0007 | 0.0028 |
| 84 | 0.0035 | 0.0007 | 0.0028 |
| 85 | 0.0035 | 0.0007 | 0.0028 |
| 86 | 0.0035 | 0.0007 | 0.0028 |
| 87 | 0.0036 | 0.0007 | 0.0029 |
| 88 | 0.0036 | 0.0007 | 0.0029 |
| 89 | 0.0036 | 0.0007 | 0.0029 |
| 90 | 0.0036 | 0.0007 | 0.0029 |
| 91 | 0.0037 | 0.0007 | 0.0030 |
| 92 | 0.0037 | 0.0007 | 0.0030 |
| 93 | 0.0037 | 0.0007 | 0.0030 |
| 94 | 0.0038 | 0.0007 | 0.0030 |
| 95 | 0.0038 | 0.0007 | 0.0030 |
| 96 | 0.0038 | 0.0007 | 0.0031 |
| 97 | 0.0038 | 0.0008 | 0.0031 |

| | | | |
|---|---|---|---|
| 98 | 0.0039 | 0.0008 | 0.0031 |
| 99 | 0.0039 | 0.0008 | 0.0031 |
| 100 | 0.0039 | 0.0008 | 0.0032 |
| 101 | 0.0040 | 0.0008 | 0.0032 |
| 102 | 0.0040 | 0.0008 | 0.0032 |
| 103 | 0.0040 | 0.0008 | 0.0032 |
| 104 | 0.0041 | 0.0008 | 0.0033 |
| 105 | 0.0041 | 0.0008 | 0.0033 |
| 106 | 0.0041 | 0.0008 | 0.0033 |
| 107 | 0.0042 | 0.0008 | 0.0034 |
| 108 | 0.0042 | 0.0008 | 0.0034 |
| 109 | 0.0043 | 0.0008 | 0.0034 |
| 110 | 0.0043 | 0.0008 | 0.0034 |
| 111 | 0.0043 | 0.0008 | 0.0035 |
| 112 | 0.0044 | 0.0009 | 0.0035 |
| 113 | 0.0044 | 0.0009 | 0.0035 |
| 114 | 0.0044 | 0.0009 | 0.0036 |
| 115 | 0.0045 | 0.0009 | 0.0036 |
| 116 | 0.0045 | 0.0009 | 0.0036 |
| 117 | 0.0046 | 0.0009 | 0.0037 |
| 118 | 0.0046 | 0.0009 | 0.0037 |
| 119 | 0.0047 | 0.0009 | 0.0038 |
| 120 | 0.0047 | 0.0009 | 0.0038 |
| 121 | 0.0048 | 0.0009 | 0.0038 |
| 122 | 0.0048 | 0.0009 | 0.0039 |
| 123 | 0.0049 | 0.0010 | 0.0039 |
| 124 | 0.0049 | 0.0010 | 0.0040 |
| 125 | 0.0050 | 0.0010 | 0.0040 |
| 126 | 0.0050 | 0.0010 | 0.0040 |
| 127 | 0.0051 | 0.0010 | 0.0041 |
| 128 | 0.0051 | 0.0010 | 0.0041 |
| 129 | 0.0052 | 0.0010 | 0.0042 |
| 130 | 0.0053 | 0.0010 | 0.0042 |
| 131 | 0.0053 | 0.0010 | 0.0043 |
| 132 | 0.0054 | 0.0011 | 0.0043 |
| 133 | 0.0055 | 0.0011 | 0.0044 |
| 134 | 0.0055 | 0.0011 | 0.0044 |
| 135 | 0.0056 | 0.0011 | 0.0045 |
| 136 | 0.0057 | 0.0011 | 0.0046 |
| 137 | 0.0058 | 0.0011 | 0.0046 |
| 138 | 0.0058 | 0.0011 | 0.0047 |
| 139 | 0.0059 | 0.0012 | 0.0048 |
| 140 | 0.0060 | 0.0012 | 0.0048 |
| 141 | 0.0061 | 0.0012 | 0.0049 |
| 142 | 0.0062 | 0.0012 | 0.0050 |
| 143 | 0.0063 | 0.0012 | 0.0051 |
| 144 | 0.0063 | 0.0012 | 0.0051 |
| 145 | 0.0039 | 0.0008 | 0.0032 |
| 146 | 0.0040 | 0.0008 | 0.0032 |
| 147 | 0.0041 | 0.0008 | 0.0033 |
| 148 | 0.0041 | 0.0008 | 0.0033 |
| 149 | 0.0042 | 0.0008 | 0.0034 |
| 150 | 0.0043 | 0.0008 | 0.0034 |
| 151 | 0.0044 | 0.0009 | 0.0035 |
| 152 | 0.0045 | 0.0009 | 0.0036 |
| 153 | 0.0046 | 0.0009 | 0.0037 |
| 154 | 0.0047 | 0.0009 | 0.0037 |
| 155 | 0.0048 | 0.0009 | 0.0039 |
| 156 | 0.0049 | 0.0010 | 0.0039 |

| | | | |
|---|---|---|---|
| 157 | 0.0050 | 0.0010 | 0.0040 |
| 158 | 0.0051 | 0.0010 | 0.0041 |
| 159 | 0.0053 | 0.0010 | 0.0042 |
| 160 | 0.0054 | 0.0011 | 0.0043 |
| 161 | 0.0056 | 0.0011 | 0.0045 |
| 162 | 0.0057 | 0.0011 | 0.0045 |
| 163 | 0.0059 | 0.0012 | 0.0047 |
| 164 | 0.0060 | 0.0012 | 0.0048 |
| 165 | 0.0062 | 0.0012 | 0.0050 |
| 166 | 0.0064 | 0.0012 | 0.0051 |
| 167 | 0.0066 | 0.0013 | 0.0053 |
| 168 | 0.0068 | 0.0013 | 0.0055 |
| 169 | 0.0073 | 0.0014 | 0.0059 |
| 170 | 0.0075 | 0.0015 | 0.0060 |
| 171 | 0.0078 | 0.0015 | 0.0063 |
| 172 | 0.0081 | 0.0016 | 0.0065 |
| 173 | 0.0085 | 0.0017 | 0.0068 |
| 174 | 0.0088 | 0.0017 | 0.0070 |
| 175 | 0.0093 | 0.0018 | 0.0075 |
| 176 | 0.0096 | 0.0019 | 0.0077 |
| 177 | 0.0103 | 0.0020 | 0.0083 |
| 178 | 0.0107 | 0.0021 | 0.0086 |
| 179 | 0.0116 | 0.0023 | 0.0093 |
| 180 | 0.0121 | 0.0024 | 0.0097 |
| 181 | 0.0132 | 0.0026 | 0.0106 |
| 182 | 0.0139 | 0.0027 | 0.0112 |
| 183 | 0.0155 | 0.0030 | 0.0125 |
| 184 | 0.0165 | 0.0032 | 0.0132 |
| 185 | 0.0359 | 0.0070 | 0.0289 |
| 186 | 0.0383 | 0.0075 | 0.0308 |
| 187 | 0.0444 | 0.0076 | 0.0368 |
| 188 | 0.0484 | 0.0076 | 0.0408 |
| 189 | 0.0602 | 0.0076 | 0.0526 |
| 190 | 0.0694 | 0.0076 | 0.0618 |
| 191 | 0.1053 | 0.0076 | 0.0976 |
| 192 | 0.1528 | 0.0076 | 0.1452 |
| 193 | 0.6610 | 0.0076 | 0.6534 |
| 194 | 0.0828 | 0.0076 | 0.0752 |
| 195 | 0.0536 | 0.0076 | 0.0459 |
| 196 | 0.0410 | 0.0076 | 0.0334 |
| 197 | 0.0176 | 0.0034 | 0.0141 |
| 198 | 0.0146 | 0.0029 | 0.0118 |
| 199 | 0.0126 | 0.0025 | 0.0101 |
| 200 | 0.0111 | 0.0022 | 0.0089 |
| 201 | 0.0100 | 0.0020 | 0.0080 |
| 202 | 0.0090 | 0.0018 | 0.0073 |
| 203 | 0.0083 | 0.0016 | 0.0067 |
| 204 | 0.0076 | 0.0015 | 0.0061 |
| 205 | 0.0069 | 0.0014 | 0.0056 |
| 206 | 0.0065 | 0.0013 | 0.0052 |
| 207 | 0.0061 | 0.0012 | 0.0049 |
| 208 | 0.0058 | 0.0011 | 0.0046 |
| 209 | 0.0055 | 0.0011 | 0.0044 |
| 210 | 0.0052 | 0.0010 | 0.0042 |
| 211 | 0.0049 | 0.0010 | 0.0040 |
| 212 | 0.0047 | 0.0009 | 0.0038 |
| 213 | 0.0045 | 0.0009 | 0.0036 |
| 214 | 0.0043 | 0.0009 | 0.0035 |
| 215 | 0.0042 | 0.0008 | 0.0034 |

| | | | |
|---|---|---|---|
| 216 | 0.0040 | 0.0008 | 0.0032 |
| 217 | 0.0064 | 0.0013 | 0.0052 |
| 218 | 0.0062 | 0.0012 | 0.0050 |
| 219 | 0.0060 | 0.0012 | 0.0049 |
| 220 | 0.0059 | 0.0012 | 0.0047 |
| 221 | 0.0057 | 0.0011 | 0.0046 |
| 222 | 0.0056 | 0.0011 | 0.0045 |
| 223 | 0.0054 | 0.0011 | 0.0044 |
| 224 | 0.0053 | 0.0010 | 0.0043 |
| 225 | 0.0052 | 0.0010 | 0.0042 |
| 226 | 0.0051 | 0.0010 | 0.0041 |
| 227 | 0.0049 | 0.0010 | 0.0040 |
| 228 | 0.0048 | 0.0009 | 0.0039 |
| 229 | 0.0047 | 0.0009 | 0.0038 |
| 230 | 0.0046 | 0.0009 | 0.0037 |
| 231 | 0.0046 | 0.0009 | 0.0037 |
| 232 | 0.0045 | 0.0009 | 0.0036 |
| 233 | 0.0044 | 0.0009 | 0.0035 |
| 234 | 0.0043 | 0.0008 | 0.0035 |
| 235 | 0.0042 | 0.0008 | 0.0034 |
| 236 | 0.0042 | 0.0008 | 0.0033 |
| 237 | 0.0041 | 0.0008 | 0.0033 |
| 238 | 0.0040 | 0.0008 | 0.0032 |
| 239 | 0.0040 | 0.0008 | 0.0032 |
| 240 | 0.0039 | 0.0008 | 0.0031 |
| 241 | 0.0038 | 0.0008 | 0.0031 |
| 242 | 0.0038 | 0.0007 | 0.0030 |
| 243 | 0.0037 | 0.0007 | 0.0030 |
| 244 | 0.0037 | 0.0007 | 0.0029 |
| 245 | 0.0036 | 0.0007 | 0.0029 |
| 246 | 0.0036 | 0.0007 | 0.0029 |
| 247 | 0.0035 | 0.0007 | 0.0028 |
| 248 | 0.0035 | 0.0007 | 0.0028 |
| 249 | 0.0034 | 0.0007 | 0.0027 |
| 250 | 0.0034 | 0.0007 | 0.0027 |
| 251 | 0.0033 | 0.0007 | 0.0027 |
| 252 | 0.0033 | 0.0006 | 0.0026 |
| 253 | 0.0032 | 0.0006 | 0.0026 |
| 254 | 0.0032 | 0.0006 | 0.0026 |
| 255 | 0.0032 | 0.0006 | 0.0025 |
| 256 | 0.0031 | 0.0006 | 0.0025 |
| 257 | 0.0031 | 0.0006 | 0.0025 |
| 258 | 0.0031 | 0.0006 | 0.0025 |
| 259 | 0.0030 | 0.0006 | 0.0024 |
| 260 | 0.0030 | 0.0006 | 0.0024 |
| 261 | 0.0030 | 0.0006 | 0.0024 |
| 262 | 0.0029 | 0.0006 | 0.0023 |
| 263 | 0.0029 | 0.0006 | 0.0023 |
| 264 | 0.0029 | 0.0006 | 0.0023 |
| 265 | 0.0028 | 0.0006 | 0.0023 |
| 266 | 0.0028 | 0.0005 | 0.0023 |
| 267 | 0.0028 | 0.0005 | 0.0022 |
| 268 | 0.0027 | 0.0005 | 0.0022 |
| 269 | 0.0027 | 0.0005 | 0.0022 |
| 270 | 0.0027 | 0.0005 | 0.0022 |
| 271 | 0.0027 | 0.0005 | 0.0021 |
| 272 | 0.0026 | 0.0005 | 0.0021 |
| 273 | 0.0026 | 0.0005 | 0.0021 |
| 274 | 0.0026 | 0.0005 | 0.0021 |

| | | | |
|---|---|---|---|
| 275 | 0.0026 | 0.0005 | 0.0021 |
| 276 | 0.0025 | 0.0005 | 0.0020 |
| 277 | 0.0025 | 0.0005 | 0.0020 |
| 278 | 0.0025 | 0.0005 | 0.0020 |
| 279 | 0.0025 | 0.0005 | 0.0020 |
| 280 | 0.0025 | 0.0005 | 0.0020 |
| 281 | 0.0024 | 0.0005 | 0.0020 |
| 282 | 0.0024 | 0.0005 | 0.0019 |
| 283 | 0.0024 | 0.0005 | 0.0019 |
| 284 | 0.0024 | 0.0005 | 0.0019 |
| 285 | 0.0024 | 0.0005 | 0.0019 |
| 286 | 0.0023 | 0.0005 | 0.0019 |
| 287 | 0.0023 | 0.0005 | 0.0019 |
| 288 | 0.0023 | 0.0005 | 0.0019 |

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Total soil rain loss = 0.33(In)
Total effective rainfall = 2.28(In)
Peak flow rate in flood hydrograph = 123.15(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 50.0 | 100.0 | 150.0 | 200.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+10 | 0.0003 | 0.03 | Q | \| | \| | \| | \| |
| 0+15 | 0.0007 | 0.06 | Q | \| | \| | \| | \| |
| 0+20 | 0.0014 | 0.11 | Q | \| | \| | \| | \| |
| 0+25 | 0.0025 | 0.16 | Q | \| | \| | \| | \| |
| 0+30 | 0.0041 | 0.23 | Q | \| | \| | \| | \| |
| 0+35 | 0.0064 | 0.34 | Q | \| | \| | \| | \| |
| 0+40 | 0.0098 | 0.49 | Q | \| | \| | \| | \| |
| 0+45 | 0.0145 | 0.69 | Q | \| | \| | \| | \| |
| 0+50 | 0.0206 | 0.88 | Q | \| | \| | \| | \| |
| 0+55 | 0.0278 | 1.05 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0359 | 1.18 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0448 | 1.30 | Q | \| | \| | \| | \| |
| 1+10 | 0.0545 | 1.40 | Q | \| | \| | \| | \| |
| 1+15 | 0.0647 | 1.48 | Q | \| | \| | \| | \| |
| 1+20 | 0.0754 | 1.55 | Q | \| | \| | \| | \| |
| 1+25 | 0.0865 | 1.62 | Q | \| | \| | \| | \| |
| 1+30 | 0.0981 | 1.68 | Q | \| | \| | \| | \| |
| 1+35 | 0.1101 | 1.74 | Q | \| | \| | \| | \| |
| 1+40 | 0.1224 | 1.79 | Q | \| | \| | \| | \| |
| 1+45 | 0.1350 | 1.84 | Q | \| | \| | \| | \| |
| 1+50 | 0.1480 | 1.88 | Q | \| | \| | \| | \| |
| 1+55 | 0.1612 | 1.92 | Q | \| | \| | \| | \| |
| 2+ 0 | 0.1748 | 1.96 | Q | \| | \| | \| | \| |
| 2+ 5 | 0.1885 | 2.00 | Q | \| | \| | \| | \| |
| 2+10 | 0.2025 | 2.04 | Q | \| | \| | \| | \| |
| 2+15 | 0.2168 | 2.07 | Q | \| | \| | \| | \| |
| 2+20 | 0.2313 | 2.10 | Q | \| | \| | \| | \| |
| 2+25 | 0.2460 | 2.13 | Q | \| | \| | \| | \| |
| 2+30 | 0.2608 | 2.16 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+35 | 0.2759 | 2.19 | Q | | | | |
| 2+40 | 0.2912 | 2.22 | Q | | | | |
| 2+45 | 0.3067 | 2.25 | Q | | | | |
| 2+50 | 0.3224 | 2.27 | Q | | | | |
| 2+55 | 0.3382 | 2.30 | Q | | | | |
| 3+ 0 | 0.3542 | 2.33 | Q | | | | |
| 3+ 5 | 0.3704 | 2.35 | Q | | | | |
| 3+10 | 0.3867 | 2.37 | Q | | | | |
| 3+15 | 0.4032 | 2.39 | Q | | | | |
| 3+20 | 0.4199 | 2.42 | Q | | | | |
| 3+25 | 0.4367 | 2.44 | Q | | | | |
| 3+30 | 0.4536 | 2.46 | Q | | | | |
| 3+35 | 0.4707 | 2.48 | Q | | | | |
| 3+40 | 0.4879 | 2.50 | Q | | | | |
| 3+45 | 0.5053 | 2.52 | Q | | | | |
| 3+50 | 0.5228 | 2.54 | QV | | | | |
| 3+55 | 0.5405 | 2.56 | QV | | | | |
| 4+ 0 | 0.5583 | 2.58 | QV | | | | |
| 4+ 5 | 0.5762 | 2.60 | QV | | | | |
| 4+10 | 0.5943 | 2.62 | QV | | | | |
| 4+15 | 0.6125 | 2.64 | QV | | | | |
| 4+20 | 0.6308 | 2.66 | QV | | | | |
| 4+25 | 0.6493 | 2.68 | QV | | | | |
| 4+30 | 0.6679 | 2.70 | QV | | | | |
| 4+35 | 0.6866 | 2.72 | QV | | | | |
| 4+40 | 0.7055 | 2.74 | QV | | | | |
| 4+45 | 0.7245 | 2.76 | QV | | | | |
| 4+50 | 0.7436 | 2.78 | QV | | | | |
| 4+55 | 0.7628 | 2.80 | QV | | | | |
| 5+ 0 | 0.7822 | 2.81 | QV | | | | |
| 5+ 5 | 0.8017 | 2.83 | QV | | | | |
| 5+10 | 0.8213 | 2.85 | QV | | | | |
| 5+15 | 0.8411 | 2.87 | QV | | | | |
| 5+20 | 0.8610 | 2.89 | QV | | | | |
| 5+25 | 0.8810 | 2.91 | QV | | | | |
| 5+30 | 0.9011 | 2.92 | QV | | | | |
| 5+35 | 0.9214 | 2.94 | QV | | | | |
| 5+40 | 0.9417 | 2.96 | QV | | | | |
| 5+45 | 0.9622 | 2.98 | QV | | | | |
| 5+50 | 0.9829 | 2.99 | QV | | | | |
| 5+55 | 1.0036 | 3.01 | QV | | | | |
| 6+ 0 | 1.0245 | 3.03 | Q V | | | | |
| 6+ 5 | 1.0455 | 3.05 | Q V | | | | |
| 6+10 | 1.0667 | 3.07 | Q V | | | | |
| 6+15 | 1.0879 | 3.09 | Q V | | | | |
| 6+20 | 1.1094 | 3.11 | Q V | | | | |
| 6+25 | 1.1309 | 3.13 | Q V | | | | |
| 6+30 | 1.1526 | 3.15 | Q V | | | | |
| 6+35 | 1.1745 | 3.17 | Q V | | | | |
| 6+40 | 1.1965 | 3.19 | Q V | | | | |
| 6+45 | 1.2186 | 3.21 | Q V | | | | |
| 6+50 | 1.2409 | 3.24 | Q V | | | | |
| 6+55 | 1.2633 | 3.26 | Q V | | | | |
| 7+ 0 | 1.2859 | 3.28 | Q V | | | | |
| 7+ 5 | 1.3086 | 3.30 | Q V | | | | |
| 7+10 | 1.3315 | 3.32 | Q V | | | | |
| 7+15 | 1.3545 | 3.34 | Q V | | | | |
| 7+20 | 1.3777 | 3.37 | Q V | | | | |
| 7+25 | 1.4011 | 3.39 | Q V | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 7+30 | 1.4245 | 3.41 | Q V | \| | \| | \| |
| 7+35 | 1.4482 | 3.43 | Q V | \| | \| | \| |
| 7+40 | 1.4720 | 3.46 | Q V | \| | \| | \| |
| 7+45 | 1.4960 | 3.48 | Q V | \| | \| | \| |
| 7+50 | 1.5201 | 3.50 | Q V | \| | \| | \| |
| 7+55 | 1.5444 | 3.53 | Q V | \| | \| | \| |
| 8+ 0 | 1.5688 | 3.55 | Q V | \| | \| | \| |
| 8+ 5 | 1.5934 | 3.57 | Q V | \| | \| | \| |
| 8+10 | 1.6182 | 3.60 | Q V | \| | \| | \| |
| 8+15 | 1.6431 | 3.62 | Q V | \| | \| | \| |
| 8+20 | 1.6682 | 3.65 | Q V | \| | \| | \| |
| 8+25 | 1.6935 | 3.67 | Q V | \| | \| | \| |
| 8+30 | 1.7190 | 3.70 | Q V | \| | \| | \| |
| 8+35 | 1.7447 | 3.73 | Q V | \| | \| | \| |
| 8+40 | 1.7705 | 3.75 | Q V | \| | \| | \| |
| 8+45 | 1.7965 | 3.78 | Q V | \| | \| | \| |
| 8+50 | 1.8228 | 3.81 | Q V | \| | \| | \| |
| 8+55 | 1.8492 | 3.84 | Q V | \| | \| | \| |
| 9+ 0 | 1.8758 | 3.86 | Q V | \| | \| | \| |
| 9+ 5 | 1.9026 | 3.89 | Q V | \| | \| | \| |
| 9+10 | 1.9296 | 3.92 | Q V | \| | \| | \| |
| 9+15 | 1.9569 | 3.95 | Q V | \| | \| | \| |
| 9+20 | 1.9843 | 3.99 | Q V | \| | \| | \| |
| 9+25 | 2.0120 | 4.02 | Q V | \| | \| | \| |
| 9+30 | 2.0399 | 4.05 | Q V | \| | \| | \| |
| 9+35 | 2.0680 | 4.08 | Q V | \| | \| | \| |
| 9+40 | 2.0963 | 4.12 | Q V | \| | \| | \| |
| 9+45 | 2.1249 | 4.15 | Q V | \| | \| | \| |
| 9+50 | 2.1537 | 4.18 | Q V | \| | \| | \| |
| 9+55 | 2.1828 | 4.22 | Q V | \| | \| | \| |
| 10+ 0 | 2.2121 | 4.26 | Q V | \| | \| | \| |
| 10+ 5 | 2.2417 | 4.29 | Q V | \| | \| | \| |
| 10+10 | 2.2715 | 4.33 | Q V | \| | \| | \| |
| 10+15 | 2.3016 | 4.37 | Q V | \| | \| | \| |
| 10+20 | 2.3319 | 4.41 | Q V | \| | \| | \| |
| 10+25 | 2.3626 | 4.45 | Q V | \| | \| | \| |
| 10+30 | 2.3935 | 4.49 | Q V | \| | \| | \| |
| 10+35 | 2.4247 | 4.53 | Q V | \| | \| | \| |
| 10+40 | 2.4562 | 4.57 | Q V | \| | \| | \| |
| 10+45 | 2.4880 | 4.62 | Q V | \| | \| | \| |
| 10+50 | 2.5201 | 4.66 | Q V | \| | \| | \| |
| 10+55 | 2.5525 | 4.71 | Q V | \| | \| | \| |
| 11+ 0 | 2.5853 | 4.76 | Q V | \| | \| | \| |
| 11+ 5 | 2.6184 | 4.80 | Q V | \| | \| | \| |
| 11+10 | 2.6518 | 4.85 | Q V | \| | \| | \| |
| 11+15 | 2.6856 | 4.90 | Q V | \| | \| | \| |
| 11+20 | 2.7197 | 4.96 | Q V | \| | \| | \| |
| 11+25 | 2.7542 | 5.01 | \|Q V | \| | \| | \| |
| 11+30 | 2.7891 | 5.06 | \|Q V | \| | \| | \| |
| 11+35 | 2.8244 | 5.12 | \|Q V | \| | \| | \| |
| 11+40 | 2.8600 | 5.18 | \|Q V | \| | \| | \| |
| 11+45 | 2.8961 | 5.24 | \|Q V | \| | \| | \| |
| 11+50 | 2.9326 | 5.30 | \|Q V | \| | \| | \| |
| 11+55 | 2.9695 | 5.36 | \|Q V | \| | \| | \| |
| 12+ 0 | 3.0068 | 5.42 | \|Q V | \| | \| | \| |
| 12+ 5 | 3.0446 | 5.48 | \|Q V | \| | \| | \| |
| 12+10 | 3.0826 | 5.53 | \|Q V | \| | \| | \| |
| 12+15 | 3.1209 | 5.56 | \|Q V | \| | \| | \| |
| 12+20 | 3.1593 | 5.58 | \|Q V | \| | \| | \| |

```
12+25       3.1979      5.60  |Q    V   |          |          |          |
12+30       3.2364      5.59  |Q    V   |          |          |          |
12+35       3.2746      5.55  |Q    V   |          |          |          |
12+40       3.3122      5.46  |Q    V   |          |          |          |
12+45       3.3488      5.31  |Q    V   |          |          |          |
12+50       3.3846      5.19  |Q    V   |          |          |          |
12+55       3.4196      5.08  |Q    V   |          |          |          |
13+ 0       3.4541      5.02  |Q    V   |          |          |          |
13+ 5       3.4883      4.97  Q     V   |          |          |          |
13+10       3.5224      4.94  Q     V   |          |          |          |
13+15       3.5564      4.94  Q     V   |          |          |          |
13+20       3.5905      4.95  Q      V  |          |          |          |
13+25       3.6247      4.97  Q      V  |          |          |          |
13+30       3.6592      5.00  |Q     V  |          |          |          |
13+35       3.6939      5.04  |Q     V  |          |          |          |
13+40       3.7290      5.09  |Q     V  |          |          |          |
13+45       3.7644      5.14  |Q     V  |          |          |          |
13+50       3.8002      5.21  |Q     V  |          |          |          |
13+55       3.8366      5.28  |Q     V  |          |          |          |
14+ 0       3.8735      5.36  |Q     V  |          |          |          |
14+ 5       3.9110      5.45  |Q     V  |          |          |          |
14+10       3.9492      5.55  |Q     V  |          |          |          |
14+15       3.9882      5.65  |Q     V  |          |          |          |
14+20       4.0279      5.77  |Q     V  |          |          |          |
14+25       4.0686      5.90  |Q     V  |          |          |          |
14+30       4.1102      6.04  |Q      V |          |          |          |
14+35       4.1528      6.20  |Q      V |          |          |          |
14+40       4.1967      6.37  |Q      V |          |          |          |
14+45       4.2418      6.56  |Q      V |          |          |          |
14+50       4.2884      6.76  |Q      V |          |          |          |
14+55       4.3365      6.98  |Q      V |          |          |          |
15+ 0       4.3862      7.22  |Q      V |          |          |          |
15+ 5       4.4377      7.48  |Q      V |          |          |          |
15+10       4.4912      7.76  |Q      V |          |          |          |
15+15       4.5468      8.08  |Q      V |          |          |          |
15+20       4.6049      8.43  |Q       V|          |          |          |
15+25       4.6661      8.89  |Q       V|          |          |          |
15+30       4.7314      9.48  |Q       V|          |          |          |
15+35       4.8020     10.26  | Q      V|          |          |          |
15+40       4.8793     11.22  | Q      V|          |          |          |
15+45       4.9649     12.43  | Q      V|          |          |          |
15+50       5.0612     13.98  | Q      V|          |          |          |
15+55       5.1730     16.25  |  Q      V          |          |          |
16+ 0       5.3075     19.52  |  Q      V          |          |          |
16+ 5       5.4902     26.53  |    Q    V          |          |          |
16+10       5.7284     34.58  |     Q   |V         |          |          |
16+15       6.0254     43.13  |       Q |V         |          |          |
16+20       6.3791     51.35  |         Q V        |          |          |
16+25       6.7921     59.96  |         |Q V       |          |          |
16+30       7.2771     70.43  |         |   Q      |          |          |
16+35       7.8883     88.74  |         |    V Q   |          |          |
16+40       8.6173    105.85  |         |     V    |Q         |          |
16+45       9.4654    123.15  |         |       V  |   Q      |          |
16+50      10.2588    115.20  |         |          V  Q       |          |
16+55      10.9733    103.75  |         |          QV         |          |
17+ 0      11.5881     89.27  |         |       Q  | V        |          |
17+ 5      12.1274     78.31  |         |    Q     |  V       |          |
17+10      12.6008     68.73  |         |  Q       |   V      |          |
17+15      13.0070     58.98  |         |Q         |    V     |          |
```

```
17+20      13.3674     52.33  |         Q          |     V    |          |
17+25      13.6946     47.51  |        Q|          |     V    |          |
17+30      13.9933     43.38  |       Q |          |      V   |          |
17+35      14.2709     40.31  |       Q |          |       V  |          |
17+40      14.5269     37.17  |      Q  |          |       V  |          |
17+45      14.7619     34.13  |     Q   |          |       V  |          |
17+50      14.9803     31.70  |     Q   |          |        V|          |
17+55      15.1870     30.01  |     Q   |          |        V|          |
18+ 0      15.3813     28.22  |    Q    |          |         V          |
18+ 5      15.5576     25.60  |    Q    |          |         V          |
18+10      15.7264     24.51  |   Q     |          |         V          |
18+15      15.8874     23.37  |   Q     |          |          |V        |
18+20      16.0363     21.62  |   Q     |          |          |V        |
18+25      16.1804     20.93  |   Q     |          |          |V        |
18+30      16.3194     20.18  |   Q     |          |          | V       |
18+35      16.4518     19.22  |  Q      |          |          | V       |
18+40      16.5811     18.78  |  Q      |          |          | V       |
18+45      16.7058     18.11  |  Q      |          |          | V       |
18+50      16.8237     17.12  |  Q      |          |          |  V      |
18+55      16.9387     16.70  |  Q      |          |          |  V      |
19+ 0      17.0478     15.83  |  Q      |          |          |  V      |
19+ 5      17.1493     14.74  | Q       |          |          |  V      |
19+10      17.2487     14.43  | Q       |          |          |  V      |
19+15      17.3455     14.06  | Q       |          |          |   V     |
19+20      17.4396     13.66  | Q       |          |          |   V     |
19+25      17.5318     13.39  | Q       |          |          |   V     |
19+30      17.6205     12.87  | Q       |          |          |   V     |
19+35      17.7058     12.39  | Q       |          |          |   V     |
19+40      17.7894     12.15  | Q       |          |          |   V     |
19+45      17.8705     11.77  | Q       |          |          |    V    |
19+50      17.9492     11.43  | Q       |          |          |    V    |
19+55      18.0261     11.15  | Q       |          |          |    V    |
20+ 0      18.0985     10.52  | Q       |          |          |    V    |
20+ 5      18.1680     10.09  | Q       |          |          |    V    |
20+10      18.2362      9.91  |Q        |          |          |    V    |
20+15      18.3033      9.74  |Q        |          |          |    V    |
20+20      18.3691      9.55  |Q        |          |          |     V   |
20+25      18.4332      9.31  |Q        |          |          |     V   |
20+30      18.4936      8.77  |Q        |          |          |     V   |
20+35      18.5519      8.47  |Q        |          |          |     V   |
20+40      18.6092      8.31  |Q        |          |          |     V   |
20+45      18.6654      8.16  |Q        |          |          |     V   |
20+50      18.7204      7.99  |Q        |          |          |     V   |
20+55      18.7737      7.73  |Q        |          |          |     V   |
21+ 0      18.8232      7.19  |Q        |          |          |     V   |
21+ 5      18.8710      6.95  |Q        |          |          |      V  |
21+10      18.9179      6.81  |Q        |          |          |      V  |
21+15      18.9639      6.67  |Q        |          |          |      V  |
21+20      19.0088      6.52  |Q        |          |          |      V  |
21+25      19.0519      6.27  |Q        |          |          |      V  |
21+30      19.0917      5.77  |Q        |          |          |      V  |
21+35      19.1303      5.61  |Q        |          |          |      V  |
21+40      19.1684      5.53  |Q        |          |          |      V  |
21+45      19.2061      5.47  |Q        |          |          |      V  |
21+50      19.2435      5.43  |Q        |          |          |      V  |
21+55      19.2809      5.43  |Q        |          |          |      V  |
22+ 0      19.3186      5.48  |Q        |          |          |      V  |
22+ 5      19.3561      5.44  |Q        |          |          |       V |
22+10      19.3933      5.40  |Q        |          |          |       V |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+15 | 19.4301 | 5.34 | \|Q | \| | \| | \| | V \| |
| 22+20 | 19.4665 | 5.28 | \|Q | \| | \| | \| | V \| |
| 22+25 | 19.5024 | 5.22 | \|Q | \| | \| | \| | V \| |
| 22+30 | 19.5380 | 5.16 | \|Q | \| | \| | \| | V \| |
| 22+35 | 19.5730 | 5.09 | \|Q | \| | \| | \| | V \| |
| 22+40 | 19.6075 | 5.01 | \|Q | \| | \| | \| | V \| |
| 22+45 | 19.6414 | 4.92 | Q | \| | \| | \| | V \| |
| 22+50 | 19.6745 | 4.81 | Q | \| | \| | \| | V \| |
| 22+55 | 19.7056 | 4.51 | Q | \| | \| | \| | V \| |
| 23+ 0 | 19.7348 | 4.24 | Q | \| | \| | \| | V \| |
| 23+ 5 | 19.7634 | 4.15 | Q | \| | \| | \| | V \| |
| 23+10 | 19.7915 | 4.08 | Q | \| | \| | \| | V \| |
| 23+15 | 19.8191 | 4.01 | Q | \| | \| | \| | V \| |
| 23+20 | 19.8462 | 3.95 | Q | \| | \| | \| | V \| |
| 23+25 | 19.8729 | 3.88 | Q | \| | \| | \| | V\| |
| 23+30 | 19.8991 | 3.80 | Q | \| | \| | \| | V\| |
| 23+35 | 19.9245 | 3.69 | Q | \| | \| | \| | V\| |
| 23+40 | 19.9487 | 3.51 | Q | \| | \| | \| | V\| |
| 23+45 | 19.9699 | 3.09 | Q | \| | \| | \| | V\| |
| 23+50 | 19.9907 | 3.01 | Q | \| | \| | \| | V\| |
| 23+55 | 20.0110 | 2.95 | Q | \| | \| | \| | V\| |
| 24+ 0 | 20.0310 | 2.90 | Q | \| | \| | \| | V\| |
| 24+ 5 | 20.0507 | 2.86 | Q | \| | \| | \| | V\| |
| 24+10 | 20.0700 | 2.81 | Q | \| | \| | \| | V\| |
| 24+15 | 20.0890 | 2.75 | Q | \| | \| | \| | V\| |
| 24+20 | 20.1074 | 2.67 | Q | \| | \| | \| | V\| |
| 24+25 | 20.1252 | 2.59 | Q | \| | \| | \| | V\| |
| 24+30 | 20.1424 | 2.50 | Q | \| | \| | \| | V\| |
| 24+35 | 20.1588 | 2.37 | Q | \| | \| | \| | V\| |
| 24+40 | 20.1739 | 2.20 | Q | \| | \| | \| | V\| |
| 24+45 | 20.1875 | 1.97 | Q | \| | \| | \| | V\| |
| 24+50 | 20.1997 | 1.77 | Q | \| | \| | \| | V\| |
| 24+55 | 20.2106 | 1.59 | Q | \| | \| | \| | V\| |
| 25+ 0 | 20.2206 | 1.45 | Q | \| | \| | \| | V\| |
| 25+ 5 | 20.2297 | 1.32 | Q | \| | \| | \| | V\| |
| 25+10 | 20.2380 | 1.21 | Q | \| | \| | \| | V\| |
| 25+15 | 20.2458 | 1.12 | Q | \| | \| | \| | V\| |
| 25+20 | 20.2530 | 1.04 | Q | \| | \| | \| | V\| |
| 25+25 | 20.2597 | 0.98 | Q | \| | \| | \| | V\| |
| 25+30 | 20.2660 | 0.91 | Q | \| | \| | \| | V\| |
| 25+35 | 20.2719 | 0.85 | Q | \| | \| | \| | V\| |
| 25+40 | 20.2774 | 0.80 | Q | \| | \| | \| | V\| |
| 25+45 | 20.2826 | 0.75 | Q | \| | \| | \| | V\| |
| 25+50 | 20.2874 | 0.71 | Q | \| | \| | \| | V\| |
| 25+55 | 20.2920 | 0.67 | Q | \| | \| | \| | V\| |
| 26+ 0 | 20.2963 | 0.63 | Q | \| | \| | \| | V\| |
| 26+ 5 | 20.3004 | 0.59 | Q | \| | \| | \| | V\| |
| 26+10 | 20.3042 | 0.56 | Q | \| | \| | \| | V\| |
| 26+15 | 20.3079 | 0.53 | Q | \| | \| | \| | V\| |
| 26+20 | 20.3113 | 0.50 | Q | \| | \| | \| | V\| |
| 26+25 | 20.3146 | 0.47 | Q | \| | \| | \| | V\| |
| 26+30 | 20.3176 | 0.45 | Q | \| | \| | \| | V\| |
| 26+35 | 20.3205 | 0.42 | Q | \| | \| | \| | V\| |
| 26+40 | 20.3233 | 0.40 | Q | \| | \| | \| | V\| |
| 26+45 | 20.3258 | 0.37 | Q | \| | \| | \| | V\| |
| 26+50 | 20.3283 | 0.35 | Q | \| | \| | \| | V\| |
| 26+55 | 20.3306 | 0.33 | Q | \| | \| | \| | V\| |
| 27+ 0 | 20.3328 | 0.32 | Q | \| | \| | \| | V\| |
| 27+ 5 | 20.3348 | 0.30 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 27+10 | 20.3368 | 0.29 | Q | \| | \| | \| | V\| |
| 27+15 | 20.3387 | 0.27 | Q | \| | \| | \| | V\| |
| 27+20 | 20.3404 | 0.26 | Q | \| | \| | \| | V\| |
| 27+25 | 20.3421 | 0.24 | Q | \| | \| | \| | V\| |
| 27+30 | 20.3437 | 0.23 | Q | \| | \| | \| | V\| |
| 27+35 | 20.3452 | 0.22 | Q | \| | \| | \| | V\| |
| 27+40 | 20.3466 | 0.21 | Q | \| | \| | \| | V\| |
| 27+45 | 20.3479 | 0.19 | Q | \| | \| | \| | V\| |
| 27+50 | 20.3492 | 0.18 | Q | \| | \| | \| | V\| |
| 27+55 | 20.3504 | 0.17 | Q | \| | \| | \| | V\| |
| 28+ 0 | 20.3515 | 0.16 | Q | \| | \| | \| | V\| |
| 28+ 5 | 20.3526 | 0.16 | Q | \| | \| | \| | V\| |
| 28+10 | 20.3536 | 0.15 | Q | \| | \| | \| | V\| |
| 28+15 | 20.3546 | 0.14 | Q | \| | \| | \| | V\| |
| 28+20 | 20.3555 | 0.13 | Q | \| | \| | \| | V\| |
| 28+25 | 20.3563 | 0.12 | Q | \| | \| | \| | V\| |
| 28+30 | 20.3571 | 0.12 | Q | \| | \| | \| | V\| |
| 28+35 | 20.3578 | 0.11 | Q | \| | \| | \| | V\| |
| 28+40 | 20.3586 | 0.10 | Q | \| | \| | \| | V\| |
| 28+45 | 20.3592 | 0.10 | Q | \| | \| | \| | V\| |
| 28+50 | 20.3598 | 0.09 | Q | \| | \| | \| | V\| |
| 28+55 | 20.3604 | 0.08 | Q | \| | \| | \| | V\| |
| 29+ 0 | 20.3610 | 0.08 | Q | \| | \| | \| | V\| |
| 29+ 5 | 20.3615 | 0.08 | Q | \| | \| | \| | V\| |
| 29+10 | 20.3620 | 0.07 | Q | \| | \| | \| | V\| |
| 29+15 | 20.3624 | 0.07 | Q | \| | \| | \| | V\| |
| 29+20 | 20.3629 | 0.06 | Q | \| | \| | \| | V\| |
| 29+25 | 20.3633 | 0.06 | Q | \| | \| | \| | V\| |
| 29+30 | 20.3637 | 0.06 | Q | \| | \| | \| | V\| |
| 29+35 | 20.3640 | 0.05 | Q | \| | \| | \| | V\| |
| 29+40 | 20.3644 | 0.05 | Q | \| | \| | \| | V\| |
| 29+45 | 20.3647 | 0.05 | Q | \| | \| | \| | V\| |
| 29+50 | 20.3650 | 0.05 | Q | \| | \| | \| | V\| |
| 29+55 | 20.3653 | 0.04 | Q | \| | \| | \| | V\| |
| 30+ 0 | 20.3656 | 0.04 | Q | \| | \| | \| | V\| |
| 30+ 5 | 20.3658 | 0.04 | Q | \| | \| | \| | V\| |
| 30+10 | 20.3661 | 0.03 | Q | \| | \| | \| | V\| |
| 30+15 | 20.3663 | 0.03 | Q | \| | \| | \| | V\| |
| 30+20 | 20.3665 | 0.03 | Q | \| | \| | \| | V\| |
| 30+25 | 20.3667 | 0.03 | Q | \| | \| | \| | V\| |
| 30+30 | 20.3669 | 0.02 | Q | \| | \| | \| | V\| |
| 30+35 | 20.3670 | 0.02 | Q | \| | \| | \| | V\| |
| 30+40 | 20.3671 | 0.02 | Q | \| | \| | \| | V\| |
| 30+45 | 20.3673 | 0.02 | Q | \| | \| | \| | V\| |
| 30+50 | 20.3673 | 0.01 | Q | \| | \| | \| | V\| |
| 30+55 | 20.3674 | 0.01 | Q | \| | \| | \| | V\| |
| 31+ 0 | 20.3675 | 0.01 | Q | \| | \| | \| | V\| |
| 31+ 5 | 20.3676 | 0.01 | Q | \| | \| | \| | V\| |
| 31+10 | 20.3676 | 0.01 | Q | \| | \| | \| | V\| |
| 31+15 | 20.3677 | 0.01 | Q | \| | \| | \| | V\| |
| 31+20 | 20.3677 | 0.00 | Q | \| | \| | \| | V\| |
| 31+25 | 20.3677 | 0.00 | Q | \| | \| | \| | V\| |
| 31+30 | 20.3677 | 0.00 | Q | \| | \| | \| | V\| |
| 31+35 | 20.3677 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 35
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 33.10 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 33.10 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 33.10 | 24 | 2.62 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 82.9 | 95.7 | 33.10 | 1.000 | 0.084 | 1.000 | 0.084 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.084

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 33.10 | 1.000 | 82.9 | 95.7 | 0.44 | 0.822 |

Area-averaged catchment yield fraction, Y = 0.822
Area-averaged low loss fraction, Yb = 0.178
User entry of time of concentration = 0.640 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 33.10(Ac.)
Catchment Lag time = 0.512 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 16.2760
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.084(In/Hr)
Average low loss rate fraction (Yb) = 0.178 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.651(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.620(In)

Rainfall depth area reduction factors:
Using a total area of 33.10(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.659(In)
30-minute factor = 0.998 Adjusted rainfall = 1.127(In)
1-hour factor = 0.998 Adjusted rainfall = 1.388(In)
3-hour factor = 1.000 Adjusted rainfall = 1.650(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.620(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 400.30 (CFS)) | |
| 1 | 0.751 | 3.007 |
| 2 | 3.242 | 9.970 |
| 3 | 7.438 | 16.798 |
| 4 | 15.051 | 30.475 |
| 5 | 29.290 | 56.998 |
| 6 | 43.043 | 55.055 |
| 7 | 52.984 | 39.794 |
| 8 | 60.115 | 28.545 |
| 9 | 65.345 | 20.936 |
| 10 | 69.600 | 17.033 |
| 11 | 73.168 | 14.281 |
| 12 | 76.128 | 11.849 |
| 13 | 78.731 | 10.422 |
| 14 | 80.898 | 8.673 |

| | | |
|---|---|---|
| 15 | 82.788 | 7.567 |
| 16 | 84.506 | 6.876 |
| 17 | 86.080 | 6.300 |
| 18 | 87.486 | 5.631 |
| 19 | 88.736 | 5.002 |
| 20 | 89.743 | 4.031 |
| 21 | 90.685 | 3.771 |
| 22 | 91.580 | 3.584 |
| 23 | 92.378 | 3.194 |
| 24 | 93.129 | 3.007 |
| 25 | 93.831 | 2.808 |
| 26 | 94.411 | 2.323 |
| 27 | 94.965 | 2.215 |
| 28 | 95.510 | 2.183 |
| 29 | 95.961 | 1.803 |
| 30 | 96.384 | 1.694 |
| 31 | 96.802 | 1.674 |
| 32 | 97.129 | 1.308 |
| 33 | 97.421 | 1.173 |
| 34 | 97.712 | 1.161 |
| 35 | 97.915 | 0.815 |
| 36 | 98.078 | 0.652 |
| 37 | 98.241 | 0.653 |
| 38 | 98.424 | 0.733 |
| 39 | 98.620 | 0.782 |
| 40 | 98.815 | 0.782 |
| 41 | 99.010 | 0.782 |
| 42 | 99.205 | 0.782 |
| 43 | 99.401 | 0.782 |
| 44 | 99.550 | 0.598 |
| 45 | 99.652 | 0.407 |
| 46 | 99.753 | 0.407 |
| 47 | 99.855 | 0.407 |
| 48 | 100.000 | 0.204 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6585 | 0.6585 |
| 2 | 0.8108 | 0.1522 |
| 3 | 0.9156 | 0.1049 |
| 4 | 0.9982 | 0.0825 |
| 5 | 1.0673 | 0.0691 |
| 6 | 1.1273 | 0.0600 |
| 7 | 1.1806 | 0.0534 |
| 8 | 1.2289 | 0.0483 |
| 9 | 1.2731 | 0.0442 |
| 10 | 1.3140 | 0.0409 |
| 11 | 1.3521 | 0.0381 |
| 12 | 1.3878 | 0.0358 |
| 13 | 1.4055 | 0.0176 |
| 14 | 1.4220 | 0.0165 |
| 15 | 1.4376 | 0.0156 |
| 16 | 1.4523 | 0.0147 |
| 17 | 1.4662 | 0.0140 |
| 18 | 1.4795 | 0.0133 |
| 19 | 1.4922 | 0.0127 |
| 20 | 1.5043 | 0.0121 |
| 21 | 1.5159 | 0.0116 |
| 22 | 1.5271 | 0.0112 |

| | | |
|---|---|---|
| 23 | 1.5379 | 0.0107 |
| 24 | 1.5482 | 0.0104 |
| 25 | 1.5582 | 0.0100 |
| 26 | 1.5679 | 0.0097 |
| 27 | 1.5773 | 0.0094 |
| 28 | 1.5863 | 0.0091 |
| 29 | 1.5951 | 0.0088 |
| 30 | 1.6037 | 0.0086 |
| 31 | 1.6120 | 0.0083 |
| 32 | 1.6201 | 0.0081 |
| 33 | 1.6280 | 0.0079 |
| 34 | 1.6357 | 0.0077 |
| 35 | 1.6432 | 0.0075 |
| 36 | 1.6505 | 0.0073 |
| 37 | 1.6576 | 0.0071 |
| 38 | 1.6645 | 0.0069 |
| 39 | 1.6713 | 0.0068 |
| 40 | 1.6780 | 0.0066 |
| 41 | 1.6845 | 0.0065 |
| 42 | 1.6908 | 0.0064 |
| 43 | 1.6971 | 0.0062 |
| 44 | 1.7032 | 0.0061 |
| 45 | 1.7092 | 0.0060 |
| 46 | 1.7151 | 0.0059 |
| 47 | 1.7209 | 0.0058 |
| 48 | 1.7266 | 0.0057 |
| 49 | 1.7322 | 0.0056 |
| 50 | 1.7377 | 0.0055 |
| 51 | 1.7431 | 0.0054 |
| 52 | 1.7484 | 0.0053 |
| 53 | 1.7536 | 0.0052 |
| 54 | 1.7587 | 0.0051 |
| 55 | 1.7638 | 0.0051 |
| 56 | 1.7688 | 0.0050 |
| 57 | 1.7737 | 0.0049 |
| 58 | 1.7785 | 0.0048 |
| 59 | 1.7833 | 0.0048 |
| 60 | 1.7880 | 0.0047 |
| 61 | 1.7926 | 0.0046 |
| 62 | 1.7972 | 0.0046 |
| 63 | 1.8017 | 0.0045 |
| 64 | 1.8062 | 0.0045 |
| 65 | 1.8106 | 0.0044 |
| 66 | 1.8149 | 0.0043 |
| 67 | 1.8192 | 0.0043 |
| 68 | 1.8234 | 0.0042 |
| 69 | 1.8276 | 0.0042 |
| 70 | 1.8317 | 0.0041 |
| 71 | 1.8358 | 0.0041 |
| 72 | 1.8398 | 0.0040 |
| 73 | 1.8463 | 0.0065 |
| 74 | 1.8527 | 0.0064 |
| 75 | 1.8591 | 0.0064 |
| 76 | 1.8653 | 0.0063 |
| 77 | 1.8716 | 0.0062 |
| 78 | 1.8777 | 0.0062 |
| 79 | 1.8839 | 0.0061 |
| 80 | 1.8899 | 0.0061 |
| 81 | 1.8959 | 0.0060 |

| | | |
|---|---|---|
| 82 | 1.9018 | 0.0059 |
| 83 | 1.9077 | 0.0059 |
| 84 | 1.9136 | 0.0058 |
| 85 | 1.9193 | 0.0058 |
| 86 | 1.9251 | 0.0057 |
| 87 | 1.9308 | 0.0057 |
| 88 | 1.9364 | 0.0056 |
| 89 | 1.9420 | 0.0056 |
| 90 | 1.9475 | 0.0055 |
| 91 | 1.9530 | 0.0055 |
| 92 | 1.9585 | 0.0054 |
| 93 | 1.9639 | 0.0054 |
| 94 | 1.9692 | 0.0054 |
| 95 | 1.9746 | 0.0053 |
| 96 | 1.9798 | 0.0053 |
| 97 | 1.9851 | 0.0052 |
| 98 | 1.9903 | 0.0052 |
| 99 | 1.9954 | 0.0052 |
| 100 | 2.0006 | 0.0051 |
| 101 | 2.0056 | 0.0051 |
| 102 | 2.0107 | 0.0050 |
| 103 | 2.0157 | 0.0050 |
| 104 | 2.0207 | 0.0050 |
| 105 | 2.0256 | 0.0049 |
| 106 | 2.0305 | 0.0049 |
| 107 | 2.0354 | 0.0049 |
| 108 | 2.0402 | 0.0048 |
| 109 | 2.0450 | 0.0048 |
| 110 | 2.0498 | 0.0048 |
| 111 | 2.0545 | 0.0047 |
| 112 | 2.0592 | 0.0047 |
| 113 | 2.0639 | 0.0047 |
| 114 | 2.0685 | 0.0046 |
| 115 | 2.0731 | 0.0046 |
| 116 | 2.0777 | 0.0046 |
| 117 | 2.0823 | 0.0046 |
| 118 | 2.0868 | 0.0045 |
| 119 | 2.0913 | 0.0045 |
| 120 | 2.0957 | 0.0045 |
| 121 | 2.1002 | 0.0044 |
| 122 | 2.1046 | 0.0044 |
| 123 | 2.1090 | 0.0044 |
| 124 | 2.1133 | 0.0044 |
| 125 | 2.1177 | 0.0043 |
| 126 | 2.1220 | 0.0043 |
| 127 | 2.1263 | 0.0043 |
| 128 | 2.1305 | 0.0043 |
| 129 | 2.1348 | 0.0042 |
| 130 | 2.1390 | 0.0042 |
| 131 | 2.1431 | 0.0042 |
| 132 | 2.1473 | 0.0042 |
| 133 | 2.1514 | 0.0041 |
| 134 | 2.1556 | 0.0041 |
| 135 | 2.1596 | 0.0041 |
| 136 | 2.1637 | 0.0041 |
| 137 | 2.1678 | 0.0040 |
| 138 | 2.1718 | 0.0040 |
| 139 | 2.1758 | 0.0040 |
| 140 | 2.1798 | 0.0040 |

| | | |
|---|---|---|
| 141 | 2.1837 | 0.0040 |
| 142 | 2.1877 | 0.0039 |
| 143 | 2.1916 | 0.0039 |
| 144 | 2.1955 | 0.0039 |
| 145 | 2.1994 | 0.0039 |
| 146 | 2.2032 | 0.0039 |
| 147 | 2.2070 | 0.0038 |
| 148 | 2.2109 | 0.0038 |
| 149 | 2.2147 | 0.0038 |
| 150 | 2.2184 | 0.0038 |
| 151 | 2.2222 | 0.0038 |
| 152 | 2.2259 | 0.0037 |
| 153 | 2.2297 | 0.0037 |
| 154 | 2.2334 | 0.0037 |
| 155 | 2.2371 | 0.0037 |
| 156 | 2.2407 | 0.0037 |
| 157 | 2.2444 | 0.0037 |
| 158 | 2.2480 | 0.0036 |
| 159 | 2.2516 | 0.0036 |
| 160 | 2.2553 | 0.0036 |
| 161 | 2.2588 | 0.0036 |
| 162 | 2.2624 | 0.0036 |
| 163 | 2.2660 | 0.0036 |
| 164 | 2.2695 | 0.0035 |
| 165 | 2.2730 | 0.0035 |
| 166 | 2.2765 | 0.0035 |
| 167 | 2.2800 | 0.0035 |
| 168 | 2.2835 | 0.0035 |
| 169 | 2.2869 | 0.0035 |
| 170 | 2.2904 | 0.0034 |
| 171 | 2.2938 | 0.0034 |
| 172 | 2.2972 | 0.0034 |
| 173 | 2.3006 | 0.0034 |
| 174 | 2.3040 | 0.0034 |
| 175 | 2.3074 | 0.0034 |
| 176 | 2.3107 | 0.0034 |
| 177 | 2.3141 | 0.0033 |
| 178 | 2.3174 | 0.0033 |
| 179 | 2.3207 | 0.0033 |
| 180 | 2.3240 | 0.0033 |
| 181 | 2.3273 | 0.0033 |
| 182 | 2.3306 | 0.0033 |
| 183 | 2.3338 | 0.0033 |
| 184 | 2.3371 | 0.0032 |
| 185 | 2.3403 | 0.0032 |
| 186 | 2.3435 | 0.0032 |
| 187 | 2.3467 | 0.0032 |
| 188 | 2.3499 | 0.0032 |
| 189 | 2.3531 | 0.0032 |
| 190 | 2.3563 | 0.0032 |
| 191 | 2.3594 | 0.0032 |
| 192 | 2.3626 | 0.0031 |
| 193 | 2.3657 | 0.0031 |
| 194 | 2.3688 | 0.0031 |
| 195 | 2.3719 | 0.0031 |
| 196 | 2.3750 | 0.0031 |
| 197 | 2.3781 | 0.0031 |
| 198 | 2.3812 | 0.0031 |
| 199 | 2.3842 | 0.0031 |

| | | |
|---|---|---|
| 200 | 2.3873 | 0.0030 |
| 201 | 2.3903 | 0.0030 |
| 202 | 2.3934 | 0.0030 |
| 203 | 2.3964 | 0.0030 |
| 204 | 2.3994 | 0.0030 |
| 205 | 2.4024 | 0.0030 |
| 206 | 2.4053 | 0.0030 |
| 207 | 2.4083 | 0.0030 |
| 208 | 2.4113 | 0.0030 |
| 209 | 2.4142 | 0.0030 |
| 210 | 2.4172 | 0.0029 |
| 211 | 2.4201 | 0.0029 |
| 212 | 2.4230 | 0.0029 |
| 213 | 2.4259 | 0.0029 |
| 214 | 2.4288 | 0.0029 |
| 215 | 2.4317 | 0.0029 |
| 216 | 2.4346 | 0.0029 |
| 217 | 2.4375 | 0.0029 |
| 218 | 2.4403 | 0.0029 |
| 219 | 2.4432 | 0.0028 |
| 220 | 2.4460 | 0.0028 |
| 221 | 2.4488 | 0.0028 |
| 222 | 2.4517 | 0.0028 |
| 223 | 2.4545 | 0.0028 |
| 224 | 2.4573 | 0.0028 |
| 225 | 2.4601 | 0.0028 |
| 226 | 2.4629 | 0.0028 |
| 227 | 2.4656 | 0.0028 |
| 228 | 2.4684 | 0.0028 |
| 229 | 2.4711 | 0.0028 |
| 230 | 2.4739 | 0.0027 |
| 231 | 2.4766 | 0.0027 |
| 232 | 2.4794 | 0.0027 |
| 233 | 2.4821 | 0.0027 |
| 234 | 2.4848 | 0.0027 |
| 235 | 2.4875 | 0.0027 |
| 236 | 2.4902 | 0.0027 |
| 237 | 2.4929 | 0.0027 |
| 238 | 2.4956 | 0.0027 |
| 239 | 2.4982 | 0.0027 |
| 240 | 2.5009 | 0.0027 |
| 241 | 2.5035 | 0.0027 |
| 242 | 2.5062 | 0.0026 |
| 243 | 2.5088 | 0.0026 |
| 244 | 2.5114 | 0.0026 |
| 245 | 2.5141 | 0.0026 |
| 246 | 2.5167 | 0.0026 |
| 247 | 2.5193 | 0.0026 |
| 248 | 2.5219 | 0.0026 |
| 249 | 2.5245 | 0.0026 |
| 250 | 2.5271 | 0.0026 |
| 251 | 2.5296 | 0.0026 |
| 252 | 2.5322 | 0.0026 |
| 253 | 2.5348 | 0.0026 |
| 254 | 2.5373 | 0.0026 |
| 255 | 2.5398 | 0.0025 |
| 256 | 2.5424 | 0.0025 |
| 257 | 2.5449 | 0.0025 |
| 258 | 2.5474 | 0.0025 |

| | | |
|---|---|---|
| 259 | 2.5499 | 0.0025 |
| 260 | 2.5525 | 0.0025 |
| 261 | 2.5550 | 0.0025 |
| 262 | 2.5574 | 0.0025 |
| 263 | 2.5599 | 0.0025 |
| 264 | 2.5624 | 0.0025 |
| 265 | 2.5649 | 0.0025 |
| 266 | 2.5673 | 0.0025 |
| 267 | 2.5698 | 0.0025 |
| 268 | 2.5723 | 0.0025 |
| 269 | 2.5747 | 0.0024 |
| 270 | 2.5771 | 0.0024 |
| 271 | 2.5796 | 0.0024 |
| 272 | 2.5820 | 0.0024 |
| 273 | 2.5844 | 0.0024 |
| 274 | 2.5868 | 0.0024 |
| 275 | 2.5892 | 0.0024 |
| 276 | 2.5916 | 0.0024 |
| 277 | 2.5940 | 0.0024 |
| 278 | 2.5964 | 0.0024 |
| 279 | 2.5988 | 0.0024 |
| 280 | 2.6011 | 0.0024 |
| 281 | 2.6035 | 0.0024 |
| 282 | 2.6059 | 0.0024 |
| 283 | 2.6082 | 0.0024 |
| 284 | 2.6106 | 0.0023 |
| 285 | 2.6129 | 0.0023 |
| 286 | 2.6152 | 0.0023 |
| 287 | 2.6176 | 0.0023 |
| 288 | 2.6199 | 0.0023 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0023 | 0.0004 | 0.0019 |
| 2 | 0.0023 | 0.0004 | 0.0019 |
| 3 | 0.0023 | 0.0004 | 0.0019 |
| 4 | 0.0023 | 0.0004 | 0.0019 |
| 5 | 0.0024 | 0.0004 | 0.0019 |
| 6 | 0.0024 | 0.0004 | 0.0019 |
| 7 | 0.0024 | 0.0004 | 0.0020 |
| 8 | 0.0024 | 0.0004 | 0.0020 |
| 9 | 0.0024 | 0.0004 | 0.0020 |
| 10 | 0.0024 | 0.0004 | 0.0020 |
| 11 | 0.0024 | 0.0004 | 0.0020 |
| 12 | 0.0024 | 0.0004 | 0.0020 |
| 13 | 0.0024 | 0.0004 | 0.0020 |
| 14 | 0.0024 | 0.0004 | 0.0020 |
| 15 | 0.0025 | 0.0004 | 0.0020 |
| 16 | 0.0025 | 0.0004 | 0.0020 |
| 17 | 0.0025 | 0.0004 | 0.0020 |
| 18 | 0.0025 | 0.0004 | 0.0020 |
| 19 | 0.0025 | 0.0004 | 0.0021 |
| 20 | 0.0025 | 0.0004 | 0.0021 |
| 21 | 0.0025 | 0.0004 | 0.0021 |
| 22 | 0.0025 | 0.0005 | 0.0021 |
| 23 | 0.0025 | 0.0005 | 0.0021 |
| 24 | 0.0026 | 0.0005 | 0.0021 |

| | | | |
|---|---|---|---|
| 25 | 0.0026 | 0.0005 | 0.0021 |
| 26 | 0.0026 | 0.0005 | 0.0021 |
| 27 | 0.0026 | 0.0005 | 0.0021 |
| 28 | 0.0026 | 0.0005 | 0.0021 |
| 29 | 0.0026 | 0.0005 | 0.0021 |
| 30 | 0.0026 | 0.0005 | 0.0022 |
| 31 | 0.0026 | 0.0005 | 0.0022 |
| 32 | 0.0026 | 0.0005 | 0.0022 |
| 33 | 0.0027 | 0.0005 | 0.0022 |
| 34 | 0.0027 | 0.0005 | 0.0022 |
| 35 | 0.0027 | 0.0005 | 0.0022 |
| 36 | 0.0027 | 0.0005 | 0.0022 |
| 37 | 0.0027 | 0.0005 | 0.0022 |
| 38 | 0.0027 | 0.0005 | 0.0022 |
| 39 | 0.0027 | 0.0005 | 0.0022 |
| 40 | 0.0027 | 0.0005 | 0.0023 |
| 41 | 0.0028 | 0.0005 | 0.0023 |
| 42 | 0.0028 | 0.0005 | 0.0023 |
| 43 | 0.0028 | 0.0005 | 0.0023 |
| 44 | 0.0028 | 0.0005 | 0.0023 |
| 45 | 0.0028 | 0.0005 | 0.0023 |
| 46 | 0.0028 | 0.0005 | 0.0023 |
| 47 | 0.0028 | 0.0005 | 0.0023 |
| 48 | 0.0029 | 0.0005 | 0.0023 |
| 49 | 0.0029 | 0.0005 | 0.0024 |
| 50 | 0.0029 | 0.0005 | 0.0024 |
| 51 | 0.0029 | 0.0005 | 0.0024 |
| 52 | 0.0029 | 0.0005 | 0.0024 |
| 53 | 0.0029 | 0.0005 | 0.0024 |
| 54 | 0.0030 | 0.0005 | 0.0024 |
| 55 | 0.0030 | 0.0005 | 0.0024 |
| 56 | 0.0030 | 0.0005 | 0.0025 |
| 57 | 0.0030 | 0.0005 | 0.0025 |
| 58 | 0.0030 | 0.0005 | 0.0025 |
| 59 | 0.0030 | 0.0005 | 0.0025 |
| 60 | 0.0030 | 0.0005 | 0.0025 |
| 61 | 0.0031 | 0.0005 | 0.0025 |
| 62 | 0.0031 | 0.0006 | 0.0025 |
| 63 | 0.0031 | 0.0006 | 0.0026 |
| 64 | 0.0031 | 0.0006 | 0.0026 |
| 65 | 0.0031 | 0.0006 | 0.0026 |
| 66 | 0.0032 | 0.0006 | 0.0026 |
| 67 | 0.0032 | 0.0006 | 0.0026 |
| 68 | 0.0032 | 0.0006 | 0.0026 |
| 69 | 0.0032 | 0.0006 | 0.0026 |
| 70 | 0.0032 | 0.0006 | 0.0027 |
| 71 | 0.0033 | 0.0006 | 0.0027 |
| 72 | 0.0033 | 0.0006 | 0.0027 |
| 73 | 0.0033 | 0.0006 | 0.0027 |
| 74 | 0.0033 | 0.0006 | 0.0027 |
| 75 | 0.0033 | 0.0006 | 0.0027 |
| 76 | 0.0034 | 0.0006 | 0.0028 |
| 77 | 0.0034 | 0.0006 | 0.0028 |
| 78 | 0.0034 | 0.0006 | 0.0028 |
| 79 | 0.0034 | 0.0006 | 0.0028 |
| 80 | 0.0034 | 0.0006 | 0.0028 |
| 81 | 0.0035 | 0.0006 | 0.0029 |
| 82 | 0.0035 | 0.0006 | 0.0029 |
| 83 | 0.0035 | 0.0006 | 0.0029 |

| | | | |
|---|---|---|---|
| 84 | 0.0035 | 0.0006 | 0.0029 |
| 85 | 0.0036 | 0.0006 | 0.0029 |
| 86 | 0.0036 | 0.0006 | 0.0029 |
| 87 | 0.0036 | 0.0006 | 0.0030 |
| 88 | 0.0036 | 0.0006 | 0.0030 |
| 89 | 0.0037 | 0.0007 | 0.0030 |
| 90 | 0.0037 | 0.0007 | 0.0030 |
| 91 | 0.0037 | 0.0007 | 0.0031 |
| 92 | 0.0037 | 0.0007 | 0.0031 |
| 93 | 0.0038 | 0.0007 | 0.0031 |
| 94 | 0.0038 | 0.0007 | 0.0031 |
| 95 | 0.0038 | 0.0007 | 0.0032 |
| 96 | 0.0039 | 0.0007 | 0.0032 |
| 97 | 0.0039 | 0.0007 | 0.0032 |
| 98 | 0.0039 | 0.0007 | 0.0032 |
| 99 | 0.0040 | 0.0007 | 0.0033 |
| 100 | 0.0040 | 0.0007 | 0.0033 |
| 101 | 0.0040 | 0.0007 | 0.0033 |
| 102 | 0.0040 | 0.0007 | 0.0033 |
| 103 | 0.0041 | 0.0007 | 0.0034 |
| 104 | 0.0041 | 0.0007 | 0.0034 |
| 105 | 0.0042 | 0.0007 | 0.0034 |
| 106 | 0.0042 | 0.0007 | 0.0034 |
| 107 | 0.0042 | 0.0008 | 0.0035 |
| 108 | 0.0043 | 0.0008 | 0.0035 |
| 109 | 0.0043 | 0.0008 | 0.0035 |
| 110 | 0.0043 | 0.0008 | 0.0036 |
| 111 | 0.0044 | 0.0008 | 0.0036 |
| 112 | 0.0044 | 0.0008 | 0.0036 |
| 113 | 0.0045 | 0.0008 | 0.0037 |
| 114 | 0.0045 | 0.0008 | 0.0037 |
| 115 | 0.0046 | 0.0008 | 0.0037 |
| 116 | 0.0046 | 0.0008 | 0.0038 |
| 117 | 0.0046 | 0.0008 | 0.0038 |
| 118 | 0.0047 | 0.0008 | 0.0038 |
| 119 | 0.0047 | 0.0008 | 0.0039 |
| 120 | 0.0048 | 0.0009 | 0.0039 |
| 121 | 0.0048 | 0.0009 | 0.0040 |
| 122 | 0.0049 | 0.0009 | 0.0040 |
| 123 | 0.0049 | 0.0009 | 0.0041 |
| 124 | 0.0050 | 0.0009 | 0.0041 |
| 125 | 0.0050 | 0.0009 | 0.0041 |
| 126 | 0.0051 | 0.0009 | 0.0042 |
| 127 | 0.0052 | 0.0009 | 0.0042 |
| 128 | 0.0052 | 0.0009 | 0.0043 |
| 129 | 0.0053 | 0.0009 | 0.0043 |
| 130 | 0.0053 | 0.0009 | 0.0044 |
| 131 | 0.0054 | 0.0010 | 0.0044 |
| 132 | 0.0054 | 0.0010 | 0.0045 |
| 133 | 0.0055 | 0.0010 | 0.0046 |
| 134 | 0.0056 | 0.0010 | 0.0046 |
| 135 | 0.0057 | 0.0010 | 0.0047 |
| 136 | 0.0057 | 0.0010 | 0.0047 |
| 137 | 0.0058 | 0.0010 | 0.0048 |
| 138 | 0.0059 | 0.0011 | 0.0048 |
| 139 | 0.0060 | 0.0011 | 0.0049 |
| 140 | 0.0061 | 0.0011 | 0.0050 |
| 141 | 0.0062 | 0.0011 | 0.0051 |
| 142 | 0.0062 | 0.0011 | 0.0051 |

| | | | |
|---|---|---|---|
| 143 | 0.0064 | 0.0011 | 0.0052 |
| 144 | 0.0064 | 0.0011 | 0.0053 |
| 145 | 0.0040 | 0.0007 | 0.0033 |
| 146 | 0.0041 | 0.0007 | 0.0033 |
| 147 | 0.0042 | 0.0007 | 0.0034 |
| 148 | 0.0042 | 0.0008 | 0.0035 |
| 149 | 0.0043 | 0.0008 | 0.0036 |
| 150 | 0.0044 | 0.0008 | 0.0036 |
| 151 | 0.0045 | 0.0008 | 0.0037 |
| 152 | 0.0046 | 0.0008 | 0.0038 |
| 153 | 0.0047 | 0.0008 | 0.0039 |
| 154 | 0.0048 | 0.0009 | 0.0039 |
| 155 | 0.0049 | 0.0009 | 0.0040 |
| 156 | 0.0050 | 0.0009 | 0.0041 |
| 157 | 0.0051 | 0.0009 | 0.0042 |
| 158 | 0.0052 | 0.0009 | 0.0043 |
| 159 | 0.0054 | 0.0010 | 0.0044 |
| 160 | 0.0055 | 0.0010 | 0.0045 |
| 161 | 0.0057 | 0.0010 | 0.0047 |
| 162 | 0.0058 | 0.0010 | 0.0048 |
| 163 | 0.0060 | 0.0011 | 0.0049 |
| 164 | 0.0061 | 0.0011 | 0.0050 |
| 165 | 0.0064 | 0.0011 | 0.0052 |
| 166 | 0.0065 | 0.0012 | 0.0053 |
| 167 | 0.0068 | 0.0012 | 0.0056 |
| 168 | 0.0069 | 0.0012 | 0.0057 |
| 169 | 0.0073 | 0.0013 | 0.0060 |
| 170 | 0.0075 | 0.0013 | 0.0062 |
| 171 | 0.0079 | 0.0014 | 0.0065 |
| 172 | 0.0081 | 0.0014 | 0.0067 |
| 173 | 0.0086 | 0.0015 | 0.0070 |
| 174 | 0.0088 | 0.0016 | 0.0072 |
| 175 | 0.0094 | 0.0017 | 0.0077 |
| 176 | 0.0097 | 0.0017 | 0.0079 |
| 177 | 0.0104 | 0.0018 | 0.0085 |
| 178 | 0.0107 | 0.0019 | 0.0088 |
| 179 | 0.0116 | 0.0021 | 0.0096 |
| 180 | 0.0121 | 0.0022 | 0.0100 |
| 181 | 0.0133 | 0.0024 | 0.0109 |
| 182 | 0.0140 | 0.0025 | 0.0115 |
| 183 | 0.0156 | 0.0028 | 0.0128 |
| 184 | 0.0165 | 0.0029 | 0.0136 |
| 185 | 0.0358 | 0.0064 | 0.0294 |
| 186 | 0.0381 | 0.0068 | 0.0313 |
| 187 | 0.0442 | 0.0070 | 0.0372 |
| 188 | 0.0483 | 0.0070 | 0.0413 |
| 189 | 0.0600 | 0.0070 | 0.0530 |
| 190 | 0.0691 | 0.0070 | 0.0621 |
| 191 | 0.1049 | 0.0070 | 0.0979 |
| 192 | 0.1522 | 0.0070 | 0.1452 |
| 193 | 0.6585 | 0.0070 | 0.6516 |
| 194 | 0.0825 | 0.0070 | 0.0756 |
| 195 | 0.0534 | 0.0070 | 0.0464 |
| 196 | 0.0409 | 0.0070 | 0.0339 |
| 197 | 0.0176 | 0.0031 | 0.0145 |
| 198 | 0.0147 | 0.0026 | 0.0121 |
| 199 | 0.0127 | 0.0023 | 0.0104 |
| 200 | 0.0112 | 0.0020 | 0.0092 |
| 201 | 0.0100 | 0.0018 | 0.0082 |

| | | | |
|---|---|---|---|
| 202 | 0.0091 | 0.0016 | 0.0075 |
| 203 | 0.0083 | 0.0015 | 0.0068 |
| 204 | 0.0077 | 0.0014 | 0.0063 |
| 205 | 0.0071 | 0.0013 | 0.0058 |
| 206 | 0.0066 | 0.0012 | 0.0055 |
| 207 | 0.0062 | 0.0011 | 0.0051 |
| 208 | 0.0059 | 0.0011 | 0.0048 |
| 209 | 0.0056 | 0.0010 | 0.0046 |
| 210 | 0.0053 | 0.0009 | 0.0044 |
| 211 | 0.0051 | 0.0009 | 0.0042 |
| 212 | 0.0048 | 0.0009 | 0.0040 |
| 213 | 0.0046 | 0.0008 | 0.0038 |
| 214 | 0.0045 | 0.0008 | 0.0037 |
| 215 | 0.0043 | 0.0008 | 0.0035 |
| 216 | 0.0041 | 0.0007 | 0.0034 |
| 217 | 0.0065 | 0.0012 | 0.0053 |
| 218 | 0.0063 | 0.0011 | 0.0052 |
| 219 | 0.0061 | 0.0011 | 0.0050 |
| 220 | 0.0059 | 0.0011 | 0.0049 |
| 221 | 0.0058 | 0.0010 | 0.0048 |
| 222 | 0.0056 | 0.0010 | 0.0046 |
| 223 | 0.0055 | 0.0010 | 0.0045 |
| 224 | 0.0054 | 0.0010 | 0.0044 |
| 225 | 0.0052 | 0.0009 | 0.0043 |
| 226 | 0.0051 | 0.0009 | 0.0042 |
| 227 | 0.0050 | 0.0009 | 0.0041 |
| 228 | 0.0049 | 0.0009 | 0.0040 |
| 229 | 0.0048 | 0.0009 | 0.0039 |
| 230 | 0.0047 | 0.0008 | 0.0039 |
| 231 | 0.0046 | 0.0008 | 0.0038 |
| 232 | 0.0045 | 0.0008 | 0.0037 |
| 233 | 0.0044 | 0.0008 | 0.0036 |
| 234 | 0.0044 | 0.0008 | 0.0036 |
| 235 | 0.0043 | 0.0008 | 0.0035 |
| 236 | 0.0042 | 0.0008 | 0.0035 |
| 237 | 0.0041 | 0.0007 | 0.0034 |
| 238 | 0.0041 | 0.0007 | 0.0033 |
| 239 | 0.0040 | 0.0007 | 0.0033 |
| 240 | 0.0039 | 0.0007 | 0.0032 |
| 241 | 0.0039 | 0.0007 | 0.0032 |
| 242 | 0.0038 | 0.0007 | 0.0031 |
| 243 | 0.0038 | 0.0007 | 0.0031 |
| 244 | 0.0037 | 0.0007 | 0.0030 |
| 245 | 0.0037 | 0.0007 | 0.0030 |
| 246 | 0.0036 | 0.0006 | 0.0030 |
| 247 | 0.0036 | 0.0006 | 0.0029 |
| 248 | 0.0035 | 0.0006 | 0.0029 |
| 249 | 0.0035 | 0.0006 | 0.0028 |
| 250 | 0.0034 | 0.0006 | 0.0028 |
| 251 | 0.0034 | 0.0006 | 0.0028 |
| 252 | 0.0033 | 0.0006 | 0.0027 |
| 253 | 0.0033 | 0.0006 | 0.0027 |
| 254 | 0.0032 | 0.0006 | 0.0027 |
| 255 | 0.0032 | 0.0006 | 0.0026 |
| 256 | 0.0032 | 0.0006 | 0.0026 |
| 257 | 0.0031 | 0.0006 | 0.0026 |
| 258 | 0.0031 | 0.0006 | 0.0025 |
| 259 | 0.0031 | 0.0005 | 0.0025 |
| 260 | 0.0030 | 0.0005 | 0.0025 |

| | | | |
|---|---|---|---|
| 261 | 0.0030 | 0.0005 | 0.0025 |
| 262 | 0.0030 | 0.0005 | 0.0024 |
| 263 | 0.0029 | 0.0005 | 0.0024 |
| 264 | 0.0029 | 0.0005 | 0.0024 |
| 265 | 0.0029 | 0.0005 | 0.0024 |
| 266 | 0.0028 | 0.0005 | 0.0023 |
| 267 | 0.0028 | 0.0005 | 0.0023 |
| 268 | 0.0028 | 0.0005 | 0.0023 |
| 269 | 0.0028 | 0.0005 | 0.0023 |
| 270 | 0.0027 | 0.0005 | 0.0022 |
| 271 | 0.0027 | 0.0005 | 0.0022 |
| 272 | 0.0027 | 0.0005 | 0.0022 |
| 273 | 0.0027 | 0.0005 | 0.0022 |
| 274 | 0.0026 | 0.0005 | 0.0022 |
| 275 | 0.0026 | 0.0005 | 0.0021 |
| 276 | 0.0026 | 0.0005 | 0.0021 |
| 277 | 0.0026 | 0.0005 | 0.0021 |
| 278 | 0.0025 | 0.0005 | 0.0021 |
| 279 | 0.0025 | 0.0004 | 0.0021 |
| 280 | 0.0025 | 0.0004 | 0.0020 |
| 281 | 0.0025 | 0.0004 | 0.0020 |
| 282 | 0.0025 | 0.0004 | 0.0020 |
| 283 | 0.0024 | 0.0004 | 0.0020 |
| 284 | 0.0024 | 0.0004 | 0.0020 |
| 285 | 0.0024 | 0.0004 | 0.0020 |
| 286 | 0.0024 | 0.0004 | 0.0019 |
| 287 | 0.0024 | 0.0004 | 0.0019 |
| 288 | 0.0023 | 0.0004 | 0.0019 |

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Total soil rain loss = 0.30(In)
Total effective rainfall = 2.32(In)
Peak flow rate in flood hydrograph = 58.05(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 15.0 | 30.0 | 45.0 | 60.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.01 | Q | \| | \| | \| | \| |
| 0+10 | 0.0002 | 0.02 | Q | \| | \| | \| | \| |
| 0+15 | 0.0006 | 0.06 | Q | \| | \| | \| | \| |
| 0+20 | 0.0014 | 0.12 | Q | \| | \| | \| | \| |
| 0+25 | 0.0029 | 0.22 | Q | \| | \| | \| | \| |
| 0+30 | 0.0052 | 0.33 | Q | \| | \| | \| | \| |
| 0+35 | 0.0080 | 0.41 | Q | \| | \| | \| | \| |
| 0+40 | 0.0112 | 0.46 | Q | \| | \| | \| | \| |
| 0+45 | 0.0147 | 0.51 | Q | \| | \| | \| | \| |
| 0+50 | 0.0184 | 0.54 | Q | \| | \| | \| | \| |
| 0+55 | 0.0223 | 0.57 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0264 | 0.59 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0307 | 0.62 | Q | \| | \| | \| | \| |
| 1+10 | 0.0350 | 0.64 | Q | \| | \| | \| | \| |
| 1+15 | 0.0395 | 0.65 | Q | \| | \| | \| | \| |
| 1+20 | 0.0441 | 0.67 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+25 | 0.0488 | 0.68 | Q | | | | |
| 1+30 | 0.0536 | 0.70 | Q | | | | |
| 1+35 | 0.0585 | 0.71 | Q | | | | |
| 1+40 | 0.0635 | 0.72 | Q | | | | |
| 1+45 | 0.0685 | 0.73 | Q | | | | |
| 1+50 | 0.0736 | 0.74 | Q | | | | |
| 1+55 | 0.0787 | 0.75 | Q | | | | |
| 2+ 0 | 0.0840 | 0.76 | Q | | | | |
| 2+ 5 | 0.0892 | 0.77 | Q | | | | |
| 2+10 | 0.0946 | 0.77 | Q | | | | |
| 2+15 | 0.0999 | 0.78 | Q | | | | |
| 2+20 | 0.1054 | 0.79 | Q | | | | |
| 2+25 | 0.1109 | 0.80 | Q | | | | |
| 2+30 | 0.1164 | 0.80 | Q | | | | |
| 2+35 | 0.1220 | 0.81 | Q | | | | |
| 2+40 | 0.1276 | 0.82 | Q | | | | |
| 2+45 | 0.1332 | 0.82 | Q | | | | |
| 2+50 | 0.1389 | 0.83 | Q | | | | |
| 2+55 | 0.1447 | 0.83 | Q | | | | |
| 3+ 0 | 0.1504 | 0.84 | Q | | | | |
| 3+ 5 | 0.1562 | 0.84 | Q | | | | |
| 3+10 | 0.1621 | 0.85 | QV | | | | |
| 3+15 | 0.1679 | 0.85 | QV | | | | |
| 3+20 | 0.1738 | 0.86 | QV | | | | |
| 3+25 | 0.1798 | 0.86 | QV | | | | |
| 3+30 | 0.1858 | 0.87 | QV | | | | |
| 3+35 | 0.1918 | 0.87 | QV | | | | |
| 3+40 | 0.1979 | 0.88 | QV | | | | |
| 3+45 | 0.2040 | 0.89 | QV | | | | |
| 3+50 | 0.2101 | 0.89 | QV | | | | |
| 3+55 | 0.2163 | 0.90 | QV | | | | |
| 4+ 0 | 0.2225 | 0.90 | QV | | | | |
| 4+ 5 | 0.2287 | 0.90 | QV | | | | |
| 4+10 | 0.2349 | 0.91 | QV | | | | |
| 4+15 | 0.2412 | 0.91 | QV | | | | |
| 4+20 | 0.2476 | 0.92 | QV | | | | |
| 4+25 | 0.2539 | 0.92 | QV | | | | |
| 4+30 | 0.2603 | 0.93 | QV | | | | |
| 4+35 | 0.2667 | 0.93 | QV | | | | |
| 4+40 | 0.2732 | 0.94 | QV | | | | |
| 4+45 | 0.2797 | 0.94 | QV | | | | |
| 4+50 | 0.2862 | 0.95 | QV | | | | |
| 4+55 | 0.2927 | 0.95 | QV | | | | |
| 5+ 0 | 0.2993 | 0.96 | QV | | | | |
| 5+ 5 | 0.3059 | 0.96 | QV | | | | |
| 5+10 | 0.3126 | 0.97 | QV | | | | |
| 5+15 | 0.3193 | 0.97 | Q V | | | | |
| 5+20 | 0.3260 | 0.98 | Q V | | | | |
| 5+25 | 0.3328 | 0.98 | Q V | | | | |
| 5+30 | 0.3396 | 0.99 | Q V | | | | |
| 5+35 | 0.3464 | 0.99 | Q V | | | | |
| 5+40 | 0.3533 | 1.00 | Q V | | | | |
| 5+45 | 0.3602 | 1.00 | Q V | | | | |
| 5+50 | 0.3672 | 1.01 | Q V | | | | |
| 5+55 | 0.3742 | 1.02 | Q V | | | | |
| 6+ 0 | 0.3812 | 1.02 | Q V | | | | |
| 6+ 5 | 0.3883 | 1.03 | Q V | | | | |
| 6+10 | 0.3954 | 1.03 | Q V | | | | |
| 6+15 | 0.4026 | 1.04 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+20 | 0.4098 | 1.05 | Q V | \| | \| | \| | \| |
| 6+25 | 0.4170 | 1.05 | Q V | \| | \| | \| | \| |
| 6+30 | 0.4243 | 1.06 | Q V | \| | \| | \| | \| |
| 6+35 | 0.4317 | 1.07 | Q V | \| | \| | \| | \| |
| 6+40 | 0.4390 | 1.07 | Q V | \| | \| | \| | \| |
| 6+45 | 0.4465 | 1.08 | Q V | \| | \| | \| | \| |
| 6+50 | 0.4539 | 1.09 | Q V | \| | \| | \| | \| |
| 6+55 | 0.4615 | 1.09 | Q V | \| | \| | \| | \| |
| 7+ 0 | 0.4690 | 1.10 | Q V | \| | \| | \| | \| |
| 7+ 5 | 0.4766 | 1.11 | Q V | \| | \| | \| | \| |
| 7+10 | 0.4843 | 1.11 | Q V | \| | \| | \| | \| |
| 7+15 | 0.4920 | 1.12 | Q V | \| | \| | \| | \| |
| 7+20 | 0.4998 | 1.13 | Q V | \| | \| | \| | \| |
| 7+25 | 0.5076 | 1.14 | Q V | \| | \| | \| | \| |
| 7+30 | 0.5155 | 1.14 | Q V | \| | \| | \| | \| |
| 7+35 | 0.5234 | 1.15 | Q V | \| | \| | \| | \| |
| 7+40 | 0.5314 | 1.16 | Q V | \| | \| | \| | \| |
| 7+45 | 0.5394 | 1.17 | Q V | \| | \| | \| | \| |
| 7+50 | 0.5475 | 1.17 | Q V | \| | \| | \| | \| |
| 7+55 | 0.5556 | 1.18 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.5638 | 1.19 | Q V | \| | \| | \| | \| |
| 8+ 5 | 0.5721 | 1.20 | Q V | \| | \| | \| | \| |
| 8+10 | 0.5804 | 1.21 | Q V | \| | \| | \| | \| |
| 8+15 | 0.5888 | 1.22 | Q V | \| | \| | \| | \| |
| 8+20 | 0.5973 | 1.23 | Q V | \| | \| | \| | \| |
| 8+25 | 0.6058 | 1.24 | Q V | \| | \| | \| | \| |
| 8+30 | 0.6143 | 1.24 | Q V | \| | \| | \| | \| |
| 8+35 | 0.6230 | 1.25 | Q V | \| | \| | \| | \| |
| 8+40 | 0.6317 | 1.26 | Q V | \| | \| | \| | \| |
| 8+45 | 0.6404 | 1.27 | Q V | \| | \| | \| | \| |
| 8+50 | 0.6493 | 1.28 | Q V | \| | \| | \| | \| |
| 8+55 | 0.6582 | 1.29 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.6672 | 1.30 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.6762 | 1.31 | Q V | \| | \| | \| | \| |
| 9+10 | 0.6853 | 1.33 | Q V | \| | \| | \| | \| |
| 9+15 | 0.6945 | 1.34 | Q V | \| | \| | \| | \| |
| 9+20 | 0.7038 | 1.35 | Q V | \| | \| | \| | \| |
| 9+25 | 0.7132 | 1.36 | Q V | \| | \| | \| | \| |
| 9+30 | 0.7226 | 1.37 | Q V | \| | \| | \| | \| |
| 9+35 | 0.7321 | 1.38 | Q V | \| | \| | \| | \| |
| 9+40 | 0.7417 | 1.39 | Q V | \| | \| | \| | \| |
| 9+45 | 0.7514 | 1.41 | Q V | \| | \| | \| | \| |
| 9+50 | 0.7612 | 1.42 | Q V | \| | \| | \| | \| |
| 9+55 | 0.7711 | 1.43 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.7810 | 1.45 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.7911 | 1.46 | Q V | \| | \| | \| | \| |
| 10+10 | 0.8012 | 1.47 | Q V | \| | \| | \| | \| |
| 10+15 | 0.8114 | 1.49 | Q V | \| | \| | \| | \| |
| 10+20 | 0.8218 | 1.50 | \|Q V | \| | \| | \| | \| |
| 10+25 | 0.8322 | 1.52 | \|Q V | \| | \| | \| | \| |
| 10+30 | 0.8428 | 1.53 | \|Q V | \| | \| | \| | \| |
| 10+35 | 0.8534 | 1.55 | \|Q V | \| | \| | \| | \| |
| 10+40 | 0.8642 | 1.56 | \|Q V | \| | \| | \| | \| |
| 10+45 | 0.8750 | 1.58 | \|Q V | \| | \| | \| | \| |
| 10+50 | 0.8860 | 1.59 | \|Q V | \| | \| | \| | \| |
| 10+55 | 0.8971 | 1.61 | \|Q V | \| | \| | \| | \| |
| 11+ 0 | 0.9083 | 1.63 | \|Q V | \| | \| | \| | \| |
| 11+ 5 | 0.9197 | 1.65 | \|Q V | \| | \| | \| | \| |
| 11+10 | 0.9312 | 1.67 | \|Q V | \| | \| | \| | \| |

```
11+15       0.9428      1.68  |Q   V    |          |          |          |
11+20       0.9545      1.70  |Q   V    |          |          |          |
11+25       0.9664      1.72  |Q    V   |          |          |          |
11+30       0.9784      1.74  |Q    V   |          |          |          |
11+35       0.9905      1.77  |Q    V   |          |          |          |
11+40       1.0028      1.79  |Q    V   |          |          |          |
11+45       1.0153      1.81  |Q    V   |          |          |          |
11+50       1.0279      1.83  |Q    V   |          |          |          |
11+55       1.0407      1.86  |Q    V   |          |          |          |
12+ 0       1.0536      1.88  |Q    V   |          |          |          |
12+ 5       1.0667      1.90  |Q    V   |          |          |          |
12+10       1.0798      1.90  |Q    V   |          |          |          |
12+15       1.0929      1.90  |Q    V   |          |          |          |
12+20       1.1057      1.86  |Q    V   |          |          |          |
12+25       1.1179      1.77  |Q     V  |          |          |          |
12+30       1.1295      1.68  |Q     V  |          |          |          |
12+35       1.1407      1.63  |Q     V  |          |          |          |
12+40       1.1516      1.59  |Q     V  |          |          |          |
12+45       1.1625      1.58  |Q     V  |          |          |          |
12+50       1.1733      1.57  |Q     V  |          |          |          |
12+55       1.1841      1.57  |Q     V  |          |          |          |
13+ 0       1.1949      1.57  |Q     V  |          |          |          |
13+ 5       1.2057      1.58  |Q     V  |          |          |          |
13+10       1.2167      1.59  |Q     V  |          |          |          |
13+15       1.2277      1.60  |Q     V  |          |          |          |
13+20       1.2389      1.62  |Q     V  |          |          |          |
13+25       1.2502      1.64  |Q     V  |          |          |          |
13+30       1.2617      1.67  |Q     V  |          |          |          |
13+35       1.2734      1.69  |Q     V  |          |          |          |
13+40       1.2852      1.72  |Q      V |          |          |          |
13+45       1.2973      1.76  |Q      V |          |          |          |
13+50       1.3097      1.79  |Q      V |          |          |          |
13+55       1.3223      1.83  |Q      V |          |          |          |
14+ 0       1.3351      1.87  |Q      V |          |          |          |
14+ 5       1.3483      1.92  |Q      V |          |          |          |
14+10       1.3619      1.96  |Q      V |          |          |          |
14+15       1.3758      2.02  |Q      V |          |          |          |
14+20       1.3901      2.08  |Q      V |          |          |          |
14+25       1.4048      2.14  |Q      V |          |          |          |
14+30       1.4200      2.21  |Q      V |          |          |          |
14+35       1.4357      2.28  |Q      V |          |          |          |
14+40       1.4520      2.36  |Q       V|          |          |          |
14+45       1.4689      2.45  |Q       V|          |          |          |
14+50       1.4864      2.54  |Q       V|          |          |          |
14+55       1.5046      2.65  |Q       V|          |          |          |
15+ 0       1.5237      2.76  |Q       V|          |          |          |
15+ 5       1.5436      2.89  |Q       V|          |          |          |
15+10       1.5645      3.03  | Q      V|          |          |          |
15+15       1.5865      3.19  | Q      V|          |          |          |
15+20       1.6097      3.37  | Q       V          |          |          |
15+25       1.6346      3.62  | Q       V          |          |          |
15+30       1.6622      4.00  | Q       V          |          |          |
15+35       1.6934      4.54  |  Q      V          |          |          |
15+40       1.7302      5.34  |  Q      V          |          |          |
15+45       1.7760      6.65  |   Q     |V         |          |          |
15+50       1.8322      8.16  |    Q    |V         |          |          |
15+55       1.9001      9.85  |     Q   |V         |          |          |
16+ 0       1.9830     12.04  |       Q | V        |          |          |
16+ 5       2.0966     16.50  |         Q  V       |          |          |
```

| | | | |
|---|---|---|---|
| 16+10 | 2.2589 | 23.57 | \|  \|  VQ  \|  \|  \| |
| 16+15 | 2.4741 | 31.25 | \|  \|  V  Q  \|  \|  \| |
| 16+20 | 2.7668 | 42.49 | \|  \|  V  \|  Q  \|  \| |
| 16+25 | 3.1665 | 58.05 | \|  \|  V\|  \|  Q \| |
| 16+30 | 3.5482 | 55.41 | \|  \|  \| V  \|  Q  \| |
| 16+35 | 3.8522 | 44.15 | \|  \|  \|  V  Q\|  \| |
| 16+40 | 4.0921 | 34.83 | \|  \|  \|  Q V  \|  \| |
| 16+45 | 4.2828 | 27.69 | \|  \|  Q \|  V  \|  \| |
| 16+50 | 4.4421 | 23.13 | \|  \|  Q  \|  V  \|  \| |
| 16+55 | 4.5785 | 19.80 | \|  Q  \|  V  \|  \| |
| 17+ 0 | 4.6960 | 17.06 | \|Q  \|  V\|  \| |
| 17+ 5 | 4.8002 | 15.13 | \|  Q  \|  V  \|  \| |
| 17+10 | 4.8914 | 13.24 | \|  Q \|  \|  V  \|  \| |
| 17+15 | 4.9731 | 11.87 | \|  Q  \|  \|  \|V  \|  \| |
| 17+20 | 5.0478 | 10.84 | \|  Q  \|  \|  \|V  \|  \| |
| 17+25 | 5.1163 | 9.94 | \|  Q  \|  \|  \|  V  \|  \| |
| 17+30 | 5.1786 | 9.05 | \|  Q  \|  \|  \|  V  \|  \| |
| 17+35 | 5.2351 | 8.21 | \|  Q  \|  \|  \|  V  \|  \| |
| 17+40 | 5.2852 | 7.27 | \|  Q  \|  \|  \|  V  \|  \| |
| 17+45 | 5.3319 | 6.78 | \|  Q  \|  \|  \|  V  \|  \| |
| 17+50 | 5.3757 | 6.36 | \|  Q  \|  \|  \|  V  \|  \| |
| 17+55 | 5.4161 | 5.87 | \|  Q  \|  \|  \|  V  \|  \| |
| 18+ 0 | 5.4541 | 5.51 | \|  Q  \|  \|  \|  V  \|  \| |
| 18+ 5 | 5.4896 | 5.16 | \|  Q  \|  \|  \|  V  \|  \| |
| 18+10 | 5.5219 | 4.69 | \|  Q  \|  \|  \|  V  \|  \| |
| 18+15 | 5.5526 | 4.47 | \| Q  \|  \|  \|  V  \|  \| |
| 18+20 | 5.5823 | 4.31 | \| Q  \|  \|  \|  V  \|  \| |
| 18+25 | 5.6101 | 4.04 | \| Q  \|  \|  \|  V  \|  \| |
| 18+30 | 5.6371 | 3.92 | \| Q  \|  \|  \|  V  \|  \| |
| 18+35 | 5.6634 | 3.82 | \| Q  \|  \|  \|  V  \|  \| |
| 18+40 | 5.6876 | 3.52 | \| Q  \|  \|  \|  V  \|  \| |
| 18+45 | 5.7106 | 3.34 | \| Q  \|  \|  \|  V  \|  \| |
| 18+50 | 5.7328 | 3.23 | \| Q  \|  \|  \|  V  \|  \| |
| 18+55 | 5.7531 | 2.94 | \|Q  \|  \|  \|  V  \|  \| |
| 19+ 0 | 5.7722 | 2.78 | \|Q  \|  \|  \|  V  \|  \| |
| 19+ 5 | 5.7910 | 2.73 | \|Q  \|  \|  \|  V  \|  \| |
| 19+10 | 5.8098 | 2.72 | \|Q  \|  \|  \|  V  \|  \| |
| 19+15 | 5.8284 | 2.71 | \|Q  \|  \|  \|  V  \|  \| |
| 19+20 | 5.8467 | 2.66 | \|Q  \|  \|  \|  V  \|  \| |
| 19+25 | 5.8646 | 2.60 | \|Q  \|  \|  \|  V  \|  \| |
| 19+30 | 5.8821 | 2.53 | \|Q  \|  \|  \|  V  \|  \| |
| 19+35 | 5.8990 | 2.45 | \|Q  \|  \|  \|  V  \|  \| |
| 19+40 | 5.9145 | 2.26 | \|Q  \|  \|  \|  V  \|  \| |
| 19+45 | 5.9288 | 2.07 | \|Q  \|  \|  \|  V  \|  \| |
| 19+50 | 5.9426 | 2.00 | \|Q  \|  \|  \|  V  \|  \| |
| 19+55 | 5.9557 | 1.91 | \|Q  \|  \|  \|  V  \|  \| |
| 20+ 0 | 5.9676 | 1.72 | \|Q  \|  \|  \|  V  \|  \| |
| 20+ 5 | 5.9782 | 1.55 | \|Q  \|  \|  \|  V  \|  \| |
| 20+10 | 5.9885 | 1.50 | Q  \|  \|  \|  V  \|  \| |
| 20+15 | 5.9986 | 1.46 | Q  \|  \|  \|  V  \|  \| |
| 20+20 | 6.0084 | 1.43 | Q  \|  \|  \|  V  \|  \| |
| 20+25 | 6.0181 | 1.40 | Q  \|  \|  \|  V  \|  \| |
| 20+30 | 6.0276 | 1.38 | Q  \|  \|  \|  V  \|  \| |
| 20+35 | 6.0369 | 1.36 | Q  \|  \|  \|  V  \|  \| |
| 20+40 | 6.0461 | 1.33 | Q  \|  \|  \|  V  \|  \| |
| 20+45 | 6.0552 | 1.31 | Q  \|  \|  \|  V  \|  \| |
| 20+50 | 6.0640 | 1.29 | Q  \|  \|  \|  V  \|  \| |
| 20+55 | 6.0728 | 1.27 | Q  \|  \|  \|  V  \|  \| |
| 21+ 0 | 6.0814 | 1.25 | Q  \|  \|  \|  V  \|  \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+ 5 | 6.0899 | 1.23 | Q | \| | \| | \| | V \| |
| 21+10 | 6.0983 | 1.22 | Q | \| | \| | \| | V \| |
| 21+15 | 6.1066 | 1.20 | Q | \| | \| | \| | V \| |
| 21+20 | 6.1147 | 1.18 | Q | \| | \| | \| | V \| |
| 21+25 | 6.1228 | 1.17 | Q | \| | \| | \| | V \| |
| 21+30 | 6.1307 | 1.15 | Q | \| | \| | \| | V \| |
| 21+35 | 6.1386 | 1.14 | Q | \| | \| | \| | V \| |
| 21+40 | 6.1463 | 1.12 | Q | \| | \| | \| | V \| |
| 21+45 | 6.1539 | 1.11 | Q | \| | \| | \| | V \| |
| 21+50 | 6.1615 | 1.10 | Q | \| | \| | \| | V \| |
| 21+55 | 6.1690 | 1.08 | Q | \| | \| | \| | V \| |
| 22+ 0 | 6.1763 | 1.07 | Q | \| | \| | \| | V \| |
| 22+ 5 | 6.1836 | 1.06 | Q | \| | \| | \| | V \| |
| 22+10 | 6.1908 | 1.04 | Q | \| | \| | \| | V \| |
| 22+15 | 6.1979 | 1.03 | Q | \| | \| | \| | V \| |
| 22+20 | 6.2049 | 1.02 | Q | \| | \| | \| | V \| |
| 22+25 | 6.2119 | 1.01 | Q | \| | \| | \| | V \| |
| 22+30 | 6.2187 | 1.00 | Q | \| | \| | \| | V \| |
| 22+35 | 6.2255 | 0.98 | Q | \| | \| | \| | V\| |
| 22+40 | 6.2322 | 0.97 | Q | \| | \| | \| | V\| |
| 22+45 | 6.2388 | 0.96 | Q | \| | \| | \| | V\| |
| 22+50 | 6.2454 | 0.95 | Q | \| | \| | \| | V\| |
| 22+55 | 6.2519 | 0.94 | Q | \| | \| | \| | V\| |
| 23+ 0 | 6.2583 | 0.93 | Q | \| | \| | \| | V\| |
| 23+ 5 | 6.2647 | 0.92 | Q | \| | \| | \| | V\| |
| 23+10 | 6.2710 | 0.91 | Q | \| | \| | \| | V\| |
| 23+15 | 6.2772 | 0.91 | Q | \| | \| | \| | V\| |
| 23+20 | 6.2834 | 0.90 | Q | \| | \| | \| | V\| |
| 23+25 | 6.2895 | 0.89 | Q | \| | \| | \| | V\| |
| 23+30 | 6.2956 | 0.88 | Q | \| | \| | \| | V\| |
| 23+35 | 6.3016 | 0.87 | Q | \| | \| | \| | V\| |
| 23+40 | 6.3075 | 0.86 | Q | \| | \| | \| | V\| |
| 23+45 | 6.3134 | 0.85 | Q | \| | \| | \| | V\| |
| 23+50 | 6.3192 | 0.85 | Q | \| | \| | \| | V\| |
| 23+55 | 6.3250 | 0.84 | Q | \| | \| | \| | V\| |
| 24+ 0 | 6.3307 | 0.83 | Q | \| | \| | \| | V\| |
| 24+ 5 | 6.3364 | 0.82 | Q | \| | \| | \| | V\| |
| 24+10 | 6.3418 | 0.79 | Q | \| | \| | \| | V\| |
| 24+15 | 6.3470 | 0.75 | Q | \| | \| | \| | V\| |
| 24+20 | 6.3518 | 0.69 | Q | \| | \| | \| | V\| |
| 24+25 | 6.3558 | 0.58 | Q | \| | \| | \| | V\| |
| 24+30 | 6.3590 | 0.47 | Q | \| | \| | \| | V\| |
| 24+35 | 6.3616 | 0.39 | Q | \| | \| | \| | V\| |
| 24+40 | 6.3639 | 0.33 | Q | \| | \| | \| | V\| |
| 24+45 | 6.3659 | 0.29 | Q | \| | \| | \| | V\| |
| 24+50 | 6.3676 | 0.25 | Q | \| | \| | \| | V\| |
| 24+55 | 6.3691 | 0.22 | Q | \| | \| | \| | V\| |
| 25+ 0 | 6.3705 | 0.20 | Q | \| | \| | \| | V\| |
| 25+ 5 | 6.3717 | 0.18 | Q | \| | \| | \| | V\| |
| 25+10 | 6.3728 | 0.16 | Q | \| | \| | \| | V\| |
| 25+15 | 6.3737 | 0.14 | Q | \| | \| | \| | V\| |
| 25+20 | 6.3746 | 0.13 | Q | \| | \| | \| | V\| |
| 25+25 | 6.3754 | 0.11 | Q | \| | \| | \| | V\| |
| 25+30 | 6.3761 | 0.10 | Q | \| | \| | \| | V\| |
| 25+35 | 6.3767 | 0.09 | Q | \| | \| | \| | V\| |
| 25+40 | 6.3773 | 0.08 | Q | \| | \| | \| | V\| |
| 25+45 | 6.3778 | 0.08 | Q | \| | \| | \| | V\| |
| 25+50 | 6.3783 | 0.07 | Q | \| | \| | \| | V\| |
| 25+55 | 6.3787 | 0.06 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+ 0 | 6.3791 | 0.06 | Q | \| | \| | \| | V\| |
| 26+ 5 | 6.3795 | 0.05 | Q | \| | \| | \| | V\| |
| 26+10 | 6.3798 | 0.04 | Q | \| | \| | \| | V\| |
| 26+15 | 6.3801 | 0.04 | Q | \| | \| | \| | V\| |
| 26+20 | 6.3803 | 0.04 | Q | \| | \| | \| | V\| |
| 26+25 | 6.3805 | 0.03 | Q | \| | \| | \| | V\| |
| 26+30 | 6.3807 | 0.03 | Q | \| | \| | \| | V\| |
| 26+35 | 6.3809 | 0.03 | Q | \| | \| | \| | V\| |
| 26+40 | 6.3810 | 0.02 | Q | \| | \| | \| | V\| |
| 26+45 | 6.3812 | 0.02 | Q | \| | \| | \| | V\| |
| 26+50 | 6.3813 | 0.02 | Q | \| | \| | \| | V\| |
| 26+55 | 6.3814 | 0.02 | Q | \| | \| | \| | V\| |
| 27+ 0 | 6.3815 | 0.01 | Q | \| | \| | \| | V\| |
| 27+ 5 | 6.3816 | 0.01 | Q | \| | \| | \| | V\| |
| 27+10 | 6.3817 | 0.01 | Q | \| | \| | \| | V\| |
| 27+15 | 6.3818 | 0.01 | Q | \| | \| | \| | V\| |
| 27+20 | 6.3818 | 0.01 | Q | \| | \| | \| | V\| |
| 27+25 | 6.3819 | 0.01 | Q | \| | \| | \| | V\| |
| 27+30 | 6.3819 | 0.01 | Q | \| | \| | \| | V\| |
| 27+35 | 6.3819 | 0.00 | Q | \| | \| | \| | V\| |
| 27+40 | 6.3819 | 0.00 | Q | \| | \| | \| | V\| |
| 27+45 | 6.3820 | 0.00 | Q | \| | \| | \| | V\| |
| 27+50 | 6.3820 | 0.00 | Q | \| | \| | \| | V\| |
| 27+55 | 6.3820 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 36
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) | |
|---|---|---|---|
| Rainfall data for year 100 | | | |
| 3.57 | 1 | 1.39 | |
| Rainfall data for year 100 | | | |
| 3.57 | 6 | 1.84 | |
| Rainfall data for year 100 | | | |
| 3.57 | 24 | 2.62 | |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 84.0 | 96.4 | 3.57 | 1.000 | 0.071 | 1.000 | 0.071 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.071

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 3.57 | 1.000 | 84.0 | 96.4 | 0.37 | 0.847 |

Area-averaged catchment yield fraction, Y = 0.847
Area-averaged low loss fraction, Yb = 0.153
User entry of time of concentration = 0.290 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 3.57(Ac.)
Catchment Lag time = 0.232 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 35.9195
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.071(In/Hr)
Average low loss rate fraction (Yb) = 0.153 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.651(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.620(In)

Rainfall depth area reduction factors:
Using a total area of 3.57(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.659(In)
30-minute factor = 1.000 Adjusted rainfall = 1.129(In)
1-hour factor = 1.000 Adjusted rainfall = 1.390(In)
3-hour factor = 1.000 Adjusted rainfall = 1.651(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.620(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 43.17 (CFS)) | |
| 1 | 2.324 | 1.003 |
| 2 | 14.291 | 5.167 |
| 3 | 42.610 | 12.227 |
| 4 | 61.158 | 8.008 |
| 5 | 71.110 | 4.297 |
| 6 | 77.762 | 2.872 |
| 7 | 82.485 | 2.039 |
| 8 | 86.128 | 1.573 |
| 9 | 88.974 | 1.229 |
| 10 | 91.100 | 0.918 |
| 11 | 92.881 | 0.769 |
| 12 | 94.341 | 0.630 |
| 13 | 95.534 | 0.515 |
| 14 | 96.507 | 0.420 |

| | | |
|---|---|---|
| 15 | 97.275 | 0.332 |
| 16 | 97.854 | 0.250 |
| 17 | 98.230 | 0.162 |
| 18 | 98.643 | 0.178 |
| 19 | 99.074 | 0.186 |
| 20 | 99.478 | 0.174 |
| 21 | 99.727 | 0.108 |
| 22 | 100.000 | 0.054 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6595 | 0.6595 |
| 2 | 0.8119 | 0.1524 |
| 3 | 0.9169 | 0.1050 |
| 4 | 0.9996 | 0.0826 |
| 5 | 1.0688 | 0.0692 |
| 6 | 1.1288 | 0.0601 |
| 7 | 1.1823 | 0.0534 |
| 8 | 1.2306 | 0.0483 |
| 9 | 1.2749 | 0.0443 |
| 10 | 1.3158 | 0.0409 |
| 11 | 1.3540 | 0.0382 |
| 12 | 1.3898 | 0.0358 |
| 13 | 1.4073 | 0.0175 |
| 14 | 1.4237 | 0.0164 |
| 15 | 1.4392 | 0.0155 |
| 16 | 1.4538 | 0.0146 |
| 17 | 1.4677 | 0.0139 |
| 18 | 1.4809 | 0.0132 |
| 19 | 1.4935 | 0.0126 |
| 20 | 1.5056 | 0.0120 |
| 21 | 1.5171 | 0.0116 |
| 22 | 1.5282 | 0.0111 |
| 23 | 1.5389 | 0.0107 |
| 24 | 1.5492 | 0.0103 |
| 25 | 1.5591 | 0.0099 |
| 26 | 1.5687 | 0.0096 |
| 27 | 1.5780 | 0.0093 |
| 28 | 1.5870 | 0.0090 |
| 29 | 1.5958 | 0.0087 |
| 30 | 1.6043 | 0.0085 |
| 31 | 1.6126 | 0.0083 |
| 32 | 1.6206 | 0.0080 |
| 33 | 1.6284 | 0.0078 |
| 34 | 1.6361 | 0.0076 |
| 35 | 1.6435 | 0.0074 |
| 36 | 1.6508 | 0.0073 |
| 37 | 1.6579 | 0.0071 |
| 38 | 1.6648 | 0.0069 |
| 39 | 1.6716 | 0.0068 |
| 40 | 1.6782 | 0.0066 |
| 41 | 1.6847 | 0.0065 |
| 42 | 1.6911 | 0.0064 |
| 43 | 1.6973 | 0.0062 |
| 44 | 1.7035 | 0.0061 |
| 45 | 1.7095 | 0.0060 |
| 46 | 1.7154 | 0.0059 |
| 47 | 1.7211 | 0.0058 |
| 48 | 1.7268 | 0.0057 |

| | | |
|---|---|---|
| 49 | 1.7324 | 0.0056 |
| 50 | 1.7379 | 0.0055 |
| 51 | 1.7433 | 0.0054 |
| 52 | 1.7486 | 0.0053 |
| 53 | 1.7538 | 0.0052 |
| 54 | 1.7590 | 0.0051 |
| 55 | 1.7640 | 0.0051 |
| 56 | 1.7690 | 0.0050 |
| 57 | 1.7739 | 0.0049 |
| 58 | 1.7787 | 0.0048 |
| 59 | 1.7835 | 0.0048 |
| 60 | 1.7882 | 0.0047 |
| 61 | 1.7928 | 0.0046 |
| 62 | 1.7974 | 0.0046 |
| 63 | 1.8019 | 0.0045 |
| 64 | 1.8064 | 0.0044 |
| 65 | 1.8108 | 0.0044 |
| 66 | 1.8151 | 0.0043 |
| 67 | 1.8194 | 0.0043 |
| 68 | 1.8236 | 0.0042 |
| 69 | 1.8278 | 0.0042 |
| 70 | 1.8319 | 0.0041 |
| 71 | 1.8360 | 0.0041 |
| 72 | 1.8400 | 0.0040 |
| 73 | 1.8465 | 0.0065 |
| 74 | 1.8529 | 0.0064 |
| 75 | 1.8592 | 0.0064 |
| 76 | 1.8655 | 0.0063 |
| 77 | 1.8717 | 0.0062 |
| 78 | 1.8779 | 0.0062 |
| 79 | 1.8840 | 0.0061 |
| 80 | 1.8901 | 0.0061 |
| 81 | 1.8961 | 0.0060 |
| 82 | 1.9020 | 0.0059 |
| 83 | 1.9079 | 0.0059 |
| 84 | 1.9137 | 0.0058 |
| 85 | 1.9195 | 0.0058 |
| 86 | 1.9252 | 0.0057 |
| 87 | 1.9309 | 0.0057 |
| 88 | 1.9366 | 0.0056 |
| 89 | 1.9421 | 0.0056 |
| 90 | 1.9477 | 0.0055 |
| 91 | 1.9532 | 0.0055 |
| 92 | 1.9586 | 0.0054 |
| 93 | 1.9640 | 0.0054 |
| 94 | 1.9694 | 0.0054 |
| 95 | 1.9747 | 0.0053 |
| 96 | 1.9800 | 0.0053 |
| 97 | 1.9852 | 0.0052 |
| 98 | 1.9904 | 0.0052 |
| 99 | 1.9956 | 0.0052 |
| 100 | 2.0007 | 0.0051 |
| 101 | 2.0058 | 0.0051 |
| 102 | 2.0108 | 0.0050 |
| 103 | 2.0158 | 0.0050 |
| 104 | 2.0208 | 0.0050 |
| 105 | 2.0258 | 0.0049 |
| 106 | 2.0307 | 0.0049 |
| 107 | 2.0355 | 0.0049 |

| | | |
|---|---|---|
| 108 | 2.0404 | 0.0048 |
| 109 | 2.0452 | 0.0048 |
| 110 | 2.0499 | 0.0048 |
| 111 | 2.0547 | 0.0047 |
| 112 | 2.0594 | 0.0047 |
| 113 | 2.0640 | 0.0047 |
| 114 | 2.0687 | 0.0046 |
| 115 | 2.0733 | 0.0046 |
| 116 | 2.0779 | 0.0046 |
| 117 | 2.0824 | 0.0046 |
| 118 | 2.0869 | 0.0045 |
| 119 | 2.0914 | 0.0045 |
| 120 | 2.0959 | 0.0045 |
| 121 | 2.1003 | 0.0044 |
| 122 | 2.1047 | 0.0044 |
| 123 | 2.1091 | 0.0044 |
| 124 | 2.1135 | 0.0044 |
| 125 | 2.1178 | 0.0043 |
| 126 | 2.1221 | 0.0043 |
| 127 | 2.1264 | 0.0043 |
| 128 | 2.1307 | 0.0043 |
| 129 | 2.1349 | 0.0042 |
| 130 | 2.1391 | 0.0042 |
| 131 | 2.1433 | 0.0042 |
| 132 | 2.1474 | 0.0042 |
| 133 | 2.1516 | 0.0041 |
| 134 | 2.1557 | 0.0041 |
| 135 | 2.1598 | 0.0041 |
| 136 | 2.1639 | 0.0041 |
| 137 | 2.1679 | 0.0040 |
| 138 | 2.1719 | 0.0040 |
| 139 | 2.1759 | 0.0040 |
| 140 | 2.1799 | 0.0040 |
| 141 | 2.1839 | 0.0040 |
| 142 | 2.1878 | 0.0039 |
| 143 | 2.1917 | 0.0039 |
| 144 | 2.1956 | 0.0039 |
| 145 | 2.1995 | 0.0039 |
| 146 | 2.2033 | 0.0039 |
| 147 | 2.2072 | 0.0038 |
| 148 | 2.2110 | 0.0038 |
| 149 | 2.2148 | 0.0038 |
| 150 | 2.2186 | 0.0038 |
| 151 | 2.2223 | 0.0038 |
| 152 | 2.2261 | 0.0037 |
| 153 | 2.2298 | 0.0037 |
| 154 | 2.2335 | 0.0037 |
| 155 | 2.2372 | 0.0037 |
| 156 | 2.2409 | 0.0037 |
| 157 | 2.2445 | 0.0037 |
| 158 | 2.2482 | 0.0036 |
| 159 | 2.2518 | 0.0036 |
| 160 | 2.2554 | 0.0036 |
| 161 | 2.2590 | 0.0036 |
| 162 | 2.2625 | 0.0036 |
| 163 | 2.2661 | 0.0036 |
| 164 | 2.2696 | 0.0035 |
| 165 | 2.2732 | 0.0035 |
| 166 | 2.2767 | 0.0035 |

| | | |
|---|---|---|
| 167 | 2.2801 | 0.0035 |
| 168 | 2.2836 | 0.0035 |
| 169 | 2.2871 | 0.0035 |
| 170 | 2.2905 | 0.0034 |
| 171 | 2.2939 | 0.0034 |
| 172 | 2.2974 | 0.0034 |
| 173 | 2.3008 | 0.0034 |
| 174 | 2.3041 | 0.0034 |
| 175 | 2.3075 | 0.0034 |
| 176 | 2.3109 | 0.0034 |
| 177 | 2.3142 | 0.0033 |
| 178 | 2.3175 | 0.0033 |
| 179 | 2.3208 | 0.0033 |
| 180 | 2.3241 | 0.0033 |
| 181 | 2.3274 | 0.0033 |
| 182 | 2.3307 | 0.0033 |
| 183 | 2.3340 | 0.0033 |
| 184 | 2.3372 | 0.0032 |
| 185 | 2.3404 | 0.0032 |
| 186 | 2.3436 | 0.0032 |
| 187 | 2.3469 | 0.0032 |
| 188 | 2.3500 | 0.0032 |
| 189 | 2.3532 | 0.0032 |
| 190 | 2.3564 | 0.0032 |
| 191 | 2.3596 | 0.0032 |
| 192 | 2.3627 | 0.0031 |
| 193 | 2.3658 | 0.0031 |
| 194 | 2.3689 | 0.0031 |
| 195 | 2.3721 | 0.0031 |
| 196 | 2.3751 | 0.0031 |
| 197 | 2.3782 | 0.0031 |
| 198 | 2.3813 | 0.0031 |
| 199 | 2.3844 | 0.0031 |
| 200 | 2.3874 | 0.0030 |
| 201 | 2.3904 | 0.0030 |
| 202 | 2.3935 | 0.0030 |
| 203 | 2.3965 | 0.0030 |
| 204 | 2.3995 | 0.0030 |
| 205 | 2.4025 | 0.0030 |
| 206 | 2.4055 | 0.0030 |
| 207 | 2.4084 | 0.0030 |
| 208 | 2.4114 | 0.0030 |
| 209 | 2.4144 | 0.0030 |
| 210 | 2.4173 | 0.0029 |
| 211 | 2.4202 | 0.0029 |
| 212 | 2.4231 | 0.0029 |
| 213 | 2.4260 | 0.0029 |
| 214 | 2.4289 | 0.0029 |
| 215 | 2.4318 | 0.0029 |
| 216 | 2.4347 | 0.0029 |
| 217 | 2.4376 | 0.0029 |
| 218 | 2.4404 | 0.0029 |
| 219 | 2.4433 | 0.0028 |
| 220 | 2.4461 | 0.0028 |
| 221 | 2.4490 | 0.0028 |
| 222 | 2.4518 | 0.0028 |
| 223 | 2.4546 | 0.0028 |
| 224 | 2.4574 | 0.0028 |
| 225 | 2.4602 | 0.0028 |

| | | |
|---|---|---|
| 226 | 2.4630 | 0.0028 |
| 227 | 2.4657 | 0.0028 |
| 228 | 2.4685 | 0.0028 |
| 229 | 2.4713 | 0.0028 |
| 230 | 2.4740 | 0.0027 |
| 231 | 2.4767 | 0.0027 |
| 232 | 2.4795 | 0.0027 |
| 233 | 2.4822 | 0.0027 |
| 234 | 2.4849 | 0.0027 |
| 235 | 2.4876 | 0.0027 |
| 236 | 2.4903 | 0.0027 |
| 237 | 2.4930 | 0.0027 |
| 238 | 2.4957 | 0.0027 |
| 239 | 2.4983 | 0.0027 |
| 240 | 2.5010 | 0.0027 |
| 241 | 2.5037 | 0.0027 |
| 242 | 2.5063 | 0.0026 |
| 243 | 2.5089 | 0.0026 |
| 244 | 2.5116 | 0.0026 |
| 245 | 2.5142 | 0.0026 |
| 246 | 2.5168 | 0.0026 |
| 247 | 2.5194 | 0.0026 |
| 248 | 2.5220 | 0.0026 |
| 249 | 2.5246 | 0.0026 |
| 250 | 2.5272 | 0.0026 |
| 251 | 2.5297 | 0.0026 |
| 252 | 2.5323 | 0.0026 |
| 253 | 2.5349 | 0.0026 |
| 254 | 2.5374 | 0.0026 |
| 255 | 2.5400 | 0.0025 |
| 256 | 2.5425 | 0.0025 |
| 257 | 2.5450 | 0.0025 |
| 258 | 2.5475 | 0.0025 |
| 259 | 2.5500 | 0.0025 |
| 260 | 2.5526 | 0.0025 |
| 261 | 2.5551 | 0.0025 |
| 262 | 2.5575 | 0.0025 |
| 263 | 2.5600 | 0.0025 |
| 264 | 2.5625 | 0.0025 |
| 265 | 2.5650 | 0.0025 |
| 266 | 2.5674 | 0.0025 |
| 267 | 2.5699 | 0.0025 |
| 268 | 2.5724 | 0.0025 |
| 269 | 2.5748 | 0.0024 |
| 270 | 2.5772 | 0.0024 |
| 271 | 2.5797 | 0.0024 |
| 272 | 2.5821 | 0.0024 |
| 273 | 2.5845 | 0.0024 |
| 274 | 2.5869 | 0.0024 |
| 275 | 2.5893 | 0.0024 |
| 276 | 2.5917 | 0.0024 |
| 277 | 2.5941 | 0.0024 |
| 278 | 2.5965 | 0.0024 |
| 279 | 2.5989 | 0.0024 |
| 280 | 2.6012 | 0.0024 |
| 281 | 2.6036 | 0.0024 |
| 282 | 2.6060 | 0.0024 |
| 283 | 2.6083 | 0.0024 |
| 284 | 2.6107 | 0.0023 |

| | | |
|---|---|---|
| 285 | 2.6130 | 0.0023 |
| 286 | 2.6153 | 0.0023 |
| 287 | 2.6177 | 0.0023 |
| 288 | 2.6200 | 0.0023 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0023 | 0.0004 | 0.0020 |
| 2 | 0.0023 | 0.0004 | 0.0020 |
| 3 | 0.0023 | 0.0004 | 0.0020 |
| 4 | 0.0023 | 0.0004 | 0.0020 |
| 5 | 0.0024 | 0.0004 | 0.0020 |
| 6 | 0.0024 | 0.0004 | 0.0020 |
| 7 | 0.0024 | 0.0004 | 0.0020 |
| 8 | 0.0024 | 0.0004 | 0.0020 |
| 9 | 0.0024 | 0.0004 | 0.0020 |
| 10 | 0.0024 | 0.0004 | 0.0020 |
| 11 | 0.0024 | 0.0004 | 0.0020 |
| 12 | 0.0024 | 0.0004 | 0.0021 |
| 13 | 0.0024 | 0.0004 | 0.0021 |
| 14 | 0.0024 | 0.0004 | 0.0021 |
| 15 | 0.0025 | 0.0004 | 0.0021 |
| 16 | 0.0025 | 0.0004 | 0.0021 |
| 17 | 0.0025 | 0.0004 | 0.0021 |
| 18 | 0.0025 | 0.0004 | 0.0021 |
| 19 | 0.0025 | 0.0004 | 0.0021 |
| 20 | 0.0025 | 0.0004 | 0.0021 |
| 21 | 0.0025 | 0.0004 | 0.0021 |
| 22 | 0.0025 | 0.0004 | 0.0021 |
| 23 | 0.0025 | 0.0004 | 0.0022 |
| 24 | 0.0026 | 0.0004 | 0.0022 |
| 25 | 0.0026 | 0.0004 | 0.0022 |
| 26 | 0.0026 | 0.0004 | 0.0022 |
| 27 | 0.0026 | 0.0004 | 0.0022 |
| 28 | 0.0026 | 0.0004 | 0.0022 |
| 29 | 0.0026 | 0.0004 | 0.0022 |
| 30 | 0.0026 | 0.0004 | 0.0022 |
| 31 | 0.0026 | 0.0004 | 0.0022 |
| 32 | 0.0026 | 0.0004 | 0.0022 |
| 33 | 0.0027 | 0.0004 | 0.0023 |
| 34 | 0.0027 | 0.0004 | 0.0023 |
| 35 | 0.0027 | 0.0004 | 0.0023 |
| 36 | 0.0027 | 0.0004 | 0.0023 |
| 37 | 0.0027 | 0.0004 | 0.0023 |
| 38 | 0.0027 | 0.0004 | 0.0023 |
| 39 | 0.0027 | 0.0004 | 0.0023 |
| 40 | 0.0027 | 0.0004 | 0.0023 |
| 41 | 0.0028 | 0.0004 | 0.0023 |
| 42 | 0.0028 | 0.0004 | 0.0023 |
| 43 | 0.0028 | 0.0004 | 0.0024 |
| 44 | 0.0028 | 0.0004 | 0.0024 |
| 45 | 0.0028 | 0.0004 | 0.0024 |
| 46 | 0.0028 | 0.0004 | 0.0024 |
| 47 | 0.0028 | 0.0004 | 0.0024 |
| 48 | 0.0029 | 0.0004 | 0.0024 |
| 49 | 0.0029 | 0.0004 | 0.0024 |
| 50 | 0.0029 | 0.0004 | 0.0024 |

| | | | |
|---|---|---|---|
| 51 | 0.0029 | 0.0004 | 0.0025 |
| 52 | 0.0029 | 0.0004 | 0.0025 |
| 53 | 0.0029 | 0.0004 | 0.0025 |
| 54 | 0.0030 | 0.0005 | 0.0025 |
| 55 | 0.0030 | 0.0005 | 0.0025 |
| 56 | 0.0030 | 0.0005 | 0.0025 |
| 57 | 0.0030 | 0.0005 | 0.0025 |
| 58 | 0.0030 | 0.0005 | 0.0026 |
| 59 | 0.0030 | 0.0005 | 0.0026 |
| 60 | 0.0030 | 0.0005 | 0.0026 |
| 61 | 0.0031 | 0.0005 | 0.0026 |
| 62 | 0.0031 | 0.0005 | 0.0026 |
| 63 | 0.0031 | 0.0005 | 0.0026 |
| 64 | 0.0031 | 0.0005 | 0.0026 |
| 65 | 0.0031 | 0.0005 | 0.0027 |
| 66 | 0.0032 | 0.0005 | 0.0027 |
| 67 | 0.0032 | 0.0005 | 0.0027 |
| 68 | 0.0032 | 0.0005 | 0.0027 |
| 69 | 0.0032 | 0.0005 | 0.0027 |
| 70 | 0.0032 | 0.0005 | 0.0027 |
| 71 | 0.0033 | 0.0005 | 0.0028 |
| 72 | 0.0033 | 0.0005 | 0.0028 |
| 73 | 0.0033 | 0.0005 | 0.0028 |
| 74 | 0.0033 | 0.0005 | 0.0028 |
| 75 | 0.0033 | 0.0005 | 0.0028 |
| 76 | 0.0034 | 0.0005 | 0.0028 |
| 77 | 0.0034 | 0.0005 | 0.0029 |
| 78 | 0.0034 | 0.0005 | 0.0029 |
| 79 | 0.0034 | 0.0005 | 0.0029 |
| 80 | 0.0034 | 0.0005 | 0.0029 |
| 81 | 0.0035 | 0.0005 | 0.0029 |
| 82 | 0.0035 | 0.0005 | 0.0030 |
| 83 | 0.0035 | 0.0005 | 0.0030 |
| 84 | 0.0035 | 0.0005 | 0.0030 |
| 85 | 0.0036 | 0.0005 | 0.0030 |
| 86 | 0.0036 | 0.0005 | 0.0030 |
| 87 | 0.0036 | 0.0006 | 0.0031 |
| 88 | 0.0036 | 0.0006 | 0.0031 |
| 89 | 0.0037 | 0.0006 | 0.0031 |
| 90 | 0.0037 | 0.0006 | 0.0031 |
| 91 | 0.0037 | 0.0006 | 0.0032 |
| 92 | 0.0037 | 0.0006 | 0.0032 |
| 93 | 0.0038 | 0.0006 | 0.0032 |
| 94 | 0.0038 | 0.0006 | 0.0032 |
| 95 | 0.0038 | 0.0006 | 0.0033 |
| 96 | 0.0039 | 0.0006 | 0.0033 |
| 97 | 0.0039 | 0.0006 | 0.0033 |
| 98 | 0.0039 | 0.0006 | 0.0033 |
| 99 | 0.0040 | 0.0006 | 0.0034 |
| 100 | 0.0040 | 0.0006 | 0.0034 |
| 101 | 0.0040 | 0.0006 | 0.0034 |
| 102 | 0.0040 | 0.0006 | 0.0034 |
| 103 | 0.0041 | 0.0006 | 0.0035 |
| 104 | 0.0041 | 0.0006 | 0.0035 |
| 105 | 0.0042 | 0.0006 | 0.0035 |
| 106 | 0.0042 | 0.0006 | 0.0035 |
| 107 | 0.0042 | 0.0006 | 0.0036 |
| 108 | 0.0043 | 0.0007 | 0.0036 |
| 109 | 0.0043 | 0.0007 | 0.0036 |

| | | | |
|---|---|---|---|
| 110 | 0.0043 | 0.0007 | 0.0037 |
| 111 | 0.0044 | 0.0007 | 0.0037 |
| 112 | 0.0044 | 0.0007 | 0.0037 |
| 113 | 0.0045 | 0.0007 | 0.0038 |
| 114 | 0.0045 | 0.0007 | 0.0038 |
| 115 | 0.0046 | 0.0007 | 0.0039 |
| 116 | 0.0046 | 0.0007 | 0.0039 |
| 117 | 0.0046 | 0.0007 | 0.0039 |
| 118 | 0.0047 | 0.0007 | 0.0040 |
| 119 | 0.0047 | 0.0007 | 0.0040 |
| 120 | 0.0048 | 0.0007 | 0.0040 |
| 121 | 0.0048 | 0.0007 | 0.0041 |
| 122 | 0.0049 | 0.0007 | 0.0041 |
| 123 | 0.0049 | 0.0008 | 0.0042 |
| 124 | 0.0050 | 0.0008 | 0.0042 |
| 125 | 0.0050 | 0.0008 | 0.0043 |
| 126 | 0.0051 | 0.0008 | 0.0043 |
| 127 | 0.0052 | 0.0008 | 0.0044 |
| 128 | 0.0052 | 0.0008 | 0.0044 |
| 129 | 0.0053 | 0.0008 | 0.0045 |
| 130 | 0.0053 | 0.0008 | 0.0045 |
| 131 | 0.0054 | 0.0008 | 0.0046 |
| 132 | 0.0054 | 0.0008 | 0.0046 |
| 133 | 0.0055 | 0.0008 | 0.0047 |
| 134 | 0.0056 | 0.0009 | 0.0047 |
| 135 | 0.0057 | 0.0009 | 0.0048 |
| 136 | 0.0057 | 0.0009 | 0.0049 |
| 137 | 0.0058 | 0.0009 | 0.0049 |
| 138 | 0.0059 | 0.0009 | 0.0050 |
| 139 | 0.0060 | 0.0009 | 0.0051 |
| 140 | 0.0061 | 0.0009 | 0.0051 |
| 141 | 0.0062 | 0.0009 | 0.0052 |
| 142 | 0.0062 | 0.0010 | 0.0053 |
| 143 | 0.0064 | 0.0010 | 0.0054 |
| 144 | 0.0064 | 0.0010 | 0.0054 |
| 145 | 0.0040 | 0.0006 | 0.0034 |
| 146 | 0.0041 | 0.0006 | 0.0034 |
| 147 | 0.0042 | 0.0006 | 0.0035 |
| 148 | 0.0042 | 0.0006 | 0.0036 |
| 149 | 0.0043 | 0.0007 | 0.0037 |
| 150 | 0.0044 | 0.0007 | 0.0037 |
| 151 | 0.0045 | 0.0007 | 0.0038 |
| 152 | 0.0046 | 0.0007 | 0.0039 |
| 153 | 0.0047 | 0.0007 | 0.0040 |
| 154 | 0.0048 | 0.0007 | 0.0040 |
| 155 | 0.0049 | 0.0008 | 0.0042 |
| 156 | 0.0050 | 0.0008 | 0.0042 |
| 157 | 0.0051 | 0.0008 | 0.0044 |
| 158 | 0.0052 | 0.0008 | 0.0044 |
| 159 | 0.0054 | 0.0008 | 0.0046 |
| 160 | 0.0055 | 0.0008 | 0.0046 |
| 161 | 0.0057 | 0.0009 | 0.0048 |
| 162 | 0.0058 | 0.0009 | 0.0049 |
| 163 | 0.0060 | 0.0009 | 0.0051 |
| 164 | 0.0061 | 0.0009 | 0.0052 |
| 165 | 0.0064 | 0.0010 | 0.0054 |
| 166 | 0.0065 | 0.0010 | 0.0055 |
| 167 | 0.0068 | 0.0010 | 0.0057 |
| 168 | 0.0069 | 0.0011 | 0.0059 |

| | | | |
|---|---|---|---|
| 169 | 0.0073 | 0.0011 | 0.0062 |
| 170 | 0.0074 | 0.0011 | 0.0063 |
| 171 | 0.0078 | 0.0012 | 0.0066 |
| 172 | 0.0080 | 0.0012 | 0.0068 |
| 173 | 0.0085 | 0.0013 | 0.0072 |
| 174 | 0.0087 | 0.0013 | 0.0074 |
| 175 | 0.0093 | 0.0014 | 0.0079 |
| 176 | 0.0096 | 0.0015 | 0.0081 |
| 177 | 0.0103 | 0.0016 | 0.0087 |
| 178 | 0.0107 | 0.0016 | 0.0090 |
| 179 | 0.0116 | 0.0018 | 0.0098 |
| 180 | 0.0120 | 0.0018 | 0.0102 |
| 181 | 0.0132 | 0.0020 | 0.0112 |
| 182 | 0.0139 | 0.0021 | 0.0118 |
| 183 | 0.0155 | 0.0024 | 0.0131 |
| 184 | 0.0164 | 0.0025 | 0.0139 |
| 185 | 0.0358 | 0.0055 | 0.0303 |
| 186 | 0.0382 | 0.0058 | 0.0323 |
| 187 | 0.0443 | 0.0059 | 0.0383 |
| 188 | 0.0483 | 0.0059 | 0.0424 |
| 189 | 0.0601 | 0.0059 | 0.0542 |
| 190 | 0.0692 | 0.0059 | 0.0633 |
| 191 | 0.1050 | 0.0059 | 0.0991 |
| 192 | 0.1524 | 0.0059 | 0.1465 |
| 193 | 0.6595 | 0.0059 | 0.6535 |
| 194 | 0.0826 | 0.0059 | 0.0767 |
| 195 | 0.0534 | 0.0059 | 0.0475 |
| 196 | 0.0409 | 0.0059 | 0.0350 |
| 197 | 0.0175 | 0.0027 | 0.0149 |
| 198 | 0.0146 | 0.0022 | 0.0124 |
| 199 | 0.0126 | 0.0019 | 0.0107 |
| 200 | 0.0111 | 0.0017 | 0.0094 |
| 201 | 0.0099 | 0.0015 | 0.0084 |
| 202 | 0.0090 | 0.0014 | 0.0076 |
| 203 | 0.0083 | 0.0013 | 0.0070 |
| 204 | 0.0076 | 0.0012 | 0.0065 |
| 205 | 0.0071 | 0.0011 | 0.0060 |
| 206 | 0.0066 | 0.0010 | 0.0056 |
| 207 | 0.0062 | 0.0010 | 0.0053 |
| 208 | 0.0059 | 0.0009 | 0.0050 |
| 209 | 0.0056 | 0.0009 | 0.0047 |
| 210 | 0.0053 | 0.0008 | 0.0045 |
| 211 | 0.0051 | 0.0008 | 0.0043 |
| 212 | 0.0048 | 0.0007 | 0.0041 |
| 213 | 0.0046 | 0.0007 | 0.0039 |
| 214 | 0.0044 | 0.0007 | 0.0038 |
| 215 | 0.0043 | 0.0007 | 0.0036 |
| 216 | 0.0041 | 0.0006 | 0.0035 |
| 217 | 0.0065 | 0.0010 | 0.0055 |
| 218 | 0.0063 | 0.0010 | 0.0053 |
| 219 | 0.0061 | 0.0009 | 0.0052 |
| 220 | 0.0059 | 0.0009 | 0.0050 |
| 221 | 0.0058 | 0.0009 | 0.0049 |
| 222 | 0.0056 | 0.0009 | 0.0048 |
| 223 | 0.0055 | 0.0008 | 0.0047 |
| 224 | 0.0054 | 0.0008 | 0.0045 |
| 225 | 0.0052 | 0.0008 | 0.0044 |
| 226 | 0.0051 | 0.0008 | 0.0043 |
| 227 | 0.0050 | 0.0008 | 0.0042 |

| | | | |
|---|---|---|---|
| 228 | 0.0049 | 0.0007 | 0.0042 |
| 229 | 0.0048 | 0.0007 | 0.0041 |
| 230 | 0.0047 | 0.0007 | 0.0040 |
| 231 | 0.0046 | 0.0007 | 0.0039 |
| 232 | 0.0045 | 0.0007 | 0.0038 |
| 233 | 0.0044 | 0.0007 | 0.0038 |
| 234 | 0.0044 | 0.0007 | 0.0037 |
| 235 | 0.0043 | 0.0007 | 0.0036 |
| 236 | 0.0042 | 0.0006 | 0.0036 |
| 237 | 0.0041 | 0.0006 | 0.0035 |
| 238 | 0.0041 | 0.0006 | 0.0034 |
| 239 | 0.0040 | 0.0006 | 0.0034 |
| 240 | 0.0039 | 0.0006 | 0.0033 |
| 241 | 0.0039 | 0.0006 | 0.0033 |
| 242 | 0.0038 | 0.0006 | 0.0032 |
| 243 | 0.0038 | 0.0006 | 0.0032 |
| 244 | 0.0037 | 0.0006 | 0.0031 |
| 245 | 0.0037 | 0.0006 | 0.0031 |
| 246 | 0.0036 | 0.0006 | 0.0031 |
| 247 | 0.0036 | 0.0005 | 0.0030 |
| 248 | 0.0035 | 0.0005 | 0.0030 |
| 249 | 0.0035 | 0.0005 | 0.0029 |
| 250 | 0.0034 | 0.0005 | 0.0029 |
| 251 | 0.0034 | 0.0005 | 0.0029 |
| 252 | 0.0033 | 0.0005 | 0.0028 |
| 253 | 0.0033 | 0.0005 | 0.0028 |
| 254 | 0.0032 | 0.0005 | 0.0027 |
| 255 | 0.0032 | 0.0005 | 0.0027 |
| 256 | 0.0032 | 0.0005 | 0.0027 |
| 257 | 0.0031 | 0.0005 | 0.0027 |
| 258 | 0.0031 | 0.0005 | 0.0026 |
| 259 | 0.0031 | 0.0005 | 0.0026 |
| 260 | 0.0030 | 0.0005 | 0.0026 |
| 261 | 0.0030 | 0.0005 | 0.0025 |
| 262 | 0.0030 | 0.0005 | 0.0025 |
| 263 | 0.0029 | 0.0004 | 0.0025 |
| 264 | 0.0029 | 0.0004 | 0.0025 |
| 265 | 0.0029 | 0.0004 | 0.0024 |
| 266 | 0.0028 | 0.0004 | 0.0024 |
| 267 | 0.0028 | 0.0004 | 0.0024 |
| 268 | 0.0028 | 0.0004 | 0.0024 |
| 269 | 0.0028 | 0.0004 | 0.0023 |
| 270 | 0.0027 | 0.0004 | 0.0023 |
| 271 | 0.0027 | 0.0004 | 0.0023 |
| 272 | 0.0027 | 0.0004 | 0.0023 |
| 273 | 0.0027 | 0.0004 | 0.0022 |
| 274 | 0.0026 | 0.0004 | 0.0022 |
| 275 | 0.0026 | 0.0004 | 0.0022 |
| 276 | 0.0026 | 0.0004 | 0.0022 |
| 277 | 0.0026 | 0.0004 | 0.0022 |
| 278 | 0.0025 | 0.0004 | 0.0021 |
| 279 | 0.0025 | 0.0004 | 0.0021 |
| 280 | 0.0025 | 0.0004 | 0.0021 |
| 281 | 0.0025 | 0.0004 | 0.0021 |
| 282 | 0.0025 | 0.0004 | 0.0021 |
| 283 | 0.0024 | 0.0004 | 0.0021 |
| 284 | 0.0024 | 0.0004 | 0.0020 |
| 285 | 0.0024 | 0.0004 | 0.0020 |
| 286 | 0.0024 | 0.0004 | 0.0020 |

```
     287             0.0024          0.0004             0.0020
     288             0.0023          0.0004             0.0020
     ---------------------------------------------------------------------
     ---------------------------------------------------------------------
     Total soil rain loss =      0.26(In)
     Total effective rainfall =      2.36(In)
     Peak flow rate in flood hydrograph =     10.53(CFS)
     ---------------------------------------------------------------------
     +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        24 - H O U R    S T O R M
                   R u n o f f      H y d r o g r a p h
     ---------------------------------------------------------------------
                Hydrograph in   5   Minute intervals ((CFS))

     ---------------------------------------------------------------------
Time(h+m) Volume Ac.Ft   Q(CFS)  0        5.0      10.0      15.0      20.0
-------------------------------------------------------------------------
  0+ 5       0.0000      0.00  Q         |         |         |         |
  0+10       0.0001      0.01  Q         |         |         |         |
  0+15       0.0003      0.04  Q         |         |         |         |
  0+20       0.0007      0.05  Q         |         |         |         |
  0+25       0.0011      0.06  Q         |         |         |         |
  0+30       0.0016      0.07  Q         |         |         |         |
  0+35       0.0021      0.07  Q         |         |         |         |
  0+40       0.0026      0.07  Q         |         |         |         |
  0+45       0.0031      0.08  Q         |         |         |         |
  0+50       0.0037      0.08  Q         |         |         |         |
  0+55       0.0042      0.08  Q         |         |         |         |
  1+ 0       0.0048      0.08  Q         |         |         |         |
  1+ 5       0.0054      0.08  Q         |         |         |         |
  1+10       0.0059      0.09  Q         |         |         |         |
  1+15       0.0065      0.09  Q         |         |         |         |
  1+20       0.0071      0.09  Q         |         |         |         |
  1+25       0.0077      0.09  Q         |         |         |         |
  1+30       0.0083      0.09  Q         |         |         |         |
  1+35       0.0090      0.09  Q         |         |         |         |
  1+40       0.0096      0.09  Q         |         |         |         |
  1+45       0.0102      0.09  Q         |         |         |         |
  1+50       0.0108      0.09  Q         |         |         |         |
  1+55       0.0115      0.09  Q         |         |         |         |
  2+ 0       0.0121      0.09  Q         |         |         |         |
  2+ 5       0.0127      0.09  Q         |         |         |         |
  2+10       0.0134      0.09  Q         |         |         |         |
  2+15       0.0140      0.09  Q         |         |         |         |
  2+20       0.0146      0.09  Q         |         |         |         |
  2+25       0.0153      0.09  Q         |         |         |         |
  2+30       0.0159      0.09  Q         |         |         |         |
  2+35       0.0166      0.09  Q         |         |         |         |
  2+40       0.0172      0.09  Q         |         |         |         |
  2+45       0.0179      0.10  QV        |         |         |         |
  2+50       0.0186      0.10  QV        |         |         |         |
  2+55       0.0192      0.10  QV        |         |         |         |
  3+ 0       0.0199      0.10  QV        |         |         |         |
  3+ 5       0.0205      0.10  QV        |         |         |         |
  3+10       0.0212      0.10  QV        |         |         |         |
  3+15       0.0219      0.10  QV        |         |         |         |
  3+20       0.0226      0.10  QV        |         |         |         |
  3+25       0.0233      0.10  QV        |         |         |         |
  3+30       0.0239      0.10  QV        |         |         |         |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+35 | 0.0246 | 0.10 | QV | | | | |
| 3+40 | 0.0253 | 0.10 | QV | | | | |
| 3+45 | 0.0260 | 0.10 | QV | | | | |
| 3+50 | 0.0267 | 0.10 | QV | | | | |
| 3+55 | 0.0274 | 0.10 | QV | | | | |
| 4+ 0 | 0.0281 | 0.10 | QV | | | | |
| 4+ 5 | 0.0288 | 0.10 | QV | | | | |
| 4+10 | 0.0295 | 0.10 | QV | | | | |
| 4+15 | 0.0303 | 0.10 | QV | | | | |
| 4+20 | 0.0310 | 0.10 | QV | | | | |
| 4+25 | 0.0317 | 0.11 | QV | | | | |
| 4+30 | 0.0324 | 0.11 | QV | | | | |
| 4+35 | 0.0332 | 0.11 | QV | | | | |
| 4+40 | 0.0339 | 0.11 | QV | | | | |
| 4+45 | 0.0346 | 0.11 | QV | | | | |
| 4+50 | 0.0354 | 0.11 | Q V | | | | |
| 4+55 | 0.0361 | 0.11 | Q V | | | | |
| 5+ 0 | 0.0369 | 0.11 | Q V | | | | |
| 5+ 5 | 0.0376 | 0.11 | Q V | | | | |
| 5+10 | 0.0384 | 0.11 | Q V | | | | |
| 5+15 | 0.0391 | 0.11 | Q V | | | | |
| 5+20 | 0.0399 | 0.11 | Q V | | | | |
| 5+25 | 0.0407 | 0.11 | Q V | | | | |
| 5+30 | 0.0415 | 0.11 | Q V | | | | |
| 5+35 | 0.0422 | 0.11 | Q V | | | | |
| 5+40 | 0.0430 | 0.11 | Q V | | | | |
| 5+45 | 0.0438 | 0.11 | Q V | | | | |
| 5+50 | 0.0446 | 0.12 | Q V | | | | |
| 5+55 | 0.0454 | 0.12 | Q V | | | | |
| 6+ 0 | 0.0462 | 0.12 | Q V | | | | |
| 6+ 5 | 0.0470 | 0.12 | Q V | | | | |
| 6+10 | 0.0478 | 0.12 | Q V | | | | |
| 6+15 | 0.0487 | 0.12 | Q V | | | | |
| 6+20 | 0.0495 | 0.12 | Q V | | | | |
| 6+25 | 0.0503 | 0.12 | Q V | | | | |
| 6+30 | 0.0511 | 0.12 | Q V | | | | |
| 6+35 | 0.0520 | 0.12 | Q V | | | | |
| 6+40 | 0.0528 | 0.12 | Q  V | | | | |
| 6+45 | 0.0537 | 0.12 | Q  V | | | | |
| 6+50 | 0.0545 | 0.12 | Q  V | | | | |
| 6+55 | 0.0554 | 0.13 | Q  V | | | | |
| 7+ 0 | 0.0563 | 0.13 | Q  V | | | | |
| 7+ 5 | 0.0571 | 0.13 | Q  V | | | | |
| 7+10 | 0.0580 | 0.13 | Q  V | | | | |
| 7+15 | 0.0589 | 0.13 | Q  V | | | | |
| 7+20 | 0.0598 | 0.13 | Q  V | | | | |
| 7+25 | 0.0607 | 0.13 | Q  V | | | | |
| 7+30 | 0.0616 | 0.13 | Q  V | | | | |
| 7+35 | 0.0625 | 0.13 | Q  V | | | | |
| 7+40 | 0.0634 | 0.13 | Q  V | | | | |
| 7+45 | 0.0643 | 0.13 | Q  V | | | | |
| 7+50 | 0.0653 | 0.13 | Q  V | | | | |
| 7+55 | 0.0662 | 0.14 | Q  V | | | | |
| 8+ 0 | 0.0671 | 0.14 | Q  V | | | | |
| 8+ 5 | 0.0681 | 0.14 | Q  V | | | | |
| 8+10 | 0.0690 | 0.14 | Q  V | | | | |
| 8+15 | 0.0700 | 0.14 | Q  V | | | | |
| 8+20 | 0.0710 | 0.14 | Q   V | | | | |
| 8+25 | 0.0720 | 0.14 | Q   V | | | | |

```
 8+30       0.0729      0.14  Q   V     |          |          |          |
 8+35       0.0739      0.14  Q   V     |          |          |          |
 8+40       0.0749      0.15  Q   V     |          |          |          |
 8+45       0.0760      0.15  Q   V     |          |          |          |
 8+50       0.0770      0.15  Q   V     |          |          |          |
 8+55       0.0780      0.15  Q   V     |          |          |          |
 9+ 0       0.0790      0.15  Q   V     |          |          |          |
 9+ 5       0.0801      0.15  Q   V     |          |          |          |
 9+10       0.0811      0.15  Q   V     |          |          |          |
 9+15       0.0822      0.15  Q   V     |          |          |          |
 9+20       0.0833      0.16  Q   V     |          |          |          |
 9+25       0.0844      0.16  Q   V     |          |          |          |
 9+30       0.0854      0.16  Q   V     |          |          |          |
 9+35       0.0865      0.16  Q   V     |          |          |          |
 9+40       0.0877      0.16  Q    V    |          |          |          |
 9+45       0.0888      0.16  Q    V    |          |          |          |
 9+50       0.0899      0.16  Q    V    |          |          |          |
 9+55       0.0911      0.17  Q    V    |          |          |          |
10+ 0       0.0922      0.17  Q    V    |          |          |          |
10+ 5       0.0934      0.17  Q    V    |          |          |          |
10+10       0.0946      0.17  Q    V    |          |          |          |
10+15       0.0957      0.17  Q    V    |          |          |          |
10+20       0.0969      0.17  Q    V    |          |          |          |
10+25       0.0982      0.18  Q    V    |          |          |          |
10+30       0.0994      0.18  Q    V    |          |          |          |
10+35       0.1006      0.18  Q    V    |          |          |          |
10+40       0.1019      0.18  Q    V    |          |          |          |
10+45       0.1031      0.18  Q    V    |          |          |          |
10+50       0.1044      0.19  Q    V    |          |          |          |
10+55       0.1057      0.19  Q     V   |          |          |          |
11+ 0       0.1070      0.19  Q     V   |          |          |          |
11+ 5       0.1084      0.19  Q     V   |          |          |          |
11+10       0.1097      0.19  Q     V   |          |          |          |
11+15       0.1111      0.20  Q     V   |          |          |          |
11+20       0.1124      0.20  Q     V   |          |          |          |
11+25       0.1138      0.20  Q     V   |          |          |          |
11+30       0.1152      0.20  Q     V   |          |          |          |
11+35       0.1167      0.21  Q     V   |          |          |          |
11+40       0.1181      0.21  Q     V   |          |          |          |
11+45       0.1196      0.21  Q     V   |          |          |          |
11+50       0.1211      0.22  Q     V   |          |          |          |
11+55       0.1226      0.22  Q     V   |          |          |          |
12+ 0       0.1241      0.22  Q      V  |          |          |          |
12+ 5       0.1256      0.22  Q      V  |          |          |          |
12+10       0.1271      0.22  Q      V  |          |          |          |
12+15       0.1284      0.19  Q      V  |          |          |          |
12+20       0.1297      0.18  Q      V  |          |          |          |
12+25       0.1308      0.17  Q      V  |          |          |          |
12+30       0.1320      0.17  Q      V  |          |          |          |
12+35       0.1332      0.17  Q      V  |          |          |          |
12+40       0.1343      0.17  Q      V  |          |          |          |
12+45       0.1355      0.17  Q      V  |          |          |          |
12+50       0.1366      0.17  Q      V  |          |          |          |
12+55       0.1378      0.17  Q      V  |          |          |          |
13+ 0       0.1390      0.17  Q      V  |          |          |          |
13+ 5       0.1402      0.18  Q      V  |          |          |          |
13+10       0.1414      0.18  Q       V |          |          |          |
13+15       0.1427      0.18  Q       V |          |          |          |
13+20       0.1440      0.19  Q       V |          |          |          |
```

```
13+25       0.1453      0.19  Q       V |          |          |          |
13+30       0.1466      0.19  Q       V |          |          |          |
13+35       0.1480      0.20  Q       V |          |          |          |
13+40       0.1494      0.20  Q       V |          |          |          |
13+45       0.1508      0.21  Q       V |          |          |          |
13+50       0.1523      0.21  Q       V |          |          |          |
13+55       0.1538      0.22  Q       V |          |          |          |
14+ 0       0.1553      0.23  Q       V |          |          |          |
14+ 5       0.1569      0.23  Q       V |          |          |          |
14+10       0.1586      0.24  Q        V|          |          |          |
14+15       0.1603      0.25  Q        V|          |          |          |
14+20       0.1621      0.26  Q        V|          |          |          |
14+25       0.1639      0.27  Q        V|          |          |          |
14+30       0.1658      0.28  Q        V|          |          |          |
14+35       0.1678      0.29  Q        V|          |          |          |
14+40       0.1699      0.30  Q        V|          |          |          |
14+45       0.1720      0.31  Q        V|          |          |          |
14+50       0.1743      0.33  Q        V|          |          |          |
14+55       0.1766      0.34  Q         V          |          |          |
15+ 0       0.1791      0.36  Q         V          |          |          |
15+ 5       0.1818      0.38  Q         V          |          |          |
15+10       0.1845      0.40  Q         V          |          |          |
15+15       0.1875      0.43  Q         V          |          |          |
15+20       0.1907      0.46  Q         V          |          |          |
15+25       0.1942      0.51  |Q        |V          |          |          |
15+30       0.1986      0.63  |Q        |V          |          |          |
15+35       0.2045      0.87  |Q        |V          |          |          |
15+40       0.2119      1.07  | Q       | V         |          |          |
15+45       0.2206      1.27  | Q       | V         |          |          |
15+50       0.2310      1.50  |  Q      |  V        |          |          |
15+55       0.2436      1.83  |  Q      |  V        |          |          |
16+ 0       0.2597      2.34  |   Q     |   V       |          |          |
16+ 5       0.2852      3.70  |      Q  |     V     |          |          |
16+10       0.3315      6.72  |         |  Q    V   |          |          |
16+15       0.4040     10.53  |         |          |Q V       |          |
16+20       0.4573      7.74  |         |    Q     |     V    |          |
16+25       0.4925      5.11  |         Q          |       V  |          |
16+30       0.5186      3.79  |      Q  |          |        V|          |
16+35       0.5381      2.83  |    Q    |          |         V          |
16+40       0.5535      2.23  |   Q     |          |         |V         |
16+45       0.5659      1.80  |  Q      |          |         | V        |
16+50       0.5759      1.46  | Q       |          |         | V        |
16+55       0.5845      1.24  | Q       |          |         |  V       |
17+ 0       0.5918      1.06  | Q       |          |         |  V       |
17+ 5       0.5980      0.91  |Q        |          |         |   V      |
17+10       0.6034      0.78  |Q        |          |         |   V      |
17+15       0.6080      0.66  |Q        |          |         |   V      |
17+20       0.6118      0.56  |Q        |          |         |   V      |
17+25       0.6151      0.47  Q         |          |         |    V     |
17+30       0.6182      0.45  Q         |          |         |    V     |
17+35       0.6211      0.42  Q         |          |         |    V     |
17+40       0.6237      0.38  Q         |          |         |    V     |
17+45       0.6259      0.32  Q         |          |         |    V     |
17+50       0.6277      0.26  Q         |          |         |    V     |
17+55       0.6291      0.21  Q         |          |         |    V     |
18+ 0       0.6304      0.19  Q         |          |         |    V     |
18+ 5       0.6316      0.18  Q         |          |         |     V    |
18+10       0.6329      0.18  Q         |          |         |     V    |
18+15       0.6343      0.20  Q         |          |         |     V    |
```

```
18+20       0.6357      0.21  Q         |          |          |     V    |
18+25       0.6372      0.21  Q         |          |          |     V    |
18+30       0.6387      0.21  Q         |          |          |     V    |
18+35       0.6401      0.21  Q         |          |          |     V    |
18+40       0.6415      0.21  Q         |          |          |     V    |
18+45       0.6429      0.20  Q         |          |          |     V    |
18+50       0.6443      0.20  Q         |          |          |     V    |
18+55       0.6457      0.20  Q         |          |          |     V    |
19+ 0       0.6470      0.19  Q         |          |          |     V    |
19+ 5       0.6483      0.19  Q         |          |          |     V    |
19+10       0.6496      0.19  Q         |          |          |      V   |
19+15       0.6508      0.18  Q         |          |          |      V   |
19+20       0.6521      0.18  Q         |          |          |      V   |
19+25       0.6533      0.18  Q         |          |          |      V   |
19+30       0.6545      0.17  Q         |          |          |      V   |
19+35       0.6556      0.17  Q         |          |          |      V   |
19+40       0.6568      0.17  Q         |          |          |      V   |
19+45       0.6579      0.16  Q         |          |          |      V   |
19+50       0.6590      0.16  Q         |          |          |      V   |
19+55       0.6601      0.16  Q         |          |          |      V   |
20+ 0       0.6611      0.15  Q         |          |          |      V   |
20+ 5       0.6622      0.15  Q         |          |          |      V   |
20+10       0.6632      0.15  Q         |          |          |      V   |
20+15       0.6642      0.15  Q         |          |          |      V   |
20+20       0.6652      0.14  Q         |          |          |      V   |
20+25       0.6662      0.14  Q         |          |          |       V  |
20+30       0.6672      0.14  Q         |          |          |       V  |
20+35       0.6681      0.14  Q         |          |          |       V  |
20+40       0.6691      0.14  Q         |          |          |       V  |
20+45       0.6700      0.13  Q         |          |          |       V  |
20+50       0.6709      0.13  Q         |          |          |       V  |
20+55       0.6718      0.13  Q         |          |          |       V  |
21+ 0       0.6727      0.13  Q         |          |          |       V  |
21+ 5       0.6736      0.13  Q         |          |          |       V  |
21+10       0.6744      0.13  Q         |          |          |       V  |
21+15       0.6753      0.12  Q         |          |          |       V  |
21+20       0.6761      0.12  Q         |          |          |       V  |
21+25       0.6769      0.12  Q         |          |          |       V  |
21+30       0.6778      0.12  Q         |          |          |       V  |
21+35       0.6786      0.12  Q         |          |          |       V  |
21+40       0.6794      0.12  Q         |          |          |       V  |
21+45       0.6802      0.11  Q         |          |          |       V  |
21+50       0.6809      0.11  Q         |          |          |       V  |
21+55       0.6817      0.11  Q         |          |          |       V  |
22+ 0       0.6825      0.11  Q         |          |          |       V  |
22+ 5       0.6832      0.11  Q         |          |          |       V  |
22+10       0.6840      0.11  Q         |          |          |        V |
22+15       0.6847      0.11  Q         |          |          |        V |
22+20       0.6854      0.11  Q         |          |          |        V |
22+25       0.6862      0.11  Q         |          |          |        V |
22+30       0.6869      0.10  Q         |          |          |        V |
22+35       0.6876      0.10  Q         |          |          |        V |
22+40       0.6883      0.10  Q         |          |          |        V |
22+45       0.6890      0.10  Q         |          |          |        V |
22+50       0.6897      0.10  Q         |          |          |        V |
22+55       0.6904      0.10  Q         |          |          |        V |
23+ 0       0.6910      0.10  Q         |          |          |        V |
23+ 5       0.6917      0.10  Q         |          |          |        V |
23+10       0.6924      0.10  Q         |          |          |        V |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+15 | 0.6930 | 0.10 | Q | \| | \| | \| | V\| |
| 23+20 | 0.6937 | 0.09 | Q | \| | \| | \| | V\| |
| 23+25 | 0.6943 | 0.09 | Q | \| | \| | \| | V\| |
| 23+30 | 0.6950 | 0.09 | Q | \| | \| | \| | V\| |
| 23+35 | 0.6956 | 0.09 | Q | \| | \| | \| | V\| |
| 23+40 | 0.6962 | 0.09 | Q | \| | \| | \| | V\| |
| 23+45 | 0.6968 | 0.09 | Q | \| | \| | \| | V\| |
| 23+50 | 0.6975 | 0.09 | Q | \| | \| | \| | V\| |
| 23+55 | 0.6981 | 0.09 | Q | \| | \| | \| | V\| |
| 24+ 0 | 0.6987 | 0.09 | Q | \| | \| | \| | V\| |
| 24+ 5 | 0.6993 | 0.09 | Q | \| | \| | \| | V\| |
| 24+10 | 0.6998 | 0.07 | Q | \| | \| | \| | V\| |
| 24+15 | 0.7001 | 0.05 | Q | \| | \| | \| | V\| |
| 24+20 | 0.7004 | 0.03 | Q | \| | \| | \| | V\| |
| 24+25 | 0.7005 | 0.03 | Q | \| | \| | \| | V\| |
| 24+30 | 0.7007 | 0.02 | Q | \| | \| | \| | V\| |
| 24+35 | 0.7008 | 0.02 | Q | \| | \| | \| | V\| |
| 24+40 | 0.7009 | 0.01 | Q | \| | \| | \| | V\| |
| 24+45 | 0.7009 | 0.01 | Q | \| | \| | \| | V\| |
| 24+50 | 0.7010 | 0.01 | Q | \| | \| | \| | V\| |
| 24+55 | 0.7010 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 0 | 0.7011 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 5 | 0.7011 | 0.00 | Q | \| | \| | \| | V\| |
| 25+10 | 0.7011 | 0.00 | Q | \| | \| | \| | V\| |
| 25+15 | 0.7011 | 0.00 | Q | \| | \| | \| | V\| |
| 25+20 | 0.7011 | 0.00 | Q | \| | \| | \| | V\| |
| 25+25 | 0.7011 | 0.00 | Q | \| | \| | \| | V\| |
| 25+30 | 0.7011 | 0.00 | Q | \| | \| | \| | V\| |
| 25+35 | 0.7011 | 0.00 | Q | \| | \| | \| | V\| |
| 25+40 | 0.7012 | 0.00 | Q | \| | \| | \| | V\| |
| 25+45 | 0.7012 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 37
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 10.24 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 10.24 | 6 | 1.85 |
| Rainfall data for year 100 | | |
| 10.24 | 24 | 2.63 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 84.0 | 96.4 | 10.42 | 1.000 | 0.071 | 1.000 | 0.071 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.071

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 10.42 | 1.000 | 84.0 | 96.4 | 0.37 | 0.848 |

Area-averaged catchment yield fraction, Y = 0.848
Area-averaged low loss fraction, Yb = 0.152
User entry of time of concentration = 0.460 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 10.42(Ac.)
Catchment Lag time = 0.368 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 22.6449
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.071(In/Hr)
Average low loss rate fraction (Yb) = 0.152 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.656(In)
Specified peak 6-hour rainfall = 1.850(In)
Specified peak 24-hour rainfall = 2.630(In)

Rainfall depth area reduction factors:
Using a total area of 10.24(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.659(In)
30-minute factor = 1.000 Adjusted rainfall = 1.128(In)
1-hour factor = 1.000 Adjusted rainfall = 1.389(In)
3-hour factor = 1.000 Adjusted rainfall = 1.656(In)
6-hour factor = 1.000 Adjusted rainfall = 1.850(In)
24-hour factor = 1.000 Adjusted rainfall = 2.630(In)
---------------------------------------------------------------------

U n i t H y d r o g r a p h
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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 126.02 (CFS)) | |
| 1 | 1.178 | 1.485 |
| 2 | 5.552 | 5.511 |
| 3 | 15.131 | 12.072 |
| 4 | 34.714 | 24.677 |
| 5 | 50.752 | 20.211 |
| 6 | 60.938 | 12.836 |
| 7 | 67.717 | 8.543 |
| 8 | 72.933 | 6.573 |
| 9 | 77.018 | 5.148 |
| 10 | 80.296 | 4.130 |
| 11 | 82.979 | 3.382 |
| 12 | 85.300 | 2.924 |
| 13 | 87.341 | 2.572 |
| 14 | 89.028 | 2.126 |

| | | |
|---|---|---|
| 15 | 90.382 | 1.706 |
| 16 | 91.629 | 1.571 |
| 17 | 92.726 | 1.382 |
| 18 | 93.724 | 1.257 |
| 19 | 94.544 | 1.033 |
| 20 | 95.312 | 0.968 |
| 21 | 95.970 | 0.829 |
| 22 | 96.559 | 0.742 |
| 23 | 97.071 | 0.645 |
| 24 | 97.479 | 0.514 |
| 25 | 97.840 | 0.456 |
| 26 | 98.074 | 0.295 |
| 27 | 98.307 | 0.293 |
| 28 | 98.573 | 0.335 |
| 29 | 98.845 | 0.342 |
| 30 | 99.116 | 0.342 |
| 31 | 99.388 | 0.342 |
| 32 | 99.583 | 0.247 |
| 33 | 99.725 | 0.178 |
| 34 | 99.866 | 0.178 |
| 35 | 100.000 | 0.169 |

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| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6593 | 0.6593 |
| 2 | 0.8116 | 0.1524 |
| 3 | 0.9166 | 0.1050 |
| 4 | 0.9992 | 0.0826 |
| 5 | 1.0684 | 0.0692 |
| 6 | 1.1285 | 0.0601 |
| 7 | 1.1819 | 0.0534 |
| 8 | 1.2302 | 0.0483 |
| 9 | 1.2745 | 0.0442 |
| 10 | 1.3154 | 0.0409 |
| 11 | 1.3535 | 0.0382 |
| 12 | 1.3893 | 0.0358 |
| 13 | 1.4072 | 0.0179 |
| 14 | 1.4240 | 0.0168 |
| 15 | 1.4398 | 0.0158 |
| 16 | 1.4548 | 0.0149 |
| 17 | 1.4689 | 0.0142 |
| 18 | 1.4824 | 0.0135 |
| 19 | 1.4953 | 0.0129 |
| 20 | 1.5076 | 0.0123 |
| 21 | 1.5194 | 0.0118 |
| 22 | 1.5308 | 0.0113 |
| 23 | 1.5417 | 0.0109 |
| 24 | 1.5522 | 0.0105 |
| 25 | 1.5624 | 0.0102 |
| 26 | 1.5722 | 0.0098 |
| 27 | 1.5817 | 0.0095 |
| 28 | 1.5910 | 0.0092 |
| 29 | 1.5999 | 0.0090 |
| 30 | 1.6086 | 0.0087 |
| 31 | 1.6171 | 0.0085 |
| 32 | 1.6253 | 0.0082 |
| 33 | 1.6333 | 0.0080 |
| 34 | 1.6411 | 0.0078 |
| 35 | 1.6488 | 0.0076 |

| | | |
|---|---|---|
| 36 | 1.6562 | 0.0074 |
| 37 | 1.6635 | 0.0073 |
| 38 | 1.6706 | 0.0071 |
| 39 | 1.6775 | 0.0069 |
| 40 | 1.6843 | 0.0068 |
| 41 | 1.6909 | 0.0067 |
| 42 | 1.6975 | 0.0065 |
| 43 | 1.7038 | 0.0064 |
| 44 | 1.7101 | 0.0063 |
| 45 | 1.7163 | 0.0061 |
| 46 | 1.7223 | 0.0060 |
| 47 | 1.7282 | 0.0059 |
| 48 | 1.7340 | 0.0058 |
| 49 | 1.7397 | 0.0057 |
| 50 | 1.7454 | 0.0056 |
| 51 | 1.7509 | 0.0055 |
| 52 | 1.7563 | 0.0054 |
| 53 | 1.7617 | 0.0053 |
| 54 | 1.7669 | 0.0053 |
| 55 | 1.7721 | 0.0052 |
| 56 | 1.7772 | 0.0051 |
| 57 | 1.7822 | 0.0050 |
| 58 | 1.7872 | 0.0050 |
| 59 | 1.7921 | 0.0049 |
| 60 | 1.7969 | 0.0048 |
| 61 | 1.8016 | 0.0047 |
| 62 | 1.8063 | 0.0047 |
| 63 | 1.8109 | 0.0046 |
| 64 | 1.8155 | 0.0046 |
| 65 | 1.8200 | 0.0045 |
| 66 | 1.8244 | 0.0044 |
| 67 | 1.8288 | 0.0044 |
| 68 | 1.8331 | 0.0043 |
| 69 | 1.8374 | 0.0043 |
| 70 | 1.8416 | 0.0042 |
| 71 | 1.8458 | 0.0042 |
| 72 | 1.8499 | 0.0041 |
| 73 | 1.8564 | 0.0065 |
| 74 | 1.8628 | 0.0064 |
| 75 | 1.8692 | 0.0064 |
| 76 | 1.8755 | 0.0063 |
| 77 | 1.8817 | 0.0062 |
| 78 | 1.8879 | 0.0062 |
| 79 | 1.8940 | 0.0061 |
| 80 | 1.9001 | 0.0061 |
| 81 | 1.9061 | 0.0060 |
| 82 | 1.9120 | 0.0059 |
| 83 | 1.9179 | 0.0059 |
| 84 | 1.9237 | 0.0058 |
| 85 | 1.9295 | 0.0058 |
| 86 | 1.9353 | 0.0057 |
| 87 | 1.9410 | 0.0057 |
| 88 | 1.9466 | 0.0056 |
| 89 | 1.9522 | 0.0056 |
| 90 | 1.9577 | 0.0055 |
| 91 | 1.9632 | 0.0055 |
| 92 | 1.9687 | 0.0055 |
| 93 | 1.9741 | 0.0054 |
| 94 | 1.9795 | 0.0054 |

| | | |
|---|---|---|
| 95 | 1.9848 | 0.0053 |
| 96 | 1.9901 | 0.0053 |
| 97 | 1.9953 | 0.0052 |
| 98 | 2.0005 | 0.0052 |
| 99 | 2.0057 | 0.0052 |
| 100 | 2.0108 | 0.0051 |
| 101 | 2.0159 | 0.0051 |
| 102 | 2.0209 | 0.0050 |
| 103 | 2.0259 | 0.0050 |
| 104 | 2.0309 | 0.0050 |
| 105 | 2.0358 | 0.0049 |
| 106 | 2.0407 | 0.0049 |
| 107 | 2.0456 | 0.0049 |
| 108 | 2.0504 | 0.0048 |
| 109 | 2.0552 | 0.0048 |
| 110 | 2.0600 | 0.0048 |
| 111 | 2.0647 | 0.0047 |
| 112 | 2.0695 | 0.0047 |
| 113 | 2.0741 | 0.0047 |
| 114 | 2.0788 | 0.0046 |
| 115 | 2.0834 | 0.0046 |
| 116 | 2.0880 | 0.0046 |
| 117 | 2.0925 | 0.0046 |
| 118 | 2.0970 | 0.0045 |
| 119 | 2.1015 | 0.0045 |
| 120 | 2.1060 | 0.0045 |
| 121 | 2.1104 | 0.0044 |
| 122 | 2.1149 | 0.0044 |
| 123 | 2.1192 | 0.0044 |
| 124 | 2.1236 | 0.0044 |
| 125 | 2.1279 | 0.0043 |
| 126 | 2.1322 | 0.0043 |
| 127 | 2.1365 | 0.0043 |
| 128 | 2.1408 | 0.0043 |
| 129 | 2.1450 | 0.0042 |
| 130 | 2.1492 | 0.0042 |
| 131 | 2.1534 | 0.0042 |
| 132 | 2.1576 | 0.0042 |
| 133 | 2.1617 | 0.0041 |
| 134 | 2.1658 | 0.0041 |
| 135 | 2.1699 | 0.0041 |
| 136 | 2.1740 | 0.0041 |
| 137 | 2.1780 | 0.0040 |
| 138 | 2.1820 | 0.0040 |
| 139 | 2.1860 | 0.0040 |
| 140 | 2.1900 | 0.0040 |
| 141 | 2.1940 | 0.0040 |
| 142 | 2.1979 | 0.0039 |
| 143 | 2.2018 | 0.0039 |
| 144 | 2.2057 | 0.0039 |
| 145 | 2.2096 | 0.0039 |
| 146 | 2.2135 | 0.0039 |
| 147 | 2.2173 | 0.0038 |
| 148 | 2.2211 | 0.0038 |
| 149 | 2.2249 | 0.0038 |
| 150 | 2.2287 | 0.0038 |
| 151 | 2.2325 | 0.0038 |
| 152 | 2.2362 | 0.0037 |
| 153 | 2.2399 | 0.0037 |

| | | |
|---|---|---|
| 154 | 2.2436 | 0.0037 |
| 155 | 2.2473 | 0.0037 |
| 156 | 2.2510 | 0.0037 |
| 157 | 2.2547 | 0.0037 |
| 158 | 2.2583 | 0.0036 |
| 159 | 2.2619 | 0.0036 |
| 160 | 2.2655 | 0.0036 |
| 161 | 2.2691 | 0.0036 |
| 162 | 2.2727 | 0.0036 |
| 163 | 2.2762 | 0.0036 |
| 164 | 2.2798 | 0.0035 |
| 165 | 2.2833 | 0.0035 |
| 166 | 2.2868 | 0.0035 |
| 167 | 2.2903 | 0.0035 |
| 168 | 2.2937 | 0.0035 |
| 169 | 2.2972 | 0.0035 |
| 170 | 2.3006 | 0.0034 |
| 171 | 2.3041 | 0.0034 |
| 172 | 2.3075 | 0.0034 |
| 173 | 2.3109 | 0.0034 |
| 174 | 2.3143 | 0.0034 |
| 175 | 2.3176 | 0.0034 |
| 176 | 2.3210 | 0.0034 |
| 177 | 2.3243 | 0.0033 |
| 178 | 2.3276 | 0.0033 |
| 179 | 2.3310 | 0.0033 |
| 180 | 2.3343 | 0.0033 |
| 181 | 2.3375 | 0.0033 |
| 182 | 2.3408 | 0.0033 |
| 183 | 2.3441 | 0.0033 |
| 184 | 2.3473 | 0.0032 |
| 185 | 2.3505 | 0.0032 |
| 186 | 2.3538 | 0.0032 |
| 187 | 2.3570 | 0.0032 |
| 188 | 2.3602 | 0.0032 |
| 189 | 2.3633 | 0.0032 |
| 190 | 2.3665 | 0.0032 |
| 191 | 2.3697 | 0.0032 |
| 192 | 2.3728 | 0.0031 |
| 193 | 2.3759 | 0.0031 |
| 194 | 2.3790 | 0.0031 |
| 195 | 2.3822 | 0.0031 |
| 196 | 2.3852 | 0.0031 |
| 197 | 2.3883 | 0.0031 |
| 198 | 2.3914 | 0.0031 |
| 199 | 2.3945 | 0.0031 |
| 200 | 2.3975 | 0.0030 |
| 201 | 2.4005 | 0.0030 |
| 202 | 2.4036 | 0.0030 |
| 203 | 2.4066 | 0.0030 |
| 204 | 2.4096 | 0.0030 |
| 205 | 2.4126 | 0.0030 |
| 206 | 2.4156 | 0.0030 |
| 207 | 2.4185 | 0.0030 |
| 208 | 2.4215 | 0.0030 |
| 209 | 2.4244 | 0.0029 |
| 210 | 2.4274 | 0.0029 |
| 211 | 2.4303 | 0.0029 |
| 212 | 2.4332 | 0.0029 |

| | | |
|---|---|---|
| 213 | 2.4361 | 0.0029 |
| 214 | 2.4390 | 0.0029 |
| 215 | 2.4419 | 0.0029 |
| 216 | 2.4448 | 0.0029 |
| 217 | 2.4477 | 0.0029 |
| 218 | 2.4505 | 0.0029 |
| 219 | 2.4534 | 0.0028 |
| 220 | 2.4562 | 0.0028 |
| 221 | 2.4590 | 0.0028 |
| 222 | 2.4619 | 0.0028 |
| 223 | 2.4647 | 0.0028 |
| 224 | 2.4675 | 0.0028 |
| 225 | 2.4703 | 0.0028 |
| 226 | 2.4730 | 0.0028 |
| 227 | 2.4758 | 0.0028 |
| 228 | 2.4786 | 0.0028 |
| 229 | 2.4813 | 0.0028 |
| 230 | 2.4841 | 0.0027 |
| 231 | 2.4868 | 0.0027 |
| 232 | 2.4895 | 0.0027 |
| 233 | 2.4923 | 0.0027 |
| 234 | 2.4950 | 0.0027 |
| 235 | 2.4977 | 0.0027 |
| 236 | 2.5004 | 0.0027 |
| 237 | 2.5030 | 0.0027 |
| 238 | 2.5057 | 0.0027 |
| 239 | 2.5084 | 0.0027 |
| 240 | 2.5111 | 0.0027 |
| 241 | 2.5137 | 0.0027 |
| 242 | 2.5163 | 0.0026 |
| 243 | 2.5190 | 0.0026 |
| 244 | 2.5216 | 0.0026 |
| 245 | 2.5242 | 0.0026 |
| 246 | 2.5268 | 0.0026 |
| 247 | 2.5294 | 0.0026 |
| 248 | 2.5320 | 0.0026 |
| 249 | 2.5346 | 0.0026 |
| 250 | 2.5372 | 0.0026 |
| 251 | 2.5398 | 0.0026 |
| 252 | 2.5423 | 0.0026 |
| 253 | 2.5449 | 0.0026 |
| 254 | 2.5474 | 0.0025 |
| 255 | 2.5500 | 0.0025 |
| 256 | 2.5525 | 0.0025 |
| 257 | 2.5550 | 0.0025 |
| 258 | 2.5576 | 0.0025 |
| 259 | 2.5601 | 0.0025 |
| 260 | 2.5626 | 0.0025 |
| 261 | 2.5651 | 0.0025 |
| 262 | 2.5676 | 0.0025 |
| 263 | 2.5701 | 0.0025 |
| 264 | 2.5725 | 0.0025 |
| 265 | 2.5750 | 0.0025 |
| 266 | 2.5775 | 0.0025 |
| 267 | 2.5799 | 0.0025 |
| 268 | 2.5824 | 0.0024 |
| 269 | 2.5848 | 0.0024 |
| 270 | 2.5872 | 0.0024 |
| 271 | 2.5897 | 0.0024 |

| | | |
|---|---|---|
| 272 | 2.5921 | 0.0024 |
| 273 | 2.5945 | 0.0024 |
| 274 | 2.5969 | 0.0024 |
| 275 | 2.5993 | 0.0024 |
| 276 | 2.6017 | 0.0024 |
| 277 | 2.6041 | 0.0024 |
| 278 | 2.6065 | 0.0024 |
| 279 | 2.6089 | 0.0024 |
| 280 | 2.6112 | 0.0024 |
| 281 | 2.6136 | 0.0024 |
| 282 | 2.6160 | 0.0024 |
| 283 | 2.6183 | 0.0024 |
| 284 | 2.6206 | 0.0023 |
| 285 | 2.6230 | 0.0023 |
| 286 | 2.6253 | 0.0023 |
| 287 | 2.6276 | 0.0023 |
| 288 | 2.6300 | 0.0023 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0023 | 0.0004 | 0.0020 |
| 2 | 0.0023 | 0.0004 | 0.0020 |
| 3 | 0.0023 | 0.0004 | 0.0020 |
| 4 | 0.0023 | 0.0004 | 0.0020 |
| 5 | 0.0024 | 0.0004 | 0.0020 |
| 6 | 0.0024 | 0.0004 | 0.0020 |
| 7 | 0.0024 | 0.0004 | 0.0020 |
| 8 | 0.0024 | 0.0004 | 0.0020 |
| 9 | 0.0024 | 0.0004 | 0.0020 |
| 10 | 0.0024 | 0.0004 | 0.0020 |
| 11 | 0.0024 | 0.0004 | 0.0020 |
| 12 | 0.0024 | 0.0004 | 0.0021 |
| 13 | 0.0024 | 0.0004 | 0.0021 |
| 14 | 0.0024 | 0.0004 | 0.0021 |
| 15 | 0.0025 | 0.0004 | 0.0021 |
| 16 | 0.0025 | 0.0004 | 0.0021 |
| 17 | 0.0025 | 0.0004 | 0.0021 |
| 18 | 0.0025 | 0.0004 | 0.0021 |
| 19 | 0.0025 | 0.0004 | 0.0021 |
| 20 | 0.0025 | 0.0004 | 0.0021 |
| 21 | 0.0025 | 0.0004 | 0.0021 |
| 22 | 0.0025 | 0.0004 | 0.0021 |
| 23 | 0.0025 | 0.0004 | 0.0022 |
| 24 | 0.0025 | 0.0004 | 0.0022 |
| 25 | 0.0026 | 0.0004 | 0.0022 |
| 26 | 0.0026 | 0.0004 | 0.0022 |
| 27 | 0.0026 | 0.0004 | 0.0022 |
| 28 | 0.0026 | 0.0004 | 0.0022 |
| 29 | 0.0026 | 0.0004 | 0.0022 |
| 30 | 0.0026 | 0.0004 | 0.0022 |
| 31 | 0.0026 | 0.0004 | 0.0022 |
| 32 | 0.0026 | 0.0004 | 0.0022 |
| 33 | 0.0027 | 0.0004 | 0.0023 |
| 34 | 0.0027 | 0.0004 | 0.0023 |
| 35 | 0.0027 | 0.0004 | 0.0023 |
| 36 | 0.0027 | 0.0004 | 0.0023 |
| 37 | 0.0027 | 0.0004 | 0.0023 |

| | | | |
|---|---|---|---|
| 38 | 0.0027 | 0.0004 | 0.0023 |
| 39 | 0.0027 | 0.0004 | 0.0023 |
| 40 | 0.0027 | 0.0004 | 0.0023 |
| 41 | 0.0028 | 0.0004 | 0.0023 |
| 42 | 0.0028 | 0.0004 | 0.0024 |
| 43 | 0.0028 | 0.0004 | 0.0024 |
| 44 | 0.0028 | 0.0004 | 0.0024 |
| 45 | 0.0028 | 0.0004 | 0.0024 |
| 46 | 0.0028 | 0.0004 | 0.0024 |
| 47 | 0.0028 | 0.0004 | 0.0024 |
| 48 | 0.0029 | 0.0004 | 0.0024 |
| 49 | 0.0029 | 0.0004 | 0.0024 |
| 50 | 0.0029 | 0.0004 | 0.0024 |
| 51 | 0.0029 | 0.0004 | 0.0025 |
| 52 | 0.0029 | 0.0004 | 0.0025 |
| 53 | 0.0029 | 0.0004 | 0.0025 |
| 54 | 0.0029 | 0.0004 | 0.0025 |
| 55 | 0.0030 | 0.0005 | 0.0025 |
| 56 | 0.0030 | 0.0005 | 0.0025 |
| 57 | 0.0030 | 0.0005 | 0.0025 |
| 58 | 0.0030 | 0.0005 | 0.0026 |
| 59 | 0.0030 | 0.0005 | 0.0026 |
| 60 | 0.0030 | 0.0005 | 0.0026 |
| 61 | 0.0031 | 0.0005 | 0.0026 |
| 62 | 0.0031 | 0.0005 | 0.0026 |
| 63 | 0.0031 | 0.0005 | 0.0026 |
| 64 | 0.0031 | 0.0005 | 0.0026 |
| 65 | 0.0031 | 0.0005 | 0.0027 |
| 66 | 0.0032 | 0.0005 | 0.0027 |
| 67 | 0.0032 | 0.0005 | 0.0027 |
| 68 | 0.0032 | 0.0005 | 0.0027 |
| 69 | 0.0032 | 0.0005 | 0.0027 |
| 70 | 0.0032 | 0.0005 | 0.0027 |
| 71 | 0.0033 | 0.0005 | 0.0028 |
| 72 | 0.0033 | 0.0005 | 0.0028 |
| 73 | 0.0033 | 0.0005 | 0.0028 |
| 74 | 0.0033 | 0.0005 | 0.0028 |
| 75 | 0.0033 | 0.0005 | 0.0028 |
| 76 | 0.0034 | 0.0005 | 0.0028 |
| 77 | 0.0034 | 0.0005 | 0.0029 |
| 78 | 0.0034 | 0.0005 | 0.0029 |
| 79 | 0.0034 | 0.0005 | 0.0029 |
| 80 | 0.0034 | 0.0005 | 0.0029 |
| 81 | 0.0035 | 0.0005 | 0.0029 |
| 82 | 0.0035 | 0.0005 | 0.0030 |
| 83 | 0.0035 | 0.0005 | 0.0030 |
| 84 | 0.0035 | 0.0005 | 0.0030 |
| 85 | 0.0036 | 0.0005 | 0.0030 |
| 86 | 0.0036 | 0.0005 | 0.0030 |
| 87 | 0.0036 | 0.0006 | 0.0031 |
| 88 | 0.0036 | 0.0006 | 0.0031 |
| 89 | 0.0037 | 0.0006 | 0.0031 |
| 90 | 0.0037 | 0.0006 | 0.0031 |
| 91 | 0.0037 | 0.0006 | 0.0032 |
| 92 | 0.0037 | 0.0006 | 0.0032 |
| 93 | 0.0038 | 0.0006 | 0.0032 |
| 94 | 0.0038 | 0.0006 | 0.0032 |
| 95 | 0.0038 | 0.0006 | 0.0033 |
| 96 | 0.0039 | 0.0006 | 0.0033 |

| | | | |
|---|---|---|---|
| 97 | 0.0039 | 0.0006 | 0.0033 |
| 98 | 0.0039 | 0.0006 | 0.0033 |
| 99 | 0.0040 | 0.0006 | 0.0034 |
| 100 | 0.0040 | 0.0006 | 0.0034 |
| 101 | 0.0040 | 0.0006 | 0.0034 |
| 102 | 0.0040 | 0.0006 | 0.0034 |
| 103 | 0.0041 | 0.0006 | 0.0035 |
| 104 | 0.0041 | 0.0006 | 0.0035 |
| 105 | 0.0042 | 0.0006 | 0.0035 |
| 106 | 0.0042 | 0.0006 | 0.0035 |
| 107 | 0.0042 | 0.0006 | 0.0036 |
| 108 | 0.0043 | 0.0006 | 0.0036 |
| 109 | 0.0043 | 0.0007 | 0.0037 |
| 110 | 0.0043 | 0.0007 | 0.0037 |
| 111 | 0.0044 | 0.0007 | 0.0037 |
| 112 | 0.0044 | 0.0007 | 0.0037 |
| 113 | 0.0045 | 0.0007 | 0.0038 |
| 114 | 0.0045 | 0.0007 | 0.0038 |
| 115 | 0.0046 | 0.0007 | 0.0039 |
| 116 | 0.0046 | 0.0007 | 0.0039 |
| 117 | 0.0046 | 0.0007 | 0.0039 |
| 118 | 0.0047 | 0.0007 | 0.0040 |
| 119 | 0.0047 | 0.0007 | 0.0040 |
| 120 | 0.0048 | 0.0007 | 0.0040 |
| 121 | 0.0048 | 0.0007 | 0.0041 |
| 122 | 0.0049 | 0.0007 | 0.0041 |
| 123 | 0.0049 | 0.0008 | 0.0042 |
| 124 | 0.0050 | 0.0008 | 0.0042 |
| 125 | 0.0050 | 0.0008 | 0.0043 |
| 126 | 0.0051 | 0.0008 | 0.0043 |
| 127 | 0.0052 | 0.0008 | 0.0044 |
| 128 | 0.0052 | 0.0008 | 0.0044 |
| 129 | 0.0053 | 0.0008 | 0.0045 |
| 130 | 0.0053 | 0.0008 | 0.0045 |
| 131 | 0.0054 | 0.0008 | 0.0046 |
| 132 | 0.0055 | 0.0008 | 0.0046 |
| 133 | 0.0055 | 0.0008 | 0.0047 |
| 134 | 0.0056 | 0.0009 | 0.0047 |
| 135 | 0.0057 | 0.0009 | 0.0048 |
| 136 | 0.0057 | 0.0009 | 0.0049 |
| 137 | 0.0058 | 0.0009 | 0.0049 |
| 138 | 0.0059 | 0.0009 | 0.0050 |
| 139 | 0.0060 | 0.0009 | 0.0051 |
| 140 | 0.0061 | 0.0009 | 0.0051 |
| 141 | 0.0062 | 0.0009 | 0.0052 |
| 142 | 0.0062 | 0.0009 | 0.0053 |
| 143 | 0.0064 | 0.0010 | 0.0054 |
| 144 | 0.0064 | 0.0010 | 0.0054 |
| 145 | 0.0041 | 0.0006 | 0.0035 |
| 146 | 0.0042 | 0.0006 | 0.0035 |
| 147 | 0.0043 | 0.0007 | 0.0036 |
| 148 | 0.0043 | 0.0007 | 0.0037 |
| 149 | 0.0044 | 0.0007 | 0.0038 |
| 150 | 0.0045 | 0.0007 | 0.0038 |
| 151 | 0.0046 | 0.0007 | 0.0039 |
| 152 | 0.0047 | 0.0007 | 0.0040 |
| 153 | 0.0048 | 0.0007 | 0.0041 |
| 154 | 0.0049 | 0.0007 | 0.0041 |
| 155 | 0.0050 | 0.0008 | 0.0043 |

| | | | |
|---|---|---|---|
| 156 | 0.0051 | 0.0008 | 0.0043 |
| 157 | 0.0053 | 0.0008 | 0.0045 |
| 158 | 0.0053 | 0.0008 | 0.0045 |
| 159 | 0.0055 | 0.0008 | 0.0047 |
| 160 | 0.0056 | 0.0009 | 0.0048 |
| 161 | 0.0058 | 0.0009 | 0.0049 |
| 162 | 0.0059 | 0.0009 | 0.0050 |
| 163 | 0.0061 | 0.0009 | 0.0052 |
| 164 | 0.0063 | 0.0010 | 0.0053 |
| 165 | 0.0065 | 0.0010 | 0.0055 |
| 166 | 0.0067 | 0.0010 | 0.0056 |
| 167 | 0.0069 | 0.0011 | 0.0059 |
| 168 | 0.0071 | 0.0011 | 0.0060 |
| 169 | 0.0074 | 0.0011 | 0.0063 |
| 170 | 0.0076 | 0.0012 | 0.0065 |
| 171 | 0.0080 | 0.0012 | 0.0068 |
| 172 | 0.0082 | 0.0013 | 0.0070 |
| 173 | 0.0087 | 0.0013 | 0.0074 |
| 174 | 0.0090 | 0.0014 | 0.0076 |
| 175 | 0.0095 | 0.0014 | 0.0081 |
| 176 | 0.0098 | 0.0015 | 0.0083 |
| 177 | 0.0105 | 0.0016 | 0.0089 |
| 178 | 0.0109 | 0.0017 | 0.0093 |
| 179 | 0.0118 | 0.0018 | 0.0100 |
| 180 | 0.0123 | 0.0019 | 0.0104 |
| 181 | 0.0135 | 0.0021 | 0.0114 |
| 182 | 0.0142 | 0.0022 | 0.0120 |
| 183 | 0.0158 | 0.0024 | 0.0134 |
| 184 | 0.0168 | 0.0026 | 0.0142 |
| 185 | 0.0358 | 0.0055 | 0.0303 |
| 186 | 0.0382 | 0.0058 | 0.0323 |
| 187 | 0.0442 | 0.0059 | 0.0383 |
| 188 | 0.0483 | 0.0059 | 0.0424 |
| 189 | 0.0601 | 0.0059 | 0.0542 |
| 190 | 0.0692 | 0.0059 | 0.0633 |
| 191 | 0.1050 | 0.0059 | 0.0991 |
| 192 | 0.1524 | 0.0059 | 0.1465 |
| 193 | 0.6593 | 0.0059 | 0.6533 |
| 194 | 0.0826 | 0.0059 | 0.0767 |
| 195 | 0.0534 | 0.0059 | 0.0475 |
| 196 | 0.0409 | 0.0059 | 0.0350 |
| 197 | 0.0179 | 0.0027 | 0.0152 |
| 198 | 0.0149 | 0.0023 | 0.0127 |
| 199 | 0.0129 | 0.0020 | 0.0109 |
| 200 | 0.0113 | 0.0017 | 0.0096 |
| 201 | 0.0102 | 0.0015 | 0.0086 |
| 202 | 0.0092 | 0.0014 | 0.0078 |
| 203 | 0.0085 | 0.0013 | 0.0072 |
| 204 | 0.0078 | 0.0012 | 0.0066 |
| 205 | 0.0073 | 0.0011 | 0.0062 |
| 206 | 0.0068 | 0.0010 | 0.0058 |
| 207 | 0.0064 | 0.0010 | 0.0054 |
| 208 | 0.0060 | 0.0009 | 0.0051 |
| 209 | 0.0057 | 0.0009 | 0.0048 |
| 210 | 0.0054 | 0.0008 | 0.0046 |
| 211 | 0.0052 | 0.0008 | 0.0044 |
| 212 | 0.0050 | 0.0008 | 0.0042 |
| 213 | 0.0047 | 0.0007 | 0.0040 |
| 214 | 0.0046 | 0.0007 | 0.0039 |

| | | | |
|---|---|---|---|
| 215 | 0.0044 | 0.0007 | 0.0037 |
| 216 | 0.0042 | 0.0006 | 0.0036 |
| 217 | 0.0065 | 0.0010 | 0.0055 |
| 218 | 0.0063 | 0.0010 | 0.0053 |
| 219 | 0.0061 | 0.0009 | 0.0052 |
| 220 | 0.0059 | 0.0009 | 0.0050 |
| 221 | 0.0058 | 0.0009 | 0.0049 |
| 222 | 0.0056 | 0.0009 | 0.0048 |
| 223 | 0.0055 | 0.0008 | 0.0047 |
| 224 | 0.0054 | 0.0008 | 0.0045 |
| 225 | 0.0052 | 0.0008 | 0.0044 |
| 226 | 0.0051 | 0.0008 | 0.0043 |
| 227 | 0.0050 | 0.0008 | 0.0042 |
| 228 | 0.0049 | 0.0007 | 0.0042 |
| 229 | 0.0048 | 0.0007 | 0.0041 |
| 230 | 0.0047 | 0.0007 | 0.0040 |
| 231 | 0.0046 | 0.0007 | 0.0039 |
| 232 | 0.0045 | 0.0007 | 0.0038 |
| 233 | 0.0044 | 0.0007 | 0.0038 |
| 234 | 0.0044 | 0.0007 | 0.0037 |
| 235 | 0.0043 | 0.0007 | 0.0036 |
| 236 | 0.0042 | 0.0006 | 0.0036 |
| 237 | 0.0041 | 0.0006 | 0.0035 |
| 238 | 0.0041 | 0.0006 | 0.0034 |
| 239 | 0.0040 | 0.0006 | 0.0034 |
| 240 | 0.0039 | 0.0006 | 0.0033 |
| 241 | 0.0039 | 0.0006 | 0.0033 |
| 242 | 0.0038 | 0.0006 | 0.0032 |
| 243 | 0.0038 | 0.0006 | 0.0032 |
| 244 | 0.0037 | 0.0006 | 0.0031 |
| 245 | 0.0037 | 0.0006 | 0.0031 |
| 246 | 0.0036 | 0.0005 | 0.0031 |
| 247 | 0.0036 | 0.0005 | 0.0030 |
| 248 | 0.0035 | 0.0005 | 0.0030 |
| 249 | 0.0035 | 0.0005 | 0.0029 |
| 250 | 0.0034 | 0.0005 | 0.0029 |
| 251 | 0.0034 | 0.0005 | 0.0029 |
| 252 | 0.0033 | 0.0005 | 0.0028 |
| 253 | 0.0033 | 0.0005 | 0.0028 |
| 254 | 0.0032 | 0.0005 | 0.0028 |
| 255 | 0.0032 | 0.0005 | 0.0027 |
| 256 | 0.0032 | 0.0005 | 0.0027 |
| 257 | 0.0031 | 0.0005 | 0.0027 |
| 258 | 0.0031 | 0.0005 | 0.0026 |
| 259 | 0.0031 | 0.0005 | 0.0026 |
| 260 | 0.0030 | 0.0005 | 0.0026 |
| 261 | 0.0030 | 0.0005 | 0.0025 |
| 262 | 0.0030 | 0.0005 | 0.0025 |
| 263 | 0.0029 | 0.0004 | 0.0025 |
| 264 | 0.0029 | 0.0004 | 0.0025 |
| 265 | 0.0029 | 0.0004 | 0.0024 |
| 266 | 0.0028 | 0.0004 | 0.0024 |
| 267 | 0.0028 | 0.0004 | 0.0024 |
| 268 | 0.0028 | 0.0004 | 0.0024 |
| 269 | 0.0028 | 0.0004 | 0.0023 |
| 270 | 0.0027 | 0.0004 | 0.0023 |
| 271 | 0.0027 | 0.0004 | 0.0023 |
| 272 | 0.0027 | 0.0004 | 0.0023 |
| 273 | 0.0027 | 0.0004 | 0.0022 |

| | | | |
|---|---|---|---|
| 274 | 0.0026 | 0.0004 | 0.0022 |
| 275 | 0.0026 | 0.0004 | 0.0022 |
| 276 | 0.0026 | 0.0004 | 0.0022 |
| 277 | 0.0026 | 0.0004 | 0.0022 |
| 278 | 0.0025 | 0.0004 | 0.0021 |
| 279 | 0.0025 | 0.0004 | 0.0021 |
| 280 | 0.0025 | 0.0004 | 0.0021 |
| 281 | 0.0025 | 0.0004 | 0.0021 |
| 282 | 0.0024 | 0.0004 | 0.0021 |
| 283 | 0.0024 | 0.0004 | 0.0021 |
| 284 | 0.0024 | 0.0004 | 0.0020 |
| 285 | 0.0024 | 0.0004 | 0.0020 |
| 286 | 0.0024 | 0.0004 | 0.0020 |
| 287 | 0.0024 | 0.0004 | 0.0020 |
| 288 | 0.0023 | 0.0004 | 0.0020 |

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Total soil rain loss = 0.26(In)
Total effective rainfall = 2.37(In)
Peak flow rate in flood hydrograph = 23.25(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 7.5 | 15.0 | 22.5 | 30.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.01 | Q | | | | |
| 0+15 | 0.0004 | 0.04 | Q | | | | |
| 0+20 | 0.0010 | 0.09 | Q | | | | |
| 0+25 | 0.0018 | 0.13 | Q | | | | |
| 0+30 | 0.0029 | 0.15 | Q | | | | |
| 0+35 | 0.0041 | 0.17 | Q | | | | |
| 0+40 | 0.0053 | 0.18 | Q | | | | |
| 0+45 | 0.0066 | 0.19 | Q | | | | |
| 0+50 | 0.0080 | 0.20 | Q | | | | |
| 0+55 | 0.0095 | 0.21 | Q | | | | |
| 1+ 0 | 0.0110 | 0.22 | Q | | | | |
| 1+ 5 | 0.0125 | 0.22 | Q | | | | |
| 1+10 | 0.0141 | 0.23 | Q | | | | |
| 1+15 | 0.0157 | 0.23 | Q | | | | |
| 1+20 | 0.0173 | 0.24 | Q | | | | |
| 1+25 | 0.0190 | 0.24 | Q | | | | |
| 1+30 | 0.0206 | 0.24 | Q | | | | |
| 1+35 | 0.0223 | 0.25 | Q | | | | |
| 1+40 | 0.0241 | 0.25 | Q | | | | |
| 1+45 | 0.0258 | 0.25 | Q | | | | |
| 1+50 | 0.0275 | 0.25 | Q | | | | |
| 1+55 | 0.0293 | 0.26 | Q | | | | |
| 2+ 0 | 0.0311 | 0.26 | Q | | | | |
| 2+ 5 | 0.0329 | 0.26 | Q | | | | |
| 2+10 | 0.0347 | 0.26 | Q | | | | |
| 2+15 | 0.0365 | 0.26 | Q | | | | |
| 2+20 | 0.0384 | 0.27 | Q | | | | |
| 2+25 | 0.0402 | 0.27 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+30 | 0.0421 | 0.27 | Q | \| | \| | \| | \| |
| 2+35 | 0.0439 | 0.27 | Q | \| | \| | \| | \| |
| 2+40 | 0.0458 | 0.27 | Q | \| | \| | \| | \| |
| 2+45 | 0.0477 | 0.28 | Q | \| | \| | \| | \| |
| 2+50 | 0.0496 | 0.28 | Q | \| | \| | \| | \| |
| 2+55 | 0.0515 | 0.28 | QV | \| | \| | \| | \| |
| 3+ 0 | 0.0534 | 0.28 | QV | \| | \| | \| | \| |
| 3+ 5 | 0.0554 | 0.28 | QV | \| | \| | \| | \| |
| 3+10 | 0.0573 | 0.28 | QV | \| | \| | \| | \| |
| 3+15 | 0.0593 | 0.28 | QV | \| | \| | \| | \| |
| 3+20 | 0.0612 | 0.28 | QV | \| | \| | \| | \| |
| 3+25 | 0.0632 | 0.29 | QV | \| | \| | \| | \| |
| 3+30 | 0.0652 | 0.29 | QV | \| | \| | \| | \| |
| 3+35 | 0.0672 | 0.29 | QV | \| | \| | \| | \| |
| 3+40 | 0.0692 | 0.29 | QV | \| | \| | \| | \| |
| 3+45 | 0.0712 | 0.29 | QV | \| | \| | \| | \| |
| 3+50 | 0.0732 | 0.29 | QV | \| | \| | \| | \| |
| 3+55 | 0.0752 | 0.29 | QV | \| | \| | \| | \| |
| 4+ 0 | 0.0773 | 0.30 | QV | \| | \| | \| | \| |
| 4+ 5 | 0.0793 | 0.30 | QV | \| | \| | \| | \| |
| 4+10 | 0.0814 | 0.30 | QV | \| | \| | \| | \| |
| 4+15 | 0.0834 | 0.30 | QV | \| | \| | \| | \| |
| 4+20 | 0.0855 | 0.30 | QV | \| | \| | \| | \| |
| 4+25 | 0.0876 | 0.30 | QV | \| | \| | \| | \| |
| 4+30 | 0.0897 | 0.30 | QV | \| | \| | \| | \| |
| 4+35 | 0.0918 | 0.31 | QV | \| | \| | \| | \| |
| 4+40 | 0.0939 | 0.31 | QV | \| | \| | \| | \| |
| 4+45 | 0.0961 | 0.31 | QV | \| | \| | \| | \| |
| 4+50 | 0.0982 | 0.31 | QV | \| | \| | \| | \| |
| 4+55 | 0.1004 | 0.31 | QV | \| | \| | \| | \| |
| 5+ 0 | 0.1025 | 0.31 | QV | \| | \| | \| | \| |
| 5+ 5 | 0.1047 | 0.32 | Q V | \| | \| | \| | \| |
| 5+10 | 0.1069 | 0.32 | Q V | \| | \| | \| | \| |
| 5+15 | 0.1091 | 0.32 | Q V | \| | \| | \| | \| |
| 5+20 | 0.1113 | 0.32 | Q V | \| | \| | \| | \| |
| 5+25 | 0.1136 | 0.32 | Q V | \| | \| | \| | \| |
| 5+30 | 0.1158 | 0.33 | Q V | \| | \| | \| | \| |
| 5+35 | 0.1181 | 0.33 | Q V | \| | \| | \| | \| |
| 5+40 | 0.1203 | 0.33 | Q V | \| | \| | \| | \| |
| 5+45 | 0.1226 | 0.33 | Q V | \| | \| | \| | \| |
| 5+50 | 0.1249 | 0.33 | Q V | \| | \| | \| | \| |
| 5+55 | 0.1272 | 0.33 | Q V | \| | \| | \| | \| |
| 6+ 0 | 0.1295 | 0.34 | Q V | \| | \| | \| | \| |
| 6+ 5 | 0.1318 | 0.34 | Q V | \| | \| | \| | \| |
| 6+10 | 0.1342 | 0.34 | Q V | \| | \| | \| | \| |
| 6+15 | 0.1366 | 0.34 | Q V | \| | \| | \| | \| |
| 6+20 | 0.1389 | 0.34 | Q V | \| | \| | \| | \| |
| 6+25 | 0.1413 | 0.35 | Q V | \| | \| | \| | \| |
| 6+30 | 0.1437 | 0.35 | Q V | \| | \| | \| | \| |
| 6+35 | 0.1461 | 0.35 | Q V | \| | \| | \| | \| |
| 6+40 | 0.1486 | 0.35 | Q V | \| | \| | \| | \| |
| 6+45 | 0.1510 | 0.36 | Q V | \| | \| | \| | \| |
| 6+50 | 0.1535 | 0.36 | Q V | \| | \| | \| | \| |
| 6+55 | 0.1560 | 0.36 | Q  V | \| | \| | \| | \| |
| 7+ 0 | 0.1585 | 0.36 | Q  V | \| | \| | \| | \| |
| 7+ 5 | 0.1610 | 0.36 | Q  V | \| | \| | \| | \| |
| 7+10 | 0.1635 | 0.37 | Q  V | \| | \| | \| | \| |
| 7+15 | 0.1661 | 0.37 | Q  V | \| | \| | \| | \| |
| 7+20 | 0.1686 | 0.37 | Q  V | \| | \| | \| | \| |

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 7+25       0.1712      0.37  Q  V      |          |          |          |
 7+30       0.1738      0.38  Q  V      |          |          |          |
 7+35       0.1764      0.38  Q  V      |          |          |          |
 7+40       0.1791      0.38  Q  V      |          |          |          |
 7+45       0.1817      0.39  Q  V      |          |          |          |
 7+50       0.1844      0.39  Q  V      |          |          |          |
 7+55       0.1871      0.39  Q  V      |          |          |          |
 8+ 0       0.1898      0.39  Q  V      |          |          |          |
 8+ 5       0.1925      0.40  Q  V      |          |          |          |
 8+10       0.1953      0.40  Q  V      |          |          |          |
 8+15       0.1980      0.40  Q  V      |          |          |          |
 8+20       0.2008      0.41  Q  V      |          |          |          |
 8+25       0.2036      0.41  Q  V      |          |          |          |
 8+30       0.2065      0.41  Q   V     |          |          |          |
 8+35       0.2093      0.41  Q   V     |          |          |          |
 8+40       0.2122      0.42  Q   V     |          |          |          |
 8+45       0.2151      0.42  Q   V     |          |          |          |
 8+50       0.2180      0.42  Q   V     |          |          |          |
 8+55       0.2210      0.43  Q   V     |          |          |          |
 9+ 0       0.2240      0.43  Q   V     |          |          |          |
 9+ 5       0.2270      0.44  Q   V     |          |          |          |
 9+10       0.2300      0.44  Q   V     |          |          |          |
 9+15       0.2330      0.44  Q   V     |          |          |          |
 9+20       0.2361      0.45  Q   V     |          |          |          |
 9+25       0.2392      0.45  Q   V     |          |          |          |
 9+30       0.2424      0.45  Q   V     |          |          |          |
 9+35       0.2455      0.46  Q   V     |          |          |          |
 9+40       0.2487      0.46  Q   V     |          |          |          |
 9+45       0.2519      0.47  Q   V     |          |          |          |
 9+50       0.2552      0.47  Q   V     |          |          |          |
 9+55       0.2584      0.48  Q    V    |          |          |          |
10+ 0       0.2617      0.48  Q    V    |          |          |          |
10+ 5       0.2651      0.48  Q    V    |          |          |          |
10+10       0.2684      0.49  Q    V    |          |          |          |
10+15       0.2718      0.49  Q    V    |          |          |          |
10+20       0.2753      0.50  Q    V    |          |          |          |
10+25       0.2788      0.50  Q    V    |          |          |          |
10+30       0.2823      0.51  Q    V    |          |          |          |
10+35       0.2858      0.51  Q    V    |          |          |          |
10+40       0.2894      0.52  Q    V    |          |          |          |
10+45       0.2930      0.53  Q    V    |          |          |          |
10+50       0.2967      0.53  Q    V    |          |          |          |
10+55       0.3004      0.54  Q    V    |          |          |          |
11+ 0       0.3041      0.54  Q    V    |          |          |          |
11+ 5       0.3079      0.55  Q    V    |          |          |          |
11+10       0.3117      0.56  Q     V   |          |          |          |
11+15       0.3156      0.56  Q     V   |          |          |          |
11+20       0.3195      0.57  Q     V   |          |          |          |
11+25       0.3235      0.58  Q     V   |          |          |          |
11+30       0.3275      0.58  Q     V   |          |          |          |
11+35       0.3315      0.59  Q     V   |          |          |          |
11+40       0.3357      0.60  Q     V   |          |          |          |
11+45       0.3398      0.61  Q     V   |          |          |          |
11+50       0.3440      0.61  Q     V   |          |          |          |
11+55       0.3483      0.62  Q     V   |          |          |          |
12+ 0       0.3527      0.63  Q     V   |          |          |          |
12+ 5       0.3570      0.64  Q     V   |          |          |          |
12+10       0.3614      0.63  Q      V  |          |          |          |
12+15       0.3657      0.62  Q      V  |          |          |          |
```

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12+20       0.3696      0.58  Q      V  |          |          |          |
12+25       0.3734      0.54  Q      V  |          |          |          |
12+30       0.3770      0.53  Q      V  |          |          |          |
12+35       0.3805      0.52  Q      V  |          |          |          |
12+40       0.3841      0.51  Q      V  |          |          |          |
12+45       0.3876      0.51  Q      V  |          |          |          |
12+50       0.3911      0.51  Q      V  |          |          |          |
12+55       0.3946      0.51  Q      V  |          |          |          |
13+ 0       0.3982      0.52  Q      V  |          |          |          |
13+ 5       0.4018      0.52  Q      V  |          |          |          |
13+10       0.4054      0.53  Q      V  |          |          |          |
13+15       0.4091      0.54  Q      V  |          |          |          |
13+20       0.4129      0.54  Q       V |          |          |          |
13+25       0.4167      0.55  Q       V |          |          |          |
13+30       0.4206      0.56  Q       V |          |          |          |
13+35       0.4245      0.57  Q       V |          |          |          |
13+40       0.4286      0.59  Q       V |          |          |          |
13+45       0.4327      0.60  Q       V |          |          |          |
13+50       0.4369      0.61  Q       V |          |          |          |
13+55       0.4413      0.63  Q       V |          |          |          |
14+ 0       0.4457      0.65  Q       V |          |          |          |
14+ 5       0.4503      0.66  Q       V |          |          |          |
14+10       0.4550      0.68  Q       V |          |          |          |
14+15       0.4598      0.70  Q       V |          |          |          |
14+20       0.4648      0.72  Q        V|          |          |          |
14+25       0.4700      0.75  Q        V|          |          |          |
14+30       0.4753      0.77  |Q       V|          |          |          |
14+35       0.4808      0.80  |Q       V|          |          |          |
14+40       0.4865      0.83  |Q       V|          |          |          |
14+45       0.4925      0.87  |Q       V|          |          |          |
14+50       0.4987      0.90  |Q       V|          |          |          |
14+55       0.5052      0.94  |Q       V|          |          |          |
15+ 0       0.5120      0.99  |Q       V|          |          |          |
15+ 5       0.5192      1.04  |Q        V          |          |          |
15+10       0.5267      1.09  |Q        V          |          |          |
15+15       0.5347      1.16  |Q        V          |          |          |
15+20       0.5431      1.23  |Q        V          |          |          |
15+25       0.5523      1.34  |Q        V          |          |          |
15+30       0.5628      1.51  | Q       V          |          |          |
15+35       0.5752      1.81  | Q       |V         |          |          |
15+40       0.5913      2.33  |  Q      |V         |          |          |
15+45       0.6109      2.86  |  Q      |V         |          |          |
15+50       0.6344      3.41  |   Q     | V        |          |          |
15+55       0.6625      4.07  |    Q    | V        |          |          |
16+ 0       0.6972      5.04  |     Q   |  V       |          |          |
16+ 5       0.7465      7.17  |        Q|   V      |          |          |
16+10       0.8227     11.06  |         |   QV     |          |          |
16+15       0.9343     16.20  |         |       V  |Q         |          |
16+20       1.0945     23.25  |         |          |V         |Q         |
16+25       1.2318     19.95  |         |          |  V  Q    |          |
16+30       1.3326     14.63  |         |        Q|    V     |          |
16+35       1.4087     11.04  |         |   Q      |      V   |          |
16+40       1.4693      8.81  |         |Q         |       V  |          |
16+45       1.5185      7.15  |        Q|          |        V |          |
16+50       1.5596      5.96  |      Q  |          |         V|          |
16+55       1.5946      5.08  |     Q   |          |          |V         |
17+ 0       1.6253      4.46  |    Q    |          |          |V         |
17+ 5       1.6525      3.95  |    Q    |          |          | V        |
17+10       1.6761      3.43  |   Q     |          |          | V        |
```

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17+15       1.6966      2.98  |  Q      |         |         | V       |
17+20       1.7153      2.72  |  Q      |         |         |  V      |
17+25       1.7322      2.45  |  Q      |         |         |  V      |
17+30       1.7476      2.23  | Q       |         |         |  V      |
17+35       1.7613      1.98  | Q       |         |         |   V     |
17+40       1.7739      1.83  | Q       |         |         |   V     |
17+45       1.7853      1.65  | Q       |         |         |   V     |
17+50       1.7957      1.51  | Q       |         |         |   V     |
17+55       1.8051      1.37  |Q        |         |         |    V    |
18+ 0       1.8135      1.22  |Q        |         |         |    V    |
18+ 5       1.8212      1.12  |Q        |         |         |    V    |
18+10       1.8280      0.99  |Q        |         |         |    V    |
18+15       1.8347      0.97  |Q        |         |         |    V    |
18+20       1.8416      1.01  |Q        |         |         |    V    |
18+25       1.8486      1.02  |Q        |         |         |    V    |
18+30       1.8555      1.00  |Q        |         |         |     V   |
18+35       1.8622      0.97  |Q        |         |         |     V   |
18+40       1.8683      0.89  |Q        |         |         |     V   |
18+45       1.8740      0.82  |Q        |         |         |     V   |
18+50       1.8794      0.78  |Q        |         |         |     V   |
18+55       1.8845      0.74  Q         |         |         |     V   |
19+ 0       1.8887      0.62  Q         |         |         |     V   |
19+ 5       1.8928      0.59  Q         |         |         |     V   |
19+10       1.8968      0.58  Q         |         |         |     V   |
19+15       1.9006      0.56  Q         |         |         |     V   |
19+20       1.9044      0.55  Q         |         |         |      V  |
19+25       1.9081      0.54  Q         |         |         |      V  |
19+30       1.9117      0.53  Q         |         |         |      V  |
19+35       1.9153      0.52  Q         |         |         |      V  |
19+40       1.9188      0.51  Q         |         |         |      V  |
19+45       1.9222      0.50  Q         |         |         |      V  |
19+50       1.9256      0.49  Q         |         |         |      V  |
19+55       1.9289      0.48  Q         |         |         |      V  |
20+ 0       1.9321      0.47  Q         |         |         |      V  |
20+ 5       1.9353      0.46  Q         |         |         |      V  |
20+10       1.9385      0.46  Q         |         |         |      V  |
20+15       1.9416      0.45  Q         |         |         |      V  |
20+20       1.9446      0.44  Q         |         |         |      V  |
20+25       1.9476      0.43  Q         |         |         |      V  |
20+30       1.9505      0.43  Q         |         |         |      V  |
20+35       1.9534      0.42  Q         |         |         |      V  |
20+40       1.9563      0.42  Q         |         |         |       V |
20+45       1.9591      0.41  Q         |         |         |       V |
20+50       1.9619      0.40  Q         |         |         |       V |
20+55       1.9646      0.40  Q         |         |         |       V |
21+ 0       1.9673      0.39  Q         |         |         |       V |
21+ 5       1.9700      0.39  Q         |         |         |       V |
21+10       1.9726      0.38  Q         |         |         |       V |
21+15       1.9752      0.38  Q         |         |         |       V |
21+20       1.9777      0.37  Q         |         |         |       V |
21+25       1.9803      0.37  Q         |         |         |       V |
21+30       1.9827      0.36  Q         |         |         |       V |
21+35       1.9852      0.36  Q         |         |         |       V |
21+40       1.9876      0.35  Q         |         |         |       V |
21+45       1.9900      0.35  Q         |         |         |       V |
21+50       1.9924      0.34  Q         |         |         |       V |
21+55       1.9947      0.34  Q         |         |         |       V |
22+ 0       1.9970      0.33  Q         |         |         |       V |
22+ 5       1.9993      0.33  Q         |         |         |       V |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+10 | 2.0015 | 0.33 | Q | \| | \| | \| | V \| |
| 22+15 | 2.0038 | 0.32 | Q | \| | \| | \| | V \| |
| 22+20 | 2.0060 | 0.32 | Q | \| | \| | \| | V \| |
| 22+25 | 2.0081 | 0.32 | Q | \| | \| | \| | V\| |
| 22+30 | 2.0103 | 0.31 | Q | \| | \| | \| | V\| |
| 22+35 | 2.0124 | 0.31 | Q | \| | \| | \| | V\| |
| 22+40 | 2.0145 | 0.31 | Q | \| | \| | \| | V\| |
| 22+45 | 2.0166 | 0.30 | Q | \| | \| | \| | V\| |
| 22+50 | 2.0187 | 0.30 | Q | \| | \| | \| | V\| |
| 22+55 | 2.0207 | 0.30 | Q | \| | \| | \| | V\| |
| 23+ 0 | 2.0228 | 0.29 | Q | \| | \| | \| | V\| |
| 23+ 5 | 2.0248 | 0.29 | Q | \| | \| | \| | V\| |
| 23+10 | 2.0268 | 0.29 | Q | \| | \| | \| | V\| |
| 23+15 | 2.0287 | 0.29 | Q | \| | \| | \| | V\| |
| 23+20 | 2.0307 | 0.28 | Q | \| | \| | \| | V\| |
| 23+25 | 2.0326 | 0.28 | Q | \| | \| | \| | V\| |
| 23+30 | 2.0345 | 0.28 | Q | \| | \| | \| | V\| |
| 23+35 | 2.0364 | 0.28 | Q | \| | \| | \| | V\| |
| 23+40 | 2.0383 | 0.27 | Q | \| | \| | \| | V\| |
| 23+45 | 2.0402 | 0.27 | Q | \| | \| | \| | V\| |
| 23+50 | 2.0420 | 0.27 | Q | \| | \| | \| | V\| |
| 23+55 | 2.0438 | 0.27 | Q | \| | \| | \| | V\| |
| 24+ 0 | 2.0457 | 0.26 | Q | \| | \| | \| | V\| |
| 24+ 5 | 2.0474 | 0.26 | Q | \| | \| | \| | V\| |
| 24+10 | 2.0491 | 0.25 | Q | \| | \| | \| | V\| |
| 24+15 | 2.0506 | 0.22 | Q | \| | \| | \| | V\| |
| 24+20 | 2.0518 | 0.17 | Q | \| | \| | \| | V\| |
| 24+25 | 2.0527 | 0.13 | Q | \| | \| | \| | V\| |
| 24+30 | 2.0534 | 0.10 | Q | \| | \| | \| | V\| |
| 24+35 | 2.0540 | 0.08 | Q | \| | \| | \| | V\| |
| 24+40 | 2.0545 | 0.07 | Q | \| | \| | \| | V\| |
| 24+45 | 2.0549 | 0.06 | Q | \| | \| | \| | V\| |
| 24+50 | 2.0552 | 0.05 | Q | \| | \| | \| | V\| |
| 24+55 | 2.0556 | 0.04 | Q | \| | \| | \| | V\| |
| 25+ 0 | 2.0558 | 0.04 | Q | \| | \| | \| | V\| |
| 25+ 5 | 2.0560 | 0.03 | Q | \| | \| | \| | V\| |
| 25+10 | 2.0562 | 0.03 | Q | \| | \| | \| | V\| |
| 25+15 | 2.0564 | 0.03 | Q | \| | \| | \| | V\| |
| 25+20 | 2.0566 | 0.02 | Q | \| | \| | \| | V\| |
| 25+25 | 2.0567 | 0.02 | Q | \| | \| | \| | V\| |
| 25+30 | 2.0568 | 0.02 | Q | \| | \| | \| | V\| |
| 25+35 | 2.0569 | 0.01 | Q | \| | \| | \| | V\| |
| 25+40 | 2.0570 | 0.01 | Q | \| | \| | \| | V\| |
| 25+45 | 2.0571 | 0.01 | Q | \| | \| | \| | V\| |
| 25+50 | 2.0571 | 0.01 | Q | \| | \| | \| | V\| |
| 25+55 | 2.0572 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 0 | 2.0572 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 5 | 2.0573 | 0.01 | Q | \| | \| | \| | V\| |
| 26+10 | 2.0573 | 0.00 | Q | \| | \| | \| | V\| |
| 26+15 | 2.0573 | 0.00 | Q | \| | \| | \| | V\| |
| 26+20 | 2.0574 | 0.00 | Q | \| | \| | \| | V\| |
| 26+25 | 2.0574 | 0.00 | Q | \| | \| | \| | V\| |
| 26+30 | 2.0574 | 0.00 | Q | \| | \| | \| | V\| |
| 26+35 | 2.0574 | 0.00 | Q | \| | \| | \| | V\| |
| 26+40 | 2.0574 | 0.00 | Q | \| | \| | \| | V\| |
| 26+45 | 2.0574 | 0.00 | Q | \| | \| | \| | V\| |
| 26+50 | 2.0574 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 38
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DAT: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 12.30 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 12.30 | 6 | 1.85 |
| Rainfall data for year 100 | | |
| 12.30 | 24 | 2.64 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 84.0 | 96.4 | 12.30 | 1.000 | 0.071 | 1.000 | 0.071 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.071

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 12.30 | 1.000 | 84.0 | 96.4 | 0.37 | 0.848 |

Area-averaged catchment yield fraction, Y = 0.848
Area-averaged low loss fraction, Yb = 0.152
User entry of time of concentration = 0.520 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 12.30(Ac.)
Catchment Lag time = 0.416 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 20.0321
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.071(In/Hr)
Average low loss rate fraction (Yb) = 0.152 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.656(In)
Specified peak 6-hour rainfall = 1.850(In)
Specified peak 24-hour rainfall = 2.640(In)

Rainfall depth area reduction factors:
Using a total area of 12.30(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.659(In)
30-minute factor = 0.999 Adjusted rainfall = 1.128(In)
1-hour factor = 0.999 Adjusted rainfall = 1.389(In)
3-hour factor = 1.000 Adjusted rainfall = 1.656(In)
6-hour factor = 1.000 Adjusted rainfall = 1.850(In)
24-hour factor = 1.000 Adjusted rainfall = 2.640(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 148.75 (CFS)) | |
| 1 | 0.995 | 1.480 |
| 2 | 4.516 | 5.238 |
| 3 | 11.300 | 10.092 |
| 4 | 26.240 | 22.223 |
| 5 | 43.399 | 25.525 |
| 6 | 55.091 | 17.392 |
| 7 | 62.875 | 11.579 |
| 8 | 68.500 | 8.369 |
| 9 | 73.033 | 6.742 |
| 10 | 76.661 | 5.397 |
| 11 | 79.664 | 4.468 |
| 12 | 82.167 | 3.722 |
| 13 | 84.311 | 3.189 |
| 14 | 86.250 | 2.884 |

| | | |
|---|---|---|
| 15 | 87.937 | 2.510 |
| 16 | 89.330 | 2.072 |
| 17 | 90.508 | 1.752 |
| 18 | 91.609 | 1.638 |
| 19 | 92.585 | 1.452 |
| 20 | 93.487 | 1.342 |
| 21 | 94.262 | 1.153 |
| 22 | 94.943 | 1.013 |
| 23 | 95.601 | 0.979 |
| 24 | 96.140 | 0.800 |
| 25 | 96.660 | 0.775 |
| 26 | 97.095 | 0.646 |
| 27 | 97.455 | 0.536 |
| 28 | 97.792 | 0.501 |
| 29 | 98.009 | 0.323 |
| 30 | 98.210 | 0.298 |
| 31 | 98.432 | 0.331 |
| 32 | 98.672 | 0.358 |
| 33 | 98.913 | 0.358 |
| 34 | 99.153 | 0.358 |
| 35 | 99.393 | 0.357 |
| 36 | 99.570 | 0.263 |
| 37 | 99.695 | 0.186 |
| 38 | 99.820 | 0.186 |
| 39 | 100.000 | 0.093 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6592 | 0.6592 |
| 2 | 0.8116 | 0.1524 |
| 3 | 0.9165 | 0.1050 |
| 4 | 0.9991 | 0.0826 |
| 5 | 1.0683 | 0.0692 |
| 6 | 1.1284 | 0.0601 |
| 7 | 1.1818 | 0.0534 |
| 8 | 1.2301 | 0.0483 |
| 9 | 1.2743 | 0.0442 |
| 10 | 1.3153 | 0.0409 |
| 11 | 1.3534 | 0.0381 |
| 12 | 1.3892 | 0.0358 |
| 13 | 1.4071 | 0.0179 |
| 14 | 1.4239 | 0.0168 |
| 15 | 1.4397 | 0.0158 |
| 16 | 1.4546 | 0.0149 |
| 17 | 1.4688 | 0.0142 |
| 18 | 1.4823 | 0.0135 |
| 19 | 1.4952 | 0.0129 |
| 20 | 1.5075 | 0.0123 |
| 21 | 1.5193 | 0.0118 |
| 22 | 1.5307 | 0.0114 |
| 23 | 1.5416 | 0.0109 |
| 24 | 1.5521 | 0.0105 |
| 25 | 1.5623 | 0.0102 |
| 26 | 1.5722 | 0.0098 |
| 27 | 1.5817 | 0.0095 |
| 28 | 1.5909 | 0.0092 |
| 29 | 1.5999 | 0.0090 |
| 30 | 1.6086 | 0.0087 |
| 31 | 1.6170 | 0.0085 |

| | | |
|---|---|---|
| 32 | 1.6253 | 0.0082 |
| 33 | 1.6333 | 0.0080 |
| 34 | 1.6411 | 0.0078 |
| 35 | 1.6487 | 0.0076 |
| 36 | 1.6562 | 0.0074 |
| 37 | 1.6634 | 0.0073 |
| 38 | 1.6705 | 0.0071 |
| 39 | 1.6775 | 0.0069 |
| 40 | 1.6843 | 0.0068 |
| 41 | 1.6909 | 0.0067 |
| 42 | 1.6974 | 0.0065 |
| 43 | 1.7038 | 0.0064 |
| 44 | 1.7101 | 0.0063 |
| 45 | 1.7162 | 0.0061 |
| 46 | 1.7223 | 0.0060 |
| 47 | 1.7282 | 0.0059 |
| 48 | 1.7340 | 0.0058 |
| 49 | 1.7397 | 0.0057 |
| 50 | 1.7453 | 0.0056 |
| 51 | 1.7509 | 0.0055 |
| 52 | 1.7563 | 0.0054 |
| 53 | 1.7616 | 0.0053 |
| 54 | 1.7669 | 0.0053 |
| 55 | 1.7721 | 0.0052 |
| 56 | 1.7772 | 0.0051 |
| 57 | 1.7822 | 0.0050 |
| 58 | 1.7872 | 0.0050 |
| 59 | 1.7921 | 0.0049 |
| 60 | 1.7969 | 0.0048 |
| 61 | 1.8016 | 0.0047 |
| 62 | 1.8063 | 0.0047 |
| 63 | 1.8109 | 0.0046 |
| 64 | 1.8155 | 0.0046 |
| 65 | 1.8200 | 0.0045 |
| 66 | 1.8244 | 0.0044 |
| 67 | 1.8288 | 0.0044 |
| 68 | 1.8331 | 0.0043 |
| 69 | 1.8374 | 0.0043 |
| 70 | 1.8416 | 0.0042 |
| 71 | 1.8458 | 0.0042 |
| 72 | 1.8499 | 0.0041 |
| 73 | 1.8565 | 0.0066 |
| 74 | 1.8630 | 0.0065 |
| 75 | 1.8694 | 0.0064 |
| 76 | 1.8758 | 0.0064 |
| 77 | 1.8821 | 0.0063 |
| 78 | 1.8883 | 0.0062 |
| 79 | 1.8945 | 0.0062 |
| 80 | 1.9006 | 0.0061 |
| 81 | 1.9067 | 0.0061 |
| 82 | 1.9127 | 0.0060 |
| 83 | 1.9186 | 0.0060 |
| 84 | 1.9245 | 0.0059 |
| 85 | 1.9304 | 0.0059 |
| 86 | 1.9362 | 0.0058 |
| 87 | 1.9419 | 0.0058 |
| 88 | 1.9477 | 0.0057 |
| 89 | 1.9533 | 0.0057 |
| 90 | 1.9589 | 0.0056 |

| | | |
|---|---|---|
| 91 | 1.9645 | 0.0056 |
| 92 | 1.9700 | 0.0055 |
| 93 | 1.9755 | 0.0055 |
| 94 | 1.9809 | 0.0054 |
| 95 | 1.9863 | 0.0054 |
| 96 | 1.9916 | 0.0053 |
| 97 | 1.9969 | 0.0053 |
| 98 | 2.0022 | 0.0053 |
| 99 | 2.0074 | 0.0052 |
| 100 | 2.0126 | 0.0052 |
| 101 | 2.0177 | 0.0051 |
| 102 | 2.0228 | 0.0051 |
| 103 | 2.0279 | 0.0051 |
| 104 | 2.0329 | 0.0050 |
| 105 | 2.0379 | 0.0050 |
| 106 | 2.0429 | 0.0050 |
| 107 | 2.0478 | 0.0049 |
| 108 | 2.0527 | 0.0049 |
| 109 | 2.0576 | 0.0049 |
| 110 | 2.0624 | 0.0048 |
| 111 | 2.0672 | 0.0048 |
| 112 | 2.0719 | 0.0048 |
| 113 | 2.0767 | 0.0047 |
| 114 | 2.0814 | 0.0047 |
| 115 | 2.0860 | 0.0047 |
| 116 | 2.0907 | 0.0046 |
| 117 | 2.0953 | 0.0046 |
| 118 | 2.0999 | 0.0046 |
| 119 | 2.1044 | 0.0046 |
| 120 | 2.1089 | 0.0045 |
| 121 | 2.1134 | 0.0045 |
| 122 | 2.1179 | 0.0045 |
| 123 | 2.1223 | 0.0044 |
| 124 | 2.1268 | 0.0044 |
| 125 | 2.1311 | 0.0044 |
| 126 | 2.1355 | 0.0044 |
| 127 | 2.1398 | 0.0043 |
| 128 | 2.1441 | 0.0043 |
| 129 | 2.1484 | 0.0043 |
| 130 | 2.1527 | 0.0043 |
| 131 | 2.1569 | 0.0042 |
| 132 | 2.1611 | 0.0042 |
| 133 | 2.1653 | 0.0042 |
| 134 | 2.1695 | 0.0042 |
| 135 | 2.1736 | 0.0041 |
| 136 | 2.1778 | 0.0041 |
| 137 | 2.1818 | 0.0041 |
| 138 | 2.1859 | 0.0041 |
| 139 | 2.1900 | 0.0041 |
| 140 | 2.1940 | 0.0040 |
| 141 | 2.1980 | 0.0040 |
| 142 | 2.2020 | 0.0040 |
| 143 | 2.2060 | 0.0040 |
| 144 | 2.2099 | 0.0039 |
| 145 | 2.2138 | 0.0039 |
| 146 | 2.2178 | 0.0039 |
| 147 | 2.2216 | 0.0039 |
| 148 | 2.2255 | 0.0039 |
| 149 | 2.2294 | 0.0038 |

| | | |
|---|---|---|
| 150 | 2.2332 | 0.0038 |
| 151 | 2.2370 | 0.0038 |
| 152 | 2.2408 | 0.0038 |
| 153 | 2.2446 | 0.0038 |
| 154 | 2.2483 | 0.0038 |
| 155 | 2.2520 | 0.0037 |
| 156 | 2.2558 | 0.0037 |
| 157 | 2.2595 | 0.0037 |
| 158 | 2.2631 | 0.0037 |
| 159 | 2.2668 | 0.0037 |
| 160 | 2.2705 | 0.0036 |
| 161 | 2.2741 | 0.0036 |
| 162 | 2.2777 | 0.0036 |
| 163 | 2.2813 | 0.0036 |
| 164 | 2.2849 | 0.0036 |
| 165 | 2.2885 | 0.0036 |
| 166 | 2.2920 | 0.0035 |
| 167 | 2.2955 | 0.0035 |
| 168 | 2.2991 | 0.0035 |
| 169 | 2.3026 | 0.0035 |
| 170 | 2.3060 | 0.0035 |
| 171 | 2.3095 | 0.0035 |
| 172 | 2.3130 | 0.0035 |
| 173 | 2.3164 | 0.0034 |
| 174 | 2.3198 | 0.0034 |
| 175 | 2.3233 | 0.0034 |
| 176 | 2.3267 | 0.0034 |
| 177 | 2.3300 | 0.0034 |
| 178 | 2.3334 | 0.0034 |
| 179 | 2.3368 | 0.0034 |
| 180 | 2.3401 | 0.0033 |
| 181 | 2.3434 | 0.0033 |
| 182 | 2.3467 | 0.0033 |
| 183 | 2.3501 | 0.0033 |
| 184 | 2.3533 | 0.0033 |
| 185 | 2.3566 | 0.0033 |
| 186 | 2.3599 | 0.0033 |
| 187 | 2.3631 | 0.0032 |
| 188 | 2.3664 | 0.0032 |
| 189 | 2.3696 | 0.0032 |
| 190 | 2.3728 | 0.0032 |
| 191 | 2.3760 | 0.0032 |
| 192 | 2.3792 | 0.0032 |
| 193 | 2.3823 | 0.0032 |
| 194 | 2.3855 | 0.0032 |
| 195 | 2.3887 | 0.0031 |
| 196 | 2.3918 | 0.0031 |
| 197 | 2.3949 | 0.0031 |
| 198 | 2.3980 | 0.0031 |
| 199 | 2.4011 | 0.0031 |
| 200 | 2.4042 | 0.0031 |
| 201 | 2.4073 | 0.0031 |
| 202 | 2.4104 | 0.0031 |
| 203 | 2.4134 | 0.0031 |
| 204 | 2.4165 | 0.0030 |
| 205 | 2.4195 | 0.0030 |
| 206 | 2.4225 | 0.0030 |
| 207 | 2.4255 | 0.0030 |
| 208 | 2.4285 | 0.0030 |

| | | |
|---|---|---|
| 209 | 2.4315 | 0.0030 |
| 210 | 2.4345 | 0.0030 |
| 211 | 2.4375 | 0.0030 |
| 212 | 2.4404 | 0.0030 |
| 213 | 2.4434 | 0.0029 |
| 214 | 2.4463 | 0.0029 |
| 215 | 2.4492 | 0.0029 |
| 216 | 2.4522 | 0.0029 |
| 217 | 2.4551 | 0.0029 |
| 218 | 2.4580 | 0.0029 |
| 219 | 2.4608 | 0.0029 |
| 220 | 2.4637 | 0.0029 |
| 221 | 2.4666 | 0.0029 |
| 222 | 2.4694 | 0.0029 |
| 223 | 2.4723 | 0.0028 |
| 224 | 2.4751 | 0.0028 |
| 225 | 2.4780 | 0.0028 |
| 226 | 2.4808 | 0.0028 |
| 227 | 2.4836 | 0.0028 |
| 228 | 2.4864 | 0.0028 |
| 229 | 2.4892 | 0.0028 |
| 230 | 2.4920 | 0.0028 |
| 231 | 2.4948 | 0.0028 |
| 232 | 2.4975 | 0.0028 |
| 233 | 2.5003 | 0.0028 |
| 234 | 2.5030 | 0.0027 |
| 235 | 2.5058 | 0.0027 |
| 236 | 2.5085 | 0.0027 |
| 237 | 2.5112 | 0.0027 |
| 238 | 2.5139 | 0.0027 |
| 239 | 2.5166 | 0.0027 |
| 240 | 2.5193 | 0.0027 |
| 241 | 2.5220 | 0.0027 |
| 242 | 2.5247 | 0.0027 |
| 243 | 2.5274 | 0.0027 |
| 244 | 2.5300 | 0.0027 |
| 245 | 2.5327 | 0.0027 |
| 246 | 2.5353 | 0.0026 |
| 247 | 2.5380 | 0.0026 |
| 248 | 2.5406 | 0.0026 |
| 249 | 2.5432 | 0.0026 |
| 250 | 2.5459 | 0.0026 |
| 251 | 2.5485 | 0.0026 |
| 252 | 2.5511 | 0.0026 |
| 253 | 2.5537 | 0.0026 |
| 254 | 2.5562 | 0.0026 |
| 255 | 2.5588 | 0.0026 |
| 256 | 2.5614 | 0.0026 |
| 257 | 2.5640 | 0.0026 |
| 258 | 2.5665 | 0.0026 |
| 259 | 2.5691 | 0.0025 |
| 260 | 2.5716 | 0.0025 |
| 261 | 2.5741 | 0.0025 |
| 262 | 2.5767 | 0.0025 |
| 263 | 2.5792 | 0.0025 |
| 264 | 2.5817 | 0.0025 |
| 265 | 2.5842 | 0.0025 |
| 266 | 2.5867 | 0.0025 |
| 267 | 2.5892 | 0.0025 |

| | | |
|---|---|---|
| 268 | 2.5917 | 0.0025 |
| 269 | 2.5941 | 0.0025 |
| 270 | 2.5966 | 0.0025 |
| 271 | 2.5991 | 0.0025 |
| 272 | 2.6015 | 0.0025 |
| 273 | 2.6040 | 0.0025 |
| 274 | 2.6064 | 0.0024 |
| 275 | 2.6089 | 0.0024 |
| 276 | 2.6113 | 0.0024 |
| 277 | 2.6137 | 0.0024 |
| 278 | 2.6161 | 0.0024 |
| 279 | 2.6185 | 0.0024 |
| 280 | 2.6210 | 0.0024 |
| 281 | 2.6233 | 0.0024 |
| 282 | 2.6257 | 0.0024 |
| 283 | 2.6281 | 0.0024 |
| 284 | 2.6305 | 0.0024 |
| 285 | 2.6329 | 0.0024 |
| 286 | 2.6352 | 0.0024 |
| 287 | 2.6376 | 0.0024 |
| 288 | 2.6400 | 0.0024 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0024 | 0.0004 | 0.0020 |
| 2 | 0.0024 | 0.0004 | 0.0020 |
| 3 | 0.0024 | 0.0004 | 0.0020 |
| 4 | 0.0024 | 0.0004 | 0.0020 |
| 5 | 0.0024 | 0.0004 | 0.0020 |
| 6 | 0.0024 | 0.0004 | 0.0020 |
| 7 | 0.0024 | 0.0004 | 0.0020 |
| 8 | 0.0024 | 0.0004 | 0.0021 |
| 9 | 0.0024 | 0.0004 | 0.0021 |
| 10 | 0.0024 | 0.0004 | 0.0021 |
| 11 | 0.0025 | 0.0004 | 0.0021 |
| 12 | 0.0025 | 0.0004 | 0.0021 |
| 13 | 0.0025 | 0.0004 | 0.0021 |
| 14 | 0.0025 | 0.0004 | 0.0021 |
| 15 | 0.0025 | 0.0004 | 0.0021 |
| 16 | 0.0025 | 0.0004 | 0.0021 |
| 17 | 0.0025 | 0.0004 | 0.0021 |
| 18 | 0.0025 | 0.0004 | 0.0021 |
| 19 | 0.0025 | 0.0004 | 0.0021 |
| 20 | 0.0025 | 0.0004 | 0.0022 |
| 21 | 0.0026 | 0.0004 | 0.0022 |
| 22 | 0.0026 | 0.0004 | 0.0022 |
| 23 | 0.0026 | 0.0004 | 0.0022 |
| 24 | 0.0026 | 0.0004 | 0.0022 |
| 25 | 0.0026 | 0.0004 | 0.0022 |
| 26 | 0.0026 | 0.0004 | 0.0022 |
| 27 | 0.0026 | 0.0004 | 0.0022 |
| 28 | 0.0026 | 0.0004 | 0.0022 |
| 29 | 0.0026 | 0.0004 | 0.0022 |
| 30 | 0.0027 | 0.0004 | 0.0023 |
| 31 | 0.0027 | 0.0004 | 0.0023 |
| 32 | 0.0027 | 0.0004 | 0.0023 |
| 33 | 0.0027 | 0.0004 | 0.0023 |

| | | | |
|---|---|---|---|
| 34 | 0.0027 | 0.0004 | 0.0023 |
| 35 | 0.0027 | 0.0004 | 0.0023 |
| 36 | 0.0027 | 0.0004 | 0.0023 |
| 37 | 0.0027 | 0.0004 | 0.0023 |
| 38 | 0.0028 | 0.0004 | 0.0023 |
| 39 | 0.0028 | 0.0004 | 0.0024 |
| 40 | 0.0028 | 0.0004 | 0.0024 |
| 41 | 0.0028 | 0.0004 | 0.0024 |
| 42 | 0.0028 | 0.0004 | 0.0024 |
| 43 | 0.0028 | 0.0004 | 0.0024 |
| 44 | 0.0028 | 0.0004 | 0.0024 |
| 45 | 0.0029 | 0.0004 | 0.0024 |
| 46 | 0.0029 | 0.0004 | 0.0024 |
| 47 | 0.0029 | 0.0004 | 0.0024 |
| 48 | 0.0029 | 0.0004 | 0.0025 |
| 49 | 0.0029 | 0.0004 | 0.0025 |
| 50 | 0.0029 | 0.0004 | 0.0025 |
| 51 | 0.0029 | 0.0004 | 0.0025 |
| 52 | 0.0030 | 0.0004 | 0.0025 |
| 53 | 0.0030 | 0.0005 | 0.0025 |
| 54 | 0.0030 | 0.0005 | 0.0025 |
| 55 | 0.0030 | 0.0005 | 0.0026 |
| 56 | 0.0030 | 0.0005 | 0.0026 |
| 57 | 0.0030 | 0.0005 | 0.0026 |
| 58 | 0.0031 | 0.0005 | 0.0026 |
| 59 | 0.0031 | 0.0005 | 0.0026 |
| 60 | 0.0031 | 0.0005 | 0.0026 |
| 61 | 0.0031 | 0.0005 | 0.0026 |
| 62 | 0.0031 | 0.0005 | 0.0027 |
| 63 | 0.0031 | 0.0005 | 0.0027 |
| 64 | 0.0032 | 0.0005 | 0.0027 |
| 65 | 0.0032 | 0.0005 | 0.0027 |
| 66 | 0.0032 | 0.0005 | 0.0027 |
| 67 | 0.0032 | 0.0005 | 0.0027 |
| 68 | 0.0032 | 0.0005 | 0.0027 |
| 69 | 0.0033 | 0.0005 | 0.0028 |
| 70 | 0.0033 | 0.0005 | 0.0028 |
| 71 | 0.0033 | 0.0005 | 0.0028 |
| 72 | 0.0033 | 0.0005 | 0.0028 |
| 73 | 0.0033 | 0.0005 | 0.0028 |
| 74 | 0.0034 | 0.0005 | 0.0028 |
| 75 | 0.0034 | 0.0005 | 0.0029 |
| 76 | 0.0034 | 0.0005 | 0.0029 |
| 77 | 0.0034 | 0.0005 | 0.0029 |
| 78 | 0.0034 | 0.0005 | 0.0029 |
| 79 | 0.0035 | 0.0005 | 0.0029 |
| 80 | 0.0035 | 0.0005 | 0.0030 |
| 81 | 0.0035 | 0.0005 | 0.0030 |
| 82 | 0.0035 | 0.0005 | 0.0030 |
| 83 | 0.0036 | 0.0005 | 0.0030 |
| 84 | 0.0036 | 0.0005 | 0.0030 |
| 85 | 0.0036 | 0.0005 | 0.0031 |
| 86 | 0.0036 | 0.0006 | 0.0031 |
| 87 | 0.0037 | 0.0006 | 0.0031 |
| 88 | 0.0037 | 0.0006 | 0.0031 |
| 89 | 0.0037 | 0.0006 | 0.0032 |
| 90 | 0.0037 | 0.0006 | 0.0032 |
| 91 | 0.0038 | 0.0006 | 0.0032 |
| 92 | 0.0038 | 0.0006 | 0.0032 |

| | | | |
|---|---|---|---|
| 93 | 0.0038 | 0.0006 | 0.0032 |
| 94 | 0.0038 | 0.0006 | 0.0033 |
| 95 | 0.0039 | 0.0006 | 0.0033 |
| 96 | 0.0039 | 0.0006 | 0.0033 |
| 97 | 0.0039 | 0.0006 | 0.0033 |
| 98 | 0.0040 | 0.0006 | 0.0034 |
| 99 | 0.0040 | 0.0006 | 0.0034 |
| 100 | 0.0040 | 0.0006 | 0.0034 |
| 101 | 0.0041 | 0.0006 | 0.0035 |
| 102 | 0.0041 | 0.0006 | 0.0035 |
| 103 | 0.0041 | 0.0006 | 0.0035 |
| 104 | 0.0042 | 0.0006 | 0.0035 |
| 105 | 0.0042 | 0.0006 | 0.0036 |
| 106 | 0.0042 | 0.0006 | 0.0036 |
| 107 | 0.0043 | 0.0007 | 0.0036 |
| 108 | 0.0043 | 0.0007 | 0.0037 |
| 109 | 0.0044 | 0.0007 | 0.0037 |
| 110 | 0.0044 | 0.0007 | 0.0037 |
| 111 | 0.0044 | 0.0007 | 0.0038 |
| 112 | 0.0045 | 0.0007 | 0.0038 |
| 113 | 0.0045 | 0.0007 | 0.0038 |
| 114 | 0.0046 | 0.0007 | 0.0039 |
| 115 | 0.0046 | 0.0007 | 0.0039 |
| 116 | 0.0046 | 0.0007 | 0.0039 |
| 117 | 0.0047 | 0.0007 | 0.0040 |
| 118 | 0.0047 | 0.0007 | 0.0040 |
| 119 | 0.0048 | 0.0007 | 0.0041 |
| 120 | 0.0048 | 0.0007 | 0.0041 |
| 121 | 0.0049 | 0.0007 | 0.0041 |
| 122 | 0.0049 | 0.0007 | 0.0042 |
| 123 | 0.0050 | 0.0008 | 0.0042 |
| 124 | 0.0050 | 0.0008 | 0.0043 |
| 125 | 0.0051 | 0.0008 | 0.0043 |
| 126 | 0.0051 | 0.0008 | 0.0044 |
| 127 | 0.0052 | 0.0008 | 0.0044 |
| 128 | 0.0053 | 0.0008 | 0.0045 |
| 129 | 0.0053 | 0.0008 | 0.0045 |
| 130 | 0.0054 | 0.0008 | 0.0046 |
| 131 | 0.0055 | 0.0008 | 0.0046 |
| 132 | 0.0055 | 0.0008 | 0.0047 |
| 133 | 0.0056 | 0.0009 | 0.0048 |
| 134 | 0.0057 | 0.0009 | 0.0048 |
| 135 | 0.0058 | 0.0009 | 0.0049 |
| 136 | 0.0058 | 0.0009 | 0.0049 |
| 137 | 0.0059 | 0.0009 | 0.0050 |
| 138 | 0.0060 | 0.0009 | 0.0051 |
| 139 | 0.0061 | 0.0009 | 0.0051 |
| 140 | 0.0061 | 0.0009 | 0.0052 |
| 141 | 0.0062 | 0.0009 | 0.0053 |
| 142 | 0.0063 | 0.0010 | 0.0053 |
| 143 | 0.0064 | 0.0010 | 0.0055 |
| 144 | 0.0065 | 0.0010 | 0.0055 |
| 145 | 0.0041 | 0.0006 | 0.0035 |
| 146 | 0.0042 | 0.0006 | 0.0035 |
| 147 | 0.0043 | 0.0006 | 0.0036 |
| 148 | 0.0043 | 0.0007 | 0.0037 |
| 149 | 0.0044 | 0.0007 | 0.0038 |
| 150 | 0.0045 | 0.0007 | 0.0038 |
| 151 | 0.0046 | 0.0007 | 0.0039 |

| | | | |
|---|---|---|---|
| 152 | 0.0047 | 0.0007 | 0.0040 |
| 153 | 0.0048 | 0.0007 | 0.0041 |
| 154 | 0.0049 | 0.0007 | 0.0041 |
| 155 | 0.0050 | 0.0008 | 0.0043 |
| 156 | 0.0051 | 0.0008 | 0.0043 |
| 157 | 0.0053 | 0.0008 | 0.0045 |
| 158 | 0.0053 | 0.0008 | 0.0045 |
| 159 | 0.0055 | 0.0008 | 0.0047 |
| 160 | 0.0056 | 0.0009 | 0.0048 |
| 161 | 0.0058 | 0.0009 | 0.0049 |
| 162 | 0.0059 | 0.0009 | 0.0050 |
| 163 | 0.0061 | 0.0009 | 0.0052 |
| 164 | 0.0063 | 0.0010 | 0.0053 |
| 165 | 0.0065 | 0.0010 | 0.0055 |
| 166 | 0.0067 | 0.0010 | 0.0056 |
| 167 | 0.0069 | 0.0011 | 0.0059 |
| 168 | 0.0071 | 0.0011 | 0.0060 |
| 169 | 0.0074 | 0.0011 | 0.0063 |
| 170 | 0.0076 | 0.0012 | 0.0065 |
| 171 | 0.0080 | 0.0012 | 0.0068 |
| 172 | 0.0082 | 0.0012 | 0.0070 |
| 173 | 0.0087 | 0.0013 | 0.0074 |
| 174 | 0.0090 | 0.0014 | 0.0076 |
| 175 | 0.0095 | 0.0014 | 0.0081 |
| 176 | 0.0098 | 0.0015 | 0.0083 |
| 177 | 0.0105 | 0.0016 | 0.0089 |
| 178 | 0.0109 | 0.0017 | 0.0093 |
| 179 | 0.0118 | 0.0018 | 0.0100 |
| 180 | 0.0123 | 0.0019 | 0.0105 |
| 181 | 0.0135 | 0.0020 | 0.0114 |
| 182 | 0.0142 | 0.0022 | 0.0120 |
| 183 | 0.0158 | 0.0024 | 0.0134 |
| 184 | 0.0168 | 0.0025 | 0.0142 |
| 185 | 0.0358 | 0.0054 | 0.0304 |
| 186 | 0.0381 | 0.0058 | 0.0324 |
| 187 | 0.0442 | 0.0059 | 0.0383 |
| 188 | 0.0483 | 0.0059 | 0.0424 |
| 189 | 0.0601 | 0.0059 | 0.0541 |
| 190 | 0.0692 | 0.0059 | 0.0633 |
| 191 | 0.1050 | 0.0059 | 0.0991 |
| 192 | 0.1524 | 0.0059 | 0.1465 |
| 193 | 0.6592 | 0.0059 | 0.6533 |
| 194 | 0.0826 | 0.0059 | 0.0767 |
| 195 | 0.0534 | 0.0059 | 0.0475 |
| 196 | 0.0409 | 0.0059 | 0.0350 |
| 197 | 0.0179 | 0.0027 | 0.0152 |
| 198 | 0.0149 | 0.0023 | 0.0127 |
| 199 | 0.0129 | 0.0020 | 0.0109 |
| 200 | 0.0114 | 0.0017 | 0.0096 |
| 201 | 0.0102 | 0.0015 | 0.0086 |
| 202 | 0.0092 | 0.0014 | 0.0078 |
| 203 | 0.0085 | 0.0013 | 0.0072 |
| 204 | 0.0078 | 0.0012 | 0.0066 |
| 205 | 0.0073 | 0.0011 | 0.0062 |
| 206 | 0.0068 | 0.0010 | 0.0058 |
| 207 | 0.0064 | 0.0010 | 0.0054 |
| 208 | 0.0060 | 0.0009 | 0.0051 |
| 209 | 0.0057 | 0.0009 | 0.0048 |
| 210 | 0.0054 | 0.0008 | 0.0046 |

| | | | |
|---|---|---|---|
| 211 | 0.0052 | 0.0008 | 0.0044 |
| 212 | 0.0050 | 0.0008 | 0.0042 |
| 213 | 0.0047 | 0.0007 | 0.0040 |
| 214 | 0.0046 | 0.0007 | 0.0039 |
| 215 | 0.0044 | 0.0007 | 0.0037 |
| 216 | 0.0042 | 0.0006 | 0.0036 |
| 217 | 0.0066 | 0.0010 | 0.0056 |
| 218 | 0.0064 | 0.0010 | 0.0054 |
| 219 | 0.0062 | 0.0009 | 0.0052 |
| 220 | 0.0060 | 0.0009 | 0.0051 |
| 221 | 0.0059 | 0.0009 | 0.0050 |
| 222 | 0.0057 | 0.0009 | 0.0048 |
| 223 | 0.0056 | 0.0008 | 0.0047 |
| 224 | 0.0054 | 0.0008 | 0.0046 |
| 225 | 0.0053 | 0.0008 | 0.0045 |
| 226 | 0.0052 | 0.0008 | 0.0044 |
| 227 | 0.0051 | 0.0008 | 0.0043 |
| 228 | 0.0050 | 0.0008 | 0.0042 |
| 229 | 0.0049 | 0.0007 | 0.0041 |
| 230 | 0.0048 | 0.0007 | 0.0040 |
| 231 | 0.0047 | 0.0007 | 0.0040 |
| 232 | 0.0046 | 0.0007 | 0.0039 |
| 233 | 0.0045 | 0.0007 | 0.0038 |
| 234 | 0.0044 | 0.0007 | 0.0037 |
| 235 | 0.0043 | 0.0007 | 0.0037 |
| 236 | 0.0043 | 0.0006 | 0.0036 |
| 237 | 0.0042 | 0.0006 | 0.0036 |
| 238 | 0.0041 | 0.0006 | 0.0035 |
| 239 | 0.0041 | 0.0006 | 0.0034 |
| 240 | 0.0040 | 0.0006 | 0.0034 |
| 241 | 0.0039 | 0.0006 | 0.0033 |
| 242 | 0.0039 | 0.0006 | 0.0033 |
| 243 | 0.0038 | 0.0006 | 0.0032 |
| 244 | 0.0038 | 0.0006 | 0.0032 |
| 245 | 0.0037 | 0.0006 | 0.0031 |
| 246 | 0.0036 | 0.0006 | 0.0031 |
| 247 | 0.0036 | 0.0005 | 0.0031 |
| 248 | 0.0035 | 0.0005 | 0.0030 |
| 249 | 0.0035 | 0.0005 | 0.0030 |
| 250 | 0.0035 | 0.0005 | 0.0029 |
| 251 | 0.0034 | 0.0005 | 0.0029 |
| 252 | 0.0034 | 0.0005 | 0.0029 |
| 253 | 0.0033 | 0.0005 | 0.0028 |
| 254 | 0.0033 | 0.0005 | 0.0028 |
| 255 | 0.0032 | 0.0005 | 0.0028 |
| 256 | 0.0032 | 0.0005 | 0.0027 |
| 257 | 0.0032 | 0.0005 | 0.0027 |
| 258 | 0.0031 | 0.0005 | 0.0027 |
| 259 | 0.0031 | 0.0005 | 0.0026 |
| 260 | 0.0031 | 0.0005 | 0.0026 |
| 261 | 0.0030 | 0.0005 | 0.0026 |
| 262 | 0.0030 | 0.0005 | 0.0025 |
| 263 | 0.0030 | 0.0005 | 0.0025 |
| 264 | 0.0029 | 0.0004 | 0.0025 |
| 265 | 0.0029 | 0.0004 | 0.0025 |
| 266 | 0.0029 | 0.0004 | 0.0024 |
| 267 | 0.0028 | 0.0004 | 0.0024 |
| 268 | 0.0028 | 0.0004 | 0.0024 |
| 269 | 0.0028 | 0.0004 | 0.0024 |

| | | | |
|---|---|---|---|
| 270 | 0.0028 | 0.0004 | 0.0023 |
| 271 | 0.0027 | 0.0004 | 0.0023 |
| 272 | 0.0027 | 0.0004 | 0.0023 |
| 273 | 0.0027 | 0.0004 | 0.0023 |
| 274 | 0.0027 | 0.0004 | 0.0023 |
| 275 | 0.0026 | 0.0004 | 0.0022 |
| 276 | 0.0026 | 0.0004 | 0.0022 |
| 277 | 0.0026 | 0.0004 | 0.0022 |
| 278 | 0.0026 | 0.0004 | 0.0022 |
| 279 | 0.0025 | 0.0004 | 0.0022 |
| 280 | 0.0025 | 0.0004 | 0.0021 |
| 281 | 0.0025 | 0.0004 | 0.0021 |
| 282 | 0.0025 | 0.0004 | 0.0021 |
| 283 | 0.0025 | 0.0004 | 0.0021 |
| 284 | 0.0024 | 0.0004 | 0.0021 |
| 285 | 0.0024 | 0.0004 | 0.0021 |
| 286 | 0.0024 | 0.0004 | 0.0020 |
| 287 | 0.0024 | 0.0004 | 0.0020 |
| 288 | 0.0024 | 0.0004 | 0.0020 |

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Total soil rain loss = 0.26(In)
Total effective rainfall = 2.38(In)
Peak flow rate in flood hydrograph = 24.50(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 7.5 | 15.0 | 22.5 | 30.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+15 | 0.0003 | 0.03 | Q | \| | \| | \| | \| |
| 0+20 | 0.0009 | 0.08 | Q | \| | \| | \| | \| |
| 0+25 | 0.0018 | 0.13 | Q | \| | \| | \| | \| |
| 0+30 | 0.0029 | 0.16 | Q | \| | \| | \| | \| |
| 0+35 | 0.0042 | 0.19 | Q | \| | \| | \| | \| |
| 0+40 | 0.0056 | 0.21 | Q | \| | \| | \| | \| |
| 0+45 | 0.0071 | 0.22 | Q | \| | \| | \| | \| |
| 0+50 | 0.0087 | 0.23 | Q | \| | \| | \| | \| |
| 0+55 | 0.0104 | 0.24 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0121 | 0.25 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0139 | 0.26 | Q | \| | \| | \| | \| |
| 1+10 | 0.0157 | 0.26 | Q | \| | \| | \| | \| |
| 1+15 | 0.0176 | 0.27 | Q | \| | \| | \| | \| |
| 1+20 | 0.0195 | 0.28 | Q | \| | \| | \| | \| |
| 1+25 | 0.0214 | 0.28 | Q | \| | \| | \| | \| |
| 1+30 | 0.0234 | 0.28 | Q | \| | \| | \| | \| |
| 1+35 | 0.0253 | 0.29 | Q | \| | \| | \| | \| |
| 1+40 | 0.0274 | 0.29 | Q | \| | \| | \| | \| |
| 1+45 | 0.0294 | 0.30 | Q | \| | \| | \| | \| |
| 1+50 | 0.0315 | 0.30 | Q | \| | \| | \| | \| |
| 1+55 | 0.0335 | 0.30 | Q | \| | \| | \| | \| |
| 2+ 0 | 0.0356 | 0.31 | Q | \| | \| | \| | \| |
| 2+ 5 | 0.0378 | 0.31 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+10 | 0.0399 | 0.31 | Q | | | | |
| 2+15 | 0.0421 | 0.31 | Q | | | | |
| 2+20 | 0.0442 | 0.32 | Q | | | | |
| 2+25 | 0.0464 | 0.32 | Q | | | | |
| 2+30 | 0.0486 | 0.32 | Q | | | | |
| 2+35 | 0.0508 | 0.32 | Q | | | | |
| 2+40 | 0.0531 | 0.32 | Q | | | | |
| 2+45 | 0.0553 | 0.33 | Q | | | | |
| 2+50 | 0.0576 | 0.33 | Q | | | | |
| 2+55 | 0.0598 | 0.33 | Q | | | | |
| 3+ 0 | 0.0621 | 0.33 | QV | | | | |
| 3+ 5 | 0.0644 | 0.33 | QV | | | | |
| 3+10 | 0.0667 | 0.34 | QV | | | | |
| 3+15 | 0.0691 | 0.34 | QV | | | | |
| 3+20 | 0.0714 | 0.34 | QV | | | | |
| 3+25 | 0.0738 | 0.34 | QV | | | | |
| 3+30 | 0.0761 | 0.34 | QV | | | | |
| 3+35 | 0.0785 | 0.34 | QV | | | | |
| 3+40 | 0.0809 | 0.35 | QV | | | | |
| 3+45 | 0.0833 | 0.35 | QV | | | | |
| 3+50 | 0.0857 | 0.35 | QV | | | | |
| 3+55 | 0.0881 | 0.35 | QV | | | | |
| 4+ 0 | 0.0905 | 0.35 | QV | | | | |
| 4+ 5 | 0.0930 | 0.35 | QV | | | | |
| 4+10 | 0.0954 | 0.36 | QV | | | | |
| 4+15 | 0.0979 | 0.36 | QV | | | | |
| 4+20 | 0.1003 | 0.36 | QV | | | | |
| 4+25 | 0.1028 | 0.36 | QV | | | | |
| 4+30 | 0.1053 | 0.36 | QV | | | | |
| 4+35 | 0.1079 | 0.37 | QV | | | | |
| 4+40 | 0.1104 | 0.37 | QV | | | | |
| 4+45 | 0.1129 | 0.37 | QV | | | | |
| 4+50 | 0.1155 | 0.37 | QV | | | | |
| 4+55 | 0.1180 | 0.37 | QV | | | | |
| 5+ 0 | 0.1206 | 0.37 | QV | | | | |
| 5+ 5 | 0.1232 | 0.38 | Q V | | | | |
| 5+10 | 0.1258 | 0.38 | Q V | | | | |
| 5+15 | 0.1285 | 0.38 | Q V | | | | |
| 5+20 | 0.1311 | 0.38 | Q V | | | | |
| 5+25 | 0.1337 | 0.39 | Q V | | | | |
| 5+30 | 0.1364 | 0.39 | Q V | | | | |
| 5+35 | 0.1391 | 0.39 | Q V | | | | |
| 5+40 | 0.1418 | 0.39 | Q V | | | | |
| 5+45 | 0.1445 | 0.39 | Q V | | | | |
| 5+50 | 0.1472 | 0.40 | Q V | | | | |
| 5+55 | 0.1500 | 0.40 | Q V | | | | |
| 6+ 0 | 0.1527 | 0.40 | Q V | | | | |
| 6+ 5 | 0.1555 | 0.40 | Q V | | | | |
| 6+10 | 0.1583 | 0.41 | Q V | | | | |
| 6+15 | 0.1611 | 0.41 | Q V | | | | |
| 6+20 | 0.1639 | 0.41 | Q V | | | | |
| 6+25 | 0.1668 | 0.41 | Q V | | | | |
| 6+30 | 0.1696 | 0.42 | Q V | | | | |
| 6+35 | 0.1725 | 0.42 | Q V | | | | |
| 6+40 | 0.1754 | 0.42 | Q V | | | | |
| 6+45 | 0.1783 | 0.42 | Q V | | | | |
| 6+50 | 0.1813 | 0.43 | Q V | | | | |
| 6+55 | 0.1842 | 0.43 | Q  V | | | | |
| 7+ 0 | 0.1872 | 0.43 | Q  V | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 7+ 5 | 0.1902 | 0.43 | Q | V | | | | |
| 7+10 | 0.1932 | 0.44 | Q | V | | | | |
| 7+15 | 0.1962 | 0.44 | Q | V | | | | |
| 7+20 | 0.1993 | 0.44 | Q | V | | | | |
| 7+25 | 0.2023 | 0.45 | Q | V | | | | |
| 7+30 | 0.2054 | 0.45 | Q | V | | | | |
| 7+35 | 0.2085 | 0.45 | Q | V | | | | |
| 7+40 | 0.2117 | 0.45 | Q | V | | | | |
| 7+45 | 0.2148 | 0.46 | Q | V | | | | |
| 7+50 | 0.2180 | 0.46 | Q | V | | | | |
| 7+55 | 0.2212 | 0.46 | Q | V | | | | |
| 8+ 0 | 0.2244 | 0.47 | Q | V | | | | |
| 8+ 5 | 0.2277 | 0.47 | Q | V | | | | |
| 8+10 | 0.2309 | 0.47 | Q | V | | | | |
| 8+15 | 0.2342 | 0.48 | Q | V | | | | |
| 8+20 | 0.2375 | 0.48 | Q | V | | | | |
| 8+25 | 0.2409 | 0.49 | Q | V | | | | |
| 8+30 | 0.2443 | 0.49 | Q | V | | | | |
| 8+35 | 0.2477 | 0.49 | Q | V | | | | |
| 8+40 | 0.2511 | 0.50 | Q | V | | | | |
| 8+45 | 0.2545 | 0.50 | Q | V | | | | |
| 8+50 | 0.2580 | 0.50 | Q | V | | | | |
| 8+55 | 0.2615 | 0.51 | Q | V | | | | |
| 9+ 0 | 0.2650 | 0.51 | Q | V | | | | |
| 9+ 5 | 0.2686 | 0.52 | Q | V | | | | |
| 9+10 | 0.2722 | 0.52 | Q | V | | | | |
| 9+15 | 0.2758 | 0.53 | Q | V | | | | |
| 9+20 | 0.2794 | 0.53 | Q | V | | | | |
| 9+25 | 0.2831 | 0.53 | Q | V | | | | |
| 9+30 | 0.2868 | 0.54 | Q | V | | | | |
| 9+35 | 0.2906 | 0.54 | Q | V | | | | |
| 9+40 | 0.2944 | 0.55 | Q | V | | | | |
| 9+45 | 0.2982 | 0.55 | Q | V | | | | |
| 9+50 | 0.3020 | 0.56 | Q | V | | | | |
| 9+55 | 0.3059 | 0.56 | Q | V | | | | |
| 10+ 0 | 0.3098 | 0.57 | Q | V | | | | |
| 10+ 5 | 0.3138 | 0.57 | Q | V | | | | |
| 10+10 | 0.3178 | 0.58 | Q | V | | | | |
| 10+15 | 0.3218 | 0.59 | Q | V | | | | |
| 10+20 | 0.3259 | 0.59 | Q | V | | | | |
| 10+25 | 0.3300 | 0.60 | Q | V | | | | |
| 10+30 | 0.3342 | 0.60 | Q | V | | | | |
| 10+35 | 0.3384 | 0.61 | Q | V | | | | |
| 10+40 | 0.3426 | 0.62 | Q | V | | | | |
| 10+45 | 0.3469 | 0.62 | Q | V | | | | |
| 10+50 | 0.3512 | 0.63 | Q | V | | | | |
| 10+55 | 0.3556 | 0.64 | Q | V | | | | |
| 11+ 0 | 0.3600 | 0.64 | Q | V | | | | |
| 11+ 5 | 0.3645 | 0.65 | Q | V | | | | |
| 11+10 | 0.3690 | 0.66 | Q | V | | | | |
| 11+15 | 0.3736 | 0.67 | Q | V | | | | |
| 11+20 | 0.3783 | 0.67 | Q | V | | | | |
| 11+25 | 0.3829 | 0.68 | Q | V | | | | |
| 11+30 | 0.3877 | 0.69 | Q | V | | | | |
| 11+35 | 0.3925 | 0.70 | Q | V | | | | |
| 11+40 | 0.3974 | 0.71 | Q | V | | | | |
| 11+45 | 0.4023 | 0.72 | Q | V | | | | |
| 11+50 | 0.4073 | 0.72 | Q | V | | | | |
| 11+55 | 0.4123 | 0.73 | Q | V | | | | |

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12+ 0       0.4175      0.74  Q     V   |          |          |          |
12+ 5       0.4226      0.75  |Q    V   |          |          |          |
12+10       0.4278      0.75  |Q     V  |          |          |          |
12+15       0.4329      0.74  Q      V  |          |          |          |
12+20       0.4377      0.70  Q      V  |          |          |          |
12+25       0.4423      0.66  Q      V  |          |          |          |
12+30       0.4467      0.63  Q      V  |          |          |          |
12+35       0.4509      0.62  Q      V  |          |          |          |
12+40       0.4551      0.61  Q      V  |          |          |          |
12+45       0.4593      0.61  Q      V  |          |          |          |
12+50       0.4635      0.61  Q      V  |          |          |          |
12+55       0.4677      0.61  Q      V  |          |          |          |
13+ 0       0.4719      0.61  Q      V  |          |          |          |
13+ 5       0.4762      0.62  Q      V  |          |          |          |
13+10       0.4805      0.62  Q      V  |          |          |          |
13+15       0.4848      0.63  Q      V  |          |          |          |
13+20       0.4892      0.64  Q       V |          |          |          |
13+25       0.4937      0.65  Q       V |          |          |          |
13+30       0.4983      0.66  Q       V |          |          |          |
13+35       0.5029      0.67  Q       V |          |          |          |
13+40       0.5076      0.69  Q       V |          |          |          |
13+45       0.5124      0.70  Q       V |          |          |          |
13+50       0.5174      0.72  Q       V |          |          |          |
13+55       0.5224      0.73  Q       V |          |          |          |
14+ 0       0.5276      0.75  |Q      V |          |          |          |
14+ 5       0.5329      0.77  |Q      V |          |          |          |
14+10       0.5384      0.79  |Q      V |          |          |          |
14+15       0.5440      0.81  |Q      V |          |          |          |
14+20       0.5498      0.84  |Q       V|          |          |          |
14+25       0.5557      0.87  |Q       V|          |          |          |
14+30       0.5619      0.90  |Q       V|          |          |          |
14+35       0.5683      0.93  |Q       V|          |          |          |
14+40       0.5749      0.96  |Q       V|          |          |          |
14+45       0.5818      1.00  |Q       V|          |          |          |
14+50       0.5890      1.04  |Q       V|          |          |          |
14+55       0.5964      1.08  |Q       V|          |          |          |
15+ 0       0.6042      1.13  |Q       V|          |          |          |
15+ 5       0.6124      1.19  |Q        V          |          |          |
15+10       0.6210      1.25  |Q        V          |          |          |
15+15       0.6301      1.32  |Q        V          |          |          |
15+20       0.6398      1.40  |Q        V          |          |          |
15+25       0.6502      1.52  | Q       V          |          |          |
15+30       0.6619      1.70  | Q       V          |          |          |
15+35       0.6756      1.98  | Q       |V         |          |          |
15+40       0.6926      2.47  |  Q      |V         |          |          |
15+45       0.7138      3.08  |   Q     |V         |          |          |
15+50       0.7393      3.70  |   Q     | V        |          |          |
15+55       0.7698      4.42  |    Q    | V        |          |          |
16+ 0       0.8071      5.43  |      Q  |  V       |          |          |
16+ 5       0.8593      7.58  |         Q   V      |          |          |
16+10       0.9372     11.31  |         |    Q     |          |          |
16+15       1.0460     15.80  |         |      V   |Q         |          |
16+20       1.2062     23.25  |         |        V |          |Q         |
16+25       1.3749     24.50  |         |          | V        | Q        |
16+30       1.5043     18.79  |         |          |   VQ     |          |
16+35       1.6023     14.23  |         |       Q  |     V    |          |
16+40       1.6792     11.16  |         |   Q      |      V   |          |
16+45       1.7423      9.17  |         | Q        |       V  |          |
16+50       1.7949      7.63  |         Q          |        V |          |
```

```
16+55       1.8397      6.52  |       Q |          |          V         |
17+ 0       1.8786      5.64  |      Q  |          |          V         |
17+ 5       1.9128      4.97  |     Q   |          |          |V        |
17+10       1.9437      4.48  |    Q    |          |          |V        |
17+15       1.9711      3.99  |    Q    |          |          | V       |
17+20       1.9953      3.50  |   Q     |          |          | V       |
17+25       2.0168      3.13  |   Q     |          |          |  V      |
17+30       2.0367      2.89  |  Q      |          |          |  V      |
17+35       2.0548      2.63  |  Q      |          |          |  V      |
17+40       2.0715      2.43  |  Q      |          |          |   V     |
17+45       2.0867      2.20  | Q       |          |          |   V     |
17+50       2.1005      2.01  | Q       |          |          |   V     |
17+55       2.1134      1.88  | Q       |          |          |   V     |
18+ 0       2.1251      1.69  | Q       |          |          |   V     |
18+ 5       2.1360      1.59  | Q       |          |          |    V    |
18+10       2.1460      1.45  |Q        |          |          |    V    |
18+15       2.1552      1.33  |Q        |          |          |    V    |
18+20       2.1640      1.29  |Q        |          |          |    V    |
18+25       2.1722      1.19  |Q        |          |          |    V    |
18+30       2.1802      1.16  |Q        |          |          |    V    |
18+35       2.1883      1.17  |Q        |          |          |    V    |
18+40       2.1963      1.17  |Q        |          |          |     V   |
18+45       2.2042      1.14  |Q        |          |          |     V   |
18+50       2.2119      1.11  |Q        |          |          |     V   |
18+55       2.2193      1.08  |Q        |          |          |     V   |
19+ 0       2.2260      0.98  |Q        |          |          |     V   |
19+ 5       2.2322      0.90  |Q        |          |          |     V   |
19+10       2.2381      0.86  |Q        |          |          |     V   |
19+15       2.2434      0.77  |Q        |          |          |     V   |
19+20       2.2481      0.69  Q         |          |          |     V   |
19+25       2.2527      0.66  Q         |          |          |      V  |
19+30       2.2571      0.64  Q         |          |          |      V  |
19+35       2.2615      0.63  Q         |          |          |      V  |
19+40       2.2657      0.62  Q         |          |          |      V  |
19+45       2.2699      0.60  Q         |          |          |      V  |
19+50       2.2739      0.59  Q         |          |          |      V  |
19+55       2.2780      0.58  Q         |          |          |      V  |
20+ 0       2.2819      0.57  Q         |          |          |      V  |
20+ 5       2.2858      0.56  Q         |          |          |      V  |
20+10       2.2896      0.55  Q         |          |          |      V  |
20+15       2.2933      0.54  Q         |          |          |      V  |
20+20       2.2970      0.53  Q         |          |          |      V  |
20+25       2.3006      0.53  Q         |          |          |      V  |
20+30       2.3042      0.52  Q         |          |          |      V  |
20+35       2.3077      0.51  Q         |          |          |      V  |
20+40       2.3112      0.50  Q         |          |          |      V  |
20+45       2.3146      0.49  Q         |          |          |       V |
20+50       2.3179      0.49  Q         |          |          |       V |
20+55       2.3212      0.48  Q         |          |          |       V |
21+ 0       2.3245      0.47  Q         |          |          |       V |
21+ 5       2.3277      0.47  Q         |          |          |       V |
21+10       2.3309      0.46  Q         |          |          |       V |
21+15       2.3340      0.45  Q         |          |          |       V |
21+20       2.3371      0.45  Q         |          |          |       V |
21+25       2.3402      0.44  Q         |          |          |       V |
21+30       2.3432      0.44  Q         |          |          |       V |
21+35       2.3461      0.43  Q         |          |          |       V |
21+40       2.3491      0.43  Q         |          |          |       V |
21+45       2.3520      0.42  Q         |          |          |       V |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+50 | 2.3548 | 0.41 | Q | \| | \| | \| | V \| |
| 21+55 | 2.3576 | 0.41 | Q | \| | \| | \| | V \| |
| 22+ 0 | 2.3604 | 0.40 | Q | \| | \| | \| | V \| |
| 22+ 5 | 2.3632 | 0.40 | Q | \| | \| | \| | V \| |
| 22+10 | 2.3659 | 0.40 | Q | \| | \| | \| | V \| |
| 22+15 | 2.3686 | 0.39 | Q | \| | \| | \| | V \| |
| 22+20 | 2.3713 | 0.39 | Q | \| | \| | \| | V \| |
| 22+25 | 2.3739 | 0.38 | Q | \| | \| | \| | V \| |
| 22+30 | 2.3765 | 0.38 | Q | \| | \| | \| | V\| |
| 22+35 | 2.3791 | 0.37 | Q | \| | \| | \| | V\| |
| 22+40 | 2.3816 | 0.37 | Q | \| | \| | \| | V\| |
| 22+45 | 2.3842 | 0.37 | Q | \| | \| | \| | V\| |
| 22+50 | 2.3866 | 0.36 | Q | \| | \| | \| | V\| |
| 22+55 | 2.3891 | 0.36 | Q | \| | \| | \| | V\| |
| 23+ 0 | 2.3916 | 0.36 | Q | \| | \| | \| | V\| |
| 23+ 5 | 2.3940 | 0.35 | Q | \| | \| | \| | V\| |
| 23+10 | 2.3964 | 0.35 | Q | \| | \| | \| | V\| |
| 23+15 | 2.3988 | 0.34 | Q | \| | \| | \| | V\| |
| 23+20 | 2.4011 | 0.34 | Q | \| | \| | \| | V\| |
| 23+25 | 2.4034 | 0.34 | Q | \| | \| | \| | V\| |
| 23+30 | 2.4058 | 0.34 | Q | \| | \| | \| | V\| |
| 23+35 | 2.4080 | 0.33 | Q | \| | \| | \| | V\| |
| 23+40 | 2.4103 | 0.33 | Q | \| | \| | \| | V\| |
| 23+45 | 2.4126 | 0.33 | Q | \| | \| | \| | V\| |
| 23+50 | 2.4148 | 0.32 | Q | \| | \| | \| | V\| |
| 23+55 | 2.4170 | 0.32 | Q | \| | \| | \| | V\| |
| 24+ 0 | 2.4192 | 0.32 | Q | \| | \| | \| | V\| |
| 24+ 5 | 2.4213 | 0.31 | Q | \| | \| | \| | V\| |
| 24+10 | 2.4234 | 0.30 | Q | \| | \| | \| | V\| |
| 24+15 | 2.4253 | 0.28 | Q | \| | \| | \| | V\| |
| 24+20 | 2.4269 | 0.23 | Q | \| | \| | \| | V\| |
| 24+25 | 2.4281 | 0.18 | Q | \| | \| | \| | V\| |
| 24+30 | 2.4291 | 0.14 | Q | \| | \| | \| | V\| |
| 24+35 | 2.4299 | 0.12 | Q | \| | \| | \| | V\| |
| 24+40 | 2.4306 | 0.10 | Q | \| | \| | \| | V\| |
| 24+45 | 2.4312 | 0.09 | Q | \| | \| | \| | V\| |
| 24+50 | 2.4317 | 0.07 | Q | \| | \| | \| | V\| |
| 24+55 | 2.4321 | 0.06 | Q | \| | \| | \| | V\| |
| 25+ 0 | 2.4325 | 0.06 | Q | \| | \| | \| | V\| |
| 25+ 5 | 2.4328 | 0.05 | Q | \| | \| | \| | V\| |
| 25+10 | 2.4331 | 0.04 | Q | \| | \| | \| | V\| |
| 25+15 | 2.4334 | 0.04 | Q | \| | \| | \| | V\| |
| 25+20 | 2.4336 | 0.03 | Q | \| | \| | \| | V\| |
| 25+25 | 2.4338 | 0.03 | Q | \| | \| | \| | V\| |
| 25+30 | 2.4340 | 0.03 | Q | \| | \| | \| | V\| |
| 25+35 | 2.4342 | 0.02 | Q | \| | \| | \| | V\| |
| 25+40 | 2.4343 | 0.02 | Q | \| | \| | \| | V\| |
| 25+45 | 2.4344 | 0.02 | Q | \| | \| | \| | V\| |
| 25+50 | 2.4345 | 0.02 | Q | \| | \| | \| | V\| |
| 25+55 | 2.4346 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 0 | 2.4347 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 5 | 2.4348 | 0.01 | Q | \| | \| | \| | V\| |
| 26+10 | 2.4348 | 0.01 | Q | \| | \| | \| | V\| |
| 26+15 | 2.4349 | 0.01 | Q | \| | \| | \| | V\| |
| 26+20 | 2.4349 | 0.01 | Q | \| | \| | \| | V\| |
| 26+25 | 2.4350 | 0.01 | Q | \| | \| | \| | V\| |
| 26+30 | 2.4350 | 0.01 | Q | \| | \| | \| | V\| |
| 26+35 | 2.4350 | 0.00 | Q | \| | \| | \| | V\| |
| 26+40 | 2.4351 | 0.00 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+45 | 2.4351 | 0.00 | Q | \| | \| | \| | V\| |
| 26+50 | 2.4351 | 0.00 | Q | \| | \| | \| | V\| |
| 26+55 | 2.4351 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 0 | 2.4351 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 5 | 2.4351 | 0.00 | Q | \| | \| | \| | V\| |
| 27+10 | 2.4351 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 39
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 277.99 | 1 | 1.40 |
| Rainfall data for year 100 | | |
| 277.99 | 6 | 1.86 |
| Rainfall data for year 100 | | |
| 277.99 | 24 | 2.65 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 83.2 | 95.9 | 277.99 | 1.000 | 0.080 | 0.929 | 0.075 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.075

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 258.25 | 0.929 | 83.2 | 95.9 | 0.43 | 0.830 |
| 19.74 | 0.071 | 98.0 | 98.0 | 0.20 | 0.913 |

Area-averaged catchment yield fraction, Y = 0.836
Area-averaged low loss fraction, Yb = 0.164
User entry of time of concentration = 1.450 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 277.99(Ac.)
Catchment Lag time = 1.160 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 7.1839
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.075(In/Hr)
Average low loss rate fraction (Yb) = 0.164 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.664(In)
Computed peak 30-minute rainfall = 1.137(In)
Specified peak 1-hour rainfall = 1.400(In)
Computed peak 3-hour rainfall = 1.666(In)
Specified peak 6-hour rainfall = 1.860(In)
Specified peak 24-hour rainfall = 2.650(In)

Rainfall depth area reduction factors:
Using a total area of 277.99(Ac.) (Ref: fig. E-4)

5-minute factor = 0.987 Adjusted rainfall = 0.656(In)
30-minute factor = 0.987 Adjusted rainfall = 1.122(In)
1-hour factor = 0.987 Adjusted rainfall = 1.382(In)
3-hour factor = 0.998 Adjusted rainfall = 1.664(In)
6-hour factor = 0.999 Adjusted rainfall = 1.858(In)
24-hour factor = 1.000 Adjusted rainfall = 2.649(In)
---------------------------------------------------------------------

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 3361.94 (CFS)) | |
| 1 | 0.316 | 10.627 |
| 2 | 0.968 | 21.907 |
| 3 | 2.017 | 35.285 |
| 4 | 3.302 | 43.187 |
| 5 | 5.017 | 57.671 |
| 6 | 6.991 | 66.362 |
| 7 | 9.391 | 80.695 |
| 8 | 12.983 | 120.739 |
| 9 | 17.705 | 158.745 |
| 10 | 24.385 | 224.593 |
| 11 | 31.552 | 240.953 |
| 12 | 37.818 | 210.668 |
| 13 | 43.446 | 189.201 |

| | | |
|---|---|---|
| 14 | 48.066 | 155.324 |
| 15 | 52.167 | 137.855 |
| 16 | 55.846 | 123.691 |
| 17 | 58.817 | 99.897 |
| 18 | 61.483 | 89.613 |
| 19 | 63.766 | 76.745 |
| 20 | 65.879 | 71.067 |
| 21 | 67.778 | 63.833 |
| 22 | 69.569 | 60.209 |
| 23 | 71.272 | 57.267 |
| 24 | 72.764 | 50.161 |
| 25 | 74.166 | 47.117 |
| 26 | 75.441 | 42.883 |
| 27 | 76.682 | 41.725 |
| 28 | 77.886 | 40.474 |
| 29 | 78.926 | 34.948 |
| 30 | 79.874 | 31.880 |
| 31 | 80.822 | 31.880 |
| 32 | 81.731 | 30.540 |
| 33 | 82.516 | 26.381 |
| 34 | 83.291 | 26.084 |
| 35 | 84.066 | 26.026 |
| 36 | 84.783 | 24.113 |
| 37 | 85.472 | 23.186 |
| 38 | 86.162 | 23.186 |
| 39 | 86.822 | 22.184 |
| 40 | 87.401 | 19.473 |
| 41 | 87.976 | 19.322 |
| 42 | 88.546 | 19.182 |
| 43 | 89.019 | 15.886 |
| 44 | 89.450 | 14.491 |
| 45 | 89.881 | 14.491 |
| 46 | 90.304 | 14.212 |
| 47 | 90.707 | 13.553 |
| 48 | 91.109 | 13.525 |
| 49 | 91.509 | 13.449 |
| 50 | 91.869 | 12.094 |
| 51 | 92.214 | 11.593 |
| 52 | 92.559 | 11.593 |
| 53 | 92.894 | 11.284 |
| 54 | 93.211 | 10.646 |
| 55 | 93.527 | 10.627 |
| 56 | 93.839 | 10.503 |
| 57 | 94.100 | 8.770 |
| 58 | 94.345 | 8.212 |
| 59 | 94.589 | 8.212 |
| 60 | 94.833 | 8.212 |
| 61 | 95.077 | 8.212 |
| 62 | 95.322 | 8.212 |
| 63 | 95.562 | 8.086 |
| 64 | 95.761 | 6.675 |
| 65 | 95.947 | 6.279 |
| 66 | 96.134 | 6.279 |
| 67 | 96.321 | 6.279 |
| 68 | 96.508 | 6.279 |
| 69 | 96.695 | 6.279 |
| 70 | 96.877 | 6.125 |
| 71 | 97.016 | 4.695 |
| 72 | 97.146 | 4.347 |

| | | |
|---|---|---|
| 73 | 97.275 | 4.347 |
| 74 | 97.404 | 4.347 |
| 75 | 97.534 | 4.347 |
| 76 | 97.663 | 4.347 |
| 77 | 97.787 | 4.160 |
| 78 | 97.868 | 2.718 |
| 79 | 97.939 | 2.415 |
| 80 | 98.011 | 2.415 |
| 81 | 98.083 | 2.415 |
| 82 | 98.155 | 2.415 |
| 83 | 98.227 | 2.415 |
| 84 | 98.300 | 2.471 |
| 85 | 98.384 | 2.833 |
| 86 | 98.471 | 2.898 |
| 87 | 98.557 | 2.898 |
| 88 | 98.643 | 2.898 |
| 89 | 98.729 | 2.898 |
| 90 | 98.816 | 2.898 |
| 91 | 98.902 | 2.898 |
| 92 | 98.988 | 2.898 |
| 93 | 99.074 | 2.898 |
| 94 | 99.160 | 2.898 |
| 95 | 99.247 | 2.898 |
| 96 | 99.333 | 2.898 |
| 97 | 99.419 | 2.898 |
| 98 | 99.499 | 2.680 |
| 99 | 99.548 | 1.644 |
| 100 | 99.592 | 1.509 |
| 101 | 99.637 | 1.509 |
| 102 | 99.682 | 1.509 |
| 103 | 99.727 | 1.509 |
| 104 | 99.772 | 1.509 |
| 105 | 99.817 | 1.509 |
| 106 | 99.862 | 1.509 |
| 107 | 99.907 | 1.509 |
| 108 | 99.952 | 1.509 |
| 109 | 100.000 | 0.755 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6557 | 0.6557 |
| 2 | 0.8072 | 0.1516 |
| 3 | 0.9116 | 0.1044 |
| 4 | 0.9938 | 0.0822 |
| 5 | 1.0626 | 0.0688 |
| 6 | 1.1223 | 0.0597 |
| 7 | 1.1755 | 0.0531 |
| 8 | 1.2235 | 0.0480 |
| 9 | 1.2675 | 0.0440 |
| 10 | 1.3082 | 0.0407 |
| 11 | 1.3462 | 0.0379 |
| 12 | 1.3818 | 0.0356 |
| 13 | 1.4006 | 0.0188 |
| 14 | 1.4182 | 0.0177 |
| 15 | 1.4349 | 0.0166 |
| 16 | 1.4506 | 0.0157 |
| 17 | 1.4655 | 0.0149 |
| 18 | 1.4798 | 0.0142 |
| 19 | 1.4933 | 0.0136 |

| | | |
|---|---|---|
| 20 | 1.5063 | 0.0130 |
| 21 | 1.5188 | 0.0125 |
| 22 | 1.5308 | 0.0120 |
| 23 | 1.5423 | 0.0115 |
| 24 | 1.5535 | 0.0111 |
| 25 | 1.5642 | 0.0108 |
| 26 | 1.5746 | 0.0104 |
| 27 | 1.5847 | 0.0101 |
| 28 | 1.5945 | 0.0098 |
| 29 | 1.6040 | 0.0095 |
| 30 | 1.6132 | 0.0092 |
| 31 | 1.6221 | 0.0090 |
| 32 | 1.6309 | 0.0087 |
| 33 | 1.6394 | 0.0085 |
| 34 | 1.6477 | 0.0083 |
| 35 | 1.6558 | 0.0081 |
| 36 | 1.6637 | 0.0079 |
| 37 | 1.6710 | 0.0073 |
| 38 | 1.6781 | 0.0071 |
| 39 | 1.6851 | 0.0070 |
| 40 | 1.6919 | 0.0068 |
| 41 | 1.6986 | 0.0067 |
| 42 | 1.7051 | 0.0065 |
| 43 | 1.7115 | 0.0064 |
| 44 | 1.7178 | 0.0063 |
| 45 | 1.7240 | 0.0062 |
| 46 | 1.7301 | 0.0061 |
| 47 | 1.7360 | 0.0060 |
| 48 | 1.7419 | 0.0058 |
| 49 | 1.7476 | 0.0057 |
| 50 | 1.7533 | 0.0056 |
| 51 | 1.7588 | 0.0056 |
| 52 | 1.7643 | 0.0055 |
| 53 | 1.7697 | 0.0054 |
| 54 | 1.7749 | 0.0053 |
| 55 | 1.7801 | 0.0052 |
| 56 | 1.7853 | 0.0051 |
| 57 | 1.7903 | 0.0051 |
| 58 | 1.7953 | 0.0050 |
| 59 | 1.8002 | 0.0049 |
| 60 | 1.8051 | 0.0048 |
| 61 | 1.8098 | 0.0048 |
| 62 | 1.8145 | 0.0047 |
| 63 | 1.8192 | 0.0046 |
| 64 | 1.8238 | 0.0046 |
| 65 | 1.8283 | 0.0045 |
| 66 | 1.8327 | 0.0045 |
| 67 | 1.8371 | 0.0044 |
| 68 | 1.8415 | 0.0044 |
| 69 | 1.8458 | 0.0043 |
| 70 | 1.8500 | 0.0042 |
| 71 | 1.8542 | 0.0042 |
| 72 | 1.8584 | 0.0041 |
| 73 | 1.8650 | 0.0066 |
| 74 | 1.8715 | 0.0065 |
| 75 | 1.8779 | 0.0064 |
| 76 | 1.8843 | 0.0064 |
| 77 | 1.8906 | 0.0063 |
| 78 | 1.8968 | 0.0062 |

| | | |
|---|---|---|
| 79 | 1.9030 | 0.0062 |
| 80 | 1.9091 | 0.0061 |
| 81 | 1.9152 | 0.0061 |
| 82 | 1.9212 | 0.0060 |
| 83 | 1.9272 | 0.0060 |
| 84 | 1.9331 | 0.0059 |
| 85 | 1.9390 | 0.0059 |
| 86 | 1.9448 | 0.0058 |
| 87 | 1.9505 | 0.0058 |
| 88 | 1.9562 | 0.0057 |
| 89 | 1.9619 | 0.0057 |
| 90 | 1.9675 | 0.0056 |
| 91 | 1.9731 | 0.0056 |
| 92 | 1.9786 | 0.0055 |
| 93 | 1.9841 | 0.0055 |
| 94 | 1.9895 | 0.0054 |
| 95 | 1.9949 | 0.0054 |
| 96 | 2.0003 | 0.0053 |
| 97 | 2.0056 | 0.0053 |
| 98 | 2.0108 | 0.0053 |
| 99 | 2.0161 | 0.0052 |
| 100 | 2.0212 | 0.0052 |
| 101 | 2.0264 | 0.0051 |
| 102 | 2.0315 | 0.0051 |
| 103 | 2.0366 | 0.0051 |
| 104 | 2.0416 | 0.0050 |
| 105 | 2.0466 | 0.0050 |
| 106 | 2.0516 | 0.0050 |
| 107 | 2.0565 | 0.0049 |
| 108 | 2.0614 | 0.0049 |
| 109 | 2.0663 | 0.0049 |
| 110 | 2.0711 | 0.0048 |
| 111 | 2.0759 | 0.0048 |
| 112 | 2.0807 | 0.0048 |
| 113 | 2.0854 | 0.0047 |
| 114 | 2.0901 | 0.0047 |
| 115 | 2.0948 | 0.0047 |
| 116 | 2.0994 | 0.0046 |
| 117 | 2.1040 | 0.0046 |
| 118 | 2.1086 | 0.0046 |
| 119 | 2.1132 | 0.0046 |
| 120 | 2.1177 | 0.0045 |
| 121 | 2.1222 | 0.0045 |
| 122 | 2.1267 | 0.0045 |
| 123 | 2.1311 | 0.0044 |
| 124 | 2.1355 | 0.0044 |
| 125 | 2.1399 | 0.0044 |
| 126 | 2.1443 | 0.0044 |
| 127 | 2.1486 | 0.0043 |
| 128 | 2.1530 | 0.0043 |
| 129 | 2.1572 | 0.0043 |
| 130 | 2.1615 | 0.0043 |
| 131 | 2.1657 | 0.0042 |
| 132 | 2.1700 | 0.0042 |
| 133 | 2.1742 | 0.0042 |
| 134 | 2.1783 | 0.0042 |
| 135 | 2.1825 | 0.0041 |
| 136 | 2.1866 | 0.0041 |
| 137 | 2.1907 | 0.0041 |

| | | |
|---|---|---|
| 138 | 2.1948 | 0.0041 |
| 139 | 2.1988 | 0.0041 |
| 140 | 2.2029 | 0.0040 |
| 141 | 2.2069 | 0.0040 |
| 142 | 2.2109 | 0.0040 |
| 143 | 2.2148 | 0.0040 |
| 144 | 2.2188 | 0.0040 |
| 145 | 2.2227 | 0.0039 |
| 146 | 2.2266 | 0.0039 |
| 147 | 2.2305 | 0.0039 |
| 148 | 2.2344 | 0.0039 |
| 149 | 2.2382 | 0.0039 |
| 150 | 2.2421 | 0.0038 |
| 151 | 2.2459 | 0.0038 |
| 152 | 2.2497 | 0.0038 |
| 153 | 2.2535 | 0.0038 |
| 154 | 2.2572 | 0.0038 |
| 155 | 2.2609 | 0.0037 |
| 156 | 2.2647 | 0.0037 |
| 157 | 2.2684 | 0.0037 |
| 158 | 2.2721 | 0.0037 |
| 159 | 2.2757 | 0.0037 |
| 160 | 2.2794 | 0.0037 |
| 161 | 2.2830 | 0.0036 |
| 162 | 2.2866 | 0.0036 |
| 163 | 2.2902 | 0.0036 |
| 164 | 2.2938 | 0.0036 |
| 165 | 2.2974 | 0.0036 |
| 166 | 2.3009 | 0.0036 |
| 167 | 2.3045 | 0.0035 |
| 168 | 2.3080 | 0.0035 |
| 169 | 2.3115 | 0.0035 |
| 170 | 2.3150 | 0.0035 |
| 171 | 2.3185 | 0.0035 |
| 172 | 2.3219 | 0.0035 |
| 173 | 2.3254 | 0.0034 |
| 174 | 2.3288 | 0.0034 |
| 175 | 2.3322 | 0.0034 |
| 176 | 2.3356 | 0.0034 |
| 177 | 2.3390 | 0.0034 |
| 178 | 2.3424 | 0.0034 |
| 179 | 2.3457 | 0.0034 |
| 180 | 2.3491 | 0.0033 |
| 181 | 2.3524 | 0.0033 |
| 182 | 2.3557 | 0.0033 |
| 183 | 2.3590 | 0.0033 |
| 184 | 2.3623 | 0.0033 |
| 185 | 2.3656 | 0.0033 |
| 186 | 2.3689 | 0.0033 |
| 187 | 2.3721 | 0.0033 |
| 188 | 2.3753 | 0.0032 |
| 189 | 2.3786 | 0.0032 |
| 190 | 2.3818 | 0.0032 |
| 191 | 2.3850 | 0.0032 |
| 192 | 2.3882 | 0.0032 |
| 193 | 2.3913 | 0.0032 |
| 194 | 2.3945 | 0.0032 |
| 195 | 2.3977 | 0.0032 |
| 196 | 2.4008 | 0.0031 |

| | | |
|---|---|---|
| 197 | 2.4039 | 0.0031 |
| 198 | 2.4070 | 0.0031 |
| 199 | 2.4101 | 0.0031 |
| 200 | 2.4132 | 0.0031 |
| 201 | 2.4163 | 0.0031 |
| 202 | 2.4194 | 0.0031 |
| 203 | 2.4224 | 0.0031 |
| 204 | 2.4255 | 0.0030 |
| 205 | 2.4285 | 0.0030 |
| 206 | 2.4315 | 0.0030 |
| 207 | 2.4346 | 0.0030 |
| 208 | 2.4376 | 0.0030 |
| 209 | 2.4405 | 0.0030 |
| 210 | 2.4435 | 0.0030 |
| 211 | 2.4465 | 0.0030 |
| 212 | 2.4495 | 0.0030 |
| 213 | 2.4524 | 0.0029 |
| 214 | 2.4553 | 0.0029 |
| 215 | 2.4583 | 0.0029 |
| 216 | 2.4612 | 0.0029 |
| 217 | 2.4641 | 0.0029 |
| 218 | 2.4670 | 0.0029 |
| 219 | 2.4699 | 0.0029 |
| 220 | 2.4728 | 0.0029 |
| 221 | 2.4756 | 0.0029 |
| 222 | 2.4785 | 0.0029 |
| 223 | 2.4813 | 0.0029 |
| 224 | 2.4842 | 0.0028 |
| 225 | 2.4870 | 0.0028 |
| 226 | 2.4898 | 0.0028 |
| 227 | 2.4927 | 0.0028 |
| 228 | 2.4955 | 0.0028 |
| 229 | 2.4983 | 0.0028 |
| 230 | 2.5010 | 0.0028 |
| 231 | 2.5038 | 0.0028 |
| 232 | 2.5066 | 0.0028 |
| 233 | 2.5093 | 0.0028 |
| 234 | 2.5121 | 0.0027 |
| 235 | 2.5148 | 0.0027 |
| 236 | 2.5176 | 0.0027 |
| 237 | 2.5203 | 0.0027 |
| 238 | 2.5230 | 0.0027 |
| 239 | 2.5257 | 0.0027 |
| 240 | 2.5284 | 0.0027 |
| 241 | 2.5311 | 0.0027 |
| 242 | 2.5338 | 0.0027 |
| 243 | 2.5364 | 0.0027 |
| 244 | 2.5391 | 0.0027 |
| 245 | 2.5418 | 0.0027 |
| 246 | 2.5444 | 0.0026 |
| 247 | 2.5471 | 0.0026 |
| 248 | 2.5497 | 0.0026 |
| 249 | 2.5523 | 0.0026 |
| 250 | 2.5549 | 0.0026 |
| 251 | 2.5575 | 0.0026 |
| 252 | 2.5601 | 0.0026 |
| 253 | 2.5627 | 0.0026 |
| 254 | 2.5653 | 0.0026 |
| 255 | 2.5679 | 0.0026 |

| | | |
|---|---|---|
| 256 | 2.5705 | 0.0026 |
| 257 | 2.5730 | 0.0026 |
| 258 | 2.5756 | 0.0026 |
| 259 | 2.5781 | 0.0025 |
| 260 | 2.5807 | 0.0025 |
| 261 | 2.5832 | 0.0025 |
| 262 | 2.5858 | 0.0025 |
| 263 | 2.5883 | 0.0025 |
| 264 | 2.5908 | 0.0025 |
| 265 | 2.5933 | 0.0025 |
| 266 | 2.5958 | 0.0025 |
| 267 | 2.5983 | 0.0025 |
| 268 | 2.6008 | 0.0025 |
| 269 | 2.6032 | 0.0025 |
| 270 | 2.6057 | 0.0025 |
| 271 | 2.6082 | 0.0025 |
| 272 | 2.6106 | 0.0025 |
| 273 | 2.6131 | 0.0025 |
| 274 | 2.6155 | 0.0024 |
| 275 | 2.6180 | 0.0024 |
| 276 | 2.6204 | 0.0024 |
| 277 | 2.6228 | 0.0024 |
| 278 | 2.6252 | 0.0024 |
| 279 | 2.6277 | 0.0024 |
| 280 | 2.6301 | 0.0024 |
| 281 | 2.6325 | 0.0024 |
| 282 | 2.6349 | 0.0024 |
| 283 | 2.6372 | 0.0024 |
| 284 | 2.6396 | 0.0024 |
| 285 | 2.6420 | 0.0024 |
| 286 | 2.6444 | 0.0024 |
| 287 | 2.6467 | 0.0024 |
| 288 | 2.6491 | 0.0024 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0024 | 0.0004 | 0.0020 |
| 2 | 0.0024 | 0.0004 | 0.0020 |
| 3 | 0.0024 | 0.0004 | 0.0020 |
| 4 | 0.0024 | 0.0004 | 0.0020 |
| 5 | 0.0024 | 0.0004 | 0.0020 |
| 6 | 0.0024 | 0.0004 | 0.0020 |
| 7 | 0.0024 | 0.0004 | 0.0020 |
| 8 | 0.0024 | 0.0004 | 0.0020 |
| 9 | 0.0024 | 0.0004 | 0.0020 |
| 10 | 0.0024 | 0.0004 | 0.0020 |
| 11 | 0.0025 | 0.0004 | 0.0020 |
| 12 | 0.0025 | 0.0004 | 0.0021 |
| 13 | 0.0025 | 0.0004 | 0.0021 |
| 14 | 0.0025 | 0.0004 | 0.0021 |
| 15 | 0.0025 | 0.0004 | 0.0021 |
| 16 | 0.0025 | 0.0004 | 0.0021 |
| 17 | 0.0025 | 0.0004 | 0.0021 |
| 18 | 0.0025 | 0.0004 | 0.0021 |
| 19 | 0.0025 | 0.0004 | 0.0021 |
| 20 | 0.0025 | 0.0004 | 0.0021 |
| 21 | 0.0026 | 0.0004 | 0.0021 |

| | | | |
|---|---|---|---|
| 22 | 0.0026 | 0.0004 | 0.0021 |
| 23 | 0.0026 | 0.0004 | 0.0022 |
| 24 | 0.0026 | 0.0004 | 0.0022 |
| 25 | 0.0026 | 0.0004 | 0.0022 |
| 26 | 0.0026 | 0.0004 | 0.0022 |
| 27 | 0.0026 | 0.0004 | 0.0022 |
| 28 | 0.0026 | 0.0004 | 0.0022 |
| 29 | 0.0026 | 0.0004 | 0.0022 |
| 30 | 0.0027 | 0.0004 | 0.0022 |
| 31 | 0.0027 | 0.0004 | 0.0022 |
| 32 | 0.0027 | 0.0004 | 0.0022 |
| 33 | 0.0027 | 0.0004 | 0.0023 |
| 34 | 0.0027 | 0.0004 | 0.0023 |
| 35 | 0.0027 | 0.0004 | 0.0023 |
| 36 | 0.0027 | 0.0004 | 0.0023 |
| 37 | 0.0027 | 0.0005 | 0.0023 |
| 38 | 0.0028 | 0.0005 | 0.0023 |
| 39 | 0.0028 | 0.0005 | 0.0023 |
| 40 | 0.0028 | 0.0005 | 0.0023 |
| 41 | 0.0028 | 0.0005 | 0.0023 |
| 42 | 0.0028 | 0.0005 | 0.0024 |
| 43 | 0.0028 | 0.0005 | 0.0024 |
| 44 | 0.0028 | 0.0005 | 0.0024 |
| 45 | 0.0029 | 0.0005 | 0.0024 |
| 46 | 0.0029 | 0.0005 | 0.0024 |
| 47 | 0.0029 | 0.0005 | 0.0024 |
| 48 | 0.0029 | 0.0005 | 0.0024 |
| 49 | 0.0029 | 0.0005 | 0.0024 |
| 50 | 0.0029 | 0.0005 | 0.0024 |
| 51 | 0.0029 | 0.0005 | 0.0025 |
| 52 | 0.0030 | 0.0005 | 0.0025 |
| 53 | 0.0030 | 0.0005 | 0.0025 |
| 54 | 0.0030 | 0.0005 | 0.0025 |
| 55 | 0.0030 | 0.0005 | 0.0025 |
| 56 | 0.0030 | 0.0005 | 0.0025 |
| 57 | 0.0030 | 0.0005 | 0.0025 |
| 58 | 0.0031 | 0.0005 | 0.0026 |
| 59 | 0.0031 | 0.0005 | 0.0026 |
| 60 | 0.0031 | 0.0005 | 0.0026 |
| 61 | 0.0031 | 0.0005 | 0.0026 |
| 62 | 0.0031 | 0.0005 | 0.0026 |
| 63 | 0.0032 | 0.0005 | 0.0026 |
| 64 | 0.0032 | 0.0005 | 0.0026 |
| 65 | 0.0032 | 0.0005 | 0.0027 |
| 66 | 0.0032 | 0.0005 | 0.0027 |
| 67 | 0.0032 | 0.0005 | 0.0027 |
| 68 | 0.0032 | 0.0005 | 0.0027 |
| 69 | 0.0033 | 0.0005 | 0.0027 |
| 70 | 0.0033 | 0.0005 | 0.0027 |
| 71 | 0.0033 | 0.0005 | 0.0028 |
| 72 | 0.0033 | 0.0005 | 0.0028 |
| 73 | 0.0033 | 0.0005 | 0.0028 |
| 74 | 0.0034 | 0.0006 | 0.0028 |
| 75 | 0.0034 | 0.0006 | 0.0028 |
| 76 | 0.0034 | 0.0006 | 0.0028 |
| 77 | 0.0034 | 0.0006 | 0.0029 |
| 78 | 0.0034 | 0.0006 | 0.0029 |
| 79 | 0.0035 | 0.0006 | 0.0029 |
| 80 | 0.0035 | 0.0006 | 0.0029 |

| | | | |
|---|---|---|---|
| 81 | 0.0035 | 0.0006 | 0.0029 |
| 82 | 0.0035 | 0.0006 | 0.0030 |
| 83 | 0.0036 | 0.0006 | 0.0030 |
| 84 | 0.0036 | 0.0006 | 0.0030 |
| 85 | 0.0036 | 0.0006 | 0.0030 |
| 86 | 0.0036 | 0.0006 | 0.0030 |
| 87 | 0.0037 | 0.0006 | 0.0031 |
| 88 | 0.0037 | 0.0006 | 0.0031 |
| 89 | 0.0037 | 0.0006 | 0.0031 |
| 90 | 0.0037 | 0.0006 | 0.0031 |
| 91 | 0.0038 | 0.0006 | 0.0032 |
| 92 | 0.0038 | 0.0006 | 0.0032 |
| 93 | 0.0038 | 0.0006 | 0.0032 |
| 94 | 0.0039 | 0.0006 | 0.0032 |
| 95 | 0.0039 | 0.0006 | 0.0033 |
| 96 | 0.0039 | 0.0006 | 0.0033 |
| 97 | 0.0040 | 0.0006 | 0.0033 |
| 98 | 0.0040 | 0.0007 | 0.0033 |
| 99 | 0.0040 | 0.0007 | 0.0034 |
| 100 | 0.0040 | 0.0007 | 0.0034 |
| 101 | 0.0041 | 0.0007 | 0.0034 |
| 102 | 0.0041 | 0.0007 | 0.0034 |
| 103 | 0.0041 | 0.0007 | 0.0035 |
| 104 | 0.0042 | 0.0007 | 0.0035 |
| 105 | 0.0042 | 0.0007 | 0.0035 |
| 106 | 0.0042 | 0.0007 | 0.0035 |
| 107 | 0.0043 | 0.0007 | 0.0036 |
| 108 | 0.0043 | 0.0007 | 0.0036 |
| 109 | 0.0044 | 0.0007 | 0.0036 |
| 110 | 0.0044 | 0.0007 | 0.0037 |
| 111 | 0.0044 | 0.0007 | 0.0037 |
| 112 | 0.0045 | 0.0007 | 0.0037 |
| 113 | 0.0045 | 0.0007 | 0.0038 |
| 114 | 0.0046 | 0.0007 | 0.0038 |
| 115 | 0.0046 | 0.0008 | 0.0039 |
| 116 | 0.0046 | 0.0008 | 0.0039 |
| 117 | 0.0047 | 0.0008 | 0.0039 |
| 118 | 0.0047 | 0.0008 | 0.0040 |
| 119 | 0.0048 | 0.0008 | 0.0040 |
| 120 | 0.0048 | 0.0008 | 0.0040 |
| 121 | 0.0049 | 0.0008 | 0.0041 |
| 122 | 0.0049 | 0.0008 | 0.0041 |
| 123 | 0.0050 | 0.0008 | 0.0042 |
| 124 | 0.0050 | 0.0008 | 0.0042 |
| 125 | 0.0051 | 0.0008 | 0.0043 |
| 126 | 0.0051 | 0.0008 | 0.0043 |
| 127 | 0.0052 | 0.0009 | 0.0044 |
| 128 | 0.0053 | 0.0009 | 0.0044 |
| 129 | 0.0053 | 0.0009 | 0.0045 |
| 130 | 0.0054 | 0.0009 | 0.0045 |
| 131 | 0.0055 | 0.0009 | 0.0046 |
| 132 | 0.0055 | 0.0009 | 0.0046 |
| 133 | 0.0056 | 0.0009 | 0.0047 |
| 134 | 0.0057 | 0.0009 | 0.0047 |
| 135 | 0.0058 | 0.0009 | 0.0048 |
| 136 | 0.0058 | 0.0010 | 0.0049 |
| 137 | 0.0059 | 0.0010 | 0.0049 |
| 138 | 0.0060 | 0.0010 | 0.0050 |
| 139 | 0.0061 | 0.0010 | 0.0051 |

| | | | |
|---|---|---|---|
| 140 | 0.0061 | 0.0010 | 0.0051 |
| 141 | 0.0062 | 0.0010 | 0.0052 |
| 142 | 0.0063 | 0.0010 | 0.0053 |
| 143 | 0.0064 | 0.0011 | 0.0054 |
| 144 | 0.0065 | 0.0011 | 0.0054 |
| 145 | 0.0041 | 0.0007 | 0.0035 |
| 146 | 0.0042 | 0.0007 | 0.0035 |
| 147 | 0.0043 | 0.0007 | 0.0036 |
| 148 | 0.0044 | 0.0007 | 0.0036 |
| 149 | 0.0045 | 0.0007 | 0.0037 |
| 150 | 0.0045 | 0.0007 | 0.0038 |
| 151 | 0.0046 | 0.0008 | 0.0039 |
| 152 | 0.0047 | 0.0008 | 0.0039 |
| 153 | 0.0048 | 0.0008 | 0.0040 |
| 154 | 0.0049 | 0.0008 | 0.0041 |
| 155 | 0.0051 | 0.0008 | 0.0042 |
| 156 | 0.0051 | 0.0008 | 0.0043 |
| 157 | 0.0053 | 0.0009 | 0.0044 |
| 158 | 0.0054 | 0.0009 | 0.0045 |
| 159 | 0.0056 | 0.0009 | 0.0046 |
| 160 | 0.0056 | 0.0009 | 0.0047 |
| 161 | 0.0058 | 0.0010 | 0.0049 |
| 162 | 0.0060 | 0.0010 | 0.0050 |
| 163 | 0.0062 | 0.0010 | 0.0052 |
| 164 | 0.0063 | 0.0010 | 0.0053 |
| 165 | 0.0065 | 0.0011 | 0.0055 |
| 166 | 0.0067 | 0.0011 | 0.0056 |
| 167 | 0.0070 | 0.0011 | 0.0058 |
| 168 | 0.0071 | 0.0012 | 0.0060 |
| 169 | 0.0079 | 0.0013 | 0.0066 |
| 170 | 0.0081 | 0.0013 | 0.0068 |
| 171 | 0.0085 | 0.0014 | 0.0071 |
| 172 | 0.0087 | 0.0014 | 0.0073 |
| 173 | 0.0092 | 0.0015 | 0.0077 |
| 174 | 0.0095 | 0.0016 | 0.0079 |
| 175 | 0.0101 | 0.0017 | 0.0084 |
| 176 | 0.0104 | 0.0017 | 0.0087 |
| 177 | 0.0111 | 0.0018 | 0.0093 |
| 178 | 0.0115 | 0.0019 | 0.0097 |
| 179 | 0.0125 | 0.0020 | 0.0104 |
| 180 | 0.0130 | 0.0021 | 0.0109 |
| 181 | 0.0142 | 0.0023 | 0.0119 |
| 182 | 0.0149 | 0.0024 | 0.0125 |
| 183 | 0.0166 | 0.0027 | 0.0139 |
| 184 | 0.0177 | 0.0029 | 0.0148 |
| 185 | 0.0356 | 0.0058 | 0.0298 |
| 186 | 0.0379 | 0.0062 | 0.0317 |
| 187 | 0.0440 | 0.0062 | 0.0378 |
| 188 | 0.0480 | 0.0062 | 0.0418 |
| 189 | 0.0597 | 0.0062 | 0.0535 |
| 190 | 0.0688 | 0.0062 | 0.0626 |
| 191 | 0.1044 | 0.0062 | 0.0982 |
| 192 | 0.1516 | 0.0062 | 0.1453 |
| 193 | 0.6557 | 0.0062 | 0.6494 |
| 194 | 0.0822 | 0.0062 | 0.0760 |
| 195 | 0.0531 | 0.0062 | 0.0469 |
| 196 | 0.0407 | 0.0062 | 0.0345 |
| 197 | 0.0188 | 0.0031 | 0.0157 |
| 198 | 0.0157 | 0.0026 | 0.0132 |

| | | | |
|---|---|---|---|
| 199 | 0.0136 | 0.0022 | 0.0114 |
| 200 | 0.0120 | 0.0020 | 0.0100 |
| 201 | 0.0108 | 0.0018 | 0.0090 |
| 202 | 0.0098 | 0.0016 | 0.0082 |
| 203 | 0.0090 | 0.0015 | 0.0075 |
| 204 | 0.0083 | 0.0014 | 0.0069 |
| 205 | 0.0073 | 0.0012 | 0.0061 |
| 206 | 0.0068 | 0.0011 | 0.0057 |
| 207 | 0.0064 | 0.0011 | 0.0054 |
| 208 | 0.0061 | 0.0010 | 0.0051 |
| 209 | 0.0057 | 0.0009 | 0.0048 |
| 210 | 0.0055 | 0.0009 | 0.0046 |
| 211 | 0.0052 | 0.0009 | 0.0044 |
| 212 | 0.0050 | 0.0008 | 0.0042 |
| 213 | 0.0048 | 0.0008 | 0.0040 |
| 214 | 0.0046 | 0.0008 | 0.0038 |
| 215 | 0.0044 | 0.0007 | 0.0037 |
| 216 | 0.0042 | 0.0007 | 0.0036 |
| 217 | 0.0066 | 0.0011 | 0.0055 |
| 218 | 0.0064 | 0.0010 | 0.0053 |
| 219 | 0.0062 | 0.0010 | 0.0052 |
| 220 | 0.0060 | 0.0010 | 0.0050 |
| 221 | 0.0059 | 0.0010 | 0.0049 |
| 222 | 0.0057 | 0.0009 | 0.0048 |
| 223 | 0.0056 | 0.0009 | 0.0047 |
| 224 | 0.0054 | 0.0009 | 0.0045 |
| 225 | 0.0053 | 0.0009 | 0.0044 |
| 226 | 0.0052 | 0.0009 | 0.0043 |
| 227 | 0.0051 | 0.0008 | 0.0042 |
| 228 | 0.0050 | 0.0008 | 0.0042 |
| 229 | 0.0049 | 0.0008 | 0.0041 |
| 230 | 0.0048 | 0.0008 | 0.0040 |
| 231 | 0.0047 | 0.0008 | 0.0039 |
| 232 | 0.0046 | 0.0008 | 0.0038 |
| 233 | 0.0045 | 0.0007 | 0.0038 |
| 234 | 0.0044 | 0.0007 | 0.0037 |
| 235 | 0.0043 | 0.0007 | 0.0036 |
| 236 | 0.0043 | 0.0007 | 0.0036 |
| 237 | 0.0042 | 0.0007 | 0.0035 |
| 238 | 0.0041 | 0.0007 | 0.0034 |
| 239 | 0.0041 | 0.0007 | 0.0034 |
| 240 | 0.0040 | 0.0007 | 0.0033 |
| 241 | 0.0039 | 0.0006 | 0.0033 |
| 242 | 0.0039 | 0.0006 | 0.0032 |
| 243 | 0.0038 | 0.0006 | 0.0032 |
| 244 | 0.0038 | 0.0006 | 0.0031 |
| 245 | 0.0037 | 0.0006 | 0.0031 |
| 246 | 0.0037 | 0.0006 | 0.0031 |
| 247 | 0.0036 | 0.0006 | 0.0030 |
| 248 | 0.0036 | 0.0006 | 0.0030 |
| 249 | 0.0035 | 0.0006 | 0.0029 |
| 250 | 0.0035 | 0.0006 | 0.0029 |
| 251 | 0.0034 | 0.0006 | 0.0029 |
| 252 | 0.0034 | 0.0006 | 0.0028 |
| 253 | 0.0033 | 0.0005 | 0.0028 |
| 254 | 0.0033 | 0.0005 | 0.0028 |
| 255 | 0.0033 | 0.0005 | 0.0027 |
| 256 | 0.0032 | 0.0005 | 0.0027 |
| 257 | 0.0032 | 0.0005 | 0.0027 |

| | | | |
|---|---|---|---|
| 258 | 0.0031 | 0.0005 | 0.0026 |
| 259 | 0.0031 | 0.0005 | 0.0026 |
| 260 | 0.0031 | 0.0005 | 0.0026 |
| 261 | 0.0030 | 0.0005 | 0.0025 |
| 262 | 0.0030 | 0.0005 | 0.0025 |
| 263 | 0.0030 | 0.0005 | 0.0025 |
| 264 | 0.0029 | 0.0005 | 0.0025 |
| 265 | 0.0029 | 0.0005 | 0.0024 |
| 266 | 0.0029 | 0.0005 | 0.0024 |
| 267 | 0.0029 | 0.0005 | 0.0024 |
| 268 | 0.0028 | 0.0005 | 0.0024 |
| 269 | 0.0028 | 0.0005 | 0.0023 |
| 270 | 0.0028 | 0.0005 | 0.0023 |
| 271 | 0.0027 | 0.0004 | 0.0023 |
| 272 | 0.0027 | 0.0004 | 0.0023 |
| 273 | 0.0027 | 0.0004 | 0.0022 |
| 274 | 0.0027 | 0.0004 | 0.0022 |
| 275 | 0.0026 | 0.0004 | 0.0022 |
| 276 | 0.0026 | 0.0004 | 0.0022 |
| 277 | 0.0026 | 0.0004 | 0.0022 |
| 278 | 0.0026 | 0.0004 | 0.0021 |
| 279 | 0.0025 | 0.0004 | 0.0021 |
| 280 | 0.0025 | 0.0004 | 0.0021 |
| 281 | 0.0025 | 0.0004 | 0.0021 |
| 282 | 0.0025 | 0.0004 | 0.0021 |
| 283 | 0.0025 | 0.0004 | 0.0021 |
| 284 | 0.0024 | 0.0004 | 0.0020 |
| 285 | 0.0024 | 0.0004 | 0.0020 |
| 286 | 0.0024 | 0.0004 | 0.0020 |
| 287 | 0.0024 | 0.0004 | 0.0020 |
| 288 | 0.0024 | 0.0004 | 0.0020 |

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Total soil rain loss = 0.28(In)
Total effective rainfall = 2.37(In)
Peak flow rate in flood hydrograph = 278.92(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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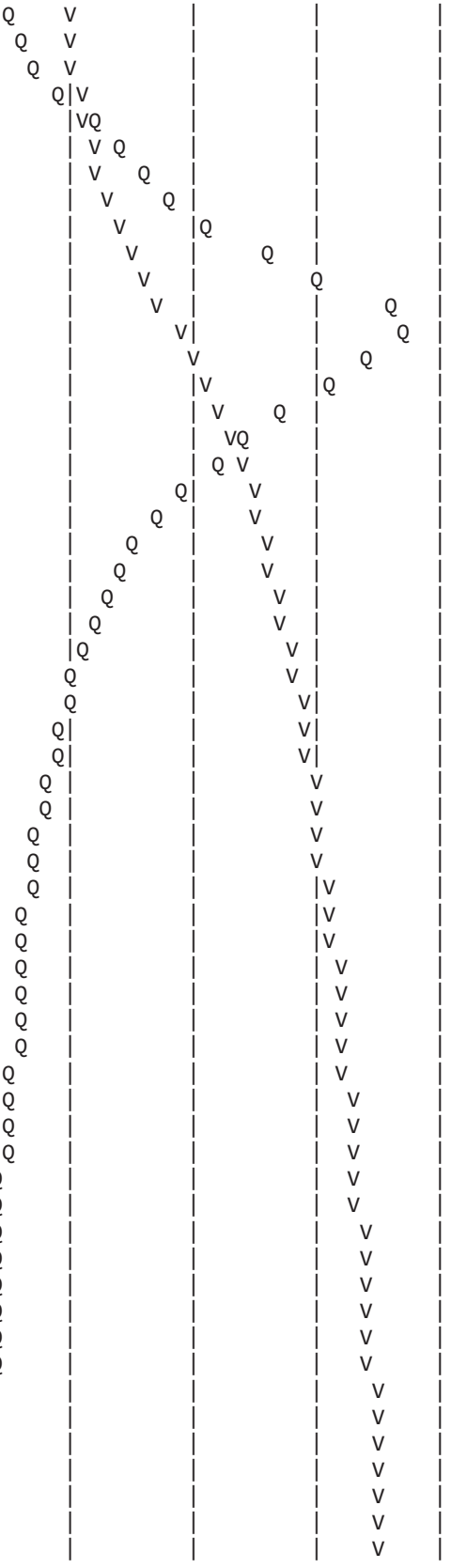
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 75.0 | 150.0 | 225.0 | 300.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0001 | 0.02 | Q | \| | \| | \| | \| |
| 0+10 | 0.0006 | 0.06 | Q | \| | \| | \| | \| |
| 0+15 | 0.0015 | 0.13 | Q | \| | \| | \| | \| |
| 0+20 | 0.0030 | 0.22 | Q | \| | \| | \| | \| |
| 0+25 | 0.0053 | 0.33 | Q | \| | \| | \| | \| |
| 0+30 | 0.0085 | 0.47 | Q | \| | \| | \| | \| |
| 0+35 | 0.0128 | 0.63 | Q | \| | \| | \| | \| |
| 0+40 | 0.0188 | 0.87 | Q | \| | \| | \| | \| |
| 0+45 | 0.0269 | 1.18 | Q | \| | \| | \| | \| |
| 0+50 | 0.0382 | 1.63 | Q | \| | \| | \| | \| |
| 0+55 | 0.0527 | 2.11 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0701 | 2.53 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0902 | 2.91 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+10 | 0.1125 | 3.23 | Q | \| | \| | \| | \| |
| 1+15 | 0.1367 | 3.52 | Q | \| | \| | \| | \| |
| 1+20 | 0.1627 | 3.77 | Q | \| | \| | \| | \| |
| 1+25 | 0.1901 | 3.99 | Q | \| | \| | \| | \| |
| 1+30 | 0.2189 | 4.18 | Q | \| | \| | \| | \| |
| 1+35 | 0.2488 | 4.35 | Q | \| | \| | \| | \| |
| 1+40 | 0.2798 | 4.50 | Q | \| | \| | \| | \| |
| 1+45 | 0.3118 | 4.65 | Q | \| | \| | \| | \| |
| 1+50 | 0.3448 | 4.78 | Q | \| | \| | \| | \| |
| 1+55 | 0.3787 | 4.92 | Q | \| | \| | \| | \| |
| 2+ 0 | 0.4133 | 5.04 | Q | \| | \| | \| | \| |
| 2+ 5 | 0.4488 | 5.15 | Q | \| | \| | \| | \| |
| 2+10 | 0.4850 | 5.26 | Q | \| | \| | \| | \| |
| 2+15 | 0.5219 | 5.36 | Q | \| | \| | \| | \| |
| 2+20 | 0.5595 | 5.46 | Q | \| | \| | \| | \| |
| 2+25 | 0.5978 | 5.55 | Q | \| | \| | \| | \| |
| 2+30 | 0.6366 | 5.64 | Q | \| | \| | \| | \| |
| 2+35 | 0.6760 | 5.73 | Q | \| | \| | \| | \| |
| 2+40 | 0.7161 | 5.81 | Q | \| | \| | \| | \| |
| 2+45 | 0.7566 | 5.89 | Q | \| | \| | \| | \| |
| 2+50 | 0.7977 | 5.96 | Q | \| | \| | \| | \| |
| 2+55 | 0.8393 | 6.04 | Q | \| | \| | \| | \| |
| 3+ 0 | 0.8814 | 6.12 | Q | \| | \| | \| | \| |
| 3+ 5 | 0.9240 | 6.19 | Q | \| | \| | \| | \| |
| 3+10 | 0.9672 | 6.26 | Q | \| | \| | \| | \| |
| 3+15 | 1.0108 | 6.33 | Q | \| | \| | \| | \| |
| 3+20 | 1.0548 | 6.40 | Q | \| | \| | \| | \| |
| 3+25 | 1.0994 | 6.47 | Q | \| | \| | \| | \| |
| 3+30 | 1.1444 | 6.53 | Q | \| | \| | \| | \| |
| 3+35 | 1.1898 | 6.59 | Q | \| | \| | \| | \| |
| 3+40 | 1.2356 | 6.65 | Q | \| | \| | \| | \| |
| 3+45 | 1.2818 | 6.71 | Q | \| | \| | \| | \| |
| 3+50 | 1.3284 | 6.77 | Q | \| | \| | \| | \| |
| 3+55 | 1.3755 | 6.83 | QV | \| | \| | \| | \| |
| 4+ 0 | 1.4229 | 6.89 | QV | \| | \| | \| | \| |
| 4+ 5 | 1.4707 | 6.94 | QV | \| | \| | \| | \| |
| 4+10 | 1.5189 | 7.00 | QV | \| | \| | \| | \| |
| 4+15 | 1.5675 | 7.06 | QV | \| | \| | \| | \| |
| 4+20 | 1.6165 | 7.11 | QV | \| | \| | \| | \| |
| 4+25 | 1.6659 | 7.17 | QV | \| | \| | \| | \| |
| 4+30 | 1.7157 | 7.23 | QV | \| | \| | \| | \| |
| 4+35 | 1.7658 | 7.28 | QV | \| | \| | \| | \| |
| 4+40 | 1.8163 | 7.34 | QV | \| | \| | \| | \| |
| 4+45 | 1.8672 | 7.39 | QV | \| | \| | \| | \| |
| 4+50 | 1.9185 | 7.44 | QV | \| | \| | \| | \| |
| 4+55 | 1.9701 | 7.50 | QV | \| | \| | \| | \| |
| 5+ 0 | 2.0221 | 7.55 | \|Q | \| | \| | \| | \| |
| 5+ 5 | 2.0745 | 7.60 | \|Q | \| | \| | \| | \| |
| 5+10 | 2.1272 | 7.66 | \|Q | \| | \| | \| | \| |
| 5+15 | 2.1804 | 7.71 | \|Q | \| | \| | \| | \| |
| 5+20 | 2.2339 | 7.77 | \|Q | \| | \| | \| | \| |
| 5+25 | 2.2877 | 7.82 | \|Q | \| | \| | \| | \| |
| 5+30 | 2.3419 | 7.87 | \|Q | \| | \| | \| | \| |
| 5+35 | 2.3965 | 7.93 | \|Q | \| | \| | \| | \| |
| 5+40 | 2.4515 | 7.98 | \|Q | \| | \| | \| | \| |
| 5+45 | 2.5068 | 8.03 | \|Q | \| | \| | \| | \| |
| 5+50 | 2.5625 | 8.09 | \|Q | \| | \| | \| | \| |
| 5+55 | 2.6186 | 8.14 | \|Q | \| | \| | \| | \| |
| 6+ 0 | 2.6750 | 8.19 | \|Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+ 5 | 2.7318 | 8.25 | Q | | | | |
| 6+10 | 2.7890 | 8.30 | QV | | | | |
| 6+15 | 2.8465 | 8.36 | QV | | | | |
| 6+20 | 2.9045 | 8.41 | QV | | | | |
| 6+25 | 2.9628 | 8.47 | QV | | | | |
| 6+30 | 3.0214 | 8.52 | QV | | | | |
| 6+35 | 3.0805 | 8.57 | QV | | | | |
| 6+40 | 3.1399 | 8.63 | QV | | | | |
| 6+45 | 3.1997 | 8.68 | QV | | | | |
| 6+50 | 3.2599 | 8.74 | QV | | | | |
| 6+55 | 3.3204 | 8.79 | QV | | | | |
| 7+ 0 | 3.3814 | 8.85 | QV | | | | |
| 7+ 5 | 3.4427 | 8.91 | QV | | | | |
| 7+10 | 3.5045 | 8.97 | QV | | | | |
| 7+15 | 3.5666 | 9.03 | QV | | | | |
| 7+20 | 3.6292 | 9.09 | QV | | | | |
| 7+25 | 3.6922 | 9.15 | QV | | | | |
| 7+30 | 3.7557 | 9.21 | QV | | | | |
| 7+35 | 3.8196 | 9.28 | QV | | | | |
| 7+40 | 3.8839 | 9.34 | QV | | | | |
| 7+45 | 3.9487 | 9.41 | QV | | | | |
| 7+50 | 4.0139 | 9.47 | QV | | | | |
| 7+55 | 4.0796 | 9.54 | QV | | | | |
| 8+ 0 | 4.1458 | 9.61 | Q V | | | | |
| 8+ 5 | 4.2124 | 9.68 | Q V | | | | |
| 8+10 | 4.2795 | 9.75 | Q V | | | | |
| 8+15 | 4.3471 | 9.81 | Q V | | | | |
| 8+20 | 4.4152 | 9.88 | Q V | | | | |
| 8+25 | 4.4837 | 9.95 | Q V | | | | |
| 8+30 | 4.5528 | 10.03 | Q V | | | | |
| 8+35 | 4.6223 | 10.10 | Q V | | | | |
| 8+40 | 4.6924 | 10.17 | Q V | | | | |
| 8+45 | 4.7629 | 10.25 | Q V | | | | |
| 8+50 | 4.8341 | 10.32 | Q V | | | | |
| 8+55 | 4.9057 | 10.40 | Q V | | | | |
| 9+ 0 | 4.9779 | 10.48 | Q V | | | | |
| 9+ 5 | 5.0506 | 10.56 | Q V | | | | |
| 9+10 | 5.1239 | 10.64 | Q V | | | | |
| 9+15 | 5.1977 | 10.72 | Q V | | | | |
| 9+20 | 5.2721 | 10.80 | Q V | | | | |
| 9+25 | 5.3470 | 10.88 | Q V | | | | |
| 9+30 | 5.4225 | 10.97 | Q V | | | | |
| 9+35 | 5.4987 | 11.05 | Q  V | | | | |
| 9+40 | 5.5754 | 11.14 | Q  V | | | | |
| 9+45 | 5.6528 | 11.23 | Q  V | | | | |
| 9+50 | 5.7308 | 11.32 | Q  V | | | | |
| 9+55 | 5.8094 | 11.42 | Q  V | | | | |
| 10+ 0 | 5.8887 | 11.51 | Q  V | | | | |
| 10+ 5 | 5.9686 | 11.61 | Q  V | | | | |
| 10+10 | 6.0492 | 11.71 | Q  V | | | | |
| 10+15 | 6.1305 | 11.81 | Q  V | | | | |
| 10+20 | 6.2126 | 11.91 | Q  V | | | | |
| 10+25 | 6.2953 | 12.02 | Q  V | | | | |
| 10+30 | 6.3788 | 12.12 | Q  V | | | | |
| 10+35 | 6.4631 | 12.23 | Q  V | | | | |
| 10+40 | 6.5481 | 12.35 | Q  V | | | | |
| 10+45 | 6.6339 | 12.46 | Q  V | | | | |
| 10+50 | 6.7205 | 12.58 | Q  V | | | | |
| 10+55 | 6.8080 | 12.70 | Q  V | | | | |

```
11+ 0       6.8962     12.82  |Q   V    |          |          |          |
11+ 5       6.9854     12.94  |Q   V    |          |          |          |
11+10       7.0754     13.07  |Q   V    |          |          |          |
11+15       7.1664     13.20  |Q   V    |          |          |          |
11+20       7.2583     13.34  |Q   V    |          |          |          |
11+25       7.3511     13.48  |Q   V    |          |          |          |
11+30       7.4449     13.62  |Q   V    |          |          |          |
11+35       7.5397     13.76  |Q   V    |          |          |          |
11+40       7.6355     13.91  |Q   V    |          |          |          |
11+45       7.7324     14.07  |Q   V    |          |          |          |
11+50       7.8303     14.22  |Q   V    |          |          |          |
11+55       7.9294     14.39  |Q   V    |          |          |          |
12+ 0       8.0296     14.55  |Q   V    |          |          |          |
12+ 5       8.1309     14.70  |Q   V    |          |          |          |
12+10       8.2330     14.83  |Q    V   |          |          |          |
12+15       8.3359     14.94  |Q    V   |          |          |          |
12+20       8.4394     15.03  | Q   V   |          |          |          |
12+25       8.5434     15.10  | Q   V   |          |          |          |
12+30       8.6478     15.16  | Q   V   |          |          |          |
12+35       8.7523     15.18  | Q   V   |          |          |          |
12+40       8.8566     15.14  | Q   V   |          |          |          |
12+45       8.9600     15.01  | Q   V   |          |          |          |
12+50       9.0616     14.75  |Q    V   |          |          |          |
12+55       9.1612     14.46  |Q    V   |          |          |          |
13+ 0       9.2592     14.23  |Q    V   |          |          |          |
13+ 5       9.3560     14.05  |Q    V   |          |          |          |
13+10       9.4520     13.95  |Q    V   |          |          |          |
13+15       9.5476     13.88  |Q    V   |          |          |          |
13+20       9.6430     13.85  |Q     V  |          |          |          |
13+25       9.7385     13.87  |Q     V  |          |          |          |
13+30       9.8344     13.92  |Q     V  |          |          |          |
13+35       9.9309     14.01  |Q     V  |          |          |          |
13+40      10.0280     14.11  |Q     V  |          |          |          |
13+45      10.1261     14.24  |Q     V  |          |          |          |
13+50      10.2252     14.39  |Q     V  |          |          |          |
13+55      10.3255     14.55  |Q     V  |          |          |          |
14+ 0      10.4270     14.75  |Q     V  |          |          |          |
14+ 5      10.5301     14.96  |Q     V  |          |          |          |
14+10      10.6348     15.21  | Q    V  |          |          |          |
14+15      10.7414     15.48  | Q    V  |          |          |          |
14+20      10.8500     15.77  | Q    V  |          |          |          |
14+25      10.9609     16.10  | Q     V |          |          |          |
14+30      11.0742     16.46  | Q     V |          |          |          |
14+35      11.1903     16.85  | Q     V |          |          |          |
14+40      11.3093     17.29  | Q     V |          |          |          |
14+45      11.4318     17.78  | Q     V |          |          |          |
14+50      11.5580     18.33  | Q     V |          |          |          |
14+55      11.6884     18.93  | Q     V |          |          |          |
15+ 0      11.8232     19.57  | Q     V |          |          |          |
15+ 5      11.9627     20.26  | Q     V |          |          |          |
15+10      12.1073     20.99  | Q     V |          |          |          |
15+15      12.2573     21.79  | Q     V |          |          |          |
15+20      12.4135     22.68  |  Q     V|          |          |          |
15+25      12.5773     23.79  |  Q     V|          |          |          |
15+30      12.7506     25.16  |  Q     V|          |          |          |
15+35      12.9358     26.89  |  Q     V|          |          |          |
15+40      13.1353     28.96  |  Q     V|          |          |          |
15+45      13.3527     31.57  |   Q    V|          |          |          |
15+50      13.5920     34.75  |   Q    V|          |          |          |
```

| | | | |
|---|---|---|---|
| 15+55 | 13.8604 | 38.97 |  |
| 16+ 0 | 14.1709 | 45.08 | |
| 16+ 5 | 14.5740 | 58.53 | |
| 16+10 | 15.0833 | 73.95 | |
| 16+15 | 15.7107 | 91.10 | |
| 16+20 | 16.4385 | 105.69 | |
| 16+25 | 17.2919 | 123.91 | |
| 16+30 | 18.2563 | 140.03 | |
| 16+35 | 19.3646 | 160.93 | |
| 16+40 | 20.7178 | 196.48 | |
| 16+45 | 22.3007 | 229.83 | |
| 16+50 | 24.1718 | 271.69 | |
| 16+55 | 26.0928 | 278.92 | |
| 17+ 0 | 27.8519 | 255.42 | |
| 17+ 5 | 29.4592 | 233.38 | |
| 17+10 | 30.8636 | 203.93 | |
| 17+15 | 32.1277 | 183.54 | |
| 17+20 | 33.2689 | 165.70 | |
| 17+25 | 34.2605 | 143.98 | |
| 17+30 | 35.1617 | 130.86 | |
| 17+35 | 35.9721 | 117.66 | |
| 17+40 | 36.7243 | 109.23 | |
| 17+45 | 37.4192 | 100.89 | |
| 17+50 | 38.0729 | 94.92 | |
| 17+55 | 38.6900 | 89.60 | |
| 18+ 0 | 39.2575 | 82.40 | |
| 18+ 5 | 39.7928 | 77.72 | |
| 18+10 | 40.2946 | 72.86 | |
| 18+15 | 40.7756 | 69.85 | |
| 18+20 | 41.2358 | 66.81 | |
| 18+25 | 41.6607 | 61.70 | |
| 18+30 | 42.0623 | 58.32 | |
| 18+35 | 42.4530 | 56.72 | |
| 18+40 | 42.8281 | 54.47 | |
| 18+45 | 43.1799 | 51.08 | |
| 18+50 | 43.5249 | 50.09 | |
| 18+55 | 43.8640 | 49.24 | |
| 19+ 0 | 44.1905 | 47.40 | |
| 19+ 5 | 44.5083 | 46.16 | |
| 19+10 | 44.8202 | 45.29 | |
| 19+15 | 45.1217 | 43.77 | |
| 19+20 | 45.4069 | 41.42 | |
| 19+25 | 45.6854 | 40.43 | |
| 19+30 | 45.9561 | 39.31 | |
| 19+35 | 46.2080 | 36.57 | |
| 19+40 | 46.4493 | 35.05 | |
| 19+45 | 46.6861 | 34.38 | |
| 19+50 | 46.9175 | 33.60 | |
| 19+55 | 47.1428 | 32.71 | |
| 20+ 0 | 47.3643 | 32.16 | |
| 20+ 5 | 47.5813 | 31.51 | |
| 20+10 | 47.7892 | 30.19 | |
| 20+15 | 47.9916 | 29.39 | |
| 20+20 | 48.1906 | 28.89 | |
| 20+25 | 48.3849 | 28.21 | |
| 20+30 | 48.5734 | 27.38 | |
| 20+35 | 48.7585 | 26.87 | |
| 20+40 | 48.9391 | 26.22 | |
| 20+45 | 49.1095 | 24.74 | |

```
20+50      49.2747     23.99  |  Q      |         |         |    V    |
20+55      49.4372     23.61  |  Q      |         |         |     V   |
21+ 0      49.5973     23.25  |  Q      |         |         |     V   |
21+ 5      49.7552     22.91  |  Q      |         |         |     V   |
21+10      49.9104     22.54  |  Q      |         |         |     V   |
21+15      50.0619     22.01  | Q       |         |         |     V   |
21+20      50.2052     20.81  | Q       |         |         |     V   |
21+25      50.3445     20.22  | Q       |         |         |     V   |
21+30      50.4815     19.90  | Q       |         |         |     V   |
21+35      50.6164     19.59  | Q       |         |         |     V   |
21+40      50.7492     19.28  | Q       |         |         |      V  |
21+45      50.8796     18.93  | Q       |         |         |      V  |
21+50      51.0064     18.41  | Q       |         |         |      V  |
21+55      51.1250     17.23  | Q       |         |         |      V  |
22+ 0      51.2401     16.70  | Q       |         |         |      V  |
22+ 5      51.3531     16.41  | Q       |         |         |      V  |
22+10      51.4643     16.14  | Q       |         |         |      V  |
22+15      51.5736     15.87  | Q       |         |         |      V  |
22+20      51.6807     15.56  | Q       |         |         |      V  |
22+25      51.7846     15.08  | Q       |         |         |      V  |
22+30      51.8809     13.98  |Q        |         |         |      V  |
22+35      51.9744     13.57  |Q        |         |         |      V  |
22+40      52.0665     13.38  |Q        |         |         |       V |
22+45      52.1576     13.22  |Q        |         |         |       V |
22+50      52.2479     13.11  |Q        |         |         |       V |
22+55      52.3376     13.02  |Q        |         |         |       V |
23+ 0      52.4270     12.99  |Q        |         |         |       V |
23+ 5      52.5174     13.12  |Q        |         |         |       V |
23+10      52.6074     13.07  |Q        |         |         |       V |
23+15      52.6967     12.98  |Q        |         |         |       V |
23+20      52.7854     12.87  |Q        |         |         |       V |
23+25      52.8733     12.77  |Q        |         |         |       V |
23+30      52.9605     12.65  |Q        |         |         |       V |
23+35      53.0468     12.53  |Q        |         |         |       V |
23+40      53.1322     12.40  |Q        |         |         |       V |
23+45      53.2166     12.26  |Q        |         |         |       V |
23+50      53.3001     12.12  |Q        |         |         |       V |
23+55      53.3825     11.96  |Q        |         |         |       V |
24+ 0      53.4636     11.78  |Q        |         |         |        V|
24+ 5      53.5431     11.54  |Q        |         |         |        V|
24+10      53.6196     11.11  |Q        |         |         |        V|
24+15      53.6901     10.25  |Q        |         |         |        V|
24+20      53.7583      9.90  |Q        |         |         |        V|
24+25      53.8247      9.63  |Q        |         |         |        V|
24+30      53.8891      9.35  |Q        |         |         |        V|
24+35      53.9515      9.06  |Q        |         |         |        V|
24+40      54.0113      8.69  |Q        |         |         |        V|
24+45      54.0681      8.24  |Q        |         |         |        V|
24+50      54.1207      7.65  |Q        |         |         |        V|
24+55      54.1689      7.00  Q         |         |         |        V|
25+ 0      54.2127      6.35  Q         |         |         |        V|
25+ 5      54.2495      5.34  Q         |         |         |        V|
25+10      54.2801      4.45  Q         |         |         |        V|
25+15      54.3080      4.05  Q         |         |         |        V|
25+20      54.3335      3.71  Q         |         |         |        V|
25+25      54.3573      3.45  Q         |         |         |        V|
25+30      54.3795      3.23  Q         |         |         |        V|
25+35      54.4004      3.03  Q         |         |         |        V|
25+40      54.4201      2.86  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+45 | 54.4387 | 2.70 | Q | \| | \| | \| | V\| |
| 25+50 | 54.4562 | 2.55 | Q | \| | \| | \| | V\| |
| 25+55 | 54.4728 | 2.41 | Q | \| | \| | \| | V\| |
| 26+ 0 | 54.4885 | 2.28 | Q | \| | \| | \| | V\| |
| 26+ 5 | 54.5035 | 2.17 | Q | \| | \| | \| | V\| |
| 26+10 | 54.5176 | 2.06 | Q | \| | \| | \| | V\| |
| 26+15 | 54.5311 | 1.96 | Q | \| | \| | \| | V\| |
| 26+20 | 54.5439 | 1.85 | Q | \| | \| | \| | V\| |
| 26+25 | 54.5560 | 1.77 | Q | \| | \| | \| | V\| |
| 26+30 | 54.5676 | 1.68 | Q | \| | \| | \| | V\| |
| 26+35 | 54.5787 | 1.60 | Q | \| | \| | \| | V\| |
| 26+40 | 54.5892 | 1.53 | Q | \| | \| | \| | V\| |
| 26+45 | 54.5993 | 1.46 | Q | \| | \| | \| | V\| |
| 26+50 | 54.6089 | 1.40 | Q | \| | \| | \| | V\| |
| 26+55 | 54.6181 | 1.33 | Q | \| | \| | \| | V\| |
| 27+ 0 | 54.6268 | 1.27 | Q | \| | \| | \| | V\| |
| 27+ 5 | 54.6352 | 1.21 | Q | \| | \| | \| | V\| |
| 27+10 | 54.6431 | 1.15 | Q | \| | \| | \| | V\| |
| 27+15 | 54.6507 | 1.10 | Q | \| | \| | \| | V\| |
| 27+20 | 54.6579 | 1.05 | Q | \| | \| | \| | V\| |
| 27+25 | 54.6647 | 1.00 | Q | \| | \| | \| | V\| |
| 27+30 | 54.6712 | 0.95 | Q | \| | \| | \| | V\| |
| 27+35 | 54.6775 | 0.90 | Q | \| | \| | \| | V\| |
| 27+40 | 54.6834 | 0.87 | Q | \| | \| | \| | V\| |
| 27+45 | 54.6891 | 0.83 | Q | \| | \| | \| | V\| |
| 27+50 | 54.6946 | 0.79 | Q | \| | \| | \| | V\| |
| 27+55 | 54.6998 | 0.76 | Q | \| | \| | \| | V\| |
| 28+ 0 | 54.7048 | 0.72 | Q | \| | \| | \| | V\| |
| 28+ 5 | 54.7095 | 0.69 | Q | \| | \| | \| | V\| |
| 28+10 | 54.7140 | 0.66 | Q | \| | \| | \| | V\| |
| 28+15 | 54.7183 | 0.63 | Q | \| | \| | \| | V\| |
| 28+20 | 54.7224 | 0.60 | Q | \| | \| | \| | V\| |
| 28+25 | 54.7264 | 0.57 | Q | \| | \| | \| | V\| |
| 28+30 | 54.7301 | 0.54 | Q | \| | \| | \| | V\| |
| 28+35 | 54.7336 | 0.52 | Q | \| | \| | \| | V\| |
| 28+40 | 54.7370 | 0.49 | Q | \| | \| | \| | V\| |
| 28+45 | 54.7402 | 0.47 | Q | \| | \| | \| | V\| |
| 28+50 | 54.7433 | 0.45 | Q | \| | \| | \| | V\| |
| 28+55 | 54.7462 | 0.43 | Q | \| | \| | \| | V\| |
| 29+ 0 | 54.7490 | 0.40 | Q | \| | \| | \| | V\| |
| 29+ 5 | 54.7517 | 0.38 | Q | \| | \| | \| | V\| |
| 29+10 | 54.7542 | 0.36 | Q | \| | \| | \| | V\| |
| 29+15 | 54.7565 | 0.35 | Q | \| | \| | \| | V\| |
| 29+20 | 54.7588 | 0.33 | Q | \| | \| | \| | V\| |
| 29+25 | 54.7610 | 0.31 | Q | \| | \| | \| | V\| |
| 29+30 | 54.7630 | 0.30 | Q | \| | \| | \| | V\| |
| 29+35 | 54.7650 | 0.28 | Q | \| | \| | \| | V\| |
| 29+40 | 54.7668 | 0.27 | Q | \| | \| | \| | V\| |
| 29+45 | 54.7686 | 0.25 | Q | \| | \| | \| | V\| |
| 29+50 | 54.7702 | 0.24 | Q | \| | \| | \| | V\| |
| 29+55 | 54.7718 | 0.23 | Q | \| | \| | \| | V\| |
| 30+ 0 | 54.7732 | 0.22 | Q | \| | \| | \| | V\| |
| 30+ 5 | 54.7747 | 0.21 | Q | \| | \| | \| | V\| |
| 30+10 | 54.7760 | 0.19 | Q | \| | \| | \| | V\| |
| 30+15 | 54.7773 | 0.18 | Q | \| | \| | \| | V\| |
| 30+20 | 54.7785 | 0.17 | Q | \| | \| | \| | V\| |
| 30+25 | 54.7796 | 0.16 | Q | \| | \| | \| | V\| |
| 30+30 | 54.7807 | 0.16 | Q | \| | \| | \| | V\| |
| 30+35 | 54.7817 | 0.15 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 30+40 | 54.7827 | 0.15 | Q | \| | \| | \| | V\| |
| 30+45 | 54.7837 | 0.14 | Q | \| | \| | \| | V\| |
| 30+50 | 54.7846 | 0.13 | Q | \| | \| | \| | V\| |
| 30+55 | 54.7855 | 0.13 | Q | \| | \| | \| | V\| |
| 31+ 0 | 54.7863 | 0.12 | Q | \| | \| | \| | V\| |
| 31+ 5 | 54.7871 | 0.11 | Q | \| | \| | \| | V\| |
| 31+10 | 54.7879 | 0.11 | Q | \| | \| | \| | V\| |
| 31+15 | 54.7886 | 0.10 | Q | \| | \| | \| | V\| |
| 31+20 | 54.7892 | 0.09 | Q | \| | \| | \| | V\| |
| 31+25 | 54.7898 | 0.09 | Q | \| | \| | \| | V\| |
| 31+30 | 54.7904 | 0.08 | Q | \| | \| | \| | V\| |
| 31+35 | 54.7909 | 0.08 | Q | \| | \| | \| | V\| |
| 31+40 | 54.7914 | 0.07 | Q | \| | \| | \| | V\| |
| 31+45 | 54.7918 | 0.06 | Q | \| | \| | \| | V\| |
| 31+50 | 54.7922 | 0.06 | Q | \| | \| | \| | V\| |
| 31+55 | 54.7926 | 0.05 | Q | \| | \| | \| | V\| |
| 32+ 0 | 54.7929 | 0.04 | Q | \| | \| | \| | V\| |
| 32+ 5 | 54.7931 | 0.04 | Q | \| | \| | \| | V\| |
| 32+10 | 54.7934 | 0.03 | Q | \| | \| | \| | V\| |
| 32+15 | 54.7936 | 0.03 | Q | \| | \| | \| | V\| |
| 32+20 | 54.7937 | 0.03 | Q | \| | \| | \| | V\| |
| 32+25 | 54.7939 | 0.02 | Q | \| | \| | \| | V\| |
| 32+30 | 54.7940 | 0.02 | Q | \| | \| | \| | V\| |
| 32+35 | 54.7941 | 0.02 | Q | \| | \| | \| | V\| |
| 32+40 | 54.7942 | 0.01 | Q | \| | \| | \| | V\| |
| 32+45 | 54.7943 | 0.01 | Q | \| | \| | \| | V\| |
| 32+50 | 54.7944 | 0.01 | Q | \| | \| | \| | V\| |
| 32+55 | 54.7944 | 0.00 | Q | \| | \| | \| | V\| |
| 33+ 0 | 54.7944 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 40
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 3.40 | 1 | 1.40 |
| Rainfall data for year 100 | | |
| 3.40 | 6 | 1.86 |
| Rainfall data for year 100 | | |
| 3.40 | 24 | 2.65 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 84.0 | 96.4 | 3.40 | 1.000 | 0.071 | 1.000 | 0.071 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.071

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 3.40 | 1.000 | 84.0 | 96.4 | 0.37 | 0.849 |

Area-averaged catchment yield fraction, Y = 0.849
Area-averaged low loss fraction, Yb = 0.151
User entry of time of concentration = 0.280 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 3.40(Ac.)
Catchment Lag time = 0.224 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 37.2024
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.071(In/Hr)
Average low loss rate fraction (Yb) = 0.151 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.664(In)
Computed peak 30-minute rainfall = 1.137(In)
Specified peak 1-hour rainfall = 1.400(In)
Computed peak 3-hour rainfall = 1.666(In)
Specified peak 6-hour rainfall = 1.860(In)
Specified peak 24-hour rainfall = 2.650(In)

Rainfall depth area reduction factors:
Using a total area of 3.40(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.664(In)
30-minute factor = 1.000 Adjusted rainfall = 1.137(In)
1-hour factor = 1.000 Adjusted rainfall = 1.400(In)
3-hour factor = 1.000 Adjusted rainfall = 1.666(In)
6-hour factor = 1.000 Adjusted rainfall = 1.860(In)
24-hour factor = 1.000 Adjusted rainfall = 2.650(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 41.12 (CFS)) | |
| 1 | 2.453 | 1.009 |
| 2 | 15.615 | 5.412 |
| 3 | 44.808 | 12.004 |
| 4 | 62.667 | 7.344 |
| 5 | 72.342 | 3.978 |
| 6 | 78.814 | 2.661 |
| 7 | 83.398 | 1.885 |
| 8 | 86.976 | 1.471 |
| 9 | 89.667 | 1.106 |
| 10 | 91.740 | 0.852 |
| 11 | 93.476 | 0.714 |
| 12 | 94.846 | 0.564 |
| 13 | 95.989 | 0.470 |
| 14 | 96.911 | 0.379 |

| | | |
|---|---|---|
| 15 | 97.603 | 0.284 |
| 16 | 98.066 | 0.191 |
| 17 | 98.467 | 0.165 |
| 18 | 98.913 | 0.183 |
| 19 | 99.355 | 0.182 |
| 20 | 99.659 | 0.125 |
| 21 | 100.000 | 0.062 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6642 | 0.6642 |
| 2 | 0.8177 | 0.1535 |
| 3 | 0.9235 | 0.1058 |
| 4 | 1.0068 | 0.0832 |
| 5 | 1.0765 | 0.0697 |
| 6 | 1.1370 | 0.0605 |
| 7 | 1.1908 | 0.0538 |
| 8 | 1.2395 | 0.0487 |
| 9 | 1.2840 | 0.0446 |
| 10 | 1.3253 | 0.0412 |
| 11 | 1.3637 | 0.0384 |
| 12 | 1.3998 | 0.0361 |
| 13 | 1.4177 | 0.0179 |
| 14 | 1.4344 | 0.0168 |
| 15 | 1.4502 | 0.0158 |
| 16 | 1.4652 | 0.0149 |
| 17 | 1.4793 | 0.0142 |
| 18 | 1.4928 | 0.0135 |
| 19 | 1.5057 | 0.0129 |
| 20 | 1.5180 | 0.0123 |
| 21 | 1.5298 | 0.0118 |
| 22 | 1.5411 | 0.0113 |
| 23 | 1.5520 | 0.0109 |
| 24 | 1.5625 | 0.0105 |
| 25 | 1.5727 | 0.0102 |
| 26 | 1.5825 | 0.0098 |
| 27 | 1.5920 | 0.0095 |
| 28 | 1.6012 | 0.0092 |
| 29 | 1.6102 | 0.0089 |
| 30 | 1.6189 | 0.0087 |
| 31 | 1.6273 | 0.0084 |
| 32 | 1.6355 | 0.0082 |
| 33 | 1.6435 | 0.0080 |
| 34 | 1.6513 | 0.0078 |
| 35 | 1.6589 | 0.0076 |
| 36 | 1.6664 | 0.0074 |
| 37 | 1.6736 | 0.0073 |
| 38 | 1.6807 | 0.0071 |
| 39 | 1.6877 | 0.0069 |
| 40 | 1.6944 | 0.0068 |
| 41 | 1.7011 | 0.0066 |
| 42 | 1.7076 | 0.0065 |
| 43 | 1.7140 | 0.0064 |
| 44 | 1.7203 | 0.0063 |
| 45 | 1.7264 | 0.0061 |
| 46 | 1.7324 | 0.0060 |
| 47 | 1.7383 | 0.0059 |
| 48 | 1.7442 | 0.0058 |
| 49 | 1.7499 | 0.0057 |

| | | |
|---|---|---|
| 50 | 1.7555 | 0.0056 |
| 51 | 1.7610 | 0.0055 |
| 52 | 1.7664 | 0.0054 |
| 53 | 1.7718 | 0.0053 |
| 54 | 1.7770 | 0.0053 |
| 55 | 1.7822 | 0.0052 |
| 56 | 1.7873 | 0.0051 |
| 57 | 1.7923 | 0.0050 |
| 58 | 1.7973 | 0.0049 |
| 59 | 1.8022 | 0.0049 |
| 60 | 1.8070 | 0.0048 |
| 61 | 1.8117 | 0.0047 |
| 62 | 1.8164 | 0.0047 |
| 63 | 1.8210 | 0.0046 |
| 64 | 1.8256 | 0.0046 |
| 65 | 1.8301 | 0.0045 |
| 66 | 1.8345 | 0.0044 |
| 67 | 1.8389 | 0.0044 |
| 68 | 1.8432 | 0.0043 |
| 69 | 1.8475 | 0.0043 |
| 70 | 1.8517 | 0.0042 |
| 71 | 1.8559 | 0.0042 |
| 72 | 1.8600 | 0.0041 |
| 73 | 1.8665 | 0.0066 |
| 74 | 1.8730 | 0.0065 |
| 75 | 1.8795 | 0.0064 |
| 76 | 1.8858 | 0.0064 |
| 77 | 1.8921 | 0.0063 |
| 78 | 1.8984 | 0.0062 |
| 79 | 1.9046 | 0.0062 |
| 80 | 1.9107 | 0.0061 |
| 81 | 1.9168 | 0.0061 |
| 82 | 1.9228 | 0.0060 |
| 83 | 1.9287 | 0.0060 |
| 84 | 1.9347 | 0.0059 |
| 85 | 1.9405 | 0.0059 |
| 86 | 1.9463 | 0.0058 |
| 87 | 1.9521 | 0.0058 |
| 88 | 1.9578 | 0.0057 |
| 89 | 1.9634 | 0.0057 |
| 90 | 1.9690 | 0.0056 |
| 91 | 1.9746 | 0.0056 |
| 92 | 1.9801 | 0.0055 |
| 93 | 1.9856 | 0.0055 |
| 94 | 1.9910 | 0.0054 |
| 95 | 1.9964 | 0.0054 |
| 96 | 2.0018 | 0.0053 |
| 97 | 2.0071 | 0.0053 |
| 98 | 2.0123 | 0.0053 |
| 99 | 2.0175 | 0.0052 |
| 100 | 2.0227 | 0.0052 |
| 101 | 2.0279 | 0.0051 |
| 102 | 2.0330 | 0.0051 |
| 103 | 2.0381 | 0.0051 |
| 104 | 2.0431 | 0.0050 |
| 105 | 2.0481 | 0.0050 |
| 106 | 2.0531 | 0.0050 |
| 107 | 2.0580 | 0.0049 |
| 108 | 2.0629 | 0.0049 |

| | | |
|---|---|---|
| 109 | 2.0677 | 0.0049 |
| 110 | 2.0726 | 0.0048 |
| 111 | 2.0774 | 0.0048 |
| 112 | 2.0821 | 0.0048 |
| 113 | 2.0869 | 0.0047 |
| 114 | 2.0916 | 0.0047 |
| 115 | 2.0962 | 0.0047 |
| 116 | 2.1009 | 0.0046 |
| 117 | 2.1055 | 0.0046 |
| 118 | 2.1101 | 0.0046 |
| 119 | 2.1146 | 0.0046 |
| 120 | 2.1191 | 0.0045 |
| 121 | 2.1236 | 0.0045 |
| 122 | 2.1281 | 0.0045 |
| 123 | 2.1325 | 0.0044 |
| 124 | 2.1369 | 0.0044 |
| 125 | 2.1413 | 0.0044 |
| 126 | 2.1457 | 0.0044 |
| 127 | 2.1500 | 0.0043 |
| 128 | 2.1543 | 0.0043 |
| 129 | 2.1586 | 0.0043 |
| 130 | 2.1629 | 0.0043 |
| 131 | 2.1671 | 0.0042 |
| 132 | 2.1713 | 0.0042 |
| 133 | 2.1755 | 0.0042 |
| 134 | 2.1797 | 0.0042 |
| 135 | 2.1838 | 0.0041 |
| 136 | 2.1880 | 0.0041 |
| 137 | 2.1920 | 0.0041 |
| 138 | 2.1961 | 0.0041 |
| 139 | 2.2002 | 0.0041 |
| 140 | 2.2042 | 0.0040 |
| 141 | 2.2082 | 0.0040 |
| 142 | 2.2122 | 0.0040 |
| 143 | 2.2162 | 0.0040 |
| 144 | 2.2201 | 0.0039 |
| 145 | 2.2240 | 0.0039 |
| 146 | 2.2280 | 0.0039 |
| 147 | 2.2318 | 0.0039 |
| 148 | 2.2357 | 0.0039 |
| 149 | 2.2396 | 0.0038 |
| 150 | 2.2434 | 0.0038 |
| 151 | 2.2472 | 0.0038 |
| 152 | 2.2510 | 0.0038 |
| 153 | 2.2548 | 0.0038 |
| 154 | 2.2585 | 0.0038 |
| 155 | 2.2622 | 0.0037 |
| 156 | 2.2660 | 0.0037 |
| 157 | 2.2697 | 0.0037 |
| 158 | 2.2733 | 0.0037 |
| 159 | 2.2770 | 0.0037 |
| 160 | 2.2807 | 0.0036 |
| 161 | 2.2843 | 0.0036 |
| 162 | 2.2879 | 0.0036 |
| 163 | 2.2915 | 0.0036 |
| 164 | 2.2951 | 0.0036 |
| 165 | 2.2986 | 0.0036 |
| 166 | 2.3022 | 0.0035 |
| 167 | 2.3057 | 0.0035 |

| | | |
|---|---|---|
| 168 | 2.3093 | 0.0035 |
| 169 | 2.3128 | 0.0035 |
| 170 | 2.3162 | 0.0035 |
| 171 | 2.3197 | 0.0035 |
| 172 | 2.3232 | 0.0035 |
| 173 | 2.3266 | 0.0034 |
| 174 | 2.3300 | 0.0034 |
| 175 | 2.3334 | 0.0034 |
| 176 | 2.3368 | 0.0034 |
| 177 | 2.3402 | 0.0034 |
| 178 | 2.3436 | 0.0034 |
| 179 | 2.3470 | 0.0034 |
| 180 | 2.3503 | 0.0033 |
| 181 | 2.3536 | 0.0033 |
| 182 | 2.3569 | 0.0033 |
| 183 | 2.3602 | 0.0033 |
| 184 | 2.3635 | 0.0033 |
| 185 | 2.3668 | 0.0033 |
| 186 | 2.3701 | 0.0033 |
| 187 | 2.3733 | 0.0032 |
| 188 | 2.3765 | 0.0032 |
| 189 | 2.3798 | 0.0032 |
| 190 | 2.3830 | 0.0032 |
| 191 | 2.3862 | 0.0032 |
| 192 | 2.3893 | 0.0032 |
| 193 | 2.3925 | 0.0032 |
| 194 | 2.3957 | 0.0032 |
| 195 | 2.3988 | 0.0031 |
| 196 | 2.4020 | 0.0031 |
| 197 | 2.4051 | 0.0031 |
| 198 | 2.4082 | 0.0031 |
| 199 | 2.4113 | 0.0031 |
| 200 | 2.4144 | 0.0031 |
| 201 | 2.4175 | 0.0031 |
| 202 | 2.4205 | 0.0031 |
| 203 | 2.4236 | 0.0031 |
| 204 | 2.4266 | 0.0030 |
| 205 | 2.4297 | 0.0030 |
| 206 | 2.4327 | 0.0030 |
| 207 | 2.4357 | 0.0030 |
| 208 | 2.4387 | 0.0030 |
| 209 | 2.4417 | 0.0030 |
| 210 | 2.4447 | 0.0030 |
| 211 | 2.4476 | 0.0030 |
| 212 | 2.4506 | 0.0030 |
| 213 | 2.4535 | 0.0029 |
| 214 | 2.4565 | 0.0029 |
| 215 | 2.4594 | 0.0029 |
| 216 | 2.4623 | 0.0029 |
| 217 | 2.4652 | 0.0029 |
| 218 | 2.4681 | 0.0029 |
| 219 | 2.4710 | 0.0029 |
| 220 | 2.4739 | 0.0029 |
| 221 | 2.4767 | 0.0029 |
| 222 | 2.4796 | 0.0029 |
| 223 | 2.4824 | 0.0028 |
| 224 | 2.4853 | 0.0028 |
| 225 | 2.4881 | 0.0028 |
| 226 | 2.4909 | 0.0028 |

| | | |
|---|---|---|
| 227 | 2.4937 | 0.0028 |
| 228 | 2.4965 | 0.0028 |
| 229 | 2.4993 | 0.0028 |
| 230 | 2.5021 | 0.0028 |
| 231 | 2.5049 | 0.0028 |
| 232 | 2.5076 | 0.0028 |
| 233 | 2.5104 | 0.0028 |
| 234 | 2.5131 | 0.0027 |
| 235 | 2.5159 | 0.0027 |
| 236 | 2.5186 | 0.0027 |
| 237 | 2.5213 | 0.0027 |
| 238 | 2.5240 | 0.0027 |
| 239 | 2.5267 | 0.0027 |
| 240 | 2.5294 | 0.0027 |
| 241 | 2.5321 | 0.0027 |
| 242 | 2.5348 | 0.0027 |
| 243 | 2.5375 | 0.0027 |
| 244 | 2.5401 | 0.0027 |
| 245 | 2.5428 | 0.0027 |
| 246 | 2.5454 | 0.0026 |
| 247 | 2.5481 | 0.0026 |
| 248 | 2.5507 | 0.0026 |
| 249 | 2.5533 | 0.0026 |
| 250 | 2.5559 | 0.0026 |
| 251 | 2.5586 | 0.0026 |
| 252 | 2.5612 | 0.0026 |
| 253 | 2.5637 | 0.0026 |
| 254 | 2.5663 | 0.0026 |
| 255 | 2.5689 | 0.0026 |
| 256 | 2.5715 | 0.0026 |
| 257 | 2.5740 | 0.0026 |
| 258 | 2.5766 | 0.0026 |
| 259 | 2.5791 | 0.0025 |
| 260 | 2.5817 | 0.0025 |
| 261 | 2.5842 | 0.0025 |
| 262 | 2.5867 | 0.0025 |
| 263 | 2.5892 | 0.0025 |
| 264 | 2.5918 | 0.0025 |
| 265 | 2.5943 | 0.0025 |
| 266 | 2.5968 | 0.0025 |
| 267 | 2.5992 | 0.0025 |
| 268 | 2.6017 | 0.0025 |
| 269 | 2.6042 | 0.0025 |
| 270 | 2.6067 | 0.0025 |
| 271 | 2.6091 | 0.0025 |
| 272 | 2.6116 | 0.0025 |
| 273 | 2.6140 | 0.0024 |
| 274 | 2.6165 | 0.0024 |
| 275 | 2.6189 | 0.0024 |
| 276 | 2.6213 | 0.0024 |
| 277 | 2.6238 | 0.0024 |
| 278 | 2.6262 | 0.0024 |
| 279 | 2.6286 | 0.0024 |
| 280 | 2.6310 | 0.0024 |
| 281 | 2.6334 | 0.0024 |
| 282 | 2.6358 | 0.0024 |
| 283 | 2.6382 | 0.0024 |
| 284 | 2.6405 | 0.0024 |
| 285 | 2.6429 | 0.0024 |

| | | |
|---|---|---|
| 286 | 2.6453 | 0.0024 |
| 287 | 2.6476 | 0.0024 |
| 288 | 2.6500 | 0.0024 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0024 | 0.0004 | 0.0020 |
| 2 | 0.0024 | 0.0004 | 0.0020 |
| 3 | 0.0024 | 0.0004 | 0.0020 |
| 4 | 0.0024 | 0.0004 | 0.0020 |
| 5 | 0.0024 | 0.0004 | 0.0020 |
| 6 | 0.0024 | 0.0004 | 0.0020 |
| 7 | 0.0024 | 0.0004 | 0.0020 |
| 8 | 0.0024 | 0.0004 | 0.0021 |
| 9 | 0.0024 | 0.0004 | 0.0021 |
| 10 | 0.0024 | 0.0004 | 0.0021 |
| 11 | 0.0024 | 0.0004 | 0.0021 |
| 12 | 0.0025 | 0.0004 | 0.0021 |
| 13 | 0.0025 | 0.0004 | 0.0021 |
| 14 | 0.0025 | 0.0004 | 0.0021 |
| 15 | 0.0025 | 0.0004 | 0.0021 |
| 16 | 0.0025 | 0.0004 | 0.0021 |
| 17 | 0.0025 | 0.0004 | 0.0021 |
| 18 | 0.0025 | 0.0004 | 0.0021 |
| 19 | 0.0025 | 0.0004 | 0.0021 |
| 20 | 0.0025 | 0.0004 | 0.0022 |
| 21 | 0.0026 | 0.0004 | 0.0022 |
| 22 | 0.0026 | 0.0004 | 0.0022 |
| 23 | 0.0026 | 0.0004 | 0.0022 |
| 24 | 0.0026 | 0.0004 | 0.0022 |
| 25 | 0.0026 | 0.0004 | 0.0022 |
| 26 | 0.0026 | 0.0004 | 0.0022 |
| 27 | 0.0026 | 0.0004 | 0.0022 |
| 28 | 0.0026 | 0.0004 | 0.0022 |
| 29 | 0.0026 | 0.0004 | 0.0022 |
| 30 | 0.0027 | 0.0004 | 0.0023 |
| 31 | 0.0027 | 0.0004 | 0.0023 |
| 32 | 0.0027 | 0.0004 | 0.0023 |
| 33 | 0.0027 | 0.0004 | 0.0023 |
| 34 | 0.0027 | 0.0004 | 0.0023 |
| 35 | 0.0027 | 0.0004 | 0.0023 |
| 36 | 0.0027 | 0.0004 | 0.0023 |
| 37 | 0.0027 | 0.0004 | 0.0023 |
| 38 | 0.0028 | 0.0004 | 0.0023 |
| 39 | 0.0028 | 0.0004 | 0.0024 |
| 40 | 0.0028 | 0.0004 | 0.0024 |
| 41 | 0.0028 | 0.0004 | 0.0024 |
| 42 | 0.0028 | 0.0004 | 0.0024 |
| 43 | 0.0028 | 0.0004 | 0.0024 |
| 44 | 0.0028 | 0.0004 | 0.0024 |
| 45 | 0.0029 | 0.0004 | 0.0024 |
| 46 | 0.0029 | 0.0004 | 0.0024 |
| 47 | 0.0029 | 0.0004 | 0.0024 |
| 48 | 0.0029 | 0.0004 | 0.0025 |
| 49 | 0.0029 | 0.0004 | 0.0025 |
| 50 | 0.0029 | 0.0004 | 0.0025 |
| 51 | 0.0029 | 0.0004 | 0.0025 |

| | | | |
|---|---|---|---|
| 52 | 0.0030 | 0.0004 | 0.0025 |
| 53 | 0.0030 | 0.0005 | 0.0025 |
| 54 | 0.0030 | 0.0005 | 0.0025 |
| 55 | 0.0030 | 0.0005 | 0.0026 |
| 56 | 0.0030 | 0.0005 | 0.0026 |
| 57 | 0.0030 | 0.0005 | 0.0026 |
| 58 | 0.0031 | 0.0005 | 0.0026 |
| 59 | 0.0031 | 0.0005 | 0.0026 |
| 60 | 0.0031 | 0.0005 | 0.0026 |
| 61 | 0.0031 | 0.0005 | 0.0026 |
| 62 | 0.0031 | 0.0005 | 0.0027 |
| 63 | 0.0031 | 0.0005 | 0.0027 |
| 64 | 0.0032 | 0.0005 | 0.0027 |
| 65 | 0.0032 | 0.0005 | 0.0027 |
| 66 | 0.0032 | 0.0005 | 0.0027 |
| 67 | 0.0032 | 0.0005 | 0.0027 |
| 68 | 0.0032 | 0.0005 | 0.0027 |
| 69 | 0.0033 | 0.0005 | 0.0028 |
| 70 | 0.0033 | 0.0005 | 0.0028 |
| 71 | 0.0033 | 0.0005 | 0.0028 |
| 72 | 0.0033 | 0.0005 | 0.0028 |
| 73 | 0.0033 | 0.0005 | 0.0028 |
| 74 | 0.0034 | 0.0005 | 0.0028 |
| 75 | 0.0034 | 0.0005 | 0.0029 |
| 76 | 0.0034 | 0.0005 | 0.0029 |
| 77 | 0.0034 | 0.0005 | 0.0029 |
| 78 | 0.0034 | 0.0005 | 0.0029 |
| 79 | 0.0035 | 0.0005 | 0.0029 |
| 80 | 0.0035 | 0.0005 | 0.0030 |
| 81 | 0.0035 | 0.0005 | 0.0030 |
| 82 | 0.0035 | 0.0005 | 0.0030 |
| 83 | 0.0036 | 0.0005 | 0.0030 |
| 84 | 0.0036 | 0.0005 | 0.0030 |
| 85 | 0.0036 | 0.0005 | 0.0031 |
| 86 | 0.0036 | 0.0005 | 0.0031 |
| 87 | 0.0037 | 0.0006 | 0.0031 |
| 88 | 0.0037 | 0.0006 | 0.0031 |
| 89 | 0.0037 | 0.0006 | 0.0032 |
| 90 | 0.0037 | 0.0006 | 0.0032 |
| 91 | 0.0038 | 0.0006 | 0.0032 |
| 92 | 0.0038 | 0.0006 | 0.0032 |
| 93 | 0.0038 | 0.0006 | 0.0032 |
| 94 | 0.0038 | 0.0006 | 0.0033 |
| 95 | 0.0039 | 0.0006 | 0.0033 |
| 96 | 0.0039 | 0.0006 | 0.0033 |
| 97 | 0.0039 | 0.0006 | 0.0034 |
| 98 | 0.0040 | 0.0006 | 0.0034 |
| 99 | 0.0040 | 0.0006 | 0.0034 |
| 100 | 0.0040 | 0.0006 | 0.0034 |
| 101 | 0.0041 | 0.0006 | 0.0035 |
| 102 | 0.0041 | 0.0006 | 0.0035 |
| 103 | 0.0041 | 0.0006 | 0.0035 |
| 104 | 0.0042 | 0.0006 | 0.0035 |
| 105 | 0.0042 | 0.0006 | 0.0036 |
| 106 | 0.0042 | 0.0006 | 0.0036 |
| 107 | 0.0043 | 0.0006 | 0.0036 |
| 108 | 0.0043 | 0.0007 | 0.0037 |
| 109 | 0.0044 | 0.0007 | 0.0037 |
| 110 | 0.0044 | 0.0007 | 0.0037 |

| | | | |
|---|---|---|---|
| 111 | 0.0044 | 0.0007 | 0.0038 |
| 112 | 0.0045 | 0.0007 | 0.0038 |
| 113 | 0.0045 | 0.0007 | 0.0038 |
| 114 | 0.0046 | 0.0007 | 0.0039 |
| 115 | 0.0046 | 0.0007 | 0.0039 |
| 116 | 0.0046 | 0.0007 | 0.0039 |
| 117 | 0.0047 | 0.0007 | 0.0040 |
| 118 | 0.0047 | 0.0007 | 0.0040 |
| 119 | 0.0048 | 0.0007 | 0.0041 |
| 120 | 0.0048 | 0.0007 | 0.0041 |
| 121 | 0.0049 | 0.0007 | 0.0042 |
| 122 | 0.0049 | 0.0007 | 0.0042 |
| 123 | 0.0050 | 0.0008 | 0.0042 |
| 124 | 0.0050 | 0.0008 | 0.0043 |
| 125 | 0.0051 | 0.0008 | 0.0043 |
| 126 | 0.0051 | 0.0008 | 0.0044 |
| 127 | 0.0052 | 0.0008 | 0.0044 |
| 128 | 0.0053 | 0.0008 | 0.0045 |
| 129 | 0.0053 | 0.0008 | 0.0045 |
| 130 | 0.0054 | 0.0008 | 0.0046 |
| 131 | 0.0055 | 0.0008 | 0.0046 |
| 132 | 0.0055 | 0.0008 | 0.0047 |
| 133 | 0.0056 | 0.0008 | 0.0048 |
| 134 | 0.0057 | 0.0009 | 0.0048 |
| 135 | 0.0058 | 0.0009 | 0.0049 |
| 136 | 0.0058 | 0.0009 | 0.0049 |
| 137 | 0.0059 | 0.0009 | 0.0050 |
| 138 | 0.0060 | 0.0009 | 0.0051 |
| 139 | 0.0061 | 0.0009 | 0.0052 |
| 140 | 0.0061 | 0.0009 | 0.0052 |
| 141 | 0.0062 | 0.0009 | 0.0053 |
| 142 | 0.0063 | 0.0010 | 0.0054 |
| 143 | 0.0064 | 0.0010 | 0.0055 |
| 144 | 0.0065 | 0.0010 | 0.0055 |
| 145 | 0.0041 | 0.0006 | 0.0035 |
| 146 | 0.0042 | 0.0006 | 0.0035 |
| 147 | 0.0043 | 0.0006 | 0.0036 |
| 148 | 0.0043 | 0.0007 | 0.0037 |
| 149 | 0.0044 | 0.0007 | 0.0038 |
| 150 | 0.0045 | 0.0007 | 0.0038 |
| 151 | 0.0046 | 0.0007 | 0.0039 |
| 152 | 0.0047 | 0.0007 | 0.0040 |
| 153 | 0.0048 | 0.0007 | 0.0041 |
| 154 | 0.0049 | 0.0007 | 0.0041 |
| 155 | 0.0050 | 0.0008 | 0.0043 |
| 156 | 0.0051 | 0.0008 | 0.0043 |
| 157 | 0.0053 | 0.0008 | 0.0045 |
| 158 | 0.0053 | 0.0008 | 0.0045 |
| 159 | 0.0055 | 0.0008 | 0.0047 |
| 160 | 0.0056 | 0.0008 | 0.0048 |
| 161 | 0.0058 | 0.0009 | 0.0049 |
| 162 | 0.0059 | 0.0009 | 0.0050 |
| 163 | 0.0061 | 0.0009 | 0.0052 |
| 164 | 0.0063 | 0.0009 | 0.0053 |
| 165 | 0.0065 | 0.0010 | 0.0055 |
| 166 | 0.0066 | 0.0010 | 0.0056 |
| 167 | 0.0069 | 0.0010 | 0.0059 |
| 168 | 0.0071 | 0.0011 | 0.0060 |
| 169 | 0.0074 | 0.0011 | 0.0063 |

| | | | |
|---|---|---|---|
| 170 | 0.0076 | 0.0012 | 0.0065 |
| 171 | 0.0080 | 0.0012 | 0.0068 |
| 172 | 0.0082 | 0.0012 | 0.0070 |
| 173 | 0.0087 | 0.0013 | 0.0074 |
| 174 | 0.0089 | 0.0014 | 0.0076 |
| 175 | 0.0095 | 0.0014 | 0.0081 |
| 176 | 0.0098 | 0.0015 | 0.0083 |
| 177 | 0.0105 | 0.0016 | 0.0089 |
| 178 | 0.0109 | 0.0017 | 0.0093 |
| 179 | 0.0118 | 0.0018 | 0.0100 |
| 180 | 0.0123 | 0.0019 | 0.0104 |
| 181 | 0.0135 | 0.0020 | 0.0114 |
| 182 | 0.0142 | 0.0021 | 0.0120 |
| 183 | 0.0158 | 0.0024 | 0.0134 |
| 184 | 0.0168 | 0.0025 | 0.0142 |
| 185 | 0.0361 | 0.0055 | 0.0306 |
| 186 | 0.0384 | 0.0058 | 0.0326 |
| 187 | 0.0446 | 0.0059 | 0.0387 |
| 188 | 0.0487 | 0.0059 | 0.0428 |
| 189 | 0.0605 | 0.0059 | 0.0546 |
| 190 | 0.0697 | 0.0059 | 0.0638 |
| 191 | 0.1058 | 0.0059 | 0.0999 |
| 192 | 0.1535 | 0.0059 | 0.1476 |
| 193 | 0.6642 | 0.0059 | 0.6583 |
| 194 | 0.0832 | 0.0059 | 0.0773 |
| 195 | 0.0538 | 0.0059 | 0.0479 |
| 196 | 0.0412 | 0.0059 | 0.0353 |
| 197 | 0.0179 | 0.0027 | 0.0152 |
| 198 | 0.0149 | 0.0023 | 0.0127 |
| 199 | 0.0129 | 0.0019 | 0.0109 |
| 200 | 0.0113 | 0.0017 | 0.0096 |
| 201 | 0.0102 | 0.0015 | 0.0086 |
| 202 | 0.0092 | 0.0014 | 0.0078 |
| 203 | 0.0084 | 0.0013 | 0.0072 |
| 204 | 0.0078 | 0.0012 | 0.0066 |
| 205 | 0.0073 | 0.0011 | 0.0062 |
| 206 | 0.0068 | 0.0010 | 0.0058 |
| 207 | 0.0064 | 0.0010 | 0.0054 |
| 208 | 0.0060 | 0.0009 | 0.0051 |
| 209 | 0.0057 | 0.0009 | 0.0048 |
| 210 | 0.0054 | 0.0008 | 0.0046 |
| 211 | 0.0052 | 0.0008 | 0.0044 |
| 212 | 0.0049 | 0.0007 | 0.0042 |
| 213 | 0.0047 | 0.0007 | 0.0040 |
| 214 | 0.0046 | 0.0007 | 0.0039 |
| 215 | 0.0044 | 0.0007 | 0.0037 |
| 216 | 0.0042 | 0.0006 | 0.0036 |
| 217 | 0.0066 | 0.0010 | 0.0056 |
| 218 | 0.0064 | 0.0010 | 0.0054 |
| 219 | 0.0062 | 0.0009 | 0.0052 |
| 220 | 0.0060 | 0.0009 | 0.0051 |
| 221 | 0.0059 | 0.0009 | 0.0050 |
| 222 | 0.0057 | 0.0009 | 0.0048 |
| 223 | 0.0056 | 0.0008 | 0.0047 |
| 224 | 0.0054 | 0.0008 | 0.0046 |
| 225 | 0.0053 | 0.0008 | 0.0045 |
| 226 | 0.0052 | 0.0008 | 0.0044 |
| 227 | 0.0051 | 0.0008 | 0.0043 |
| 228 | 0.0050 | 0.0008 | 0.0042 |

| | | | |
|---|---|---|---|
| 229 | 0.0049 | 0.0007 | 0.0041 |
| 230 | 0.0048 | 0.0007 | 0.0040 |
| 231 | 0.0047 | 0.0007 | 0.0040 |
| 232 | 0.0046 | 0.0007 | 0.0039 |
| 233 | 0.0045 | 0.0007 | 0.0038 |
| 234 | 0.0044 | 0.0007 | 0.0037 |
| 235 | 0.0043 | 0.0007 | 0.0037 |
| 236 | 0.0043 | 0.0006 | 0.0036 |
| 237 | 0.0042 | 0.0006 | 0.0036 |
| 238 | 0.0041 | 0.0006 | 0.0035 |
| 239 | 0.0041 | 0.0006 | 0.0034 |
| 240 | 0.0040 | 0.0006 | 0.0034 |
| 241 | 0.0039 | 0.0006 | 0.0033 |
| 242 | 0.0039 | 0.0006 | 0.0033 |
| 243 | 0.0038 | 0.0006 | 0.0032 |
| 244 | 0.0038 | 0.0006 | 0.0032 |
| 245 | 0.0037 | 0.0006 | 0.0031 |
| 246 | 0.0036 | 0.0006 | 0.0031 |
| 247 | 0.0036 | 0.0005 | 0.0031 |
| 248 | 0.0035 | 0.0005 | 0.0030 |
| 249 | 0.0035 | 0.0005 | 0.0030 |
| 250 | 0.0035 | 0.0005 | 0.0029 |
| 251 | 0.0034 | 0.0005 | 0.0029 |
| 252 | 0.0034 | 0.0005 | 0.0029 |
| 253 | 0.0033 | 0.0005 | 0.0028 |
| 254 | 0.0033 | 0.0005 | 0.0028 |
| 255 | 0.0032 | 0.0005 | 0.0028 |
| 256 | 0.0032 | 0.0005 | 0.0027 |
| 257 | 0.0032 | 0.0005 | 0.0027 |
| 258 | 0.0031 | 0.0005 | 0.0027 |
| 259 | 0.0031 | 0.0005 | 0.0026 |
| 260 | 0.0031 | 0.0005 | 0.0026 |
| 261 | 0.0030 | 0.0005 | 0.0026 |
| 262 | 0.0030 | 0.0005 | 0.0025 |
| 263 | 0.0030 | 0.0004 | 0.0025 |
| 264 | 0.0029 | 0.0004 | 0.0025 |
| 265 | 0.0029 | 0.0004 | 0.0025 |
| 266 | 0.0029 | 0.0004 | 0.0024 |
| 267 | 0.0028 | 0.0004 | 0.0024 |
| 268 | 0.0028 | 0.0004 | 0.0024 |
| 269 | 0.0028 | 0.0004 | 0.0024 |
| 270 | 0.0028 | 0.0004 | 0.0023 |
| 271 | 0.0027 | 0.0004 | 0.0023 |
| 272 | 0.0027 | 0.0004 | 0.0023 |
| 273 | 0.0027 | 0.0004 | 0.0023 |
| 274 | 0.0027 | 0.0004 | 0.0023 |
| 275 | 0.0026 | 0.0004 | 0.0022 |
| 276 | 0.0026 | 0.0004 | 0.0022 |
| 277 | 0.0026 | 0.0004 | 0.0022 |
| 278 | 0.0026 | 0.0004 | 0.0022 |
| 279 | 0.0025 | 0.0004 | 0.0022 |
| 280 | 0.0025 | 0.0004 | 0.0021 |
| 281 | 0.0025 | 0.0004 | 0.0021 |
| 282 | 0.0025 | 0.0004 | 0.0021 |
| 283 | 0.0025 | 0.0004 | 0.0021 |
| 284 | 0.0024 | 0.0004 | 0.0021 |
| 285 | 0.0024 | 0.0004 | 0.0021 |
| 286 | 0.0024 | 0.0004 | 0.0020 |
| 287 | 0.0024 | 0.0004 | 0.0020 |

288 0.0024 0.0004 0.0020

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Total soil rain loss = 0.26(In)
Total effective rainfall = 2.39(In)
Peak flow rate in flood hydrograph = 10.31(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.01 | Q | | | | |
| 0+15 | 0.0004 | 0.04 | Q | | | | |
| 0+20 | 0.0007 | 0.05 | Q | | | | |
| 0+25 | 0.0011 | 0.06 | Q | | | | |
| 0+30 | 0.0016 | 0.07 | Q | | | | |
| 0+35 | 0.0021 | 0.07 | Q | | | | |
| 0+40 | 0.0025 | 0.07 | Q | | | | |
| 0+45 | 0.0031 | 0.08 | Q | | | | |
| 0+50 | 0.0036 | 0.08 | Q | | | | |
| 0+55 | 0.0041 | 0.08 | Q | | | | |
| 1+ 0 | 0.0047 | 0.08 | Q | | | | |
| 1+ 5 | 0.0053 | 0.08 | Q | | | | |
| 1+10 | 0.0058 | 0.08 | Q | | | | |
| 1+15 | 0.0064 | 0.08 | Q | | | | |
| 1+20 | 0.0070 | 0.08 | Q | | | | |
| 1+25 | 0.0076 | 0.08 | Q | | | | |
| 1+30 | 0.0082 | 0.09 | Q | | | | |
| 1+35 | 0.0087 | 0.09 | Q | | | | |
| 1+40 | 0.0093 | 0.09 | Q | | | | |
| 1+45 | 0.0099 | 0.09 | Q | | | | |
| 1+50 | 0.0106 | 0.09 | Q | | | | |
| 1+55 | 0.0112 | 0.09 | Q | | | | |
| 2+ 0 | 0.0118 | 0.09 | Q | | | | |
| 2+ 5 | 0.0124 | 0.09 | Q | | | | |
| 2+10 | 0.0130 | 0.09 | Q | | | | |
| 2+15 | 0.0136 | 0.09 | Q | | | | |
| 2+20 | 0.0142 | 0.09 | Q | | | | |
| 2+25 | 0.0149 | 0.09 | Q | | | | |
| 2+30 | 0.0155 | 0.09 | Q | | | | |
| 2+35 | 0.0161 | 0.09 | Q | | | | |
| 2+40 | 0.0167 | 0.09 | Q | | | | |
| 2+45 | 0.0174 | 0.09 | QV | | | | |
| 2+50 | 0.0180 | 0.09 | QV | | | | |
| 2+55 | 0.0187 | 0.09 | QV | | | | |
| 3+ 0 | 0.0193 | 0.09 | QV | | | | |
| 3+ 5 | 0.0199 | 0.09 | QV | | | | |
| 3+10 | 0.0206 | 0.09 | QV | | | | |
| 3+15 | 0.0212 | 0.09 | QV | | | | |
| 3+20 | 0.0219 | 0.10 | QV | | | | |
| 3+25 | 0.0226 | 0.10 | QV | | | | |
| 3+30 | 0.0232 | 0.10 | QV | | | | |
| 3+35 | 0.0239 | 0.10 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+40 | 0.0246 | 0.10 | QV | | | | |
| 3+45 | 0.0252 | 0.10 | QV | | | | |
| 3+50 | 0.0259 | 0.10 | QV | | | | |
| 3+55 | 0.0266 | 0.10 | QV | | | | |
| 4+ 0 | 0.0273 | 0.10 | QV | | | | |
| 4+ 5 | 0.0280 | 0.10 | QV | | | | |
| 4+10 | 0.0286 | 0.10 | QV | | | | |
| 4+15 | 0.0293 | 0.10 | QV | | | | |
| 4+20 | 0.0300 | 0.10 | QV | | | | |
| 4+25 | 0.0307 | 0.10 | QV | | | | |
| 4+30 | 0.0314 | 0.10 | QV | | | | |
| 4+35 | 0.0321 | 0.10 | QV | | | | |
| 4+40 | 0.0328 | 0.10 | QV | | | | |
| 4+45 | 0.0336 | 0.10 | QV | | | | |
| 4+50 | 0.0343 | 0.10 | Q V | | | | |
| 4+55 | 0.0350 | 0.10 | Q V | | | | |
| 5+ 0 | 0.0357 | 0.11 | Q V | | | | |
| 5+ 5 | 0.0365 | 0.11 | Q V | | | | |
| 5+10 | 0.0372 | 0.11 | Q V | | | | |
| 5+15 | 0.0379 | 0.11 | Q V | | | | |
| 5+20 | 0.0387 | 0.11 | Q V | | | | |
| 5+25 | 0.0394 | 0.11 | Q V | | | | |
| 5+30 | 0.0402 | 0.11 | Q V | | | | |
| 5+35 | 0.0409 | 0.11 | Q V | | | | |
| 5+40 | 0.0417 | 0.11 | Q V | | | | |
| 5+45 | 0.0424 | 0.11 | Q V | | | | |
| 5+50 | 0.0432 | 0.11 | Q V | | | | |
| 5+55 | 0.0440 | 0.11 | Q V | | | | |
| 6+ 0 | 0.0448 | 0.11 | Q V | | | | |
| 6+ 5 | 0.0455 | 0.11 | Q V | | | | |
| 6+10 | 0.0463 | 0.11 | Q V | | | | |
| 6+15 | 0.0471 | 0.11 | Q V | | | | |
| 6+20 | 0.0479 | 0.12 | Q V | | | | |
| 6+25 | 0.0487 | 0.12 | Q V | | | | |
| 6+30 | 0.0495 | 0.12 | Q V | | | | |
| 6+35 | 0.0503 | 0.12 | Q V | | | | |
| 6+40 | 0.0512 | 0.12 | Q  V | | | | |
| 6+45 | 0.0520 | 0.12 | Q  V | | | | |
| 6+50 | 0.0528 | 0.12 | Q  V | | | | |
| 6+55 | 0.0536 | 0.12 | Q  V | | | | |
| 7+ 0 | 0.0545 | 0.12 | Q  V | | | | |
| 7+ 5 | 0.0553 | 0.12 | Q  V | | | | |
| 7+10 | 0.0562 | 0.12 | Q  V | | | | |
| 7+15 | 0.0570 | 0.12 | Q  V | | | | |
| 7+20 | 0.0579 | 0.13 | Q  V | | | | |
| 7+25 | 0.0588 | 0.13 | Q  V | | | | |
| 7+30 | 0.0596 | 0.13 | Q  V | | | | |
| 7+35 | 0.0605 | 0.13 | Q  V | | | | |
| 7+40 | 0.0614 | 0.13 | Q  V | | | | |
| 7+45 | 0.0623 | 0.13 | Q  V | | | | |
| 7+50 | 0.0632 | 0.13 | Q  V | | | | |
| 7+55 | 0.0641 | 0.13 | Q  V | | | | |
| 8+ 0 | 0.0650 | 0.13 | Q  V | | | | |
| 8+ 5 | 0.0659 | 0.13 | Q  V | | | | |
| 8+10 | 0.0668 | 0.13 | Q  V | | | | |
| 8+15 | 0.0678 | 0.14 | Q   V | | | | |
| 8+20 | 0.0687 | 0.14 | Q   V | | | | |
| 8+25 | 0.0697 | 0.14 | Q   V | | | | |
| 8+30 | 0.0706 | 0.14 | Q   V | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8+35 | 0.0716 | 0.14 | Q | V | | | | |
| 8+40 | 0.0725 | 0.14 | Q | V | | | | |
| 8+45 | 0.0735 | 0.14 | Q | V | | | | |
| 8+50 | 0.0745 | 0.14 | Q | V | | | | |
| 8+55 | 0.0755 | 0.14 | Q | V | | | | |
| 9+ 0 | 0.0765 | 0.15 | Q | V | | | | |
| 9+ 5 | 0.0775 | 0.15 | Q | V | | | | |
| 9+10 | 0.0785 | 0.15 | Q | V | | | | |
| 9+15 | 0.0796 | 0.15 | Q | V | | | | |
| 9+20 | 0.0806 | 0.15 | Q | V | | | | |
| 9+25 | 0.0816 | 0.15 | Q | V | | | | |
| 9+30 | 0.0827 | 0.15 | Q | V | | | | |
| 9+35 | 0.0838 | 0.15 | Q | V | | | | |
| 9+40 | 0.0848 | 0.16 | Q | V | | | | |
| 9+45 | 0.0859 | 0.16 | Q | V | | | | |
| 9+50 | 0.0870 | 0.16 | Q | V | | | | |
| 9+55 | 0.0881 | 0.16 | Q | V | | | | |
| 10+ 0 | 0.0892 | 0.16 | Q | V | | | | |
| 10+ 5 | 0.0904 | 0.16 | Q | V | | | | |
| 10+10 | 0.0915 | 0.17 | Q | V | | | | |
| 10+15 | 0.0927 | 0.17 | Q | V | | | | |
| 10+20 | 0.0938 | 0.17 | Q | V | | | | |
| 10+25 | 0.0950 | 0.17 | Q | V | | | | |
| 10+30 | 0.0962 | 0.17 | Q | V | | | | |
| 10+35 | 0.0974 | 0.17 | Q | V | | | | |
| 10+40 | 0.0986 | 0.18 | Q | V | | | | |
| 10+45 | 0.0998 | 0.18 | Q | V | | | | |
| 10+50 | 0.1011 | 0.18 | Q | V | | | | |
| 10+55 | 0.1023 | 0.18 | Q | V | | | | |
| 11+ 0 | 0.1036 | 0.18 | Q | V | | | | |
| 11+ 5 | 0.1049 | 0.19 | Q | V | | | | |
| 11+10 | 0.1062 | 0.19 | Q | V | | | | |
| 11+15 | 0.1075 | 0.19 | Q | V | | | | |
| 11+20 | 0.1088 | 0.19 | Q | V | | | | |
| 11+25 | 0.1101 | 0.20 | Q | V | | | | |
| 11+30 | 0.1115 | 0.20 | Q | V | | | | |
| 11+35 | 0.1129 | 0.20 | Q | V | | | | |
| 11+40 | 0.1143 | 0.20 | Q | V | | | | |
| 11+45 | 0.1157 | 0.21 | Q | V | | | | |
| 11+50 | 0.1171 | 0.21 | Q | V | | | | |
| 11+55 | 0.1186 | 0.21 | Q | V | | | | |
| 12+ 0 | 0.1201 | 0.21 | Q | V | | | | |
| 12+ 5 | 0.1216 | 0.22 | Q | V | | | | |
| 12+10 | 0.1230 | 0.21 | Q | V | | | | |
| 12+15 | 0.1243 | 0.18 | Q | V | | | | |
| 12+20 | 0.1255 | 0.17 | Q | V | | | | |
| 12+25 | 0.1266 | 0.17 | Q | V | | | | |
| 12+30 | 0.1277 | 0.16 | Q | V | | | | |
| 12+35 | 0.1289 | 0.16 | Q | V | | | | |
| 12+40 | 0.1300 | 0.16 | Q | V | | | | |
| 12+45 | 0.1311 | 0.16 | Q | V | | | | |
| 12+50 | 0.1322 | 0.16 | Q | V | | | | |
| 12+55 | 0.1334 | 0.17 | Q | V | | | | |
| 13+ 0 | 0.1345 | 0.17 | Q | V | | | | |
| 13+ 5 | 0.1357 | 0.17 | Q | V | | | | |
| 13+10 | 0.1369 | 0.17 | Q | V | | | | |
| 13+15 | 0.1381 | 0.18 | Q | V | | | | |
| 13+20 | 0.1394 | 0.18 | Q | V | | | | |
| 13+25 | 0.1407 | 0.19 | Q | V | | | | |

```
13+30       0.1420      0.19  Q       V |          |          |          |
13+35       0.1433      0.19  Q       V |          |          |          |
13+40       0.1447      0.20  Q       V |          |          |          |
13+45       0.1461      0.20  Q       V |          |          |          |
13+50       0.1475      0.21  Q       V |          |          |          |
13+55       0.1490      0.22  Q       V |          |          |          |
14+ 0       0.1505      0.22  Q       V |          |          |          |
14+ 5       0.1521      0.23  Q        V|          |          |          |
14+10       0.1537      0.24  Q        V|          |          |          |
14+15       0.1554      0.24  Q        V|          |          |          |
14+20       0.1571      0.25  Q        V|          |          |          |
14+25       0.1589      0.26  Q        V|          |          |          |
14+30       0.1608      0.27  Q        V|          |          |          |
14+35       0.1627      0.28  Q        V|          |          |          |
14+40       0.1647      0.29  Q        V|          |          |          |
14+45       0.1669      0.31  Q        V|          |          |          |
14+50       0.1691      0.32  Q         V          |          |          |
14+55       0.1714      0.34  Q         V          |          |          |
15+ 0       0.1738      0.35  Q         V          |          |          |
15+ 5       0.1764      0.37  Q         V          |          |          |
15+10       0.1791      0.40  Q         V          |          |          |
15+15       0.1821      0.42  Q         V          |          |          |
15+20       0.1852      0.45  Q         V          |          |          |
15+25       0.1886      0.50  |Q        |V          |          |          |
15+30       0.1929      0.62  |Q        |V          |          |          |
15+35       0.1988      0.85  |Q        |V          |          |          |
15+40       0.2060      1.05  | Q       | V         |          |          |
15+45       0.2146      1.24  | Q       | V         |          |          |
15+50       0.2247      1.47  | Q       |  V        |          |          |
15+55       0.2370      1.79  |  Q      |   V       |          |          |
16+ 0       0.2528      2.30  |   Q     |   V       |          |          |
16+ 5       0.2781      3.66  |      Q  |     V     |          |          |
16+10       0.3248      6.78  |         |  Q     V  |          |          |
16+15       0.3958     10.31  |         |         Q  V          |          |
16+20       0.4458      7.26  |         |   Q       |     V    |          |
16+25       0.4790      4.82  |        Q|           |       V  |          |
16+30       0.5035      3.57  |      Q  |           |        V |          |
16+35       0.5218      2.65  |    Q    |           |         V          |
16+40       0.5362      2.10  |   Q     |           |          |V         |
16+45       0.5478      1.68  |  Q      |           |          | V        |
16+50       0.5572      1.37  | Q       |           |          | V        |
16+55       0.5653      1.17  | Q       |           |          |  V       |
17+ 0       0.5721      0.98  |Q        |           |          |  V       |
17+ 5       0.5779      0.85  |Q        |           |          |   V      |
17+10       0.5828      0.72  |Q        |           |          |   V      |
17+15       0.5870      0.61  |Q        |           |          |   V      |
17+20       0.5905      0.51  |Q        |           |          |   V      |
17+25       0.5936      0.45  Q         |           |          |    V     |
17+30       0.5966      0.43  Q         |           |          |    V     |
17+35       0.5993      0.40  Q         |           |          |    V     |
17+40       0.6016      0.33  Q         |           |          |    V     |
17+45       0.6035      0.27  Q         |           |          |    V     |
17+50       0.6049      0.21  Q         |           |          |    V     |
17+55       0.6063      0.19  Q         |           |          |    V     |
18+ 0       0.6075      0.18  Q         |           |          |    V     |
18+ 5       0.6087      0.17  Q         |           |          |     V    |
18+10       0.6099      0.18  Q         |           |          |     V    |
18+15       0.6113      0.20  Q         |           |          |     V    |
18+20       0.6127      0.20  Q         |           |          |     V    |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18+25 | 0.6141 | 0.21 | Q | \| | \| | \| | V \| |
| 18+30 | 0.6155 | 0.20 | Q | \| | \| | \| | V \| |
| 18+35 | 0.6169 | 0.20 | Q | \| | \| | \| | V \| |
| 18+40 | 0.6183 | 0.20 | Q | \| | \| | \| | V \| |
| 18+45 | 0.6196 | 0.20 | Q | \| | \| | \| | V \| |
| 18+50 | 0.6209 | 0.19 | Q | \| | \| | \| | V \| |
| 18+55 | 0.6222 | 0.19 | Q | \| | \| | \| | V \| |
| 19+ 0 | 0.6235 | 0.19 | Q | \| | \| | \| | V \| |
| 19+ 5 | 0.6248 | 0.18 | Q | \| | \| | \| | V \| |
| 19+10 | 0.6260 | 0.18 | Q | \| | \| | \| | V \| |
| 19+15 | 0.6272 | 0.18 | Q | \| | \| | \| | V \| |
| 19+20 | 0.6284 | 0.17 | Q | \| | \| | \| | V \| |
| 19+25 | 0.6296 | 0.17 | Q | \| | \| | \| | V \| |
| 19+30 | 0.6307 | 0.17 | Q | \| | \| | \| | V \| |
| 19+35 | 0.6319 | 0.16 | Q | \| | \| | \| | V \| |
| 19+40 | 0.6330 | 0.16 | Q | \| | \| | \| | V \| |
| 19+45 | 0.6340 | 0.16 | Q | \| | \| | \| | V \| |
| 19+50 | 0.6351 | 0.15 | Q | \| | \| | \| | V \| |
| 19+55 | 0.6361 | 0.15 | Q | \| | \| | \| | V \| |
| 20+ 0 | 0.6372 | 0.15 | Q | \| | \| | \| | V \| |
| 20+ 5 | 0.6382 | 0.15 | Q | \| | \| | \| | V \| |
| 20+10 | 0.6392 | 0.14 | Q | \| | \| | \| | V \| |
| 20+15 | 0.6402 | 0.14 | Q | \| | \| | \| | V \| |
| 20+20 | 0.6411 | 0.14 | Q | \| | \| | \| | V \| |
| 20+25 | 0.6421 | 0.14 | Q | \| | \| | \| | V \| |
| 20+30 | 0.6430 | 0.14 | Q | \| | \| | \| | V \| |
| 20+35 | 0.6439 | 0.13 | Q | \| | \| | \| | V \| |
| 20+40 | 0.6448 | 0.13 | Q | \| | \| | \| | V \| |
| 20+45 | 0.6457 | 0.13 | Q | \| | \| | \| | V \| |
| 20+50 | 0.6466 | 0.13 | Q | \| | \| | \| | V \| |
| 20+55 | 0.6474 | 0.13 | Q | \| | \| | \| | V \| |
| 21+ 0 | 0.6483 | 0.12 | Q | \| | \| | \| | V \| |
| 21+ 5 | 0.6491 | 0.12 | Q | \| | \| | \| | V \| |
| 21+10 | 0.6500 | 0.12 | Q | \| | \| | \| | V \| |
| 21+15 | 0.6508 | 0.12 | Q | \| | \| | \| | V \| |
| 21+20 | 0.6516 | 0.12 | Q | \| | \| | \| | V \| |
| 21+25 | 0.6524 | 0.12 | Q | \| | \| | \| | V \| |
| 21+30 | 0.6532 | 0.11 | Q | \| | \| | \| | V \| |
| 21+35 | 0.6540 | 0.11 | Q | \| | \| | \| | V \| |
| 21+40 | 0.6547 | 0.11 | Q | \| | \| | \| | V \| |
| 21+45 | 0.6555 | 0.11 | Q | \| | \| | \| | V \| |
| 21+50 | 0.6563 | 0.11 | Q | \| | \| | \| | V \| |
| 21+55 | 0.6570 | 0.11 | Q | \| | \| | \| | V \| |
| 22+ 0 | 0.6577 | 0.11 | Q | \| | \| | \| | V \| |
| 22+ 5 | 0.6585 | 0.11 | Q | \| | \| | \| | V \| |
| 22+10 | 0.6592 | 0.10 | Q | \| | \| | \| | V\| |
| 22+15 | 0.6599 | 0.10 | Q | \| | \| | \| | V\| |
| 22+20 | 0.6606 | 0.10 | Q | \| | \| | \| | V\| |
| 22+25 | 0.6613 | 0.10 | Q | \| | \| | \| | V\| |
| 22+30 | 0.6620 | 0.10 | Q | \| | \| | \| | V\| |
| 22+35 | 0.6627 | 0.10 | Q | \| | \| | \| | V\| |
| 22+40 | 0.6633 | 0.10 | Q | \| | \| | \| | V\| |
| 22+45 | 0.6640 | 0.10 | Q | \| | \| | \| | V\| |
| 22+50 | 0.6647 | 0.10 | Q | \| | \| | \| | V\| |
| 22+55 | 0.6653 | 0.10 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.6660 | 0.09 | Q | \| | \| | \| | V\| |
| 23+ 5 | 0.6666 | 0.09 | Q | \| | \| | \| | V\| |
| 23+10 | 0.6673 | 0.09 | Q | \| | \| | \| | V\| |
| 23+15 | 0.6679 | 0.09 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+20 | 0.6685 | 0.09 | Q | \| | \| | \| | V\| |
| 23+25 | 0.6692 | 0.09 | Q | \| | \| | \| | V\| |
| 23+30 | 0.6698 | 0.09 | Q | \| | \| | \| | V\| |
| 23+35 | 0.6704 | 0.09 | Q | \| | \| | \| | V\| |
| 23+40 | 0.6710 | 0.09 | Q | \| | \| | \| | V\| |
| 23+45 | 0.6716 | 0.09 | Q | \| | \| | \| | V\| |
| 23+50 | 0.6722 | 0.09 | Q | \| | \| | \| | V\| |
| 23+55 | 0.6728 | 0.09 | Q | \| | \| | \| | V\| |
| 24+ 0 | 0.6734 | 0.09 | Q | \| | \| | \| | V\| |
| 24+ 5 | 0.6739 | 0.08 | Q | \| | \| | \| | V\| |
| 24+10 | 0.6744 | 0.07 | Q | \| | \| | \| | V\| |
| 24+15 | 0.6747 | 0.05 | Q | \| | \| | \| | V\| |
| 24+20 | 0.6750 | 0.03 | Q | \| | \| | \| | V\| |
| 24+25 | 0.6751 | 0.02 | Q | \| | \| | \| | V\| |
| 24+30 | 0.6752 | 0.02 | Q | \| | \| | \| | V\| |
| 24+35 | 0.6753 | 0.01 | Q | \| | \| | \| | V\| |
| 24+40 | 0.6754 | 0.01 | Q | \| | \| | \| | V\| |
| 24+45 | 0.6755 | 0.01 | Q | \| | \| | \| | V\| |
| 24+50 | 0.6755 | 0.01 | Q | \| | \| | \| | V\| |
| 24+55 | 0.6756 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 0 | 0.6756 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 5 | 0.6756 | 0.00 | Q | \| | \| | \| | V\| |
| 25+10 | 0.6756 | 0.00 | Q | \| | \| | \| | V\| |
| 25+15 | 0.6756 | 0.00 | Q | \| | \| | \| | V\| |
| 25+20 | 0.6756 | 0.00 | Q | \| | \| | \| | V\| |
| 25+25 | 0.6757 | 0.00 | Q | \| | \| | \| | V\| |
| 25+30 | 0.6757 | 0.00 | Q | \| | \| | \| | V\| |
| 25+35 | 0.6757 | 0.00 | Q | \| | \| | \| | V\| |
| 25+40 | 0.6757 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 41
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 2.26 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 2.26 | 6 | 1.86 |
| Rainfall data for year 100 | | |
| 2.26 | 24 | 2.65 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 84.0 | 96.4 | 2.26 | 1.000 | 0.071 | 1.000 | 0.071 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.071

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 2.26 | 1.000 | 84.0 | 96.4 | 0.37 | 0.849 |

Area-averaged catchment yield fraction, Y = 0.849
Area-averaged low loss fraction, Yb = 0.151
User entry of time of concentration = 0.260 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 2.26(Ac.)
Catchment Lag time = 0.208 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 40.0641
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.071(In/Hr)
Average low loss rate fraction (Yb) = 0.151 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.662(In)
Specified peak 6-hour rainfall = 1.860(In)
Specified peak 24-hour rainfall = 2.650(In)

Rainfall depth area reduction factors:
Using a total area of 2.26(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.659(In)
30-minute factor = 1.000 Adjusted rainfall = 1.129(In)
1-hour factor = 1.000 Adjusted rainfall = 1.390(In)
3-hour factor = 1.000 Adjusted rainfall = 1.662(In)
6-hour factor = 1.000 Adjusted rainfall = 1.860(In)
24-hour factor = 1.000 Adjusted rainfall = 2.650(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 27.33 (CFS)) | |
| 1 | 2.755 | 0.753 |
| 2 | 18.770 | 4.377 |
| 3 | 49.245 | 8.329 |
| 4 | 65.688 | 4.494 |
| 5 | 74.847 | 2.503 |
| 6 | 80.916 | 1.659 |
| 7 | 85.280 | 1.193 |
| 8 | 88.633 | 0.916 |
| 9 | 91.058 | 0.663 |
| 10 | 93.036 | 0.541 |
| 11 | 94.603 | 0.428 |
| 12 | 95.871 | 0.346 |
| 13 | 96.878 | 0.275 |
| 14 | 97.624 | 0.204 |

| | | |
|---|---|---|
| 15 | 98.109 | 0.133 |
| 16 | 98.552 | 0.121 |
| 17 | 99.033 | 0.131 |
| 18 | 99.481 | 0.123 |
| 19 | 99.757 | 0.075 |
| 20 | 100.000 | 0.066 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6595 | 0.6595 |
| 2 | 0.8119 | 0.1524 |
| 3 | 0.9170 | 0.1050 |
| 4 | 0.9996 | 0.0827 |
| 5 | 1.0688 | 0.0692 |
| 6 | 1.1289 | 0.0601 |
| 7 | 1.1823 | 0.0534 |
| 8 | 1.2307 | 0.0483 |
| 9 | 1.2749 | 0.0443 |
| 10 | 1.3159 | 0.0409 |
| 11 | 1.3540 | 0.0382 |
| 12 | 1.3899 | 0.0358 |
| 13 | 1.4081 | 0.0182 |
| 14 | 1.4251 | 0.0171 |
| 15 | 1.4412 | 0.0161 |
| 16 | 1.4564 | 0.0152 |
| 17 | 1.4709 | 0.0144 |
| 18 | 1.4846 | 0.0137 |
| 19 | 1.4977 | 0.0131 |
| 20 | 1.5103 | 0.0125 |
| 21 | 1.5223 | 0.0120 |
| 22 | 1.5339 | 0.0116 |
| 23 | 1.5450 | 0.0111 |
| 24 | 1.5557 | 0.0107 |
| 25 | 1.5661 | 0.0104 |
| 26 | 1.5761 | 0.0100 |
| 27 | 1.5858 | 0.0097 |
| 28 | 1.5952 | 0.0094 |
| 29 | 1.6043 | 0.0091 |
| 30 | 1.6132 | 0.0089 |
| 31 | 1.6218 | 0.0086 |
| 32 | 1.6302 | 0.0084 |
| 33 | 1.6384 | 0.0082 |
| 34 | 1.6464 | 0.0080 |
| 35 | 1.6542 | 0.0078 |
| 36 | 1.6618 | 0.0076 |
| 37 | 1.6692 | 0.0074 |
| 38 | 1.6764 | 0.0073 |
| 39 | 1.6835 | 0.0071 |
| 40 | 1.6905 | 0.0069 |
| 41 | 1.6973 | 0.0068 |
| 42 | 1.7039 | 0.0067 |
| 43 | 1.7105 | 0.0065 |
| 44 | 1.7169 | 0.0064 |
| 45 | 1.7232 | 0.0063 |
| 46 | 1.7293 | 0.0062 |
| 47 | 1.7354 | 0.0061 |
| 48 | 1.7413 | 0.0059 |
| 49 | 1.7472 | 0.0058 |
| 50 | 1.7529 | 0.0057 |

| | | |
|---|---|---|
| 51 | 1.7586 | 0.0057 |
| 52 | 1.7641 | 0.0056 |
| 53 | 1.7696 | 0.0055 |
| 54 | 1.7750 | 0.0054 |
| 55 | 1.7803 | 0.0053 |
| 56 | 1.7855 | 0.0052 |
| 57 | 1.7907 | 0.0051 |
| 58 | 1.7957 | 0.0051 |
| 59 | 1.8007 | 0.0050 |
| 60 | 1.8057 | 0.0049 |
| 61 | 1.8105 | 0.0049 |
| 62 | 1.8153 | 0.0048 |
| 63 | 1.8200 | 0.0047 |
| 64 | 1.8247 | 0.0047 |
| 65 | 1.8293 | 0.0046 |
| 66 | 1.8339 | 0.0045 |
| 67 | 1.8384 | 0.0045 |
| 68 | 1.8428 | 0.0044 |
| 69 | 1.8472 | 0.0044 |
| 70 | 1.8515 | 0.0043 |
| 71 | 1.8558 | 0.0043 |
| 72 | 1.8600 | 0.0042 |
| 73 | 1.8665 | 0.0066 |
| 74 | 1.8730 | 0.0065 |
| 75 | 1.8795 | 0.0064 |
| 76 | 1.8858 | 0.0064 |
| 77 | 1.8921 | 0.0063 |
| 78 | 1.8984 | 0.0062 |
| 79 | 1.9046 | 0.0062 |
| 80 | 1.9107 | 0.0061 |
| 81 | 1.9168 | 0.0061 |
| 82 | 1.9228 | 0.0060 |
| 83 | 1.9288 | 0.0060 |
| 84 | 1.9347 | 0.0059 |
| 85 | 1.9405 | 0.0059 |
| 86 | 1.9463 | 0.0058 |
| 87 | 1.9521 | 0.0058 |
| 88 | 1.9578 | 0.0057 |
| 89 | 1.9634 | 0.0057 |
| 90 | 1.9690 | 0.0056 |
| 91 | 1.9746 | 0.0056 |
| 92 | 1.9801 | 0.0055 |
| 93 | 1.9856 | 0.0055 |
| 94 | 1.9910 | 0.0054 |
| 95 | 1.9964 | 0.0054 |
| 96 | 2.0018 | 0.0053 |
| 97 | 2.0071 | 0.0053 |
| 98 | 2.0123 | 0.0053 |
| 99 | 2.0176 | 0.0052 |
| 100 | 2.0227 | 0.0052 |
| 101 | 2.0279 | 0.0051 |
| 102 | 2.0330 | 0.0051 |
| 103 | 2.0381 | 0.0051 |
| 104 | 2.0431 | 0.0050 |
| 105 | 2.0481 | 0.0050 |
| 106 | 2.0531 | 0.0050 |
| 107 | 2.0580 | 0.0049 |
| 108 | 2.0629 | 0.0049 |
| 109 | 2.0677 | 0.0049 |

| | | |
|---|---|---|
| 110 | 2.0726 | 0.0048 |
| 111 | 2.0774 | 0.0048 |
| 112 | 2.0821 | 0.0048 |
| 113 | 2.0869 | 0.0047 |
| 114 | 2.0916 | 0.0047 |
| 115 | 2.0962 | 0.0047 |
| 116 | 2.1009 | 0.0046 |
| 117 | 2.1055 | 0.0046 |
| 118 | 2.1101 | 0.0046 |
| 119 | 2.1146 | 0.0046 |
| 120 | 2.1191 | 0.0045 |
| 121 | 2.1236 | 0.0045 |
| 122 | 2.1281 | 0.0045 |
| 123 | 2.1325 | 0.0044 |
| 124 | 2.1370 | 0.0044 |
| 125 | 2.1413 | 0.0044 |
| 126 | 2.1457 | 0.0044 |
| 127 | 2.1500 | 0.0043 |
| 128 | 2.1543 | 0.0043 |
| 129 | 2.1586 | 0.0043 |
| 130 | 2.1629 | 0.0043 |
| 131 | 2.1671 | 0.0042 |
| 132 | 2.1713 | 0.0042 |
| 133 | 2.1755 | 0.0042 |
| 134 | 2.1797 | 0.0042 |
| 135 | 2.1838 | 0.0041 |
| 136 | 2.1880 | 0.0041 |
| 137 | 2.1921 | 0.0041 |
| 138 | 2.1961 | 0.0041 |
| 139 | 2.2002 | 0.0041 |
| 140 | 2.2042 | 0.0040 |
| 141 | 2.2082 | 0.0040 |
| 142 | 2.2122 | 0.0040 |
| 143 | 2.2162 | 0.0040 |
| 144 | 2.2201 | 0.0039 |
| 145 | 2.2241 | 0.0039 |
| 146 | 2.2280 | 0.0039 |
| 147 | 2.2318 | 0.0039 |
| 148 | 2.2357 | 0.0039 |
| 149 | 2.2396 | 0.0038 |
| 150 | 2.2434 | 0.0038 |
| 151 | 2.2472 | 0.0038 |
| 152 | 2.2510 | 0.0038 |
| 153 | 2.2548 | 0.0038 |
| 154 | 2.2585 | 0.0038 |
| 155 | 2.2622 | 0.0037 |
| 156 | 2.2660 | 0.0037 |
| 157 | 2.2697 | 0.0037 |
| 158 | 2.2734 | 0.0037 |
| 159 | 2.2770 | 0.0037 |
| 160 | 2.2807 | 0.0036 |
| 161 | 2.2843 | 0.0036 |
| 162 | 2.2879 | 0.0036 |
| 163 | 2.2915 | 0.0036 |
| 164 | 2.2951 | 0.0036 |
| 165 | 2.2987 | 0.0036 |
| 166 | 2.3022 | 0.0035 |
| 167 | 2.3057 | 0.0035 |
| 168 | 2.3093 | 0.0035 |

| | | |
|---|---|---|
| 169 | 2.3128 | 0.0035 |
| 170 | 2.3162 | 0.0035 |
| 171 | 2.3197 | 0.0035 |
| 172 | 2.3232 | 0.0035 |
| 173 | 2.3266 | 0.0034 |
| 174 | 2.3300 | 0.0034 |
| 175 | 2.3335 | 0.0034 |
| 176 | 2.3369 | 0.0034 |
| 177 | 2.3402 | 0.0034 |
| 178 | 2.3436 | 0.0034 |
| 179 | 2.3470 | 0.0034 |
| 180 | 2.3503 | 0.0033 |
| 181 | 2.3536 | 0.0033 |
| 182 | 2.3569 | 0.0033 |
| 183 | 2.3602 | 0.0033 |
| 184 | 2.3635 | 0.0033 |
| 185 | 2.3668 | 0.0033 |
| 186 | 2.3701 | 0.0033 |
| 187 | 2.3733 | 0.0032 |
| 188 | 2.3765 | 0.0032 |
| 189 | 2.3798 | 0.0032 |
| 190 | 2.3830 | 0.0032 |
| 191 | 2.3862 | 0.0032 |
| 192 | 2.3894 | 0.0032 |
| 193 | 2.3925 | 0.0032 |
| 194 | 2.3957 | 0.0032 |
| 195 | 2.3988 | 0.0031 |
| 196 | 2.4020 | 0.0031 |
| 197 | 2.4051 | 0.0031 |
| 198 | 2.4082 | 0.0031 |
| 199 | 2.4113 | 0.0031 |
| 200 | 2.4144 | 0.0031 |
| 201 | 2.4175 | 0.0031 |
| 202 | 2.4205 | 0.0031 |
| 203 | 2.4236 | 0.0031 |
| 204 | 2.4266 | 0.0030 |
| 205 | 2.4297 | 0.0030 |
| 206 | 2.4327 | 0.0030 |
| 207 | 2.4357 | 0.0030 |
| 208 | 2.4387 | 0.0030 |
| 209 | 2.4417 | 0.0030 |
| 210 | 2.4447 | 0.0030 |
| 211 | 2.4476 | 0.0030 |
| 212 | 2.4506 | 0.0030 |
| 213 | 2.4535 | 0.0029 |
| 214 | 2.4565 | 0.0029 |
| 215 | 2.4594 | 0.0029 |
| 216 | 2.4623 | 0.0029 |
| 217 | 2.4652 | 0.0029 |
| 218 | 2.4681 | 0.0029 |
| 219 | 2.4710 | 0.0029 |
| 220 | 2.4739 | 0.0029 |
| 221 | 2.4767 | 0.0029 |
| 222 | 2.4796 | 0.0029 |
| 223 | 2.4824 | 0.0028 |
| 224 | 2.4853 | 0.0028 |
| 225 | 2.4881 | 0.0028 |
| 226 | 2.4909 | 0.0028 |
| 227 | 2.4937 | 0.0028 |

| | | |
|---|---|---|
| 228 | 2.4965 | 0.0028 |
| 229 | 2.4993 | 0.0028 |
| 230 | 2.5021 | 0.0028 |
| 231 | 2.5049 | 0.0028 |
| 232 | 2.5076 | 0.0028 |
| 233 | 2.5104 | 0.0028 |
| 234 | 2.5131 | 0.0027 |
| 235 | 2.5159 | 0.0027 |
| 236 | 2.5186 | 0.0027 |
| 237 | 2.5213 | 0.0027 |
| 238 | 2.5240 | 0.0027 |
| 239 | 2.5268 | 0.0027 |
| 240 | 2.5294 | 0.0027 |
| 241 | 2.5321 | 0.0027 |
| 242 | 2.5348 | 0.0027 |
| 243 | 2.5375 | 0.0027 |
| 244 | 2.5401 | 0.0027 |
| 245 | 2.5428 | 0.0027 |
| 246 | 2.5454 | 0.0026 |
| 247 | 2.5481 | 0.0026 |
| 248 | 2.5507 | 0.0026 |
| 249 | 2.5533 | 0.0026 |
| 250 | 2.5560 | 0.0026 |
| 251 | 2.5586 | 0.0026 |
| 252 | 2.5612 | 0.0026 |
| 253 | 2.5638 | 0.0026 |
| 254 | 2.5663 | 0.0026 |
| 255 | 2.5689 | 0.0026 |
| 256 | 2.5715 | 0.0026 |
| 257 | 2.5740 | 0.0026 |
| 258 | 2.5766 | 0.0026 |
| 259 | 2.5791 | 0.0025 |
| 260 | 2.5817 | 0.0025 |
| 261 | 2.5842 | 0.0025 |
| 262 | 2.5867 | 0.0025 |
| 263 | 2.5893 | 0.0025 |
| 264 | 2.5918 | 0.0025 |
| 265 | 2.5943 | 0.0025 |
| 266 | 2.5968 | 0.0025 |
| 267 | 2.5993 | 0.0025 |
| 268 | 2.6017 | 0.0025 |
| 269 | 2.6042 | 0.0025 |
| 270 | 2.6067 | 0.0025 |
| 271 | 2.6091 | 0.0025 |
| 272 | 2.6116 | 0.0025 |
| 273 | 2.6140 | 0.0024 |
| 274 | 2.6165 | 0.0024 |
| 275 | 2.6189 | 0.0024 |
| 276 | 2.6213 | 0.0024 |
| 277 | 2.6238 | 0.0024 |
| 278 | 2.6262 | 0.0024 |
| 279 | 2.6286 | 0.0024 |
| 280 | 2.6310 | 0.0024 |
| 281 | 2.6334 | 0.0024 |
| 282 | 2.6358 | 0.0024 |
| 283 | 2.6382 | 0.0024 |
| 284 | 2.6405 | 0.0024 |
| 285 | 2.6429 | 0.0024 |
| 286 | 2.6453 | 0.0024 |

| | | |
|---|---|---|
| 287 | 2.6476 | 0.0024 |
| 288 | 2.6500 | 0.0024 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0024 | 0.0004 | 0.0020 |
| 2 | 0.0024 | 0.0004 | 0.0020 |
| 3 | 0.0024 | 0.0004 | 0.0020 |
| 4 | 0.0024 | 0.0004 | 0.0020 |
| 5 | 0.0024 | 0.0004 | 0.0020 |
| 6 | 0.0024 | 0.0004 | 0.0020 |
| 7 | 0.0024 | 0.0004 | 0.0020 |
| 8 | 0.0024 | 0.0004 | 0.0021 |
| 9 | 0.0024 | 0.0004 | 0.0021 |
| 10 | 0.0024 | 0.0004 | 0.0021 |
| 11 | 0.0024 | 0.0004 | 0.0021 |
| 12 | 0.0025 | 0.0004 | 0.0021 |
| 13 | 0.0025 | 0.0004 | 0.0021 |
| 14 | 0.0025 | 0.0004 | 0.0021 |
| 15 | 0.0025 | 0.0004 | 0.0021 |
| 16 | 0.0025 | 0.0004 | 0.0021 |
| 17 | 0.0025 | 0.0004 | 0.0021 |
| 18 | 0.0025 | 0.0004 | 0.0021 |
| 19 | 0.0025 | 0.0004 | 0.0021 |
| 20 | 0.0025 | 0.0004 | 0.0022 |
| 21 | 0.0026 | 0.0004 | 0.0022 |
| 22 | 0.0026 | 0.0004 | 0.0022 |
| 23 | 0.0026 | 0.0004 | 0.0022 |
| 24 | 0.0026 | 0.0004 | 0.0022 |
| 25 | 0.0026 | 0.0004 | 0.0022 |
| 26 | 0.0026 | 0.0004 | 0.0022 |
| 27 | 0.0026 | 0.0004 | 0.0022 |
| 28 | 0.0026 | 0.0004 | 0.0022 |
| 29 | 0.0026 | 0.0004 | 0.0022 |
| 30 | 0.0027 | 0.0004 | 0.0023 |
| 31 | 0.0027 | 0.0004 | 0.0023 |
| 32 | 0.0027 | 0.0004 | 0.0023 |
| 33 | 0.0027 | 0.0004 | 0.0023 |
| 34 | 0.0027 | 0.0004 | 0.0023 |
| 35 | 0.0027 | 0.0004 | 0.0023 |
| 36 | 0.0027 | 0.0004 | 0.0023 |
| 37 | 0.0027 | 0.0004 | 0.0023 |
| 38 | 0.0028 | 0.0004 | 0.0023 |
| 39 | 0.0028 | 0.0004 | 0.0024 |
| 40 | 0.0028 | 0.0004 | 0.0024 |
| 41 | 0.0028 | 0.0004 | 0.0024 |
| 42 | 0.0028 | 0.0004 | 0.0024 |
| 43 | 0.0028 | 0.0004 | 0.0024 |
| 44 | 0.0028 | 0.0004 | 0.0024 |
| 45 | 0.0029 | 0.0004 | 0.0024 |
| 46 | 0.0029 | 0.0004 | 0.0024 |
| 47 | 0.0029 | 0.0004 | 0.0024 |
| 48 | 0.0029 | 0.0004 | 0.0025 |
| 49 | 0.0029 | 0.0004 | 0.0025 |
| 50 | 0.0029 | 0.0004 | 0.0025 |
| 51 | 0.0029 | 0.0004 | 0.0025 |
| 52 | 0.0030 | 0.0004 | 0.0025 |

| | | | |
|---|---|---|---|
| 53 | 0.0030 | 0.0005 | 0.0025 |
| 54 | 0.0030 | 0.0005 | 0.0025 |
| 55 | 0.0030 | 0.0005 | 0.0026 |
| 56 | 0.0030 | 0.0005 | 0.0026 |
| 57 | 0.0030 | 0.0005 | 0.0026 |
| 58 | 0.0031 | 0.0005 | 0.0026 |
| 59 | 0.0031 | 0.0005 | 0.0026 |
| 60 | 0.0031 | 0.0005 | 0.0026 |
| 61 | 0.0031 | 0.0005 | 0.0026 |
| 62 | 0.0031 | 0.0005 | 0.0027 |
| 63 | 0.0031 | 0.0005 | 0.0027 |
| 64 | 0.0032 | 0.0005 | 0.0027 |
| 65 | 0.0032 | 0.0005 | 0.0027 |
| 66 | 0.0032 | 0.0005 | 0.0027 |
| 67 | 0.0032 | 0.0005 | 0.0027 |
| 68 | 0.0032 | 0.0005 | 0.0027 |
| 69 | 0.0033 | 0.0005 | 0.0028 |
| 70 | 0.0033 | 0.0005 | 0.0028 |
| 71 | 0.0033 | 0.0005 | 0.0028 |
| 72 | 0.0033 | 0.0005 | 0.0028 |
| 73 | 0.0033 | 0.0005 | 0.0028 |
| 74 | 0.0034 | 0.0005 | 0.0028 |
| 75 | 0.0034 | 0.0005 | 0.0029 |
| 76 | 0.0034 | 0.0005 | 0.0029 |
| 77 | 0.0034 | 0.0005 | 0.0029 |
| 78 | 0.0034 | 0.0005 | 0.0029 |
| 79 | 0.0035 | 0.0005 | 0.0029 |
| 80 | 0.0035 | 0.0005 | 0.0030 |
| 81 | 0.0035 | 0.0005 | 0.0030 |
| 82 | 0.0035 | 0.0005 | 0.0030 |
| 83 | 0.0036 | 0.0005 | 0.0030 |
| 84 | 0.0036 | 0.0005 | 0.0030 |
| 85 | 0.0036 | 0.0005 | 0.0031 |
| 86 | 0.0036 | 0.0005 | 0.0031 |
| 87 | 0.0037 | 0.0006 | 0.0031 |
| 88 | 0.0037 | 0.0006 | 0.0031 |
| 89 | 0.0037 | 0.0006 | 0.0032 |
| 90 | 0.0037 | 0.0006 | 0.0032 |
| 91 | 0.0038 | 0.0006 | 0.0032 |
| 92 | 0.0038 | 0.0006 | 0.0032 |
| 93 | 0.0038 | 0.0006 | 0.0032 |
| 94 | 0.0038 | 0.0006 | 0.0033 |
| 95 | 0.0039 | 0.0006 | 0.0033 |
| 96 | 0.0039 | 0.0006 | 0.0033 |
| 97 | 0.0039 | 0.0006 | 0.0034 |
| 98 | 0.0040 | 0.0006 | 0.0034 |
| 99 | 0.0040 | 0.0006 | 0.0034 |
| 100 | 0.0040 | 0.0006 | 0.0034 |
| 101 | 0.0041 | 0.0006 | 0.0035 |
| 102 | 0.0041 | 0.0006 | 0.0035 |
| 103 | 0.0041 | 0.0006 | 0.0035 |
| 104 | 0.0042 | 0.0006 | 0.0035 |
| 105 | 0.0042 | 0.0006 | 0.0036 |
| 106 | 0.0042 | 0.0006 | 0.0036 |
| 107 | 0.0043 | 0.0006 | 0.0036 |
| 108 | 0.0043 | 0.0007 | 0.0037 |
| 109 | 0.0044 | 0.0007 | 0.0037 |
| 110 | 0.0044 | 0.0007 | 0.0037 |
| 111 | 0.0044 | 0.0007 | 0.0038 |

| | | | |
|---|---|---|---|
| 112 | 0.0045 | 0.0007 | 0.0038 |
| 113 | 0.0045 | 0.0007 | 0.0038 |
| 114 | 0.0046 | 0.0007 | 0.0039 |
| 115 | 0.0046 | 0.0007 | 0.0039 |
| 116 | 0.0046 | 0.0007 | 0.0039 |
| 117 | 0.0047 | 0.0007 | 0.0040 |
| 118 | 0.0047 | 0.0007 | 0.0040 |
| 119 | 0.0048 | 0.0007 | 0.0041 |
| 120 | 0.0048 | 0.0007 | 0.0041 |
| 121 | 0.0049 | 0.0007 | 0.0042 |
| 122 | 0.0049 | 0.0007 | 0.0042 |
| 123 | 0.0050 | 0.0008 | 0.0042 |
| 124 | 0.0050 | 0.0008 | 0.0043 |
| 125 | 0.0051 | 0.0008 | 0.0043 |
| 126 | 0.0051 | 0.0008 | 0.0044 |
| 127 | 0.0052 | 0.0008 | 0.0044 |
| 128 | 0.0053 | 0.0008 | 0.0045 |
| 129 | 0.0053 | 0.0008 | 0.0045 |
| 130 | 0.0054 | 0.0008 | 0.0046 |
| 131 | 0.0055 | 0.0008 | 0.0046 |
| 132 | 0.0055 | 0.0008 | 0.0047 |
| 133 | 0.0056 | 0.0008 | 0.0048 |
| 134 | 0.0057 | 0.0009 | 0.0048 |
| 135 | 0.0058 | 0.0009 | 0.0049 |
| 136 | 0.0058 | 0.0009 | 0.0049 |
| 137 | 0.0059 | 0.0009 | 0.0050 |
| 138 | 0.0060 | 0.0009 | 0.0051 |
| 139 | 0.0061 | 0.0009 | 0.0052 |
| 140 | 0.0061 | 0.0009 | 0.0052 |
| 141 | 0.0062 | 0.0009 | 0.0053 |
| 142 | 0.0063 | 0.0010 | 0.0054 |
| 143 | 0.0064 | 0.0010 | 0.0055 |
| 144 | 0.0065 | 0.0010 | 0.0055 |
| 145 | 0.0042 | 0.0006 | 0.0036 |
| 146 | 0.0043 | 0.0006 | 0.0036 |
| 147 | 0.0044 | 0.0007 | 0.0037 |
| 148 | 0.0044 | 0.0007 | 0.0038 |
| 149 | 0.0045 | 0.0007 | 0.0039 |
| 150 | 0.0046 | 0.0007 | 0.0039 |
| 151 | 0.0047 | 0.0007 | 0.0040 |
| 152 | 0.0048 | 0.0007 | 0.0041 |
| 153 | 0.0049 | 0.0007 | 0.0042 |
| 154 | 0.0050 | 0.0008 | 0.0042 |
| 155 | 0.0051 | 0.0008 | 0.0044 |
| 156 | 0.0052 | 0.0008 | 0.0044 |
| 157 | 0.0054 | 0.0008 | 0.0046 |
| 158 | 0.0055 | 0.0008 | 0.0046 |
| 159 | 0.0057 | 0.0009 | 0.0048 |
| 160 | 0.0057 | 0.0009 | 0.0049 |
| 161 | 0.0059 | 0.0009 | 0.0050 |
| 162 | 0.0061 | 0.0009 | 0.0051 |
| 163 | 0.0063 | 0.0010 | 0.0053 |
| 164 | 0.0064 | 0.0010 | 0.0054 |
| 165 | 0.0067 | 0.0010 | 0.0057 |
| 166 | 0.0068 | 0.0010 | 0.0058 |
| 167 | 0.0071 | 0.0011 | 0.0060 |
| 168 | 0.0073 | 0.0011 | 0.0062 |
| 169 | 0.0076 | 0.0011 | 0.0064 |
| 170 | 0.0078 | 0.0012 | 0.0066 |

| | | | |
|---|---|---|---|
| 171 | 0.0082 | 0.0012 | 0.0069 |
| 172 | 0.0084 | 0.0013 | 0.0071 |
| 173 | 0.0089 | 0.0013 | 0.0075 |
| 174 | 0.0091 | 0.0014 | 0.0077 |
| 175 | 0.0097 | 0.0015 | 0.0082 |
| 176 | 0.0100 | 0.0015 | 0.0085 |
| 177 | 0.0107 | 0.0016 | 0.0091 |
| 178 | 0.0111 | 0.0017 | 0.0094 |
| 179 | 0.0120 | 0.0018 | 0.0102 |
| 180 | 0.0125 | 0.0019 | 0.0106 |
| 181 | 0.0137 | 0.0021 | 0.0117 |
| 182 | 0.0144 | 0.0022 | 0.0122 |
| 183 | 0.0161 | 0.0024 | 0.0136 |
| 184 | 0.0171 | 0.0026 | 0.0145 |
| 185 | 0.0358 | 0.0054 | 0.0304 |
| 186 | 0.0382 | 0.0058 | 0.0324 |
| 187 | 0.0443 | 0.0059 | 0.0383 |
| 188 | 0.0483 | 0.0059 | 0.0424 |
| 189 | 0.0601 | 0.0059 | 0.0542 |
| 190 | 0.0692 | 0.0059 | 0.0633 |
| 191 | 0.1050 | 0.0059 | 0.0991 |
| 192 | 0.1524 | 0.0059 | 0.1465 |
| 193 | 0.6595 | 0.0059 | 0.6536 |
| 194 | 0.0827 | 0.0059 | 0.0767 |
| 195 | 0.0534 | 0.0059 | 0.0475 |
| 196 | 0.0409 | 0.0059 | 0.0350 |
| 197 | 0.0182 | 0.0028 | 0.0155 |
| 198 | 0.0152 | 0.0023 | 0.0129 |
| 199 | 0.0131 | 0.0020 | 0.0111 |
| 200 | 0.0116 | 0.0017 | 0.0098 |
| 201 | 0.0104 | 0.0016 | 0.0088 |
| 202 | 0.0094 | 0.0014 | 0.0080 |
| 203 | 0.0086 | 0.0013 | 0.0073 |
| 204 | 0.0080 | 0.0012 | 0.0068 |
| 205 | 0.0074 | 0.0011 | 0.0063 |
| 206 | 0.0069 | 0.0011 | 0.0059 |
| 207 | 0.0065 | 0.0010 | 0.0055 |
| 208 | 0.0062 | 0.0009 | 0.0052 |
| 209 | 0.0058 | 0.0009 | 0.0050 |
| 210 | 0.0056 | 0.0008 | 0.0047 |
| 211 | 0.0053 | 0.0008 | 0.0045 |
| 212 | 0.0051 | 0.0008 | 0.0043 |
| 213 | 0.0049 | 0.0007 | 0.0041 |
| 214 | 0.0047 | 0.0007 | 0.0040 |
| 215 | 0.0045 | 0.0007 | 0.0038 |
| 216 | 0.0043 | 0.0007 | 0.0037 |
| 217 | 0.0066 | 0.0010 | 0.0056 |
| 218 | 0.0064 | 0.0010 | 0.0054 |
| 219 | 0.0062 | 0.0009 | 0.0052 |
| 220 | 0.0060 | 0.0009 | 0.0051 |
| 221 | 0.0059 | 0.0009 | 0.0050 |
| 222 | 0.0057 | 0.0009 | 0.0048 |
| 223 | 0.0056 | 0.0008 | 0.0047 |
| 224 | 0.0054 | 0.0008 | 0.0046 |
| 225 | 0.0053 | 0.0008 | 0.0045 |
| 226 | 0.0052 | 0.0008 | 0.0044 |
| 227 | 0.0051 | 0.0008 | 0.0043 |
| 228 | 0.0050 | 0.0008 | 0.0042 |
| 229 | 0.0049 | 0.0007 | 0.0041 |

| | | | |
|---|---|---|---|
| 230 | 0.0048 | 0.0007 | 0.0040 |
| 231 | 0.0047 | 0.0007 | 0.0040 |
| 232 | 0.0046 | 0.0007 | 0.0039 |
| 233 | 0.0045 | 0.0007 | 0.0038 |
| 234 | 0.0044 | 0.0007 | 0.0037 |
| 235 | 0.0043 | 0.0007 | 0.0037 |
| 236 | 0.0043 | 0.0006 | 0.0036 |
| 237 | 0.0042 | 0.0006 | 0.0036 |
| 238 | 0.0041 | 0.0006 | 0.0035 |
| 239 | 0.0041 | 0.0006 | 0.0034 |
| 240 | 0.0040 | 0.0006 | 0.0034 |
| 241 | 0.0039 | 0.0006 | 0.0033 |
| 242 | 0.0039 | 0.0006 | 0.0033 |
| 243 | 0.0038 | 0.0006 | 0.0032 |
| 244 | 0.0038 | 0.0006 | 0.0032 |
| 245 | 0.0037 | 0.0006 | 0.0031 |
| 246 | 0.0036 | 0.0006 | 0.0031 |
| 247 | 0.0036 | 0.0005 | 0.0031 |
| 248 | 0.0035 | 0.0005 | 0.0030 |
| 249 | 0.0035 | 0.0005 | 0.0030 |
| 250 | 0.0035 | 0.0005 | 0.0029 |
| 251 | 0.0034 | 0.0005 | 0.0029 |
| 252 | 0.0034 | 0.0005 | 0.0029 |
| 253 | 0.0033 | 0.0005 | 0.0028 |
| 254 | 0.0033 | 0.0005 | 0.0028 |
| 255 | 0.0032 | 0.0005 | 0.0028 |
| 256 | 0.0032 | 0.0005 | 0.0027 |
| 257 | 0.0032 | 0.0005 | 0.0027 |
| 258 | 0.0031 | 0.0005 | 0.0027 |
| 259 | 0.0031 | 0.0005 | 0.0026 |
| 260 | 0.0031 | 0.0005 | 0.0026 |
| 261 | 0.0030 | 0.0005 | 0.0026 |
| 262 | 0.0030 | 0.0005 | 0.0025 |
| 263 | 0.0030 | 0.0004 | 0.0025 |
| 264 | 0.0029 | 0.0004 | 0.0025 |
| 265 | 0.0029 | 0.0004 | 0.0025 |
| 266 | 0.0029 | 0.0004 | 0.0024 |
| 267 | 0.0028 | 0.0004 | 0.0024 |
| 268 | 0.0028 | 0.0004 | 0.0024 |
| 269 | 0.0028 | 0.0004 | 0.0024 |
| 270 | 0.0028 | 0.0004 | 0.0023 |
| 271 | 0.0027 | 0.0004 | 0.0023 |
| 272 | 0.0027 | 0.0004 | 0.0023 |
| 273 | 0.0027 | 0.0004 | 0.0023 |
| 274 | 0.0027 | 0.0004 | 0.0023 |
| 275 | 0.0026 | 0.0004 | 0.0022 |
| 276 | 0.0026 | 0.0004 | 0.0022 |
| 277 | 0.0026 | 0.0004 | 0.0022 |
| 278 | 0.0026 | 0.0004 | 0.0022 |
| 279 | 0.0025 | 0.0004 | 0.0022 |
| 280 | 0.0025 | 0.0004 | 0.0021 |
| 281 | 0.0025 | 0.0004 | 0.0021 |
| 282 | 0.0025 | 0.0004 | 0.0021 |
| 283 | 0.0025 | 0.0004 | 0.0021 |
| 284 | 0.0024 | 0.0004 | 0.0021 |
| 285 | 0.0024 | 0.0004 | 0.0021 |
| 286 | 0.0024 | 0.0004 | 0.0020 |
| 287 | 0.0024 | 0.0004 | 0.0020 |
| 288 | 0.0024 | 0.0004 | 0.0020 |

Total soil rain loss = 0.26(In)
Total effective rainfall = 2.39(In)
Peak flow rate in flood hydrograph = 7.00(CFS)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

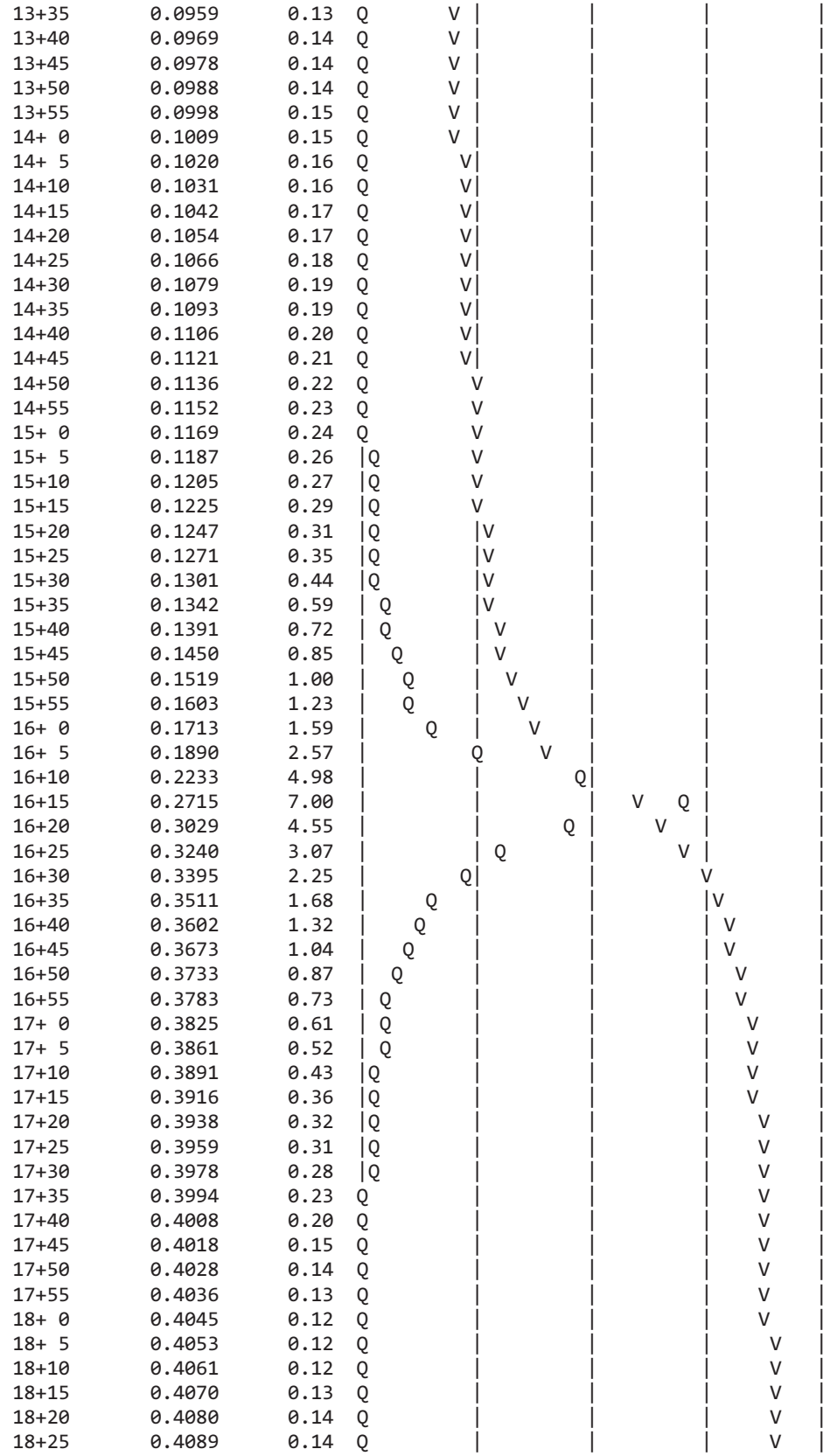
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 2.5 | 5.0 | 7.5 | 10.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.01 | Q | | | | |
| 0+15 | 0.0003 | 0.03 | Q | | | | |
| 0+20 | 0.0005 | 0.04 | Q | | | | |
| 0+25 | 0.0008 | 0.04 | Q | | | | |
| 0+30 | 0.0011 | 0.04 | Q | | | | |
| 0+35 | 0.0014 | 0.05 | Q | | | | |
| 0+40 | 0.0018 | 0.05 | Q | | | | |
| 0+45 | 0.0021 | 0.05 | Q | | | | |
| 0+50 | 0.0025 | 0.05 | Q | | | | |
| 0+55 | 0.0028 | 0.05 | Q | | | | |
| 1+ 0 | 0.0032 | 0.05 | Q | | | | |
| 1+ 5 | 0.0036 | 0.05 | Q | | | | |
| 1+10 | 0.0040 | 0.06 | Q | | | | |
| 1+15 | 0.0044 | 0.06 | Q | | | | |
| 1+20 | 0.0047 | 0.06 | Q | | | | |
| 1+25 | 0.0051 | 0.06 | Q | | | | |
| 1+30 | 0.0055 | 0.06 | Q | | | | |
| 1+35 | 0.0059 | 0.06 | Q | | | | |
| 1+40 | 0.0063 | 0.06 | Q | | | | |
| 1+45 | 0.0067 | 0.06 | Q | | | | |
| 1+50 | 0.0071 | 0.06 | Q | | | | |
| 1+55 | 0.0075 | 0.06 | Q | | | | |
| 2+ 0 | 0.0079 | 0.06 | Q | | | | |
| 2+ 5 | 0.0083 | 0.06 | Q | | | | |
| 2+10 | 0.0088 | 0.06 | Q | | | | |
| 2+15 | 0.0092 | 0.06 | Q | | | | |
| 2+20 | 0.0096 | 0.06 | Q | | | | |
| 2+25 | 0.0100 | 0.06 | Q | | | | |
| 2+30 | 0.0104 | 0.06 | Q | | | | |
| 2+35 | 0.0108 | 0.06 | Q | | | | |
| 2+40 | 0.0113 | 0.06 | QV | | | | |
| 2+45 | 0.0117 | 0.06 | QV | | | | |
| 2+50 | 0.0121 | 0.06 | QV | | | | |
| 2+55 | 0.0125 | 0.06 | QV | | | | |
| 3+ 0 | 0.0130 | 0.06 | QV | | | | |
| 3+ 5 | 0.0134 | 0.06 | QV | | | | |
| 3+10 | 0.0138 | 0.06 | QV | | | | |
| 3+15 | 0.0143 | 0.06 | QV | | | | |
| 3+20 | 0.0147 | 0.06 | QV | | | | |
| 3+25 | 0.0151 | 0.06 | QV | | | | |
| 3+30 | 0.0156 | 0.06 | QV | | | | |
| 3+35 | 0.0160 | 0.06 | QV | | | | |
| 3+40 | 0.0165 | 0.06 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+45 | 0.0169 | 0.07 | QV | | | | |
| 3+50 | 0.0174 | 0.07 | QV | | | | |
| 3+55 | 0.0178 | 0.07 | QV | | | | |
| 4+ 0 | 0.0183 | 0.07 | QV | | | | |
| 4+ 5 | 0.0187 | 0.07 | QV | | | | |
| 4+10 | 0.0192 | 0.07 | QV | | | | |
| 4+15 | 0.0196 | 0.07 | QV | | | | |
| 4+20 | 0.0201 | 0.07 | QV | | | | |
| 4+25 | 0.0206 | 0.07 | QV | | | | |
| 4+30 | 0.0210 | 0.07 | QV | | | | |
| 4+35 | 0.0215 | 0.07 | QV | | | | |
| 4+40 | 0.0220 | 0.07 | QV | | | | |
| 4+45 | 0.0225 | 0.07 | QV | | | | |
| 4+50 | 0.0229 | 0.07 | Q V | | | | |
| 4+55 | 0.0234 | 0.07 | Q V | | | | |
| 5+ 0 | 0.0239 | 0.07 | Q V | | | | |
| 5+ 5 | 0.0244 | 0.07 | Q V | | | | |
| 5+10 | 0.0249 | 0.07 | Q V | | | | |
| 5+15 | 0.0254 | 0.07 | Q V | | | | |
| 5+20 | 0.0259 | 0.07 | Q V | | | | |
| 5+25 | 0.0264 | 0.07 | Q V | | | | |
| 5+30 | 0.0269 | 0.07 | Q V | | | | |
| 5+35 | 0.0274 | 0.07 | Q V | | | | |
| 5+40 | 0.0279 | 0.07 | Q V | | | | |
| 5+45 | 0.0284 | 0.07 | Q V | | | | |
| 5+50 | 0.0289 | 0.07 | Q V | | | | |
| 5+55 | 0.0294 | 0.07 | Q V | | | | |
| 6+ 0 | 0.0299 | 0.08 | Q V | | | | |
| 6+ 5 | 0.0305 | 0.08 | Q V | | | | |
| 6+10 | 0.0310 | 0.08 | Q V | | | | |
| 6+15 | 0.0315 | 0.08 | Q V | | | | |
| 6+20 | 0.0320 | 0.08 | Q V | | | | |
| 6+25 | 0.0326 | 0.08 | Q V | | | | |
| 6+30 | 0.0331 | 0.08 | Q V | | | | |
| 6+35 | 0.0337 | 0.08 | Q V | | | | |
| 6+40 | 0.0342 | 0.08 | Q  V | | | | |
| 6+45 | 0.0348 | 0.08 | Q  V | | | | |
| 6+50 | 0.0353 | 0.08 | Q  V | | | | |
| 6+55 | 0.0359 | 0.08 | Q  V | | | | |
| 7+ 0 | 0.0364 | 0.08 | Q  V | | | | |
| 7+ 5 | 0.0370 | 0.08 | Q  V | | | | |
| 7+10 | 0.0375 | 0.08 | Q  V | | | | |
| 7+15 | 0.0381 | 0.08 | Q  V | | | | |
| 7+20 | 0.0387 | 0.08 | Q  V | | | | |
| 7+25 | 0.0393 | 0.08 | Q  V | | | | |
| 7+30 | 0.0399 | 0.08 | Q  V | | | | |
| 7+35 | 0.0404 | 0.09 | Q  V | | | | |
| 7+40 | 0.0410 | 0.09 | Q  V | | | | |
| 7+45 | 0.0416 | 0.09 | Q  V | | | | |
| 7+50 | 0.0422 | 0.09 | Q  V | | | | |
| 7+55 | 0.0428 | 0.09 | Q  V | | | | |
| 8+ 0 | 0.0434 | 0.09 | Q  V | | | | |
| 8+ 5 | 0.0440 | 0.09 | Q  V | | | | |
| 8+10 | 0.0447 | 0.09 | Q  V | | | | |
| 8+15 | 0.0453 | 0.09 | Q   V | | | | |
| 8+20 | 0.0459 | 0.09 | Q   V | | | | |
| 8+25 | 0.0465 | 0.09 | Q   V | | | | |
| 8+30 | 0.0472 | 0.09 | Q   V | | | | |
| 8+35 | 0.0478 | 0.09 | Q   V | | | | |

```
 8+40       0.0485      0.09  Q   V     |          |          |          |
 8+45       0.0491      0.09  Q   V     |          |          |          |
 8+50       0.0498      0.10  Q   V     |          |          |          |
 8+55       0.0504      0.10  Q   V     |          |          |          |
 9+ 0       0.0511      0.10  Q   V     |          |          |          |
 9+ 5       0.0518      0.10  Q   V     |          |          |          |
 9+10       0.0525      0.10  Q   V     |          |          |          |
 9+15       0.0532      0.10  Q   V     |          |          |          |
 9+20       0.0538      0.10  Q   V     |          |          |          |
 9+25       0.0545      0.10  Q   V     |          |          |          |
 9+30       0.0552      0.10  Q   V     |          |          |          |
 9+35       0.0560      0.10  Q   V     |          |          |          |
 9+40       0.0567      0.10  Q    V    |          |          |          |
 9+45       0.0574      0.11  Q    V    |          |          |          |
 9+50       0.0581      0.11  Q    V    |          |          |          |
 9+55       0.0589      0.11  Q    V    |          |          |          |
10+ 0       0.0596      0.11  Q    V    |          |          |          |
10+ 5       0.0604      0.11  Q    V    |          |          |          |
10+10       0.0611      0.11  Q    V    |          |          |          |
10+15       0.0619      0.11  Q    V    |          |          |          |
10+20       0.0627      0.11  Q    V    |          |          |          |
10+25       0.0635      0.11  Q    V    |          |          |          |
10+30       0.0642      0.12  Q    V    |          |          |          |
10+35       0.0651      0.12  Q    V    |          |          |          |
10+40       0.0659      0.12  Q    V    |          |          |          |
10+45       0.0667      0.12  Q    V    |          |          |          |
10+50       0.0675      0.12  Q     V   |          |          |          |
10+55       0.0683      0.12  Q     V   |          |          |          |
11+ 0       0.0692      0.12  Q     V   |          |          |          |
11+ 5       0.0700      0.12  Q     V   |          |          |          |
11+10       0.0709      0.13  Q     V   |          |          |          |
11+15       0.0718      0.13  Q     V   |          |          |          |
11+20       0.0727      0.13  Q     V   |          |          |          |
11+25       0.0736      0.13  Q     V   |          |          |          |
11+30       0.0745      0.13  Q     V   |          |          |          |
11+35       0.0754      0.13  Q     V   |          |          |          |
11+40       0.0763      0.14  Q     V   |          |          |          |
11+45       0.0773      0.14  Q     V   |          |          |          |
11+50       0.0783      0.14  Q     V   |          |          |          |
11+55       0.0792      0.14  Q      V  |          |          |          |
12+ 0       0.0802      0.14  Q      V  |          |          |          |
12+ 5       0.0812      0.14  Q      V  |          |          |          |
12+10       0.0822      0.14  Q      V  |          |          |          |
12+15       0.0830      0.12  Q      V  |          |          |          |
12+20       0.0838      0.12  Q      V  |          |          |          |
12+25       0.0846      0.11  Q      V  |          |          |          |
12+30       0.0853      0.11  Q      V  |          |          |          |
12+35       0.0861      0.11  Q      V  |          |          |          |
12+40       0.0868      0.11  Q      V  |          |          |          |
12+45       0.0876      0.11  Q      V  |          |          |          |
12+50       0.0884      0.11  Q      V  |          |          |          |
12+55       0.0891      0.11  Q      V  |          |          |          |
13+ 0       0.0899      0.11  Q       V |          |          |          |
13+ 5       0.0907      0.12  Q       V |          |          |          |
13+10       0.0916      0.12  Q       V |          |          |          |
13+15       0.0924      0.12  Q       V |          |          |          |
13+20       0.0933      0.12  Q       V |          |          |          |
13+25       0.0941      0.13  Q       V |          |          |          |
13+30       0.0950      0.13  Q       V |          |          |          |
```



| | | | |
|---|---|---|---|
| 13+35 | 0.0959 | 0.13 | Q V \| \| \| \| |
| 13+40 | 0.0969 | 0.14 | Q V \| \| \| \| |
| 13+45 | 0.0978 | 0.14 | Q V \| \| \| \| |
| 13+50 | 0.0988 | 0.14 | Q V \| \| \| \| |
| 13+55 | 0.0998 | 0.15 | Q V \| \| \| \| |
| 14+ 0 | 0.1009 | 0.15 | Q V \| \| \| \| |
| 14+ 5 | 0.1020 | 0.16 | Q V\| \| \| \| |
| 14+10 | 0.1031 | 0.16 | Q V\| \| \| \| |
| 14+15 | 0.1042 | 0.17 | Q V\| \| \| \| |
| 14+20 | 0.1054 | 0.17 | Q V\| \| \| \| |
| 14+25 | 0.1066 | 0.18 | Q V\| \| \| \| |
| 14+30 | 0.1079 | 0.19 | Q V\| \| \| \| |
| 14+35 | 0.1093 | 0.19 | Q V\| \| \| \| |
| 14+40 | 0.1106 | 0.20 | Q V\| \| \| \| |
| 14+45 | 0.1121 | 0.21 | Q V\| \| \| \| |
| 14+50 | 0.1136 | 0.22 | Q V \| \| \| |
| 14+55 | 0.1152 | 0.23 | Q V \| \| \| |
| 15+ 0 | 0.1169 | 0.24 | Q V \| \| \| |
| 15+ 5 | 0.1187 | 0.26 | \|Q V \| \| \| |
| 15+10 | 0.1205 | 0.27 | \|Q V \| \| \| |
| 15+15 | 0.1225 | 0.29 | \|Q V \| \| \| |
| 15+20 | 0.1247 | 0.31 | \|Q \|V \| \| \| |
| 15+25 | 0.1271 | 0.35 | \|Q \|V \| \| \| |
| 15+30 | 0.1301 | 0.44 | \|Q \|V \| \| \| |
| 15+35 | 0.1342 | 0.59 | \| Q \|V \| \| \| |
| 15+40 | 0.1391 | 0.72 | \| Q \| V \| \| \| |
| 15+45 | 0.1450 | 0.85 | \| Q \| V \| \| \| |
| 15+50 | 0.1519 | 1.00 | \| Q \| V \| \| \| |
| 15+55 | 0.1603 | 1.23 | \| Q \| V \| \| \| |
| 16+ 0 | 0.1713 | 1.59 | \| Q \| V \| \| \| |
| 16+ 5 | 0.1890 | 2.57 | \| Q V \| \| \| |
| 16+10 | 0.2233 | 4.98 | \| \| Q\| \| \| |
| 16+15 | 0.2715 | 7.00 | \| \| \| V Q \| \| |
| 16+20 | 0.3029 | 4.55 | \| \| Q \| V \| \| |
| 16+25 | 0.3240 | 3.07 | \| Q \| V \| \| |
| 16+30 | 0.3395 | 2.25 | \| Q\| \| V \| |
| 16+35 | 0.3511 | 1.68 | \| Q \| \| \|V \| |
| 16+40 | 0.3602 | 1.32 | \| Q \| \| \| V \| |
| 16+45 | 0.3673 | 1.04 | \| Q \| \| \| V \| |
| 16+50 | 0.3733 | 0.87 | \| Q \| \| \| V \| |
| 16+55 | 0.3783 | 0.73 | \| Q \| \| \| V \| |
| 17+ 0 | 0.3825 | 0.61 | \| Q \| \| \| V \| |
| 17+ 5 | 0.3861 | 0.52 | \| Q \| \| \| V \| |
| 17+10 | 0.3891 | 0.43 | \|Q \| \| \| V \| |
| 17+15 | 0.3916 | 0.36 | \|Q \| \| \| V \| |
| 17+20 | 0.3938 | 0.32 | \|Q \| \| \| V \| |
| 17+25 | 0.3959 | 0.31 | \|Q \| \| \| V \| |
| 17+30 | 0.3978 | 0.28 | \|Q \| \| \| V \| |
| 17+35 | 0.3994 | 0.23 | Q \| \| \| V \| |
| 17+40 | 0.4008 | 0.20 | Q \| \| \| V \| |
| 17+45 | 0.4018 | 0.15 | Q \| \| \| V \| |
| 17+50 | 0.4028 | 0.14 | Q \| \| \| V \| |
| 17+55 | 0.4036 | 0.13 | Q \| \| \| V \| |
| 18+ 0 | 0.4045 | 0.12 | Q \| \| \| V \| |
| 18+ 5 | 0.4053 | 0.12 | Q \| \| \| V \| |
| 18+10 | 0.4061 | 0.12 | Q \| \| \| V \| |
| 18+15 | 0.4070 | 0.13 | Q \| \| \| V \| |
| 18+20 | 0.4080 | 0.14 | Q \| \| \| V \| |
| 18+25 | 0.4089 | 0.14 | Q \| \| \| V \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18+30 | 0.4098 | 0.14 | Q | \| | \| | \| | V \| |
| 18+35 | 0.4108 | 0.13 | Q | \| | \| | \| | V \| |
| 18+40 | 0.4117 | 0.13 | Q | \| | \| | \| | V \| |
| 18+45 | 0.4126 | 0.13 | Q | \| | \| | \| | V \| |
| 18+50 | 0.4135 | 0.13 | Q | \| | \| | \| | V \| |
| 18+55 | 0.4143 | 0.13 | Q | \| | \| | \| | V \| |
| 19+ 0 | 0.4152 | 0.12 | Q | \| | \| | \| | V \| |
| 19+ 5 | 0.4160 | 0.12 | Q | \| | \| | \| | V \| |
| 19+10 | 0.4169 | 0.12 | Q | \| | \| | \| | V \| |
| 19+15 | 0.4177 | 0.12 | Q | \| | \| | \| | V \| |
| 19+20 | 0.4184 | 0.11 | Q | \| | \| | \| | V \| |
| 19+25 | 0.4192 | 0.11 | Q | \| | \| | \| | V \| |
| 19+30 | 0.4200 | 0.11 | Q | \| | \| | \| | V \| |
| 19+35 | 0.4207 | 0.11 | Q | \| | \| | \| | V \| |
| 19+40 | 0.4215 | 0.11 | Q | \| | \| | \| | V \| |
| 19+45 | 0.4222 | 0.10 | Q | \| | \| | \| | V \| |
| 19+50 | 0.4229 | 0.10 | Q | \| | \| | \| | V \| |
| 19+55 | 0.4236 | 0.10 | Q | \| | \| | \| | V \| |
| 20+ 0 | 0.4242 | 0.10 | Q | \| | \| | \| | V \| |
| 20+ 5 | 0.4249 | 0.10 | Q | \| | \| | \| | V \| |
| 20+10 | 0.4256 | 0.10 | Q | \| | \| | \| | V \| |
| 20+15 | 0.4262 | 0.09 | Q | \| | \| | \| | V \| |
| 20+20 | 0.4269 | 0.09 | Q | \| | \| | \| | V \| |
| 20+25 | 0.4275 | 0.09 | Q | \| | \| | \| | V \| |
| 20+30 | 0.4281 | 0.09 | Q | \| | \| | \| | V \| |
| 20+35 | 0.4287 | 0.09 | Q | \| | \| | \| | V \| |
| 20+40 | 0.4293 | 0.09 | Q | \| | \| | \| | V \| |
| 20+45 | 0.4299 | 0.09 | Q | \| | \| | \| | V \| |
| 20+50 | 0.4305 | 0.08 | Q | \| | \| | \| | V \| |
| 20+55 | 0.4311 | 0.08 | Q | \| | \| | \| | V \| |
| 21+ 0 | 0.4316 | 0.08 | Q | \| | \| | \| | V \| |
| 21+ 5 | 0.4322 | 0.08 | Q | \| | \| | \| | V \| |
| 21+10 | 0.4327 | 0.08 | Q | \| | \| | \| | V \| |
| 21+15 | 0.4333 | 0.08 | Q | \| | \| | \| | V \| |
| 21+20 | 0.4338 | 0.08 | Q | \| | \| | \| | V \| |
| 21+25 | 0.4343 | 0.08 | Q | \| | \| | \| | V \| |
| 21+30 | 0.4349 | 0.08 | Q | \| | \| | \| | V \| |
| 21+35 | 0.4354 | 0.08 | Q | \| | \| | \| | V \| |
| 21+40 | 0.4359 | 0.07 | Q | \| | \| | \| | V \| |
| 21+45 | 0.4364 | 0.07 | Q | \| | \| | \| | V \| |
| 21+50 | 0.4369 | 0.07 | Q | \| | \| | \| | V \| |
| 21+55 | 0.4374 | 0.07 | Q | \| | \| | \| | V \| |
| 22+ 0 | 0.4379 | 0.07 | Q | \| | \| | \| | V \| |
| 22+ 5 | 0.4384 | 0.07 | Q | \| | \| | \| | V \| |
| 22+10 | 0.4388 | 0.07 | Q | \| | \| | \| | V\| |
| 22+15 | 0.4393 | 0.07 | Q | \| | \| | \| | V\| |
| 22+20 | 0.4398 | 0.07 | Q | \| | \| | \| | V\| |
| 22+25 | 0.4403 | 0.07 | Q | \| | \| | \| | V\| |
| 22+30 | 0.4407 | 0.07 | Q | \| | \| | \| | V\| |
| 22+35 | 0.4412 | 0.07 | Q | \| | \| | \| | V\| |
| 22+40 | 0.4416 | 0.07 | Q | \| | \| | \| | V\| |
| 22+45 | 0.4421 | 0.06 | Q | \| | \| | \| | V\| |
| 22+50 | 0.4425 | 0.06 | Q | \| | \| | \| | V\| |
| 22+55 | 0.4429 | 0.06 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.4434 | 0.06 | Q | \| | \| | \| | V\| |
| 23+ 5 | 0.4438 | 0.06 | Q | \| | \| | \| | V\| |
| 23+10 | 0.4442 | 0.06 | Q | \| | \| | \| | V\| |
| 23+15 | 0.4446 | 0.06 | Q | \| | \| | \| | V\| |
| 23+20 | 0.4451 | 0.06 | Q | \| | \| | \| | V\| |

```
  23+25       0.4455      0.06  Q         |          |         |        V|
  23+30       0.4459      0.06  Q         |          |         |        V|
  23+35       0.4463      0.06  Q         |          |         |        V|
  23+40       0.4467      0.06  Q         |          |         |        V|
  23+45       0.4471      0.06  Q         |          |         |        V|
  23+50       0.4475      0.06  Q         |          |         |        V|
  23+55       0.4479      0.06  Q         |          |         |        V|
  24+ 0       0.4483      0.06  Q         |          |         |        V|
  24+ 5       0.4486      0.05  Q         |          |         |        V|
  24+10       0.4490      0.05  Q         |          |         |        V|
  24+15       0.4492      0.03  Q         |          |         |        V|
  24+20       0.4493      0.02  Q         |          |         |        V|
  24+25       0.4494      0.01  Q         |          |         |        V|
  24+30       0.4495      0.01  Q         |          |         |        V|
  24+35       0.4495      0.01  Q         |          |         |        V|
  24+40       0.4496      0.01  Q         |          |         |        V|
  24+45       0.4496      0.01  Q         |          |         |        V|
  24+50       0.4496      0.00  Q         |          |         |        V|
  24+55       0.4496      0.00  Q         |          |         |        V|
  25+ 0       0.4497      0.00  Q         |          |         |        V|
  25+ 5       0.4497      0.00  Q         |          |         |        V|
  25+10       0.4497      0.00  Q         |          |         |        V|
  25+15       0.4497      0.00  Q         |          |         |        V|
  25+20       0.4497      0.00  Q         |          |         |        V|
  25+25       0.4497      0.00  Q         |          |         |        V|
  25+30       0.4497      0.00  Q         |          |         |        V|
  25+35       0.4497      0.00  Q         |          |         |         V
-------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 42
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 124.33 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 124.33 | 6 | 1.87 |
| Rainfall data for year 100 | | |
| 124.33 | 24 | 2.67 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 84.0 | 96.4 | 124.33 | 1.000 | 0.071 | 0.971 | 0.069 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.069

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 120.72 | 0.971 | 84.0 | 96.4 | 0.37 | 0.850 |
| 3.61 | 0.029 | 98.0 | 98.0 | 0.20 | 0.914 |

Area-averaged catchment yield fraction, Y = 0.852
Area-averaged low loss fraction, Yb = 0.148
User entry of time of concentration = 0.970 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 124.33(Ac.)
Catchment Lag time = 0.776 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 10.7388
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.069(In/Hr)
Average low loss rate fraction (Yb) = 0.148 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.667(In)
Specified peak 6-hour rainfall = 1.870(In)
Specified peak 24-hour rainfall = 2.670(In)

Rainfall depth area reduction factors:
Using a total area of 124.33(Ac.) (Ref: fig. E-4)

5-minute factor = 0.994 Adjusted rainfall = 0.656(In)
30-minute factor = 0.994 Adjusted rainfall = 1.122(In)
1-hour factor = 0.994 Adjusted rainfall = 1.382(In)
3-hour factor = 0.999 Adjusted rainfall = 1.666(In)
6-hour factor = 1.000 Adjusted rainfall = 1.869(In)
24-hour factor = 1.000 Adjusted rainfall = 2.670(In)
---

U n i t H y d r o g r a p h

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 1503.62 (CFS)) | |
| 1 | 0.473 | 7.105 |
| 2 | 1.718 | 18.723 |
| 3 | 3.704 | 29.870 |
| 4 | 6.443 | 41.183 |
| 5 | 10.130 | 55.439 |
| 6 | 16.367 | 93.784 |
| 7 | 25.977 | 144.497 |
| 8 | 36.043 | 151.352 |
| 9 | 44.394 | 125.560 |
| 10 | 50.987 | 99.137 |
| 11 | 56.434 | 81.893 |
| 12 | 60.673 | 63.739 |
| 13 | 64.172 | 52.611 |

| | | |
|---|---|---|
| 14 | 67.173 | 45.131 |
| 15 | 69.871 | 40.569 |
| 16 | 72.287 | 36.320 |
| 17 | 74.374 | 31.390 |
| 18 | 76.263 | 28.400 |
| 19 | 78.049 | 26.853 |
| 20 | 79.542 | 22.446 |
| 21 | 80.959 | 21.310 |
| 22 | 82.236 | 19.195 |
| 23 | 83.395 | 17.439 |
| 24 | 84.522 | 16.937 |
| 25 | 85.558 | 15.577 |
| 26 | 86.575 | 15.303 |
| 27 | 87.466 | 13.395 |
| 28 | 88.325 | 12.911 |
| 29 | 89.063 | 11.103 |
| 30 | 89.708 | 9.688 |
| 31 | 90.340 | 9.513 |
| 32 | 90.943 | 9.065 |
| 33 | 91.538 | 8.935 |
| 34 | 92.068 | 7.977 |
| 35 | 92.583 | 7.749 |
| 36 | 93.074 | 7.378 |
| 37 | 93.547 | 7.105 |
| 38 | 93.989 | 6.648 |
| 39 | 94.357 | 5.540 |
| 40 | 94.722 | 5.490 |
| 41 | 95.087 | 5.490 |
| 42 | 95.452 | 5.484 |
| 43 | 95.766 | 4.726 |
| 44 | 96.046 | 4.198 |
| 45 | 96.325 | 4.198 |
| 46 | 96.604 | 4.198 |
| 47 | 96.875 | 4.073 |
| 48 | 97.082 | 3.109 |
| 49 | 97.275 | 2.906 |
| 50 | 97.468 | 2.906 |
| 51 | 97.662 | 2.906 |
| 52 | 97.828 | 2.509 |
| 53 | 97.938 | 1.645 |
| 54 | 98.045 | 1.615 |
| 55 | 98.153 | 1.615 |
| 56 | 98.260 | 1.617 |
| 57 | 98.381 | 1.815 |
| 58 | 98.510 | 1.938 |
| 59 | 98.639 | 1.938 |
| 60 | 98.768 | 1.938 |
| 61 | 98.896 | 1.938 |
| 62 | 99.025 | 1.938 |
| 63 | 99.154 | 1.938 |
| 64 | 99.283 | 1.938 |
| 65 | 99.412 | 1.938 |
| 66 | 99.520 | 1.629 |
| 67 | 99.588 | 1.025 |
| 68 | 99.655 | 1.009 |
| 69 | 99.723 | 1.009 |
| 70 | 99.790 | 1.009 |
| 71 | 99.857 | 1.009 |
| 72 | 99.924 | 1.009 |

| | | |
|---|---|---|
| 73 | 100.000 | 0.505 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6557 | 0.6557 |
| 2 | 0.8073 | 0.1516 |
| 3 | 0.9117 | 0.1044 |
| 4 | 0.9939 | 0.0822 |
| 5 | 1.0627 | 0.0688 |
| 6 | 1.1225 | 0.0597 |
| 7 | 1.1756 | 0.0531 |
| 8 | 1.2236 | 0.0480 |
| 9 | 1.2676 | 0.0440 |
| 10 | 1.3083 | 0.0407 |
| 11 | 1.3463 | 0.0379 |
| 12 | 1.3819 | 0.0356 |
| 13 | 1.4009 | 0.0190 |
| 14 | 1.4186 | 0.0178 |
| 15 | 1.4354 | 0.0168 |
| 16 | 1.4512 | 0.0159 |
| 17 | 1.4663 | 0.0151 |
| 18 | 1.4806 | 0.0143 |
| 19 | 1.4943 | 0.0137 |
| 20 | 1.5074 | 0.0131 |
| 21 | 1.5200 | 0.0126 |
| 22 | 1.5321 | 0.0121 |
| 23 | 1.5437 | 0.0116 |
| 24 | 1.5549 | 0.0112 |
| 25 | 1.5658 | 0.0108 |
| 26 | 1.5763 | 0.0105 |
| 27 | 1.5864 | 0.0102 |
| 28 | 1.5963 | 0.0099 |
| 29 | 1.6058 | 0.0096 |
| 30 | 1.6151 | 0.0093 |
| 31 | 1.6242 | 0.0090 |
| 32 | 1.6330 | 0.0088 |
| 33 | 1.6415 | 0.0086 |
| 34 | 1.6499 | 0.0084 |
| 35 | 1.6581 | 0.0082 |
| 36 | 1.6660 | 0.0080 |
| 37 | 1.6736 | 0.0076 |
| 38 | 1.6811 | 0.0074 |
| 39 | 1.6883 | 0.0073 |
| 40 | 1.6954 | 0.0071 |
| 41 | 1.7024 | 0.0070 |
| 42 | 1.7092 | 0.0068 |
| 43 | 1.7159 | 0.0067 |
| 44 | 1.7225 | 0.0066 |
| 45 | 1.7289 | 0.0064 |
| 46 | 1.7352 | 0.0063 |
| 47 | 1.7415 | 0.0062 |
| 48 | 1.7476 | 0.0061 |
| 49 | 1.7536 | 0.0060 |
| 50 | 1.7594 | 0.0059 |
| 51 | 1.7652 | 0.0058 |
| 52 | 1.7709 | 0.0057 |
| 53 | 1.7766 | 0.0056 |
| 54 | 1.7821 | 0.0055 |
| 55 | 1.7875 | 0.0054 |

| | | |
|---|---|---|
| 56 | 1.7929 | 0.0054 |
| 57 | 1.7981 | 0.0053 |
| 58 | 1.8033 | 0.0052 |
| 59 | 1.8085 | 0.0051 |
| 60 | 1.8135 | 0.0051 |
| 61 | 1.8185 | 0.0050 |
| 62 | 1.8234 | 0.0049 |
| 63 | 1.8283 | 0.0049 |
| 64 | 1.8331 | 0.0048 |
| 65 | 1.8378 | 0.0047 |
| 66 | 1.8425 | 0.0047 |
| 67 | 1.8471 | 0.0046 |
| 68 | 1.8516 | 0.0045 |
| 69 | 1.8561 | 0.0045 |
| 70 | 1.8605 | 0.0044 |
| 71 | 1.8649 | 0.0044 |
| 72 | 1.8693 | 0.0043 |
| 73 | 1.8759 | 0.0066 |
| 74 | 1.8825 | 0.0066 |
| 75 | 1.8890 | 0.0065 |
| 76 | 1.8954 | 0.0064 |
| 77 | 1.9018 | 0.0064 |
| 78 | 1.9081 | 0.0063 |
| 79 | 1.9144 | 0.0063 |
| 80 | 1.9206 | 0.0062 |
| 81 | 1.9267 | 0.0061 |
| 82 | 1.9328 | 0.0061 |
| 83 | 1.9389 | 0.0060 |
| 84 | 1.9448 | 0.0060 |
| 85 | 1.9508 | 0.0059 |
| 86 | 1.9566 | 0.0059 |
| 87 | 1.9625 | 0.0058 |
| 88 | 1.9682 | 0.0058 |
| 89 | 1.9740 | 0.0057 |
| 90 | 1.9796 | 0.0057 |
| 91 | 1.9853 | 0.0056 |
| 92 | 1.9909 | 0.0056 |
| 93 | 1.9964 | 0.0055 |
| 94 | 2.0019 | 0.0055 |
| 95 | 2.0073 | 0.0055 |
| 96 | 2.0128 | 0.0054 |
| 97 | 2.0181 | 0.0054 |
| 98 | 2.0235 | 0.0053 |
| 99 | 2.0287 | 0.0053 |
| 100 | 2.0340 | 0.0052 |
| 101 | 2.0392 | 0.0052 |
| 102 | 2.0444 | 0.0052 |
| 103 | 2.0495 | 0.0051 |
| 104 | 2.0546 | 0.0051 |
| 105 | 2.0597 | 0.0051 |
| 106 | 2.0647 | 0.0050 |
| 107 | 2.0697 | 0.0050 |
| 108 | 2.0746 | 0.0050 |
| 109 | 2.0796 | 0.0049 |
| 110 | 2.0844 | 0.0049 |
| 111 | 2.0893 | 0.0049 |
| 112 | 2.0941 | 0.0048 |
| 113 | 2.0989 | 0.0048 |
| 114 | 2.1037 | 0.0048 |

| | | |
|---|---|---|
| 115 | 2.1084 | 0.0047 |
| 116 | 2.1131 | 0.0047 |
| 117 | 2.1178 | 0.0047 |
| 118 | 2.1224 | 0.0046 |
| 119 | 2.1270 | 0.0046 |
| 120 | 2.1316 | 0.0046 |
| 121 | 2.1361 | 0.0046 |
| 122 | 2.1407 | 0.0045 |
| 123 | 2.1452 | 0.0045 |
| 124 | 2.1496 | 0.0045 |
| 125 | 2.1541 | 0.0044 |
| 126 | 2.1585 | 0.0044 |
| 127 | 2.1629 | 0.0044 |
| 128 | 2.1672 | 0.0044 |
| 129 | 2.1716 | 0.0043 |
| 130 | 2.1759 | 0.0043 |
| 131 | 2.1802 | 0.0043 |
| 132 | 2.1845 | 0.0043 |
| 133 | 2.1887 | 0.0042 |
| 134 | 2.1929 | 0.0042 |
| 135 | 2.1971 | 0.0042 |
| 136 | 2.2013 | 0.0042 |
| 137 | 2.2054 | 0.0041 |
| 138 | 2.2096 | 0.0041 |
| 139 | 2.2137 | 0.0041 |
| 140 | 2.2178 | 0.0041 |
| 141 | 2.2218 | 0.0041 |
| 142 | 2.2259 | 0.0040 |
| 143 | 2.2299 | 0.0040 |
| 144 | 2.2339 | 0.0040 |
| 145 | 2.2378 | 0.0040 |
| 146 | 2.2418 | 0.0040 |
| 147 | 2.2457 | 0.0039 |
| 148 | 2.2497 | 0.0039 |
| 149 | 2.2536 | 0.0039 |
| 150 | 2.2574 | 0.0039 |
| 151 | 2.2613 | 0.0039 |
| 152 | 2.2651 | 0.0038 |
| 153 | 2.2690 | 0.0038 |
| 154 | 2.2728 | 0.0038 |
| 155 | 2.2765 | 0.0038 |
| 156 | 2.2803 | 0.0038 |
| 157 | 2.2841 | 0.0037 |
| 158 | 2.2878 | 0.0037 |
| 159 | 2.2915 | 0.0037 |
| 160 | 2.2952 | 0.0037 |
| 161 | 2.2989 | 0.0037 |
| 162 | 2.3025 | 0.0037 |
| 163 | 2.3062 | 0.0036 |
| 164 | 2.3098 | 0.0036 |
| 165 | 2.3134 | 0.0036 |
| 166 | 2.3170 | 0.0036 |
| 167 | 2.3206 | 0.0036 |
| 168 | 2.3242 | 0.0036 |
| 169 | 2.3277 | 0.0035 |
| 170 | 2.3313 | 0.0035 |
| 171 | 2.3348 | 0.0035 |
| 172 | 2.3383 | 0.0035 |
| 173 | 2.3418 | 0.0035 |

| | | |
|---|---|---|
| 174 | 2.3452 | 0.0035 |
| 175 | 2.3487 | 0.0035 |
| 176 | 2.3521 | 0.0034 |
| 177 | 2.3556 | 0.0034 |
| 178 | 2.3590 | 0.0034 |
| 179 | 2.3624 | 0.0034 |
| 180 | 2.3658 | 0.0034 |
| 181 | 2.3691 | 0.0034 |
| 182 | 2.3725 | 0.0034 |
| 183 | 2.3758 | 0.0033 |
| 184 | 2.3792 | 0.0033 |
| 185 | 2.3825 | 0.0033 |
| 186 | 2.3858 | 0.0033 |
| 187 | 2.3891 | 0.0033 |
| 188 | 2.3924 | 0.0033 |
| 189 | 2.3956 | 0.0033 |
| 190 | 2.3989 | 0.0033 |
| 191 | 2.4021 | 0.0032 |
| 192 | 2.4053 | 0.0032 |
| 193 | 2.4086 | 0.0032 |
| 194 | 2.4118 | 0.0032 |
| 195 | 2.4149 | 0.0032 |
| 196 | 2.4181 | 0.0032 |
| 197 | 2.4213 | 0.0032 |
| 198 | 2.4244 | 0.0032 |
| 199 | 2.4276 | 0.0031 |
| 200 | 2.4307 | 0.0031 |
| 201 | 2.4338 | 0.0031 |
| 202 | 2.4369 | 0.0031 |
| 203 | 2.4400 | 0.0031 |
| 204 | 2.4431 | 0.0031 |
| 205 | 2.4462 | 0.0031 |
| 206 | 2.4493 | 0.0031 |
| 207 | 2.4523 | 0.0031 |
| 208 | 2.4553 | 0.0030 |
| 209 | 2.4584 | 0.0030 |
| 210 | 2.4614 | 0.0030 |
| 211 | 2.4644 | 0.0030 |
| 212 | 2.4674 | 0.0030 |
| 213 | 2.4704 | 0.0030 |
| 214 | 2.4734 | 0.0030 |
| 215 | 2.4763 | 0.0030 |
| 216 | 2.4793 | 0.0030 |
| 217 | 2.4822 | 0.0029 |
| 218 | 2.4852 | 0.0029 |
| 219 | 2.4881 | 0.0029 |
| 220 | 2.4910 | 0.0029 |
| 221 | 2.4939 | 0.0029 |
| 222 | 2.4968 | 0.0029 |
| 223 | 2.4997 | 0.0029 |
| 224 | 2.5026 | 0.0029 |
| 225 | 2.5054 | 0.0029 |
| 226 | 2.5083 | 0.0029 |
| 227 | 2.5111 | 0.0028 |
| 228 | 2.5140 | 0.0028 |
| 229 | 2.5168 | 0.0028 |
| 230 | 2.5196 | 0.0028 |
| 231 | 2.5224 | 0.0028 |
| 232 | 2.5252 | 0.0028 |

| | | | |
|---|---|---|---|
| 233 | 2.5280 | 0.0028 | |
| 234 | 2.5308 | 0.0028 | |
| 235 | 2.5336 | 0.0028 | |
| 236 | 2.5364 | 0.0028 | |
| 237 | 2.5391 | 0.0028 | |
| 238 | 2.5419 | 0.0027 | |
| 239 | 2.5446 | 0.0027 | |
| 240 | 2.5474 | 0.0027 | |
| 241 | 2.5501 | 0.0027 | |
| 242 | 2.5528 | 0.0027 | |
| 243 | 2.5555 | 0.0027 | |
| 244 | 2.5582 | 0.0027 | |
| 245 | 2.5609 | 0.0027 | |
| 246 | 2.5636 | 0.0027 | |
| 247 | 2.5662 | 0.0027 | |
| 248 | 2.5689 | 0.0027 | |
| 249 | 2.5716 | 0.0027 | |
| 250 | 2.5742 | 0.0027 | |
| 251 | 2.5769 | 0.0026 | |
| 252 | 2.5795 | 0.0026 | |
| 253 | 2.5821 | 0.0026 | |
| 254 | 2.5847 | 0.0026 | |
| 255 | 2.5874 | 0.0026 | |
| 256 | 2.5900 | 0.0026 | |
| 257 | 2.5926 | 0.0026 | |
| 258 | 2.5952 | 0.0026 | |
| 259 | 2.5977 | 0.0026 | |
| 260 | 2.6003 | 0.0026 | |
| 261 | 2.6029 | 0.0026 | |
| 262 | 2.6054 | 0.0026 | |
| 263 | 2.6080 | 0.0026 | |
| 264 | 2.6105 | 0.0025 | |
| 265 | 2.6131 | 0.0025 | |
| 266 | 2.6156 | 0.0025 | |
| 267 | 2.6181 | 0.0025 | |
| 268 | 2.6206 | 0.0025 | |
| 269 | 2.6232 | 0.0025 | |
| 270 | 2.6257 | 0.0025 | |
| 271 | 2.6282 | 0.0025 | |
| 272 | 2.6306 | 0.0025 | |
| 273 | 2.6331 | 0.0025 | |
| 274 | 2.6356 | 0.0025 | |
| 275 | 2.6381 | 0.0025 | |
| 276 | 2.6405 | 0.0025 | |
| 277 | 2.6430 | 0.0025 | |
| 278 | 2.6454 | 0.0024 | |
| 279 | 2.6479 | 0.0024 | |
| 280 | 2.6503 | 0.0024 | |
| 281 | 2.6528 | 0.0024 | |
| 282 | 2.6552 | 0.0024 | |
| 283 | 2.6576 | 0.0024 | |
| 284 | 2.6600 | 0.0024 | |
| 285 | 2.6624 | 0.0024 | |
| 286 | 2.6648 | 0.0024 | |
| 287 | 2.6672 | 0.0024 | |
| 288 | 2.6696 | 0.0024 | |

| Unit Period | Unit Rainfall | Unit Soil-Loss | Effective Rainfall |
|---|---|---|---|

| (number) | (In) | (In) | (In) |
|---|---|---|---|
| 1 | 0.0024 | 0.0004 | 0.0020 |
| 2 | 0.0024 | 0.0004 | 0.0020 |
| 3 | 0.0024 | 0.0004 | 0.0020 |
| 4 | 0.0024 | 0.0004 | 0.0021 |
| 5 | 0.0024 | 0.0004 | 0.0021 |
| 6 | 0.0024 | 0.0004 | 0.0021 |
| 7 | 0.0024 | 0.0004 | 0.0021 |
| 8 | 0.0024 | 0.0004 | 0.0021 |
| 9 | 0.0025 | 0.0004 | 0.0021 |
| 10 | 0.0025 | 0.0004 | 0.0021 |
| 11 | 0.0025 | 0.0004 | 0.0021 |
| 12 | 0.0025 | 0.0004 | 0.0021 |
| 13 | 0.0025 | 0.0004 | 0.0021 |
| 14 | 0.0025 | 0.0004 | 0.0021 |
| 15 | 0.0025 | 0.0004 | 0.0021 |
| 16 | 0.0025 | 0.0004 | 0.0022 |
| 17 | 0.0025 | 0.0004 | 0.0022 |
| 18 | 0.0026 | 0.0004 | 0.0022 |
| 19 | 0.0026 | 0.0004 | 0.0022 |
| 20 | 0.0026 | 0.0004 | 0.0022 |
| 21 | 0.0026 | 0.0004 | 0.0022 |
| 22 | 0.0026 | 0.0004 | 0.0022 |
| 23 | 0.0026 | 0.0004 | 0.0022 |
| 24 | 0.0026 | 0.0004 | 0.0022 |
| 25 | 0.0026 | 0.0004 | 0.0022 |
| 26 | 0.0026 | 0.0004 | 0.0023 |
| 27 | 0.0027 | 0.0004 | 0.0023 |
| 28 | 0.0027 | 0.0004 | 0.0023 |
| 29 | 0.0027 | 0.0004 | 0.0023 |
| 30 | 0.0027 | 0.0004 | 0.0023 |
| 31 | 0.0027 | 0.0004 | 0.0023 |
| 32 | 0.0027 | 0.0004 | 0.0023 |
| 33 | 0.0027 | 0.0004 | 0.0023 |
| 34 | 0.0027 | 0.0004 | 0.0023 |
| 35 | 0.0028 | 0.0004 | 0.0023 |
| 36 | 0.0028 | 0.0004 | 0.0024 |
| 37 | 0.0028 | 0.0004 | 0.0024 |
| 38 | 0.0028 | 0.0004 | 0.0024 |
| 39 | 0.0028 | 0.0004 | 0.0024 |
| 40 | 0.0028 | 0.0004 | 0.0024 |
| 41 | 0.0028 | 0.0004 | 0.0024 |
| 42 | 0.0028 | 0.0004 | 0.0024 |
| 43 | 0.0029 | 0.0004 | 0.0024 |
| 44 | 0.0029 | 0.0004 | 0.0024 |
| 45 | 0.0029 | 0.0004 | 0.0025 |
| 46 | 0.0029 | 0.0004 | 0.0025 |
| 47 | 0.0029 | 0.0004 | 0.0025 |
| 48 | 0.0029 | 0.0004 | 0.0025 |
| 49 | 0.0030 | 0.0004 | 0.0025 |
| 50 | 0.0030 | 0.0004 | 0.0025 |
| 51 | 0.0030 | 0.0004 | 0.0025 |
| 52 | 0.0030 | 0.0004 | 0.0026 |
| 53 | 0.0030 | 0.0004 | 0.0026 |
| 54 | 0.0030 | 0.0004 | 0.0026 |
| 55 | 0.0031 | 0.0005 | 0.0026 |
| 56 | 0.0031 | 0.0005 | 0.0026 |
| 57 | 0.0031 | 0.0005 | 0.0026 |

| | | | |
|---|---|---|---|
| 58 | 0.0031 | 0.0005 | 0.0026 |
| 59 | 0.0031 | 0.0005 | 0.0027 |
| 60 | 0.0031 | 0.0005 | 0.0027 |
| 61 | 0.0032 | 0.0005 | 0.0027 |
| 62 | 0.0032 | 0.0005 | 0.0027 |
| 63 | 0.0032 | 0.0005 | 0.0027 |
| 64 | 0.0032 | 0.0005 | 0.0027 |
| 65 | 0.0032 | 0.0005 | 0.0027 |
| 66 | 0.0032 | 0.0005 | 0.0028 |
| 67 | 0.0033 | 0.0005 | 0.0028 |
| 68 | 0.0033 | 0.0005 | 0.0028 |
| 69 | 0.0033 | 0.0005 | 0.0028 |
| 70 | 0.0033 | 0.0005 | 0.0028 |
| 71 | 0.0033 | 0.0005 | 0.0028 |
| 72 | 0.0034 | 0.0005 | 0.0029 |
| 73 | 0.0034 | 0.0005 | 0.0029 |
| 74 | 0.0034 | 0.0005 | 0.0029 |
| 75 | 0.0034 | 0.0005 | 0.0029 |
| 76 | 0.0034 | 0.0005 | 0.0029 |
| 77 | 0.0035 | 0.0005 | 0.0030 |
| 78 | 0.0035 | 0.0005 | 0.0030 |
| 79 | 0.0035 | 0.0005 | 0.0030 |
| 80 | 0.0035 | 0.0005 | 0.0030 |
| 81 | 0.0036 | 0.0005 | 0.0030 |
| 82 | 0.0036 | 0.0005 | 0.0030 |
| 83 | 0.0036 | 0.0005 | 0.0031 |
| 84 | 0.0036 | 0.0005 | 0.0031 |
| 85 | 0.0037 | 0.0005 | 0.0031 |
| 86 | 0.0037 | 0.0005 | 0.0031 |
| 87 | 0.0037 | 0.0006 | 0.0032 |
| 88 | 0.0037 | 0.0006 | 0.0032 |
| 89 | 0.0038 | 0.0006 | 0.0032 |
| 90 | 0.0038 | 0.0006 | 0.0032 |
| 91 | 0.0038 | 0.0006 | 0.0033 |
| 92 | 0.0038 | 0.0006 | 0.0033 |
| 93 | 0.0039 | 0.0006 | 0.0033 |
| 94 | 0.0039 | 0.0006 | 0.0033 |
| 95 | 0.0039 | 0.0006 | 0.0034 |
| 96 | 0.0040 | 0.0006 | 0.0034 |
| 97 | 0.0040 | 0.0006 | 0.0034 |
| 98 | 0.0040 | 0.0006 | 0.0034 |
| 99 | 0.0041 | 0.0006 | 0.0035 |
| 100 | 0.0041 | 0.0006 | 0.0035 |
| 101 | 0.0041 | 0.0006 | 0.0035 |
| 102 | 0.0041 | 0.0006 | 0.0035 |
| 103 | 0.0042 | 0.0006 | 0.0036 |
| 104 | 0.0042 | 0.0006 | 0.0036 |
| 105 | 0.0043 | 0.0006 | 0.0036 |
| 106 | 0.0043 | 0.0006 | 0.0037 |
| 107 | 0.0043 | 0.0006 | 0.0037 |
| 108 | 0.0044 | 0.0006 | 0.0037 |
| 109 | 0.0044 | 0.0007 | 0.0038 |
| 110 | 0.0044 | 0.0007 | 0.0038 |
| 111 | 0.0045 | 0.0007 | 0.0038 |
| 112 | 0.0045 | 0.0007 | 0.0039 |
| 113 | 0.0046 | 0.0007 | 0.0039 |
| 114 | 0.0046 | 0.0007 | 0.0039 |
| 115 | 0.0047 | 0.0007 | 0.0040 |
| 116 | 0.0047 | 0.0007 | 0.0040 |

| | | | |
|---|---|---|---|
| 117 | 0.0048 | 0.0007 | 0.0041 |
| 118 | 0.0048 | 0.0007 | 0.0041 |
| 119 | 0.0049 | 0.0007 | 0.0041 |
| 120 | 0.0049 | 0.0007 | 0.0042 |
| 121 | 0.0050 | 0.0007 | 0.0042 |
| 122 | 0.0050 | 0.0007 | 0.0042 |
| 123 | 0.0051 | 0.0008 | 0.0043 |
| 124 | 0.0051 | 0.0008 | 0.0043 |
| 125 | 0.0052 | 0.0008 | 0.0044 |
| 126 | 0.0052 | 0.0008 | 0.0044 |
| 127 | 0.0053 | 0.0008 | 0.0045 |
| 128 | 0.0053 | 0.0008 | 0.0045 |
| 129 | 0.0054 | 0.0008 | 0.0046 |
| 130 | 0.0055 | 0.0008 | 0.0046 |
| 131 | 0.0055 | 0.0008 | 0.0047 |
| 132 | 0.0056 | 0.0008 | 0.0048 |
| 133 | 0.0057 | 0.0008 | 0.0048 |
| 134 | 0.0057 | 0.0008 | 0.0049 |
| 135 | 0.0058 | 0.0009 | 0.0050 |
| 136 | 0.0059 | 0.0009 | 0.0050 |
| 137 | 0.0060 | 0.0009 | 0.0051 |
| 138 | 0.0060 | 0.0009 | 0.0051 |
| 139 | 0.0061 | 0.0009 | 0.0052 |
| 140 | 0.0062 | 0.0009 | 0.0053 |
| 141 | 0.0063 | 0.0009 | 0.0054 |
| 142 | 0.0064 | 0.0009 | 0.0054 |
| 143 | 0.0065 | 0.0010 | 0.0055 |
| 144 | 0.0066 | 0.0010 | 0.0056 |
| 145 | 0.0043 | 0.0006 | 0.0037 |
| 146 | 0.0044 | 0.0007 | 0.0037 |
| 147 | 0.0045 | 0.0007 | 0.0038 |
| 148 | 0.0045 | 0.0007 | 0.0039 |
| 149 | 0.0047 | 0.0007 | 0.0040 |
| 150 | 0.0047 | 0.0007 | 0.0040 |
| 151 | 0.0049 | 0.0007 | 0.0041 |
| 152 | 0.0049 | 0.0007 | 0.0042 |
| 153 | 0.0051 | 0.0008 | 0.0043 |
| 154 | 0.0051 | 0.0008 | 0.0044 |
| 155 | 0.0053 | 0.0008 | 0.0045 |
| 156 | 0.0054 | 0.0008 | 0.0046 |
| 157 | 0.0055 | 0.0008 | 0.0047 |
| 158 | 0.0056 | 0.0008 | 0.0048 |
| 159 | 0.0058 | 0.0009 | 0.0049 |
| 160 | 0.0059 | 0.0009 | 0.0050 |
| 161 | 0.0061 | 0.0009 | 0.0052 |
| 162 | 0.0062 | 0.0009 | 0.0053 |
| 163 | 0.0064 | 0.0010 | 0.0055 |
| 164 | 0.0066 | 0.0010 | 0.0056 |
| 165 | 0.0068 | 0.0010 | 0.0058 |
| 166 | 0.0070 | 0.0010 | 0.0059 |
| 167 | 0.0073 | 0.0011 | 0.0062 |
| 168 | 0.0074 | 0.0011 | 0.0063 |
| 169 | 0.0080 | 0.0012 | 0.0068 |
| 170 | 0.0082 | 0.0012 | 0.0069 |
| 171 | 0.0086 | 0.0013 | 0.0073 |
| 172 | 0.0088 | 0.0013 | 0.0075 |
| 173 | 0.0093 | 0.0014 | 0.0079 |
| 174 | 0.0096 | 0.0014 | 0.0081 |
| 175 | 0.0102 | 0.0015 | 0.0087 |

| | | | |
|---|---|---|---|
| 176 | 0.0105 | 0.0016 | 0.0089 |
| 177 | 0.0112 | 0.0017 | 0.0096 |
| 178 | 0.0116 | 0.0017 | 0.0099 |
| 179 | 0.0126 | 0.0019 | 0.0107 |
| 180 | 0.0131 | 0.0019 | 0.0112 |
| 181 | 0.0143 | 0.0021 | 0.0122 |
| 182 | 0.0151 | 0.0022 | 0.0128 |
| 183 | 0.0168 | 0.0025 | 0.0143 |
| 184 | 0.0178 | 0.0026 | 0.0151 |
| 185 | 0.0356 | 0.0053 | 0.0303 |
| 186 | 0.0379 | 0.0056 | 0.0323 |
| 187 | 0.0440 | 0.0057 | 0.0383 |
| 188 | 0.0480 | 0.0057 | 0.0423 |
| 189 | 0.0597 | 0.0057 | 0.0540 |
| 190 | 0.0688 | 0.0057 | 0.0631 |
| 191 | 0.1044 | 0.0057 | 0.0987 |
| 192 | 0.1516 | 0.0057 | 0.1458 |
| 193 | 0.6557 | 0.0057 | 0.6500 |
| 194 | 0.0822 | 0.0057 | 0.0764 |
| 195 | 0.0531 | 0.0057 | 0.0474 |
| 196 | 0.0407 | 0.0057 | 0.0350 |
| 197 | 0.0190 | 0.0028 | 0.0161 |
| 198 | 0.0159 | 0.0024 | 0.0135 |
| 199 | 0.0137 | 0.0020 | 0.0117 |
| 200 | 0.0121 | 0.0018 | 0.0103 |
| 201 | 0.0108 | 0.0016 | 0.0092 |
| 202 | 0.0099 | 0.0015 | 0.0084 |
| 203 | 0.0090 | 0.0013 | 0.0077 |
| 204 | 0.0084 | 0.0012 | 0.0071 |
| 205 | 0.0076 | 0.0011 | 0.0065 |
| 206 | 0.0071 | 0.0011 | 0.0061 |
| 207 | 0.0067 | 0.0010 | 0.0057 |
| 208 | 0.0063 | 0.0009 | 0.0054 |
| 209 | 0.0060 | 0.0009 | 0.0051 |
| 210 | 0.0057 | 0.0008 | 0.0049 |
| 211 | 0.0054 | 0.0008 | 0.0046 |
| 212 | 0.0052 | 0.0008 | 0.0044 |
| 213 | 0.0050 | 0.0007 | 0.0042 |
| 214 | 0.0048 | 0.0007 | 0.0041 |
| 215 | 0.0046 | 0.0007 | 0.0039 |
| 216 | 0.0044 | 0.0007 | 0.0038 |
| 217 | 0.0066 | 0.0010 | 0.0057 |
| 218 | 0.0064 | 0.0010 | 0.0055 |
| 219 | 0.0063 | 0.0009 | 0.0053 |
| 220 | 0.0061 | 0.0009 | 0.0052 |
| 221 | 0.0059 | 0.0009 | 0.0050 |
| 222 | 0.0058 | 0.0009 | 0.0049 |
| 223 | 0.0056 | 0.0008 | 0.0048 |
| 224 | 0.0055 | 0.0008 | 0.0047 |
| 225 | 0.0054 | 0.0008 | 0.0046 |
| 226 | 0.0052 | 0.0008 | 0.0045 |
| 227 | 0.0051 | 0.0008 | 0.0044 |
| 228 | 0.0050 | 0.0007 | 0.0043 |
| 229 | 0.0049 | 0.0007 | 0.0042 |
| 230 | 0.0048 | 0.0007 | 0.0041 |
| 231 | 0.0047 | 0.0007 | 0.0040 |
| 232 | 0.0046 | 0.0007 | 0.0040 |
| 233 | 0.0046 | 0.0007 | 0.0039 |
| 234 | 0.0045 | 0.0007 | 0.0038 |

| | | | |
|---|---|---|---|
| 235 | 0.0044 | 0.0007 | 0.0037 |
| 236 | 0.0043 | 0.0006 | 0.0037 |
| 237 | 0.0042 | 0.0006 | 0.0036 |
| 238 | 0.0042 | 0.0006 | 0.0036 |
| 239 | 0.0041 | 0.0006 | 0.0035 |
| 240 | 0.0040 | 0.0006 | 0.0034 |
| 241 | 0.0040 | 0.0006 | 0.0034 |
| 242 | 0.0039 | 0.0006 | 0.0033 |
| 243 | 0.0039 | 0.0006 | 0.0033 |
| 244 | 0.0038 | 0.0006 | 0.0032 |
| 245 | 0.0037 | 0.0006 | 0.0032 |
| 246 | 0.0037 | 0.0005 | 0.0031 |
| 247 | 0.0036 | 0.0005 | 0.0031 |
| 248 | 0.0036 | 0.0005 | 0.0031 |
| 249 | 0.0035 | 0.0005 | 0.0030 |
| 250 | 0.0035 | 0.0005 | 0.0030 |
| 251 | 0.0035 | 0.0005 | 0.0029 |
| 252 | 0.0034 | 0.0005 | 0.0029 |
| 253 | 0.0034 | 0.0005 | 0.0029 |
| 254 | 0.0033 | 0.0005 | 0.0028 |
| 255 | 0.0033 | 0.0005 | 0.0028 |
| 256 | 0.0033 | 0.0005 | 0.0028 |
| 257 | 0.0032 | 0.0005 | 0.0027 |
| 258 | 0.0032 | 0.0005 | 0.0027 |
| 259 | 0.0031 | 0.0005 | 0.0027 |
| 260 | 0.0031 | 0.0005 | 0.0026 |
| 261 | 0.0031 | 0.0005 | 0.0026 |
| 262 | 0.0030 | 0.0005 | 0.0026 |
| 263 | 0.0030 | 0.0004 | 0.0026 |
| 264 | 0.0030 | 0.0004 | 0.0025 |
| 265 | 0.0029 | 0.0004 | 0.0025 |
| 266 | 0.0029 | 0.0004 | 0.0025 |
| 267 | 0.0029 | 0.0004 | 0.0025 |
| 268 | 0.0029 | 0.0004 | 0.0024 |
| 269 | 0.0028 | 0.0004 | 0.0024 |
| 270 | 0.0028 | 0.0004 | 0.0024 |
| 271 | 0.0028 | 0.0004 | 0.0024 |
| 272 | 0.0027 | 0.0004 | 0.0023 |
| 273 | 0.0027 | 0.0004 | 0.0023 |
| 274 | 0.0027 | 0.0004 | 0.0023 |
| 275 | 0.0027 | 0.0004 | 0.0023 |
| 276 | 0.0027 | 0.0004 | 0.0023 |
| 277 | 0.0026 | 0.0004 | 0.0022 |
| 278 | 0.0026 | 0.0004 | 0.0022 |
| 279 | 0.0026 | 0.0004 | 0.0022 |
| 280 | 0.0026 | 0.0004 | 0.0022 |
| 281 | 0.0025 | 0.0004 | 0.0022 |
| 282 | 0.0025 | 0.0004 | 0.0021 |
| 283 | 0.0025 | 0.0004 | 0.0021 |
| 284 | 0.0025 | 0.0004 | 0.0021 |
| 285 | 0.0025 | 0.0004 | 0.0021 |
| 286 | 0.0024 | 0.0004 | 0.0021 |
| 287 | 0.0024 | 0.0004 | 0.0021 |
| 288 | 0.0024 | 0.0004 | 0.0020 |

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Total soil rain loss = 0.26(In)
Total effective rainfall = 2.41(In)
Peak flow rate in flood hydrograph = 163.96(CFS)

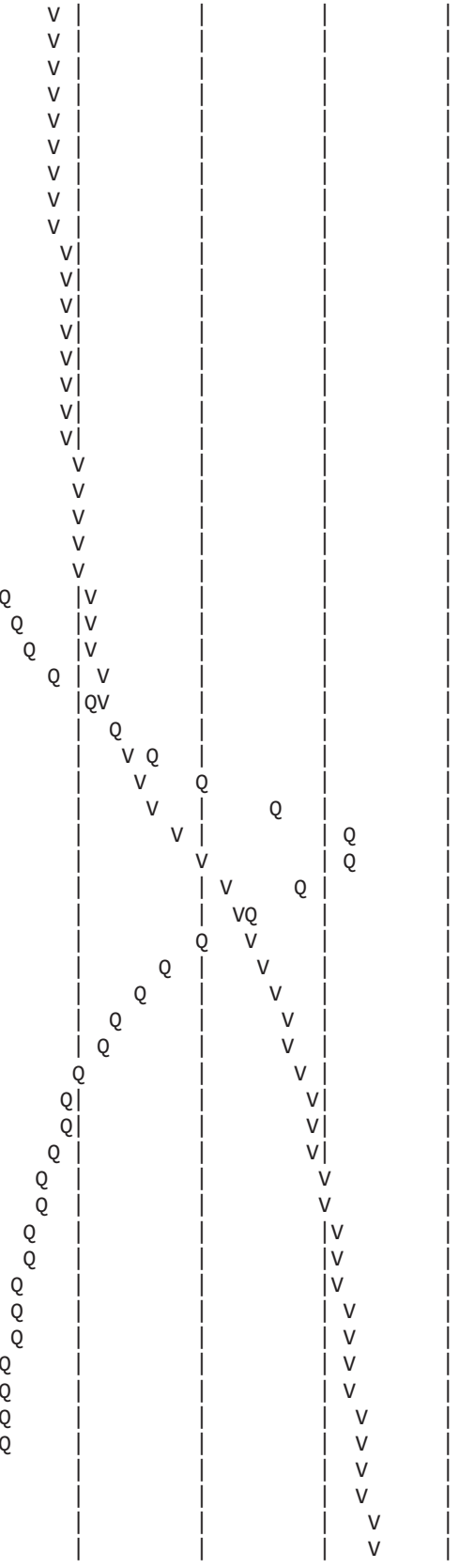
24 - H O U R  S T O R M
R u n o f f  H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 50.0 | 100.0 | 150.0 | 200.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0001 | 0.01 | Q | | | | |
| 0+10 | 0.0005 | 0.05 | Q | | | | |
| 0+15 | 0.0012 | 0.11 | Q | | | | |
| 0+20 | 0.0026 | 0.20 | Q | | | | |
| 0+25 | 0.0047 | 0.31 | Q | | | | |
| 0+30 | 0.0082 | 0.50 | Q | | | | |
| 0+35 | 0.0137 | 0.80 | Q | | | | |
| 0+40 | 0.0213 | 1.11 | Q | | | | |
| 0+45 | 0.0308 | 1.37 | Q | | | | |
| 0+50 | 0.0416 | 1.57 | Q | | | | |
| 0+55 | 0.0536 | 1.75 | Q | | | | |
| 1+ 0 | 0.0666 | 1.88 | Q | | | | |
| 1+ 5 | 0.0804 | 2.00 | Q | | | | |
| 1+10 | 0.0948 | 2.10 | Q | | | | |
| 1+15 | 0.1099 | 2.19 | Q | | | | |
| 1+20 | 0.1255 | 2.27 | Q | | | | |
| 1+25 | 0.1416 | 2.34 | Q | | | | |
| 1+30 | 0.1582 | 2.41 | Q | | | | |
| 1+35 | 0.1753 | 2.47 | Q | | | | |
| 1+40 | 0.1927 | 2.53 | Q | | | | |
| 1+45 | 0.2105 | 2.58 | Q | | | | |
| 1+50 | 0.2287 | 2.63 | Q | | | | |
| 1+55 | 0.2471 | 2.68 | Q | | | | |
| 2+ 0 | 0.2659 | 2.73 | Q | | | | |
| 2+ 5 | 0.2850 | 2.77 | Q | | | | |
| 2+10 | 0.3043 | 2.81 | Q | | | | |
| 2+15 | 0.3240 | 2.85 | Q | | | | |
| 2+20 | 0.3439 | 2.89 | Q | | | | |
| 2+25 | 0.3640 | 2.92 | Q | | | | |
| 2+30 | 0.3843 | 2.96 | Q | | | | |
| 2+35 | 0.4049 | 2.99 | Q | | | | |
| 2+40 | 0.4257 | 3.02 | Q | | | | |
| 2+45 | 0.4467 | 3.05 | Q | | | | |
| 2+50 | 0.4680 | 3.08 | Q | | | | |
| 2+55 | 0.4894 | 3.11 | Q | | | | |
| 3+ 0 | 0.5110 | 3.14 | Q | | | | |
| 3+ 5 | 0.5328 | 3.17 | Q | | | | |
| 3+10 | 0.5548 | 3.19 | Q | | | | |
| 3+15 | 0.5770 | 3.22 | Q | | | | |
| 3+20 | 0.5993 | 3.25 | Q | | | | |
| 3+25 | 0.6219 | 3.27 | Q | | | | |
| 3+30 | 0.6446 | 3.30 | QV | | | | |
| 3+35 | 0.6675 | 3.32 | QV | | | | |
| 3+40 | 0.6905 | 3.35 | QV | | | | |
| 3+45 | 0.7137 | 3.37 | QV | | | | |
| 3+50 | 0.7371 | 3.40 | QV | | | | |
| 3+55 | 0.7607 | 3.42 | QV | | | | |
| 4+ 0 | 0.7844 | 3.44 | QV | | | | |
| 4+ 5 | 0.8083 | 3.46 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4+10 | 0.8323 | 3.49 | QV | \| | \| | \| | \| |
| 4+15 | 0.8564 | 3.51 | QV | \| | \| | \| | \| |
| 4+20 | 0.8808 | 3.53 | QV | \| | \| | \| | \| |
| 4+25 | 0.9052 | 3.55 | QV | \| | \| | \| | \| |
| 4+30 | 0.9298 | 3.57 | QV | \| | \| | \| | \| |
| 4+35 | 0.9546 | 3.59 | QV | \| | \| | \| | \| |
| 4+40 | 0.9795 | 3.62 | QV | \| | \| | \| | \| |
| 4+45 | 1.0046 | 3.64 | QV | \| | \| | \| | \| |
| 4+50 | 1.0298 | 3.66 | QV | \| | \| | \| | \| |
| 4+55 | 1.0551 | 3.68 | QV | \| | \| | \| | \| |
| 5+ 0 | 1.0806 | 3.71 | QV | \| | \| | \| | \| |
| 5+ 5 | 1.1063 | 3.73 | QV | \| | \| | \| | \| |
| 5+10 | 1.1322 | 3.75 | QV | \| | \| | \| | \| |
| 5+15 | 1.1582 | 3.78 | QV | \| | \| | \| | \| |
| 5+20 | 1.1843 | 3.80 | QV | \| | \| | \| | \| |
| 5+25 | 1.2107 | 3.82 | QV | \| | \| | \| | \| |
| 5+30 | 1.2372 | 3.85 | QV | \| | \| | \| | \| |
| 5+35 | 1.2638 | 3.87 | Q V | \| | \| | \| | \| |
| 5+40 | 1.2906 | 3.89 | Q V | \| | \| | \| | \| |
| 5+45 | 1.3176 | 3.92 | Q V | \| | \| | \| | \| |
| 5+50 | 1.3447 | 3.94 | Q V | \| | \| | \| | \| |
| 5+55 | 1.3720 | 3.96 | Q V | \| | \| | \| | \| |
| 6+ 0 | 1.3995 | 3.99 | Q V | \| | \| | \| | \| |
| 6+ 5 | 1.4271 | 4.01 | Q V | \| | \| | \| | \| |
| 6+10 | 1.4549 | 4.03 | Q V | \| | \| | \| | \| |
| 6+15 | 1.4828 | 4.06 | Q V | \| | \| | \| | \| |
| 6+20 | 1.5109 | 4.08 | Q V | \| | \| | \| | \| |
| 6+25 | 1.5392 | 4.10 | Q V | \| | \| | \| | \| |
| 6+30 | 1.5676 | 4.13 | Q V | \| | \| | \| | \| |
| 6+35 | 1.5962 | 4.15 | Q V | \| | \| | \| | \| |
| 6+40 | 1.6250 | 4.18 | Q V | \| | \| | \| | \| |
| 6+45 | 1.6539 | 4.20 | Q V | \| | \| | \| | \| |
| 6+50 | 1.6830 | 4.23 | Q V | \| | \| | \| | \| |
| 6+55 | 1.7123 | 4.25 | Q V | \| | \| | \| | \| |
| 7+ 0 | 1.7418 | 4.28 | Q V | \| | \| | \| | \| |
| 7+ 5 | 1.7714 | 4.31 | Q V | \| | \| | \| | \| |
| 7+10 | 1.8013 | 4.33 | Q V | \| | \| | \| | \| |
| 7+15 | 1.8313 | 4.36 | Q V | \| | \| | \| | \| |
| 7+20 | 1.8615 | 4.39 | Q V | \| | \| | \| | \| |
| 7+25 | 1.8919 | 4.42 | Q  V | \| | \| | \| | \| |
| 7+30 | 1.9225 | 4.44 | Q  V | \| | \| | \| | \| |
| 7+35 | 1.9533 | 4.47 | Q  V | \| | \| | \| | \| |
| 7+40 | 1.9843 | 4.50 | Q  V | \| | \| | \| | \| |
| 7+45 | 2.0155 | 4.53 | Q  V | \| | \| | \| | \| |
| 7+50 | 2.0469 | 4.56 | Q  V | \| | \| | \| | \| |
| 7+55 | 2.0786 | 4.59 | Q  V | \| | \| | \| | \| |
| 8+ 0 | 2.1104 | 4.62 | Q  V | \| | \| | \| | \| |
| 8+ 5 | 2.1425 | 4.66 | Q  V | \| | \| | \| | \| |
| 8+10 | 2.1748 | 4.69 | Q  V | \| | \| | \| | \| |
| 8+15 | 2.2073 | 4.72 | Q  V | \| | \| | \| | \| |
| 8+20 | 2.2401 | 4.75 | Q  V | \| | \| | \| | \| |
| 8+25 | 2.2730 | 4.79 | Q  V | \| | \| | \| | \| |
| 8+30 | 2.3063 | 4.82 | Q  V | \| | \| | \| | \| |
| 8+35 | 2.3397 | 4.86 | Q  V | \| | \| | \| | \| |
| 8+40 | 2.3734 | 4.89 | Q  V | \| | \| | \| | \| |
| 8+45 | 2.4074 | 4.93 | Q  V | \| | \| | \| | \| |
| 8+50 | 2.4416 | 4.97 | Q  V | \| | \| | \| | \| |
| 8+55 | 2.4761 | 5.01 | \|Q V | \| | \| | \| | \| |
| 9+ 0 | 2.5108 | 5.04 | \|Q  V | \| | \| | \| | \| |

```
 9+ 5       2.5458      5.08  |Q  V     |          |          |          |
 9+10       2.5811      5.12  |Q  V     |          |          |          |
 9+15       2.6167      5.16  |Q  V     |          |          |          |
 9+20       2.6525      5.20  |Q  V     |          |          |          |
 9+25       2.6886      5.25  |Q  V     |          |          |          |
 9+30       2.7251      5.29  |Q  V     |          |          |          |
 9+35       2.7618      5.33  |Q  V     |          |          |          |
 9+40       2.7989      5.38  |Q  V     |          |          |          |
 9+45       2.8362      5.42  |Q  V     |          |          |          |
 9+50       2.8739      5.47  |Q  V     |          |          |          |
 9+55       2.9119      5.52  |Q  V     |          |          |          |
10+ 0       2.9502      5.57  |Q  V     |          |          |          |
10+ 5       2.9889      5.62  |Q  V     |          |          |          |
10+10       3.0279      5.67  |Q  V     |          |          |          |
10+15       3.0673      5.72  |Q  V     |          |          |          |
10+20       3.1071      5.77  |Q  V     |          |          |          |
10+25       3.1472      5.83  |Q   V    |          |          |          |
10+30       3.1877      5.88  |Q   V    |          |          |          |
10+35       3.2286      5.94  |Q   V    |          |          |          |
10+40       3.2698      5.99  |Q   V    |          |          |          |
10+45       3.3115      6.05  |Q   V    |          |          |          |
10+50       3.3536      6.11  |Q   V    |          |          |          |
10+55       3.3962      6.18  |Q   V    |          |          |          |
11+ 0       3.4391      6.24  |Q   V    |          |          |          |
11+ 5       3.4826      6.30  |Q   V    |          |          |          |
11+10       3.5264      6.37  |Q   V    |          |          |          |
11+15       3.5708      6.44  |Q   V    |          |          |          |
11+20       3.6156      6.51  |Q   V    |          |          |          |
11+25       3.6609      6.58  |Q   V    |          |          |          |
11+30       3.7068      6.65  |Q   V    |          |          |          |
11+35       3.7531      6.73  |Q    V   |          |          |          |
11+40       3.8000      6.81  |Q    V   |          |          |          |
11+45       3.8475      6.89  |Q    V   |          |          |          |
11+50       3.8955      6.97  |Q    V   |          |          |          |
11+55       3.9441      7.06  |Q    V   |          |          |          |
12+ 0       3.9933      7.14  |Q    V   |          |          |          |
12+ 5       4.0430      7.22  |Q    V   |          |          |          |
12+10       4.0931      7.27  |Q    V   |          |          |          |
12+15       4.1434      7.31  |Q    V   |          |          |          |
12+20       4.1938      7.32  |Q    V   |          |          |          |
12+25       4.2442      7.31  |Q    V   |          |          |          |
12+30       4.2939      7.22  |Q    V   |          |          |          |
12+35       4.3424      7.03  |Q    V   |          |          |          |
12+40       4.3894      6.83  |Q     V  |          |          |          |
12+45       4.4354      6.68  |Q     V  |          |          |          |
12+50       4.4808      6.58  |Q     V  |          |          |          |
12+55       4.5257      6.52  |Q     V  |          |          |          |
13+ 0       4.5705      6.50  |Q     V  |          |          |          |
13+ 5       4.6152      6.50  |Q     V  |          |          |          |
13+10       4.6602      6.52  |Q     V  |          |          |          |
13+15       4.7053      6.56  |Q     V  |          |          |          |
13+20       4.7508      6.60  |Q     V  |          |          |          |
13+25       4.7967      6.66  |Q     V  |          |          |          |
13+30       4.8431      6.73  |Q     V  |          |          |          |
13+35       4.8900      6.81  |Q     V  |          |          |          |
13+40       4.9376      6.91  |Q     V  |          |          |          |
13+45       4.9858      7.01  |Q     V  |          |          |          |
13+50       5.0349      7.12  |Q      V |          |          |          |
13+55       5.0848      7.25  |Q      V |          |          |          |
```

| | | | |
|---|---|---|---|
| 14+ 0 | 5.1357 | 7.38 |  |
| 14+ 5 | 5.1875 | 7.53 | |
| 14+10 | 5.2404 | 7.69 | |
| 14+15 | 5.2946 | 7.86 | |
| 14+20 | 5.3500 | 8.05 | |
| 14+25 | 5.4069 | 8.26 | |
| 14+30 | 5.4655 | 8.50 | |
| 14+35 | 5.5258 | 8.76 | |
| 14+40 | 5.5880 | 9.04 | |
| 14+45 | 5.6523 | 9.33 | |
| 14+50 | 5.7188 | 9.65 | |
| 14+55 | 5.7876 | 10.00 | |
| 15+ 0 | 5.8591 | 10.37 | |
| 15+ 5 | 5.9333 | 10.78 | |
| 15+10 | 6.0107 | 11.23 | |
| 15+15 | 6.0915 | 11.74 | |
| 15+20 | 6.1762 | 12.29 | |
| 15+25 | 6.2658 | 13.02 | |
| 15+30 | 6.3622 | 13.98 | |
| 15+35 | 6.4671 | 15.23 | |
| 15+40 | 6.5829 | 16.82 | |
| 15+45 | 6.7128 | 18.86 | |
| 15+50 | 6.8630 | 21.81 | |
| 15+55 | 7.0428 | 26.12 | |
| 16+ 0 | 7.2618 | 31.79 | |
| 16+ 5 | 7.5527 | 42.24 | |
| 16+10 | 7.9364 | 55.71 | |
| 16+15 | 8.4144 | 69.41 | |
| 16+20 | 8.9927 | 83.96 | |
| 16+25 | 9.6920 | 101.54 | |
| 16+30 | 10.5965 | 131.33 | |
| 16+35 | 11.7163 | 162.60 | |
| 16+40 | 12.8455 | 163.96 | |
| 16+45 | 13.8358 | 143.79 | |
| 16+50 | 14.6738 | 121.68 | |
| 16+55 | 15.3909 | 104.11 | |
| 17+ 0 | 15.9899 | 86.98 | |
| 17+ 5 | 16.5071 | 75.09 | |
| 17+10 | 16.9646 | 66.44 | |
| 17+15 | 17.3789 | 60.15 | |
| 17+20 | 17.7552 | 54.63 | |
| 17+25 | 18.0943 | 49.25 | |
| 17+30 | 18.4062 | 45.28 | |
| 17+35 | 18.6971 | 42.25 | |
| 17+40 | 18.9587 | 37.99 | |
| 17+45 | 19.2045 | 35.68 | |
| 17+50 | 19.4322 | 33.07 | |
| 17+55 | 19.6445 | 30.83 | |
| 18+ 0 | 19.8471 | 29.41 | |
| 18+ 5 | 20.0374 | 27.63 | |
| 18+10 | 20.2197 | 26.47 | |
| 18+15 | 20.3886 | 24.53 | |
| 18+20 | 20.5495 | 23.36 | |
| 18+25 | 20.6982 | 21.60 | |
| 18+30 | 20.8377 | 20.25 | |
| 18+35 | 20.9739 | 19.78 | |
| 18+40 | 21.1064 | 19.23 | |
| 18+45 | 21.2360 | 18.82 | |
| 18+50 | 21.3597 | 17.96 | |

```
18+55     21.4800     17.47  |  Q      |         |         |   V     |
19+ 0     21.5964     16.90  |  Q      |         |         |   V     |
19+ 5     21.7089     16.34  |  Q      |         |         |   V     |
19+10     21.8168     15.67  |  Q      |         |         |   V     |
19+15     21.9180     14.70  | Q       |         |         |    V    |
19+20     22.0169     14.35  | Q       |         |         |    V    |
19+25     22.1135     14.03  | Q       |         |         |    V    |
19+30     22.2076     13.66  | Q       |         |         |    V    |
19+35     22.2965     12.92  | Q       |         |         |    V    |
19+40     22.3814     12.33  | Q       |         |         |    V    |
19+45     22.4643     12.03  | Q       |         |         |     V   |
19+50     22.5451     11.73  | Q       |         |         |     V   |
19+55     22.6230     11.32  | Q       |         |         |     V   |
20+ 0     22.6953     10.49  | Q       |         |         |     V   |
20+ 5     22.7650     10.12  | Q       |         |         |     V   |
20+10     22.8330      9.88  |Q        |         |         |     V   |
20+15     22.8992      9.61  |Q        |         |         |     V   |
20+20     22.9620      9.12  |Q        |         |         |     V   |
20+25     23.0201      8.44  |Q        |         |         |     V   |
20+30     23.0769      8.25  |Q        |         |         |      V  |
20+35     23.1328      8.12  |Q        |         |         |      V  |
20+40     23.1882      8.03  |Q        |         |         |      V  |
20+45     23.2437      8.07  |Q        |         |         |      V  |
20+50     23.2991      8.05  |Q        |         |         |      V  |
20+55     23.3539      7.95  |Q        |         |         |      V  |
21+ 0     23.4079      7.85  |Q        |         |         |      V  |
21+ 5     23.4612      7.73  |Q        |         |         |      V  |
21+10     23.5136      7.62  |Q        |         |         |      V  |
21+15     23.5652      7.49  |Q        |         |         |      V  |
21+20     23.6158      7.34  |Q        |         |         |      V  |
21+25     23.6651      7.16  |Q        |         |         |      V  |
21+30     23.7118      6.78  |Q        |         |         |       V |
21+35     23.7550      6.28  |Q        |         |         |       V |
21+40     23.7971      6.11  |Q        |         |         |       V |
21+45     23.8383      5.97  |Q        |         |         |       V |
21+50     23.8785      5.84  |Q        |         |         |       V |
21+55     23.9177      5.69  |Q        |         |         |       V |
22+ 0     23.9556      5.51  |Q        |         |         |       V |
22+ 5     23.9905      5.05  |Q        |         |         |       V |
22+10     24.0224      4.63  Q        |         |         |       V |
22+15     24.0535      4.52  Q        |         |         |       V |
22+20     24.0840      4.43  Q        |         |         |       V |
22+25     24.1140      4.35  Q        |         |         |       V |
22+30     24.1435      4.29  Q        |         |         |       V |
22+35     24.1727      4.23  Q        |         |         |       V |
22+40     24.2014      4.18  Q        |         |         |       V |
22+45     24.2298      4.12  Q        |         |         |       V |
22+50     24.2579      4.07  Q        |         |         |       V |
22+55     24.2856      4.03  Q        |         |         |       V |
23+ 0     24.3130      3.98  Q        |         |         |       V |
23+ 5     24.3401      3.94  Q        |         |         |        V|
23+10     24.3670      3.89  Q        |         |         |        V|
23+15     24.3935      3.85  Q        |         |         |        V|
23+20     24.4198      3.81  Q        |         |         |        V|
23+25     24.4458      3.77  Q        |         |         |        V|
23+30     24.4715      3.74  Q        |         |         |        V|
23+35     24.4970      3.70  Q        |         |         |        V|
23+40     24.5222      3.66  Q        |         |         |        V|
23+45     24.5472      3.63  Q        |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+50 | 24.5719 | 3.59 | Q | \| | \| | \| | V\| |
| 23+55 | 24.5964 | 3.56 | Q | \| | \| | \| | V\| |
| 24+ 0 | 24.6207 | 3.52 | Q | \| | \| | \| | V\| |
| 24+ 5 | 24.6446 | 3.48 | Q | \| | \| | \| | V\| |
| 24+10 | 24.6680 | 3.40 | Q | \| | \| | \| | V\| |
| 24+15 | 24.6908 | 3.31 | Q | \| | \| | \| | V\| |
| 24+20 | 24.7129 | 3.20 | Q | \| | \| | \| | V\| |
| 24+25 | 24.7339 | 3.05 | Q | \| | \| | \| | V\| |
| 24+30 | 24.7534 | 2.84 | Q | \| | \| | \| | V\| |
| 24+35 | 24.7708 | 2.52 | Q | \| | \| | \| | V\| |
| 24+40 | 24.7858 | 2.19 | Q | \| | \| | \| | V\| |
| 24+45 | 24.7990 | 1.91 | Q | \| | \| | \| | V\| |
| 24+50 | 24.8107 | 1.69 | Q | \| | \| | \| | V\| |
| 24+55 | 24.8211 | 1.51 | Q | \| | \| | \| | V\| |
| 25+ 0 | 24.8305 | 1.37 | Q | \| | \| | \| | V\| |
| 25+ 5 | 24.8391 | 1.25 | Q | \| | \| | \| | V\| |
| 25+10 | 24.8470 | 1.15 | Q | \| | \| | \| | V\| |
| 25+15 | 24.8543 | 1.05 | Q | \| | \| | \| | V\| |
| 25+20 | 24.8609 | 0.97 | Q | \| | \| | \| | V\| |
| 25+25 | 24.8671 | 0.90 | Q | \| | \| | \| | V\| |
| 25+30 | 24.8728 | 0.83 | Q | \| | \| | \| | V\| |
| 25+35 | 24.8781 | 0.77 | Q | \| | \| | \| | V\| |
| 25+40 | 24.8830 | 0.71 | Q | \| | \| | \| | V\| |
| 25+45 | 24.8876 | 0.66 | Q | \| | \| | \| | V\| |
| 25+50 | 24.8919 | 0.62 | Q | \| | \| | \| | V\| |
| 25+55 | 24.8959 | 0.58 | Q | \| | \| | \| | V\| |
| 26+ 0 | 24.8996 | 0.54 | Q | \| | \| | \| | V\| |
| 26+ 5 | 24.9030 | 0.50 | Q | \| | \| | \| | V\| |
| 26+10 | 24.9062 | 0.47 | Q | \| | \| | \| | V\| |
| 26+15 | 24.9092 | 0.43 | Q | \| | \| | \| | V\| |
| 26+20 | 24.9120 | 0.40 | Q | \| | \| | \| | V\| |
| 26+25 | 24.9146 | 0.38 | Q | \| | \| | \| | V\| |
| 26+30 | 24.9171 | 0.36 | Q | \| | \| | \| | V\| |
| 26+35 | 24.9194 | 0.33 | Q | \| | \| | \| | V\| |
| 26+40 | 24.9215 | 0.31 | Q | \| | \| | \| | V\| |
| 26+45 | 24.9235 | 0.29 | Q | \| | \| | \| | V\| |
| 26+50 | 24.9254 | 0.27 | Q | \| | \| | \| | V\| |
| 26+55 | 24.9271 | 0.25 | Q | \| | \| | \| | V\| |
| 27+ 0 | 24.9287 | 0.24 | Q | \| | \| | \| | V\| |
| 27+ 5 | 24.9302 | 0.22 | Q | \| | \| | \| | V\| |
| 27+10 | 24.9316 | 0.20 | Q | \| | \| | \| | V\| |
| 27+15 | 24.9330 | 0.19 | Q | \| | \| | \| | V\| |
| 27+20 | 24.9342 | 0.18 | Q | \| | \| | \| | V\| |
| 27+25 | 24.9353 | 0.17 | Q | \| | \| | \| | V\| |
| 27+30 | 24.9364 | 0.15 | Q | \| | \| | \| | V\| |
| 27+35 | 24.9373 | 0.14 | Q | \| | \| | \| | V\| |
| 27+40 | 24.9383 | 0.13 | Q | \| | \| | \| | V\| |
| 27+45 | 24.9391 | 0.12 | Q | \| | \| | \| | V\| |
| 27+50 | 24.9399 | 0.11 | Q | \| | \| | \| | V\| |
| 27+55 | 24.9406 | 0.10 | Q | \| | \| | \| | V\| |
| 28+ 0 | 24.9412 | 0.10 | Q | \| | \| | \| | V\| |
| 28+ 5 | 24.9419 | 0.09 | Q | \| | \| | \| | V\| |
| 28+10 | 24.9424 | 0.08 | Q | \| | \| | \| | V\| |
| 28+15 | 24.9430 | 0.08 | Q | \| | \| | \| | V\| |
| 28+20 | 24.9434 | 0.07 | Q | \| | \| | \| | V\| |
| 28+25 | 24.9439 | 0.07 | Q | \| | \| | \| | V\| |
| 28+30 | 24.9443 | 0.06 | Q | \| | \| | \| | V\| |
| 28+35 | 24.9447 | 0.06 | Q | \| | \| | \| | V\| |
| 28+40 | 24.9451 | 0.06 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 28+45 | 24.9455 | 0.05 | Q | \| | \| | \| | V\| |
| 28+50 | 24.9458 | 0.05 | Q | \| | \| | \| | V\| |
| 28+55 | 24.9461 | 0.04 | Q | \| | \| | \| | V\| |
| 29+ 0 | 24.9463 | 0.04 | Q | \| | \| | \| | V\| |
| 29+ 5 | 24.9466 | 0.03 | Q | \| | \| | \| | V\| |
| 29+10 | 24.9468 | 0.03 | Q | \| | \| | \| | V\| |
| 29+15 | 24.9469 | 0.03 | Q | \| | \| | \| | V\| |
| 29+20 | 24.9471 | 0.02 | Q | \| | \| | \| | V\| |
| 29+25 | 24.9472 | 0.02 | Q | \| | \| | \| | V\| |
| 29+30 | 24.9473 | 0.01 | Q | \| | \| | \| | V\| |
| 29+35 | 24.9474 | 0.01 | Q | \| | \| | \| | V\| |
| 29+40 | 24.9475 | 0.01 | Q | \| | \| | \| | V\| |
| 29+45 | 24.9475 | 0.01 | Q | \| | \| | \| | V\| |
| 29+50 | 24.9475 | 0.01 | Q | \| | \| | \| | V\| |
| 29+55 | 24.9476 | 0.00 | Q | \| | \| | \| | V\| |
| 30+ 0 | 24.9476 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 43
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 6.95 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 6.95 | 6 | 1.87 |
| Rainfall data for year 100 | | |
| 6.95 | 24 | 2.67 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 84.0 | 96.4 | 6.95 | 1.000 | 0.071 | 1.000 | 0.071 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.071

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 6.95 | 1.000 | 84.0 | 96.4 | 0.37 | 0.850 |

Area-averaged catchment yield fraction, Y = 0.850
Area-averaged low loss fraction, Yb = 0.150
User entry of time of concentration = 0.460 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 6.95(Ac.)
Catchment Lag time = 0.368 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 22.6449
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.071(In/Hr)
Average low loss rate fraction (Yb) = 0.150 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.667(In)
Specified peak 6-hour rainfall = 1.870(In)
Specified peak 24-hour rainfall = 2.670(In)

Rainfall depth area reduction factors:
Using a total area of 6.95(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.659(In)
30-minute factor = 1.000 Adjusted rainfall = 1.129(In)
1-hour factor = 1.000 Adjusted rainfall = 1.390(In)
3-hour factor = 1.000 Adjusted rainfall = 1.667(In)
6-hour factor = 1.000 Adjusted rainfall = 1.870(In)
24-hour factor = 1.000 Adjusted rainfall = 2.670(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 84.05 (CFS)) | |
| 1 | 1.178 | 0.990 |
| 2 | 5.552 | 3.676 |
| 3 | 15.131 | 8.052 |
| 4 | 34.714 | 16.459 |
| 5 | 50.752 | 13.481 |
| 6 | 60.938 | 8.561 |
| 7 | 67.717 | 5.698 |
| 8 | 72.933 | 4.384 |
| 9 | 77.018 | 3.434 |
| 10 | 80.296 | 2.755 |
| 11 | 82.979 | 2.256 |
| 12 | 85.300 | 1.950 |
| 13 | 87.341 | 1.716 |
| 14 | 89.028 | 1.418 |

| | | |
|---|---|---|
| 15 | 90.382 | 1.138 |
| 16 | 91.629 | 1.048 |
| 17 | 92.726 | 0.922 |
| 18 | 93.724 | 0.839 |
| 19 | 94.544 | 0.689 |
| 20 | 95.312 | 0.646 |
| 21 | 95.970 | 0.553 |
| 22 | 96.559 | 0.495 |
| 23 | 97.071 | 0.430 |
| 24 | 97.479 | 0.343 |
| 25 | 97.840 | 0.304 |
| 26 | 98.074 | 0.197 |
| 27 | 98.307 | 0.195 |
| 28 | 98.573 | 0.224 |
| 29 | 98.845 | 0.228 |
| 30 | 99.116 | 0.228 |
| 31 | 99.388 | 0.228 |
| 32 | 99.583 | 0.164 |
| 33 | 99.725 | 0.119 |
| 34 | 99.866 | 0.119 |
| 35 | 100.000 | 0.112 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6594 | 0.6594 |
| 2 | 0.8118 | 0.1524 |
| 3 | 0.9168 | 0.1050 |
| 4 | 0.9994 | 0.0826 |
| 5 | 1.0686 | 0.0692 |
| 6 | 1.1287 | 0.0601 |
| 7 | 1.1821 | 0.0534 |
| 8 | 1.2304 | 0.0483 |
| 9 | 1.2747 | 0.0443 |
| 10 | 1.3156 | 0.0409 |
| 11 | 1.3537 | 0.0382 |
| 12 | 1.3895 | 0.0358 |
| 13 | 1.4081 | 0.0186 |
| 14 | 1.4255 | 0.0174 |
| 15 | 1.4419 | 0.0164 |
| 16 | 1.4574 | 0.0155 |
| 17 | 1.4722 | 0.0147 |
| 18 | 1.4862 | 0.0140 |
| 19 | 1.4996 | 0.0134 |
| 20 | 1.5124 | 0.0128 |
| 21 | 1.5247 | 0.0123 |
| 22 | 1.5365 | 0.0118 |
| 23 | 1.5478 | 0.0114 |
| 24 | 1.5588 | 0.0110 |
| 25 | 1.5694 | 0.0106 |
| 26 | 1.5796 | 0.0102 |
| 27 | 1.5895 | 0.0099 |
| 28 | 1.5991 | 0.0096 |
| 29 | 1.6085 | 0.0093 |
| 30 | 1.6175 | 0.0091 |
| 31 | 1.6264 | 0.0088 |
| 32 | 1.6350 | 0.0086 |
| 33 | 1.6433 | 0.0084 |
| 34 | 1.6515 | 0.0082 |
| 35 | 1.6594 | 0.0080 |

| | | |
|---|---|---|
| 36 | 1.6672 | 0.0078 |
| 37 | 1.6748 | 0.0076 |
| 38 | 1.6822 | 0.0074 |
| 39 | 1.6894 | 0.0073 |
| 40 | 1.6965 | 0.0071 |
| 41 | 1.7035 | 0.0070 |
| 42 | 1.7103 | 0.0068 |
| 43 | 1.7170 | 0.0067 |
| 44 | 1.7235 | 0.0065 |
| 45 | 1.7299 | 0.0064 |
| 46 | 1.7363 | 0.0063 |
| 47 | 1.7425 | 0.0062 |
| 48 | 1.7485 | 0.0061 |
| 49 | 1.7545 | 0.0060 |
| 50 | 1.7604 | 0.0059 |
| 51 | 1.7662 | 0.0058 |
| 52 | 1.7719 | 0.0057 |
| 53 | 1.7775 | 0.0056 |
| 54 | 1.7830 | 0.0055 |
| 55 | 1.7884 | 0.0054 |
| 56 | 1.7937 | 0.0053 |
| 57 | 1.7990 | 0.0053 |
| 58 | 1.8042 | 0.0052 |
| 59 | 1.8093 | 0.0051 |
| 60 | 1.8144 | 0.0050 |
| 61 | 1.8193 | 0.0050 |
| 62 | 1.8242 | 0.0049 |
| 63 | 1.8291 | 0.0048 |
| 64 | 1.8338 | 0.0048 |
| 65 | 1.8386 | 0.0047 |
| 66 | 1.8432 | 0.0047 |
| 67 | 1.8478 | 0.0046 |
| 68 | 1.8523 | 0.0045 |
| 69 | 1.8568 | 0.0045 |
| 70 | 1.8613 | 0.0044 |
| 71 | 1.8656 | 0.0044 |
| 72 | 1.8700 | 0.0043 |
| 73 | 1.8766 | 0.0066 |
| 74 | 1.8832 | 0.0066 |
| 75 | 1.8897 | 0.0065 |
| 76 | 1.8961 | 0.0064 |
| 77 | 1.9025 | 0.0064 |
| 78 | 1.9088 | 0.0063 |
| 79 | 1.9151 | 0.0063 |
| 80 | 1.9213 | 0.0062 |
| 81 | 1.9274 | 0.0061 |
| 82 | 1.9335 | 0.0061 |
| 83 | 1.9395 | 0.0060 |
| 84 | 1.9455 | 0.0060 |
| 85 | 1.9514 | 0.0059 |
| 86 | 1.9573 | 0.0059 |
| 87 | 1.9631 | 0.0058 |
| 88 | 1.9689 | 0.0058 |
| 89 | 1.9746 | 0.0057 |
| 90 | 1.9803 | 0.0057 |
| 91 | 1.9859 | 0.0056 |
| 92 | 1.9915 | 0.0056 |
| 93 | 1.9970 | 0.0055 |
| 94 | 2.0025 | 0.0055 |

| | | |
|---|---|---|
| 95 | 2.0080 | 0.0055 |
| 96 | 2.0134 | 0.0054 |
| 97 | 2.0188 | 0.0054 |
| 98 | 2.0241 | 0.0053 |
| 99 | 2.0294 | 0.0053 |
| 100 | 2.0346 | 0.0052 |
| 101 | 2.0398 | 0.0052 |
| 102 | 2.0450 | 0.0052 |
| 103 | 2.0501 | 0.0051 |
| 104 | 2.0552 | 0.0051 |
| 105 | 2.0603 | 0.0051 |
| 106 | 2.0653 | 0.0050 |
| 107 | 2.0703 | 0.0050 |
| 108 | 2.0753 | 0.0050 |
| 109 | 2.0802 | 0.0049 |
| 110 | 2.0851 | 0.0049 |
| 111 | 2.0899 | 0.0049 |
| 112 | 2.0947 | 0.0048 |
| 113 | 2.0995 | 0.0048 |
| 114 | 2.1043 | 0.0048 |
| 115 | 2.1090 | 0.0047 |
| 116 | 2.1137 | 0.0047 |
| 117 | 2.1184 | 0.0047 |
| 118 | 2.1230 | 0.0046 |
| 119 | 2.1276 | 0.0046 |
| 120 | 2.1322 | 0.0046 |
| 121 | 2.1367 | 0.0046 |
| 122 | 2.1413 | 0.0045 |
| 123 | 2.1458 | 0.0045 |
| 124 | 2.1502 | 0.0045 |
| 125 | 2.1547 | 0.0044 |
| 126 | 2.1591 | 0.0044 |
| 127 | 2.1635 | 0.0044 |
| 128 | 2.1678 | 0.0044 |
| 129 | 2.1722 | 0.0043 |
| 130 | 2.1765 | 0.0043 |
| 131 | 2.1808 | 0.0043 |
| 132 | 2.1851 | 0.0043 |
| 133 | 2.1893 | 0.0042 |
| 134 | 2.1935 | 0.0042 |
| 135 | 2.1977 | 0.0042 |
| 136 | 2.2019 | 0.0042 |
| 137 | 2.2060 | 0.0041 |
| 138 | 2.2101 | 0.0041 |
| 139 | 2.2143 | 0.0041 |
| 140 | 2.2183 | 0.0041 |
| 141 | 2.2224 | 0.0041 |
| 142 | 2.2264 | 0.0040 |
| 143 | 2.2304 | 0.0040 |
| 144 | 2.2344 | 0.0040 |
| 145 | 2.2384 | 0.0040 |
| 146 | 2.2424 | 0.0040 |
| 147 | 2.2463 | 0.0039 |
| 148 | 2.2502 | 0.0039 |
| 149 | 2.2541 | 0.0039 |
| 150 | 2.2580 | 0.0039 |
| 151 | 2.2619 | 0.0039 |
| 152 | 2.2657 | 0.0038 |
| 153 | 2.2695 | 0.0038 |

| | | |
|---|---|---|
| 154 | 2.2733 | 0.0038 |
| 155 | 2.2771 | 0.0038 |
| 156 | 2.2809 | 0.0038 |
| 157 | 2.2846 | 0.0037 |
| 158 | 2.2883 | 0.0037 |
| 159 | 2.2921 | 0.0037 |
| 160 | 2.2958 | 0.0037 |
| 161 | 2.2994 | 0.0037 |
| 162 | 2.3031 | 0.0037 |
| 163 | 2.3067 | 0.0036 |
| 164 | 2.3104 | 0.0036 |
| 165 | 2.3140 | 0.0036 |
| 166 | 2.3176 | 0.0036 |
| 167 | 2.3211 | 0.0036 |
| 168 | 2.3247 | 0.0036 |
| 169 | 2.3283 | 0.0035 |
| 170 | 2.3318 | 0.0035 |
| 171 | 2.3353 | 0.0035 |
| 172 | 2.3388 | 0.0035 |
| 173 | 2.3423 | 0.0035 |
| 174 | 2.3458 | 0.0035 |
| 175 | 2.3492 | 0.0035 |
| 176 | 2.3527 | 0.0034 |
| 177 | 2.3561 | 0.0034 |
| 178 | 2.3595 | 0.0034 |
| 179 | 2.3629 | 0.0034 |
| 180 | 2.3663 | 0.0034 |
| 181 | 2.3697 | 0.0034 |
| 182 | 2.3730 | 0.0034 |
| 183 | 2.3764 | 0.0033 |
| 184 | 2.3797 | 0.0033 |
| 185 | 2.3830 | 0.0033 |
| 186 | 2.3863 | 0.0033 |
| 187 | 2.3896 | 0.0033 |
| 188 | 2.3929 | 0.0033 |
| 189 | 2.3961 | 0.0033 |
| 190 | 2.3994 | 0.0033 |
| 191 | 2.4026 | 0.0032 |
| 192 | 2.4058 | 0.0032 |
| 193 | 2.4091 | 0.0032 |
| 194 | 2.4123 | 0.0032 |
| 195 | 2.4154 | 0.0032 |
| 196 | 2.4186 | 0.0032 |
| 197 | 2.4218 | 0.0032 |
| 198 | 2.4249 | 0.0032 |
| 199 | 2.4281 | 0.0031 |
| 200 | 2.4312 | 0.0031 |
| 201 | 2.4343 | 0.0031 |
| 202 | 2.4374 | 0.0031 |
| 203 | 2.4405 | 0.0031 |
| 204 | 2.4436 | 0.0031 |
| 205 | 2.4467 | 0.0031 |
| 206 | 2.4497 | 0.0031 |
| 207 | 2.4528 | 0.0030 |
| 208 | 2.4558 | 0.0030 |
| 209 | 2.4589 | 0.0030 |
| 210 | 2.4619 | 0.0030 |
| 211 | 2.4649 | 0.0030 |
| 212 | 2.4679 | 0.0030 |

| | | |
|---|---|---|
| 213 | 2.4709 | 0.0030 |
| 214 | 2.4738 | 0.0030 |
| 215 | 2.4768 | 0.0030 |
| 216 | 2.4798 | 0.0030 |
| 217 | 2.4827 | 0.0029 |
| 218 | 2.4856 | 0.0029 |
| 219 | 2.4886 | 0.0029 |
| 220 | 2.4915 | 0.0029 |
| 221 | 2.4944 | 0.0029 |
| 222 | 2.4973 | 0.0029 |
| 223 | 2.5002 | 0.0029 |
| 224 | 2.5030 | 0.0029 |
| 225 | 2.5059 | 0.0029 |
| 226 | 2.5088 | 0.0029 |
| 227 | 2.5116 | 0.0028 |
| 228 | 2.5144 | 0.0028 |
| 229 | 2.5173 | 0.0028 |
| 230 | 2.5201 | 0.0028 |
| 231 | 2.5229 | 0.0028 |
| 232 | 2.5257 | 0.0028 |
| 233 | 2.5285 | 0.0028 |
| 234 | 2.5313 | 0.0028 |
| 235 | 2.5341 | 0.0028 |
| 236 | 2.5368 | 0.0028 |
| 237 | 2.5396 | 0.0028 |
| 238 | 2.5423 | 0.0027 |
| 239 | 2.5451 | 0.0027 |
| 240 | 2.5478 | 0.0027 |
| 241 | 2.5505 | 0.0027 |
| 242 | 2.5532 | 0.0027 |
| 243 | 2.5559 | 0.0027 |
| 244 | 2.5586 | 0.0027 |
| 245 | 2.5613 | 0.0027 |
| 246 | 2.5640 | 0.0027 |
| 247 | 2.5667 | 0.0027 |
| 248 | 2.5694 | 0.0027 |
| 249 | 2.5720 | 0.0027 |
| 250 | 2.5747 | 0.0026 |
| 251 | 2.5773 | 0.0026 |
| 252 | 2.5799 | 0.0026 |
| 253 | 2.5826 | 0.0026 |
| 254 | 2.5852 | 0.0026 |
| 255 | 2.5878 | 0.0026 |
| 256 | 2.5904 | 0.0026 |
| 257 | 2.5930 | 0.0026 |
| 258 | 2.5956 | 0.0026 |
| 259 | 2.5982 | 0.0026 |
| 260 | 2.6007 | 0.0026 |
| 261 | 2.6033 | 0.0026 |
| 262 | 2.6059 | 0.0026 |
| 263 | 2.6084 | 0.0026 |
| 264 | 2.6110 | 0.0025 |
| 265 | 2.6135 | 0.0025 |
| 266 | 2.6160 | 0.0025 |
| 267 | 2.6185 | 0.0025 |
| 268 | 2.6211 | 0.0025 |
| 269 | 2.6236 | 0.0025 |
| 270 | 2.6261 | 0.0025 |
| 271 | 2.6286 | 0.0025 |

| | | |
|---|---|---|
| 272 | 2.6311 | 0.0025 |
| 273 | 2.6335 | 0.0025 |
| 274 | 2.6360 | 0.0025 |
| 275 | 2.6385 | 0.0025 |
| 276 | 2.6409 | 0.0025 |
| 277 | 2.6434 | 0.0025 |
| 278 | 2.6458 | 0.0024 |
| 279 | 2.6483 | 0.0024 |
| 280 | 2.6507 | 0.0024 |
| 281 | 2.6532 | 0.0024 |
| 282 | 2.6556 | 0.0024 |
| 283 | 2.6580 | 0.0024 |
| 284 | 2.6604 | 0.0024 |
| 285 | 2.6628 | 0.0024 |
| 286 | 2.6652 | 0.0024 |
| 287 | 2.6676 | 0.0024 |
| 288 | 2.6700 | 0.0024 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0024 | 0.0004 | 0.0020 |
| 2 | 0.0024 | 0.0004 | 0.0020 |
| 3 | 0.0024 | 0.0004 | 0.0020 |
| 4 | 0.0024 | 0.0004 | 0.0020 |
| 5 | 0.0024 | 0.0004 | 0.0021 |
| 6 | 0.0024 | 0.0004 | 0.0021 |
| 7 | 0.0024 | 0.0004 | 0.0021 |
| 8 | 0.0024 | 0.0004 | 0.0021 |
| 9 | 0.0025 | 0.0004 | 0.0021 |
| 10 | 0.0025 | 0.0004 | 0.0021 |
| 11 | 0.0025 | 0.0004 | 0.0021 |
| 12 | 0.0025 | 0.0004 | 0.0021 |
| 13 | 0.0025 | 0.0004 | 0.0021 |
| 14 | 0.0025 | 0.0004 | 0.0021 |
| 15 | 0.0025 | 0.0004 | 0.0021 |
| 16 | 0.0025 | 0.0004 | 0.0022 |
| 17 | 0.0025 | 0.0004 | 0.0022 |
| 18 | 0.0026 | 0.0004 | 0.0022 |
| 19 | 0.0026 | 0.0004 | 0.0022 |
| 20 | 0.0026 | 0.0004 | 0.0022 |
| 21 | 0.0026 | 0.0004 | 0.0022 |
| 22 | 0.0026 | 0.0004 | 0.0022 |
| 23 | 0.0026 | 0.0004 | 0.0022 |
| 24 | 0.0026 | 0.0004 | 0.0022 |
| 25 | 0.0026 | 0.0004 | 0.0022 |
| 26 | 0.0026 | 0.0004 | 0.0022 |
| 27 | 0.0027 | 0.0004 | 0.0023 |
| 28 | 0.0027 | 0.0004 | 0.0023 |
| 29 | 0.0027 | 0.0004 | 0.0023 |
| 30 | 0.0027 | 0.0004 | 0.0023 |
| 31 | 0.0027 | 0.0004 | 0.0023 |
| 32 | 0.0027 | 0.0004 | 0.0023 |
| 33 | 0.0027 | 0.0004 | 0.0023 |
| 34 | 0.0027 | 0.0004 | 0.0023 |
| 35 | 0.0028 | 0.0004 | 0.0023 |
| 36 | 0.0028 | 0.0004 | 0.0024 |
| 37 | 0.0028 | 0.0004 | 0.0024 |

| | | | |
|---|---|---|---|
| 38 | 0.0028 | 0.0004 | 0.0024 |
| 39 | 0.0028 | 0.0004 | 0.0024 |
| 40 | 0.0028 | 0.0004 | 0.0024 |
| 41 | 0.0028 | 0.0004 | 0.0024 |
| 42 | 0.0028 | 0.0004 | 0.0024 |
| 43 | 0.0029 | 0.0004 | 0.0024 |
| 44 | 0.0029 | 0.0004 | 0.0024 |
| 45 | 0.0029 | 0.0004 | 0.0025 |
| 46 | 0.0029 | 0.0004 | 0.0025 |
| 47 | 0.0029 | 0.0004 | 0.0025 |
| 48 | 0.0029 | 0.0004 | 0.0025 |
| 49 | 0.0030 | 0.0004 | 0.0025 |
| 50 | 0.0030 | 0.0004 | 0.0025 |
| 51 | 0.0030 | 0.0004 | 0.0025 |
| 52 | 0.0030 | 0.0005 | 0.0025 |
| 53 | 0.0030 | 0.0005 | 0.0026 |
| 54 | 0.0030 | 0.0005 | 0.0026 |
| 55 | 0.0030 | 0.0005 | 0.0026 |
| 56 | 0.0031 | 0.0005 | 0.0026 |
| 57 | 0.0031 | 0.0005 | 0.0026 |
| 58 | 0.0031 | 0.0005 | 0.0026 |
| 59 | 0.0031 | 0.0005 | 0.0026 |
| 60 | 0.0031 | 0.0005 | 0.0027 |
| 61 | 0.0032 | 0.0005 | 0.0027 |
| 62 | 0.0032 | 0.0005 | 0.0027 |
| 63 | 0.0032 | 0.0005 | 0.0027 |
| 64 | 0.0032 | 0.0005 | 0.0027 |
| 65 | 0.0032 | 0.0005 | 0.0027 |
| 66 | 0.0032 | 0.0005 | 0.0028 |
| 67 | 0.0033 | 0.0005 | 0.0028 |
| 68 | 0.0033 | 0.0005 | 0.0028 |
| 69 | 0.0033 | 0.0005 | 0.0028 |
| 70 | 0.0033 | 0.0005 | 0.0028 |
| 71 | 0.0033 | 0.0005 | 0.0028 |
| 72 | 0.0034 | 0.0005 | 0.0029 |
| 73 | 0.0034 | 0.0005 | 0.0029 |
| 74 | 0.0034 | 0.0005 | 0.0029 |
| 75 | 0.0034 | 0.0005 | 0.0029 |
| 76 | 0.0034 | 0.0005 | 0.0029 |
| 77 | 0.0035 | 0.0005 | 0.0029 |
| 78 | 0.0035 | 0.0005 | 0.0030 |
| 79 | 0.0035 | 0.0005 | 0.0030 |
| 80 | 0.0035 | 0.0005 | 0.0030 |
| 81 | 0.0036 | 0.0005 | 0.0030 |
| 82 | 0.0036 | 0.0005 | 0.0030 |
| 83 | 0.0036 | 0.0005 | 0.0031 |
| 84 | 0.0036 | 0.0005 | 0.0031 |
| 85 | 0.0037 | 0.0006 | 0.0031 |
| 86 | 0.0037 | 0.0006 | 0.0031 |
| 87 | 0.0037 | 0.0006 | 0.0032 |
| 88 | 0.0037 | 0.0006 | 0.0032 |
| 89 | 0.0038 | 0.0006 | 0.0032 |
| 90 | 0.0038 | 0.0006 | 0.0032 |
| 91 | 0.0038 | 0.0006 | 0.0032 |
| 92 | 0.0038 | 0.0006 | 0.0033 |
| 93 | 0.0039 | 0.0006 | 0.0033 |
| 94 | 0.0039 | 0.0006 | 0.0033 |
| 95 | 0.0039 | 0.0006 | 0.0033 |
| 96 | 0.0040 | 0.0006 | 0.0034 |

| | | | |
|---|---|---|---|
| 97 | 0.0040 | 0.0006 | 0.0034 |
| 98 | 0.0040 | 0.0006 | 0.0034 |
| 99 | 0.0041 | 0.0006 | 0.0035 |
| 100 | 0.0041 | 0.0006 | 0.0035 |
| 101 | 0.0041 | 0.0006 | 0.0035 |
| 102 | 0.0041 | 0.0006 | 0.0035 |
| 103 | 0.0042 | 0.0006 | 0.0036 |
| 104 | 0.0042 | 0.0006 | 0.0036 |
| 105 | 0.0043 | 0.0006 | 0.0036 |
| 106 | 0.0043 | 0.0006 | 0.0036 |
| 107 | 0.0043 | 0.0007 | 0.0037 |
| 108 | 0.0044 | 0.0007 | 0.0037 |
| 109 | 0.0044 | 0.0007 | 0.0038 |
| 110 | 0.0044 | 0.0007 | 0.0038 |
| 111 | 0.0045 | 0.0007 | 0.0038 |
| 112 | 0.0045 | 0.0007 | 0.0038 |
| 113 | 0.0046 | 0.0007 | 0.0039 |
| 114 | 0.0046 | 0.0007 | 0.0039 |
| 115 | 0.0047 | 0.0007 | 0.0040 |
| 116 | 0.0047 | 0.0007 | 0.0040 |
| 117 | 0.0048 | 0.0007 | 0.0040 |
| 118 | 0.0048 | 0.0007 | 0.0041 |
| 119 | 0.0049 | 0.0007 | 0.0041 |
| 120 | 0.0049 | 0.0007 | 0.0042 |
| 121 | 0.0050 | 0.0007 | 0.0042 |
| 122 | 0.0050 | 0.0007 | 0.0042 |
| 123 | 0.0051 | 0.0008 | 0.0043 |
| 124 | 0.0051 | 0.0008 | 0.0043 |
| 125 | 0.0052 | 0.0008 | 0.0044 |
| 126 | 0.0052 | 0.0008 | 0.0044 |
| 127 | 0.0053 | 0.0008 | 0.0045 |
| 128 | 0.0053 | 0.0008 | 0.0045 |
| 129 | 0.0054 | 0.0008 | 0.0046 |
| 130 | 0.0055 | 0.0008 | 0.0046 |
| 131 | 0.0055 | 0.0008 | 0.0047 |
| 132 | 0.0056 | 0.0008 | 0.0047 |
| 133 | 0.0057 | 0.0009 | 0.0048 |
| 134 | 0.0057 | 0.0009 | 0.0049 |
| 135 | 0.0058 | 0.0009 | 0.0049 |
| 136 | 0.0059 | 0.0009 | 0.0050 |
| 137 | 0.0060 | 0.0009 | 0.0051 |
| 138 | 0.0060 | 0.0009 | 0.0051 |
| 139 | 0.0061 | 0.0009 | 0.0052 |
| 140 | 0.0062 | 0.0009 | 0.0053 |
| 141 | 0.0063 | 0.0009 | 0.0054 |
| 142 | 0.0064 | 0.0010 | 0.0054 |
| 143 | 0.0065 | 0.0010 | 0.0055 |
| 144 | 0.0066 | 0.0010 | 0.0056 |
| 145 | 0.0043 | 0.0006 | 0.0037 |
| 146 | 0.0044 | 0.0007 | 0.0037 |
| 147 | 0.0045 | 0.0007 | 0.0038 |
| 148 | 0.0045 | 0.0007 | 0.0039 |
| 149 | 0.0047 | 0.0007 | 0.0040 |
| 150 | 0.0047 | 0.0007 | 0.0040 |
| 151 | 0.0048 | 0.0007 | 0.0041 |
| 152 | 0.0049 | 0.0007 | 0.0042 |
| 153 | 0.0050 | 0.0008 | 0.0043 |
| 154 | 0.0051 | 0.0008 | 0.0043 |
| 155 | 0.0053 | 0.0008 | 0.0045 |

| | | | |
|---|---|---|---|
| 156 | 0.0053 | 0.0008 | 0.0045 |
| 157 | 0.0055 | 0.0008 | 0.0047 |
| 158 | 0.0056 | 0.0008 | 0.0048 |
| 159 | 0.0058 | 0.0009 | 0.0049 |
| 160 | 0.0059 | 0.0009 | 0.0050 |
| 161 | 0.0061 | 0.0009 | 0.0052 |
| 162 | 0.0062 | 0.0009 | 0.0053 |
| 163 | 0.0064 | 0.0010 | 0.0055 |
| 164 | 0.0065 | 0.0010 | 0.0056 |
| 165 | 0.0068 | 0.0010 | 0.0058 |
| 166 | 0.0070 | 0.0010 | 0.0059 |
| 167 | 0.0073 | 0.0011 | 0.0062 |
| 168 | 0.0074 | 0.0011 | 0.0063 |
| 169 | 0.0078 | 0.0012 | 0.0066 |
| 170 | 0.0080 | 0.0012 | 0.0068 |
| 171 | 0.0084 | 0.0013 | 0.0071 |
| 172 | 0.0086 | 0.0013 | 0.0073 |
| 173 | 0.0091 | 0.0014 | 0.0077 |
| 174 | 0.0093 | 0.0014 | 0.0079 |
| 175 | 0.0099 | 0.0015 | 0.0084 |
| 176 | 0.0102 | 0.0015 | 0.0087 |
| 177 | 0.0110 | 0.0016 | 0.0093 |
| 178 | 0.0114 | 0.0017 | 0.0097 |
| 179 | 0.0123 | 0.0018 | 0.0104 |
| 180 | 0.0128 | 0.0019 | 0.0109 |
| 181 | 0.0140 | 0.0021 | 0.0119 |
| 182 | 0.0147 | 0.0022 | 0.0125 |
| 183 | 0.0164 | 0.0025 | 0.0139 |
| 184 | 0.0174 | 0.0026 | 0.0148 |
| 185 | 0.0358 | 0.0054 | 0.0304 |
| 186 | 0.0382 | 0.0057 | 0.0324 |
| 187 | 0.0443 | 0.0059 | 0.0383 |
| 188 | 0.0483 | 0.0059 | 0.0424 |
| 189 | 0.0601 | 0.0059 | 0.0542 |
| 190 | 0.0692 | 0.0059 | 0.0633 |
| 191 | 0.1050 | 0.0059 | 0.0991 |
| 192 | 0.1524 | 0.0059 | 0.1465 |
| 193 | 0.6594 | 0.0059 | 0.6534 |
| 194 | 0.0826 | 0.0059 | 0.0767 |
| 195 | 0.0534 | 0.0059 | 0.0475 |
| 196 | 0.0409 | 0.0059 | 0.0350 |
| 197 | 0.0186 | 0.0028 | 0.0158 |
| 198 | 0.0155 | 0.0023 | 0.0132 |
| 199 | 0.0134 | 0.0020 | 0.0114 |
| 200 | 0.0118 | 0.0018 | 0.0100 |
| 201 | 0.0106 | 0.0016 | 0.0090 |
| 202 | 0.0096 | 0.0014 | 0.0082 |
| 203 | 0.0088 | 0.0013 | 0.0075 |
| 204 | 0.0082 | 0.0012 | 0.0069 |
| 205 | 0.0076 | 0.0011 | 0.0064 |
| 206 | 0.0071 | 0.0011 | 0.0060 |
| 207 | 0.0067 | 0.0010 | 0.0057 |
| 208 | 0.0063 | 0.0009 | 0.0054 |
| 209 | 0.0060 | 0.0009 | 0.0051 |
| 210 | 0.0057 | 0.0009 | 0.0048 |
| 211 | 0.0054 | 0.0008 | 0.0046 |
| 212 | 0.0052 | 0.0008 | 0.0044 |
| 213 | 0.0050 | 0.0007 | 0.0042 |
| 214 | 0.0048 | 0.0007 | 0.0041 |

| | | | |
|---|---|---|---|
| 215 | 0.0046 | 0.0007 | 0.0039 |
| 216 | 0.0044 | 0.0007 | 0.0038 |
| 217 | 0.0066 | 0.0010 | 0.0056 |
| 218 | 0.0064 | 0.0010 | 0.0055 |
| 219 | 0.0063 | 0.0009 | 0.0053 |
| 220 | 0.0061 | 0.0009 | 0.0052 |
| 221 | 0.0059 | 0.0009 | 0.0050 |
| 222 | 0.0058 | 0.0009 | 0.0049 |
| 223 | 0.0056 | 0.0008 | 0.0048 |
| 224 | 0.0055 | 0.0008 | 0.0047 |
| 225 | 0.0054 | 0.0008 | 0.0046 |
| 226 | 0.0052 | 0.0008 | 0.0045 |
| 227 | 0.0051 | 0.0008 | 0.0044 |
| 228 | 0.0050 | 0.0008 | 0.0043 |
| 229 | 0.0049 | 0.0007 | 0.0042 |
| 230 | 0.0048 | 0.0007 | 0.0041 |
| 231 | 0.0047 | 0.0007 | 0.0040 |
| 232 | 0.0046 | 0.0007 | 0.0039 |
| 233 | 0.0046 | 0.0007 | 0.0039 |
| 234 | 0.0045 | 0.0007 | 0.0038 |
| 235 | 0.0044 | 0.0007 | 0.0037 |
| 236 | 0.0043 | 0.0006 | 0.0037 |
| 237 | 0.0042 | 0.0006 | 0.0036 |
| 238 | 0.0042 | 0.0006 | 0.0035 |
| 239 | 0.0041 | 0.0006 | 0.0035 |
| 240 | 0.0040 | 0.0006 | 0.0034 |
| 241 | 0.0040 | 0.0006 | 0.0034 |
| 242 | 0.0039 | 0.0006 | 0.0033 |
| 243 | 0.0039 | 0.0006 | 0.0033 |
| 244 | 0.0038 | 0.0006 | 0.0032 |
| 245 | 0.0037 | 0.0006 | 0.0032 |
| 246 | 0.0037 | 0.0006 | 0.0031 |
| 247 | 0.0036 | 0.0005 | 0.0031 |
| 248 | 0.0036 | 0.0005 | 0.0031 |
| 249 | 0.0035 | 0.0005 | 0.0030 |
| 250 | 0.0035 | 0.0005 | 0.0030 |
| 251 | 0.0035 | 0.0005 | 0.0029 |
| 252 | 0.0034 | 0.0005 | 0.0029 |
| 253 | 0.0034 | 0.0005 | 0.0029 |
| 254 | 0.0033 | 0.0005 | 0.0028 |
| 255 | 0.0033 | 0.0005 | 0.0028 |
| 256 | 0.0033 | 0.0005 | 0.0028 |
| 257 | 0.0032 | 0.0005 | 0.0027 |
| 258 | 0.0032 | 0.0005 | 0.0027 |
| 259 | 0.0031 | 0.0005 | 0.0027 |
| 260 | 0.0031 | 0.0005 | 0.0026 |
| 261 | 0.0031 | 0.0005 | 0.0026 |
| 262 | 0.0030 | 0.0005 | 0.0026 |
| 263 | 0.0030 | 0.0005 | 0.0026 |
| 264 | 0.0030 | 0.0004 | 0.0025 |
| 265 | 0.0029 | 0.0004 | 0.0025 |
| 266 | 0.0029 | 0.0004 | 0.0025 |
| 267 | 0.0029 | 0.0004 | 0.0025 |
| 268 | 0.0029 | 0.0004 | 0.0024 |
| 269 | 0.0028 | 0.0004 | 0.0024 |
| 270 | 0.0028 | 0.0004 | 0.0024 |
| 271 | 0.0028 | 0.0004 | 0.0024 |
| 272 | 0.0027 | 0.0004 | 0.0023 |
| 273 | 0.0027 | 0.0004 | 0.0023 |

| | | | |
|---|---|---|---|
| 274 | 0.0027 | 0.0004 | 0.0023 |
| 275 | 0.0027 | 0.0004 | 0.0023 |
| 276 | 0.0026 | 0.0004 | 0.0023 |
| 277 | 0.0026 | 0.0004 | 0.0022 |
| 278 | 0.0026 | 0.0004 | 0.0022 |
| 279 | 0.0026 | 0.0004 | 0.0022 |
| 280 | 0.0026 | 0.0004 | 0.0022 |
| 281 | 0.0025 | 0.0004 | 0.0022 |
| 282 | 0.0025 | 0.0004 | 0.0021 |
| 283 | 0.0025 | 0.0004 | 0.0021 |
| 284 | 0.0025 | 0.0004 | 0.0021 |
| 285 | 0.0025 | 0.0004 | 0.0021 |
| 286 | 0.0024 | 0.0004 | 0.0021 |
| 287 | 0.0024 | 0.0004 | 0.0021 |
| 288 | 0.0024 | 0.0004 | 0.0020 |

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Total soil rain loss = 0.26(In)
Total effective rainfall = 2.41(In)
Peak flow rate in flood hydrograph = 15.52(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.01 | Q | | | | |
| 0+15 | 0.0003 | 0.03 | Q | | | | |
| 0+20 | 0.0007 | 0.06 | Q | | | | |
| 0+25 | 0.0013 | 0.09 | Q | | | | |
| 0+30 | 0.0020 | 0.10 | Q | | | | |
| 0+35 | 0.0028 | 0.12 | Q | | | | |
| 0+40 | 0.0036 | 0.13 | Q | | | | |
| 0+45 | 0.0046 | 0.13 | Q | | | | |
| 0+50 | 0.0055 | 0.14 | Q | | | | |
| 0+55 | 0.0065 | 0.14 | Q | | | | |
| 1+ 0 | 0.0075 | 0.15 | Q | | | | |
| 1+ 5 | 0.0086 | 0.15 | Q | | | | |
| 1+10 | 0.0097 | 0.16 | Q | | | | |
| 1+15 | 0.0108 | 0.16 | Q | | | | |
| 1+20 | 0.0119 | 0.16 | Q | | | | |
| 1+25 | 0.0130 | 0.16 | Q | | | | |
| 1+30 | 0.0142 | 0.17 | Q | | | | |
| 1+35 | 0.0153 | 0.17 | Q | | | | |
| 1+40 | 0.0165 | 0.17 | Q | | | | |
| 1+45 | 0.0177 | 0.17 | Q | | | | |
| 1+50 | 0.0189 | 0.17 | Q | | | | |
| 1+55 | 0.0201 | 0.18 | Q | | | | |
| 2+ 0 | 0.0214 | 0.18 | Q | | | | |
| 2+ 5 | 0.0226 | 0.18 | Q | | | | |
| 2+10 | 0.0238 | 0.18 | Q | | | | |
| 2+15 | 0.0251 | 0.18 | Q | | | | |
| 2+20 | 0.0263 | 0.18 | Q | | | | |
| 2+25 | 0.0276 | 0.18 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+30 | 0.0289 | 0.19 | Q | | | | |
| 2+35 | 0.0302 | 0.19 | Q | | | | |
| 2+40 | 0.0315 | 0.19 | Q | | | | |
| 2+45 | 0.0328 | 0.19 | Q | | | | |
| 2+50 | 0.0341 | 0.19 | Q | | | | |
| 2+55 | 0.0354 | 0.19 | QV | | | | |
| 3+ 0 | 0.0367 | 0.19 | QV | | | | |
| 3+ 5 | 0.0380 | 0.19 | QV | | | | |
| 3+10 | 0.0394 | 0.19 | QV | | | | |
| 3+15 | 0.0407 | 0.19 | QV | | | | |
| 3+20 | 0.0421 | 0.20 | QV | | | | |
| 3+25 | 0.0434 | 0.20 | QV | | | | |
| 3+30 | 0.0448 | 0.20 | QV | | | | |
| 3+35 | 0.0461 | 0.20 | QV | | | | |
| 3+40 | 0.0475 | 0.20 | QV | | | | |
| 3+45 | 0.0489 | 0.20 | QV | | | | |
| 3+50 | 0.0503 | 0.20 | QV | | | | |
| 3+55 | 0.0517 | 0.20 | QV | | | | |
| 4+ 0 | 0.0531 | 0.20 | QV | | | | |
| 4+ 5 | 0.0545 | 0.20 | QV | | | | |
| 4+10 | 0.0559 | 0.21 | QV | | | | |
| 4+15 | 0.0573 | 0.21 | QV | | | | |
| 4+20 | 0.0587 | 0.21 | QV | | | | |
| 4+25 | 0.0602 | 0.21 | QV | | | | |
| 4+30 | 0.0616 | 0.21 | QV | | | | |
| 4+35 | 0.0631 | 0.21 | QV | | | | |
| 4+40 | 0.0645 | 0.21 | QV | | | | |
| 4+45 | 0.0660 | 0.21 | QV | | | | |
| 4+50 | 0.0675 | 0.21 | QV | | | | |
| 4+55 | 0.0689 | 0.21 | QV | | | | |
| 5+ 0 | 0.0704 | 0.22 | Q V | | | | |
| 5+ 5 | 0.0719 | 0.22 | Q V | | | | |
| 5+10 | 0.0734 | 0.22 | Q V | | | | |
| 5+15 | 0.0749 | 0.22 | Q V | | | | |
| 5+20 | 0.0765 | 0.22 | Q V | | | | |
| 5+25 | 0.0780 | 0.22 | Q V | | | | |
| 5+30 | 0.0795 | 0.22 | Q V | | | | |
| 5+35 | 0.0811 | 0.22 | Q V | | | | |
| 5+40 | 0.0826 | 0.23 | Q V | | | | |
| 5+45 | 0.0842 | 0.23 | Q V | | | | |
| 5+50 | 0.0858 | 0.23 | Q V | | | | |
| 5+55 | 0.0873 | 0.23 | Q V | | | | |
| 6+ 0 | 0.0889 | 0.23 | Q V | | | | |
| 6+ 5 | 0.0905 | 0.23 | Q V | | | | |
| 6+10 | 0.0921 | 0.23 | Q V | | | | |
| 6+15 | 0.0938 | 0.24 | Q V | | | | |
| 6+20 | 0.0954 | 0.24 | Q V | | | | |
| 6+25 | 0.0970 | 0.24 | Q V | | | | |
| 6+30 | 0.0987 | 0.24 | Q V | | | | |
| 6+35 | 0.1003 | 0.24 | Q V | | | | |
| 6+40 | 0.1020 | 0.24 | Q V | | | | |
| 6+45 | 0.1037 | 0.24 | Q V | | | | |
| 6+50 | 0.1054 | 0.25 | Q V | | | | |
| 6+55 | 0.1071 | 0.25 | Q V | | | | |
| 7+ 0 | 0.1088 | 0.25 | Q V | | | | |
| 7+ 5 | 0.1105 | 0.25 | Q V | | | | |
| 7+10 | 0.1123 | 0.25 | Q V | | | | |
| 7+15 | 0.1140 | 0.25 | Q V | | | | |
| 7+20 | 0.1158 | 0.26 | Q V | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 7+25 | 0.1175 | 0.26 | Q | V | | | | |
| 7+30 | 0.1193 | 0.26 | Q | V | | | | |
| 7+35 | 0.1211 | 0.26 | Q | V | | | | |
| 7+40 | 0.1229 | 0.26 | Q | V | | | | |
| 7+45 | 0.1247 | 0.26 | Q | V | | | | |
| 7+50 | 0.1266 | 0.27 | Q | V | | | | |
| 7+55 | 0.1284 | 0.27 | Q | V | | | | |
| 8+ 0 | 0.1303 | 0.27 | Q | V | | | | |
| 8+ 5 | 0.1322 | 0.27 | Q | V | | | | |
| 8+10 | 0.1340 | 0.27 | Q | V | | | | |
| 8+15 | 0.1359 | 0.28 | Q | V | | | | |
| 8+20 | 0.1379 | 0.28 | Q | V | | | | |
| 8+25 | 0.1398 | 0.28 | Q | V | | | | |
| 8+30 | 0.1417 | 0.28 | Q | V | | | | |
| 8+35 | 0.1437 | 0.28 | Q | V | | | | |
| 8+40 | 0.1457 | 0.29 | Q | V | | | | |
| 8+45 | 0.1477 | 0.29 | Q | V | | | | |
| 8+50 | 0.1497 | 0.29 | Q | V | | | | |
| 8+55 | 0.1517 | 0.29 | Q | V | | | | |
| 9+ 0 | 0.1537 | 0.30 | Q | V | | | | |
| 9+ 5 | 0.1558 | 0.30 | Q | V | | | | |
| 9+10 | 0.1578 | 0.30 | Q | V | | | | |
| 9+15 | 0.1599 | 0.30 | Q | V | | | | |
| 9+20 | 0.1620 | 0.31 | Q | V | | | | |
| 9+25 | 0.1642 | 0.31 | Q | V | | | | |
| 9+30 | 0.1663 | 0.31 | Q | V | | | | |
| 9+35 | 0.1685 | 0.31 | Q | V | | | | |
| 9+40 | 0.1707 | 0.32 | Q | V | | | | |
| 9+45 | 0.1729 | 0.32 | Q | V | | | | |
| 9+50 | 0.1751 | 0.32 | Q | V | | | | |
| 9+55 | 0.1773 | 0.33 | Q | V | | | | |
| 10+ 0 | 0.1796 | 0.33 | Q | V | | | | |
| 10+ 5 | 0.1819 | 0.33 | Q | V | | | | |
| 10+10 | 0.1842 | 0.34 | Q | V | | | | |
| 10+15 | 0.1865 | 0.34 | Q | V | | | | |
| 10+20 | 0.1889 | 0.34 | Q | V | | | | |
| 10+25 | 0.1913 | 0.35 | Q | V | | | | |
| 10+30 | 0.1937 | 0.35 | Q | V | | | | |
| 10+35 | 0.1961 | 0.35 | Q | V | | | | |
| 10+40 | 0.1985 | 0.36 | Q | V | | | | |
| 10+45 | 0.2010 | 0.36 | Q | V | | | | |
| 10+50 | 0.2035 | 0.36 | Q | V | | | | |
| 10+55 | 0.2061 | 0.37 | Q | V | | | | |
| 11+ 0 | 0.2086 | 0.37 | Q | V | | | | |
| 11+ 5 | 0.2112 | 0.38 | Q | V | | | | |
| 11+10 | 0.2138 | 0.38 | Q | V | | | | |
| 11+15 | 0.2165 | 0.38 | Q | V | | | | |
| 11+20 | 0.2192 | 0.39 | Q | V | | | | |
| 11+25 | 0.2219 | 0.39 | Q | V | | | | |
| 11+30 | 0.2246 | 0.40 | Q | V | | | | |
| 11+35 | 0.2274 | 0.40 | Q | V | | | | |
| 11+40 | 0.2302 | 0.41 | Q | V | | | | |
| 11+45 | 0.2331 | 0.41 | Q | V | | | | |
| 11+50 | 0.2360 | 0.42 | Q | V | | | | |
| 11+55 | 0.2389 | 0.43 | Q | V | | | | |
| 12+ 0 | 0.2419 | 0.43 | Q | V | | | | |
| 12+ 5 | 0.2449 | 0.44 | Q | V | | | | |
| 12+10 | 0.2479 | 0.43 | Q | V | | | | |
| 12+15 | 0.2508 | 0.42 | Q | V | | | | |

```
12+20       0.2535      0.40  Q      V  |          |          |          |
12+25       0.2561      0.38  Q      V  |          |          |          |
12+30       0.2586      0.36  Q      V  |          |          |          |
12+35       0.2611      0.36  Q      V  |          |          |          |
12+40       0.2635      0.36  Q      V  |          |          |          |
12+45       0.2660      0.36  Q      V  |          |          |          |
12+50       0.2684      0.36  Q      V  |          |          |          |
12+55       0.2709      0.36  Q      V  |          |          |          |
13+ 0       0.2734      0.36  Q      V  |          |          |          |
13+ 5       0.2759      0.36  Q      V  |          |          |          |
13+10       0.2784      0.37  Q      V  |          |          |          |
13+15       0.2810      0.37  Q       V |          |          |          |
13+20       0.2836      0.38  Q       V |          |          |          |
13+25       0.2863      0.39  Q       V |          |          |          |
13+30       0.2890      0.39  Q       V |          |          |          |
13+35       0.2918      0.40  Q       V |          |          |          |
13+40       0.2946      0.41  Q       V |          |          |          |
13+45       0.2975      0.42  Q       V |          |          |          |
13+50       0.3004      0.43  Q       V |          |          |          |
13+55       0.3035      0.44  Q       V |          |          |          |
14+ 0       0.3066      0.45  Q       V |          |          |          |
14+ 5       0.3098      0.46  Q       V |          |          |          |
14+10       0.3130      0.48  Q       V |          |          |          |
14+15       0.3164      0.49  Q        V|          |          |          |
14+20       0.3199      0.51  |Q       V|          |          |          |
14+25       0.3235      0.52  |Q       V|          |          |          |
14+30       0.3272      0.54  |Q       V|          |          |          |
14+35       0.3311      0.56  |Q       V|          |          |          |
14+40       0.3351      0.58  |Q       V|          |          |          |
14+45       0.3392      0.60  |Q       V|          |          |          |
14+50       0.3436      0.63  |Q       V|          |          |          |
14+55       0.3481      0.66  |Q       V|          |          |          |
15+ 0       0.3528      0.69  |Q        V          |          |          |
15+ 5       0.3578      0.72  |Q        V          |          |          |
15+10       0.3631      0.76  |Q        V          |          |          |
15+15       0.3686      0.81  |Q        V          |          |          |
15+20       0.3745      0.86  |Q        V          |          |          |
15+25       0.3809      0.93  |Q        V          |          |          |
15+30       0.3881      1.05  | Q       |V          |          |          |
15+35       0.3966      1.24  | Q       |V          |          |          |
15+40       0.4075      1.58  |  Q      |V          |          |          |
15+45       0.4208      1.93  |  Q      | V         |          |          |
15+50       0.4366      2.29  |   Q     | V         |          |          |
15+55       0.4554      2.73  |    Q    |  V        |          |          |
16+ 0       0.4786      3.37  |     Q   |  V        |          |          |
16+ 5       0.5116      4.79  |        Q|   V       |          |          |
16+10       0.5624      7.39  |         |   Q V     |          |          |
16+15       0.6369     10.82  |         |       V  |Q         |          |
16+20       0.7438     15.52  |         |          |V         |Q         |
16+25       0.8355     13.31  |         |          |  V  Q    |          |
16+30       0.9028      9.77  |         |        Q|    V     |          |
16+35       0.9536      7.38  |         |   Q      |      V   |          |
16+40       0.9942      5.89  |         |Q         |       V  |          |
16+45       1.0272      4.79  |        Q|          |        V|          |
16+50       1.0547      4.00  |       Q |          |         V          |
16+55       1.0783      3.42  |     Q   |          |         V          |
17+ 0       1.0990      3.00  |     Q   |          |         |V         |
17+ 5       1.1173      2.66  |    Q    |          |         | V        |
17+10       1.1332      2.32  |   Q     |          |         | V        |
```

```
17+15       1.1471      2.01  |   Q     |         |         | V       |
17+20       1.1597      1.84  |  Q      |         |         |  V      |
17+25       1.1712      1.66  |  Q      |         |         |  V      |
17+30       1.1816      1.51  |  Q      |         |         |  V      |
17+35       1.1908      1.35  | Q       |         |         |   V     |
17+40       1.1994      1.24  | Q       |         |         |   V     |
17+45       1.2072      1.12  | Q       |         |         |   V     |
17+50       1.2142      1.03  | Q       |         |         |   V     |
17+55       1.2207      0.93  |Q        |         |         |    V    |
18+ 0       1.2264      0.83  |Q        |         |         |    V    |
18+ 5       1.2317      0.76  |Q        |         |         |    V    |
18+10       1.2363      0.68  |Q        |         |         |    V    |
18+15       1.2409      0.66  |Q        |         |         |    V    |
18+20       1.2456      0.69  |Q        |         |         |    V    |
18+25       1.2504      0.69  |Q        |         |         |    V    |
18+30       1.2551      0.68  |Q        |         |         |     V   |
18+35       1.2597      0.66  |Q        |         |         |     V   |
18+40       1.2638      0.61  |Q        |         |         |     V   |
18+45       1.2677      0.56  |Q        |         |         |     V   |
18+50       1.2714      0.54  |Q        |         |         |     V   |
18+55       1.2748      0.51  |Q        |         |         |     V   |
19+ 0       1.2778      0.42  Q         |         |         |     V   |
19+ 5       1.2806      0.41  Q         |         |         |     V   |
19+10       1.2833      0.40  Q         |         |         |     V   |
19+15       1.2859      0.38  Q         |         |         |     V   |
19+20       1.2885      0.38  Q         |         |         |     V   |
19+25       1.2911      0.37  Q         |         |         |      V  |
19+30       1.2935      0.36  Q         |         |         |      V  |
19+35       1.2960      0.35  Q         |         |         |      V  |
19+40       1.2984      0.35  Q         |         |         |      V  |
19+45       1.3007      0.34  Q         |         |         |      V  |
19+50       1.3030      0.34  Q         |         |         |      V  |
19+55       1.3053      0.33  Q         |         |         |      V  |
20+ 0       1.3075      0.32  Q         |         |         |      V  |
20+ 5       1.3097      0.32  Q         |         |         |      V  |
20+10       1.3119      0.31  Q         |         |         |      V  |
20+15       1.3140      0.31  Q         |         |         |      V  |
20+20       1.3161      0.30  Q         |         |         |      V  |
20+25       1.3181      0.30  Q         |         |         |      V  |
20+30       1.3202      0.29  Q         |         |         |      V  |
20+35       1.3222      0.29  Q         |         |         |      V  |
20+40       1.3241      0.28  Q         |         |         |       V |
20+45       1.3260      0.28  Q         |         |         |       V |
20+50       1.3279      0.28  Q         |         |         |       V |
20+55       1.3298      0.27  Q         |         |         |       V |
21+ 0       1.3317      0.27  Q         |         |         |       V |
21+ 5       1.3335      0.26  Q         |         |         |       V |
21+10       1.3353      0.26  Q         |         |         |       V |
21+15       1.3371      0.26  Q         |         |         |       V |
21+20       1.3388      0.25  Q         |         |         |       V |
21+25       1.3405      0.25  Q         |         |         |       V |
21+30       1.3423      0.25  Q         |         |         |       V |
21+35       1.3439      0.24  Q         |         |         |       V |
21+40       1.3456      0.24  Q         |         |         |       V |
21+45       1.3472      0.24  Q         |         |         |       V |
21+50       1.3489      0.24  Q         |         |         |       V |
21+55       1.3505      0.23  Q         |         |         |       V |
22+ 0       1.3520      0.23  Q         |         |         |       V |
22+ 5       1.3536      0.23  Q         |         |         |       V |
```

```
   22+10       1.3551      0.22  Q         |          |          |       V |
   22+15       1.3567      0.22  Q         |          |          |       V |
   22+20       1.3582      0.22  Q         |          |          |       V |
   22+25       1.3597      0.22  Q         |          |          |        V|
   22+30       1.3612      0.21  Q         |          |          |        V|
   22+35       1.3626      0.21  Q         |          |          |        V|
   22+40       1.3641      0.21  Q         |          |          |        V|
   22+45       1.3655      0.21  Q         |          |          |        V|
   22+50       1.3669      0.21  Q         |          |          |        V|
   22+55       1.3683      0.20  Q         |          |          |        V|
   23+ 0       1.3697      0.20  Q         |          |          |        V|
   23+ 5       1.3711      0.20  Q         |          |          |        V|
   23+10       1.3725      0.20  Q         |          |          |        V|
   23+15       1.3738      0.20  Q         |          |          |        V|
   23+20       1.3752      0.19  Q         |          |          |        V|
   23+25       1.3765      0.19  Q         |          |          |        V|
   23+30       1.3778      0.19  Q         |          |          |        V|
   23+35       1.3791      0.19  Q         |          |          |        V|
   23+40       1.3804      0.19  Q         |          |          |        V|
   23+45       1.3817      0.19  Q         |          |          |        V|
   23+50       1.3829      0.18  Q         |          |          |        V|
   23+55       1.3842      0.18  Q         |          |          |        V|
   24+ 0       1.3854      0.18  Q         |          |          |        V|
   24+ 5       1.3867      0.18  Q         |          |          |        V|
   24+10       1.3878      0.17  Q         |          |          |        V|
   24+15       1.3889      0.15  Q         |          |          |        V|
   24+20       1.3897      0.12  Q         |          |          |        V|
   24+25       1.3903      0.09  Q         |          |          |        V|
   24+30       1.3908      0.07  Q         |          |          |        V|
   24+35       1.3912      0.06  Q         |          |          |        V|
   24+40       1.3915      0.05  Q         |          |          |        V|
   24+45       1.3918      0.04  Q         |          |          |        V|
   24+50       1.3920      0.04  Q         |          |          |        V|
   24+55       1.3922      0.03  Q         |          |          |        V|
   25+ 0       1.3924      0.03  Q         |          |          |        V|
   25+ 5       1.3926      0.02  Q         |          |          |        V|
   25+10       1.3927      0.02  Q         |          |          |        V|
   25+15       1.3928      0.02  Q         |          |          |        V|
   25+20       1.3929      0.02  Q         |          |          |        V|
   25+25       1.3930      0.01  Q         |          |          |        V|
   25+30       1.3931      0.01  Q         |          |          |        V|
   25+35       1.3932      0.01  Q         |          |          |        V|
   25+40       1.3932      0.01  Q         |          |          |        V|
   25+45       1.3933      0.01  Q         |          |          |        V|
   25+50       1.3933      0.01  Q         |          |          |        V|
   25+55       1.3934      0.01  Q         |          |          |        V|
   26+ 0       1.3934      0.00  Q         |          |          |        V|
   26+ 5       1.3934      0.00  Q         |          |          |        V|
   26+10       1.3934      0.00  Q         |          |          |        V|
   26+15       1.3935      0.00  Q         |          |          |        V|
   26+20       1.3935      0.00  Q         |          |          |        V|
   26+25       1.3935      0.00  Q         |          |          |        V|
   26+30       1.3935      0.00  Q         |          |          |        V|
   26+35       1.3935      0.00  Q         |          |          |        V|
   26+40       1.3935      0.00  Q         |          |          |        V|
   26+45       1.3935      0.00  Q         |          |          |        V|
   26+50       1.3935      0.00  Q         |          |          |         V
-------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 44
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) | |
|---|---|---|---|
| Rainfall data for year 100 | | | |
| 6.47 | 1 | 1.39 | |
| Rainfall data for year 100 | | | |
| 6.47 | 6 | 1.87 | |
| Rainfall data for year 100 | | | |
| 6.47 | 24 | 2.68 | |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 84.0 | 96.4 | 6.47 | 1.000 | 0.071 | 1.000 | 0.071 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.071

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 6.47 | 1.000 | 84.0 | 96.4 | 0.37 | 0.850 |

Area-averaged catchment yield fraction, Y = 0.850
Area-averaged low loss fraction, Yb = 0.150
User entry of time of concentration = 0.410 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 6.47(Ac.)
Catchment Lag time = 0.328 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 25.4065
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.071(In/Hr)
Average low loss rate fraction (Yb) = 0.150 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.667(In)
Specified peak 6-hour rainfall = 1.870(In)
Specified peak 24-hour rainfall = 2.680(In)

Rainfall depth area reduction factors:
Using a total area of 6.47(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.659(In)
30-minute factor = 1.000 Adjusted rainfall = 1.129(In)
1-hour factor = 1.000 Adjusted rainfall = 1.390(In)
3-hour factor = 1.000 Adjusted rainfall = 1.667(In)
6-hour factor = 1.000 Adjusted rainfall = 1.870(In)
24-hour factor = 1.000 Adjusted rainfall = 2.680(In)
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U n i t H y d r o g r a p h
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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 78.25 (CFS)) | |
| 1 | 1.380 | 1.080 |
| 2 | 6.762 | 4.211 |
| 3 | 20.568 | 10.803 |
| 4 | 42.363 | 17.054 |
| 5 | 56.880 | 11.359 |
| 6 | 65.684 | 6.889 |
| 7 | 71.945 | 4.899 |
| 8 | 76.690 | 3.713 |
| 9 | 80.400 | 2.903 |
| 10 | 83.363 | 2.319 |
| 11 | 85.903 | 1.988 |
| 12 | 88.065 | 1.691 |
| 13 | 89.753 | 1.321 |
| 14 | 91.202 | 1.134 |

| | | |
|---|---|---|
| 15 | 92.480 | 1.000 |
| 16 | 93.619 | 0.891 |
| 17 | 94.553 | 0.731 |
| 18 | 95.408 | 0.669 |
| 19 | 96.121 | 0.557 |
| 20 | 96.771 | 0.509 |
| 21 | 97.275 | 0.395 |
| 22 | 97.720 | 0.348 |
| 23 | 98.016 | 0.232 |
| 24 | 98.274 | 0.202 |
| 25 | 98.570 | 0.231 |
| 26 | 98.874 | 0.239 |
| 27 | 99.179 | 0.239 |
| 28 | 99.469 | 0.227 |
| 29 | 99.651 | 0.142 |
| 30 | 99.809 | 0.124 |
| 31 | 100.000 | 0.062 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6594 | 0.6594 |
| 2 | 0.8118 | 0.1524 |
| 3 | 0.9168 | 0.1050 |
| 4 | 0.9994 | 0.0826 |
| 5 | 1.0686 | 0.0692 |
| 6 | 1.1287 | 0.0601 |
| 7 | 1.1821 | 0.0534 |
| 8 | 1.2304 | 0.0483 |
| 9 | 1.2747 | 0.0443 |
| 10 | 1.3156 | 0.0409 |
| 11 | 1.3538 | 0.0382 |
| 12 | 1.3896 | 0.0358 |
| 13 | 1.4081 | 0.0186 |
| 14 | 1.4256 | 0.0174 |
| 15 | 1.4420 | 0.0164 |
| 16 | 1.4575 | 0.0155 |
| 17 | 1.4722 | 0.0147 |
| 18 | 1.4862 | 0.0140 |
| 19 | 1.4996 | 0.0134 |
| 20 | 1.5124 | 0.0128 |
| 21 | 1.5247 | 0.0123 |
| 22 | 1.5365 | 0.0118 |
| 23 | 1.5478 | 0.0114 |
| 24 | 1.5588 | 0.0110 |
| 25 | 1.5694 | 0.0106 |
| 26 | 1.5796 | 0.0102 |
| 27 | 1.5895 | 0.0099 |
| 28 | 1.5992 | 0.0096 |
| 29 | 1.6085 | 0.0093 |
| 30 | 1.6176 | 0.0091 |
| 31 | 1.6264 | 0.0088 |
| 32 | 1.6350 | 0.0086 |
| 33 | 1.6433 | 0.0084 |
| 34 | 1.6515 | 0.0082 |
| 35 | 1.6594 | 0.0080 |
| 36 | 1.6672 | 0.0078 |
| 37 | 1.6748 | 0.0076 |
| 38 | 1.6822 | 0.0074 |
| 39 | 1.6894 | 0.0073 |

| | | |
|---|---|---|
| 40 | 1.6965 | 0.0071 |
| 41 | 1.7035 | 0.0070 |
| 42 | 1.7103 | 0.0068 |
| 43 | 1.7170 | 0.0067 |
| 44 | 1.7235 | 0.0065 |
| 45 | 1.7300 | 0.0064 |
| 46 | 1.7363 | 0.0063 |
| 47 | 1.7425 | 0.0062 |
| 48 | 1.7485 | 0.0061 |
| 49 | 1.7545 | 0.0060 |
| 50 | 1.7604 | 0.0059 |
| 51 | 1.7662 | 0.0058 |
| 52 | 1.7719 | 0.0057 |
| 53 | 1.7775 | 0.0056 |
| 54 | 1.7830 | 0.0055 |
| 55 | 1.7884 | 0.0054 |
| 56 | 1.7937 | 0.0053 |
| 57 | 1.7990 | 0.0053 |
| 58 | 1.8042 | 0.0052 |
| 59 | 1.8093 | 0.0051 |
| 60 | 1.8144 | 0.0050 |
| 61 | 1.8193 | 0.0050 |
| 62 | 1.8242 | 0.0049 |
| 63 | 1.8291 | 0.0048 |
| 64 | 1.8338 | 0.0048 |
| 65 | 1.8386 | 0.0047 |
| 66 | 1.8432 | 0.0047 |
| 67 | 1.8478 | 0.0046 |
| 68 | 1.8523 | 0.0045 |
| 69 | 1.8568 | 0.0045 |
| 70 | 1.8613 | 0.0044 |
| 71 | 1.8656 | 0.0044 |
| 72 | 1.8700 | 0.0043 |
| 73 | 1.8767 | 0.0067 |
| 74 | 1.8833 | 0.0066 |
| 75 | 1.8899 | 0.0066 |
| 76 | 1.8964 | 0.0065 |
| 77 | 1.9028 | 0.0064 |
| 78 | 1.9092 | 0.0064 |
| 79 | 1.9156 | 0.0063 |
| 80 | 1.9218 | 0.0063 |
| 81 | 1.9280 | 0.0062 |
| 82 | 1.9342 | 0.0062 |
| 83 | 1.9403 | 0.0061 |
| 84 | 1.9463 | 0.0060 |
| 85 | 1.9523 | 0.0060 |
| 86 | 1.9582 | 0.0059 |
| 87 | 1.9641 | 0.0059 |
| 88 | 1.9700 | 0.0058 |
| 89 | 1.9757 | 0.0058 |
| 90 | 1.9815 | 0.0057 |
| 91 | 1.9872 | 0.0057 |
| 92 | 1.9928 | 0.0056 |
| 93 | 1.9984 | 0.0056 |
| 94 | 2.0040 | 0.0056 |
| 95 | 2.0095 | 0.0055 |
| 96 | 2.0150 | 0.0055 |
| 97 | 2.0204 | 0.0054 |
| 98 | 2.0258 | 0.0054 |

| | | |
|---|---|---|
| 99 | 2.0311 | 0.0053 |
| 100 | 2.0364 | 0.0053 |
| 101 | 2.0417 | 0.0053 |
| 102 | 2.0469 | 0.0052 |
| 103 | 2.0521 | 0.0052 |
| 104 | 2.0573 | 0.0052 |
| 105 | 2.0624 | 0.0051 |
| 106 | 2.0675 | 0.0051 |
| 107 | 2.0725 | 0.0050 |
| 108 | 2.0775 | 0.0050 |
| 109 | 2.0825 | 0.0050 |
| 110 | 2.0874 | 0.0049 |
| 111 | 2.0924 | 0.0049 |
| 112 | 2.0972 | 0.0049 |
| 113 | 2.1021 | 0.0048 |
| 114 | 2.1069 | 0.0048 |
| 115 | 2.1117 | 0.0048 |
| 116 | 2.1164 | 0.0048 |
| 117 | 2.1212 | 0.0047 |
| 118 | 2.1258 | 0.0047 |
| 119 | 2.1305 | 0.0047 |
| 120 | 2.1351 | 0.0046 |
| 121 | 2.1397 | 0.0046 |
| 122 | 2.1443 | 0.0046 |
| 123 | 2.1489 | 0.0045 |
| 124 | 2.1534 | 0.0045 |
| 125 | 2.1579 | 0.0045 |
| 126 | 2.1624 | 0.0045 |
| 127 | 2.1668 | 0.0044 |
| 128 | 2.1712 | 0.0044 |
| 129 | 2.1756 | 0.0044 |
| 130 | 2.1800 | 0.0044 |
| 131 | 2.1843 | 0.0043 |
| 132 | 2.1886 | 0.0043 |
| 133 | 2.1929 | 0.0043 |
| 134 | 2.1972 | 0.0043 |
| 135 | 2.2014 | 0.0042 |
| 136 | 2.2057 | 0.0042 |
| 137 | 2.2099 | 0.0042 |
| 138 | 2.2140 | 0.0042 |
| 139 | 2.2182 | 0.0042 |
| 140 | 2.2223 | 0.0041 |
| 141 | 2.2264 | 0.0041 |
| 142 | 2.2305 | 0.0041 |
| 143 | 2.2346 | 0.0041 |
| 144 | 2.2386 | 0.0040 |
| 145 | 2.2427 | 0.0040 |
| 146 | 2.2467 | 0.0040 |
| 147 | 2.2506 | 0.0040 |
| 148 | 2.2546 | 0.0040 |
| 149 | 2.2586 | 0.0039 |
| 150 | 2.2625 | 0.0039 |
| 151 | 2.2664 | 0.0039 |
| 152 | 2.2703 | 0.0039 |
| 153 | 2.2741 | 0.0039 |
| 154 | 2.2780 | 0.0038 |
| 155 | 2.2818 | 0.0038 |
| 156 | 2.2856 | 0.0038 |
| 157 | 2.2894 | 0.0038 |

| | | |
|---|---|---|
| 158 | 2.2932 | 0.0038 |
| 159 | 2.2970 | 0.0038 |
| 160 | 2.3007 | 0.0037 |
| 161 | 2.3044 | 0.0037 |
| 162 | 2.3081 | 0.0037 |
| 163 | 2.3118 | 0.0037 |
| 164 | 2.3155 | 0.0037 |
| 165 | 2.3192 | 0.0037 |
| 166 | 2.3228 | 0.0036 |
| 167 | 2.3264 | 0.0036 |
| 168 | 2.3300 | 0.0036 |
| 169 | 2.3336 | 0.0036 |
| 170 | 2.3372 | 0.0036 |
| 171 | 2.3408 | 0.0036 |
| 172 | 2.3443 | 0.0035 |
| 173 | 2.3478 | 0.0035 |
| 174 | 2.3514 | 0.0035 |
| 175 | 2.3549 | 0.0035 |
| 176 | 2.3583 | 0.0035 |
| 177 | 2.3618 | 0.0035 |
| 178 | 2.3653 | 0.0035 |
| 179 | 2.3687 | 0.0034 |
| 180 | 2.3721 | 0.0034 |
| 181 | 2.3756 | 0.0034 |
| 182 | 2.3790 | 0.0034 |
| 183 | 2.3823 | 0.0034 |
| 184 | 2.3857 | 0.0034 |
| 185 | 2.3891 | 0.0034 |
| 186 | 2.3924 | 0.0033 |
| 187 | 2.3958 | 0.0033 |
| 188 | 2.3991 | 0.0033 |
| 189 | 2.4024 | 0.0033 |
| 190 | 2.4057 | 0.0033 |
| 191 | 2.4090 | 0.0033 |
| 192 | 2.4122 | 0.0033 |
| 193 | 2.4155 | 0.0033 |
| 194 | 2.4187 | 0.0032 |
| 195 | 2.4219 | 0.0032 |
| 196 | 2.4252 | 0.0032 |
| 197 | 2.4284 | 0.0032 |
| 198 | 2.4316 | 0.0032 |
| 199 | 2.4347 | 0.0032 |
| 200 | 2.4379 | 0.0032 |
| 201 | 2.4411 | 0.0032 |
| 202 | 2.4442 | 0.0031 |
| 203 | 2.4474 | 0.0031 |
| 204 | 2.4505 | 0.0031 |
| 205 | 2.4536 | 0.0031 |
| 206 | 2.4567 | 0.0031 |
| 207 | 2.4598 | 0.0031 |
| 208 | 2.4629 | 0.0031 |
| 209 | 2.4659 | 0.0031 |
| 210 | 2.4690 | 0.0031 |
| 211 | 2.4720 | 0.0030 |
| 212 | 2.4751 | 0.0030 |
| 213 | 2.4781 | 0.0030 |
| 214 | 2.4811 | 0.0030 |
| 215 | 2.4841 | 0.0030 |
| 216 | 2.4871 | 0.0030 |

| | | |
|---|---|---|
| 217 | 2.4901 | 0.0030 |
| 218 | 2.4931 | 0.0030 |
| 219 | 2.4960 | 0.0030 |
| 220 | 2.4990 | 0.0030 |
| 221 | 2.5019 | 0.0029 |
| 222 | 2.5049 | 0.0029 |
| 223 | 2.5078 | 0.0029 |
| 224 | 2.5107 | 0.0029 |
| 225 | 2.5136 | 0.0029 |
| 226 | 2.5165 | 0.0029 |
| 227 | 2.5194 | 0.0029 |
| 228 | 2.5223 | 0.0029 |
| 229 | 2.5251 | 0.0029 |
| 230 | 2.5280 | 0.0029 |
| 231 | 2.5308 | 0.0028 |
| 232 | 2.5337 | 0.0028 |
| 233 | 2.5365 | 0.0028 |
| 234 | 2.5393 | 0.0028 |
| 235 | 2.5422 | 0.0028 |
| 236 | 2.5450 | 0.0028 |
| 237 | 2.5478 | 0.0028 |
| 238 | 2.5505 | 0.0028 |
| 239 | 2.5533 | 0.0028 |
| 240 | 2.5561 | 0.0028 |
| 241 | 2.5588 | 0.0028 |
| 242 | 2.5616 | 0.0028 |
| 243 | 2.5643 | 0.0027 |
| 244 | 2.5671 | 0.0027 |
| 245 | 2.5698 | 0.0027 |
| 246 | 2.5725 | 0.0027 |
| 247 | 2.5752 | 0.0027 |
| 248 | 2.5779 | 0.0027 |
| 249 | 2.5806 | 0.0027 |
| 250 | 2.5833 | 0.0027 |
| 251 | 2.5860 | 0.0027 |
| 252 | 2.5887 | 0.0027 |
| 253 | 2.5913 | 0.0027 |
| 254 | 2.5940 | 0.0027 |
| 255 | 2.5966 | 0.0026 |
| 256 | 2.5993 | 0.0026 |
| 257 | 2.6019 | 0.0026 |
| 258 | 2.6045 | 0.0026 |
| 259 | 2.6071 | 0.0026 |
| 260 | 2.6098 | 0.0026 |
| 261 | 2.6124 | 0.0026 |
| 262 | 2.6150 | 0.0026 |
| 263 | 2.6175 | 0.0026 |
| 264 | 2.6201 | 0.0026 |
| 265 | 2.6227 | 0.0026 |
| 266 | 2.6253 | 0.0026 |
| 267 | 2.6278 | 0.0026 |
| 268 | 2.6304 | 0.0026 |
| 269 | 2.6329 | 0.0025 |
| 270 | 2.6355 | 0.0025 |
| 271 | 2.6380 | 0.0025 |
| 272 | 2.6405 | 0.0025 |
| 273 | 2.6430 | 0.0025 |
| 274 | 2.6455 | 0.0025 |
| 275 | 2.6480 | 0.0025 |

| | | |
|---|---|---|
| 276 | 2.6505 | 0.0025 |
| 277 | 2.6530 | 0.0025 |
| 278 | 2.6555 | 0.0025 |
| 279 | 2.6580 | 0.0025 |
| 280 | 2.6605 | 0.0025 |
| 281 | 2.6629 | 0.0025 |
| 282 | 2.6654 | 0.0025 |
| 283 | 2.6678 | 0.0025 |
| 284 | 2.6703 | 0.0024 |
| 285 | 2.6727 | 0.0024 |
| 286 | 2.6751 | 0.0024 |
| 287 | 2.6776 | 0.0024 |
| 288 | 2.6800 | 0.0024 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0024 | 0.0004 | 0.0021 |
| 2 | 0.0024 | 0.0004 | 0.0021 |
| 3 | 0.0024 | 0.0004 | 0.0021 |
| 4 | 0.0024 | 0.0004 | 0.0021 |
| 5 | 0.0025 | 0.0004 | 0.0021 |
| 6 | 0.0025 | 0.0004 | 0.0021 |
| 7 | 0.0025 | 0.0004 | 0.0021 |
| 8 | 0.0025 | 0.0004 | 0.0021 |
| 9 | 0.0025 | 0.0004 | 0.0021 |
| 10 | 0.0025 | 0.0004 | 0.0021 |
| 11 | 0.0025 | 0.0004 | 0.0021 |
| 12 | 0.0025 | 0.0004 | 0.0021 |
| 13 | 0.0025 | 0.0004 | 0.0022 |
| 14 | 0.0025 | 0.0004 | 0.0022 |
| 15 | 0.0026 | 0.0004 | 0.0022 |
| 16 | 0.0026 | 0.0004 | 0.0022 |
| 17 | 0.0026 | 0.0004 | 0.0022 |
| 18 | 0.0026 | 0.0004 | 0.0022 |
| 19 | 0.0026 | 0.0004 | 0.0022 |
| 20 | 0.0026 | 0.0004 | 0.0022 |
| 21 | 0.0026 | 0.0004 | 0.0022 |
| 22 | 0.0026 | 0.0004 | 0.0022 |
| 23 | 0.0026 | 0.0004 | 0.0023 |
| 24 | 0.0027 | 0.0004 | 0.0023 |
| 25 | 0.0027 | 0.0004 | 0.0023 |
| 26 | 0.0027 | 0.0004 | 0.0023 |
| 27 | 0.0027 | 0.0004 | 0.0023 |
| 28 | 0.0027 | 0.0004 | 0.0023 |
| 29 | 0.0027 | 0.0004 | 0.0023 |
| 30 | 0.0027 | 0.0004 | 0.0023 |
| 31 | 0.0027 | 0.0004 | 0.0023 |
| 32 | 0.0028 | 0.0004 | 0.0023 |
| 33 | 0.0028 | 0.0004 | 0.0024 |
| 34 | 0.0028 | 0.0004 | 0.0024 |
| 35 | 0.0028 | 0.0004 | 0.0024 |
| 36 | 0.0028 | 0.0004 | 0.0024 |
| 37 | 0.0028 | 0.0004 | 0.0024 |
| 38 | 0.0028 | 0.0004 | 0.0024 |
| 39 | 0.0028 | 0.0004 | 0.0024 |
| 40 | 0.0029 | 0.0004 | 0.0024 |
| 41 | 0.0029 | 0.0004 | 0.0024 |

| | | | |
|---|---|---|---|
| 42 | 0.0029 | 0.0004 | 0.0025 |
| 43 | 0.0029 | 0.0004 | 0.0025 |
| 44 | 0.0029 | 0.0004 | 0.0025 |
| 45 | 0.0029 | 0.0004 | 0.0025 |
| 46 | 0.0029 | 0.0004 | 0.0025 |
| 47 | 0.0030 | 0.0004 | 0.0025 |
| 48 | 0.0030 | 0.0004 | 0.0025 |
| 49 | 0.0030 | 0.0004 | 0.0025 |
| 50 | 0.0030 | 0.0004 | 0.0026 |
| 51 | 0.0030 | 0.0005 | 0.0026 |
| 52 | 0.0030 | 0.0005 | 0.0026 |
| 53 | 0.0031 | 0.0005 | 0.0026 |
| 54 | 0.0031 | 0.0005 | 0.0026 |
| 55 | 0.0031 | 0.0005 | 0.0026 |
| 56 | 0.0031 | 0.0005 | 0.0026 |
| 57 | 0.0031 | 0.0005 | 0.0027 |
| 58 | 0.0031 | 0.0005 | 0.0027 |
| 59 | 0.0032 | 0.0005 | 0.0027 |
| 60 | 0.0032 | 0.0005 | 0.0027 |
| 61 | 0.0032 | 0.0005 | 0.0027 |
| 62 | 0.0032 | 0.0005 | 0.0027 |
| 63 | 0.0032 | 0.0005 | 0.0027 |
| 64 | 0.0032 | 0.0005 | 0.0028 |
| 65 | 0.0033 | 0.0005 | 0.0028 |
| 66 | 0.0033 | 0.0005 | 0.0028 |
| 67 | 0.0033 | 0.0005 | 0.0028 |
| 68 | 0.0033 | 0.0005 | 0.0028 |
| 69 | 0.0033 | 0.0005 | 0.0028 |
| 70 | 0.0034 | 0.0005 | 0.0029 |
| 71 | 0.0034 | 0.0005 | 0.0029 |
| 72 | 0.0034 | 0.0005 | 0.0029 |
| 73 | 0.0034 | 0.0005 | 0.0029 |
| 74 | 0.0034 | 0.0005 | 0.0029 |
| 75 | 0.0035 | 0.0005 | 0.0030 |
| 76 | 0.0035 | 0.0005 | 0.0030 |
| 77 | 0.0035 | 0.0005 | 0.0030 |
| 78 | 0.0035 | 0.0005 | 0.0030 |
| 79 | 0.0036 | 0.0005 | 0.0030 |
| 80 | 0.0036 | 0.0005 | 0.0030 |
| 81 | 0.0036 | 0.0005 | 0.0031 |
| 82 | 0.0036 | 0.0005 | 0.0031 |
| 83 | 0.0037 | 0.0005 | 0.0031 |
| 84 | 0.0037 | 0.0006 | 0.0031 |
| 85 | 0.0037 | 0.0006 | 0.0032 |
| 86 | 0.0037 | 0.0006 | 0.0032 |
| 87 | 0.0038 | 0.0006 | 0.0032 |
| 88 | 0.0038 | 0.0006 | 0.0032 |
| 89 | 0.0038 | 0.0006 | 0.0032 |
| 90 | 0.0038 | 0.0006 | 0.0033 |
| 91 | 0.0039 | 0.0006 | 0.0033 |
| 92 | 0.0039 | 0.0006 | 0.0033 |
| 93 | 0.0039 | 0.0006 | 0.0033 |
| 94 | 0.0039 | 0.0006 | 0.0034 |
| 95 | 0.0040 | 0.0006 | 0.0034 |
| 96 | 0.0040 | 0.0006 | 0.0034 |
| 97 | 0.0040 | 0.0006 | 0.0034 |
| 98 | 0.0041 | 0.0006 | 0.0035 |
| 99 | 0.0041 | 0.0006 | 0.0035 |
| 100 | 0.0041 | 0.0006 | 0.0035 |

| | | | |
|---|---|---|---|
| 101 | 0.0042 | 0.0006 | 0.0036 |
| 102 | 0.0042 | 0.0006 | 0.0036 |
| 103 | 0.0042 | 0.0006 | 0.0036 |
| 104 | 0.0043 | 0.0006 | 0.0036 |
| 105 | 0.0043 | 0.0006 | 0.0037 |
| 106 | 0.0043 | 0.0007 | 0.0037 |
| 107 | 0.0044 | 0.0007 | 0.0037 |
| 108 | 0.0044 | 0.0007 | 0.0038 |
| 109 | 0.0045 | 0.0007 | 0.0038 |
| 110 | 0.0045 | 0.0007 | 0.0038 |
| 111 | 0.0045 | 0.0007 | 0.0039 |
| 112 | 0.0046 | 0.0007 | 0.0039 |
| 113 | 0.0046 | 0.0007 | 0.0039 |
| 114 | 0.0047 | 0.0007 | 0.0040 |
| 115 | 0.0047 | 0.0007 | 0.0040 |
| 116 | 0.0048 | 0.0007 | 0.0040 |
| 117 | 0.0048 | 0.0007 | 0.0041 |
| 118 | 0.0048 | 0.0007 | 0.0041 |
| 119 | 0.0049 | 0.0007 | 0.0042 |
| 120 | 0.0049 | 0.0007 | 0.0042 |
| 121 | 0.0050 | 0.0008 | 0.0043 |
| 122 | 0.0050 | 0.0008 | 0.0043 |
| 123 | 0.0051 | 0.0008 | 0.0044 |
| 124 | 0.0052 | 0.0008 | 0.0044 |
| 125 | 0.0052 | 0.0008 | 0.0044 |
| 126 | 0.0053 | 0.0008 | 0.0045 |
| 127 | 0.0053 | 0.0008 | 0.0045 |
| 128 | 0.0054 | 0.0008 | 0.0046 |
| 129 | 0.0055 | 0.0008 | 0.0047 |
| 130 | 0.0055 | 0.0008 | 0.0047 |
| 131 | 0.0056 | 0.0008 | 0.0048 |
| 132 | 0.0056 | 0.0008 | 0.0048 |
| 133 | 0.0057 | 0.0009 | 0.0049 |
| 134 | 0.0058 | 0.0009 | 0.0049 |
| 135 | 0.0059 | 0.0009 | 0.0050 |
| 136 | 0.0059 | 0.0009 | 0.0050 |
| 137 | 0.0060 | 0.0009 | 0.0051 |
| 138 | 0.0061 | 0.0009 | 0.0052 |
| 139 | 0.0062 | 0.0009 | 0.0053 |
| 140 | 0.0063 | 0.0009 | 0.0053 |
| 141 | 0.0064 | 0.0010 | 0.0054 |
| 142 | 0.0064 | 0.0010 | 0.0055 |
| 143 | 0.0066 | 0.0010 | 0.0056 |
| 144 | 0.0066 | 0.0010 | 0.0056 |
| 145 | 0.0043 | 0.0006 | 0.0037 |
| 146 | 0.0044 | 0.0007 | 0.0037 |
| 147 | 0.0045 | 0.0007 | 0.0038 |
| 148 | 0.0045 | 0.0007 | 0.0039 |
| 149 | 0.0047 | 0.0007 | 0.0040 |
| 150 | 0.0047 | 0.0007 | 0.0040 |
| 151 | 0.0048 | 0.0007 | 0.0041 |
| 152 | 0.0049 | 0.0007 | 0.0042 |
| 153 | 0.0050 | 0.0008 | 0.0043 |
| 154 | 0.0051 | 0.0008 | 0.0043 |
| 155 | 0.0053 | 0.0008 | 0.0045 |
| 156 | 0.0053 | 0.0008 | 0.0045 |
| 157 | 0.0055 | 0.0008 | 0.0047 |
| 158 | 0.0056 | 0.0008 | 0.0048 |
| 159 | 0.0058 | 0.0009 | 0.0049 |

| | | | |
|---|---|---|---|
| 160 | 0.0059 | 0.0009 | 0.0050 |
| 161 | 0.0061 | 0.0009 | 0.0052 |
| 162 | 0.0062 | 0.0009 | 0.0053 |
| 163 | 0.0064 | 0.0010 | 0.0055 |
| 164 | 0.0065 | 0.0010 | 0.0056 |
| 165 | 0.0068 | 0.0010 | 0.0058 |
| 166 | 0.0070 | 0.0010 | 0.0059 |
| 167 | 0.0073 | 0.0011 | 0.0062 |
| 168 | 0.0074 | 0.0011 | 0.0063 |
| 169 | 0.0078 | 0.0012 | 0.0066 |
| 170 | 0.0080 | 0.0012 | 0.0068 |
| 171 | 0.0084 | 0.0013 | 0.0071 |
| 172 | 0.0086 | 0.0013 | 0.0073 |
| 173 | 0.0091 | 0.0014 | 0.0077 |
| 174 | 0.0093 | 0.0014 | 0.0079 |
| 175 | 0.0099 | 0.0015 | 0.0084 |
| 176 | 0.0102 | 0.0015 | 0.0087 |
| 177 | 0.0110 | 0.0016 | 0.0093 |
| 178 | 0.0114 | 0.0017 | 0.0097 |
| 179 | 0.0123 | 0.0018 | 0.0104 |
| 180 | 0.0128 | 0.0019 | 0.0109 |
| 181 | 0.0140 | 0.0021 | 0.0119 |
| 182 | 0.0147 | 0.0022 | 0.0125 |
| 183 | 0.0164 | 0.0025 | 0.0139 |
| 184 | 0.0174 | 0.0026 | 0.0148 |
| 185 | 0.0358 | 0.0054 | 0.0304 |
| 186 | 0.0382 | 0.0057 | 0.0324 |
| 187 | 0.0443 | 0.0059 | 0.0383 |
| 188 | 0.0483 | 0.0059 | 0.0424 |
| 189 | 0.0601 | 0.0059 | 0.0542 |
| 190 | 0.0692 | 0.0059 | 0.0633 |
| 191 | 0.1050 | 0.0059 | 0.0991 |
| 192 | 0.1524 | 0.0059 | 0.1465 |
| 193 | 0.6594 | 0.0059 | 0.6535 |
| 194 | 0.0826 | 0.0059 | 0.0767 |
| 195 | 0.0534 | 0.0059 | 0.0475 |
| 196 | 0.0409 | 0.0059 | 0.0350 |
| 197 | 0.0186 | 0.0028 | 0.0158 |
| 198 | 0.0155 | 0.0023 | 0.0132 |
| 199 | 0.0134 | 0.0020 | 0.0114 |
| 200 | 0.0118 | 0.0018 | 0.0100 |
| 201 | 0.0106 | 0.0016 | 0.0090 |
| 202 | 0.0096 | 0.0014 | 0.0082 |
| 203 | 0.0088 | 0.0013 | 0.0075 |
| 204 | 0.0082 | 0.0012 | 0.0069 |
| 205 | 0.0076 | 0.0011 | 0.0064 |
| 206 | 0.0071 | 0.0011 | 0.0060 |
| 207 | 0.0067 | 0.0010 | 0.0057 |
| 208 | 0.0063 | 0.0009 | 0.0054 |
| 209 | 0.0060 | 0.0009 | 0.0051 |
| 210 | 0.0057 | 0.0009 | 0.0048 |
| 211 | 0.0054 | 0.0008 | 0.0046 |
| 212 | 0.0052 | 0.0008 | 0.0044 |
| 213 | 0.0050 | 0.0007 | 0.0042 |
| 214 | 0.0048 | 0.0007 | 0.0041 |
| 215 | 0.0046 | 0.0007 | 0.0039 |
| 216 | 0.0044 | 0.0007 | 0.0038 |
| 217 | 0.0067 | 0.0010 | 0.0057 |
| 218 | 0.0065 | 0.0010 | 0.0055 |

| | | | |
|---|---|---|---|
| 219 | 0.0063 | 0.0009 | 0.0054 |
| 220 | 0.0062 | 0.0009 | 0.0052 |
| 221 | 0.0060 | 0.0009 | 0.0051 |
| 222 | 0.0058 | 0.0009 | 0.0050 |
| 223 | 0.0057 | 0.0009 | 0.0048 |
| 224 | 0.0056 | 0.0008 | 0.0047 |
| 225 | 0.0054 | 0.0008 | 0.0046 |
| 226 | 0.0053 | 0.0008 | 0.0045 |
| 227 | 0.0052 | 0.0008 | 0.0044 |
| 228 | 0.0051 | 0.0008 | 0.0043 |
| 229 | 0.0050 | 0.0007 | 0.0042 |
| 230 | 0.0049 | 0.0007 | 0.0041 |
| 231 | 0.0048 | 0.0007 | 0.0041 |
| 232 | 0.0047 | 0.0007 | 0.0040 |
| 233 | 0.0046 | 0.0007 | 0.0039 |
| 234 | 0.0045 | 0.0007 | 0.0038 |
| 235 | 0.0044 | 0.0007 | 0.0038 |
| 236 | 0.0044 | 0.0007 | 0.0037 |
| 237 | 0.0043 | 0.0006 | 0.0036 |
| 238 | 0.0042 | 0.0006 | 0.0036 |
| 239 | 0.0042 | 0.0006 | 0.0035 |
| 240 | 0.0041 | 0.0006 | 0.0035 |
| 241 | 0.0040 | 0.0006 | 0.0034 |
| 242 | 0.0040 | 0.0006 | 0.0034 |
| 243 | 0.0039 | 0.0006 | 0.0033 |
| 244 | 0.0038 | 0.0006 | 0.0033 |
| 245 | 0.0038 | 0.0006 | 0.0032 |
| 246 | 0.0037 | 0.0006 | 0.0032 |
| 247 | 0.0037 | 0.0006 | 0.0031 |
| 248 | 0.0036 | 0.0005 | 0.0031 |
| 249 | 0.0036 | 0.0005 | 0.0031 |
| 250 | 0.0035 | 0.0005 | 0.0030 |
| 251 | 0.0035 | 0.0005 | 0.0030 |
| 252 | 0.0035 | 0.0005 | 0.0029 |
| 253 | 0.0034 | 0.0005 | 0.0029 |
| 254 | 0.0034 | 0.0005 | 0.0029 |
| 255 | 0.0033 | 0.0005 | 0.0028 |
| 256 | 0.0033 | 0.0005 | 0.0028 |
| 257 | 0.0033 | 0.0005 | 0.0028 |
| 258 | 0.0032 | 0.0005 | 0.0027 |
| 259 | 0.0032 | 0.0005 | 0.0027 |
| 260 | 0.0031 | 0.0005 | 0.0027 |
| 261 | 0.0031 | 0.0005 | 0.0026 |
| 262 | 0.0031 | 0.0005 | 0.0026 |
| 263 | 0.0030 | 0.0005 | 0.0026 |
| 264 | 0.0030 | 0.0005 | 0.0026 |
| 265 | 0.0030 | 0.0004 | 0.0025 |
| 266 | 0.0030 | 0.0004 | 0.0025 |
| 267 | 0.0029 | 0.0004 | 0.0025 |
| 268 | 0.0029 | 0.0004 | 0.0025 |
| 269 | 0.0029 | 0.0004 | 0.0024 |
| 270 | 0.0028 | 0.0004 | 0.0024 |
| 271 | 0.0028 | 0.0004 | 0.0024 |
| 272 | 0.0028 | 0.0004 | 0.0024 |
| 273 | 0.0028 | 0.0004 | 0.0023 |
| 274 | 0.0027 | 0.0004 | 0.0023 |
| 275 | 0.0027 | 0.0004 | 0.0023 |
| 276 | 0.0027 | 0.0004 | 0.0023 |
| 277 | 0.0027 | 0.0004 | 0.0023 |

| | | | |
|---|---|---|---|
| 278 | 0.0026 | 0.0004 | 0.0022 |
| 279 | 0.0026 | 0.0004 | 0.0022 |
| 280 | 0.0026 | 0.0004 | 0.0022 |
| 281 | 0.0026 | 0.0004 | 0.0022 |
| 282 | 0.0026 | 0.0004 | 0.0022 |
| 283 | 0.0025 | 0.0004 | 0.0022 |
| 284 | 0.0025 | 0.0004 | 0.0021 |
| 285 | 0.0025 | 0.0004 | 0.0021 |
| 286 | 0.0025 | 0.0004 | 0.0021 |
| 287 | 0.0025 | 0.0004 | 0.0021 |
| 288 | 0.0024 | 0.0004 | 0.0021 |

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Total soil rain loss = 0.26(In)
Total effective rainfall = 2.42(In)
Peak flow rate in flood hydrograph = 15.50(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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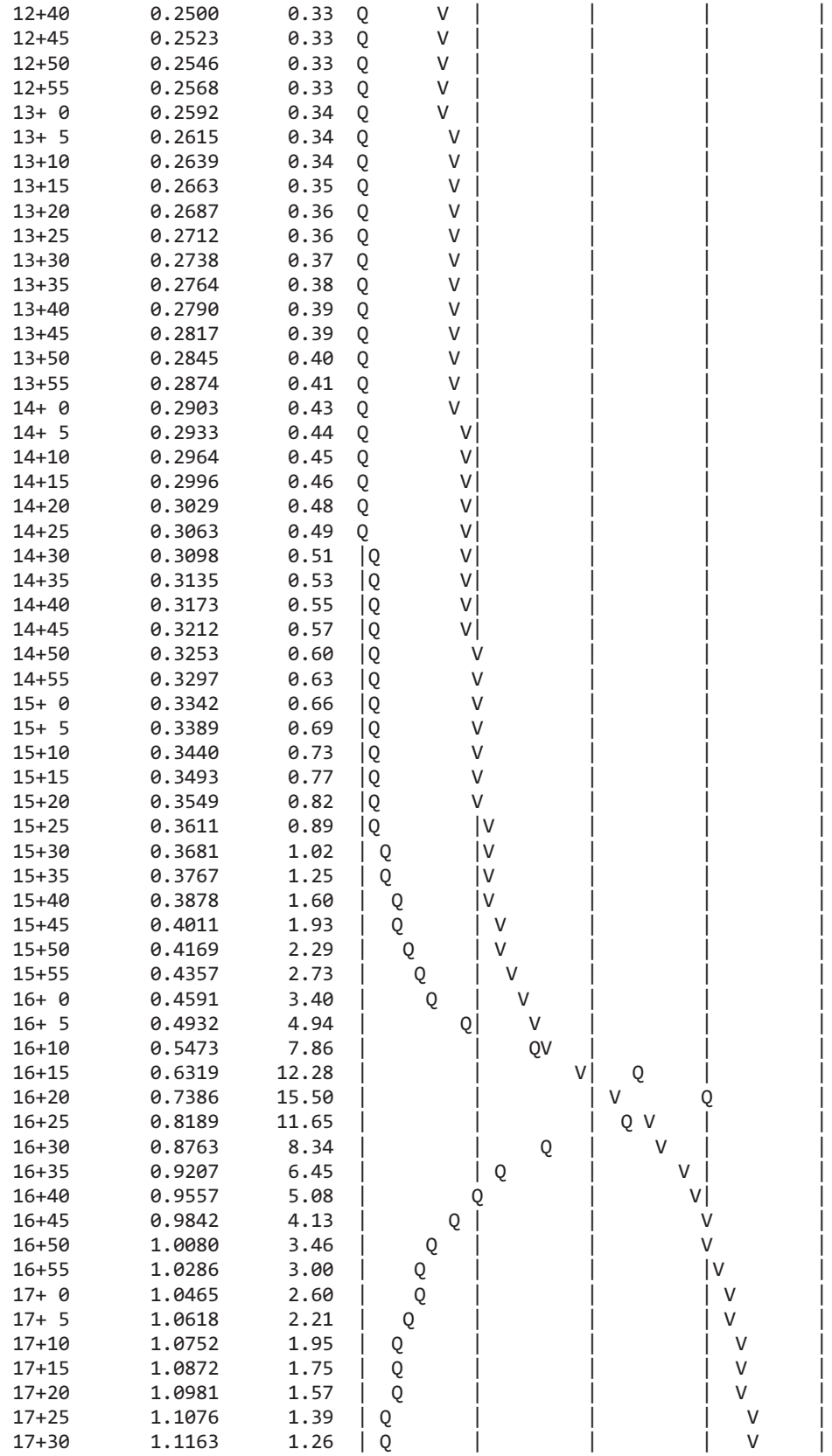
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+15 | 0.0003 | 0.03 | Q | \| | \| | \| | \| |
| 0+20 | 0.0008 | 0.07 | Q | \| | \| | \| | \| |
| 0+25 | 0.0014 | 0.09 | Q | \| | \| | \| | \| |
| 0+30 | 0.0022 | 0.11 | Q | \| | \| | \| | \| |
| 0+35 | 0.0030 | 0.12 | Q | \| | \| | \| | \| |
| 0+40 | 0.0038 | 0.13 | Q | \| | \| | \| | \| |
| 0+45 | 0.0047 | 0.13 | Q | \| | \| | \| | \| |
| 0+50 | 0.0057 | 0.14 | Q | \| | \| | \| | \| |
| 0+55 | 0.0066 | 0.14 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0076 | 0.15 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0087 | 0.15 | Q | \| | \| | \| | \| |
| 1+10 | 0.0097 | 0.15 | Q | \| | \| | \| | \| |
| 1+15 | 0.0108 | 0.15 | Q | \| | \| | \| | \| |
| 1+20 | 0.0119 | 0.16 | Q | \| | \| | \| | \| |
| 1+25 | 0.0130 | 0.16 | Q | \| | \| | \| | \| |
| 1+30 | 0.0141 | 0.16 | Q | \| | \| | \| | \| |
| 1+35 | 0.0152 | 0.16 | Q | \| | \| | \| | \| |
| 1+40 | 0.0163 | 0.16 | Q | \| | \| | \| | \| |
| 1+45 | 0.0175 | 0.17 | Q | \| | \| | \| | \| |
| 1+50 | 0.0186 | 0.17 | Q | \| | \| | \| | \| |
| 1+55 | 0.0198 | 0.17 | Q | \| | \| | \| | \| |
| 2+ 0 | 0.0209 | 0.17 | Q | \| | \| | \| | \| |
| 2+ 5 | 0.0221 | 0.17 | Q | \| | \| | \| | \| |
| 2+10 | 0.0233 | 0.17 | Q | \| | \| | \| | \| |
| 2+15 | 0.0245 | 0.17 | Q | \| | \| | \| | \| |
| 2+20 | 0.0257 | 0.17 | Q | \| | \| | \| | \| |
| 2+25 | 0.0269 | 0.18 | Q | \| | \| | \| | \| |
| 2+30 | 0.0281 | 0.18 | Q | \| | \| | \| | \| |
| 2+35 | 0.0293 | 0.18 | Q | \| | \| | \| | \| |
| 2+40 | 0.0306 | 0.18 | Q | \| | \| | \| | \| |
| 2+45 | 0.0318 | 0.18 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+50 | 0.0331 | 0.18 | QV | | | | |
| 2+55 | 0.0343 | 0.18 | QV | | | | |
| 3+ 0 | 0.0355 | 0.18 | QV | | | | |
| 3+ 5 | 0.0368 | 0.18 | QV | | | | |
| 3+10 | 0.0381 | 0.18 | QV | | | | |
| 3+15 | 0.0393 | 0.18 | QV | | | | |
| 3+20 | 0.0406 | 0.19 | QV | | | | |
| 3+25 | 0.0419 | 0.19 | QV | | | | |
| 3+30 | 0.0432 | 0.19 | QV | | | | |
| 3+35 | 0.0445 | 0.19 | QV | | | | |
| 3+40 | 0.0458 | 0.19 | QV | | | | |
| 3+45 | 0.0471 | 0.19 | QV | | | | |
| 3+50 | 0.0484 | 0.19 | QV | | | | |
| 3+55 | 0.0497 | 0.19 | QV | | | | |
| 4+ 0 | 0.0510 | 0.19 | QV | | | | |
| 4+ 5 | 0.0524 | 0.19 | QV | | | | |
| 4+10 | 0.0537 | 0.19 | QV | | | | |
| 4+15 | 0.0550 | 0.20 | QV | | | | |
| 4+20 | 0.0564 | 0.20 | QV | | | | |
| 4+25 | 0.0577 | 0.20 | QV | | | | |
| 4+30 | 0.0591 | 0.20 | QV | | | | |
| 4+35 | 0.0605 | 0.20 | QV | | | | |
| 4+40 | 0.0619 | 0.20 | QV | | | | |
| 4+45 | 0.0632 | 0.20 | QV | | | | |
| 4+50 | 0.0646 | 0.20 | QV | | | | |
| 4+55 | 0.0660 | 0.20 | Q V | | | | |
| 5+ 0 | 0.0674 | 0.20 | Q V | | | | |
| 5+ 5 | 0.0689 | 0.21 | Q V | | | | |
| 5+10 | 0.0703 | 0.21 | Q V | | | | |
| 5+15 | 0.0717 | 0.21 | Q V | | | | |
| 5+20 | 0.0732 | 0.21 | Q V | | | | |
| 5+25 | 0.0746 | 0.21 | Q V | | | | |
| 5+30 | 0.0761 | 0.21 | Q V | | | | |
| 5+35 | 0.0775 | 0.21 | Q V | | | | |
| 5+40 | 0.0790 | 0.21 | Q V | | | | |
| 5+45 | 0.0805 | 0.21 | Q V | | | | |
| 5+50 | 0.0820 | 0.22 | Q V | | | | |
| 5+55 | 0.0835 | 0.22 | Q V | | | | |
| 6+ 0 | 0.0850 | 0.22 | Q V | | | | |
| 6+ 5 | 0.0865 | 0.22 | Q V | | | | |
| 6+10 | 0.0880 | 0.22 | Q V | | | | |
| 6+15 | 0.0895 | 0.22 | Q V | | | | |
| 6+20 | 0.0911 | 0.22 | Q V | | | | |
| 6+25 | 0.0926 | 0.23 | Q V | | | | |
| 6+30 | 0.0942 | 0.23 | Q V | | | | |
| 6+35 | 0.0958 | 0.23 | Q V | | | | |
| 6+40 | 0.0973 | 0.23 | Q V | | | | |
| 6+45 | 0.0989 | 0.23 | Q  V | | | | |
| 6+50 | 0.1005 | 0.23 | Q  V | | | | |
| 6+55 | 0.1022 | 0.23 | Q  V | | | | |
| 7+ 0 | 0.1038 | 0.24 | Q  V | | | | |
| 7+ 5 | 0.1054 | 0.24 | Q  V | | | | |
| 7+10 | 0.1070 | 0.24 | Q  V | | | | |
| 7+15 | 0.1087 | 0.24 | Q  V | | | | |
| 7+20 | 0.1104 | 0.24 | Q  V | | | | |
| 7+25 | 0.1120 | 0.24 | Q  V | | | | |
| 7+30 | 0.1137 | 0.25 | Q  V | | | | |
| 7+35 | 0.1154 | 0.25 | Q  V | | | | |
| 7+40 | 0.1171 | 0.25 | Q  V | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 7+45 | 0.1189 | 0.25 | Q | V | | | | |
| 7+50 | 0.1206 | 0.25 | Q | V | | | | |
| 7+55 | 0.1223 | 0.25 | Q | V | | | | |
| 8+ 0 | 0.1241 | 0.26 | Q | V | | | | |
| 8+ 5 | 0.1259 | 0.26 | Q | V | | | | |
| 8+10 | 0.1277 | 0.26 | Q | V | | | | |
| 8+15 | 0.1295 | 0.26 | Q | V | | | | |
| 8+20 | 0.1313 | 0.26 | Q | | V | | | |
| 8+25 | 0.1331 | 0.27 | Q | | V | | | |
| 8+30 | 0.1349 | 0.27 | Q | | V | | | |
| 8+35 | 0.1368 | 0.27 | Q | | V | | | |
| 8+40 | 0.1387 | 0.27 | Q | | V | | | |
| 8+45 | 0.1406 | 0.27 | Q | | V | | | |
| 8+50 | 0.1425 | 0.28 | Q | | V | | | |
| 8+55 | 0.1444 | 0.28 | Q | | V | | | |
| 9+ 0 | 0.1463 | 0.28 | Q | | V | | | |
| 9+ 5 | 0.1483 | 0.28 | Q | | V | | | |
| 9+10 | 0.1502 | 0.29 | Q | | V | | | |
| 9+15 | 0.1522 | 0.29 | Q | | V | | | |
| 9+20 | 0.1542 | 0.29 | Q | | V | | | |
| 9+25 | 0.1562 | 0.29 | Q | | V | | | |
| 9+30 | 0.1582 | 0.30 | Q | | V | | | |
| 9+35 | 0.1603 | 0.30 | Q | | V | | | |
| 9+40 | 0.1624 | 0.30 | Q | | V | | | |
| 9+45 | 0.1644 | 0.30 | Q | | | V | | |
| 9+50 | 0.1666 | 0.31 | Q | | | V | | |
| 9+55 | 0.1687 | 0.31 | Q | | | V | | |
| 10+ 0 | 0.1708 | 0.31 | Q | | | V | | |
| 10+ 5 | 0.1730 | 0.31 | Q | | | V | | |
| 10+10 | 0.1752 | 0.32 | Q | | | V | | |
| 10+15 | 0.1774 | 0.32 | Q | | | V | | |
| 10+20 | 0.1796 | 0.32 | Q | | | V | | |
| 10+25 | 0.1819 | 0.33 | Q | | | V | | |
| 10+30 | 0.1841 | 0.33 | Q | | | V | | |
| 10+35 | 0.1864 | 0.33 | Q | | | V | | |
| 10+40 | 0.1888 | 0.34 | Q | | | V | | |
| 10+45 | 0.1911 | 0.34 | Q | | | V | | |
| 10+50 | 0.1935 | 0.34 | Q | | | V | | |
| 10+55 | 0.1959 | 0.35 | Q | | | | V | |
| 11+ 0 | 0.1983 | 0.35 | Q | | | | V | |
| 11+ 5 | 0.2008 | 0.36 | Q | | | | V | |
| 11+10 | 0.2033 | 0.36 | Q | | | | V | |
| 11+15 | 0.2058 | 0.36 | Q | | | | V | |
| 11+20 | 0.2083 | 0.37 | Q | | | | V | |
| 11+25 | 0.2109 | 0.37 | Q | | | | V | |
| 11+30 | 0.2135 | 0.38 | Q | | | | V | |
| 11+35 | 0.2161 | 0.38 | Q | | | | V | |
| 11+40 | 0.2188 | 0.39 | Q | | | | V | |
| 11+45 | 0.2215 | 0.39 | Q | | | | V | |
| 11+50 | 0.2243 | 0.40 | Q | | | | V | |
| 11+55 | 0.2270 | 0.40 | Q | | | | V | |
| 12+ 0 | 0.2299 | 0.41 | Q | | | | | V |
| 12+ 5 | 0.2327 | 0.41 | Q | | | | | V |
| 12+10 | 0.2355 | 0.41 | Q | | | | | V |
| 12+15 | 0.2382 | 0.39 | Q | | | | | V |
| 12+20 | 0.2407 | 0.36 | Q | | | | | V |
| 12+25 | 0.2431 | 0.35 | Q | | | | | V |
| 12+30 | 0.2454 | 0.34 | Q | | | | | V |
| 12+35 | 0.2477 | 0.33 | Q | | | | | V |



| | | | |
|---|---|---|---|
| 12+40 | 0.2500 | 0.33 | |
| 12+45 | 0.2523 | 0.33 | |
| 12+50 | 0.2546 | 0.33 | |
| 12+55 | 0.2568 | 0.33 | |
| 13+ 0 | 0.2592 | 0.34 | |
| 13+ 5 | 0.2615 | 0.34 | |
| 13+10 | 0.2639 | 0.34 | |
| 13+15 | 0.2663 | 0.35 | |
| 13+20 | 0.2687 | 0.36 | |
| 13+25 | 0.2712 | 0.36 | |
| 13+30 | 0.2738 | 0.37 | |
| 13+35 | 0.2764 | 0.38 | |
| 13+40 | 0.2790 | 0.39 | |
| 13+45 | 0.2817 | 0.39 | |
| 13+50 | 0.2845 | 0.40 | |
| 13+55 | 0.2874 | 0.41 | |
| 14+ 0 | 0.2903 | 0.43 | |
| 14+ 5 | 0.2933 | 0.44 | |
| 14+10 | 0.2964 | 0.45 | |
| 14+15 | 0.2996 | 0.46 | |
| 14+20 | 0.3029 | 0.48 | |
| 14+25 | 0.3063 | 0.49 | |
| 14+30 | 0.3098 | 0.51 | |
| 14+35 | 0.3135 | 0.53 | |
| 14+40 | 0.3173 | 0.55 | |
| 14+45 | 0.3212 | 0.57 | |
| 14+50 | 0.3253 | 0.60 | |
| 14+55 | 0.3297 | 0.63 | |
| 15+ 0 | 0.3342 | 0.66 | |
| 15+ 5 | 0.3389 | 0.69 | |
| 15+10 | 0.3440 | 0.73 | |
| 15+15 | 0.3493 | 0.77 | |
| 15+20 | 0.3549 | 0.82 | |
| 15+25 | 0.3611 | 0.89 | |
| 15+30 | 0.3681 | 1.02 | |
| 15+35 | 0.3767 | 1.25 | |
| 15+40 | 0.3878 | 1.60 | |
| 15+45 | 0.4011 | 1.93 | |
| 15+50 | 0.4169 | 2.29 | |
| 15+55 | 0.4357 | 2.73 | |
| 16+ 0 | 0.4591 | 3.40 | |
| 16+ 5 | 0.4932 | 4.94 | |
| 16+10 | 0.5473 | 7.86 | |
| 16+15 | 0.6319 | 12.28 | |
| 16+20 | 0.7386 | 15.50 | |
| 16+25 | 0.8189 | 11.65 | |
| 16+30 | 0.8763 | 8.34 | |
| 16+35 | 0.9207 | 6.45 | |
| 16+40 | 0.9557 | 5.08 | |
| 16+45 | 0.9842 | 4.13 | |
| 16+50 | 1.0080 | 3.46 | |
| 16+55 | 1.0286 | 3.00 | |
| 17+ 0 | 1.0465 | 2.60 | |
| 17+ 5 | 1.0618 | 2.21 | |
| 17+10 | 1.0752 | 1.95 | |
| 17+15 | 1.0872 | 1.75 | |
| 17+20 | 1.0981 | 1.57 | |
| 17+25 | 1.1076 | 1.39 | |
| 17+30 | 1.1163 | 1.26 | |

```
17+35       1.1241      1.13  | Q       |         |         |   V     |
17+40       1.1312      1.03  | Q       |         |         |   V     |
17+45       1.1374      0.90  |Q        |         |         |   V     |
17+50       1.1430      0.82  |Q        |         |         |    V    |
17+55       1.1479      0.71  |Q        |         |         |    V    |
18+ 0       1.1524      0.65  |Q        |         |         |    V    |
18+ 5       1.1568      0.64  |Q        |         |         |    V    |
18+10       1.1611      0.63  |Q        |         |         |    V    |
18+15       1.1654      0.62  |Q        |         |         |    V    |
18+20       1.1696      0.61  |Q        |         |         |    V    |
18+25       1.1735      0.56  |Q        |         |         |     V   |
18+30       1.1771      0.53  |Q        |         |         |     V   |
18+35       1.1803      0.47  Q         |         |         |     V   |
18+40       1.1832      0.42  Q         |         |         |     V   |
18+45       1.1860      0.40  Q         |         |         |     V   |
18+50       1.1887      0.39  Q         |         |         |     V   |
18+55       1.1913      0.38  Q         |         |         |     V   |
19+ 0       1.1939      0.38  Q         |         |         |     V   |
19+ 5       1.1964      0.37  Q         |         |         |     V   |
19+10       1.1989      0.36  Q         |         |         |     V   |
19+15       1.2014      0.35  Q         |         |         |     V   |
19+20       1.2037      0.35  Q         |         |         |      V  |
19+25       1.2061      0.34  Q         |         |         |      V  |
19+30       1.2084      0.33  Q         |         |         |      V  |
19+35       1.2107      0.33  Q         |         |         |      V  |
19+40       1.2129      0.32  Q         |         |         |      V  |
19+45       1.2151      0.32  Q         |         |         |      V  |
19+50       1.2172      0.31  Q         |         |         |      V  |
19+55       1.2193      0.31  Q         |         |         |      V  |
20+ 0       1.2214      0.30  Q         |         |         |      V  |
20+ 5       1.2234      0.30  Q         |         |         |      V  |
20+10       1.2254      0.29  Q         |         |         |      V  |
20+15       1.2274      0.29  Q         |         |         |      V  |
20+20       1.2293      0.28  Q         |         |         |      V  |
20+25       1.2312      0.28  Q         |         |         |      V  |
20+30       1.2331      0.27  Q         |         |         |      V  |
20+35       1.2350      0.27  Q         |         |         |      V  |
20+40       1.2368      0.26  Q         |         |         |       V |
20+45       1.2386      0.26  Q         |         |         |       V |
20+50       1.2404      0.26  Q         |         |         |       V |
20+55       1.2421      0.25  Q         |         |         |       V |
21+ 0       1.2438      0.25  Q         |         |         |       V |
21+ 5       1.2455      0.25  Q         |         |         |       V |
21+10       1.2472      0.24  Q         |         |         |       V |
21+15       1.2489      0.24  Q         |         |         |       V |
21+20       1.2505      0.24  Q         |         |         |       V |
21+25       1.2521      0.23  Q         |         |         |       V |
21+30       1.2537      0.23  Q         |         |         |       V |
21+35       1.2553      0.23  Q         |         |         |       V |
21+40       1.2568      0.22  Q         |         |         |       V |
21+45       1.2583      0.22  Q         |         |         |       V |
21+50       1.2598      0.22  Q         |         |         |       V |
21+55       1.2613      0.22  Q         |         |         |       V |
22+ 0       1.2628      0.21  Q         |         |         |       V |
22+ 5       1.2643      0.21  Q         |         |         |       V |
22+10       1.2657      0.21  Q         |         |         |       V |
22+15       1.2671      0.21  Q         |         |         |       V |
22+20       1.2686      0.21  Q         |         |         |        V|
22+25       1.2700      0.20  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+30 | 1.2713 | 0.20 | Q | | | | V |
| 22+35 | 1.2727 | 0.20 | Q | | | | V |
| 22+40 | 1.2741 | 0.20 | Q | | | | V |
| 22+45 | 1.2754 | 0.19 | Q | | | | V |
| 22+50 | 1.2767 | 0.19 | Q | | | | V |
| 22+55 | 1.2780 | 0.19 | Q | | | | V |
| 23+ 0 | 1.2793 | 0.19 | Q | | | | V |
| 23+ 5 | 1.2806 | 0.19 | Q | | | | V |
| 23+10 | 1.2819 | 0.19 | Q | | | | V |
| 23+15 | 1.2832 | 0.18 | Q | | | | V |
| 23+20 | 1.2844 | 0.18 | Q | | | | V |
| 23+25 | 1.2857 | 0.18 | Q | | | | V |
| 23+30 | 1.2869 | 0.18 | Q | | | | V |
| 23+35 | 1.2881 | 0.18 | Q | | | | V |
| 23+40 | 1.2893 | 0.18 | Q | | | | V |
| 23+45 | 1.2905 | 0.17 | Q | | | | V |
| 23+50 | 1.2917 | 0.17 | Q | | | | V |
| 23+55 | 1.2929 | 0.17 | Q | | | | V |
| 24+ 0 | 1.2941 | 0.17 | Q | | | | V |
| 24+ 5 | 1.2952 | 0.17 | Q | | | | V |
| 24+10 | 1.2963 | 0.16 | Q | | | | V |
| 24+15 | 1.2972 | 0.13 | Q | | | | V |
| 24+20 | 1.2979 | 0.10 | Q | | | | V |
| 24+25 | 1.2984 | 0.07 | Q | | | | V |
| 24+30 | 1.2988 | 0.06 | Q | | | | V |
| 24+35 | 1.2991 | 0.05 | Q | | | | V |
| 24+40 | 1.2994 | 0.04 | Q | | | | V |
| 24+45 | 1.2996 | 0.03 | Q | | | | V |
| 24+50 | 1.2998 | 0.03 | Q | | | | V |
| 24+55 | 1.2999 | 0.02 | Q | | | | V |
| 25+ 0 | 1.3001 | 0.02 | Q | | | | V |
| 25+ 5 | 1.3002 | 0.02 | Q | | | | V |
| 25+10 | 1.3003 | 0.01 | Q | | | | V |
| 25+15 | 1.3004 | 0.01 | Q | | | | V |
| 25+20 | 1.3004 | 0.01 | Q | | | | V |
| 25+25 | 1.3005 | 0.01 | Q | | | | V |
| 25+30 | 1.3006 | 0.01 | Q | | | | V |
| 25+35 | 1.3006 | 0.01 | Q | | | | V |
| 25+40 | 1.3006 | 0.01 | Q | | | | V |
| 25+45 | 1.3007 | 0.00 | Q | | | | V |
| 25+50 | 1.3007 | 0.00 | Q | | | | V |
| 25+55 | 1.3007 | 0.00 | Q | | | | V |
| 26+ 0 | 1.3007 | 0.00 | Q | | | | V |
| 26+ 5 | 1.3008 | 0.00 | Q | | | | V |
| 26+10 | 1.3008 | 0.00 | Q | | | | V |
| 26+15 | 1.3008 | 0.00 | Q | | | | V |
| 26+20 | 1.3008 | 0.00 | Q | | | | V |
| 26+25 | 1.3008 | 0.00 | Q | | | | V |
| 26+30 | 1.3008 | 0.00 | Q | | | | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 45
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) | |
|---|---|---|---|
| Rainfall data for year 100 | | | |
| 3.49 | 1 | 1.39 | |
| Rainfall data for year 100 | | | |
| 3.49 | 6 | 1.87 | |
| Rainfall data for year 100 | | | |
| 3.49 | 24 | 2.68 | |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 84.0 | 96.4 | 3.49 | 1.000 | 0.071 | 1.000 | 0.071 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.071

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 3.49 | 1.000 | 84.0 | 96.4 | 0.37 | 0.850 |

Area-averaged catchment yield fraction, Y = 0.850
Area-averaged low loss fraction, Yb = 0.150
User entry of time of concentration = 0.270 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 3.49(Ac.)
Catchment Lag time = 0.216 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 38.5802
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.071(In/Hr)
Average low loss rate fraction (Yb) = 0.150 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.667(In)
Specified peak 6-hour rainfall = 1.870(In)
Specified peak 24-hour rainfall = 2.680(In)

Rainfall depth area reduction factors:
Using a total area of 3.49(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.659(In)
30-minute factor = 1.000 Adjusted rainfall = 1.129(In)
1-hour factor = 1.000 Adjusted rainfall = 1.390(In)
3-hour factor = 1.000 Adjusted rainfall = 1.667(In)
6-hour factor = 1.000 Adjusted rainfall = 1.870(In)
24-hour factor = 1.000 Adjusted rainfall = 2.680(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 42.21 (CFS)) | |
| 1 | 2.595 | 1.095 |
| 2 | 17.110 | 6.126 |
| 3 | 47.025 | 12.626 |
| 4 | 64.168 | 7.235 |
| 5 | 73.585 | 3.975 |
| 6 | 79.873 | 2.654 |
| 7 | 84.321 | 1.877 |
| 8 | 87.824 | 1.479 |
| 9 | 90.350 | 1.066 |
| 10 | 92.386 | 0.859 |
| 11 | 94.047 | 0.701 |
| 12 | 95.367 | 0.557 |
| 13 | 96.438 | 0.452 |
| 14 | 97.275 | 0.353 |

| | | |
|---|---|---|
| 15 | 97.884 | 0.257 |
| 16 | 98.288 | 0.170 |
| 17 | 98.739 | 0.190 |
| 18 | 99.202 | 0.195 |
| 19 | 99.584 | 0.161 |
| 20 | 99.827 | 0.103 |
| 21 | 100.000 | 0.073 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6595 | 0.6595 |
| 2 | 0.8119 | 0.1524 |
| 3 | 0.9169 | 0.1050 |
| 4 | 0.9996 | 0.0826 |
| 5 | 1.0688 | 0.0692 |
| 6 | 1.1288 | 0.0601 |
| 7 | 1.1823 | 0.0534 |
| 8 | 1.2306 | 0.0483 |
| 9 | 1.2749 | 0.0443 |
| 10 | 1.3158 | 0.0409 |
| 11 | 1.3540 | 0.0382 |
| 12 | 1.3898 | 0.0358 |
| 13 | 1.4083 | 0.0186 |
| 14 | 1.4257 | 0.0174 |
| 15 | 1.4421 | 0.0164 |
| 16 | 1.4576 | 0.0155 |
| 17 | 1.4723 | 0.0147 |
| 18 | 1.4863 | 0.0140 |
| 19 | 1.4997 | 0.0134 |
| 20 | 1.5125 | 0.0128 |
| 21 | 1.5248 | 0.0123 |
| 22 | 1.5366 | 0.0118 |
| 23 | 1.5480 | 0.0114 |
| 24 | 1.5589 | 0.0110 |
| 25 | 1.5695 | 0.0106 |
| 26 | 1.5797 | 0.0102 |
| 27 | 1.5896 | 0.0099 |
| 28 | 1.5992 | 0.0096 |
| 29 | 1.6086 | 0.0093 |
| 30 | 1.6176 | 0.0091 |
| 31 | 1.6264 | 0.0088 |
| 32 | 1.6350 | 0.0086 |
| 33 | 1.6434 | 0.0084 |
| 34 | 1.6515 | 0.0081 |
| 35 | 1.6595 | 0.0080 |
| 36 | 1.6672 | 0.0078 |
| 37 | 1.6748 | 0.0076 |
| 38 | 1.6822 | 0.0074 |
| 39 | 1.6895 | 0.0073 |
| 40 | 1.6966 | 0.0071 |
| 41 | 1.7035 | 0.0070 |
| 42 | 1.7103 | 0.0068 |
| 43 | 1.7170 | 0.0067 |
| 44 | 1.7236 | 0.0065 |
| 45 | 1.7300 | 0.0064 |
| 46 | 1.7363 | 0.0063 |
| 47 | 1.7425 | 0.0062 |
| 48 | 1.7486 | 0.0061 |
| 49 | 1.7545 | 0.0060 |

| | | |
|---|---|---|
| 50 | 1.7604 | 0.0059 |
| 51 | 1.7662 | 0.0058 |
| 52 | 1.7719 | 0.0057 |
| 53 | 1.7775 | 0.0056 |
| 54 | 1.7830 | 0.0055 |
| 55 | 1.7884 | 0.0054 |
| 56 | 1.7938 | 0.0053 |
| 57 | 1.7990 | 0.0053 |
| 58 | 1.8042 | 0.0052 |
| 59 | 1.8093 | 0.0051 |
| 60 | 1.8144 | 0.0050 |
| 61 | 1.8193 | 0.0050 |
| 62 | 1.8243 | 0.0049 |
| 63 | 1.8291 | 0.0048 |
| 64 | 1.8339 | 0.0048 |
| 65 | 1.8386 | 0.0047 |
| 66 | 1.8432 | 0.0047 |
| 67 | 1.8478 | 0.0046 |
| 68 | 1.8524 | 0.0045 |
| 69 | 1.8568 | 0.0045 |
| 70 | 1.8613 | 0.0044 |
| 71 | 1.8657 | 0.0044 |
| 72 | 1.8700 | 0.0043 |
| 73 | 1.8767 | 0.0067 |
| 74 | 1.8833 | 0.0066 |
| 75 | 1.8899 | 0.0066 |
| 76 | 1.8964 | 0.0065 |
| 77 | 1.9029 | 0.0064 |
| 78 | 1.9092 | 0.0064 |
| 79 | 1.9156 | 0.0063 |
| 80 | 1.9218 | 0.0063 |
| 81 | 1.9280 | 0.0062 |
| 82 | 1.9342 | 0.0062 |
| 83 | 1.9403 | 0.0061 |
| 84 | 1.9463 | 0.0060 |
| 85 | 1.9523 | 0.0060 |
| 86 | 1.9583 | 0.0059 |
| 87 | 1.9641 | 0.0059 |
| 88 | 1.9700 | 0.0058 |
| 89 | 1.9758 | 0.0058 |
| 90 | 1.9815 | 0.0057 |
| 91 | 1.9872 | 0.0057 |
| 92 | 1.9928 | 0.0056 |
| 93 | 1.9984 | 0.0056 |
| 94 | 2.0040 | 0.0056 |
| 95 | 2.0095 | 0.0055 |
| 96 | 2.0150 | 0.0055 |
| 97 | 2.0204 | 0.0054 |
| 98 | 2.0258 | 0.0054 |
| 99 | 2.0311 | 0.0053 |
| 100 | 2.0364 | 0.0053 |
| 101 | 2.0417 | 0.0053 |
| 102 | 2.0469 | 0.0052 |
| 103 | 2.0521 | 0.0052 |
| 104 | 2.0573 | 0.0052 |
| 105 | 2.0624 | 0.0051 |
| 106 | 2.0675 | 0.0051 |
| 107 | 2.0725 | 0.0050 |
| 108 | 2.0775 | 0.0050 |

| | | |
|---|---|---|
| 109 | 2.0825 | 0.0050 |
| 110 | 2.0875 | 0.0049 |
| 111 | 2.0924 | 0.0049 |
| 112 | 2.0973 | 0.0049 |
| 113 | 2.1021 | 0.0048 |
| 114 | 2.1069 | 0.0048 |
| 115 | 2.1117 | 0.0048 |
| 116 | 2.1164 | 0.0048 |
| 117 | 2.1212 | 0.0047 |
| 118 | 2.1259 | 0.0047 |
| 119 | 2.1305 | 0.0047 |
| 120 | 2.1352 | 0.0046 |
| 121 | 2.1398 | 0.0046 |
| 122 | 2.1443 | 0.0046 |
| 123 | 2.1489 | 0.0045 |
| 124 | 2.1534 | 0.0045 |
| 125 | 2.1579 | 0.0045 |
| 126 | 2.1624 | 0.0045 |
| 127 | 2.1668 | 0.0044 |
| 128 | 2.1712 | 0.0044 |
| 129 | 2.1756 | 0.0044 |
| 130 | 2.1800 | 0.0044 |
| 131 | 2.1843 | 0.0043 |
| 132 | 2.1886 | 0.0043 |
| 133 | 2.1929 | 0.0043 |
| 134 | 2.1972 | 0.0043 |
| 135 | 2.2014 | 0.0042 |
| 136 | 2.2057 | 0.0042 |
| 137 | 2.2099 | 0.0042 |
| 138 | 2.2140 | 0.0042 |
| 139 | 2.2182 | 0.0042 |
| 140 | 2.2223 | 0.0041 |
| 141 | 2.2264 | 0.0041 |
| 142 | 2.2305 | 0.0041 |
| 143 | 2.2346 | 0.0041 |
| 144 | 2.2386 | 0.0040 |
| 145 | 2.2427 | 0.0040 |
| 146 | 2.2467 | 0.0040 |
| 147 | 2.2507 | 0.0040 |
| 148 | 2.2546 | 0.0040 |
| 149 | 2.2586 | 0.0039 |
| 150 | 2.2625 | 0.0039 |
| 151 | 2.2664 | 0.0039 |
| 152 | 2.2703 | 0.0039 |
| 153 | 2.2742 | 0.0039 |
| 154 | 2.2780 | 0.0038 |
| 155 | 2.2818 | 0.0038 |
| 156 | 2.2856 | 0.0038 |
| 157 | 2.2894 | 0.0038 |
| 158 | 2.2932 | 0.0038 |
| 159 | 2.2970 | 0.0038 |
| 160 | 2.3007 | 0.0037 |
| 161 | 2.3044 | 0.0037 |
| 162 | 2.3082 | 0.0037 |
| 163 | 2.3118 | 0.0037 |
| 164 | 2.3155 | 0.0037 |
| 165 | 2.3192 | 0.0037 |
| 166 | 2.3228 | 0.0036 |
| 167 | 2.3264 | 0.0036 |

| | | |
|---|---|---|
| 168 | 2.3300 | 0.0036 |
| 169 | 2.3336 | 0.0036 |
| 170 | 2.3372 | 0.0036 |
| 171 | 2.3408 | 0.0036 |
| 172 | 2.3443 | 0.0035 |
| 173 | 2.3479 | 0.0035 |
| 174 | 2.3514 | 0.0035 |
| 175 | 2.3549 | 0.0035 |
| 176 | 2.3584 | 0.0035 |
| 177 | 2.3618 | 0.0035 |
| 178 | 2.3653 | 0.0035 |
| 179 | 2.3687 | 0.0034 |
| 180 | 2.3722 | 0.0034 |
| 181 | 2.3756 | 0.0034 |
| 182 | 2.3790 | 0.0034 |
| 183 | 2.3824 | 0.0034 |
| 184 | 2.3857 | 0.0034 |
| 185 | 2.3891 | 0.0034 |
| 186 | 2.3924 | 0.0033 |
| 187 | 2.3958 | 0.0033 |
| 188 | 2.3991 | 0.0033 |
| 189 | 2.4024 | 0.0033 |
| 190 | 2.4057 | 0.0033 |
| 191 | 2.4090 | 0.0033 |
| 192 | 2.4122 | 0.0033 |
| 193 | 2.4155 | 0.0033 |
| 194 | 2.4187 | 0.0032 |
| 195 | 2.4220 | 0.0032 |
| 196 | 2.4252 | 0.0032 |
| 197 | 2.4284 | 0.0032 |
| 198 | 2.4316 | 0.0032 |
| 199 | 2.4348 | 0.0032 |
| 200 | 2.4379 | 0.0032 |
| 201 | 2.4411 | 0.0032 |
| 202 | 2.4442 | 0.0031 |
| 203 | 2.4474 | 0.0031 |
| 204 | 2.4505 | 0.0031 |
| 205 | 2.4536 | 0.0031 |
| 206 | 2.4567 | 0.0031 |
| 207 | 2.4598 | 0.0031 |
| 208 | 2.4629 | 0.0031 |
| 209 | 2.4660 | 0.0031 |
| 210 | 2.4690 | 0.0031 |
| 211 | 2.4721 | 0.0030 |
| 212 | 2.4751 | 0.0030 |
| 213 | 2.4781 | 0.0030 |
| 214 | 2.4811 | 0.0030 |
| 215 | 2.4841 | 0.0030 |
| 216 | 2.4871 | 0.0030 |
| 217 | 2.4901 | 0.0030 |
| 218 | 2.4931 | 0.0030 |
| 219 | 2.4961 | 0.0030 |
| 220 | 2.4990 | 0.0030 |
| 221 | 2.5019 | 0.0029 |
| 222 | 2.5049 | 0.0029 |
| 223 | 2.5078 | 0.0029 |
| 224 | 2.5107 | 0.0029 |
| 225 | 2.5136 | 0.0029 |
| 226 | 2.5165 | 0.0029 |

| | | |
|---|---|---|
| 227 | 2.5194 | 0.0029 |
| 228 | 2.5223 | 0.0029 |
| 229 | 2.5252 | 0.0029 |
| 230 | 2.5280 | 0.0029 |
| 231 | 2.5309 | 0.0028 |
| 232 | 2.5337 | 0.0028 |
| 233 | 2.5365 | 0.0028 |
| 234 | 2.5394 | 0.0028 |
| 235 | 2.5422 | 0.0028 |
| 236 | 2.5450 | 0.0028 |
| 237 | 2.5478 | 0.0028 |
| 238 | 2.5505 | 0.0028 |
| 239 | 2.5533 | 0.0028 |
| 240 | 2.5561 | 0.0028 |
| 241 | 2.5589 | 0.0028 |
| 242 | 2.5616 | 0.0028 |
| 243 | 2.5644 | 0.0027 |
| 244 | 2.5671 | 0.0027 |
| 245 | 2.5698 | 0.0027 |
| 246 | 2.5725 | 0.0027 |
| 247 | 2.5752 | 0.0027 |
| 248 | 2.5779 | 0.0027 |
| 249 | 2.5806 | 0.0027 |
| 250 | 2.5833 | 0.0027 |
| 251 | 2.5860 | 0.0027 |
| 252 | 2.5887 | 0.0027 |
| 253 | 2.5913 | 0.0027 |
| 254 | 2.5940 | 0.0027 |
| 255 | 2.5966 | 0.0026 |
| 256 | 2.5993 | 0.0026 |
| 257 | 2.6019 | 0.0026 |
| 258 | 2.6045 | 0.0026 |
| 259 | 2.6072 | 0.0026 |
| 260 | 2.6098 | 0.0026 |
| 261 | 2.6124 | 0.0026 |
| 262 | 2.6150 | 0.0026 |
| 263 | 2.6176 | 0.0026 |
| 264 | 2.6201 | 0.0026 |
| 265 | 2.6227 | 0.0026 |
| 266 | 2.6253 | 0.0026 |
| 267 | 2.6278 | 0.0026 |
| 268 | 2.6304 | 0.0026 |
| 269 | 2.6329 | 0.0025 |
| 270 | 2.6355 | 0.0025 |
| 271 | 2.6380 | 0.0025 |
| 272 | 2.6405 | 0.0025 |
| 273 | 2.6430 | 0.0025 |
| 274 | 2.6455 | 0.0025 |
| 275 | 2.6480 | 0.0025 |
| 276 | 2.6505 | 0.0025 |
| 277 | 2.6530 | 0.0025 |
| 278 | 2.6555 | 0.0025 |
| 279 | 2.6580 | 0.0025 |
| 280 | 2.6605 | 0.0025 |
| 281 | 2.6629 | 0.0025 |
| 282 | 2.6654 | 0.0025 |
| 283 | 2.6678 | 0.0025 |
| 284 | 2.6703 | 0.0024 |
| 285 | 2.6727 | 0.0024 |

| | | | |
|---|---|---|---|
| 286 | 2.6751 | 0.0024 | |
| 287 | 2.6776 | 0.0024 | |
| 288 | 2.6800 | 0.0024 | |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0024 | 0.0004 | 0.0021 |
| 2 | 0.0024 | 0.0004 | 0.0021 |
| 3 | 0.0024 | 0.0004 | 0.0021 |
| 4 | 0.0024 | 0.0004 | 0.0021 |
| 5 | 0.0025 | 0.0004 | 0.0021 |
| 6 | 0.0025 | 0.0004 | 0.0021 |
| 7 | 0.0025 | 0.0004 | 0.0021 |
| 8 | 0.0025 | 0.0004 | 0.0021 |
| 9 | 0.0025 | 0.0004 | 0.0021 |
| 10 | 0.0025 | 0.0004 | 0.0021 |
| 11 | 0.0025 | 0.0004 | 0.0021 |
| 12 | 0.0025 | 0.0004 | 0.0021 |
| 13 | 0.0025 | 0.0004 | 0.0022 |
| 14 | 0.0025 | 0.0004 | 0.0022 |
| 15 | 0.0026 | 0.0004 | 0.0022 |
| 16 | 0.0026 | 0.0004 | 0.0022 |
| 17 | 0.0026 | 0.0004 | 0.0022 |
| 18 | 0.0026 | 0.0004 | 0.0022 |
| 19 | 0.0026 | 0.0004 | 0.0022 |
| 20 | 0.0026 | 0.0004 | 0.0022 |
| 21 | 0.0026 | 0.0004 | 0.0022 |
| 22 | 0.0026 | 0.0004 | 0.0022 |
| 23 | 0.0026 | 0.0004 | 0.0023 |
| 24 | 0.0027 | 0.0004 | 0.0023 |
| 25 | 0.0027 | 0.0004 | 0.0023 |
| 26 | 0.0027 | 0.0004 | 0.0023 |
| 27 | 0.0027 | 0.0004 | 0.0023 |
| 28 | 0.0027 | 0.0004 | 0.0023 |
| 29 | 0.0027 | 0.0004 | 0.0023 |
| 30 | 0.0027 | 0.0004 | 0.0023 |
| 31 | 0.0027 | 0.0004 | 0.0023 |
| 32 | 0.0028 | 0.0004 | 0.0023 |
| 33 | 0.0028 | 0.0004 | 0.0024 |
| 34 | 0.0028 | 0.0004 | 0.0024 |
| 35 | 0.0028 | 0.0004 | 0.0024 |
| 36 | 0.0028 | 0.0004 | 0.0024 |
| 37 | 0.0028 | 0.0004 | 0.0024 |
| 38 | 0.0028 | 0.0004 | 0.0024 |
| 39 | 0.0028 | 0.0004 | 0.0024 |
| 40 | 0.0029 | 0.0004 | 0.0024 |
| 41 | 0.0029 | 0.0004 | 0.0024 |
| 42 | 0.0029 | 0.0004 | 0.0025 |
| 43 | 0.0029 | 0.0004 | 0.0025 |
| 44 | 0.0029 | 0.0004 | 0.0025 |
| 45 | 0.0029 | 0.0004 | 0.0025 |
| 46 | 0.0029 | 0.0004 | 0.0025 |
| 47 | 0.0030 | 0.0004 | 0.0025 |
| 48 | 0.0030 | 0.0004 | 0.0025 |
| 49 | 0.0030 | 0.0004 | 0.0025 |
| 50 | 0.0030 | 0.0004 | 0.0026 |
| 51 | 0.0030 | 0.0005 | 0.0026 |

| | | | |
|---|---|---|---|
| 52 | 0.0030 | 0.0005 | 0.0026 |
| 53 | 0.0031 | 0.0005 | 0.0026 |
| 54 | 0.0031 | 0.0005 | 0.0026 |
| 55 | 0.0031 | 0.0005 | 0.0026 |
| 56 | 0.0031 | 0.0005 | 0.0026 |
| 57 | 0.0031 | 0.0005 | 0.0027 |
| 58 | 0.0031 | 0.0005 | 0.0027 |
| 59 | 0.0032 | 0.0005 | 0.0027 |
| 60 | 0.0032 | 0.0005 | 0.0027 |
| 61 | 0.0032 | 0.0005 | 0.0027 |
| 62 | 0.0032 | 0.0005 | 0.0027 |
| 63 | 0.0032 | 0.0005 | 0.0027 |
| 64 | 0.0032 | 0.0005 | 0.0028 |
| 65 | 0.0033 | 0.0005 | 0.0028 |
| 66 | 0.0033 | 0.0005 | 0.0028 |
| 67 | 0.0033 | 0.0005 | 0.0028 |
| 68 | 0.0033 | 0.0005 | 0.0028 |
| 69 | 0.0033 | 0.0005 | 0.0028 |
| 70 | 0.0034 | 0.0005 | 0.0029 |
| 71 | 0.0034 | 0.0005 | 0.0029 |
| 72 | 0.0034 | 0.0005 | 0.0029 |
| 73 | 0.0034 | 0.0005 | 0.0029 |
| 74 | 0.0034 | 0.0005 | 0.0029 |
| 75 | 0.0035 | 0.0005 | 0.0030 |
| 76 | 0.0035 | 0.0005 | 0.0030 |
| 77 | 0.0035 | 0.0005 | 0.0030 |
| 78 | 0.0035 | 0.0005 | 0.0030 |
| 79 | 0.0036 | 0.0005 | 0.0030 |
| 80 | 0.0036 | 0.0005 | 0.0030 |
| 81 | 0.0036 | 0.0005 | 0.0031 |
| 82 | 0.0036 | 0.0005 | 0.0031 |
| 83 | 0.0037 | 0.0005 | 0.0031 |
| 84 | 0.0037 | 0.0006 | 0.0031 |
| 85 | 0.0037 | 0.0006 | 0.0032 |
| 86 | 0.0037 | 0.0006 | 0.0032 |
| 87 | 0.0038 | 0.0006 | 0.0032 |
| 88 | 0.0038 | 0.0006 | 0.0032 |
| 89 | 0.0038 | 0.0006 | 0.0032 |
| 90 | 0.0038 | 0.0006 | 0.0033 |
| 91 | 0.0039 | 0.0006 | 0.0033 |
| 92 | 0.0039 | 0.0006 | 0.0033 |
| 93 | 0.0039 | 0.0006 | 0.0033 |
| 94 | 0.0039 | 0.0006 | 0.0034 |
| 95 | 0.0040 | 0.0006 | 0.0034 |
| 96 | 0.0040 | 0.0006 | 0.0034 |
| 97 | 0.0040 | 0.0006 | 0.0034 |
| 98 | 0.0041 | 0.0006 | 0.0035 |
| 99 | 0.0041 | 0.0006 | 0.0035 |
| 100 | 0.0041 | 0.0006 | 0.0035 |
| 101 | 0.0042 | 0.0006 | 0.0036 |
| 102 | 0.0042 | 0.0006 | 0.0036 |
| 103 | 0.0042 | 0.0006 | 0.0036 |
| 104 | 0.0043 | 0.0006 | 0.0036 |
| 105 | 0.0043 | 0.0006 | 0.0037 |
| 106 | 0.0043 | 0.0007 | 0.0037 |
| 107 | 0.0044 | 0.0007 | 0.0037 |
| 108 | 0.0044 | 0.0007 | 0.0038 |
| 109 | 0.0045 | 0.0007 | 0.0038 |
| 110 | 0.0045 | 0.0007 | 0.0038 |

| | | | |
|---|---|---|---|
| 111 | 0.0045 | 0.0007 | 0.0039 |
| 112 | 0.0046 | 0.0007 | 0.0039 |
| 113 | 0.0046 | 0.0007 | 0.0039 |
| 114 | 0.0047 | 0.0007 | 0.0040 |
| 115 | 0.0047 | 0.0007 | 0.0040 |
| 116 | 0.0048 | 0.0007 | 0.0040 |
| 117 | 0.0048 | 0.0007 | 0.0041 |
| 118 | 0.0048 | 0.0007 | 0.0041 |
| 119 | 0.0049 | 0.0007 | 0.0042 |
| 120 | 0.0049 | 0.0007 | 0.0042 |
| 121 | 0.0050 | 0.0008 | 0.0043 |
| 122 | 0.0050 | 0.0008 | 0.0043 |
| 123 | 0.0051 | 0.0008 | 0.0044 |
| 124 | 0.0052 | 0.0008 | 0.0044 |
| 125 | 0.0052 | 0.0008 | 0.0044 |
| 126 | 0.0053 | 0.0008 | 0.0045 |
| 127 | 0.0053 | 0.0008 | 0.0045 |
| 128 | 0.0054 | 0.0008 | 0.0046 |
| 129 | 0.0055 | 0.0008 | 0.0047 |
| 130 | 0.0055 | 0.0008 | 0.0047 |
| 131 | 0.0056 | 0.0008 | 0.0048 |
| 132 | 0.0056 | 0.0008 | 0.0048 |
| 133 | 0.0057 | 0.0009 | 0.0049 |
| 134 | 0.0058 | 0.0009 | 0.0049 |
| 135 | 0.0059 | 0.0009 | 0.0050 |
| 136 | 0.0059 | 0.0009 | 0.0050 |
| 137 | 0.0060 | 0.0009 | 0.0051 |
| 138 | 0.0061 | 0.0009 | 0.0052 |
| 139 | 0.0062 | 0.0009 | 0.0053 |
| 140 | 0.0063 | 0.0009 | 0.0053 |
| 141 | 0.0064 | 0.0010 | 0.0054 |
| 142 | 0.0064 | 0.0010 | 0.0055 |
| 143 | 0.0066 | 0.0010 | 0.0056 |
| 144 | 0.0066 | 0.0010 | 0.0056 |
| 145 | 0.0043 | 0.0006 | 0.0037 |
| 146 | 0.0044 | 0.0007 | 0.0037 |
| 147 | 0.0045 | 0.0007 | 0.0038 |
| 148 | 0.0045 | 0.0007 | 0.0039 |
| 149 | 0.0047 | 0.0007 | 0.0040 |
| 150 | 0.0047 | 0.0007 | 0.0040 |
| 151 | 0.0048 | 0.0007 | 0.0041 |
| 152 | 0.0049 | 0.0007 | 0.0042 |
| 153 | 0.0050 | 0.0008 | 0.0043 |
| 154 | 0.0051 | 0.0008 | 0.0043 |
| 155 | 0.0053 | 0.0008 | 0.0045 |
| 156 | 0.0053 | 0.0008 | 0.0045 |
| 157 | 0.0055 | 0.0008 | 0.0047 |
| 158 | 0.0056 | 0.0008 | 0.0048 |
| 159 | 0.0058 | 0.0009 | 0.0049 |
| 160 | 0.0059 | 0.0009 | 0.0050 |
| 161 | 0.0061 | 0.0009 | 0.0052 |
| 162 | 0.0062 | 0.0009 | 0.0053 |
| 163 | 0.0064 | 0.0010 | 0.0055 |
| 164 | 0.0065 | 0.0010 | 0.0056 |
| 165 | 0.0068 | 0.0010 | 0.0058 |
| 166 | 0.0070 | 0.0010 | 0.0059 |
| 167 | 0.0073 | 0.0011 | 0.0062 |
| 168 | 0.0074 | 0.0011 | 0.0063 |
| 169 | 0.0078 | 0.0012 | 0.0066 |

| | | | |
|---|---|---|---|
| 170 | 0.0080 | 0.0012 | 0.0068 |
| 171 | 0.0084 | 0.0013 | 0.0071 |
| 172 | 0.0086 | 0.0013 | 0.0073 |
| 173 | 0.0091 | 0.0014 | 0.0077 |
| 174 | 0.0093 | 0.0014 | 0.0079 |
| 175 | 0.0099 | 0.0015 | 0.0084 |
| 176 | 0.0102 | 0.0015 | 0.0087 |
| 177 | 0.0110 | 0.0016 | 0.0093 |
| 178 | 0.0114 | 0.0017 | 0.0097 |
| 179 | 0.0123 | 0.0018 | 0.0104 |
| 180 | 0.0128 | 0.0019 | 0.0109 |
| 181 | 0.0140 | 0.0021 | 0.0119 |
| 182 | 0.0147 | 0.0022 | 0.0125 |
| 183 | 0.0164 | 0.0025 | 0.0139 |
| 184 | 0.0174 | 0.0026 | 0.0148 |
| 185 | 0.0358 | 0.0054 | 0.0304 |
| 186 | 0.0382 | 0.0057 | 0.0325 |
| 187 | 0.0443 | 0.0059 | 0.0383 |
| 188 | 0.0483 | 0.0059 | 0.0424 |
| 189 | 0.0601 | 0.0059 | 0.0542 |
| 190 | 0.0692 | 0.0059 | 0.0633 |
| 191 | 0.1050 | 0.0059 | 0.0991 |
| 192 | 0.1524 | 0.0059 | 0.1465 |
| 193 | 0.6595 | 0.0059 | 0.6535 |
| 194 | 0.0826 | 0.0059 | 0.0767 |
| 195 | 0.0534 | 0.0059 | 0.0475 |
| 196 | 0.0409 | 0.0059 | 0.0350 |
| 197 | 0.0186 | 0.0028 | 0.0158 |
| 198 | 0.0155 | 0.0023 | 0.0132 |
| 199 | 0.0134 | 0.0020 | 0.0114 |
| 200 | 0.0118 | 0.0018 | 0.0100 |
| 201 | 0.0106 | 0.0016 | 0.0090 |
| 202 | 0.0096 | 0.0014 | 0.0082 |
| 203 | 0.0088 | 0.0013 | 0.0075 |
| 204 | 0.0081 | 0.0012 | 0.0069 |
| 205 | 0.0076 | 0.0011 | 0.0064 |
| 206 | 0.0071 | 0.0011 | 0.0060 |
| 207 | 0.0067 | 0.0010 | 0.0057 |
| 208 | 0.0063 | 0.0009 | 0.0054 |
| 209 | 0.0060 | 0.0009 | 0.0051 |
| 210 | 0.0057 | 0.0009 | 0.0048 |
| 211 | 0.0054 | 0.0008 | 0.0046 |
| 212 | 0.0052 | 0.0008 | 0.0044 |
| 213 | 0.0050 | 0.0007 | 0.0042 |
| 214 | 0.0048 | 0.0007 | 0.0041 |
| 215 | 0.0046 | 0.0007 | 0.0039 |
| 216 | 0.0044 | 0.0007 | 0.0038 |
| 217 | 0.0067 | 0.0010 | 0.0057 |
| 218 | 0.0065 | 0.0010 | 0.0055 |
| 219 | 0.0063 | 0.0009 | 0.0054 |
| 220 | 0.0062 | 0.0009 | 0.0052 |
| 221 | 0.0060 | 0.0009 | 0.0051 |
| 222 | 0.0058 | 0.0009 | 0.0050 |
| 223 | 0.0057 | 0.0009 | 0.0048 |
| 224 | 0.0056 | 0.0008 | 0.0047 |
| 225 | 0.0054 | 0.0008 | 0.0046 |
| 226 | 0.0053 | 0.0008 | 0.0045 |
| 227 | 0.0052 | 0.0008 | 0.0044 |
| 228 | 0.0051 | 0.0008 | 0.0043 |

| | | | |
|---|---|---|---|
| 229 | 0.0050 | 0.0007 | 0.0042 |
| 230 | 0.0049 | 0.0007 | 0.0041 |
| 231 | 0.0048 | 0.0007 | 0.0041 |
| 232 | 0.0047 | 0.0007 | 0.0040 |
| 233 | 0.0046 | 0.0007 | 0.0039 |
| 234 | 0.0045 | 0.0007 | 0.0038 |
| 235 | 0.0044 | 0.0007 | 0.0038 |
| 236 | 0.0044 | 0.0007 | 0.0037 |
| 237 | 0.0043 | 0.0006 | 0.0036 |
| 238 | 0.0042 | 0.0006 | 0.0036 |
| 239 | 0.0042 | 0.0006 | 0.0035 |
| 240 | 0.0041 | 0.0006 | 0.0035 |
| 241 | 0.0040 | 0.0006 | 0.0034 |
| 242 | 0.0040 | 0.0006 | 0.0034 |
| 243 | 0.0039 | 0.0006 | 0.0033 |
| 244 | 0.0038 | 0.0006 | 0.0033 |
| 245 | 0.0038 | 0.0006 | 0.0032 |
| 246 | 0.0037 | 0.0006 | 0.0032 |
| 247 | 0.0037 | 0.0006 | 0.0031 |
| 248 | 0.0036 | 0.0005 | 0.0031 |
| 249 | 0.0036 | 0.0005 | 0.0031 |
| 250 | 0.0035 | 0.0005 | 0.0030 |
| 251 | 0.0035 | 0.0005 | 0.0030 |
| 252 | 0.0035 | 0.0005 | 0.0029 |
| 253 | 0.0034 | 0.0005 | 0.0029 |
| 254 | 0.0034 | 0.0005 | 0.0029 |
| 255 | 0.0033 | 0.0005 | 0.0028 |
| 256 | 0.0033 | 0.0005 | 0.0028 |
| 257 | 0.0033 | 0.0005 | 0.0028 |
| 258 | 0.0032 | 0.0005 | 0.0027 |
| 259 | 0.0032 | 0.0005 | 0.0027 |
| 260 | 0.0031 | 0.0005 | 0.0027 |
| 261 | 0.0031 | 0.0005 | 0.0026 |
| 262 | 0.0031 | 0.0005 | 0.0026 |
| 263 | 0.0030 | 0.0005 | 0.0026 |
| 264 | 0.0030 | 0.0005 | 0.0026 |
| 265 | 0.0030 | 0.0004 | 0.0025 |
| 266 | 0.0030 | 0.0004 | 0.0025 |
| 267 | 0.0029 | 0.0004 | 0.0025 |
| 268 | 0.0029 | 0.0004 | 0.0025 |
| 269 | 0.0029 | 0.0004 | 0.0024 |
| 270 | 0.0028 | 0.0004 | 0.0024 |
| 271 | 0.0028 | 0.0004 | 0.0024 |
| 272 | 0.0028 | 0.0004 | 0.0024 |
| 273 | 0.0028 | 0.0004 | 0.0023 |
| 274 | 0.0027 | 0.0004 | 0.0023 |
| 275 | 0.0027 | 0.0004 | 0.0023 |
| 276 | 0.0027 | 0.0004 | 0.0023 |
| 277 | 0.0027 | 0.0004 | 0.0023 |
| 278 | 0.0026 | 0.0004 | 0.0022 |
| 279 | 0.0026 | 0.0004 | 0.0022 |
| 280 | 0.0026 | 0.0004 | 0.0022 |
| 281 | 0.0026 | 0.0004 | 0.0022 |
| 282 | 0.0026 | 0.0004 | 0.0022 |
| 283 | 0.0025 | 0.0004 | 0.0022 |
| 284 | 0.0025 | 0.0004 | 0.0021 |
| 285 | 0.0025 | 0.0004 | 0.0021 |
| 286 | 0.0025 | 0.0004 | 0.0021 |
| 287 | 0.0025 | 0.0004 | 0.0021 |

288 0.0024 0.0004 0.0021

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Total soil rain loss = 0.26(In)
Total effective rainfall = 2.42(In)
Peak flow rate in flood hydrograph = 10.68(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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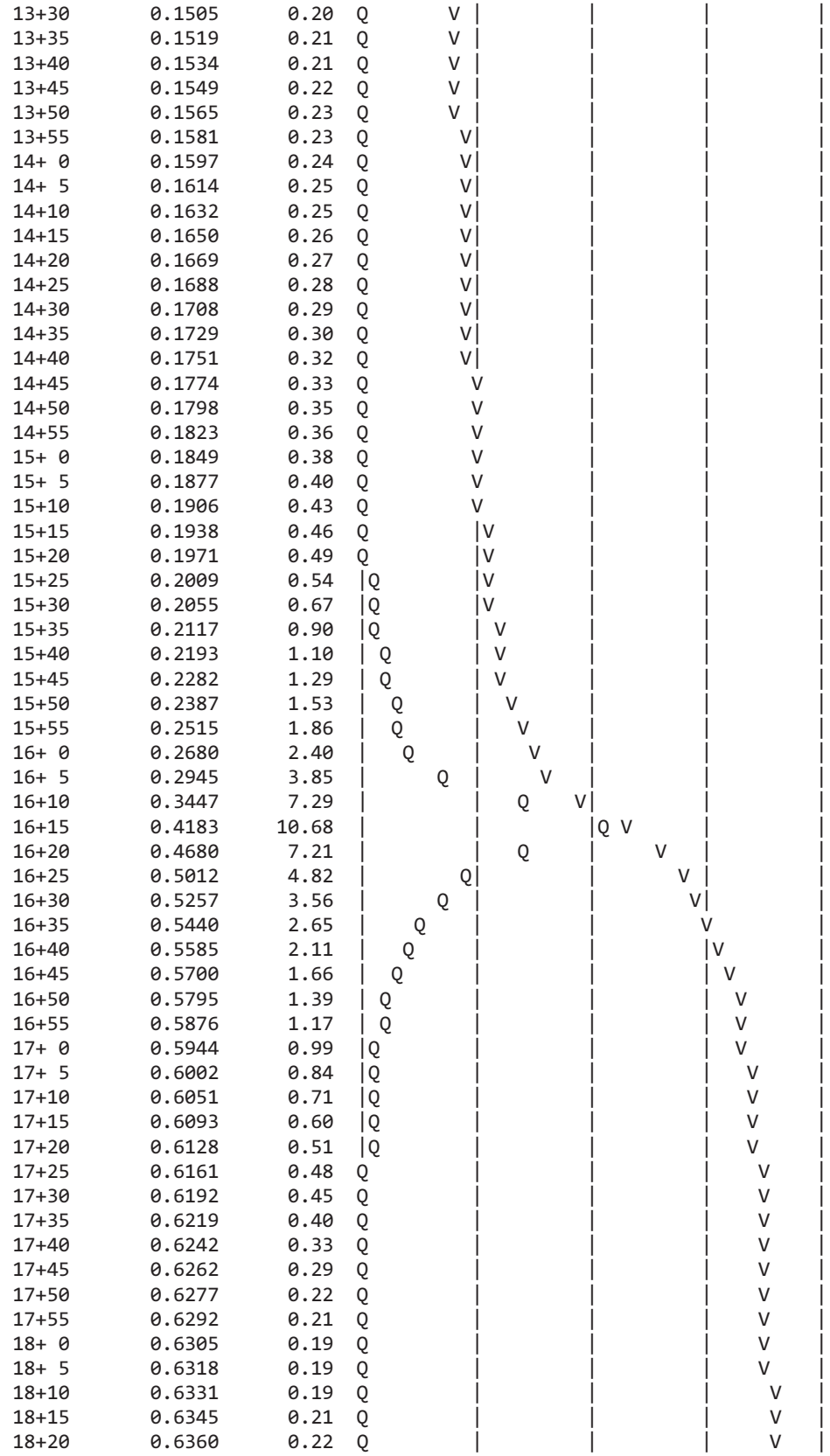
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.01 | Q | | | | |
| 0+15 | 0.0004 | 0.04 | Q | | | | |
| 0+20 | 0.0008 | 0.06 | Q | | | | |
| 0+25 | 0.0012 | 0.06 | Q | | | | |
| 0+30 | 0.0017 | 0.07 | Q | | | | |
| 0+35 | 0.0022 | 0.07 | Q | | | | |
| 0+40 | 0.0028 | 0.08 | Q | | | | |
| 0+45 | 0.0033 | 0.08 | Q | | | | |
| 0+50 | 0.0039 | 0.08 | Q | | | | |
| 0+55 | 0.0044 | 0.08 | Q | | | | |
| 1+ 0 | 0.0050 | 0.09 | Q | | | | |
| 1+ 5 | 0.0056 | 0.09 | Q | | | | |
| 1+10 | 0.0062 | 0.09 | Q | | | | |
| 1+15 | 0.0068 | 0.09 | Q | | | | |
| 1+20 | 0.0075 | 0.09 | Q | | | | |
| 1+25 | 0.0081 | 0.09 | Q | | | | |
| 1+30 | 0.0087 | 0.09 | Q | | | | |
| 1+35 | 0.0093 | 0.09 | Q | | | | |
| 1+40 | 0.0100 | 0.09 | Q | | | | |
| 1+45 | 0.0106 | 0.09 | Q | | | | |
| 1+50 | 0.0112 | 0.09 | Q | | | | |
| 1+55 | 0.0119 | 0.09 | Q | | | | |
| 2+ 0 | 0.0125 | 0.09 | Q | | | | |
| 2+ 5 | 0.0132 | 0.09 | Q | | | | |
| 2+10 | 0.0138 | 0.09 | Q | | | | |
| 2+15 | 0.0145 | 0.10 | Q | | | | |
| 2+20 | 0.0151 | 0.10 | Q | | | | |
| 2+25 | 0.0158 | 0.10 | Q | | | | |
| 2+30 | 0.0165 | 0.10 | Q | | | | |
| 2+35 | 0.0171 | 0.10 | Q | | | | |
| 2+40 | 0.0178 | 0.10 | QV | | | | |
| 2+45 | 0.0185 | 0.10 | QV | | | | |
| 2+50 | 0.0192 | 0.10 | QV | | | | |
| 2+55 | 0.0198 | 0.10 | QV | | | | |
| 3+ 0 | 0.0205 | 0.10 | QV | | | | |
| 3+ 5 | 0.0212 | 0.10 | QV | | | | |
| 3+10 | 0.0219 | 0.10 | QV | | | | |
| 3+15 | 0.0226 | 0.10 | QV | | | | |
| 3+20 | 0.0233 | 0.10 | QV | | | | |
| 3+25 | 0.0240 | 0.10 | QV | | | | |
| 3+30 | 0.0247 | 0.10 | QV | | | | |
| 3+35 | 0.0254 | 0.10 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+40 | 0.0261 | 0.10 | QV | | | | |
| 3+45 | 0.0268 | 0.10 | QV | | | | |
| 3+50 | 0.0275 | 0.10 | QV | | | | |
| 3+55 | 0.0282 | 0.10 | QV | | | | |
| 4+ 0 | 0.0289 | 0.10 | QV | | | | |
| 4+ 5 | 0.0297 | 0.11 | QV | | | | |
| 4+10 | 0.0304 | 0.11 | QV | | | | |
| 4+15 | 0.0311 | 0.11 | QV | | | | |
| 4+20 | 0.0319 | 0.11 | QV | | | | |
| 4+25 | 0.0326 | 0.11 | QV | | | | |
| 4+30 | 0.0334 | 0.11 | QV | | | | |
| 4+35 | 0.0341 | 0.11 | QV | | | | |
| 4+40 | 0.0349 | 0.11 | QV | | | | |
| 4+45 | 0.0356 | 0.11 | Q V | | | | |
| 4+50 | 0.0364 | 0.11 | Q V | | | | |
| 4+55 | 0.0371 | 0.11 | Q V | | | | |
| 5+ 0 | 0.0379 | 0.11 | Q V | | | | |
| 5+ 5 | 0.0387 | 0.11 | Q V | | | | |
| 5+10 | 0.0395 | 0.11 | Q V | | | | |
| 5+15 | 0.0402 | 0.11 | Q V | | | | |
| 5+20 | 0.0410 | 0.11 | Q V | | | | |
| 5+25 | 0.0418 | 0.11 | Q V | | | | |
| 5+30 | 0.0426 | 0.12 | Q V | | | | |
| 5+35 | 0.0434 | 0.12 | Q V | | | | |
| 5+40 | 0.0442 | 0.12 | Q V | | | | |
| 5+45 | 0.0450 | 0.12 | Q V | | | | |
| 5+50 | 0.0458 | 0.12 | Q V | | | | |
| 5+55 | 0.0466 | 0.12 | Q V | | | | |
| 6+ 0 | 0.0475 | 0.12 | Q V | | | | |
| 6+ 5 | 0.0483 | 0.12 | Q V | | | | |
| 6+10 | 0.0491 | 0.12 | Q V | | | | |
| 6+15 | 0.0500 | 0.12 | Q V | | | | |
| 6+20 | 0.0508 | 0.12 | Q V | | | | |
| 6+25 | 0.0516 | 0.12 | Q V | | | | |
| 6+30 | 0.0525 | 0.12 | Q V | | | | |
| 6+35 | 0.0534 | 0.12 | Q  V | | | | |
| 6+40 | 0.0542 | 0.13 | Q  V | | | | |
| 6+45 | 0.0551 | 0.13 | Q  V | | | | |
| 6+50 | 0.0560 | 0.13 | Q  V | | | | |
| 6+55 | 0.0568 | 0.13 | Q  V | | | | |
| 7+ 0 | 0.0577 | 0.13 | Q  V | | | | |
| 7+ 5 | 0.0586 | 0.13 | Q  V | | | | |
| 7+10 | 0.0595 | 0.13 | Q  V | | | | |
| 7+15 | 0.0604 | 0.13 | Q  V | | | | |
| 7+20 | 0.0613 | 0.13 | Q  V | | | | |
| 7+25 | 0.0623 | 0.13 | Q  V | | | | |
| 7+30 | 0.0632 | 0.13 | Q  V | | | | |
| 7+35 | 0.0641 | 0.13 | Q  V | | | | |
| 7+40 | 0.0650 | 0.14 | Q  V | | | | |
| 7+45 | 0.0660 | 0.14 | Q  V | | | | |
| 7+50 | 0.0669 | 0.14 | Q  V | | | | |
| 7+55 | 0.0679 | 0.14 | Q  V | | | | |
| 8+ 0 | 0.0689 | 0.14 | Q  V | | | | |
| 8+ 5 | 0.0698 | 0.14 | Q  V | | | | |
| 8+10 | 0.0708 | 0.14 | Q   V | | | | |
| 8+15 | 0.0718 | 0.14 | Q   V | | | | |
| 8+20 | 0.0728 | 0.14 | Q   V | | | | |
| 8+25 | 0.0738 | 0.15 | Q   V | | | | |
| 8+30 | 0.0748 | 0.15 | Q   V | | | | |

```
 8+35      0.0758      0.15  Q   V     |          |          |          |
 8+40      0.0768      0.15  Q   V     |          |          |          |
 8+45      0.0779      0.15  Q   V     |          |          |          |
 8+50      0.0789      0.15  Q   V     |          |          |          |
 8+55      0.0800      0.15  Q   V     |          |          |          |
 9+ 0      0.0810      0.15  Q   V     |          |          |          |
 9+ 5      0.0821      0.16  Q   V     |          |          |          |
 9+10      0.0832      0.16  Q   V     |          |          |          |
 9+15      0.0843      0.16  Q   V     |          |          |          |
 9+20      0.0853      0.16  Q   V     |          |          |          |
 9+25      0.0865      0.16  Q   V     |          |          |          |
 9+30      0.0876      0.16  Q   V     |          |          |          |
 9+35      0.0887      0.16  Q    V    |          |          |          |
 9+40      0.0898      0.16  Q    V    |          |          |          |
 9+45      0.0910      0.17  Q    V    |          |          |          |
 9+50      0.0921      0.17  Q    V    |          |          |          |
 9+55      0.0933      0.17  Q    V    |          |          |          |
10+ 0      0.0945      0.17  Q    V    |          |          |          |
10+ 5      0.0957      0.17  Q    V    |          |          |          |
10+10      0.0969      0.17  Q    V    |          |          |          |
10+15      0.0981      0.18  Q    V    |          |          |          |
10+20      0.0993      0.18  Q    V    |          |          |          |
10+25      0.1006      0.18  Q    V    |          |          |          |
10+30      0.1018      0.18  Q    V    |          |          |          |
10+35      0.1031      0.18  Q    V    |          |          |          |
10+40      0.1044      0.19  Q    V    |          |          |          |
10+45      0.1057      0.19  Q     V   |          |          |          |
10+50      0.1070      0.19  Q     V   |          |          |          |
10+55      0.1083      0.19  Q     V   |          |          |          |
11+ 0      0.1096      0.19  Q     V   |          |          |          |
11+ 5      0.1110      0.20  Q     V   |          |          |          |
11+10      0.1123      0.20  Q     V   |          |          |          |
11+15      0.1137      0.20  Q     V   |          |          |          |
11+20      0.1151      0.20  Q     V   |          |          |          |
11+25      0.1166      0.21  Q     V   |          |          |          |
11+30      0.1180      0.21  Q     V   |          |          |          |
11+35      0.1195      0.21  Q     V   |          |          |          |
11+40      0.1209      0.21  Q     V   |          |          |          |
11+45      0.1224      0.22  Q     V   |          |          |          |
11+50      0.1239      0.22  Q      V  |          |          |          |
11+55      0.1255      0.22  Q      V  |          |          |          |
12+ 0      0.1270      0.23  Q      V  |          |          |          |
12+ 5      0.1286      0.23  Q      V  |          |          |          |
12+10      0.1301      0.22  Q      V  |          |          |          |
12+15      0.1314      0.20  Q      V  |          |          |          |
12+20      0.1327      0.18  Q      V  |          |          |          |
12+25      0.1339      0.18  Q      V  |          |          |          |
12+30      0.1351      0.18  Q      V  |          |          |          |
12+35      0.1363      0.17  Q      V  |          |          |          |
12+40      0.1375      0.17  Q      V  |          |          |          |
12+45      0.1388      0.18  Q      V  |          |          |          |
12+50      0.1400      0.18  Q      V  |          |          |          |
12+55      0.1412      0.18  Q       V |          |          |          |
13+ 0      0.1425      0.18  Q       V |          |          |          |
13+ 5      0.1437      0.18  Q       V |          |          |          |
13+10      0.1450      0.19  Q       V |          |          |          |
13+15      0.1464      0.19  Q       V |          |          |          |
13+20      0.1477      0.20  Q       V |          |          |          |
13+25      0.1491      0.20  Q       V |          |          |          |
```



| | | | |
|---|---|---|---|
| 13+30 | 0.1505 | 0.20 | |
| 13+35 | 0.1519 | 0.21 | |
| 13+40 | 0.1534 | 0.21 | |
| 13+45 | 0.1549 | 0.22 | |
| 13+50 | 0.1565 | 0.23 | |
| 13+55 | 0.1581 | 0.23 | |
| 14+ 0 | 0.1597 | 0.24 | |
| 14+ 5 | 0.1614 | 0.25 | |
| 14+10 | 0.1632 | 0.25 | |
| 14+15 | 0.1650 | 0.26 | |
| 14+20 | 0.1669 | 0.27 | |
| 14+25 | 0.1688 | 0.28 | |
| 14+30 | 0.1708 | 0.29 | |
| 14+35 | 0.1729 | 0.30 | |
| 14+40 | 0.1751 | 0.32 | |
| 14+45 | 0.1774 | 0.33 | |
| 14+50 | 0.1798 | 0.35 | |
| 14+55 | 0.1823 | 0.36 | |
| 15+ 0 | 0.1849 | 0.38 | |
| 15+ 5 | 0.1877 | 0.40 | |
| 15+10 | 0.1906 | 0.43 | |
| 15+15 | 0.1938 | 0.46 | |
| 15+20 | 0.1971 | 0.49 | |
| 15+25 | 0.2009 | 0.54 | |
| 15+30 | 0.2055 | 0.67 | |
| 15+35 | 0.2117 | 0.90 | |
| 15+40 | 0.2193 | 1.10 | |
| 15+45 | 0.2282 | 1.29 | |
| 15+50 | 0.2387 | 1.53 | |
| 15+55 | 0.2515 | 1.86 | |
| 16+ 0 | 0.2680 | 2.40 | |
| 16+ 5 | 0.2945 | 3.85 | |
| 16+10 | 0.3447 | 7.29 | |
| 16+15 | 0.4183 | 10.68 | |
| 16+20 | 0.4680 | 7.21 | |
| 16+25 | 0.5012 | 4.82 | |
| 16+30 | 0.5257 | 3.56 | |
| 16+35 | 0.5440 | 2.65 | |
| 16+40 | 0.5585 | 2.11 | |
| 16+45 | 0.5700 | 1.66 | |
| 16+50 | 0.5795 | 1.39 | |
| 16+55 | 0.5876 | 1.17 | |
| 17+ 0 | 0.5944 | 0.99 | |
| 17+ 5 | 0.6002 | 0.84 | |
| 17+10 | 0.6051 | 0.71 | |
| 17+15 | 0.6093 | 0.60 | |
| 17+20 | 0.6128 | 0.51 | |
| 17+25 | 0.6161 | 0.48 | |
| 17+30 | 0.6192 | 0.45 | |
| 17+35 | 0.6219 | 0.40 | |
| 17+40 | 0.6242 | 0.33 | |
| 17+45 | 0.6262 | 0.29 | |
| 17+50 | 0.6277 | 0.22 | |
| 17+55 | 0.6292 | 0.21 | |
| 18+ 0 | 0.6305 | 0.19 | |
| 18+ 5 | 0.6318 | 0.19 | |
| 18+10 | 0.6331 | 0.19 | |
| 18+15 | 0.6345 | 0.21 | |
| 18+20 | 0.6360 | 0.22 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18+25 | 0.6375 | 0.22 | Q | \| | \| | \| | V \| |
| 18+30 | 0.6390 | 0.22 | Q | \| | \| | \| | V \| |
| 18+35 | 0.6405 | 0.21 | Q | \| | \| | \| | V \| |
| 18+40 | 0.6419 | 0.21 | Q | \| | \| | \| | V \| |
| 18+45 | 0.6434 | 0.21 | Q | \| | \| | \| | V \| |
| 18+50 | 0.6448 | 0.20 | Q | \| | \| | \| | V \| |
| 18+55 | 0.6461 | 0.20 | Q | \| | \| | \| | V \| |
| 19+ 0 | 0.6475 | 0.20 | Q | \| | \| | \| | V \| |
| 19+ 5 | 0.6488 | 0.19 | Q | \| | \| | \| | V \| |
| 19+10 | 0.6501 | 0.19 | Q | \| | \| | \| | V \| |
| 19+15 | 0.6514 | 0.19 | Q | \| | \| | \| | V \| |
| 19+20 | 0.6526 | 0.18 | Q | \| | \| | \| | V \| |
| 19+25 | 0.6539 | 0.18 | Q | \| | \| | \| | V \| |
| 19+30 | 0.6551 | 0.17 | Q | \| | \| | \| | V \| |
| 19+35 | 0.6563 | 0.17 | Q | \| | \| | \| | V \| |
| 19+40 | 0.6574 | 0.17 | Q | \| | \| | \| | V \| |
| 19+45 | 0.6586 | 0.17 | Q | \| | \| | \| | V \| |
| 19+50 | 0.6597 | 0.16 | Q | \| | \| | \| | V \| |
| 19+55 | 0.6608 | 0.16 | Q | \| | \| | \| | V \| |
| 20+ 0 | 0.6619 | 0.16 | Q | \| | \| | \| | V \| |
| 20+ 5 | 0.6629 | 0.15 | Q | \| | \| | \| | V \| |
| 20+10 | 0.6640 | 0.15 | Q | \| | \| | \| | V \| |
| 20+15 | 0.6650 | 0.15 | Q | \| | \| | \| | V \| |
| 20+20 | 0.6660 | 0.15 | Q | \| | \| | \| | V \| |
| 20+25 | 0.6670 | 0.14 | Q | \| | \| | \| | V \| |
| 20+30 | 0.6680 | 0.14 | Q | \| | \| | \| | V \| |
| 20+35 | 0.6690 | 0.14 | Q | \| | \| | \| | V \| |
| 20+40 | 0.6699 | 0.14 | Q | \| | \| | \| | V \| |
| 20+45 | 0.6709 | 0.14 | Q | \| | \| | \| | V \| |
| 20+50 | 0.6718 | 0.13 | Q | \| | \| | \| | V \| |
| 20+55 | 0.6727 | 0.13 | Q | \| | \| | \| | V \| |
| 21+ 0 | 0.6736 | 0.13 | Q | \| | \| | \| | V \| |
| 21+ 5 | 0.6745 | 0.13 | Q | \| | \| | \| | V \| |
| 21+10 | 0.6754 | 0.13 | Q | \| | \| | \| | V \| |
| 21+15 | 0.6762 | 0.13 | Q | \| | \| | \| | V \| |
| 21+20 | 0.6771 | 0.12 | Q | \| | \| | \| | V \| |
| 21+25 | 0.6779 | 0.12 | Q | \| | \| | \| | V \| |
| 21+30 | 0.6788 | 0.12 | Q | \| | \| | \| | V \| |
| 21+35 | 0.6796 | 0.12 | Q | \| | \| | \| | V \| |
| 21+40 | 0.6804 | 0.12 | Q | \| | \| | \| | V \| |
| 21+45 | 0.6812 | 0.12 | Q | \| | \| | \| | V \| |
| 21+50 | 0.6820 | 0.12 | Q | \| | \| | \| | V \| |
| 21+55 | 0.6828 | 0.11 | Q | \| | \| | \| | V \| |
| 22+ 0 | 0.6836 | 0.11 | Q | \| | \| | \| | V \| |
| 22+ 5 | 0.6843 | 0.11 | Q | \| | \| | \| | V \| |
| 22+10 | 0.6851 | 0.11 | Q | \| | \| | \| | V\| |
| 22+15 | 0.6858 | 0.11 | Q | \| | \| | \| | V\| |
| 22+20 | 0.6866 | 0.11 | Q | \| | \| | \| | V\| |
| 22+25 | 0.6873 | 0.11 | Q | \| | \| | \| | V\| |
| 22+30 | 0.6881 | 0.11 | Q | \| | \| | \| | V\| |
| 22+35 | 0.6888 | 0.10 | Q | \| | \| | \| | V\| |
| 22+40 | 0.6895 | 0.10 | Q | \| | \| | \| | V\| |
| 22+45 | 0.6902 | 0.10 | Q | \| | \| | \| | V\| |
| 22+50 | 0.6909 | 0.10 | Q | \| | \| | \| | V\| |
| 22+55 | 0.6916 | 0.10 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.6923 | 0.10 | Q | \| | \| | \| | V\| |
| 23+ 5 | 0.6930 | 0.10 | Q | \| | \| | \| | V\| |
| 23+10 | 0.6936 | 0.10 | Q | \| | \| | \| | V\| |
| 23+15 | 0.6943 | 0.10 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+20 | 0.6950 | 0.10 | Q | \| | \| | \| | V\| |
| 23+25 | 0.6956 | 0.10 | Q | \| | \| | \| | V\| |
| 23+30 | 0.6963 | 0.09 | Q | \| | \| | \| | V\| |
| 23+35 | 0.6969 | 0.09 | Q | \| | \| | \| | V\| |
| 23+40 | 0.6976 | 0.09 | Q | \| | \| | \| | V\| |
| 23+45 | 0.6982 | 0.09 | Q | \| | \| | \| | V\| |
| 23+50 | 0.6988 | 0.09 | Q | \| | \| | \| | V\| |
| 23+55 | 0.6995 | 0.09 | Q | \| | \| | \| | V\| |
| 24+ 0 | 0.7001 | 0.09 | Q | \| | \| | \| | V\| |
| 24+ 5 | 0.7007 | 0.09 | Q | \| | \| | \| | V\| |
| 24+10 | 0.7012 | 0.07 | Q | \| | \| | \| | V\| |
| 24+15 | 0.7015 | 0.05 | Q | \| | \| | \| | V\| |
| 24+20 | 0.7017 | 0.03 | Q | \| | \| | \| | V\| |
| 24+25 | 0.7019 | 0.02 | Q | \| | \| | \| | V\| |
| 24+30 | 0.7020 | 0.02 | Q | \| | \| | \| | V\| |
| 24+35 | 0.7021 | 0.01 | Q | \| | \| | \| | V\| |
| 24+40 | 0.7022 | 0.01 | Q | \| | \| | \| | V\| |
| 24+45 | 0.7023 | 0.01 | Q | \| | \| | \| | V\| |
| 24+50 | 0.7023 | 0.01 | Q | \| | \| | \| | V\| |
| 24+55 | 0.7023 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 0 | 0.7024 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 5 | 0.7024 | 0.00 | Q | \| | \| | \| | V\| |
| 25+10 | 0.7024 | 0.00 | Q | \| | \| | \| | V\| |
| 25+15 | 0.7024 | 0.00 | Q | \| | \| | \| | V\| |
| 25+20 | 0.7024 | 0.00 | Q | \| | \| | \| | V\| |
| 25+25 | 0.7024 | 0.00 | Q | \| | \| | \| | V\| |
| 25+30 | 0.7024 | 0.00 | Q | \| | \| | \| | V\| |
| 25+35 | 0.7024 | 0.00 | Q | \| | \| | \| | V\| |
| 25+40 | 0.7024 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 46
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 3782.66 | 1 | 1.29 |
| Rainfall data for year 100 | | |
| 3782.66 | 6 | 2.16 |
| Rainfall data for year 100 | | |
| 3782.66 | 24 | 3.27 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 87.0 | 97.4 | 3782.66 | 1.000 | 0.051 | 0.981 | 0.050 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.050

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 3709.28 | 0.981 | 87.0 | 97.4 | 0.27 | 0.908 |
| 73.38 | 0.019 | 98.0 | 98.0 | 0.20 | 0.929 |

Area-averaged catchment yield fraction, Y = 0.909
Area-averaged low loss fraction, Yb = 0.091
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 35115.00(Ft.)
Length from concentration point to centroid = 20362.00(Ft.)
Elevation difference along watercourse = 2044.90(Ft.)
Mannings friction factor along watercourse = 0.030
Watershed area = 3782.66(Ac.)
Catchment Lag time = 0.832 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 10.0169
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.050(In/Hr)
Average low loss rate fraction (Yb) = 0.091 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.170
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.830

Computed peak 5-minute rainfall = 0.612(In)
Computed peak 30-minute rainfall = 1.048(In)
Specified peak 1-hour rainfall = 1.290(In)
Computed peak 3-hour rainfall = 1.770(In)
Specified peak 6-hour rainfall = 2.160(In)
Specified peak 24-hour rainfall = 3.270(In)

Rainfall depth area reduction factors:
Using a total area of 3782.66(Ac.) (Ref: fig. E-4)

5-minute factor = 0.831 Adjusted rainfall = 0.509(In)
30-minute factor = 0.831 Adjusted rainfall = 0.871(In)
1-hour factor = 0.831 Adjusted rainfall = 1.072(In)
3-hour factor = 0.978 Adjusted rainfall = 1.730(In)
6-hour factor = 0.989 Adjusted rainfall = 2.135(In)
24-hour factor = 0.995 Adjusted rainfall = 3.254(In)
---------------------------------------------------------------------

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 45746.54 (CFS)) | |
| 1 | 0.474 | 216.686 |
| 2 | 1.623 | 525.660 |
| 3 | 3.400 | 813.175 |
| 4 | 5.787 | 1091.995 |
| 5 | 8.853 | 1402.404 |

| | | |
|---|---|---|
| 6 | 13.492 | 2122.091 |
| 7 | 20.491 | 3201.751 |
| 8 | 29.652 | 4190.896 |
| 9 | 38.141 | 3883.423 |
| 10 | 46.231 | 3700.946 |
| 11 | 52.842 | 3024.301 |
| 12 | 57.803 | 2269.453 |
| 13 | 61.701 | 1783.477 |
| 14 | 64.962 | 1491.412 |
| 15 | 67.802 | 1299.220 |
| 16 | 70.337 | 1159.998 |
| 17 | 72.634 | 1050.683 |
| 18 | 74.667 | 929.813 |
| 19 | 76.472 | 826.111 |
| 20 | 78.199 | 790.060 |
| 21 | 79.714 | 692.687 |
| 22 | 81.056 | 614.223 |
| 23 | 82.364 | 598.309 |
| 24 | 83.492 | 515.984 |
| 25 | 84.594 | 504.189 |
| 26 | 85.620 | 469.420 |
| 27 | 86.582 | 439.909 |
| 28 | 87.520 | 428.964 |
| 29 | 88.338 | 374.133 |
| 30 | 89.139 | 366.478 |
| 31 | 89.834 | 317.956 |
| 32 | 90.442 | 278.059 |
| 33 | 91.040 | 273.799 |
| 34 | 91.593 | 253.124 |
| 35 | 92.141 | 250.318 |
| 36 | 92.643 | 229.951 |
| 37 | 93.110 | 213.723 |
| 38 | 93.569 | 209.826 |
| 39 | 93.988 | 191.503 |
| 40 | 94.401 | 189.046 |
| 41 | 94.752 | 160.618 |
| 42 | 95.055 | 138.663 |
| 43 | 95.358 | 138.663 |
| 44 | 95.661 | 138.663 |
| 45 | 95.964 | 138.571 |
| 46 | 96.227 | 120.334 |
| 47 | 96.461 | 106.678 |
| 48 | 96.694 | 106.678 |
| 49 | 96.927 | 106.678 |
| 50 | 97.160 | 106.559 |
| 51 | 97.350 | 87.195 |
| 52 | 97.510 | 73.135 |
| 53 | 97.670 | 73.135 |
| 54 | 97.830 | 73.135 |
| 55 | 97.990 | 73.011 |
| 56 | 98.112 | 56.145 |
| 57 | 98.209 | 44.266 |
| 58 | 98.306 | 44.266 |
| 59 | 98.403 | 44.266 |
| 60 | 98.499 | 44.289 |
| 61 | 98.602 | 46.943 |
| 62 | 98.709 | 48.757 |
| 63 | 98.815 | 48.757 |
| 64 | 98.922 | 48.757 |

| | | |
|---|---|---|
| 65 | 99.028 | 48.747 |
| 66 | 99.133 | 47.816 |
| 67 | 99.236 | 47.199 |
| 68 | 99.339 | 47.199 |
| 69 | 99.442 | 47.199 |
| 70 | 99.547 | 47.641 |
| 71 | 99.617 | 32.275 |
| 72 | 99.669 | 23.771 |
| 73 | 99.721 | 23.771 |
| 74 | 99.773 | 23.771 |
| 75 | 99.825 | 23.771 |
| 76 | 99.877 | 23.771 |
| 77 | 99.929 | 23.771 |
| 78 | 100.000 | 11.886 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5086 | 0.5086 |
| 2 | 0.6262 | 0.1176 |
| 3 | 0.7071 | 0.0810 |
| 4 | 0.7709 | 0.0637 |
| 5 | 0.8243 | 0.0534 |
| 6 | 0.8706 | 0.0463 |
| 7 | 0.9118 | 0.0412 |
| 8 | 0.9491 | 0.0373 |
| 9 | 0.9832 | 0.0341 |
| 10 | 1.0148 | 0.0316 |
| 11 | 1.0442 | 0.0294 |
| 12 | 1.0718 | 0.0276 |
| 13 | 1.1099 | 0.0381 |
| 14 | 1.1463 | 0.0364 |
| 15 | 1.1814 | 0.0350 |
| 16 | 1.2151 | 0.0337 |
| 17 | 1.2476 | 0.0325 |
| 18 | 1.2791 | 0.0315 |
| 19 | 1.3096 | 0.0305 |
| 20 | 1.3392 | 0.0296 |
| 21 | 1.3680 | 0.0288 |
| 22 | 1.3960 | 0.0280 |
| 23 | 1.4234 | 0.0273 |
| 24 | 1.4500 | 0.0267 |
| 25 | 1.4761 | 0.0260 |
| 26 | 1.5015 | 0.0255 |
| 27 | 1.5264 | 0.0249 |
| 28 | 1.5508 | 0.0244 |
| 29 | 1.5747 | 0.0239 |
| 30 | 1.5982 | 0.0234 |
| 31 | 1.6212 | 0.0230 |
| 32 | 1.6438 | 0.0226 |
| 33 | 1.6660 | 0.0222 |
| 34 | 1.6878 | 0.0218 |
| 35 | 1.7093 | 0.0215 |
| 36 | 1.7304 | 0.0211 |
| 37 | 1.7448 | 0.0144 |
| 38 | 1.7590 | 0.0142 |
| 39 | 1.7729 | 0.0139 |
| 40 | 1.7866 | 0.0137 |
| 41 | 1.8000 | 0.0134 |
| 42 | 1.8132 | 0.0132 |

| | | |
|---|---|---|
| 43 | 1.8262 | 0.0130 |
| 44 | 1.8390 | 0.0128 |
| 45 | 1.8516 | 0.0126 |
| 46 | 1.8640 | 0.0124 |
| 47 | 1.8762 | 0.0122 |
| 48 | 1.8882 | 0.0120 |
| 49 | 1.9000 | 0.0118 |
| 50 | 1.9117 | 0.0117 |
| 51 | 1.9232 | 0.0115 |
| 52 | 1.9346 | 0.0114 |
| 53 | 1.9458 | 0.0112 |
| 54 | 1.9568 | 0.0111 |
| 55 | 1.9678 | 0.0109 |
| 56 | 1.9785 | 0.0108 |
| 57 | 1.9892 | 0.0106 |
| 58 | 1.9997 | 0.0105 |
| 59 | 2.0101 | 0.0104 |
| 60 | 2.0204 | 0.0103 |
| 61 | 2.0305 | 0.0102 |
| 62 | 2.0406 | 0.0100 |
| 63 | 2.0505 | 0.0099 |
| 64 | 2.0603 | 0.0098 |
| 65 | 2.0700 | 0.0097 |
| 66 | 2.0796 | 0.0096 |
| 67 | 2.0891 | 0.0095 |
| 68 | 2.0986 | 0.0094 |
| 69 | 2.1079 | 0.0093 |
| 70 | 2.1171 | 0.0092 |
| 71 | 2.1262 | 0.0091 |
| 72 | 2.1353 | 0.0090 |
| 73 | 2.1442 | 0.0090 |
| 74 | 2.1531 | 0.0089 |
| 75 | 2.1619 | 0.0088 |
| 76 | 2.1706 | 0.0087 |
| 77 | 2.1793 | 0.0086 |
| 78 | 2.1878 | 0.0086 |
| 79 | 2.1963 | 0.0085 |
| 80 | 2.2047 | 0.0084 |
| 81 | 2.2131 | 0.0083 |
| 82 | 2.2213 | 0.0083 |
| 83 | 2.2295 | 0.0082 |
| 84 | 2.2377 | 0.0081 |
| 85 | 2.2457 | 0.0081 |
| 86 | 2.2537 | 0.0080 |
| 87 | 2.2616 | 0.0079 |
| 88 | 2.2695 | 0.0079 |
| 89 | 2.2773 | 0.0078 |
| 90 | 2.2851 | 0.0077 |
| 91 | 2.2928 | 0.0077 |
| 92 | 2.3004 | 0.0076 |
| 93 | 2.3080 | 0.0076 |
| 94 | 2.3155 | 0.0075 |
| 95 | 2.3229 | 0.0075 |
| 96 | 2.3303 | 0.0074 |
| 97 | 2.3377 | 0.0074 |
| 98 | 2.3450 | 0.0073 |
| 99 | 2.3522 | 0.0072 |
| 100 | 2.3594 | 0.0072 |
| 101 | 2.3666 | 0.0071 |

| | | |
|---|---|---|
| 102 | 2.3737 | 0.0071 |
| 103 | 2.3807 | 0.0070 |
| 104 | 2.3877 | 0.0070 |
| 105 | 2.3947 | 0.0070 |
| 106 | 2.4016 | 0.0069 |
| 107 | 2.4084 | 0.0069 |
| 108 | 2.4152 | 0.0068 |
| 109 | 2.4220 | 0.0068 |
| 110 | 2.4288 | 0.0067 |
| 111 | 2.4354 | 0.0067 |
| 112 | 2.4421 | 0.0066 |
| 113 | 2.4487 | 0.0066 |
| 114 | 2.4553 | 0.0066 |
| 115 | 2.4618 | 0.0065 |
| 116 | 2.4683 | 0.0065 |
| 117 | 2.4747 | 0.0064 |
| 118 | 2.4811 | 0.0064 |
| 119 | 2.4875 | 0.0064 |
| 120 | 2.4938 | 0.0063 |
| 121 | 2.5001 | 0.0063 |
| 122 | 2.5064 | 0.0063 |
| 123 | 2.5126 | 0.0062 |
| 124 | 2.5188 | 0.0062 |
| 125 | 2.5250 | 0.0062 |
| 126 | 2.5311 | 0.0061 |
| 127 | 2.5372 | 0.0061 |
| 128 | 2.5432 | 0.0061 |
| 129 | 2.5492 | 0.0060 |
| 130 | 2.5552 | 0.0060 |
| 131 | 2.5612 | 0.0060 |
| 132 | 2.5671 | 0.0059 |
| 133 | 2.5730 | 0.0059 |
| 134 | 2.5789 | 0.0059 |
| 135 | 2.5847 | 0.0058 |
| 136 | 2.5905 | 0.0058 |
| 137 | 2.5963 | 0.0058 |
| 138 | 2.6020 | 0.0057 |
| 139 | 2.6077 | 0.0057 |
| 140 | 2.6134 | 0.0057 |
| 141 | 2.6191 | 0.0057 |
| 142 | 2.6247 | 0.0056 |
| 143 | 2.6303 | 0.0056 |
| 144 | 2.6359 | 0.0056 |
| 145 | 2.6415 | 0.0055 |
| 146 | 2.6470 | 0.0055 |
| 147 | 2.6525 | 0.0055 |
| 148 | 2.6579 | 0.0055 |
| 149 | 2.6634 | 0.0054 |
| 150 | 2.6688 | 0.0054 |
| 151 | 2.6742 | 0.0054 |
| 152 | 2.6796 | 0.0054 |
| 153 | 2.6849 | 0.0053 |
| 154 | 2.6902 | 0.0053 |
| 155 | 2.6955 | 0.0053 |
| 156 | 2.7008 | 0.0053 |
| 157 | 2.7061 | 0.0052 |
| 158 | 2.7113 | 0.0052 |
| 159 | 2.7165 | 0.0052 |
| 160 | 2.7217 | 0.0052 |

| | | |
|---|---|---|
| 161 | 2.7268 | 0.0052 |
| 162 | 2.7320 | 0.0051 |
| 163 | 2.7371 | 0.0051 |
| 164 | 2.7422 | 0.0051 |
| 165 | 2.7472 | 0.0051 |
| 166 | 2.7523 | 0.0050 |
| 167 | 2.7573 | 0.0050 |
| 168 | 2.7623 | 0.0050 |
| 169 | 2.7673 | 0.0050 |
| 170 | 2.7723 | 0.0050 |
| 171 | 2.7772 | 0.0049 |
| 172 | 2.7821 | 0.0049 |
| 173 | 2.7871 | 0.0049 |
| 174 | 2.7919 | 0.0049 |
| 175 | 2.7968 | 0.0049 |
| 176 | 2.8016 | 0.0048 |
| 177 | 2.8065 | 0.0048 |
| 178 | 2.8113 | 0.0048 |
| 179 | 2.8161 | 0.0048 |
| 180 | 2.8208 | 0.0048 |
| 181 | 2.8256 | 0.0048 |
| 182 | 2.8303 | 0.0047 |
| 183 | 2.8351 | 0.0047 |
| 184 | 2.8398 | 0.0047 |
| 185 | 2.8444 | 0.0047 |
| 186 | 2.8491 | 0.0047 |
| 187 | 2.8537 | 0.0046 |
| 188 | 2.8584 | 0.0046 |
| 189 | 2.8630 | 0.0046 |
| 190 | 2.8676 | 0.0046 |
| 191 | 2.8722 | 0.0046 |
| 192 | 2.8767 | 0.0046 |
| 193 | 2.8813 | 0.0045 |
| 194 | 2.8858 | 0.0045 |
| 195 | 2.8903 | 0.0045 |
| 196 | 2.8948 | 0.0045 |
| 197 | 2.8993 | 0.0045 |
| 198 | 2.9037 | 0.0045 |
| 199 | 2.9082 | 0.0044 |
| 200 | 2.9126 | 0.0044 |
| 201 | 2.9170 | 0.0044 |
| 202 | 2.9214 | 0.0044 |
| 203 | 2.9258 | 0.0044 |
| 204 | 2.9302 | 0.0044 |
| 205 | 2.9346 | 0.0044 |
| 206 | 2.9389 | 0.0043 |
| 207 | 2.9432 | 0.0043 |
| 208 | 2.9476 | 0.0043 |
| 209 | 2.9519 | 0.0043 |
| 210 | 2.9561 | 0.0043 |
| 211 | 2.9604 | 0.0043 |
| 212 | 2.9647 | 0.0043 |
| 213 | 2.9689 | 0.0042 |
| 214 | 2.9731 | 0.0042 |
| 215 | 2.9773 | 0.0042 |
| 216 | 2.9816 | 0.0042 |
| 217 | 2.9857 | 0.0042 |
| 218 | 2.9899 | 0.0042 |
| 219 | 2.9941 | 0.0042 |

| | | |
|---|---|---|
| 220 | 2.9982 | 0.0041 |
| 221 | 3.0024 | 0.0041 |
| 222 | 3.0065 | 0.0041 |
| 223 | 3.0106 | 0.0041 |
| 224 | 3.0147 | 0.0041 |
| 225 | 3.0188 | 0.0041 |
| 226 | 3.0228 | 0.0041 |
| 227 | 3.0269 | 0.0041 |
| 228 | 3.0309 | 0.0040 |
| 229 | 3.0350 | 0.0040 |
| 230 | 3.0390 | 0.0040 |
| 231 | 3.0430 | 0.0040 |
| 232 | 3.0470 | 0.0040 |
| 233 | 3.0510 | 0.0040 |
| 234 | 3.0550 | 0.0040 |
| 235 | 3.0589 | 0.0040 |
| 236 | 3.0629 | 0.0039 |
| 237 | 3.0668 | 0.0039 |
| 238 | 3.0707 | 0.0039 |
| 239 | 3.0747 | 0.0039 |
| 240 | 3.0786 | 0.0039 |
| 241 | 3.0825 | 0.0039 |
| 242 | 3.0863 | 0.0039 |
| 243 | 3.0902 | 0.0039 |
| 244 | 3.0941 | 0.0039 |
| 245 | 3.0979 | 0.0038 |
| 246 | 3.1017 | 0.0038 |
| 247 | 3.1056 | 0.0038 |
| 248 | 3.1094 | 0.0038 |
| 249 | 3.1132 | 0.0038 |
| 250 | 3.1170 | 0.0038 |
| 251 | 3.1208 | 0.0038 |
| 252 | 3.1245 | 0.0038 |
| 253 | 3.1283 | 0.0038 |
| 254 | 3.1321 | 0.0038 |
| 255 | 3.1358 | 0.0037 |
| 256 | 3.1395 | 0.0037 |
| 257 | 3.1433 | 0.0037 |
| 258 | 3.1470 | 0.0037 |
| 259 | 3.1507 | 0.0037 |
| 260 | 3.1544 | 0.0037 |
| 261 | 3.1580 | 0.0037 |
| 262 | 3.1617 | 0.0037 |
| 263 | 3.1654 | 0.0037 |
| 264 | 3.1690 | 0.0037 |
| 265 | 3.1727 | 0.0036 |
| 266 | 3.1763 | 0.0036 |
| 267 | 3.1799 | 0.0036 |
| 268 | 3.1835 | 0.0036 |
| 269 | 3.1872 | 0.0036 |
| 270 | 3.1907 | 0.0036 |
| 271 | 3.1943 | 0.0036 |
| 272 | 3.1979 | 0.0036 |
| 273 | 3.2015 | 0.0036 |
| 274 | 3.2050 | 0.0036 |
| 275 | 3.2086 | 0.0036 |
| 276 | 3.2121 | 0.0035 |
| 277 | 3.2157 | 0.0035 |
| 278 | 3.2192 | 0.0035 |

| | | |
|---|---|---|
| 279 | 3.2227 | 0.0035 |
| 280 | 3.2262 | 0.0035 |
| 281 | 3.2297 | 0.0035 |
| 282 | 3.2332 | 0.0035 |
| 283 | 3.2367 | 0.0035 |
| 284 | 3.2401 | 0.0035 |
| 285 | 3.2436 | 0.0035 |
| 286 | 3.2471 | 0.0035 |
| 287 | 3.2505 | 0.0034 |
| 288 | 3.2539 | 0.0034 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0034 | 0.0003 | 0.0031 |
| 2 | 0.0034 | 0.0003 | 0.0031 |
| 3 | 0.0035 | 0.0003 | 0.0031 |
| 4 | 0.0035 | 0.0003 | 0.0032 |
| 5 | 0.0035 | 0.0003 | 0.0032 |
| 6 | 0.0035 | 0.0003 | 0.0032 |
| 7 | 0.0035 | 0.0003 | 0.0032 |
| 8 | 0.0035 | 0.0003 | 0.0032 |
| 9 | 0.0035 | 0.0003 | 0.0032 |
| 10 | 0.0036 | 0.0003 | 0.0032 |
| 11 | 0.0036 | 0.0003 | 0.0032 |
| 12 | 0.0036 | 0.0003 | 0.0033 |
| 13 | 0.0036 | 0.0003 | 0.0033 |
| 14 | 0.0036 | 0.0003 | 0.0033 |
| 15 | 0.0036 | 0.0003 | 0.0033 |
| 16 | 0.0036 | 0.0003 | 0.0033 |
| 17 | 0.0037 | 0.0003 | 0.0033 |
| 18 | 0.0037 | 0.0003 | 0.0033 |
| 19 | 0.0037 | 0.0003 | 0.0033 |
| 20 | 0.0037 | 0.0003 | 0.0034 |
| 21 | 0.0037 | 0.0003 | 0.0034 |
| 22 | 0.0037 | 0.0003 | 0.0034 |
| 23 | 0.0037 | 0.0003 | 0.0034 |
| 24 | 0.0038 | 0.0003 | 0.0034 |
| 25 | 0.0038 | 0.0003 | 0.0034 |
| 26 | 0.0038 | 0.0003 | 0.0034 |
| 27 | 0.0038 | 0.0003 | 0.0035 |
| 28 | 0.0038 | 0.0003 | 0.0035 |
| 29 | 0.0038 | 0.0004 | 0.0035 |
| 30 | 0.0038 | 0.0004 | 0.0035 |
| 31 | 0.0039 | 0.0004 | 0.0035 |
| 32 | 0.0039 | 0.0004 | 0.0035 |
| 33 | 0.0039 | 0.0004 | 0.0035 |
| 34 | 0.0039 | 0.0004 | 0.0036 |
| 35 | 0.0039 | 0.0004 | 0.0036 |
| 36 | 0.0039 | 0.0004 | 0.0036 |
| 37 | 0.0040 | 0.0004 | 0.0036 |
| 38 | 0.0040 | 0.0004 | 0.0036 |
| 39 | 0.0040 | 0.0004 | 0.0036 |
| 40 | 0.0040 | 0.0004 | 0.0037 |
| 41 | 0.0040 | 0.0004 | 0.0037 |
| 42 | 0.0041 | 0.0004 | 0.0037 |
| 43 | 0.0041 | 0.0004 | 0.0037 |
| 44 | 0.0041 | 0.0004 | 0.0037 |

| | | | |
|---|---|---|---|
| 45 | 0.0041 | 0.0004 | 0.0037 |
| 46 | 0.0041 | 0.0004 | 0.0038 |
| 47 | 0.0042 | 0.0004 | 0.0038 |
| 48 | 0.0042 | 0.0004 | 0.0038 |
| 49 | 0.0042 | 0.0004 | 0.0038 |
| 50 | 0.0042 | 0.0004 | 0.0038 |
| 51 | 0.0042 | 0.0004 | 0.0039 |
| 52 | 0.0043 | 0.0004 | 0.0039 |
| 53 | 0.0043 | 0.0004 | 0.0039 |
| 54 | 0.0043 | 0.0004 | 0.0039 |
| 55 | 0.0043 | 0.0004 | 0.0039 |
| 56 | 0.0043 | 0.0004 | 0.0039 |
| 57 | 0.0044 | 0.0004 | 0.0040 |
| 58 | 0.0044 | 0.0004 | 0.0040 |
| 59 | 0.0044 | 0.0004 | 0.0040 |
| 60 | 0.0044 | 0.0004 | 0.0040 |
| 61 | 0.0045 | 0.0004 | 0.0041 |
| 62 | 0.0045 | 0.0004 | 0.0041 |
| 63 | 0.0045 | 0.0004 | 0.0041 |
| 64 | 0.0045 | 0.0004 | 0.0041 |
| 65 | 0.0046 | 0.0004 | 0.0041 |
| 66 | 0.0046 | 0.0004 | 0.0042 |
| 67 | 0.0046 | 0.0004 | 0.0042 |
| 68 | 0.0046 | 0.0004 | 0.0042 |
| 69 | 0.0047 | 0.0004 | 0.0042 |
| 70 | 0.0047 | 0.0004 | 0.0043 |
| 71 | 0.0047 | 0.0004 | 0.0043 |
| 72 | 0.0047 | 0.0004 | 0.0043 |
| 73 | 0.0048 | 0.0004 | 0.0043 |
| 74 | 0.0048 | 0.0004 | 0.0044 |
| 75 | 0.0048 | 0.0004 | 0.0044 |
| 76 | 0.0048 | 0.0004 | 0.0044 |
| 77 | 0.0049 | 0.0004 | 0.0044 |
| 78 | 0.0049 | 0.0004 | 0.0045 |
| 79 | 0.0049 | 0.0005 | 0.0045 |
| 80 | 0.0050 | 0.0005 | 0.0045 |
| 81 | 0.0050 | 0.0005 | 0.0045 |
| 82 | 0.0050 | 0.0005 | 0.0046 |
| 83 | 0.0051 | 0.0005 | 0.0046 |
| 84 | 0.0051 | 0.0005 | 0.0046 |
| 85 | 0.0051 | 0.0005 | 0.0047 |
| 86 | 0.0052 | 0.0005 | 0.0047 |
| 87 | 0.0052 | 0.0005 | 0.0047 |
| 88 | 0.0052 | 0.0005 | 0.0047 |
| 89 | 0.0053 | 0.0005 | 0.0048 |
| 90 | 0.0053 | 0.0005 | 0.0048 |
| 91 | 0.0053 | 0.0005 | 0.0049 |
| 92 | 0.0054 | 0.0005 | 0.0049 |
| 93 | 0.0054 | 0.0005 | 0.0049 |
| 94 | 0.0054 | 0.0005 | 0.0049 |
| 95 | 0.0055 | 0.0005 | 0.0050 |
| 96 | 0.0055 | 0.0005 | 0.0050 |
| 97 | 0.0056 | 0.0005 | 0.0051 |
| 98 | 0.0056 | 0.0005 | 0.0051 |
| 99 | 0.0057 | 0.0005 | 0.0051 |
| 100 | 0.0057 | 0.0005 | 0.0052 |
| 101 | 0.0057 | 0.0005 | 0.0052 |
| 102 | 0.0058 | 0.0005 | 0.0052 |
| 103 | 0.0058 | 0.0005 | 0.0053 |

| | | | |
|---|---|---|---|
| 104 | 0.0059 | 0.0005 | 0.0053 |
| 105 | 0.0059 | 0.0005 | 0.0054 |
| 106 | 0.0060 | 0.0005 | 0.0054 |
| 107 | 0.0060 | 0.0005 | 0.0055 |
| 108 | 0.0061 | 0.0006 | 0.0055 |
| 109 | 0.0061 | 0.0006 | 0.0056 |
| 110 | 0.0062 | 0.0006 | 0.0056 |
| 111 | 0.0062 | 0.0006 | 0.0057 |
| 112 | 0.0063 | 0.0006 | 0.0057 |
| 113 | 0.0063 | 0.0006 | 0.0058 |
| 114 | 0.0064 | 0.0006 | 0.0058 |
| 115 | 0.0064 | 0.0006 | 0.0059 |
| 116 | 0.0065 | 0.0006 | 0.0059 |
| 117 | 0.0066 | 0.0006 | 0.0060 |
| 118 | 0.0066 | 0.0006 | 0.0060 |
| 119 | 0.0067 | 0.0006 | 0.0061 |
| 120 | 0.0067 | 0.0006 | 0.0061 |
| 121 | 0.0068 | 0.0006 | 0.0062 |
| 122 | 0.0069 | 0.0006 | 0.0062 |
| 123 | 0.0070 | 0.0006 | 0.0063 |
| 124 | 0.0070 | 0.0006 | 0.0064 |
| 125 | 0.0071 | 0.0006 | 0.0064 |
| 126 | 0.0071 | 0.0007 | 0.0065 |
| 127 | 0.0072 | 0.0007 | 0.0066 |
| 128 | 0.0073 | 0.0007 | 0.0066 |
| 129 | 0.0074 | 0.0007 | 0.0067 |
| 130 | 0.0075 | 0.0007 | 0.0068 |
| 131 | 0.0076 | 0.0007 | 0.0069 |
| 132 | 0.0076 | 0.0007 | 0.0069 |
| 133 | 0.0077 | 0.0007 | 0.0070 |
| 134 | 0.0078 | 0.0007 | 0.0071 |
| 135 | 0.0079 | 0.0007 | 0.0072 |
| 136 | 0.0080 | 0.0007 | 0.0073 |
| 137 | 0.0081 | 0.0007 | 0.0074 |
| 138 | 0.0082 | 0.0007 | 0.0074 |
| 139 | 0.0083 | 0.0008 | 0.0076 |
| 140 | 0.0084 | 0.0008 | 0.0076 |
| 141 | 0.0086 | 0.0008 | 0.0078 |
| 142 | 0.0086 | 0.0008 | 0.0079 |
| 143 | 0.0088 | 0.0008 | 0.0080 |
| 144 | 0.0089 | 0.0008 | 0.0081 |
| 145 | 0.0090 | 0.0008 | 0.0082 |
| 146 | 0.0091 | 0.0008 | 0.0083 |
| 147 | 0.0093 | 0.0009 | 0.0085 |
| 148 | 0.0094 | 0.0009 | 0.0085 |
| 149 | 0.0096 | 0.0009 | 0.0087 |
| 150 | 0.0097 | 0.0009 | 0.0088 |
| 151 | 0.0099 | 0.0009 | 0.0090 |
| 152 | 0.0100 | 0.0009 | 0.0091 |
| 153 | 0.0103 | 0.0009 | 0.0093 |
| 154 | 0.0104 | 0.0009 | 0.0094 |
| 155 | 0.0106 | 0.0010 | 0.0097 |
| 156 | 0.0108 | 0.0010 | 0.0098 |
| 157 | 0.0111 | 0.0010 | 0.0101 |
| 158 | 0.0112 | 0.0010 | 0.0102 |
| 159 | 0.0115 | 0.0011 | 0.0105 |
| 160 | 0.0117 | 0.0011 | 0.0106 |
| 161 | 0.0120 | 0.0011 | 0.0109 |
| 162 | 0.0122 | 0.0011 | 0.0111 |

| | | | |
|---|---|---|---|
| 163 | 0.0126 | 0.0011 | 0.0114 |
| 164 | 0.0128 | 0.0012 | 0.0116 |
| 165 | 0.0132 | 0.0012 | 0.0120 |
| 166 | 0.0134 | 0.0012 | 0.0122 |
| 167 | 0.0139 | 0.0013 | 0.0126 |
| 168 | 0.0142 | 0.0013 | 0.0129 |
| 169 | 0.0211 | 0.0019 | 0.0192 |
| 170 | 0.0215 | 0.0020 | 0.0195 |
| 171 | 0.0222 | 0.0020 | 0.0202 |
| 172 | 0.0226 | 0.0021 | 0.0205 |
| 173 | 0.0234 | 0.0021 | 0.0213 |
| 174 | 0.0239 | 0.0022 | 0.0217 |
| 175 | 0.0249 | 0.0023 | 0.0226 |
| 176 | 0.0255 | 0.0023 | 0.0231 |
| 177 | 0.0267 | 0.0024 | 0.0242 |
| 178 | 0.0273 | 0.0025 | 0.0248 |
| 179 | 0.0288 | 0.0026 | 0.0262 |
| 180 | 0.0296 | 0.0027 | 0.0269 |
| 181 | 0.0315 | 0.0029 | 0.0286 |
| 182 | 0.0325 | 0.0030 | 0.0296 |
| 183 | 0.0350 | 0.0032 | 0.0318 |
| 184 | 0.0364 | 0.0033 | 0.0331 |
| 185 | 0.0276 | 0.0025 | 0.0251 |
| 186 | 0.0294 | 0.0027 | 0.0267 |
| 187 | 0.0341 | 0.0031 | 0.0310 |
| 188 | 0.0373 | 0.0034 | 0.0339 |
| 189 | 0.0463 | 0.0042 | 0.0421 |
| 190 | 0.0534 | 0.0042 | 0.0492 |
| 191 | 0.0810 | 0.0042 | 0.0768 |
| 192 | 0.1176 | 0.0042 | 0.1134 |
| 193 | 0.5086 | 0.0042 | 0.5044 |
| 194 | 0.0637 | 0.0042 | 0.0595 |
| 195 | 0.0412 | 0.0038 | 0.0374 |
| 196 | 0.0316 | 0.0029 | 0.0287 |
| 197 | 0.0381 | 0.0035 | 0.0346 |
| 198 | 0.0337 | 0.0031 | 0.0306 |
| 199 | 0.0305 | 0.0028 | 0.0277 |
| 200 | 0.0280 | 0.0026 | 0.0255 |
| 201 | 0.0260 | 0.0024 | 0.0237 |
| 202 | 0.0244 | 0.0022 | 0.0222 |
| 203 | 0.0230 | 0.0021 | 0.0209 |
| 204 | 0.0218 | 0.0020 | 0.0198 |
| 205 | 0.0144 | 0.0013 | 0.0131 |
| 206 | 0.0137 | 0.0012 | 0.0124 |
| 207 | 0.0130 | 0.0012 | 0.0118 |
| 208 | 0.0124 | 0.0011 | 0.0113 |
| 209 | 0.0118 | 0.0011 | 0.0108 |
| 210 | 0.0114 | 0.0010 | 0.0103 |
| 211 | 0.0109 | 0.0010 | 0.0099 |
| 212 | 0.0105 | 0.0010 | 0.0096 |
| 213 | 0.0102 | 0.0009 | 0.0092 |
| 214 | 0.0098 | 0.0009 | 0.0089 |
| 215 | 0.0095 | 0.0009 | 0.0086 |
| 216 | 0.0092 | 0.0008 | 0.0084 |
| 217 | 0.0090 | 0.0008 | 0.0082 |
| 218 | 0.0087 | 0.0008 | 0.0079 |
| 219 | 0.0085 | 0.0008 | 0.0077 |
| 220 | 0.0083 | 0.0008 | 0.0075 |
| 221 | 0.0081 | 0.0007 | 0.0073 |

| | | | |
|---|---|---|---|
| 222 | 0.0079 | 0.0007 | 0.0072 |
| 223 | 0.0077 | 0.0007 | 0.0070 |
| 224 | 0.0075 | 0.0007 | 0.0068 |
| 225 | 0.0074 | 0.0007 | 0.0067 |
| 226 | 0.0072 | 0.0007 | 0.0065 |
| 227 | 0.0070 | 0.0006 | 0.0064 |
| 228 | 0.0069 | 0.0006 | 0.0063 |
| 229 | 0.0068 | 0.0006 | 0.0062 |
| 230 | 0.0066 | 0.0006 | 0.0060 |
| 231 | 0.0065 | 0.0006 | 0.0059 |
| 232 | 0.0064 | 0.0006 | 0.0058 |
| 233 | 0.0063 | 0.0006 | 0.0057 |
| 234 | 0.0062 | 0.0006 | 0.0056 |
| 235 | 0.0061 | 0.0006 | 0.0055 |
| 236 | 0.0060 | 0.0005 | 0.0054 |
| 237 | 0.0059 | 0.0005 | 0.0054 |
| 238 | 0.0058 | 0.0005 | 0.0053 |
| 239 | 0.0057 | 0.0005 | 0.0052 |
| 240 | 0.0056 | 0.0005 | 0.0051 |
| 241 | 0.0055 | 0.0005 | 0.0050 |
| 242 | 0.0055 | 0.0005 | 0.0050 |
| 243 | 0.0054 | 0.0005 | 0.0049 |
| 244 | 0.0053 | 0.0005 | 0.0048 |
| 245 | 0.0052 | 0.0005 | 0.0048 |
| 246 | 0.0052 | 0.0005 | 0.0047 |
| 247 | 0.0051 | 0.0005 | 0.0046 |
| 248 | 0.0050 | 0.0005 | 0.0046 |
| 249 | 0.0050 | 0.0005 | 0.0045 |
| 250 | 0.0049 | 0.0004 | 0.0045 |
| 251 | 0.0049 | 0.0004 | 0.0044 |
| 252 | 0.0048 | 0.0004 | 0.0044 |
| 253 | 0.0048 | 0.0004 | 0.0043 |
| 254 | 0.0047 | 0.0004 | 0.0043 |
| 255 | 0.0046 | 0.0004 | 0.0042 |
| 256 | 0.0046 | 0.0004 | 0.0042 |
| 257 | 0.0045 | 0.0004 | 0.0041 |
| 258 | 0.0045 | 0.0004 | 0.0041 |
| 259 | 0.0044 | 0.0004 | 0.0040 |
| 260 | 0.0044 | 0.0004 | 0.0040 |
| 261 | 0.0044 | 0.0004 | 0.0040 |
| 262 | 0.0043 | 0.0004 | 0.0039 |
| 263 | 0.0043 | 0.0004 | 0.0039 |
| 264 | 0.0042 | 0.0004 | 0.0038 |
| 265 | 0.0042 | 0.0004 | 0.0038 |
| 266 | 0.0041 | 0.0004 | 0.0038 |
| 267 | 0.0041 | 0.0004 | 0.0037 |
| 268 | 0.0041 | 0.0004 | 0.0037 |
| 269 | 0.0040 | 0.0004 | 0.0037 |
| 270 | 0.0040 | 0.0004 | 0.0036 |
| 271 | 0.0040 | 0.0004 | 0.0036 |
| 272 | 0.0039 | 0.0004 | 0.0036 |
| 273 | 0.0039 | 0.0004 | 0.0035 |
| 274 | 0.0039 | 0.0004 | 0.0035 |
| 275 | 0.0038 | 0.0003 | 0.0035 |
| 276 | 0.0038 | 0.0003 | 0.0034 |
| 277 | 0.0038 | 0.0003 | 0.0034 |
| 278 | 0.0037 | 0.0003 | 0.0034 |
| 279 | 0.0037 | 0.0003 | 0.0034 |
| 280 | 0.0037 | 0.0003 | 0.0033 |

| | | | |
|---|---|---|---|
| 281 | 0.0036 | 0.0003 | 0.0033 |
| 282 | 0.0036 | 0.0003 | 0.0033 |
| 283 | 0.0036 | 0.0003 | 0.0033 |
| 284 | 0.0036 | 0.0003 | 0.0032 |
| 285 | 0.0035 | 0.0003 | 0.0032 |
| 286 | 0.0035 | 0.0003 | 0.0032 |
| 287 | 0.0035 | 0.0003 | 0.0032 |
| 288 | 0.0035 | 0.0003 | 0.0031 |

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Total soil rain loss = 0.24(In)
Total effective rainfall = 3.01(In)
Peak flow rate in flood hydrograph = 3931.07(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 1000.0 | 2000.0 | 3000.0 | 4000.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0047 | 0.68 | Q | | | | |
| 0+10 | 0.0206 | 2.32 | Q | | | | |
| 0+15 | 0.0542 | 4.87 | Q | | | | |
| 0+20 | 0.1113 | 8.30 | Q | | | | |
| 0+25 | 0.1988 | 12.70 | Q | | | | |
| 0+30 | 0.3322 | 19.38 | Q | | | | |
| 0+35 | 0.5350 | 29.44 | Q | | | | |
| 0+40 | 0.8287 | 42.64 | Q | | | | |
| 0+45 | 1.2069 | 54.92 | Q | | | | |
| 0+50 | 1.6661 | 66.67 | Q | | | | |
| 0+55 | 2.1919 | 76.36 | Q | | | | |
| 1+ 0 | 2.7686 | 83.73 | Q | | | | |
| 1+ 5 | 3.3857 | 89.61 | Q | | | | |
| 1+10 | 4.0372 | 94.60 | Q | | | | |
| 1+15 | 4.7190 | 99.01 | Q | | | | |
| 1+20 | 5.4284 | 103.00 | VQ | | | | |
| 1+25 | 6.1631 | 106.67 | VQ | | | | |
| 1+30 | 6.9205 | 109.98 | VQ | | | | |
| 1+35 | 7.6986 | 112.98 | VQ | | | | |
| 1+40 | 8.4966 | 115.88 | VQ | | | | |
| 1+45 | 9.3126 | 118.48 | VQ | | | | |
| 1+50 | 10.1450 | 120.86 | VQ | | | | |
| 1+55 | 10.9934 | 123.19 | VQ | | | | |
| 2+ 0 | 11.8563 | 125.29 | VQ | | | | |
| 2+ 5 | 12.7333 | 127.35 | VQ | | | | |
| 2+10 | 13.6239 | 129.32 | VQ | | | | |
| 2+15 | 14.5275 | 131.20 | VQ | | | | |
| 2+20 | 15.4440 | 133.06 | VQ | | | | |
| 2+25 | 16.3721 | 134.76 | VQ | | | | |
| 2+30 | 17.3118 | 136.45 | VQ | | | | |
| 2+35 | 18.2621 | 137.99 | VQ | | | | |
| 2+40 | 19.2223 | 139.42 | VQ | | | | |
| 2+45 | 20.1923 | 140.84 | VQ | | | | |
| 2+50 | 21.1717 | 142.21 | VQ | | | | |
| 2+55 | 22.1605 | 143.57 | VQ | | | | |
| 3+ 0 | 23.1583 | 144.89 | VQ | | | | |

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3+ 5      24.1649    146.16  |Q        |         |         |         |
3+10      25.1802    147.42  |Q        |         |         |         |
3+15      26.2039    148.64  |Q        |         |         |         |
3+20      27.2360    149.86  |Q        |         |         |         |
3+25      28.2759    151.00  |Q        |         |         |         |
3+30      29.3233    152.08  |Q        |         |         |         |
3+35      30.3781    153.16  |Q        |         |         |         |
3+40      31.4406    154.26  |Q        |         |         |         |
3+45      32.5106    155.36  |Q        |         |         |         |
3+50      33.5878    156.42  |Q        |         |         |         |
3+55      34.6721    157.44  |Q        |         |         |         |
4+ 0      35.7636    158.47  |Q        |         |         |         |
4+ 5      36.8621    159.51  |Q        |         |         |         |
4+10      37.9679    160.56  |Q        |         |         |         |
4+15      39.0806    161.56  |Q        |         |         |         |
4+20      40.1999    162.52  |Q        |         |         |         |
4+25      41.3258    163.49  |Q        |         |         |         |
4+30      42.4586    164.47  |Q        |         |         |         |
4+35      43.5981    165.46  |Q        |         |         |         |
4+40      44.7441    166.41  |Q        |         |         |         |
4+45      45.8965    167.32  |Q        |         |         |         |
4+50      47.0552    168.25  |Q        |         |         |         |
4+55      48.2204    169.19  |QV       |         |         |         |
5+ 0      49.3922    170.14  |QV       |         |         |         |
5+ 5      50.5706    171.10  |QV       |         |         |         |
5+10      51.7557    172.08  |QV       |         |         |         |
5+15      52.9477    173.07  |QV       |         |         |         |
5+20      54.1466    174.08  |QV       |         |         |         |
5+25      55.3524    175.09  |QV       |         |         |         |
5+30      56.5653    176.11  |QV       |         |         |         |
5+35      57.7853    177.14  |QV       |         |         |         |
5+40      59.0125    178.19  |QV       |         |         |         |
5+45      60.2470    179.24  |QV       |         |         |         |
5+50      61.4888    180.31  |QV       |         |         |         |
5+55      62.7377    181.34  |QV       |         |         |         |
6+ 0      63.9936    182.36  |QV       |         |         |         |
6+ 5      65.2566    183.39  |QV       |         |         |         |
6+10      66.5267    184.43  |QV       |         |         |         |
6+15      67.8042    185.48  |QV       |         |         |         |
6+20      69.0890    186.55  |QV       |         |         |         |
6+25      70.3812    187.63  |QV       |         |         |         |
6+30      71.6808    188.69  |Q V      |         |         |         |
6+35      72.9874    189.73  |Q V      |         |         |         |
6+40      74.3013    190.78  |Q V      |         |         |         |
6+45      75.6226    191.84  |Q V      |         |         |         |
6+50      76.9512    192.92  |Q V      |         |         |         |
6+55      78.2874    194.01  |Q V      |         |         |         |
7+ 0      79.6312    195.12  |Q V      |         |         |         |
7+ 5      80.9827    196.24  |Q V      |         |         |         |
7+10      82.3422    197.39  |Q V      |         |         |         |
7+15      83.7095    198.54  |Q V      |         |         |         |
7+20      85.0850    199.72  |Q V      |         |         |         |
7+25      86.4686    200.90  | QV      |         |         |         |
7+30      87.8606    202.12  | QV      |         |         |         |
7+35      89.2610    203.34  | QV      |         |         |         |
7+40      90.6700    204.59  | QV      |         |         |         |
7+45      92.0877    205.85  | QV      |         |         |         |
7+50      93.5142    207.13  | QV      |         |         |         |
7+55      94.9497    208.43  | Q V     |         |         |         |
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 8+ 0      96.3943    209.76  | Q V     |         |         |         |
 8+ 5      97.8482    211.10  | Q V     |         |         |         |
 8+10      99.3114    212.47  | Q V     |         |         |         |
 8+15     100.7842    213.85  | Q V     |         |         |         |
 8+20     102.2668    215.26  | Q V     |         |         |         |
 8+25     103.7591    216.69  | Q V     |         |         |         |
 8+30     105.2615    218.15  | Q V     |         |         |         |
 8+35     106.7741    219.63  | Q V     |         |         |         |
 8+40     108.2971    221.14  | Q V     |         |         |         |
 8+45     109.8306    222.66  | Q V     |         |         |         |
 8+50     111.3748    224.22  | Q V     |         |         |         |
 8+55     112.9300    225.80  | Q V     |         |         |         |
 9+ 0     114.4962    227.42  | Q V     |         |         |         |
 9+ 5     116.0737    229.06  | Q V     |         |         |         |
 9+10     117.6628    230.73  | Q V     |         |         |         |
 9+15     119.2635    232.43  | Q  V    |         |         |         |
 9+20     120.8762    234.16  | Q  V    |         |         |         |
 9+25     122.5010    235.92  | Q  V    |         |         |         |
 9+30     124.1382    237.72  | Q  V    |         |         |         |
 9+35     125.7880    239.55  | Q  V    |         |         |         |
 9+40     127.4507    241.42  | Q  V    |         |         |         |
 9+45     129.1264    243.31  | Q  V    |         |         |         |
 9+50     130.8155    245.26  | Q  V    |         |         |         |
 9+55     132.5182    247.23  | Q  V    |         |         |         |
10+ 0     134.2348    249.25  | Q  V    |         |         |         |
10+ 5     135.9656    251.31  | Q  V    |         |         |         |
10+10     137.7109    253.41  | Q  V    |         |         |         |
10+15     139.4709    255.55  | Q  V    |         |         |         |
10+20     141.2460    257.75  | Q  V    |         |         |         |
10+25     143.0365    259.98  | Q   V   |         |         |         |
10+30     144.8427    262.27  | Q   V   |         |         |         |
10+35     146.6651    264.60  | Q   V   |         |         |         |
10+40     148.5039    266.99  | Q   V   |         |         |         |
10+45     150.3594    269.43  | Q   V   |         |         |         |
10+50     152.2323    271.93  | Q   V   |         |         |         |
10+55     154.1226    274.48  | Q   V   |         |         |         |
11+ 0     156.0311    277.10  | Q   V   |         |         |         |
11+ 5     157.9579    279.77  | Q   V   |         |         |         |
11+10     159.9037    282.53  | Q   V   |         |         |         |
11+15     161.8687    285.33  | Q   V   |         |         |         |
11+20     163.8537    288.22  | Q   V   |         |         |         |
11+25     165.8589    291.16  | Q   V   |         |         |         |
11+30     167.8851    294.20  | Q    V  |         |         |         |
11+35     169.9326    297.30  | Q    V  |         |         |         |
11+40     172.0022    300.50  |  Q   V  |         |         |         |
11+45     174.0943    303.77  |  Q   V  |         |         |         |
11+50     176.2097    307.15  |  Q   V  |         |         |         |
11+55     178.3488    310.60  |  Q   V  |         |         |         |
12+ 0     180.5125    314.17  |  Q   V  |         |         |         |
12+ 5     182.7014    317.82  |  Q   V  |         |         |         |
12+10     184.9162    321.60  |  Q   V  |         |         |         |
12+15     187.1577    325.46  |  Q   V  |         |         |         |
12+20     189.4266    329.46  |  Q   V  |         |         |         |
12+25     191.7238    333.55  |  Q    V |         |         |         |
12+30     194.0502    337.79  |  Q    V |         |         |         |
12+35     196.4064    342.12  |  Q    V |         |         |         |
12+40     198.7935    346.61  |  Q    V |         |         |         |
12+45     201.2124    351.23  |  Q    V |         |         |         |
12+50     203.6645    356.04  |  Q    V |         |         |         |
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12+55     206.1508    361.01  |  Q    V |          |          |          |
13+ 0     208.6728    366.19  |  Q    V |          |          |          |
13+ 5     211.2317    371.55  |  Q    V |          |          |          |
13+10     213.8291    377.15  |  Q     V|          |          |          |
13+15     216.4663    382.93  |  Q     V|          |          |          |
13+20     219.1452    388.98  |  Q     V|          |          |          |
13+25     221.8673    395.24  |  Q     V|          |          |          |
13+30     224.6345    401.80  |   Q    V|          |          |          |
13+35     227.4486    408.60  |   Q    V|          |          |          |
13+40     230.3119    415.75  |   Q    V|          |          |          |
13+45     233.2264    423.18  |   Q    V|          |          |          |
13+50     236.1947    431.00  |   Q    V|          |          |          |
13+55     239.2192    439.15  |   Q     V          |          |          |
14+ 0     242.3029    447.76  |   Q     V          |          |          |
14+ 5     245.4573    458.01  |   Q     V          |          |          |
14+10     248.6983    470.60  |   Q     V          |          |          |
14+15     252.0410    485.36  |   Q     V          |          |          |
14+20     255.5012    502.42  |    Q    V          |          |          |
14+25     259.0957    521.91  |    Q    V          |          |          |
14+30     262.8590    546.44  |    Q    |V         |          |          |
14+35     266.8402    578.06  |    Q    |V         |          |          |
14+40     271.0865    616.57  |     Q   |V         |          |          |
14+45     275.5935    654.42  |     Q   |V         |          |          |
14+50     280.3638    692.64  |     Q   |V         |          |          |
14+55     285.3794    728.27  |      Q  | V        |          |          |
15+ 0     290.6221    761.23  |      Q  | V        |          |          |
15+ 5     296.0832    792.96  |      Q  | V        |          |          |
15+10     301.7655    825.07  |       Q | V        |          |          |
15+15     307.6754    858.11  |       Q | V        |          |          |
15+20     313.8258    893.05  |       Q |  V       |          |          |
15+25     320.2153    927.74  |        Q|  V       |          |          |
15+30     326.8404    961.97  |        Q|  V       |          |          |
15+35     333.7021    996.32  |        Q|   V      |          |          |
15+40     340.8139   1032.62  |         Q   V      |          |          |
15+45     348.1914   1071.23  |         Q   V      |          |          |
15+50     355.8393   1110.47  |         |Q   V     |          |          |
15+55     363.7728   1151.95  |         |Q   V     |          |          |
16+ 0     372.0876   1207.31  |         | Q  V     |          |          |
16+ 5     381.5742   1377.45  |         |  Q  V    |          |          |
16+10     392.6073   1602.00  |         |     Q    |          |          |
16+15     405.2281   1832.53  |         |      VQ  |          |          |
16+20     419.5759   2083.31  |         |      V  Q|          |          |
16+25     435.9768   2381.41  |         |       V |  Q       |          |
16+30     455.7650   2873.24  |         |        V|       Q  |          |
16+35     479.6894   3473.83  |         |         V          |   Q      |
16+40     506.7629   3931.07  |         |         |V         |        Q |
16+45     532.6586   3760.05  |         |         | V        |      Q   |
16+50     557.2534   3571.17  |         |         |  V       |    Q     |
16+55     578.9624   3152.15  |         |         |   V      |Q         |
17+ 0     597.6472   2713.04  |         |         |    V Q   |          |
17+ 5     614.2043   2404.08  |         |         |    QV    |          |
17+10     629.3334   2196.74  |         |         |Q    V    |          |
17+15     643.3830   2040.01  |         |         Q      V   |          |
17+20     656.5287   1908.75  |         |        Q|      V   |          |
17+25     668.8631   1790.95  |         |      Q  |       V  |          |
17+30     680.3592   1669.24  |         |     Q   |       V  |          |
17+35     691.0666   1554.70  |         |    Q    |        V |          |
17+40     701.1574   1465.18  |         |   Q     |        V |          |
17+45     710.5017   1356.80  |         |  Q      |        V |          |
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17+50     719.1918   1261.81  |          | Q        |          V          |
17+55     727.4539   1199.66  |          |Q         |          V          |
18+ 0     735.1641   1119.52  |          |Q         |          |V         |
18+ 5     742.5566   1073.40  |          Q          |          |V         |
18+10     749.5933   1021.72  |          Q          |          |V         |
18+15     756.3070    974.84  |         Q|          |          |V         |
18+20     762.7554    936.31  |         Q|          |          | V        |
18+25     768.8304    882.09  |        Q |          |          | V        |
18+30     774.6716    848.14  |        Q |          |          | V        |
18+35     780.1784    799.58  |       Q  |          |          | V        |
18+40     785.3960    757.60  |       Q  |          |          |  V       |
18+45     790.4427    732.79  |       Q  |          |          |  V       |
18+50     795.2886    703.62  |       Q  |          |          |  V       |
18+55     799.9852    681.95  |      Q   |          |          |  V       |
19+ 0     804.4894    654.02  |      Q   |          |          |  V       |
19+ 5     808.8205    628.87  |      Q   |          |          |   V      |
19+10     813.0192    609.66  |      Q   |          |          |   V      |
19+15     817.0507    585.37  |     Q    |          |          |   V      |
19+20     820.9570    567.20  |     Q    |          |          |   V      |
19+25     824.6709    539.25  |     Q    |          |          |   V      |
19+30     828.2237    515.87  |     Q    |          |          |   V      |
19+35     831.6907    503.40  |     Q    |          |          |    V     |
19+40     835.0778    491.81  |    Q     |          |          |    V     |
19+45     838.3798    479.45  |    Q     |          |          |    V     |
19+50     841.5465    459.80  |    Q     |          |          |    V     |
19+55     844.5979    443.08  |    Q     |          |          |    V     |
20+ 0     847.5812    433.16  |    Q     |          |          |    V     |
20+ 5     850.4983    423.57  |    Q     |          |          |    V     |
20+10     853.3432    413.07  |    Q     |          |          |    V     |
20+15     856.0622    394.80  |   Q      |          |          |     V    |
20+20     858.6780    379.82  |   Q      |          |          |     V    |
20+25     861.2380    371.72  |   Q      |          |          |     V    |
20+30     863.7437    363.82  |   Q      |          |          |     V    |
20+35     866.1891    355.08  |   Q      |          |          |     V    |
20+40     868.5276    339.55  |   Q      |          |          |     V    |
20+45     870.7808    327.16  |   Q      |          |          |     V    |
20+50     872.9902    320.80  |   Q      |          |          |     V    |
20+55     875.1609    315.19  |   Q      |          |          |     V    |
21+ 0     877.2950    309.88  |   Q      |          |          |      V   |
21+ 5     879.4009    305.77  |   Q      |          |          |      V   |
21+10     881.4765    301.38  |   Q      |          |          |      V   |
21+15     883.5187    296.53  | Q        |          |          |      V   |
21+20     885.5288    291.87  | Q        |          |          |      V   |
21+25     887.5069    287.22  | Q        |          |          |      V   |
21+30     889.4507    282.24  | Q        |          |          |      V   |
21+35     891.3609    277.36  | Q        |          |          |      V   |
21+40     893.2397    272.79  | Q        |          |          |      V   |
21+45     895.0848    267.91  | Q        |          |          |      V   |
21+50     896.8931    262.57  | Q        |          |          |      V   |
21+55     898.6210    250.88  | Q        |          |          |      V   |
22+ 0     900.2926    242.72  | Q        |          |          |      V   |
22+ 5     901.9362    238.65  | Q        |          |          |       V  |
22+10     903.5535    234.84  | Q        |          |          |       V  |
22+15     905.1438    230.91  | Q        |          |          |       V  |
22+20     906.7048    226.65  | Q        |          |          |       V  |
22+25     908.2320    221.76  | Q        |          |          |       V  |
22+30     909.6915    211.92  | Q        |          |          |       V  |
22+35     911.0884    202.82  | Q        |          |          |       V  |
22+40     912.4614    199.37  |Q         |          |          |       V  |
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22+45     913.8139    196.37  |Q        |         |         |       V |
22+50     915.1463    193.48  |Q        |         |         |       V |
22+55     916.4598    190.72  |Q        |         |         |       V |
23+ 0     917.7557    188.16  |Q        |         |         |       V |
23+ 5     919.0347    185.72  |Q        |         |         |       V |
23+10     920.2977    183.38  |Q        |         |         |       V |
23+15     921.5452    181.13  |Q        |         |         |       V |
23+20     922.7777    178.97  |Q        |         |         |       V |
23+25     923.9959    176.88  |Q        |         |         |       V |
23+30     925.2006    174.92  |Q        |         |         |        V|
23+35     926.3927    173.10  |Q        |         |         |        V|
23+40     927.5727    171.33  |Q        |         |         |        V|
23+45     928.7408    169.61  |Q        |         |         |        V|
23+50     929.8975    167.95  |Q        |         |         |        V|
23+55     931.0430    166.32  |Q        |         |         |        V|
24+ 0     932.1776    164.74  |Q        |         |         |        V|
24+ 5     933.2969    162.53  |Q        |         |         |        V|
24+10     934.3947    159.40  |Q        |         |         |        V|
24+15     935.4651    155.42  |Q        |         |         |        V|
24+20     936.5024    150.62  |Q        |         |         |        V|
24+25     937.5005    144.92  |Q        |         |         |        V|
24+30     938.4442    137.03  |Q        |         |         |        V|
24+35     939.3110    125.86  |Q        |         |         |        V|
24+40     940.0803    111.70  |Q        |         |         |        V|
24+45     940.7595     98.62  Q        |         |         |        V|
24+50     941.3533     86.22  Q        |         |         |        V|
24+55     941.8770     76.03  Q        |         |         |        V|
25+ 0     942.3472     68.28  Q        |         |         |        V|
25+ 5     942.7749     62.10  Q        |         |         |        V|
25+10     943.1668     56.90  Q        |         |         |        V|
25+15     943.5272     52.33  Q        |         |         |        V|
25+20     943.8595     48.25  Q        |         |         |        V|
25+25     944.1662     44.54  Q        |         |         |        V|
25+30     944.4502     41.24  Q        |         |         |        V|
25+35     944.7139     38.29  Q        |         |         |        V|
25+40     944.9583     35.48  Q        |         |         |        V|
25+45     945.1856     33.01  Q        |         |         |        V|
25+50     945.3977     30.79  Q        |         |         |        V|
25+55     945.5950     28.65  Q        |         |         |        V|
26+ 0     945.7795     26.79  Q        |         |         |        V|
26+ 5     945.9516     24.98  Q        |         |         |        V|
26+10     946.1120     23.29  Q        |         |         |        V|
26+15     946.2615     21.71  Q        |         |         |        V|
26+20     946.4005     20.19  Q        |         |         |        V|
26+25     946.5303     18.84  Q        |         |         |        V|
26+30     946.6510     17.53  Q        |         |         |        V|
26+35     946.7639     16.39  Q        |         |         |        V|
26+40     946.8698     15.38  Q        |         |         |        V|
26+45     946.9689     14.39  Q        |         |         |        V|
26+50     947.0616     13.47  Q        |         |         |        V|
26+55     947.1483     12.58  Q        |         |         |        V|
27+ 0     947.2292     11.75  Q        |         |         |        V|
27+ 5     947.3048     10.98  Q        |         |         |        V|
27+10     947.3753     10.23  Q        |         |         |        V|
27+15     947.4410      9.55  Q        |         |         |        V|
27+20     947.5022      8.88  Q        |         |         |        V|
27+25     947.5593      8.30  Q        |         |         |        V|
27+30     947.6130      7.80  Q        |         |         |        V|
27+35     947.6633      7.30  Q        |         |         |        V|
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|---|---|---|---|---|---|---|---|
| 27+40 | 947.7101 | 6.80 | Q | \| | \| | \| | V\| |
| 27+45 | 947.7536 | 6.32 | Q | \| | \| | \| | V\| |
| 27+50 | 947.7942 | 5.89 | Q | \| | \| | \| | V\| |
| 27+55 | 947.8321 | 5.51 | Q | \| | \| | \| | V\| |
| 28+ 0 | 947.8674 | 5.13 | Q | \| | \| | \| | V\| |
| 28+ 5 | 947.9001 | 4.75 | Q | \| | \| | \| | V\| |
| 28+10 | 947.9303 | 4.38 | Q | \| | \| | \| | V\| |
| 28+15 | 947.9584 | 4.07 | Q | \| | \| | \| | V\| |
| 28+20 | 947.9846 | 3.81 | Q | \| | \| | \| | V\| |
| 28+25 | 948.0091 | 3.55 | Q | \| | \| | \| | V\| |
| 28+30 | 948.0318 | 3.30 | Q | \| | \| | \| | V\| |
| 28+35 | 948.0527 | 3.04 | Q | \| | \| | \| | V\| |
| 28+40 | 948.0723 | 2.84 | Q | \| | \| | \| | V\| |
| 28+45 | 948.0907 | 2.68 | Q | \| | \| | \| | V\| |
| 28+50 | 948.1081 | 2.52 | Q | \| | \| | \| | V\| |
| 28+55 | 948.1244 | 2.36 | Q | \| | \| | \| | V\| |
| 29+ 0 | 948.1396 | 2.21 | Q | \| | \| | \| | V\| |
| 29+ 5 | 948.1536 | 2.04 | Q | \| | \| | \| | V\| |
| 29+10 | 948.1665 | 1.87 | Q | \| | \| | \| | V\| |
| 29+15 | 948.1783 | 1.71 | Q | \| | \| | \| | V\| |
| 29+20 | 948.1889 | 1.54 | Q | \| | \| | \| | V\| |
| 29+25 | 948.1984 | 1.38 | Q | \| | \| | \| | V\| |
| 29+30 | 948.2068 | 1.22 | Q | \| | \| | \| | V\| |
| 29+35 | 948.2142 | 1.06 | Q | \| | \| | \| | V\| |
| 29+40 | 948.2204 | 0.91 | Q | \| | \| | \| | V\| |
| 29+45 | 948.2256 | 0.75 | Q | \| | \| | \| | V\| |
| 29+50 | 948.2297 | 0.60 | Q | \| | \| | \| | V\| |
| 29+55 | 948.2331 | 0.50 | Q | \| | \| | \| | V\| |
| 30+ 0 | 948.2360 | 0.42 | Q | \| | \| | \| | V\| |
| 30+ 5 | 948.2384 | 0.34 | Q | \| | \| | \| | V\| |
| 30+10 | 948.2402 | 0.26 | Q | \| | \| | \| | V\| |
| 30+15 | 948.2415 | 0.19 | Q | \| | \| | \| | V\| |
| 30+20 | 948.2422 | 0.11 | Q | \| | \| | \| | V\| |
| 30+25 | 948.2425 | 0.04 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 47
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 3500.82 | 1 | 1.29 |
| Rainfall data for year 100 | | |
| 3500.82 | 6 | 2.07 |
| Rainfall data for year 100 | | |
| 3500.82 | 24 | 3.03 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 68.3 | 85.6 | 3500.82 | 1.000 | 0.272 | 0.980 | 0.267 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.267

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 3429.05 | 0.980 | 68.3 | 85.6 | 1.68 | 0.547 |
| 71.77 | 0.020 | 98.0 | 98.0 | 0.20 | 0.923 |

Area-averaged catchment yield fraction, Y = 0.555
Area-averaged low loss fraction, Yb = 0.445
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 38102.00(Ft.)
Length from concentration point to centroid = 19862.00(Ft.)
Elevation difference along watercourse = 2190.20(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 3500.82(Ac.)
Catchment Lag time = 0.994 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 8.3819
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.267(In/Hr)
Average low loss rate fraction (Yb) = 0.445 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.070
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.930

Computed peak 5-minute rainfall = 0.612(In)
Computed peak 30-minute rainfall = 1.048(In)
Specified peak 1-hour rainfall = 1.290(In)
Computed peak 3-hour rainfall = 1.724(In)
Specified peak 6-hour rainfall = 2.070(In)
Specified peak 24-hour rainfall = 3.030(In)

Rainfall depth area reduction factors:
Using a total area of 3500.82(Ac.) (Ref: fig. E-4)

5-minute factor = 0.840 Adjusted rainfall = 0.514(In)
30-minute factor = 0.840 Adjusted rainfall = 0.880(In)
1-hour factor = 0.840 Adjusted rainfall = 1.084(In)
3-hour factor = 0.979 Adjusted rainfall = 1.688(In)
6-hour factor = 0.989 Adjusted rainfall = 2.048(In)
24-hour factor = 0.996 Adjusted rainfall = 3.016(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 42338.04 (CFS)) | |
| 1 | 0.380 | 160.948 |
| 2 | 1.222 | 356.405 |
| 3 | 2.556 | 564.927 |
| 4 | 4.309 | 742.077 |
| 5 | 6.480 | 918.954 |

| | | |
|---|---|---|
| 6 | 9.191 | 1147.876 |
| 7 | 13.270 | 1727.137 |
| 8 | 18.948 | 2403.919 |
| 9 | 26.917 | 3373.882 |
| 10 | 34.549 | 3231.299 |
| 11 | 41.468 | 2929.399 |
| 12 | 47.495 | 2551.811 |
| 13 | 52.539 | 2135.534 |
| 14 | 56.769 | 1790.580 |
| 15 | 60.125 | 1420.941 |
| 16 | 63.022 | 1226.597 |
| 17 | 65.590 | 1087.093 |
| 18 | 67.855 | 959.246 |
| 19 | 69.952 | 887.854 |
| 20 | 71.903 | 825.896 |
| 21 | 73.622 | 727.891 |
| 22 | 75.186 | 662.094 |
| 23 | 76.654 | 621.320 |
| 24 | 78.073 | 600.720 |
| 25 | 79.299 | 519.118 |
| 26 | 80.412 | 471.416 |
| 27 | 81.523 | 470.372 |
| 28 | 82.507 | 416.539 |
| 29 | 83.419 | 386.246 |
| 30 | 84.330 | 385.556 |
| 31 | 85.171 | 356.225 |
| 32 | 85.976 | 340.680 |
| 33 | 86.778 | 339.640 |
| 34 | 87.493 | 302.464 |
| 35 | 88.163 | 283.900 |
| 36 | 88.830 | 282.375 |
| 37 | 89.387 | 235.824 |
| 38 | 89.892 | 213.919 |
| 39 | 90.397 | 213.479 |
| 40 | 90.873 | 201.885 |
| 41 | 91.338 | 196.743 |
| 42 | 91.801 | 195.901 |
| 43 | 92.218 | 176.475 |
| 44 | 92.615 | 168.353 |
| 45 | 93.012 | 167.802 |
| 46 | 93.382 | 156.590 |
| 47 | 93.741 | 152.170 |
| 48 | 94.097 | 150.738 |
| 49 | 94.392 | 124.821 |
| 50 | 94.664 | 115.192 |
| 51 | 94.936 | 115.192 |
| 52 | 95.208 | 115.192 |
| 53 | 95.480 | 115.192 |
| 54 | 95.749 | 113.873 |
| 55 | 95.973 | 94.638 |
| 56 | 96.181 | 88.293 |
| 57 | 96.390 | 88.293 |
| 58 | 96.598 | 88.293 |
| 59 | 96.807 | 88.293 |
| 60 | 97.011 | 86.634 |
| 61 | 97.169 | 66.721 |
| 62 | 97.313 | 60.897 |
| 63 | 97.457 | 60.897 |
| 64 | 97.600 | 60.897 |

| | | |
|---|---|---|
| 65 | 97.744 | 60.897 |
| 66 | 97.884 | 58.999 |
| 67 | 97.978 | 39.926 |
| 68 | 98.061 | 34.991 |
| 69 | 98.143 | 34.991 |
| 70 | 98.226 | 34.991 |
| 71 | 98.309 | 34.991 |
| 72 | 98.392 | 35.479 |
| 73 | 98.486 | 39.647 |
| 74 | 98.582 | 40.598 |
| 75 | 98.678 | 40.598 |
| 76 | 98.774 | 40.598 |
| 77 | 98.870 | 40.598 |
| 78 | 98.965 | 40.547 |
| 79 | 99.060 | 40.175 |
| 80 | 99.155 | 40.101 |
| 81 | 99.250 | 40.101 |
| 82 | 99.344 | 40.101 |
| 83 | 99.439 | 40.101 |
| 84 | 99.528 | 37.856 |
| 85 | 99.583 | 23.123 |
| 86 | 99.632 | 20.627 |
| 87 | 99.681 | 20.627 |
| 88 | 99.729 | 20.627 |
| 89 | 99.778 | 20.627 |
| 90 | 99.827 | 20.627 |
| 91 | 99.875 | 20.627 |
| 92 | 99.924 | 20.627 |
| 93 | 99.973 | 20.627 |
| 94 | 100.000 | 11.493 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5143 | 0.5143 |
| 2 | 0.6331 | 0.1189 |
| 3 | 0.7150 | 0.0819 |
| 4 | 0.7795 | 0.0645 |
| 5 | 0.8334 | 0.0540 |
| 6 | 0.8803 | 0.0469 |
| 7 | 0.9220 | 0.0417 |
| 8 | 0.9596 | 0.0377 |
| 9 | 0.9942 | 0.0345 |
| 10 | 1.0261 | 0.0319 |
| 11 | 1.0558 | 0.0298 |
| 12 | 1.0838 | 0.0279 |
| 13 | 1.1193 | 0.0356 |
| 14 | 1.1533 | 0.0340 |
| 15 | 1.1859 | 0.0326 |
| 16 | 1.2172 | 0.0313 |
| 17 | 1.2473 | 0.0301 |
| 18 | 1.2764 | 0.0291 |
| 19 | 1.3046 | 0.0282 |
| 20 | 1.3319 | 0.0273 |
| 21 | 1.3584 | 0.0265 |
| 22 | 1.3841 | 0.0257 |
| 23 | 1.4092 | 0.0251 |
| 24 | 1.4336 | 0.0244 |
| 25 | 1.4574 | 0.0238 |
| 26 | 1.4806 | 0.0233 |

| | | |
|---|---|---|
| 27 | 1.5033 | 0.0227 |
| 28 | 1.5256 | 0.0222 |
| 29 | 1.5473 | 0.0218 |
| 30 | 1.5686 | 0.0213 |
| 31 | 1.5895 | 0.0209 |
| 32 | 1.6100 | 0.0205 |
| 33 | 1.6302 | 0.0201 |
| 34 | 1.6499 | 0.0198 |
| 35 | 1.6693 | 0.0194 |
| 36 | 1.6884 | 0.0191 |
| 37 | 1.7013 | 0.0129 |
| 38 | 1.7140 | 0.0127 |
| 39 | 1.7265 | 0.0124 |
| 40 | 1.7387 | 0.0122 |
| 41 | 1.7507 | 0.0120 |
| 42 | 1.7624 | 0.0118 |
| 43 | 1.7740 | 0.0116 |
| 44 | 1.7854 | 0.0114 |
| 45 | 1.7966 | 0.0112 |
| 46 | 1.8076 | 0.0110 |
| 47 | 1.8185 | 0.0109 |
| 48 | 1.8292 | 0.0107 |
| 49 | 1.8397 | 0.0105 |
| 50 | 1.8501 | 0.0104 |
| 51 | 1.8603 | 0.0102 |
| 52 | 1.8704 | 0.0101 |
| 53 | 1.8803 | 0.0099 |
| 54 | 1.8902 | 0.0098 |
| 55 | 1.8998 | 0.0097 |
| 56 | 1.9094 | 0.0096 |
| 57 | 1.9188 | 0.0094 |
| 58 | 1.9281 | 0.0093 |
| 59 | 1.9373 | 0.0092 |
| 60 | 1.9464 | 0.0091 |
| 61 | 1.9554 | 0.0090 |
| 62 | 1.9643 | 0.0089 |
| 63 | 1.9730 | 0.0088 |
| 64 | 1.9817 | 0.0087 |
| 65 | 1.9903 | 0.0086 |
| 66 | 1.9987 | 0.0085 |
| 67 | 2.0071 | 0.0084 |
| 68 | 2.0154 | 0.0083 |
| 69 | 2.0236 | 0.0082 |
| 70 | 2.0317 | 0.0081 |
| 71 | 2.0398 | 0.0080 |
| 72 | 2.0477 | 0.0080 |
| 73 | 2.0557 | 0.0079 |
| 74 | 2.0635 | 0.0078 |
| 75 | 2.0712 | 0.0078 |
| 76 | 2.0789 | 0.0077 |
| 77 | 2.0865 | 0.0076 |
| 78 | 2.0941 | 0.0075 |
| 79 | 2.1015 | 0.0075 |
| 80 | 2.1089 | 0.0074 |
| 81 | 2.1163 | 0.0073 |
| 82 | 2.1235 | 0.0073 |
| 83 | 2.1307 | 0.0072 |
| 84 | 2.1379 | 0.0071 |
| 85 | 2.1449 | 0.0071 |

| | | |
|---|---|---|
| 86 | 2.1520 | 0.0070 |
| 87 | 2.1589 | 0.0070 |
| 88 | 2.1658 | 0.0069 |
| 89 | 2.1727 | 0.0068 |
| 90 | 2.1795 | 0.0068 |
| 91 | 2.1862 | 0.0067 |
| 92 | 2.1929 | 0.0067 |
| 93 | 2.1995 | 0.0066 |
| 94 | 2.2061 | 0.0066 |
| 95 | 2.2127 | 0.0065 |
| 96 | 2.2191 | 0.0065 |
| 97 | 2.2256 | 0.0064 |
| 98 | 2.2320 | 0.0064 |
| 99 | 2.2383 | 0.0063 |
| 100 | 2.2446 | 0.0063 |
| 101 | 2.2508 | 0.0062 |
| 102 | 2.2570 | 0.0062 |
| 103 | 2.2632 | 0.0062 |
| 104 | 2.2693 | 0.0061 |
| 105 | 2.2754 | 0.0061 |
| 106 | 2.2814 | 0.0060 |
| 107 | 2.2874 | 0.0060 |
| 108 | 2.2934 | 0.0060 |
| 109 | 2.2993 | 0.0059 |
| 110 | 2.3052 | 0.0059 |
| 111 | 2.3110 | 0.0058 |
| 112 | 2.3168 | 0.0058 |
| 113 | 2.3226 | 0.0058 |
| 114 | 2.3283 | 0.0057 |
| 115 | 2.3340 | 0.0057 |
| 116 | 2.3396 | 0.0057 |
| 117 | 2.3453 | 0.0056 |
| 118 | 2.3508 | 0.0056 |
| 119 | 2.3564 | 0.0055 |
| 120 | 2.3619 | 0.0055 |
| 121 | 2.3674 | 0.0055 |
| 122 | 2.3728 | 0.0055 |
| 123 | 2.3783 | 0.0054 |
| 124 | 2.3836 | 0.0054 |
| 125 | 2.3890 | 0.0054 |
| 126 | 2.3943 | 0.0053 |
| 127 | 2.3996 | 0.0053 |
| 128 | 2.4049 | 0.0053 |
| 129 | 2.4101 | 0.0052 |
| 130 | 2.4153 | 0.0052 |
| 131 | 2.4205 | 0.0052 |
| 132 | 2.4256 | 0.0051 |
| 133 | 2.4308 | 0.0051 |
| 134 | 2.4359 | 0.0051 |
| 135 | 2.4409 | 0.0051 |
| 136 | 2.4460 | 0.0050 |
| 137 | 2.4510 | 0.0050 |
| 138 | 2.4560 | 0.0050 |
| 139 | 2.4609 | 0.0050 |
| 140 | 2.4659 | 0.0049 |
| 141 | 2.4708 | 0.0049 |
| 142 | 2.4756 | 0.0049 |
| 143 | 2.4805 | 0.0049 |
| 144 | 2.4853 | 0.0048 |

| | | |
|---|---|---|
| 145 | 2.4902 | 0.0048 |
| 146 | 2.4949 | 0.0048 |
| 147 | 2.4997 | 0.0048 |
| 148 | 2.5044 | 0.0047 |
| 149 | 2.5092 | 0.0047 |
| 150 | 2.5139 | 0.0047 |
| 151 | 2.5185 | 0.0047 |
| 152 | 2.5232 | 0.0046 |
| 153 | 2.5278 | 0.0046 |
| 154 | 2.5324 | 0.0046 |
| 155 | 2.5370 | 0.0046 |
| 156 | 2.5416 | 0.0046 |
| 157 | 2.5461 | 0.0045 |
| 158 | 2.5506 | 0.0045 |
| 159 | 2.5551 | 0.0045 |
| 160 | 2.5596 | 0.0045 |
| 161 | 2.5641 | 0.0045 |
| 162 | 2.5685 | 0.0044 |
| 163 | 2.5729 | 0.0044 |
| 164 | 2.5773 | 0.0044 |
| 165 | 2.5817 | 0.0044 |
| 166 | 2.5861 | 0.0044 |
| 167 | 2.5904 | 0.0043 |
| 168 | 2.5947 | 0.0043 |
| 169 | 2.5990 | 0.0043 |
| 170 | 2.6033 | 0.0043 |
| 171 | 2.6076 | 0.0043 |
| 172 | 2.6118 | 0.0043 |
| 173 | 2.6161 | 0.0042 |
| 174 | 2.6203 | 0.0042 |
| 175 | 2.6245 | 0.0042 |
| 176 | 2.6287 | 0.0042 |
| 177 | 2.6328 | 0.0042 |
| 178 | 2.6370 | 0.0041 |
| 179 | 2.6411 | 0.0041 |
| 180 | 2.6452 | 0.0041 |
| 181 | 2.6493 | 0.0041 |
| 182 | 2.6534 | 0.0041 |
| 183 | 2.6575 | 0.0041 |
| 184 | 2.6615 | 0.0040 |
| 185 | 2.6656 | 0.0040 |
| 186 | 2.6696 | 0.0040 |
| 187 | 2.6736 | 0.0040 |
| 188 | 2.6776 | 0.0040 |
| 189 | 2.6815 | 0.0040 |
| 190 | 2.6855 | 0.0040 |
| 191 | 2.6894 | 0.0039 |
| 192 | 2.6934 | 0.0039 |
| 193 | 2.6973 | 0.0039 |
| 194 | 2.7012 | 0.0039 |
| 195 | 2.7051 | 0.0039 |
| 196 | 2.7089 | 0.0039 |
| 197 | 2.7128 | 0.0039 |
| 198 | 2.7166 | 0.0038 |
| 199 | 2.7204 | 0.0038 |
| 200 | 2.7243 | 0.0038 |
| 201 | 2.7281 | 0.0038 |
| 202 | 2.7318 | 0.0038 |
| 203 | 2.7356 | 0.0038 |

| | | |
|---|---|---|
| 204 | 2.7394 | 0.0038 |
| 205 | 2.7431 | 0.0037 |
| 206 | 2.7469 | 0.0037 |
| 207 | 2.7506 | 0.0037 |
| 208 | 2.7543 | 0.0037 |
| 209 | 2.7580 | 0.0037 |
| 210 | 2.7617 | 0.0037 |
| 211 | 2.7653 | 0.0037 |
| 212 | 2.7690 | 0.0037 |
| 213 | 2.7726 | 0.0036 |
| 214 | 2.7763 | 0.0036 |
| 215 | 2.7799 | 0.0036 |
| 216 | 2.7835 | 0.0036 |
| 217 | 2.7871 | 0.0036 |
| 218 | 2.7907 | 0.0036 |
| 219 | 2.7942 | 0.0036 |
| 220 | 2.7978 | 0.0036 |
| 221 | 2.8013 | 0.0035 |
| 222 | 2.8049 | 0.0035 |
| 223 | 2.8084 | 0.0035 |
| 224 | 2.8119 | 0.0035 |
| 225 | 2.8154 | 0.0035 |
| 226 | 2.8189 | 0.0035 |
| 227 | 2.8224 | 0.0035 |
| 228 | 2.8258 | 0.0035 |
| 229 | 2.8293 | 0.0035 |
| 230 | 2.8328 | 0.0034 |
| 231 | 2.8362 | 0.0034 |
| 232 | 2.8396 | 0.0034 |
| 233 | 2.8430 | 0.0034 |
| 234 | 2.8464 | 0.0034 |
| 235 | 2.8498 | 0.0034 |
| 236 | 2.8532 | 0.0034 |
| 237 | 2.8566 | 0.0034 |
| 238 | 2.8599 | 0.0034 |
| 239 | 2.8633 | 0.0034 |
| 240 | 2.8666 | 0.0033 |
| 241 | 2.8700 | 0.0033 |
| 242 | 2.8733 | 0.0033 |
| 243 | 2.8766 | 0.0033 |
| 244 | 2.8799 | 0.0033 |
| 245 | 2.8832 | 0.0033 |
| 246 | 2.8865 | 0.0033 |
| 247 | 2.8898 | 0.0033 |
| 248 | 2.8930 | 0.0033 |
| 249 | 2.8963 | 0.0033 |
| 250 | 2.8995 | 0.0032 |
| 251 | 2.9028 | 0.0032 |
| 252 | 2.9060 | 0.0032 |
| 253 | 2.9092 | 0.0032 |
| 254 | 2.9124 | 0.0032 |
| 255 | 2.9156 | 0.0032 |
| 256 | 2.9188 | 0.0032 |
| 257 | 2.9220 | 0.0032 |
| 258 | 2.9252 | 0.0032 |
| 259 | 2.9283 | 0.0032 |
| 260 | 2.9315 | 0.0032 |
| 261 | 2.9346 | 0.0031 |
| 262 | 2.9378 | 0.0031 |

| | | |
|---|---|---|
| 263 | 2.9409 | 0.0031 |
| 264 | 2.9440 | 0.0031 |
| 265 | 2.9471 | 0.0031 |
| 266 | 2.9502 | 0.0031 |
| 267 | 2.9533 | 0.0031 |
| 268 | 2.9564 | 0.0031 |
| 269 | 2.9595 | 0.0031 |
| 270 | 2.9625 | 0.0031 |
| 271 | 2.9656 | 0.0031 |
| 272 | 2.9687 | 0.0031 |
| 273 | 2.9717 | 0.0030 |
| 274 | 2.9747 | 0.0030 |
| 275 | 2.9778 | 0.0030 |
| 276 | 2.9808 | 0.0030 |
| 277 | 2.9838 | 0.0030 |
| 278 | 2.9868 | 0.0030 |
| 279 | 2.9898 | 0.0030 |
| 280 | 2.9928 | 0.0030 |
| 281 | 2.9958 | 0.0030 |
| 282 | 2.9988 | 0.0030 |
| 283 | 3.0017 | 0.0030 |
| 284 | 3.0047 | 0.0030 |
| 285 | 3.0076 | 0.0030 |
| 286 | 3.0106 | 0.0029 |
| 287 | 3.0135 | 0.0029 |
| 288 | 3.0165 | 0.0029 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0029 | 0.0013 | 0.0016 |
| 2 | 0.0029 | 0.0013 | 0.0016 |
| 3 | 0.0030 | 0.0013 | 0.0016 |
| 4 | 0.0030 | 0.0013 | 0.0016 |
| 5 | 0.0030 | 0.0013 | 0.0017 |
| 6 | 0.0030 | 0.0013 | 0.0017 |
| 7 | 0.0030 | 0.0013 | 0.0017 |
| 8 | 0.0030 | 0.0013 | 0.0017 |
| 9 | 0.0030 | 0.0013 | 0.0017 |
| 10 | 0.0030 | 0.0013 | 0.0017 |
| 11 | 0.0030 | 0.0014 | 0.0017 |
| 12 | 0.0031 | 0.0014 | 0.0017 |
| 13 | 0.0031 | 0.0014 | 0.0017 |
| 14 | 0.0031 | 0.0014 | 0.0017 |
| 15 | 0.0031 | 0.0014 | 0.0017 |
| 16 | 0.0031 | 0.0014 | 0.0017 |
| 17 | 0.0031 | 0.0014 | 0.0017 |
| 18 | 0.0031 | 0.0014 | 0.0017 |
| 19 | 0.0031 | 0.0014 | 0.0017 |
| 20 | 0.0032 | 0.0014 | 0.0018 |
| 21 | 0.0032 | 0.0014 | 0.0018 |
| 22 | 0.0032 | 0.0014 | 0.0018 |
| 23 | 0.0032 | 0.0014 | 0.0018 |
| 24 | 0.0032 | 0.0014 | 0.0018 |
| 25 | 0.0032 | 0.0014 | 0.0018 |
| 26 | 0.0032 | 0.0014 | 0.0018 |
| 27 | 0.0033 | 0.0014 | 0.0018 |
| 28 | 0.0033 | 0.0015 | 0.0018 |

| | | | |
|---|---|---|---|
| 29 | 0.0033 | 0.0015 | 0.0018 |
| 30 | 0.0033 | 0.0015 | 0.0018 |
| 31 | 0.0033 | 0.0015 | 0.0018 |
| 32 | 0.0033 | 0.0015 | 0.0018 |
| 33 | 0.0033 | 0.0015 | 0.0019 |
| 34 | 0.0034 | 0.0015 | 0.0019 |
| 35 | 0.0034 | 0.0015 | 0.0019 |
| 36 | 0.0034 | 0.0015 | 0.0019 |
| 37 | 0.0034 | 0.0015 | 0.0019 |
| 38 | 0.0034 | 0.0015 | 0.0019 |
| 39 | 0.0034 | 0.0015 | 0.0019 |
| 40 | 0.0034 | 0.0015 | 0.0019 |
| 41 | 0.0035 | 0.0015 | 0.0019 |
| 42 | 0.0035 | 0.0015 | 0.0019 |
| 43 | 0.0035 | 0.0016 | 0.0019 |
| 44 | 0.0035 | 0.0016 | 0.0019 |
| 45 | 0.0035 | 0.0016 | 0.0020 |
| 46 | 0.0035 | 0.0016 | 0.0020 |
| 47 | 0.0036 | 0.0016 | 0.0020 |
| 48 | 0.0036 | 0.0016 | 0.0020 |
| 49 | 0.0036 | 0.0016 | 0.0020 |
| 50 | 0.0036 | 0.0016 | 0.0020 |
| 51 | 0.0036 | 0.0016 | 0.0020 |
| 52 | 0.0037 | 0.0016 | 0.0020 |
| 53 | 0.0037 | 0.0016 | 0.0020 |
| 54 | 0.0037 | 0.0016 | 0.0020 |
| 55 | 0.0037 | 0.0017 | 0.0021 |
| 56 | 0.0037 | 0.0017 | 0.0021 |
| 57 | 0.0038 | 0.0017 | 0.0021 |
| 58 | 0.0038 | 0.0017 | 0.0021 |
| 59 | 0.0038 | 0.0017 | 0.0021 |
| 60 | 0.0038 | 0.0017 | 0.0021 |
| 61 | 0.0038 | 0.0017 | 0.0021 |
| 62 | 0.0039 | 0.0017 | 0.0021 |
| 63 | 0.0039 | 0.0017 | 0.0022 |
| 64 | 0.0039 | 0.0017 | 0.0022 |
| 65 | 0.0039 | 0.0017 | 0.0022 |
| 66 | 0.0039 | 0.0018 | 0.0022 |
| 67 | 0.0040 | 0.0018 | 0.0022 |
| 68 | 0.0040 | 0.0018 | 0.0022 |
| 69 | 0.0040 | 0.0018 | 0.0022 |
| 70 | 0.0040 | 0.0018 | 0.0022 |
| 71 | 0.0041 | 0.0018 | 0.0023 |
| 72 | 0.0041 | 0.0018 | 0.0023 |
| 73 | 0.0041 | 0.0018 | 0.0023 |
| 74 | 0.0041 | 0.0018 | 0.0023 |
| 75 | 0.0042 | 0.0019 | 0.0023 |
| 76 | 0.0042 | 0.0019 | 0.0023 |
| 77 | 0.0042 | 0.0019 | 0.0023 |
| 78 | 0.0042 | 0.0019 | 0.0023 |
| 79 | 0.0043 | 0.0019 | 0.0024 |
| 80 | 0.0043 | 0.0019 | 0.0024 |
| 81 | 0.0043 | 0.0019 | 0.0024 |
| 82 | 0.0043 | 0.0019 | 0.0024 |
| 83 | 0.0044 | 0.0020 | 0.0024 |
| 84 | 0.0044 | 0.0020 | 0.0024 |
| 85 | 0.0044 | 0.0020 | 0.0025 |
| 86 | 0.0045 | 0.0020 | 0.0025 |
| 87 | 0.0045 | 0.0020 | 0.0025 |

| | | | |
|---|---|---|---|
| 88 | 0.0045 | 0.0020 | 0.0025 |
| 89 | 0.0046 | 0.0020 | 0.0025 |
| 90 | 0.0046 | 0.0020 | 0.0025 |
| 91 | 0.0046 | 0.0021 | 0.0026 |
| 92 | 0.0046 | 0.0021 | 0.0026 |
| 93 | 0.0047 | 0.0021 | 0.0026 |
| 94 | 0.0047 | 0.0021 | 0.0026 |
| 95 | 0.0048 | 0.0021 | 0.0026 |
| 96 | 0.0048 | 0.0021 | 0.0027 |
| 97 | 0.0048 | 0.0022 | 0.0027 |
| 98 | 0.0049 | 0.0022 | 0.0027 |
| 99 | 0.0049 | 0.0022 | 0.0027 |
| 100 | 0.0049 | 0.0022 | 0.0027 |
| 101 | 0.0050 | 0.0022 | 0.0028 |
| 102 | 0.0050 | 0.0022 | 0.0028 |
| 103 | 0.0051 | 0.0023 | 0.0028 |
| 104 | 0.0051 | 0.0023 | 0.0028 |
| 105 | 0.0051 | 0.0023 | 0.0029 |
| 106 | 0.0052 | 0.0023 | 0.0029 |
| 107 | 0.0052 | 0.0023 | 0.0029 |
| 108 | 0.0053 | 0.0023 | 0.0029 |
| 109 | 0.0053 | 0.0024 | 0.0030 |
| 110 | 0.0054 | 0.0024 | 0.0030 |
| 111 | 0.0054 | 0.0024 | 0.0030 |
| 112 | 0.0055 | 0.0024 | 0.0030 |
| 113 | 0.0055 | 0.0025 | 0.0031 |
| 114 | 0.0055 | 0.0025 | 0.0031 |
| 115 | 0.0056 | 0.0025 | 0.0031 |
| 116 | 0.0057 | 0.0025 | 0.0031 |
| 117 | 0.0057 | 0.0025 | 0.0032 |
| 118 | 0.0058 | 0.0026 | 0.0032 |
| 119 | 0.0058 | 0.0026 | 0.0032 |
| 120 | 0.0059 | 0.0026 | 0.0033 |
| 121 | 0.0060 | 0.0026 | 0.0033 |
| 122 | 0.0060 | 0.0027 | 0.0033 |
| 123 | 0.0061 | 0.0027 | 0.0034 |
| 124 | 0.0061 | 0.0027 | 0.0034 |
| 125 | 0.0062 | 0.0028 | 0.0034 |
| 126 | 0.0062 | 0.0028 | 0.0035 |
| 127 | 0.0063 | 0.0028 | 0.0035 |
| 128 | 0.0064 | 0.0028 | 0.0035 |
| 129 | 0.0065 | 0.0029 | 0.0036 |
| 130 | 0.0065 | 0.0029 | 0.0036 |
| 131 | 0.0066 | 0.0030 | 0.0037 |
| 132 | 0.0067 | 0.0030 | 0.0037 |
| 133 | 0.0068 | 0.0030 | 0.0038 |
| 134 | 0.0068 | 0.0030 | 0.0038 |
| 135 | 0.0070 | 0.0031 | 0.0039 |
| 136 | 0.0070 | 0.0031 | 0.0039 |
| 137 | 0.0071 | 0.0032 | 0.0040 |
| 138 | 0.0072 | 0.0032 | 0.0040 |
| 139 | 0.0073 | 0.0033 | 0.0041 |
| 140 | 0.0074 | 0.0033 | 0.0041 |
| 141 | 0.0075 | 0.0034 | 0.0042 |
| 142 | 0.0076 | 0.0034 | 0.0042 |
| 143 | 0.0078 | 0.0035 | 0.0043 |
| 144 | 0.0078 | 0.0035 | 0.0043 |
| 145 | 0.0080 | 0.0035 | 0.0044 |
| 146 | 0.0080 | 0.0036 | 0.0045 |

| | | | |
|---|---|---|---|
| 147 | 0.0082 | 0.0037 | 0.0046 |
| 148 | 0.0083 | 0.0037 | 0.0046 |
| 149 | 0.0085 | 0.0038 | 0.0047 |
| 150 | 0.0086 | 0.0038 | 0.0048 |
| 151 | 0.0088 | 0.0039 | 0.0049 |
| 152 | 0.0089 | 0.0039 | 0.0049 |
| 153 | 0.0091 | 0.0040 | 0.0050 |
| 154 | 0.0092 | 0.0041 | 0.0051 |
| 155 | 0.0094 | 0.0042 | 0.0052 |
| 156 | 0.0096 | 0.0043 | 0.0053 |
| 157 | 0.0098 | 0.0044 | 0.0054 |
| 158 | 0.0099 | 0.0044 | 0.0055 |
| 159 | 0.0102 | 0.0046 | 0.0057 |
| 160 | 0.0104 | 0.0046 | 0.0058 |
| 161 | 0.0107 | 0.0048 | 0.0059 |
| 162 | 0.0109 | 0.0048 | 0.0060 |
| 163 | 0.0112 | 0.0050 | 0.0062 |
| 164 | 0.0114 | 0.0051 | 0.0063 |
| 165 | 0.0118 | 0.0052 | 0.0065 |
| 166 | 0.0120 | 0.0053 | 0.0067 |
| 167 | 0.0124 | 0.0055 | 0.0069 |
| 168 | 0.0127 | 0.0056 | 0.0070 |
| 169 | 0.0191 | 0.0085 | 0.0106 |
| 170 | 0.0194 | 0.0086 | 0.0108 |
| 171 | 0.0201 | 0.0090 | 0.0112 |
| 172 | 0.0205 | 0.0091 | 0.0114 |
| 173 | 0.0213 | 0.0095 | 0.0118 |
| 174 | 0.0218 | 0.0097 | 0.0121 |
| 175 | 0.0227 | 0.0101 | 0.0126 |
| 176 | 0.0233 | 0.0103 | 0.0129 |
| 177 | 0.0244 | 0.0109 | 0.0135 |
| 178 | 0.0251 | 0.0112 | 0.0139 |
| 179 | 0.0265 | 0.0118 | 0.0147 |
| 180 | 0.0273 | 0.0121 | 0.0151 |
| 181 | 0.0291 | 0.0130 | 0.0162 |
| 182 | 0.0301 | 0.0134 | 0.0167 |
| 183 | 0.0326 | 0.0145 | 0.0181 |
| 184 | 0.0340 | 0.0151 | 0.0189 |
| 185 | 0.0279 | 0.0124 | 0.0155 |
| 186 | 0.0298 | 0.0132 | 0.0165 |
| 187 | 0.0345 | 0.0154 | 0.0192 |
| 188 | 0.0377 | 0.0168 | 0.0209 |
| 189 | 0.0469 | 0.0209 | 0.0260 |
| 190 | 0.0540 | 0.0222 | 0.0317 |
| 191 | 0.0819 | 0.0222 | 0.0597 |
| 192 | 0.1189 | 0.0222 | 0.0966 |
| 193 | 0.5143 | 0.0222 | 0.4920 |
| 194 | 0.0645 | 0.0222 | 0.0422 |
| 195 | 0.0417 | 0.0185 | 0.0231 |
| 196 | 0.0319 | 0.0142 | 0.0177 |
| 197 | 0.0356 | 0.0158 | 0.0197 |
| 198 | 0.0313 | 0.0139 | 0.0174 |
| 199 | 0.0282 | 0.0125 | 0.0156 |
| 200 | 0.0257 | 0.0115 | 0.0143 |
| 201 | 0.0238 | 0.0106 | 0.0132 |
| 202 | 0.0222 | 0.0099 | 0.0123 |
| 203 | 0.0209 | 0.0093 | 0.0116 |
| 204 | 0.0198 | 0.0088 | 0.0110 |
| 205 | 0.0129 | 0.0058 | 0.0072 |

| | | | |
|---|---|---|---|
| 206 | 0.0122 | 0.0054 | 0.0068 |
| 207 | 0.0116 | 0.0052 | 0.0064 |
| 208 | 0.0110 | 0.0049 | 0.0061 |
| 209 | 0.0105 | 0.0047 | 0.0058 |
| 210 | 0.0101 | 0.0045 | 0.0056 |
| 211 | 0.0097 | 0.0043 | 0.0054 |
| 212 | 0.0093 | 0.0041 | 0.0052 |
| 213 | 0.0090 | 0.0040 | 0.0050 |
| 214 | 0.0087 | 0.0039 | 0.0048 |
| 215 | 0.0084 | 0.0037 | 0.0047 |
| 216 | 0.0081 | 0.0036 | 0.0045 |
| 217 | 0.0079 | 0.0035 | 0.0044 |
| 218 | 0.0077 | 0.0034 | 0.0043 |
| 219 | 0.0075 | 0.0033 | 0.0041 |
| 220 | 0.0073 | 0.0032 | 0.0040 |
| 221 | 0.0071 | 0.0032 | 0.0039 |
| 222 | 0.0069 | 0.0031 | 0.0038 |
| 223 | 0.0067 | 0.0030 | 0.0037 |
| 224 | 0.0066 | 0.0029 | 0.0037 |
| 225 | 0.0064 | 0.0029 | 0.0036 |
| 226 | 0.0063 | 0.0028 | 0.0035 |
| 227 | 0.0062 | 0.0027 | 0.0034 |
| 228 | 0.0060 | 0.0027 | 0.0033 |
| 229 | 0.0059 | 0.0026 | 0.0033 |
| 230 | 0.0058 | 0.0026 | 0.0032 |
| 231 | 0.0057 | 0.0025 | 0.0032 |
| 232 | 0.0056 | 0.0025 | 0.0031 |
| 233 | 0.0055 | 0.0024 | 0.0030 |
| 234 | 0.0054 | 0.0024 | 0.0030 |
| 235 | 0.0053 | 0.0024 | 0.0029 |
| 236 | 0.0052 | 0.0023 | 0.0029 |
| 237 | 0.0051 | 0.0023 | 0.0028 |
| 238 | 0.0050 | 0.0022 | 0.0028 |
| 239 | 0.0050 | 0.0022 | 0.0028 |
| 240 | 0.0049 | 0.0022 | 0.0027 |
| 241 | 0.0048 | 0.0021 | 0.0027 |
| 242 | 0.0047 | 0.0021 | 0.0026 |
| 243 | 0.0047 | 0.0021 | 0.0026 |
| 244 | 0.0046 | 0.0020 | 0.0026 |
| 245 | 0.0045 | 0.0020 | 0.0025 |
| 246 | 0.0045 | 0.0020 | 0.0025 |
| 247 | 0.0044 | 0.0020 | 0.0025 |
| 248 | 0.0044 | 0.0019 | 0.0024 |
| 249 | 0.0043 | 0.0019 | 0.0024 |
| 250 | 0.0043 | 0.0019 | 0.0024 |
| 251 | 0.0042 | 0.0019 | 0.0023 |
| 252 | 0.0041 | 0.0018 | 0.0023 |
| 253 | 0.0041 | 0.0018 | 0.0023 |
| 254 | 0.0040 | 0.0018 | 0.0022 |
| 255 | 0.0040 | 0.0018 | 0.0022 |
| 256 | 0.0040 | 0.0018 | 0.0022 |
| 257 | 0.0039 | 0.0017 | 0.0022 |
| 258 | 0.0039 | 0.0017 | 0.0021 |
| 259 | 0.0038 | 0.0017 | 0.0021 |
| 260 | 0.0038 | 0.0017 | 0.0021 |
| 261 | 0.0037 | 0.0017 | 0.0021 |
| 262 | 0.0037 | 0.0016 | 0.0021 |
| 263 | 0.0037 | 0.0016 | 0.0020 |
| 264 | 0.0036 | 0.0016 | 0.0020 |

| | | | |
|---|---|---|---|
| 265 | 0.0036 | 0.0016 | 0.0020 |
| 266 | 0.0036 | 0.0016 | 0.0020 |
| 267 | 0.0035 | 0.0016 | 0.0020 |
| 268 | 0.0035 | 0.0016 | 0.0019 |
| 269 | 0.0035 | 0.0015 | 0.0019 |
| 270 | 0.0034 | 0.0015 | 0.0019 |
| 271 | 0.0034 | 0.0015 | 0.0019 |
| 272 | 0.0034 | 0.0015 | 0.0019 |
| 273 | 0.0033 | 0.0015 | 0.0018 |
| 274 | 0.0033 | 0.0015 | 0.0018 |
| 275 | 0.0033 | 0.0015 | 0.0018 |
| 276 | 0.0032 | 0.0014 | 0.0018 |
| 277 | 0.0032 | 0.0014 | 0.0018 |
| 278 | 0.0032 | 0.0014 | 0.0018 |
| 279 | 0.0032 | 0.0014 | 0.0018 |
| 280 | 0.0031 | 0.0014 | 0.0017 |
| 281 | 0.0031 | 0.0014 | 0.0017 |
| 282 | 0.0031 | 0.0014 | 0.0017 |
| 283 | 0.0031 | 0.0014 | 0.0017 |
| 284 | 0.0030 | 0.0014 | 0.0017 |
| 285 | 0.0030 | 0.0013 | 0.0017 |
| 286 | 0.0030 | 0.0013 | 0.0017 |
| 287 | 0.0030 | 0.0013 | 0.0016 |
| 288 | 0.0029 | 0.0013 | 0.0016 |

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Total soil rain loss = 1.08(In)
Total effective rainfall = 1.93(In)
Peak flow rate in flood hydrograph = 2754.99(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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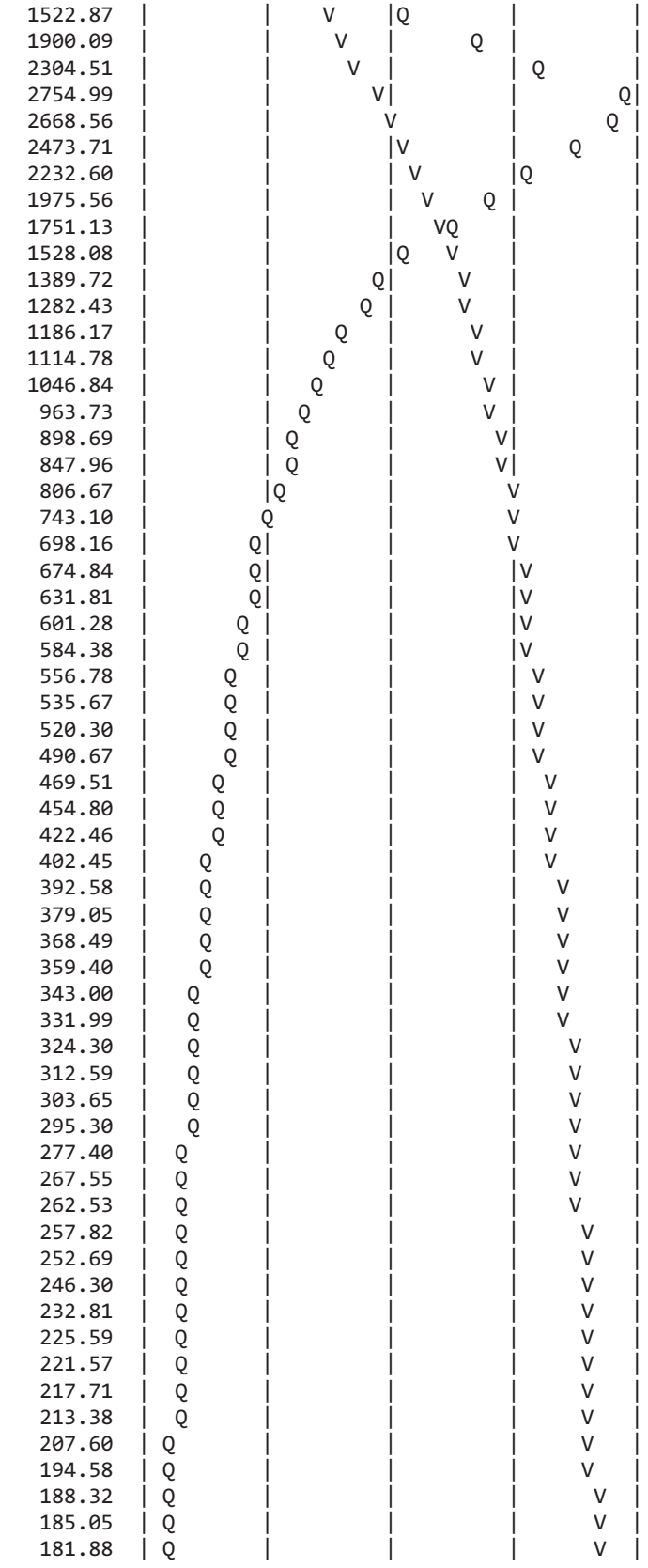
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 700.0 | 1400.0 | 2100.0 | 2800.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0018 | 0.26 | Q | | | | |
| 0+10 | 0.0076 | 0.84 | Q | | | | |
| 0+15 | 0.0197 | 1.76 | Q | | | | |
| 0+20 | 0.0402 | 2.98 | Q | | | | |
| 0+25 | 0.0711 | 4.48 | Q | | | | |
| 0+30 | 0.1149 | 6.36 | Q | | | | |
| 0+35 | 0.1782 | 9.19 | Q | | | | |
| 0+40 | 0.2687 | 13.14 | Q | | | | |
| 0+45 | 0.3973 | 18.67 | Q | | | | |
| 0+50 | 0.5625 | 23.99 | Q | | | | |
| 0+55 | 0.7611 | 28.84 | Q | | | | |
| 1+ 0 | 0.9891 | 33.10 | Q | | | | |
| 1+ 5 | 1.2418 | 36.70 | Q | | | | |
| 1+10 | 1.5156 | 39.75 | Q | | | | |
| 1+15 | 1.8063 | 42.21 | Q | | | | |
| 1+20 | 2.1118 | 44.37 | Q | | | | |
| 1+25 | 2.4307 | 46.31 | Q | | | | |
| 1+30 | 2.7616 | 48.05 | Q | | | | |
| 1+35 | 3.1038 | 49.68 | Q | | | | |
| 1+40 | 3.4565 | 51.22 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+45 | 3.8188 | 52.60 | Q | \| | \| | \| | \| |
| 1+50 | 4.1899 | 53.89 | Q | \| | \| | \| | \| |
| 1+55 | 4.5694 | 55.11 | Q | \| | \| | \| | \| |
| 2+ 0 | 4.9572 | 56.31 | Q | \| | \| | \| | \| |
| 2+ 5 | 5.3524 | 57.38 | Q | \| | \| | \| | \| |
| 2+10 | 5.7545 | 58.38 | Q | \| | \| | \| | \| |
| 2+15 | 6.1634 | 59.38 | Q | \| | \| | \| | \| |
| 2+20 | 6.5787 | 60.30 | Q | \| | \| | \| | \| |
| 2+25 | 7.0000 | 61.18 | Q | \| | \| | \| | \| |
| 2+30 | 7.4274 | 62.05 | Q | \| | \| | \| | \| |
| 2+35 | 7.8605 | 62.89 | Q | \| | \| | \| | \| |
| 2+40 | 8.2993 | 63.71 | Q | \| | \| | \| | \| |
| 2+45 | 8.7437 | 64.53 | Q | \| | \| | \| | \| |
| 2+50 | 9.1933 | 65.29 | Q | \| | \| | \| | \| |
| 2+55 | 9.6480 | 66.03 | Q | \| | \| | \| | \| |
| 3+ 0 | 10.1078 | 66.77 | Q | \| | \| | \| | \| |
| 3+ 5 | 10.5723 | 67.43 | Q | \| | \| | \| | \| |
| 3+10 | 11.0411 | 68.07 | Q | \| | \| | \| | \| |
| 3+15 | 11.5143 | 68.71 | Q | \| | \| | \| | \| |
| 3+20 | 11.9918 | 69.34 | Q | \| | \| | \| | \| |
| 3+25 | 12.4737 | 69.96 | Q | \| | \| | \| | \| |
| 3+30 | 12.9598 | 70.59 | VQ | \| | \| | \| | \| |
| 3+35 | 13.4501 | 71.19 | VQ | \| | \| | \| | \| |
| 3+40 | 13.9444 | 71.78 | VQ | \| | \| | \| | \| |
| 3+45 | 14.4428 | 72.37 | \|Q | \| | \| | \| | \| |
| 3+50 | 14.9452 | 72.95 | \|Q | \| | \| | \| | \| |
| 3+55 | 15.4516 | 73.53 | \|Q | \| | \| | \| | \| |
| 4+ 0 | 15.9619 | 74.10 | \|Q | \| | \| | \| | \| |
| 4+ 5 | 16.4760 | 74.65 | \|Q | \| | \| | \| | \| |
| 4+10 | 16.9938 | 75.18 | \|Q | \| | \| | \| | \| |
| 4+15 | 17.5152 | 75.71 | \|Q | \| | \| | \| | \| |
| 4+20 | 18.0403 | 76.25 | \|Q | \| | \| | \| | \| |
| 4+25 | 18.5692 | 76.79 | \|Q | \| | \| | \| | \| |
| 4+30 | 19.1018 | 77.34 | \|Q | \| | \| | \| | \| |
| 4+35 | 19.6381 | 77.86 | \|Q | \| | \| | \| | \| |
| 4+40 | 20.1778 | 78.37 | \|Q | \| | \| | \| | \| |
| 4+45 | 20.7212 | 78.90 | \|Q | \| | \| | \| | \| |
| 4+50 | 21.2681 | 79.42 | \|Q | \| | \| | \| | \| |
| 4+55 | 21.8188 | 79.95 | \|Q | \| | \| | \| | \| |
| 5+ 0 | 22.3730 | 80.48 | \|Q | \| | \| | \| | \| |
| 5+ 5 | 22.9308 | 80.98 | \|Q | \| | \| | \| | \| |
| 5+10 | 23.4920 | 81.48 | \|Q | \| | \| | \| | \| |
| 5+15 | 24.0566 | 81.99 | \|Q | \| | \| | \| | \| |
| 5+20 | 24.6248 | 82.50 | \|Q | \| | \| | \| | \| |
| 5+25 | 25.1965 | 83.02 | \|Q | \| | \| | \| | \| |
| 5+30 | 25.7718 | 83.53 | \|Q | \| | \| | \| | \| |
| 5+35 | 26.3505 | 84.03 | \|Q | \| | \| | \| | \| |
| 5+40 | 26.9326 | 84.52 | \|Q | \| | \| | \| | \| |
| 5+45 | 27.5181 | 85.01 | \|Q | \| | \| | \| | \| |
| 5+50 | 28.1071 | 85.51 | \|Q | \| | \| | \| | \| |
| 5+55 | 28.6995 | 86.02 | \|QV | \| | \| | \| | \| |
| 6+ 0 | 29.2955 | 86.54 | \|QV | \| | \| | \| | \| |
| 6+ 5 | 29.8951 | 87.07 | \|QV | \| | \| | \| | \| |
| 6+10 | 30.4984 | 87.60 | \|QV | \| | \| | \| | \| |
| 6+15 | 31.1055 | 88.14 | \|QV | \| | \| | \| | \| |
| 6+20 | 31.7163 | 88.69 | \|QV | \| | \| | \| | \| |
| 6+25 | 32.3309 | 89.24 | \|QV | \| | \| | \| | \| |
| 6+30 | 32.9494 | 89.80 | \|QV | \| | \| | \| | \| |
| 6+35 | 33.5718 | 90.37 | \|QV | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+40 | 34.1981 | 90.95 | \|QV | \| | \| | \| | \| |
| 6+45 | 34.8285 | 91.53 | \|QV | \| | \| | \| | \| |
| 6+50 | 35.4629 | 92.12 | \|QV | \| | \| | \| | \| |
| 6+55 | 36.1014 | 92.71 | \|QV | \| | \| | \| | \| |
| 7+ 0 | 36.7441 | 93.31 | \|QV | \| | \| | \| | \| |
| 7+ 5 | 37.3908 | 93.90 | \|QV | \| | \| | \| | \| |
| 7+10 | 38.0415 | 94.49 | \|QV | \| | \| | \| | \| |
| 7+15 | 38.6963 | 95.08 | \|QV | \| | \| | \| | \| |
| 7+20 | 39.3553 | 95.69 | \|QV | \| | \| | \| | \| |
| 7+25 | 40.0186 | 96.30 | \|QV | \| | \| | \| | \| |
| 7+30 | 40.6861 | 96.92 | \|QV | \| | \| | \| | \| |
| 7+35 | 41.3579 | 97.55 | \|QV | \| | \| | \| | \| |
| 7+40 | 42.0342 | 98.19 | \|QV | \| | \| | \| | \| |
| 7+45 | 42.7149 | 98.84 | \|Q V | \| | \| | \| | \| |
| 7+50 | 43.4001 | 99.48 | \|Q V | \| | \| | \| | \| |
| 7+55 | 44.0896 | 100.12 | \|Q V | \| | \| | \| | \| |
| 8+ 0 | 44.7836 | 100.76 | \|Q V | \| | \| | \| | \| |
| 8+ 5 | 45.4821 | 101.42 | \|Q V | \| | \| | \| | \| |
| 8+10 | 46.1852 | 102.08 | \|Q V | \| | \| | \| | \| |
| 8+15 | 46.8929 | 102.76 | \|Q V | \| | \| | \| | \| |
| 8+20 | 47.6053 | 103.45 | \|Q V | \| | \| | \| | \| |
| 8+25 | 48.3226 | 104.15 | \|Q V | \| | \| | \| | \| |
| 8+30 | 49.0447 | 104.85 | \|Q V | \| | \| | \| | \| |
| 8+35 | 49.7718 | 105.58 | \|Q V | \| | \| | \| | \| |
| 8+40 | 50.5039 | 106.31 | \|Q V | \| | \| | \| | \| |
| 8+45 | 51.2412 | 107.05 | \|Q V | \| | \| | \| | \| |
| 8+50 | 51.9837 | 107.81 | \|Q V | \| | \| | \| | \| |
| 8+55 | 52.7315 | 108.58 | \|Q V | \| | \| | \| | \| |
| 9+ 0 | 53.4848 | 109.37 | \|Q V | \| | \| | \| | \| |
| 9+ 5 | 54.2435 | 110.17 | \|Q V | \| | \| | \| | \| |
| 9+10 | 55.0078 | 110.98 | \|Q V | \| | \| | \| | \| |
| 9+15 | 55.7778 | 111.81 | \|Q V | \| | \| | \| | \| |
| 9+20 | 56.5536 | 112.65 | \|Q  V | \| | \| | \| | \| |
| 9+25 | 57.3354 | 113.51 | \|Q  V | \| | \| | \| | \| |
| 9+30 | 58.1231 | 114.38 | \|Q  V | \| | \| | \| | \| |
| 9+35 | 58.9170 | 115.27 | \|Q  V | \| | \| | \| | \| |
| 9+40 | 59.7171 | 116.18 | \|Q  V | \| | \| | \| | \| |
| 9+45 | 60.5236 | 117.11 | \|Q  V | \| | \| | \| | \| |
| 9+50 | 61.3366 | 118.05 | \|Q  V | \| | \| | \| | \| |
| 9+55 | 62.1562 | 119.01 | \|Q  V | \| | \| | \| | \| |
| 10+ 0 | 62.9826 | 119.99 | \|Q  V | \| | \| | \| | \| |
| 10+ 5 | 63.8159 | 120.99 | \|Q  V | \| | \| | \| | \| |
| 10+10 | 64.6562 | 122.01 | \|Q  V | \| | \| | \| | \| |
| 10+15 | 65.5037 | 123.06 | \|Q  V | \| | \| | \| | \| |
| 10+20 | 66.3584 | 124.12 | \|Q  V | \| | \| | \| | \| |
| 10+25 | 67.2208 | 125.21 | \|Q  V | \| | \| | \| | \| |
| 10+30 | 68.0907 | 126.31 | \|Q  V | \| | \| | \| | \| |
| 10+35 | 68.9684 | 127.45 | \|Q  V | \| | \| | \| | \| |
| 10+40 | 69.8542 | 128.61 | \|Q  V | \| | \| | \| | \| |
| 10+45 | 70.7481 | 129.80 | \|Q   V | \| | \| | \| | \| |
| 10+50 | 71.6503 | 131.00 | \|Q   V | \| | \| | \| | \| |
| 10+55 | 72.5611 | 132.25 | \|Q   V | \| | \| | \| | \| |
| 11+ 0 | 73.4806 | 133.51 | \|Q   V | \| | \| | \| | \| |
| 11+ 5 | 74.4091 | 134.82 | \|Q   V | \| | \| | \| | \| |
| 11+10 | 75.3467 | 136.14 | \|Q   V | \| | \| | \| | \| |
| 11+15 | 76.2938 | 137.51 | \|Q   V | \| | \| | \| | \| |
| 11+20 | 77.2504 | 138.90 | \|Q   V | \| | \| | \| | \| |
| 11+25 | 78.2169 | 140.34 | \| Q  V | \| | \| | \| | \| |
| 11+30 | 79.1935 | 141.80 | \| Q  V | \| | \| | \| | \| |

```
11+35      80.1805    143.31  | Q  V    |          |          |          |
11+40      81.1781    144.85  | Q  V    |          |          |          |
11+45      82.1867    146.44  | Q  V    |          |          |          |
11+50      83.2064    148.07  | Q  V    |          |          |          |
11+55      84.2378    149.75  | Q  V    |          |          |          |
12+ 0      85.2809    151.47  | Q   V   |          |          |          |
12+ 5      86.3363    153.24  | Q   V   |          |          |          |
12+10      87.4042    155.05  | Q   V   |          |          |          |
12+15      88.4849    156.93  | Q   V   |          |          |          |
12+20      89.5789    158.84  | Q   V   |          |          |          |
12+25      90.6865    160.82  | Q   V   |          |          |          |
12+30      91.8080    162.85  | Q   V   |          |          |          |
12+35      92.9441    164.95  | Q   V   |          |          |          |
12+40      94.0949    167.09  | Q   V   |          |          |          |
12+45      95.2609    169.31  | Q   V   |          |          |          |
12+50      96.4426    171.59  | Q   V   |          |          |          |
12+55      97.6407    173.96  | Q   V   |          |          |          |
13+ 0      98.8557    176.42  | Q    V  |          |          |          |
13+ 5     100.0884    178.99  | Q    V  |          |          |          |
13+10     101.3393    181.64  | Q    V  |          |          |          |
13+15     102.6094    184.42  | Q    V  |          |          |          |
13+20     103.8992    187.28  | Q    V  |          |          |          |
13+25     105.2098    190.29  | Q    V  |          |          |          |
13+30     106.5418    193.40  | Q    V  |          |          |          |
13+35     107.8963    196.67  | Q    V  |          |          |          |
13+40     109.2741    200.06  | Q    V  |          |          |          |
13+45     110.6764    203.62  | Q    V  |          |          |          |
13+50     112.1043    207.32  | Q    V  |          |          |          |
13+55     113.5590    211.22  |  Q    V |          |          |          |
14+ 0     115.0416    215.28  |  Q    V |          |          |          |
14+ 5     116.5576    220.11  |  Q    V |          |          |          |
14+10     118.1124    225.77  |  Q    V |          |          |          |
14+15     119.7130    232.40  |  Q    V |          |          |          |
14+20     121.3649    239.86  |  Q    V |          |          |          |
14+25     123.0747    248.26  |  Q    V |          |          |          |
14+30     124.8496    257.72  |  Q    V |          |          |          |
14+35     126.7060    269.54  |  Q    V |          |          |          |
14+40     128.6617    283.97  |   Q    V|          |          |          |
14+45     130.7428    302.18  |   Q    V|          |          |          |
14+50     132.9501    320.49  |   Q    V|          |          |          |
14+55     135.2821    338.61  |   Q    V|          |          |          |
15+ 0     137.7350    356.16  |    Q   V|          |          |          |
15+ 5     140.3060    373.31  |    Q   V|          |          |          |
15+10     142.9929    390.14  |    Q    V          |          |          |
15+15     145.7955    406.94  |    Q    V          |          |          |
15+20     148.7168    424.17  |     Q   V          |          |          |
15+25     151.7583    441.62  |     Q   V          |          |          |
15+30     154.9200    459.08  |     Q   V          |          |          |
15+35     158.2073    477.32  |     Q   |V         |          |          |
15+40     161.6269    496.51  |      Q  |V         |          |          |
15+45     165.1924    517.72  |      Q  |V         |          |          |
15+50     168.9210    541.39  |      Q  |V         |          |          |
15+55     172.8530    570.93  |       Q | V        |          |          |
16+ 0     177.0689    612.15  |       Q | V        |          |          |
16+ 5     182.0900    729.06  |         Q V        |          |          |
16+10     188.0668    867.83  |         | QV       |          |          |
16+15     195.0676   1016.51  |         |  VQ      |          |          |
16+20     203.0361   1157.04  |         |   V Q    |          |          |
16+25     212.0931   1315.07  |         |    V  Q  |          |          |
```

| | | | |
|---|---|---|---|
| 16+30 | 222.5812 | 1522.87 |  |
| 16+35 | 235.6672 | 1900.09 | |
| 16+40 | 251.5385 | 2304.51 | |
| 16+45 | 270.5123 | 2754.99 | |
| 16+50 | 288.8907 | 2668.56 | |
| 16+55 | 305.9273 | 2473.71 | |
| 17+ 0 | 321.3033 | 2232.60 | |
| 17+ 5 | 334.9091 | 1975.56 | |
| 17+10 | 346.9692 | 1751.13 | |
| 17+15 | 357.4931 | 1528.08 | |
| 17+20 | 367.0642 | 1389.72 | |
| 17+25 | 375.8964 | 1282.43 | |
| 17+30 | 384.0656 | 1186.17 | |
| 17+35 | 391.7432 | 1114.78 | |
| 17+40 | 398.9528 | 1046.84 | |
| 17+45 | 405.5901 | 963.73 | |
| 17+50 | 411.7794 | 898.69 | |
| 17+55 | 417.6193 | 847.96 | |
| 18+ 0 | 423.1749 | 806.67 | |
| 18+ 5 | 428.2926 | 743.10 | |
| 18+10 | 433.1009 | 698.16 | |
| 18+15 | 437.7485 | 674.84 | |
| 18+20 | 442.0998 | 631.81 | |
| 18+25 | 446.2409 | 601.28 | |
| 18+30 | 450.2656 | 584.38 | |
| 18+35 | 454.1001 | 556.78 | |
| 18+40 | 457.7894 | 535.67 | |
| 18+45 | 461.3727 | 520.30 | |
| 18+50 | 464.7520 | 490.67 | |
| 18+55 | 467.9855 | 469.51 | |
| 19+ 0 | 471.1177 | 454.80 | |
| 19+ 5 | 474.0272 | 422.46 | |
| 19+10 | 476.7989 | 402.45 | |
| 19+15 | 479.5027 | 392.58 | |
| 19+20 | 482.1132 | 379.05 | |
| 19+25 | 484.6510 | 368.49 | |
| 19+30 | 487.1261 | 359.40 | |
| 19+35 | 489.4884 | 343.00 | |
| 19+40 | 491.7749 | 331.99 | |
| 19+45 | 494.0083 | 324.30 | |
| 19+50 | 496.1611 | 312.59 | |
| 19+55 | 498.2524 | 303.65 | |
| 20+ 0 | 500.2861 | 295.30 | |
| 20+ 5 | 502.1966 | 277.40 | |
| 20+10 | 504.0392 | 267.55 | |
| 20+15 | 505.8473 | 262.53 | |
| 20+20 | 507.6229 | 257.82 | |
| 20+25 | 509.3632 | 252.69 | |
| 20+30 | 511.0595 | 246.30 | |
| 20+35 | 512.6629 | 232.81 | |
| 20+40 | 514.2165 | 225.59 | |
| 20+45 | 515.7425 | 221.57 | |
| 20+50 | 517.2419 | 217.71 | |
| 20+55 | 518.7114 | 213.38 | |
| 21+ 0 | 520.1412 | 207.60 | |
| 21+ 5 | 521.4812 | 194.58 | |
| 21+10 | 522.7782 | 188.32 | |
| 21+15 | 524.0527 | 185.05 | |
| 21+20 | 525.3053 | 181.88 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+25 | 526.5321 | 178.13 | Q | | | | V |
| 21+30 | 527.7229 | 172.90 | Q | | | | V |
| 21+35 | 528.8315 | 160.97 | Q | | | | V |
| 21+40 | 529.9046 | 155.81 | Q | | | | V |
| 21+45 | 530.9607 | 153.35 | Q | | | | V |
| 21+50 | 532.0017 | 151.15 | Q | | | | V |
| 21+55 | 533.0285 | 149.10 | Q | | | | V |
| 22+ 0 | 534.0444 | 147.50 | Q | | | | V |
| 22+ 5 | 535.0603 | 147.51 | Q | | | | V |
| 22+10 | 536.0665 | 146.10 | Q | | | | V |
| 22+15 | 537.0597 | 144.21 | Q | | | | V |
| 22+20 | 538.0399 | 142.33 | Q | | | | V |
| 22+25 | 539.0078 | 140.53 | Q | | | | V |
| 22+30 | 539.9632 | 138.73 | Q | | | | V |
| 22+35 | 540.9056 | 136.84 | Q | | | | V |
| 22+40 | 541.8360 | 135.09 | Q | | | | V |
| 22+45 | 542.7541 | 133.31 | Q | | | | V |
| 22+50 | 543.6589 | 131.38 | Q | | | | V |
| 22+55 | 544.5471 | 128.96 | Q | | | | V |
| 23+ 0 | 545.4083 | 125.05 | Q | | | | V |
| 23+ 5 | 546.2087 | 116.22 | Q | | | | V |
| 23+10 | 546.9877 | 113.12 | Q | | | | V |
| 23+15 | 547.7555 | 111.49 | Q | | | | V |
| 23+20 | 548.5129 | 109.97 | Q | | | | V |
| 23+25 | 549.2595 | 108.41 | Q | | | | V |
| 23+30 | 549.9954 | 106.85 | Q | | | | V |
| 23+35 | 550.7201 | 105.23 | Q | | | | V |
| 23+40 | 551.4317 | 103.33 | Q | | | | V |
| 23+45 | 552.1261 | 100.82 | Q | | | | V |
| 23+50 | 552.7756 | 94.31 | Q | | | | V |
| 23+55 | 553.3774 | 87.39 | Q | | | | V |
| 24+ 0 | 553.9687 | 85.85 | Q | | | | V |
| 24+ 5 | 554.5499 | 84.40 | Q | | | | V |
| 24+10 | 555.1195 | 82.70 | Q | | | | V |
| 24+15 | 555.6752 | 80.69 | Q | | | | V |
| 24+20 | 556.2156 | 78.46 | Q | | | | V |
| 24+25 | 556.7391 | 76.01 | Q | | | | V |
| 24+30 | 557.2435 | 73.24 | Q | | | | V |
| 24+35 | 557.7227 | 69.58 | Q | | | | V |
| 24+40 | 558.1695 | 64.88 | Q | | | | V |
| 24+45 | 558.5735 | 58.66 | Q | | | | V |
| 24+50 | 558.9369 | 52.76 | Q | | | | V |
| 24+55 | 559.2637 | 47.46 | Q | | | | V |
| 25+ 0 | 559.5586 | 42.82 | Q | | | | V |
| 25+ 5 | 559.8265 | 38.90 | Q | | | | V |
| 25+10 | 560.0716 | 35.58 | Q | | | | V |
| 25+15 | 560.2981 | 32.90 | Q | | | | V |
| 25+20 | 560.5086 | 30.56 | Q | | | | V |
| 25+25 | 560.7047 | 28.47 | Q | | | | V |
| 25+30 | 560.8880 | 26.61 | Q | | | | V |
| 25+35 | 561.0594 | 24.89 | Q | | | | V |
| 25+40 | 561.2198 | 23.29 | Q | | | | V |
| 25+45 | 561.3704 | 21.87 | Q | | | | V |
| 25+50 | 561.5120 | 20.56 | Q | | | | V |
| 25+55 | 561.6452 | 19.34 | Q | | | | V |
| 26+ 0 | 561.7703 | 18.17 | Q | | | | V |
| 26+ 5 | 561.8884 | 17.13 | Q | | | | V |
| 26+10 | 561.9999 | 16.19 | Q | | | | V |
| 26+15 | 562.1050 | 15.26 | Q | | | | V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+20 | 562.2044 | 14.43 | Q | \| | \| | \| | V\| |
| 26+25 | 562.2985 | 13.66 | Q | \| | \| | \| | V\| |
| 26+30 | 562.3873 | 12.89 | Q | \| | \| | \| | V\| |
| 26+35 | 562.4712 | 12.19 | Q | \| | \| | \| | V\| |
| 26+40 | 562.5505 | 11.51 | Q | \| | \| | \| | V\| |
| 26+45 | 562.6252 | 10.85 | Q | \| | \| | \| | V\| |
| 26+50 | 562.6957 | 10.25 | Q | \| | \| | \| | V\| |
| 26+55 | 562.7624 | 9.68 | Q | \| | \| | \| | V\| |
| 27+ 0 | 562.8253 | 9.13 | Q | \| | \| | \| | V\| |
| 27+ 5 | 562.8849 | 8.66 | Q | \| | \| | \| | V\| |
| 27+10 | 562.9416 | 8.23 | Q | \| | \| | \| | V\| |
| 27+15 | 562.9953 | 7.80 | Q | \| | \| | \| | V\| |
| 27+20 | 563.0462 | 7.40 | Q | \| | \| | \| | V\| |
| 27+25 | 563.0945 | 7.00 | Q | \| | \| | \| | V\| |
| 27+30 | 563.1401 | 6.62 | Q | \| | \| | \| | V\| |
| 27+35 | 563.1832 | 6.27 | Q | \| | \| | \| | V\| |
| 27+40 | 563.2241 | 5.94 | Q | \| | \| | \| | V\| |
| 27+45 | 563.2627 | 5.61 | Q | \| | \| | \| | V\| |
| 27+50 | 563.2992 | 5.30 | Q | \| | \| | \| | V\| |
| 27+55 | 563.3337 | 5.00 | Q | \| | \| | \| | V\| |
| 28+ 0 | 563.3662 | 4.71 | Q | \| | \| | \| | V\| |
| 28+ 5 | 563.3969 | 4.47 | Q | \| | \| | \| | V\| |
| 28+10 | 563.4261 | 4.24 | Q | \| | \| | \| | V\| |
| 28+15 | 563.4537 | 4.01 | Q | \| | \| | \| | V\| |
| 28+20 | 563.4798 | 3.79 | Q | \| | \| | \| | V\| |
| 28+25 | 563.5043 | 3.57 | Q | \| | \| | \| | V\| |
| 28+30 | 563.5274 | 3.35 | Q | \| | \| | \| | V\| |
| 28+35 | 563.5492 | 3.16 | Q | \| | \| | \| | V\| |
| 28+40 | 563.5698 | 2.99 | Q | \| | \| | \| | V\| |
| 28+45 | 563.5892 | 2.82 | Q | \| | \| | \| | V\| |
| 28+50 | 563.6075 | 2.65 | Q | \| | \| | \| | V\| |
| 28+55 | 563.6246 | 2.49 | Q | \| | \| | \| | V\| |
| 29+ 0 | 563.6406 | 2.32 | Q | \| | \| | \| | V\| |
| 29+ 5 | 563.6557 | 2.19 | Q | \| | \| | \| | V\| |
| 29+10 | 563.6700 | 2.08 | Q | \| | \| | \| | V\| |
| 29+15 | 563.6835 | 1.96 | Q | \| | \| | \| | V\| |
| 29+20 | 563.6962 | 1.84 | Q | \| | \| | \| | V\| |
| 29+25 | 563.7081 | 1.73 | Q | \| | \| | \| | V\| |
| 29+30 | 563.7193 | 1.62 | Q | \| | \| | \| | V\| |
| 29+35 | 563.7299 | 1.54 | Q | \| | \| | \| | V\| |
| 29+40 | 563.7400 | 1.47 | Q | \| | \| | \| | V\| |
| 29+45 | 563.7496 | 1.40 | Q | \| | \| | \| | V\| |
| 29+50 | 563.7588 | 1.33 | Q | \| | \| | \| | V\| |
| 29+55 | 563.7675 | 1.26 | Q | \| | \| | \| | V\| |
| 30+ 0 | 563.7757 | 1.19 | Q | \| | \| | \| | V\| |
| 30+ 5 | 563.7834 | 1.12 | Q | \| | \| | \| | V\| |
| 30+10 | 563.7906 | 1.05 | Q | \| | \| | \| | V\| |
| 30+15 | 563.7973 | 0.97 | Q | \| | \| | \| | V\| |
| 30+20 | 563.8035 | 0.90 | Q | \| | \| | \| | V\| |
| 30+25 | 563.8092 | 0.82 | Q | \| | \| | \| | V\| |
| 30+30 | 563.8143 | 0.75 | Q | \| | \| | \| | V\| |
| 30+35 | 563.8190 | 0.68 | Q | \| | \| | \| | V\| |
| 30+40 | 563.8232 | 0.61 | Q | \| | \| | \| | V\| |
| 30+45 | 563.8269 | 0.54 | Q | \| | \| | \| | V\| |
| 30+50 | 563.8302 | 0.47 | Q | \| | \| | \| | V\| |
| 30+55 | 563.8330 | 0.40 | Q | \| | \| | \| | V\| |
| 31+ 0 | 563.8353 | 0.34 | Q | \| | \| | \| | V\| |
| 31+ 5 | 563.8373 | 0.30 | Q | \| | \| | \| | V\| |
| 31+10 | 563.8391 | 0.26 | Q | \| | \| | \| | V\| |

```
   31+15     563.8407      0.23  Q         |         |         |        V|
   31+20     563.8420      0.19  Q         |         |         |        V|
   31+25     563.8431      0.16  Q         |         |         |        V|
   31+30     563.8439      0.12  Q         |         |         |        V|
   31+35     563.8445      0.09  Q         |         |         |        V|
   31+40     563.8449      0.05  Q         |         |         |        V|
   31+45     563.8450      0.02  Q         |         |         |         V
-------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 48
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) | |
|---|---|---|---|
| Rainfall data for year 100 | | | |
| 764.55 | 1 | 1.40 | |
| Rainfall data for year 100 | | | |
| 764.55 | 6 | 1.85 | |
| Rainfall data for year 100 | | | |
| 764.55 | 24 | 2.62 | |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 70.7 | 87.6 | 764.55 | 1.000 | 0.237 | 0.894 | 0.212 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.212

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 683.20 | 0.894 | 70.7 | 87.6 | 1.42 | 0.554 |
| 81.35 | 0.106 | 98.0 | 98.0 | 0.20 | 0.912 |

Area-averaged catchment yield fraction, Y = 0.592
Area-averaged low loss fraction, Yb = 0.408
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 20795.00(Ft.)
Length from concentration point to centroid = 10119.00(Ft.)
Elevation difference along watercourse = 58.10(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 764.55(Ac.)
Catchment Lag time = 1.086 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 7.6744
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.212(In/Hr)
Average low loss rate fraction (Yb) = 0.408 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.664(In)
Computed peak 30-minute rainfall = 1.137(In)
Specified peak 1-hour rainfall = 1.400(In)
Computed peak 3-hour rainfall = 1.661(In)
Specified peak 6-hour rainfall = 1.850(In)
Specified peak 24-hour rainfall = 2.620(In)

Rainfall depth area reduction factors:
Using a total area of 764.55(Ac.) (Ref: fig. E-4)

5-minute factor = 0.964 Adjusted rainfall = 0.641(In)
30-minute factor = 0.964 Adjusted rainfall = 1.096(In)
1-hour factor = 0.964 Adjusted rainfall = 1.350(In)
3-hour factor = 0.995 Adjusted rainfall = 1.653(In)
6-hour factor = 0.998 Adjusted rainfall = 1.846(In)
24-hour factor = 0.999 Adjusted rainfall = 2.617(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 9246.28 (CFS)) | |
| 1 | 0.338 | 31.222 |
| 2 | 1.055 | 66.356 |
| 3 | 2.223 | 107.990 |
| 4 | 3.682 | 134.858 |
| 5 | 5.569 | 174.501 |
| 6 | 7.882 | 213.896 |
| 7 | 10.735 | 263.782 |
| 8 | 15.337 | 425.521 |
| 9 | 21.329 | 553.991 |
| 10 | 29.124 | 720.728 |

| | | |
|---|---|---|
| 11 | 36.078 | 643.007 |
| 12 | 42.350 | 579.965 |
| 13 | 47.395 | 466.497 |
| 14 | 51.874 | 414.107 |
| 15 | 55.805 | 363.422 |
| 16 | 58.978 | 293.445 |
| 17 | 61.785 | 259.530 |
| 18 | 64.201 | 223.393 |
| 19 | 66.382 | 201.643 |
| 20 | 68.389 | 185.575 |
| 21 | 70.258 | 172.837 |
| 22 | 71.995 | 160.626 |
| 23 | 73.531 | 142.020 |
| 24 | 74.941 | 130.380 |
| 25 | 76.282 | 123.973 |
| 26 | 77.577 | 119.742 |
| 27 | 78.745 | 107.940 |
| 28 | 79.758 | 93.714 |
| 29 | 80.771 | 93.667 |
| 30 | 81.741 | 89.708 |
| 31 | 82.580 | 77.499 |
| 32 | 83.408 | 76.637 |
| 33 | 84.229 | 75.870 |
| 34 | 84.981 | 69.533 |
| 35 | 85.718 | 68.122 |
| 36 | 86.453 | 67.964 |
| 37 | 87.109 | 60.710 |
| 38 | 87.723 | 56.768 |
| 39 | 88.337 | 56.768 |
| 40 | 88.888 | 50.903 |
| 41 | 89.349 | 42.635 |
| 42 | 89.809 | 42.576 |
| 43 | 90.263 | 41.973 |
| 44 | 90.695 | 39.910 |
| 45 | 91.125 | 39.738 |
| 46 | 91.550 | 39.297 |
| 47 | 91.929 | 35.103 |
| 48 | 92.298 | 34.061 |
| 49 | 92.666 | 34.034 |
| 50 | 93.015 | 32.281 |
| 51 | 93.353 | 31.222 |
| 52 | 93.690 | 31.222 |
| 53 | 93.998 | 28.482 |
| 54 | 94.260 | 24.178 |
| 55 | 94.521 | 24.126 |
| 56 | 94.782 | 24.126 |
| 57 | 95.043 | 24.126 |
| 58 | 95.304 | 24.126 |
| 59 | 95.560 | 23.751 |
| 60 | 95.772 | 19.599 |
| 61 | 95.972 | 18.450 |
| 62 | 96.171 | 18.450 |
| 63 | 96.371 | 18.450 |
| 64 | 96.570 | 18.450 |
| 65 | 96.770 | 18.450 |
| 66 | 96.947 | 16.406 |
| 67 | 97.086 | 12.838 |
| 68 | 97.224 | 12.773 |
| 69 | 97.363 | 12.773 |

| | | |
|---|---|---|
| 70 | 97.501 | 12.773 |
| 71 | 97.639 | 12.773 |
| 72 | 97.774 | 12.457 |
| 73 | 97.864 | 8.357 |
| 74 | 97.941 | 7.096 |
| 75 | 98.017 | 7.096 |
| 76 | 98.094 | 7.096 |
| 77 | 98.171 | 7.096 |
| 78 | 98.248 | 7.096 |
| 79 | 98.330 | 7.571 |
| 80 | 98.421 | 8.492 |
| 81 | 98.514 | 8.515 |
| 82 | 98.606 | 8.515 |
| 83 | 98.698 | 8.515 |
| 84 | 98.790 | 8.515 |
| 85 | 98.882 | 8.515 |
| 86 | 98.974 | 8.515 |
| 87 | 99.066 | 8.515 |
| 88 | 99.158 | 8.515 |
| 89 | 99.250 | 8.515 |
| 90 | 99.342 | 8.515 |
| 91 | 99.434 | 8.515 |
| 92 | 99.513 | 7.248 |
| 93 | 99.562 | 4.527 |
| 94 | 99.610 | 4.435 |
| 95 | 99.658 | 4.435 |
| 96 | 99.706 | 4.435 |
| 97 | 99.754 | 4.435 |
| 98 | 99.802 | 4.435 |
| 99 | 99.850 | 4.435 |
| 100 | 99.898 | 4.435 |
| 101 | 99.946 | 4.435 |
| 102 | 100.000 | 2.217 |

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| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6405 | 0.6405 |
| 2 | 0.7886 | 0.1480 |
| 3 | 0.8906 | 0.1020 |
| 4 | 0.9708 | 0.0803 |
| 5 | 1.0380 | 0.0672 |
| 6 | 1.0964 | 0.0584 |
| 7 | 1.1483 | 0.0519 |
| 8 | 1.1952 | 0.0469 |
| 9 | 1.2382 | 0.0430 |
| 10 | 1.2780 | 0.0398 |
| 11 | 1.3150 | 0.0371 |
| 12 | 1.3498 | 0.0348 |
| 13 | 1.3699 | 0.0201 |
| 14 | 1.3888 | 0.0189 |
| 15 | 1.4066 | 0.0178 |
| 16 | 1.4235 | 0.0169 |
| 17 | 1.4395 | 0.0160 |
| 18 | 1.4548 | 0.0153 |
| 19 | 1.4694 | 0.0146 |
| 20 | 1.4833 | 0.0140 |
| 21 | 1.4968 | 0.0134 |
| 22 | 1.5097 | 0.0129 |
| 23 | 1.5221 | 0.0124 |

| | | |
|---|---|---|
| 24 | 1.5341 | 0.0120 |
| 25 | 1.5457 | 0.0116 |
| 26 | 1.5570 | 0.0112 |
| 27 | 1.5678 | 0.0109 |
| 28 | 1.5784 | 0.0106 |
| 29 | 1.5887 | 0.0103 |
| 30 | 1.5986 | 0.0100 |
| 31 | 1.6083 | 0.0097 |
| 32 | 1.6178 | 0.0095 |
| 33 | 1.6270 | 0.0092 |
| 34 | 1.6360 | 0.0090 |
| 35 | 1.6448 | 0.0088 |
| 36 | 1.6534 | 0.0086 |
| 37 | 1.6606 | 0.0072 |
| 38 | 1.6676 | 0.0070 |
| 39 | 1.6745 | 0.0069 |
| 40 | 1.6812 | 0.0067 |
| 41 | 1.6878 | 0.0066 |
| 42 | 1.6943 | 0.0065 |
| 43 | 1.7006 | 0.0063 |
| 44 | 1.7069 | 0.0062 |
| 45 | 1.7130 | 0.0061 |
| 46 | 1.7189 | 0.0060 |
| 47 | 1.7248 | 0.0059 |
| 48 | 1.7306 | 0.0058 |
| 49 | 1.7363 | 0.0057 |
| 50 | 1.7418 | 0.0056 |
| 51 | 1.7473 | 0.0055 |
| 52 | 1.7527 | 0.0054 |
| 53 | 1.7580 | 0.0053 |
| 54 | 1.7632 | 0.0052 |
| 55 | 1.7684 | 0.0051 |
| 56 | 1.7734 | 0.0051 |
| 57 | 1.7784 | 0.0050 |
| 58 | 1.7833 | 0.0049 |
| 59 | 1.7882 | 0.0048 |
| 60 | 1.7930 | 0.0048 |
| 61 | 1.7977 | 0.0047 |
| 62 | 1.8023 | 0.0046 |
| 63 | 1.8069 | 0.0046 |
| 64 | 1.8114 | 0.0045 |
| 65 | 1.8159 | 0.0045 |
| 66 | 1.8203 | 0.0044 |
| 67 | 1.8246 | 0.0043 |
| 68 | 1.8289 | 0.0043 |
| 69 | 1.8332 | 0.0042 |
| 70 | 1.8373 | 0.0042 |
| 71 | 1.8415 | 0.0041 |
| 72 | 1.8456 | 0.0041 |
| 73 | 1.8520 | 0.0064 |
| 74 | 1.8584 | 0.0064 |
| 75 | 1.8647 | 0.0063 |
| 76 | 1.8709 | 0.0062 |
| 77 | 1.8771 | 0.0062 |
| 78 | 1.8832 | 0.0061 |
| 79 | 1.8892 | 0.0061 |
| 80 | 1.8952 | 0.0060 |
| 81 | 1.9012 | 0.0059 |
| 82 | 1.9071 | 0.0059 |

| | | |
|---|---|---|
| 83 | 1.9129 | 0.0058 |
| 84 | 1.9187 | 0.0058 |
| 85 | 1.9244 | 0.0057 |
| 86 | 1.9301 | 0.0057 |
| 87 | 1.9357 | 0.0056 |
| 88 | 1.9413 | 0.0056 |
| 89 | 1.9469 | 0.0055 |
| 90 | 1.9524 | 0.0055 |
| 91 | 1.9578 | 0.0054 |
| 92 | 1.9632 | 0.0054 |
| 93 | 1.9686 | 0.0054 |
| 94 | 1.9739 | 0.0053 |
| 95 | 1.9791 | 0.0053 |
| 96 | 1.9844 | 0.0052 |
| 97 | 1.9896 | 0.0052 |
| 98 | 1.9947 | 0.0052 |
| 99 | 1.9998 | 0.0051 |
| 100 | 2.0049 | 0.0051 |
| 101 | 2.0099 | 0.0050 |
| 102 | 2.0149 | 0.0050 |
| 103 | 2.0199 | 0.0050 |
| 104 | 2.0248 | 0.0049 |
| 105 | 2.0297 | 0.0049 |
| 106 | 2.0346 | 0.0049 |
| 107 | 2.0394 | 0.0048 |
| 108 | 2.0442 | 0.0048 |
| 109 | 2.0489 | 0.0048 |
| 110 | 2.0537 | 0.0047 |
| 111 | 2.0583 | 0.0047 |
| 112 | 2.0630 | 0.0047 |
| 113 | 2.0676 | 0.0046 |
| 114 | 2.0722 | 0.0046 |
| 115 | 2.0768 | 0.0046 |
| 116 | 2.0813 | 0.0045 |
| 117 | 2.0858 | 0.0045 |
| 118 | 2.0903 | 0.0045 |
| 119 | 2.0948 | 0.0045 |
| 120 | 2.0992 | 0.0044 |
| 121 | 2.1036 | 0.0044 |
| 122 | 2.1080 | 0.0044 |
| 123 | 2.1123 | 0.0043 |
| 124 | 2.1166 | 0.0043 |
| 125 | 2.1209 | 0.0043 |
| 126 | 2.1252 | 0.0043 |
| 127 | 2.1294 | 0.0042 |
| 128 | 2.1336 | 0.0042 |
| 129 | 2.1378 | 0.0042 |
| 130 | 2.1420 | 0.0042 |
| 131 | 2.1461 | 0.0041 |
| 132 | 2.1502 | 0.0041 |
| 133 | 2.1543 | 0.0041 |
| 134 | 2.1584 | 0.0041 |
| 135 | 2.1624 | 0.0040 |
| 136 | 2.1665 | 0.0040 |
| 137 | 2.1705 | 0.0040 |
| 138 | 2.1745 | 0.0040 |
| 139 | 2.1784 | 0.0040 |
| 140 | 2.1824 | 0.0039 |
| 141 | 2.1863 | 0.0039 |

| | | |
|---|---|---|
| 142 | 2.1902 | 0.0039 |
| 143 | 2.1941 | 0.0039 |
| 144 | 2.1979 | 0.0039 |
| 145 | 2.2017 | 0.0038 |
| 146 | 2.2056 | 0.0038 |
| 147 | 2.2094 | 0.0038 |
| 148 | 2.2131 | 0.0038 |
| 149 | 2.2169 | 0.0038 |
| 150 | 2.2206 | 0.0037 |
| 151 | 2.2244 | 0.0037 |
| 152 | 2.2281 | 0.0037 |
| 153 | 2.2318 | 0.0037 |
| 154 | 2.2354 | 0.0037 |
| 155 | 2.2391 | 0.0036 |
| 156 | 2.2427 | 0.0036 |
| 157 | 2.2463 | 0.0036 |
| 158 | 2.2499 | 0.0036 |
| 159 | 2.2535 | 0.0036 |
| 160 | 2.2571 | 0.0036 |
| 161 | 2.2606 | 0.0035 |
| 162 | 2.2641 | 0.0035 |
| 163 | 2.2677 | 0.0035 |
| 164 | 2.2712 | 0.0035 |
| 165 | 2.2746 | 0.0035 |
| 166 | 2.2781 | 0.0035 |
| 167 | 2.2816 | 0.0035 |
| 168 | 2.2850 | 0.0034 |
| 169 | 2.2884 | 0.0034 |
| 170 | 2.2918 | 0.0034 |
| 171 | 2.2952 | 0.0034 |
| 172 | 2.2986 | 0.0034 |
| 173 | 2.3019 | 0.0034 |
| 174 | 2.3053 | 0.0033 |
| 175 | 2.3086 | 0.0033 |
| 176 | 2.3119 | 0.0033 |
| 177 | 2.3152 | 0.0033 |
| 178 | 2.3185 | 0.0033 |
| 179 | 2.3218 | 0.0033 |
| 180 | 2.3251 | 0.0033 |
| 181 | 2.3283 | 0.0032 |
| 182 | 2.3316 | 0.0032 |
| 183 | 2.3348 | 0.0032 |
| 184 | 2.3380 | 0.0032 |
| 185 | 2.3412 | 0.0032 |
| 186 | 2.3444 | 0.0032 |
| 187 | 2.3475 | 0.0032 |
| 188 | 2.3507 | 0.0032 |
| 189 | 2.3538 | 0.0031 |
| 190 | 2.3570 | 0.0031 |
| 191 | 2.3601 | 0.0031 |
| 192 | 2.3632 | 0.0031 |
| 193 | 2.3663 | 0.0031 |
| 194 | 2.3694 | 0.0031 |
| 195 | 2.3725 | 0.0031 |
| 196 | 2.3755 | 0.0031 |
| 197 | 2.3786 | 0.0030 |
| 198 | 2.3816 | 0.0030 |
| 199 | 2.3846 | 0.0030 |
| 200 | 2.3876 | 0.0030 |

| | | |
|---|---|---|
| 201 | 2.3906 | 0.0030 |
| 202 | 2.3936 | 0.0030 |
| 203 | 2.3966 | 0.0030 |
| 204 | 2.3996 | 0.0030 |
| 205 | 2.4026 | 0.0030 |
| 206 | 2.4055 | 0.0029 |
| 207 | 2.4084 | 0.0029 |
| 208 | 2.4114 | 0.0029 |
| 209 | 2.4143 | 0.0029 |
| 210 | 2.4172 | 0.0029 |
| 211 | 2.4201 | 0.0029 |
| 212 | 2.4230 | 0.0029 |
| 213 | 2.4258 | 0.0029 |
| 214 | 2.4287 | 0.0029 |
| 215 | 2.4316 | 0.0029 |
| 216 | 2.4344 | 0.0028 |
| 217 | 2.4372 | 0.0028 |
| 218 | 2.4401 | 0.0028 |
| 219 | 2.4429 | 0.0028 |
| 220 | 2.4457 | 0.0028 |
| 221 | 2.4485 | 0.0028 |
| 222 | 2.4513 | 0.0028 |
| 223 | 2.4541 | 0.0028 |
| 224 | 2.4568 | 0.0028 |
| 225 | 2.4596 | 0.0028 |
| 226 | 2.4623 | 0.0028 |
| 227 | 2.4651 | 0.0027 |
| 228 | 2.4678 | 0.0027 |
| 229 | 2.4705 | 0.0027 |
| 230 | 2.4733 | 0.0027 |
| 231 | 2.4760 | 0.0027 |
| 232 | 2.4787 | 0.0027 |
| 233 | 2.4813 | 0.0027 |
| 234 | 2.4840 | 0.0027 |
| 235 | 2.4867 | 0.0027 |
| 236 | 2.4894 | 0.0027 |
| 237 | 2.4920 | 0.0027 |
| 238 | 2.4947 | 0.0026 |
| 239 | 2.4973 | 0.0026 |
| 240 | 2.4999 | 0.0026 |
| 241 | 2.5026 | 0.0026 |
| 242 | 2.5052 | 0.0026 |
| 243 | 2.5078 | 0.0026 |
| 244 | 2.5104 | 0.0026 |
| 245 | 2.5130 | 0.0026 |
| 246 | 2.5155 | 0.0026 |
| 247 | 2.5181 | 0.0026 |
| 248 | 2.5207 | 0.0026 |
| 249 | 2.5232 | 0.0026 |
| 250 | 2.5258 | 0.0026 |
| 251 | 2.5283 | 0.0025 |
| 252 | 2.5309 | 0.0025 |
| 253 | 2.5334 | 0.0025 |
| 254 | 2.5359 | 0.0025 |
| 255 | 2.5384 | 0.0025 |
| 256 | 2.5409 | 0.0025 |
| 257 | 2.5434 | 0.0025 |
| 258 | 2.5459 | 0.0025 |
| 259 | 2.5484 | 0.0025 |

| | | |
|---|---|---|
| 260 | 2.5509 | 0.0025 |
| 261 | 2.5533 | 0.0025 |
| 262 | 2.5558 | 0.0025 |
| 263 | 2.5583 | 0.0025 |
| 264 | 2.5607 | 0.0024 |
| 265 | 2.5632 | 0.0024 |
| 266 | 2.5656 | 0.0024 |
| 267 | 2.5680 | 0.0024 |
| 268 | 2.5704 | 0.0024 |
| 269 | 2.5729 | 0.0024 |
| 270 | 2.5753 | 0.0024 |
| 271 | 2.5777 | 0.0024 |
| 272 | 2.5801 | 0.0024 |
| 273 | 2.5824 | 0.0024 |
| 274 | 2.5848 | 0.0024 |
| 275 | 2.5872 | 0.0024 |
| 276 | 2.5896 | 0.0024 |
| 277 | 2.5919 | 0.0024 |
| 278 | 2.5943 | 0.0024 |
| 279 | 2.5966 | 0.0023 |
| 280 | 2.5990 | 0.0023 |
| 281 | 2.6013 | 0.0023 |
| 282 | 2.6036 | 0.0023 |
| 283 | 2.6060 | 0.0023 |
| 284 | 2.6083 | 0.0023 |
| 285 | 2.6106 | 0.0023 |
| 286 | 2.6129 | 0.0023 |
| 287 | 2.6152 | 0.0023 |
| 288 | 2.6175 | 0.0023 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0023 | 0.0009 | 0.0014 |
| 2 | 0.0023 | 0.0009 | 0.0014 |
| 3 | 0.0023 | 0.0009 | 0.0014 |
| 4 | 0.0023 | 0.0009 | 0.0014 |
| 5 | 0.0023 | 0.0009 | 0.0014 |
| 6 | 0.0023 | 0.0010 | 0.0014 |
| 7 | 0.0023 | 0.0010 | 0.0014 |
| 8 | 0.0024 | 0.0010 | 0.0014 |
| 9 | 0.0024 | 0.0010 | 0.0014 |
| 10 | 0.0024 | 0.0010 | 0.0014 |
| 11 | 0.0024 | 0.0010 | 0.0014 |
| 12 | 0.0024 | 0.0010 | 0.0014 |
| 13 | 0.0024 | 0.0010 | 0.0014 |
| 14 | 0.0024 | 0.0010 | 0.0014 |
| 15 | 0.0024 | 0.0010 | 0.0014 |
| 16 | 0.0024 | 0.0010 | 0.0014 |
| 17 | 0.0024 | 0.0010 | 0.0015 |
| 18 | 0.0025 | 0.0010 | 0.0015 |
| 19 | 0.0025 | 0.0010 | 0.0015 |
| 20 | 0.0025 | 0.0010 | 0.0015 |
| 21 | 0.0025 | 0.0010 | 0.0015 |
| 22 | 0.0025 | 0.0010 | 0.0015 |
| 23 | 0.0025 | 0.0010 | 0.0015 |
| 24 | 0.0025 | 0.0010 | 0.0015 |
| 25 | 0.0025 | 0.0010 | 0.0015 |

| | | | |
|---|---|---|---|
| 26 | 0.0025 | 0.0010 | 0.0015 |
| 27 | 0.0026 | 0.0010 | 0.0015 |
| 28 | 0.0026 | 0.0010 | 0.0015 |
| 29 | 0.0026 | 0.0011 | 0.0015 |
| 30 | 0.0026 | 0.0011 | 0.0015 |
| 31 | 0.0026 | 0.0011 | 0.0015 |
| 32 | 0.0026 | 0.0011 | 0.0015 |
| 33 | 0.0026 | 0.0011 | 0.0016 |
| 34 | 0.0026 | 0.0011 | 0.0016 |
| 35 | 0.0027 | 0.0011 | 0.0016 |
| 36 | 0.0027 | 0.0011 | 0.0016 |
| 37 | 0.0027 | 0.0011 | 0.0016 |
| 38 | 0.0027 | 0.0011 | 0.0016 |
| 39 | 0.0027 | 0.0011 | 0.0016 |
| 40 | 0.0027 | 0.0011 | 0.0016 |
| 41 | 0.0027 | 0.0011 | 0.0016 |
| 42 | 0.0027 | 0.0011 | 0.0016 |
| 43 | 0.0028 | 0.0011 | 0.0016 |
| 44 | 0.0028 | 0.0011 | 0.0016 |
| 45 | 0.0028 | 0.0011 | 0.0017 |
| 46 | 0.0028 | 0.0011 | 0.0017 |
| 47 | 0.0028 | 0.0011 | 0.0017 |
| 48 | 0.0028 | 0.0012 | 0.0017 |
| 49 | 0.0028 | 0.0012 | 0.0017 |
| 50 | 0.0029 | 0.0012 | 0.0017 |
| 51 | 0.0029 | 0.0012 | 0.0017 |
| 52 | 0.0029 | 0.0012 | 0.0017 |
| 53 | 0.0029 | 0.0012 | 0.0017 |
| 54 | 0.0029 | 0.0012 | 0.0017 |
| 55 | 0.0029 | 0.0012 | 0.0017 |
| 56 | 0.0029 | 0.0012 | 0.0017 |
| 57 | 0.0030 | 0.0012 | 0.0018 |
| 58 | 0.0030 | 0.0012 | 0.0018 |
| 59 | 0.0030 | 0.0012 | 0.0018 |
| 60 | 0.0030 | 0.0012 | 0.0018 |
| 61 | 0.0030 | 0.0012 | 0.0018 |
| 62 | 0.0030 | 0.0012 | 0.0018 |
| 63 | 0.0031 | 0.0013 | 0.0018 |
| 64 | 0.0031 | 0.0013 | 0.0018 |
| 65 | 0.0031 | 0.0013 | 0.0018 |
| 66 | 0.0031 | 0.0013 | 0.0018 |
| 67 | 0.0031 | 0.0013 | 0.0019 |
| 68 | 0.0032 | 0.0013 | 0.0019 |
| 69 | 0.0032 | 0.0013 | 0.0019 |
| 70 | 0.0032 | 0.0013 | 0.0019 |
| 71 | 0.0032 | 0.0013 | 0.0019 |
| 72 | 0.0032 | 0.0013 | 0.0019 |
| 73 | 0.0033 | 0.0013 | 0.0019 |
| 74 | 0.0033 | 0.0013 | 0.0019 |
| 75 | 0.0033 | 0.0013 | 0.0020 |
| 76 | 0.0033 | 0.0014 | 0.0020 |
| 77 | 0.0033 | 0.0014 | 0.0020 |
| 78 | 0.0034 | 0.0014 | 0.0020 |
| 79 | 0.0034 | 0.0014 | 0.0020 |
| 80 | 0.0034 | 0.0014 | 0.0020 |
| 81 | 0.0034 | 0.0014 | 0.0020 |
| 82 | 0.0035 | 0.0014 | 0.0020 |
| 83 | 0.0035 | 0.0014 | 0.0021 |
| 84 | 0.0035 | 0.0014 | 0.0021 |

| | | | |
|---|---|---|---|
| 85 | 0.0035 | 0.0014 | 0.0021 |
| 86 | 0.0035 | 0.0014 | 0.0021 |
| 87 | 0.0036 | 0.0015 | 0.0021 |
| 88 | 0.0036 | 0.0015 | 0.0021 |
| 89 | 0.0036 | 0.0015 | 0.0022 |
| 90 | 0.0036 | 0.0015 | 0.0022 |
| 91 | 0.0037 | 0.0015 | 0.0022 |
| 92 | 0.0037 | 0.0015 | 0.0022 |
| 93 | 0.0037 | 0.0015 | 0.0022 |
| 94 | 0.0038 | 0.0015 | 0.0022 |
| 95 | 0.0038 | 0.0015 | 0.0023 |
| 96 | 0.0038 | 0.0016 | 0.0023 |
| 97 | 0.0039 | 0.0016 | 0.0023 |
| 98 | 0.0039 | 0.0016 | 0.0023 |
| 99 | 0.0039 | 0.0016 | 0.0023 |
| 100 | 0.0039 | 0.0016 | 0.0023 |
| 101 | 0.0040 | 0.0016 | 0.0024 |
| 102 | 0.0040 | 0.0016 | 0.0024 |
| 103 | 0.0040 | 0.0017 | 0.0024 |
| 104 | 0.0041 | 0.0017 | 0.0024 |
| 105 | 0.0041 | 0.0017 | 0.0024 |
| 106 | 0.0041 | 0.0017 | 0.0025 |
| 107 | 0.0042 | 0.0017 | 0.0025 |
| 108 | 0.0042 | 0.0017 | 0.0025 |
| 109 | 0.0043 | 0.0017 | 0.0025 |
| 110 | 0.0043 | 0.0017 | 0.0025 |
| 111 | 0.0043 | 0.0018 | 0.0026 |
| 112 | 0.0044 | 0.0018 | 0.0026 |
| 113 | 0.0044 | 0.0018 | 0.0026 |
| 114 | 0.0045 | 0.0018 | 0.0026 |
| 115 | 0.0045 | 0.0018 | 0.0027 |
| 116 | 0.0045 | 0.0018 | 0.0027 |
| 117 | 0.0046 | 0.0019 | 0.0027 |
| 118 | 0.0046 | 0.0019 | 0.0027 |
| 119 | 0.0047 | 0.0019 | 0.0028 |
| 120 | 0.0047 | 0.0019 | 0.0028 |
| 121 | 0.0048 | 0.0020 | 0.0028 |
| 122 | 0.0048 | 0.0020 | 0.0029 |
| 123 | 0.0049 | 0.0020 | 0.0029 |
| 124 | 0.0049 | 0.0020 | 0.0029 |
| 125 | 0.0050 | 0.0020 | 0.0030 |
| 126 | 0.0050 | 0.0021 | 0.0030 |
| 127 | 0.0051 | 0.0021 | 0.0030 |
| 128 | 0.0052 | 0.0021 | 0.0031 |
| 129 | 0.0052 | 0.0021 | 0.0031 |
| 130 | 0.0053 | 0.0021 | 0.0031 |
| 131 | 0.0054 | 0.0022 | 0.0032 |
| 132 | 0.0054 | 0.0022 | 0.0032 |
| 133 | 0.0055 | 0.0022 | 0.0033 |
| 134 | 0.0055 | 0.0023 | 0.0033 |
| 135 | 0.0056 | 0.0023 | 0.0033 |
| 136 | 0.0057 | 0.0023 | 0.0034 |
| 137 | 0.0058 | 0.0024 | 0.0034 |
| 138 | 0.0058 | 0.0024 | 0.0035 |
| 139 | 0.0059 | 0.0024 | 0.0035 |
| 140 | 0.0060 | 0.0024 | 0.0036 |
| 141 | 0.0061 | 0.0025 | 0.0036 |
| 142 | 0.0062 | 0.0025 | 0.0037 |
| 143 | 0.0063 | 0.0026 | 0.0037 |

| | | | |
|---|---|---|---|
| 144 | 0.0064 | 0.0026 | 0.0038 |
| 145 | 0.0041 | 0.0017 | 0.0024 |
| 146 | 0.0041 | 0.0017 | 0.0025 |
| 147 | 0.0042 | 0.0017 | 0.0025 |
| 148 | 0.0043 | 0.0018 | 0.0025 |
| 149 | 0.0044 | 0.0018 | 0.0026 |
| 150 | 0.0045 | 0.0018 | 0.0026 |
| 151 | 0.0046 | 0.0019 | 0.0027 |
| 152 | 0.0046 | 0.0019 | 0.0028 |
| 153 | 0.0048 | 0.0019 | 0.0028 |
| 154 | 0.0048 | 0.0020 | 0.0029 |
| 155 | 0.0050 | 0.0020 | 0.0030 |
| 156 | 0.0051 | 0.0021 | 0.0030 |
| 157 | 0.0052 | 0.0021 | 0.0031 |
| 158 | 0.0053 | 0.0022 | 0.0031 |
| 159 | 0.0055 | 0.0022 | 0.0032 |
| 160 | 0.0056 | 0.0023 | 0.0033 |
| 161 | 0.0058 | 0.0024 | 0.0034 |
| 162 | 0.0059 | 0.0024 | 0.0035 |
| 163 | 0.0061 | 0.0025 | 0.0036 |
| 164 | 0.0062 | 0.0025 | 0.0037 |
| 165 | 0.0065 | 0.0026 | 0.0038 |
| 166 | 0.0066 | 0.0027 | 0.0039 |
| 167 | 0.0069 | 0.0028 | 0.0041 |
| 168 | 0.0070 | 0.0029 | 0.0042 |
| 169 | 0.0086 | 0.0035 | 0.0051 |
| 170 | 0.0088 | 0.0036 | 0.0052 |
| 171 | 0.0092 | 0.0038 | 0.0055 |
| 172 | 0.0095 | 0.0039 | 0.0056 |
| 173 | 0.0100 | 0.0041 | 0.0059 |
| 174 | 0.0103 | 0.0042 | 0.0061 |
| 175 | 0.0109 | 0.0044 | 0.0064 |
| 176 | 0.0112 | 0.0046 | 0.0067 |
| 177 | 0.0120 | 0.0049 | 0.0071 |
| 178 | 0.0124 | 0.0051 | 0.0074 |
| 179 | 0.0134 | 0.0055 | 0.0080 |
| 180 | 0.0140 | 0.0057 | 0.0083 |
| 181 | 0.0153 | 0.0062 | 0.0090 |
| 182 | 0.0160 | 0.0065 | 0.0095 |
| 183 | 0.0178 | 0.0073 | 0.0105 |
| 184 | 0.0189 | 0.0077 | 0.0112 |
| 185 | 0.0348 | 0.0142 | 0.0206 |
| 186 | 0.0371 | 0.0151 | 0.0220 |
| 187 | 0.0430 | 0.0175 | 0.0255 |
| 188 | 0.0469 | 0.0176 | 0.0293 |
| 189 | 0.0584 | 0.0176 | 0.0407 |
| 190 | 0.0672 | 0.0176 | 0.0496 |
| 191 | 0.1020 | 0.0176 | 0.0843 |
| 192 | 0.1480 | 0.0176 | 0.1304 |
| 193 | 0.6405 | 0.0176 | 0.6229 |
| 194 | 0.0803 | 0.0176 | 0.0626 |
| 195 | 0.0519 | 0.0176 | 0.0342 |
| 196 | 0.0398 | 0.0162 | 0.0236 |
| 197 | 0.0201 | 0.0082 | 0.0119 |
| 198 | 0.0169 | 0.0069 | 0.0100 |
| 199 | 0.0146 | 0.0059 | 0.0086 |
| 200 | 0.0129 | 0.0053 | 0.0076 |
| 201 | 0.0116 | 0.0047 | 0.0069 |
| 202 | 0.0106 | 0.0043 | 0.0063 |

| | | | |
|---|---|---|---|
| 203 | 0.0097 | 0.0040 | 0.0058 |
| 204 | 0.0090 | 0.0037 | 0.0053 |
| 205 | 0.0072 | 0.0029 | 0.0043 |
| 206 | 0.0067 | 0.0027 | 0.0040 |
| 207 | 0.0063 | 0.0026 | 0.0038 |
| 208 | 0.0060 | 0.0024 | 0.0035 |
| 209 | 0.0057 | 0.0023 | 0.0034 |
| 210 | 0.0054 | 0.0022 | 0.0032 |
| 211 | 0.0051 | 0.0021 | 0.0030 |
| 212 | 0.0049 | 0.0020 | 0.0029 |
| 213 | 0.0047 | 0.0019 | 0.0028 |
| 214 | 0.0045 | 0.0018 | 0.0027 |
| 215 | 0.0043 | 0.0018 | 0.0026 |
| 216 | 0.0042 | 0.0017 | 0.0025 |
| 217 | 0.0064 | 0.0026 | 0.0038 |
| 218 | 0.0062 | 0.0025 | 0.0037 |
| 219 | 0.0061 | 0.0025 | 0.0036 |
| 220 | 0.0059 | 0.0024 | 0.0035 |
| 221 | 0.0057 | 0.0023 | 0.0034 |
| 222 | 0.0056 | 0.0023 | 0.0033 |
| 223 | 0.0054 | 0.0022 | 0.0032 |
| 224 | 0.0053 | 0.0022 | 0.0031 |
| 225 | 0.0052 | 0.0021 | 0.0031 |
| 226 | 0.0051 | 0.0021 | 0.0030 |
| 227 | 0.0050 | 0.0020 | 0.0029 |
| 228 | 0.0049 | 0.0020 | 0.0029 |
| 229 | 0.0048 | 0.0019 | 0.0028 |
| 230 | 0.0047 | 0.0019 | 0.0028 |
| 231 | 0.0046 | 0.0019 | 0.0027 |
| 232 | 0.0045 | 0.0018 | 0.0027 |
| 233 | 0.0044 | 0.0018 | 0.0026 |
| 234 | 0.0043 | 0.0018 | 0.0026 |
| 235 | 0.0042 | 0.0017 | 0.0025 |
| 236 | 0.0042 | 0.0017 | 0.0025 |
| 237 | 0.0041 | 0.0017 | 0.0024 |
| 238 | 0.0040 | 0.0016 | 0.0024 |
| 239 | 0.0040 | 0.0016 | 0.0023 |
| 240 | 0.0039 | 0.0016 | 0.0023 |
| 241 | 0.0038 | 0.0016 | 0.0023 |
| 242 | 0.0038 | 0.0015 | 0.0022 |
| 243 | 0.0037 | 0.0015 | 0.0022 |
| 244 | 0.0037 | 0.0015 | 0.0022 |
| 245 | 0.0036 | 0.0015 | 0.0021 |
| 246 | 0.0036 | 0.0015 | 0.0021 |
| 247 | 0.0035 | 0.0014 | 0.0021 |
| 248 | 0.0035 | 0.0014 | 0.0021 |
| 249 | 0.0034 | 0.0014 | 0.0020 |
| 250 | 0.0034 | 0.0014 | 0.0020 |
| 251 | 0.0033 | 0.0014 | 0.0020 |
| 252 | 0.0033 | 0.0013 | 0.0019 |
| 253 | 0.0032 | 0.0013 | 0.0019 |
| 254 | 0.0032 | 0.0013 | 0.0019 |
| 255 | 0.0032 | 0.0013 | 0.0019 |
| 256 | 0.0031 | 0.0013 | 0.0019 |
| 257 | 0.0031 | 0.0013 | 0.0018 |
| 258 | 0.0031 | 0.0012 | 0.0018 |
| 259 | 0.0030 | 0.0012 | 0.0018 |
| 260 | 0.0030 | 0.0012 | 0.0018 |
| 261 | 0.0030 | 0.0012 | 0.0018 |

| | | | |
|---|---|---|---|
| 262 | 0.0029 | 0.0012 | 0.0017 |
| 263 | 0.0029 | 0.0012 | 0.0017 |
| 264 | 0.0029 | 0.0012 | 0.0017 |
| 265 | 0.0028 | 0.0012 | 0.0017 |
| 266 | 0.0028 | 0.0011 | 0.0017 |
| 267 | 0.0028 | 0.0011 | 0.0016 |
| 268 | 0.0028 | 0.0011 | 0.0016 |
| 269 | 0.0027 | 0.0011 | 0.0016 |
| 270 | 0.0027 | 0.0011 | 0.0016 |
| 271 | 0.0027 | 0.0011 | 0.0016 |
| 272 | 0.0026 | 0.0011 | 0.0016 |
| 273 | 0.0026 | 0.0011 | 0.0016 |
| 274 | 0.0026 | 0.0011 | 0.0015 |
| 275 | 0.0026 | 0.0010 | 0.0015 |
| 276 | 0.0026 | 0.0010 | 0.0015 |
| 277 | 0.0025 | 0.0010 | 0.0015 |
| 278 | 0.0025 | 0.0010 | 0.0015 |
| 279 | 0.0025 | 0.0010 | 0.0015 |
| 280 | 0.0025 | 0.0010 | 0.0015 |
| 281 | 0.0024 | 0.0010 | 0.0014 |
| 282 | 0.0024 | 0.0010 | 0.0014 |
| 283 | 0.0024 | 0.0010 | 0.0014 |
| 284 | 0.0024 | 0.0010 | 0.0014 |
| 285 | 0.0024 | 0.0010 | 0.0014 |
| 286 | 0.0023 | 0.0010 | 0.0014 |
| 287 | 0.0023 | 0.0009 | 0.0014 |
| 288 | 0.0023 | 0.0009 | 0.0014 |

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Total soil rain loss = 0.72(In)
Total effective rainfall = 1.90(In)
Peak flow rate in flood hydrograph = 732.31(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 200.0 | 400.0 | 600.0 | 800.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0003 | 0.04 | Q | \| | \| | \| | \| |
| 0+10 | 0.0012 | 0.13 | Q | \| | \| | \| | \| |
| 0+15 | 0.0031 | 0.28 | Q | \| | \| | \| | \| |
| 0+20 | 0.0063 | 0.46 | Q | \| | \| | \| | \| |
| 0+25 | 0.0112 | 0.70 | Q | \| | \| | \| | \| |
| 0+30 | 0.0180 | 1.00 | Q | \| | \| | \| | \| |
| 0+35 | 0.0274 | 1.36 | Q | \| | \| | \| | \| |
| 0+40 | 0.0408 | 1.94 | Q | \| | \| | \| | \| |
| 0+45 | 0.0594 | 2.70 | Q | \| | \| | \| | \| |
| 0+50 | 0.0848 | 3.69 | Q | \| | \| | \| | \| |
| 0+55 | 0.1163 | 4.58 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.1534 | 5.39 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.1950 | 6.04 | Q | \| | \| | \| | \| |
| 1+10 | 0.2407 | 6.63 | Q | \| | \| | \| | \| |
| 1+15 | 0.2899 | 7.15 | Q | \| | \| | \| | \| |
| 1+20 | 0.3420 | 7.57 | Q | \| | \| | \| | \| |
| 1+25 | 0.3968 | 7.96 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+30 | 0.4539 | 8.29 | Q | | | | |
| 1+35 | 0.5132 | 8.60 | Q | | | | |
| 1+40 | 0.5744 | 8.89 | Q | | | | |
| 1+45 | 0.6375 | 9.16 | Q | | | | |
| 1+50 | 0.7023 | 9.41 | Q | | | | |
| 1+55 | 0.7687 | 9.65 | Q | | | | |
| 2+ 0 | 0.8367 | 9.86 | Q | | | | |
| 2+ 5 | 0.9060 | 10.07 | Q | | | | |
| 2+10 | 0.9768 | 10.28 | Q | | | | |
| 2+15 | 1.0489 | 10.47 | Q | | | | |
| 2+20 | 1.1222 | 10.64 | Q | | | | |
| 2+25 | 1.1966 | 10.81 | Q | | | | |
| 2+30 | 1.2723 | 10.98 | Q | | | | |
| 2+35 | 1.3489 | 11.13 | Q | | | | |
| 2+40 | 1.4266 | 11.28 | Q | | | | |
| 2+45 | 1.5054 | 11.44 | Q | | | | |
| 2+50 | 1.5851 | 11.58 | Q | | | | |
| 2+55 | 1.6659 | 11.72 | Q | | | | |
| 3+ 0 | 1.7476 | 11.87 | Q | | | | |
| 3+ 5 | 1.8303 | 12.00 | Q | | | | |
| 3+10 | 1.9138 | 12.13 | Q | | | | |
| 3+15 | 1.9983 | 12.26 | Q | | | | |
| 3+20 | 2.0836 | 12.39 | Q | | | | |
| 3+25 | 2.1697 | 12.50 | Q | | | | |
| 3+30 | 2.2566 | 12.62 | Q | | | | |
| 3+35 | 2.3443 | 12.73 | Q | | | | |
| 3+40 | 2.4327 | 12.84 | Q | | | | |
| 3+45 | 2.5220 | 12.96 | Q | | | | |
| 3+50 | 2.6120 | 13.07 | Q | | | | |
| 3+55 | 2.7028 | 13.18 | Q | | | | |
| 4+ 0 | 2.7943 | 13.29 | Q | | | | |
| 4+ 5 | 2.8865 | 13.40 | Q | | | | |
| 4+10 | 2.9795 | 13.50 | Q | | | | |
| 4+15 | 3.0733 | 13.61 | QV | | | | |
| 4+20 | 3.1678 | 13.72 | QV | | | | |
| 4+25 | 3.2630 | 13.82 | QV | | | | |
| 4+30 | 3.3589 | 13.92 | QV | | | | |
| 4+35 | 3.4554 | 14.02 | QV | | | | |
| 4+40 | 3.5527 | 14.13 | QV | | | | |
| 4+45 | 3.6507 | 14.23 | QV | | | | |
| 4+50 | 3.7494 | 14.33 | QV | | | | |
| 4+55 | 3.8489 | 14.44 | QV | | | | |
| 5+ 0 | 3.9490 | 14.54 | QV | | | | |
| 5+ 5 | 4.0498 | 14.63 | QV | | | | |
| 5+10 | 4.1512 | 14.73 | QV | | | | |
| 5+15 | 4.2534 | 14.84 | QV | | | | |
| 5+20 | 4.3563 | 14.94 | QV | | | | |
| 5+25 | 4.4599 | 15.04 | QV | | | | |
| 5+30 | 4.5641 | 15.14 | QV | | | | |
| 5+35 | 4.6691 | 15.24 | QV | | | | |
| 5+40 | 4.7747 | 15.34 | QV | | | | |
| 5+45 | 4.8810 | 15.44 | QV | | | | |
| 5+50 | 4.9880 | 15.54 | QV | | | | |
| 5+55 | 5.0958 | 15.64 | QV | | | | |
| 6+ 0 | 5.2042 | 15.74 | QV | | | | |
| 6+ 5 | 5.3133 | 15.84 | QV | | | | |
| 6+10 | 5.4230 | 15.94 | QV | | | | |
| 6+15 | 5.5335 | 16.04 | QV | | | | |
| 6+20 | 5.6446 | 16.14 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+25 | 5.7564 | 16.24 | QV | \| | \| | \| | \| |
| 6+30 | 5.8689 | 16.34 | QV | \| | \| | \| | \| |
| 6+35 | 5.9822 | 16.44 | QV | \| | \| | \| | \| |
| 6+40 | 6.0962 | 16.55 | Q V | \| | \| | \| | \| |
| 6+45 | 6.2109 | 16.66 | Q V | \| | \| | \| | \| |
| 6+50 | 6.3264 | 16.77 | Q V | \| | \| | \| | \| |
| 6+55 | 6.4426 | 16.88 | Q V | \| | \| | \| | \| |
| 7+ 0 | 6.5597 | 16.99 | Q V | \| | \| | \| | \| |
| 7+ 5 | 6.6775 | 17.11 | Q V | \| | \| | \| | \| |
| 7+10 | 6.7961 | 17.22 | Q V | \| | \| | \| | \| |
| 7+15 | 6.9155 | 17.34 | Q V | \| | \| | \| | \| |
| 7+20 | 7.0358 | 17.46 | Q V | \| | \| | \| | \| |
| 7+25 | 7.1568 | 17.58 | Q V | \| | \| | \| | \| |
| 7+30 | 7.2787 | 17.70 | Q V | \| | \| | \| | \| |
| 7+35 | 7.4015 | 17.82 | Q V | \| | \| | \| | \| |
| 7+40 | 7.5251 | 17.95 | Q V | \| | \| | \| | \| |
| 7+45 | 7.6495 | 18.07 | Q V | \| | \| | \| | \| |
| 7+50 | 7.7748 | 18.19 | Q V | \| | \| | \| | \| |
| 7+55 | 7.9010 | 18.32 | Q V | \| | \| | \| | \| |
| 8+ 0 | 8.0281 | 18.45 | Q V | \| | \| | \| | \| |
| 8+ 5 | 8.1560 | 18.58 | Q V | \| | \| | \| | \| |
| 8+10 | 8.2848 | 18.71 | Q V | \| | \| | \| | \| |
| 8+15 | 8.4146 | 18.84 | Q V | \| | \| | \| | \| |
| 8+20 | 8.5452 | 18.98 | Q V | \| | \| | \| | \| |
| 8+25 | 8.6769 | 19.11 | Q V | \| | \| | \| | \| |
| 8+30 | 8.8094 | 19.25 | Q V | \| | \| | \| | \| |
| 8+35 | 8.9429 | 19.38 | Q V | \| | \| | \| | \| |
| 8+40 | 9.0774 | 19.52 | Q  V | \| | \| | \| | \| |
| 8+45 | 9.2128 | 19.66 | Q  V | \| | \| | \| | \| |
| 8+50 | 9.3492 | 19.81 | Q  V | \| | \| | \| | \| |
| 8+55 | 9.4866 | 19.95 | Q  V | \| | \| | \| | \| |
| 9+ 0 | 9.6251 | 20.10 | \|Q V | \| | \| | \| | \| |
| 9+ 5 | 9.7645 | 20.25 | \|Q V | \| | \| | \| | \| |
| 9+10 | 9.9050 | 20.40 | \|Q V | \| | \| | \| | \| |
| 9+15 | 10.0466 | 20.56 | \|Q V | \| | \| | \| | \| |
| 9+20 | 10.1893 | 20.72 | \|Q V | \| | \| | \| | \| |
| 9+25 | 10.3331 | 20.88 | \|Q V | \| | \| | \| | \| |
| 9+30 | 10.4781 | 21.05 | \|Q V | \| | \| | \| | \| |
| 9+35 | 10.6242 | 21.21 | \|Q V | \| | \| | \| | \| |
| 9+40 | 10.7714 | 21.38 | \|Q V | \| | \| | \| | \| |
| 9+45 | 10.9199 | 21.56 | \|Q V | \| | \| | \| | \| |
| 9+50 | 11.0696 | 21.74 | \|Q V | \| | \| | \| | \| |
| 9+55 | 11.2206 | 21.92 | \|Q V | \| | \| | \| | \| |
| 10+ 0 | 11.3728 | 22.10 | \|Q V | \| | \| | \| | \| |
| 10+ 5 | 11.5263 | 22.29 | \|Q V | \| | \| | \| | \| |
| 10+10 | 11.6812 | 22.49 | \|Q V | \| | \| | \| | \| |
| 10+15 | 11.8374 | 22.68 | \|Q V | \| | \| | \| | \| |
| 10+20 | 11.9950 | 22.88 | \|Q V | \| | \| | \| | \| |
| 10+25 | 12.1540 | 23.09 | \|Q  V | \| | \| | \| | \| |
| 10+30 | 12.3145 | 23.30 | \|Q  V | \| | \| | \| | \| |
| 10+35 | 12.4764 | 23.51 | \|Q  V | \| | \| | \| | \| |
| 10+40 | 12.6398 | 23.73 | \|Q  V | \| | \| | \| | \| |
| 10+45 | 12.8048 | 23.95 | \|Q  V | \| | \| | \| | \| |
| 10+50 | 12.9714 | 24.18 | \|Q  V | \| | \| | \| | \| |
| 10+55 | 13.1395 | 24.42 | \|Q  V | \| | \| | \| | \| |
| 11+ 0 | 13.3093 | 24.66 | \|Q  V | \| | \| | \| | \| |
| 11+ 5 | 13.4809 | 24.90 | \|Q  V | \| | \| | \| | \| |
| 11+10 | 13.6541 | 25.16 | \|Q  V | \| | \| | \| | \| |
| 11+15 | 13.8291 | 25.41 | \|Q  V | \| | \| | \| | \| |

| | | | | | | |
|---|---|---|---|---|---|---|
| 11+20 | 14.0059 | 25.68 | Q V | | | |
| 11+25 | 14.1846 | 25.95 | Q V | | | |
| 11+30 | 14.3653 | 26.23 | Q V | | | |
| 11+35 | 14.5478 | 26.51 | Q V | | | |
| 11+40 | 14.7324 | 26.80 | Q V | | | |
| 11+45 | 14.9190 | 27.10 | Q V | | | |
| 11+50 | 15.1078 | 27.41 | Q V | | | |
| 11+55 | 15.2988 | 27.73 | Q V | | | |
| 12+ 0 | 15.4920 | 28.05 | Q V | | | |
| 12+ 5 | 15.6872 | 28.34 | Q V | | | |
| 12+10 | 15.8841 | 28.59 | Q V | | | |
| 12+15 | 16.0824 | 28.79 | Q V | | | |
| 12+20 | 16.2818 | 28.96 | Q V | | | |
| 12+25 | 16.4822 | 29.08 | Q V | | | |
| 12+30 | 16.6830 | 29.16 | Q V | | | |
| 12+35 | 16.8839 | 29.17 | Q V | | | |
| 12+40 | 17.0834 | 28.96 | Q V | | | |
| 12+45 | 17.2802 | 28.58 | Q V | | | |
| 12+50 | 17.4727 | 27.96 | Q V | | | |
| 12+55 | 17.6618 | 27.45 | Q V | | | |
| 13+ 0 | 17.8480 | 27.04 | Q V | | | |
| 13+ 5 | 18.0324 | 26.78 | Q V | | | |
| 13+10 | 18.2158 | 26.62 | Q V | | | |
| 13+15 | 18.3985 | 26.53 | Q V | | | |
| 13+20 | 18.5814 | 26.56 | Q V | | | |
| 13+25 | 18.7648 | 26.64 | Q V | | | |
| 13+30 | 18.9493 | 26.79 | Q V | | | |
| 13+35 | 19.1351 | 26.98 | Q V | | | |
| 13+40 | 19.3226 | 27.22 | Q V | | | |
| 13+45 | 19.5120 | 27.49 | Q V | | | |
| 13+50 | 19.7035 | 27.81 | Q V | | | |
| 13+55 | 19.8975 | 28.17 | Q V | | | |
| 14+ 0 | 20.0943 | 28.57 | Q V | | | |
| 14+ 5 | 20.2942 | 29.04 | Q V | | | |
| 14+10 | 20.4978 | 29.56 | Q V | | | |
| 14+15 | 20.7056 | 30.17 | Q V | | | |
| 14+20 | 20.9181 | 30.86 | Q V | | | |
| 14+25 | 21.1358 | 31.61 | Q V | | | |
| 14+30 | 21.3594 | 32.46 | Q V | | | |
| 14+35 | 21.5894 | 33.40 | Q V | | | |
| 14+40 | 21.8272 | 34.53 | Q V | | | |
| 14+45 | 22.0739 | 35.82 | Q V | | | |
| 14+50 | 22.3310 | 37.33 | Q V | | | |
| 14+55 | 22.5988 | 38.87 | Q V | | | |
| 15+ 0 | 22.8776 | 40.49 | Q V | | | |
| 15+ 5 | 23.1679 | 42.15 | Q V | | | |
| 15+10 | 23.4705 | 43.93 | Q V | | | |
| 15+15 | 23.7860 | 45.81 | Q V | | | |
| 15+20 | 24.1156 | 47.86 | Q V | | | |
| 15+25 | 24.4623 | 50.34 | Q V | | | |
| 15+30 | 24.8298 | 53.36 | Q V | | | |
| 15+35 | 25.2227 | 57.05 | Q V | | | |
| 15+40 | 25.6460 | 61.47 | Q V | | | |
| 15+45 | 26.1077 | 67.04 | Q V | | | |
| 15+50 | 26.6184 | 74.15 | Q V | | | |
| 15+55 | 27.1967 | 83.96 | Q V | | | |
| 16+ 0 | 27.8785 | 99.00 | Q V | | | |
| 16+ 5 | 28.8062 | 134.70 | Q V | | | |
| 16+10 | 30.0187 | 176.05 | QV | | | |

| | | | |
|---|---|---|---|
| 16+15 | 31.5415 | 221.11 | VQ |
| 16+20 | 33.3344 | 260.32 | V Q |
| 16+25 | 35.4524 | 307.54 | V Q |
| 16+30 | 37.9310 | 359.88 | V Q |
| 16+35 | 40.8502 | 423.87 | V Q |
| 16+40 | 44.6131 | 546.38 | V Q |
| 16+45 | 49.0299 | 641.31 | V Q |
| 16+50 | 54.0733 | 732.31 | V Q |
| 16+55 | 58.7348 | 676.84 | V Q |
| 17+ 0 | 62.9829 | 616.82 | V Q |
| 17+ 5 | 66.6264 | 529.03 | V Q |
| 17+10 | 69.8856 | 473.23 | Q |
| 17+15 | 72.7816 | 420.50 | Q V |
| 17+20 | 75.2693 | 361.22 | Q V |
| 17+25 | 77.5047 | 324.57 | Q V |
| 17+30 | 79.5035 | 290.23 | Q V |
| 17+35 | 81.3359 | 266.06 | Q V |
| 17+40 | 83.0360 | 246.85 | Q V |
| 17+45 | 84.6228 | 230.40 | Q V |
| 17+50 | 86.1018 | 214.75 | Q V |
| 17+55 | 87.4566 | 196.72 | Q V |
| 18+ 0 | 88.7205 | 183.51 | Q V |
| 18+ 5 | 89.9186 | 173.97 | Q V |
| 18+10 | 91.0592 | 165.62 | Q V |
| 18+15 | 92.1178 | 153.71 | Q V |
| 18+20 | 93.0933 | 141.63 | Q V |
| 18+25 | 94.0397 | 137.42 | Q V |
| 18+30 | 94.9440 | 131.31 | Q V |
| 18+35 | 95.7820 | 121.67 | Q V |
| 18+40 | 96.5993 | 118.67 | Q V |
| 18+45 | 97.3976 | 115.91 | Q V |
| 18+50 | 98.1603 | 110.74 | Q V |
| 18+55 | 98.9054 | 108.20 | Q V |
| 19+ 0 | 99.6350 | 105.94 | Q V |
| 19+ 5 | 100.3228 | 99.87 | Q V |
| 19+10 | 100.9818 | 95.68 | Q V |
| 19+15 | 101.6242 | 93.29 | Q V |
| 19+20 | 102.2283 | 87.71 | Q V |
| 19+25 | 102.7889 | 81.40 | Q V |
| 19+30 | 103.3381 | 79.74 | Q V |
| 19+35 | 103.8750 | 77.97 | Q V |
| 19+40 | 104.3956 | 75.59 | Q V |
| 19+45 | 104.9068 | 74.22 | Q V |
| 19+50 | 105.4062 | 72.52 | Q V |
| 19+55 | 105.8812 | 68.96 | Q V |
| 20+ 0 | 106.3439 | 67.19 | Q V |
| 20+ 5 | 106.7982 | 65.97 | Q V |
| 20+10 | 107.2381 | 63.87 | Q V |
| 20+15 | 107.6662 | 62.16 | Q V |
| 20+20 | 108.0850 | 60.80 | Q V |
| 20+25 | 108.4841 | 57.96 | Q V |
| 20+30 | 108.8598 | 54.55 | Q V |
| 20+35 | 109.2290 | 53.60 | Q V |
| 20+40 | 109.5926 | 52.80 | Q V |
| 20+45 | 109.9509 | 52.02 | Q V |
| 20+50 | 110.3029 | 51.11 | Q V |
| 20+55 | 110.6457 | 49.78 | Q V |
| 21+ 0 | 110.9664 | 46.56 | Q V |
| 21+ 5 | 111.2770 | 45.10 | Q V |

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21+10     111.5826     44.38  | Q       |         |         |     V   |
21+15     111.8835     43.69  | Q       |         |         |      V  |
21+20     112.1793     42.95  | Q       |         |         |      V  |
21+25     112.4685     41.98  | Q       |         |         |      V  |
21+30     112.7429     39.85  |Q        |         |         |      V  |
21+35     112.9983     37.09  |Q        |         |         |      V  |
21+40     113.2487     36.35  |Q        |         |         |      V  |
21+45     113.4946     35.72  |Q        |         |         |      V  |
21+50     113.7364     35.10  |Q        |         |         |      V  |
21+55     113.9731     34.37  |Q        |         |         |      V  |
22+ 0     114.2023     33.28  |Q        |         |         |      V  |
22+ 5     114.4110     30.31  |Q        |         |         |      V  |
22+10     114.6110     29.04  |Q        |         |         |      V  |
22+15     114.8080     28.61  |Q        |         |         |       V |
22+20     115.0028     28.28  |Q        |         |         |       V |
22+25     115.1960     28.05  |Q        |         |         |       V |
22+30     115.3881     27.89  |Q        |         |         |       V |
22+35     115.5811     28.03  |Q        |         |         |       V |
22+40     115.7765     28.36  |Q        |         |         |       V |
22+45     115.9706     28.19  |Q        |         |         |       V |
22+50     116.1633     27.97  |Q        |         |         |       V |
22+55     116.3544     27.75  |Q        |         |         |       V |
23+ 0     116.5437     27.49  |Q        |         |         |       V |
23+ 5     116.7312     27.22  |Q        |         |         |       V |
23+10     116.9167     26.94  |Q        |         |         |       V |
23+15     117.1003     26.65  |Q        |         |         |       V |
23+20     117.2817     26.34  |Q        |         |         |       V |
23+25     117.4606     25.98  |Q        |         |         |       V |
23+30     117.6367     25.56  |Q        |         |         |       V |
23+35     117.8087     24.98  |Q        |         |         |        V|
23+40     117.9715     23.65  |Q        |         |         |        V|
23+45     118.1208     21.68  |Q        |         |         |        V|
23+50     118.2669     21.21  |Q        |         |         |        V|
23+55     118.4105     20.86  |Q        |         |         |        V|
24+ 0     118.5521     20.55  |Q        |         |         |        V|
24+ 5     118.6913     20.21  |Q        |         |         |        V|
24+10     118.8276     19.80  Q         |         |         |        V|
24+15     118.9606     19.30  Q         |         |         |        V|
24+20     119.0892     18.68  Q         |         |         |        V|
24+25     119.2120     17.83  Q         |         |         |        V|
24+30     119.3203     15.73  Q         |         |         |        V|
24+35     119.4149     13.73  Q         |         |         |        V|
24+40     119.5032     12.83  Q         |         |         |        V|
24+45     119.5848     11.84  Q         |         |         |        V|
24+50     119.6584     10.69  Q         |         |         |        V|
24+55     119.7251      9.68  Q         |         |         |        V|
25+ 0     119.7856      8.78  Q         |         |         |        V|
25+ 5     119.8410      8.04  Q         |         |         |        V|
25+10     119.8919      7.39  Q         |         |         |        V|
25+15     119.9388      6.81  Q         |         |         |        V|
25+20     119.9825      6.34  Q         |         |         |        V|
25+25     120.0232      5.92  Q         |         |         |        V|
25+30     120.0615      5.55  Q         |         |         |        V|
25+35     120.0975      5.23  Q         |         |         |        V|
25+40     120.1314      4.92  Q         |         |         |        V|
25+45     120.1633      4.63  Q         |         |         |        V|
25+50     120.1934      4.37  Q         |         |         |        V|
25+55     120.2218      4.13  Q         |         |         |        V|
26+ 0     120.2488      3.91  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+ 5 | 120.2743 | 3.70 | Q | \| | \| | \| | V\| |
| 26+10 | 120.2984 | 3.50 | Q | \| | \| | \| | V\| |
| 26+15 | 120.3213 | 3.32 | Q | \| | \| | \| | V\| |
| 26+20 | 120.3431 | 3.16 | Q | \| | \| | \| | V\| |
| 26+25 | 120.3638 | 3.01 | Q | \| | \| | \| | V\| |
| 26+30 | 120.3834 | 2.85 | Q | \| | \| | \| | V\| |
| 26+35 | 120.4022 | 2.72 | Q | \| | \| | \| | V\| |
| 26+40 | 120.4199 | 2.58 | Q | \| | \| | \| | V\| |
| 26+45 | 120.4368 | 2.45 | Q | \| | \| | \| | V\| |
| 26+50 | 120.4529 | 2.33 | Q | \| | \| | \| | V\| |
| 26+55 | 120.4681 | 2.21 | Q | \| | \| | \| | V\| |
| 27+ 0 | 120.4825 | 2.09 | Q | \| | \| | \| | V\| |
| 27+ 5 | 120.4962 | 1.99 | Q | \| | \| | \| | V\| |
| 27+10 | 120.5092 | 1.89 | Q | \| | \| | \| | V\| |
| 27+15 | 120.5216 | 1.79 | Q | \| | \| | \| | V\| |
| 27+20 | 120.5333 | 1.70 | Q | \| | \| | \| | V\| |
| 27+25 | 120.5445 | 1.63 | Q | \| | \| | \| | V\| |
| 27+30 | 120.5552 | 1.55 | Q | \| | \| | \| | V\| |
| 27+35 | 120.5654 | 1.48 | Q | \| | \| | \| | V\| |
| 27+40 | 120.5751 | 1.41 | Q | \| | \| | \| | V\| |
| 27+45 | 120.5844 | 1.34 | Q | \| | \| | \| | V\| |
| 27+50 | 120.5931 | 1.27 | Q | \| | \| | \| | V\| |
| 27+55 | 120.6015 | 1.21 | Q | \| | \| | \| | V\| |
| 28+ 0 | 120.6095 | 1.16 | Q | \| | \| | \| | V\| |
| 28+ 5 | 120.6170 | 1.10 | Q | \| | \| | \| | V\| |
| 28+10 | 120.6242 | 1.04 | Q | \| | \| | \| | V\| |
| 28+15 | 120.6310 | 0.99 | Q | \| | \| | \| | V\| |
| 28+20 | 120.6375 | 0.94 | Q | \| | \| | \| | V\| |
| 28+25 | 120.6436 | 0.89 | Q | \| | \| | \| | V\| |
| 28+30 | 120.6494 | 0.85 | Q | \| | \| | \| | V\| |
| 28+35 | 120.6550 | 0.81 | Q | \| | \| | \| | V\| |
| 28+40 | 120.6602 | 0.77 | Q | \| | \| | \| | V\| |
| 28+45 | 120.6652 | 0.73 | Q | \| | \| | \| | V\| |
| 28+50 | 120.6699 | 0.69 | Q | \| | \| | \| | V\| |
| 28+55 | 120.6744 | 0.65 | Q | \| | \| | \| | V\| |
| 29+ 0 | 120.6786 | 0.61 | Q | \| | \| | \| | V\| |
| 29+ 5 | 120.6826 | 0.58 | Q | \| | \| | \| | V\| |
| 29+10 | 120.6864 | 0.55 | Q | \| | \| | \| | V\| |
| 29+15 | 120.6900 | 0.52 | Q | \| | \| | \| | V\| |
| 29+20 | 120.6934 | 0.49 | Q | \| | \| | \| | V\| |
| 29+25 | 120.6966 | 0.46 | Q | \| | \| | \| | V\| |
| 29+30 | 120.6996 | 0.44 | Q | \| | \| | \| | V\| |
| 29+35 | 120.7025 | 0.41 | Q | \| | \| | \| | V\| |
| 29+40 | 120.7052 | 0.39 | Q | \| | \| | \| | V\| |
| 29+45 | 120.7077 | 0.37 | Q | \| | \| | \| | V\| |
| 29+50 | 120.7102 | 0.35 | Q | \| | \| | \| | V\| |
| 29+55 | 120.7124 | 0.33 | Q | \| | \| | \| | V\| |
| 30+ 0 | 120.7146 | 0.31 | Q | \| | \| | \| | V\| |
| 30+ 5 | 120.7166 | 0.30 | Q | \| | \| | \| | V\| |
| 30+10 | 120.7186 | 0.28 | Q | \| | \| | \| | V\| |
| 30+15 | 120.7204 | 0.27 | Q | \| | \| | \| | V\| |
| 30+20 | 120.7222 | 0.26 | Q | \| | \| | \| | V\| |
| 30+25 | 120.7239 | 0.25 | Q | \| | \| | \| | V\| |
| 30+30 | 120.7256 | 0.24 | Q | \| | \| | \| | V\| |
| 30+35 | 120.7271 | 0.22 | Q | \| | \| | \| | V\| |
| 30+40 | 120.7286 | 0.21 | Q | \| | \| | \| | V\| |
| 30+45 | 120.7299 | 0.20 | Q | \| | \| | \| | V\| |
| 30+50 | 120.7312 | 0.18 | Q | \| | \| | \| | V\| |
| 30+55 | 120.7324 | 0.17 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 31+ 0 | 120.7335 | 0.16 | Q | \| | \| | \| | V\| |
| 31+ 5 | 120.7345 | 0.15 | Q | \| | \| | \| | V\| |
| 31+10 | 120.7354 | 0.13 | Q | \| | \| | \| | V\| |
| 31+15 | 120.7362 | 0.12 | Q | \| | \| | \| | V\| |
| 31+20 | 120.7369 | 0.11 | Q | \| | \| | \| | V\| |
| 31+25 | 120.7376 | 0.09 | Q | \| | \| | \| | V\| |
| 31+30 | 120.7381 | 0.08 | Q | \| | \| | \| | V\| |
| 31+35 | 120.7386 | 0.07 | Q | \| | \| | \| | V\| |
| 31+40 | 120.7390 | 0.06 | Q | \| | \| | \| | V\| |
| 31+45 | 120.7394 | 0.05 | Q | \| | \| | \| | V\| |
| 31+50 | 120.7397 | 0.05 | Q | \| | \| | \| | V\| |
| 31+55 | 120.7400 | 0.04 | Q | \| | \| | \| | V\| |
| 32+ 0 | 120.7402 | 0.03 | Q | \| | \| | \| | V\| |
| 32+ 5 | 120.7404 | 0.03 | Q | \| | \| | \| | V\| |
| 32+10 | 120.7406 | 0.02 | Q | \| | \| | \| | V\| |
| 32+15 | 120.7407 | 0.02 | Q | \| | \| | \| | V\| |
| 32+20 | 120.7407 | 0.01 | Q | \| | \| | \| | V\| |
| 32+25 | 120.7408 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 49
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 17446.64 | 1 | 1.36 |
| Rainfall data for year 100 | | |
| 17446.64 | 6 | 2.15 |
| Rainfall data for year 100 | | |
| 17446.64 | 24 | 3.24 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 71.3 | 88.0 | 17446.64 | 1.000 | 0.229 | 0.989 | 0.226 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.226

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 17251.24 | 0.989 | 71.3 | 88.0 | 1.36 | 0.628 |
| 195.40 | 0.011 | 98.0 | 98.0 | 0.20 | 0.928 |

Area-averaged catchment yield fraction, Y = 0.631
Area-averaged low loss fraction, Yb = 0.369
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 81047.00(Ft.)
Length from concentration point to centroid = 39563.00(Ft.)
Elevation difference along watercourse = 2612.40(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 17446.64(Ac.)
Catchment Lag time = 1.921 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 4.3384
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.226(In/Hr)
Average low loss rate fraction (Yb) = 0.369 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.180
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.820

Computed peak 5-minute rainfall = 0.645(In)
Computed peak 30-minute rainfall = 1.105(In)
Specified peak 1-hour rainfall = 1.360(In)
Computed peak 3-hour rainfall = 1.801(In)
Specified peak 6-hour rainfall = 2.150(In)
Specified peak 24-hour rainfall = 3.240(In)

Rainfall depth area reduction factors:
Using a total area of 17446.64(Ac.) (Ref: fig. E-4)

5-minute factor = 0.568 Adjusted rainfall = 0.367(In)
30-minute factor = 0.594 Adjusted rainfall = 0.656(In)
1-hour factor = 0.605 Adjusted rainfall = 0.823(In)
3-hour factor = 0.908 Adjusted rainfall = 1.635(In)
6-hour factor = 0.957 Adjusted rainfall = 2.057(In)
24-hour factor = 0.974 Adjusted rainfall = 3.155(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 210995.30 (CFS)) | |
| 1 | 0.206 | 434.623 |
| 2 | 0.618 | 869.246 |
| 3 | 1.032 | 873.480 |
| 4 | 1.625 | 1251.922 |
| 5 | 2.366 | 1563.169 |

| | | |
|---|---|---|
| 6 | 3.121 | 1592.420 |
| 7 | 4.085 | 2035.078 |
| 8 | 5.139 | 2224.011 |
| 9 | 6.236 | 2313.686 |
| 10 | 7.590 | 2857.279 |
| 11 | 9.009 | 2994.395 |
| 12 | 10.558 | 3267.314 |
| 13 | 12.966 | 5080.180 |
| 14 | 15.533 | 5416.978 |
| 15 | 18.413 | 6076.469 |
| 16 | 22.344 | 8294.244 |
| 17 | 26.388 | 8532.086 |
| 18 | 30.323 | 8302.613 |
| 19 | 33.956 | 7665.416 |
| 20 | 37.591 | 7670.467 |
| 21 | 41.160 | 7530.812 |
| 22 | 44.698 | 7464.989 |
| 23 | 48.172 | 7330.347 |
| 24 | 51.074 | 6122.057 |
| 25 | 53.464 | 5042.553 |
| 26 | 55.814 | 4958.843 |
| 27 | 57.760 | 4106.802 |
| 28 | 59.486 | 3640.289 |
| 29 | 61.205 | 3627.504 |
| 30 | 62.699 | 3153.128 |
| 31 | 64.080 | 2913.110 |
| 32 | 65.453 | 2896.212 |
| 33 | 66.692 | 2614.635 |
| 34 | 67.859 | 2462.850 |
| 35 | 69.013 | 2435.140 |
| 36 | 70.072 | 2234.811 |
| 37 | 71.110 | 2190.324 |
| 38 | 72.127 | 2145.936 |
| 39 | 73.038 | 1921.327 |
| 40 | 73.934 | 1890.079 |
| 41 | 74.802 | 1831.740 |
| 42 | 75.579 | 1639.391 |
| 43 | 76.349 | 1624.253 |
| 44 | 77.110 | 1605.926 |
| 45 | 77.852 | 1565.640 |
| 46 | 78.593 | 1564.204 |
| 47 | 79.270 | 1428.065 |
| 48 | 79.853 | 1229.756 |
| 49 | 80.435 | 1228.076 |
| 50 | 81.017 | 1228.076 |
| 51 | 81.599 | 1228.076 |
| 52 | 82.180 | 1225.998 |
| 53 | 82.697 | 1090.094 |
| 54 | 83.175 | 1008.384 |
| 55 | 83.653 | 1008.384 |
| 56 | 84.130 | 1008.384 |
| 57 | 84.608 | 1008.384 |
| 58 | 85.082 | 999.269 |
| 59 | 85.510 | 904.080 |
| 60 | 85.927 | 878.766 |
| 61 | 86.343 | 878.766 |
| 62 | 86.760 | 878.766 |
| 63 | 87.176 | 878.766 |
| 64 | 87.580 | 851.291 |

| | | |
|---|---|---|
| 65 | 87.932 | 743.299 |
| 66 | 88.279 | 732.305 |
| 67 | 88.626 | 732.305 |
| 68 | 88.973 | 732.305 |
| 69 | 89.320 | 732.305 |
| 70 | 89.637 | 668.545 |
| 71 | 89.902 | 557.804 |
| 72 | 90.165 | 555.820 |
| 73 | 90.428 | 555.820 |
| 74 | 90.692 | 555.820 |
| 75 | 90.955 | 555.604 |
| 76 | 91.203 | 522.906 |
| 77 | 91.440 | 499.432 |
| 78 | 91.676 | 499.432 |
| 79 | 91.913 | 499.432 |
| 80 | 92.150 | 499.432 |
| 81 | 92.385 | 495.564 |
| 82 | 92.595 | 442.883 |
| 83 | 92.797 | 426.202 |
| 84 | 92.999 | 426.202 |
| 85 | 93.201 | 426.202 |
| 86 | 93.403 | 426.202 |
| 87 | 93.601 | 418.322 |
| 88 | 93.782 | 381.170 |
| 89 | 93.960 | 376.405 |
| 90 | 94.138 | 376.405 |
| 91 | 94.317 | 376.405 |
| 92 | 94.495 | 376.405 |
| 93 | 94.658 | 343.946 |
| 94 | 94.789 | 277.008 |
| 95 | 94.920 | 274.981 |
| 96 | 95.050 | 274.981 |
| 97 | 95.180 | 274.981 |
| 98 | 95.311 | 274.981 |
| 99 | 95.441 | 274.981 |
| 100 | 95.571 | 274.981 |
| 101 | 95.702 | 274.981 |
| 102 | 95.832 | 274.981 |
| 103 | 95.962 | 274.981 |
| 104 | 96.092 | 272.585 |
| 105 | 96.200 | 228.282 |
| 106 | 96.300 | 211.636 |
| 107 | 96.400 | 211.636 |
| 108 | 96.501 | 211.636 |
| 109 | 96.601 | 211.636 |
| 110 | 96.701 | 211.636 |
| 111 | 96.802 | 211.636 |
| 112 | 96.902 | 211.636 |
| 113 | 97.002 | 211.636 |
| 114 | 97.102 | 211.636 |
| 115 | 97.203 | 211.636 |
| 116 | 97.294 | 192.891 |
| 117 | 97.364 | 147.078 |
| 118 | 97.433 | 144.996 |
| 119 | 97.501 | 144.996 |
| 120 | 97.570 | 144.996 |
| 121 | 97.639 | 144.996 |
| 122 | 97.708 | 144.996 |
| 123 | 97.776 | 144.996 |

| | | |
|---|---|---|
| 124 | 97.845 | 144.996 |
| 125 | 97.914 | 144.996 |
| 126 | 97.982 | 144.996 |
| 127 | 98.050 | 143.559 |
| 128 | 98.100 | 105.284 |
| 129 | 98.142 | 88.243 |
| 130 | 98.184 | 88.243 |
| 131 | 98.226 | 88.243 |
| 132 | 98.268 | 88.243 |
| 133 | 98.309 | 88.243 |
| 134 | 98.351 | 88.243 |
| 135 | 98.393 | 88.243 |
| 136 | 98.435 | 88.243 |
| 137 | 98.477 | 88.243 |
| 138 | 98.519 | 88.243 |
| 139 | 98.561 | 90.306 |
| 140 | 98.607 | 96.285 |
| 141 | 98.653 | 96.664 |
| 142 | 98.699 | 96.664 |
| 143 | 98.744 | 96.664 |
| 144 | 98.790 | 96.664 |
| 145 | 98.836 | 96.664 |
| 146 | 98.882 | 96.664 |
| 147 | 98.928 | 96.664 |
| 148 | 98.973 | 96.664 |
| 149 | 99.019 | 96.664 |
| 150 | 99.065 | 96.614 |
| 151 | 99.110 | 94.490 |
| 152 | 99.154 | 93.369 |
| 153 | 99.198 | 93.369 |
| 154 | 99.243 | 93.369 |
| 155 | 99.287 | 93.369 |
| 156 | 99.331 | 93.369 |
| 157 | 99.375 | 93.369 |
| 158 | 99.420 | 93.369 |
| 159 | 99.464 | 93.369 |
| 160 | 99.508 | 93.369 |
| 161 | 99.552 | 93.369 |
| 162 | 99.592 | 83.755 |
| 163 | 99.616 | 49.556 |
| 164 | 99.638 | 46.913 |
| 165 | 99.660 | 46.913 |
| 166 | 99.682 | 46.913 |
| 167 | 99.705 | 46.913 |
| 168 | 99.727 | 46.913 |
| 169 | 99.749 | 46.913 |
| 170 | 99.771 | 46.913 |
| 171 | 99.793 | 46.913 |
| 172 | 99.816 | 46.913 |
| 173 | 99.838 | 46.913 |
| 174 | 99.860 | 46.913 |
| 175 | 99.882 | 46.913 |
| 176 | 99.905 | 46.913 |
| 177 | 99.927 | 46.913 |
| 178 | 99.949 | 46.913 |
| 179 | 99.971 | 46.913 |
| 180 | 100.000 | 23.457 |

| Peak Unit | Adjusted mass rainfall | Unit rainfall |
|---|---|---|

| Number | (In) | (In) |
|---|---|---|
| 1 | 0.3668 | 0.3668 |
| 2 | 0.4592 | 0.0924 |
| 3 | 0.5237 | 0.0645 |
| 4 | 0.5749 | 0.0512 |
| 5 | 0.6180 | 0.0431 |
| 6 | 0.6557 | 0.0376 |
| 7 | 0.6896 | 0.0340 |
| 8 | 0.7205 | 0.0309 |
| 9 | 0.7488 | 0.0284 |
| 10 | 0.7752 | 0.0263 |
| 11 | 0.7998 | 0.0246 |
| 12 | 0.8229 | 0.0231 |
| 13 | 0.8651 | 0.0422 |
| 14 | 0.9061 | 0.0410 |
| 15 | 0.9460 | 0.0399 |
| 16 | 0.9850 | 0.0389 |
| 17 | 1.0230 | 0.0380 |
| 18 | 1.0602 | 0.0372 |
| 19 | 1.0966 | 0.0364 |
| 20 | 1.1324 | 0.0357 |
| 21 | 1.1674 | 0.0351 |
| 22 | 1.2019 | 0.0344 |
| 23 | 1.2357 | 0.0339 |
| 24 | 1.2690 | 0.0333 |
| 25 | 1.3018 | 0.0328 |
| 26 | 1.3341 | 0.0323 |
| 27 | 1.3659 | 0.0318 |
| 28 | 1.3973 | 0.0314 |
| 29 | 1.4283 | 0.0310 |
| 30 | 1.4589 | 0.0306 |
| 31 | 1.4891 | 0.0302 |
| 32 | 1.5190 | 0.0298 |
| 33 | 1.5484 | 0.0295 |
| 34 | 1.5776 | 0.0292 |
| 35 | 1.6064 | 0.0288 |
| 36 | 1.6350 | 0.0285 |
| 37 | 1.6499 | 0.0149 |
| 38 | 1.6645 | 0.0146 |
| 39 | 1.6789 | 0.0144 |
| 40 | 1.6930 | 0.0141 |
| 41 | 1.7069 | 0.0139 |
| 42 | 1.7206 | 0.0137 |
| 43 | 1.7340 | 0.0135 |
| 44 | 1.7473 | 0.0132 |
| 45 | 1.7603 | 0.0130 |
| 46 | 1.7732 | 0.0129 |
| 47 | 1.7858 | 0.0127 |
| 48 | 1.7983 | 0.0125 |
| 49 | 1.8106 | 0.0123 |
| 50 | 1.8228 | 0.0121 |
| 51 | 1.8348 | 0.0120 |
| 52 | 1.8466 | 0.0118 |
| 53 | 1.8583 | 0.0117 |
| 54 | 1.8698 | 0.0115 |
| 55 | 1.8812 | 0.0114 |
| 56 | 1.8925 | 0.0113 |
| 57 | 1.9036 | 0.0111 |
| 58 | 1.9146 | 0.0110 |

| | | |
|---|---|---|
| 59 | 1.9254 | 0.0109 |
| 60 | 1.9362 | 0.0107 |
| 61 | 1.9468 | 0.0106 |
| 62 | 1.9573 | 0.0105 |
| 63 | 1.9677 | 0.0104 |
| 64 | 1.9780 | 0.0103 |
| 65 | 1.9881 | 0.0102 |
| 66 | 1.9982 | 0.0101 |
| 67 | 2.0082 | 0.0100 |
| 68 | 2.0181 | 0.0099 |
| 69 | 2.0278 | 0.0098 |
| 70 | 2.0375 | 0.0097 |
| 71 | 2.0471 | 0.0096 |
| 72 | 2.0566 | 0.0095 |
| 73 | 2.0654 | 0.0088 |
| 74 | 2.0741 | 0.0087 |
| 75 | 2.0827 | 0.0086 |
| 76 | 2.0912 | 0.0085 |
| 77 | 2.0997 | 0.0085 |
| 78 | 2.1081 | 0.0084 |
| 79 | 2.1164 | 0.0083 |
| 80 | 2.1246 | 0.0082 |
| 81 | 2.1328 | 0.0082 |
| 82 | 2.1409 | 0.0081 |
| 83 | 2.1489 | 0.0080 |
| 84 | 2.1569 | 0.0080 |
| 85 | 2.1647 | 0.0079 |
| 86 | 2.1726 | 0.0078 |
| 87 | 2.1803 | 0.0078 |
| 88 | 2.1881 | 0.0077 |
| 89 | 2.1957 | 0.0076 |
| 90 | 2.2033 | 0.0076 |
| 91 | 2.2108 | 0.0075 |
| 92 | 2.2183 | 0.0075 |
| 93 | 2.2257 | 0.0074 |
| 94 | 2.2331 | 0.0074 |
| 95 | 2.2404 | 0.0073 |
| 96 | 2.2476 | 0.0073 |
| 97 | 2.2548 | 0.0072 |
| 98 | 2.2620 | 0.0072 |
| 99 | 2.2691 | 0.0071 |
| 100 | 2.2761 | 0.0071 |
| 101 | 2.2831 | 0.0070 |
| 102 | 2.2901 | 0.0070 |
| 103 | 2.2970 | 0.0069 |
| 104 | 2.3039 | 0.0069 |
| 105 | 2.3107 | 0.0068 |
| 106 | 2.3175 | 0.0068 |
| 107 | 2.3242 | 0.0067 |
| 108 | 2.3309 | 0.0067 |
| 109 | 2.3375 | 0.0066 |
| 110 | 2.3441 | 0.0066 |
| 111 | 2.3507 | 0.0066 |
| 112 | 2.3572 | 0.0065 |
| 113 | 2.3637 | 0.0065 |
| 114 | 2.3701 | 0.0064 |
| 115 | 2.3765 | 0.0064 |
| 116 | 2.3829 | 0.0064 |
| 117 | 2.3892 | 0.0063 |

| | | |
|---|---|---|
| 118 | 2.3955 | 0.0063 |
| 119 | 2.4017 | 0.0062 |
| 120 | 2.4079 | 0.0062 |
| 121 | 2.4141 | 0.0062 |
| 122 | 2.4202 | 0.0061 |
| 123 | 2.4264 | 0.0061 |
| 124 | 2.4324 | 0.0061 |
| 125 | 2.4385 | 0.0060 |
| 126 | 2.4445 | 0.0060 |
| 127 | 2.4504 | 0.0060 |
| 128 | 2.4564 | 0.0059 |
| 129 | 2.4623 | 0.0059 |
| 130 | 2.4682 | 0.0059 |
| 131 | 2.4740 | 0.0058 |
| 132 | 2.4798 | 0.0058 |
| 133 | 2.4856 | 0.0058 |
| 134 | 2.4914 | 0.0058 |
| 135 | 2.4971 | 0.0057 |
| 136 | 2.5028 | 0.0057 |
| 137 | 2.5085 | 0.0057 |
| 138 | 2.5141 | 0.0056 |
| 139 | 2.5197 | 0.0056 |
| 140 | 2.5253 | 0.0056 |
| 141 | 2.5309 | 0.0056 |
| 142 | 2.5364 | 0.0055 |
| 143 | 2.5419 | 0.0055 |
| 144 | 2.5474 | 0.0055 |
| 145 | 2.5528 | 0.0054 |
| 146 | 2.5582 | 0.0054 |
| 147 | 2.5636 | 0.0054 |
| 148 | 2.5690 | 0.0054 |
| 149 | 2.5743 | 0.0053 |
| 150 | 2.5797 | 0.0053 |
| 151 | 2.5850 | 0.0053 |
| 152 | 2.5902 | 0.0053 |
| 153 | 2.5955 | 0.0052 |
| 154 | 2.6007 | 0.0052 |
| 155 | 2.6059 | 0.0052 |
| 156 | 2.6111 | 0.0052 |
| 157 | 2.6162 | 0.0052 |
| 158 | 2.6214 | 0.0051 |
| 159 | 2.6265 | 0.0051 |
| 160 | 2.6316 | 0.0051 |
| 161 | 2.6366 | 0.0051 |
| 162 | 2.6417 | 0.0050 |
| 163 | 2.6467 | 0.0050 |
| 164 | 2.6517 | 0.0050 |
| 165 | 2.6567 | 0.0050 |
| 166 | 2.6617 | 0.0050 |
| 167 | 2.6666 | 0.0049 |
| 168 | 2.6715 | 0.0049 |
| 169 | 2.6764 | 0.0049 |
| 170 | 2.6813 | 0.0049 |
| 171 | 2.6862 | 0.0049 |
| 172 | 2.6910 | 0.0048 |
| 173 | 2.6958 | 0.0048 |
| 174 | 2.7006 | 0.0048 |
| 175 | 2.7054 | 0.0048 |
| 176 | 2.7102 | 0.0048 |

| | | |
|---|---|---|
| 177 | 2.7149 | 0.0047 |
| 178 | 2.7196 | 0.0047 |
| 179 | 2.7243 | 0.0047 |
| 180 | 2.7290 | 0.0047 |
| 181 | 2.7337 | 0.0047 |
| 182 | 2.7384 | 0.0047 |
| 183 | 2.7430 | 0.0046 |
| 184 | 2.7476 | 0.0046 |
| 185 | 2.7522 | 0.0046 |
| 186 | 2.7568 | 0.0046 |
| 187 | 2.7614 | 0.0046 |
| 188 | 2.7659 | 0.0046 |
| 189 | 2.7705 | 0.0045 |
| 190 | 2.7750 | 0.0045 |
| 191 | 2.7795 | 0.0045 |
| 192 | 2.7840 | 0.0045 |
| 193 | 2.7884 | 0.0045 |
| 194 | 2.7929 | 0.0045 |
| 195 | 2.7973 | 0.0044 |
| 196 | 2.8017 | 0.0044 |
| 197 | 2.8061 | 0.0044 |
| 198 | 2.8105 | 0.0044 |
| 199 | 2.8149 | 0.0044 |
| 200 | 2.8193 | 0.0044 |
| 201 | 2.8236 | 0.0043 |
| 202 | 2.8279 | 0.0043 |
| 203 | 2.8323 | 0.0043 |
| 204 | 2.8366 | 0.0043 |
| 205 | 2.8408 | 0.0043 |
| 206 | 2.8451 | 0.0043 |
| 207 | 2.8494 | 0.0043 |
| 208 | 2.8536 | 0.0042 |
| 209 | 2.8578 | 0.0042 |
| 210 | 2.8621 | 0.0042 |
| 211 | 2.8663 | 0.0042 |
| 212 | 2.8704 | 0.0042 |
| 213 | 2.8746 | 0.0042 |
| 214 | 2.8788 | 0.0042 |
| 215 | 2.8829 | 0.0041 |
| 216 | 2.8871 | 0.0041 |
| 217 | 2.8912 | 0.0041 |
| 218 | 2.8953 | 0.0041 |
| 219 | 2.8994 | 0.0041 |
| 220 | 2.9035 | 0.0041 |
| 221 | 2.9075 | 0.0041 |
| 222 | 2.9116 | 0.0041 |
| 223 | 2.9156 | 0.0040 |
| 224 | 2.9197 | 0.0040 |
| 225 | 2.9237 | 0.0040 |
| 226 | 2.9277 | 0.0040 |
| 227 | 2.9317 | 0.0040 |
| 228 | 2.9356 | 0.0040 |
| 229 | 2.9396 | 0.0040 |
| 230 | 2.9436 | 0.0040 |
| 231 | 2.9475 | 0.0039 |
| 232 | 2.9515 | 0.0039 |
| 233 | 2.9554 | 0.0039 |
| 234 | 2.9593 | 0.0039 |
| 235 | 2.9632 | 0.0039 |

| | | |
|---|---|---|
| 236 | 2.9671 | 0.0039 |
| 237 | 2.9709 | 0.0039 |
| 238 | 2.9748 | 0.0039 |
| 239 | 2.9787 | 0.0039 |
| 240 | 2.9825 | 0.0038 |
| 241 | 2.9863 | 0.0038 |
| 242 | 2.9902 | 0.0038 |
| 243 | 2.9940 | 0.0038 |
| 244 | 2.9978 | 0.0038 |
| 245 | 3.0016 | 0.0038 |
| 246 | 3.0053 | 0.0038 |
| 247 | 3.0091 | 0.0038 |
| 248 | 3.0129 | 0.0038 |
| 249 | 3.0166 | 0.0037 |
| 250 | 3.0203 | 0.0037 |
| 251 | 3.0241 | 0.0037 |
| 252 | 3.0278 | 0.0037 |
| 253 | 3.0315 | 0.0037 |
| 254 | 3.0352 | 0.0037 |
| 255 | 3.0389 | 0.0037 |
| 256 | 3.0425 | 0.0037 |
| 257 | 3.0462 | 0.0037 |
| 258 | 3.0499 | 0.0037 |
| 259 | 3.0535 | 0.0036 |
| 260 | 3.0571 | 0.0036 |
| 261 | 3.0608 | 0.0036 |
| 262 | 3.0644 | 0.0036 |
| 263 | 3.0680 | 0.0036 |
| 264 | 3.0716 | 0.0036 |
| 265 | 3.0752 | 0.0036 |
| 266 | 3.0787 | 0.0036 |
| 267 | 3.0823 | 0.0036 |
| 268 | 3.0859 | 0.0036 |
| 269 | 3.0894 | 0.0036 |
| 270 | 3.0930 | 0.0035 |
| 271 | 3.0965 | 0.0035 |
| 272 | 3.1000 | 0.0035 |
| 273 | 3.1035 | 0.0035 |
| 274 | 3.1070 | 0.0035 |
| 275 | 3.1105 | 0.0035 |
| 276 | 3.1140 | 0.0035 |
| 277 | 3.1175 | 0.0035 |
| 278 | 3.1210 | 0.0035 |
| 279 | 3.1244 | 0.0035 |
| 280 | 3.1279 | 0.0035 |
| 281 | 3.1313 | 0.0034 |
| 282 | 3.1348 | 0.0034 |
| 283 | 3.1382 | 0.0034 |
| 284 | 3.1416 | 0.0034 |
| 285 | 3.1450 | 0.0034 |
| 286 | 3.1484 | 0.0034 |
| 287 | 3.1518 | 0.0034 |
| 288 | 3.1552 | 0.0034 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0034 | 0.0012 | 0.0021 |

| | | | |
|---|---|---|---|
| 2 | 0.0034 | 0.0013 | 0.0021 |
| 3 | 0.0034 | 0.0013 | 0.0022 |
| 4 | 0.0034 | 0.0013 | 0.0022 |
| 5 | 0.0034 | 0.0013 | 0.0022 |
| 6 | 0.0034 | 0.0013 | 0.0022 |
| 7 | 0.0035 | 0.0013 | 0.0022 |
| 8 | 0.0035 | 0.0013 | 0.0022 |
| 9 | 0.0035 | 0.0013 | 0.0022 |
| 10 | 0.0035 | 0.0013 | 0.0022 |
| 11 | 0.0035 | 0.0013 | 0.0022 |
| 12 | 0.0035 | 0.0013 | 0.0022 |
| 13 | 0.0035 | 0.0013 | 0.0022 |
| 14 | 0.0036 | 0.0013 | 0.0022 |
| 15 | 0.0036 | 0.0013 | 0.0023 |
| 16 | 0.0036 | 0.0013 | 0.0023 |
| 17 | 0.0036 | 0.0013 | 0.0023 |
| 18 | 0.0036 | 0.0013 | 0.0023 |
| 19 | 0.0036 | 0.0013 | 0.0023 |
| 20 | 0.0036 | 0.0013 | 0.0023 |
| 21 | 0.0037 | 0.0013 | 0.0023 |
| 22 | 0.0037 | 0.0014 | 0.0023 |
| 23 | 0.0037 | 0.0014 | 0.0023 |
| 24 | 0.0037 | 0.0014 | 0.0023 |
| 25 | 0.0037 | 0.0014 | 0.0023 |
| 26 | 0.0037 | 0.0014 | 0.0024 |
| 27 | 0.0037 | 0.0014 | 0.0024 |
| 28 | 0.0038 | 0.0014 | 0.0024 |
| 29 | 0.0038 | 0.0014 | 0.0024 |
| 30 | 0.0038 | 0.0014 | 0.0024 |
| 31 | 0.0038 | 0.0014 | 0.0024 |
| 32 | 0.0038 | 0.0014 | 0.0024 |
| 33 | 0.0038 | 0.0014 | 0.0024 |
| 34 | 0.0039 | 0.0014 | 0.0024 |
| 35 | 0.0039 | 0.0014 | 0.0024 |
| 36 | 0.0039 | 0.0014 | 0.0025 |
| 37 | 0.0039 | 0.0014 | 0.0025 |
| 38 | 0.0039 | 0.0014 | 0.0025 |
| 39 | 0.0039 | 0.0015 | 0.0025 |
| 40 | 0.0040 | 0.0015 | 0.0025 |
| 41 | 0.0040 | 0.0015 | 0.0025 |
| 42 | 0.0040 | 0.0015 | 0.0025 |
| 43 | 0.0040 | 0.0015 | 0.0025 |
| 44 | 0.0040 | 0.0015 | 0.0025 |
| 45 | 0.0041 | 0.0015 | 0.0026 |
| 46 | 0.0041 | 0.0015 | 0.0026 |
| 47 | 0.0041 | 0.0015 | 0.0026 |
| 48 | 0.0041 | 0.0015 | 0.0026 |
| 49 | 0.0041 | 0.0015 | 0.0026 |
| 50 | 0.0041 | 0.0015 | 0.0026 |
| 51 | 0.0042 | 0.0015 | 0.0026 |
| 52 | 0.0042 | 0.0015 | 0.0026 |
| 53 | 0.0042 | 0.0016 | 0.0027 |
| 54 | 0.0042 | 0.0016 | 0.0027 |
| 55 | 0.0043 | 0.0016 | 0.0027 |
| 56 | 0.0043 | 0.0016 | 0.0027 |
| 57 | 0.0043 | 0.0016 | 0.0027 |
| 58 | 0.0043 | 0.0016 | 0.0027 |
| 59 | 0.0043 | 0.0016 | 0.0027 |
| 60 | 0.0044 | 0.0016 | 0.0028 |

| | | | |
|---|---|---|---|
| 61 | 0.0044 | 0.0016 | 0.0028 |
| 62 | 0.0044 | 0.0016 | 0.0028 |
| 63 | 0.0044 | 0.0016 | 0.0028 |
| 64 | 0.0045 | 0.0016 | 0.0028 |
| 65 | 0.0045 | 0.0017 | 0.0028 |
| 66 | 0.0045 | 0.0017 | 0.0028 |
| 67 | 0.0045 | 0.0017 | 0.0029 |
| 68 | 0.0046 | 0.0017 | 0.0029 |
| 69 | 0.0046 | 0.0017 | 0.0029 |
| 70 | 0.0046 | 0.0017 | 0.0029 |
| 71 | 0.0046 | 0.0017 | 0.0029 |
| 72 | 0.0047 | 0.0017 | 0.0029 |
| 73 | 0.0047 | 0.0017 | 0.0030 |
| 74 | 0.0047 | 0.0017 | 0.0030 |
| 75 | 0.0047 | 0.0017 | 0.0030 |
| 76 | 0.0048 | 0.0018 | 0.0030 |
| 77 | 0.0048 | 0.0018 | 0.0030 |
| 78 | 0.0048 | 0.0018 | 0.0030 |
| 79 | 0.0049 | 0.0018 | 0.0031 |
| 80 | 0.0049 | 0.0018 | 0.0031 |
| 81 | 0.0049 | 0.0018 | 0.0031 |
| 82 | 0.0049 | 0.0018 | 0.0031 |
| 83 | 0.0050 | 0.0018 | 0.0031 |
| 84 | 0.0050 | 0.0018 | 0.0032 |
| 85 | 0.0050 | 0.0019 | 0.0032 |
| 86 | 0.0051 | 0.0019 | 0.0032 |
| 87 | 0.0051 | 0.0019 | 0.0032 |
| 88 | 0.0051 | 0.0019 | 0.0032 |
| 89 | 0.0052 | 0.0019 | 0.0033 |
| 90 | 0.0052 | 0.0019 | 0.0033 |
| 91 | 0.0052 | 0.0019 | 0.0033 |
| 92 | 0.0053 | 0.0019 | 0.0033 |
| 93 | 0.0053 | 0.0020 | 0.0034 |
| 94 | 0.0053 | 0.0020 | 0.0034 |
| 95 | 0.0054 | 0.0020 | 0.0034 |
| 96 | 0.0054 | 0.0020 | 0.0034 |
| 97 | 0.0055 | 0.0020 | 0.0035 |
| 98 | 0.0055 | 0.0020 | 0.0035 |
| 99 | 0.0056 | 0.0020 | 0.0035 |
| 100 | 0.0056 | 0.0021 | 0.0035 |
| 101 | 0.0056 | 0.0021 | 0.0036 |
| 102 | 0.0057 | 0.0021 | 0.0036 |
| 103 | 0.0057 | 0.0021 | 0.0036 |
| 104 | 0.0058 | 0.0021 | 0.0036 |
| 105 | 0.0058 | 0.0021 | 0.0037 |
| 106 | 0.0058 | 0.0022 | 0.0037 |
| 107 | 0.0059 | 0.0022 | 0.0037 |
| 108 | 0.0059 | 0.0022 | 0.0038 |
| 109 | 0.0060 | 0.0022 | 0.0038 |
| 110 | 0.0060 | 0.0022 | 0.0038 |
| 111 | 0.0061 | 0.0023 | 0.0039 |
| 112 | 0.0061 | 0.0023 | 0.0039 |
| 113 | 0.0062 | 0.0023 | 0.0039 |
| 114 | 0.0062 | 0.0023 | 0.0039 |
| 115 | 0.0063 | 0.0023 | 0.0040 |
| 116 | 0.0064 | 0.0023 | 0.0040 |
| 117 | 0.0064 | 0.0024 | 0.0041 |
| 118 | 0.0065 | 0.0024 | 0.0041 |
| 119 | 0.0066 | 0.0024 | 0.0041 |

| | | | |
|---|---|---|---|
| 120 | 0.0066 | 0.0024 | 0.0042 |
| 121 | 0.0067 | 0.0025 | 0.0042 |
| 122 | 0.0067 | 0.0025 | 0.0042 |
| 123 | 0.0068 | 0.0025 | 0.0043 |
| 124 | 0.0069 | 0.0025 | 0.0043 |
| 125 | 0.0070 | 0.0026 | 0.0044 |
| 126 | 0.0070 | 0.0026 | 0.0044 |
| 127 | 0.0071 | 0.0026 | 0.0045 |
| 128 | 0.0072 | 0.0026 | 0.0045 |
| 129 | 0.0073 | 0.0027 | 0.0046 |
| 130 | 0.0073 | 0.0027 | 0.0046 |
| 131 | 0.0074 | 0.0027 | 0.0047 |
| 132 | 0.0075 | 0.0028 | 0.0047 |
| 133 | 0.0076 | 0.0028 | 0.0048 |
| 134 | 0.0076 | 0.0028 | 0.0048 |
| 135 | 0.0078 | 0.0029 | 0.0049 |
| 136 | 0.0078 | 0.0029 | 0.0049 |
| 137 | 0.0080 | 0.0029 | 0.0050 |
| 138 | 0.0080 | 0.0030 | 0.0051 |
| 139 | 0.0082 | 0.0030 | 0.0052 |
| 140 | 0.0082 | 0.0030 | 0.0052 |
| 141 | 0.0084 | 0.0031 | 0.0053 |
| 142 | 0.0085 | 0.0031 | 0.0053 |
| 143 | 0.0086 | 0.0032 | 0.0054 |
| 144 | 0.0087 | 0.0032 | 0.0055 |
| 145 | 0.0095 | 0.0035 | 0.0060 |
| 146 | 0.0096 | 0.0035 | 0.0061 |
| 147 | 0.0098 | 0.0036 | 0.0062 |
| 148 | 0.0099 | 0.0036 | 0.0062 |
| 149 | 0.0101 | 0.0037 | 0.0064 |
| 150 | 0.0102 | 0.0038 | 0.0064 |
| 151 | 0.0104 | 0.0038 | 0.0066 |
| 152 | 0.0105 | 0.0039 | 0.0066 |
| 153 | 0.0107 | 0.0040 | 0.0068 |
| 154 | 0.0109 | 0.0040 | 0.0069 |
| 155 | 0.0111 | 0.0041 | 0.0070 |
| 156 | 0.0113 | 0.0041 | 0.0071 |
| 157 | 0.0115 | 0.0043 | 0.0073 |
| 158 | 0.0117 | 0.0043 | 0.0074 |
| 159 | 0.0120 | 0.0044 | 0.0076 |
| 160 | 0.0121 | 0.0045 | 0.0077 |
| 161 | 0.0125 | 0.0046 | 0.0079 |
| 162 | 0.0127 | 0.0047 | 0.0080 |
| 163 | 0.0130 | 0.0048 | 0.0082 |
| 164 | 0.0132 | 0.0049 | 0.0084 |
| 165 | 0.0137 | 0.0050 | 0.0086 |
| 166 | 0.0139 | 0.0051 | 0.0088 |
| 167 | 0.0144 | 0.0053 | 0.0091 |
| 168 | 0.0146 | 0.0054 | 0.0092 |
| 169 | 0.0285 | 0.0105 | 0.0180 |
| 170 | 0.0288 | 0.0106 | 0.0182 |
| 171 | 0.0295 | 0.0109 | 0.0186 |
| 172 | 0.0298 | 0.0110 | 0.0188 |
| 173 | 0.0306 | 0.0113 | 0.0193 |
| 174 | 0.0310 | 0.0114 | 0.0196 |
| 175 | 0.0318 | 0.0117 | 0.0201 |
| 176 | 0.0323 | 0.0119 | 0.0204 |
| 177 | 0.0333 | 0.0123 | 0.0210 |
| 178 | 0.0339 | 0.0125 | 0.0214 |

| | | | |
|---|---|---|---|
| 179 | 0.0351 | 0.0129 | 0.0221 |
| 180 | 0.0357 | 0.0132 | 0.0226 |
| 181 | 0.0372 | 0.0137 | 0.0235 |
| 182 | 0.0380 | 0.0140 | 0.0240 |
| 183 | 0.0399 | 0.0147 | 0.0252 |
| 184 | 0.0410 | 0.0151 | 0.0259 |
| 185 | 0.0231 | 0.0085 | 0.0146 |
| 186 | 0.0246 | 0.0091 | 0.0155 |
| 187 | 0.0284 | 0.0105 | 0.0179 |
| 188 | 0.0309 | 0.0114 | 0.0195 |
| 189 | 0.0376 | 0.0139 | 0.0238 |
| 190 | 0.0431 | 0.0159 | 0.0272 |
| 191 | 0.0645 | 0.0188 | 0.0457 |
| 192 | 0.0924 | 0.0188 | 0.0736 |
| 193 | 0.3668 | 0.0188 | 0.3480 |
| 194 | 0.0512 | 0.0188 | 0.0323 |
| 195 | 0.0340 | 0.0125 | 0.0215 |
| 196 | 0.0263 | 0.0097 | 0.0166 |
| 197 | 0.0422 | 0.0156 | 0.0267 |
| 198 | 0.0389 | 0.0143 | 0.0246 |
| 199 | 0.0364 | 0.0134 | 0.0230 |
| 200 | 0.0344 | 0.0127 | 0.0217 |
| 201 | 0.0328 | 0.0121 | 0.0207 |
| 202 | 0.0314 | 0.0116 | 0.0198 |
| 203 | 0.0302 | 0.0111 | 0.0191 |
| 204 | 0.0292 | 0.0107 | 0.0184 |
| 205 | 0.0149 | 0.0055 | 0.0094 |
| 206 | 0.0141 | 0.0052 | 0.0089 |
| 207 | 0.0135 | 0.0050 | 0.0085 |
| 208 | 0.0129 | 0.0047 | 0.0081 |
| 209 | 0.0123 | 0.0045 | 0.0078 |
| 210 | 0.0118 | 0.0044 | 0.0075 |
| 211 | 0.0114 | 0.0042 | 0.0072 |
| 212 | 0.0110 | 0.0041 | 0.0069 |
| 213 | 0.0106 | 0.0039 | 0.0067 |
| 214 | 0.0103 | 0.0038 | 0.0065 |
| 215 | 0.0100 | 0.0037 | 0.0063 |
| 216 | 0.0097 | 0.0036 | 0.0061 |
| 217 | 0.0088 | 0.0032 | 0.0055 |
| 218 | 0.0085 | 0.0031 | 0.0054 |
| 219 | 0.0083 | 0.0031 | 0.0052 |
| 220 | 0.0081 | 0.0030 | 0.0051 |
| 221 | 0.0079 | 0.0029 | 0.0050 |
| 222 | 0.0077 | 0.0028 | 0.0049 |
| 223 | 0.0075 | 0.0028 | 0.0048 |
| 224 | 0.0074 | 0.0027 | 0.0046 |
| 225 | 0.0072 | 0.0027 | 0.0045 |
| 226 | 0.0071 | 0.0026 | 0.0045 |
| 227 | 0.0069 | 0.0025 | 0.0044 |
| 228 | 0.0068 | 0.0025 | 0.0043 |
| 229 | 0.0066 | 0.0024 | 0.0042 |
| 230 | 0.0065 | 0.0024 | 0.0041 |
| 231 | 0.0064 | 0.0024 | 0.0040 |
| 232 | 0.0063 | 0.0023 | 0.0040 |
| 233 | 0.0062 | 0.0023 | 0.0039 |
| 234 | 0.0061 | 0.0022 | 0.0038 |
| 235 | 0.0060 | 0.0022 | 0.0038 |
| 236 | 0.0059 | 0.0022 | 0.0037 |
| 237 | 0.0058 | 0.0021 | 0.0037 |

| | | | |
|---|---|---|---|
| 238 | 0.0057 | 0.0021 | 0.0036 |
| 239 | 0.0056 | 0.0021 | 0.0035 |
| 240 | 0.0055 | 0.0020 | 0.0035 |
| 241 | 0.0054 | 0.0020 | 0.0034 |
| 242 | 0.0054 | 0.0020 | 0.0034 |
| 243 | 0.0053 | 0.0020 | 0.0033 |
| 244 | 0.0052 | 0.0019 | 0.0033 |
| 245 | 0.0052 | 0.0019 | 0.0033 |
| 246 | 0.0051 | 0.0019 | 0.0032 |
| 247 | 0.0050 | 0.0019 | 0.0032 |
| 248 | 0.0050 | 0.0018 | 0.0031 |
| 249 | 0.0049 | 0.0018 | 0.0031 |
| 250 | 0.0048 | 0.0018 | 0.0031 |
| 251 | 0.0048 | 0.0018 | 0.0030 |
| 252 | 0.0047 | 0.0017 | 0.0030 |
| 253 | 0.0047 | 0.0017 | 0.0030 |
| 254 | 0.0046 | 0.0017 | 0.0029 |
| 255 | 0.0046 | 0.0017 | 0.0029 |
| 256 | 0.0045 | 0.0017 | 0.0029 |
| 257 | 0.0045 | 0.0016 | 0.0028 |
| 258 | 0.0044 | 0.0016 | 0.0028 |
| 259 | 0.0044 | 0.0016 | 0.0028 |
| 260 | 0.0043 | 0.0016 | 0.0027 |
| 261 | 0.0043 | 0.0016 | 0.0027 |
| 262 | 0.0042 | 0.0016 | 0.0027 |
| 263 | 0.0042 | 0.0015 | 0.0027 |
| 264 | 0.0042 | 0.0015 | 0.0026 |
| 265 | 0.0041 | 0.0015 | 0.0026 |
| 266 | 0.0041 | 0.0015 | 0.0026 |
| 267 | 0.0040 | 0.0015 | 0.0026 |
| 268 | 0.0040 | 0.0015 | 0.0025 |
| 269 | 0.0040 | 0.0015 | 0.0025 |
| 270 | 0.0039 | 0.0014 | 0.0025 |
| 271 | 0.0039 | 0.0014 | 0.0025 |
| 272 | 0.0039 | 0.0014 | 0.0024 |
| 273 | 0.0038 | 0.0014 | 0.0024 |
| 274 | 0.0038 | 0.0014 | 0.0024 |
| 275 | 0.0038 | 0.0014 | 0.0024 |
| 276 | 0.0037 | 0.0014 | 0.0024 |
| 277 | 0.0037 | 0.0014 | 0.0023 |
| 278 | 0.0037 | 0.0014 | 0.0023 |
| 279 | 0.0036 | 0.0013 | 0.0023 |
| 280 | 0.0036 | 0.0013 | 0.0023 |
| 281 | 0.0036 | 0.0013 | 0.0023 |
| 282 | 0.0036 | 0.0013 | 0.0022 |
| 283 | 0.0035 | 0.0013 | 0.0022 |
| 284 | 0.0035 | 0.0013 | 0.0022 |
| 285 | 0.0035 | 0.0013 | 0.0022 |
| 286 | 0.0035 | 0.0013 | 0.0022 |
| 287 | 0.0034 | 0.0013 | 0.0022 |
| 288 | 0.0034 | 0.0013 | 0.0021 |

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Total soil rain loss = 1.03(In)
Total effective rainfall = 2.13(In)
Peak flow rate in flood hydrograph = 7103.32(CFS)

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24 - H O U R S T O R M

R u n o f f  H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 1800.0 | 3600.0 | 5400.0 | 7200.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0064 | 0.93 | Q | | | | |
| 0+10 | 0.0256 | 2.79 | Q | | | | |
| 0+15 | 0.0578 | 4.67 | Q | | | | |
| 0+20 | 0.1085 | 7.36 | Q | | | | |
| 0+25 | 0.1823 | 10.73 | Q | | | | |
| 0+30 | 0.2799 | 14.17 | Q | | | | |
| 0+35 | 0.4078 | 18.57 | Q | | | | |
| 0+40 | 0.5689 | 23.39 | Q | | | | |
| 0+45 | 0.7647 | 28.42 | Q | | | | |
| 0+50 | 1.0032 | 34.63 | Q | | | | |
| 0+55 | 1.2867 | 41.16 | Q | | | | |
| 1+ 0 | 1.6193 | 48.29 | Q | | | | |
| 1+ 5 | 2.0279 | 59.33 | Q | | | | |
| 1+10 | 2.5177 | 71.13 | Q | | | | |
| 1+15 | 3.0989 | 84.38 | Q | | | | |
| 1+20 | 3.8042 | 102.42 | Q | | | | |
| 1+25 | 4.6377 | 121.03 | Q | | | | |
| 1+30 | 5.5966 | 139.22 | Q | | | | |
| 1+35 | 6.6718 | 156.12 | Q | | | | |
| 1+40 | 7.8639 | 173.10 | Q | | | | |
| 1+45 | 9.1713 | 189.83 | VQ | | | | |
| 1+50 | 10.5935 | 206.50 | VQ | | | | |
| 1+55 | 12.1288 | 222.94 | VQ | | | | |
| 2+ 0 | 13.7601 | 236.86 | VQ | | | | |
| 2+ 5 | 15.4717 | 248.53 | VQ | | | | |
| 2+10 | 17.2628 | 260.07 | VQ | | | | |
| 2+15 | 19.1212 | 269.83 | VQ | | | | |
| 2+20 | 21.0402 | 278.64 | VQ | | | | |
| 2+25 | 23.0199 | 287.46 | VQ | | | | |
| 2+30 | 25.0537 | 295.30 | VQ | | | | |
| 2+35 | 27.1382 | 302.67 | VQ | | | | |
| 2+40 | 29.2733 | 310.03 | VQ | | | | |
| 2+45 | 31.4553 | 316.82 | VQ | | | | |
| 2+50 | 33.6821 | 323.33 | VQ | | | | |
| 2+55 | 35.9534 | 329.80 | VQ | | | | |
| 3+ 0 | 38.2666 | 335.88 | VQ | | | | |
| 3+ 5 | 40.6212 | 341.89 | VQ | | | | |
| 3+10 | 43.0168 | 347.84 | VQ | | | | |
| 3+15 | 45.4502 | 353.33 | VQ | | | | |
| 3+20 | 47.9212 | 358.79 | VQ | | | | |
| 3+25 | 50.4291 | 364.15 | V Q | | | | |
| 3+30 | 52.9714 | 369.13 | V Q | | | | |
| 3+35 | 55.5479 | 374.11 | V Q | | | | |
| 3+40 | 58.1585 | 379.07 | V Q | | | | |
| 3+45 | 60.8030 | 383.97 | V Q | | | | |
| 3+50 | 63.4814 | 388.91 | V Q | | | | |
| 3+55 | 66.1920 | 393.57 | V Q | | | | |
| 4+ 0 | 68.9319 | 397.85 | V Q | | | | |
| 4+ 5 | 71.7015 | 402.14 | V Q | | | | |
| 4+10 | 74.5008 | 406.46 | V Q | | | | |
| 4+15 | 77.3301 | 410.81 | \|VQ | | | | |
| 4+20 | 80.1894 | 415.18 | \|VQ | | | | |

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|---|---|---|---|---|---|---|---|
| 4+25 | 83.0771 | 419.29 | VQ | | | | |
| 4+30 | 85.9921 | 423.25 | VQ | | | | |
| 4+35 | 88.9345 | 427.24 | VQ | | | | |
| 4+40 | 91.9045 | 431.26 | VQ | | | | |
| 4+45 | 94.9025 | 435.30 | VQ | | | | |
| 4+50 | 97.9283 | 439.35 | VQ | | | | |
| 4+55 | 100.9809 | 443.23 | VQ | | | | |
| 5+ 0 | 104.0599 | 447.08 | VQ | | | | |
| 5+ 5 | 107.1657 | 450.96 | VQ | | | | |
| 5+10 | 110.2985 | 454.87 | VQ | | | | |
| 5+15 | 113.4583 | 458.81 | VQ | | | | |
| 5+20 | 116.6451 | 462.72 | VQ | | | | |
| 5+25 | 119.8575 | 466.43 | VQ | | | | |
| 5+30 | 123.0954 | 470.15 | VQ | | | | |
| 5+35 | 126.3591 | 473.89 | VQ | | | | |
| 5+40 | 129.6489 | 477.67 | VQ | | | | |
| 5+45 | 132.9649 | 481.48 | VQ | | | | |
| 5+50 | 136.3064 | 485.19 | VQ | | | | |
| 5+55 | 139.6720 | 488.68 | VQ | | | | |
| 6+ 0 | 143.0619 | 492.21 | VQ | | | | |
| 6+ 5 | 146.4763 | 495.77 | VQ | | | | |
| 6+10 | 149.9154 | 499.36 | VQ | | | | |
| 6+15 | 153.3795 | 502.99 | VQ | | | | |
| 6+20 | 156.8683 | 506.58 | Q | | | | |
| 6+25 | 160.3817 | 510.15 | Q | | | | |
| 6+30 | 163.9200 | 513.76 | Q | | | | |
| 6+35 | 167.4833 | 517.40 | Q | | | | |
| 6+40 | 171.0720 | 521.08 | Q | | | | |
| 6+45 | 174.6862 | 524.78 | Q | | | | |
| 6+50 | 178.3254 | 528.42 | Q | | | | |
| 6+55 | 181.9897 | 532.05 | Q | | | | |
| 7+ 0 | 185.6792 | 535.72 | Q | | | | |
| 7+ 5 | 189.3943 | 539.43 | Q | | | | |
| 7+10 | 193.1352 | 543.18 | VQ | | | | |
| 7+15 | 196.9021 | 546.96 | VQ | | | | |
| 7+20 | 200.6948 | 550.70 | VQ | | | | |
| 7+25 | 204.5134 | 554.46 | VQ | | | | |
| 7+30 | 208.3583 | 558.27 | VQ | | | | |
| 7+35 | 212.2297 | 562.13 | VQ | | | | |
| 7+40 | 216.1280 | 566.03 | VQ | | | | |
| 7+45 | 220.0529 | 569.90 | VQ | | | | |
| 7+50 | 224.0039 | 573.68 | VQ | | | | |
| 7+55 | 227.9812 | 577.50 | VQ | | | | |
| 8+ 0 | 231.9851 | 581.38 | Q | | | | |
| 8+ 5 | 236.0161 | 585.29 | Q | | | | |
| 8+10 | 240.0743 | 589.26 | Q | | | | |
| 8+15 | 244.1603 | 593.28 | Q | | | | |
| 8+20 | 248.2743 | 597.35 | Q | | | | |
| 8+25 | 252.4167 | 601.47 | Q | | | | |
| 8+30 | 256.5879 | 605.66 | Q | | | | |
| 8+35 | 260.7882 | 609.89 | Q | | | | |
| 8+40 | 265.0181 | 614.18 | Q | | | | |
| 8+45 | 269.2773 | 618.43 | Q | | | | |
| 8+50 | 273.5659 | 622.71 | Q | | | | |
| 8+55 | 277.8844 | 627.04 | Q | | | | |
| 9+ 0 | 282.2332 | 631.45 | Q | | | | |
| 9+ 5 | 286.6127 | 635.91 | Q | | | | |
| 9+10 | 291.0235 | 640.44 | Q | | | | |
| 9+15 | 295.4659 | 645.04 | Q | | | | |

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|---|---|---|---|---|---|---|---|
| 9+20 | 299.9405 | 649.71 | Q | | | | |
| 9+25 | 304.4477 | 654.44 | Q | | | | |
| 9+30 | 308.9880 | 659.26 | Q | | | | |
| 9+35 | 313.5620 | 664.14 | QV | | | | |
| 9+40 | 318.1699 | 669.07 | QV | | | | |
| 9+45 | 322.8116 | 673.97 | QV | | | | |
| 9+50 | 327.4877 | 678.96 | QV | | | | |
| 9+55 | 332.1985 | 684.02 | QV | | | | |
| 10+ 0 | 336.9449 | 689.18 | QV | | | | |
| 10+ 5 | 341.7274 | 694.41 | QV | | | | |
| 10+10 | 346.5465 | 699.74 | QV | | | | |
| 10+15 | 351.4030 | 705.16 | QV | | | | |
| 10+20 | 356.2976 | 710.69 | QV | | | | |
| 10+25 | 361.2308 | 716.30 | QV | | | | |
| 10+30 | 366.2034 | 722.03 | Q | | | | |
| 10+35 | 371.2161 | 727.84 | Q | | | | |
| 10+40 | 376.2691 | 733.70 | Q | | | | |
| 10+45 | 381.3629 | 739.62 | Q | | | | |
| 10+50 | 386.4983 | 745.66 | Q | | | | |
| 10+55 | 391.6761 | 751.82 | QV | | | | |
| 11+ 0 | 396.8973 | 758.11 | QV | | | | |
| 11+ 5 | 402.1625 | 764.51 | QV | | | | |
| 11+10 | 407.4728 | 771.06 | QV | | | | |
| 11+15 | 412.8291 | 777.73 | QV | | | | |
| 11+20 | 418.2323 | 784.55 | QV | | | | |
| 11+25 | 423.6835 | 791.51 | QV | | | | |
| 11+30 | 429.1837 | 798.63 | QV | | | | |
| 11+35 | 434.7340 | 805.91 | QV | | | | |
| 11+40 | 440.3357 | 813.36 | QV | | | | |
| 11+45 | 445.9898 | 820.98 | QV | | | | |
| 11+50 | 451.6977 | 828.78 | QV | | | | |
| 11+55 | 457.4605 | 836.76 | QV | | | | |
| 12+ 0 | 463.2796 | 844.93 | QV | | | | |
| 12+ 5 | 469.1575 | 853.47 | Q V | | | | |
| 12+10 | 475.0969 | 862.40 | Q V | | | | |
| 12+15 | 481.0992 | 871.54 | Q V | | | | |
| 12+20 | 487.1671 | 881.06 | Q V | | | | |
| 12+25 | 493.3031 | 890.94 | Q V | | | | |
| 12+30 | 499.5089 | 901.09 | QV | | | | |
| 12+35 | 505.7875 | 911.65 | QV | | | | |
| 12+40 | 512.1414 | 922.58 | QV | | | | |
| 12+45 | 518.5726 | 933.82 | QV | | | | |
| 12+50 | 525.0849 | 945.58 | QV | | | | |
| 12+55 | 531.6806 | 957.71 | QV | | | | |
| 13+ 0 | 538.3631 | 970.29 | QV | | | | |
| 13+ 5 | 545.1394 | 983.93 | Q V | | | | |
| 13+10 | 552.0133 | 998.09 | Q V | | | | |
| 13+15 | 558.9892 | 1012.90 | Q V | | | | |
| 13+20 | 566.0762 | 1029.03 | Q V | | | | |
| 13+25 | 573.2778 | 1045.68 | Q V | | | | |
| 13+30 | 580.5967 | 1062.70 | Q V | | | | |
| 13+35 | 588.0338 | 1079.88 | Q V | | | | |
| 13+40 | 595.5930 | 1097.59 | QV | | | | |
| 13+45 | 603.2774 | 1115.77 | QV | | | | |
| 13+50 | 611.0910 | 1134.54 | QV | | | | |
| 13+55 | 619.0376 | 1153.85 | Q V | | | | |
| 14+ 0 | 627.1186 | 1173.36 | Q V | | | | |
| 14+ 5 | 635.3609 | 1196.78 | Q V | | | | |
| 14+10 | 643.7949 | 1224.62 | Q V | | | | |

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|---|---|---|---|---|---|---|---|
| 14+15 | 652.4239 | 1252.93 | Q V | | | | |
| 14+20 | 661.2748 | 1285.14 | QV | | | | |
| 14+25 | 670.3718 | 1320.88 | QV | | | | |
| 14+30 | 679.7224 | 1357.71 | QV | | | | |
| 14+35 | 689.3591 | 1399.24 | QV | | | | |
| 14+40 | 699.3009 | 1443.55 | QV | | | | |
| 14+45 | 709.5609 | 1489.76 | QV | | | | |
| 14+50 | 720.1800 | 1541.89 | QV | | | | |
| 14+55 | 731.1762 | 1596.65 | QV | | | | |
| 15+ 0 | 742.5760 | 1655.26 | Q | | | | |
| 15+ 5 | 754.4966 | 1730.87 | Q | | | | |
| 15+10 | 766.9715 | 1811.35 | VQ | | | | |
| 15+15 | 780.0535 | 1899.51 | Q | | | | |
| 15+20 | 793.8889 | 2008.89 | VQ | | | | |
| 15+25 | 808.4719 | 2117.45 | VQ | | | | |
| 15+30 | 823.7723 | 2221.62 | V Q | | | | |
| 15+35 | 839.7778 | 2324.01 | V Q | | | | |
| 15+40 | 856.4852 | 2425.91 | V Q | | | | |
| 15+45 | 873.8955 | 2527.98 | V Q | | | | |
| 15+50 | 892.0493 | 2635.93 | V Q | | | | |
| 15+55 | 910.9915 | 2750.41 | V Q | | | | |
| 16+ 0 | 930.8081 | 2877.37 | V Q | | | | |
| 16+ 5 | 952.3760 | 3131.67 | V Q | | | | |
| 16+10 | 975.6033 | 3372.61 | V Q | | | | |
| 16+15 | 999.6078 | 3485.45 | V Q | | | | |
| 16+20 | 1025.1044 | 3702.11 | V Q | | | | |
| 16+25 | 1051.8102 | 3877.68 | V Q | | | | |
| 16+30 | 1079.1950 | 3976.28 | V Q | | | | |
| 16+35 | 1108.0120 | 4184.22 | V Q | | | | |
| 16+40 | 1137.5955 | 4295.52 | V Q | | | | |
| 16+45 | 1167.8308 | 4390.17 | V Q | | | | |
| 16+50 | 1199.6557 | 4620.98 | V Q | | | | |
| 16+55 | 1232.5166 | 4771.40 | V Q | | | | |
| 17+ 0 | 1267.0167 | 5009.41 | V Q | | | | |
| 17+ 5 | 1306.1058 | 5675.73 | V | Q | | | |
| 17+10 | 1346.8282 | 5912.89 | V | Q | | | |
| 17+15 | 1389.9418 | 6260.10 | V | Q | | | |
| 17+20 | 1438.1690 | 7002.59 | V | Q | | | |
| 17+25 | 1487.0900 | 7103.32 | V | Q | | | |
| 17+30 | 1535.3695 | 7010.19 | V | Q | | | |
| 17+35 | 1582.1933 | 6798.82 | V | Q | | | |
| 17+40 | 1629.0001 | 6796.35 | V | Q | | | |
| 17+45 | 1675.3971 | 6736.84 | V | Q | | | |
| 17+50 | 1721.2861 | 6663.08 | V | Q | | | |
| 17+55 | 1766.0699 | 6502.61 | V | Q | | | |
| 18+ 0 | 1807.4450 | 6007.66 | V | Q | | | |
| 18+ 5 | 1845.7402 | 5560.47 | V | Q | | | |
| 18+10 | 1882.9582 | 5404.06 | V | Q | | | |
| 18+15 | 1917.6080 | 5031.14 | V Q | | | | |
| 18+20 | 1950.4112 | 4763.03 | VQ | | | | |
| 18+25 | 1982.1966 | 4615.24 | Q | | | | |
| 18+30 | 2012.1138 | 4343.97 | Q V | | | | |
| 18+35 | 2040.7134 | 4152.67 | Q V | | | | |
| 18+40 | 2068.4250 | 4023.72 | Q V | | | | |
| 18+45 | 2094.7737 | 3825.84 | Q V | | | | |
| 18+50 | 2120.0560 | 3670.99 | Q V | | | | |
| 18+55 | 2144.5205 | 3552.24 | Q V | | | | |
| 19+ 0 | 2167.9298 | 3399.03 | Q V | | | | |
| 19+ 5 | 2190.6543 | 3299.60 | Q V | | | | |

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19+10    2212.6745   3197.33  |         |      Q  |       V |         |
19+15    2233.7224   3056.15  |         |     Q   |       V |         |
19+20    2254.2265   2977.20  |         |     Q   |        V|         |
19+25    2274.1213   2888.74  |         |     Q   |        V|         |
19+30    2293.2037   2770.76  |         |    Q    |        V|         |
19+35    2311.8618   2709.15  |         |    Q    |        V|         |
19+40    2330.1019   2648.47  |         |   Q     |         V         |
19+45    2347.9048   2584.98  |         |   Q     |         V         |
19+50    2365.3115   2527.45  |         |   Q     |         V         |
19+55    2382.0340   2428.10  |         |  Q      |         V         |
20+ 0    2398.0130   2320.16  |         | Q       |         |V        |
20+ 5    2413.6907   2276.39  |         | Q       |         |V        |
20+10    2429.0932   2236.45  |         | Q       |         |V        |
20+15    2444.2261   2197.29  |         | Q       |         |V        |
20+20    2459.0438   2151.53  |         |Q        |         |V        |
20+25    2473.2860   2067.96  |         |Q        |         |V        |
20+30    2487.1106   2007.34  |         |Q        |         | V       |
20+35    2500.7083   1974.39  |         Q         |         | V       |
20+40    2514.0927   1943.41  |         Q         |         | V       |
20+45    2527.2573   1911.50  |         Q         |         | V       |
20+50    2540.1599   1873.47  |         Q         |         | V       |
20+55    2552.6457   1812.94  |         Q         |         |  V      |
21+ 0    2564.8883   1777.62  |        Q|         |         |  V      |
21+ 5    2576.9495   1751.28  |        Q|         |         |  V      |
21+10    2588.8353   1725.82  |        Q|         |         |  V      |
21+15    2600.5324   1698.42  |        Q|         |         |  V      |
21+20    2611.9654   1660.07  |        Q|         |         |  V      |
21+25    2622.9967   1601.75  |       Q |         |         |  V      |
21+30    2633.8476   1575.54  |       Q |         |         |   V     |
21+35    2644.5486   1553.79  |       Q |         |         |   V     |
21+40    2655.0962   1531.52  |       Q |         |         |   V     |
21+45    2665.4592   1504.71  |       Q |         |         |   V     |
21+50    2675.4941   1457.07  |       Q |         |         |   V     |
21+55    2685.1381   1400.30  |      Q  |         |         |   V     |
22+ 0    2694.6358   1379.07  |      Q  |         |         |   V     |
22+ 5    2704.0029   1360.10  |      Q  |         |         |   V     |
22+10    2713.2399   1341.22  |      Q  |         |         |    V    |
22+15    2722.3333   1320.36  |      Q  |         |         |    V    |
22+20    2731.2212   1290.53  |      Q  |         |         |    V    |
22+25    2739.9392   1265.85  |      Q  |         |         |    V    |
22+30    2748.5420   1249.13  |     Q   |         |         |    V    |
22+35    2757.0330   1232.89  |     Q   |         |         |    V    |
22+40    2765.4072   1215.94  |     Q   |         |         |    V    |
22+45    2773.6431   1195.84  |     Q   |         |         |    V    |
22+50    2781.6502   1162.63  |     Q   |         |         |    V    |
22+55    2789.5194   1142.61  |     Q   |         |         |     V   |
23+ 0    2797.2911   1128.46  |     Q   |         |         |     V   |
23+ 5    2804.9699   1114.96  |     Q   |         |         |     V   |
23+10    2812.5529   1101.04  |     Q   |         |         |     V   |
23+15    2820.0175   1083.86  |     Q   |         |         |     V   |
23+20    2827.3122   1059.20  |    Q    |         |         |     V   |
23+25    2834.5111   1045.27  |    Q    |         |         |     V   |
23+30    2841.6262   1033.11  |    Q    |         |         |     V   |
23+35    2848.6540   1020.44  |    Q    |         |         |     V   |
23+40    2855.5774   1005.28  |    Q    |         |         |     V   |
23+45    2862.3207    979.12  |    Q    |         |         |      V  |
23+50    2868.8319    945.43  |    Q    |         |         |      V  |
23+55    2875.2574    932.98  |    Q    |         |         |      V  |
24+ 0    2881.6087    922.21  |    Q    |         |         |      V  |
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|---|---|---|---|---|---|---|
| 24+ 5 | 2887.8840 | 911.17 | Q | | | V |
| 24+10 | 2894.0748 | 898.90 | Q | | | V |
| 24+15 | 2900.1826 | 886.86 | Q | | | V |
| 24+20 | 2906.2053 | 874.49 | Q | | | V |
| 24+25 | 2912.1386 | 861.51 | Q | | | V |
| 24+30 | 2917.9817 | 848.41 | Q | | | V |
| 24+35 | 2923.7226 | 833.58 | Q | | | V |
| 24+40 | 2929.3423 | 815.98 | Q | | | V |
| 24+45 | 2934.7595 | 786.59 | Q | | | V |
| 24+50 | 2940.0363 | 766.19 | Q | | | V |
| 24+55 | 2945.2109 | 751.36 | Q | | | V |
| 25+ 0 | 2950.2843 | 736.65 | Q | | | V |
| 25+ 5 | 2955.2316 | 718.36 | Q | | | V |
| 25+10 | 2960.0482 | 699.37 | Q | | | V |
| 25+15 | 2964.7253 | 679.11 | Q | | | V |
| 25+20 | 2969.2310 | 654.22 | Q | | | V |
| 25+25 | 2973.5616 | 628.81 | Q | | | V |
| 25+30 | 2977.7187 | 603.60 | Q | | | V |
| 25+35 | 2981.7035 | 578.60 | Q | | | V |
| 25+40 | 2985.4733 | 547.38 | Q | | | V |
| 25+45 | 2988.9878 | 510.30 | Q | | | V |
| 25+50 | 2992.3472 | 487.77 | Q | | | V |
| 25+55 | 2995.5630 | 466.94 | Q | | | V |
| 26+ 0 | 2998.6576 | 449.34 | Q | | | V |
| 26+ 5 | 3001.6462 | 433.94 | Q | | | V |
| 26+10 | 3004.5307 | 418.84 | Q | | | V |
| 26+15 | 3007.3247 | 405.68 | Q | | | V |
| 26+20 | 3010.0348 | 393.51 | Q | | | V |
| 26+25 | 3012.6608 | 381.30 | Q | | | V |
| 26+30 | 3015.2052 | 369.44 | Q | | | V |
| 26+35 | 3017.6599 | 356.43 | Q | | | V |
| 26+40 | 3019.9547 | 333.20 | Q | | | V |
| 26+45 | 3022.1483 | 318.51 | Q | | | V |
| 26+50 | 3024.2837 | 310.07 | Q | | | V |
| 26+55 | 3026.3643 | 302.10 | Q | | | V |
| 27+ 0 | 3028.3909 | 294.26 | Q | | | V |
| 27+ 5 | 3030.3640 | 286.50 | Q | | | V |
| 27+10 | 3032.2855 | 279.00 | Q | | | V |
| 27+15 | 3034.1597 | 272.14 | Q | | | V |
| 27+20 | 3035.9881 | 265.48 | Q | | | V |
| 27+25 | 3037.7727 | 259.11 | Q | | | V |
| 27+30 | 3039.5173 | 253.33 | Q | | | V |
| 27+35 | 3041.2261 | 248.11 | Q | | | V |
| 27+40 | 3042.9086 | 244.30 | Q | | | V |
| 27+45 | 3044.5546 | 238.99 | Q | | | V |
| 27+50 | 3046.1630 | 233.54 | Q | | | V |
| 27+55 | 3047.7362 | 228.43 | Q | | | V |
| 28+ 0 | 3049.2778 | 223.85 | Q | | | V |
| 28+ 5 | 3050.7880 | 219.28 | Q | | | V |
| 28+10 | 3052.2668 | 214.72 | Q | | | V |
| 28+15 | 3053.7141 | 210.15 | Q | | | V |
| 28+20 | 3055.1300 | 205.58 | Q | | | V |
| 28+25 | 3056.5161 | 201.26 | Q | | | V |
| 28+30 | 3057.8729 | 197.02 | Q | | | V |
| 28+35 | 3059.1963 | 192.15 | Q | | | V |
| 28+40 | 3060.4882 | 187.59 | Q | | | V |
| 28+45 | 3061.7513 | 183.39 | Q | | | V |
| 28+50 | 3062.9864 | 179.33 | Q | | | V |
| 28+55 | 3064.1975 | 175.86 | Q | | | V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 29+ 0 | 3065.3836 | 172.22 | Q | \| | \| | \| | V\| |
| 29+ 5 | 3066.5426 | 168.30 | Q | \| | \| | \| | V\| |
| 29+10 | 3067.6741 | 164.29 | Q | \| | \| | \| | V\| |
| 29+15 | 3068.7768 | 160.11 | Q | \| | \| | \| | V\| |
| 29+20 | 3069.8491 | 155.70 | Q | \| | \| | \| | V\| |
| 29+25 | 3070.8864 | 150.61 | Q | \| | \| | \| | V\| |
| 29+30 | 3071.8637 | 141.91 | Q | \| | \| | \| | V\| |
| 29+35 | 3072.7370 | 126.80 | Q | \| | \| | \| | V\| |
| 29+40 | 3073.5764 | 121.88 | Q | \| | \| | \| | V\| |
| 29+45 | 3074.3904 | 118.20 | Q | \| | \| | \| | V\| |
| 29+50 | 3075.1807 | 114.75 | Q | \| | \| | \| | V\| |
| 29+55 | 3075.9466 | 111.21 | Q | \| | \| | \| | V\| |
| 30+ 0 | 3076.6885 | 107.72 | Q | \| | \| | \| | V\| |
| 30+ 5 | 3077.4067 | 104.28 | Q | \| | \| | \| | V\| |
| 30+10 | 3078.1014 | 100.87 | Q | \| | \| | \| | V\| |
| 30+15 | 3078.7728 | 97.48 | Q | \| | \| | \| | V\| |
| 30+20 | 3079.4233 | 94.46 | Q | \| | \| | \| | V\| |
| 30+25 | 3080.0555 | 91.78 | Q | \| | \| | \| | V\| |
| 30+30 | 3080.6695 | 89.15 | Q | \| | \| | \| | V\| |
| 30+35 | 3081.2669 | 86.75 | Q | \| | \| | \| | V\| |
| 30+40 | 3081.8473 | 84.27 | Q | \| | \| | \| | V\| |
| 30+45 | 3082.4096 | 81.64 | Q | \| | \| | \| | V\| |
| 30+50 | 3082.9512 | 78.64 | Q | \| | \| | \| | V\| |
| 30+55 | 3083.4651 | 74.62 | Q | \| | \| | \| | V\| |
| 31+ 0 | 3083.9026 | 63.52 | Q | \| | \| | \| | V\| |
| 31+ 5 | 3084.2705 | 53.42 | Q | \| | \| | \| | V\| |
| 31+10 | 3084.6216 | 50.99 | Q | \| | \| | \| | V\| |
| 31+15 | 3084.9589 | 48.97 | Q | \| | \| | \| | V\| |
| 31+20 | 3085.2820 | 46.92 | Q | \| | \| | \| | V\| |
| 31+25 | 3085.5899 | 44.71 | Q | \| | \| | \| | V\| |
| 31+30 | 3085.8833 | 42.61 | Q | \| | \| | \| | V\| |
| 31+35 | 3086.1629 | 40.60 | Q | \| | \| | \| | V\| |
| 31+40 | 3086.4291 | 38.65 | Q | \| | \| | \| | V\| |
| 31+45 | 3086.6829 | 36.84 | Q | \| | \| | \| | V\| |
| 31+50 | 3086.9254 | 35.22 | Q | \| | \| | \| | V\| |
| 31+55 | 3087.1571 | 33.65 | Q | \| | \| | \| | V\| |
| 32+ 0 | 3087.3796 | 32.31 | Q | \| | \| | \| | V\| |
| 32+ 5 | 3087.5945 | 31.20 | Q | \| | \| | \| | V\| |
| 32+10 | 3087.8020 | 30.13 | Q | \| | \| | \| | V\| |
| 32+15 | 3088.0023 | 29.08 | Q | \| | \| | \| | V\| |
| 32+20 | 3088.1956 | 28.06 | Q | \| | \| | \| | V\| |
| 32+25 | 3088.3820 | 27.06 | Q | \| | \| | \| | V\| |
| 32+30 | 3088.5616 | 26.09 | Q | \| | \| | \| | V\| |
| 32+35 | 3088.7347 | 25.13 | Q | \| | \| | \| | V\| |
| 32+40 | 3088.9013 | 24.19 | Q | \| | \| | \| | V\| |
| 32+45 | 3089.0623 | 23.37 | Q | \| | \| | \| | V\| |
| 32+50 | 3089.2180 | 22.60 | Q | \| | \| | \| | V\| |
| 32+55 | 3089.3684 | 21.85 | Q | \| | \| | \| | V\| |
| 33+ 0 | 3089.5138 | 21.12 | Q | \| | \| | \| | V\| |
| 33+ 5 | 3089.6544 | 20.40 | Q | \| | \| | \| | V\| |
| 33+10 | 3089.7901 | 19.71 | Q | \| | \| | \| | V\| |
| 33+15 | 3089.9211 | 19.02 | Q | \| | \| | \| | V\| |
| 33+20 | 3090.0474 | 18.34 | Q | \| | \| | \| | V\| |
| 33+25 | 3090.1692 | 17.68 | Q | \| | \| | \| | V\| |
| 33+30 | 3090.2864 | 17.02 | Q | \| | \| | \| | V\| |
| 33+35 | 3090.3992 | 16.38 | Q | \| | \| | \| | V\| |
| 33+40 | 3090.5079 | 15.78 | Q | \| | \| | \| | V\| |
| 33+45 | 3090.6132 | 15.29 | Q | \| | \| | \| | V\| |
| 33+50 | 3090.7152 | 14.81 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 33+55 | 3090.8140 | 14.34 | Q | \| | \| | \| | V\| |
| 34+ 0 | 3090.9095 | 13.88 | Q | \| | \| | \| | V\| |
| 34+ 5 | 3091.0019 | 13.42 | Q | \| | \| | \| | V\| |
| 34+10 | 3091.0912 | 12.97 | Q | \| | \| | \| | V\| |
| 34+15 | 3091.1775 | 12.52 | Q | \| | \| | \| | V\| |
| 34+20 | 3091.2607 | 12.08 | Q | \| | \| | \| | V\| |
| 34+25 | 3091.3409 | 11.65 | Q | \| | \| | \| | V\| |
| 34+30 | 3091.4181 | 11.22 | Q | \| | \| | \| | V\| |
| 34+35 | 3091.4925 | 10.80 | Q | \| | \| | \| | V\| |
| 34+40 | 3091.5645 | 10.46 | Q | \| | \| | \| | V\| |
| 34+45 | 3091.6346 | 10.17 | Q | \| | \| | \| | V\| |
| 34+50 | 3091.7027 | 9.88 | Q | \| | \| | \| | V\| |
| 34+55 | 3091.7688 | 9.60 | Q | \| | \| | \| | V\| |
| 35+ 0 | 3091.8329 | 9.32 | Q | \| | \| | \| | V\| |
| 35+ 5 | 3091.8952 | 9.04 | Q | \| | \| | \| | V\| |
| 35+10 | 3091.9555 | 8.76 | Q | \| | \| | \| | V\| |
| 35+15 | 3092.0140 | 8.49 | Q | \| | \| | \| | V\| |
| 35+20 | 3092.0707 | 8.23 | Q | \| | \| | \| | V\| |
| 35+25 | 3092.1255 | 7.96 | Q | \| | \| | \| | V\| |
| 35+30 | 3092.1785 | 7.70 | Q | \| | \| | \| | V\| |
| 35+35 | 3092.2298 | 7.44 | Q | \| | \| | \| | V\| |
| 35+40 | 3092.2791 | 7.17 | Q | \| | \| | \| | V\| |
| 35+45 | 3092.3266 | 6.90 | Q | \| | \| | \| | V\| |
| 35+50 | 3092.3722 | 6.63 | Q | \| | \| | \| | V\| |
| 35+55 | 3092.4161 | 6.36 | Q | \| | \| | \| | V\| |
| 36+ 0 | 3092.4581 | 6.10 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 50
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 3444.14 | 1 | 1.45 |
| Rainfall data for year 100 | | |
| 3444.14 | 6 | 2.64 |
| Rainfall data for year 100 | | |
| 3444.14 | 24 | 4.24 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 88.0 | 97.6 | 3444.14 | 1.000 | 0.048 | 1.000 | 0.048 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.048

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 3444.14 | 1.000 | 88.0 | 97.6 | 0.25 | 0.934 |

Area-averaged catchment yield fraction, Y = 0.934
Area-averaged low loss fraction, Yb = 0.066
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 24414.00(Ft.)
Length from concentration point to centroid = 13905.00(Ft.)
Elevation difference along watercourse = 1760.00(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 3444.14(Ac.)
Catchment Lag time = 0.702 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 11.8667
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.048(In/Hr)
Average low loss rate fraction (Yb) = 0.066 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.950
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.050

Computed peak 5-minute rainfall = 0.689(In)
Computed peak 30-minute rainfall = 1.179(In)
Specified peak 1-hour rainfall = 1.451(In)
Computed peak 3-hour rainfall = 2.092(In)
Specified peak 6-hour rainfall = 2.636(In)
Specified peak 24-hour rainfall = 4.235(In)

Rainfall depth area reduction factors:
Using a total area of 3444.14(Ac.) (Ref: fig. E-4)

5-minute factor = 0.842 Adjusted rainfall = 0.580(In)
30-minute factor = 0.842 Adjusted rainfall = 0.992(In)
1-hour factor = 0.842 Adjusted rainfall = 1.222(In)
3-hour factor = 0.980 Adjusted rainfall = 2.050(In)
6-hour factor = 0.989 Adjusted rainfall = 2.608(In)
24-hour factor = 0.996 Adjusted rainfall = 4.216(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 41652.57 (CFS)) | |
| 1 | 0.740 | 308.265 |
| 2 | 2.435 | 705.927 |
| 3 | 4.806 | 987.787 |
| 4 | 7.863 | 1273.040 |
| 5 | 11.639 | 1573.119 |
| 6 | 16.946 | 2210.217 |

| | | |
|---|---|---|
| 7 | 23.871 | 2884.545 |
| 8 | 34.448 | 4405.419 |
| 9 | 49.916 | 6443.142 |
| 10 | 57.976 | 3356.832 |
| 11 | 63.349 | 2238.239 |
| 12 | 67.615 | 1776.795 |
| 13 | 71.209 | 1496.913 |
| 14 | 74.138 | 1220.236 |
| 15 | 76.904 | 1151.984 |
| 16 | 79.250 | 977.265 |
| 17 | 81.421 | 904.052 |
| 18 | 83.294 | 780.513 |
| 19 | 84.996 | 708.703 |
| 20 | 86.544 | 644.903 |
| 21 | 87.961 | 590.169 |
| 22 | 89.257 | 539.866 |
| 23 | 90.397 | 474.770 |
| 24 | 91.472 | 447.535 |
| 25 | 92.424 | 396.621 |
| 26 | 93.323 | 374.716 |
| 27 | 94.088 | 318.507 |
| 28 | 94.811 | 301.075 |
| 29 | 95.399 | 244.948 |
| 30 | 95.961 | 234.175 |
| 31 | 96.452 | 204.519 |
| 32 | 96.921 | 195.125 |
| 33 | 97.287 | 152.708 |
| 34 | 97.621 | 139.039 |
| 35 | 97.823 | 84.187 |
| 36 | 97.979 | 64.750 |
| 37 | 98.134 | 64.750 |
| 38 | 98.289 | 64.715 |
| 39 | 98.429 | 58.206 |
| 40 | 98.557 | 53.382 |
| 41 | 98.685 | 53.382 |
| 42 | 98.814 | 53.382 |
| 43 | 98.923 | 45.611 |
| 44 | 99.002 | 32.811 |
| 45 | 99.080 | 32.622 |
| 46 | 99.159 | 32.622 |
| 47 | 99.241 | 34.197 |
| 48 | 99.336 | 39.587 |
| 49 | 99.432 | 40.037 |
| 50 | 99.528 | 40.037 |
| 51 | 99.620 | 38.280 |
| 52 | 99.679 | 24.633 |
| 53 | 99.731 | 21.748 |
| 54 | 99.783 | 21.748 |
| 55 | 99.835 | 21.511 |
| 56 | 99.872 | 15.178 |
| 57 | 99.901 | 12.357 |
| 58 | 99.931 | 12.357 |
| 59 | 99.972 | 16.945 |
| 60 | 99.977 | 2.239 |
| 61 | 99.981 | 1.545 |
| 62 | 99.984 | 1.545 |
| 63 | 99.988 | 1.545 |
| 64 | 99.992 | 1.545 |
| 65 | 99.995 | 1.545 |

| | | |
|---|---|---|
| 66 | 100.000 | 0.772 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5797 | 0.5797 |
| 2 | 0.7137 | 0.1340 |
| 3 | 0.8060 | 0.0923 |
| 4 | 0.8787 | 0.0727 |
| 5 | 0.9395 | 0.0608 |
| 6 | 0.9924 | 0.0528 |
| 7 | 1.0393 | 0.0470 |
| 8 | 1.0818 | 0.0425 |
| 9 | 1.1207 | 0.0389 |
| 10 | 1.1567 | 0.0360 |
| 11 | 1.1902 | 0.0336 |
| 12 | 1.2217 | 0.0315 |
| 13 | 1.2687 | 0.0469 |
| 14 | 1.3137 | 0.0451 |
| 15 | 1.3571 | 0.0434 |
| 16 | 1.3990 | 0.0419 |
| 17 | 1.4396 | 0.0405 |
| 18 | 1.4789 | 0.0393 |
| 19 | 1.5170 | 0.0382 |
| 20 | 1.5541 | 0.0371 |
| 21 | 1.5902 | 0.0361 |
| 22 | 1.6255 | 0.0352 |
| 23 | 1.6599 | 0.0344 |
| 24 | 1.6935 | 0.0336 |
| 25 | 1.7264 | 0.0329 |
| 26 | 1.7586 | 0.0322 |
| 27 | 1.7901 | 0.0315 |
| 28 | 1.8210 | 0.0309 |
| 29 | 1.8514 | 0.0304 |
| 30 | 1.8812 | 0.0298 |
| 31 | 1.9105 | 0.0293 |
| 32 | 1.9393 | 0.0288 |
| 33 | 1.9676 | 0.0283 |
| 34 | 1.9955 | 0.0279 |
| 35 | 2.0229 | 0.0274 |
| 36 | 2.0499 | 0.0270 |
| 37 | 2.0695 | 0.0196 |
| 38 | 2.0888 | 0.0193 |
| 39 | 2.1077 | 0.0189 |
| 40 | 2.1263 | 0.0186 |
| 41 | 2.1447 | 0.0183 |
| 42 | 2.1627 | 0.0180 |
| 43 | 2.1804 | 0.0178 |
| 44 | 2.1979 | 0.0175 |
| 45 | 2.2152 | 0.0172 |
| 46 | 2.2321 | 0.0170 |
| 47 | 2.2489 | 0.0167 |
| 48 | 2.2654 | 0.0165 |
| 49 | 2.2817 | 0.0163 |
| 50 | 2.2977 | 0.0161 |
| 51 | 2.3136 | 0.0159 |
| 52 | 2.3293 | 0.0157 |
| 53 | 2.3447 | 0.0155 |
| 54 | 2.3600 | 0.0153 |
| 55 | 2.3751 | 0.0151 |

| | | |
|---|---|---|
| 56 | 2.3900 | 0.0149 |
| 57 | 2.4047 | 0.0147 |
| 58 | 2.4193 | 0.0146 |
| 59 | 2.4337 | 0.0144 |
| 60 | 2.4480 | 0.0143 |
| 61 | 2.4621 | 0.0141 |
| 62 | 2.4760 | 0.0139 |
| 63 | 2.4898 | 0.0138 |
| 64 | 2.5035 | 0.0137 |
| 65 | 2.5170 | 0.0135 |
| 66 | 2.5304 | 0.0134 |
| 67 | 2.5436 | 0.0133 |
| 68 | 2.5568 | 0.0131 |
| 69 | 2.5698 | 0.0130 |
| 70 | 2.5826 | 0.0129 |
| 71 | 2.5954 | 0.0128 |
| 72 | 2.6080 | 0.0126 |
| 73 | 2.6205 | 0.0125 |
| 74 | 2.6329 | 0.0124 |
| 75 | 2.6452 | 0.0123 |
| 76 | 2.6574 | 0.0122 |
| 77 | 2.6694 | 0.0121 |
| 78 | 2.6814 | 0.0120 |
| 79 | 2.6932 | 0.0119 |
| 80 | 2.7050 | 0.0118 |
| 81 | 2.7167 | 0.0117 |
| 82 | 2.7283 | 0.0116 |
| 83 | 2.7397 | 0.0115 |
| 84 | 2.7511 | 0.0114 |
| 85 | 2.7624 | 0.0113 |
| 86 | 2.7737 | 0.0112 |
| 87 | 2.7848 | 0.0111 |
| 88 | 2.7958 | 0.0111 |
| 89 | 2.8068 | 0.0110 |
| 90 | 2.8177 | 0.0109 |
| 91 | 2.8285 | 0.0108 |
| 92 | 2.8392 | 0.0107 |
| 93 | 2.8499 | 0.0107 |
| 94 | 2.8605 | 0.0106 |
| 95 | 2.8710 | 0.0105 |
| 96 | 2.8814 | 0.0104 |
| 97 | 2.8918 | 0.0104 |
| 98 | 2.9021 | 0.0103 |
| 99 | 2.9123 | 0.0102 |
| 100 | 2.9225 | 0.0102 |
| 101 | 2.9326 | 0.0101 |
| 102 | 2.9426 | 0.0100 |
| 103 | 2.9526 | 0.0100 |
| 104 | 2.9625 | 0.0099 |
| 105 | 2.9723 | 0.0098 |
| 106 | 2.9821 | 0.0098 |
| 107 | 2.9918 | 0.0097 |
| 108 | 3.0015 | 0.0097 |
| 109 | 3.0111 | 0.0096 |
| 110 | 3.0206 | 0.0095 |
| 111 | 3.0301 | 0.0095 |
| 112 | 3.0395 | 0.0094 |
| 113 | 3.0489 | 0.0094 |
| 114 | 3.0582 | 0.0093 |

| | | |
|---|---|---|
| 115 | 3.0675 | 0.0093 |
| 116 | 3.0767 | 0.0092 |
| 117 | 3.0859 | 0.0092 |
| 118 | 3.0950 | 0.0091 |
| 119 | 3.1041 | 0.0091 |
| 120 | 3.1131 | 0.0090 |
| 121 | 3.1220 | 0.0090 |
| 122 | 3.1310 | 0.0089 |
| 123 | 3.1398 | 0.0089 |
| 124 | 3.1487 | 0.0088 |
| 125 | 3.1574 | 0.0088 |
| 126 | 3.1662 | 0.0087 |
| 127 | 3.1748 | 0.0087 |
| 128 | 3.1835 | 0.0086 |
| 129 | 3.1921 | 0.0086 |
| 130 | 3.2006 | 0.0086 |
| 131 | 3.2092 | 0.0085 |
| 132 | 3.2176 | 0.0085 |
| 133 | 3.2260 | 0.0084 |
| 134 | 3.2344 | 0.0084 |
| 135 | 3.2428 | 0.0083 |
| 136 | 3.2511 | 0.0083 |
| 137 | 3.2593 | 0.0083 |
| 138 | 3.2676 | 0.0082 |
| 139 | 3.2758 | 0.0082 |
| 140 | 3.2839 | 0.0081 |
| 141 | 3.2920 | 0.0081 |
| 142 | 3.3001 | 0.0081 |
| 143 | 3.3081 | 0.0080 |
| 144 | 3.3161 | 0.0080 |
| 145 | 3.3241 | 0.0080 |
| 146 | 3.3320 | 0.0079 |
| 147 | 3.3399 | 0.0079 |
| 148 | 3.3478 | 0.0079 |
| 149 | 3.3556 | 0.0078 |
| 150 | 3.3634 | 0.0078 |
| 151 | 3.3711 | 0.0078 |
| 152 | 3.3788 | 0.0077 |
| 153 | 3.3865 | 0.0077 |
| 154 | 3.3942 | 0.0077 |
| 155 | 3.4018 | 0.0076 |
| 156 | 3.4094 | 0.0076 |
| 157 | 3.4169 | 0.0076 |
| 158 | 3.4245 | 0.0075 |
| 159 | 3.4320 | 0.0075 |
| 160 | 3.4394 | 0.0075 |
| 161 | 3.4469 | 0.0074 |
| 162 | 3.4543 | 0.0074 |
| 163 | 3.4616 | 0.0074 |
| 164 | 3.4690 | 0.0073 |
| 165 | 3.4763 | 0.0073 |
| 166 | 3.4836 | 0.0073 |
| 167 | 3.4908 | 0.0073 |
| 168 | 3.4981 | 0.0072 |
| 169 | 3.5053 | 0.0072 |
| 170 | 3.5124 | 0.0072 |
| 171 | 3.5196 | 0.0071 |
| 172 | 3.5267 | 0.0071 |
| 173 | 3.5338 | 0.0071 |

| | | |
|---|---|---|
| 174 | 3.5409 | 0.0071 |
| 175 | 3.5479 | 0.0070 |
| 176 | 3.5549 | 0.0070 |
| 177 | 3.5619 | 0.0070 |
| 178 | 3.5689 | 0.0070 |
| 179 | 3.5758 | 0.0069 |
| 180 | 3.5827 | 0.0069 |
| 181 | 3.5896 | 0.0069 |
| 182 | 3.5965 | 0.0069 |
| 183 | 3.6033 | 0.0068 |
| 184 | 3.6101 | 0.0068 |
| 185 | 3.6169 | 0.0068 |
| 186 | 3.6237 | 0.0068 |
| 187 | 3.6304 | 0.0067 |
| 188 | 3.6371 | 0.0067 |
| 189 | 3.6438 | 0.0067 |
| 190 | 3.6505 | 0.0067 |
| 191 | 3.6571 | 0.0066 |
| 192 | 3.6637 | 0.0066 |
| 193 | 3.6703 | 0.0066 |
| 194 | 3.6769 | 0.0066 |
| 195 | 3.6835 | 0.0066 |
| 196 | 3.6900 | 0.0065 |
| 197 | 3.6965 | 0.0065 |
| 198 | 3.7030 | 0.0065 |
| 199 | 3.7095 | 0.0065 |
| 200 | 3.7159 | 0.0064 |
| 201 | 3.7224 | 0.0064 |
| 202 | 3.7288 | 0.0064 |
| 203 | 3.7352 | 0.0064 |
| 204 | 3.7415 | 0.0064 |
| 205 | 3.7479 | 0.0063 |
| 206 | 3.7542 | 0.0063 |
| 207 | 3.7605 | 0.0063 |
| 208 | 3.7668 | 0.0063 |
| 209 | 3.7731 | 0.0063 |
| 210 | 3.7793 | 0.0062 |
| 211 | 3.7855 | 0.0062 |
| 212 | 3.7917 | 0.0062 |
| 213 | 3.7979 | 0.0062 |
| 214 | 3.8041 | 0.0062 |
| 215 | 3.8102 | 0.0062 |
| 216 | 3.8164 | 0.0061 |
| 217 | 3.8225 | 0.0061 |
| 218 | 3.8286 | 0.0061 |
| 219 | 3.8347 | 0.0061 |
| 220 | 3.8407 | 0.0061 |
| 221 | 3.8468 | 0.0060 |
| 222 | 3.8528 | 0.0060 |
| 223 | 3.8588 | 0.0060 |
| 224 | 3.8648 | 0.0060 |
| 225 | 3.8707 | 0.0060 |
| 226 | 3.8767 | 0.0060 |
| 227 | 3.8826 | 0.0059 |
| 228 | 3.8886 | 0.0059 |
| 229 | 3.8945 | 0.0059 |
| 230 | 3.9003 | 0.0059 |
| 231 | 3.9062 | 0.0059 |
| 232 | 3.9121 | 0.0059 |

| | | | |
|---|---|---|---|
| 233 | 3.9179 | 0.0058 | |
| 234 | 3.9237 | 0.0058 | |
| 235 | 3.9295 | 0.0058 | |
| 236 | 3.9353 | 0.0058 | |
| 237 | 3.9411 | 0.0058 | |
| 238 | 3.9468 | 0.0058 | |
| 239 | 3.9526 | 0.0057 | |
| 240 | 3.9583 | 0.0057 | |
| 241 | 3.9640 | 0.0057 | |
| 242 | 3.9697 | 0.0057 | |
| 243 | 3.9754 | 0.0057 | |
| 244 | 3.9810 | 0.0057 | |
| 245 | 3.9867 | 0.0056 | |
| 246 | 3.9923 | 0.0056 | |
| 247 | 3.9979 | 0.0056 | |
| 248 | 4.0035 | 0.0056 | |
| 249 | 4.0091 | 0.0056 | |
| 250 | 4.0147 | 0.0056 | |
| 251 | 4.0202 | 0.0056 | |
| 252 | 4.0258 | 0.0055 | |
| 253 | 4.0313 | 0.0055 | |
| 254 | 4.0368 | 0.0055 | |
| 255 | 4.0423 | 0.0055 | |
| 256 | 4.0478 | 0.0055 | |
| 257 | 4.0533 | 0.0055 | |
| 258 | 4.0587 | 0.0055 | |
| 259 | 4.0642 | 0.0054 | |
| 260 | 4.0696 | 0.0054 | |
| 261 | 4.0750 | 0.0054 | |
| 262 | 4.0804 | 0.0054 | |
| 263 | 4.0858 | 0.0054 | |
| 264 | 4.0912 | 0.0054 | |
| 265 | 4.0966 | 0.0054 | |
| 266 | 4.1019 | 0.0054 | |
| 267 | 4.1073 | 0.0053 | |
| 268 | 4.1126 | 0.0053 | |
| 269 | 4.1179 | 0.0053 | |
| 270 | 4.1232 | 0.0053 | |
| 271 | 4.1285 | 0.0053 | |
| 272 | 4.1337 | 0.0053 | |
| 273 | 4.1390 | 0.0053 | |
| 274 | 4.1443 | 0.0052 | |
| 275 | 4.1495 | 0.0052 | |
| 276 | 4.1547 | 0.0052 | |
| 277 | 4.1599 | 0.0052 | |
| 278 | 4.1651 | 0.0052 | |
| 279 | 4.1703 | 0.0052 | |
| 280 | 4.1755 | 0.0052 | |
| 281 | 4.1806 | 0.0052 | |
| 282 | 4.1858 | 0.0051 | |
| 283 | 4.1909 | 0.0051 | |
| 284 | 4.1961 | 0.0051 | |
| 285 | 4.2012 | 0.0051 | |
| 286 | 4.2063 | 0.0051 | |
| 287 | 4.2114 | 0.0051 | |
| 288 | 4.2164 | 0.0051 | |

| Unit Period | Unit Rainfall | Unit Soil-Loss | Effective Rainfall |
|---|---|---|---|

| (number) | (In) | (In) | (In) |
|---|---|---|---|
| 1 | 0.0051 | 0.0003 | 0.0047 |
| 2 | 0.0051 | 0.0003 | 0.0048 |
| 3 | 0.0051 | 0.0003 | 0.0048 |
| 4 | 0.0051 | 0.0003 | 0.0048 |
| 5 | 0.0051 | 0.0003 | 0.0048 |
| 6 | 0.0052 | 0.0003 | 0.0048 |
| 7 | 0.0052 | 0.0003 | 0.0048 |
| 8 | 0.0052 | 0.0003 | 0.0049 |
| 9 | 0.0052 | 0.0003 | 0.0049 |
| 10 | 0.0052 | 0.0003 | 0.0049 |
| 11 | 0.0053 | 0.0003 | 0.0049 |
| 12 | 0.0053 | 0.0004 | 0.0049 |
| 13 | 0.0053 | 0.0004 | 0.0049 |
| 14 | 0.0053 | 0.0004 | 0.0050 |
| 15 | 0.0053 | 0.0004 | 0.0050 |
| 16 | 0.0054 | 0.0004 | 0.0050 |
| 17 | 0.0054 | 0.0004 | 0.0050 |
| 18 | 0.0054 | 0.0004 | 0.0050 |
| 19 | 0.0054 | 0.0004 | 0.0051 |
| 20 | 0.0054 | 0.0004 | 0.0051 |
| 21 | 0.0055 | 0.0004 | 0.0051 |
| 22 | 0.0055 | 0.0004 | 0.0051 |
| 23 | 0.0055 | 0.0004 | 0.0051 |
| 24 | 0.0055 | 0.0004 | 0.0051 |
| 25 | 0.0055 | 0.0004 | 0.0052 |
| 26 | 0.0056 | 0.0004 | 0.0052 |
| 27 | 0.0056 | 0.0004 | 0.0052 |
| 28 | 0.0056 | 0.0004 | 0.0052 |
| 29 | 0.0056 | 0.0004 | 0.0053 |
| 30 | 0.0056 | 0.0004 | 0.0053 |
| 31 | 0.0057 | 0.0004 | 0.0053 |
| 32 | 0.0057 | 0.0004 | 0.0053 |
| 33 | 0.0057 | 0.0004 | 0.0053 |
| 34 | 0.0057 | 0.0004 | 0.0054 |
| 35 | 0.0058 | 0.0004 | 0.0054 |
| 36 | 0.0058 | 0.0004 | 0.0054 |
| 37 | 0.0058 | 0.0004 | 0.0054 |
| 38 | 0.0058 | 0.0004 | 0.0054 |
| 39 | 0.0059 | 0.0004 | 0.0055 |
| 40 | 0.0059 | 0.0004 | 0.0055 |
| 41 | 0.0059 | 0.0004 | 0.0055 |
| 42 | 0.0059 | 0.0004 | 0.0055 |
| 43 | 0.0060 | 0.0004 | 0.0056 |
| 44 | 0.0060 | 0.0004 | 0.0056 |
| 45 | 0.0060 | 0.0004 | 0.0056 |
| 46 | 0.0060 | 0.0004 | 0.0056 |
| 47 | 0.0061 | 0.0004 | 0.0057 |
| 48 | 0.0061 | 0.0004 | 0.0057 |
| 49 | 0.0061 | 0.0004 | 0.0057 |
| 50 | 0.0062 | 0.0004 | 0.0057 |
| 51 | 0.0062 | 0.0004 | 0.0058 |
| 52 | 0.0062 | 0.0004 | 0.0058 |
| 53 | 0.0062 | 0.0004 | 0.0058 |
| 54 | 0.0063 | 0.0004 | 0.0058 |
| 55 | 0.0063 | 0.0004 | 0.0059 |
| 56 | 0.0063 | 0.0004 | 0.0059 |
| 57 | 0.0064 | 0.0004 | 0.0059 |

| | | | |
|---|---|---|---|
| 58 | 0.0064 | 0.0004 | 0.0060 |
| 59 | 0.0064 | 0.0004 | 0.0060 |
| 60 | 0.0064 | 0.0004 | 0.0060 |
| 61 | 0.0065 | 0.0004 | 0.0061 |
| 62 | 0.0065 | 0.0004 | 0.0061 |
| 63 | 0.0066 | 0.0004 | 0.0061 |
| 64 | 0.0066 | 0.0004 | 0.0061 |
| 65 | 0.0066 | 0.0004 | 0.0062 |
| 66 | 0.0066 | 0.0004 | 0.0062 |
| 67 | 0.0067 | 0.0004 | 0.0062 |
| 68 | 0.0067 | 0.0004 | 0.0063 |
| 69 | 0.0068 | 0.0004 | 0.0063 |
| 70 | 0.0068 | 0.0005 | 0.0063 |
| 71 | 0.0068 | 0.0005 | 0.0064 |
| 72 | 0.0069 | 0.0005 | 0.0064 |
| 73 | 0.0069 | 0.0005 | 0.0065 |
| 74 | 0.0069 | 0.0005 | 0.0065 |
| 75 | 0.0070 | 0.0005 | 0.0065 |
| 76 | 0.0070 | 0.0005 | 0.0065 |
| 77 | 0.0071 | 0.0005 | 0.0066 |
| 78 | 0.0071 | 0.0005 | 0.0066 |
| 79 | 0.0071 | 0.0005 | 0.0067 |
| 80 | 0.0072 | 0.0005 | 0.0067 |
| 81 | 0.0072 | 0.0005 | 0.0067 |
| 82 | 0.0073 | 0.0005 | 0.0068 |
| 83 | 0.0073 | 0.0005 | 0.0068 |
| 84 | 0.0073 | 0.0005 | 0.0069 |
| 85 | 0.0074 | 0.0005 | 0.0069 |
| 86 | 0.0074 | 0.0005 | 0.0069 |
| 87 | 0.0075 | 0.0005 | 0.0070 |
| 88 | 0.0075 | 0.0005 | 0.0070 |
| 89 | 0.0076 | 0.0005 | 0.0071 |
| 90 | 0.0076 | 0.0005 | 0.0071 |
| 91 | 0.0077 | 0.0005 | 0.0072 |
| 92 | 0.0077 | 0.0005 | 0.0072 |
| 93 | 0.0078 | 0.0005 | 0.0073 |
| 94 | 0.0078 | 0.0005 | 0.0073 |
| 95 | 0.0079 | 0.0005 | 0.0074 |
| 96 | 0.0079 | 0.0005 | 0.0074 |
| 97 | 0.0080 | 0.0005 | 0.0075 |
| 98 | 0.0080 | 0.0005 | 0.0075 |
| 99 | 0.0081 | 0.0005 | 0.0076 |
| 100 | 0.0081 | 0.0005 | 0.0076 |
| 101 | 0.0082 | 0.0005 | 0.0077 |
| 102 | 0.0083 | 0.0005 | 0.0077 |
| 103 | 0.0083 | 0.0006 | 0.0078 |
| 104 | 0.0084 | 0.0006 | 0.0078 |
| 105 | 0.0085 | 0.0006 | 0.0079 |
| 106 | 0.0085 | 0.0006 | 0.0079 |
| 107 | 0.0086 | 0.0006 | 0.0080 |
| 108 | 0.0086 | 0.0006 | 0.0081 |
| 109 | 0.0087 | 0.0006 | 0.0082 |
| 110 | 0.0088 | 0.0006 | 0.0082 |
| 111 | 0.0089 | 0.0006 | 0.0083 |
| 112 | 0.0089 | 0.0006 | 0.0083 |
| 113 | 0.0090 | 0.0006 | 0.0084 |
| 114 | 0.0091 | 0.0006 | 0.0085 |
| 115 | 0.0092 | 0.0006 | 0.0086 |
| 116 | 0.0092 | 0.0006 | 0.0086 |

| | | | |
|---|---|---|---|
| 117 | 0.0093 | 0.0006 | 0.0087 |
| 118 | 0.0094 | 0.0006 | 0.0088 |
| 119 | 0.0095 | 0.0006 | 0.0089 |
| 120 | 0.0095 | 0.0006 | 0.0089 |
| 121 | 0.0097 | 0.0006 | 0.0090 |
| 122 | 0.0097 | 0.0006 | 0.0091 |
| 123 | 0.0098 | 0.0007 | 0.0092 |
| 124 | 0.0099 | 0.0007 | 0.0092 |
| 125 | 0.0100 | 0.0007 | 0.0094 |
| 126 | 0.0101 | 0.0007 | 0.0094 |
| 127 | 0.0102 | 0.0007 | 0.0095 |
| 128 | 0.0103 | 0.0007 | 0.0096 |
| 129 | 0.0104 | 0.0007 | 0.0097 |
| 130 | 0.0105 | 0.0007 | 0.0098 |
| 131 | 0.0107 | 0.0007 | 0.0099 |
| 132 | 0.0107 | 0.0007 | 0.0100 |
| 133 | 0.0109 | 0.0007 | 0.0102 |
| 134 | 0.0110 | 0.0007 | 0.0102 |
| 135 | 0.0111 | 0.0007 | 0.0104 |
| 136 | 0.0112 | 0.0007 | 0.0105 |
| 137 | 0.0114 | 0.0008 | 0.0106 |
| 138 | 0.0115 | 0.0008 | 0.0107 |
| 139 | 0.0117 | 0.0008 | 0.0109 |
| 140 | 0.0118 | 0.0008 | 0.0110 |
| 141 | 0.0120 | 0.0008 | 0.0112 |
| 142 | 0.0121 | 0.0008 | 0.0113 |
| 143 | 0.0123 | 0.0008 | 0.0115 |
| 144 | 0.0124 | 0.0008 | 0.0116 |
| 145 | 0.0126 | 0.0008 | 0.0118 |
| 146 | 0.0128 | 0.0008 | 0.0119 |
| 147 | 0.0130 | 0.0009 | 0.0121 |
| 148 | 0.0131 | 0.0009 | 0.0123 |
| 149 | 0.0134 | 0.0009 | 0.0125 |
| 150 | 0.0135 | 0.0009 | 0.0126 |
| 151 | 0.0138 | 0.0009 | 0.0129 |
| 152 | 0.0139 | 0.0009 | 0.0130 |
| 153 | 0.0143 | 0.0009 | 0.0133 |
| 154 | 0.0144 | 0.0010 | 0.0135 |
| 155 | 0.0147 | 0.0010 | 0.0138 |
| 156 | 0.0149 | 0.0010 | 0.0139 |
| 157 | 0.0153 | 0.0010 | 0.0143 |
| 158 | 0.0155 | 0.0010 | 0.0144 |
| 159 | 0.0159 | 0.0011 | 0.0148 |
| 160 | 0.0161 | 0.0011 | 0.0150 |
| 161 | 0.0165 | 0.0011 | 0.0154 |
| 162 | 0.0167 | 0.0011 | 0.0156 |
| 163 | 0.0172 | 0.0011 | 0.0161 |
| 164 | 0.0175 | 0.0012 | 0.0163 |
| 165 | 0.0180 | 0.0012 | 0.0168 |
| 166 | 0.0183 | 0.0012 | 0.0171 |
| 167 | 0.0189 | 0.0013 | 0.0177 |
| 168 | 0.0193 | 0.0013 | 0.0180 |
| 169 | 0.0270 | 0.0018 | 0.0252 |
| 170 | 0.0274 | 0.0018 | 0.0256 |
| 171 | 0.0283 | 0.0019 | 0.0264 |
| 172 | 0.0288 | 0.0019 | 0.0269 |
| 173 | 0.0298 | 0.0020 | 0.0278 |
| 174 | 0.0304 | 0.0020 | 0.0283 |
| 175 | 0.0315 | 0.0021 | 0.0294 |

| | | | |
|---|---|---|---|
| 176 | 0.0322 | 0.0021 | 0.0301 |
| 177 | 0.0336 | 0.0022 | 0.0314 |
| 178 | 0.0344 | 0.0023 | 0.0321 |
| 179 | 0.0361 | 0.0024 | 0.0337 |
| 180 | 0.0371 | 0.0025 | 0.0346 |
| 181 | 0.0393 | 0.0026 | 0.0367 |
| 182 | 0.0405 | 0.0027 | 0.0378 |
| 183 | 0.0434 | 0.0029 | 0.0405 |
| 184 | 0.0451 | 0.0030 | 0.0421 |
| 185 | 0.0315 | 0.0021 | 0.0294 |
| 186 | 0.0336 | 0.0022 | 0.0313 |
| 187 | 0.0389 | 0.0026 | 0.0363 |
| 188 | 0.0425 | 0.0028 | 0.0397 |
| 189 | 0.0528 | 0.0035 | 0.0493 |
| 190 | 0.0608 | 0.0040 | 0.0569 |
| 191 | 0.0923 | 0.0040 | 0.0884 |
| 192 | 0.1340 | 0.0040 | 0.1300 |
| 193 | 0.5797 | 0.0040 | 0.5758 |
| 194 | 0.0727 | 0.0040 | 0.0687 |
| 195 | 0.0470 | 0.0031 | 0.0438 |
| 196 | 0.0360 | 0.0024 | 0.0336 |
| 197 | 0.0469 | 0.0031 | 0.0438 |
| 198 | 0.0419 | 0.0028 | 0.0391 |
| 199 | 0.0382 | 0.0025 | 0.0356 |
| 200 | 0.0352 | 0.0023 | 0.0329 |
| 201 | 0.0329 | 0.0022 | 0.0307 |
| 202 | 0.0309 | 0.0021 | 0.0289 |
| 203 | 0.0293 | 0.0019 | 0.0273 |
| 204 | 0.0279 | 0.0019 | 0.0260 |
| 205 | 0.0196 | 0.0013 | 0.0183 |
| 206 | 0.0186 | 0.0012 | 0.0174 |
| 207 | 0.0178 | 0.0012 | 0.0166 |
| 208 | 0.0170 | 0.0011 | 0.0158 |
| 209 | 0.0163 | 0.0011 | 0.0152 |
| 210 | 0.0157 | 0.0010 | 0.0146 |
| 211 | 0.0151 | 0.0010 | 0.0141 |
| 212 | 0.0146 | 0.0010 | 0.0136 |
| 213 | 0.0141 | 0.0009 | 0.0132 |
| 214 | 0.0137 | 0.0009 | 0.0128 |
| 215 | 0.0133 | 0.0009 | 0.0124 |
| 216 | 0.0129 | 0.0009 | 0.0120 |
| 217 | 0.0125 | 0.0008 | 0.0117 |
| 218 | 0.0122 | 0.0008 | 0.0114 |
| 219 | 0.0119 | 0.0008 | 0.0111 |
| 220 | 0.0116 | 0.0008 | 0.0108 |
| 221 | 0.0113 | 0.0008 | 0.0106 |
| 222 | 0.0111 | 0.0007 | 0.0103 |
| 223 | 0.0108 | 0.0007 | 0.0101 |
| 224 | 0.0106 | 0.0007 | 0.0099 |
| 225 | 0.0104 | 0.0007 | 0.0097 |
| 226 | 0.0102 | 0.0007 | 0.0095 |
| 227 | 0.0100 | 0.0007 | 0.0093 |
| 228 | 0.0098 | 0.0006 | 0.0091 |
| 229 | 0.0096 | 0.0006 | 0.0090 |
| 230 | 0.0094 | 0.0006 | 0.0088 |
| 231 | 0.0093 | 0.0006 | 0.0087 |
| 232 | 0.0091 | 0.0006 | 0.0085 |
| 233 | 0.0090 | 0.0006 | 0.0084 |
| 234 | 0.0088 | 0.0006 | 0.0082 |

| | | | |
|---|---|---|---|
| 235 | 0.0087 | 0.0006 | 0.0081 |
| 236 | 0.0086 | 0.0006 | 0.0080 |
| 237 | 0.0084 | 0.0006 | 0.0079 |
| 238 | 0.0083 | 0.0006 | 0.0078 |
| 239 | 0.0082 | 0.0005 | 0.0076 |
| 240 | 0.0081 | 0.0005 | 0.0075 |
| 241 | 0.0080 | 0.0005 | 0.0074 |
| 242 | 0.0079 | 0.0005 | 0.0073 |
| 243 | 0.0078 | 0.0005 | 0.0072 |
| 244 | 0.0077 | 0.0005 | 0.0071 |
| 245 | 0.0076 | 0.0005 | 0.0071 |
| 246 | 0.0075 | 0.0005 | 0.0070 |
| 247 | 0.0074 | 0.0005 | 0.0069 |
| 248 | 0.0073 | 0.0005 | 0.0068 |
| 249 | 0.0072 | 0.0005 | 0.0067 |
| 250 | 0.0071 | 0.0005 | 0.0066 |
| 251 | 0.0070 | 0.0005 | 0.0066 |
| 252 | 0.0070 | 0.0005 | 0.0065 |
| 253 | 0.0069 | 0.0005 | 0.0064 |
| 254 | 0.0068 | 0.0005 | 0.0064 |
| 255 | 0.0067 | 0.0004 | 0.0063 |
| 256 | 0.0067 | 0.0004 | 0.0062 |
| 257 | 0.0066 | 0.0004 | 0.0062 |
| 258 | 0.0065 | 0.0004 | 0.0061 |
| 259 | 0.0065 | 0.0004 | 0.0060 |
| 260 | 0.0064 | 0.0004 | 0.0060 |
| 261 | 0.0063 | 0.0004 | 0.0059 |
| 262 | 0.0063 | 0.0004 | 0.0059 |
| 263 | 0.0062 | 0.0004 | 0.0058 |
| 264 | 0.0062 | 0.0004 | 0.0058 |
| 265 | 0.0061 | 0.0004 | 0.0057 |
| 266 | 0.0061 | 0.0004 | 0.0057 |
| 267 | 0.0060 | 0.0004 | 0.0056 |
| 268 | 0.0060 | 0.0004 | 0.0056 |
| 269 | 0.0059 | 0.0004 | 0.0055 |
| 270 | 0.0059 | 0.0004 | 0.0055 |
| 271 | 0.0058 | 0.0004 | 0.0054 |
| 272 | 0.0058 | 0.0004 | 0.0054 |
| 273 | 0.0057 | 0.0004 | 0.0053 |
| 274 | 0.0057 | 0.0004 | 0.0053 |
| 275 | 0.0056 | 0.0004 | 0.0052 |
| 276 | 0.0056 | 0.0004 | 0.0052 |
| 277 | 0.0055 | 0.0004 | 0.0052 |
| 278 | 0.0055 | 0.0004 | 0.0051 |
| 279 | 0.0054 | 0.0004 | 0.0051 |
| 280 | 0.0054 | 0.0004 | 0.0050 |
| 281 | 0.0054 | 0.0004 | 0.0050 |
| 282 | 0.0053 | 0.0004 | 0.0050 |
| 283 | 0.0053 | 0.0004 | 0.0049 |
| 284 | 0.0052 | 0.0003 | 0.0049 |
| 285 | 0.0052 | 0.0003 | 0.0049 |
| 286 | 0.0052 | 0.0003 | 0.0048 |
| 287 | 0.0051 | 0.0003 | 0.0048 |
| 288 | 0.0051 | 0.0003 | 0.0048 |

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Total soil rain loss = 0.24(In)
Total effective rainfall = 3.98(In)
Peak flow rate in flood hydrograph = 5599.01(CFS)

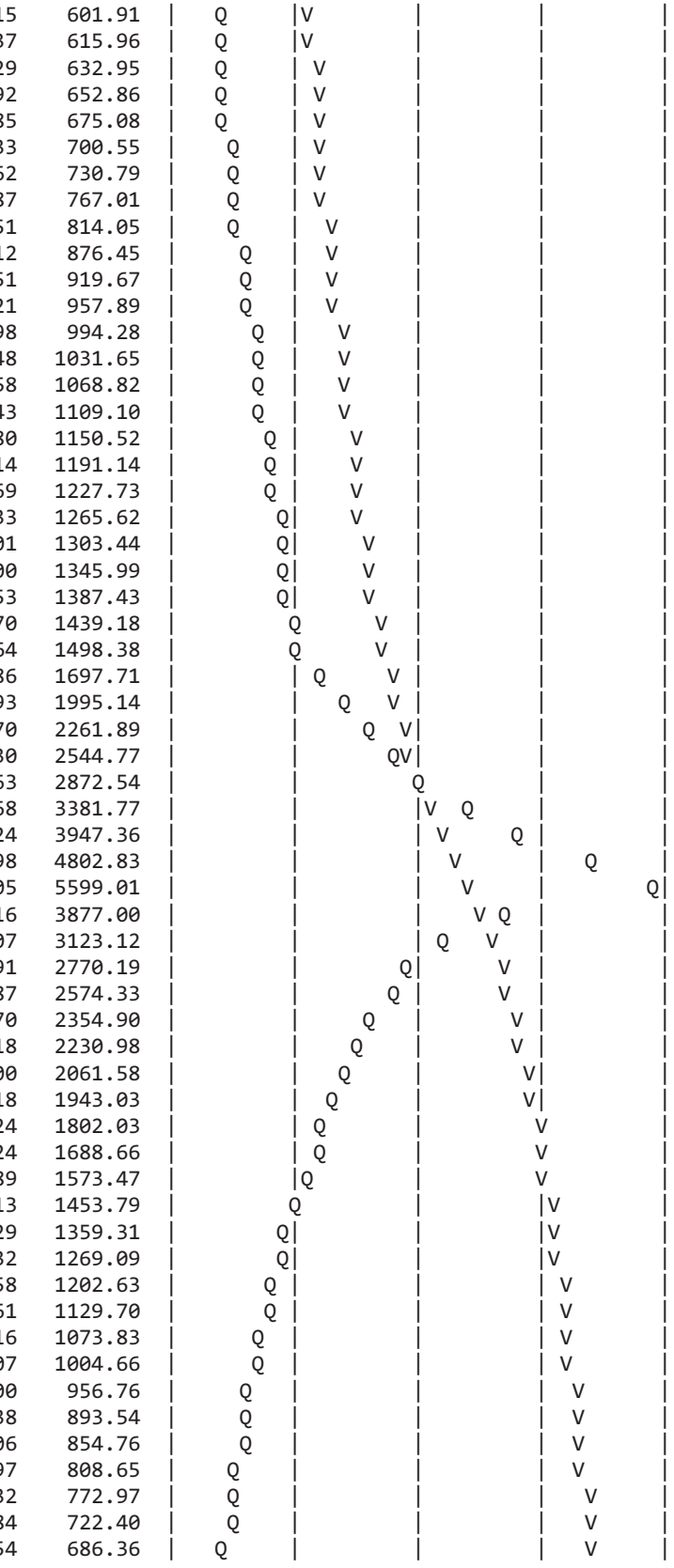
24 - H O U R  S T O R M
R u n o f f  H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 1400.0 | 2800.0 | 4200.0 | 5600.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0101 | 1.46 | Q | | | | |
| 0+10 | 0.0432 | 4.81 | Q | | | | |
| 0+15 | 0.1087 | 9.51 | Q | | | | |
| 0+20 | 0.2160 | 15.58 | Q | | | | |
| 0+25 | 0.3750 | 23.09 | Q | | | | |
| 0+30 | 0.6066 | 33.64 | Q | | | | |
| 0+35 | 0.9333 | 47.43 | Q | | | | |
| 0+40 | 1.4048 | 68.47 | Q | | | | |
| 0+45 | 2.0883 | 99.24 | Q | | | | |
| 0+50 | 2.8837 | 115.48 | Q | | | | |
| 0+55 | 3.7549 | 126.50 | Q | | | | |
| 1+ 0 | 4.6870 | 135.35 | Q | | | | |
| 1+ 5 | 5.6714 | 142.93 | VQ | | | | |
| 1+10 | 6.6989 | 149.20 | VQ | | | | |
| 1+15 | 7.7678 | 155.19 | VQ | | | | |
| 1+20 | 8.8722 | 160.37 | VQ | | | | |
| 1+25 | 10.0102 | 165.23 | VQ | | | | |
| 1+30 | 11.1776 | 169.51 | VQ | | | | |
| 1+35 | 12.3724 | 173.49 | VQ | | | | |
| 1+40 | 13.5925 | 177.16 | VQ | | | | |
| 1+45 | 14.8363 | 180.60 | VQ | | | | |
| 1+50 | 16.1022 | 183.81 | VQ | | | | |
| 1+55 | 17.3883 | 186.74 | VQ | | | | |
| 2+ 0 | 18.6936 | 189.54 | VQ | | | | |
| 2+ 5 | 20.0168 | 192.13 | VQ | | | | |
| 2+10 | 21.3571 | 194.60 | VQ | | | | |
| 2+15 | 22.7128 | 196.85 | VQ | | | | |
| 2+20 | 24.0833 | 199.00 | VQ | | | | |
| 2+25 | 25.4671 | 200.92 | VQ | | | | |
| 2+30 | 26.8636 | 202.78 | VQ | | | | |
| 2+35 | 28.2722 | 204.53 | VQ | | | | |
| 2+40 | 29.6925 | 206.23 | \|Q | | | | |
| 2+45 | 31.1234 | 207.75 | \|Q | | | | |
| 2+50 | 32.5642 | 209.21 | \|Q | | | | |
| 2+55 | 34.0134 | 210.43 | \|Q | | | | |
| 3+ 0 | 35.4703 | 211.55 | \|Q | | | | |
| 3+ 5 | 36.9352 | 212.70 | \|Q | | | | |
| 3+10 | 38.4079 | 213.83 | \|Q | | | | |
| 3+15 | 39.8884 | 214.97 | \|Q | | | | |
| 3+20 | 41.3765 | 216.07 | \|Q | | | | |
| 3+25 | 42.8724 | 217.21 | \|Q | | | | |
| 3+30 | 44.3761 | 218.33 | \|Q | | | | |
| 3+35 | 45.8874 | 219.45 | \|Q | | | | |
| 3+40 | 47.4059 | 220.49 | \|Q | | | | |
| 3+45 | 48.9319 | 221.57 | \|Q | | | | |
| 3+50 | 50.4651 | 222.63 | \|Q | | | | |
| 3+55 | 52.0060 | 223.73 | \|Q | | | | |
| 4+ 0 | 53.5545 | 224.85 | \|Q | | | | |
| 4+ 5 | 55.1110 | 226.00 | \|Q | | | | |

```
4+10      56.6753    227.14  |Q         |          |          |          |
4+15      58.2477    228.31  |QV        |          |          |          |
4+20      59.8276    229.40  |QV        |          |          |          |
4+25      61.4151    230.51  |QV        |          |          |          |
4+30      63.0102    231.61  |QV        |          |          |          |
4+35      64.6131    232.74  |QV        |          |          |          |
4+40      66.2235    233.83  |QV        |          |          |          |
4+45      67.8415    234.94  |QV        |          |          |          |
4+50      69.4672    236.04  |QV        |          |          |          |
4+55      71.1008    237.20  |QV        |          |          |          |
5+ 0      72.7418    238.28  |QV        |          |          |          |
5+ 5      74.3905    239.39  |QV        |          |          |          |
5+10      76.0468    240.49  |QV        |          |          |          |
5+15      77.7109    241.63  |QV        |          |          |          |
5+20      79.3828    242.75  |QV        |          |          |          |
5+25      81.0627    243.92  |QV        |          |          |          |
5+30      82.7505    245.07  |QV        |          |          |          |
5+35      84.4464    246.26  |QV        |          |          |          |
5+40      86.1505    247.43  |Q V       |          |          |          |
5+45      87.8629    248.64  |Q V       |          |          |          |
5+50      89.5836    249.84  |Q V       |          |          |          |
5+55      91.3129    251.09  |Q V       |          |          |          |
6+ 0      93.0506    252.32  |Q V       |          |          |          |
6+ 5      94.7972    253.60  |Q V       |          |          |          |
6+10      96.5525    254.86  |Q V       |          |          |          |
6+15      98.3168    256.18  |Q V       |          |          |          |
6+20     100.0900    257.47  |Q V       |          |          |          |
6+25     101.8725    258.82  |Q V       |          |          |          |
6+30     103.6642    260.15  |Q V       |          |          |          |
6+35     105.4654    261.53  |Q V       |          |          |          |
6+40     107.2760    262.90  |Q V       |          |          |          |
6+45     109.0963    264.32  |Q V       |          |          |          |
6+50     110.9264    265.72  |Q V       |          |          |          |
6+55     112.7665    267.18  |Q V       |          |          |          |
7+ 0     114.6165    268.62  |Q  V      |          |          |          |
7+ 5     116.4768    270.12  |Q  V      |          |          |          |
7+10     118.3474    271.61  |Q  V      |          |          |          |
7+15     120.2286    273.15  |Q  V      |          |          |          |
7+20     122.1203    274.68  |Q  V      |          |          |          |
7+25     124.0230    276.26  |Q  V      |          |          |          |
7+30     125.9364    277.83  |Q  V      |          |          |          |
7+35     127.8612    279.47  |Q  V      |          |          |          |
7+40     129.7970    281.09  | Q V      |          |          |          |
7+45     131.7445    282.77  | Q V      |          |          |          |
7+50     133.7034    284.44  | Q V      |          |          |          |
7+55     135.6743    286.18  | Q V      |          |          |          |
8+ 0     137.6571    287.89  | Q V      |          |          |          |
8+ 5     139.6522    289.68  | Q V      |          |          |          |
8+10     141.6594    291.46  | Q V      |          |          |          |
8+15     143.6794    293.31  | Q  V     |          |          |          |
8+20     145.7121    295.13  | Q  V     |          |          |          |
8+25     147.7578    297.04  | Q  V     |          |          |          |
8+30     149.8166    298.93  | Q  V     |          |          |          |
8+35     151.8889    300.90  | Q  V     |          |          |          |
8+40     153.9747    302.86  | Q  V     |          |          |          |
8+45     156.0745    304.90  | Q  V     |          |          |          |
8+50     158.1883    306.92  | Q  V     |          |          |          |
8+55     160.3165    309.02  | Q  V     |          |          |          |
9+ 0     162.4592    311.12  | Q  V     |          |          |          |
```

```
 9+ 5     164.6169    313.30  | Q  V    |         |         |         |
 9+10     166.7895    315.46  | Q  V    |         |         |         |
 9+15     168.9777    317.73  | Q  V    |         |         |         |
 9+20     171.1814    319.97  | Q  V    |         |         |         |
 9+25     173.4012    322.32  | Q   V   |         |         |         |
 9+30     175.6371    324.65  | Q   V   |         |         |         |
 9+35     177.8897    327.08  | Q   V   |         |         |         |
 9+40     180.1589    329.50  | Q   V   |         |         |         |
 9+45     182.4456    332.03  | Q   V   |         |         |         |
 9+50     184.7496    334.54  | Q   V   |         |         |         |
 9+55     187.0717    337.17  | Q   V   |         |         |         |
10+ 0     189.4118    339.78  | Q   V   |         |         |         |
10+ 5     191.7708    342.52  | Q   V   |         |         |         |
10+10     194.1484    345.24  | Q   V   |         |         |         |
10+15     196.5457    348.09  | Q   V   |         |         |         |
10+20     198.9626    350.92  | Q   V   |         |         |         |
10+25     201.3999    353.90  | Q    V  |         |         |         |
10+30     203.8575    356.85  | Q    V  |         |         |         |
10+35     206.3366    359.96  | Q    V  |         |         |         |
10+40     208.8369    363.05  | Q    V  |         |         |         |
10+45     211.3596    366.29  | Q    V  |         |         |         |
10+50     213.9045    369.52  | Q    V  |         |         |         |
10+55     216.4728    372.92  | Q    V  |         |         |         |
11+ 0     219.0644    376.30  | Q    V  |         |         |         |
11+ 5     221.6805    379.86  | Q    V  |         |         |         |
11+10     224.3210    383.40  | Q    V  |         |         |         |
11+15     226.9872    387.14  | Q    V  |         |         |         |
11+20     229.6791    390.86  | Q     V |         |         |         |
11+25     232.3980    394.78  | Q     V |         |         |         |
11+30     235.1439    398.70  | Q     V |         |         |         |
11+35     237.9182    402.83  | Q     V |         |         |         |
11+40     240.7209    406.95  | Q     V |         |         |         |
11+45     243.5535    411.30  | Q     V |         |         |         |
11+50     246.4162    415.66  | Q     V |         |         |         |
11+55     249.3105    420.25  |  Q    V |         |         |         |
12+ 0     252.2365    424.85  |  Q    V |         |         |         |
12+ 5     255.1960    429.73  |  Q    V |         |         |         |
12+10     258.1893    434.62  |  Q     V|         |         |         |
12+15     261.2182    439.81  |  Q     V|         |         |         |
12+20     264.2831    445.02  |  Q     V|         |         |         |
12+25     267.3860    450.54  |  Q     V|         |         |         |
12+30     270.5273    456.11  |  Q     V|         |         |         |
12+35     273.7093    462.03  |  Q     V|         |         |         |
12+40     276.9327    468.03  |  Q     V|         |         |         |
12+45     280.2003    474.46  |  Q     V|         |         |         |
12+50     283.5118    480.84  |  Q     V|         |         |         |
12+55     286.8698    487.58  |  Q      V         |         |         |
13+ 0     290.2746    494.37  |  Q      V         |         |         |
13+ 5     293.7291    501.59  |  Q      V         |         |         |
13+10     297.2338    508.88  |  Q      V         |         |         |
13+15     300.7920    516.65  |  Q      V         |         |         |
13+20     304.4043    524.51  |  Q      V         |         |         |
13+25     308.0745    532.91  |  Q      V         |         |         |
13+30     311.8033    541.42  |  Q      V         |         |         |
13+35     315.5948    550.53  |  Q      |V        |         |         |
13+40     319.4501    559.80  |  Q      |V        |         |         |
13+45     323.3740    569.74  |   Q     |V        |         |         |
13+50     327.3675    579.87  |   Q     |V        |         |         |
13+55     331.4362    590.77  |   Q     |V        |         |         |
```

| | | | |
|---|---|---|---|
| 14+ 0 | 335.5815 | 601.91 |  |
| 14+ 5 | 339.8237 | 615.96 | |
| 14+10 | 344.1829 | 632.95 | |
| 14+15 | 348.6792 | 652.86 | |
| 14+20 | 353.3285 | 675.08 | |
| 14+25 | 358.1533 | 700.55 | |
| 14+30 | 363.1862 | 730.79 | |
| 14+35 | 368.4687 | 767.01 | |
| 14+40 | 374.0751 | 814.05 | |
| 14+45 | 380.1112 | 876.45 | |
| 14+50 | 386.4451 | 919.67 | |
| 14+55 | 393.0421 | 957.89 | |
| 15+ 0 | 399.8898 | 994.28 | |
| 15+ 5 | 406.9948 | 1031.65 | |
| 15+10 | 414.3558 | 1068.82 | |
| 15+15 | 421.9943 | 1109.10 | |
| 15+20 | 429.9180 | 1150.52 | |
| 15+25 | 438.1214 | 1191.14 | |
| 15+30 | 446.5769 | 1227.73 | |
| 15+35 | 455.2933 | 1265.62 | |
| 15+40 | 464.2701 | 1303.44 | |
| 15+45 | 473.5400 | 1345.99 | |
| 15+50 | 483.0953 | 1387.43 | |
| 15+55 | 493.0070 | 1439.18 | |
| 16+ 0 | 503.3264 | 1498.38 | |
| 16+ 5 | 515.0186 | 1697.71 | |
| 16+10 | 528.7593 | 1995.14 | |
| 16+15 | 544.3370 | 2261.89 | |
| 16+20 | 561.8630 | 2544.77 | |
| 16+25 | 581.6463 | 2872.54 | |
| 16+30 | 604.9368 | 3381.77 | |
| 16+35 | 632.1224 | 3947.36 | |
| 16+40 | 665.1998 | 4802.83 | |
| 16+45 | 703.7605 | 5599.01 | |
| 16+50 | 730.4616 | 3877.00 | |
| 16+55 | 751.9707 | 3123.12 | |
| 17+ 0 | 771.0491 | 2770.19 | |
| 17+ 5 | 788.7787 | 2574.33 | |
| 17+10 | 804.9970 | 2354.90 | |
| 17+15 | 820.3618 | 2230.98 | |
| 17+20 | 834.5600 | 2061.58 | |
| 17+25 | 847.9418 | 1943.03 | |
| 17+30 | 860.3524 | 1802.03 | |
| 17+35 | 871.9824 | 1688.66 | |
| 17+40 | 882.8189 | 1573.47 | |
| 17+45 | 892.8313 | 1453.79 | |
| 17+50 | 902.1929 | 1359.31 | |
| 17+55 | 910.9332 | 1269.09 | |
| 18+ 0 | 919.2158 | 1202.63 | |
| 18+ 5 | 926.9961 | 1129.70 | |
| 18+10 | 934.3916 | 1073.83 | |
| 18+15 | 941.3107 | 1004.66 | |
| 18+20 | 947.9000 | 956.76 | |
| 18+25 | 954.0538 | 893.54 | |
| 18+30 | 959.9406 | 854.76 | |
| 18+35 | 965.5097 | 808.65 | |
| 18+40 | 970.8332 | 772.97 | |
| 18+45 | 975.8084 | 722.40 | |
| 18+50 | 980.5354 | 686.36 | |

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18+55     984.9049    634.44  |   Q     |         |         |   V     |
19+ 0     989.0615    603.54  |   Q     |         |         |   V     |
19+ 5     993.0873    584.54  |   Q     |         |         |   V     |
19+10     996.9925    567.04  |   Q     |         |         |   V     |
19+15    1000.7611    547.21  |  Q      |         |         |    V    |
19+20    1004.4056    529.17  |  Q      |         |         |    V    |
19+25    1007.9503    514.69  |  Q      |         |         |    V    |
19+30    1011.3972    500.50  |  Q      |         |         |    V    |
19+35    1014.7248    483.17  |  Q      |         |         |    V    |
19+40    1017.9267    464.91  |  Q      |         |         |    V    |
19+45    1021.0546    454.17  |  Q      |         |         |    V    |
19+50    1024.1169    444.64  |  Q      |         |         |    V    |
19+55    1027.1253    436.82  |  Q      |         |         |    V    |
20+ 0    1030.0932    430.94  |  Q      |         |         |     V   |
20+ 5    1033.0047    422.76  |  Q      |         |         |     V   |
20+10    1035.8560    414.00  | Q       |         |         |     V   |
20+15    1038.6384    404.01  | Q       |         |         |     V   |
20+20    1041.3190    389.22  | Q       |         |         |     V   |
20+25    1043.9381    380.29  | Q       |         |         |     V   |
20+30    1046.5078    373.12  | Q       |         |         |     V   |
20+35    1049.0281    365.95  | Q       |         |         |     V   |
20+40    1051.4800    356.03  | Q       |         |         |     V   |
20+45    1053.8790    348.32  | Q       |         |         |     V   |
20+50    1056.2356    342.19  | Q       |         |         |      V  |
20+55    1058.5621    337.81  | Q       |         |         |      V  |
21+ 0    1060.7980    324.65  | Q       |         |         |      V  |
21+ 5    1062.9928    318.69  | Q       |         |         |      V  |
21+10    1065.1525    313.59  | Q       |         |         |      V  |
21+15    1067.2799    308.90  | Q       |         |         |      V  |
21+20    1069.3753    304.26  | Q       |         |         |      V  |
21+25    1071.4400    299.78  | Q       |         |         |      V  |
21+30    1073.4724    295.11  | Q       |         |         |      V  |
21+35    1075.4742    290.65  | Q       |         |         |      V  |
21+40    1077.4494    286.80  | Q       |         |         |      V  |
21+45    1079.3992    283.12  | Q       |         |         |      V  |
21+50    1081.3247    279.57  |Q        |         |         |      V  |
21+55    1083.2262    276.10  |Q        |         |         |      V  |
22+ 0    1085.1053    272.85  |Q        |         |         |       V |
22+ 5    1086.9627    269.70  |Q        |         |         |       V |
22+10    1088.7992    266.65  |Q        |         |         |       V |
22+15    1090.6153    263.70  |Q        |         |         |       V |
22+20    1092.4116    260.83  |Q        |         |         |       V |
22+25    1094.1888    258.05  |Q        |         |         |       V |
22+30    1095.9474    255.35  |Q        |         |         |       V |
22+35    1097.6880    252.73  |Q        |         |         |       V |
22+40    1099.4110    250.18  |Q        |         |         |       V |
22+45    1101.1169    247.70  |Q        |         |         |       V |
22+50    1102.8061    245.28  |Q        |         |         |       V |
22+55    1104.4791    242.92  |Q        |         |         |       V |
23+ 0    1106.1364    240.63  |Q        |         |         |       V |
23+ 5    1107.7781    238.39  |Q        |         |         |       V |
23+10    1109.4048    236.20  |Q        |         |         |       V |
23+15    1111.0169    234.06  |Q        |         |         |       V |
23+20    1112.6145    231.98  |Q        |         |         |       V |
23+25    1114.1982    229.94  |Q        |         |         |        V|
23+30    1115.7681    227.95  |Q        |         |         |        V|
23+35    1117.3246    226.01  |Q        |         |         |        V|
23+40    1118.8680    224.10  |Q        |         |         |        V|
23+45    1120.3986    222.24  |Q        |         |         |        V|
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23+50    1121.9166    220.42  |Q        |         |         |        V|
23+55    1123.4223    218.63  |Q        |         |         |        V|
24+ 0    1124.9160    216.88  |Q        |         |         |        V|
24+ 5    1126.3878    213.71  |Q        |         |         |        V|
24+10    1127.8252    208.70  |Q        |         |         |        V|
24+15    1129.2193    202.42  |Q        |         |         |        V|
24+20    1130.5612    194.85  |Q        |         |         |        V|
24+25    1131.8417    185.93  |Q        |         |         |        V|
24+30    1133.0405    174.07  |Q        |         |         |        V|
24+35    1134.1364    159.12  |Q        |         |         |        V|
24+40    1135.0806    137.10  Q         |         |         |        V|
24+45    1135.8078    105.59  Q         |         |         |        V|
24+50    1136.4202     88.91  Q         |         |         |        V|
24+55    1136.9550     77.65  Q         |         |         |        V|
25+ 0    1137.4278     68.65  Q         |         |         |        V|
25+ 5    1137.8482     61.05  Q         |         |         |        V|
25+10    1138.2257     54.81  Q         |         |         |        V|
25+15    1138.5628     48.94  Q         |         |         |        V|
25+20    1138.8654     43.95  Q         |         |         |        V|
25+25    1139.1363     39.34  Q         |         |         |        V|
25+30    1139.3798     35.35  Q         |         |         |        V|
25+35    1139.5983     31.72  Q         |         |         |        V|
25+40    1139.7941     28.43  Q         |         |         |        V|
25+45    1139.9692     25.43  Q         |         |         |        V|
25+50    1140.1254     22.68  Q         |         |         |        V|
25+55    1140.2649     20.26  Q         |         |         |        V|
26+ 0    1140.3888     17.99  Q         |         |         |        V|
26+ 5    1140.4989     15.98  Q         |         |         |        V|
26+10    1140.5959     14.09  Q         |         |         |        V|
26+15    1140.6818     12.47  Q         |         |         |        V|
26+20    1140.7573     10.95  Q         |         |         |        V|
26+25    1140.8242      9.71  Q         |         |         |        V|
26+30    1140.8829      8.53  Q         |         |         |        V|
26+35    1140.9346      7.50  Q         |         |         |        V|
26+40    1140.9795      6.52  Q         |         |         |        V|
26+45    1141.0191      5.75  Q         |         |         |        V|
26+50    1141.0538      5.05  Q         |         |         |        V|
26+55    1141.0856      4.61  Q         |         |         |        V|
27+ 0    1141.1150      4.27  Q         |         |         |        V|
27+ 5    1141.1421      3.93  Q         |         |         |        V|
27+10    1141.1668      3.60  Q         |         |         |        V|
27+15    1141.1895      3.29  Q         |         |         |        V|
27+20    1141.2103      3.02  Q         |         |         |        V|
27+25    1141.2292      2.74  Q         |         |         |        V|
27+30    1141.2461      2.47  Q         |         |         |        V|
27+35    1141.2615      2.23  Q         |         |         |        V|
27+40    1141.2757      2.06  Q         |         |         |        V|
27+45    1141.2888      1.89  Q         |         |         |        V|
27+50    1141.3007      1.73  Q         |         |         |        V|
27+55    1141.3113      1.55  Q         |         |         |        V|
28+ 0    1141.3207      1.35  Q         |         |         |        V|
28+ 5    1141.3286      1.15  Q         |         |         |        V|
28+10    1141.3352      0.96  Q         |         |         |        V|
28+15    1141.3405      0.77  Q         |         |         |        V|
28+20    1141.3449      0.65  Q         |         |         |        V|
28+25    1141.3486      0.54  Q         |         |         |        V|
28+30    1141.3516      0.43  Q         |         |         |        V|
28+35    1141.3539      0.33  Q         |         |         |        V|
28+40    1141.3556      0.25  Q         |         |         |        V|
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   28+45    1141.3569      0.19  Q         |         |         |        V|
   28+50    1141.3579      0.13  Q         |         |         |        V|
   28+55    1141.3582      0.05  Q         |         |         |        V|
   29+ 0    1141.3585      0.04  Q         |         |         |        V|
   29+ 5    1141.3587      0.03  Q         |         |         |        V|
   29+10    1141.3589      0.03  Q         |         |         |        V|
   29+15    1141.3590      0.02  Q         |         |         |        V|
   29+20    1141.3591      0.01  Q         |         |         |        V|
   29+25    1141.3591      0.00  Q         |         |         |         V
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U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 51
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 15350.45 | 1 | 1.42 |
| Rainfall data for year 100 | | |
| 15350.45 | 6 | 2.25 |
| Rainfall data for year 100 | | |
| 15350.45 | 24 | 3.40 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.4 | 93.1 | 15350.45 | 1.000 | 0.135 | 0.995 | 0.134 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.134

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 15279.84 | 0.995 | 78.4 | 93.1 | 0.75 | 0.778 |
| 70.61 | 0.005 | 98.0 | 98.0 | 0.20 | 0.931 |

Area-averaged catchment yield fraction, Y = 0.779
Area-averaged low loss fraction, Yb = 0.221
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Watercourse length = 45387.00(Ft.)
Length from concentration point to centroid = 22710.00(Ft.)
Elevation difference along watercourse = 2686.10(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 15350.45(Ac.)
Catchment Lag time = 1.112 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 7.4948
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.134(In/Hr)
Average low loss rate fraction (Yb) = 0.221 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.420
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.580

Computed peak 5-minute rainfall = 0.674(In)
Computed peak 30-minute rainfall = 1.153(In)
Specified peak 1-hour rainfall = 1.420(In)
Computed peak 3-hour rainfall = 1.883(In)
Specified peak 6-hour rainfall = 2.250(In)
Specified peak 24-hour rainfall = 3.400(In)

Rainfall depth area reduction factors:
Using a total area of 15350.45(Ac.) (Ref: fig. E-4)

5-minute factor = 0.592 Adjusted rainfall = 0.399(In)
30-minute factor = 0.614 Adjusted rainfall = 0.709(In)
1-hour factor = 0.623 Adjusted rainfall = 0.885(In)
3-hour factor = 0.918 Adjusted rainfall = 1.728(In)
6-hour factor = 0.961 Adjusted rainfall = 2.162(In)
24-hour factor = 0.977 Adjusted rainfall = 3.320(In)
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U n i t H y d r o g r a p h
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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 185644.50 (CFS)) | |
| 1 | 0.391 | 725.184 |
| 2 | 1.191 | 1485.986 |
| 3 | 2.342 | 2136.544 |
| 4 | 3.768 | 2647.236 |
| 5 | 5.525 | 3261.968 |

| | | |
|---|---|---|
| 6 | 7.648 | 3941.781 |
| 7 | 10.097 | 4545.583 |
| 8 | 13.687 | 6664.526 |
| 9 | 18.221 | 8417.958 |
| 10 | 24.192 | 11085.274 |
| 11 | 30.236 | 11219.257 |
| 12 | 36.417 | 11474.799 |
| 13 | 43.758 | 13627.337 |
| 14 | 50.547 | 12604.827 |
| 15 | 55.093 | 8438.035 |
| 16 | 58.677 | 6654.891 |
| 17 | 61.760 | 5722.671 |
| 18 | 64.361 | 4829.586 |
| 19 | 66.755 | 4443.825 |
| 20 | 68.869 | 3924.810 |
| 21 | 70.796 | 3577.526 |
| 22 | 72.574 | 3299.609 |
| 23 | 74.226 | 3068.111 |
| 24 | 75.782 | 2887.834 |
| 25 | 77.143 | 2525.945 |
| 26 | 78.470 | 2464.392 |
| 27 | 79.766 | 2405.020 |
| 28 | 80.859 | 2029.767 |
| 29 | 81.886 | 1906.737 |
| 30 | 82.913 | 1906.737 |
| 31 | 83.854 | 1746.619 |
| 32 | 84.701 | 1572.880 |
| 33 | 85.548 | 1572.808 |
| 34 | 86.369 | 1523.697 |
| 35 | 87.097 | 1350.772 |
| 36 | 87.816 | 1335.718 |
| 37 | 88.530 | 1325.158 |
| 38 | 89.158 | 1166.399 |
| 39 | 89.758 | 1113.098 |
| 40 | 90.358 | 1113.098 |
| 41 | 90.892 | 992.592 |
| 42 | 91.355 | 858.296 |
| 43 | 91.817 | 858.199 |
| 44 | 92.265 | 832.701 |
| 45 | 92.664 | 740.717 |
| 46 | 93.059 | 732.419 |
| 47 | 93.451 | 727.373 |
| 48 | 93.800 | 648.294 |
| 49 | 94.135 | 621.109 |
| 50 | 94.469 | 621.109 |
| 51 | 94.778 | 573.381 |
| 52 | 95.057 | 518.765 |
| 53 | 95.337 | 518.704 |
| 54 | 95.598 | 484.152 |
| 55 | 95.790 | 356.438 |
| 56 | 95.975 | 344.504 |
| 57 | 96.161 | 344.504 |
| 58 | 96.346 | 344.504 |
| 59 | 96.532 | 344.504 |
| 60 | 96.718 | 344.504 |
| 61 | 96.884 | 309.474 |
| 62 | 97.029 | 268.322 |
| 63 | 97.173 | 268.257 |
| 64 | 97.318 | 268.257 |

| | | |
|---|---|---|
| 65 | 97.462 | 268.257 |
| 66 | 97.607 | 268.257 |
| 67 | 97.749 | 264.628 |
| 68 | 97.858 | 202.655 |
| 69 | 97.956 | 180.322 |
| 70 | 98.053 | 180.322 |
| 71 | 98.150 | 180.322 |
| 72 | 98.247 | 180.322 |
| 73 | 98.344 | 180.322 |
| 74 | 98.436 | 170.290 |
| 75 | 98.507 | 131.347 |
| 76 | 98.575 | 127.450 |
| 77 | 98.644 | 127.450 |
| 78 | 98.713 | 127.450 |
| 79 | 98.781 | 127.450 |
| 80 | 98.850 | 127.450 |
| 81 | 98.917 | 124.221 |
| 82 | 98.982 | 120.226 |
| 83 | 99.046 | 120.215 |
| 84 | 99.111 | 120.215 |
| 85 | 99.176 | 120.215 |
| 86 | 99.241 | 120.215 |
| 87 | 99.305 | 119.778 |
| 88 | 99.365 | 111.612 |
| 89 | 99.424 | 108.527 |
| 90 | 99.482 | 108.527 |
| 91 | 99.541 | 108.527 |
| 92 | 99.599 | 108.527 |
| 93 | 99.658 | 108.527 |
| 94 | 99.711 | 98.918 |
| 95 | 99.740 | 54.108 |
| 96 | 99.767 | 50.437 |
| 97 | 99.794 | 50.437 |
| 98 | 99.821 | 50.437 |
| 99 | 99.849 | 50.437 |
| 100 | 99.876 | 50.437 |
| 101 | 99.903 | 50.437 |
| 102 | 99.930 | 50.437 |
| 103 | 99.957 | 50.437 |
| 104 | 99.984 | 50.437 |
| 105 | 100.000 | 28.841 |

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| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.3987 | 0.3987 |
| 2 | 0.4981 | 0.0994 |
| 3 | 0.5673 | 0.0693 |
| 4 | 0.6222 | 0.0549 |
| 5 | 0.6685 | 0.0462 |
| 6 | 0.7088 | 0.0403 |
| 7 | 0.7446 | 0.0358 |
| 8 | 0.7771 | 0.0325 |
| 9 | 0.8070 | 0.0299 |
| 10 | 0.8346 | 0.0277 |
| 11 | 0.8605 | 0.0258 |
| 12 | 0.8848 | 0.0243 |
| 13 | 0.9290 | 0.0442 |
| 14 | 0.9719 | 0.0429 |
| 15 | 1.0137 | 0.0417 |

| | | |
|---|---|---|
| 16 | 1.0543 | 0.0407 |
| 17 | 1.0940 | 0.0397 |
| 18 | 1.1328 | 0.0388 |
| 19 | 1.1708 | 0.0380 |
| 20 | 1.2079 | 0.0372 |
| 21 | 1.2444 | 0.0365 |
| 22 | 1.2802 | 0.0358 |
| 23 | 1.3153 | 0.0352 |
| 24 | 1.3499 | 0.0346 |
| 25 | 1.3839 | 0.0340 |
| 26 | 1.4174 | 0.0335 |
| 27 | 1.4504 | 0.0330 |
| 28 | 1.4829 | 0.0325 |
| 29 | 1.5149 | 0.0321 |
| 30 | 1.5466 | 0.0316 |
| 31 | 1.5778 | 0.0312 |
| 32 | 1.6086 | 0.0308 |
| 33 | 1.6390 | 0.0305 |
| 34 | 1.6691 | 0.0301 |
| 35 | 1.6989 | 0.0298 |
| 36 | 1.7283 | 0.0294 |
| 37 | 1.7437 | 0.0154 |
| 38 | 1.7588 | 0.0151 |
| 39 | 1.7736 | 0.0148 |
| 40 | 1.7881 | 0.0146 |
| 41 | 1.8024 | 0.0143 |
| 42 | 1.8165 | 0.0141 |
| 43 | 1.8304 | 0.0139 |
| 44 | 1.8440 | 0.0136 |
| 45 | 1.8574 | 0.0134 |
| 46 | 1.8707 | 0.0132 |
| 47 | 1.8837 | 0.0130 |
| 48 | 1.8966 | 0.0128 |
| 49 | 1.9092 | 0.0127 |
| 50 | 1.9217 | 0.0125 |
| 51 | 1.9340 | 0.0123 |
| 52 | 1.9462 | 0.0122 |
| 53 | 1.9582 | 0.0120 |
| 54 | 1.9701 | 0.0119 |
| 55 | 1.9818 | 0.0117 |
| 56 | 1.9933 | 0.0116 |
| 57 | 2.0048 | 0.0114 |
| 58 | 2.0161 | 0.0113 |
| 59 | 2.0272 | 0.0112 |
| 60 | 2.0382 | 0.0110 |
| 61 | 2.0492 | 0.0109 |
| 62 | 2.0599 | 0.0108 |
| 63 | 2.0706 | 0.0107 |
| 64 | 2.0812 | 0.0106 |
| 65 | 2.0916 | 0.0104 |
| 66 | 2.1020 | 0.0103 |
| 67 | 2.1122 | 0.0102 |
| 68 | 2.1223 | 0.0101 |
| 69 | 2.1323 | 0.0100 |
| 70 | 2.1423 | 0.0099 |
| 71 | 2.1521 | 0.0098 |
| 72 | 2.1618 | 0.0097 |
| 73 | 2.1711 | 0.0093 |
| 74 | 2.1803 | 0.0092 |

| | | |
|---|---|---|
| 75 | 2.1893 | 0.0091 |
| 76 | 2.1983 | 0.0090 |
| 77 | 2.2072 | 0.0089 |
| 78 | 2.2161 | 0.0088 |
| 79 | 2.2248 | 0.0088 |
| 80 | 2.2335 | 0.0087 |
| 81 | 2.2421 | 0.0086 |
| 82 | 2.2507 | 0.0085 |
| 83 | 2.2591 | 0.0085 |
| 84 | 2.2675 | 0.0084 |
| 85 | 2.2758 | 0.0083 |
| 86 | 2.2841 | 0.0083 |
| 87 | 2.2923 | 0.0082 |
| 88 | 2.3004 | 0.0081 |
| 89 | 2.3085 | 0.0081 |
| 90 | 2.3165 | 0.0080 |
| 91 | 2.3244 | 0.0079 |
| 92 | 2.3323 | 0.0079 |
| 93 | 2.3401 | 0.0078 |
| 94 | 2.3479 | 0.0078 |
| 95 | 2.3556 | 0.0077 |
| 96 | 2.3632 | 0.0076 |
| 97 | 2.3708 | 0.0076 |
| 98 | 2.3783 | 0.0075 |
| 99 | 2.3858 | 0.0075 |
| 100 | 2.3933 | 0.0074 |
| 101 | 2.4006 | 0.0074 |
| 102 | 2.4080 | 0.0073 |
| 103 | 2.4153 | 0.0073 |
| 104 | 2.4225 | 0.0072 |
| 105 | 2.4297 | 0.0072 |
| 106 | 2.4368 | 0.0071 |
| 107 | 2.4439 | 0.0071 |
| 108 | 2.4510 | 0.0070 |
| 109 | 2.4580 | 0.0070 |
| 110 | 2.4649 | 0.0070 |
| 111 | 2.4718 | 0.0069 |
| 112 | 2.4787 | 0.0069 |
| 113 | 2.4855 | 0.0068 |
| 114 | 2.4923 | 0.0068 |
| 115 | 2.4991 | 0.0067 |
| 116 | 2.5058 | 0.0067 |
| 117 | 2.5124 | 0.0067 |
| 118 | 2.5191 | 0.0066 |
| 119 | 2.5257 | 0.0066 |
| 120 | 2.5322 | 0.0066 |
| 121 | 2.5387 | 0.0065 |
| 122 | 2.5452 | 0.0065 |
| 123 | 2.5516 | 0.0064 |
| 124 | 2.5581 | 0.0064 |
| 125 | 2.5644 | 0.0064 |
| 126 | 2.5708 | 0.0063 |
| 127 | 2.5771 | 0.0063 |
| 128 | 2.5833 | 0.0063 |
| 129 | 2.5895 | 0.0062 |
| 130 | 2.5957 | 0.0062 |
| 131 | 2.6019 | 0.0062 |
| 132 | 2.6080 | 0.0061 |
| 133 | 2.6141 | 0.0061 |

| | | |
|---|---|---|
| 134 | 2.6202 | 0.0061 |
| 135 | 2.6262 | 0.0060 |
| 136 | 2.6323 | 0.0060 |
| 137 | 2.6382 | 0.0060 |
| 138 | 2.6442 | 0.0059 |
| 139 | 2.6501 | 0.0059 |
| 140 | 2.6560 | 0.0059 |
| 141 | 2.6618 | 0.0059 |
| 142 | 2.6677 | 0.0058 |
| 143 | 2.6735 | 0.0058 |
| 144 | 2.6792 | 0.0058 |
| 145 | 2.6850 | 0.0057 |
| 146 | 2.6907 | 0.0057 |
| 147 | 2.6964 | 0.0057 |
| 148 | 2.7021 | 0.0057 |
| 149 | 2.7077 | 0.0056 |
| 150 | 2.7133 | 0.0056 |
| 151 | 2.7189 | 0.0056 |
| 152 | 2.7245 | 0.0056 |
| 153 | 2.7300 | 0.0055 |
| 154 | 2.7355 | 0.0055 |
| 155 | 2.7410 | 0.0055 |
| 156 | 2.7465 | 0.0055 |
| 157 | 2.7519 | 0.0054 |
| 158 | 2.7573 | 0.0054 |
| 159 | 2.7627 | 0.0054 |
| 160 | 2.7681 | 0.0054 |
| 161 | 2.7734 | 0.0053 |
| 162 | 2.7787 | 0.0053 |
| 163 | 2.7840 | 0.0053 |
| 164 | 2.7893 | 0.0053 |
| 165 | 2.7946 | 0.0053 |
| 166 | 2.7998 | 0.0052 |
| 167 | 2.8050 | 0.0052 |
| 168 | 2.8102 | 0.0052 |
| 169 | 2.8154 | 0.0052 |
| 170 | 2.8205 | 0.0051 |
| 171 | 2.8256 | 0.0051 |
| 172 | 2.8307 | 0.0051 |
| 173 | 2.8358 | 0.0051 |
| 174 | 2.8409 | 0.0051 |
| 175 | 2.8459 | 0.0050 |
| 176 | 2.8510 | 0.0050 |
| 177 | 2.8560 | 0.0050 |
| 178 | 2.8610 | 0.0050 |
| 179 | 2.8659 | 0.0050 |
| 180 | 2.8709 | 0.0049 |
| 181 | 2.8758 | 0.0049 |
| 182 | 2.8807 | 0.0049 |
| 183 | 2.8856 | 0.0049 |
| 184 | 2.8905 | 0.0049 |
| 185 | 2.8953 | 0.0049 |
| 186 | 2.9002 | 0.0048 |
| 187 | 2.9050 | 0.0048 |
| 188 | 2.9098 | 0.0048 |
| 189 | 2.9146 | 0.0048 |
| 190 | 2.9193 | 0.0048 |
| 191 | 2.9241 | 0.0047 |
| 192 | 2.9288 | 0.0047 |

| | | |
|---|---|---|
| 193 | 2.9335 | 0.0047 |
| 194 | 2.9382 | 0.0047 |
| 195 | 2.9429 | 0.0047 |
| 196 | 2.9476 | 0.0047 |
| 197 | 2.9522 | 0.0046 |
| 198 | 2.9568 | 0.0046 |
| 199 | 2.9614 | 0.0046 |
| 200 | 2.9660 | 0.0046 |
| 201 | 2.9706 | 0.0046 |
| 202 | 2.9752 | 0.0046 |
| 203 | 2.9797 | 0.0046 |
| 204 | 2.9843 | 0.0045 |
| 205 | 2.9888 | 0.0045 |
| 206 | 2.9933 | 0.0045 |
| 207 | 2.9978 | 0.0045 |
| 208 | 3.0023 | 0.0045 |
| 209 | 3.0067 | 0.0045 |
| 210 | 3.0112 | 0.0044 |
| 211 | 3.0156 | 0.0044 |
| 212 | 3.0200 | 0.0044 |
| 213 | 3.0244 | 0.0044 |
| 214 | 3.0288 | 0.0044 |
| 215 | 3.0332 | 0.0044 |
| 216 | 3.0376 | 0.0044 |
| 217 | 3.0419 | 0.0043 |
| 218 | 3.0462 | 0.0043 |
| 219 | 3.0506 | 0.0043 |
| 220 | 3.0549 | 0.0043 |
| 221 | 3.0592 | 0.0043 |
| 222 | 3.0634 | 0.0043 |
| 223 | 3.0677 | 0.0043 |
| 224 | 3.0719 | 0.0043 |
| 225 | 3.0762 | 0.0042 |
| 226 | 3.0804 | 0.0042 |
| 227 | 3.0846 | 0.0042 |
| 228 | 3.0888 | 0.0042 |
| 229 | 3.0930 | 0.0042 |
| 230 | 3.0972 | 0.0042 |
| 231 | 3.1014 | 0.0042 |
| 232 | 3.1055 | 0.0041 |
| 233 | 3.1096 | 0.0041 |
| 234 | 3.1138 | 0.0041 |
| 235 | 3.1179 | 0.0041 |
| 236 | 3.1220 | 0.0041 |
| 237 | 3.1261 | 0.0041 |
| 238 | 3.1301 | 0.0041 |
| 239 | 3.1342 | 0.0041 |
| 240 | 3.1383 | 0.0041 |
| 241 | 3.1423 | 0.0040 |
| 242 | 3.1463 | 0.0040 |
| 243 | 3.1504 | 0.0040 |
| 244 | 3.1544 | 0.0040 |
| 245 | 3.1584 | 0.0040 |
| 246 | 3.1623 | 0.0040 |
| 247 | 3.1663 | 0.0040 |
| 248 | 3.1703 | 0.0040 |
| 249 | 3.1742 | 0.0040 |
| 250 | 3.1782 | 0.0039 |
| 251 | 3.1821 | 0.0039 |

| | | |
|---|---|---|
| 252 | 3.1860 | 0.0039 |
| 253 | 3.1899 | 0.0039 |
| 254 | 3.1938 | 0.0039 |
| 255 | 3.1977 | 0.0039 |
| 256 | 3.2016 | 0.0039 |
| 257 | 3.2055 | 0.0039 |
| 258 | 3.2093 | 0.0039 |
| 259 | 3.2132 | 0.0038 |
| 260 | 3.2170 | 0.0038 |
| 261 | 3.2208 | 0.0038 |
| 262 | 3.2246 | 0.0038 |
| 263 | 3.2284 | 0.0038 |
| 264 | 3.2322 | 0.0038 |
| 265 | 3.2360 | 0.0038 |
| 266 | 3.2398 | 0.0038 |
| 267 | 3.2436 | 0.0038 |
| 268 | 3.2473 | 0.0038 |
| 269 | 3.2511 | 0.0037 |
| 270 | 3.2548 | 0.0037 |
| 271 | 3.2585 | 0.0037 |
| 272 | 3.2622 | 0.0037 |
| 273 | 3.2660 | 0.0037 |
| 274 | 3.2697 | 0.0037 |
| 275 | 3.2733 | 0.0037 |
| 276 | 3.2770 | 0.0037 |
| 277 | 3.2807 | 0.0037 |
| 278 | 3.2844 | 0.0037 |
| 279 | 3.2880 | 0.0037 |
| 280 | 3.2917 | 0.0036 |
| 281 | 3.2953 | 0.0036 |
| 282 | 3.2989 | 0.0036 |
| 283 | 3.3025 | 0.0036 |
| 284 | 3.3061 | 0.0036 |
| 285 | 3.3097 | 0.0036 |
| 286 | 3.3133 | 0.0036 |
| 287 | 3.3169 | 0.0036 |
| 288 | 3.3205 | 0.0036 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0036 | 0.0008 | 0.0028 |
| 2 | 0.0036 | 0.0008 | 0.0028 |
| 3 | 0.0036 | 0.0008 | 0.0028 |
| 4 | 0.0036 | 0.0008 | 0.0028 |
| 5 | 0.0036 | 0.0008 | 0.0028 |
| 6 | 0.0036 | 0.0008 | 0.0028 |
| 7 | 0.0037 | 0.0008 | 0.0028 |
| 8 | 0.0037 | 0.0008 | 0.0029 |
| 9 | 0.0037 | 0.0008 | 0.0029 |
| 10 | 0.0037 | 0.0008 | 0.0029 |
| 11 | 0.0037 | 0.0008 | 0.0029 |
| 12 | 0.0037 | 0.0008 | 0.0029 |
| 13 | 0.0037 | 0.0008 | 0.0029 |
| 14 | 0.0037 | 0.0008 | 0.0029 |
| 15 | 0.0038 | 0.0008 | 0.0029 |
| 16 | 0.0038 | 0.0008 | 0.0029 |
| 17 | 0.0038 | 0.0008 | 0.0030 |

| | | | |
|---|---|---|---|
| 18 | 0.0038 | 0.0008 | 0.0030 |
| 19 | 0.0038 | 0.0008 | 0.0030 |
| 20 | 0.0038 | 0.0008 | 0.0030 |
| 21 | 0.0039 | 0.0009 | 0.0030 |
| 22 | 0.0039 | 0.0009 | 0.0030 |
| 23 | 0.0039 | 0.0009 | 0.0030 |
| 24 | 0.0039 | 0.0009 | 0.0030 |
| 25 | 0.0039 | 0.0009 | 0.0031 |
| 26 | 0.0039 | 0.0009 | 0.0031 |
| 27 | 0.0040 | 0.0009 | 0.0031 |
| 28 | 0.0040 | 0.0009 | 0.0031 |
| 29 | 0.0040 | 0.0009 | 0.0031 |
| 30 | 0.0040 | 0.0009 | 0.0031 |
| 31 | 0.0040 | 0.0009 | 0.0031 |
| 32 | 0.0040 | 0.0009 | 0.0031 |
| 33 | 0.0041 | 0.0009 | 0.0032 |
| 34 | 0.0041 | 0.0009 | 0.0032 |
| 35 | 0.0041 | 0.0009 | 0.0032 |
| 36 | 0.0041 | 0.0009 | 0.0032 |
| 37 | 0.0041 | 0.0009 | 0.0032 |
| 38 | 0.0041 | 0.0009 | 0.0032 |
| 39 | 0.0042 | 0.0009 | 0.0032 |
| 40 | 0.0042 | 0.0009 | 0.0033 |
| 41 | 0.0042 | 0.0009 | 0.0033 |
| 42 | 0.0042 | 0.0009 | 0.0033 |
| 43 | 0.0042 | 0.0009 | 0.0033 |
| 44 | 0.0043 | 0.0009 | 0.0033 |
| 45 | 0.0043 | 0.0009 | 0.0033 |
| 46 | 0.0043 | 0.0010 | 0.0033 |
| 47 | 0.0043 | 0.0010 | 0.0034 |
| 48 | 0.0043 | 0.0010 | 0.0034 |
| 49 | 0.0044 | 0.0010 | 0.0034 |
| 50 | 0.0044 | 0.0010 | 0.0034 |
| 51 | 0.0044 | 0.0010 | 0.0034 |
| 52 | 0.0044 | 0.0010 | 0.0034 |
| 53 | 0.0044 | 0.0010 | 0.0035 |
| 54 | 0.0045 | 0.0010 | 0.0035 |
| 55 | 0.0045 | 0.0010 | 0.0035 |
| 56 | 0.0045 | 0.0010 | 0.0035 |
| 57 | 0.0045 | 0.0010 | 0.0035 |
| 58 | 0.0046 | 0.0010 | 0.0035 |
| 59 | 0.0046 | 0.0010 | 0.0036 |
| 60 | 0.0046 | 0.0010 | 0.0036 |
| 61 | 0.0046 | 0.0010 | 0.0036 |
| 62 | 0.0046 | 0.0010 | 0.0036 |
| 63 | 0.0047 | 0.0010 | 0.0036 |
| 64 | 0.0047 | 0.0010 | 0.0037 |
| 65 | 0.0047 | 0.0010 | 0.0037 |
| 66 | 0.0047 | 0.0011 | 0.0037 |
| 67 | 0.0048 | 0.0011 | 0.0037 |
| 68 | 0.0048 | 0.0011 | 0.0037 |
| 69 | 0.0048 | 0.0011 | 0.0038 |
| 70 | 0.0049 | 0.0011 | 0.0038 |
| 71 | 0.0049 | 0.0011 | 0.0038 |
| 72 | 0.0049 | 0.0011 | 0.0038 |
| 73 | 0.0049 | 0.0011 | 0.0039 |
| 74 | 0.0050 | 0.0011 | 0.0039 |
| 75 | 0.0050 | 0.0011 | 0.0039 |
| 76 | 0.0050 | 0.0011 | 0.0039 |

| | | | |
|---|---|---|---|
| 77 | 0.0051 | 0.0011 | 0.0039 |
| 78 | 0.0051 | 0.0011 | 0.0040 |
| 79 | 0.0051 | 0.0011 | 0.0040 |
| 80 | 0.0051 | 0.0011 | 0.0040 |
| 81 | 0.0052 | 0.0011 | 0.0040 |
| 82 | 0.0052 | 0.0012 | 0.0041 |
| 83 | 0.0053 | 0.0012 | 0.0041 |
| 84 | 0.0053 | 0.0012 | 0.0041 |
| 85 | 0.0053 | 0.0012 | 0.0041 |
| 86 | 0.0053 | 0.0012 | 0.0042 |
| 87 | 0.0054 | 0.0012 | 0.0042 |
| 88 | 0.0054 | 0.0012 | 0.0042 |
| 89 | 0.0055 | 0.0012 | 0.0043 |
| 90 | 0.0055 | 0.0012 | 0.0043 |
| 91 | 0.0055 | 0.0012 | 0.0043 |
| 92 | 0.0056 | 0.0012 | 0.0043 |
| 93 | 0.0056 | 0.0012 | 0.0044 |
| 94 | 0.0056 | 0.0012 | 0.0044 |
| 95 | 0.0057 | 0.0013 | 0.0044 |
| 96 | 0.0057 | 0.0013 | 0.0045 |
| 97 | 0.0058 | 0.0013 | 0.0045 |
| 98 | 0.0058 | 0.0013 | 0.0045 |
| 99 | 0.0059 | 0.0013 | 0.0046 |
| 100 | 0.0059 | 0.0013 | 0.0046 |
| 101 | 0.0059 | 0.0013 | 0.0046 |
| 102 | 0.0060 | 0.0013 | 0.0047 |
| 103 | 0.0060 | 0.0013 | 0.0047 |
| 104 | 0.0061 | 0.0013 | 0.0047 |
| 105 | 0.0061 | 0.0014 | 0.0048 |
| 106 | 0.0062 | 0.0014 | 0.0048 |
| 107 | 0.0062 | 0.0014 | 0.0049 |
| 108 | 0.0063 | 0.0014 | 0.0049 |
| 109 | 0.0063 | 0.0014 | 0.0049 |
| 110 | 0.0064 | 0.0014 | 0.0050 |
| 111 | 0.0064 | 0.0014 | 0.0050 |
| 112 | 0.0065 | 0.0014 | 0.0050 |
| 113 | 0.0066 | 0.0015 | 0.0051 |
| 114 | 0.0066 | 0.0015 | 0.0051 |
| 115 | 0.0067 | 0.0015 | 0.0052 |
| 116 | 0.0067 | 0.0015 | 0.0052 |
| 117 | 0.0068 | 0.0015 | 0.0053 |
| 118 | 0.0068 | 0.0015 | 0.0053 |
| 119 | 0.0069 | 0.0015 | 0.0054 |
| 120 | 0.0070 | 0.0015 | 0.0054 |
| 121 | 0.0070 | 0.0016 | 0.0055 |
| 122 | 0.0071 | 0.0016 | 0.0055 |
| 123 | 0.0072 | 0.0016 | 0.0056 |
| 124 | 0.0072 | 0.0016 | 0.0056 |
| 125 | 0.0073 | 0.0016 | 0.0057 |
| 126 | 0.0074 | 0.0016 | 0.0057 |
| 127 | 0.0075 | 0.0017 | 0.0058 |
| 128 | 0.0075 | 0.0017 | 0.0059 |
| 129 | 0.0076 | 0.0017 | 0.0060 |
| 130 | 0.0077 | 0.0017 | 0.0060 |
| 131 | 0.0078 | 0.0017 | 0.0061 |
| 132 | 0.0079 | 0.0017 | 0.0061 |
| 133 | 0.0080 | 0.0018 | 0.0062 |
| 134 | 0.0081 | 0.0018 | 0.0063 |
| 135 | 0.0082 | 0.0018 | 0.0064 |

| | | | |
|---|---|---|---|
| 136 | 0.0083 | 0.0018 | 0.0064 |
| 137 | 0.0084 | 0.0019 | 0.0065 |
| 138 | 0.0085 | 0.0019 | 0.0066 |
| 139 | 0.0086 | 0.0019 | 0.0067 |
| 140 | 0.0087 | 0.0019 | 0.0068 |
| 141 | 0.0088 | 0.0020 | 0.0069 |
| 142 | 0.0089 | 0.0020 | 0.0069 |
| 143 | 0.0091 | 0.0020 | 0.0071 |
| 144 | 0.0092 | 0.0020 | 0.0071 |
| 145 | 0.0097 | 0.0022 | 0.0076 |
| 146 | 0.0098 | 0.0022 | 0.0077 |
| 147 | 0.0100 | 0.0022 | 0.0078 |
| 148 | 0.0101 | 0.0022 | 0.0079 |
| 149 | 0.0103 | 0.0023 | 0.0080 |
| 150 | 0.0104 | 0.0023 | 0.0081 |
| 151 | 0.0107 | 0.0024 | 0.0083 |
| 152 | 0.0108 | 0.0024 | 0.0084 |
| 153 | 0.0110 | 0.0024 | 0.0086 |
| 154 | 0.0112 | 0.0025 | 0.0087 |
| 155 | 0.0114 | 0.0025 | 0.0089 |
| 156 | 0.0116 | 0.0026 | 0.0090 |
| 157 | 0.0119 | 0.0026 | 0.0092 |
| 158 | 0.0120 | 0.0027 | 0.0093 |
| 159 | 0.0123 | 0.0027 | 0.0096 |
| 160 | 0.0125 | 0.0028 | 0.0097 |
| 161 | 0.0128 | 0.0028 | 0.0100 |
| 162 | 0.0130 | 0.0029 | 0.0101 |
| 163 | 0.0134 | 0.0030 | 0.0105 |
| 164 | 0.0136 | 0.0030 | 0.0106 |
| 165 | 0.0141 | 0.0031 | 0.0110 |
| 166 | 0.0143 | 0.0032 | 0.0111 |
| 167 | 0.0148 | 0.0033 | 0.0115 |
| 168 | 0.0151 | 0.0033 | 0.0117 |
| 169 | 0.0294 | 0.0065 | 0.0229 |
| 170 | 0.0298 | 0.0066 | 0.0232 |
| 171 | 0.0305 | 0.0067 | 0.0237 |
| 172 | 0.0308 | 0.0068 | 0.0240 |
| 173 | 0.0316 | 0.0070 | 0.0246 |
| 174 | 0.0321 | 0.0071 | 0.0250 |
| 175 | 0.0330 | 0.0073 | 0.0257 |
| 176 | 0.0335 | 0.0074 | 0.0261 |
| 177 | 0.0346 | 0.0077 | 0.0269 |
| 178 | 0.0352 | 0.0078 | 0.0274 |
| 179 | 0.0365 | 0.0081 | 0.0284 |
| 180 | 0.0372 | 0.0082 | 0.0289 |
| 181 | 0.0388 | 0.0086 | 0.0302 |
| 182 | 0.0397 | 0.0088 | 0.0309 |
| 183 | 0.0417 | 0.0092 | 0.0325 |
| 184 | 0.0429 | 0.0095 | 0.0334 |
| 185 | 0.0243 | 0.0054 | 0.0189 |
| 186 | 0.0258 | 0.0057 | 0.0201 |
| 187 | 0.0299 | 0.0066 | 0.0232 |
| 188 | 0.0325 | 0.0072 | 0.0253 |
| 189 | 0.0403 | 0.0089 | 0.0314 |
| 190 | 0.0462 | 0.0102 | 0.0360 |
| 191 | 0.0693 | 0.0112 | 0.0581 |
| 192 | 0.0994 | 0.0112 | 0.0882 |
| 193 | 0.3987 | 0.0112 | 0.3875 |
| 194 | 0.0549 | 0.0112 | 0.0437 |

| | | | |
|---|---|---|---|
| 195 | 0.0358 | 0.0079 | 0.0279 |
| 196 | 0.0277 | 0.0061 | 0.0215 |
| 197 | 0.0442 | 0.0098 | 0.0344 |
| 198 | 0.0407 | 0.0090 | 0.0317 |
| 199 | 0.0380 | 0.0084 | 0.0295 |
| 200 | 0.0358 | 0.0079 | 0.0279 |
| 201 | 0.0340 | 0.0075 | 0.0265 |
| 202 | 0.0325 | 0.0072 | 0.0253 |
| 203 | 0.0312 | 0.0069 | 0.0243 |
| 204 | 0.0301 | 0.0067 | 0.0234 |
| 205 | 0.0154 | 0.0034 | 0.0120 |
| 206 | 0.0146 | 0.0032 | 0.0113 |
| 207 | 0.0139 | 0.0031 | 0.0108 |
| 208 | 0.0132 | 0.0029 | 0.0103 |
| 209 | 0.0127 | 0.0028 | 0.0099 |
| 210 | 0.0122 | 0.0027 | 0.0095 |
| 211 | 0.0117 | 0.0026 | 0.0091 |
| 212 | 0.0113 | 0.0025 | 0.0088 |
| 213 | 0.0109 | 0.0024 | 0.0085 |
| 214 | 0.0106 | 0.0023 | 0.0082 |
| 215 | 0.0102 | 0.0023 | 0.0080 |
| 216 | 0.0099 | 0.0022 | 0.0077 |
| 217 | 0.0093 | 0.0020 | 0.0072 |
| 218 | 0.0090 | 0.0020 | 0.0070 |
| 219 | 0.0088 | 0.0019 | 0.0068 |
| 220 | 0.0085 | 0.0019 | 0.0066 |
| 221 | 0.0083 | 0.0018 | 0.0065 |
| 222 | 0.0081 | 0.0018 | 0.0063 |
| 223 | 0.0079 | 0.0018 | 0.0062 |
| 224 | 0.0078 | 0.0017 | 0.0060 |
| 225 | 0.0076 | 0.0017 | 0.0059 |
| 226 | 0.0074 | 0.0016 | 0.0058 |
| 227 | 0.0073 | 0.0016 | 0.0057 |
| 228 | 0.0071 | 0.0016 | 0.0056 |
| 229 | 0.0070 | 0.0016 | 0.0055 |
| 230 | 0.0069 | 0.0015 | 0.0054 |
| 231 | 0.0067 | 0.0015 | 0.0053 |
| 232 | 0.0066 | 0.0015 | 0.0052 |
| 233 | 0.0065 | 0.0014 | 0.0051 |
| 234 | 0.0064 | 0.0014 | 0.0050 |
| 235 | 0.0063 | 0.0014 | 0.0049 |
| 236 | 0.0062 | 0.0014 | 0.0048 |
| 237 | 0.0061 | 0.0014 | 0.0047 |
| 238 | 0.0060 | 0.0013 | 0.0047 |
| 239 | 0.0059 | 0.0013 | 0.0046 |
| 240 | 0.0058 | 0.0013 | 0.0045 |
| 241 | 0.0057 | 0.0013 | 0.0045 |
| 242 | 0.0057 | 0.0013 | 0.0044 |
| 243 | 0.0056 | 0.0012 | 0.0043 |
| 244 | 0.0055 | 0.0012 | 0.0043 |
| 245 | 0.0054 | 0.0012 | 0.0042 |
| 246 | 0.0054 | 0.0012 | 0.0042 |
| 247 | 0.0053 | 0.0012 | 0.0041 |
| 248 | 0.0052 | 0.0012 | 0.0041 |
| 249 | 0.0052 | 0.0011 | 0.0040 |
| 250 | 0.0051 | 0.0011 | 0.0040 |
| 251 | 0.0050 | 0.0011 | 0.0039 |
| 252 | 0.0050 | 0.0011 | 0.0039 |
| 253 | 0.0049 | 0.0011 | 0.0038 |

| | | | |
|---|---|---|---|
| 254 | 0.0049 | 0.0011 | 0.0038 |
| 255 | 0.0048 | 0.0011 | 0.0038 |
| 256 | 0.0048 | 0.0011 | 0.0037 |
| 257 | 0.0047 | 0.0010 | 0.0037 |
| 258 | 0.0047 | 0.0010 | 0.0036 |
| 259 | 0.0046 | 0.0010 | 0.0036 |
| 260 | 0.0046 | 0.0010 | 0.0036 |
| 261 | 0.0045 | 0.0010 | 0.0035 |
| 262 | 0.0045 | 0.0010 | 0.0035 |
| 263 | 0.0044 | 0.0010 | 0.0035 |
| 264 | 0.0044 | 0.0010 | 0.0034 |
| 265 | 0.0043 | 0.0010 | 0.0034 |
| 266 | 0.0043 | 0.0010 | 0.0034 |
| 267 | 0.0043 | 0.0009 | 0.0033 |
| 268 | 0.0042 | 0.0009 | 0.0033 |
| 269 | 0.0042 | 0.0009 | 0.0033 |
| 270 | 0.0041 | 0.0009 | 0.0032 |
| 271 | 0.0041 | 0.0009 | 0.0032 |
| 272 | 0.0041 | 0.0009 | 0.0032 |
| 273 | 0.0040 | 0.0009 | 0.0031 |
| 274 | 0.0040 | 0.0009 | 0.0031 |
| 275 | 0.0040 | 0.0009 | 0.0031 |
| 276 | 0.0039 | 0.0009 | 0.0031 |
| 277 | 0.0039 | 0.0009 | 0.0030 |
| 278 | 0.0039 | 0.0009 | 0.0030 |
| 279 | 0.0038 | 0.0009 | 0.0030 |
| 280 | 0.0038 | 0.0008 | 0.0030 |
| 281 | 0.0038 | 0.0008 | 0.0029 |
| 282 | 0.0038 | 0.0008 | 0.0029 |
| 283 | 0.0037 | 0.0008 | 0.0029 |
| 284 | 0.0037 | 0.0008 | 0.0029 |
| 285 | 0.0037 | 0.0008 | 0.0029 |
| 286 | 0.0036 | 0.0008 | 0.0028 |
| 287 | 0.0036 | 0.0008 | 0.0028 |
| 288 | 0.0036 | 0.0008 | 0.0028 |

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Total soil rain loss = 0.64(In)
Total effective rainfall = 2.68(In)
Peak flow rate in flood hydrograph = 10831.85(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 2725.0 | 5450.0 | 8175.0 | 10900.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0139 | 2.02 | Q | \| | \| | \| | \| |
| 0+10 | 0.0563 | 6.16 | Q | \| | \| | \| | \| |
| 0+15 | 0.1398 | 12.12 | Q | \| | \| | \| | \| |
| 0+20 | 0.2742 | 19.52 | Q | \| | \| | \| | \| |
| 0+25 | 0.4717 | 28.67 | Q | \| | \| | \| | \| |
| 0+30 | 0.7453 | 39.73 | Q | \| | \| | \| | \| |
| 0+35 | 1.1069 | 52.51 | Q | \| | \| | \| | \| |
| 0+40 | 1.5976 | 71.24 | Q | \| | \| | \| | \| |
| 0+45 | 2.2512 | 94.91 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+50 | 3.1195 | 126.08 | Q | | | | |
| 0+55 | 4.2058 | 157.73 | Q | | | | |
| 1+ 0 | 5.5158 | 190.22 | Q | | | | |
| 1+ 5 | 7.0916 | 228.81 | Q | | | | |
| 1+10 | 8.9146 | 264.69 | Q | | | | |
| 1+15 | 10.9058 | 289.13 | VQ | | | | |
| 1+20 | 13.0319 | 308.70 | VQ | | | | |
| 1+25 | 15.2754 | 325.76 | VQ | | | | |
| 1+30 | 17.6198 | 340.41 | VQ | | | | |
| 1+35 | 20.0580 | 354.03 | VQ | | | | |
| 1+40 | 22.5806 | 366.28 | VQ | | | | |
| 1+45 | 25.1812 | 377.61 | VQ | | | | |
| 1+50 | 27.8549 | 388.22 | VQ | | | | |
| 1+55 | 30.5975 | 398.22 | VQ | | | | |
| 2+ 0 | 33.4058 | 407.78 | VQ | | | | |
| 2+ 5 | 36.2734 | 416.37 | VQ | | | | |
| 2+10 | 39.1992 | 424.83 | VQ | | | | |
| 2+15 | 42.1824 | 433.16 | VQ | | | | |
| 2+20 | 45.2161 | 440.49 | VQ | | | | |
| 2+25 | 48.2981 | 447.51 | VQ | | | | |
| 2+30 | 51.4288 | 454.58 | VQ | | | | |
| 2+35 | 54.6053 | 461.23 | VQ | | | | |
| 2+40 | 57.8246 | 467.44 | VQ | | | | |
| 2+45 | 61.0868 | 473.67 | VQ | | | | |
| 2+50 | 64.3913 | 479.81 | VQ | | | | |
| 2+55 | 67.7349 | 485.49 | VQ | | | | |
| 3+ 0 | 71.1176 | 491.18 | VQ | | | | |
| 3+ 5 | 74.5395 | 496.86 | VQ | | | | |
| 3+10 | 77.9977 | 502.14 | VQ | | | | |
| 3+15 | 81.4915 | 507.29 | VQ | | | | |
| 3+20 | 85.0210 | 512.49 | VQ | | | | |
| 3+25 | 88.5842 | 517.37 | \|Q | | | | |
| 3+30 | 92.1787 | 521.92 | \|Q | | | | |
| 3+35 | 95.8047 | 526.50 | \|Q | | | | |
| 3+40 | 99.4620 | 531.04 | \|Q | | | | |
| 3+45 | 103.1490 | 535.35 | \|Q | | | | |
| 3+50 | 106.8657 | 539.68 | \|Q | | | | |
| 3+55 | 110.6124 | 544.01 | \|Q | | | | |
| 4+ 0 | 114.3876 | 548.17 | \|VQ | | | | |
| 4+ 5 | 118.1912 | 552.27 | \|VQ | | | | |
| 4+10 | 122.0232 | 556.42 | \|VQ | | | | |
| 4+15 | 125.8831 | 560.45 | \|VQ | | | | |
| 4+20 | 129.7699 | 564.37 | \|VQ | | | | |
| 4+25 | 133.6840 | 568.32 | \|VQ | | | | |
| 4+30 | 137.6249 | 572.21 | \|VQ | | | | |
| 4+35 | 141.5903 | 575.78 | \|VQ | | | | |
| 4+40 | 145.5803 | 579.35 | \|VQ | | | | |
| 4+45 | 149.5950 | 582.94 | \|VQ | | | | |
| 4+50 | 153.6348 | 586.58 | \|VQ | | | | |
| 4+55 | 157.6998 | 590.24 | \|VQ | | | | |
| 5+ 0 | 161.7903 | 593.94 | \|VQ | | | | |
| 5+ 5 | 165.9058 | 597.57 | \|VQ | | | | |
| 5+10 | 170.0459 | 601.14 | \|VQ | | | | |
| 5+15 | 174.2106 | 604.73 | \| Q | | | | |
| 5+20 | 178.4005 | 608.36 | \| Q | | | | |
| 5+25 | 182.6155 | 612.02 | \| Q | | | | |
| 5+30 | 186.8561 | 615.73 | \| Q | | | | |
| 5+35 | 191.1223 | 619.46 | \| Q | | | | |
| 5+40 | 195.4133 | 623.06 | \| Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+45 | 199.7290 | 626.63 | Q | | | | |
| 5+50 | 204.0696 | 630.25 | Q | | | | |
| 5+55 | 208.4353 | 633.90 | Q | | | | |
| 6+ 0 | 212.8265 | 637.60 | Q | | | | |
| 6+ 5 | 217.2434 | 641.33 | Q | | | | |
| 6+10 | 221.6861 | 645.09 | Q | | | | |
| 6+15 | 226.1543 | 648.77 | Q | | | | |
| 6+20 | 230.6481 | 652.50 | Q | | | | |
| 6+25 | 235.1678 | 656.26 | Q | | | | |
| 6+30 | 239.7137 | 660.08 | Q | | | | |
| 6+35 | 244.2862 | 663.93 | Q | | | | |
| 6+40 | 248.8857 | 667.84 | Q | | | | |
| 6+45 | 253.5122 | 671.77 | Q | | | | |
| 6+50 | 258.1662 | 675.76 | QV | | | | |
| 6+55 | 262.8480 | 679.79 | QV | | | | |
| 7+ 0 | 267.5579 | 683.88 | QV | | | | |
| 7+ 5 | 272.2963 | 688.01 | QV | | | | |
| 7+10 | 277.0635 | 692.21 | QV | | | | |
| 7+15 | 281.8600 | 696.45 | QV | | | | |
| 7+20 | 286.6860 | 700.73 | QV | | | | |
| 7+25 | 291.5417 | 705.05 | QV | | | | |
| 7+30 | 296.4277 | 709.44 | QV | | | | |
| 7+35 | 301.3442 | 713.88 | QV | | | | |
| 7+40 | 306.2919 | 718.40 | QV | | | | |
| 7+45 | 311.2709 | 722.96 | QV | | | | |
| 7+50 | 316.2818 | 727.58 | QV | | | | |
| 7+55 | 321.3239 | 732.12 | QV | | | | |
| 8+ 0 | 326.3978 | 736.73 | QV | | | | |
| 8+ 5 | 331.5039 | 741.40 | QV | | | | |
| 8+10 | 336.6426 | 746.15 | QV | | | | |
| 8+15 | 341.8145 | 750.96 | QV | | | | |
| 8+20 | 347.0201 | 755.86 | Q V | | | | |
| 8+25 | 352.2599 | 760.81 | Q V | | | | |
| 8+30 | 357.5344 | 765.86 | Q V | | | | |
| 8+35 | 362.8442 | 770.98 | Q V | | | | |
| 8+40 | 368.1898 | 776.19 | Q V | | | | |
| 8+45 | 373.5714 | 781.41 | Q V | | | | |
| 8+50 | 378.9891 | 786.65 | Q V | | | | |
| 8+55 | 384.4434 | 791.96 | Q V | | | | |
| 9+ 0 | 389.9350 | 797.38 | Q V | | | | |
| 9+ 5 | 395.4644 | 802.88 | Q V | | | | |
| 9+10 | 401.0325 | 808.48 | Q V | | | | |
| 9+15 | 406.6398 | 814.17 | Q V | | | | |
| 9+20 | 412.2870 | 819.98 | QV | | | | |
| 9+25 | 417.9748 | 825.87 | QV | | | | |
| 9+30 | 423.7040 | 831.89 | QV | | | | |
| 9+35 | 429.4753 | 837.99 | Q V | | | | |
| 9+40 | 435.2896 | 844.23 | Q V | | | | |
| 9+45 | 441.1475 | 850.57 | Q V | | | | |
| 9+50 | 447.0500 | 857.04 | Q V | | | | |
| 9+55 | 452.9978 | 863.62 | Q V | | | | |
| 10+ 0 | 458.9919 | 870.35 | Q V | | | | |
| 10+ 5 | 465.0331 | 877.18 | Q V | | | | |
| 10+10 | 471.1225 | 884.18 | Q V | | | | |
| 10+15 | 477.2609 | 891.29 | Q V | | | | |
| 10+20 | 483.4494 | 898.57 | Q V | | | | |
| 10+25 | 489.6889 | 905.98 | Q V | | | | |
| 10+30 | 495.9807 | 913.56 | Q V | | | | |
| 10+35 | 502.3256 | 921.28 | Q V | | | | |

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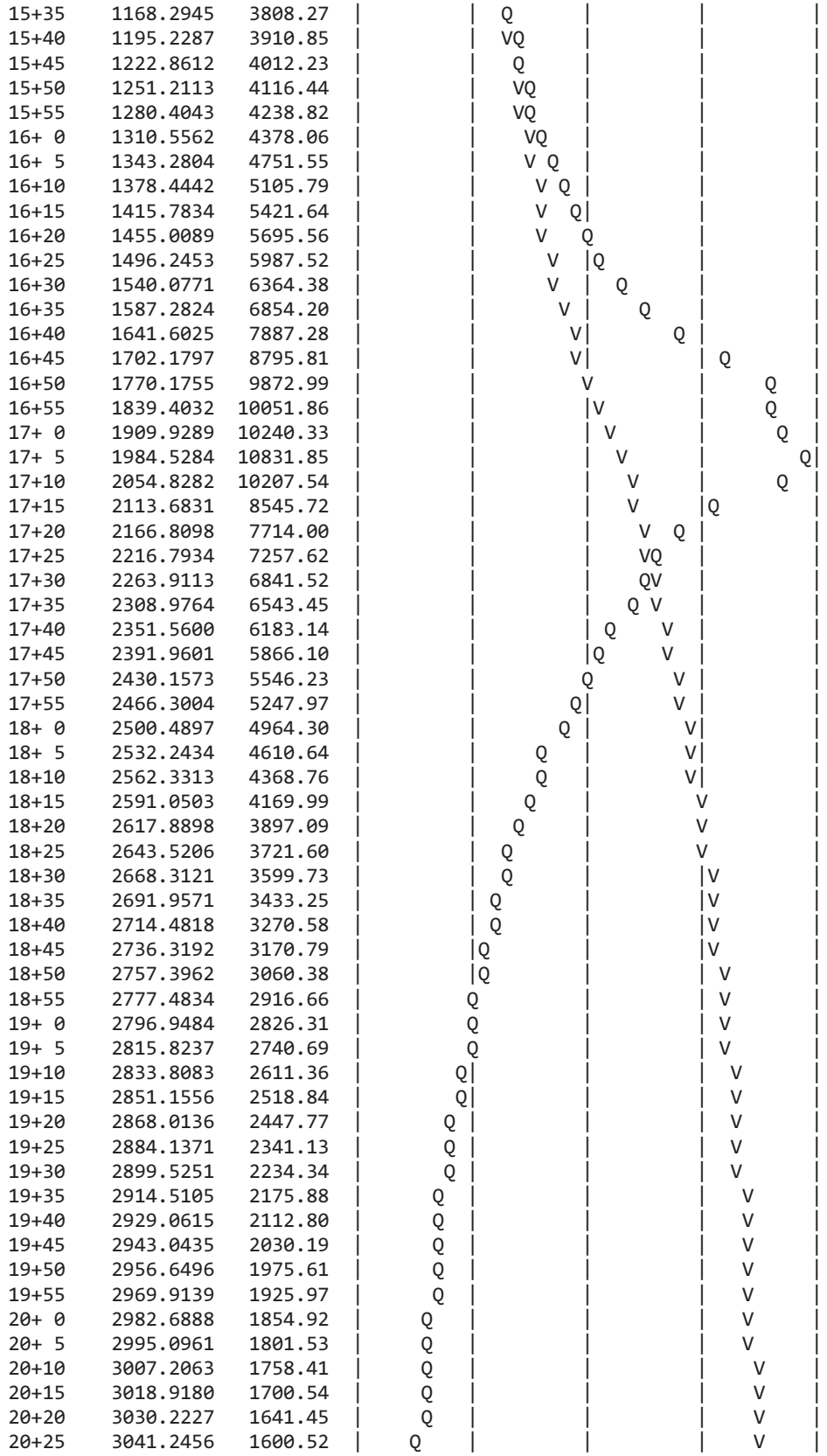
10+40     508.7249    929.19  |  Q V    |         |         |         |
10+45     515.1798    937.24  |  Q  V   |         |         |         |
10+50     521.6915    945.50  |  Q  V   |         |         |         |
10+55     528.2611    953.91  |  Q  V   |         |         |         |
11+ 0     534.8902    962.54  |  Q  V   |         |         |         |
11+ 5     541.5799    971.34  |  Q  V   |         |         |         |
11+10     548.3318    980.38  |  Q  V   |         |         |         |
11+15     555.1471    989.59  |  Q  V   |         |         |         |
11+20     562.0277    999.06  |  Q  V   |         |         |         |
11+25     568.9748   1008.72  |  Q  V   |         |         |         |
11+30     575.9903   1018.65  |  Q  V   |         |         |         |
11+35     583.0756   1028.80  |  Q  V   |         |         |         |
11+40     590.2329   1039.24  |  Q  V   |         |         |         |
11+45     597.4637   1049.91  |  Q  V   |         |         |         |
11+50     604.7702   1060.90  |  Q   V  |         |         |         |
11+55     612.1541   1072.14  |  Q   V  |         |         |         |
12+ 0     619.6178   1083.73  |  Q   V  |         |         |         |
12+ 5     627.1647   1095.82  |   Q  V  |         |         |         |
12+10     634.7992   1108.53  |   Q  V  |         |         |         |
12+15     642.5247   1121.74  |   Q  V  |         |         |         |
12+20     650.3451   1135.53  |   Q  V  |         |         |         |
12+25     658.2642   1149.85  |   Q  V  |         |         |         |
12+30     666.2866   1164.85  |   Q  V  |         |         |         |
12+35     674.4161   1180.41  |   Q  V  |         |         |         |
12+40     682.6609   1197.14  |   Q  V  |         |         |         |
12+45     691.0276   1214.85  |   Q   V |         |         |         |
12+50     699.5259   1233.95  |   Q   V |         |         |         |
12+55     708.1594   1253.59  |   Q   V |         |         |         |
13+ 0     716.9331   1273.94  |   Q   V |         |         |         |
13+ 5     725.8553   1295.50  |   Q   V |         |         |         |
13+10     734.9288   1317.46  |   Q   V |         |         |         |
13+15     744.1487   1338.73  |   Q   V |         |         |         |
13+20     753.5167   1360.23  |   Q   V |         |         |         |
13+25     763.0354   1382.11  |    Q  V |         |         |         |
13+30     772.7089   1404.59  |    Q   V|         |         |         |
13+35     782.5416   1427.71  |    Q   V|         |         |         |
13+40     792.5392   1451.66  |    Q   V|         |         |         |
13+45     802.7070   1476.36  |    Q   V|         |         |         |
13+50     813.0521   1502.11  |    Q   V|         |         |         |
13+55     823.5809   1528.78  |    Q   V|         |         |         |
14+ 0     834.3018   1556.68  |    Q   V|         |         |         |
14+ 5     845.2757   1593.41  |    Q   V|         |         |         |
14+10     856.5690   1639.79  |     Q   V         |         |         |
14+15     868.2393   1694.53  |     Q   V         |         |         |
14+20     880.3359   1756.42  |     Q   V         |         |         |
14+25     892.9155   1826.55  |     Q   V         |         |         |
14+30     906.0429   1906.11  |     Q   V         |         |         |
14+35     919.7765   1994.11  |      Q  V         |         |         |
14+40     934.2898   2107.33  |      Q  V         |         |         |
14+45     949.7294   2241.83  |       Q |V        |         |         |
14+50     966.3137   2408.05  |       Q |V        |         |         |
14+55     984.0736   2578.74  |        Q|V        |         |         |
15+ 0    1003.0545   2756.02  |         QV        |         |         |
15+ 5    1023.4411   2960.14  |         QV        |         |         |
15+10    1045.1900   3157.94  |         |QV       |         |         |
15+15    1068.0261   3315.80  |         | Q       |         |         |
15+20    1091.8572   3460.27  |         | Q       |         |         |
15+25    1116.5717   3588.55  |         |  Q      |         |         |
15+30    1142.0667   3701.88  |         |  Q      |         |         |
```



| | | | |
|---|---|---|---|
| 15+35 | 1168.2945 | 3808.27 | \| Q \| \| \| |
| 15+40 | 1195.2287 | 3910.85 | \| VQ \| \| \| |
| 15+45 | 1222.8612 | 4012.23 | \| Q \| \| \| |
| 15+50 | 1251.2113 | 4116.44 | \| VQ \| \| \| |
| 15+55 | 1280.4043 | 4238.82 | \| VQ \| \| \| |
| 16+ 0 | 1310.5562 | 4378.06 | \| VQ \| \| \| |
| 16+ 5 | 1343.2804 | 4751.55 | \| V Q \| \| \| |
| 16+10 | 1378.4442 | 5105.79 | \| V Q \| \| \| |
| 16+15 | 1415.7834 | 5421.64 | \| V Q\| \| \| |
| 16+20 | 1455.0089 | 5695.56 | \| V Q \| \| |
| 16+25 | 1496.2453 | 5987.52 | \| V \|Q \| \| |
| 16+30 | 1540.0771 | 6364.38 | \| V \| Q \| \| |
| 16+35 | 1587.2824 | 6854.20 | \| V \| Q \| \| |
| 16+40 | 1641.6025 | 7887.28 | \| V\| Q \| \| |
| 16+45 | 1702.1797 | 8795.81 | \| V\| \| Q \| |
| 16+50 | 1770.1755 | 9872.99 | \| V \| Q \| |
| 16+55 | 1839.4032 | 10051.86 | \| \|V \| Q \| |
| 17+ 0 | 1909.9289 | 10240.33 | \| \| V \| Q \| |
| 17+ 5 | 1984.5284 | 10831.85 | \| \| V \| Q\| |
| 17+10 | 2054.8282 | 10207.54 | \| \| V \| Q \| |
| 17+15 | 2113.6831 | 8545.72 | \| \| V \|Q \| |
| 17+20 | 2166.8098 | 7714.00 | \| \| V Q \| \| |
| 17+25 | 2216.7934 | 7257.62 | \| \| VQ \| \| |
| 17+30 | 2263.9113 | 6841.52 | \| \| QV \| \| |
| 17+35 | 2308.9764 | 6543.45 | \| \| Q V \| \| |
| 17+40 | 2351.5600 | 6183.14 | \| \| Q V \| \| |
| 17+45 | 2391.9601 | 5866.10 | \| \|Q V \| \| |
| 17+50 | 2430.1573 | 5546.23 | \| Q V \| \| |
| 17+55 | 2466.3004 | 5247.97 | \| Q\| V \| \| |
| 18+ 0 | 2500.4897 | 4964.30 | \| Q \| V\| \| |
| 18+ 5 | 2532.2434 | 4610.64 | \| Q \| V\| \| |
| 18+10 | 2562.3313 | 4368.76 | \| Q \| V\| \| |
| 18+15 | 2591.0503 | 4169.99 | \| Q \| V \| |
| 18+20 | 2617.8898 | 3897.09 | \| Q \| V \| |
| 18+25 | 2643.5206 | 3721.60 | \| Q \| V \| |
| 18+30 | 2668.3121 | 3599.73 | \| Q \| \|V \| |
| 18+35 | 2691.9571 | 3433.25 | \| Q \| \|V \| |
| 18+40 | 2714.4818 | 3270.58 | \| Q \| \|V \| |
| 18+45 | 2736.3192 | 3170.79 | \|Q \| \|V \| |
| 18+50 | 2757.3962 | 3060.38 | \|Q \| \| V \| |
| 18+55 | 2777.4834 | 2916.66 | Q \| \| V \| |
| 19+ 0 | 2796.9484 | 2826.31 | Q \| \| V \| |
| 19+ 5 | 2815.8237 | 2740.69 | Q \| \| V \| |
| 19+10 | 2833.8083 | 2611.36 | Q\| \| \| V \| |
| 19+15 | 2851.1556 | 2518.84 | Q\| \| \| V \| |
| 19+20 | 2868.0136 | 2447.77 | Q \| \| \| V \| |
| 19+25 | 2884.1371 | 2341.13 | Q \| \| \| V \| |
| 19+30 | 2899.5251 | 2234.34 | Q \| \| \| V \| |
| 19+35 | 2914.5105 | 2175.88 | Q \| \| \| V \| |
| 19+40 | 2929.0615 | 2112.80 | Q \| \| \| V \| |
| 19+45 | 2943.0435 | 2030.19 | Q \| \| \| V \| |
| 19+50 | 2956.6496 | 1975.61 | Q \| \| \| V \| |
| 19+55 | 2969.9139 | 1925.97 | Q \| \| \| V \| |
| 20+ 0 | 2982.6888 | 1854.92 | Q \| \| \| V \| |
| 20+ 5 | 2995.0961 | 1801.53 | Q \| \| \| V \| |
| 20+10 | 3007.2063 | 1758.41 | Q \| \| \| V \| |
| 20+15 | 3018.9180 | 1700.54 | Q \| \| \| V \| |
| 20+20 | 3030.2227 | 1641.45 | Q \| \| \| V \| |
| 20+25 | 3041.2456 | 1600.52 | Q \| \| \| V \| |

```
20+30    3051.9158   1549.32  |    Q    |         |         |    V    |
20+35    3062.0528   1471.89  |    Q    |         |         |    V    |
20+40    3071.9400   1435.62  |    Q    |         |         |    V    |
20+45    3081.6317   1407.23  |    Q    |         |         |    V    |
20+50    3091.1341   1379.75  |    Q    |         |         |     V   |
20+55    3100.4359   1350.62  |   Q     |         |         |     V   |
21+ 0    3109.5417   1322.17  |   Q     |         |         |     V   |
21+ 5    3118.3808   1283.44  |   Q     |         |         |     V   |
21+10    3126.9555   1245.05  |   Q     |         |         |     V   |
21+15    3135.3737   1222.31  |   Q     |         |         |     V   |
21+20    3143.6459   1201.13  |   Q     |         |         |     V   |
21+25    3151.7710   1179.77  |   Q     |         |         |     V   |
21+30    3159.7423   1157.42  |   Q     |         |         |     V   |
21+35    3167.5536   1134.20  |   Q     |         |         |      V  |
21+40    3175.0859   1093.69  |   Q     |         |         |      V  |
21+45    3182.4428   1068.23  |  Q      |         |         |      V  |
21+50    3189.6855   1051.64  |  Q      |         |         |      V  |
21+55    3196.8161   1035.37  |  Q      |         |         |      V  |
22+ 0    3203.8297   1018.38  |  Q      |         |         |      V  |
22+ 5    3210.7226   1000.85  |  Q      |         |         |      V  |
22+10    3217.4723    980.06  |  Q      |         |         |      V  |
22+15    3224.0244    951.36  |  Q      |         |         |      V  |
22+20    3230.4667    935.42  |  Q      |         |         |      V  |
22+25    3236.8151    921.79  |  Q      |         |         |      V  |
22+30    3243.0727    908.61  |  Q      |         |         |      V  |
22+35    3249.2382    895.23  |  Q      |         |         |      V  |
22+40    3255.3179    882.77  |  Q      |         |         |       V |
22+45    3261.3068    869.58  |  Q      |         |         |       V |
22+50    3267.2038    856.25  |  Q      |         |         |       V |
22+55    3273.0202    844.54  |  Q      |         |         |       V |
23+ 0    3278.7576    833.07  |  Q      |         |         |       V |
23+ 5    3284.4167    821.69  |  Q      |         |         |       V |
23+10    3289.9985    810.49  | Q       |         |         |       V |
23+15    3295.5090    800.11  | Q       |         |         |       V |
23+20    3300.9329    787.56  | Q       |         |         |       V |
23+25    3306.2835    776.91  | Q       |         |         |       V |
23+30    3311.5690    767.45  | Q       |         |         |       V |
23+35    3316.7889    757.92  | Q       |         |         |       V |
23+40    3321.9404    748.01  | Q       |         |         |       V |
23+45    3327.0158    736.95  | Q       |         |         |       V |
23+50    3331.9866    721.75  | Q       |         |         |       V |
23+55    3336.7831    696.46  | Q       |         |         |       V |
24+ 0    3341.5056    685.71  | Q       |         |         |        V|
24+ 5    3346.1572    675.41  | Q       |         |         |        V|
24+10    3350.7286    663.77  | Q       |         |         |        V|
24+15    3355.2043    649.87  | Q       |         |         |        V|
24+20    3359.5760    634.78  | Q       |         |         |        V|
24+25    3363.8330    618.11  | Q       |         |         |        V|
24+30    3367.9621    599.55  | Q       |         |         |        V|
24+35    3371.9496    578.97  | Q       |         |         |        V|
24+40    3375.7476    551.48  | Q       |         |         |        V|
24+45    3379.2743    512.08  |Q        |         |         |        V|
24+50    3382.4732    464.47  |Q        |         |         |        V|
24+55    3385.4178    427.57  |Q        |         |         |        V|
25+ 0    3388.1101    390.92  |Q        |         |         |        V|
25+ 5    3390.5105    348.53  |Q        |         |         |        V|
25+10    3392.6388    309.03  |Q        |         |         |        V|
25+15    3394.5778    281.54  |Q        |         |         |        V|
25+20    3396.3639    259.34  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+25 | 3398.0169 | 240.01 | Q | \| | \| | \| | V\| |
| 25+30 | 3399.5553 | 223.38 | Q | \| | \| | \| | V\| |
| 25+35 | 3400.9881 | 208.03 | Q | \| | \| | \| | V\| |
| 25+40 | 3402.3263 | 194.31 | Q | \| | \| | \| | V\| |
| 25+45 | 3403.5793 | 181.94 | Q | \| | \| | \| | V\| |
| 25+50 | 3404.7557 | 170.81 | Q | \| | \| | \| | V\| |
| 25+55 | 3405.8608 | 160.46 | Q | \| | \| | \| | V\| |
| 26+ 0 | 3406.8990 | 150.74 | Q | \| | \| | \| | V\| |
| 26+ 5 | 3407.8778 | 142.13 | Q | \| | \| | \| | V\| |
| 26+10 | 3408.7993 | 133.80 | Q | \| | \| | \| | V\| |
| 26+15 | 3409.6651 | 125.72 | Q | \| | \| | \| | V\| |
| 26+20 | 3410.4831 | 118.77 | Q | \| | \| | \| | V\| |
| 26+25 | 3411.2562 | 112.25 | Q | \| | \| | \| | V\| |
| 26+30 | 3411.9848 | 105.80 | Q | \| | \| | \| | V\| |
| 26+35 | 3412.6726 | 99.86 | Q | \| | \| | \| | V\| |
| 26+40 | 3413.3233 | 94.48 | Q | \| | \| | \| | V\| |
| 26+45 | 3413.9373 | 89.16 | Q | \| | \| | \| | V\| |
| 26+50 | 3414.5161 | 84.04 | Q | \| | \| | \| | V\| |
| 26+55 | 3415.0633 | 79.45 | Q | \| | \| | \| | V\| |
| 27+ 0 | 3415.5795 | 74.96 | Q | \| | \| | \| | V\| |
| 27+ 5 | 3416.0654 | 70.54 | Q | \| | \| | \| | V\| |
| 27+10 | 3416.5242 | 66.61 | Q | \| | \| | \| | V\| |
| 27+15 | 3416.9572 | 62.87 | Q | \| | \| | \| | V\| |
| 27+20 | 3417.3647 | 59.17 | Q | \| | \| | \| | V\| |
| 27+25 | 3417.7493 | 55.84 | Q | \| | \| | \| | V\| |
| 27+30 | 3418.1138 | 52.92 | Q | \| | \| | \| | V\| |
| 27+35 | 3418.4583 | 50.03 | Q | \| | \| | \| | V\| |
| 27+40 | 3418.7836 | 47.24 | Q | \| | \| | \| | V\| |
| 27+45 | 3419.0917 | 44.73 | Q | \| | \| | \| | V\| |
| 27+50 | 3419.3828 | 42.27 | Q | \| | \| | \| | V\| |
| 27+55 | 3419.6573 | 39.85 | Q | \| | \| | \| | V\| |
| 28+ 0 | 3419.9168 | 37.68 | Q | \| | \| | \| | V\| |
| 28+ 5 | 3420.1620 | 35.60 | Q | \| | \| | \| | V\| |
| 28+10 | 3420.3930 | 33.54 | Q | \| | \| | \| | V\| |
| 28+15 | 3420.6109 | 31.64 | Q | \| | \| | \| | V\| |
| 28+20 | 3420.8168 | 29.90 | Q | \| | \| | \| | V\| |
| 28+25 | 3421.0109 | 28.19 | Q | \| | \| | \| | V\| |
| 28+30 | 3421.1940 | 26.58 | Q | \| | \| | \| | V\| |
| 28+35 | 3421.3685 | 25.35 | Q | \| | \| | \| | V\| |
| 28+40 | 3421.5349 | 24.16 | Q | \| | \| | \| | V\| |
| 28+45 | 3421.6932 | 22.98 | Q | \| | \| | \| | V\| |
| 28+50 | 3421.8435 | 21.82 | Q | \| | \| | \| | V\| |
| 28+55 | 3421.9858 | 20.66 | Q | \| | \| | \| | V\| |
| 29+ 0 | 3422.1202 | 19.52 | Q | \| | \| | \| | V\| |
| 29+ 5 | 3422.2475 | 18.49 | Q | \| | \| | \| | V\| |
| 29+10 | 3422.3686 | 17.58 | Q | \| | \| | \| | V\| |
| 29+15 | 3422.4835 | 16.68 | Q | \| | \| | \| | V\| |
| 29+20 | 3422.5922 | 15.79 | Q | \| | \| | \| | V\| |
| 29+25 | 3422.6949 | 14.90 | Q | \| | \| | \| | V\| |
| 29+30 | 3422.7915 | 14.03 | Q | \| | \| | \| | V\| |
| 29+35 | 3422.8822 | 13.17 | Q | \| | \| | \| | V\| |
| 29+40 | 3422.9683 | 12.50 | Q | \| | \| | \| | V\| |
| 29+45 | 3423.0502 | 11.89 | Q | \| | \| | \| | V\| |
| 29+50 | 3423.1279 | 11.29 | Q | \| | \| | \| | V\| |
| 29+55 | 3423.2015 | 10.69 | Q | \| | \| | \| | V\| |
| 30+ 0 | 3423.2711 | 10.10 | Q | \| | \| | \| | V\| |
| 30+ 5 | 3423.3366 | 9.51 | Q | \| | \| | \| | V\| |
| 30+10 | 3423.3983 | 8.96 | Q | \| | \| | \| | V\| |
| 30+15 | 3423.4570 | 8.52 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 30+20 | 3423.5127 | 8.10 | Q | \| | \| | \| | V\| |
| 30+25 | 3423.5656 | 7.68 | Q | \| | \| | \| | V\| |
| 30+30 | 3423.6156 | 7.26 | Q | \| | \| | \| | V\| |
| 30+35 | 3423.6627 | 6.85 | Q | \| | \| | \| | V\| |
| 30+40 | 3423.7071 | 6.44 | Q | \| | \| | \| | V\| |
| 30+45 | 3423.7487 | 6.04 | Q | \| | \| | \| | V\| |
| 30+50 | 3423.7876 | 5.66 | Q | \| | \| | \| | V\| |
| 30+55 | 3423.8240 | 5.28 | Q | \| | \| | \| | V\| |
| 31+ 0 | 3423.8578 | 4.90 | Q | \| | \| | \| | V\| |
| 31+ 5 | 3423.8890 | 4.53 | Q | \| | \| | \| | V\| |
| 31+10 | 3423.9176 | 4.16 | Q | \| | \| | \| | V\| |
| 31+15 | 3423.9438 | 3.80 | Q | \| | \| | \| | V\| |
| 31+20 | 3423.9676 | 3.46 | Q | \| | \| | \| | V\| |
| 31+25 | 3423.9892 | 3.13 | Q | \| | \| | \| | V\| |
| 31+30 | 3424.0085 | 2.81 | Q | \| | \| | \| | V\| |
| 31+35 | 3424.0256 | 2.48 | Q | \| | \| | \| | V\| |
| 31+40 | 3424.0405 | 2.16 | Q | \| | \| | \| | V\| |
| 31+45 | 3424.0532 | 1.84 | Q | \| | \| | \| | V\| |
| 31+50 | 3424.0639 | 1.56 | Q | \| | \| | \| | V\| |
| 31+55 | 3424.0735 | 1.39 | Q | \| | \| | \| | V\| |
| 32+ 0 | 3424.0821 | 1.24 | Q | \| | \| | \| | V\| |
| 32+ 5 | 3424.0896 | 1.09 | Q | \| | \| | \| | V\| |
| 32+10 | 3424.0961 | 0.95 | Q | \| | \| | \| | V\| |
| 32+15 | 3424.1016 | 0.80 | Q | \| | \| | \| | V\| |
| 32+20 | 3424.1061 | 0.65 | Q | \| | \| | \| | V\| |
| 32+25 | 3424.1096 | 0.51 | Q | \| | \| | \| | V\| |
| 32+30 | 3424.1121 | 0.36 | Q | \| | \| | \| | V\| |
| 32+35 | 3424.1137 | 0.22 | Q | \| | \| | \| | V\| |
| 32+40 | 3424.1142 | 0.08 | Q | \| | \| | \| | V\| |

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U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREA 52
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 2128.12 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 2128.12 | 6 | 2.04 |
| Rainfall data for year 100 | | |
| 2128.12 | 24 | 2.93 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 73.1 | 89.5 | 2128.12 | 1.000 | 0.202 | 0.988 | 0.199 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.199

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 2102.16 | 0.988 | 73.1 | 89.5 | 1.17 | 0.641 |
| 25.96 | 0.012 | 98.0 | 98.0 | 0.20 | 0.921 |

Area-averaged catchment yield fraction, Y = 0.644
Area-averaged low loss fraction, Yb = 0.356
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 17716.00(Ft.)
Length from concentration point to centroid = 8950.00(Ft.)
Elevation difference along watercourse = 1680.00(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 2128.12(Ac.)
Catchment Lag time = 0.499 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 16.6951
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.199(In/Hr)
Average low loss rate fraction (Yb) = 0.356 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.040
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.960

Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.759(In)
Specified peak 6-hour rainfall = 2.040(In)
Specified peak 24-hour rainfall = 2.930(In)

Rainfall depth area reduction factors:
Using a total area of 2128.12(Ac.) (Ref: fig. E-4)

5-minute factor = 0.900 Adjusted rainfall = 0.594(In)
30-minute factor = 0.900 Adjusted rainfall = 1.016(In)
1-hour factor = 0.900 Adjusted rainfall = 1.251(In)
3-hour factor = 0.987 Adjusted rainfall = 1.736(In)
6-hour factor = 0.993 Adjusted rainfall = 2.026(In)
24-hour factor = 0.997 Adjusted rainfall = 2.922(In)
---

U n i t H y d r o g r a p h

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 25736.95 (CFS)) | |
| 1 | 0.788 | 202.857 |
| 2 | 3.396 | 671.080 |
| 3 | 7.775 | 1127.163 |
| 4 | 16.008 | 2118.909 |
| 5 | 30.716 | 3785.384 |

| | | |
|---|---|---|
| 6 | 44.401 | 3522.173 |
| 7 | 54.400 | 2573.305 |
| 8 | 61.321 | 1781.260 |
| 9 | 66.467 | 1324.483 |
| 10 | 70.677 | 1083.411 |
| 11 | 74.156 | 895.448 |
| 12 | 77.110 | 760.364 |
| 13 | 79.615 | 644.663 |
| 14 | 81.772 | 555.138 |
| 15 | 83.629 | 477.832 |
| 16 | 85.330 | 437.953 |
| 17 | 86.896 | 402.907 |
| 18 | 88.261 | 351.359 |
| 19 | 89.421 | 298.546 |
| 20 | 90.415 | 255.760 |
| 21 | 91.352 | 241.322 |
| 22 | 92.210 | 220.851 |
| 23 | 92.996 | 202.182 |
| 24 | 93.728 | 188.251 |
| 25 | 94.359 | 162.548 |
| 26 | 94.912 | 142.310 |
| 27 | 95.465 | 142.275 |
| 28 | 95.947 | 124.140 |
| 29 | 96.371 | 108.967 |
| 30 | 96.794 | 108.923 |
| 31 | 97.145 | 90.446 |
| 32 | 97.438 | 75.280 |
| 33 | 97.730 | 75.229 |
| 34 | 97.952 | 57.168 |
| 35 | 98.118 | 42.624 |
| 36 | 98.283 | 42.639 |
| 37 | 98.465 | 46.855 |
| 38 | 98.660 | 50.187 |
| 39 | 98.855 | 50.186 |
| 40 | 99.050 | 49.993 |
| 41 | 99.243 | 49.843 |
| 42 | 99.437 | 49.930 |
| 43 | 99.577 | 36.004 |
| 44 | 99.677 | 25.781 |
| 45 | 99.778 | 25.781 |
| 46 | 99.878 | 25.781 |
| 47 | 100.000 | 12.890 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5938 | 0.5938 |
| 2 | 0.7310 | 0.1372 |
| 3 | 0.8256 | 0.0946 |
| 4 | 0.9000 | 0.0744 |
| 5 | 0.9623 | 0.0623 |
| 6 | 1.0164 | 0.0541 |
| 7 | 1.0645 | 0.0481 |
| 8 | 1.1080 | 0.0435 |
| 9 | 1.1479 | 0.0399 |
| 10 | 1.1847 | 0.0369 |
| 11 | 1.2191 | 0.0344 |
| 12 | 1.2513 | 0.0322 |
| 13 | 1.2816 | 0.0302 |
| 14 | 1.3102 | 0.0286 |

| | | |
|---|---|---|
| 15 | 1.3374 | 0.0272 |
| 16 | 1.3634 | 0.0260 |
| 17 | 1.3883 | 0.0249 |
| 18 | 1.4122 | 0.0239 |
| 19 | 1.4351 | 0.0230 |
| 20 | 1.4572 | 0.0221 |
| 21 | 1.4786 | 0.0214 |
| 22 | 1.4992 | 0.0207 |
| 23 | 1.5193 | 0.0200 |
| 24 | 1.5387 | 0.0194 |
| 25 | 1.5575 | 0.0188 |
| 26 | 1.5758 | 0.0183 |
| 27 | 1.5937 | 0.0178 |
| 28 | 1.6110 | 0.0174 |
| 29 | 1.6280 | 0.0169 |
| 30 | 1.6445 | 0.0165 |
| 31 | 1.6607 | 0.0162 |
| 32 | 1.6765 | 0.0158 |
| 33 | 1.6919 | 0.0155 |
| 34 | 1.7071 | 0.0151 |
| 35 | 1.7219 | 0.0148 |
| 36 | 1.7364 | 0.0145 |
| 37 | 1.7470 | 0.0106 |
| 38 | 1.7575 | 0.0104 |
| 39 | 1.7677 | 0.0102 |
| 40 | 1.7777 | 0.0100 |
| 41 | 1.7875 | 0.0098 |
| 42 | 1.7971 | 0.0096 |
| 43 | 1.8065 | 0.0094 |
| 44 | 1.8158 | 0.0093 |
| 45 | 1.8249 | 0.0091 |
| 46 | 1.8339 | 0.0090 |
| 47 | 1.8427 | 0.0088 |
| 48 | 1.8514 | 0.0087 |
| 49 | 1.8599 | 0.0085 |
| 50 | 1.8683 | 0.0084 |
| 51 | 1.8765 | 0.0083 |
| 52 | 1.8847 | 0.0081 |
| 53 | 1.8927 | 0.0080 |
| 54 | 1.9006 | 0.0079 |
| 55 | 1.9084 | 0.0078 |
| 56 | 1.9161 | 0.0077 |
| 57 | 1.9236 | 0.0076 |
| 58 | 1.9311 | 0.0075 |
| 59 | 1.9385 | 0.0074 |
| 60 | 1.9458 | 0.0073 |
| 61 | 1.9529 | 0.0072 |
| 62 | 1.9600 | 0.0071 |
| 63 | 1.9670 | 0.0070 |
| 64 | 1.9739 | 0.0069 |
| 65 | 1.9808 | 0.0068 |
| 66 | 1.9875 | 0.0068 |
| 67 | 1.9942 | 0.0067 |
| 68 | 2.0008 | 0.0066 |
| 69 | 2.0073 | 0.0065 |
| 70 | 2.0138 | 0.0064 |
| 71 | 2.0201 | 0.0064 |
| 72 | 2.0264 | 0.0063 |
| 73 | 2.0338 | 0.0074 |

| | | |
|---|---|---|
| 74 | 2.0411 | 0.0073 |
| 75 | 2.0484 | 0.0072 |
| 76 | 2.0556 | 0.0072 |
| 77 | 2.0627 | 0.0071 |
| 78 | 2.0697 | 0.0070 |
| 79 | 2.0767 | 0.0070 |
| 80 | 2.0836 | 0.0069 |
| 81 | 2.0904 | 0.0068 |
| 82 | 2.0972 | 0.0068 |
| 83 | 2.1040 | 0.0067 |
| 84 | 2.1106 | 0.0067 |
| 85 | 2.1172 | 0.0066 |
| 86 | 2.1238 | 0.0065 |
| 87 | 2.1303 | 0.0065 |
| 88 | 2.1367 | 0.0064 |
| 89 | 2.1431 | 0.0064 |
| 90 | 2.1494 | 0.0063 |
| 91 | 2.1557 | 0.0063 |
| 92 | 2.1619 | 0.0062 |
| 93 | 2.1681 | 0.0062 |
| 94 | 2.1742 | 0.0061 |
| 95 | 2.1803 | 0.0061 |
| 96 | 2.1864 | 0.0060 |
| 97 | 2.1924 | 0.0060 |
| 98 | 2.1983 | 0.0059 |
| 99 | 2.2042 | 0.0059 |
| 100 | 2.2101 | 0.0059 |
| 101 | 2.2159 | 0.0058 |
| 102 | 2.2217 | 0.0058 |
| 103 | 2.2274 | 0.0057 |
| 104 | 2.2331 | 0.0057 |
| 105 | 2.2387 | 0.0056 |
| 106 | 2.2443 | 0.0056 |
| 107 | 2.2499 | 0.0056 |
| 108 | 2.2554 | 0.0055 |
| 109 | 2.2609 | 0.0055 |
| 110 | 2.2664 | 0.0055 |
| 111 | 2.2718 | 0.0054 |
| 112 | 2.2772 | 0.0054 |
| 113 | 2.2826 | 0.0054 |
| 114 | 2.2879 | 0.0053 |
| 115 | 2.2931 | 0.0053 |
| 116 | 2.2984 | 0.0052 |
| 117 | 2.3036 | 0.0052 |
| 118 | 2.3088 | 0.0052 |
| 119 | 2.3139 | 0.0052 |
| 120 | 2.3191 | 0.0051 |
| 121 | 2.3242 | 0.0051 |
| 122 | 2.3292 | 0.0051 |
| 123 | 2.3342 | 0.0050 |
| 124 | 2.3392 | 0.0050 |
| 125 | 2.3442 | 0.0050 |
| 126 | 2.3491 | 0.0049 |
| 127 | 2.3540 | 0.0049 |
| 128 | 2.3589 | 0.0049 |
| 129 | 2.3638 | 0.0049 |
| 130 | 2.3686 | 0.0048 |
| 131 | 2.3734 | 0.0048 |
| 132 | 2.3782 | 0.0048 |

| | | |
|---|---|---|
| 133 | 2.3829 | 0.0047 |
| 134 | 2.3876 | 0.0047 |
| 135 | 2.3923 | 0.0047 |
| 136 | 2.3970 | 0.0047 |
| 137 | 2.4016 | 0.0046 |
| 138 | 2.4063 | 0.0046 |
| 139 | 2.4108 | 0.0046 |
| 140 | 2.4154 | 0.0046 |
| 141 | 2.4200 | 0.0045 |
| 142 | 2.4245 | 0.0045 |
| 143 | 2.4290 | 0.0045 |
| 144 | 2.4334 | 0.0045 |
| 145 | 2.4379 | 0.0045 |
| 146 | 2.4423 | 0.0044 |
| 147 | 2.4467 | 0.0044 |
| 148 | 2.4511 | 0.0044 |
| 149 | 2.4555 | 0.0044 |
| 150 | 2.4598 | 0.0043 |
| 151 | 2.4641 | 0.0043 |
| 152 | 2.4684 | 0.0043 |
| 153 | 2.4727 | 0.0043 |
| 154 | 2.4770 | 0.0043 |
| 155 | 2.4812 | 0.0042 |
| 156 | 2.4854 | 0.0042 |
| 157 | 2.4896 | 0.0042 |
| 158 | 2.4938 | 0.0042 |
| 159 | 2.4980 | 0.0042 |
| 160 | 2.5021 | 0.0041 |
| 161 | 2.5062 | 0.0041 |
| 162 | 2.5103 | 0.0041 |
| 163 | 2.5144 | 0.0041 |
| 164 | 2.5185 | 0.0041 |
| 165 | 2.5225 | 0.0040 |
| 166 | 2.5265 | 0.0040 |
| 167 | 2.5305 | 0.0040 |
| 168 | 2.5345 | 0.0040 |
| 169 | 2.5385 | 0.0040 |
| 170 | 2.5425 | 0.0040 |
| 171 | 2.5464 | 0.0039 |
| 172 | 2.5503 | 0.0039 |
| 173 | 2.5542 | 0.0039 |
| 174 | 2.5581 | 0.0039 |
| 175 | 2.5620 | 0.0039 |
| 176 | 2.5659 | 0.0039 |
| 177 | 2.5697 | 0.0038 |
| 178 | 2.5735 | 0.0038 |
| 179 | 2.5773 | 0.0038 |
| 180 | 2.5811 | 0.0038 |
| 181 | 2.5849 | 0.0038 |
| 182 | 2.5887 | 0.0038 |
| 183 | 2.5924 | 0.0037 |
| 184 | 2.5962 | 0.0037 |
| 185 | 2.5999 | 0.0037 |
| 186 | 2.6036 | 0.0037 |
| 187 | 2.6073 | 0.0037 |
| 188 | 2.6109 | 0.0037 |
| 189 | 2.6146 | 0.0037 |
| 190 | 2.6183 | 0.0036 |
| 191 | 2.6219 | 0.0036 |

| | | |
|---|---|---|
| 192 | 2.6255 | 0.0036 |
| 193 | 2.6291 | 0.0036 |
| 194 | 2.6327 | 0.0036 |
| 195 | 2.6363 | 0.0036 |
| 196 | 2.6398 | 0.0036 |
| 197 | 2.6434 | 0.0035 |
| 198 | 2.6469 | 0.0035 |
| 199 | 2.6504 | 0.0035 |
| 200 | 2.6540 | 0.0035 |
| 201 | 2.6575 | 0.0035 |
| 202 | 2.6609 | 0.0035 |
| 203 | 2.6644 | 0.0035 |
| 204 | 2.6679 | 0.0035 |
| 205 | 2.6713 | 0.0034 |
| 206 | 2.6748 | 0.0034 |
| 207 | 2.6782 | 0.0034 |
| 208 | 2.6816 | 0.0034 |
| 209 | 2.6850 | 0.0034 |
| 210 | 2.6884 | 0.0034 |
| 211 | 2.6917 | 0.0034 |
| 212 | 2.6951 | 0.0034 |
| 213 | 2.6985 | 0.0034 |
| 214 | 2.7018 | 0.0033 |
| 215 | 2.7051 | 0.0033 |
| 216 | 2.7084 | 0.0033 |
| 217 | 2.7117 | 0.0033 |
| 218 | 2.7150 | 0.0033 |
| 219 | 2.7183 | 0.0033 |
| 220 | 2.7216 | 0.0033 |
| 221 | 2.7249 | 0.0033 |
| 222 | 2.7281 | 0.0033 |
| 223 | 2.7313 | 0.0032 |
| 224 | 2.7346 | 0.0032 |
| 225 | 2.7378 | 0.0032 |
| 226 | 2.7410 | 0.0032 |
| 227 | 2.7442 | 0.0032 |
| 228 | 2.7474 | 0.0032 |
| 229 | 2.7506 | 0.0032 |
| 230 | 2.7537 | 0.0032 |
| 231 | 2.7569 | 0.0032 |
| 232 | 2.7600 | 0.0031 |
| 233 | 2.7632 | 0.0031 |
| 234 | 2.7663 | 0.0031 |
| 235 | 2.7694 | 0.0031 |
| 236 | 2.7725 | 0.0031 |
| 237 | 2.7756 | 0.0031 |
| 238 | 2.7787 | 0.0031 |
| 239 | 2.7818 | 0.0031 |
| 240 | 2.7849 | 0.0031 |
| 241 | 2.7879 | 0.0031 |
| 242 | 2.7910 | 0.0030 |
| 243 | 2.7940 | 0.0030 |
| 244 | 2.7970 | 0.0030 |
| 245 | 2.8001 | 0.0030 |
| 246 | 2.8031 | 0.0030 |
| 247 | 2.8061 | 0.0030 |
| 248 | 2.8091 | 0.0030 |
| 249 | 2.8121 | 0.0030 |
| 250 | 2.8150 | 0.0030 |

| | | |
|---|---|---|
| 251 | 2.8180 | 0.0030 |
| 252 | 2.8210 | 0.0030 |
| 253 | 2.8239 | 0.0030 |
| 254 | 2.8269 | 0.0029 |
| 255 | 2.8298 | 0.0029 |
| 256 | 2.8327 | 0.0029 |
| 257 | 2.8356 | 0.0029 |
| 258 | 2.8385 | 0.0029 |
| 259 | 2.8414 | 0.0029 |
| 260 | 2.8443 | 0.0029 |
| 261 | 2.8472 | 0.0029 |
| 262 | 2.8501 | 0.0029 |
| 263 | 2.8530 | 0.0029 |
| 264 | 2.8558 | 0.0029 |
| 265 | 2.8587 | 0.0029 |
| 266 | 2.8615 | 0.0028 |
| 267 | 2.8644 | 0.0028 |
| 268 | 2.8672 | 0.0028 |
| 269 | 2.8700 | 0.0028 |
| 270 | 2.8728 | 0.0028 |
| 271 | 2.8756 | 0.0028 |
| 272 | 2.8784 | 0.0028 |
| 273 | 2.8812 | 0.0028 |
| 274 | 2.8840 | 0.0028 |
| 275 | 2.8868 | 0.0028 |
| 276 | 2.8895 | 0.0028 |
| 277 | 2.8923 | 0.0028 |
| 278 | 2.8951 | 0.0028 |
| 279 | 2.8978 | 0.0027 |
| 280 | 2.9005 | 0.0027 |
| 281 | 2.9033 | 0.0027 |
| 282 | 2.9060 | 0.0027 |
| 283 | 2.9087 | 0.0027 |
| 284 | 2.9114 | 0.0027 |
| 285 | 2.9141 | 0.0027 |
| 286 | 2.9168 | 0.0027 |
| 287 | 2.9195 | 0.0027 |
| 288 | 2.9222 | 0.0027 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0027 | 0.0010 | 0.0017 |
| 2 | 0.0027 | 0.0010 | 0.0017 |
| 3 | 0.0027 | 0.0010 | 0.0017 |
| 4 | 0.0027 | 0.0010 | 0.0017 |
| 5 | 0.0027 | 0.0010 | 0.0018 |
| 6 | 0.0027 | 0.0010 | 0.0018 |
| 7 | 0.0027 | 0.0010 | 0.0018 |
| 8 | 0.0028 | 0.0010 | 0.0018 |
| 9 | 0.0028 | 0.0010 | 0.0018 |
| 10 | 0.0028 | 0.0010 | 0.0018 |
| 11 | 0.0028 | 0.0010 | 0.0018 |
| 12 | 0.0028 | 0.0010 | 0.0018 |
| 13 | 0.0028 | 0.0010 | 0.0018 |
| 14 | 0.0028 | 0.0010 | 0.0018 |
| 15 | 0.0028 | 0.0010 | 0.0018 |
| 16 | 0.0028 | 0.0010 | 0.0018 |

| | | | |
|---|---|---|---|
| 17 | 0.0029 | 0.0010 | 0.0018 |
| 18 | 0.0029 | 0.0010 | 0.0018 |
| 19 | 0.0029 | 0.0010 | 0.0019 |
| 20 | 0.0029 | 0.0010 | 0.0019 |
| 21 | 0.0029 | 0.0010 | 0.0019 |
| 22 | 0.0029 | 0.0010 | 0.0019 |
| 23 | 0.0029 | 0.0010 | 0.0019 |
| 24 | 0.0029 | 0.0010 | 0.0019 |
| 25 | 0.0030 | 0.0011 | 0.0019 |
| 26 | 0.0030 | 0.0011 | 0.0019 |
| 27 | 0.0030 | 0.0011 | 0.0019 |
| 28 | 0.0030 | 0.0011 | 0.0019 |
| 29 | 0.0030 | 0.0011 | 0.0019 |
| 30 | 0.0030 | 0.0011 | 0.0019 |
| 31 | 0.0030 | 0.0011 | 0.0020 |
| 32 | 0.0030 | 0.0011 | 0.0020 |
| 33 | 0.0031 | 0.0011 | 0.0020 |
| 34 | 0.0031 | 0.0011 | 0.0020 |
| 35 | 0.0031 | 0.0011 | 0.0020 |
| 36 | 0.0031 | 0.0011 | 0.0020 |
| 37 | 0.0031 | 0.0011 | 0.0020 |
| 38 | 0.0031 | 0.0011 | 0.0020 |
| 39 | 0.0032 | 0.0011 | 0.0020 |
| 40 | 0.0032 | 0.0011 | 0.0020 |
| 41 | 0.0032 | 0.0011 | 0.0021 |
| 42 | 0.0032 | 0.0011 | 0.0021 |
| 43 | 0.0032 | 0.0011 | 0.0021 |
| 44 | 0.0032 | 0.0011 | 0.0021 |
| 45 | 0.0033 | 0.0012 | 0.0021 |
| 46 | 0.0033 | 0.0012 | 0.0021 |
| 47 | 0.0033 | 0.0012 | 0.0021 |
| 48 | 0.0033 | 0.0012 | 0.0021 |
| 49 | 0.0033 | 0.0012 | 0.0021 |
| 50 | 0.0033 | 0.0012 | 0.0021 |
| 51 | 0.0034 | 0.0012 | 0.0022 |
| 52 | 0.0034 | 0.0012 | 0.0022 |
| 53 | 0.0034 | 0.0012 | 0.0022 |
| 54 | 0.0034 | 0.0012 | 0.0022 |
| 55 | 0.0034 | 0.0012 | 0.0022 |
| 56 | 0.0034 | 0.0012 | 0.0022 |
| 57 | 0.0035 | 0.0012 | 0.0022 |
| 58 | 0.0035 | 0.0012 | 0.0022 |
| 59 | 0.0035 | 0.0012 | 0.0023 |
| 60 | 0.0035 | 0.0012 | 0.0023 |
| 61 | 0.0035 | 0.0013 | 0.0023 |
| 62 | 0.0035 | 0.0013 | 0.0023 |
| 63 | 0.0036 | 0.0013 | 0.0023 |
| 64 | 0.0036 | 0.0013 | 0.0023 |
| 65 | 0.0036 | 0.0013 | 0.0023 |
| 66 | 0.0036 | 0.0013 | 0.0023 |
| 67 | 0.0037 | 0.0013 | 0.0024 |
| 68 | 0.0037 | 0.0013 | 0.0024 |
| 69 | 0.0037 | 0.0013 | 0.0024 |
| 70 | 0.0037 | 0.0013 | 0.0024 |
| 71 | 0.0037 | 0.0013 | 0.0024 |
| 72 | 0.0038 | 0.0013 | 0.0024 |
| 73 | 0.0038 | 0.0014 | 0.0024 |
| 74 | 0.0038 | 0.0014 | 0.0025 |
| 75 | 0.0038 | 0.0014 | 0.0025 |

| | | | |
|---|---|---|---|
| 76 | 0.0039 | 0.0014 | 0.0025 |
| 77 | 0.0039 | 0.0014 | 0.0025 |
| 78 | 0.0039 | 0.0014 | 0.0025 |
| 79 | 0.0039 | 0.0014 | 0.0025 |
| 80 | 0.0040 | 0.0014 | 0.0025 |
| 81 | 0.0040 | 0.0014 | 0.0026 |
| 82 | 0.0040 | 0.0014 | 0.0026 |
| 83 | 0.0040 | 0.0014 | 0.0026 |
| 84 | 0.0041 | 0.0014 | 0.0026 |
| 85 | 0.0041 | 0.0015 | 0.0026 |
| 86 | 0.0041 | 0.0015 | 0.0027 |
| 87 | 0.0042 | 0.0015 | 0.0027 |
| 88 | 0.0042 | 0.0015 | 0.0027 |
| 89 | 0.0042 | 0.0015 | 0.0027 |
| 90 | 0.0042 | 0.0015 | 0.0027 |
| 91 | 0.0043 | 0.0015 | 0.0028 |
| 92 | 0.0043 | 0.0015 | 0.0028 |
| 93 | 0.0043 | 0.0015 | 0.0028 |
| 94 | 0.0044 | 0.0016 | 0.0028 |
| 95 | 0.0044 | 0.0016 | 0.0028 |
| 96 | 0.0044 | 0.0016 | 0.0029 |
| 97 | 0.0045 | 0.0016 | 0.0029 |
| 98 | 0.0045 | 0.0016 | 0.0029 |
| 99 | 0.0045 | 0.0016 | 0.0029 |
| 100 | 0.0046 | 0.0016 | 0.0029 |
| 101 | 0.0046 | 0.0016 | 0.0030 |
| 102 | 0.0046 | 0.0017 | 0.0030 |
| 103 | 0.0047 | 0.0017 | 0.0030 |
| 104 | 0.0047 | 0.0017 | 0.0030 |
| 105 | 0.0048 | 0.0017 | 0.0031 |
| 106 | 0.0048 | 0.0017 | 0.0031 |
| 107 | 0.0049 | 0.0017 | 0.0031 |
| 108 | 0.0049 | 0.0017 | 0.0031 |
| 109 | 0.0049 | 0.0018 | 0.0032 |
| 110 | 0.0050 | 0.0018 | 0.0032 |
| 111 | 0.0050 | 0.0018 | 0.0032 |
| 112 | 0.0051 | 0.0018 | 0.0033 |
| 113 | 0.0051 | 0.0018 | 0.0033 |
| 114 | 0.0052 | 0.0018 | 0.0033 |
| 115 | 0.0052 | 0.0019 | 0.0034 |
| 116 | 0.0052 | 0.0019 | 0.0034 |
| 117 | 0.0053 | 0.0019 | 0.0034 |
| 118 | 0.0054 | 0.0019 | 0.0034 |
| 119 | 0.0054 | 0.0019 | 0.0035 |
| 120 | 0.0055 | 0.0019 | 0.0035 |
| 121 | 0.0055 | 0.0020 | 0.0036 |
| 122 | 0.0056 | 0.0020 | 0.0036 |
| 123 | 0.0056 | 0.0020 | 0.0036 |
| 124 | 0.0057 | 0.0020 | 0.0037 |
| 125 | 0.0058 | 0.0021 | 0.0037 |
| 126 | 0.0058 | 0.0021 | 0.0037 |
| 127 | 0.0059 | 0.0021 | 0.0038 |
| 128 | 0.0059 | 0.0021 | 0.0038 |
| 129 | 0.0060 | 0.0021 | 0.0039 |
| 130 | 0.0061 | 0.0022 | 0.0039 |
| 131 | 0.0062 | 0.0022 | 0.0040 |
| 132 | 0.0062 | 0.0022 | 0.0040 |
| 133 | 0.0063 | 0.0023 | 0.0041 |
| 134 | 0.0064 | 0.0023 | 0.0041 |

| | | | |
|---|---|---|---|
| 135 | 0.0065 | 0.0023 | 0.0042 |
| 136 | 0.0065 | 0.0023 | 0.0042 |
| 137 | 0.0067 | 0.0024 | 0.0043 |
| 138 | 0.0067 | 0.0024 | 0.0043 |
| 139 | 0.0068 | 0.0024 | 0.0044 |
| 140 | 0.0069 | 0.0025 | 0.0044 |
| 141 | 0.0070 | 0.0025 | 0.0045 |
| 142 | 0.0071 | 0.0025 | 0.0046 |
| 143 | 0.0072 | 0.0026 | 0.0047 |
| 144 | 0.0073 | 0.0026 | 0.0047 |
| 145 | 0.0063 | 0.0022 | 0.0041 |
| 146 | 0.0064 | 0.0023 | 0.0041 |
| 147 | 0.0065 | 0.0023 | 0.0042 |
| 148 | 0.0066 | 0.0023 | 0.0042 |
| 149 | 0.0068 | 0.0024 | 0.0043 |
| 150 | 0.0068 | 0.0024 | 0.0044 |
| 151 | 0.0070 | 0.0025 | 0.0045 |
| 152 | 0.0071 | 0.0025 | 0.0046 |
| 153 | 0.0073 | 0.0026 | 0.0047 |
| 154 | 0.0074 | 0.0026 | 0.0047 |
| 155 | 0.0076 | 0.0027 | 0.0049 |
| 156 | 0.0077 | 0.0027 | 0.0049 |
| 157 | 0.0079 | 0.0028 | 0.0051 |
| 158 | 0.0080 | 0.0029 | 0.0052 |
| 159 | 0.0083 | 0.0029 | 0.0053 |
| 160 | 0.0084 | 0.0030 | 0.0054 |
| 161 | 0.0087 | 0.0031 | 0.0056 |
| 162 | 0.0088 | 0.0031 | 0.0057 |
| 163 | 0.0091 | 0.0032 | 0.0059 |
| 164 | 0.0093 | 0.0033 | 0.0060 |
| 165 | 0.0096 | 0.0034 | 0.0062 |
| 166 | 0.0098 | 0.0035 | 0.0063 |
| 167 | 0.0102 | 0.0036 | 0.0066 |
| 168 | 0.0104 | 0.0037 | 0.0067 |
| 169 | 0.0145 | 0.0052 | 0.0094 |
| 170 | 0.0148 | 0.0053 | 0.0095 |
| 171 | 0.0155 | 0.0055 | 0.0100 |
| 172 | 0.0158 | 0.0056 | 0.0102 |
| 173 | 0.0165 | 0.0059 | 0.0107 |
| 174 | 0.0169 | 0.0060 | 0.0109 |
| 175 | 0.0178 | 0.0063 | 0.0115 |
| 176 | 0.0183 | 0.0065 | 0.0118 |
| 177 | 0.0194 | 0.0069 | 0.0125 |
| 178 | 0.0200 | 0.0071 | 0.0129 |
| 179 | 0.0214 | 0.0076 | 0.0138 |
| 180 | 0.0221 | 0.0079 | 0.0142 |
| 181 | 0.0239 | 0.0085 | 0.0154 |
| 182 | 0.0249 | 0.0089 | 0.0160 |
| 183 | 0.0272 | 0.0097 | 0.0175 |
| 184 | 0.0286 | 0.0102 | 0.0184 |
| 185 | 0.0322 | 0.0115 | 0.0208 |
| 186 | 0.0344 | 0.0122 | 0.0221 |
| 187 | 0.0399 | 0.0142 | 0.0257 |
| 188 | 0.0435 | 0.0155 | 0.0280 |
| 189 | 0.0541 | 0.0166 | 0.0375 |
| 190 | 0.0623 | 0.0166 | 0.0457 |
| 191 | 0.0946 | 0.0166 | 0.0779 |
| 192 | 0.1372 | 0.0166 | 0.1206 |
| 193 | 0.5938 | 0.0166 | 0.5772 |

| | | | |
|---|---|---|---|
| 194 | 0.0744 | 0.0166 | 0.0578 |
| 195 | 0.0481 | 0.0166 | 0.0315 |
| 196 | 0.0369 | 0.0131 | 0.0237 |
| 197 | 0.0302 | 0.0108 | 0.0195 |
| 198 | 0.0260 | 0.0093 | 0.0167 |
| 199 | 0.0230 | 0.0082 | 0.0148 |
| 200 | 0.0207 | 0.0074 | 0.0133 |
| 201 | 0.0188 | 0.0067 | 0.0121 |
| 202 | 0.0174 | 0.0062 | 0.0112 |
| 203 | 0.0162 | 0.0058 | 0.0104 |
| 204 | 0.0151 | 0.0054 | 0.0097 |
| 205 | 0.0106 | 0.0038 | 0.0068 |
| 206 | 0.0100 | 0.0036 | 0.0064 |
| 207 | 0.0094 | 0.0034 | 0.0061 |
| 208 | 0.0090 | 0.0032 | 0.0058 |
| 209 | 0.0085 | 0.0030 | 0.0055 |
| 210 | 0.0081 | 0.0029 | 0.0052 |
| 211 | 0.0078 | 0.0028 | 0.0050 |
| 212 | 0.0075 | 0.0027 | 0.0048 |
| 213 | 0.0072 | 0.0026 | 0.0046 |
| 214 | 0.0069 | 0.0025 | 0.0045 |
| 215 | 0.0067 | 0.0024 | 0.0043 |
| 216 | 0.0064 | 0.0023 | 0.0042 |
| 217 | 0.0074 | 0.0026 | 0.0048 |
| 218 | 0.0072 | 0.0026 | 0.0046 |
| 219 | 0.0070 | 0.0025 | 0.0045 |
| 220 | 0.0068 | 0.0024 | 0.0044 |
| 221 | 0.0066 | 0.0024 | 0.0043 |
| 222 | 0.0064 | 0.0023 | 0.0041 |
| 223 | 0.0063 | 0.0022 | 0.0040 |
| 224 | 0.0061 | 0.0022 | 0.0039 |
| 225 | 0.0060 | 0.0021 | 0.0039 |
| 226 | 0.0059 | 0.0021 | 0.0038 |
| 227 | 0.0057 | 0.0020 | 0.0037 |
| 228 | 0.0056 | 0.0020 | 0.0036 |
| 229 | 0.0055 | 0.0020 | 0.0035 |
| 230 | 0.0054 | 0.0019 | 0.0035 |
| 231 | 0.0053 | 0.0019 | 0.0034 |
| 232 | 0.0052 | 0.0018 | 0.0033 |
| 233 | 0.0051 | 0.0018 | 0.0033 |
| 234 | 0.0050 | 0.0018 | 0.0032 |
| 235 | 0.0049 | 0.0017 | 0.0032 |
| 236 | 0.0048 | 0.0017 | 0.0031 |
| 237 | 0.0047 | 0.0017 | 0.0031 |
| 238 | 0.0047 | 0.0017 | 0.0030 |
| 239 | 0.0046 | 0.0016 | 0.0030 |
| 240 | 0.0045 | 0.0016 | 0.0029 |
| 241 | 0.0045 | 0.0016 | 0.0029 |
| 242 | 0.0044 | 0.0016 | 0.0028 |
| 243 | 0.0043 | 0.0015 | 0.0028 |
| 244 | 0.0043 | 0.0015 | 0.0027 |
| 245 | 0.0042 | 0.0015 | 0.0027 |
| 246 | 0.0041 | 0.0015 | 0.0027 |
| 247 | 0.0041 | 0.0015 | 0.0026 |
| 248 | 0.0040 | 0.0014 | 0.0026 |
| 249 | 0.0040 | 0.0014 | 0.0026 |
| 250 | 0.0039 | 0.0014 | 0.0025 |
| 251 | 0.0039 | 0.0014 | 0.0025 |
| 252 | 0.0038 | 0.0014 | 0.0025 |

| | | | |
|---|---|---|---|
| 253 | 0.0038 | 0.0013 | 0.0024 |
| 254 | 0.0037 | 0.0013 | 0.0024 |
| 255 | 0.0037 | 0.0013 | 0.0024 |
| 256 | 0.0036 | 0.0013 | 0.0023 |
| 257 | 0.0036 | 0.0013 | 0.0023 |
| 258 | 0.0036 | 0.0013 | 0.0023 |
| 259 | 0.0035 | 0.0013 | 0.0023 |
| 260 | 0.0035 | 0.0012 | 0.0022 |
| 261 | 0.0034 | 0.0012 | 0.0022 |
| 262 | 0.0034 | 0.0012 | 0.0022 |
| 263 | 0.0034 | 0.0012 | 0.0022 |
| 264 | 0.0033 | 0.0012 | 0.0022 |
| 265 | 0.0033 | 0.0012 | 0.0021 |
| 266 | 0.0033 | 0.0012 | 0.0021 |
| 267 | 0.0032 | 0.0012 | 0.0021 |
| 268 | 0.0032 | 0.0011 | 0.0021 |
| 269 | 0.0032 | 0.0011 | 0.0020 |
| 270 | 0.0031 | 0.0011 | 0.0020 |
| 271 | 0.0031 | 0.0011 | 0.0020 |
| 272 | 0.0031 | 0.0011 | 0.0020 |
| 273 | 0.0031 | 0.0011 | 0.0020 |
| 274 | 0.0030 | 0.0011 | 0.0020 |
| 275 | 0.0030 | 0.0011 | 0.0019 |
| 276 | 0.0030 | 0.0011 | 0.0019 |
| 277 | 0.0030 | 0.0011 | 0.0019 |
| 278 | 0.0029 | 0.0010 | 0.0019 |
| 279 | 0.0029 | 0.0010 | 0.0019 |
| 280 | 0.0029 | 0.0010 | 0.0019 |
| 281 | 0.0029 | 0.0010 | 0.0018 |
| 282 | 0.0028 | 0.0010 | 0.0018 |
| 283 | 0.0028 | 0.0010 | 0.0018 |
| 284 | 0.0028 | 0.0010 | 0.0018 |
| 285 | 0.0028 | 0.0010 | 0.0018 |
| 286 | 0.0027 | 0.0010 | 0.0018 |
| 287 | 0.0027 | 0.0010 | 0.0018 |
| 288 | 0.0027 | 0.0010 | 0.0017 |

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Total soil rain loss = 0.78(In)
Total effective rainfall = 2.14(In)
Peak flow rate in flood hydrograph = 3269.02(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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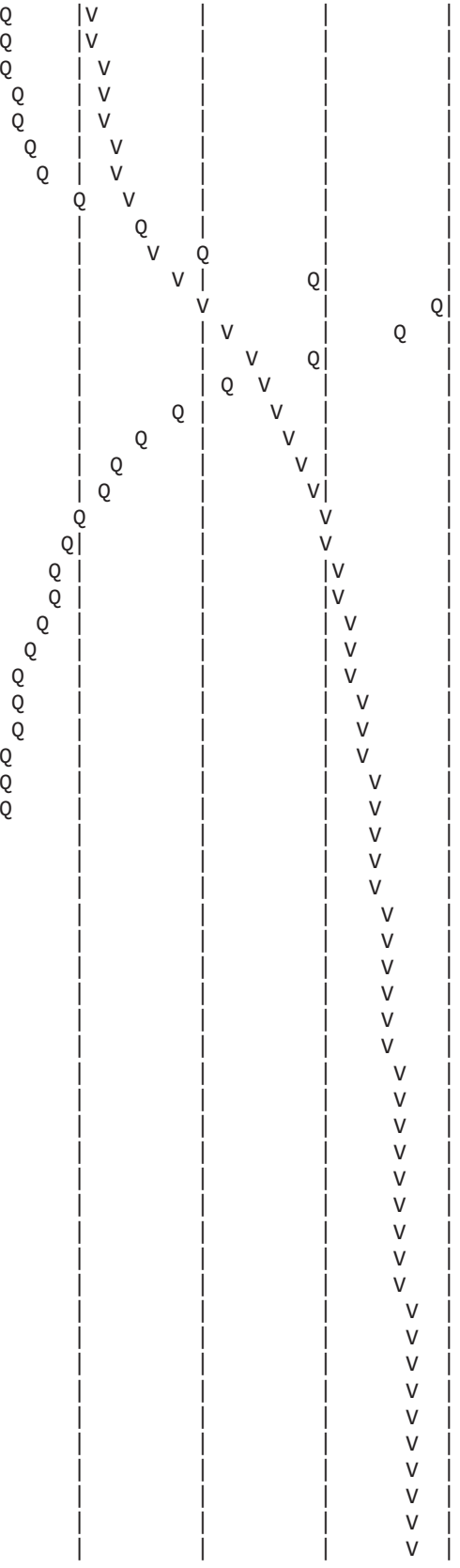
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 825.0 | 1650.0 | 2475.0 | 3300.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0024 | 0.35 | Q | \| | \| | \| | \| |
| 0+10 | 0.0128 | 1.51 | Q | \| | \| | \| | \| |
| 0+15 | 0.0367 | 3.46 | Q | \| | \| | \| | \| |
| 0+20 | 0.0858 | 7.14 | Q | \| | \| | \| | \| |
| 0+25 | 0.1802 | 13.70 | Q | \| | \| | \| | \| |
| 0+30 | 0.3168 | 19.83 | Q | \| | \| | \| | \| |
| 0+35 | 0.4845 | 24.35 | Q | \| | \| | \| | \| |
| 0+40 | 0.6740 | 27.52 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+45 | 0.8801 | 29.92 | Q | | | | |
| 0+50 | 1.0998 | 31.91 | Q | | | | |
| 0+55 | 1.3311 | 33.58 | Q | | | | |
| 1+ 0 | 1.5723 | 35.02 | Q | | | | |
| 1+ 5 | 1.8221 | 36.28 | Q | | | | |
| 1+10 | 2.0795 | 37.38 | Q | | | | |
| 1+15 | 2.3437 | 38.35 | Q | | | | |
| 1+20 | 2.6141 | 39.26 | Q | | | | |
| 1+25 | 2.8904 | 40.12 | Q | | | | |
| 1+30 | 3.1720 | 40.89 | Q | | | | |
| 1+35 | 3.4583 | 41.57 | Q | | | | |
| 1+40 | 3.7488 | 42.18 | Q | | | | |
| 1+45 | 4.0433 | 42.77 | Q | | | | |
| 1+50 | 4.3417 | 43.33 | Q | | | | |
| 1+55 | 4.6438 | 43.86 | Q | | | | |
| 2+ 0 | 4.9494 | 44.37 | Q | | | | |
| 2+ 5 | 5.2582 | 44.84 | Q | | | | |
| 2+10 | 5.5699 | 45.27 | Q | | | | |
| 2+15 | 5.8847 | 45.71 | Q | | | | |
| 2+20 | 6.2024 | 46.12 | Q | | | | |
| 2+25 | 6.5226 | 46.50 | Q | | | | |
| 2+30 | 6.8456 | 46.89 | Q | | | | |
| 2+35 | 7.1710 | 47.25 | Q | | | | |
| 2+40 | 7.4988 | 47.59 | Q | | | | |
| 2+45 | 7.8288 | 47.93 | Q | | | | |
| 2+50 | 8.1611 | 48.24 | Q | | | | |
| 2+55 | 8.4953 | 48.53 | Q | | | | |
| 3+ 0 | 8.8315 | 48.82 | Q | | | | |
| 3+ 5 | 9.1697 | 49.12 | Q | | | | |
| 3+10 | 9.5101 | 49.42 | QV | | | | |
| 3+15 | 9.8527 | 49.74 | QV | | | | |
| 3+20 | 10.1973 | 50.05 | QV | | | | |
| 3+25 | 10.5442 | 50.37 | QV | | | | |
| 3+30 | 10.8933 | 50.68 | QV | | | | |
| 3+35 | 11.2444 | 50.98 | QV | | | | |
| 3+40 | 11.5975 | 51.27 | QV | | | | |
| 3+45 | 11.9525 | 51.55 | QV | | | | |
| 3+50 | 12.3096 | 51.84 | QV | | | | |
| 3+55 | 12.6685 | 52.11 | QV | | | | |
| 4+ 0 | 13.0291 | 52.36 | QV | | | | |
| 4+ 5 | 13.3915 | 52.62 | QV | | | | |
| 4+10 | 13.7556 | 52.87 | QV | | | | |
| 4+15 | 14.1215 | 53.13 | QV | | | | |
| 4+20 | 14.4892 | 53.39 | QV | | | | |
| 4+25 | 14.8587 | 53.66 | QV | | | | |
| 4+30 | 15.2301 | 53.93 | QV | | | | |
| 4+35 | 15.6034 | 54.20 | QV | | | | |
| 4+40 | 15.9785 | 54.47 | QV | | | | |
| 4+45 | 16.3556 | 54.75 | QV | | | | |
| 4+50 | 16.7346 | 55.03 | QV | | | | |
| 4+55 | 17.1156 | 55.32 | QV | | | | |
| 5+ 0 | 17.4985 | 55.60 | QV | | | | |
| 5+ 5 | 17.8835 | 55.90 | QV | | | | |
| 5+10 | 18.2705 | 56.19 | QV | | | | |
| 5+15 | 18.6596 | 56.49 | QV | | | | |
| 5+20 | 19.0507 | 56.79 | Q V | | | | |
| 5+25 | 19.4440 | 57.10 | Q V | | | | |
| 5+30 | 19.8394 | 57.41 | Q V | | | | |
| 5+35 | 20.2370 | 57.73 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+40 | 20.6367 | 58.05 | Q V | \| | \| | \| | \| |
| 5+45 | 21.0387 | 58.37 | Q V | \| | \| | \| | \| |
| 5+50 | 21.4430 | 58.70 | Q V | \| | \| | \| | \| |
| 5+55 | 21.8495 | 59.03 | Q V | \| | \| | \| | \| |
| 6+ 0 | 22.2584 | 59.37 | Q V | \| | \| | \| | \| |
| 6+ 5 | 22.6696 | 59.71 | Q V | \| | \| | \| | \| |
| 6+10 | 23.0832 | 60.05 | Q V | \| | \| | \| | \| |
| 6+15 | 23.4992 | 60.40 | Q V | \| | \| | \| | \| |
| 6+20 | 23.9176 | 60.76 | Q V | \| | \| | \| | \| |
| 6+25 | 24.3386 | 61.12 | Q V | \| | \| | \| | \| |
| 6+30 | 24.7620 | 61.48 | Q V | \| | \| | \| | \| |
| 6+35 | 25.1880 | 61.86 | Q V | \| | \| | \| | \| |
| 6+40 | 25.6166 | 62.23 | Q V | \| | \| | \| | \| |
| 6+45 | 26.0479 | 62.61 | Q V | \| | \| | \| | \| |
| 6+50 | 26.4817 | 63.00 | Q V | \| | \| | \| | \| |
| 6+55 | 26.9183 | 63.39 | Q V | \| | \| | \| | \| |
| 7+ 0 | 27.3577 | 63.79 | Q V | \| | \| | \| | \| |
| 7+ 5 | 27.7998 | 64.20 | Q V | \| | \| | \| | \| |
| 7+10 | 28.2447 | 64.61 | Q V | \| | \| | \| | \| |
| 7+15 | 28.6926 | 65.02 | Q  V | \| | \| | \| | \| |
| 7+20 | 29.1433 | 65.45 | Q  V | \| | \| | \| | \| |
| 7+25 | 29.5970 | 65.88 | Q  V | \| | \| | \| | \| |
| 7+30 | 30.0537 | 66.31 | Q  V | \| | \| | \| | \| |
| 7+35 | 30.5135 | 66.76 | Q  V | \| | \| | \| | \| |
| 7+40 | 30.9763 | 67.21 | Q  V | \| | \| | \| | \| |
| 7+45 | 31.4424 | 67.67 | Q  V | \| | \| | \| | \| |
| 7+50 | 31.9116 | 68.13 | Q  V | \| | \| | \| | \| |
| 7+55 | 32.3841 | 68.61 | Q  V | \| | \| | \| | \| |
| 8+ 0 | 32.8599 | 69.08 | Q  V | \| | \| | \| | \| |
| 8+ 5 | 33.3390 | 69.58 | Q  V | \| | \| | \| | \| |
| 8+10 | 33.8216 | 70.07 | Q  V | \| | \| | \| | \| |
| 8+15 | 34.3077 | 70.58 | Q  V | \| | \| | \| | \| |
| 8+20 | 34.7973 | 71.09 | Q  V | \| | \| | \| | \| |
| 8+25 | 35.2905 | 71.62 | Q  V | \| | \| | \| | \| |
| 8+30 | 35.7874 | 72.15 | Q  V | \| | \| | \| | \| |
| 8+35 | 36.2880 | 72.69 | Q  V | \| | \| | \| | \| |
| 8+40 | 36.7925 | 73.24 | Q  V | \| | \| | \| | \| |
| 8+45 | 37.3008 | 73.81 | Q  V | \| | \| | \| | \| |
| 8+50 | 37.8130 | 74.38 | Q  V | \| | \| | \| | \| |
| 8+55 | 38.3293 | 74.96 | Q   V | \| | \| | \| | \| |
| 9+ 0 | 38.8496 | 75.55 | Q   V | \| | \| | \| | \| |
| 9+ 5 | 39.3741 | 76.16 | Q   V | \| | \| | \| | \| |
| 9+10 | 39.9029 | 76.77 | Q   V | \| | \| | \| | \| |
| 9+15 | 40.4360 | 77.41 | Q   V | \| | \| | \| | \| |
| 9+20 | 40.9735 | 78.04 | Q   V | \| | \| | \| | \| |
| 9+25 | 41.5155 | 78.70 | Q   V | \| | \| | \| | \| |
| 9+30 | 42.0621 | 79.36 | Q   V | \| | \| | \| | \| |
| 9+35 | 42.6134 | 80.05 | Q   V | \| | \| | \| | \| |
| 9+40 | 43.1694 | 80.74 | Q   V | \| | \| | \| | \| |
| 9+45 | 43.7304 | 81.45 | Q   V | \| | \| | \| | \| |
| 9+50 | 44.2963 | 82.17 | Q   V | \| | \| | \| | \| |
| 9+55 | 44.8674 | 82.92 | \|Q  V | \| | \| | \| | \| |
| 10+ 0 | 45.4436 | 83.67 | \|Q  V | \| | \| | \| | \| |
| 10+ 5 | 46.0251 | 84.44 | \|Q  V | \| | \| | \| | \| |
| 10+10 | 46.6121 | 85.23 | \|Q  V | \| | \| | \| | \| |
| 10+15 | 47.2047 | 86.04 | \|Q  V | \| | \| | \| | \| |
| 10+20 | 47.8029 | 86.86 | \|Q   V | \| | \| | \| | \| |
| 10+25 | 48.4069 | 87.71 | \|Q   V | \| | \| | \| | \| |
| 10+30 | 49.0169 | 88.57 | \|Q   V | \| | \| | \| | \| |

```
10+35      49.6330     89.46  |Q   V    |          |          |          |
10+40      50.2553     90.36  |Q   V    |          |          |          |
10+45      50.8840     91.29  |Q   V    |          |          |          |
10+50      51.5192     92.24  |Q   V    |          |          |          |
10+55      52.1612     93.21  |Q   V    |          |          |          |
11+ 0      52.8100     94.21  |Q   V    |          |          |          |
11+ 5      53.4659     95.24  |Q   V    |          |          |          |
11+10      54.1290     96.29  |Q   V    |          |          |          |
11+15      54.7996     97.37  |Q   V    |          |          |          |
11+20      55.4778     98.48  |Q   V    |          |          |          |
11+25      56.1639     99.62  |Q   V    |          |          |          |
11+30      56.8581    100.79  |Q   V    |          |          |          |
11+35      57.5605    102.00  |Q    V   |          |          |          |
11+40      58.2715    103.23  |Q    V   |          |          |          |
11+45      58.9913    104.51  |Q    V   |          |          |          |
11+50      59.7201    105.82  |Q    V   |          |          |          |
11+55      60.4583    107.18  |Q    V   |          |          |          |
12+ 0      61.2060    108.57  |Q    V   |          |          |          |
12+ 5      61.9627    109.87  |Q    V   |          |          |          |
12+10      62.7261    110.85  |Q    V   |          |          |          |
12+15      63.4943    111.54  |Q    V   |          |          |          |
12+20      64.2623    111.51  |Q    V   |          |          |          |
12+25      65.0219    110.30  |Q    V   |          |          |          |
12+30      65.7745    109.29  |Q    V   |          |          |          |
12+35      66.5254    109.03  |Q     V  |          |          |          |
12+40      67.2788    109.39  |Q     V  |          |          |          |
12+45      68.0375    110.16  |Q     V  |          |          |          |
12+50      68.8030    111.15  |Q     V  |          |          |          |
12+55      69.5769    112.36  |Q     V  |          |          |          |
13+ 0      70.3601    113.72  |Q     V  |          |          |          |
13+ 5      71.1540    115.27  |Q     V  |          |          |          |
13+10      71.9593    116.94  |Q     V  |          |          |          |
13+15      72.7773    118.77  |Q     V  |          |          |          |
13+20      73.6086    120.71  |Q     V  |          |          |          |
13+25      74.4543    122.79  |Q     V  |          |          |          |
13+30      75.3152    125.00  |Q     V  |          |          |          |
13+35      76.1926    127.40  |Q      V |          |          |          |
13+40      77.0874    129.93  |Q      V |          |          |          |
13+45      78.0009    132.63  |Q      V |          |          |          |
13+50      78.9339    135.48  |Q      V |          |          |          |
13+55      79.8880    138.53  |Q      V |          |          |          |
14+ 0      80.8641    141.74  |Q      V |          |          |          |
14+ 5      81.8675    145.68  |Q      V |          |          |          |
14+10      82.9069    150.93  |Q      V |          |          |          |
14+15      83.9921    157.56  |Q      V |          |          |          |
14+20      85.1409    166.82  | Q     V |          |          |          |
14+25      86.3837    180.45  | Q      V|          |          |          |
14+30      87.7192    193.92  | Q      V|          |          |          |
14+35      89.1366    205.81  | Q      V|          |          |          |
14+40      90.6266    216.35  | Q      V|          |          |          |
14+45      92.1866    226.51  | Q      V|          |          |          |
14+50      93.8167    236.69  | Q      V|          |          |          |
14+55      95.5196    247.27  | Q       V          |          |          |
15+ 0      97.2983    258.27  |  Q      V          |          |          |
15+ 5      99.1582    270.06  |  Q      V          |          |          |
15+10     101.1048    282.65  |  Q      V          |          |          |
15+15     103.1469    296.51  |  Q      V          |          |          |
15+20     105.2936    311.70  |  Q      |V         |          |          |
15+25     107.5591    328.95  |  Q      |V         |          |          |
```

| | | | |
|---|---|---|---|
| 15+30 | 109.9580 | 348.33 |  |
| 15+35 | 112.5127 | 370.94 | |
| 15+40 | 115.2489 | 397.29 | |
| 15+45 | 118.2115 | 430.18 | |
| 15+50 | 121.4641 | 472.27 | |
| 15+55 | 125.1317 | 532.53 | |
| 16+ 0 | 129.4579 | 628.16 | |
| 16+ 5 | 135.4349 | 867.86 | |
| 16+10 | 144.1923 | 1271.57 | |
| 16+15 | 156.0038 | 1715.04 | |
| 16+20 | 172.5659 | 2404.82 | |
| 16+25 | 195.0798 | 3269.02 | |
| 16+30 | 216.0279 | 3041.66 | |
| 16+35 | 232.6187 | 2408.99 | |
| 16+40 | 245.4537 | 1863.64 | |
| 16+45 | 255.9015 | 1517.03 | |
| 16+50 | 264.8827 | 1304.07 | |
| 16+55 | 272.7065 | 1136.01 | |
| 17+ 0 | 279.6368 | 1006.29 | |
| 17+ 5 | 285.8037 | 895.44 | |
| 17+10 | 291.3439 | 804.43 | |
| 17+15 | 296.3436 | 725.96 | |
| 17+20 | 300.9460 | 668.27 | |
| 17+25 | 305.1577 | 611.54 | |
| 17+30 | 308.9424 | 549.53 | |
| 17+35 | 312.3342 | 492.49 | |
| 17+40 | 315.4087 | 446.41 | |
| 17+45 | 318.2872 | 417.97 | |
| 17+50 | 320.9666 | 389.04 | |
| 17+55 | 323.4637 | 362.58 | |
| 18+ 0 | 325.8003 | 339.27 | |
| 18+ 5 | 327.9490 | 312.00 | |
| 18+10 | 329.9442 | 289.70 | |
| 18+15 | 331.8606 | 278.26 | |
| 18+20 | 333.6484 | 259.59 | |
| 18+25 | 335.3328 | 244.57 | |
| 18+30 | 336.9634 | 236.76 | |
| 18+35 | 338.4777 | 219.89 | |
| 18+40 | 339.8894 | 204.97 | |
| 18+45 | 341.2475 | 197.20 | |
| 18+50 | 342.4963 | 181.32 | |
| 18+55 | 343.6576 | 168.63 | |
| 19+ 0 | 344.7901 | 164.44 | |
| 19+ 5 | 345.9126 | 162.98 | |
| 19+10 | 347.0223 | 161.13 | |
| 19+15 | 348.1067 | 157.46 | |
| 19+20 | 349.1643 | 153.56 | |
| 19+25 | 350.1923 | 149.27 | |
| 19+30 | 351.1854 | 144.20 | |
| 19+35 | 352.0963 | 132.27 | |
| 19+40 | 352.9420 | 122.80 | |
| 19+45 | 353.7587 | 118.57 | |
| 19+50 | 354.5429 | 113.88 | |
| 19+55 | 355.2523 | 102.99 | |
| 20+ 0 | 355.8932 | 93.06 | |
| 20+ 5 | 356.5148 | 90.26 | |
| 20+10 | 357.1208 | 87.98 | |
| 20+15 | 357.7128 | 85.95 | |
| 20+20 | 358.2918 | 84.08 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20+25 | 358.8589 | 82.33 | Q | \| | \| | \| | V \| |
| 20+30 | 359.4146 | 80.69 | Q | \| | \| | \| | V \| |
| 20+35 | 359.9598 | 79.17 | Q | \| | \| | \| | V \| |
| 20+40 | 360.4952 | 77.73 | Q | \| | \| | \| | V \| |
| 20+45 | 361.0212 | 76.37 | Q | \| | \| | \| | V \| |
| 20+50 | 361.5381 | 75.07 | Q | \| | \| | \| | V \| |
| 20+55 | 362.0466 | 73.83 | Q | \| | \| | \| | V \| |
| 21+ 0 | 362.5472 | 72.69 | Q | \| | \| | \| | V \| |
| 21+ 5 | 363.0403 | 71.59 | Q | \| | \| | \| | V \| |
| 21+10 | 363.5261 | 70.54 | Q | \| | \| | \| | V \| |
| 21+15 | 364.0049 | 69.53 | Q | \| | \| | \| | V \| |
| 21+20 | 364.4771 | 68.56 | Q | \| | \| | \| | V \| |
| 21+25 | 364.9428 | 67.62 | Q | \| | \| | \| | V \| |
| 21+30 | 365.4023 | 66.72 | Q | \| | \| | \| | V \| |
| 21+35 | 365.8558 | 65.84 | Q | \| | \| | \| | V \| |
| 21+40 | 366.3033 | 64.98 | Q | \| | \| | \| | V \| |
| 21+45 | 366.7451 | 64.15 | Q | \| | \| | \| | V \| |
| 21+50 | 367.1813 | 63.34 | Q | \| | \| | \| | V \| |
| 21+55 | 367.6122 | 62.56 | Q | \| | \| | \| | V \| |
| 22+ 0 | 368.0377 | 61.78 | Q | \| | \| | \| | V \| |
| 22+ 5 | 368.4580 | 61.03 | Q | \| | \| | \| | V \| |
| 22+10 | 368.8733 | 60.30 | Q | \| | \| | \| | V \| |
| 22+15 | 369.2837 | 59.59 | Q | \| | \| | \| | V \| |
| 22+20 | 369.6894 | 58.91 | Q | \| | \| | \| | V \| |
| 22+25 | 370.0905 | 58.24 | Q | \| | \| | \| | V \| |
| 22+30 | 370.4871 | 57.59 | Q | \| | \| | \| | V\| |
| 22+35 | 370.8794 | 56.95 | Q | \| | \| | \| | V\| |
| 22+40 | 371.2674 | 56.34 | Q | \| | \| | \| | V\| |
| 22+45 | 371.6513 | 55.74 | Q | \| | \| | \| | V\| |
| 22+50 | 372.0311 | 55.15 | Q | \| | \| | \| | V\| |
| 22+55 | 372.4070 | 54.58 | Q | \| | \| | \| | V\| |
| 23+ 0 | 372.7791 | 54.03 | Q | \| | \| | \| | V\| |
| 23+ 5 | 373.1474 | 53.48 | Q | \| | \| | \| | V\| |
| 23+10 | 373.5121 | 52.95 | Q | \| | \| | \| | V\| |
| 23+15 | 373.8732 | 52.44 | Q | \| | \| | \| | V\| |
| 23+20 | 374.2309 | 51.93 | Q | \| | \| | \| | V\| |
| 23+25 | 374.5851 | 51.44 | Q | \| | \| | \| | V\| |
| 23+30 | 374.9361 | 50.95 | Q | \| | \| | \| | V\| |
| 23+35 | 375.2837 | 50.48 | Q | \| | \| | \| | V\| |
| 23+40 | 375.6282 | 50.02 | Q | \| | \| | \| | V\| |
| 23+45 | 375.9696 | 49.57 | Q | \| | \| | \| | V\| |
| 23+50 | 376.3079 | 49.13 | Q | \| | \| | \| | V\| |
| 23+55 | 376.6433 | 48.69 | Q | \| | \| | \| | V\| |
| 24+ 0 | 376.9757 | 48.27 | Q | \| | \| | \| | V\| |
| 24+ 5 | 377.3029 | 47.51 | Q | \| | \| | \| | V\| |
| 24+10 | 377.6193 | 45.95 | Q | \| | \| | \| | V\| |
| 24+15 | 377.9197 | 43.62 | Q | \| | \| | \| | V\| |
| 24+20 | 378.1925 | 39.60 | Q | \| | \| | \| | V\| |
| 24+25 | 378.4180 | 32.75 | Q | \| | \| | \| | V\| |
| 24+30 | 378.5998 | 26.40 | Q | \| | \| | \| | V\| |
| 24+35 | 378.7496 | 21.75 | Q | \| | \| | \| | V\| |
| 24+40 | 378.8770 | 18.49 | Q | \| | \| | \| | V\| |
| 24+45 | 378.9875 | 16.05 | Q | \| | \| | \| | V\| |
| 24+50 | 379.0843 | 14.05 | Q | \| | \| | \| | V\| |
| 24+55 | 379.1696 | 12.39 | Q | \| | \| | \| | V\| |
| 25+ 0 | 379.2452 | 10.97 | Q | \| | \| | \| | V\| |
| 25+ 5 | 379.3124 | 9.77 | Q | \| | \| | \| | V\| |
| 25+10 | 379.3725 | 8.73 | Q | \| | \| | \| | V\| |
| 25+15 | 379.4264 | 7.83 | Q | \| | \| | \| | V\| |

```
  25+20     379.4747      7.01  Q         |         |         |        V|
  25+25     379.5178      6.25  Q         |         |         |        V|
  25+30     379.5563      5.59  Q         |         |         |        V|
  25+35     379.5909      5.03  Q         |         |         |        V|
  25+40     379.6223      4.55  Q         |         |         |        V|
  25+45     379.6505      4.10  Q         |         |         |        V|
  25+50     379.6758      3.68  Q         |         |         |        V|
  25+55     379.6986      3.30  Q         |         |         |        V|
  26+ 0     379.7189      2.95  Q         |         |         |        V|
  26+ 5     379.7371      2.64  Q         |         |         |        V|
  26+10     379.7534      2.38  Q         |         |         |        V|
  26+15     379.7680      2.11  Q         |         |         |        V|
  26+20     379.7809      1.88  Q         |         |         |        V|
  26+25     379.7925      1.68  Q         |         |         |        V|
  26+30     379.8026      1.48  Q         |         |         |        V|
  26+35     379.8116      1.31  Q         |         |         |        V|
  26+40     379.8197      1.17  Q         |         |         |        V|
  26+45     379.8267      1.03  Q         |         |         |        V|
  26+50     379.8331      0.92  Q         |         |         |        V|
  26+55     379.8389      0.84  Q         |         |         |        V|
  27+ 0     379.8441      0.76  Q         |         |         |        V|
  27+ 5     379.8487      0.67  Q         |         |         |        V|
  27+10     379.8527      0.58  Q         |         |         |        V|
  27+15     379.8561      0.49  Q         |         |         |        V|
  27+20     379.8589      0.40  Q         |         |         |        V|
  27+25     379.8610      0.31  Q         |         |         |        V|
  27+30     379.8625      0.22  Q         |         |         |        V|
  27+35     379.8636      0.16  Q         |         |         |        V|
  27+40     379.8644      0.11  Q         |         |         |        V|
  27+45     379.8649      0.07  Q         |         |         |        V|
  27+50     379.8650      0.02  Q         |         |         |         V
-------------------------------------------------------------------------
```

# TECHNICAL APPENDIX NO. 5

Existing Conditions
Hydrograph Routing Calculations
100-Year, 24-Hour Storm Event

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014
Study date: 09/06/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREAS 49 AND 50 - ROUTING
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********** HYDROGRAPH INFORMATION **********

From study/file name: EX50.rte
**********HYDROGRAPH DATA**********
Number of intervals = 353
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 5599.015 (CFS)
Total volume = 1141.359 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

**********

++++++++++

Process from Point/Station 1.000 to Point/Station 1.000
**** FLOWBY BASIN ROUTING OR SPLIT FLOW ****

A constant split flow fraction of 0.5000 is
being diverted from the main stream into stream number 1
Total volume of excess flow diverted into flowby
basin (stream number 1 ) is 570.68(Ac.Ft)

++++++++++

P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

---

Hydrograph in 5 Minute intervals (CFS)

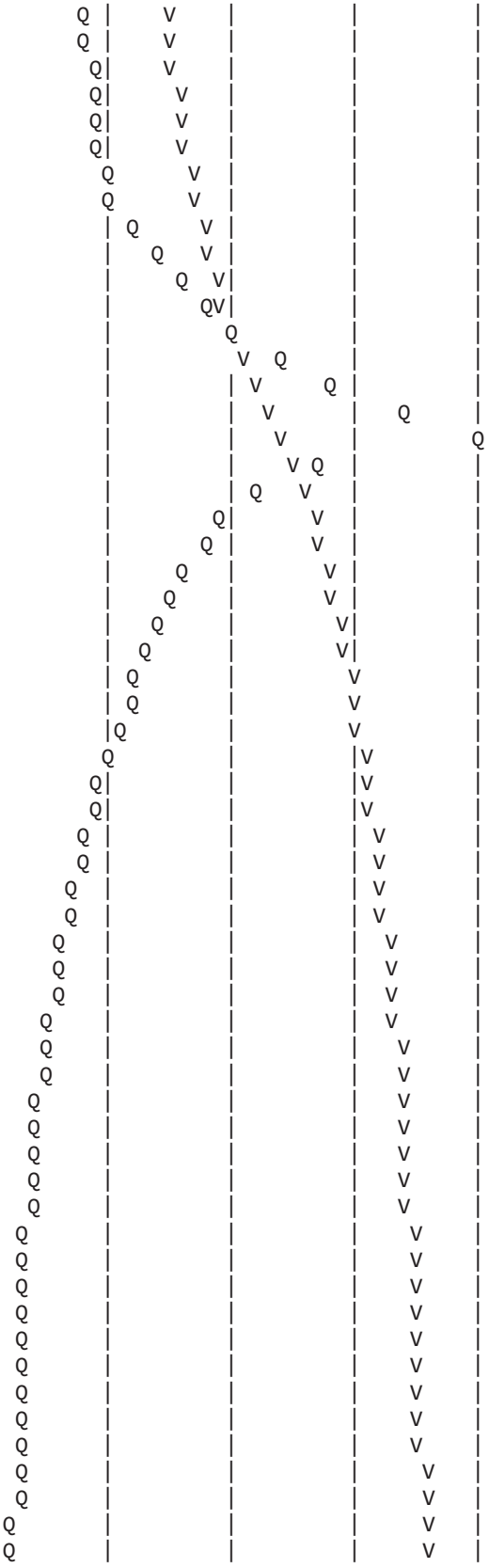
---

| Time(h+m) | Volume(Ac.Ft) | Q(CFS) | 0 | 699.9 | 1399.8 | 2099.6 | 2799.5 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0050 | 0.73 | Q | \| | \| | \| | \| |
| 0+10 | 0.0216 | 2.41 | Q | \| | \| | \| | \| |
| 0+15 | 0.0544 | 4.76 | Q | \| | \| | \| | \| |
| 0+20 | 0.1080 | 7.79 | Q | \| | \| | \| | \| |
| 0+25 | 0.1875 | 11.54 | Q | \| | \| | \| | \| |
| 0+30 | 0.3033 | 16.82 | Q | \| | \| | \| | \| |
| 0+35 | 0.4666 | 23.71 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+40 | 0.7024 | 34.24 | Q | \| | \| | \| | \| |
| 0+45 | 1.0442 | 49.62 | Q | \| | \| | \| | \| |
| 0+50 | 1.4418 | 57.74 | Q | \| | \| | \| | \| |
| 0+55 | 1.8774 | 63.25 | Q | \| | \| | \| | \| |
| 1+ 0 | 2.3435 | 67.68 | Q | \| | \| | \| | \| |
| 1+ 5 | 2.8357 | 71.46 | VQ | \| | \| | \| | \| |
| 1+10 | 3.3495 | 74.60 | VQ | \| | \| | \| | \| |
| 1+15 | 3.8839 | 77.60 | VQ | \| | \| | \| | \| |
| 1+20 | 4.4361 | 80.18 | VQ | \| | \| | \| | \| |
| 1+25 | 5.0051 | 82.61 | VQ | \| | \| | \| | \| |
| 1+30 | 5.5888 | 84.75 | VQ | \| | \| | \| | \| |
| 1+35 | 6.1862 | 86.74 | VQ | \| | \| | \| | \| |
| 1+40 | 6.7962 | 88.58 | VQ | \| | \| | \| | \| |
| 1+45 | 7.4181 | 90.30 | VQ | \| | \| | \| | \| |
| 1+50 | 8.0511 | 91.90 | VQ | \| | \| | \| | \| |
| 1+55 | 8.6941 | 93.37 | VQ | \| | \| | \| | \| |
| 2+ 0 | 9.3468 | 94.77 | VQ | \| | \| | \| | \| |
| 2+ 5 | 10.0084 | 96.06 | VQ | \| | \| | \| | \| |
| 2+10 | 10.6785 | 97.30 | VQ | \| | \| | \| | \| |
| 2+15 | 11.3564 | 98.42 | VQ | \| | \| | \| | \| |
| 2+20 | 12.0417 | 99.50 | VQ | \| | \| | \| | \| |
| 2+25 | 12.7335 | 100.46 | VQ | \| | \| | \| | \| |
| 2+30 | 13.4318 | 101.39 | VQ | \| | \| | \| | \| |
| 2+35 | 14.1361 | 102.27 | VQ | \| | \| | \| | \| |
| 2+40 | 14.8463 | 103.11 | \|Q | \| | \| | \| | \| |
| 2+45 | 15.5617 | 103.88 | \|Q | \| | \| | \| | \| |
| 2+50 | 16.2821 | 104.60 | \|Q | \| | \| | \| | \| |
| 2+55 | 17.0067 | 105.21 | \|Q | \| | \| | \| | \| |
| 3+ 0 | 17.7352 | 105.77 | \|Q | \| | \| | \| | \| |
| 3+ 5 | 18.4676 | 106.35 | \|Q | \| | \| | \| | \| |
| 3+10 | 19.2039 | 106.92 | \|Q | \| | \| | \| | \| |
| 3+15 | 19.9442 | 107.49 | \|Q | \| | \| | \| | \| |
| 3+20 | 20.6883 | 108.04 | \|Q | \| | \| | \| | \| |
| 3+25 | 21.4362 | 108.60 | \|Q | \| | \| | \| | \| |
| 3+30 | 22.1880 | 109.16 | \|Q | \| | \| | \| | \| |
| 3+35 | 22.9437 | 109.72 | \|Q | \| | \| | \| | \| |
| 3+40 | 23.7030 | 110.24 | \|Q | \| | \| | \| | \| |
| 3+45 | 24.4659 | 110.78 | \|Q | \| | \| | \| | \| |
| 3+50 | 25.2326 | 111.31 | \|Q | \| | \| | \| | \| |
| 3+55 | 26.0030 | 111.87 | \|Q | \| | \| | \| | \| |
| 4+ 0 | 26.7773 | 112.42 | \|Q | \| | \| | \| | \| |
| 4+ 5 | 27.5555 | 113.00 | \|Q | \| | \| | \| | \| |
| 4+10 | 28.3377 | 113.57 | \|Q | \| | \| | \| | \| |
| 4+15 | 29.1239 | 114.15 | \|QV | \| | \| | \| | \| |
| 4+20 | 29.9138 | 114.70 | \|QV | \| | \| | \| | \| |
| 4+25 | 30.7076 | 115.25 | \|QV | \| | \| | \| | \| |
| 4+30 | 31.5051 | 115.80 | \|QV | \| | \| | \| | \| |
| 4+35 | 32.3065 | 116.37 | \|QV | \| | \| | \| | \| |
| 4+40 | 33.1117 | 116.91 | \|QV | \| | \| | \| | \| |
| 4+45 | 33.9208 | 117.47 | \|QV | \| | \| | \| | \| |
| 4+50 | 34.7336 | 118.02 | \|QV | \| | \| | \| | \| |
| 4+55 | 35.5504 | 118.60 | \|QV | \| | \| | \| | \| |
| 5+ 0 | 36.3709 | 119.14 | \|QV | \| | \| | \| | \| |
| 5+ 5 | 37.1953 | 119.70 | \|QV | \| | \| | \| | \| |
| 5+10 | 38.0234 | 120.25 | \|QV | \| | \| | \| | \| |
| 5+15 | 38.8555 | 120.81 | \|QV | \| | \| | \| | \| |
| 5+20 | 39.6914 | 121.38 | \|QV | \| | \| | \| | \| |
| 5+25 | 40.5313 | 121.96 | \|QV | \| | \| | \| | \| |
| 5+30 | 41.3752 | 122.53 | \|QV | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+35 | 42.2232 | 123.13 | QV | | | | |
| 5+40 | 43.0752 | 123.71 | Q V | | | | |
| 5+45 | 43.9315 | 124.32 | Q V | | | | |
| 5+50 | 44.7918 | 124.92 | Q V | | | | |
| 5+55 | 45.6564 | 125.55 | Q V | | | | |
| 6+ 0 | 46.5253 | 126.16 | Q V | | | | |
| 6+ 5 | 47.3986 | 126.80 | Q V | | | | |
| 6+10 | 48.2762 | 127.43 | Q V | | | | |
| 6+15 | 49.1584 | 128.09 | Q V | | | | |
| 6+20 | 50.0450 | 128.74 | Q V | | | | |
| 6+25 | 50.9363 | 129.41 | Q V | | | | |
| 6+30 | 51.8321 | 130.07 | Q V | | | | |
| 6+35 | 52.7327 | 130.77 | Q V | | | | |
| 6+40 | 53.6380 | 131.45 | Q V | | | | |
| 6+45 | 54.5482 | 132.16 | Q V | | | | |
| 6+50 | 55.4632 | 132.86 | Q V | | | | |
| 6+55 | 56.3832 | 133.59 | Q V | | | | |
| 7+ 0 | 57.3082 | 134.31 | Q V | | | | |
| 7+ 5 | 58.2384 | 135.06 | Q V | | | | |
| 7+10 | 59.1737 | 135.80 | Q V | | | | |
| 7+15 | 60.1143 | 136.58 | Q V | | | | |
| 7+20 | 61.0602 | 137.34 | Q V | | | | |
| 7+25 | 62.0115 | 138.13 | Q V | | | | |
| 7+30 | 62.9682 | 138.92 | Q V | | | | |
| 7+35 | 63.9306 | 139.74 | Q V | | | | |
| 7+40 | 64.8985 | 140.54 | Q V | | | | |
| 7+45 | 65.8722 | 141.39 | Q V | | | | |
| 7+50 | 66.8517 | 142.22 | Q V | | | | |
| 7+55 | 67.8372 | 143.09 | Q V | | | | |
| 8+ 0 | 68.8285 | 143.95 | Q V | | | | |
| 8+ 5 | 69.8261 | 144.84 | Q V | | | | |
| 8+10 | 70.8297 | 145.73 | Q V | | | | |
| 8+15 | 71.8397 | 146.65 | Q V | | | | |
| 8+20 | 72.8560 | 147.57 | Q V | | | | |
| 8+25 | 73.8789 | 148.52 | Q V | | | | |
| 8+30 | 74.9083 | 149.47 | Q V | | | | |
| 8+35 | 75.9445 | 150.45 | Q V | | | | |
| 8+40 | 76.9874 | 151.43 | Q V | | | | |
| 8+45 | 78.0373 | 152.45 | Q V | | | | |
| 8+50 | 79.0941 | 153.46 | Q V | | | | |
| 8+55 | 80.1583 | 154.51 | Q V | | | | |
| 9+ 0 | 81.2296 | 155.56 | Q V | | | | |
| 9+ 5 | 82.3085 | 156.65 | Q V | | | | |
| 9+10 | 83.3948 | 157.73 | Q V | | | | |
| 9+15 | 84.4889 | 158.86 | Q V | | | | |
| 9+20 | 85.5907 | 159.99 | Q V | | | | |
| 9+25 | 86.7006 | 161.16 | Q V | | | | |
| 9+30 | 87.8185 | 162.32 | Q V | | | | |
| 9+35 | 88.9448 | 163.54 | Q V | | | | |
| 9+40 | 90.0795 | 164.75 | Q V | | | | |
| 9+45 | 91.2228 | 166.01 | Q V | | | | |
| 9+50 | 92.3748 | 167.27 | Q V | | | | |
| 9+55 | 93.5359 | 168.58 | Q V | | | | |
| 10+ 0 | 94.7059 | 169.89 | Q V | | | | |
| 10+ 5 | 95.8854 | 171.26 | Q V | | | | |
| 10+10 | 97.0742 | 172.62 | Q V | | | | |
| 10+15 | 98.2729 | 174.04 | Q V | | | | |
| 10+20 | 99.4813 | 175.46 | Q V | | | | |
| 10+25 | 100.6999 | 176.95 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10+30 | 101.9288 | 178.43 | Q V | | | | |
| 10+35 | 103.1683 | 179.98 | Q V | | | | |
| 10+40 | 104.4185 | 181.52 | Q V | | | | |
| 10+45 | 105.6798 | 183.15 | Q V | | | | |
| 10+50 | 106.9523 | 184.76 | Q V | | | | |
| 10+55 | 108.2364 | 186.46 | Q V | | | | |
| 11+ 0 | 109.5322 | 188.15 | Q V | | | | |
| 11+ 5 | 110.8402 | 189.93 | Q V | | | | |
| 11+10 | 112.1605 | 191.70 | Q V | | | | |
| 11+15 | 113.4936 | 193.57 | Q V | | | | |
| 11+20 | 114.8396 | 195.43 | Q V | | | | |
| 11+25 | 116.1990 | 197.39 | Q V | | | | |
| 11+30 | 117.5719 | 199.35 | Q V | | | | |
| 11+35 | 118.9591 | 201.41 | Q V | | | | |
| 11+40 | 120.3604 | 203.48 | Q V | | | | |
| 11+45 | 121.7768 | 205.65 | Q V | | | | |
| 11+50 | 123.2081 | 207.83 | Q V | | | | |
| 11+55 | 124.6552 | 210.13 | Q V | | | | |
| 12+ 0 | 126.1182 | 212.43 | Q V | | | | |
| 12+ 5 | 127.5980 | 214.86 | Q V | | | | |
| 12+10 | 129.0946 | 217.31 | Q V | | | | |
| 12+15 | 130.6091 | 219.90 | Q V | | | | |
| 12+20 | 132.1416 | 222.51 | Q V | | | | |
| 12+25 | 133.6930 | 225.27 | Q V | | | | |
| 12+30 | 135.2636 | 228.06 | Q V | | | | |
| 12+35 | 136.8547 | 231.02 | Q V | | | | |
| 12+40 | 138.4663 | 234.02 | Q V | | | | |
| 12+45 | 140.1002 | 237.23 | Q V | | | | |
| 12+50 | 141.7559 | 240.42 | Q V | | | | |
| 12+55 | 143.4349 | 243.79 | Q V | | | | |
| 13+ 0 | 145.1373 | 247.19 | Q V | | | | |
| 13+ 5 | 146.8646 | 250.80 | Q V | | | | |
| 13+10 | 148.6169 | 254.44 | Q V | | | | |
| 13+15 | 150.3960 | 258.33 | Q V | | | | |
| 13+20 | 152.2022 | 262.25 | Q V | | | | |
| 13+25 | 154.0372 | 266.45 | Q V | | | | |
| 13+30 | 155.9016 | 270.71 | Q V | | | | |
| 13+35 | 157.7974 | 275.27 | Q V | | | | |
| 13+40 | 159.7251 | 279.90 | Q V | | | | |
| 13+45 | 161.6870 | 284.87 | Q V | | | | |
| 13+50 | 163.6838 | 289.93 | Q V | | | | |
| 13+55 | 165.7181 | 295.38 | Q V | | | | |
| 14+ 0 | 167.7908 | 300.95 | Q V | | | | |
| 14+ 5 | 169.9119 | 307.98 | Q V | | | | |
| 14+10 | 172.0914 | 316.48 | Q V | | | | |
| 14+15 | 174.3396 | 326.43 | Q V | | | | |
| 14+20 | 176.6643 | 337.54 | Q V | | | | |
| 14+25 | 179.0766 | 350.28 | Q V | | | | |
| 14+30 | 181.5931 | 365.40 | Q V | | | | |
| 14+35 | 184.2343 | 383.51 | Q V | | | | |
| 14+40 | 187.0375 | 407.02 | Q V | | | | |
| 14+45 | 190.0556 | 438.22 | Q V | | | | |
| 14+50 | 193.2225 | 459.84 | Q V | | | | |
| 14+55 | 196.5210 | 478.94 | Q V | | | | |
| 15+ 0 | 199.9449 | 497.14 | Q V | | | | |
| 15+ 5 | 203.4974 | 515.83 | Q V | | | | |
| 15+10 | 207.1779 | 534.41 | Q V | | | | |
| 15+15 | 210.9971 | 554.55 | Q V | | | | |
| 15+20 | 214.9590 | 575.26 | Q V | | | | |

| | | | |
|---|---|---|---|
| 15+25 | 219.0607 | 595.57 |  |
| 15+30 | 223.2884 | 613.87 | |
| 15+35 | 227.6466 | 632.81 | |
| 15+40 | 232.1351 | 651.72 | |
| 15+45 | 236.7700 | 673.00 | |
| 15+50 | 241.5477 | 693.71 | |
| 15+55 | 246.5035 | 719.59 | |
| 16+ 0 | 251.6632 | 749.19 | |
| 16+ 5 | 257.5093 | 848.86 | |
| 16+10 | 264.3796 | 997.57 | |
| 16+15 | 272.1685 | 1130.94 | |
| 16+20 | 280.9315 | 1272.39 | |
| 16+25 | 290.8231 | 1436.27 | |
| 16+30 | 302.4684 | 1690.89 | |
| 16+35 | 316.0612 | 1973.68 | |
| 16+40 | 332.5999 | 2401.42 | |
| 16+45 | 351.8802 | 2799.51 | |
| 16+50 | 365.2308 | 1938.50 | |
| 16+55 | 375.9853 | 1561.56 | |
| 17+ 0 | 385.5246 | 1385.10 | |
| 17+ 5 | 394.3893 | 1287.16 | |
| 17+10 | 402.4985 | 1177.45 | |
| 17+15 | 410.1809 | 1115.49 | |
| 17+20 | 417.2800 | 1030.79 | |
| 17+25 | 423.9709 | 971.51 | |
| 17+30 | 430.1762 | 901.01 | |
| 17+35 | 435.9912 | 844.33 | |
| 17+40 | 441.4095 | 786.74 | |
| 17+45 | 446.4156 | 726.90 | |
| 17+50 | 451.0965 | 679.66 | |
| 17+55 | 455.4666 | 634.54 | |
| 18+ 0 | 459.6079 | 601.32 | |
| 18+ 5 | 463.4980 | 564.85 | |
| 18+10 | 467.1958 | 536.91 | |
| 18+15 | 470.6554 | 502.33 | |
| 18+20 | 473.9500 | 478.38 | |
| 18+25 | 477.0269 | 446.77 | |
| 18+30 | 479.9703 | 427.38 | |
| 18+35 | 482.7549 | 404.32 | |
| 18+40 | 485.4166 | 386.48 | |
| 18+45 | 487.9042 | 361.20 | |
| 18+50 | 490.2677 | 343.18 | |
| 18+55 | 492.4524 | 317.22 | |
| 19+ 0 | 494.5307 | 301.77 | |
| 19+ 5 | 496.5436 | 292.27 | |
| 19+10 | 498.4962 | 283.52 | |
| 19+15 | 500.3806 | 273.60 | |
| 19+20 | 502.2028 | 264.59 | |
| 19+25 | 503.9751 | 257.35 | |
| 19+30 | 505.6986 | 250.25 | |
| 19+35 | 507.3624 | 241.59 | |
| 19+40 | 508.9633 | 232.45 | |
| 19+45 | 510.5273 | 227.09 | |
| 19+50 | 512.0584 | 222.32 | |
| 19+55 | 513.5626 | 218.41 | |
| 20+ 0 | 515.0466 | 215.47 | |
| 20+ 5 | 516.5024 | 211.38 | |
| 20+10 | 517.9280 | 207.00 | |
| 20+15 | 519.3192 | 202.01 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20+20 | 520.6595 | 194.61 | Q | | | | V |
| 20+25 | 521.9690 | 190.14 | Q | | | | V |
| 20+30 | 523.2539 | 186.56 | Q | | | | V |
| 20+35 | 524.5140 | 182.97 | Q | | | | V |
| 20+40 | 525.7400 | 178.01 | Q | | | | V |
| 20+45 | 526.9395 | 174.16 | Q | | | | V |
| 20+50 | 528.1178 | 171.09 | Q | | | | V |
| 20+55 | 529.2811 | 168.91 | Q | | | | V |
| 21+ 0 | 530.3990 | 162.32 | Q | | | | V |
| 21+ 5 | 531.4964 | 159.34 | Q | | | | V |
| 21+10 | 532.5763 | 156.80 | Q | | | | V |
| 21+15 | 533.6400 | 154.45 | Q | | | | V |
| 21+20 | 534.6877 | 152.13 | Q | | | | V |
| 21+25 | 535.7200 | 149.89 | Q | | | | V |
| 21+30 | 536.7362 | 147.56 | Q | | | | V |
| 21+35 | 537.7371 | 145.33 | Q | | | | V |
| 21+40 | 538.7247 | 143.40 | Q | | | | V |
| 21+45 | 539.6996 | 141.56 | Q | | | | V |
| 21+50 | 540.6623 | 139.79 | Q | | | | V |
| 21+55 | 541.6131 | 138.05 | Q | | | | V |
| 22+ 0 | 542.5527 | 136.42 | Q | | | | V |
| 22+ 5 | 543.4814 | 134.85 | Q | | | | V |
| 22+10 | 544.3996 | 133.33 | Q | | | | V |
| 22+15 | 545.3076 | 131.85 | Q | | | | V |
| 22+20 | 546.2058 | 130.42 | Q | | | | V |
| 22+25 | 547.0944 | 129.02 | Q | | | | V |
| 22+30 | 547.9737 | 127.67 | Q | | | | V |
| 22+35 | 548.8440 | 126.36 | Q | | | | V |
| 22+40 | 549.7055 | 125.09 | Q | | | | V |
| 22+45 | 550.5584 | 123.85 | Q | | | | V |
| 22+50 | 551.4031 | 122.64 | Q | | | | V |
| 22+55 | 552.2396 | 121.46 | Q | | | | V |
| 23+ 0 | 553.0682 | 120.31 | Q | | | | V |
| 23+ 5 | 553.8891 | 119.19 | Q | | | | V |
| 23+10 | 554.7024 | 118.10 | Q | | | | V |
| 23+15 | 555.5084 | 117.03 | Q | | | | V |
| 23+20 | 556.3073 | 115.99 | Q | | | | V |
| 23+25 | 557.0991 | 114.97 | Q | | | | V |
| 23+30 | 557.8840 | 113.98 | Q | | | | V |
| 23+35 | 558.6623 | 113.00 | Q | | | | V |
| 23+40 | 559.4340 | 112.05 | Q | | | | V |
| 23+45 | 560.1993 | 111.12 | Q | | | | V |
| 23+50 | 560.9583 | 110.21 | Q | | | | V |
| 23+55 | 561.7111 | 109.32 | Q | | | | V |
| 24+ 0 | 562.4580 | 108.44 | Q | | | | V |
| 24+ 5 | 563.1939 | 106.86 | Q | | | | V |
| 24+10 | 563.9126 | 104.35 | Q | | | | V |
| 24+15 | 564.6096 | 101.21 | Q | | | | V |
| 24+20 | 565.2806 | 97.42 | Q | | | | V |
| 24+25 | 565.9208 | 92.96 | Q | | | | V |
| 24+30 | 566.5203 | 87.04 | Q | | | | V |
| 24+35 | 567.0682 | 79.56 | Q | | | | V |
| 24+40 | 567.5403 | 68.55 | Q | | | | V |
| 24+45 | 567.9039 | 52.80 | Q | | | | V |
| 24+50 | 568.2101 | 44.46 | Q | | | | V |
| 24+55 | 568.4775 | 38.82 | Q | | | | V |
| 25+ 0 | 568.7139 | 34.33 | Q | | | | V |
| 25+ 5 | 568.9241 | 30.52 | Q | | | | V |
| 25+10 | 569.1128 | 27.41 | Q | | | | V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+15 | 569.2814 | 24.47 | Q | \| | \| | \| | V\| |
| 25+20 | 569.4327 | 21.97 | Q | \| | \| | \| | V\| |
| 25+25 | 569.5682 | 19.67 | Q | \| | \| | \| | V\| |
| 25+30 | 569.6899 | 17.67 | Q | \| | \| | \| | V\| |
| 25+35 | 569.7991 | 15.86 | Q | \| | \| | \| | V\| |
| 25+40 | 569.8970 | 14.22 | Q | \| | \| | \| | V\| |
| 25+45 | 569.9846 | 12.71 | Q | \| | \| | \| | V\| |
| 25+50 | 570.0627 | 11.34 | Q | \| | \| | \| | V\| |
| 25+55 | 570.1325 | 10.13 | Q | \| | \| | \| | V\| |
| 26+ 0 | 570.1944 | 9.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 570.2494 | 7.99 | Q | \| | \| | \| | V\| |
| 26+10 | 570.2980 | 7.04 | Q | \| | \| | \| | V\| |
| 26+15 | 570.3409 | 6.24 | Q | \| | \| | \| | V\| |
| 26+20 | 570.3786 | 5.48 | Q | \| | \| | \| | V\| |
| 26+25 | 570.4121 | 4.86 | Q | \| | \| | \| | V\| |
| 26+30 | 570.4415 | 4.27 | Q | \| | \| | \| | V\| |
| 26+35 | 570.4673 | 3.75 | Q | \| | \| | \| | V\| |
| 26+40 | 570.4897 | 3.26 | Q | \| | \| | \| | V\| |
| 26+45 | 570.5095 | 2.87 | Q | \| | \| | \| | V\| |
| 26+50 | 570.5269 | 2.52 | Q | \| | \| | \| | V\| |
| 26+55 | 570.5428 | 2.31 | Q | \| | \| | \| | V\| |
| 27+ 0 | 570.5575 | 2.13 | Q | \| | \| | \| | V\| |
| 27+ 5 | 570.5710 | 1.97 | Q | \| | \| | \| | V\| |
| 27+10 | 570.5834 | 1.80 | Q | \| | \| | \| | V\| |
| 27+15 | 570.5948 | 1.65 | Q | \| | \| | \| | V\| |
| 27+20 | 570.6051 | 1.51 | Q | \| | \| | \| | V\| |
| 27+25 | 570.6146 | 1.37 | Q | \| | \| | \| | V\| |
| 27+30 | 570.6231 | 1.23 | Q | \| | \| | \| | V\| |
| 27+35 | 570.6308 | 1.12 | Q | \| | \| | \| | V\| |
| 27+40 | 570.6379 | 1.03 | Q | \| | \| | \| | V\| |
| 27+45 | 570.6444 | 0.95 | Q | \| | \| | \| | V\| |
| 27+50 | 570.6503 | 0.86 | Q | \| | \| | \| | V\| |
| 27+55 | 570.6557 | 0.78 | Q | \| | \| | \| | V\| |
| 28+ 0 | 570.6603 | 0.68 | Q | \| | \| | \| | V\| |
| 28+ 5 | 570.6643 | 0.58 | Q | \| | \| | \| | V\| |
| 28+10 | 570.6676 | 0.48 | Q | \| | \| | \| | V\| |
| 28+15 | 570.6702 | 0.38 | Q | \| | \| | \| | V\| |
| 28+20 | 570.6725 | 0.32 | Q | \| | \| | \| | V\| |
| 28+25 | 570.6743 | 0.27 | Q | \| | \| | \| | V\| |
| 28+30 | 570.6758 | 0.22 | Q | \| | \| | \| | V\| |
| 28+35 | 570.6769 | 0.16 | Q | \| | \| | \| | V\| |
| 28+40 | 570.6778 | 0.13 | Q | \| | \| | \| | V\| |
| 28+45 | 570.6785 | 0.10 | Q | \| | \| | \| | V\| |
| 28+50 | 570.6789 | 0.07 | Q | \| | \| | \| | V\| |
| 28+55 | 570.6791 | 0.03 | Q | \| | \| | \| | V\| |
| 29+ 0 | 570.6793 | 0.02 | Q | \| | \| | \| | V\| |
| 29+ 5 | 570.6794 | 0.02 | Q | \| | \| | \| | V\| |
| 29+10 | 570.6795 | 0.01 | Q | \| | \| | \| | V\| |
| 29+15 | 570.6795 | 0.01 | Q | \| | \| | \| | V\| |
| 29+20 | 570.6796 | 0.01 | Q | \| | \| | \| | V\| |
| 29+25 | 570.6796 | 0.00 | Q | \| | \| | \| | V\| |

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**********HYDROGRAPH DATA**********

Number of intervals = 353
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2799.507 (CFS)
Total volume = 570.680 (Ac.Ft)

Status of hydrographs being held in storage

| Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|

```
        Peak (CFS)   2799.507     0.000     0.000     0.000     0.000
        Vol (Ac.Ft)    570.680     0.000     0.000     0.000     0.000
******************************************************************************

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Process from Point/Station        1.000 to Point/Station        1.100
**** STREAM ROUTING SCS CONVEX METHOD ****
______________________________________________________________________________
HYDROGRAPH STREAM ROUTING DATA:
Length of stream =  41975.00 (Ft.)
Elevation difference = 1032.40 (Ft.)
Slope of channel =  0.024596 (Vert/Horiz)
Channel type - Improved Channel


Channel length = 41975.00(Ft.)     Elevation difference = 1032.40(Ft.)
Channel evaluation using mean flow rate of hydrograph
Channel base width  =  100.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Manning's 'N'    = 0.035
Maximum depth of channel  =    3.000(Ft.)
Flow(q) thru subarea =    268.931(CFS)
Depth of flow =     0.580(Ft.)
Average velocity =     4.586(Ft/s)
Total flow rate =   268.931(CFS)
Channel flow top width =  102.319(Ft.)
Depth of flow in channel =   0.58(Ft.)
Total number of channels (same dimensions) = 1
Flow Velocity =    4.59(Ft/s)
Travel time  =    0.00 min.
Individual channel flow =  268.931(CFS)
Total capacity of improved channels =    268.931(CFS)
Critical Depth in Channel =    0.61(Ft.)


Channel evaluation using maximum flow rate of hydrograph
Flow(q) thru subarea =   2799.507(CFS)
Depth of flow =     2.353(Ft.)
Average velocity =    11.363(Ft/s)
Total flow rate =  2799.507(CFS)
Channel flow top width =  109.412(Ft.)
Depth of flow in channel =   2.35(Ft.)
Total number of channels (same dimensions) = 1
Flow Velocity =   11.36(Ft/s)
Travel time  =    0.00 min.
Individual channel flow = 2799.507(CFS)
Total capacity of improved channels =   2799.507(CFS)
Critical Depth in Channel =    2.84(Ft.)


********************** SCS CONVEX CHANNEL ROUTING ********************
Convex method of stream routing  data items:
Using equation: Outflow =
O(t+dt) = (1-c*)O(t+dt-dt*) + Input(c*)
          where c* = 1 - (1-c)^e and dt = c(length)/velocity
```

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          c(v/v+1.7) =   0.8699   Travel time =  61.57 (min.)
        dt*(unit time interval) =   5.00(min.),  e=   0.3956
        dt(routing time-step) =  53.56 (min.),   c* =   0.5536

     Output hydrograph delayed by 0  unit time increments


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                      P R I N T  O F  S T O R M
                   R u n o f f     H y d r o g r a p h
     ---------------------------------------------------------------------
                Hydrograph in   5   Minute intervals (CFS)

     ---------------------------------------------------------------------
Time(h+m) Out = O(CFS) In = I  0      699.9    1399.8    2099.6    2799.5
-----------------------------------------------------------------------
  0+ 5       0.3668      0.73  O         |         |         |         |
  0+10       1.4093      2.41  O         |         |         |         |
  0+15       3.1403      4.76  O         |         |         |         |
  0+20       5.5567      7.79  O         |         |         |         |
  0+25       8.6766     11.54  O         |         |         |         |
  0+30      12.9123     16.82  O         |         |         |         |
  0+35      18.5357     23.71  O         |         |         |         |
  0+40      26.6837     34.24  O         |         |         |         |
  0+45      38.5876     49.62  O         |         |         |         |
  0+50      48.7724     57.74  O         |         |         |         |
  0+55      56.5027     63.25  O         |         |         |         |
  1+ 0      62.4595     67.68  O         |         |         |         |
  1+ 5      67.2483     71.46  OI        |         |         |         |
  1+10      71.1566     74.60  |O        |         |         |         |
  1+15      74.5676     77.60  |O        |         |         |         |
  1+20      77.5429     80.18  |O        |         |         |         |
  1+25      80.2253     82.61  |O        |         |         |         |
  1+30      82.6223     84.75  |O        |         |         |         |
  1+35      84.8006     86.74  |O        |         |         |         |
  1+40      86.7972     88.58  |O        |         |         |         |
  1+45      88.6485     90.30  |O        |         |         |         |
  1+50      90.3684     91.90  |O        |         |         |         |
  1+55      91.9547     93.37  |O        |         |         |         |
  2+ 0      93.4402     94.77  |O        |         |         |         |
  2+ 5      94.8253     96.06  |O        |         |         |         |
  2+10      96.1323     97.30  |O        |         |         |         |
  2+15      97.3431     98.42  |O        |         |         |         |
  2+20      98.4820     99.50  |O        |         |         |         |
  2+25      99.5278    100.46  |O        |         |         |         |
  2+30     100.5110    101.39  |O        |         |         |         |
  2+35     101.4373    102.27  |O        |         |         |         |
  2+40     102.3217    103.11  |O        |         |         |         |
  2+45     103.1435    103.88  |O        |         |         |         |
  2+50     103.9140    104.60  |O        |         |         |         |
  2+55     104.6023    105.21  |O        |         |         |         |
  3+ 0     105.2219    105.77  |O        |         |         |         |
  3+ 5     105.8159    106.35  |O        |         |         |         |
  3+10     106.3960    106.92  |O        |         |         |         |
  3+15     106.9699    107.49  |O        |         |         |         |
  3+20     107.5321    108.04  |O        |         |         |         |
  3+25     108.0961    108.60  |O        |         |         |         |
  3+30     108.6587    109.16  |O        |         |         |         |
  3+35     109.2192    109.72  |O        |         |         |         |
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|---|---|---|---|---|---|---|---|
| 3+40 | 109.7601 | 110.24 | O | | | | |
| 3+45 | 110.2986 | 110.78 | O | | | | |
| 3+50 | 110.8334 | 111.31 | O | | | | |
| 3+55 | 111.3767 | 111.87 | O | | | | |
| 4+ 0 | 111.9278 | 112.42 | O | | | | |
| 4+ 5 | 112.4921 | 113.00 | O | | | | |
| 4+10 | 113.0597 | 113.57 | O | | | | |
| 4+15 | 113.6355 | 114.15 | O | | | | |
| 4+20 | 114.1958 | 114.70 | O | | | | |
| 4+25 | 114.7531 | 115.25 | O | | | | |
| 4+30 | 115.3059 | 115.80 | O | | | | |
| 4+35 | 115.8656 | 116.37 | O | | | | |
| 4+40 | 116.4180 | 116.91 | O | | | | |
| 4+45 | 116.9724 | 117.47 | O | | | | |
| 4+50 | 117.5247 | 118.02 | O | | | | |
| 4+55 | 118.0909 | 118.60 | O | | | | |
| 5+ 0 | 118.6437 | 119.14 | O | | | | |
| 5+ 5 | 119.1976 | 119.70 | O | | | | |
| 5+10 | 119.7492 | 120.25 | O | | | | |
| 5+15 | 120.3098 | 120.81 | O | | | | |
| 5+20 | 120.8715 | 121.38 | O | | | | |
| 5+25 | 121.4441 | 121.96 | O | | | | |
| 5+30 | 122.0177 | 122.53 | O | | | | |
| 5+35 | 122.6015 | 123.13 | O | | | | |
| 5+40 | 123.1868 | 123.71 | O | | | | |
| 5+45 | 123.7837 | 124.32 | O | | | | |
| 5+50 | 124.3830 | 124.92 | O | | | | |
| 5+55 | 124.9946 | 125.55 | O | | | | |
| 6+ 0 | 125.6088 | 126.16 | O | | | | |
| 6+ 5 | 126.2358 | 126.80 | O | | | | |
| 6+10 | 126.8657 | 127.43 | O | | | | |
| 6+15 | 127.5088 | 128.09 | O | | | | |
| 6+20 | 128.1549 | 128.74 | O | | | | |
| 6+25 | 128.8149 | 129.41 | O | | | | |
| 6+30 | 129.4780 | 130.07 | O | | | | |
| 6+35 | 130.1554 | 130.77 | O | | | | |
| 6+40 | 130.8363 | 131.45 | O | | | | |
| 6+45 | 131.5320 | 132.16 | O | | | | |
| 6+50 | 132.2314 | 132.86 | O | | | | |
| 6+55 | 132.9462 | 133.59 | O | | | | |
| 7+ 0 | 133.6648 | 134.31 | O | | | | |
| 7+ 5 | 134.3995 | 135.06 | O | | | | |
| 7+10 | 135.1384 | 135.80 | O | | | | |
| 7+15 | 135.8940 | 136.58 | O | | | | |
| 7+20 | 136.6540 | 137.34 | O | | | | |
| 7+25 | 137.4314 | 138.13 | O | | | | |
| 7+30 | 138.2135 | 138.92 | O | | | | |
| 7+35 | 139.0137 | 139.74 | O | | | | |
| 7+40 | 139.8190 | 140.54 | OI | | | | |
| 7+45 | 140.6431 | 141.39 | O | | | | |
| 7+50 | 141.4728 | 142.22 | O | | | | |
| 7+55 | 142.3220 | 143.09 | O | | | | |
| 8+ 0 | 143.1772 | 143.95 | O | | | | |
| 8+ 5 | 144.0527 | 144.84 | O | | | | |
| 8+10 | 144.9347 | 145.73 | O | | | | |
| 8+15 | 145.8380 | 146.65 | O | | | | |
| 8+20 | 146.7481 | 147.57 | O | | | | |
| 8+25 | 147.6806 | 148.52 | O | | | | |
| 8+30 | 148.6204 | 149.47 | O | | | | |

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|---|---|---|---|---|---|---|
| 8+35 | 149.5835 | 150.45 | O | | | |
| 8+40 | 150.5545 | 151.43 | O | | | |
| 8+45 | 151.5501 | 152.45 | O | | | |
| 8+50 | 152.5540 | 153.46 | O | | | |
| 8+55 | 153.5837 | 154.51 | O | | | |
| 9+ 0 | 154.6225 | 155.56 | O | | | |
| 9+ 5 | 155.6882 | 156.65 | O | | | |
| 9+10 | 156.7638 | 157.73 | O | | | |
| 9+15 | 157.8677 | 158.86 | O | | | |
| 9+20 | 158.9822 | 159.99 | O | | | |
| 9+25 | 160.1265 | 161.16 | O | | | |
| 9+30 | 161.2823 | 162.32 | O | | | |
| 9+35 | 162.4694 | 163.54 | O | | | |
| 9+40 | 163.6690 | 164.75 | O | | | |
| 9+45 | 164.9016 | 166.01 | O | | | |
| 9+50 | 166.1477 | 167.27 | O | | | |
| 9+55 | 167.4287 | 168.58 | O | | | |
| 10+ 0 | 168.7243 | 169.89 | O | | | |
| 10+ 5 | 170.0569 | 171.26 | O | | | |
| 10+10 | 171.4051 | 172.62 | O | | | |
| 10+15 | 172.7927 | 174.04 | O | | | |
| 10+20 | 174.1973 | 175.46 | O | | | |
| 10+25 | 175.6435 | 176.95 | O | | | |
| 10+30 | 177.1083 | 178.43 | O | | | |
| 10+35 | 178.6174 | 179.98 | O | | | |
| 10+40 | 180.1467 | 181.52 | O | | | |
| 10+45 | 181.7232 | 183.15 | O | | | |
| 10+50 | 183.3216 | 184.76 | O | | | |
| 10+55 | 184.9704 | 186.46 | O | | | |
| 11+ 0 | 186.6433 | 188.15 | O | | | |
| 11+ 5 | 188.3700 | 189.93 | O | | | |
| 11+10 | 190.1230 | 191.70 | O | | | |
| 11+15 | 191.9337 | 193.57 | O | | | |
| 11+20 | 193.7733 | 195.43 | O | | | |
| 11+25 | 195.6749 | 197.39 | O | | | |
| 11+30 | 197.6081 | 199.35 | O | | | |
| 11+35 | 199.6081 | 201.41 | O | | | |
| 11+40 | 201.6431 | 203.48 | O | | | |
| 11+45 | 203.7500 | 205.65 | O | | | |
| 11+50 | 205.8956 | 207.83 | O | | | |
| 11+55 | 208.1191 | 210.13 | OI | | | |
| 12+ 0 | 210.3853 | 212.43 | O | | | |
| 12+ 5 | 212.7384 | 214.86 | O | | | |
| 12+10 | 215.1432 | 217.31 | O | | | |
| 12+15 | 217.6443 | 219.90 | O | | | |
| 12+20 | 220.2026 | 222.51 | O | | | |
| 12+25 | 222.8659 | 225.27 | O | | | |
| 12+30 | 225.5954 | 228.06 | O | | | |
| 12+35 | 228.4437 | 231.02 | O | | | |
| 12+40 | 231.3742 | 234.02 | O | | | |
| 12+45 | 234.4493 | 237.23 | O | | | |
| 12+50 | 237.5891 | 240.42 | O | | | |
| 12+55 | 240.8483 | 243.79 | O | | | |
| 13+ 0 | 244.1817 | 247.19 | O | | | |
| 13+ 5 | 247.6572 | 250.80 | O | | | |
| 13+10 | 251.2241 | 254.44 | O | | | |
| 13+15 | 254.9546 | 258.33 | O | | | |
| 13+20 | 258.7932 | 262.25 | O | | | |
| 13+25 | 262.8170 | 266.45 | O | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 13+30 | 266.9666 | 270.71 | O | | | | |
| 13+35 | 271.3262 | 275.27 | O | | | | |
| 13+40 | 275.8323 | 279.90 | O | | | | |
| 13+45 | 280.5782 | 284.87 | O | | | | |
| 13+50 | 285.4957 | 289.93 | O | | | | |
| 13+55 | 290.6885 | 295.38 | O | | | | |
| 14+ 0 | 296.0836 | 300.95 | O | | | | |
| 14+ 5 | 302.3076 | 307.98 | O | | | | |
| 14+10 | 309.7131 | 316.48 | O | | | | |
| 14+15 | 318.4544 | 326.43 | O | | | | |
| 14+20 | 328.4477 | 337.54 | O | | | | |
| 14+25 | 339.8741 | 350.28 | OI | | | | |
| 14+30 | 353.2220 | 365.40 | O | | | | |
| 14+35 | 369.0521 | 383.51 | O | | | | |
| 14+40 | 388.8595 | 407.02 | O | | | | |
| 14+45 | 414.5768 | 438.22 | OI | | | | |
| 14+50 | 438.5175 | 459.84 | O | | | | |
| 14+55 | 459.9112 | 478.94 | O | | | | |
| 15+ 0 | 479.5828 | 497.14 | OI | | | | |
| 15+ 5 | 498.6825 | 515.83 | O | | | | |
| 15+10 | 517.5014 | 534.41 | O | | | | |
| 15+15 | 536.9729 | 554.55 | O | | | | |
| 15+20 | 557.0994 | 575.26 | OI | | | | |
| 15+25 | 577.3496 | 595.57 | O | | | | |
| 15+30 | 596.6205 | 613.87 | O | | | | |
| 15+35 | 615.6768 | 632.81 | OI | | | | |
| 15+40 | 634.6547 | 651.72 | O | | | | |
| 15+45 | 654.7820 | 673.00 | O | | | | |
| 15+50 | 675.2648 | 693.71 | O | | | | |
| 15+55 | 698.4663 | 719.59 | OI | | | | |
| 16+ 0 | 725.0177 | 749.19 | O | | | | |
| 16+ 5 | 788.4279 | 848.86 | OI | | | | |
| 16+10 | 896.5306 | 997.57 | O I | | | | |
| 16+15 | 1019.4169 | 1130.94 | O I | | | | |
| 16+20 | 1152.1593 | 1272.39 | O I | | | | |
| 16+25 | 1300.9822 | 1436.27 | O I | | | | |
| 16+30 | 1503.6877 | 1690.89 | O I | | | | |
| 16+35 | 1749.2757 | 1973.68 | O I | | | | |
| 16+40 | 2088.2168 | 2401.42 | O | I | | | |
| 16+45 | 2461.4379 | 2799.51 | O | I | | | |
| 16+50 | 2216.4226 | 1938.50 | I | O | | | |
| 16+55 | 1873.3498 | 1561.56 | I O | | | | |
| 17+ 0 | 1612.1548 | 1385.10 | I O | | | | |
| 17+ 5 | 1437.2893 | 1287.16 | I O | | | | |
| 17+10 | 1299.1026 | 1177.45 | I O | | | | |
| 17+15 | 1200.6495 | 1115.49 | I O | | | | |
| 17+20 | 1110.9871 | 1030.79 | IO | | | | |
| 17+25 | 1036.8333 | 971.51 | IO | | | | |
| 17+30 | 965.2829 | 901.01 | IO | | | | |
| 17+35 | 901.2498 | 844.33 | O | | | | |
| 17+40 | 840.8274 | 786.74 | IO | | | | |
| 17+45 | 780.8440 | 726.90 | IO | | | | |
| 17+50 | 727.2638 | 679.66 | IO | | | | |
| 17+55 | 678.2623 | 634.54 | O | | | | |
| 18+ 0 | 637.3794 | 601.32 | IO | | | | |
| 18+ 5 | 599.1087 | 564.85 | O | | | | |
| 18+10 | 566.1188 | 536.91 | IO | | | | |
| 18+15 | 532.5909 | 502.33 | O | | | | |
| 18+20 | 503.8146 | 478.38 | IO | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 18+25 | 473.8651 | 446.77 | O | | | |
| 18+30 | 449.1308 | 427.38 | O | | | |
| 18+35 | 425.5154 | 404.32 | IO | | | |
| 18+40 | 404.8282 | 386.48 | O | | | |
| 18+45 | 381.9799 | 361.20 | O | | | |
| 18+50 | 361.4310 | 343.18 | IO | | | |
| 18+55 | 338.2966 | 317.22 | O | | | |
| 19+ 0 | 318.8740 | 301.77 | O | | | |
| 19+ 5 | 304.6360 | 292.27 | O | | | |
| 19+10 | 293.3970 | 283.52 | O | | | |
| 19+15 | 282.9512 | 273.60 | IO | | | |
| 19+20 | 273.2497 | 264.59 | O | | | |
| 19+25 | 264.8193 | 257.35 | O | | | |
| 19+30 | 257.1193 | 250.25 | O | | | |
| 19+35 | 248.9668 | 241.59 | O | | | |
| 19+40 | 240.2968 | 232.45 | O | | | |
| 19+45 | 233.2610 | 227.09 | O | | | |
| 19+50 | 227.4508 | 222.32 | O | | | |
| 19+55 | 222.6469 | 218.41 | O | | | |
| 20+ 0 | 218.8251 | 215.47 | O | | | |
| 20+ 5 | 214.9145 | 211.38 | O | | | |
| 20+10 | 210.7583 | 207.00 | IO | | | |
| 20+15 | 206.1704 | 202.01 | O | | | |
| 20+20 | 200.1528 | 194.61 | O | | | |
| 20+25 | 194.8428 | 190.14 | O | | | |
| 20+30 | 190.4423 | 186.56 | O | | | |
| 20+35 | 186.4924 | 182.97 | O | | | |
| 20+40 | 182.0545 | 178.01 | O | | | |
| 20+45 | 177.8840 | 174.16 | O | | | |
| 20+50 | 174.2832 | 171.09 | O | | | |
| 20+55 | 171.4188 | 168.91 | O | | | |
| 21+ 0 | 166.7231 | 162.32 | O | | | |
| 21+ 5 | 162.7915 | 159.34 | O | | | |
| 21+10 | 159.6041 | 156.80 | O | | | |
| 21+15 | 156.8707 | 154.45 | O | | | |
| 21+20 | 154.3654 | 152.13 | O | | | |
| 21+25 | 152.0039 | 149.89 | O | | | |
| 21+30 | 149.6621 | 147.56 | O | | | |
| 21+35 | 147.3774 | 145.33 | O | | | |
| 21+40 | 145.2744 | 143.40 | O | | | |
| 21+45 | 143.3136 | 141.56 | O | | | |
| 21+50 | 141.4522 | 139.79 | IO | | | |
| 21+55 | 139.6590 | 138.05 | O | | | |
| 22+ 0 | 137.9516 | 136.42 | O | | | |
| 22+ 5 | 136.3157 | 134.85 | O | | | |
| 22+10 | 134.7393 | 133.33 | O | | | |
| 22+15 | 133.2155 | 131.85 | O | | | |
| 22+20 | 131.7395 | 130.42 | O | | | |
| 22+25 | 130.3081 | 129.02 | O | | | |
| 22+30 | 128.9196 | 127.67 | O | | | |
| 22+35 | 127.5724 | 126.36 | O | | | |
| 22+40 | 126.2635 | 125.09 | O | | | |
| 22+45 | 124.9905 | 123.85 | O | | | |
| 22+50 | 123.7514 | 122.64 | O | | | |
| 22+55 | 122.5445 | 121.46 | O | | | |
| 23+ 0 | 121.3685 | 120.31 | O | | | |
| 23+ 5 | 120.2219 | 119.19 | O | | | |
| 23+10 | 119.1035 | 118.10 | O | | | |
| 23+15 | 118.0120 | 117.03 | O | | | |

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|---|---|---|---|---|---|---|---|
| 23+20 | 116.9464 | 115.99 | \|O | \| | \| | \| | \| |
| 23+25 | 115.9057 | 114.97 | \|O | \| | \| | \| | \| |
| 23+30 | 114.8888 | 113.98 | \|O | \| | \| | \| | \| |
| 23+35 | 113.8949 | 113.00 | \|O | \| | \| | \| | \| |
| 23+40 | 112.9231 | 112.05 | \|O | \| | \| | \| | \| |
| 23+45 | 111.9727 | 111.12 | \|O | \| | \| | \| | \| |
| 23+50 | 111.0427 | 110.21 | \|O | \| | \| | \| | \| |
| 23+55 | 110.1325 | 109.32 | \|O | \| | \| | \| | \| |
| 24+ 0 | 109.2414 | 108.44 | \|O | \| | \| | \| | \| |
| 24+ 5 | 108.0028 | 106.86 | \|O | \| | \| | \| | \| |
| 24+10 | 106.1112 | 104.35 | \|O | \| | \| | \| | \| |
| 24+15 | 103.5600 | 101.21 | \|O | \| | \| | \| | \| |
| 24+20 | 100.3586 | 97.42 | \|O | \| | \| | \| | \| |
| 24+25 | 96.4951 | 92.96 | \|O | \| | \| | \| | \| |
| 24+30 | 91.5646 | 87.04 | \|O | \| | \| | \| | \| |
| 24+35 | 85.3057 | 79.56 | \|O | \| | \| | \| | \| |
| 24+40 | 76.5974 | 68.55 | IO | \| | \| | \| | \| |
| 24+45 | 64.2343 | 52.80 | O | \| | \| | \| | \| |
| 24+50 | 53.7158 | 44.46 | O | \| | \| | \| | \| |
| 24+55 | 45.7627 | 38.82 | O | \| | \| | \| | \| |
| 25+ 0 | 39.6636 | 34.33 | O | \| | \| | \| | \| |
| 25+ 5 | 34.8001 | 30.52 | O | \| | \| | \| | \| |
| 25+10 | 30.8672 | 27.41 | O | \| | \| | \| | \| |
| 25+15 | 27.4780 | 24.47 | O | \| | \| | \| | \| |
| 25+20 | 24.5597 | 21.97 | O | \| | \| | \| | \| |
| 25+25 | 21.9708 | 19.67 | O | \| | \| | \| | \| |
| 25+30 | 19.6943 | 17.67 | O | \| | \| | \| | \| |
| 25+35 | 17.6663 | 15.86 | O | \| | \| | \| | \| |
| 25+40 | 15.8414 | 14.22 | O | \| | \| | \| | \| |
| 25+45 | 14.1871 | 12.71 | O | \| | \| | \| | \| |
| 25+50 | 12.6817 | 11.34 | O | \| | \| | \| | \| |
| 25+55 | 11.3320 | 10.13 | O | \| | \| | \| | \| |
| 26+ 0 | 10.0973 | 9.00 | O | \| | \| | \| | \| |
| 26+ 5 | 8.9826 | 7.99 | O | \| | \| | \| | \| |
| 26+10 | 7.9578 | 7.04 | O | \| | \| | \| | \| |
| 26+15 | 7.0466 | 6.24 | O | \| | \| | \| | \| |
| 26+20 | 6.2171 | 5.48 | O | \| | \| | \| | \| |
| 26+25 | 5.4961 | 4.86 | O | \| | \| | \| | \| |
| 26+30 | 4.8457 | 4.27 | O | \| | \| | \| | \| |
| 26+35 | 4.2658 | 3.75 | O | \| | \| | \| | \| |
| 26+40 | 3.7344 | 3.26 | O | \| | \| | \| | \| |
| 26+45 | 3.2782 | 2.87 | O | \| | \| | \| | \| |
| 26+50 | 2.8786 | 2.52 | O | \| | \| | \| | \| |
| 26+55 | 2.5725 | 2.31 | O | \| | \| | \| | \| |
| 27+ 0 | 2.3389 | 2.13 | O | \| | \| | \| | \| |
| 27+ 5 | 2.1409 | 1.97 | O | \| | \| | \| | \| |
| 27+10 | 1.9595 | 1.80 | O | \| | \| | \| | \| |
| 27+15 | 1.7941 | 1.65 | O | \| | \| | \| | \| |
| 27+20 | 1.6428 | 1.51 | O | \| | \| | \| | \| |
| 27+25 | 1.4992 | 1.37 | O | \| | \| | \| | \| |
| 27+30 | 1.3595 | 1.23 | O | \| | \| | \| | \| |
| 27+35 | 1.2314 | 1.12 | O | \| | \| | \| | \| |
| 27+40 | 1.1251 | 1.03 | O | \| | \| | \| | \| |
| 27+45 | 1.0307 | 0.95 | O | \| | \| | \| | \| |
| 27+50 | 0.9420 | 0.86 | O | \| | \| | \| | \| |
| 27+55 | 0.8543 | 0.78 | O | \| | \| | \| | \| |
| 28+ 0 | 0.7609 | 0.68 | O | \| | \| | \| | \| |
| 28+ 5 | 0.6641 | 0.58 | O | \| | \| | \| | \| |
| 28+10 | 0.5662 | 0.48 | O | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 28+15 | 0.4702 | 0.38 | Q | | | | |
| 28+20 | 0.3919 | 0.32 | Q | | | | |
| 28+25 | 0.3268 | 0.27 | Q | | | | |
| 28+30 | 0.2683 | 0.22 | Q | | | | |
| 28+35 | 0.2130 | 0.16 | Q | | | | |
| 28+40 | 0.1671 | 0.13 | Q | | | | |
| 28+45 | 0.1296 | 0.10 | Q | | | | |
| 28+50 | 0.0962 | 0.07 | Q | | | | |
| 28+55 | 0.0595 | 0.03 | Q | | | | |
| 29+ 0 | 0.0382 | 0.02 | Q | | | | |
| 29+ 5 | 0.0265 | 0.02 | Q | | | | |
| 29+10 | 0.0192 | 0.01 | Q | | | | |
| 29+15 | 0.0139 | 0.01 | Q | | | | |
| 29+20 | 0.0095 | 0.01 | Q | | | | |
| 29+25 | 0.0054 | 0.00 | Q | | | | |
| 29+30 | 0.0025 | 0.00 | Q | | | | |
| 29+35 | 0.0011 | 0.00 | Q | | | | |
| 29+40 | 0.0000 | 0.00 | Q | | | | |

**********HYDROGRAPH DATA**********

Number of intervals = 356
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2461.438 (CFS)
Total volume = 570.680 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 1.100 to Point/Station 1.100
**** ADD/COMBINE/RECOVER HYDROGRAPHS ****

********** HYDROGRAPH INFORMATION **********

From study/file name: EX49.rte

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P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals (CFS)

| Time(h+m) | Add q(CFS) | Tot. Q | 0 | 2035.0 | 4070.1 | 6105.1 | 8140.2 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.9294 | 1.30 | Q | | | | |
| 0+10 | 2.7904 | 4.20 | Q | | | | |
| 0+15 | 4.6672 | 7.81 | Q | | | | |
| 0+20 | 7.3601 | 12.92 | Q | | | | |
| 0+25 | 10.7274 | 19.40 | Q | | | | |
| 0+30 | 14.1698 | 27.08 | Q | | | | |
| 0+35 | 18.5711 | 37.11 | Q | | | | |
| 0+40 | 23.3918 | 50.08 | Q | | | | |
| 0+45 | 28.4224 | 67.01 | Q | | | | |
| 0+50 | 34.6335 | 83.41 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+55 | 41.1601 | 97.66 | Q | | | | |
| 1+ 0 | 48.2950 | 110.75 | Q | | | | |
| 1+ 5 | 59.3319 | 126.58 | Q | | | | |
| 1+10 | 71.1265 | 142.28 | Q | | | | |
| 1+15 | 84.3779 | 158.95 | Q | | | | |
| 1+20 | 102.4166 | 179.96 | Q | | | | |
| 1+25 | 121.0297 | 201.25 | Q | | | | |
| 1+30 | 139.2222 | 221.84 | qQ | | | | |
| 1+35 | 156.1204 | 240.92 | qQ | | | | |
| 1+40 | 173.0951 | 259.89 | qQ | | | | |
| 1+45 | 189.8342 | 278.48 | qQ | | | | |
| 1+50 | 206.4987 | 296.87 | \|Q | | | | |
| 1+55 | 222.9377 | 314.89 | \|Q | | | | |
| 2+ 0 | 236.8592 | 330.30 | \|Q | | | | |
| 2+ 5 | 248.5281 | 343.35 | \|Q | | | | |
| 2+10 | 260.0674 | 356.20 | \|Q | | | | |
| 2+15 | 269.8300 | 367.17 | \|Q | | | | |
| 2+20 | 278.6401 | 377.12 | \|Q | | | | |
| 2+25 | 287.4578 | 386.99 | \|Q | | | | |
| 2+30 | 295.3021 | 395.81 | \|Q | | | | |
| 2+35 | 302.6664 | 404.10 | \|Q | | | | |
| 2+40 | 310.0303 | 412.35 | \|qQ | | | | |
| 2+45 | 316.8233 | 419.97 | \|qQ | | | | |
| 2+50 | 323.3266 | 427.24 | \|qQ | | | | |
| 2+55 | 329.7990 | 434.40 | \|qQ | | | | |
| 3+ 0 | 335.8768 | 441.10 | \|qQ | | | | |
| 3+ 5 | 341.8873 | 447.70 | \|qQ | | | | |
| 3+10 | 347.8351 | 454.23 | \|qQ | | | | |
| 3+15 | 353.3303 | 460.30 | \|qQ | | | | |
| 3+20 | 358.7902 | 466.32 | \|qQ | | | | |
| 3+25 | 364.1511 | 472.25 | \|qQ | | | | |
| 3+30 | 369.1323 | 477.79 | \|qQ | | | | |
| 3+35 | 374.1061 | 483.33 | \|qQ | | | | |
| 3+40 | 379.0709 | 488.83 | \|qQ | | | | |
| 3+45 | 383.9749 | 494.27 | \|qQ | | | | |
| 3+50 | 388.9066 | 499.74 | \|qQ | | | | |
| 3+55 | 393.5726 | 504.95 | \|qQ | | | | |
| 4+ 0 | 397.8454 | 509.77 | \|qQ | | | | |
| 4+ 5 | 402.1384 | 514.63 | \|qQ | | | | |
| 4+10 | 406.4609 | 519.52 | \|qQ | | | | |
| 4+15 | 410.8078 | 524.44 | \| Q | | | | |
| 4+20 | 415.1807 | 529.38 | \| Q | | | | |
| 4+25 | 419.2880 | 534.04 | \| Q | | | | |
| 4+30 | 423.2512 | 538.56 | \| Q | | | | |
| 4+35 | 427.2383 | 543.10 | \| Q | | | | |
| 4+40 | 431.2560 | 547.67 | \| Q | | | | |
| 4+45 | 435.2984 | 552.27 | \| Q | | | | |
| 4+50 | 439.3527 | 556.88 | \| Q | | | | |
| 4+55 | 443.2290 | 561.32 | \| Q | | | | |
| 5+ 0 | 447.0829 | 565.73 | \| Q | | | | |
| 5+ 5 | 450.9620 | 570.16 | \| Q | | | | |
| 5+10 | 454.8735 | 574.62 | \| Q | | | | |
| 5+15 | 458.8111 | 579.12 | \| Q | | | | |
| 5+20 | 462.7233 | 583.59 | \| Q | | | | |
| 5+25 | 466.4314 | 587.88 | \| Q | | | | |
| 5+30 | 470.1496 | 592.17 | \| Q | | | | |
| 5+35 | 473.8943 | 596.50 | \| Q | | | | |
| 5+40 | 477.6736 | 600.86 | \| Q | | | | |
| 5+45 | 481.4803 | 605.26 | \| Q | | | | |

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|---|---|---|---|---|---|---|---|
| 5+50 | 485.1864 | 609.57 | Q | | | | |
| 5+55 | 488.6839 | 613.68 | qQ | | | | |
| 6+ 0 | 492.2127 | 617.82 | qQ | | | | |
| 6+ 5 | 495.7696 | 622.01 | qQ | | | | |
| 6+10 | 499.3633 | 626.23 | qQ | | | | |
| 6+15 | 502.9856 | 630.49 | qQ | | | | |
| 6+20 | 506.5761 | 634.73 | qQ | | | | |
| 6+25 | 510.1464 | 638.96 | qQ | | | | |
| 6+30 | 513.7558 | 643.23 | qQ | | | | |
| 6+35 | 517.3961 | 647.55 | qQ | | | | |
| 6+40 | 521.0769 | 651.91 | qQ | | | | |
| 6+45 | 524.7816 | 656.31 | qQ | | | | |
| 6+50 | 528.4156 | 660.65 | qQ | | | | |
| 6+55 | 532.0471 | 664.99 | qQ | | | | |
| 7+ 0 | 535.7215 | 669.39 | qQ | | | | |
| 7+ 5 | 539.4303 | 673.83 | qQ | | | | |
| 7+10 | 543.1836 | 678.32 | qQ | | | | |
| 7+15 | 546.9559 | 682.85 | qQ | | | | |
| 7+20 | 550.6950 | 687.35 | qQ | | | | |
| 7+25 | 554.4611 | 691.89 | qQ | | | | |
| 7+30 | 558.2749 | 696.49 | qQ | | | | |
| 7+35 | 562.1273 | 701.14 | qQ | | | | |
| 7+40 | 566.0295 | 705.85 | qQ | | | | |
| 7+45 | 569.9026 | 710.55 | qQ | | | | |
| 7+50 | 573.6842 | 715.16 | qQ | | | | |
| 7+55 | 577.5031 | 719.83 | qQ | | | | |
| 8+ 0 | 581.3750 | 724.55 | qQ | | | | |
| 8+ 5 | 585.2905 | 729.34 | qQ | | | | |
| 8+10 | 589.2613 | 734.20 | qQ | | | | |
| 8+15 | 593.2778 | 739.12 | qQ | | | | |
| 8+20 | 597.3521 | 744.10 | qQ | | | | |
| 8+25 | 601.4743 | 749.15 | qQ | | | | |
| 8+30 | 605.6569 | 754.28 | qQ | | | | |
| 8+35 | 609.8898 | 759.47 | qQ | | | | |
| 8+40 | 614.1809 | 764.74 | Q | | | | |
| 8+45 | 618.4300 | 769.98 | Q | | | | |
| 8+50 | 622.7095 | 775.26 | Q | | | | |
| 8+55 | 627.0440 | 780.63 | Q | | | | |
| 9+ 0 | 631.4475 | 786.07 | Q | | | | |
| 9+ 5 | 635.9090 | 791.60 | Q | | | | |
| 9+10 | 640.4429 | 797.21 | Q | | | | |
| 9+15 | 645.0378 | 802.91 | Q | | | | |
| 9+20 | 649.7089 | 808.69 | Q | | | | |
| 9+25 | 654.4444 | 814.57 | qQ | | | | |
| 9+30 | 659.2599 | 820.54 | qQ | | | | |
| 9+35 | 664.1435 | 826.61 | qQ | | | | |
| 9+40 | 669.0714 | 832.74 | qQ | | | | |
| 9+45 | 673.9732 | 838.87 | qQ | | | | |
| 9+50 | 678.9589 | 845.11 | qQ | | | | |
| 9+55 | 684.0204 | 851.45 | qQ | | | | |
| 10+ 0 | 689.1752 | 857.90 | qQ | | | | |
| 10+ 5 | 694.4103 | 864.47 | qQ | | | | |
| 10+10 | 699.7440 | 871.15 | qQ | | | | |
| 10+15 | 705.1630 | 877.96 | qQ | | | | |
| 10+20 | 710.6865 | 884.88 | qQ | | | | |
| 10+25 | 716.3007 | 891.94 | qQ | | | | |
| 10+30 | 722.0255 | 899.13 | qQ | | | | |
| 10+35 | 727.8439 | 906.46 | qQ | | | | |
| 10+40 | 733.6980 | 913.84 | qQ | | | | |

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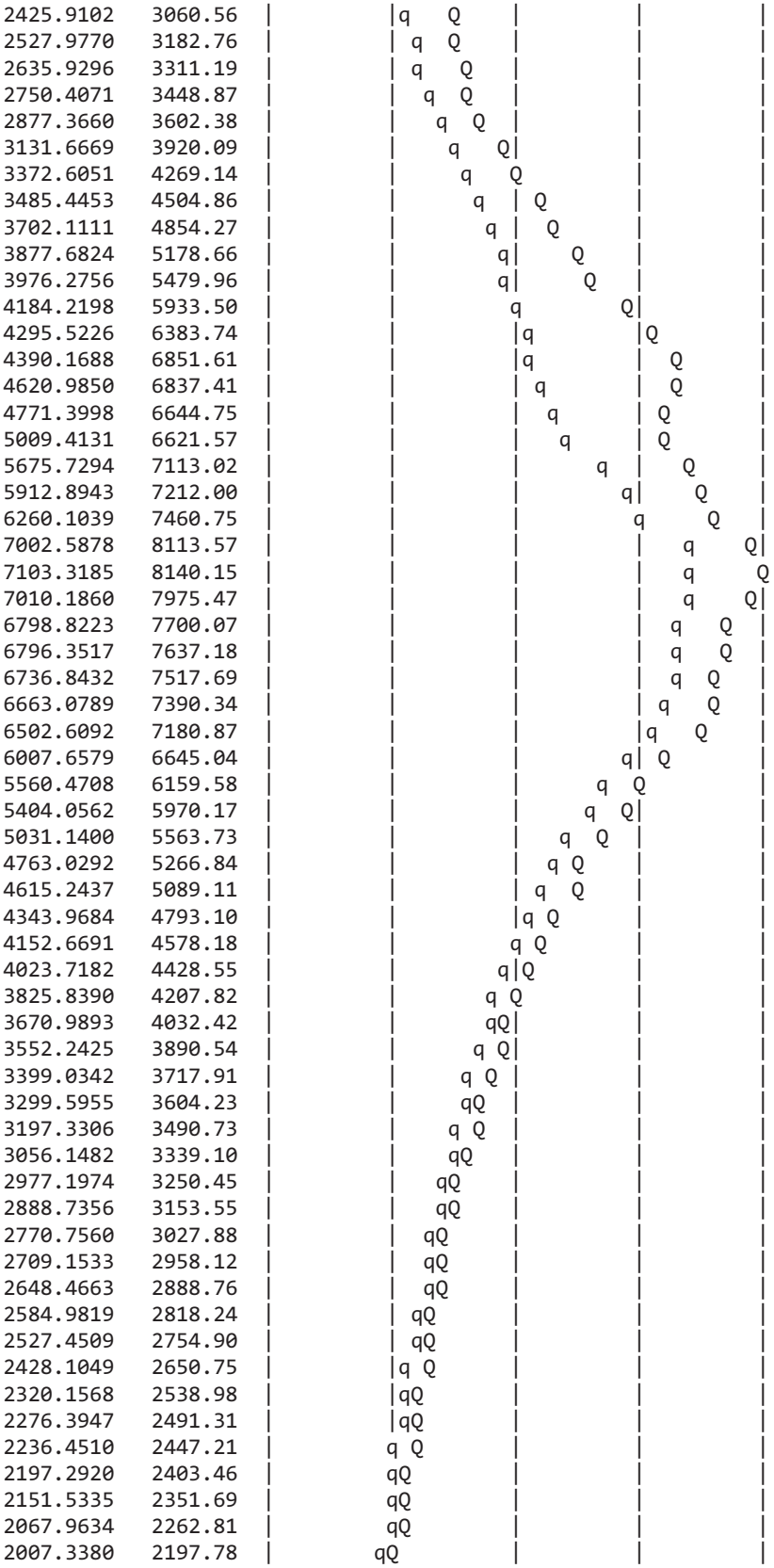
10+45     739.6186    921.34  |  qQ     |         |         |         |
10+50     745.6635    928.99  |  qQ     |         |         |         |
10+55     751.8183    936.79  |  qQ     |         |         |         |
11+ 0     758.1057    944.75  |  qQ     |         |         |         |
11+ 5     764.5106    952.88  |  qQ     |         |         |         |
11+10     771.0570    961.18  |  qQ     |         |         |         |
11+15     777.7294    969.66  |  qQ     |         |         |         |
11+20     784.5531    978.33  |  qQ     |         |         |         |
11+25     791.5123    987.19  |  qQ     |         |         |         |
11+30     798.6335    996.24  |  qQ     |         |         |         |
11+35     805.9051   1005.51  |  qQ     |         |         |         |
11+40     813.3633   1015.01  |  qQ     |         |         |         |
11+45     820.9800   1024.73  |   qQ    |         |         |         |
11+50     828.7837   1034.68  |   qQ    |         |         |         |
11+55     836.7580   1044.88  |   qQ    |         |         |         |
12+ 0     844.9339   1055.32  |   qQ    |         |         |         |
12+ 5     853.4699   1066.21  |   qQ    |         |         |         |
12+10     862.3997   1077.54  |   qQ    |         |         |         |
12+15     871.5350   1089.18  |   qQ    |         |         |         |
12+20     881.0618   1101.26  |   qQ    |         |         |         |
12+25     890.9369   1113.80  |   qQ    |         |         |         |
12+30     901.0857   1126.68  |   qQ    |         |         |         |
12+35     911.6532   1140.10  |   qQ    |         |         |         |
12+40     922.5809   1153.96  |   qQ    |         |         |         |
12+45     933.8156   1168.26  |   qQ    |         |         |         |
12+50     945.5834   1183.17  |   qQ    |         |         |         |
12+55     957.7060   1198.55  |   qQ    |         |         |         |
13+ 0     970.2857   1214.47  |   qQ    |         |         |         |
13+ 5     983.9271   1231.58  |   q Q   |         |         |         |
13+10     998.0913   1249.32  |   q Q   |         |         |         |
13+15    1012.8972   1267.85  |   q Q   |         |         |         |
13+20    1029.0267   1287.82  |    qQ   |         |         |         |
13+25    1045.6776   1308.49  |    qQ   |         |         |         |
13+30    1062.7036   1329.67  |    qQ   |         |         |         |
13+35    1079.8758   1351.20  |    qQ   |         |         |         |
13+40    1097.5858   1373.42  |    qQ   |         |         |         |
13+45    1115.7713   1396.35  |    qQ   |         |         |         |
13+50    1134.5373   1420.03  |    qQ   |         |         |         |
13+55    1153.8498   1444.54  |    q Q  |         |         |         |
14+ 0    1173.3611   1469.44  |    q Q  |         |         |         |
14+ 5    1196.7849   1499.09  |    q Q  |         |         |         |
14+10    1224.6174   1534.33  |     qQ  |         |         |         |
14+15    1252.9315   1571.39  |     qQ  |         |         |         |
14+20    1285.1439   1613.59  |     qQ  |         |         |         |
14+25    1320.8835   1660.76  |     q Q |         |         |         |
14+30    1357.7146   1710.94  |     q Q |         |         |         |
14+35    1399.2399   1768.29  |     q Q |         |         |         |
14+40    1443.5530   1832.41  |      q Q|         |         |         |
14+45    1489.7551   1904.33  |      q Q|         |         |         |
14+50    1541.8896   1980.41  |      q Q|         |         |         |
14+55    1596.6484   2056.56  |      q  Q         |         |         |
15+ 0    1655.2581   2134.84  |       q Q         |         |         |
15+ 5    1730.8707   2229.55  |       q Q         |         |         |
15+10    1811.3490   2328.85  |       q |Q        |         |         |
15+15    1899.5137   2436.49  |        q|Q        |         |         |
15+20    2008.8902   2565.99  |        q| Q       |         |         |
15+25    2117.4523   2694.80  |         q  Q      |         |         |
15+30    2221.6167   2818.24  |         q  Q      |         |         |
15+35    2324.0100   2939.69  |         |q  Q     |         |         |
```

| | | | |
|---|---|---|---|
| 15+40 | 2425.9102 | 3060.56 |  |
| 15+45 | 2527.9770 | 3182.76 | |
| 15+50 | 2635.9296 | 3311.19 | |
| 15+55 | 2750.4071 | 3448.87 | |
| 16+ 0 | 2877.3660 | 3602.38 | |
| 16+ 5 | 3131.6669 | 3920.09 | |
| 16+10 | 3372.6051 | 4269.14 | |
| 16+15 | 3485.4453 | 4504.86 | |
| 16+20 | 3702.1111 | 4854.27 | |
| 16+25 | 3877.6824 | 5178.66 | |
| 16+30 | 3976.2756 | 5479.96 | |
| 16+35 | 4184.2198 | 5933.50 | |
| 16+40 | 4295.5226 | 6383.74 | |
| 16+45 | 4390.1688 | 6851.61 | |
| 16+50 | 4620.9850 | 6837.41 | |
| 16+55 | 4771.3998 | 6644.75 | |
| 17+ 0 | 5009.4131 | 6621.57 | |
| 17+ 5 | 5675.7294 | 7113.02 | |
| 17+10 | 5912.8943 | 7212.00 | |
| 17+15 | 6260.1039 | 7460.75 | |
| 17+20 | 7002.5878 | 8113.57 | |
| 17+25 | 7103.3185 | 8140.15 | |
| 17+30 | 7010.1860 | 7975.47 | |
| 17+35 | 6798.8223 | 7700.07 | |
| 17+40 | 6796.3517 | 7637.18 | |
| 17+45 | 6736.8432 | 7517.69 | |
| 17+50 | 6663.0789 | 7390.34 | |
| 17+55 | 6502.6092 | 7180.87 | |
| 18+ 0 | 6007.6579 | 6645.04 | |
| 18+ 5 | 5560.4708 | 6159.58 | |
| 18+10 | 5404.0562 | 5970.17 | |
| 18+15 | 5031.1400 | 5563.73 | |
| 18+20 | 4763.0292 | 5266.84 | |
| 18+25 | 4615.2437 | 5089.11 | |
| 18+30 | 4343.9684 | 4793.10 | |
| 18+35 | 4152.6691 | 4578.18 | |
| 18+40 | 4023.7182 | 4428.55 | |
| 18+45 | 3825.8390 | 4207.82 | |
| 18+50 | 3670.9893 | 4032.42 | |
| 18+55 | 3552.2425 | 3890.54 | |
| 19+ 0 | 3399.0342 | 3717.91 | |
| 19+ 5 | 3299.5955 | 3604.23 | |
| 19+10 | 3197.3306 | 3490.73 | |
| 19+15 | 3056.1482 | 3339.10 | |
| 19+20 | 2977.1974 | 3250.45 | |
| 19+25 | 2888.7356 | 3153.55 | |
| 19+30 | 2770.7560 | 3027.88 | |
| 19+35 | 2709.1533 | 2958.12 | |
| 19+40 | 2648.4663 | 2888.76 | |
| 19+45 | 2584.9819 | 2818.24 | |
| 19+50 | 2527.4509 | 2754.90 | |
| 19+55 | 2428.1049 | 2650.75 | |
| 20+ 0 | 2320.1568 | 2538.98 | |
| 20+ 5 | 2276.3947 | 2491.31 | |
| 20+10 | 2236.4510 | 2447.21 | |
| 20+15 | 2197.2920 | 2403.46 | |
| 20+20 | 2151.5335 | 2351.69 | |
| 20+25 | 2067.9634 | 2262.81 | |
| 20+30 | 2007.3380 | 2197.78 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 20+35 | 1974.3883 | 2160.88 | qQ | | | |
| 20+40 | 1943.4070 | 2125.46 | qQ | | | |
| 20+45 | 1911.5005 | 2089.38 | qQ | | | |
| 20+50 | 1873.4670 | 2047.75 | qQ | | | |
| 20+55 | 1812.9350 | 1984.35 | qQ | | | |
| 21+ 0 | 1777.6241 | 1944.35 | qQ | | | |
| 21+ 5 | 1751.2807 | 1914.07 | qQ | | | |
| 21+10 | 1725.8221 | 1885.43 | qQ | | | |
| 21+15 | 1698.4180 | 1855.29 | qQ | | | |
| 21+20 | 1660.0669 | 1814.43 | Q | | | |
| 21+25 | 1601.7521 | 1753.76 | qQ | | | |
| 21+30 | 1575.5426 | 1725.20 | qQ | | | |
| 21+35 | 1553.7867 | 1701.16 | qQ | | | |
| 21+40 | 1531.5165 | 1676.79 | qQ | | | |
| 21+45 | 1504.7068 | 1648.02 | qQ | | | |
| 21+50 | 1457.0748 | 1598.53 | Q | | | |
| 21+55 | 1400.2978 | 1539.96 | qQ | | | |
| 22+ 0 | 1379.0686 | 1517.02 | qQ | | | |
| 22+ 5 | 1360.0988 | 1496.41 | qQ | | | |
| 22+10 | 1341.2218 | 1475.96 | qQ | | | |
| 22+15 | 1320.3557 | 1453.57 | qQ | | | |
| 22+20 | 1290.5276 | 1422.27 | Q | | | |
| 22+25 | 1265.8478 | 1396.16 | Q | | | |
| 22+30 | 1249.1314 | 1378.05 | Q | | | |
| 22+35 | 1232.8884 | 1360.46 | Q | | | |
| 22+40 | 1215.9416 | 1342.21 | qQ | | | |
| 22+45 | 1195.8438 | 1320.83 | qQ | | | |
| 22+50 | 1162.6291 | 1286.38 | qQ | | | |
| 22+55 | 1142.6117 | 1265.16 | qQ | | | |
| 23+ 0 | 1128.4583 | 1249.83 | qQ | | | |
| 23+ 5 | 1114.9616 | 1235.18 | qQ | | | |
| 23+10 | 1101.0443 | 1220.15 | Q | | | |
| 23+15 | 1083.8573 | 1201.87 | Q | | | |
| 23+20 | 1059.1976 | 1176.14 | Q | | | |
| 23+25 | 1045.2742 | 1161.18 | Q | | | |
| 23+30 | 1033.1129 | 1148.00 | Q | | | |
| 23+35 | 1020.4366 | 1134.33 | Q | | | |
| 23+40 | 1005.2831 | 1118.21 | qQ | | | |
| 23+45 | 979.1243 | 1091.10 | qQ | | | |
| 23+50 | 945.4293 | 1056.47 | qQ | | | |
| 23+55 | 932.9806 | 1043.11 | qQ | | | |
| 24+ 0 | 922.2117 | 1031.45 | qQ | | | |
| 24+ 5 | 911.1739 | 1019.18 | qQ | | | |
| 24+10 | 898.9002 | 1005.01 | Q | | | |
| 24+15 | 886.8602 | 990.42 | Q | | | |
| 24+20 | 874.4920 | 974.85 | Q | | | |
| 24+25 | 861.5142 | 958.01 | Q | | | |
| 24+30 | 848.4099 | 939.97 | Q | | | |
| 24+35 | 833.5782 | 918.88 | Q | | | |
| 24+40 | 815.9801 | 892.58 | Q | | | |
| 24+45 | 786.5885 | 850.82 | qQ | | | |
| 24+50 | 766.1854 | 819.90 | qQ | | | |
| 24+55 | 751.3578 | 797.12 | Q | | | |
| 25+ 0 | 736.6479 | 776.31 | Q | | | |
| 25+ 5 | 718.3570 | 753.16 | Q | | | |
| 25+10 | 699.3732 | 730.24 | Q | | | |
| 25+15 | 679.1129 | 706.59 | Q | | | |
| 25+20 | 654.2193 | 678.78 | Q | | | |
| 25+25 | 628.8102 | 650.78 | Q | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+30 | 603.6039 | 623.30 | qQ | | | | |
| 25+35 | 578.6012 | 596.27 | Q | | | | |
| 25+40 | 547.3778 | 563.22 | Q | | | | |
| 25+45 | 510.3026 | 524.49 | Q | | | | |
| 25+50 | 487.7749 | 500.46 | Q | | | | |
| 25+55 | 466.9401 | 478.27 | Q | | | | |
| 26+ 0 | 449.3390 | 459.44 | Q | | | | |
| 26+ 5 | 433.9365 | 442.92 | Q | | | | |
| 26+10 | 418.8405 | 426.80 | Q | | | | |
| 26+15 | 405.6799 | 412.73 | qQ | | | | |
| 26+20 | 393.5090 | 399.73 | Q | | | | |
| 26+25 | 381.2954 | 386.79 | Q | | | | |
| 26+30 | 369.4399 | 374.29 | Q | | | | |
| 26+35 | 356.4315 | 360.70 | Q | | | | |
| 26+40 | 333.2033 | 336.94 | Q | | | | |
| 26+45 | 318.5089 | 321.79 | Q | | | | |
| 26+50 | 310.0658 | 312.94 | Q | | | | |
| 26+55 | 302.0997 | 304.67 | Q | | | | |
| 27+ 0 | 294.2641 | 296.60 | Q | | | | |
| 27+ 5 | 286.4960 | 288.64 | Q | | | | |
| 27+10 | 279.0010 | 280.96 | Q | | | | |
| 27+15 | 272.1360 | 273.93 | Q | | | | |
| 27+20 | 265.4844 | 267.13 | Q | | | | |
| 27+25 | 259.1132 | 260.61 | Q | | | | |
| 27+30 | 253.3274 | 254.69 | Q | | | | |
| 27+35 | 248.1086 | 249.34 | Q | | | | |
| 27+40 | 244.3029 | 245.43 | Q | | | | |
| 27+45 | 238.9917 | 240.02 | Q | | | | |
| 27+50 | 233.5399 | 234.48 | Q | | | | |
| 27+55 | 228.4311 | 229.29 | Q | | | | |
| 28+ 0 | 223.8493 | 224.61 | Q | | | | |
| 28+ 5 | 219.2791 | 219.94 | Q | | | | |
| 28+10 | 214.7170 | 215.28 | Q | | | | |
| 28+15 | 210.1495 | 210.62 | Q | | | | |
| 28+20 | 205.5831 | 205.97 | Q | | | | |
| 28+25 | 201.2605 | 201.59 | Q | | | | |
| 28+30 | 197.0189 | 197.29 | Q | | | | |
| 28+35 | 192.1475 | 192.36 | Q | | | | |
| 28+40 | 187.5941 | 187.76 | Q | | | | |
| 28+45 | 183.3933 | 183.52 | Q | | | | |
| 28+50 | 179.3346 | 179.43 | Q | | | | |
| 28+55 | 175.8557 | 175.92 | Q | | | | |
| 29+ 0 | 172.2157 | 172.25 | Q | | | | |
| 29+ 5 | 168.2968 | 168.32 | Q | | | | |
| 29+10 | 164.2911 | 164.31 | Q | | | | |
| 29+15 | 160.1139 | 160.13 | Q | | | | |
| 29+20 | 155.6978 | 155.71 | Q | | | | |
| 29+25 | 150.6115 | 150.62 | Q | | | | |
| 29+30 | 141.9106 | 141.91 | Q | | | | |
| 29+35 | 126.8035 | 126.80 | Q | | | | |
| 29+40 | 121.8763 | 121.88 | Q | | | | |
| 29+45 | 118.1982 | 118.20 | Q | | | | |
| 29+50 | 114.7465 | 114.75 | Q | | | | |
| 29+55 | 111.2099 | 111.21 | Q | | | | |
| 30+ 0 | 107.7197 | 107.72 | Q | | | | |
| 30+ 5 | 104.2813 | 104.28 | Q | | | | |
| 30+10 | 100.8736 | 100.87 | Q | | | | |
| 30+15 | 97.4832 | 97.48 | Q | | | | |
| 30+20 | 94.4641 | 94.46 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 30+25 | 91.7848 | 91.78 | Q | | | | |
| 30+30 | 89.1507 | 89.15 | Q | | | | |
| 30+35 | 86.7504 | 86.75 | Q | | | | |
| 30+40 | 84.2687 | 84.27 | Q | | | | |
| 30+45 | 81.6435 | 81.64 | Q | | | | |
| 30+50 | 78.6445 | 78.64 | Q | | | | |
| 30+55 | 74.6188 | 74.62 | Q | | | | |
| 31+ 0 | 63.5238 | 63.52 | Q | | | | |
| 31+ 5 | 53.4168 | 53.42 | Q | | | | |
| 31+10 | 50.9894 | 50.99 | Q | | | | |
| 31+15 | 48.9664 | 48.97 | Q | | | | |
| 31+20 | 46.9183 | 46.92 | Q | | | | |
| 31+25 | 44.7095 | 44.71 | Q | | | | |
| 31+30 | 42.6051 | 42.61 | Q | | | | |
| 31+35 | 40.5954 | 40.60 | Q | | | | |
| 31+40 | 38.6542 | 38.65 | Q | | | | |
| 31+45 | 36.8401 | 36.84 | Q | | | | |
| 31+50 | 35.2189 | 35.22 | Q | | | | |
| 31+55 | 33.6455 | 33.65 | Q | | | | |
| 32+ 0 | 32.3086 | 32.31 | Q | | | | |
| 32+ 5 | 31.2038 | 31.20 | Q | | | | |
| 32+10 | 30.1293 | 30.13 | Q | | | | |
| 32+15 | 29.0825 | 29.08 | Q | | | | |
| 32+20 | 28.0608 | 28.06 | Q | | | | |
| 32+25 | 27.0623 | 27.06 | Q | | | | |
| 32+30 | 26.0853 | 26.09 | Q | | | | |
| 32+35 | 25.1282 | 25.13 | Q | | | | |
| 32+40 | 24.1948 | 24.19 | Q | | | | |
| 32+45 | 23.3734 | 23.37 | Q | | | | |
| 32+50 | 22.6032 | 22.60 | Q | | | | |
| 32+55 | 21.8476 | 21.85 | Q | | | | |
| 33+ 0 | 21.1151 | 21.12 | Q | | | | |
| 33+ 5 | 20.4049 | 20.40 | Q | | | | |
| 33+10 | 19.7067 | 19.71 | Q | | | | |
| 33+15 | 19.0200 | 19.02 | Q | | | | |
| 33+20 | 18.3443 | 18.34 | Q | | | | |
| 33+25 | 17.6789 | 17.68 | Q | | | | |
| 33+30 | 17.0235 | 17.02 | Q | | | | |
| 33+35 | 16.3777 | 16.38 | Q | | | | |
| 33+40 | 15.7809 | 15.78 | Q | | | | |
| 33+45 | 15.2904 | 15.29 | Q | | | | |
| 33+50 | 14.8117 | 14.81 | Q | | | | |
| 33+55 | 14.3402 | 14.34 | Q | | | | |
| 34+ 0 | 13.8755 | 13.88 | Q | | | | |
| 34+ 5 | 13.4174 | 13.42 | Q | | | | |
| 34+10 | 12.9657 | 12.97 | Q | | | | |
| 34+15 | 12.5200 | 12.52 | Q | | | | |
| 34+20 | 12.0802 | 12.08 | Q | | | | |
| 34+25 | 11.6461 | 11.65 | Q | | | | |
| 34+30 | 11.2175 | 11.22 | Q | | | | |
| 34+35 | 10.7973 | 10.80 | Q | | | | |
| 34+40 | 10.4638 | 10.46 | Q | | | | |
| 34+45 | 10.1710 | 10.17 | Q | | | | |
| 34+50 | 9.8823 | 9.88 | Q | | | | |
| 34+55 | 9.5973 | 9.60 | Q | | | | |
| 35+ 0 | 9.3161 | 9.32 | Q | | | | |
| 35+ 5 | 9.0385 | 9.04 | Q | | | | |
| 35+10 | 8.7643 | 8.76 | Q | | | | |
| 35+15 | 8.4935 | 8.49 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 35+20 | 8.2260 | 8.23 | Q | \| | \| | \| | \| |
| 35+25 | 7.9617 | 7.96 | Q | \| | \| | \| | \| |
| 35+30 | 7.7005 | 7.70 | Q | \| | \| | \| | \| |
| 35+35 | 7.4379 | 7.44 | Q | \| | \| | \| | \| |
| 35+40 | 7.1654 | 7.17 | Q | \| | \| | \| | \| |
| 35+45 | 6.8951 | 6.90 | Q | \| | \| | \| | \| |
| 35+50 | 6.6277 | 6.63 | Q | \| | \| | \| | \| |
| 35+55 | 6.3631 | 6.36 | Q | \| | \| | \| | \| |
| 36+ 0 | 6.1013 | 6.10 | Q | \| | \| | \| | \| |
| 36+ 5 | 5.8421 | 5.84 | Q | \| | \| | \| | \| |
| 36+10 | 5.5855 | 5.59 | Q | \| | \| | \| | \| |
| 36+15 | 5.3314 | 5.33 | Q | \| | \| | \| | \| |
| 36+20 | 5.0798 | 5.08 | Q | \| | \| | \| | \| |
| 36+25 | 4.8307 | 4.83 | Q | \| | \| | \| | \| |
| 36+30 | 4.5840 | 4.58 | Q | \| | \| | \| | \| |
| 36+35 | 4.3441 | 4.34 | Q | \| | \| | \| | \| |
| 36+40 | 4.1088 | 4.11 | Q | \| | \| | \| | \| |
| 36+45 | 3.8757 | 3.88 | Q | \| | \| | \| | \| |
| 36+50 | 3.6447 | 3.64 | Q | \| | \| | \| | \| |
| 36+55 | 3.4158 | 3.42 | Q | \| | \| | \| | \| |
| 37+ 0 | 3.1888 | 3.19 | Q | \| | \| | \| | \| |
| 37+ 5 | 2.9639 | 2.96 | Q | \| | \| | \| | \| |
| 37+10 | 2.7408 | 2.74 | Q | \| | \| | \| | \| |
| 37+15 | 2.5197 | 2.52 | Q | \| | \| | \| | \| |
| 37+20 | 2.3004 | 2.30 | Q | \| | \| | \| | \| |
| 37+25 | 2.0829 | 2.08 | Q | \| | \| | \| | \| |
| 37+30 | 1.8877 | 1.89 | Q | \| | \| | \| | \| |
| 37+35 | 1.7670 | 1.77 | Q | \| | \| | \| | \| |
| 37+40 | 1.6530 | 1.65 | Q | \| | \| | \| | \| |
| 37+45 | 1.5400 | 1.54 | Q | \| | \| | \| | \| |
| 37+50 | 1.4280 | 1.43 | Q | \| | \| | \| | \| |
| 37+55 | 1.3169 | 1.32 | Q | \| | \| | \| | \| |
| 38+ 0 | 1.2067 | 1.21 | Q | \| | \| | \| | \| |
| 38+ 5 | 1.0974 | 1.10 | Q | \| | \| | \| | \| |
| 38+10 | 0.9890 | 0.99 | Q | \| | \| | \| | \| |
| 38+15 | 0.8814 | 0.88 | Q | \| | \| | \| | \| |
| 38+20 | 0.7747 | 0.77 | Q | \| | \| | \| | \| |
| 38+25 | 0.6689 | 0.67 | Q | \| | \| | \| | \| |
| 38+30 | 0.5639 | 0.56 | Q | \| | \| | \| | \| |
| 38+35 | 0.4596 | 0.46 | Q | \| | \| | \| | \| |
| 38+40 | 0.3562 | 0.36 | Q | \| | \| | \| | \| |
| 38+45 | 0.2535 | 0.25 | Q | \| | \| | \| | \| |
| 38+50 | 0.1516 | 0.15 | Q | \| | \| | \| | \| |
| 38+55 | 0.0504 | 0.05 | Q | \| | \| | \| | \| |

**********HYDROGRAPH DATA**********

Number of intervals = 467
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 8140.152 (CFS)
Total volume = 3663.713 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 0.000 | 0.000 | 0.000 | 0.000 |

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FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014
Study date: 09/06/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
EXISTING CONDITIONS AREAS 50 AND 51 ROUTING
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********** HYDROGRAPH INFORMATION **********

From study/file name: EX50.rte
**********HYDROGRAPH DATA**********
Number of intervals = 353
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 5599.015 (CFS)
Total volume = 1141.359 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 2.000 to Point/Station 2.000
**** FLOWBY BASIN ROUTING OR SPLIT FLOW ****

A constant split flow fraction of 0.5000 is
being diverted from the main stream into stream number 1
Total volume of excess flow diverted into flowby
basin (stream number 1 ) is 570.68(Ac.Ft)

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P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals (CFS)

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| Time(h+m) | Volume(Ac.Ft) | Q(CFS) | 0 | 699.9 | 1399.8 | 2099.6 | 2799.5 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0050 | 0.73 | Q | \| | \| | \| | \| |
| 0+10 | 0.0216 | 2.41 | Q | \| | \| | \| | \| |
| 0+15 | 0.0544 | 4.76 | Q | \| | \| | \| | \| |
| 0+20 | 0.1080 | 7.79 | Q | \| | \| | \| | \| |
| 0+25 | 0.1875 | 11.54 | Q | \| | \| | \| | \| |
| 0+30 | 0.3033 | 16.82 | Q | \| | \| | \| | \| |
| 0+35 | 0.4666 | 23.71 | Q | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 0+40 | 0.7024 | 34.24 | Q | | | | |
| 0+45 | 1.0442 | 49.62 | Q | | | | |
| 0+50 | 1.4418 | 57.74 | Q | | | | |
| 0+55 | 1.8774 | 63.25 | Q | | | | |
| 1+ 0 | 2.3435 | 67.68 | Q | | | | |
| 1+ 5 | 2.8357 | 71.46 | VQ | | | | |
| 1+10 | 3.3495 | 74.60 | VQ | | | | |
| 1+15 | 3.8839 | 77.60 | VQ | | | | |
| 1+20 | 4.4361 | 80.18 | VQ | | | | |
| 1+25 | 5.0051 | 82.61 | VQ | | | | |
| 1+30 | 5.5888 | 84.75 | VQ | | | | |
| 1+35 | 6.1862 | 86.74 | VQ | | | | |
| 1+40 | 6.7962 | 88.58 | VQ | | | | |
| 1+45 | 7.4181 | 90.30 | VQ | | | | |
| 1+50 | 8.0511 | 91.90 | VQ | | | | |
| 1+55 | 8.6941 | 93.37 | VQ | | | | |
| 2+ 0 | 9.3468 | 94.77 | VQ | | | | |
| 2+ 5 | 10.0084 | 96.06 | VQ | | | | |
| 2+10 | 10.6785 | 97.30 | VQ | | | | |
| 2+15 | 11.3564 | 98.42 | VQ | | | | |
| 2+20 | 12.0417 | 99.50 | VQ | | | | |
| 2+25 | 12.7335 | 100.46 | VQ | | | | |
| 2+30 | 13.4318 | 101.39 | VQ | | | | |
| 2+35 | 14.1361 | 102.27 | VQ | | | | |
| 2+40 | 14.8463 | 103.11 | \|Q | | | | |
| 2+45 | 15.5617 | 103.88 | \|Q | | | | |
| 2+50 | 16.2821 | 104.60 | \|Q | | | | |
| 2+55 | 17.0067 | 105.21 | \|Q | | | | |
| 3+ 0 | 17.7352 | 105.77 | \|Q | | | | |
| 3+ 5 | 18.4676 | 106.35 | \|Q | | | | |
| 3+10 | 19.2039 | 106.92 | \|Q | | | | |
| 3+15 | 19.9442 | 107.49 | \|Q | | | | |
| 3+20 | 20.6883 | 108.04 | \|Q | | | | |
| 3+25 | 21.4362 | 108.60 | \|Q | | | | |
| 3+30 | 22.1880 | 109.16 | \|Q | | | | |
| 3+35 | 22.9437 | 109.72 | \|Q | | | | |
| 3+40 | 23.7030 | 110.24 | \|Q | | | | |
| 3+45 | 24.4659 | 110.78 | \|Q | | | | |
| 3+50 | 25.2326 | 111.31 | \|Q | | | | |
| 3+55 | 26.0030 | 111.87 | \|Q | | | | |
| 4+ 0 | 26.7773 | 112.42 | \|Q | | | | |
| 4+ 5 | 27.5555 | 113.00 | \|Q | | | | |
| 4+10 | 28.3377 | 113.57 | \|Q | | | | |
| 4+15 | 29.1239 | 114.15 | \|QV | | | | |
| 4+20 | 29.9138 | 114.70 | \|QV | | | | |
| 4+25 | 30.7076 | 115.25 | \|QV | | | | |
| 4+30 | 31.5051 | 115.80 | \|QV | | | | |
| 4+35 | 32.3065 | 116.37 | \|QV | | | | |
| 4+40 | 33.1117 | 116.91 | \|QV | | | | |
| 4+45 | 33.9208 | 117.47 | \|QV | | | | |
| 4+50 | 34.7336 | 118.02 | \|QV | | | | |
| 4+55 | 35.5504 | 118.60 | \|QV | | | | |
| 5+ 0 | 36.3709 | 119.14 | \|QV | | | | |
| 5+ 5 | 37.1953 | 119.70 | \|QV | | | | |
| 5+10 | 38.0234 | 120.25 | \|QV | | | | |
| 5+15 | 38.8555 | 120.81 | \|QV | | | | |
| 5+20 | 39.6914 | 121.38 | \|QV | | | | |
| 5+25 | 40.5313 | 121.96 | \|QV | | | | |
| 5+30 | 41.3752 | 122.53 | \|QV | | | | |

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|---|---|---|---|---|---|---|---|
| 5+35 | 42.2232 | 123.13 | QV | | | | |
| 5+40 | 43.0752 | 123.71 | Q V | | | | |
| 5+45 | 43.9315 | 124.32 | Q V | | | | |
| 5+50 | 44.7918 | 124.92 | Q V | | | | |
| 5+55 | 45.6564 | 125.55 | Q V | | | | |
| 6+ 0 | 46.5253 | 126.16 | Q V | | | | |
| 6+ 5 | 47.3986 | 126.80 | Q V | | | | |
| 6+10 | 48.2762 | 127.43 | Q V | | | | |
| 6+15 | 49.1584 | 128.09 | Q V | | | | |
| 6+20 | 50.0450 | 128.74 | Q V | | | | |
| 6+25 | 50.9363 | 129.41 | Q V | | | | |
| 6+30 | 51.8321 | 130.07 | Q V | | | | |
| 6+35 | 52.7327 | 130.77 | Q V | | | | |
| 6+40 | 53.6380 | 131.45 | Q V | | | | |
| 6+45 | 54.5482 | 132.16 | Q V | | | | |
| 6+50 | 55.4632 | 132.86 | Q V | | | | |
| 6+55 | 56.3832 | 133.59 | Q V | | | | |
| 7+ 0 | 57.3082 | 134.31 | Q V | | | | |
| 7+ 5 | 58.2384 | 135.06 | Q V | | | | |
| 7+10 | 59.1737 | 135.80 | Q V | | | | |
| 7+15 | 60.1143 | 136.58 | Q V | | | | |
| 7+20 | 61.0602 | 137.34 | Q V | | | | |
| 7+25 | 62.0115 | 138.13 | Q V | | | | |
| 7+30 | 62.9682 | 138.92 | Q V | | | | |
| 7+35 | 63.9306 | 139.74 | Q V | | | | |
| 7+40 | 64.8985 | 140.54 | Q V | | | | |
| 7+45 | 65.8722 | 141.39 | Q V | | | | |
| 7+50 | 66.8517 | 142.22 | Q V | | | | |
| 7+55 | 67.8372 | 143.09 | Q V | | | | |
| 8+ 0 | 68.8285 | 143.95 | Q V | | | | |
| 8+ 5 | 69.8261 | 144.84 | Q V | | | | |
| 8+10 | 70.8297 | 145.73 | Q V | | | | |
| 8+15 | 71.8397 | 146.65 | Q V | | | | |
| 8+20 | 72.8560 | 147.57 | Q V | | | | |
| 8+25 | 73.8789 | 148.52 | Q V | | | | |
| 8+30 | 74.9083 | 149.47 | Q V | | | | |
| 8+35 | 75.9445 | 150.45 | Q V | | | | |
| 8+40 | 76.9874 | 151.43 | Q V | | | | |
| 8+45 | 78.0373 | 152.45 | Q V | | | | |
| 8+50 | 79.0941 | 153.46 | Q V | | | | |
| 8+55 | 80.1583 | 154.51 | Q V | | | | |
| 9+ 0 | 81.2296 | 155.56 | Q V | | | | |
| 9+ 5 | 82.3085 | 156.65 | Q V | | | | |
| 9+10 | 83.3948 | 157.73 | Q V | | | | |
| 9+15 | 84.4889 | 158.86 | Q V | | | | |
| 9+20 | 85.5907 | 159.99 | Q V | | | | |
| 9+25 | 86.7006 | 161.16 | Q V | | | | |
| 9+30 | 87.8185 | 162.32 | Q V | | | | |
| 9+35 | 88.9448 | 163.54 | Q V | | | | |
| 9+40 | 90.0795 | 164.75 | Q V | | | | |
| 9+45 | 91.2228 | 166.01 | Q V | | | | |
| 9+50 | 92.3748 | 167.27 | Q V | | | | |
| 9+55 | 93.5359 | 168.58 | Q V | | | | |
| 10+ 0 | 94.7059 | 169.89 | Q V | | | | |
| 10+ 5 | 95.8854 | 171.26 | Q V | | | | |
| 10+10 | 97.0742 | 172.62 | Q V | | | | |
| 10+15 | 98.2729 | 174.04 | Q V | | | | |
| 10+20 | 99.4813 | 175.46 | Q V | | | | |
| 10+25 | 100.6999 | 176.95 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10+30 | 101.9288 | 178.43 | Q V | | | | |
| 10+35 | 103.1683 | 179.98 | Q V | | | | |
| 10+40 | 104.4185 | 181.52 | Q V | | | | |
| 10+45 | 105.6798 | 183.15 | Q V | | | | |
| 10+50 | 106.9523 | 184.76 | Q V | | | | |
| 10+55 | 108.2364 | 186.46 | Q V | | | | |
| 11+ 0 | 109.5322 | 188.15 | Q V | | | | |
| 11+ 5 | 110.8402 | 189.93 | Q V | | | | |
| 11+10 | 112.1605 | 191.70 | Q V | | | | |
| 11+15 | 113.4936 | 193.57 | Q V | | | | |
| 11+20 | 114.8396 | 195.43 | Q V | | | | |
| 11+25 | 116.1990 | 197.39 | Q V | | | | |
| 11+30 | 117.5719 | 199.35 | Q V | | | | |
| 11+35 | 118.9591 | 201.41 | Q V | | | | |
| 11+40 | 120.3604 | 203.48 | Q V | | | | |
| 11+45 | 121.7768 | 205.65 | Q V | | | | |
| 11+50 | 123.2081 | 207.83 | Q V | | | | |
| 11+55 | 124.6552 | 210.13 | Q V | | | | |
| 12+ 0 | 126.1182 | 212.43 | Q V | | | | |
| 12+ 5 | 127.5980 | 214.86 | Q V | | | | |
| 12+10 | 129.0946 | 217.31 | Q V | | | | |
| 12+15 | 130.6091 | 219.90 | Q V | | | | |
| 12+20 | 132.1416 | 222.51 | Q V | | | | |
| 12+25 | 133.6930 | 225.27 | Q V | | | | |
| 12+30 | 135.2636 | 228.06 | Q V | | | | |
| 12+35 | 136.8547 | 231.02 | Q V | | | | |
| 12+40 | 138.4663 | 234.02 | Q V | | | | |
| 12+45 | 140.1002 | 237.23 | Q V | | | | |
| 12+50 | 141.7559 | 240.42 | Q V | | | | |
| 12+55 | 143.4349 | 243.79 | Q V | | | | |
| 13+ 0 | 145.1373 | 247.19 | Q V | | | | |
| 13+ 5 | 146.8646 | 250.80 | Q V | | | | |
| 13+10 | 148.6169 | 254.44 | Q V | | | | |
| 13+15 | 150.3960 | 258.33 | Q V | | | | |
| 13+20 | 152.2022 | 262.25 | Q V | | | | |
| 13+25 | 154.0372 | 266.45 | Q V | | | | |
| 13+30 | 155.9016 | 270.71 | Q V | | | | |
| 13+35 | 157.7974 | 275.27 | Q V | | | | |
| 13+40 | 159.7251 | 279.90 | Q V | | | | |
| 13+45 | 161.6870 | 284.87 | Q V | | | | |
| 13+50 | 163.6838 | 289.93 | Q V | | | | |
| 13+55 | 165.7181 | 295.38 | Q V | | | | |
| 14+ 0 | 167.7908 | 300.95 | Q V | | | | |
| 14+ 5 | 169.9119 | 307.98 | Q V | | | | |
| 14+10 | 172.0914 | 316.48 | Q V | | | | |
| 14+15 | 174.3396 | 326.43 | Q V | | | | |
| 14+20 | 176.6643 | 337.54 | Q V | | | | |
| 14+25 | 179.0766 | 350.28 | Q V | | | | |
| 14+30 | 181.5931 | 365.40 | Q V | | | | |
| 14+35 | 184.2343 | 383.51 | Q V | | | | |
| 14+40 | 187.0375 | 407.02 | Q V | | | | |
| 14+45 | 190.0556 | 438.22 | Q V | | | | |
| 14+50 | 193.2225 | 459.84 | Q V | | | | |
| 14+55 | 196.5210 | 478.94 | Q V | | | | |
| 15+ 0 | 199.9449 | 497.14 | Q V | | | | |
| 15+ 5 | 203.4974 | 515.83 | Q V | | | | |
| 15+10 | 207.1779 | 534.41 | Q V | | | | |
| 15+15 | 210.9971 | 554.55 | Q V | | | | |
| 15+20 | 214.9590 | 575.26 | Q V | | | | |

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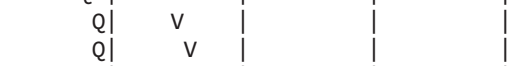
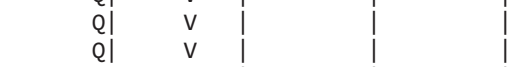
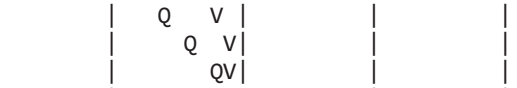
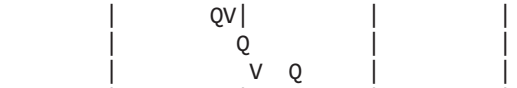
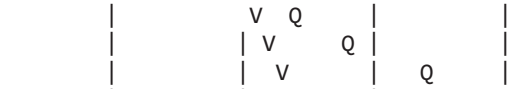
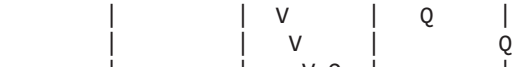
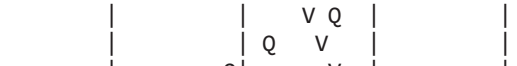
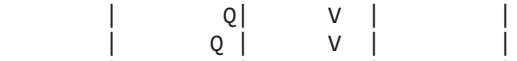
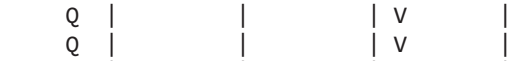
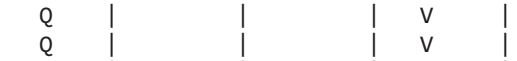
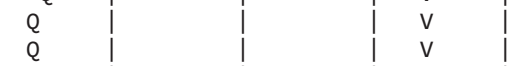
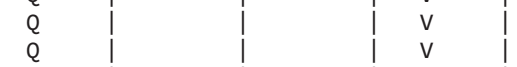
|---|---|---|---|
| 15+25 | 219.0607 | 595.57 | |
| 15+30 | 223.2884 | 613.87 |  |
| 15+35 | 227.6466 | 632.81 |  |
| 15+40 | 232.1351 | 651.72 |  |
| 15+45 | 236.7700 | 673.00 |  |
| 15+50 | 241.5477 | 693.71 |  |
| 15+55 | 246.5035 | 719.59 | |
| 16+ 0 | 251.6632 | 749.19 |  |
| 16+ 5 | 257.5093 | 848.86 | |
| 16+10 | 264.3796 | 997.57 |  |
| 16+15 | 272.1685 | 1130.94 |  |
| 16+20 | 280.9315 | 1272.39 |  |
| 16+25 | 290.8231 | 1436.27 |  |
| 16+30 | 302.4684 | 1690.89 |  |
| 16+35 | 316.0612 | 1973.68 |  |
| 16+40 | 332.5999 | 2401.42 |  |
| 16+45 | 351.8802 | 2799.51 |  |
| 16+50 | 365.2308 | 1938.50 |  |
| 16+55 | 375.9853 | 1561.56 |  |
| 17+ 0 | 385.5246 | 1385.10 |  |
| 17+ 5 | 394.3893 | 1287.16 |  |
| 17+10 | 402.4985 | 1177.45 |  |
| 17+15 | 410.1809 | 1115.49 | |
| 17+20 | 417.2800 | 1030.79 |  |
| 17+25 | 423.9709 | 971.51 | |
| 17+30 | 430.1762 | 901.01 |  |
| 17+35 | 435.9912 | 844.33 | |
| 17+40 | 441.4095 | 786.74 |  |
| 17+45 | 446.4156 | 726.90 | |
| 17+50 | 451.0965 | 679.66 |  |
| 17+55 | 455.4666 | 634.54 | |
| 18+ 0 | 459.6079 | 601.32 |  |
| 18+ 5 | 463.4980 | 564.85 | |
| 18+10 | 467.1958 | 536.91 |  |
| 18+15 | 470.6554 | 502.33 |  |
| 18+20 | 473.9500 | 478.38 |  |
| 18+25 | 477.0269 | 446.77 | |
| 18+30 | 479.9703 | 427.38 |  |
| 18+35 | 482.7549 | 404.32 | |
| 18+40 | 485.4166 | 386.48 |  |
| 18+45 | 487.9042 | 361.20 |  |
| 18+50 | 490.2677 | 343.18 |  |
| 18+55 | 492.4524 | 317.22 |  |
| 19+ 0 | 494.5307 | 301.77 |  |
| 19+ 5 | 496.5436 | 292.27 |  |
| 19+10 | 498.4962 | 283.52 |  |
| 19+15 | 500.3806 | 273.60 | |
| 19+20 | 502.2028 | 264.59 |  |
| 19+25 | 503.9751 | 257.35 | |
| 19+30 | 505.6986 | 250.25 |  |
| 19+35 | 507.3624 | 241.59 | |
| 19+40 | 508.9633 | 232.45 |  |
| 19+45 | 510.5273 | 227.09 | |
| 19+50 | 512.0584 | 222.32 |  |
| 19+55 | 513.5626 | 218.41 | |
| 20+ 0 | 515.0466 | 215.47 |  |
| 20+ 5 | 516.5024 | 211.38 | |
| 20+10 | 517.9280 | 207.00 |  |
| 20+15 | 519.3192 | 202.01 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20+20 | 520.6595 | 194.61 | Q | | | | V |
| 20+25 | 521.9690 | 190.14 | Q | | | | V |
| 20+30 | 523.2539 | 186.56 | Q | | | | V |
| 20+35 | 524.5140 | 182.97 | Q | | | | V |
| 20+40 | 525.7400 | 178.01 | Q | | | | V |
| 20+45 | 526.9395 | 174.16 | Q | | | | V |
| 20+50 | 528.1178 | 171.09 | Q | | | | V |
| 20+55 | 529.2811 | 168.91 | Q | | | | V |
| 21+ 0 | 530.3990 | 162.32 | Q | | | | V |
| 21+ 5 | 531.4964 | 159.34 | Q | | | | V |
| 21+10 | 532.5763 | 156.80 | Q | | | | V |
| 21+15 | 533.6400 | 154.45 | Q | | | | V |
| 21+20 | 534.6877 | 152.13 | Q | | | | V |
| 21+25 | 535.7200 | 149.89 | Q | | | | V |
| 21+30 | 536.7362 | 147.56 | Q | | | | V |
| 21+35 | 537.7371 | 145.33 | Q | | | | V |
| 21+40 | 538.7247 | 143.40 | Q | | | | V |
| 21+45 | 539.6996 | 141.56 | Q | | | | V |
| 21+50 | 540.6623 | 139.79 | Q | | | | V |
| 21+55 | 541.6131 | 138.05 | Q | | | | V |
| 22+ 0 | 542.5527 | 136.42 | Q | | | | V |
| 22+ 5 | 543.4814 | 134.85 | Q | | | | V |
| 22+10 | 544.3996 | 133.33 | Q | | | | V |
| 22+15 | 545.3076 | 131.85 | Q | | | | V |
| 22+20 | 546.2058 | 130.42 | Q | | | | V |
| 22+25 | 547.0944 | 129.02 | Q | | | | V |
| 22+30 | 547.9737 | 127.67 | Q | | | | V |
| 22+35 | 548.8440 | 126.36 | Q | | | | V |
| 22+40 | 549.7055 | 125.09 | Q | | | | V |
| 22+45 | 550.5584 | 123.85 | Q | | | | V |
| 22+50 | 551.4031 | 122.64 | Q | | | | V |
| 22+55 | 552.2396 | 121.46 | Q | | | | V |
| 23+ 0 | 553.0682 | 120.31 | Q | | | | V |
| 23+ 5 | 553.8891 | 119.19 | Q | | | | V |
| 23+10 | 554.7024 | 118.10 | Q | | | | V |
| 23+15 | 555.5084 | 117.03 | Q | | | | V |
| 23+20 | 556.3073 | 115.99 | Q | | | | V |
| 23+25 | 557.0991 | 114.97 | Q | | | | V |
| 23+30 | 557.8840 | 113.98 | Q | | | | V |
| 23+35 | 558.6623 | 113.00 | Q | | | | V |
| 23+40 | 559.4340 | 112.05 | Q | | | | V |
| 23+45 | 560.1993 | 111.12 | Q | | | | V |
| 23+50 | 560.9583 | 110.21 | Q | | | | V |
| 23+55 | 561.7111 | 109.32 | Q | | | | V |
| 24+ 0 | 562.4580 | 108.44 | Q | | | | V |
| 24+ 5 | 563.1939 | 106.86 | Q | | | | V |
| 24+10 | 563.9126 | 104.35 | Q | | | | V |
| 24+15 | 564.6096 | 101.21 | Q | | | | V |
| 24+20 | 565.2806 | 97.42 | Q | | | | V |
| 24+25 | 565.9208 | 92.96 | Q | | | | V |
| 24+30 | 566.5203 | 87.04 | Q | | | | V |
| 24+35 | 567.0682 | 79.56 | Q | | | | V |
| 24+40 | 567.5403 | 68.55 | Q | | | | V |
| 24+45 | 567.9039 | 52.80 | Q | | | | V |
| 24+50 | 568.2101 | 44.46 | Q | | | | V |
| 24+55 | 568.4775 | 38.82 | Q | | | | V |
| 25+ 0 | 568.7139 | 34.33 | Q | | | | V |
| 25+ 5 | 568.9241 | 30.52 | Q | | | | V |
| 25+10 | 569.1128 | 27.41 | Q | | | | V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+15 | 569.2814 | 24.47 | Q | \| | \| | \| | V\| |
| 25+20 | 569.4327 | 21.97 | Q | \| | \| | \| | V\| |
| 25+25 | 569.5682 | 19.67 | Q | \| | \| | \| | V\| |
| 25+30 | 569.6899 | 17.67 | Q | \| | \| | \| | V\| |
| 25+35 | 569.7991 | 15.86 | Q | \| | \| | \| | V\| |
| 25+40 | 569.8970 | 14.22 | Q | \| | \| | \| | V\| |
| 25+45 | 569.9846 | 12.71 | Q | \| | \| | \| | V\| |
| 25+50 | 570.0627 | 11.34 | Q | \| | \| | \| | V\| |
| 25+55 | 570.1325 | 10.13 | Q | \| | \| | \| | V\| |
| 26+ 0 | 570.1944 | 9.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 570.2494 | 7.99 | Q | \| | \| | \| | V\| |
| 26+10 | 570.2980 | 7.04 | Q | \| | \| | \| | V\| |
| 26+15 | 570.3409 | 6.24 | Q | \| | \| | \| | V\| |
| 26+20 | 570.3786 | 5.48 | Q | \| | \| | \| | V\| |
| 26+25 | 570.4121 | 4.86 | Q | \| | \| | \| | V\| |
| 26+30 | 570.4415 | 4.27 | Q | \| | \| | \| | V\| |
| 26+35 | 570.4673 | 3.75 | Q | \| | \| | \| | V\| |
| 26+40 | 570.4897 | 3.26 | Q | \| | \| | \| | V\| |
| 26+45 | 570.5095 | 2.87 | Q | \| | \| | \| | V\| |
| 26+50 | 570.5269 | 2.52 | Q | \| | \| | \| | V\| |
| 26+55 | 570.5428 | 2.31 | Q | \| | \| | \| | V\| |
| 27+ 0 | 570.5575 | 2.13 | Q | \| | \| | \| | V\| |
| 27+ 5 | 570.5710 | 1.97 | Q | \| | \| | \| | V\| |
| 27+10 | 570.5834 | 1.80 | Q | \| | \| | \| | V\| |
| 27+15 | 570.5948 | 1.65 | Q | \| | \| | \| | V\| |
| 27+20 | 570.6051 | 1.51 | Q | \| | \| | \| | V\| |
| 27+25 | 570.6146 | 1.37 | Q | \| | \| | \| | V\| |
| 27+30 | 570.6231 | 1.23 | Q | \| | \| | \| | V\| |
| 27+35 | 570.6308 | 1.12 | Q | \| | \| | \| | V\| |
| 27+40 | 570.6379 | 1.03 | Q | \| | \| | \| | V\| |
| 27+45 | 570.6444 | 0.95 | Q | \| | \| | \| | V\| |
| 27+50 | 570.6503 | 0.86 | Q | \| | \| | \| | V\| |
| 27+55 | 570.6557 | 0.78 | Q | \| | \| | \| | V\| |
| 28+ 0 | 570.6603 | 0.68 | Q | \| | \| | \| | V\| |
| 28+ 5 | 570.6643 | 0.58 | Q | \| | \| | \| | V\| |
| 28+10 | 570.6676 | 0.48 | Q | \| | \| | \| | V\| |
| 28+15 | 570.6702 | 0.38 | Q | \| | \| | \| | V\| |
| 28+20 | 570.6725 | 0.32 | Q | \| | \| | \| | V\| |
| 28+25 | 570.6743 | 0.27 | Q | \| | \| | \| | V\| |
| 28+30 | 570.6758 | 0.22 | Q | \| | \| | \| | V\| |
| 28+35 | 570.6769 | 0.16 | Q | \| | \| | \| | V\| |
| 28+40 | 570.6778 | 0.13 | Q | \| | \| | \| | V\| |
| 28+45 | 570.6785 | 0.10 | Q | \| | \| | \| | V\| |
| 28+50 | 570.6789 | 0.07 | Q | \| | \| | \| | V\| |
| 28+55 | 570.6791 | 0.03 | Q | \| | \| | \| | V\| |
| 29+ 0 | 570.6793 | 0.02 | Q | \| | \| | \| | V\| |
| 29+ 5 | 570.6794 | 0.02 | Q | \| | \| | \| | V\| |
| 29+10 | 570.6795 | 0.01 | Q | \| | \| | \| | V\| |
| 29+15 | 570.6795 | 0.01 | Q | \| | \| | \| | V\| |
| 29+20 | 570.6796 | 0.01 | Q | \| | \| | \| | V\| |
| 29+25 | 570.6796 | 0.00 | Q | \| | \| | \| | V\| |

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**********HYDROGRAPH DATA**********

Number of intervals = 353
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2799.507 (CFS)
Total volume = 570.680 (Ac.Ft)

Status of hydrographs being held in storage

| Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|

```
        Peak (CFS)   2799.507     0.000     0.000     0.000     0.000
        Vol (Ac.Ft)    570.680     0.000     0.000     0.000     0.000
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Process from Point/Station        2.000 to Point/Station        2.100
**** STREAM ROUTING SCS CONVEX METHOD ****
______________________________________________________________________________
HYDROGRAPH STREAM ROUTING DATA:
Length of stream =  42866.00 (Ft.)
Elevation difference = 1046.10 (Ft.)
Slope of channel =  0.024404 (Vert/Horiz)
Channel type - Improved Channel


Channel length = 42866.00(Ft.)     Elevation difference = 1046.10(Ft.)
Channel evaluation using mean flow rate of hydrograph
Channel base width  =  100.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Manning's 'N'    = 0.035
Maximum depth of channel  =    3.000(Ft.)
Flow(q) thru subarea =    268.931(CFS)
Depth of flow =     0.581(Ft.)
Average velocity =     4.575(Ft/s)
Total flow rate =   268.931(CFS)
Channel flow top width =  102.324(Ft.)
Depth of flow in channel =   0.58(Ft.)
Total number of channels (same dimensions) = 1
Flow Velocity =    4.58(Ft/s)
Travel time  =  156.15 min.
Individual channel flow =  268.931(CFS)
Total capacity of improved channels =    268.931(CFS)
Critical Depth in Channel =    0.61(Ft.)


Channel evaluation using maximum flow rate of hydrograph
Flow(q) thru subarea =   2799.507(CFS)
Depth of flow =     2.359(Ft.)
Average velocity =    11.335(Ft/s)
Total flow rate =  2799.507(CFS)
Channel flow top width =  109.434(Ft.)
Depth of flow in channel =   2.36(Ft.)
Total number of channels (same dimensions) = 1
Flow Velocity =   11.33(Ft/s)
Travel time  =  156.15 min.
Individual channel flow = 2799.507(CFS)
Total capacity of improved channels =   2799.507(CFS)
Critical Depth in Channel =    2.84(Ft.)


********************** SCS CONVEX CHANNEL ROUTING ********************
Convex method of stream routing  data items:
Using equation: Outflow =
O(t+dt) = (1-c*)O(t+dt-dt*) + Input(c*)
          where c* = 1 - (1-c)^e and dt = c(length)/velocity
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          c(v/v+1.7) =   0.8696   Travel time =  63.03 (min.)
        dt*(unit time interval) =   5.00(min.),  e=   0.3942
        dt(routing time-step) =  54.81 (min.),   c* =   0.5520

     Output hydrograph delayed by 0  unit time increments


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                      P R I N T  O F  S T O R M
                   R u n o f f     H y d r o g r a p h
     ---------------------------------------------------------------------
                Hydrograph in   5   Minute intervals (CFS)

     ---------------------------------------------------------------------
Time(h+m) Out = O(CFS) In = I  0      699.9    1399.8    2099.6    2799.5
-----------------------------------------------------------------------
  0+ 5       0.3666      0.73  O         |         |         |         |
  0+10       1.4080      2.41  O         |         |         |         |
  0+15       3.1372      4.76  O         |         |         |         |
  0+20       5.5516      7.79  O         |         |         |         |
  0+25       8.6694     11.54  O         |         |         |         |
  0+30      12.9025     16.82  O         |         |         |         |
  0+35      18.5225     23.71  O         |         |         |         |
  0+40      26.6656     34.24  O         |         |         |         |
  0+45      38.5617     49.62  O         |         |         |         |
  0+50      48.7396     57.74  O         |         |         |         |
  0+55      56.4711     63.25  O         |         |         |         |
  1+ 0      62.4326     67.68  O         |         |         |         |
  1+ 5      67.2262     71.46  OI        |         |         |         |
  1+10      71.1386     74.60  |O        |         |         |         |
  1+15      74.5528     77.60  |O        |         |         |         |
  1+20      77.5304     80.18  |O        |         |         |         |
  1+25      80.2144     82.61  |O        |         |         |         |
  1+30      82.6127     84.75  |O        |         |         |         |
  1+35      84.7921     86.74  |O        |         |         |         |
  1+40      86.7895     88.58  |O        |         |         |         |
  1+45      88.6415     90.30  |O        |         |         |         |
  1+50      90.3620     91.90  |O        |         |         |         |
  1+55      91.9487     93.37  |O        |         |         |         |
  2+ 0      93.4347     94.77  |O        |         |         |         |
  2+ 5      94.8202     96.06  |O        |         |         |         |
  2+10      96.1276     97.30  |O        |         |         |         |
  2+15      97.3386     98.42  |O        |         |         |         |
  2+20      98.4778     99.50  |O        |         |         |         |
  2+25      99.5239    100.46  |O        |         |         |         |
  2+30     100.5074    101.39  |O        |         |         |         |
  2+35     101.4339    102.27  |O        |         |         |         |
  2+40     102.3185    103.11  |O        |         |         |         |
  2+45     103.1405    103.88  |O        |         |         |         |
  2+50     103.9112    104.60  |O        |         |         |         |
  2+55     104.5997    105.21  |O        |         |         |         |
  3+ 0     105.2195    105.77  |O        |         |         |         |
  3+ 5     105.8137    106.35  |O        |         |         |         |
  3+10     106.3940    106.92  |O        |         |         |         |
  3+15     106.9679    107.49  |O        |         |         |         |
  3+20     107.5301    108.04  |O        |         |         |         |
  3+25     108.0942    108.60  |O        |         |         |         |
  3+30     108.6568    109.16  |O        |         |         |         |
  3+35     109.2173    109.72  |O        |         |         |         |
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|---|---|---|---|---|---|---|---|
| 3+40 | 109.7583 | 110.24 | O | | | | |
| 3+45 | 110.2968 | 110.78 | O | | | | |
| 3+50 | 110.8316 | 111.31 | O | | | | |
| 3+55 | 111.3749 | 111.87 | O | | | | |
| 4+ 0 | 111.9260 | 112.42 | O | | | | |
| 4+ 5 | 112.4902 | 113.00 | O | | | | |
| 4+10 | 113.0579 | 113.57 | O | | | | |
| 4+15 | 113.6336 | 114.15 | O | | | | |
| 4+20 | 114.1939 | 114.70 | O | | | | |
| 4+25 | 114.7512 | 115.25 | O | | | | |
| 4+30 | 115.3040 | 115.80 | O | | | | |
| 4+35 | 115.8637 | 116.37 | O | | | | |
| 4+40 | 116.4162 | 116.91 | O | | | | |
| 4+45 | 116.9706 | 117.47 | O | | | | |
| 4+50 | 117.5228 | 118.02 | O | | | | |
| 4+55 | 118.0890 | 118.60 | O | | | | |
| 5+ 0 | 118.6418 | 119.14 | O | | | | |
| 5+ 5 | 119.1958 | 119.70 | O | | | | |
| 5+10 | 119.7474 | 120.25 | O | | | | |
| 5+15 | 120.3079 | 120.81 | O | | | | |
| 5+20 | 120.8696 | 121.38 | O | | | | |
| 5+25 | 121.4422 | 121.96 | O | | | | |
| 5+30 | 122.0158 | 122.53 | O | | | | |
| 5+35 | 122.5996 | 123.13 | O | | | | |
| 5+40 | 123.1848 | 123.71 | O | | | | |
| 5+45 | 123.7818 | 124.32 | O | | | | |
| 5+50 | 124.3810 | 124.92 | O | | | | |
| 5+55 | 124.9926 | 125.55 | O | | | | |
| 6+ 0 | 125.6068 | 126.16 | O | | | | |
| 6+ 5 | 126.2338 | 126.80 | O | | | | |
| 6+10 | 126.8636 | 127.43 | O | | | | |
| 6+15 | 127.5067 | 128.09 | O | | | | |
| 6+20 | 128.1528 | 128.74 | O | | | | |
| 6+25 | 128.8127 | 129.41 | O | | | | |
| 6+30 | 129.4758 | 130.07 | O | | | | |
| 6+35 | 130.1532 | 130.77 | O | | | | |
| 6+40 | 130.8341 | 131.45 | O | | | | |
| 6+45 | 131.5297 | 132.16 | O | | | | |
| 6+50 | 132.2291 | 132.86 | O | | | | |
| 6+55 | 132.9438 | 133.59 | O | | | | |
| 7+ 0 | 133.6625 | 134.31 | O | | | | |
| 7+ 5 | 134.3972 | 135.06 | O | | | | |
| 7+10 | 135.1360 | 135.80 | O | | | | |
| 7+15 | 135.8915 | 136.58 | O | | | | |
| 7+20 | 136.6515 | 137.34 | O | | | | |
| 7+25 | 137.4288 | 138.13 | O | | | | |
| 7+30 | 138.2109 | 138.92 | O | | | | |
| 7+35 | 139.0111 | 139.74 | O | | | | |
| 7+40 | 139.8164 | 140.54 | OI | | | | |
| 7+45 | 140.6405 | 141.39 | O | | | | |
| 7+50 | 141.4701 | 142.22 | O | | | | |
| 7+55 | 142.3192 | 143.09 | O | | | | |
| 8+ 0 | 143.1743 | 143.95 | O | | | | |
| 8+ 5 | 144.0499 | 144.84 | O | | | | |
| 8+10 | 144.9318 | 145.73 | O | | | | |
| 8+15 | 145.8351 | 146.65 | O | | | | |
| 8+20 | 146.7451 | 147.57 | O | | | | |
| 8+25 | 147.6776 | 148.52 | O | | | | |
| 8+30 | 148.6173 | 149.47 | O | | | | |

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|---|---|---|---|---|---|---|
| 8+35 | 149.5804 | 150.45 | O | | | |
| 8+40 | 150.5514 | 151.43 | O | | | |
| 8+45 | 151.5468 | 152.45 | O | | | |
| 8+50 | 152.5508 | 153.46 | O | | | |
| 8+55 | 153.5804 | 154.51 | O | | | |
| 9+ 0 | 154.6191 | 155.56 | O | | | |
| 9+ 5 | 155.6848 | 156.65 | O | | | |
| 9+10 | 156.7603 | 157.73 | O | | | |
| 9+15 | 157.8641 | 158.86 | O | | | |
| 9+20 | 158.9786 | 159.99 | O | | | |
| 9+25 | 160.1228 | 161.16 | O | | | |
| 9+30 | 161.2785 | 162.32 | O | | | |
| 9+35 | 162.4656 | 163.54 | O | | | |
| 9+40 | 163.6650 | 164.75 | O | | | |
| 9+45 | 164.8977 | 166.01 | O | | | |
| 9+50 | 166.1436 | 167.27 | O | | | |
| 9+55 | 167.4246 | 168.58 | O | | | |
| 10+ 0 | 168.7200 | 169.89 | O | | | |
| 10+ 5 | 170.0526 | 171.26 | O | | | |
| 10+10 | 171.4007 | 172.62 | O | | | |
| 10+15 | 172.7882 | 174.04 | O | | | |
| 10+20 | 174.1927 | 175.46 | O | | | |
| 10+25 | 175.6389 | 176.95 | O | | | |
| 10+30 | 177.1036 | 178.43 | O | | | |
| 10+35 | 178.6126 | 179.98 | O | | | |
| 10+40 | 180.1417 | 181.52 | O | | | |
| 10+45 | 181.7181 | 183.15 | O | | | |
| 10+50 | 183.3164 | 184.76 | O | | | |
| 10+55 | 184.9651 | 186.46 | O | | | |
| 11+ 0 | 186.6378 | 188.15 | O | | | |
| 11+ 5 | 188.3644 | 189.93 | O | | | |
| 11+10 | 190.1173 | 191.70 | O | | | |
| 11+15 | 191.9279 | 193.57 | O | | | |
| 11+20 | 193.7673 | 195.43 | O | | | |
| 11+25 | 195.6688 | 197.39 | O | | | |
| 11+30 | 197.6019 | 199.35 | O | | | |
| 11+35 | 199.6017 | 201.41 | O | | | |
| 11+40 | 201.6365 | 203.48 | O | | | |
| 11+45 | 203.7433 | 205.65 | O | | | |
| 11+50 | 205.8887 | 207.83 | O | | | |
| 11+55 | 208.1120 | 210.13 | OI | | | |
| 12+ 0 | 210.3780 | 212.43 | O | | | |
| 12+ 5 | 212.7309 | 214.86 | O | | | |
| 12+10 | 215.1355 | 217.31 | O | | | |
| 12+15 | 217.6363 | 219.90 | O | | | |
| 12+20 | 220.1944 | 222.51 | O | | | |
| 12+25 | 222.8574 | 225.27 | O | | | |
| 12+30 | 225.5866 | 228.06 | O | | | |
| 12+35 | 228.4347 | 231.02 | O | | | |
| 12+40 | 231.3648 | 234.02 | O | | | |
| 12+45 | 234.4396 | 237.23 | O | | | |
| 12+50 | 237.5790 | 240.42 | O | | | |
| 12+55 | 240.8379 | 243.79 | O | | | |
| 13+ 0 | 244.1710 | 247.19 | O | | | |
| 13+ 5 | 247.6462 | 250.80 | O | | | |
| 13+10 | 251.2127 | 254.44 | O | | | |
| 13+15 | 254.9429 | 258.33 | O | | | |
| 13+20 | 258.7809 | 262.25 | O | | | |
| 13+25 | 262.8044 | 266.45 | O | | | |

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|---|---|---|---|---|---|---|---|
| 13+30 | 266.9534 | 270.71 | O | | | | |
| 13+35 | 271.3125 | 275.27 | O | | | | |
| 13+40 | 275.8180 | 279.90 | O | | | | |
| 13+45 | 280.5634 | 284.87 | O | | | | |
| 13+50 | 285.4802 | 289.93 | O | | | | |
| 13+55 | 290.6722 | 295.38 | O | | | | |
| 14+ 0 | 296.0666 | 300.95 | O | | | | |
| 14+ 5 | 302.2895 | 307.98 | O | | | | |
| 14+10 | 309.6926 | 316.48 | O | | | | |
| 14+15 | 318.4306 | 326.43 | O | | | | |
| 14+20 | 328.4200 | 337.54 | O | | | | |
| 14+25 | 339.8422 | 350.28 | OI | | | | |
| 14+30 | 353.1852 | 365.40 | O | | | | |
| 14+35 | 369.0092 | 383.51 | O | | | | |
| 14+40 | 388.8082 | 407.02 | O | | | | |
| 14+45 | 414.5130 | 438.22 | OI | | | | |
| 14+50 | 438.4421 | 459.84 | O | | | | |
| 14+55 | 459.8353 | 478.94 | O | | | | |
| 15+ 0 | 479.5109 | 497.14 | OI | | | | |
| 15+ 5 | 498.6146 | 515.83 | O | | | | |
| 15+10 | 517.4362 | 534.41 | O | | | | |
| 15+15 | 536.9086 | 554.55 | O | | | | |
| 15+20 | 557.0342 | 575.26 | OI | | | | |
| 15+25 | 577.2832 | 595.57 | O | | | | |
| 15+30 | 596.5541 | 613.87 | O | | | | |
| 15+35 | 615.6119 | 632.81 | OI | | | | |
| 15+40 | 634.5906 | 651.72 | O | | | | |
| 15+45 | 654.7177 | 673.00 | O | | | | |
| 15+50 | 675.1985 | 693.71 | O | | | | |
| 15+55 | 698.3971 | 719.59 | OI | | | | |
| 16+ 0 | 724.9415 | 749.19 | O | | | | |
| 16+ 5 | 788.3198 | 848.86 | OI | | | | |
| 16+10 | 896.3311 | 997.57 | O I | | | | |
| 16+15 | 1019.1138 | 1130.94 | O I | | | | |
| 16+20 | 1151.7896 | 1272.39 | O I | | | | |
| 16+25 | 1300.5605 | 1436.27 | O I | | | | |
| 16+30 | 1503.1870 | 1690.89 | O I | | | | |
| 16+35 | 1748.6433 | 1973.68 | O I | | | | |
| 16+40 | 2087.4145 | 2401.42 | O | I | | | |
| 16+45 | 2460.4210 | 2799.51 | O | I | | | |
| 16+50 | 2215.6922 | 1938.50 | I | O | | | |
| 16+55 | 1873.6139 | 1561.56 | I O | | | | |
| 17+ 0 | 1612.8535 | 1385.10 | I O | | | | |
| 17+ 5 | 1438.0147 | 1287.16 | I O | | | | |
| 17+10 | 1299.7154 | 1177.45 | I O | | | | |
| 17+15 | 1201.1482 | 1115.49 | I O | | | | |
| 17+20 | 1111.3813 | 1030.79 | IO | | | | |
| 17+25 | 1037.1639 | 971.51 | IO | | | | |
| 17+30 | 965.5639 | 901.01 | IO | | | | |
| 17+35 | 901.5022 | 844.33 | O | | | | |
| 17+40 | 841.0550 | 786.74 | IO | | | | |
| 17+45 | 781.0565 | 726.90 | IO | | | | |
| 17+50 | 727.4650 | 679.66 | IO | | | | |
| 17+55 | 678.4472 | 634.54 | O | | | | |
| 18+ 0 | 637.5465 | 601.32 | IO | | | | |
| 18+ 5 | 599.2560 | 564.85 | O | | | | |
| 18+10 | 566.2515 | 536.91 | IO | | | | |
| 18+15 | 532.7107 | 502.33 | O | | | | |
| 18+20 | 503.9269 | 478.38 | IO | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 18+25 | 473.9686 | 446.77 | O | | | |
| 18+30 | 449.2290 | 427.38 | O | | | |
| 18+35 | 425.6035 | 404.32 | IO | | | |
| 18+40 | 404.9091 | 386.48 | O | | | |
| 18+45 | 382.0553 | 361.20 | O | | | |
| 18+50 | 361.5056 | 343.18 | IO | | | |
| 18+55 | 338.3692 | 317.22 | O | | | |
| 19+ 0 | 318.9469 | 301.77 | O | | | |
| 19+ 5 | 304.7004 | 292.27 | O | | | |
| 19+10 | 293.4495 | 283.52 | O | | | |
| 19+15 | 282.9945 | 273.60 | IO | | | |
| 19+20 | 273.2878 | 264.59 | O | | | |
| 19+25 | 264.8532 | 257.35 | O | | | |
| 19+30 | 257.1494 | 250.25 | O | | | |
| 19+35 | 248.9947 | 241.59 | O | | | |
| 19+40 | 240.3247 | 232.45 | O | | | |
| 19+45 | 233.2884 | 227.09 | O | | | |
| 19+50 | 227.4750 | 222.32 | O | | | |
| 19+55 | 222.6676 | 218.41 | O | | | |
| 20+ 0 | 218.8425 | 215.47 | O | | | |
| 20+ 5 | 214.9293 | 211.38 | O | | | |
| 20+10 | 210.7723 | 207.00 | IO | | | |
| 20+15 | 206.1847 | 202.01 | O | | | |
| 20+20 | 200.1687 | 194.61 | O | | | |
| 20+25 | 194.8606 | 190.14 | O | | | |
| 20+30 | 190.4594 | 186.56 | O | | | |
| 20+35 | 186.5077 | 182.97 | O | | | |
| 20+40 | 182.0689 | 178.01 | O | | | |
| 20+45 | 177.8985 | 174.16 | O | | | |
| 20+50 | 174.2969 | 171.09 | O | | | |
| 20+55 | 171.4311 | 168.91 | O | | | |
| 21+ 0 | 166.7349 | 162.32 | O | | | |
| 21+ 5 | 162.8052 | 159.34 | O | | | |
| 21+10 | 159.6169 | 156.80 | O | | | |
| 21+15 | 156.8819 | 154.45 | O | | | |
| 21+20 | 154.3753 | 152.13 | O | | | |
| 21+25 | 152.0128 | 149.89 | O | | | |
| 21+30 | 149.6704 | 147.56 | O | | | |
| 21+35 | 147.3854 | 145.33 | O | | | |
| 21+40 | 145.2821 | 143.40 | O | | | |
| 21+45 | 143.3207 | 141.56 | O | | | |
| 21+50 | 141.4589 | 139.79 | IO | | | |
| 21+55 | 139.6654 | 138.05 | O | | | |
| 22+ 0 | 137.9577 | 136.42 | O | | | |
| 22+ 5 | 136.3215 | 134.85 | O | | | |
| 22+10 | 134.7449 | 133.33 | O | | | |
| 22+15 | 133.2208 | 131.85 | O | | | |
| 22+20 | 131.7447 | 130.42 | O | | | |
| 22+25 | 130.3131 | 129.02 | O | | | |
| 22+30 | 128.9244 | 127.67 | O | | | |
| 22+35 | 127.5771 | 126.36 | O | | | |
| 22+40 | 126.2680 | 125.09 | O | | | |
| 22+45 | 124.9949 | 123.85 | O | | | |
| 22+50 | 123.7557 | 122.64 | O | | | |
| 22+55 | 122.5487 | 121.46 | O | | | |
| 23+ 0 | 121.3726 | 120.31 | O | | | |
| 23+ 5 | 120.2259 | 119.19 | O | | | |
| 23+10 | 119.1073 | 118.10 | O | | | |
| 23+15 | 118.0158 | 117.03 | O | | | |

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|---|---|---|---|---|---|---|---|
| 23+20 | 116.9501 | 115.99 | \|O | \| | \| | \| | \| |
| 23+25 | 115.9093 | 114.97 | \|O | \| | \| | \| | \| |
| 23+30 | 114.8923 | 113.98 | \|O | \| | \| | \| | \| |
| 23+35 | 113.8983 | 113.00 | \|O | \| | \| | \| | \| |
| 23+40 | 112.9265 | 112.05 | \|O | \| | \| | \| | \| |
| 23+45 | 111.9759 | 111.12 | \|O | \| | \| | \| | \| |
| 23+50 | 111.0459 | 110.21 | \|O | \| | \| | \| | \| |
| 23+55 | 110.1356 | 109.32 | \|O | \| | \| | \| | \| |
| 24+ 0 | 109.2445 | 108.44 | \|O | \| | \| | \| | \| |
| 24+ 5 | 108.0060 | 106.86 | \|O | \| | \| | \| | \| |
| 24+10 | 106.1154 | 104.35 | \|O | \| | \| | \| | \| |
| 24+15 | 103.5659 | 101.21 | \|O | \| | \| | \| | \| |
| 24+20 | 100.3664 | 97.42 | \|O | \| | \| | \| | \| |
| 24+25 | 96.5050 | 92.96 | \|O | \| | \| | \| | \| |
| 24+30 | 91.5769 | 87.04 | \|O | \| | \| | \| | \| |
| 24+35 | 85.3213 | 79.56 | \|O | \| | \| | \| | \| |
| 24+40 | 76.6177 | 68.55 | IO | \| | \| | \| | \| |
| 24+45 | 64.2622 | 52.80 | O | \| | \| | \| | \| |
| 24+50 | 53.7502 | 44.46 | O | \| | \| | \| | \| |
| 24+55 | 45.7955 | 38.82 | O | \| | \| | \| | \| |
| 25+ 0 | 39.6914 | 34.33 | O | \| | \| | \| | \| |
| 25+ 5 | 34.8228 | 30.52 | O | \| | \| | \| | \| |
| 25+10 | 30.8855 | 27.41 | O | \| | \| | \| | \| |
| 25+15 | 27.4930 | 24.47 | O | \| | \| | \| | \| |
| 25+20 | 24.5723 | 21.97 | O | \| | \| | \| | \| |
| 25+25 | 21.9815 | 19.67 | O | \| | \| | \| | \| |
| 25+30 | 19.7036 | 17.67 | O | \| | \| | \| | \| |
| 25+35 | 17.6744 | 15.86 | O | \| | \| | \| | \| |
| 25+40 | 15.8486 | 14.22 | O | \| | \| | \| | \| |
| 25+45 | 14.1935 | 12.71 | O | \| | \| | \| | \| |
| 25+50 | 12.6875 | 11.34 | O | \| | \| | \| | \| |
| 25+55 | 11.3373 | 10.13 | O | \| | \| | \| | \| |
| 26+ 0 | 10.1021 | 9.00 | O | \| | \| | \| | \| |
| 26+ 5 | 8.9869 | 7.99 | O | \| | \| | \| | \| |
| 26+10 | 7.9617 | 7.04 | O | \| | \| | \| | \| |
| 26+15 | 7.0502 | 6.24 | O | \| | \| | \| | \| |
| 26+20 | 6.2203 | 5.48 | O | \| | \| | \| | \| |
| 26+25 | 5.4989 | 4.86 | O | \| | \| | \| | \| |
| 26+30 | 4.8482 | 4.27 | O | \| | \| | \| | \| |
| 26+35 | 4.2681 | 3.75 | O | \| | \| | \| | \| |
| 26+40 | 3.7365 | 3.26 | O | \| | \| | \| | \| |
| 26+45 | 3.2800 | 2.87 | O | \| | \| | \| | \| |
| 26+50 | 2.8802 | 2.52 | O | \| | \| | \| | \| |
| 26+55 | 2.5739 | 2.31 | O | \| | \| | \| | \| |
| 27+ 0 | 2.3401 | 2.13 | O | \| | \| | \| | \| |
| 27+ 5 | 2.1418 | 1.97 | O | \| | \| | \| | \| |
| 27+10 | 1.9603 | 1.80 | O | \| | \| | \| | \| |
| 27+15 | 1.7947 | 1.65 | O | \| | \| | \| | \| |
| 27+20 | 1.6434 | 1.51 | O | \| | \| | \| | \| |
| 27+25 | 1.4997 | 1.37 | O | \| | \| | \| | \| |
| 27+30 | 1.3600 | 1.23 | O | \| | \| | \| | \| |
| 27+35 | 1.2318 | 1.12 | O | \| | \| | \| | \| |
| 27+40 | 1.1255 | 1.03 | O | \| | \| | \| | \| |
| 27+45 | 1.0311 | 0.95 | O | \| | \| | \| | \| |
| 27+50 | 0.9423 | 0.86 | O | \| | \| | \| | \| |
| 27+55 | 0.8547 | 0.78 | O | \| | \| | \| | \| |
| 28+ 0 | 0.7612 | 0.68 | O | \| | \| | \| | \| |
| 28+ 5 | 0.6645 | 0.58 | O | \| | \| | \| | \| |
| 28+10 | 0.5665 | 0.48 | O | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 28+15 | 0.4706 | 0.38 | Q | | | | |
| 28+20 | 0.3922 | 0.32 | Q | | | | |
| 28+25 | 0.3271 | 0.27 | Q | | | | |
| 28+30 | 0.2685 | 0.22 | Q | | | | |
| 28+35 | 0.2133 | 0.16 | Q | | | | |
| 28+40 | 0.1673 | 0.13 | Q | | | | |
| 28+45 | 0.1297 | 0.10 | Q | | | | |
| 28+50 | 0.0964 | 0.07 | Q | | | | |
| 28+55 | 0.0596 | 0.03 | Q | | | | |
| 29+ 0 | 0.0383 | 0.02 | Q | | | | |
| 29+ 5 | 0.0266 | 0.02 | Q | | | | |
| 29+10 | 0.0193 | 0.01 | Q | | | | |
| 29+15 | 0.0139 | 0.01 | Q | | | | |
| 29+20 | 0.0095 | 0.01 | Q | | | | |
| 29+25 | 0.0054 | 0.00 | Q | | | | |
| 29+30 | 0.0025 | 0.00 | Q | | | | |
| 29+35 | 0.0011 | 0.00 | Q | | | | |
| 29+40 | 0.0000 | 0.00 | Q | | | | |

**********HYDROGRAPH DATA**********

Number of intervals = 356
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2460.421 (CFS)
Total volume = 570.680 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 2.100 to Point/Station 2.100
**** ADD/COMBINE/RECOVER HYDROGRAPHS ****

********** HYDROGRAPH INFORMATION **********

From study/file name: EX51.rte

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P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals (CFS)

| Time(h+m) | Add q(CFS) | Tot. Q | | 0 | 3067.5 | 6134.9 | 9202.4 | 12269.9 |
|---|---|---|---|---|---|---|---|---|
| 0+ 5 | 2.0175 | 2.38 | Q | | | | | |
| 0+10 | 6.1564 | 7.56 | Q | | | | | |
| 0+15 | 12.1202 | 15.26 | Q | | | | | |
| 0+20 | 19.5243 | 25.08 | Q | | | | | |
| 0+25 | 28.6660 | 37.34 | Q | | | | | |
| 0+30 | 39.7300 | 52.63 | Q | | | | | |
| 0+35 | 52.5145 | 71.04 | Q | | | | | |
| 0+40 | 71.2388 | 97.90 | Q | | | | | |
| 0+45 | 94.9050 | 133.47 | Q | | | | | |
| 0+50 | 126.0779 | 174.82 | Q | | | | | |

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|---|---|---|---|---|---|---|---|
| 0+55 | 157.7302 | 214.20 | Q | \| | \| | \| | \| |
| 1+ 0 | 190.2178 | 252.65 | Q | \| | \| | \| | \| |
| 1+ 5 | 228.8061 | 296.03 | Q | \| | \| | \| | \| |
| 1+10 | 264.6943 | 335.83 | qQ | \| | \| | \| | \| |
| 1+15 | 289.1267 | 363.68 | qQ | \| | \| | \| | \| |
| 1+20 | 308.7038 | 386.23 | \|Q | \| | \| | \| | \| |
| 1+25 | 325.7582 | 405.97 | \|Q | \| | \| | \| | \| |
| 1+30 | 340.4051 | 423.02 | \|Q | \| | \| | \| | \| |
| 1+35 | 354.0323 | 438.82 | \|Q | \| | \| | \| | \| |
| 1+40 | 366.2796 | 453.07 | \|Q | \| | \| | \| | \| |
| 1+45 | 377.6066 | 466.25 | \|Q | \| | \| | \| | \| |
| 1+50 | 388.2164 | 478.58 | \|Q | \| | \| | \| | \| |
| 1+55 | 398.2224 | 490.17 | \|Q | \| | \| | \| | \| |
| 2+ 0 | 407.7787 | 501.21 | \|Q | \| | \| | \| | \| |
| 2+ 5 | 416.3650 | 511.19 | \|Q | \| | \| | \| | \| |
| 2+10 | 424.8282 | 520.96 | \|Q | \| | \| | \| | \| |
| 2+15 | 433.1586 | 530.50 | \|Q | \| | \| | \| | \| |
| 2+20 | 440.4929 | 538.97 | \|Q | \| | \| | \| | \| |
| 2+25 | 447.5146 | 547.04 | \|Q | \| | \| | \| | \| |
| 2+30 | 454.5796 | 555.09 | \|Q | \| | \| | \| | \| |
| 2+35 | 461.2278 | 562.66 | \|Q | \| | \| | \| | \| |
| 2+40 | 467.4358 | 569.75 | \|Q | \| | \| | \| | \| |
| 2+45 | 473.6698 | 576.81 | \|Q | \| | \| | \| | \| |
| 2+50 | 479.8089 | 583.72 | \|Q | \| | \| | \| | \| |
| 2+55 | 485.4936 | 590.09 | \|Q | \| | \| | \| | \| |
| 3+ 0 | 491.1773 | 596.40 | \|Q | \| | \| | \| | \| |
| 3+ 5 | 496.8564 | 602.67 | \|Q | \| | \| | \| | \| |
| 3+10 | 502.1356 | 608.53 | \|Q | \| | \| | \| | \| |
| 3+15 | 507.2909 | 614.26 | \|qQ | \| | \| | \| | \| |
| 3+20 | 512.4865 | 620.02 | \|qQ | \| | \| | \| | \| |
| 3+25 | 517.3712 | 625.47 | \|qQ | \| | \| | \| | \| |
| 3+30 | 521.9227 | 630.58 | \|qQ | \| | \| | \| | \| |
| 3+35 | 526.4966 | 635.71 | \|qQ | \| | \| | \| | \| |
| 3+40 | 531.0393 | 640.80 | \|qQ | \| | \| | \| | \| |
| 3+45 | 535.3493 | 645.65 | \|qQ | \| | \| | \| | \| |
| 3+50 | 539.6761 | 650.51 | \|qQ | \| | \| | \| | \| |
| 3+55 | 544.0114 | 655.39 | \|qQ | \| | \| | \| | \| |
| 4+ 0 | 548.1677 | 660.09 | \|qQ | \| | \| | \| | \| |
| 4+ 5 | 552.2710 | 664.76 | \|qQ | \| | \| | \| | \| |
| 4+10 | 556.4152 | 669.47 | \|qQ | \| | \| | \| | \| |
| 4+15 | 560.4498 | 674.08 | \|qQ | \| | \| | \| | \| |
| 4+20 | 564.3742 | 678.57 | \|qQ | \| | \| | \| | \| |
| 4+25 | 568.3213 | 683.07 | \|qQ | \| | \| | \| | \| |
| 4+30 | 572.2146 | 687.52 | \|qQ | \| | \| | \| | \| |
| 4+35 | 575.7762 | 691.64 | \|qQ | \| | \| | \| | \| |
| 4+40 | 579.3468 | 695.76 | \|qQ | \| | \| | \| | \| |
| 4+45 | 582.9400 | 699.91 | \|qQ | \| | \| | \| | \| |
| 4+50 | 586.5767 | 704.10 | \|qQ | \| | \| | \| | \| |
| 4+55 | 590.2369 | 708.33 | \|qQ | \| | \| | \| | \| |
| 5+ 0 | 593.9419 | 712.58 | \|qQ | \| | \| | \| | \| |
| 5+ 5 | 597.5739 | 716.77 | \|qQ | \| | \| | \| | \| |
| 5+10 | 601.1375 | 720.88 | \|qQ | \| | \| | \| | \| |
| 5+15 | 604.7256 | 725.03 | \|qQ | \| | \| | \| | \| |
| 5+20 | 608.3607 | 729.23 | \|qQ | \| | \| | \| | \| |
| 5+25 | 612.0216 | 733.46 | \|qQ | \| | \| | \| | \| |
| 5+30 | 615.7311 | 737.75 | \| Q | \| | \| | \| | \| |
| 5+35 | 619.4573 | 742.06 | \| Q | \| | \| | \| | \| |
| 5+40 | 623.0614 | 746.25 | \| Q | \| | \| | \| | \| |
| 5+45 | 626.6309 | 750.41 | \| Q | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|
| 5+50 | 630.2514 | 754.63 | Q | | | |
| 5+55 | 633.9003 | 758.89 | Q | | | |
| 6+ 0 | 637.6021 | 763.21 | Q | | | |
| 6+ 5 | 641.3337 | 767.57 | Q | | | |
| 6+10 | 645.0921 | 771.96 | Q | | | |
| 6+15 | 648.7731 | 776.28 | Q | | | |
| 6+20 | 652.4998 | 780.65 | Q | | | |
| 6+25 | 656.2583 | 785.07 | Q | | | |
| 6+30 | 660.0754 | 789.55 | Q | | | |
| 6+35 | 663.9258 | 794.08 | Q | | | |
| 6+40 | 667.8371 | 798.67 | Q | | | |
| 6+45 | 671.7743 | 803.30 | Q | | | |
| 6+50 | 675.7635 | 807.99 | Q | | | |
| 6+55 | 679.7894 | 812.73 | Q | | | |
| 7+ 0 | 683.8808 | 817.54 | Q | | | |
| 7+ 5 | 688.0107 | 822.41 | Q | | | |
| 7+10 | 692.2089 | 827.34 | Q | | | |
| 7+15 | 696.4462 | 832.34 | Q | | | |
| 7+20 | 700.7320 | 837.38 | Q | | | |
| 7+25 | 705.0514 | 842.48 | Q | | | |
| 7+30 | 709.4449 | 847.66 | Q | | | |
| 7+35 | 713.8829 | 852.89 | Q | | | |
| 7+40 | 718.3981 | 858.21 | Q | | | |
| 7+45 | 722.9601 | 863.60 | Q | | | |
| 7+50 | 727.5760 | 869.05 | Q | | | |
| 7+55 | 732.1165 | 874.44 | Q | | | |
| 8+ 0 | 736.7306 | 879.90 | Q | | | |
| 8+ 5 | 741.3960 | 885.45 | Q | | | |
| 8+10 | 746.1490 | 891.08 | Q | | | |
| 8+15 | 750.9562 | 896.79 | Q | | | |
| 8+20 | 755.8550 | 902.60 | Q | | | |
| 8+25 | 760.8112 | 908.49 | Q | | | |
| 8+30 | 765.8634 | 914.48 | Q | | | |
| 8+35 | 770.9762 | 920.56 | qQ | | | |
| 8+40 | 776.1898 | 926.74 | qQ | | | |
| 8+45 | 781.4074 | 932.95 | qQ | | | |
| 8+50 | 786.6504 | 939.20 | qQ | | | |
| 8+55 | 791.9610 | 945.54 | qQ | | | |
| 9+ 0 | 797.3822 | 952.00 | qQ | | | |
| 9+ 5 | 802.8751 | 958.56 | qQ | | | |
| 9+10 | 808.4844 | 965.24 | qQ | | | |
| 9+15 | 814.1699 | 972.03 | qQ | | | |
| 9+20 | 819.9781 | 978.96 | qQ | | | |
| 9+25 | 825.8672 | 985.99 | qQ | | | |
| 9+30 | 831.8859 | 993.16 | qQ | | | |
| 9+35 | 837.9907 | 1000.46 | qQ | | | |
| 9+40 | 844.2323 | 1007.90 | qQ | | | |
| 9+45 | 850.5659 | 1015.46 | qQ | | | |
| 9+50 | 857.0441 | 1023.19 | qQ | | | |
| 9+55 | 863.6204 | 1031.05 | qQ | | | |
| 10+ 0 | 870.3500 | 1039.07 | qQ | | | |
| 10+ 5 | 877.1846 | 1047.24 | qQ | | | |
| 10+10 | 884.1816 | 1055.58 | qQ | | | |
| 10+15 | 891.2910 | 1064.08 | qQ | | | |
| 10+20 | 898.5731 | 1072.77 | qQ | | | |
| 10+25 | 905.9757 | 1081.61 | qQ | | | |
| 10+30 | 913.5620 | 1090.67 | qQ | | | |
| 10+35 | 921.2779 | 1099.89 | Q | | | |
| 10+40 | 929.1893 | 1109.33 | Q | | | |

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10+45     937.2404   1118.96  |  Q      |         |         |         |
10+50     945.5002   1128.82  |  Q      |         |         |         |
10+55     953.9106   1138.88  |  Q      |         |         |         |
11+ 0     962.5443   1149.18  |  Q      |         |         |         |
11+ 5     971.3405   1159.70  |  Q      |         |         |         |
11+10     980.3761   1170.49  |  Q      |         |         |         |
11+15     989.5878   1181.52  |  Q      |         |         |         |
11+20     999.0565   1192.82  |  Q      |         |         |         |
11+25    1008.7162   1204.38  |  Q      |         |         |         |
11+30    1018.6526   1216.25  |  Q      |         |         |         |
11+35    1028.7967   1228.40  |  qQ     |         |         |         |
11+40    1039.2393   1240.88  |  qQ     |         |         |         |
11+45    1049.9084   1253.65  |  qQ     |         |         |         |
11+50    1060.9003   1266.79  |  qQ     |         |         |         |
11+55    1072.1400   1280.25  |  qQ     |         |         |         |
12+ 0    1083.7297   1294.11  |  qQ     |         |         |         |
12+ 5    1095.8176   1308.55  |  qQ     |         |         |         |
12+10    1108.5251   1323.66  |  qQ     |         |         |         |
12+15    1121.7382   1339.37  |  qQ     |         |         |         |
12+20    1135.5312   1355.73  |  qQ     |         |         |         |
12+25    1149.8525   1372.71  |  qQ     |         |         |         |
12+30    1164.8488   1390.44  |  qQ     |         |         |         |
12+35    1180.4089   1408.84  |  qQ     |         |         |         |
12+40    1197.1422   1428.51  |  qQ     |         |         |         |
12+45    1214.8450   1449.28  |  qQ     |         |         |         |
12+50    1233.9544   1471.53  |   Q     |         |         |         |
12+55    1253.5855   1494.42  |   Q     |         |         |         |
13+ 0    1273.9391   1518.11  |   Q     |         |         |         |
13+ 5    1295.5023   1543.15  |   qQ    |         |         |         |
13+10    1317.4637   1568.68  |   qQ    |         |         |         |
13+15    1338.7317   1593.67  |   qQ    |         |         |         |
13+20    1360.2329   1619.01  |   qQ    |         |         |         |
13+25    1382.1128   1644.92  |   qQ    |         |         |         |
13+30    1404.5935   1671.55  |   qQ    |         |         |         |
13+35    1427.7115   1699.02  |   qQ    |         |         |         |
13+40    1451.6581   1727.48  |   qQ    |         |         |         |
13+45    1476.3626   1756.93  |   qQ    |         |         |         |
13+50    1502.1062   1787.59  |   qQ    |         |         |         |
13+55    1528.7766   1819.45  |   qQ    |         |         |         |
14+ 0    1556.6819   1852.75  |    qQ   |         |         |         |
14+ 5    1593.4121   1895.70  |    qQ   |         |         |         |
14+10    1639.7876   1949.48  |    qQ   |         |         |         |
14+15    1694.5264   2012.96  |    qQ   |         |         |         |
14+20    1756.4203   2084.84  |    qQ   |         |         |         |
14+25    1826.5541   2166.40  |    q Q  |         |         |         |
14+30    1906.1068   2259.29  |     qQ  |         |         |         |
14+35    1994.1136   2363.12  |     qQ  |         |         |         |
14+40    2107.3303   2496.14  |     q Q |         |         |         |
14+45    2241.8285   2656.34  |      qQ |         |         |         |
14+50    2408.0457   2846.49  |      q Q|         |         |         |
14+55    2578.7430   3038.58  |       qQ|         |         |         |
15+ 0    2756.0214   3235.53  |       q Q         |         |         |
15+ 5    2960.1355   3458.75  |        q|Q        |         |         |
15+10    3157.9433   3675.38  |         qQ        |         |         |
15+15    3315.8005   3852.71  |         q Q       |         |         |
15+20    3460.2707   4017.30  |         |q Q      |         |         |
15+25    3588.5479   4165.83  |         |q Q      |         |         |
15+30    3701.8805   4298.43  |         | q Q     |         |         |
15+35    3808.2729   4423.88  |         | q Q     |         |         |
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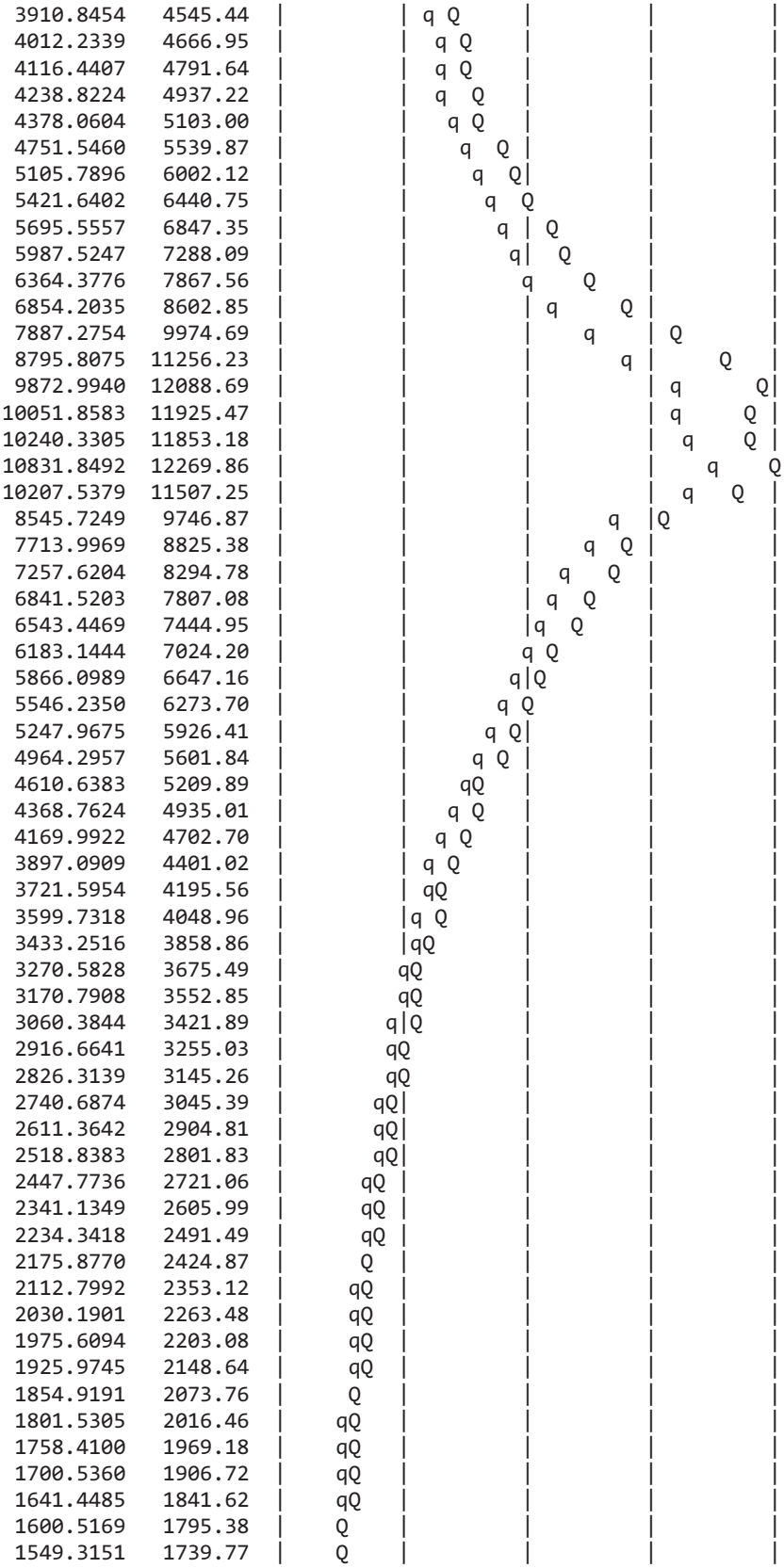
| | | | |
|---|---|---|---|
| 15+40 | 3910.8454 | 4545.44 |  |
| 15+45 | 4012.2339 | 4666.95 | |
| 15+50 | 4116.4407 | 4791.64 | |
| 15+55 | 4238.8224 | 4937.22 | |
| 16+ 0 | 4378.0604 | 5103.00 | |
| 16+ 5 | 4751.5460 | 5539.87 | |
| 16+10 | 5105.7896 | 6002.12 | |
| 16+15 | 5421.6402 | 6440.75 | |
| 16+20 | 5695.5557 | 6847.35 | |
| 16+25 | 5987.5247 | 7288.09 | |
| 16+30 | 6364.3776 | 7867.56 | |
| 16+35 | 6854.2035 | 8602.85 | |
| 16+40 | 7887.2754 | 9974.69 | |
| 16+45 | 8795.8075 | 11256.23 | |
| 16+50 | 9872.9940 | 12088.69 | |
| 16+55 | 10051.8583 | 11925.47 | |
| 17+ 0 | 10240.3305 | 11853.18 | |
| 17+ 5 | 10831.8492 | 12269.86 | |
| 17+10 | 10207.5379 | 11507.25 | |
| 17+15 | 8545.7249 | 9746.87 | |
| 17+20 | 7713.9969 | 8825.38 | |
| 17+25 | 7257.6204 | 8294.78 | |
| 17+30 | 6841.5203 | 7807.08 | |
| 17+35 | 6543.4469 | 7444.95 | |
| 17+40 | 6183.1444 | 7024.20 | |
| 17+45 | 5866.0989 | 6647.16 | |
| 17+50 | 5546.2350 | 6273.70 | |
| 17+55 | 5247.9675 | 5926.41 | |
| 18+ 0 | 4964.2957 | 5601.84 | |
| 18+ 5 | 4610.6383 | 5209.89 | |
| 18+10 | 4368.7624 | 4935.01 | |
| 18+15 | 4169.9922 | 4702.70 | |
| 18+20 | 3897.0909 | 4401.02 | |
| 18+25 | 3721.5954 | 4195.56 | |
| 18+30 | 3599.7318 | 4048.96 | |
| 18+35 | 3433.2516 | 3858.86 | |
| 18+40 | 3270.5828 | 3675.49 | |
| 18+45 | 3170.7908 | 3552.85 | |
| 18+50 | 3060.3844 | 3421.89 | |
| 18+55 | 2916.6641 | 3255.03 | |
| 19+ 0 | 2826.3139 | 3145.26 | |
| 19+ 5 | 2740.6874 | 3045.39 | |
| 19+10 | 2611.3642 | 2904.81 | |
| 19+15 | 2518.8383 | 2801.83 | |
| 19+20 | 2447.7736 | 2721.06 | |
| 19+25 | 2341.1349 | 2605.99 | |
| 19+30 | 2234.3418 | 2491.49 | |
| 19+35 | 2175.8770 | 2424.87 | |
| 19+40 | 2112.7992 | 2353.12 | |
| 19+45 | 2030.1901 | 2263.48 | |
| 19+50 | 1975.6094 | 2203.08 | |
| 19+55 | 1925.9745 | 2148.64 | |
| 20+ 0 | 1854.9191 | 2073.76 | |
| 20+ 5 | 1801.5305 | 2016.46 | |
| 20+10 | 1758.4100 | 1969.18 | |
| 20+15 | 1700.5360 | 1906.72 | |
| 20+20 | 1641.4485 | 1841.62 | |
| 20+25 | 1600.5169 | 1795.38 | |
| 20+30 | 1549.3151 | 1739.77 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 20+35 | 1471.8903 | 1658.40 | qQ | | | |
| 20+40 | 1435.6248 | 1617.69 | qQ | | | |
| 20+45 | 1407.2311 | 1585.13 | qQ | | | |
| 20+50 | 1379.7514 | 1554.05 | qQ | | | |
| 20+55 | 1350.6198 | 1522.05 | Q | | | |
| 21+ 0 | 1322.1678 | 1488.90 | Q | | | |
| 21+ 5 | 1283.4377 | 1446.24 | Q | | | |
| 21+10 | 1245.0478 | 1404.66 | Q | | | |
| 21+15 | 1222.3132 | 1379.20 | qQ | | | |
| 21+20 | 1201.1317 | 1355.51 | qQ | | | |
| 21+25 | 1179.7659 | 1331.78 | qQ | | | |
| 21+30 | 1157.4225 | 1307.09 | qQ | | | |
| 21+35 | 1134.2024 | 1281.59 | qQ | | | |
| 21+40 | 1093.6870 | 1238.97 | qQ | | | |
| 21+45 | 1068.2264 | 1211.55 | Q | | | |
| 21+50 | 1051.6356 | 1193.09 | Q | | | |
| 21+55 | 1035.3699 | 1175.04 | Q | | | |
| 22+ 0 | 1018.3761 | 1156.33 | Q | | | |
| 22+ 5 | 1000.8491 | 1137.17 | Q | | | |
| 22+10 | 980.0553 | 1114.80 | Q | | | |
| 22+15 | 951.3609 | 1084.58 | Q | | | |
| 22+20 | 935.4190 | 1067.16 | Q | | | |
| 22+25 | 921.7922 | 1052.11 | Q | | | |
| 22+30 | 908.6102 | 1037.53 | qQ | | | |
| 22+35 | 895.2274 | 1022.80 | qQ | | | |
| 22+40 | 882.7698 | 1009.04 | qQ | | | |
| 22+45 | 869.5827 | 994.58 | qQ | | | |
| 22+50 | 856.2534 | 980.01 | qQ | | | |
| 22+55 | 844.5427 | 967.09 | qQ | | | |
| 23+ 0 | 833.0728 | 954.45 | qQ | | | |
| 23+ 5 | 821.6898 | 941.92 | qQ | | | |
| 23+10 | 810.4884 | 929.60 | qQ | | | |
| 23+15 | 800.1137 | 918.13 | Q | | | |
| 23+20 | 787.5587 | 904.51 | Q | | | |
| 23+25 | 776.9104 | 892.82 | Q | | | |
| 23+30 | 767.4531 | 882.35 | Q | | | |
| 23+35 | 757.9171 | 871.82 | Q | | | |
| 23+40 | 748.0072 | 860.93 | Q | | | |
| 23+45 | 736.9479 | 848.92 | Q | | | |
| 23+50 | 721.7547 | 832.80 | Q | | | |
| 23+55 | 696.4558 | 806.59 | Q | | | |
| 24+ 0 | 685.7061 | 794.95 | Q | | | |
| 24+ 5 | 675.4094 | 783.42 | Q | | | |
| 24+10 | 663.7695 | 769.88 | Q | | | |
| 24+15 | 649.8726 | 753.44 | Q | | | |
| 24+20 | 634.7771 | 735.14 | Q | | | |
| 24+25 | 618.1091 | 714.61 | Q | | | |
| 24+30 | 599.5524 | 691.13 | qQ | | | |
| 24+35 | 578.9731 | 664.29 | qQ | | | |
| 24+40 | 551.4821 | 628.10 | qQ | | | |
| 24+45 | 512.0759 | 576.34 | Q | | | |
| 24+50 | 464.4674 | 518.22 | Q | | | |
| 24+55 | 427.5672 | 473.36 | Q | | | |
| 25+ 0 | 390.9221 | 430.61 | Q | | | |
| 25+ 5 | 348.5337 | 383.36 | Q | | | |
| 25+10 | 309.0296 | 339.92 | Q | | | |
| 25+15 | 281.5442 | 309.04 | qQ | | | |
| 25+20 | 259.3446 | 283.92 | Q | | | |
| 25+25 | 240.0067 | 261.99 | Q | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+30 | 223.3835 | 243.09 | Q | | | | |
| 25+35 | 208.0345 | 225.71 | Q | | | | |
| 25+40 | 194.3099 | 210.16 | Q | | | | |
| 25+45 | 181.9440 | 196.14 | Q | | | | |
| 25+50 | 170.8084 | 183.50 | Q | | | | |
| 25+55 | 160.4618 | 171.80 | Q | | | | |
| 26+ 0 | 150.7381 | 160.84 | Q | | | | |
| 26+ 5 | 142.1311 | 151.12 | Q | | | | |
| 26+10 | 133.7953 | 141.76 | Q | | | | |
| 26+15 | 125.7192 | 132.77 | Q | | | | |
| 26+20 | 118.7745 | 124.99 | Q | | | | |
| 26+25 | 112.2503 | 117.75 | Q | | | | |
| 26+30 | 105.7998 | 110.65 | Q | | | | |
| 26+35 | 99.8647 | 104.13 | Q | | | | |
| 26+40 | 94.4770 | 98.21 | Q | | | | |
| 26+45 | 89.1559 | 92.44 | Q | | | | |
| 26+50 | 84.0375 | 86.92 | Q | | | | |
| 26+55 | 79.4535 | 82.03 | Q | | | | |
| 27+ 0 | 74.9605 | 77.30 | Q | | | | |
| 27+ 5 | 70.5444 | 72.69 | Q | | | | |
| 27+10 | 66.6146 | 68.57 | Q | | | | |
| 27+15 | 62.8740 | 64.67 | Q | | | | |
| 27+20 | 59.1723 | 60.82 | Q | | | | |
| 27+25 | 55.8429 | 57.34 | Q | | | | |
| 27+30 | 52.9205 | 54.28 | Q | | | | |
| 27+35 | 50.0291 | 51.26 | Q | | | | |
| 27+40 | 47.2382 | 48.36 | Q | | | | |
| 27+45 | 44.7311 | 45.76 | Q | | | | |
| 27+50 | 42.2728 | 43.22 | Q | | | | |
| 27+55 | 39.8534 | 40.71 | Q | | | | |
| 28+ 0 | 37.6776 | 38.44 | Q | | | | |
| 28+ 5 | 35.5993 | 36.26 | Q | | | | |
| 28+10 | 33.5417 | 34.11 | Q | | | | |
| 28+15 | 31.6368 | 32.11 | Q | | | | |
| 28+20 | 29.9023 | 30.29 | Q | | | | |
| 28+25 | 28.1852 | 28.51 | Q | | | | |
| 28+30 | 26.5808 | 26.85 | Q | | | | |
| 28+35 | 25.3464 | 25.56 | Q | | | | |
| 28+40 | 24.1579 | 24.33 | Q | | | | |
| 28+45 | 22.9816 | 23.11 | Q | | | | |
| 28+50 | 21.8170 | 21.91 | Q | | | | |
| 28+55 | 20.6641 | 20.72 | Q | | | | |
| 29+ 0 | 19.5223 | 19.56 | Q | | | | |
| 29+ 5 | 18.4888 | 18.52 | Q | | | | |
| 29+10 | 17.5794 | 17.60 | Q | | | | |
| 29+15 | 16.6792 | 16.69 | Q | | | | |
| 29+20 | 15.7877 | 15.80 | Q | | | | |
| 29+25 | 14.9047 | 14.91 | Q | | | | |
| 29+30 | 14.0300 | 14.03 | Q | | | | |
| 29+35 | 13.1734 | 13.17 | Q | | | | |
| 29+40 | 12.4968 | 12.50 | Q | | | | |
| 29+45 | 11.8885 | 11.89 | Q | | | | |
| 29+50 | 11.2861 | 11.29 | Q | | | | |
| 29+55 | 10.6894 | 10.69 | Q | | | | |
| 30+ 0 | 10.0983 | 10.10 | Q | | | | |
| 30+ 5 | 9.5126 | 9.51 | Q | | | | |
| 30+10 | 8.9601 | 8.96 | Q | | | | |
| 30+15 | 8.5207 | 8.52 | Q | | | | |
| 30+20 | 8.0962 | 8.10 | Q | | | | |

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|---|---|---|---|---|---|---|---|
| 30+25 | 7.6756 | 7.68 | Q | \| | \| | \| | \| |
| 30+30 | 7.2590 | 7.26 | Q | \| | \| | \| | \| |
| 30+35 | 6.8461 | 6.85 | Q | \| | \| | \| | \| |
| 30+40 | 6.4369 | 6.44 | Q | \| | \| | \| | \| |
| 30+45 | 6.0403 | 6.04 | Q | \| | \| | \| | \| |
| 30+50 | 5.6582 | 5.66 | Q | \| | \| | \| | \| |
| 30+55 | 5.2795 | 5.28 | Q | \| | \| | \| | \| |
| 31+ 0 | 4.9040 | 4.90 | Q | \| | \| | \| | \| |
| 31+ 5 | 4.5317 | 4.53 | Q | \| | \| | \| | \| |
| 31+10 | 4.1626 | 4.16 | Q | \| | \| | \| | \| |
| 31+15 | 3.7976 | 3.80 | Q | \| | \| | \| | \| |
| 31+20 | 3.4584 | 3.46 | Q | \| | \| | \| | \| |
| 31+25 | 3.1304 | 3.13 | Q | \| | \| | \| | \| |
| 31+30 | 2.8052 | 2.81 | Q | \| | \| | \| | \| |
| 31+35 | 2.4825 | 2.48 | Q | \| | \| | \| | \| |
| 31+40 | 2.1623 | 2.16 | Q | \| | \| | \| | \| |
| 31+45 | 1.8446 | 1.84 | Q | \| | \| | \| | \| |
| 31+50 | 1.5561 | 1.56 | Q | \| | \| | \| | \| |
| 31+55 | 1.3941 | 1.39 | Q | \| | \| | \| | \| |
| 32+ 0 | 1.2436 | 1.24 | Q | \| | \| | \| | \| |
| 32+ 5 | 1.0943 | 1.09 | Q | \| | \| | \| | \| |
| 32+10 | 0.9462 | 0.95 | Q | \| | \| | \| | \| |
| 32+15 | 0.7992 | 0.80 | Q | \| | \| | \| | \| |
| 32+20 | 0.6533 | 0.65 | Q | \| | \| | \| | \| |
| 32+25 | 0.5085 | 0.51 | Q | \| | \| | \| | \| |
| 32+30 | 0.3648 | 0.36 | Q | \| | \| | \| | \| |
| 32+35 | 0.2222 | 0.22 | Q | \| | \| | \| | \| |
| 32+40 | 0.0806 | 0.08 | Q | \| | \| | \| | \| |

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**********HYDROGRAPH DATA**********

Number of intervals = 392
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 12269.864 (CFS)
Total volume = 3994.794 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 0.000 | 0.000 | 0.000 | 0.000 |

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# TECHNICAL APPENDIX NO. 6

Developed Conditions
Rational Method Calculations
100-Year, 1-Hour Storm Event

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 1
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.260 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 1.000 to Point/Station 1.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 357.000(Ft.)
Top (of initial area) elevation = 1965.400(Ft.)
Bottom (of initial area) elevation = 1956.100(Ft.)
Difference in elevation = 9.300(Ft.)
Slope = 0.02605 s(%)= 2.61
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 10.809 min.
Rainfall intensity = 4.183(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.873
Subarea runoff = 3.651(CFS)
Total initial stream area = 1.000(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)
End of computations, Total Study Area = 1.00 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number = 78.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY
PROPOSED CONDTIIONS AREA 2
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 2.000 to Point/Station 2.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 285.000(Ft.)
Top (of initial area) elevation = 1965.100(Ft.)
Bottom (of initial area) elevation = 1955.600(Ft.)
Difference in elevation = 9.500(Ft.)
Slope = 0.03333 s(%)= 3.33
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 9.402 min.
Rainfall intensity = 4.648(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.876
Subarea runoff = 6.308(CFS)
Total initial stream area = 1.550(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)
End of computations, Total Study Area = 1.55 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number = 78.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 3
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 3.000 to Point/Station 3.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 600.000(Ft.)
Top (of initial area) elevation = 1963.000(Ft.)
Bottom (of initial area) elevation = 1955.000(Ft.)
Difference in elevation = 8.000(Ft.)
Slope = 0.01333 s(%)= 1.33
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 15.210 min.
Rainfall intensity = 3.319(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.866
Subarea runoff = 14.139(CFS)
Total initial stream area = 4.920(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)
End of computations, Total Study Area = 4.92 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number = 78.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

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Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 4
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 4.000 to Point/Station 4.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1971.300(Ft.)
Bottom (of initial area) elevation = 1953.900(Ft.)
Difference in elevation = 17.400(Ft.)
Slope = 0.01740 s(%)= 1.74
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 17.691 min.
Rainfall intensity = 2.986(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.862
Subarea runoff = 23.037(CFS)
Total initial stream area = 8.950(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)
End of computations, Total Study Area = 8.95 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number = 78.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

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Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 5
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 5.000 to Point/Station 5.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 931.000(Ft.)
Top (of initial area) elevation = 1971.200(Ft.)
Bottom (of initial area) elevation = 1954.800(Ft.)
Difference in elevation = 16.400(Ft.)
Slope = 0.01762 s(%)= 1.76
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 17.150 min.
Rainfall intensity = 3.052(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.863
Subarea runoff = 26.330(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)

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Process from Point/Station 5.100 to Point/Station 5.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1954.800(Ft.)
Downstream point elevation = 1950.600(Ft.)

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Channel length thru subarea  =   146.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     30.522(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     30.522(CFS)
Depth of flow =   0.227(Ft.), Average velocity =   2.662(Ft/s)
Channel flow top width =   50.909(Ft.)
Flow Velocity =    2.66(Ft/s)
Travel time  =    0.91 min.
Time of concentration =   18.06 min.
Critical depth =      0.227(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      2.943(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.861
Subarea runoff =      8.298(CFS) for    3.660(Ac.)
Total runoff =     34.627(CFS)
Effective area this stream =       13.66(Ac.)
Total Study Area (Main Stream No. 1) =       13.66(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   0.245(Ft.), Average velocity =   2.798(Ft/s)
Critical depth =      0.246(Ft.)
End of computations, Total Study Area =           13.66 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number =  78.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 6
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 6.000 to Point/Station 6.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1970.700(Ft.)
Bottom (of initial area) elevation = 1962.800(Ft.)
Difference in elevation = 7.900(Ft.)
Slope = 0.00790 s(%)= 0.79
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 20.718 min.
Rainfall intensity = 2.673(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.858
Subarea runoff = 21.712(CFS)
Total initial stream area = 9.470(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)

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Process from Point/Station 6.100 to Point/Station 6.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1962.800(Ft.)
Downstream point elevation = 1948.800(Ft.)

```
Channel length thru subarea  =   474.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     25.124(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     25.124(CFS)
Depth of flow =   0.201(Ft.), Average velocity =   2.484(Ft/s)
Channel flow top width =   50.803(Ft.)
Flow Velocity =    2.48(Ft/s)
Travel time  =    3.18 min.
Time of concentration =   23.90 min.
Critical depth =      0.199(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      2.419(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.853
Subarea runoff =      6.769(CFS) for    4.330(Ac.)
Total runoff =     28.481(CFS)
Effective area this stream =       13.80(Ac.)
Total Study Area (Main Stream No. 1) =       13.80(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   0.216(Ft.), Average velocity =   2.611(Ft/s)
Critical depth =      0.215(Ft.)
End of computations, Total Study Area =           13.80 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number =  78.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 7
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 7.000 to Point/Station 7.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1970.400(Ft.)
Bottom (of initial area) elevation = 1966.600(Ft.)
Difference in elevation = 3.800(Ft.)
Slope = 0.00380 s(%)= 0.38
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 23.983 min.
Rainfall intensity = 2.413(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.853
Subarea runoff = 19.205(CFS)
Total initial stream area = 9.330(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)

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Process from Point/Station 7.100 to Point/Station 7.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1966.600(Ft.)
Downstream point elevation = 1949.600(Ft.)

```
Channel length thru subarea  =   716.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     22.939(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     22.939(CFS)
Depth of flow =   0.203(Ft.), Average velocity =   2.244(Ft/s)
Channel flow top width =   50.811(Ft.)
Flow Velocity =    2.24(Ft/s)
Travel time  =    5.32 min.
Time of concentration =   29.30 min.
Critical depth =      0.188(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      2.097(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.846
Subarea runoff =      7.391(CFS) for    5.660(Ac.)
Total runoff =     26.596(CFS)
Effective area this stream =       14.99(Ac.)
Total Study Area (Main Stream No. 1) =       14.99(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   0.222(Ft.), Average velocity =   2.379(Ft/s)
Critical depth =      0.207(Ft.)
End of computations, Total Study Area =           14.99 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number =  78.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 8
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 8.000 to Point/Station 8.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1966.700(Ft.)
Bottom (of initial area) elevation = 1950.300(Ft.)
Difference in elevation = 16.400(Ft.)
Slope = 0.01640 s(%)= 1.64
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 17.902 min.
Rainfall intensity = 2.961(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.862
Subarea runoff = 22.889(CFS)
Total initial stream area = 8.970(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)
End of computations, Total Study Area = 8.97 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number = 78.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 9
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 9.000 to Point/Station 9.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 776.000(Ft.)
Top (of initial area) elevation = 1967.200(Ft.)
Bottom (of initial area) elevation = 1965.200(Ft.)
Difference in elevation = 2.000(Ft.)
Slope = 0.00258 s(%)= 0.26
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 23.420 min.
Rainfall intensity = 2.454(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.854
Subarea runoff = 20.948(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)

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Process from Point/Station 9.100 to Point/Station 9.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1965.200(Ft.)
Downstream point elevation = 1960.400(Ft.)

```
Channel length thru subarea  =   780.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     23.892(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     23.892(CFS)
Depth of flow =   0.311(Ft.), Average velocity =   1.515(Ft/s)
Channel flow top width =   51.246(Ft.)
Flow Velocity =    1.52(Ft/s)
Travel time  =    8.58 min.
Time of concentration =   32.00 min.
Critical depth =      0.191(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      1.972(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.842
Subarea runoff =      5.817(CFS) for    6.110(Ac.)
Total runoff =     26.765(CFS)
Effective area this stream =       16.11(Ac.)
Total Study Area (Main Stream No. 1) =       16.11(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   0.333(Ft.), Average velocity =   1.584(Ft/s)
Critical depth =      0.207(Ft.)


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Process from Point/Station        9.100 to Point/Station        9.200
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     16.110(Ac.)
Runoff from this stream =     26.765(CFS)
Time of concentration =   32.00 min.
Rainfall intensity =     1.972(In/Hr)
Area averaged loss rate (Fm) =    0.1260(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000


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Process from Point/Station        9.300 to Point/Station        9.200
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Initial subarea data:
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1967.900(Ft.)
Bottom (of initial area) elevation =  1960.400(Ft.)
Difference in elevation =     7.500(Ft.)
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```
Slope =    0.00750  s(%)=       0.75
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   20.934 min.
Rainfall intensity =      2.654(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.857
Subarea runoff =     20.523(CFS)
Total initial stream area =        9.020(Ac.)
Pervious area fraction = 0.900
Initial area Fm value =    0.126(In/Hr)


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Process from Point/Station        9.300 to Point/Station        9.200
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      9.020(Ac.)
Runoff from this stream =     20.523(CFS)
Time of concentration =   20.93 min.
Rainfall intensity =     2.654(In/Hr)
Area averaged loss rate (Fm) =    0.1260(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     26.77    16.110     32.00    0.126      1.972
2     20.52     9.020     20.93    0.126      2.654
Qmax(1) =
           1.000 *    1.000 *    26.765) +
           0.730 *    1.000 *    20.523) + =      41.751
Qmax(2) =
           1.369 *    0.654 *    26.765) +
           1.000 *    1.000 *    20.523) + =      44.502

Total of 2 streams to confluence:
Flow rates before confluence point:
      26.765      20.523
Maximum flow rates at confluence using above data:
       41.751       44.502
Area of streams before confluence:
       16.110        9.020
Effective area values after confluence:
       25.130       19.559
Results of confluence:
Total flow rate =     44.502(CFS)
Time of concentration =    20.934 min.
Effective stream area after confluence =     19.559(Ac.)
Study area average Pervious fraction(Ap) =  0.900
Study area average soil loss rate(Fm) =    0.126(In/Hr)
Study area total (this main stream) =      25.13(Ac.)


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Process from Point/Station        9.200 to Point/Station        9.500
**** IMPROVED CHANNEL TRAVEL TIME ****
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```
Upstream point elevation =  1960.400(Ft.)
Downstream point elevation =  1946.500(Ft.)
Channel length thru subarea  =   495.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     47.741(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     47.741(CFS)
Depth of flow =   0.299(Ft.), Average velocity =   3.153(Ft/s)
Channel flow top width =   51.197(Ft.)
Flow Velocity =    3.15(Ft/s)
Travel time  =    2.62 min.
Time of concentration =   23.55 min.
Critical depth =      0.305(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      2.444(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.854
Subarea runoff =      6.400(CFS) for    4.840(Ac.)
Total runoff =     50.901(CFS)
Effective area this stream =       24.40(Ac.)
Total Study Area (Main Stream No. 1) =       29.97(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   0.311(Ft.), Average velocity =   3.233(Ft/s)
Critical depth =      0.316(Ft.)
End of computations, Total Study Area =           29.97 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number =  78.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164307 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 10A
100-YEAR, 1-HOURS STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 10.000 to Point/Station 10.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1967.300(Ft.)
Bottom (of initial area) elevation = 1957.800(Ft.)
Difference in elevation = 9.500(Ft.)
Slope = 0.00950 s(%)= 0.95
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 19.967 min.
Rainfall intensity = 2.743(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.859
Subarea runoff = 14.723(CFS)
Total initial stream area = 6.250(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)

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Process from Point/Station 10.100 to Point/Station 10.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1957.800(Ft.)
Downstream point elevation = 1957.300(Ft.)

```
Channel length thru subarea  =  1280.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     14.758(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     14.758(CFS)
Depth of flow =   0.533(Ft.), Average velocity =   0.542(Ft/s)
Channel flow top width =   52.132(Ft.)
Flow Velocity =    0.54(Ft/s)
Travel time  =   39.34 min.
Time of concentration =   59.31 min.
Critical depth =      0.139(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =     14.098(CFS)
therefore the upstream flow rate of Q =     14.723(CFS) is being used
Rainfall intensity =      1.280(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.811
Subarea runoff =      0.000(CFS) for    7.320(Ac.)
Total runoff =     14.723(CFS)
Effective area this stream =       13.57(Ac.)
Total Study Area (Main Stream No. 1) =       13.57(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   0.532(Ft.), Average velocity =   0.542(Ft/s)
Critical depth =      0.139(Ft.)
End of computations, Total Study Area =           13.57 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number =  78.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 11
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 11.000 to Point/Station 11.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 841.000(Ft.)
Top (of initial area) elevation = 1957.600(Ft.)
Bottom (of initial area) elevation = 1947.600(Ft.)
Difference in elevation = 10.000(Ft.)
Slope = 0.01189 s(%)= 1.19
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 17.813 min.
Rainfall intensity = 2.972(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.862
Subarea runoff = 23.561(CFS)
Total initial stream area = 9.200(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)
End of computations, Total Study Area = 9.20 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number = 78.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 12
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.280 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 12.000 to Point/Station 12.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 225.000(Ft.)
Top (of initial area) elevation = 1955.300(Ft.)
Bottom (of initial area) elevation = 1948.800(Ft.)
Difference in elevation = 6.500(Ft.)
Slope = 0.02889 s(%)= 2.89
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 8.802 min.
Rainfall intensity = 4.906(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.877
Subarea runoff = 3.742(CFS)
Total initial stream area = 0.870(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)
End of computations, Total Study Area = 0.87 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number = 78.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

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Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 13
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.280 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 13.000 to Point/Station 13.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1959.000(Ft.)
Bottom (of initial area) elevation = 1955.600(Ft.)
Difference in elevation = 3.400(Ft.)
Slope = 0.00340 s(%)= 0.34
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 24.523 min.
Rainfall intensity = 2.395(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.853
Subarea runoff = 17.068(CFS)
Total initial stream area = 8.360(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)

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Process from Point/Station 13.100 to Point/Station 13.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1955.600(Ft.)
Downstream point elevation = 1951.600(Ft.)

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Channel length thru subarea  =   808.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     21.963(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     21.963(CFS)
Depth of flow =   0.316(Ft.), Average velocity =   1.372(Ft/s)
Channel flow top width =   51.264(Ft.)
Flow Velocity =    1.37(Ft/s)
Travel time  =    9.81 min.
Time of concentration =   34.34 min.
Critical depth =      0.182(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      1.892(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.840
Subarea runoff =      9.710(CFS) for    8.490(Ac.)
Total runoff =     26.779(CFS)
Effective area this stream =       16.85(Ac.)
Total Study Area (Main Stream No. 1) =       16.85(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   0.356(Ft.), Average velocity =   1.483(Ft/s)
Critical depth =      0.207(Ft.)
End of computations, Total Study Area =           16.85 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number =  78.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 14
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.290 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 14.000 to Point/Station 14.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1955.000(Ft.)
Bottom (of initial area) elevation = 1951.800(Ft.)
Difference in elevation = 3.200(Ft.)
Slope = 0.00320 s(%)= 0.32
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 24.822 min.
Rainfall intensity = 2.393(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.853
Subarea runoff = 20.401(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)

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Process from Point/Station 14.100 to Point/Station 14.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1951.800(Ft.)
Downstream point elevation = 1947.400(Ft.)

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Channel length thru subarea  =   627.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     25.833(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     25.833(CFS)
Depth of flow =   0.314(Ft.), Average velocity =   1.626(Ft/s)
Channel flow top width =   51.255(Ft.)
Flow Velocity =    1.63(Ft/s)
Travel time  =    6.43 min.
Time of concentration =   31.25 min.
Critical depth =      0.203(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      2.037(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.844
Subarea runoff =     10.808(CFS) for    8.150(Ac.)
Total runoff =     31.210(CFS)
Effective area this stream =       18.15(Ac.)
Total Study Area (Main Stream No. 1) =       18.15(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   0.351(Ft.), Average velocity =   1.751(Ft/s)
Critical depth =      0.229(Ft.)
End of computations, Total Study Area =           18.15 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number =  78.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITONS AREA 15
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.270 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 15.000 to Point/Station 15.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 76.19
Adjusted SCS curve number for AMC 3 = 91.71
Pervious ratio(Ap) = 0.8380 Max loss rate(Fm)= 0.134(In/Hr)
Initial subarea data:
Initial area flow distance = 588.000(Ft.)
Top (of initial area) elevation = 1983.200(Ft.)
Bottom (of initial area) elevation = 1970.000(Ft.)
Difference in elevation = 13.200(Ft.)
Slope = 0.02245 s(%)= 2.24
TC = k(0.481)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 13.176 min.
Rainfall intensity = 3.670(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.867
Subarea runoff = 31.819(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 0.838
Initial area Fm value = 0.134(In/Hr)

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Process from Point/Station 15.100 to Point/Station 15.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1970.000(Ft.)
Downstream point elevation = 1964.600(Ft.)

```
Channel length thru subarea  =   891.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     55.407(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     55.407(CFS)
Depth of flow =   0.518(Ft.), Average velocity =   2.097(Ft/s)
Channel flow top width =   52.071(Ft.)
Flow Velocity =    2.10(Ft/s)
Travel time  =    7.08 min.
Time of concentration =   20.26 min.
Critical depth =      0.336(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 69.69
Adjusted SCS curve number for AMC 3 = 86.75
Pervious ratio(Ap) = 0.5200     Max loss rate(Fm)=     0.131(In/Hr)
Rainfall intensity =      2.716(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.856
Subarea runoff =     47.080(CFS) for   23.930(Ac.)
Total runoff =     78.899(CFS)
Effective area this stream =       33.93(Ac.)
Total Study Area (Main Stream No. 1) =       33.93(Ac.)
Area averaged Fm value =    0.132(In/Hr)
Depth of flow =   0.640(Ft.), Average velocity =   2.405(Ft/s)
Critical depth =      0.422(Ft.)


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Process from Point/Station       15.200 to Point/Station       15.300
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1964.600(Ft.)
Downstream point elevation =  1963.800(Ft.)
Channel length thru subarea  =  1336.000(Ft.)
Channel base width      =  100.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    104.658(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    104.658(CFS)
Depth of flow =   1.002(Ft.), Average velocity =   1.024(Ft/s)
Channel flow top width =  104.008(Ft.)
Flow Velocity =    1.02(Ft/s)
Travel time  =   21.75 min.
Time of concentration =   42.01 min.
Critical depth =      0.324(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 68.48
Adjusted SCS curve number for AMC 3 = 85.78
Pervious ratio(Ap) = 0.6280     Max loss rate(Fm)=     0.169(In/Hr)
Rainfall intensity =      1.630(In/Hr) for a   100.0 year storm
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Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.814
Subarea runoff =     51.454(CFS) for   64.340(Ac.)
Total runoff =    130.353(CFS)
Effective area this stream =       98.27(Ac.)
Total Study Area (Main Stream No. 1) =       98.27(Ac.)
Area averaged Fm value =    0.156(In/Hr)
Depth of flow =   1.143(Ft.), Average velocity =   1.115(Ft/s)
Critical depth =      0.375(Ft.)


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Process from Point/Station       15.300 to Point/Station       15.400
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1963.800(Ft.)
Downstream point elevation =  1949.300(Ft.)
Channel length thru subarea  =  6809.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    130.822(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    130.822(CFS)
Depth of flow =   1.182(Ft.), Average velocity =   2.113(Ft/s)
Channel flow top width =   54.730(Ft.)
Flow Velocity =    2.11(Ft/s)
Travel time  =   53.71 min.
Time of concentration =   95.72 min.
Critical depth =      0.594(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 72.35
Adjusted SCS curve number for AMC 3 = 88.88
Pervious ratio(Ap) = 0.9200     Max loss rate(Fm)=     0.196(In/Hr)
Rainfall intensity =      0.916(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.727
Subarea runoff =      0.859(CFS) for   98.810(Ac.)
Total runoff =    131.212(CFS)
Effective area this stream =      197.08(Ac.)
Total Study Area (Main Stream No. 1) =      197.08(Ac.)
Area averaged Fm value =    0.176(In/Hr)
Depth of flow =   1.184(Ft.), Average velocity =   2.115(Ft/s)
Critical depth =      0.594(Ft.)
End of computations, Total Study Area =          197.08 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.772
Area averaged SCS curve number =  71.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

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Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 17
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.300 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 17.000 to Point/Station 17.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9450 Max loss rate(Fm)= 0.132(In/Hr)
Initial subarea data:
Initial area flow distance = 805.000(Ft.)
Top (of initial area) elevation = 1951.200(Ft.)
Bottom (of initial area) elevation = 1947.600(Ft.)
Difference in elevation = 3.600(Ft.)
Slope = 0.00447 s(%)= 0.45
TC = k(0.508)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 21.761 min.
Rainfall intensity = 2.644(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.855
Subarea runoff = 22.606(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 0.945
Initial area Fm value = 0.132(In/Hr)

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Process from Point/Station 17.100 to Point/Station 17.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1947.600(Ft.)
Downstream point elevation = 1940.500(Ft.)

```
Channel length thru subarea  =  1959.000(Ft.)
Channel base width      =  100.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    119.258(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =    119.258(CFS)
Depth of flow =   0.632(Ft.), Average velocity =   1.863(Ft/s)
Channel flow top width =  102.528(Ft.)
Flow Velocity =    1.86(Ft/s)
Travel time  =   17.52 min.
Time of concentration =   39.28 min.
Critical depth =      0.352(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 77.84
Adjusted SCS curve number for AMC 3 = 92.70
Pervious ratio(Ap) = 0.9430     Max loss rate(Fm)=     0.134(In/Hr)
Rainfall intensity =      1.749(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.831
Subarea runoff =    193.209(CFS) for  138.480(Ac.)
Total runoff =    215.814(CFS)
Effective area this stream =      148.48(Ac.)
Total Study Area (Main Stream No. 1) =      148.48(Ac.)
Area averaged Fm value =    0.134(In/Hr)
Depth of flow =   0.902(Ft.), Average velocity =   2.351(Ft/s)
Critical depth =      0.523(Ft.)
End of computations, Total Study Area =          148.48 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.943
Area averaged SCS curve number =  77.9
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San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 18
100-YEAR, 1-HOUR STORM
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.330 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 18.000 to Point/Station 18.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 404.000(Ft.)
Top (of initial area) elevation = 1944.900(Ft.)
Bottom (of initial area) elevation = 1938.100(Ft.)
Difference in elevation = 6.800(Ft.)
Slope = 0.01683 s(%)= 1.68
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 12.393 min.
Rainfall intensity = 4.012(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.872
Subarea runoff = 34.971(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)

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Process from Point/Station 18.100 to Point/Station 18.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1938.100(Ft.)
Downstream point elevation = 1932.700(Ft.)

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Channel length thru subarea  =   830.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     57.633(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     57.633(CFS)
Depth of flow =   0.519(Ft.), Average velocity =   2.176(Ft/s)
Channel flow top width =   52.076(Ft.)
Flow Velocity =    2.18(Ft/s)
Travel time  =    6.36 min.
Time of concentration =   18.75 min.
Critical depth =      0.344(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 76.60
Adjusted SCS curve number for AMC 3 = 91.96
Pervious ratio(Ap) = 0.9090     Max loss rate(Fm)=     0.142(In/Hr)
Rainfall intensity =      3.002(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.859
Subarea runoff =     45.233(CFS) for   21.100(Ac.)
Total runoff =     80.204(CFS)
Effective area this stream =       31.10(Ac.)
Total Study Area (Main Stream No. 1) =       31.10(Ac.)
Area averaged Fm value =    0.137(In/Hr)
Depth of flow =   0.633(Ft.), Average velocity =   2.473(Ft/s)
Critical depth =      0.430(Ft.)


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Process from Point/Station       18.200 to Point/Station       18.300
**** IMPROVED CHANNEL TRAVEL TIME ****
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Upstream point elevation =  1932.700(Ft.)
Downstream point elevation =  1926.100(Ft.)
Channel length thru subarea  =   590.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     94.330(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     94.330(CFS)
Depth of flow =   0.593(Ft.), Average velocity =   3.109(Ft/s)
Channel flow top width =   52.371(Ft.)
Flow Velocity =    3.11(Ft/s)
Travel time  =    3.16 min.
Time of concentration =   21.91 min.
Critical depth =      0.477(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 67.28
Adjusted SCS curve number for AMC 3 = 84.82
Pervious ratio(Ap) = 0.9670     Max loss rate(Fm)=     0.277(In/Hr)
Rainfall intensity =      2.692(In/Hr) for a   100.0 year storm
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Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.838
Subarea runoff = 28.181(CFS) for 16.960(Ac.)
Total runoff = 108.385(CFS)
Effective area this stream = 48.06(Ac.)
Total Study Area (Main Stream No. 1) = 48.06(Ac.)
Area averaged Fm value = 0.186(In/Hr)
Depth of flow = 0.644(Ft.), Average velocity = 3.281(Ft/s)
Critical depth = 0.523(Ft.)
End of computations, Total Study Area = 48.06 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.928
Area averaged SCS curve number = 73.6

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Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 19
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.350 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 19.000 to Point/Station 19.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.360(In/Hr)
Initial subarea data:
Initial area flow distance = 756.000(Ft.)
Top (of initial area) elevation = 1933.900(Ft.)
Bottom (of initial area) elevation = 1929.600(Ft.)
Difference in elevation = 4.300(Ft.)
Slope = 0.00569 s(%)= 0.57
TC = k(0.868)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 34.570 min.
Rainfall intensity = 1.986(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.737
Subarea runoff = 11.519(CFS)
Total initial stream area = 7.870(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.360(In/Hr)
End of computations, Total Study Area = 7.87 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 62.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

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Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 20
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.360 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 20.000 to Point/Station 20.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 76.90
Adjusted SCS curve number for AMC 3 = 92.14
Pervious ratio(Ap) = 0.9070 Max loss rate(Fm)= 0.138(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1932.900(Ft.)
Bottom (of initial area) elevation = 1925.300(Ft.)
Difference in elevation = 7.600(Ft.)
Slope = 0.00760 s(%)= 0.76
TC = k(0.498)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 20.951 min.
Rainfall intensity = 2.841(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.856
Subarea runoff = 24.320(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 0.907
Initial area Fm value = 0.138(In/Hr)

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Process from Point/Station 20.100 to Point/Station 20.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1925.300(Ft.)
Downstream point elevation = 1920.500(Ft.)

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Channel length thru subarea  =   801.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     35.854(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     35.854(CFS)
Depth of flow =   0.400(Ft.), Average velocity =   1.763(Ft/s)
Channel flow top width =   51.602(Ft.)
Flow Velocity =    1.76(Ft/s)
Travel time  =    7.57 min.
Time of concentration =   28.53 min.
Critical depth =      0.250(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 77.44
Adjusted SCS curve number for AMC 3 = 92.46
Pervious ratio(Ap) = 0.9030     Max loss rate(Fm)=     0.132(In/Hr)
Rainfall intensity =      2.289(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.847
Subarea runoff =     23.001(CFS) for   14.410(Ac.)
Total runoff =     47.321(CFS)
Effective area this stream =       24.41(Ac.)
Total Study Area (Main Stream No. 1) =       24.41(Ac.)
Area averaged Fm value =    0.135(In/Hr)
Depth of flow =   0.473(Ft.), Average velocity =   1.965(Ft/s)
Critical depth =      0.301(Ft.)
End of computations, Total Study Area =           24.41 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.905
Area averaged SCS curve number =  77.2
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San Bernardino County Rational Hydrology Program

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Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 21
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.360 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 21.000 to Point/Station 21.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 947.000(Ft.)
Top (of initial area) elevation = 1926.400(Ft.)
Bottom (of initial area) elevation = 1924.800(Ft.)
Difference in elevation = 1.600(Ft.)
Slope = 0.00169 s(%)= 0.17
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 27.596 min.
Rainfall intensity = 2.342(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.852
Subarea runoff = 19.727(CFS)
Total initial stream area = 9.890(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)
End of computations, Total Study Area = 9.89 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number = 78.0

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Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 22
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.360 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 22.000 to Point/Station 22.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 392.000(Ft.)
Top (of initial area) elevation = 1928.100(Ft.)
Bottom (of initial area) elevation = 1924.000(Ft.)
Difference in elevation = 4.100(Ft.)
Slope = 0.01046 s(%)= 1.05
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 13.467 min.
Rainfall intensity = 3.870(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.871
Subarea runoff = 12.570(CFS)
Total initial stream area = 3.730(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)
End of computations, Total Study Area = 3.73 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number = 78.0

San Bernardino County Rational Hydrology Program

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Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 23
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.360 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 23.000 to Point/Station 23.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 770.000(Ft.)
Top (of initial area) elevation = 1926.000(Ft.)
Bottom (of initial area) elevation = 1922.200(Ft.)
Difference in elevation = 3.800(Ft.)
Slope = 0.00494 s(%)= 0.49
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 20.502 min.
Rainfall intensity = 2.884(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.861
Subarea runoff = 24.821(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)

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Process from Point/Station 23.100 to Point/Station 23.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1922.200(Ft.)
Downstream point elevation = 1917.200(Ft.)

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Channel length thru subarea  =  1058.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     40.760(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     40.760(CFS)
Depth of flow =   0.464(Ft.), Average velocity =   1.724(Ft/s)
Channel flow top width =   51.857(Ft.)
Flow Velocity =    1.72(Ft/s)
Travel time  =   10.23 min.
Time of concentration =   30.73 min.
Critical depth =      0.273(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      2.172(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.848
Subarea runoff =     31.814(CFS) for   20.750(Ac.)
Total runoff =     56.635(CFS)
Effective area this stream =       30.75(Ac.)
Total Study Area (Main Stream No. 1) =       30.75(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   0.565(Ft.), Average velocity =   1.960(Ft/s)
Critical depth =      0.340(Ft.)


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Process from Point/Station       23.200 to Point/Station       23.300
**** IMPROVED CHANNEL TRAVEL TIME ****
------------------------------------------------------------------------------
Upstream point elevation =  1917.200(Ft.)
Downstream point elevation =  1910.200(Ft.)
Channel length thru subarea  =  2495.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     70.377(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     70.377(CFS)
Depth of flow =   0.752(Ft.), Average velocity =   1.817(Ft/s)
Channel flow top width =   53.009(Ft.)
Flow Velocity =    1.82(Ft/s)
Travel time  =   22.89 min.
Time of concentration =   53.62 min.
Critical depth =      0.391(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      1.471(In/Hr) for a   100.0 year storm
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Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.823
Subarea runoff = 27.405(CFS) for 38.660(Ac.)
Total runoff = 84.040(CFS)
Effective area this stream = 69.41(Ac.)
Total Study Area (Main Stream No. 1) = 69.41(Ac.)
Area averaged Fm value = 0.126(In/Hr)
Depth of flow = 0.836(Ft.), Average velocity = 1.945(Ft/s)
Critical depth = 0.441(Ft.)
End of computations, Total Study Area = 69.41 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number = 78.0

San Bernardino County Rational Hydrology Program

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Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 24
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.350 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 24.000 to Point/Station 24.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 66.02
Adjusted SCS curve number for AMC 3 = 83.82
Pervious ratio(Ap) = 0.9750 Max loss rate(Fm)= 0.296(In/Hr)
Initial subarea data:
Initial area flow distance = 807.000(Ft.)
Top (of initial area) elevation = 1941.900(Ft.)
Bottom (of initial area) elevation = 1938.400(Ft.)
Difference in elevation = 3.500(Ft.)
Slope = 0.00434 s(%)= 0.43
TC = k(0.515)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 22.236 min.
Rainfall intensity = 2.705(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.801
Subarea runoff = 21.675(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 0.975
Initial area Fm value = 0.296(In/Hr)

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Process from Point/Station 24.100 to Point/Station 24.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1938.400(Ft.)
Downstream point elevation = 1936.300(Ft.)

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Channel length thru subarea  =  1074.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     31.505(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     31.505(CFS)
Depth of flow =   0.518(Ft.), Average velocity =   1.191(Ft/s)
Channel flow top width =   52.073(Ft.)
Flow Velocity =    1.19(Ft/s)
Travel time  =   15.03 min.
Time of concentration =   37.26 min.
Critical depth =      0.230(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 63.57
Adjusted SCS curve number for AMC 3 = 81.86
Pervious ratio(Ap) = 0.9900     Max loss rate(Fm)=     0.335(In/Hr)
Rainfall intensity =      1.884(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.746
Subarea runoff =     19.579(CFS) for   19.330(Ac.)
Total runoff =     41.254(CFS)
Effective area this stream =       29.33(Ac.)
Total Study Area (Main Stream No. 1) =       29.33(Ac.)
Area averaged Fm value =    0.322(In/Hr)
Depth of flow =   0.609(Ft.), Average velocity =   1.323(Ft/s)
Critical depth =      0.275(Ft.)


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Process from Point/Station       24.200 to Point/Station       24.300
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1936.300(Ft.)
Downstream point elevation =  1929.100(Ft.)
Channel length thru subarea  =  1697.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     59.017(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     59.017(CFS)
Depth of flow =   0.598(Ft.), Average velocity =   1.927(Ft/s)
Channel flow top width =   52.393(Ft.)
Flow Velocity =    1.93(Ft/s)
Travel time  =   14.68 min.
Time of concentration =   51.94 min.
Critical depth =      0.352(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.16
Adjusted SCS curve number for AMC 3 = 80.73
Pervious ratio(Ap) = 0.9990     Max loss rate(Fm)=     0.357(In/Hr)
Rainfall intensity =      1.493(In/Hr) for a   100.0 year storm
```

```
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.693
Subarea runoff =     35.439(CFS) for   44.740(Ac.)
Total runoff =     76.693(CFS)
Effective area this stream =       74.07(Ac.)
Total Study Area (Main Stream No. 1) =       74.07(Ac.)
Area averaged Fm value =    0.343(In/Hr)
Depth of flow =   0.700(Ft.), Average velocity =   2.132(Ft/s)
Critical depth =      0.414(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       24.300 to Point/Station       24.400
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1929.100(Ft.)
Downstream point elevation =  1921.900(Ft.)
Channel length thru subarea  =  1554.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     84.581(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     84.581(CFS)
Depth of flow =   0.723(Ft.), Average velocity =   2.275(Ft/s)
Channel flow top width =   52.891(Ft.)
Flow Velocity =    2.27(Ft/s)
Travel time  =   11.38 min.
Time of concentration =   63.33 min.
Critical depth =      0.445(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 73.58
Adjusted SCS curve number for AMC 3 = 89.86
Pervious ratio(Ap) = 0.9260     Max loss rate(Fm)=     0.180(In/Hr)
Rainfall intensity =      1.300(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.694
Subarea runoff =     15.709(CFS) for   28.390(Ac.)
Total runoff =     92.402(CFS)
Effective area this stream =      102.46(Ac.)
Total Study Area (Main Stream No. 1) =      102.46(Ac.)
Area averaged Fm value =    0.298(In/Hr)
Depth of flow =   0.762(Ft.), Average velocity =   2.354(Ft/s)
Critical depth =      0.469(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       24.300 to Point/Station       24.400
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =    102.460(Ac.)
Runoff from this stream =     92.402(CFS)
Time of concentration =   63.33 min.
Rainfall intensity =     1.300(In/Hr)
Area averaged loss rate (Fm) =    0.2979(In/Hr)
```

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Area averaged Pervious ratio (Ap) = 0.9747


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Process from Point/Station       24.500 to Point/Station       24.600
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Initial subarea data:
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1940.000(Ft.)
Bottom (of initial area) elevation =  1932.200(Ft.)
Difference in elevation =     7.800(Ft.)
Slope =    0.00780  s(%)=       0.78
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   20.771 min.
Rainfall intensity =      2.837(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.860
Subarea runoff =     15.858(CFS)
Total initial stream area =        6.500(Ac.)
Pervious area fraction = 0.900
Initial area Fm value =    0.126(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       24.600 to Point/Station       24.700
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1932.200(Ft.)
Downstream point elevation =  1928.300(Ft.)
Channel length thru subarea  =   755.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     27.566(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     27.566(CFS)
Depth of flow =   0.358(Ft.), Average velocity =   1.520(Ft/s)
Channel flow top width =   51.431(Ft.)
Flow Velocity =    1.52(Ft/s)
Travel time  =    8.28 min.
Time of concentration =   29.05 min.
Critical depth =      0.211(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      2.243(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.849
Subarea runoff =     23.354(CFS) for   14.080(Ac.)
Total runoff =     39.212(CFS)
```

```
Effective area this stream =       20.58(Ac.)
Total Study Area (Main Stream No. 1) =      123.04(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   0.442(Ft.), Average velocity =   1.745(Ft/s)
Critical depth =      0.266(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       24.700 to Point/Station       24.800
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1928.300(Ft.)
Downstream point elevation =  1927.300(Ft.)
Channel length thru subarea  =  1059.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     53.302(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     53.302(CFS)
Depth of flow =   0.882(Ft.), Average velocity =   1.167(Ft/s)
Channel flow top width =   53.528(Ft.)
Flow Velocity =    1.17(Ft/s)
Travel time  =   15.12 min.
Time of concentration =   44.17 min.
Critical depth =      0.328(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 74.67
Adjusted SCS curve number for AMC 3 = 90.74
Pervious ratio(Ap) = 0.9150     Max loss rate(Fm)=     0.164(In/Hr)
Rainfall intensity =      1.673(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.820
Subarea runoff =     28.099(CFS) for   28.460(Ac.)
Total runoff =     67.310(CFS)
Effective area this stream =       49.04(Ac.)
Total Study Area (Main Stream No. 1) =      151.50(Ac.)
Area averaged Fm value =    0.148(In/Hr)
Depth of flow =   1.013(Ft.), Average velocity =   1.277(Ft/s)
!!Warning: Water is above left or right bank elevations
ERROR - Channel depth exceeds maximum allowable depth
Critical depth =      0.383(Ft.)


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Process from Point/Station       24.800 to Point/Station       24.400
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1927.300(Ft.)
Downstream point elevation =  1921.900(Ft.)
Channel length thru subarea  =  1788.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     72.041(CFS)
Manning's 'N'    = 0.035
```

```
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     72.041(CFS)
Depth of flow =   0.746(Ft.), Average velocity =   1.875(Ft/s)
Channel flow top width =   52.985(Ft.)
Flow Velocity =    1.87(Ft/s)
Travel time  =   15.89 min.
Time of concentration =   60.06 min.
Critical depth =      0.398(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 77.19
Adjusted SCS curve number for AMC 3 = 92.31
Pervious ratio(Ap) = 0.9050     Max loss rate(Fm)=     0.135(In/Hr)
Rainfall intensity =      1.349(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.804
Subarea runoff =      9.406(CFS) for   21.690(Ac.)
Total runoff =     76.716(CFS)
Effective area this stream =       70.73(Ac.)
Total Study Area (Main Stream No. 1) =      173.19(Ac.)
Area averaged Fm value =    0.144(In/Hr)
Depth of flow =   0.775(Ft.), Average velocity =   1.921(Ft/s)
Critical depth =      0.414(Ft.)


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Process from Point/Station       24.800 to Point/Station       24.400
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     70.730(Ac.)
Runoff from this stream =     76.716(CFS)
Time of concentration =   60.06 min.
Rainfall intensity =     1.349(In/Hr)
Area averaged loss rate (Fm) =    0.1439(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9076
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     92.40   102.460     63.33    0.298      1.300
2     76.72    70.730     60.06    0.144      1.349
Qmax(1) =
           1.000 *    1.000 *    92.402) +
           0.959 *    1.000 *    76.716) + =     165.996
Qmax(2) =
           1.049 *    0.948 *    92.402) +
           1.000 *    1.000 *    76.716) + =     168.646

Total of 2 streams to confluence:
Flow rates before confluence point:
      92.402      76.716
Maximum flow rates at confluence using above data:
      165.996      168.646
Area of streams before confluence:
      102.460       70.730
```

```
Effective area values after confluence:
      173.190      167.909
Results of confluence:
Total flow rate =    168.646(CFS)
Time of concentration =    60.062 min.
Effective stream area after confluence =    167.909(Ac.)
Study area average Pervious fraction(Ap) =  0.947
Study area average soil loss rate(Fm) =    0.235(In/Hr)
Study area total (this main stream) =     173.19(Ac.)


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Process from Point/Station       24.400 to Point/Station       24.900
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1921.900(Ft.)
Downstream point elevation =  1914.200(Ft.)
Channel length thru subarea  =  4942.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    183.898(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    183.898(CFS)
Depth of flow =   1.589(Ft.), Average velocity =   2.176(Ft/s)
Channel flow top width =   56.356(Ft.)
Flow Velocity =    2.18(Ft/s)
Travel time  =   37.85 min.
Time of concentration =   97.91 min.
Critical depth =      0.742(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      0.958(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.722
Subarea runoff =     30.421(CFS) for  119.870(Ac.)
Total runoff =    199.067(CFS)
Effective area this stream =      287.78(Ac.)
Total Study Area (Main Stream No. 1) =      293.06(Ac.)
Area averaged Fm value =    0.190(In/Hr)
Depth of flow =   1.666(Ft.), Average velocity =   2.241(Ft/s)
Critical depth =      0.781(Ft.)
End of computations, Total Study Area =          293.06 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.928
Area averaged SCS curve number =  73.4
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 25
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.360 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 25.000 to Point/Station 25.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 879.000(Ft.)
Top (of initial area) elevation = 1935.000(Ft.)
Bottom (of initial area) elevation = 1925.300(Ft.)
Difference in elevation = 9.700(Ft.)
Slope = 0.01104 s(%)= 1.10
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 18.404 min.
Rainfall intensity = 3.110(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.864
Subarea runoff = 26.859(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)

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Process from Point/Station 25.100 to Point/Station 25.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1925.300(Ft.)
Downstream point elevation = 1923.000(Ft.)

```
Channel length thru subarea  =  1574.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     36.157(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     36.157(CFS)
Depth of flow =   0.614(Ft.), Average velocity =   1.150(Ft/s)
Channel flow top width =   52.456(Ft.)
Flow Velocity =    1.15(Ft/s)
Travel time  =   22.82 min.
Time of concentration =   41.22 min.
Critical depth =      0.254(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      1.769(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.836
Subarea runoff =     18.514(CFS) for   20.690(Ac.)
Total runoff =     45.373(CFS)
Effective area this stream =       30.69(Ac.)
Total Study Area (Main Stream No. 1) =       30.69(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   0.703(Ft.), Average velocity =   1.255(Ft/s)
Critical depth =      0.293(Ft.)


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Process from Point/Station       25.200 to Point/Station       25.300
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1923.000(Ft.)
Downstream point elevation =  1922.900(Ft.)
Channel length thru subarea  =  1306.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     52.901(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =     52.901(CFS)
Depth of flow =   1.855(Ft.), Average velocity =   0.531(Ft/s)
Channel flow top width =   57.419(Ft.)
Flow Velocity =    0.53(Ft/s)
Travel time  =   40.99 min.
Time of concentration =   82.21 min.
Critical depth =      0.324(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      1.091(In/Hr) for a   100.0 year storm
```

```
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.796
Subarea runoff =     14.973(CFS) for   38.800(Ac.)
Total runoff =     60.347(CFS)
Effective area this stream =       69.49(Ac.)
Total Study Area (Main Stream No. 1) =       69.49(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   2.005(Ft.), Average velocity =   0.557(Ft/s)
!!Warning: Water is above left or right bank elevations
ERROR - Channel depth exceeds maximum allowable depth
Critical depth =      0.355(Ft.)


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Process from Point/Station       25.300 to Point/Station       25.400
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1922.900(Ft.)
Downstream point elevation =  1916.700(Ft.)
Channel length thru subarea  =  1863.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     88.869(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     88.869(CFS)
Depth of flow =   0.822(Ft.), Average velocity =   2.094(Ft/s)
Channel flow top width =   53.287(Ft.)
Flow Velocity =    2.09(Ft/s)
Travel time  =   14.83 min.
Time of concentration =   97.04 min.
Critical depth =      0.461(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      0.971(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.783
Subarea runoff =     56.965(CFS) for   84.700(Ac.)
Total runoff =    117.312(CFS)
Effective area this stream =      154.19(Ac.)
Total Study Area (Main Stream No. 1) =      154.19(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   0.970(Ft.), Average velocity =   2.329(Ft/s)
Critical depth =      0.551(Ft.)


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Process from Point/Station       25.400 to Point/Station       25.500
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1916.700(Ft.)
Downstream point elevation =  1906.400(Ft.)
Channel length thru subarea  =   125.720(Ft.)
Channel base width      =   50.000(Ft.)
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Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    159.473(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =    159.473(CFS)
Depth of flow =   0.447(Ft.), Average velocity =   7.006(Ft/s)
Channel flow top width =   51.789(Ft.)
Flow Velocity =    7.01(Ft/s)
Travel time  =    0.30 min.
Time of concentration =   97.34 min.
Critical depth =      0.672(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 70.79
Adjusted SCS curve number for AMC 3 = 87.63
Pervious ratio(Ap) = 0.9430     Max loss rate(Fm)=     0.222(In/Hr)
Rainfall intensity =      0.969(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.743
Subarea runoff =     84.234(CFS) for  125.720(Ac.)
Total runoff =    201.545(CFS)
Effective area this stream =      279.91(Ac.)
Total Study Area (Main Stream No. 1) =      279.91(Ac.)
Area averaged Fm value =    0.169(In/Hr)
Depth of flow =   0.515(Ft.), Average velocity =   7.676(Ft/s)
Critical depth =      0.789(Ft.)
End of computations, Total Study Area =          279.91 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.919
Area averaged SCS curve number =  74.8
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 26
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 26.000 to Point/Station 26.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1912.600(Ft.)
Bottom (of initial area) elevation = 1905.800(Ft.)
Difference in elevation = 6.800(Ft.)
Slope = 0.00680 s(%)= 0.68
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 21.348 min.
Rainfall intensity = 2.865(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.860
Subarea runoff = 11.809(CFS)
Total initial stream area = 4.790(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)

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Process from Point/Station 26.000 to Point/Station 26.100
**** CONFLUENCE OF MINOR STREAMS ****

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Along Main Stream number: 1 in normal stream number 1
Stream flow area = 4.790(Ac.)

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Runoff from this stream =     11.809(CFS)
Time of concentration =   21.35 min.
Rainfall intensity =     2.865(In/Hr)
Area averaged loss rate (Fm) =    0.1260(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000


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Process from Point/Station       26.200 to Point/Station       26.100
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Initial subarea data:
Initial area flow distance =   694.000(Ft.)
Top (of initial area) elevation =  1906.900(Ft.)
Bottom (of initial area) elevation =  1905.800(Ft.)
Difference in elevation =     1.100(Ft.)
Slope =    0.00159  s(%)=       0.16
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   24.683 min.
Rainfall intensity =      2.588(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.856
Subarea runoff =     11.347(CFS)
Total initial stream area =        5.120(Ac.)
Pervious area fraction = 0.900
Initial area Fm value =    0.126(In/Hr)


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Process from Point/Station       26.200 to Point/Station       26.100
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      5.120(Ac.)
Runoff from this stream =     11.347(CFS)
Time of concentration =   24.68 min.
Rainfall intensity =     2.588(In/Hr)
Area averaged loss rate (Fm) =    0.1260(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     11.81     4.790     21.35    0.126      2.865
2     11.35     5.120     24.68    0.126      2.588
Qmax(1) =
           1.000 *    1.000 *    11.809) +
           1.112 *    0.865 *    11.347) + =      22.726
Qmax(2) =
           0.899 *    1.000 *    11.809) +
           1.000 *    1.000 *    11.347) + =      21.962

Total of 2 streams to confluence:
```

```
Flow rates before confluence point:
      11.809      11.347
Maximum flow rates at confluence using above data:
       22.726       21.962
Area of streams before confluence:
        4.790        5.120
Effective area values after confluence:
        9.218        9.910
Results of confluence:
Total flow rate =     22.726(CFS)
Time of concentration =    21.348 min.
Effective stream area after confluence =      9.218(Ac.)
Study area average Pervious fraction(Ap) =  0.900
Study area average soil loss rate(Fm) =    0.126(In/Hr)
Study area total (this main stream) =       9.91(Ac.)


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Process from Point/Station       26.100 to Point/Station       26.300
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1905.800(Ft.)
Downstream point elevation =  1904.600(Ft.)
Channel length thru subarea  =   403.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     24.842(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     24.842(CFS)
Depth of flow =   0.396(Ft.), Average velocity =   1.234(Ft/s)
Channel flow top width =   51.585(Ft.)
Flow Velocity =    1.23(Ft/s)
Travel time  =    5.44 min.
Time of concentration =   26.79 min.
Critical depth =      0.197(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      2.444(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.854
Subarea runoff =      4.142(CFS) for    3.660(Ac.)
Total runoff =     26.868(CFS)
Effective area this stream =       12.88(Ac.)
Total Study Area (Main Stream No. 1) =       13.57(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   0.415(Ft.), Average velocity =   1.273(Ft/s)
Critical depth =      0.207(Ft.)


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Process from Point/Station       26.100 to Point/Station       26.300
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
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Along Main Stream number: 1 in normal stream number 1
Stream flow area =     12.878(Ac.)
Runoff from this stream =     26.868(CFS)
Time of concentration =   26.79 min.
Rainfall intensity =     2.444(In/Hr)
Area averaged loss rate (Fm) =    0.1260(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000


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Process from Point/Station       26.400 to Point/Station       26.300
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Initial subarea data:
Initial area flow distance =   792.000(Ft.)
Top (of initial area) elevation =  1913.200(Ft.)
Bottom (of initial area) elevation =  1904.600(Ft.)
Difference in elevation =     8.600(Ft.)
Slope =    0.01086  s(%)=       1.09
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   17.709 min.
Rainfall intensity =      3.266(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.865
Subarea runoff =     12.348(CFS)
Total initial stream area =        4.370(Ac.)
Pervious area fraction = 0.900
Initial area Fm value =    0.126(In/Hr)


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Process from Point/Station       26.400 to Point/Station       26.300
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      4.370(Ac.)
Runoff from this stream =     12.348(CFS)
Time of concentration =   17.71 min.
Rainfall intensity =     3.266(In/Hr)
Area averaged loss rate (Fm) =    0.1260(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     26.87    12.878     26.79    0.126      2.444
2     12.35     4.370     17.71    0.126      3.266
Qmax(1) =
           1.000 *    1.000 *    26.868) +
           0.738 *    1.000 *    12.348) + =      35.986
Qmax(2) =
           1.354 *    0.661 *    26.868) +
           1.000 *    1.000 *    12.348) + =      36.403
```

```
Total of 2 streams to confluence:
Flow rates before confluence point:
      26.868      12.348
Maximum flow rates at confluence using above data:
       35.986       36.403
Area of streams before confluence:
       12.878        4.370
Effective area values after confluence:
       17.248       12.883
Results of confluence:
Total flow rate =     36.403(CFS)
Time of concentration =    17.709 min.
Effective stream area after confluence =     12.883(Ac.)
Study area average Pervious fraction(Ap) =  0.900
Study area average soil loss rate(Fm) =    0.126(In/Hr)
Study area total (this main stream) =      17.25(Ac.)


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Process from Point/Station       26.300 to Point/Station       26.500
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1904.600(Ft.)
Downstream point elevation =  1904.500(Ft.)
Channel length thru subarea  =   391.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     36.449(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     36.449(CFS)
Depth of flow =   1.037(Ft.), Average velocity =   0.675(Ft/s)
!!Warning: Water is above left or right bank elevations
Channel flow top width =   54.000(Ft.)
Flow Velocity =    0.68(Ft/s)
Travel time  =    9.65 min.
Time of concentration =   27.36 min.
Critical depth =      0.254(Ft.)
ERROR - Channel depth exceeds maximum allowable depth
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =     34.965(CFS)
therefore the upstream flow rate of Q =     36.403(CFS) is being used
Rainfall intensity =      2.408(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.853
Subarea runoff =      0.000(CFS) for    4.140(Ac.)
Total runoff =     36.403(CFS)
Effective area this stream =       17.02(Ac.)
Total Study Area (Main Stream No. 1) =       22.08(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   1.036(Ft.), Average velocity =   0.675(Ft/s)
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!!Warning: Water is above left or right bank elevations
ERROR - Channel depth exceeds maximum allowable depth
Critical depth =      0.254(Ft.)


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Process from Point/Station       26.300 to Point/Station       26.500
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     17.023(Ac.)
Runoff from this stream =     36.403(CFS)
Time of concentration =   27.36 min.
Rainfall intensity =     2.408(In/Hr)
Area averaged loss rate (Fm) =    0.1260(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000


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Process from Point/Station       26.600 to Point/Station       26.700
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 68.20
Adjusted SCS curve number for AMC 3 = 85.56
Pervious ratio(Ap) = 0.9520     Max loss rate(Fm)=     0.260(In/Hr)
Initial subarea data:
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1912.700(Ft.)
Bottom (of initial area) elevation =  1908.000(Ft.)
Difference in elevation =     4.700(Ft.)
Slope =    0.00470  s(%)=       0.47
TC = k(0.509)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   23.579 min.
Rainfall intensity =      2.673(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.812
Subarea runoff =     20.478(CFS)
Total initial stream area =        9.430(Ac.)
Pervious area fraction = 0.952
Initial area Fm value =    0.260(In/Hr)


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Process from Point/Station       26.700 to Point/Station       26.500
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1908.000(Ft.)
Downstream point elevation =  1904.500(Ft.)
Channel length thru subarea  =   534.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     20.673(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     20.673(CFS)
Depth of flow =   0.280(Ft.), Average velocity =   1.459(Ft/s)
Channel flow top width =   51.121(Ft.)
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Flow Velocity =    1.46(Ft/s)
Travel time  =    6.10 min.
Time of concentration =   29.68 min.
Critical depth =      0.174(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      2.275(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.806
Subarea runoff =      0.320(CFS) for    1.910(Ac.)
Total runoff =     20.798(CFS)
Effective area this stream =       11.34(Ac.)
Total Study Area (Main Stream No. 1) =       33.42(Ac.)
Area averaged Fm value =    0.237(In/Hr)
Depth of flow =   0.281(Ft.), Average velocity =   1.462(Ft/s)
Critical depth =      0.176(Ft.)


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Process from Point/Station       26.700 to Point/Station       26.500
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     11.340(Ac.)
Runoff from this stream =     20.798(CFS)
Time of concentration =   29.68 min.
Rainfall intensity =     2.275(In/Hr)
Area averaged loss rate (Fm) =    0.2373(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9432
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     36.40    17.023     27.36    0.126      2.408
2     20.80    11.340     29.68    0.237      2.275
Qmax(1) =
           1.000 *    1.000 *    36.403) +
           1.065 *    0.922 *    20.798) + =      56.831
Qmax(2) =
           0.942 *    1.000 *    36.403) +
           1.000 *    1.000 *    20.798) + =      55.077

Total of 2 streams to confluence:
Flow rates before confluence point:
      36.403      20.798
Maximum flow rates at confluence using above data:
       56.831       55.077
Area of streams before confluence:
       17.023       11.340
Effective area values after confluence:
       27.478       28.363
Results of confluence:
Total flow rate =     56.831(CFS)
```

```
Time of concentration =    27.363 min.
Effective stream area after confluence =     27.478(Ac.)
Study area average Pervious fraction(Ap) =  0.917
Study area average soil loss rate(Fm) =    0.171(In/Hr)
Study area total (this main stream) =      28.36(Ac.)


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Process from Point/Station       26.500 to Point/Station       26.800
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1904.500(Ft.)
Downstream point elevation =  1904.100(Ft.)
Channel length thru subarea  =   369.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     56.871(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     56.871(CFS)
Depth of flow =   0.880(Ft.), Average velocity =   1.249(Ft/s)
Channel flow top width =   53.519(Ft.)
Flow Velocity =    1.25(Ft/s)
Travel time  =    4.92 min.
Time of concentration =   32.29 min.
Critical depth =      0.340(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =     53.385(CFS)
therefore the upstream flow rate of Q =     56.831(CFS) is being used
Rainfall intensity =      2.145(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.830
Subarea runoff =      0.000(CFS) for    2.510(Ac.)
Total runoff =     56.831(CFS)
Effective area this stream =       29.99(Ac.)
Total Study Area (Main Stream No. 1) =       35.93(Ac.)
Area averaged Fm value =    0.167(In/Hr)
Depth of flow =   0.879(Ft.), Average velocity =   1.248(Ft/s)
Critical depth =      0.340(Ft.)


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Process from Point/Station       26.500 to Point/Station       26.800
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     29.988(Ac.)
Runoff from this stream =     56.831(CFS)
Time of concentration =   32.29 min.
Rainfall intensity =     2.145(In/Hr)
Area averaged loss rate (Fm) =    0.1668(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9158
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Process from Point/Station       26.900 to Point/Station       26.100
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 77.76
Adjusted SCS curve number for AMC 3 = 92.66
Pervious ratio(Ap) = 0.9010     Max loss rate(Fm)=     0.129(In/Hr)
Initial subarea data:
Initial area flow distance =   755.000(Ft.)
Top (of initial area) elevation =  1911.000(Ft.)
Bottom (of initial area) elevation =  1905.600(Ft.)
Difference in elevation =     5.400(Ft.)
Slope =    0.00715  s(%)=       0.72
TC = k(0.497)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   18.896 min.
Rainfall intensity =      3.121(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.863
Subarea runoff =     26.929(CFS)
Total initial stream area =       10.000(Ac.)
Pervious area fraction = 0.901
Initial area Fm value =    0.129(In/Hr)


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Process from Point/Station       26.100 to Point/Station       26.800
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1905.600(Ft.)
Downstream point elevation =  1904.100(Ft.)
Channel length thru subarea  =   690.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     31.262(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     31.262(CFS)
Depth of flow =   0.500(Ft.), Average velocity =   1.227(Ft/s)
Channel flow top width =   51.999(Ft.)
Flow Velocity =    1.23(Ft/s)
Travel time  =    9.37 min.
Time of concentration =   28.27 min.
Critical depth =      0.230(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      2.354(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.851
Subarea runoff =      8.598(CFS) for    7.730(Ac.)
Total runoff =     35.527(CFS)
Effective area this stream =       17.73(Ac.)
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Total Study Area (Main Stream No. 1) =       53.66(Ac.)
Area averaged Fm value =    0.127(In/Hr)
Depth of flow =   0.539(Ft.), Average velocity =   1.289(Ft/s)
Critical depth =      0.250(Ft.)


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Process from Point/Station       26.100 to Point/Station       26.800
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     17.730(Ac.)
Runoff from this stream =     35.527(CFS)
Time of concentration =   28.27 min.
Rainfall intensity =     2.354(In/Hr)
Area averaged loss rate (Fm) =    0.1275(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9006
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     56.83    29.988     32.29    0.167      2.145
2     35.53    17.730     28.27    0.127      2.354
Qmax(1) =
           1.000 *    1.000 *    56.831) +
           0.906 *    1.000 *    35.527) + =      89.022
Qmax(2) =
           1.106 *    0.876 *    56.831) +
           1.000 *    1.000 *    35.527) + =      90.546

Total of 2 streams to confluence:
Flow rates before confluence point:
      56.831      35.527
Maximum flow rates at confluence using above data:
       89.022       90.546
Area of streams before confluence:
       29.988       17.730
Effective area values after confluence:
       47.718       43.986
Results of confluence:
Total flow rate =     90.546(CFS)
Time of concentration =    28.270 min.
Effective stream area after confluence =     43.986(Ac.)
Study area average Pervious fraction(Ap) =  0.910
Study area average soil loss rate(Fm) =    0.152(In/Hr)
Study area total (this main stream) =      47.72(Ac.)


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Process from Point/Station       26.800 to Point/Station       26.110
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1904.100(Ft.)
Downstream point elevation =  1902.500(Ft.)
Channel length thru subarea  =  1377.000(Ft.)
Channel base width      =   75.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
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Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     96.364(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     96.364(CFS)
Depth of flow =   0.928(Ft.), Average velocity =   1.351(Ft/s)
Channel flow top width =   78.714(Ft.)
Flow Velocity =    1.35(Ft/s)
Travel time  =   16.99 min.
Time of concentration =   45.26 min.
Critical depth =      0.371(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      1.693(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.825
Subarea runoff =     11.557(CFS) for   29.140(Ac.)
Total runoff =    102.103(CFS)
Effective area this stream =       73.13(Ac.)
Total Study Area (Main Stream No. 1) =       82.80(Ac.)
Area averaged Fm value =    0.142(In/Hr)
Depth of flow =   0.961(Ft.), Average velocity =   1.381(Ft/s)
Critical depth =      0.383(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       26.110 to Point/Station       26.120
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1902.500(Ft.)
Downstream point elevation =  1897.100(Ft.)
Channel length thru subarea  =  2640.000(Ft.)
Channel base width      =   75.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    110.918(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =    110.918(CFS)
Depth of flow =   0.853(Ft.), Average velocity =   1.696(Ft/s)
Channel flow top width =   78.411(Ft.)
Flow Velocity =    1.70(Ft/s)
Travel time  =   25.95 min.
Time of concentration =   71.21 min.
Critical depth =      0.406(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      1.233(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.801
Subarea runoff =     17.550(CFS) for   48.020(Ac.)
```

```
Total runoff =    119.653(CFS)
Effective area this stream =      121.15(Ac.)
Total Study Area (Main Stream No. 1) =      130.82(Ac.)
Area averaged Fm value =    0.136(In/Hr)
Depth of flow =   0.892(Ft.), Average velocity =   1.746(Ft/s)
Critical depth =      0.430(Ft.)


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Process from Point/Station       26.120 to Point/Station       26.130
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1897.100(Ft.)
Downstream point elevation =  1893.100(Ft.)
Channel length thru subarea  =  1785.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    123.915(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =    123.915(CFS)
Depth of flow =   1.124(Ft.), Average velocity =   2.112(Ft/s)
!!Warning: Water is above left or right bank elevations
Channel flow top width =   54.000(Ft.)
Flow Velocity =    2.11(Ft/s)
Travel time  =   14.09 min.
Time of concentration =   85.30 min.
Critical depth =      0.570(Ft.)
ERROR - Channel depth exceeds maximum allowable depth
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      1.087(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.789
Subarea runoff =      8.432(CFS) for   28.210(Ac.)
Total runoff =    128.085(CFS)
Effective area this stream =      149.36(Ac.)
Total Study Area (Main Stream No. 1) =      159.03(Ac.)
Area averaged Fm value =    0.134(In/Hr)
Depth of flow =   1.145(Ft.), Average velocity =   2.140(Ft/s)
!!Warning: Water is above left or right bank elevations
ERROR - Channel depth exceeds maximum allowable depth
Critical depth =      0.586(Ft.)


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Process from Point/Station       26.120 to Point/Station       26.130
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =    149.356(Ac.)
Runoff from this stream =    128.085(CFS)
Time of concentration =   85.30 min.
Rainfall intensity =     1.087(In/Hr)
```

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Area averaged loss rate (Fm) =    0.1337(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9030


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Process from Point/Station       26.140 to Point/Station       26.150
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Initial subarea data:
Initial area flow distance =   707.000(Ft.)
Top (of initial area) elevation =  1908.100(Ft.)
Bottom (of initial area) elevation =  1905.800(Ft.)
Difference in elevation =     2.300(Ft.)
Slope =    0.00325  s(%)=       0.33
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   21.536 min.
Rainfall intensity =      2.848(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.860
Subarea runoff =     20.968(CFS)
Total initial stream area =        8.560(Ac.)
Pervious area fraction = 0.900
Initial area Fm value =    0.126(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       26.150 to Point/Station       26.160
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1905.800(Ft.)
Downstream point elevation =  1901.600(Ft.)
Channel length thru subarea  =  1141.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     33.655(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     33.655(CFS)
Depth of flow =   0.446(Ft.), Average velocity =   1.483(Ft/s)
Channel flow top width =   51.784(Ft.)
Flow Velocity =    1.48(Ft/s)
Travel time  =   12.83 min.
Time of concentration =   34.36 min.
Critical depth =      0.242(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      2.053(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.845
Subarea runoff =     25.309(CFS) for   18.120(Ac.)
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```
Total runoff =     46.278(CFS)
Effective area this stream =       26.68(Ac.)
Total Study Area (Main Stream No. 1) =      185.71(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   0.540(Ft.), Average velocity =   1.679(Ft/s)
Critical depth =      0.297(Ft.)


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Process from Point/Station       26.160 to Point/Station       26.170
**** IMPROVED CHANNEL TRAVEL TIME ****
------------------------------------------------------------------------------
Upstream point elevation =  1901.600(Ft.)
Downstream point elevation =  1896.100(Ft.)
Channel length thru subarea  =  1868.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     67.826(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     67.826(CFS)
Depth of flow =   0.725(Ft.), Average velocity =   1.818(Ft/s)
Channel flow top width =   52.901(Ft.)
Flow Velocity =    1.82(Ft/s)
Travel time  =   17.13 min.
Time of concentration =   51.49 min.
Critical depth =      0.383(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      1.547(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.827
Subarea runoff =     43.043(CFS) for   43.160(Ac.)
Total runoff =     89.320(CFS)
Effective area this stream =       69.84(Ac.)
Total Study Area (Main Stream No. 1) =      228.87(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   0.855(Ft.), Average velocity =   2.020(Ft/s)
Critical depth =      0.461(Ft.)


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Process from Point/Station       26.170 to Point/Station       26.130
**** IMPROVED CHANNEL TRAVEL TIME ****
------------------------------------------------------------------------------
Upstream point elevation =  1896.100(Ft.)
Downstream point elevation =  1893.100(Ft.)
Channel length thru subarea  =  1118.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     92.277(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
```

```
Flow(q) thru subarea =     92.277(CFS)
Depth of flow =   0.896(Ft.), Average velocity =   1.988(Ft/s)
Channel flow top width =   53.585(Ft.)
Flow Velocity =    1.99(Ft/s)
Travel time  =    9.37 min.
Time of concentration =   60.86 min.
Critical depth =      0.469(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      1.376(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.818
Subarea runoff =      5.854(CFS) for   14.750(Ac.)
Total runoff =     95.174(CFS)
Effective area this stream =       84.59(Ac.)
Total Study Area (Main Stream No. 1) =      243.62(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   0.913(Ft.), Average velocity =   2.012(Ft/s)
Critical depth =      0.477(Ft.)


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Process from Point/Station       26.170 to Point/Station       26.130
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     84.590(Ac.)
Runoff from this stream =     95.174(CFS)
Time of concentration =   60.86 min.
Rainfall intensity =     1.376(In/Hr)
Area averaged loss rate (Fm) =    0.1260(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1    128.09   149.356     85.30    0.134      1.087
2     95.17    84.590     60.86    0.126      1.376
Qmax(1) =
           1.000 *    1.000 *   128.085) +
           0.768 *    1.000 *    95.174) + =     201.215
Qmax(2) =
           1.304 *    0.714 *   128.085) +
           1.000 *    1.000 *    95.174) + =     214.344

Total of 2 streams to confluence:
Flow rates before confluence point:
     128.085      95.174
Maximum flow rates at confluence using above data:
      201.215      214.344
Area of streams before confluence:
      149.356       84.590
Effective area values after confluence:
```

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      233.946      191.165
Results of confluence:
Total flow rate =    214.344(CFS)
Time of concentration =    60.865 min.
Effective stream area after confluence =    191.165(Ac.)
Study area average Pervious fraction(Ap) =  0.902
Study area average soil loss rate(Fm) =    0.131(In/Hr)
Study area total (this main stream) =     233.95(Ac.)


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Process from Point/Station       26.130 to Point/Station       26.180
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1893.100(Ft.)
Downstream point elevation =  1890.700(Ft.)
Channel length thru subarea  =  2434.000(Ft.)
Channel base width      =   75.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    214.373(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    214.373(CFS)
Depth of flow =   1.572(Ft.), Average velocity =   1.745(Ft/s)
Channel flow top width =   81.288(Ft.)
Flow Velocity =    1.75(Ft/s)
Travel time  =   23.25 min.
Time of concentration =   84.11 min.
Critical depth =      0.633(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =    189.723(CFS)
therefore the upstream flow rate of Q =    214.344(CFS) is being used
Rainfall intensity =      1.097(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.793
Subarea runoff =      0.000(CFS) for   26.840(Ac.)
Total runoff =    214.344(CFS)
Effective area this stream =      218.00(Ac.)
Total Study Area (Main Stream No. 1) =      270.46(Ac.)
Area averaged Fm value =    0.130(In/Hr)
Depth of flow =   1.572(Ft.), Average velocity =   1.745(Ft/s)
Critical depth =      0.633(Ft.)


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Process from Point/Station       26.130 to Point/Station       26.180
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =    218.005(Ac.)
Runoff from this stream =    214.344(CFS)
Time of concentration =   84.11 min.
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Rainfall intensity =     1.097(In/Hr)
Area averaged loss rate (Fm) =    0.1303(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9017


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Process from Point/Station       26.190 to Point/Station       26.200
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Initial subarea data:
Initial area flow distance =   967.000(Ft.)
Top (of initial area) elevation =  1900.300(Ft.)
Bottom (of initial area) elevation =  1894.200(Ft.)
Difference in elevation =     6.100(Ft.)
Slope =    0.00631  s(%)=       0.63
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   21.382 min.
Rainfall intensity =      2.862(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.860
Subarea runoff =     18.912(CFS)
Total initial stream area =        7.680(Ac.)
Pervious area fraction = 0.900
Initial area Fm value =    0.126(In/Hr)


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Process from Point/Station       26.200 to Point/Station       26.210
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1894.200(Ft.)
Downstream point elevation =  1890.800(Ft.)
Channel length thru subarea  =  1041.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     33.565(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     33.565(CFS)
Depth of flow =   0.462(Ft.), Average velocity =   1.428(Ft/s)
Channel flow top width =   51.846(Ft.)
Flow Velocity =    1.43(Ft/s)
Travel time  =   12.15 min.
Time of concentration =   33.53 min.
Critical depth =      0.240(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      2.089(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.846
```

```
Subarea runoff =     29.243(CFS) for   19.580(Ac.)
Total runoff =     48.155(CFS)
Effective area this stream =       27.26(Ac.)
Total Study Area (Main Stream No. 1) =      297.72(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   0.573(Ft.), Average velocity =   1.643(Ft/s)
Critical depth =      0.305(Ft.)


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Process from Point/Station       26.210 to Point/Station       26.180
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1890.800(Ft.)
Downstream point elevation =  1890.700(Ft.)
Channel length thru subarea  =  1444.000(Ft.)
Channel base width      =   75.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     48.199(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =     48.199(CFS)
Depth of flow =   1.425(Ft.), Average velocity =   0.434(Ft/s)
Channel flow top width =   80.701(Ft.)
Flow Velocity =    0.43(Ft/s)
Travel time  =   55.40 min.
Time of concentration =   88.93 min.
Critical depth =      0.234(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =     44.152(CFS)
therefore the upstream flow rate of Q =     48.155(CFS) is being used
Rainfall intensity =      1.055(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.793
Subarea runoff =      0.000(CFS) for   25.530(Ac.)
Total runoff =     48.155(CFS)
Effective area this stream =       52.79(Ac.)
Total Study Area (Main Stream No. 1) =      323.25(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   1.424(Ft.), Average velocity =   0.434(Ft/s)
Critical depth =      0.234(Ft.)


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Process from Point/Station       26.210 to Point/Station       26.180
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     52.790(Ac.)
Runoff from this stream =     48.155(CFS)
Time of concentration =   88.93 min.
Rainfall intensity =     1.055(In/Hr)
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Area averaged loss rate (Fm) =    0.1260(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1    214.34   218.005     84.11    0.130      1.097
2     48.15    52.790     88.93    0.126      1.055
Qmax(1) =
           1.000 *    1.000 *   214.344) +
           1.045 *    0.946 *    48.155) + =     261.946
Qmax(2) =
           0.957 *    1.000 *   214.344) +
           1.000 *    1.000 *    48.155) + =     253.194

Total of 2 streams to confluence:
Flow rates before confluence point:
     214.344      48.155
Maximum flow rates at confluence using above data:
      261.946      253.194
Area of streams before confluence:
      218.005       52.790
Effective area values after confluence:
      267.933      270.795
Results of confluence:
Total flow rate =    261.946(CFS)
Time of concentration =    84.111 min.
Effective stream area after confluence =    267.933(Ac.)
Study area average Pervious fraction(Ap) =  0.901
Study area average soil loss rate(Fm) =    0.129(In/Hr)
Study area total (this main stream) =     270.79(Ac.)


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Process from Point/Station       26.180 to Point/Station       26.220
**** IMPROVED CHANNEL TRAVEL TIME ****
____________________________________________________________________________
Upstream point elevation =  1890.700(Ft.)
Downstream point elevation =  1887.200(Ft.)
Channel length thru subarea  =  1942.000(Ft.)
Channel base width      =   75.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    261.982(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    261.982(CFS)
Depth of flow =   1.480(Ft.), Average velocity =   2.270(Ft/s)
Channel flow top width =   80.920(Ft.)
Flow Velocity =    2.27(Ft/s)
Travel time  =   14.26 min.
Time of concentration =   98.37 min.
Critical depth =      0.719(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 75.97
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Adjusted SCS curve number for AMC 3 = 91.58
Pervious ratio(Ap) = 0.9130     Max loss rate(Fm)=     0.149(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =    220.040(CFS)
therefore the upstream flow rate of Q =    261.946(CFS) is being used
Rainfall intensity =      0.983(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.780
Subarea runoff =      0.000(CFS) for   18.810(Ac.)
Total runoff =    261.946(CFS)
Effective area this stream =      286.74(Ac.)
Total Study Area (Main Stream No. 1) =      342.06(Ac.)
Area averaged Fm value =    0.131(In/Hr)
Depth of flow =   1.480(Ft.), Average velocity =   2.270(Ft/s)
Critical depth =      0.719(Ft.)
End of computations, Total Study Area =          342.06 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.902
Area averaged SCS curve number =  77.6
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 27
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.380 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 27.000 to Point/Station 27.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 424.000(Ft.)
Top (of initial area) elevation = 1908.100(Ft.)
Bottom (of initial area) elevation = 1906.000(Ft.)
Difference in elevation = 2.100(Ft.)
Slope = 0.00495 s(%)= 0.50
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 16.138 min.
Rainfall intensity = 3.460(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.867
Subarea runoff = 18.454(CFS)
Total initial stream area = 6.150(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)
End of computations, Total Study Area = 6.15 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number = 78.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 28
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 28.000 to Point/Station 28.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 752.000(Ft.)
Top (of initial area) elevation = 1892.100(Ft.)
Bottom (of initial area) elevation = 1890.100(Ft.)
Difference in elevation = 2.000(Ft.)
Slope = 0.00266 s(%)= 0.27
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 22.982 min.
Rainfall intensity = 2.721(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.858
Subarea runoff = 23.356(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)

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Process from Point/Station 28.100 to Point/Station 28.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1890.100(Ft.)
Downstream point elevation = 1887.500(Ft.)

Channel length thru subarea  =  1206.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     25.028(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     25.028(CFS)
Depth of flow =   0.438(Ft.), Average velocity =   1.122(Ft/s)
Channel flow top width =   51.754(Ft.)
Flow Velocity =    1.12(Ft/s)
Travel time  =   17.92 min.
Time of concentration =   40.90 min.
Critical depth =      0.197(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      1.818(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.838
Subarea runoff =      3.258(CFS) for    7.480(Ac.)
Total runoff =     26.614(CFS)
Effective area this stream =       17.48(Ac.)
Total Study Area (Main Stream No. 1) =       17.48(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   0.455(Ft.), Average velocity =   1.149(Ft/s)
Critical depth =      0.207(Ft.)

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Process from Point/Station       28.100 to Point/Station       28.200
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     17.480(Ac.)
Runoff from this stream =     26.614(CFS)
Time of concentration =   40.90 min.
Rainfall intensity =     1.818(In/Hr)
Area averaged loss rate (Fm) =    0.1260(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000

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Process from Point/Station       28.300 to Point/Station       28.400
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Initial subarea data:
Initial area flow distance =   752.000(Ft.)
Top (of initial area) elevation =  1890.900(Ft.)
Bottom (of initial area) elevation =  1887.600(Ft.)
Difference in elevation =     3.300(Ft.)

```
Slope =    0.00439  s(%)=       0.44
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   20.792 min.
Rainfall intensity =      2.919(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.861
Subarea runoff =     25.134(CFS)
Total initial stream area =       10.000(Ac.)
Pervious area fraction = 0.900
Initial area Fm value =    0.126(In/Hr)


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Process from Point/Station       28.400 to Point/Station       28.200
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1887.600(Ft.)
Downstream point elevation =  1887.500(Ft.)
Channel length thru subarea  =   578.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     27.339(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     27.339(CFS)
Depth of flow =   0.983(Ft.), Average velocity =   0.535(Ft/s)
Channel flow top width =   53.931(Ft.)
Flow Velocity =    0.54(Ft/s)
Travel time  =   17.99 min.
Time of concentration =   38.78 min.
Critical depth =      0.211(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      1.887(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.840
Subarea runoff =      4.352(CFS) for    8.610(Ac.)
Total runoff =     29.487(CFS)
Effective area this stream =       18.61(Ac.)
Total Study Area (Main Stream No. 1) =       36.09(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   1.027(Ft.), Average velocity =   0.552(Ft/s)
!!Warning: Water is above left or right bank elevations
ERROR - Channel depth exceeds maximum allowable depth
Critical depth =      0.221(Ft.)


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Process from Point/Station       28.400 to Point/Station       28.200
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     18.610(Ac.)
Runoff from this stream =     29.487(CFS)
Time of concentration =   38.78 min.
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```
Rainfall intensity =     1.887(In/Hr)
Area averaged loss rate (Fm) =    0.1260(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     26.61    17.480     40.90    0.126      1.818
2     29.49    18.610     38.78    0.126      1.887
Qmax(1) =
           1.000 *    1.000 *    26.614) +
           0.961 *    1.000 *    29.487) + =      54.948
Qmax(2) =
           1.041 *    0.948 *    26.614) +
           1.000 *    1.000 *    29.487) + =      55.751

Total of 2 streams to confluence:
Flow rates before confluence point:
      26.614      29.487
Maximum flow rates at confluence using above data:
       54.948       55.751
Area of streams before confluence:
       17.480       18.610
Effective area values after confluence:
       36.090       35.187
Results of confluence:
Total flow rate =     55.751(CFS)
Time of concentration =    38.784 min.
Effective stream area after confluence =     35.187(Ac.)
Study area average Pervious fraction(Ap) =  0.900
Study area average soil loss rate(Fm) =    0.126(In/Hr)
Study area total (this main stream) =      36.09(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       28.200 to Point/Station       28.500
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1887.500(Ft.)
Downstream point elevation =  1884.400(Ft.)
Channel length thru subarea  =  1132.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     67.553(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     67.553(CFS)
Depth of flow =   0.739(Ft.), Average velocity =   1.775(Ft/s)
Channel flow top width =   52.957(Ft.)
Flow Velocity =    1.77(Ft/s)
Travel time  =   10.63 min.
Time of concentration =   49.41 min.
Critical depth =      0.383(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
```

```
SCS curve number for soil(AMC 2)  = 75.80
Adjusted SCS curve number for AMC 3 = 91.48
Pervious ratio(Ap) = 0.9110     Max loss rate(Fm)=     0.150(In/Hr)
Rainfall intensity =      1.592(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.823
Subarea runoff =     23.520(CFS) for   25.300(Ac.)
Total runoff =     79.271(CFS)
Effective area this stream =       60.49(Ac.)
Total Study Area (Main Stream No. 1) =       61.39(Ac.)
Area averaged Fm value =    0.136(In/Hr)
Depth of flow =   0.813(Ft.), Average velocity =   1.887(Ft/s)
Critical depth =      0.426(Ft.)
End of computations, Total Study Area =           61.39 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.905
Area averaged SCS curve number =  77.1
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 29
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Process from Point/Station 29.000 to Point/Station 29.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.126(In/Hr)
Initial subarea data:
Initial area flow distance = 776.000(Ft.)
Top (of initial area) elevation = 1889.000(Ft.)
Bottom (of initial area) elevation = 1887.500(Ft.)
Difference in elevation = 1.500(Ft.)
Slope = 0.00193 s(%)= 0.19
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 24.807 min.
Rainfall intensity = 2.579(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.856
Subarea runoff = 22.081(CFS)
Total initial stream area = 10.000(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.126(In/Hr)

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Process from Point/Station 29.100 to Point/Station 29.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1887.500(Ft.)
Downstream point elevation = 1886.400(Ft.)

```
Channel length thru subarea  =   413.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     25.522(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     25.522(CFS)
Depth of flow =   0.416(Ft.), Average velocity =   1.206(Ft/s)
Channel flow top width =   51.666(Ft.)
Flow Velocity =    1.21(Ft/s)
Travel time  =    5.71 min.
Time of concentration =   30.52 min.
Critical depth =      0.199(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.126(In/Hr)
Rainfall intensity =      2.231(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.849
Subarea runoff =      6.795(CFS) for    5.240(Ac.)
Total runoff =     28.876(CFS)
Effective area this stream =       15.24(Ac.)
Total Study Area (Main Stream No. 1) =       15.24(Ac.)
Area averaged Fm value =    0.126(In/Hr)
Depth of flow =   0.448(Ft.), Average velocity =   1.265(Ft/s)
Critical depth =      0.219(Ft.)
End of computations, Total Study Area =           15.24 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number =  78.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 30
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.400 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 30.000 to Point/Station 30.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 84.04
Adjusted SCS curve number for AMC 3 = 96.42
Pervious ratio(Ap) = 0.7790 Max loss rate(Fm)= 0.055(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1902.900(Ft.)
Bottom (of initial area) elevation = 1896.400(Ft.)
Difference in elevation = 6.500(Ft.)
Slope = 0.00650 s(%)= 0.65
TC = k(0.467)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 20.247 min.
Rainfall intensity = 2.995(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.883
Subarea runoff = 19.289(CFS)
Total initial stream area = 7.290(Ac.)
Pervious area fraction = 0.779
Initial area Fm value = 0.055(In/Hr)

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Process from Point/Station 30.100 to Point/Station 30.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1896.400(Ft.)
Downstream point elevation = 1893.000(Ft.)

```
Channel length thru subarea  =  1043.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     29.927(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     29.927(CFS)
Depth of flow =   0.431(Ft.), Average velocity =   1.365(Ft/s)
Channel flow top width =   51.725(Ft.)
Flow Velocity =    1.36(Ft/s)
Travel time  =   12.74 min.
Time of concentration =   32.99 min.
Critical depth =      0.223(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 89.51
Adjusted SCS curve number for AMC 3 = 97.90
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.037(In/Hr)
Rainfall intensity =      2.128(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.882
Subarea runoff =     21.220(CFS) for   14.300(Ac.)
Total runoff =     40.509(CFS)
Effective area this stream =       21.59(Ac.)
Total Study Area (Main Stream No. 1) =       21.59(Ac.)
Area averaged Fm value =    0.043(In/Hr)
Depth of flow =   0.517(Ft.), Average velocity =   1.536(Ft/s)
Critical depth =      0.273(Ft.)


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Process from Point/Station       30.200 to Point/Station       30.300
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1893.000(Ft.)
Downstream point elevation =  1891.100(Ft.)
Channel length thru subarea  =  1163.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     58.344(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     58.344(CFS)
Depth of flow =   0.790(Ft.), Average velocity =   1.431(Ft/s)
Channel flow top width =   53.162(Ft.)
Flow Velocity =    1.43(Ft/s)
Travel time  =   13.54 min.
Time of concentration =   46.53 min.
Critical depth =      0.348(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 88.11
Adjusted SCS curve number for AMC 3 = 97.62
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.042(In/Hr)
Rainfall intensity =      1.673(In/Hr) for a   100.0 year storm
```

```
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.877
Subarea runoff =     35.608(CFS) for   30.300(Ac.)
Total runoff =     76.117(CFS)
Effective area this stream =       51.89(Ac.)
Total Study Area (Main Stream No. 1) =       51.89(Ac.)
Area averaged Fm value =    0.043(In/Hr)
Depth of flow =   0.926(Ft.), Average velocity =   1.585(Ft/s)
Critical depth =      0.414(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       30.300 to Point/Station       30.400
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1891.100(Ft.)
Downstream point elevation =  1886.000(Ft.)
Channel length thru subarea  =  2235.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    116.208(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    116.208(CFS)
Depth of flow =   1.079(Ft.), Average velocity =   2.064(Ft/s)
Channel flow top width =   54.317(Ft.)
Flow Velocity =    2.06(Ft/s)
Travel time  =   18.05 min.
Time of concentration =   64.58 min.
Critical depth =      0.547(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 87.52
Adjusted SCS curve number for AMC 3 = 97.50
Pervious ratio(Ap) = 0.9020     Max loss rate(Fm)=     0.045(In/Hr)
Rainfall intensity =      1.330(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.870
Subarea runoff =     80.117(CFS) for   83.110(Ac.)
Total runoff =    156.235(CFS)
Effective area this stream =      135.00(Ac.)
Total Study Area (Main Stream No. 1) =      135.00(Ac.)
Area averaged Fm value =    0.044(In/Hr)
Depth of flow =   1.288(Ft.), Average velocity =   2.308(Ft/s)
Critical depth =      0.664(Ft.)
End of computations, Total Study Area =          135.00 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.895
Area averaged SCS curve number =  87.7
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 31
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.400 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 31.000 to Point/Station 31.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 0.6700 Max loss rate(Fm)= 0.241(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1924.300(Ft.)
Bottom (of initial area) elevation = 1920.600(Ft.)
Difference in elevation = 3.700(Ft.)
Slope = 0.00370 s(%)= 0.37
TC = k(0.440)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 21.357 min.
Rainfall intensity = 2.885(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.825
Subarea runoff = 12.470(CFS)
Total initial stream area = 5.240(Ac.)
Pervious area fraction = 0.670
Initial area Fm value = 0.241(In/Hr)

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Process from Point/Station 31.100 to Point/Station 31.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1920.600(Ft.)
Downstream point elevation = 1917.400(Ft.)

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Channel length thru subarea  =   991.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     18.806(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     18.806(CFS)
Depth of flow =   0.327(Ft.), Average velocity =   1.134(Ft/s)
Channel flow top width =   51.310(Ft.)
Flow Velocity =    1.13(Ft/s)
Travel time  =   14.57 min.
Time of concentration =   35.92 min.
Critical depth =      0.164(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 0.8450     Max loss rate(Fm)=     0.304(In/Hr)
Rainfall intensity =      2.005(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.773
Subarea runoff =     12.582(CFS) for   10.930(Ac.)
Total runoff =     25.052(CFS)
Effective area this stream =       16.17(Ac.)
Total Study Area (Main Stream No. 1) =       16.17(Ac.)
Area averaged Fm value =    0.283(In/Hr)
Depth of flow =   0.389(Ft.), Average velocity =   1.269(Ft/s)
Critical depth =      0.197(Ft.)


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Process from Point/Station       31.200 to Point/Station       31.300
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1917.400(Ft.)
Downstream point elevation =  1915.800(Ft.)
Channel length thru subarea  =   862.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     34.622(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     34.622(CFS)
Depth of flow =   0.557(Ft.), Average velocity =   1.216(Ft/s)
Channel flow top width =   52.227(Ft.)
Flow Velocity =    1.22(Ft/s)
Travel time  =   11.81 min.
Time of concentration =   47.73 min.
Critical depth =      0.246(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 0.9670     Max loss rate(Fm)=     0.348(In/Hr)
Rainfall intensity =      1.643(In/Hr) for a   100.0 year storm
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Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.725
Subarea runoff =     19.067(CFS) for   20.870(Ac.)
Total runoff =     44.118(CFS)
Effective area this stream =       37.04(Ac.)
Total Study Area (Main Stream No. 1) =       37.04(Ac.)
Area averaged Fm value =    0.320(In/Hr)
Depth of flow =   0.644(Ft.), Average velocity =   1.336(Ft/s)
Critical depth =      0.289(Ft.)


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Process from Point/Station       31.300 to Point/Station       31.400
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1915.800(Ft.)
Downstream point elevation =  1914.700(Ft.)
Channel length thru subarea  =  1062.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     58.278(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =     58.278(CFS)
Depth of flow =   0.905(Ft.), Average velocity =   1.243(Ft/s)
Channel flow top width =   53.620(Ft.)
Flow Velocity =    1.24(Ft/s)
Travel time  =   14.24 min.
Time of concentration =   61.97 min.
Critical depth =      0.348(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 0.9750     Max loss rate(Fm)=     0.351(In/Hr)
Rainfall intensity =      1.369(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.679
Subarea runoff =     28.262(CFS) for   40.830(Ac.)
Total runoff =     72.380(CFS)
Effective area this stream =       77.87(Ac.)
Total Study Area (Main Stream No. 1) =       77.87(Ac.)
Area averaged Fm value =    0.336(In/Hr)
Depth of flow =   1.030(Ft.), Average velocity =   1.350(Ft/s)
Critical depth =      0.398(Ft.)


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Process from Point/Station       31.400 to Point/Station       31.500
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1914.700(Ft.)
Downstream point elevation =  1905.300(Ft.)
Channel length thru subarea  =  3431.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
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Estimated mean flow rate at midpoint of channel =     88.611(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     88.611(CFS)
Depth of flow =   0.869(Ft.), Average velocity =   1.970(Ft/s)
Channel flow top width =   53.477(Ft.)
Flow Velocity =    1.97(Ft/s)
Travel time  =   29.03 min.
Time of concentration =   91.00 min.
Critical depth =      0.457(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 68.38
Adjusted SCS curve number for AMC 3 = 85.70
Pervious ratio(Ap) = 0.9280     Max loss rate(Fm)=     0.251(In/Hr)
Rainfall intensity =      1.046(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.647
Subarea runoff =     32.393(CFS) for   76.880(Ac.)
Total runoff =    104.773(CFS)
Effective area this stream =      154.75(Ac.)
Total Study Area (Main Stream No. 1) =      154.75(Ac.)
Area averaged Fm value =    0.294(In/Hr)
Depth of flow =   0.961(Ft.), Average velocity =   2.100(Ft/s)
Critical depth =      0.512(Ft.)


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Process from Point/Station       31.500 to Point/Station       31.600
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1905.300(Ft.)
Downstream point elevation =  1892.300(Ft.)
Channel length thru subarea  =  5186.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    139.723(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    139.723(CFS)
Depth of flow =   1.171(Ft.), Average velocity =   2.279(Ft/s)
Channel flow top width =   54.686(Ft.)
Flow Velocity =    2.28(Ft/s)
Travel time  =   37.93 min.
Time of concentration =  128.93 min.
Critical depth =      0.617(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 80.26
Adjusted SCS curve number for AMC 3 = 94.16
Pervious ratio(Ap) = 0.8930     Max loss rate(Fm)=     0.102(In/Hr)
Rainfall intensity =      0.820(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.683
Subarea runoff =     69.838(CFS) for  156.960(Ac.)
Total runoff =    174.611(CFS)
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Effective area this stream =      311.71(Ac.)
Total Study Area (Main Stream No. 1) =      311.71(Ac.)
Area averaged Fm value =    0.197(In/Hr)
Depth of flow =   1.338(Ft.), Average velocity =   2.478(Ft/s)
Critical depth =      0.719(Ft.)


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Process from Point/Station       31.600 to Point/Station       31.700
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1892.300(Ft.)
Downstream point elevation =  1886.800(Ft.)
Channel length thru subarea  =  2516.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    177.923(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    177.923(CFS)
Depth of flow =   1.409(Ft.), Average velocity =   2.391(Ft/s)
Channel flow top width =   55.636(Ft.)
Flow Velocity =    2.39(Ft/s)
Travel time  =   17.54 min.
Time of concentration =  146.47 min.
Critical depth =      0.727(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 73.90
Adjusted SCS curve number for AMC 3 = 90.12
Pervious ratio(Ap) = 0.9050     Max loss rate(Fm)=     0.172(In/Hr)
Rainfall intensity =      0.750(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.667
Subarea runoff =      6.526(CFS) for   50.340(Ac.)
Total runoff =    181.137(CFS)
Effective area this stream =      362.05(Ac.)
Total Study Area (Main Stream No. 1) =      362.05(Ac.)
Area averaged Fm value =    0.194(In/Hr)
Depth of flow =   1.424(Ft.), Average velocity =   2.407(Ft/s)
Critical depth =      0.734(Ft.)


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Process from Point/Station       31.600 to Point/Station       31.700
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =    362.050(Ac.)
Runoff from this stream =    181.137(CFS)
Time of concentration =  146.47 min.
Rainfall intensity =     0.750(In/Hr)
Area averaged loss rate (Fm) =    0.1937(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9109


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Process from Point/Station       31.800 to Point/Station       31.900
**** INITIAL AREA EVALUATION ****
_____________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.94
Adjusted SCS curve number for AMC 3 = 96.96
Pervious ratio(Ap) = 0.9390     Max loss rate(Fm)=     0.056(In/Hr)
Initial subarea data:
Initial area flow distance =   548.000(Ft.)
Top (of initial area) elevation =  1911.900(Ft.)
Bottom (of initial area) elevation =  1909.900(Ft.)
Difference in elevation =     2.000(Ft.)
Slope =    0.00365  s(%)=       0.36
TC = k(0.506)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   19.376 min.
Rainfall intensity =      3.089(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.884
Subarea runoff =     27.290(CFS)
Total initial stream area =       10.000(Ac.)
Pervious area fraction = 0.939
Initial area Fm value =    0.056(In/Hr)


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Process from Point/Station       31.900 to Point/Station       31.100
**** IMPROVED CHANNEL TRAVEL TIME ****
_____________________________________________________________________
Upstream point elevation =  1909.900(Ft.)
Downstream point elevation =  1906.600(Ft.)
Channel length thru subarea  =  1333.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     41.856(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     41.856(CFS)
Depth of flow =   0.572(Ft.), Average velocity =   1.430(Ft/s)
Channel flow top width =   52.289(Ft.)
Flow Velocity =    1.43(Ft/s)
Travel time  =   15.54 min.
Time of concentration =   34.91 min.
Critical depth =      0.277(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 88.41
Adjusted SCS curve number for AMC 3 = 97.68
Pervious ratio(Ap) = 0.9040     Max loss rate(Fm)=     0.042(In/Hr)
Rainfall intensity =      2.045(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.880
Subarea runoff =     29.076(CFS) for   21.330(Ac.)
Total runoff =     56.365(CFS)
Effective area this stream =       31.33(Ac.)
Total Study Area (Main Stream No. 1) =      393.38(Ac.)
Area averaged Fm value =    0.046(In/Hr)
Depth of flow =   0.684(Ft.), Average velocity =   1.605(Ft/s)
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Critical depth =      0.340(Ft.)


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Process from Point/Station       31.100 to Point/Station       31.110
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1906.600(Ft.)
Downstream point elevation =  1902.700(Ft.)
Channel length thru subarea  =  1835.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     72.993(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     72.993(CFS)
Depth of flow =   0.835(Ft.), Average velocity =   1.691(Ft/s)
Channel flow top width =   53.341(Ft.)
Flow Velocity =    1.69(Ft/s)
Travel time  =   18.08 min.
Time of concentration =   53.00 min.
Critical depth =      0.402(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 75.74
Adjusted SCS curve number for AMC 3 = 91.44
Pervious ratio(Ap) = 0.8990     Max loss rate(Fm)=     0.149(In/Hr)
Rainfall intensity =      1.527(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.839
Subarea runoff =     33.197(CFS) for   38.540(Ac.)
Total runoff =     89.562(CFS)
Effective area this stream =       69.87(Ac.)
Total Study Area (Main Stream No. 1) =      431.92(Ac.)
Area averaged Fm value =    0.103(In/Hr)
Depth of flow =   0.944(Ft.), Average velocity =   1.829(Ft/s)
Critical depth =      0.461(Ft.)


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Process from Point/Station       31.110 to Point/Station       31.120
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1902.700(Ft.)
Downstream point elevation =  1893.600(Ft.)
Channel length thru subarea  =  3382.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    113.502(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    113.502(CFS)
Depth of flow =   1.013(Ft.), Average velocity =   2.153(Ft/s)
Channel flow top width =   54.053(Ft.)
Flow Velocity =    2.15(Ft/s)
Travel time  =   26.18 min.
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Time of concentration =   79.17 min.
Critical depth =      0.539(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 62.02
Adjusted SCS curve number for AMC 3 = 80.62
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.323(In/Hr)
Rainfall intensity =      1.153(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.720
Subarea runoff =     47.811(CFS) for   95.540(Ac.)
Total runoff =    137.374(CFS)
Effective area this stream =      165.41(Ac.)
Total Study Area (Main Stream No. 1) =      527.46(Ac.)
Area averaged Fm value =    0.230(In/Hr)
Depth of flow =   1.135(Ft.), Average velocity =   2.315(Ft/s)
Critical depth =      0.609(Ft.)


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Process from Point/Station       31.120 to Point/Station       31.700
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1893.600(Ft.)
Downstream point elevation =  1886.800(Ft.)
Channel length thru subarea  =  2737.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    149.021(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    149.021(CFS)
Depth of flow =   1.220(Ft.), Average velocity =   2.328(Ft/s)
Channel flow top width =   54.882(Ft.)
Flow Velocity =    2.33(Ft/s)
Travel time  =   19.59 min.
Time of concentration =   98.77 min.
Critical depth =      0.648(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.28
Adjusted SCS curve number for AMC 3 = 92.97
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.123(In/Hr)
Rainfall intensity =      0.988(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.717
Subarea runoff =     23.223(CFS) for   61.480(Ac.)
Total runoff =    160.597(CFS)
Effective area this stream =      226.89(Ac.)
Total Study Area (Main Stream No. 1) =      588.94(Ac.)
Area averaged Fm value =    0.201(In/Hr)
Depth of flow =   1.276(Ft.), Average velocity =   2.395(Ft/s)
Critical depth =      0.680(Ft.)


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Process from Point/Station       31.120 to Point/Station       31.700
**** CONFLUENCE OF MINOR STREAMS ****
____________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =    226.890(Ac.)
Runoff from this stream =    160.597(CFS)
Time of concentration =   98.77 min.
Rainfall intensity =     0.988(In/Hr)
Area averaged loss rate (Fm) =    0.2012(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9019
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1    181.14   362.050    146.47    0.194      0.750
2    160.60   226.890     98.77    0.201      0.988
Qmax(1) =
           1.000 *    1.000 *   181.137) +
           0.697 *    1.000 *   160.597) + =     293.117
Qmax(2) =
           1.428 *    0.674 *   181.137) +
           1.000 *    1.000 *   160.597) + =     335.055

Total of 2 streams to confluence:
Flow rates before confluence point:
     181.137     160.597
Maximum flow rates at confluence using above data:
      293.117      335.055
Area of streams before confluence:
      362.050      226.890
Effective area values after confluence:
      588.940      471.029
Results of confluence:
Total flow rate =    335.055(CFS)
Time of concentration =    98.766 min.
Effective stream area after confluence =    471.029(Ac.)
Study area average Pervious fraction(Ap) =  0.907
Study area average soil loss rate(Fm) =    0.197(In/Hr)
Study area total (this main stream) =     588.94(Ac.)


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Process from Point/Station       31.700 to Point/Station       31.130
**** IMPROVED CHANNEL TRAVEL TIME ****
____________________________________________________________________________
Upstream point elevation =  1886.800(Ft.)
Downstream point elevation =  1880.800(Ft.)
Channel length thru subarea  =  3029.000(Ft.)
Channel base width      =   75.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    335.087(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    335.087(CFS)
Depth of flow =   1.667(Ft.), Average velocity =   2.567(Ft/s)
Channel flow top width =   81.666(Ft.)
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Flow Velocity =    2.57(Ft/s)
Travel time  =   19.67 min.
Time of concentration =  118.43 min.
Critical depth =      0.844(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 89.95
Adjusted SCS curve number for AMC 3 = 97.99
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.036(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =    319.853(CFS)
therefore the upstream flow rate of Q =    335.055(CFS) is being used
Rainfall intensity =      0.870(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.711
Subarea runoff =      0.000(CFS) for   45.930(Ac.)
Total runoff =    335.055(CFS)
Effective area this stream =      516.96(Ac.)
Total Study Area (Main Stream No. 1) =      634.87(Ac.)
Area averaged Fm value =    0.182(In/Hr)
Depth of flow =   1.666(Ft.), Average velocity =   2.567(Ft/s)
Critical depth =      0.844(Ft.)
End of computations, Total Study Area =          634.87 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.907
Area averaged SCS curve number =  73.9
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 32
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 32.000 to Point/Station 32.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.032(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1891.900(Ft.)
Bottom (of initial area) elevation = 1884.700(Ft.)
Difference in elevation = 7.200(Ft.)
Slope = 0.00720 s(%)= 0.72
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 21.106 min.
Rainfall intensity = 2.888(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.890
Subarea runoff = 23.751(CFS)
Total initial stream area = 9.240(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.032(In/Hr)

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Process from Point/Station 32.100 to Point/Station 32.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1884.700(Ft.)
Downstream point elevation = 1879.600(Ft.)

```
Channel length thru subarea  =  1520.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     32.163(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     32.163(CFS)
Depth of flow =   0.446(Ft.), Average velocity =   1.416(Ft/s)
Channel flow top width =   51.785(Ft.)
Flow Velocity =    1.42(Ft/s)
Travel time  =   17.89 min.
Time of concentration =   39.00 min.
Critical depth =      0.234(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.032(In/Hr)
Rainfall intensity =      1.879(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.885
Subarea runoff =     16.745(CFS) for   15.120(Ac.)
Total runoff =     40.496(CFS)
Effective area this stream =       24.36(Ac.)
Total Study Area (Main Stream No. 1) =       24.36(Ac.)
Area averaged Fm value =    0.032(In/Hr)
Depth of flow =   0.512(Ft.), Average velocity =   1.549(Ft/s)
Critical depth =      0.273(Ft.)
End of computations, Total Study Area =           24.36 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number =  91.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 33
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 33.000 to Point/Station 33.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.032(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1892.300(Ft.)
Bottom (of initial area) elevation = 1885.700(Ft.)
Difference in elevation = 6.600(Ft.)
Slope = 0.00660 s(%)= 0.66
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 21.476 min.
Rainfall intensity = 2.853(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.890
Subarea runoff = 14.726(CFS)
Total initial stream area = 5.800(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.032(In/Hr)

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Process from Point/Station 33.100 to Point/Station 33.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1885.700(Ft.)
Downstream point elevation = 1883.700(Ft.)

```
Channel length thru subarea  =   819.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     23.890(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     23.890(CFS)
Depth of flow =   0.411(Ft.), Average velocity =   1.144(Ft/s)
Channel flow top width =   51.643(Ft.)
Flow Velocity =    1.14(Ft/s)
Travel time  =   11.93 min.
Time of concentration =   33.41 min.
Critical depth =      0.191(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.032(In/Hr)
Rainfall intensity =      2.094(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.886
Subarea runoff =     18.254(CFS) for   11.970(Ac.)
Total runoff =     32.980(CFS)
Effective area this stream =       17.77(Ac.)
Total Study Area (Main Stream No. 1) =       17.77(Ac.)
Area averaged Fm value =    0.032(In/Hr)
Depth of flow =   0.498(Ft.), Average velocity =   1.298(Ft/s)
Critical depth =      0.238(Ft.)


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Process from Point/Station       33.200 to Point/Station       33.300
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1883.700(Ft.)
Downstream point elevation =  1881.400(Ft.)
Channel length thru subarea  =   871.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     40.263(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     40.263(CFS)
Depth of flow =   0.548(Ft.), Average velocity =   1.437(Ft/s)
Channel flow top width =   52.194(Ft.)
Flow Velocity =    1.44(Ft/s)
Travel time  =   10.10 min.
Time of concentration =   43.51 min.
Critical depth =      0.270(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.032(In/Hr)
Rainfall intensity =      1.741(In/Hr) for a   100.0 year storm
```

Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.883
Subarea runoff = 14.470(CFS) for 13.090(Ac.)
Total runoff = 47.451(CFS)
Effective area this stream = 30.86(Ac.)
Total Study Area (Main Stream No. 1) = 30.86(Ac.)
Area averaged Fm value = 0.032(In/Hr)
Depth of flow = 0.605(Ft.), Average velocity = 1.531(Ft/s)
Critical depth = 0.301(Ft.)
End of computations, Total Study Area = 30.86 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number = 91.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 34
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.400 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 34.000 to Point/Station 34.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 81.58
Adjusted SCS curve number for AMC 3 = 94.95
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.089(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1897.600(Ft.)
Bottom (of initial area) elevation = 1894.200(Ft.)
Difference in elevation = 3.400(Ft.)
Slope = 0.00340 s(%)= 0.34
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 24.523 min.
Rainfall intensity = 2.619(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.869
Subarea runoff = 11.840(CFS)
Total initial stream area = 5.200(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.089(In/Hr)

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Process from Point/Station 34.100 to Point/Station 34.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1894.200(Ft.)
Downstream point elevation = 1893.300(Ft.)

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Channel length thru subarea  =   570.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     19.163(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     19.163(CFS)
Depth of flow =   0.410(Ft.), Average velocity =   0.919(Ft/s)
Channel flow top width =   51.641(Ft.)
Flow Velocity =    0.92(Ft/s)
Travel time  =   10.33 min.
Time of concentration =   34.86 min.
Critical depth =      0.166(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 81.19
Adjusted SCS curve number for AMC 3 = 94.71
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.093(In/Hr)
Rainfall intensity =      2.047(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.860
Subarea runoff =     14.562(CFS) for    9.800(Ac.)
Total runoff =     26.402(CFS)
Effective area this stream =       15.00(Ac.)
Total Study Area (Main Stream No. 1) =       15.00(Ac.)
Area averaged Fm value =    0.092(In/Hr)
Depth of flow =   0.497(Ft.), Average velocity =   1.042(Ft/s)
Critical depth =      0.205(Ft.)


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Process from Point/Station       34.200 to Point/Station       34.300
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1893.300(Ft.)
Downstream point elevation =  1888.500(Ft.)
Channel length thru subarea  =  1115.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     37.152(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     37.152(CFS)
Depth of flow =   0.452(Ft.), Average velocity =   1.616(Ft/s)
Channel flow top width =   51.806(Ft.)
Flow Velocity =    1.62(Ft/s)
Travel time  =   11.50 min.
Time of concentration =   46.36 min.
Critical depth =      0.258(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 81.60
Adjusted SCS curve number for AMC 3 = 94.96
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.089(In/Hr)
Rainfall intensity =      1.677(In/Hr) for a   100.0 year storm
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```
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.852
Subarea runoff =     21.442(CFS) for   18.500(Ac.)
Total runoff =     47.844(CFS)
Effective area this stream =       33.50(Ac.)
Total Study Area (Main Stream No. 1) =       33.50(Ac.)
Area averaged Fm value =    0.090(In/Hr)
Depth of flow =   0.525(Ft.), Average velocity =   1.784(Ft/s)
Critical depth =      0.305(Ft.)


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Process from Point/Station       34.300 to Point/Station       34.400
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1888.500(Ft.)
Downstream point elevation =  1885.500(Ft.)
Channel length thru subarea  =  1198.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     67.488(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     67.488(CFS)
Depth of flow =   0.759(Ft.), Average velocity =   1.726(Ft/s)
Channel flow top width =   53.036(Ft.)
Flow Velocity =    1.73(Ft/s)
Travel time  =   11.57 min.
Time of concentration =   57.92 min.
Critical depth =      0.383(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.032(In/Hr)
Rainfall intensity =      1.435(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.862
Subarea runoff =     39.222(CFS) for   36.850(Ac.)
Total runoff =     87.066(CFS)
Effective area this stream =       70.35(Ac.)
Total Study Area (Main Stream No. 1) =       70.35(Ac.)
Area averaged Fm value =    0.060(In/Hr)
Depth of flow =   0.884(Ft.), Average velocity =   1.903(Ft/s)
Critical depth =      0.453(Ft.)


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Process from Point/Station       34.400 to Point/Station       34.500
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1885.500(Ft.)
Downstream point elevation =  1881.800(Ft.)
Channel length thru subarea  =  1714.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
```

```
Estimated mean flow rate at midpoint of channel =    100.143(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    100.143(CFS)
Depth of flow =   1.004(Ft.), Average velocity =   1.918(Ft/s)
Channel flow top width =   54.017(Ft.)
Flow Velocity =    1.92(Ft/s)
Travel time  =   14.90 min.
Time of concentration =   72.82 min.
Critical depth =      0.496(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.032(In/Hr)
Rainfall intensity =      1.223(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.863
Subarea runoff =     26.060(CFS) for   36.880(Ac.)
Total runoff =    113.125(CFS)
Effective area this stream =      107.23(Ac.)
Total Study Area (Main Stream No. 1) =      107.23(Ac.)
Area averaged Fm value =    0.050(In/Hr)
Depth of flow =   1.080(Ft.), Average velocity =   2.008(Ft/s)
Critical depth =      0.539(Ft.)
End of computations, Total Study Area =          107.23 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number =  88.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 35
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 35.000 to Point/Station 35.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.032(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1886.900(Ft.)
Bottom (of initial area) elevation = 1882.600(Ft.)
Difference in elevation = 4.300(Ft.)
Slope = 0.00430 s(%)= 0.43
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 23.398 min.
Rainfall intensity = 2.687(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.889
Subarea runoff = 14.958(CFS)
Total initial stream area = 6.260(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.032(In/Hr)

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Process from Point/Station 35.100 to Point/Station 35.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1882.600(Ft.)
Downstream point elevation = 1880.800(Ft.)

```
Channel length thru subarea  =   378.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     16.137(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     16.137(CFS)
Depth of flow =   0.266(Ft.), Average velocity =   1.201(Ft/s)
Channel flow top width =   51.064(Ft.)
Flow Velocity =    1.20(Ft/s)
Travel time  =    5.25 min.
Time of concentration =   28.64 min.
Critical depth =      0.148(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.032(In/Hr)
Rainfall intensity =      2.332(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.888
Subarea runoff =      2.266(CFS) for    2.060(Ac.)
Total runoff =     17.224(CFS)
Effective area this stream =        8.32(Ac.)
Total Study Area (Main Stream No. 1) =        8.32(Ac.)
Area averaged Fm value =    0.032(In/Hr)
Depth of flow =   0.276(Ft.), Average velocity =   1.232(Ft/s)
Critical depth =      0.154(Ft.)


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Process from Point/Station       35.100 to Point/Station       35.200
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =      8.320(Ac.)
Runoff from this stream =     17.224(CFS)
Time of concentration =   28.64 min.
Rainfall intensity =     2.332(In/Hr)
Area averaged loss rate (Fm) =    0.0322(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000


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Process from Point/Station       35.300 to Point/Station       35.400
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.032(In/Hr)
Initial subarea data:
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1887.000(Ft.)
Bottom (of initial area) elevation =  1881.700(Ft.)
Difference in elevation =     5.300(Ft.)
```

```
Slope =    0.00530  s(%)=       0.53
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   22.439 min.
Rainfall intensity =      2.767(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.890
Subarea runoff =     24.614(CFS)
Total initial stream area =       10.000(Ac.)
Pervious area fraction = 0.900
Initial area Fm value =    0.032(In/Hr)


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Process from Point/Station       35.400 to Point/Station       35.200
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1881.700(Ft.)
Downstream point elevation =  1880.800(Ft.)
Channel length thru subarea  =   288.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     28.653(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     28.653(CFS)
Depth of flow =   0.425(Ft.), Average velocity =   1.324(Ft/s)
Channel flow top width =   51.702(Ft.)
Flow Velocity =    1.32(Ft/s)
Travel time  =    3.62 min.
Time of concentration =   26.06 min.
Critical depth =      0.215(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.032(In/Hr)
Rainfall intensity =      2.492(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.888
Subarea runoff =      8.014(CFS) for    4.740(Ac.)
Total runoff =     32.628(CFS)
Effective area this stream =       14.74(Ac.)
Total Study Area (Main Stream No. 1) =       23.06(Ac.)
Area averaged Fm value =    0.032(In/Hr)
Depth of flow =   0.460(Ft.), Average velocity =   1.393(Ft/s)
Critical depth =      0.234(Ft.)


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Process from Point/Station       35.400 to Point/Station       35.200
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     14.740(Ac.)
Runoff from this stream =     32.628(CFS)
Time of concentration =   26.06 min.
Rainfall intensity =     2.492(In/Hr)
Area averaged loss rate (Fm) =    0.0322(In/Hr)
```

```
Area averaged Pervious ratio (Ap) = 0.9000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     17.22     8.320     28.64    0.032      2.332
2     32.63    14.740     26.06    0.032      2.492
Qmax(1) =
           1.000 *    1.000 *    17.224) +
           0.935 *    1.000 *    32.628) + =      47.739
Qmax(2) =
           1.069 *    0.910 *    17.224) +
           1.000 *    1.000 *    32.628) + =      49.386

Total of 2 streams to confluence:
Flow rates before confluence point:
      17.224      32.628
Maximum flow rates at confluence using above data:
       47.739       49.386
Area of streams before confluence:
        8.320       14.740
Effective area values after confluence:
       23.060       22.311
Results of confluence:
Total flow rate =     49.386(CFS)
Time of concentration =    26.064 min.
Effective stream area after confluence =     22.311(Ac.)
Study area average Pervious fraction(Ap) =  0.900
Study area average soil loss rate(Fm) =    0.032(In/Hr)
Study area total (this main stream) =      23.06(Ac.)


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Process from Point/Station       35.200 to Point/Station       35.500
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1880.800(Ft.)
Downstream point elevation =  1879.800(Ft.)
Channel length thru subarea  =   686.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     54.014(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     54.014(CFS)
Depth of flow =   0.781(Ft.), Average velocity =   1.341(Ft/s)
Channel flow top width =   53.124(Ft.)
Flow Velocity =    1.34(Ft/s)
Travel time  =    8.52 min.
Time of concentration =   34.59 min.
Critical depth =      0.328(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
```

```
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.032(In/Hr)
Rainfall intensity =      2.044(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.886
Subarea runoff =      9.189(CFS) for   10.040(Ac.)
Total runoff =     58.576(CFS)
Effective area this stream =       32.35(Ac.)
Total Study Area (Main Stream No. 1) =       33.10(Ac.)
Area averaged Fm value =    0.032(In/Hr)
Depth of flow =   0.820(Ft.), Average velocity =   1.384(Ft/s)
Critical depth =      0.348(Ft.)
End of computations, Total Study Area =           33.10 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number =  91.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 36
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 36.000 to Point/Station 36.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.032(In/Hr)
Initial subarea data:
Initial area flow distance = 628.000(Ft.)
Top (of initial area) elevation = 1883.300(Ft.)
Bottom (of initial area) elevation = 1876.400(Ft.)
Difference in elevation = 6.900(Ft.)
Slope = 0.01099 s(%)= 1.10
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 16.102 min.
Rainfall intensity = 3.491(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.892
Subarea runoff = 11.112(CFS)
Total initial stream area = 3.570(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.032(In/Hr)
End of computations, Total Study Area = 3.57 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number = 91.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 37
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 37.000 to Point/Station 37.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.032(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1883.000(Ft.)
Bottom (of initial area) elevation = 1878.400(Ft.)
Difference in elevation = 4.600(Ft.)
Slope = 0.00460 s(%)= 0.46
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 23.084 min.
Rainfall intensity = 2.713(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.889
Subarea runoff = 21.953(CFS)
Total initial stream area = 9.100(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.032(In/Hr)

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Process from Point/Station 37.100 to Point/Station 37.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1878.400(Ft.)
Downstream point elevation = 1877.300(Ft.)

```
Channel length thru subarea  =   203.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     22.733(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     22.733(CFS)
Depth of flow =   0.314(Ft.), Average velocity =   1.430(Ft/s)
Channel flow top width =   51.256(Ft.)
Flow Velocity =    1.43(Ft/s)
Travel time  =    2.37 min.
Time of concentration =   25.45 min.
Critical depth =      0.186(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.032(In/Hr)
Rainfall intensity =      2.534(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.889
Subarea runoff =      1.504(CFS) for    1.320(Ac.)
Total runoff =     23.458(CFS)
Effective area this stream =       10.42(Ac.)
Total Study Area (Main Stream No. 1) =       10.42(Ac.)
Area averaged Fm value =    0.032(In/Hr)
Depth of flow =   0.320(Ft.), Average velocity =   1.447(Ft/s)
Critical depth =      0.189(Ft.)
End of computations, Total Study Area =           10.42 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number =  91.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 38
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 38.000 to Point/Station 38.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.032(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1882.000(Ft.)
Bottom (of initial area) elevation = 1879.100(Ft.)
Difference in elevation = 2.900(Ft.)
Slope = 0.00290 s(%)= 0.29
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 25.316 min.
Rainfall intensity = 2.543(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.889
Subarea runoff = 17.378(CFS)
Total initial stream area = 7.690(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.032(In/Hr)

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Process from Point/Station 38.100 to Point/Station 38.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1879.100(Ft.)
Downstream point elevation = 1877.700(Ft.)

```
Channel length thru subarea  =   276.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     21.450(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     21.450(CFS)
Depth of flow =   0.309(Ft.), Average velocity =   1.370(Ft/s)
Channel flow top width =   51.238(Ft.)
Flow Velocity =    1.37(Ft/s)
Travel time  =    3.36 min.
Time of concentration =   28.67 min.
Critical depth =      0.178(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.032(In/Hr)
Rainfall intensity =      2.331(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.888
Subarea runoff =      8.066(CFS) for    4.610(Ac.)
Total runoff =     25.444(CFS)
Effective area this stream =       12.30(Ac.)
Total Study Area (Main Stream No. 1) =       12.30(Ac.)
Area averaged Fm value =    0.032(In/Hr)
Depth of flow =   0.343(Ft.), Average velocity =   1.465(Ft/s)
Critical depth =      0.199(Ft.)
End of computations, Total Study Area =           12.30 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number =  91.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 39
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.400 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Process from Point/Station 39.000 to Point/Station 39.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 62.00
Adjusted SCS curve number for AMC 3 = 80.60
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.324(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1903.000(Ft.)
Bottom (of initial area) elevation = 1897.800(Ft.)
Difference in elevation = 5.200(Ft.)
Slope = 0.00520 s(%)= 0.52
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 22.525 min.
Rainfall intensity = 2.780(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.795
Subarea runoff = 5.990(CFS)
Total initial stream area = 2.710(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.324(In/Hr)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Process from Point/Station 39.100 to Point/Station 39.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1897.800(Ft.)
Downstream point elevation = 1895.200(Ft.)

Channel length thru subarea = 947.000(Ft.)
Channel base width = 50.000(Ft.)
Slope or 'Z' of left channel bank = 2.000
Slope or 'Z' of right channel bank = 2.000
Estimated mean flow rate at midpoint of channel = 8.921(CFS)
Manning's 'N' = 0.035
Maximum depth of channel = 1.000(Ft.)
Flow(q) thru subarea = 8.921(CFS)
Depth of flow = 0.220(Ft.), Average velocity = 0.805(Ft/s)
Channel flow top width = 50.879(Ft.)
Flow Velocity = 0.80(Ft/s)
Travel time = 19.62 min.
Time of concentration = 42.14 min.
Critical depth = 0.100(Ft.)
Adding area flow to channel
Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 66.10
Adjusted SCS curve number for AMC 3 = 83.88
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.272(In/Hr)
Rainfall intensity = 1.793(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area,(total area with modified rational method)(Q=KCIA) is C = 0.755
Subarea runoff = 5.762(CFS) for 5.970(Ac.)
Total runoff = 11.752(CFS)
Effective area this stream = 8.68(Ac.)
Total Study Area (Main Stream No. 1) = 8.68(Ac.)
Area averaged Fm value = 0.288(In/Hr)
Depth of flow = 0.259(Ft.), Average velocity = 0.897(Ft/s)
Critical depth = 0.119(Ft.)

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Process from Point/Station 39.200 to Point/Station 39.300
**** IMPROVED CHANNEL TRAVEL TIME ****
_____

Upstream point elevation = 1895.200(Ft.)
Downstream point elevation = 1893.000(Ft.)
Channel length thru subarea = 1225.000(Ft.)
Channel base width = 50.000(Ft.)
Slope or 'Z' of left channel bank = 2.000
Slope or 'Z' of right channel bank = 2.000
Estimated mean flow rate at midpoint of channel = 14.890(CFS)
Manning's 'N' = 0.035
Maximum depth of channel = 1.000(Ft.)
Flow(q) thru subarea = 14.890(CFS)
Depth of flow = 0.339(Ft.), Average velocity = 0.866(Ft/s)
Channel flow top width = 51.357(Ft.)
Flow Velocity = 0.87(Ft/s)
Travel time = 23.58 min.
Time of concentration = 65.72 min.
Critical depth = 0.141(Ft.)
Adding area flow to channel
Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.064(In/Hr)
Rainfall intensity = 1.313(In/Hr) for a 100.0 year storm

```
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.780
Subarea runoff =      6.209(CFS) for    8.850(Ac.)
Total runoff =     17.961(CFS)
Effective area this stream =       17.53(Ac.)
Total Study Area (Main Stream No. 1) =       17.53(Ac.)
Area averaged Fm value =    0.175(In/Hr)
Depth of flow =   0.380(Ft.), Average velocity =   0.932(Ft/s)
Critical depth =      0.158(Ft.)


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Process from Point/Station       39.300 to Point/Station       39.400
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1893.000(Ft.)
Downstream point elevation =  1889.200(Ft.)
Channel length thru subarea  =  1060.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     25.124(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     25.124(CFS)
Depth of flow =   0.377(Ft.), Average velocity =   1.312(Ft/s)
Channel flow top width =   51.510(Ft.)
Flow Velocity =    1.31(Ft/s)
Travel time  =   13.47 min.
Time of concentration =   79.19 min.
Critical depth =      0.199(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.14
Adjusted SCS curve number for AMC 3 = 96.48
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.062(In/Hr)
Rainfall intensity =      1.153(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.807
Subarea runoff =     14.265(CFS) for   17.120(Ac.)
Total runoff =     32.226(CFS)
Effective area this stream =       34.65(Ac.)
Total Study Area (Main Stream No. 1) =       34.65(Ac.)
Area averaged Fm value =    0.119(In/Hr)
Depth of flow =   0.438(Ft.), Average velocity =   1.446(Ft/s)
Critical depth =      0.234(Ft.)


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Process from Point/Station       39.300 to Point/Station       39.400
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     34.650(Ac.)
Runoff from this stream =     32.226(CFS)
Time of concentration =   79.19 min.
Rainfall intensity =     1.153(In/Hr)
```

```
Area averaged loss rate (Fm) =    0.1194(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000
Program is now starting with Main Stream No. 2


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Process from Point/Station       39.500 to Point/Station       39.600
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.064(In/Hr)
Initial subarea data:
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1897.300(Ft.)
Bottom (of initial area) elevation =  1893.300(Ft.)
Difference in elevation =     4.000(Ft.)
Slope =    0.00400  s(%)=       0.40
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   23.739 min.
Rainfall intensity =      2.679(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.879
Subarea runoff =     23.044(CFS)
Total initial stream area =        9.790(Ac.)
Pervious area fraction = 0.900
Initial area Fm value =    0.064(In/Hr)


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Process from Point/Station       39.600 to Point/Station       39.700
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1893.300(Ft.)
Downstream point elevation =  1890.400(Ft.)
Channel length thru subarea  =  1661.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     34.587(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     34.587(CFS)
Depth of flow =   0.567(Ft.), Average velocity =   1.193(Ft/s)
Channel flow top width =   52.267(Ft.)
Flow Velocity =    1.19(Ft/s)
Travel time  =   23.20 min.
Time of concentration =   46.94 min.
Critical depth =      0.246(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.064(In/Hr)
Rainfall intensity =      1.663(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.865
```

```
Subarea runoff =     23.026(CFS) for   22.230(Ac.)
Total runoff =     46.070(CFS)
Effective area this stream =       32.02(Ac.)
Total Study Area (Main Stream No. 2) =       66.67(Ac.)
Area averaged Fm value =    0.064(In/Hr)
Depth of flow =   0.673(Ft.), Average velocity =   1.334(Ft/s)
Critical depth =      0.297(Ft.)


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Process from Point/Station       39.600 to Point/Station       39.700
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 2 in normal stream number 1
Stream flow area =     32.020(Ac.)
Runoff from this stream =     46.070(CFS)
Time of concentration =   46.94 min.
Rainfall intensity =     1.663(In/Hr)
Area averaged loss rate (Fm) =    0.0639(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000


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Process from Point/Station       39.800 to Point/Station       39.900
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.064(In/Hr)
Initial subarea data:
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1893.000(Ft.)
Bottom (of initial area) elevation =  1891.000(Ft.)
Difference in elevation =     2.000(Ft.)
Slope =    0.00200  s(%)=       0.20
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   27.268 min.
Rainfall intensity =      2.431(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.876
Subarea runoff =     21.266(CFS)
Total initial stream area =        9.980(Ac.)
Pervious area fraction = 0.900
Initial area Fm value =    0.064(In/Hr)


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Process from Point/Station       39.900 to Point/Station       39.700
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1891.000(Ft.)
Downstream point elevation =  1890.400(Ft.)
Channel length thru subarea  =   384.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     24.303(CFS)
Manning's 'N'    = 0.035
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```
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     24.303(CFS)
Depth of flow =   0.474(Ft.), Average velocity =   1.005(Ft/s)
Channel flow top width =   51.898(Ft.)
Flow Velocity =    1.01(Ft/s)
Travel time  =    6.37 min.
Time of concentration =   33.63 min.
Critical depth =      0.193(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.064(In/Hr)
Rainfall intensity =      2.099(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.873
Subarea runoff =      5.994(CFS) for    4.900(Ac.)
Total runoff =     27.259(CFS)
Effective area this stream =       14.88(Ac.)
Total Study Area (Main Stream No. 2) =       81.55(Ac.)
Area averaged Fm value =    0.064(In/Hr)
Depth of flow =   0.508(Ft.), Average velocity =   1.052(Ft/s)
Critical depth =      0.209(Ft.)


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Process from Point/Station       39.900 to Point/Station       39.700
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 2 in normal stream number 2
Stream flow area =     14.880(Ac.)
Runoff from this stream =     27.259(CFS)
Time of concentration =   33.63 min.
Rainfall intensity =     2.099(In/Hr)
Area averaged loss rate (Fm) =    0.0639(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     46.07    32.020     46.94    0.064      1.663
2     27.26    14.880     33.63    0.064      2.099
Qmax(1) =
           1.000 *    1.000 *    46.070) +
           0.785 *    1.000 *    27.259) + =      67.479
Qmax(2) =
           1.273 *    0.717 *    46.070) +
           1.000 *    1.000 *    27.259) + =      69.293

Total of 2 streams to confluence:
Flow rates before confluence point:
      46.070      27.259
Maximum flow rates at confluence using above data:
       67.479       69.293
Area of streams before confluence:
       32.020       14.880
```

```
Effective area values after confluence:
       46.900       37.825
Results of confluence:
Total flow rate =     69.293(CFS)
Time of concentration =    33.634 min.
Effective stream area after confluence =     37.825(Ac.)
Study area average Pervious fraction(Ap) =  0.900
Study area average soil loss rate(Fm) =    0.064(In/Hr)
Study area total (this main stream) =      46.90(Ac.)


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Process from Point/Station       39.700 to Point/Station       39.400
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1890.400(Ft.)
Downstream point elevation =  1889.200(Ft.)
Channel length thru subarea  =   638.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     70.522(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     70.522(CFS)
Depth of flow =   0.849(Ft.), Average velocity =   1.607(Ft/s)
Channel flow top width =   53.395(Ft.)
Flow Velocity =    1.61(Ft/s)
Travel time  =    6.62 min.
Time of concentration =   40.25 min.
Critical depth =      0.395(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.064(In/Hr)
Rainfall intensity =      1.851(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.869
Subarea runoff =      2.370(CFS) for    6.720(Ac.)
Total runoff =     71.662(CFS)
Effective area this stream =       44.54(Ac.)
Total Study Area (Main Stream No. 2) =       88.27(Ac.)
Area averaged Fm value =    0.064(In/Hr)
Depth of flow =   0.857(Ft.), Average velocity =   1.617(Ft/s)
Critical depth =      0.398(Ft.)


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Process from Point/Station       39.700 to Point/Station       39.400
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =     44.545(Ac.)
Runoff from this stream =     71.662(CFS)
Time of concentration =   40.25 min.
Rainfall intensity =     1.851(In/Hr)
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Area averaged loss rate (Fm) =    0.0639(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     32.23    34.650     79.19    0.119      1.153
2     71.66    44.545     40.25    0.064      1.851
Qmax(1) =
           1.000 *    1.000 *    32.226) +
           0.609 *    1.000 *    71.662) + =      75.880
Qmax(2) =
           1.676 *    0.508 *    32.226) +
           1.000 *    1.000 *    71.662) + =      99.113

Total of 2 main streams to confluence:
Flow rates before confluence point:
      33.226      72.662
Maximum flow rates at confluence using above data:
       75.880       99.113
Area of streams before confluence:
       34.650       44.545
Effective area values after confluence:
       79.195       62.155


Results of confluence:
Total flow rate =     99.113(CFS)
Time of concentration =    40.249 min.
Effective stream area after confluence  =     62.155(Ac.)
Study area average Pervious fraction(Ap) =  0.900
Study area average soil loss rate(Fm) =    0.088(In/Hr)
Study area total =      79.19(Ac.)


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Process from Point/Station       39.400 to Point/Station       39.100
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1889.200(Ft.)
Downstream point elevation =  1887.800(Ft.)
Channel length thru subarea  =   551.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     99.423(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     99.423(CFS)
Depth of flow =   0.952(Ft.), Average velocity =   2.011(Ft/s)
Channel flow top width =   53.810(Ft.)
Flow Velocity =    2.01(Ft/s)
Travel time  =    4.57 min.
Time of concentration =   44.82 min.
Critical depth =      0.492(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
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USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 87.25
Adjusted SCS curve number for AMC 3 = 97.45
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.045(In/Hr)
Rainfall intensity =      1.717(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.856
Subarea runoff =      0.548(CFS) for    5.670(Ac.)
Total runoff =     99.661(CFS)
Effective area this stream =       67.83(Ac.)
Total Study Area (Main Stream No. 1) =       93.94(Ac.)
Area averaged Fm value =    0.085(In/Hr)
Depth of flow =   0.954(Ft.), Average velocity =   2.013(Ft/s)
Critical depth =      0.492(Ft.)


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Process from Point/Station       39.400 to Point/Station       39.100
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     67.825(Ac.)
Runoff from this stream =     99.661(CFS)
Time of concentration =   44.82 min.
Rainfall intensity =     1.717(In/Hr)
Area averaged loss rate (Fm) =    0.0846(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000


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Process from Point/Station       39.110 to Point/Station       39.120
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 83.86
Adjusted SCS curve number for AMC 3 = 96.32
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.065(In/Hr)
Initial subarea data:
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1892.800(Ft.)
Bottom (of initial area) elevation =  1888.200(Ft.)
Difference in elevation =     4.600(Ft.)
Slope =    0.00460  s(%)=       0.46
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   23.084 min.
Rainfall intensity =      2.732(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.878
Subarea runoff =     22.345(CFS)
Total initial stream area =        9.310(Ac.)
Pervious area fraction = 0.900
Initial area Fm value =    0.065(In/Hr)


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Process from Point/Station       39.120 to Point/Station       39.100
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1888.200(Ft.)
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Downstream point elevation =  1887.800(Ft.)
Channel length thru subarea  =   425.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     22.393(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     22.393(CFS)
Depth of flow =   0.526(Ft.), Average velocity =   0.834(Ft/s)
Channel flow top width =   52.103(Ft.)
Flow Velocity =    0.83(Ft/s)
Travel time  =    8.49 min.
Time of concentration =   31.57 min.
Critical depth =      0.184(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.064(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =     22.325(CFS)
therefore the upstream flow rate of Q =     22.345(CFS) is being used
Rainfall intensity =      2.194(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.873
Subarea runoff =      0.000(CFS) for    2.340(Ac.)
Total runoff =     22.345(CFS)
Effective area this stream =       11.65(Ac.)
Total Study Area (Main Stream No. 1) =      105.59(Ac.)
Area averaged Fm value =    0.065(In/Hr)
Depth of flow =   0.525(Ft.), Average velocity =   0.834(Ft/s)
Critical depth =      0.184(Ft.)


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Process from Point/Station       39.120 to Point/Station       39.100
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     11.650(Ac.)
Runoff from this stream =     22.345(CFS)
Time of concentration =   31.57 min.
Rainfall intensity =     2.194(In/Hr)
Area averaged loss rate (Fm) =    0.0651(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     99.66    67.825     44.82    0.085      1.717
2     22.35    11.650     31.57    0.065      2.194
Qmax(1) =
           1.000 *    1.000 *    99.661) +
           0.776 *    1.000 *    22.345) + =     117.000
Qmax(2) =
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          1.292 *    0.705 *    99.661) +
          1.000 *    1.000 *    22.345) + =     113.078

Total of 2 streams to confluence:
Flow rates before confluence point:
      99.661      22.345
Maximum flow rates at confluence using above data:
      117.000      113.078
Area of streams before confluence:
       67.825       11.650
Effective area values after confluence:
       79.475       59.435
Results of confluence:
Total flow rate =    117.000(CFS)
Time of concentration =    44.815 min.
Effective stream area after confluence =     79.475(Ac.)
Study area average Pervious fraction(Ap) =  0.900
Study area average soil loss rate(Fm) =    0.082(In/Hr)
Study area total (this main stream) =      79.48(Ac.)


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Process from Point/Station       39.100 to Point/Station       39.130
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1887.800(Ft.)
Downstream point elevation =  1886.100(Ft.)
Channel length thru subarea  =   845.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    122.164(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    122.164(CFS)
Depth of flow =   1.155(Ft.), Average velocity =   2.023(Ft/s)
Channel flow top width =   54.618(Ft.)
Flow Velocity =    2.02(Ft/s)
Travel time  =    6.96 min.
Time of concentration =   51.78 min.
Critical depth =      0.563(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 89.13
Adjusted SCS curve number for AMC 3 = 97.83
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.039(In/Hr)
Rainfall intensity =      1.552(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.857
Subarea runoff =     10.267(CFS) for   16.220(Ac.)
Total runoff =    127.267(CFS)
Effective area this stream =       95.70(Ac.)
Total Study Area (Main Stream No. 1) =      121.81(Ac.)
Area averaged Fm value =    0.074(In/Hr)
Depth of flow =   1.183(Ft.), Average velocity =   2.054(Ft/s)
Critical depth =      0.578(Ft.)
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Process from Point/Station       39.130 to Point/Station       39.140
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1886.100(Ft.)
Downstream point elevation =  1882.000(Ft.)
Channel length thru subarea  =  1834.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    134.966(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    134.966(CFS)
Depth of flow =   1.187(Ft.), Average velocity =   2.170(Ft/s)
Channel flow top width =   54.749(Ft.)
Flow Velocity =    2.17(Ft/s)
Travel time  =   14.08 min.
Time of concentration =   65.86 min.
Critical depth =      0.602(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 88.81
Adjusted SCS curve number for AMC 3 = 97.76
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.040(In/Hr)
Rainfall intensity =      1.312(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.855
Subarea runoff =     15.332(CFS) for   31.500(Ac.)
Total runoff =    142.599(CFS)
Effective area this stream =      127.20(Ac.)
Total Study Area (Main Stream No. 1) =      153.31(Ac.)
Area averaged Fm value =    0.066(In/Hr)
Depth of flow =   1.227(Ft.), Average velocity =   2.216(Ft/s)
Critical depth =      0.625(Ft.)


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Process from Point/Station       39.140 to Point/Station       39.150
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1882.000(Ft.)
Downstream point elevation =  1876.100(Ft.)
Channel length thru subarea  =  2287.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    147.421(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =    147.421(CFS)
Depth of flow =   1.199(Ft.), Average velocity =   2.346(Ft/s)
Channel flow top width =   54.796(Ft.)
Flow Velocity =    2.35(Ft/s)
Travel time  =   16.25 min.
Time of concentration =   82.11 min.
Critical depth =      0.641(Ft.)
 Adding area flow to channel
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Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 88.00
Adjusted SCS curve number for AMC 3 = 97.60
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.043(In/Hr)
Rainfall intensity =      1.124(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.851
Subarea runoff =      9.579(CFS) for   31.910(Ac.)
Total runoff =    152.178(CFS)
Effective area this stream =      159.11(Ac.)
Total Study Area (Main Stream No. 1) =      185.22(Ac.)
Area averaged Fm value =    0.061(In/Hr)
Depth of flow =   1.222(Ft.), Average velocity =   2.375(Ft/s)
Critical depth =      0.656(Ft.)


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Process from Point/Station       39.140 to Point/Station       39.150
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =    159.105(Ac.)
Runoff from this stream =    152.178(CFS)
Time of concentration =   82.11 min.
Rainfall intensity =     1.124(In/Hr)
Area averaged loss rate (Fm) =    0.0613(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000


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Process from Point/Station       39.160 to Point/Station       39.170
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.064(In/Hr)
Initial subarea data:
Initial area flow distance =   680.000(Ft.)
Top (of initial area) elevation =  1888.000(Ft.)
Bottom (of initial area) elevation =  1886.700(Ft.)
Difference in elevation =     1.300(Ft.)
Slope =    0.00191  s(%)=       0.19
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   23.582 min.
Rainfall intensity =      2.692(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.879
Subarea runoff =     23.650(CFS)
Total initial stream area =       10.000(Ac.)
Pervious area fraction = 0.900
Initial area Fm value =    0.064(In/Hr)


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Process from Point/Station       39.170 to Point/Station       39.180
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
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Upstream point elevation =  1886.700(Ft.)
Downstream point elevation =  1882.400(Ft.)
Channel length thru subarea  =  1765.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     48.977(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     48.977(CFS)
Depth of flow =   0.632(Ft.), Average velocity =   1.512(Ft/s)
Channel flow top width =   52.527(Ft.)
Flow Velocity =    1.51(Ft/s)
Travel time  =   19.45 min.
Time of concentration =   43.03 min.
Critical depth =      0.309(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 83.44
Adjusted SCS curve number for AMC 3 = 96.06
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.070(In/Hr)
Rainfall intensity =      1.767(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.865
Subarea runoff =     50.567(CFS) for   38.560(Ac.)
Total runoff =     74.217(CFS)
Effective area this stream =       48.56(Ac.)
Total Study Area (Main Stream No. 1) =      233.78(Ac.)
Area averaged Fm value =    0.069(In/Hr)
Depth of flow =   0.810(Ft.), Average velocity =   1.775(Ft/s)
Critical depth =      0.406(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       39.180 to Point/Station       39.150
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1882.400(Ft.)
Downstream point elevation =  1876.100(Ft.)
Channel length thru subarea  =  2853.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     79.639(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     79.639(CFS)
Depth of flow =   0.870(Ft.), Average velocity =   1.769(Ft/s)
Channel flow top width =   53.480(Ft.)
Flow Velocity =    1.77(Ft/s)
Travel time  =   26.87 min.
Time of concentration =   69.91 min.
Critical depth =      0.426(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 84.40
Adjusted SCS curve number for AMC 3 = 96.64
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```
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.060(In/Hr)
Rainfall intensity =      1.258(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.853
Subarea runoff =     10.787(CFS) for   30.620(Ac.)
Total runoff =     85.004(CFS)
Effective area this stream =       79.18(Ac.)
Total Study Area (Main Stream No. 1) =      264.40(Ac.)
Area averaged Fm value =    0.065(In/Hr)
Depth of flow =   0.904(Ft.), Average velocity =   1.814(Ft/s)
Critical depth =      0.445(Ft.)


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Process from Point/Station       39.180 to Point/Station       39.150
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     79.180(Ac.)
Runoff from this stream =     85.004(CFS)
Time of concentration =   69.91 min.
Rainfall intensity =     1.258(In/Hr)
Area averaged loss rate (Fm) =    0.0651(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1    152.18   159.105     82.11    0.061      1.124
2     85.00    79.180     69.91    0.065      1.258
Qmax(1) =
           1.000 *    1.000 *   152.178) +
           0.888 *    1.000 *    85.004) + =     227.637
Qmax(2) =
           1.126 *    0.851 *   152.178) +
           1.000 *    1.000 *    85.004) + =     230.904

Total of 2 streams to confluence:
Flow rates before confluence point:
     152.178      85.004
Maximum flow rates at confluence using above data:
      227.637      230.904
Area of streams before confluence:
      159.105       79.180
Effective area values after confluence:
      238.285      214.646
Results of confluence:
Total flow rate =    230.904(CFS)
Time of concentration =    69.907 min.
Effective stream area after confluence =    214.646(Ac.)
Study area average Pervious fraction(Ap) =  0.900
Study area average soil loss rate(Fm) =    0.063(In/Hr)
Study area total (this main stream) =     238.29(Ac.)


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Process from Point/Station       39.150 to Point/Station       39.190
```

**** IMPROVED CHANNEL TRAVEL TIME ****

Upstream point elevation = 1876.100(Ft.)
Downstream point elevation = 1869.900(Ft.)
Channel length thru subarea = 2692.000(Ft.)
Channel base width = 50.000(Ft.)
Slope or 'Z' of left channel bank = 2.000
Slope or 'Z' of right channel bank = 2.000
Estimated mean flow rate at midpoint of channel = 230.933(CFS)
Manning's 'N' = 0.035
Maximum depth of channel = 2.000(Ft.)
Flow(q) thru subarea = 230.933(CFS)
Depth of flow = 1.620(Ft.), Average velocity = 2.678(Ft/s)
Channel flow top width = 56.480(Ft.)
Flow Velocity = 2.68(Ft/s)
Travel time = 16.76 min.
Time of concentration = 86.66 min.
Critical depth = 0.859(Ft.)
Adding area flow to channel
Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 90.45
Adjusted SCS curve number for AMC 3 = 98.09
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.034(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q = 209.818(CFS)
therefore the upstream flow rate of Q = 230.904(CFS) is being used
Rainfall intensity = 1.082(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.849
Subarea runoff = 0.000(CFS) for 13.590(Ac.)
Total runoff = 230.904(CFS)
Effective area this stream = 228.24(Ac.)
Total Study Area (Main Stream No. 1) = 277.99(Ac.)
Area averaged Fm value = 0.061(In/Hr)
Depth of flow = 1.620(Ft.), Average velocity = 2.678(Ft/s)
Critical depth = 0.859(Ft.)
End of computations, Total Study Area = 277.99 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number = 85.1

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 40
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.400 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 40.000 to Point/Station 40.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.032(In/Hr)
Initial subarea data:
Initial area flow distance = 515.000(Ft.)
Top (of initial area) elevation = 1881.400(Ft.)
Bottom (of initial area) elevation = 1876.500(Ft.)
Difference in elevation = 4.900(Ft.)
Slope = 0.00951 s(%)= 0.95
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 15.308 min.
Rainfall intensity = 3.642(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.892
Subarea runoff = 11.047(CFS)
Total initial stream area = 3.400(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.032(In/Hr)
End of computations, Total Study Area = 3.40 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number = 91.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 41
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 41.000 to Point/Station 41.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.032(In/Hr)
Initial subarea data:
Initial area flow distance = 340.000(Ft.)
Top (of initial area) elevation = 1878.400(Ft.)
Bottom (of initial area) elevation = 1876.300(Ft.)
Difference in elevation = 2.100(Ft.)
Slope = 0.00618 s(%)= 0.62
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 14.135 min.
Rainfall intensity = 3.824(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.892
Subarea runoff = 7.712(CFS)
Total initial stream area = 2.260(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.032(In/Hr)
End of computations, Total Study Area = 2.26 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number = 91.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 42
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

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Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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Process from Point/Station 42.000 to Point/Station 42.100
**** INITIAL AREA EVALUATION ****

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Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 84.23
Adjusted SCS curve number for AMC 3 = 96.54
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.061(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1886.700(Ft.)
Bottom (of initial area) elevation = 1881.500(Ft.)
Difference in elevation = 5.200(Ft.)
Slope = 0.00520 s(%)= 0.52
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 22.525 min.
Rainfall intensity = 2.760(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.880
Subarea runoff = 16.853(CFS)
Total initial stream area = 6.940(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.061(In/Hr)

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Process from Point/Station 42.100 to Point/Station 42.200
**** IMPROVED CHANNEL TRAVEL TIME ****

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Upstream point elevation = 1881.500(Ft.)
Downstream point elevation = 1877.700(Ft.)

```
Channel length thru subarea  =  1696.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     28.197(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     28.197(CFS)
Depth of flow =   0.466(Ft.), Average velocity =   1.189(Ft/s)
Channel flow top width =   51.862(Ft.)
Flow Velocity =    1.19(Ft/s)
Travel time  =   23.77 min.
Time of concentration =   46.29 min.
Critical depth =      0.215(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 86.06
Adjusted SCS curve number for AMC 3 = 97.21
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.050(In/Hr)
Rainfall intensity =      1.667(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.872
Subarea runoff =     22.630(CFS) for   20.240(Ac.)
Total runoff =     39.483(CFS)
Effective area this stream =       27.18(Ac.)
Total Study Area (Main Stream No. 1) =       27.18(Ac.)
Area averaged Fm value =    0.053(In/Hr)
Depth of flow =   0.569(Ft.), Average velocity =   1.356(Ft/s)
Critical depth =      0.268(Ft.)


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Process from Point/Station       42.200 to Point/Station       42.300
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1877.700(Ft.)
Downstream point elevation =  1875.700(Ft.)
Channel length thru subarea  =  1288.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     51.261(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     51.261(CFS)
Depth of flow =   0.743(Ft.), Average velocity =   1.340(Ft/s)
Channel flow top width =   52.971(Ft.)
Flow Velocity =    1.34(Ft/s)
Travel time  =   16.01 min.
Time of concentration =   62.31 min.
Critical depth =      0.320(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 90.66
Adjusted SCS curve number for AMC 3 = 98.13
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.033(In/Hr)
Rainfall intensity =      1.354(In/Hr) for a   100.0 year storm
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Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.871
Subarea runoff =     23.479(CFS) for   26.200(Ac.)
Total runoff =     62.962(CFS)
Effective area this stream =       53.38(Ac.)
Total Study Area (Main Stream No. 1) =       53.38(Ac.)
Area averaged Fm value =    0.043(In/Hr)
Depth of flow =   0.840(Ft.), Average velocity =   1.451(Ft/s)
Critical depth =      0.367(Ft.)


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Process from Point/Station       42.300 to Point/Station       42.400
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1875.700(Ft.)
Downstream point elevation =  1872.800(Ft.)
Channel length thru subarea  =   781.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     67.345(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     67.345(CFS)
Depth of flow =   0.674(Ft.), Average velocity =   1.947(Ft/s)
Channel flow top width =   52.695(Ft.)
Flow Velocity =    1.95(Ft/s)
Travel time  =    6.69 min.
Time of concentration =   68.99 min.
Critical depth =      0.383(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.032(In/Hr)
Rainfall intensity =      1.261(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.871
Subarea runoff =      8.676(CFS) for   11.900(Ac.)
Total runoff =     71.638(CFS)
Effective area this stream =       65.28(Ac.)
Total Study Area (Main Stream No. 1) =       65.28(Ac.)
Area averaged Fm value =    0.041(In/Hr)
Depth of flow =   0.699(Ft.), Average velocity =   1.994(Ft/s)
Critical depth =      0.398(Ft.)


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Process from Point/Station       42.300 to Point/Station       42.400
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     65.280(Ac.)
Runoff from this stream =     71.638(CFS)
Time of concentration =   68.99 min.
Rainfall intensity =     1.261(In/Hr)
Area averaged loss rate (Fm) =    0.0412(In/Hr)
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Area averaged Pervious ratio (Ap) = 0.9000


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Process from Point/Station       42.500 to Point/Station       42.600
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 88.34
Adjusted SCS curve number for AMC 3 = 97.67
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.042(In/Hr)
Initial subarea data:
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1879.900(Ft.)
Bottom (of initial area) elevation =  1876.400(Ft.)
Difference in elevation =     3.500(Ft.)
Slope =    0.00350  s(%)=       0.35
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   24.381 min.
Rainfall intensity =      2.611(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.886
Subarea runoff =     14.452(CFS)
Total initial stream area =        6.250(Ac.)
Pervious area fraction = 0.900
Initial area Fm value =    0.042(In/Hr)


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Process from Point/Station       42.600 to Point/Station       42.400
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1876.400(Ft.)
Downstream point elevation =  1872.800(Ft.)
Channel length thru subarea  =  1421.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     20.230(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     20.230(CFS)
Depth of flow =   0.368(Ft.), Average velocity =   1.084(Ft/s)
Channel flow top width =   51.471(Ft.)
Flow Velocity =    1.08(Ft/s)
Travel time  =   21.85 min.
Time of concentration =   46.23 min.
Critical depth =      0.172(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.032(In/Hr)
Rainfall intensity =      1.668(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.881
Subarea runoff =     11.456(CFS) for   11.380(Ac.)
Total runoff =     25.909(CFS)
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```
Effective area this stream =       17.63(Ac.)
Total Study Area (Main Stream No. 1) =       82.91(Ac.)
Area averaged Fm value =    0.036(In/Hr)
Depth of flow =   0.427(Ft.), Average velocity =   1.194(Ft/s)
Critical depth =      0.203(Ft.)


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Process from Point/Station       42.600 to Point/Station       42.400
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     17.630(Ac.)
Runoff from this stream =     25.909(CFS)
Time of concentration =   46.23 min.
Rainfall intensity =     1.668(In/Hr)
Area averaged loss rate (Fm) =    0.0355(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     71.64    65.280     68.99    0.041      1.261
2     25.91    17.630     46.23    0.036      1.668
Qmax(1) =
           1.000 *    1.000 *    71.638) +
           0.750 *    1.000 *    25.909) + =      91.076
Qmax(2) =
           1.334 *    0.670 *    71.638) +
           1.000 *    1.000 *    25.909) + =      89.962

Total of 2 streams to confluence:
Flow rates before confluence point:
      71.638      25.909
Maximum flow rates at confluence using above data:
       91.076       89.962
Area of streams before confluence:
       65.280       17.630
Effective area values after confluence:
       82.910       61.369
Results of confluence:
Total flow rate =     91.076(CFS)
Time of concentration =    68.994 min.
Effective stream area after confluence =     82.910(Ac.)
Study area average Pervious fraction(Ap) =  0.900
Study area average soil loss rate(Fm) =    0.040(In/Hr)
Study area total (this main stream) =      82.91(Ac.)


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Process from Point/Station       42.400 to Point/Station       42.700
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1872.800(Ft.)
Downstream point elevation =  1870.500(Ft.)
Channel length thru subarea  =  1035.000(Ft.)
Channel base width      =   50.000(Ft.)
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Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     91.398(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     91.398(CFS)
Depth of flow =   0.943(Ft.), Average velocity =   1.869(Ft/s)
Channel flow top width =   53.771(Ft.)
Flow Velocity =    1.87(Ft/s)
Travel time  =    9.23 min.
Time of concentration =   78.23 min.
Critical depth =      0.469(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.032(In/Hr)
Rainfall intensity =      1.154(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.869
Subarea runoff =      0.570(CFS) for    8.400(Ac.)
Total runoff =     91.645(CFS)
Effective area this stream =       91.31(Ac.)
Total Study Area (Main Stream No. 1) =       91.31(Ac.)
Area averaged Fm value =    0.039(In/Hr)
Depth of flow =   0.944(Ft.), Average velocity =   1.871(Ft/s)
Critical depth =      0.469(Ft.)


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Process from Point/Station       42.400 to Point/Station       42.700
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     91.310(Ac.)
Runoff from this stream =     91.645(CFS)
Time of concentration =   78.23 min.
Rainfall intensity =     1.154(In/Hr)
Area averaged loss rate (Fm) =    0.0393(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       42.800 to Point/Station       42.900
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 90.04
Adjusted SCS curve number for AMC 3 = 98.01
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.036(In/Hr)
Initial subarea data:
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1879.900(Ft.)
Bottom (of initial area) elevation =  1876.100(Ft.)
Difference in elevation =     3.800(Ft.)
Slope =    0.00380  s(%)=       0.38
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
```

Initial area time of concentration =  23.983 min.
Rainfall intensity =  2.641(In/Hr) for a  100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.888
Subarea runoff =  13.061(CFS)
Total initial stream area =  5.570(Ac.)
Pervious area fraction = 0.900
Initial area Fm value =  0.036(In/Hr)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station  42.900 to Point/Station  42.100
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1876.100(Ft.)
Downstream point elevation =  1874.300(Ft.)
Channel length thru subarea  =  859.000(Ft.)
Channel base width  =  50.000(Ft.)
Slope or 'Z' of left channel bank =  2.000
Slope or 'Z' of right channel bank =  2.000
Estimated mean flow rate at midpoint of channel =  19.644(CFS)
Manning's 'N'  = 0.035
Maximum depth of channel  =  1.000(Ft.)
Flow(q) thru subarea =  19.644(CFS)
Depth of flow =  0.383(Ft.), Average velocity =  1.012(Ft/s)
Channel flow top width =  51.530(Ft.)
Flow Velocity =  1.01(Ft/s)
Travel time  =  14.15 min.
Time of concentration =  38.14 min.
Critical depth =  0.168(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000  Max loss rate(Fm)=  0.032(In/Hr)
Rainfall intensity =  1.909(In/Hr) for a  100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.884
Subarea runoff =  13.102(CFS) for  9.930(Ac.)
Total runoff =  26.164(CFS)
Effective area this stream =  15.50(Ac.)
Total Study Area (Main Stream No. 1) =  106.81(Ac.)
Area averaged Fm value =  0.033(In/Hr)
Depth of flow =  0.454(Ft.), Average velocity =  1.132(Ft/s)
Critical depth =  0.203(Ft.)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station  42.100 to Point/Station  42.700
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1874.300(Ft.)
Downstream point elevation =  1870.500(Ft.)
Channel length thru subarea  =  1381.000(Ft.)
Channel base width  =  50.000(Ft.)
Slope or 'Z' of left channel bank =  2.000
Slope or 'Z' of right channel bank =  2.000
Estimated mean flow rate at midpoint of channel =  31.392(CFS)
Manning's 'N'  = 0.035

```
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     31.392(CFS)
Depth of flow =   0.467(Ft.), Average velocity =   1.320(Ft/s)
Channel flow top width =   51.867(Ft.)
Flow Velocity =    1.32(Ft/s)
Travel time  =   17.43 min.
Time of concentration =   55.57 min.
Critical depth =      0.230(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.032(In/Hr)
Rainfall intensity =      1.467(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.880
Subarea runoff =     10.395(CFS) for   12.830(Ac.)
Total runoff =     36.559(CFS)
Effective area this stream =       28.33(Ac.)
Total Study Area (Main Stream No. 1) =      119.64(Ac.)
Area averaged Fm value =    0.033(In/Hr)
Depth of flow =   0.511(Ft.), Average velocity =   1.401(Ft/s)
Critical depth =      0.254(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       42.100 to Point/Station       42.700
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     28.330(Ac.)
Runoff from this stream =     36.559(CFS)
Time of concentration =   55.57 min.
Rainfall intensity =     1.467(In/Hr)
Area averaged loss rate (Fm) =    0.0328(In/Hr)
Area averaged Pervious ratio (Ap) = 0.9000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     91.65    91.310     78.23    0.039      1.154
2     36.56    28.330     55.57    0.033      1.467
Qmax(1) =
           1.000 *    1.000 *    91.645) +
           0.782 *    1.000 *    36.559) + =     120.243
Qmax(2) =
           1.280 *    0.710 *    91.645) +
           1.000 *    1.000 *    36.559) + =     119.888

Total of 2 streams to confluence:
Flow rates before confluence point:
      91.645      36.559
Maximum flow rates at confluence using above data:
      120.243      119.888
Area of streams before confluence:
       91.310       28.330
```

```
Effective area values after confluence:
      119.640       93.193
Results of confluence:
Total flow rate =    120.243(CFS)
Time of concentration =    78.226 min.
Effective stream area after confluence =    119.640(Ac.)
Study area average Pervious fraction(Ap) =  0.900
Study area average soil loss rate(Fm) =    0.038(In/Hr)
Study area total (this main stream) =     119.64(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       42.700 to Point/Station       42.110
**** IMPROVED CHANNEL TRAVEL TIME ****
______________________________________________________________________________
Upstream point elevation =  1870.500(Ft.)
Downstream point elevation =  1869.200(Ft.)
Channel length thru subarea  =   353.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =    121.293(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =    121.293(CFS)
Depth of flow =   0.960(Ft.), Average velocity =   2.434(Ft/s)
Channel flow top width =   53.840(Ft.)
Flow Velocity =    2.43(Ft/s)
Travel time  =    2.42 min.
Time of concentration =   80.64 min.
Critical depth =      0.563(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.032(In/Hr)
Rainfall intensity =      1.130(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.870
Subarea runoff =      2.014(CFS) for    4.690(Ac.)
Total runoff =    122.257(CFS)
Effective area this stream =      124.33(Ac.)
Total Study Area (Main Stream No. 1) =      124.33(Ac.)
Area averaged Fm value =    0.038(In/Hr)
Depth of flow =   0.964(Ft.), Average velocity =   2.441(Ft/s)
Critical depth =      0.563(Ft.)
End of computations, Total Study Area =          124.33 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number =  89.6
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 43
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

---

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Process from Point/Station 43.000 to Point/Station 43.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.032(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1877.800(Ft.)
Bottom (of initial area) elevation = 1872.000(Ft.)
Difference in elevation = 5.800(Ft.)
Slope = 0.00580 s(%)= 0.58
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 22.038 min.
Rainfall intensity = 2.802(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.890
Subarea runoff = 13.263(CFS)
Total initial stream area = 5.320(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.032(In/Hr)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Process from Point/Station 43.100 to Point/Station 43.200
**** IMPROVED CHANNEL TRAVEL TIME ****

---

Upstream point elevation = 1872.000(Ft.)
Downstream point elevation = 1871.000(Ft.)

```
Channel length thru subarea  =   245.000(Ft.)
Channel base width      =   50.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     14.418(CFS)
Manning's 'N'    = 0.035
Maximum depth of channel  =    1.000(Ft.)
Flow(q) thru subarea =     14.418(CFS)
Depth of flow =   0.260(Ft.), Average velocity =   1.096(Ft/s)
Channel flow top width =   51.041(Ft.)
Flow Velocity =    1.10(Ft/s)
Travel time  =    3.72 min.
Time of concentration =   25.76 min.
Critical depth =      0.137(Ft.)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.032(In/Hr)
Rainfall intensity =      2.512(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.888
Subarea runoff =      2.249(CFS) for    1.630(Ac.)
Total runoff =     15.512(CFS)
Effective area this stream =        6.95(Ac.)
Total Study Area (Main Stream No. 1) =        6.95(Ac.)
Area averaged Fm value =    0.032(In/Hr)
Depth of flow =   0.272(Ft.), Average velocity =   1.129(Ft/s)
Critical depth =      0.145(Ft.)
End of computations, Total Study Area =            6.95 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number =  91.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

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Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 44
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********* Hydrology Study Control Information **********

---

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Process from Point/Station 44.000 to Point/Station 44.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.032(In/Hr)
Initial subarea data:
Initial area flow distance = 850.000(Ft.)
Top (of initial area) elevation = 1874.300(Ft.)
Bottom (of initial area) elevation = 1871.200(Ft.)
Difference in elevation = 3.100(Ft.)
Slope = 0.00365 s(%)= 0.36
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 22.659 min.
Rainfall intensity = 2.748(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.889
Subarea runoff = 15.815(CFS)
Total initial stream area = 6.470(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.032(In/Hr)
End of computations, Total Study Area = 6.47 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number = 91.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 09/05/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 45
100-YEAR, 1-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

---

********* Hydrology Study Control Information **********

---

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.390 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Process from Point/Station 45.000 to Point/Station 45.100
**** INITIAL AREA EVALUATION ****

---

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 91.00
Adjusted SCS curve number for AMC 3 = 98.20
Pervious ratio(Ap) = 0.9000 Max loss rate(Fm)= 0.032(In/Hr)
Initial subarea data:
Initial area flow distance = 439.000(Ft.)
Top (of initial area) elevation = 1876.300(Ft.)
Bottom (of initial area) elevation = 1872.800(Ft.)
Difference in elevation = 3.500(Ft.)
Slope = 0.00797 s(%)= 0.80
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 14.878 min.
Rainfall intensity = 3.689(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.892
Subarea runoff = 11.487(CFS)
Total initial stream area = 3.490(Ac.)
Pervious area fraction = 0.900
Initial area Fm value = 0.032(In/Hr)
End of computations, Total Study Area = 3.49 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.900
Area averaged SCS curve number = 91.0

# TECHNICAL APPENDIX NO. 7

Developed Conditions
Unit Hydrograph Calculations
100-Year, 24-Hour Storm Event

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 1
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 1.00 | 1 | 1.26 |
| Rainfall data for year 100 | | |
| 1.00 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 1.00 | 24 | 2.50 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.0 | 92.8 | 1.00 | 1.000 | 0.140 | 0.900 | 0.126 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.126

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 0.90 | 0.900 | 78.0 | 92.8 | 0.78 | 0.705 |
| 0.10 | 0.100 | 98.0 | 98.0 | 0.20 | 0.908 |

Area-averaged catchment yield fraction, Y = 0.725
Area-averaged low loss fraction, Yb = 0.275
User entry of time of concentration = 0.180 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 1.00(Ac.)
Catchment Lag time = 0.144 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 57.8704
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.126(In/Hr)
Average low loss rate fraction (Yb) = 0.275 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.598(In)
Computed peak 30-minute rainfall = 1.023(In)
Specified peak 1-hour rainfall = 1.260(In)
Computed peak 3-hour rainfall = 1.589(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.500(In)

Rainfall depth area reduction factors:
Using a total area of 1.00(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.598(In)
30-minute factor = 1.000 Adjusted rainfall = 1.023(In)
1-hour factor = 1.000 Adjusted rainfall = 1.260(In)
3-hour factor = 1.000 Adjusted rainfall = 1.589(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.500(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 12.09 (CFS)) | |
| 1 | 5.194 | 0.628 |
| 2 | 39.293 | 4.124 |
| 3 | 66.686 | 3.313 |
| 4 | 78.397 | 1.416 |
| 5 | 85.236 | 0.827 |
| 6 | 89.761 | 0.547 |
| 7 | 92.821 | 0.370 |
| 8 | 95.045 | 0.269 |
| 9 | 96.659 | 0.195 |
| 10 | 97.739 | 0.131 |
| 11 | 98.400 | 0.080 |
| 12 | 99.086 | 0.083 |
| 13 | 99.645 | 0.068 |

| | | |
|---|---|---|
| 14 | 100.000 | 0.043 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5979 | 0.5979 |
| 2 | 0.7360 | 0.1382 |
| 3 | 0.8313 | 0.0952 |
| 4 | 0.9062 | 0.0749 |
| 5 | 0.9689 | 0.0627 |
| 6 | 1.0234 | 0.0545 |
| 7 | 1.0718 | 0.0484 |
| 8 | 1.1156 | 0.0438 |
| 9 | 1.1558 | 0.0401 |
| 10 | 1.1929 | 0.0371 |
| 11 | 1.2275 | 0.0346 |
| 12 | 1.2599 | 0.0325 |
| 13 | 1.2814 | 0.0215 |
| 14 | 1.3017 | 0.0202 |
| 15 | 1.3208 | 0.0191 |
| 16 | 1.3389 | 0.0181 |
| 17 | 1.3562 | 0.0173 |
| 18 | 1.3727 | 0.0165 |
| 19 | 1.3885 | 0.0158 |
| 20 | 1.4036 | 0.0151 |
| 21 | 1.4181 | 0.0145 |
| 22 | 1.4322 | 0.0140 |
| 23 | 1.4457 | 0.0135 |
| 24 | 1.4587 | 0.0131 |
| 25 | 1.4714 | 0.0126 |
| 26 | 1.4836 | 0.0122 |
| 27 | 1.4955 | 0.0119 |
| 28 | 1.5071 | 0.0115 |
| 29 | 1.5183 | 0.0112 |
| 30 | 1.5292 | 0.0109 |
| 31 | 1.5398 | 0.0106 |
| 32 | 1.5502 | 0.0104 |
| 33 | 1.5603 | 0.0101 |
| 34 | 1.5702 | 0.0099 |
| 35 | 1.5798 | 0.0097 |
| 36 | 1.5893 | 0.0094 |
| 37 | 1.5985 | 0.0092 |
| 38 | 1.6075 | 0.0090 |
| 39 | 1.6164 | 0.0088 |
| 40 | 1.6251 | 0.0087 |
| 41 | 1.6336 | 0.0085 |
| 42 | 1.6419 | 0.0083 |
| 43 | 1.6501 | 0.0082 |
| 44 | 1.6581 | 0.0080 |
| 45 | 1.6660 | 0.0079 |
| 46 | 1.6738 | 0.0078 |
| 47 | 1.6814 | 0.0076 |
| 48 | 1.6889 | 0.0075 |
| 49 | 1.6963 | 0.0074 |
| 50 | 1.7035 | 0.0073 |
| 51 | 1.7107 | 0.0071 |
| 52 | 1.7177 | 0.0070 |
| 53 | 1.7246 | 0.0069 |
| 54 | 1.7315 | 0.0068 |
| 55 | 1.7382 | 0.0067 |

| | | |
|---|---|---|
| 56 | 1.7448 | 0.0066 |
| 57 | 1.7514 | 0.0065 |
| 58 | 1.7578 | 0.0064 |
| 59 | 1.7642 | 0.0064 |
| 60 | 1.7704 | 0.0063 |
| 61 | 1.7766 | 0.0062 |
| 62 | 1.7828 | 0.0061 |
| 63 | 1.7888 | 0.0060 |
| 64 | 1.7948 | 0.0060 |
| 65 | 1.8006 | 0.0059 |
| 66 | 1.8065 | 0.0058 |
| 67 | 1.8122 | 0.0058 |
| 68 | 1.8179 | 0.0057 |
| 69 | 1.8235 | 0.0056 |
| 70 | 1.8291 | 0.0056 |
| 71 | 1.8346 | 0.0055 |
| 72 | 1.8400 | 0.0054 |
| 73 | 1.8456 | 0.0056 |
| 74 | 1.8512 | 0.0056 |
| 75 | 1.8567 | 0.0055 |
| 76 | 1.8621 | 0.0054 |
| 77 | 1.8675 | 0.0054 |
| 78 | 1.8728 | 0.0053 |
| 79 | 1.8781 | 0.0053 |
| 80 | 1.8834 | 0.0052 |
| 81 | 1.8885 | 0.0052 |
| 82 | 1.8937 | 0.0051 |
| 83 | 1.8988 | 0.0051 |
| 84 | 1.9038 | 0.0050 |
| 85 | 1.9088 | 0.0050 |
| 86 | 1.9137 | 0.0049 |
| 87 | 1.9186 | 0.0049 |
| 88 | 1.9235 | 0.0049 |
| 89 | 1.9283 | 0.0048 |
| 90 | 1.9331 | 0.0048 |
| 91 | 1.9378 | 0.0047 |
| 92 | 1.9425 | 0.0047 |
| 93 | 1.9471 | 0.0046 |
| 94 | 1.9517 | 0.0046 |
| 95 | 1.9563 | 0.0046 |
| 96 | 1.9608 | 0.0045 |
| 97 | 1.9653 | 0.0045 |
| 98 | 1.9698 | 0.0045 |
| 99 | 1.9742 | 0.0044 |
| 100 | 1.9786 | 0.0044 |
| 101 | 1.9830 | 0.0044 |
| 102 | 1.9873 | 0.0043 |
| 103 | 1.9916 | 0.0043 |
| 104 | 1.9959 | 0.0043 |
| 105 | 2.0001 | 0.0042 |
| 106 | 2.0043 | 0.0042 |
| 107 | 2.0084 | 0.0042 |
| 108 | 2.0126 | 0.0041 |
| 109 | 2.0167 | 0.0041 |
| 110 | 2.0208 | 0.0041 |
| 111 | 2.0248 | 0.0040 |
| 112 | 2.0288 | 0.0040 |
| 113 | 2.0328 | 0.0040 |
| 114 | 2.0368 | 0.0040 |

| | | |
|---|---|---|
| 115 | 2.0407 | 0.0039 |
| 116 | 2.0446 | 0.0039 |
| 117 | 2.0485 | 0.0039 |
| 118 | 2.0524 | 0.0039 |
| 119 | 2.0562 | 0.0038 |
| 120 | 2.0600 | 0.0038 |
| 121 | 2.0638 | 0.0038 |
| 122 | 2.0676 | 0.0038 |
| 123 | 2.0713 | 0.0037 |
| 124 | 2.0750 | 0.0037 |
| 125 | 2.0787 | 0.0037 |
| 126 | 2.0824 | 0.0037 |
| 127 | 2.0860 | 0.0036 |
| 128 | 2.0896 | 0.0036 |
| 129 | 2.0932 | 0.0036 |
| 130 | 2.0968 | 0.0036 |
| 131 | 2.1004 | 0.0036 |
| 132 | 2.1039 | 0.0035 |
| 133 | 2.1074 | 0.0035 |
| 134 | 2.1109 | 0.0035 |
| 135 | 2.1144 | 0.0035 |
| 136 | 2.1178 | 0.0035 |
| 137 | 2.1213 | 0.0034 |
| 138 | 2.1247 | 0.0034 |
| 139 | 2.1281 | 0.0034 |
| 140 | 2.1314 | 0.0034 |
| 141 | 2.1348 | 0.0034 |
| 142 | 2.1381 | 0.0033 |
| 143 | 2.1415 | 0.0033 |
| 144 | 2.1448 | 0.0033 |
| 145 | 2.1480 | 0.0033 |
| 146 | 2.1513 | 0.0033 |
| 147 | 2.1546 | 0.0032 |
| 148 | 2.1578 | 0.0032 |
| 149 | 2.1610 | 0.0032 |
| 150 | 2.1642 | 0.0032 |
| 151 | 2.1674 | 0.0032 |
| 152 | 2.1706 | 0.0032 |
| 153 | 2.1737 | 0.0031 |
| 154 | 2.1768 | 0.0031 |
| 155 | 2.1800 | 0.0031 |
| 156 | 2.1831 | 0.0031 |
| 157 | 2.1861 | 0.0031 |
| 158 | 2.1892 | 0.0031 |
| 159 | 2.1923 | 0.0031 |
| 160 | 2.1953 | 0.0030 |
| 161 | 2.1983 | 0.0030 |
| 162 | 2.2013 | 0.0030 |
| 163 | 2.2043 | 0.0030 |
| 164 | 2.2073 | 0.0030 |
| 165 | 2.2103 | 0.0030 |
| 166 | 2.2133 | 0.0030 |
| 167 | 2.2162 | 0.0029 |
| 168 | 2.2191 | 0.0029 |
| 169 | 2.2220 | 0.0029 |
| 170 | 2.2249 | 0.0029 |
| 171 | 2.2278 | 0.0029 |
| 172 | 2.2307 | 0.0029 |
| 173 | 2.2336 | 0.0029 |

| | | |
|---|---|---|
| 174 | 2.2364 | 0.0028 |
| 175 | 2.2392 | 0.0028 |
| 176 | 2.2421 | 0.0028 |
| 177 | 2.2449 | 0.0028 |
| 178 | 2.2477 | 0.0028 |
| 179 | 2.2505 | 0.0028 |
| 180 | 2.2532 | 0.0028 |
| 181 | 2.2560 | 0.0028 |
| 182 | 2.2587 | 0.0028 |
| 183 | 2.2615 | 0.0027 |
| 184 | 2.2642 | 0.0027 |
| 185 | 2.2669 | 0.0027 |
| 186 | 2.2696 | 0.0027 |
| 187 | 2.2723 | 0.0027 |
| 188 | 2.2750 | 0.0027 |
| 189 | 2.2777 | 0.0027 |
| 190 | 2.2803 | 0.0027 |
| 191 | 2.2830 | 0.0026 |
| 192 | 2.2856 | 0.0026 |
| 193 | 2.2882 | 0.0026 |
| 194 | 2.2909 | 0.0026 |
| 195 | 2.2935 | 0.0026 |
| 196 | 2.2961 | 0.0026 |
| 197 | 2.2986 | 0.0026 |
| 198 | 2.3012 | 0.0026 |
| 199 | 2.3038 | 0.0026 |
| 200 | 2.3063 | 0.0026 |
| 201 | 2.3089 | 0.0025 |
| 202 | 2.3114 | 0.0025 |
| 203 | 2.3139 | 0.0025 |
| 204 | 2.3165 | 0.0025 |
| 205 | 2.3190 | 0.0025 |
| 206 | 2.3215 | 0.0025 |
| 207 | 2.3240 | 0.0025 |
| 208 | 2.3264 | 0.0025 |
| 209 | 2.3289 | 0.0025 |
| 210 | 2.3314 | 0.0025 |
| 211 | 2.3338 | 0.0025 |
| 212 | 2.3362 | 0.0024 |
| 213 | 2.3387 | 0.0024 |
| 214 | 2.3411 | 0.0024 |
| 215 | 2.3435 | 0.0024 |
| 216 | 2.3459 | 0.0024 |
| 217 | 2.3483 | 0.0024 |
| 218 | 2.3507 | 0.0024 |
| 219 | 2.3531 | 0.0024 |
| 220 | 2.3555 | 0.0024 |
| 221 | 2.3578 | 0.0024 |
| 222 | 2.3602 | 0.0024 |
| 223 | 2.3625 | 0.0023 |
| 224 | 2.3649 | 0.0023 |
| 225 | 2.3672 | 0.0023 |
| 226 | 2.3695 | 0.0023 |
| 227 | 2.3718 | 0.0023 |
| 228 | 2.3741 | 0.0023 |
| 229 | 2.3764 | 0.0023 |
| 230 | 2.3787 | 0.0023 |
| 231 | 2.3810 | 0.0023 |
| 232 | 2.3833 | 0.0023 |

| | | | |
|---|---|---|---|
| 233 | 2.3856 | 0.0023 | |
| 234 | 2.3878 | 0.0023 | |
| 235 | 2.3901 | 0.0023 | |
| 236 | 2.3923 | 0.0022 | |
| 237 | 2.3945 | 0.0022 | |
| 238 | 2.3968 | 0.0022 | |
| 239 | 2.3990 | 0.0022 | |
| 240 | 2.4012 | 0.0022 | |
| 241 | 2.4034 | 0.0022 | |
| 242 | 2.4056 | 0.0022 | |
| 243 | 2.4078 | 0.0022 | |
| 244 | 2.4100 | 0.0022 | |
| 245 | 2.4122 | 0.0022 | |
| 246 | 2.4144 | 0.0022 | |
| 247 | 2.4165 | 0.0022 | |
| 248 | 2.4187 | 0.0022 | |
| 249 | 2.4208 | 0.0022 | |
| 250 | 2.4230 | 0.0021 | |
| 251 | 2.4251 | 0.0021 | |
| 252 | 2.4273 | 0.0021 | |
| 253 | 2.4294 | 0.0021 | |
| 254 | 2.4315 | 0.0021 | |
| 255 | 2.4336 | 0.0021 | |
| 256 | 2.4357 | 0.0021 | |
| 257 | 2.4378 | 0.0021 | |
| 258 | 2.4399 | 0.0021 | |
| 259 | 2.4420 | 0.0021 | |
| 260 | 2.4441 | 0.0021 | |
| 261 | 2.4462 | 0.0021 | |
| 262 | 2.4482 | 0.0021 | |
| 263 | 2.4503 | 0.0021 | |
| 264 | 2.4524 | 0.0021 | |
| 265 | 2.4544 | 0.0021 | |
| 266 | 2.4565 | 0.0020 | |
| 267 | 2.4585 | 0.0020 | |
| 268 | 2.4605 | 0.0020 | |
| 269 | 2.4626 | 0.0020 | |
| 270 | 2.4646 | 0.0020 | |
| 271 | 2.4666 | 0.0020 | |
| 272 | 2.4686 | 0.0020 | |
| 273 | 2.4706 | 0.0020 | |
| 274 | 2.4726 | 0.0020 | |
| 275 | 2.4746 | 0.0020 | |
| 276 | 2.4766 | 0.0020 | |
| 277 | 2.4786 | 0.0020 | |
| 278 | 2.4805 | 0.0020 | |
| 279 | 2.4825 | 0.0020 | |
| 280 | 2.4845 | 0.0020 | |
| 281 | 2.4864 | 0.0020 | |
| 282 | 2.4884 | 0.0020 | |
| 283 | 2.4903 | 0.0019 | |
| 284 | 2.4923 | 0.0019 | |
| 285 | 2.4942 | 0.0019 | |
| 286 | 2.4961 | 0.0019 | |
| 287 | 2.4981 | 0.0019 | |
| 288 | 2.5000 | 0.0019 | |

| Unit Period | Unit Rainfall | Unit Soil-Loss | Effective Rainfall |
|---|---|---|---|

| (number) | (In) | (In) | (In) |
|---|---|---|---|
| 1 | 0.0019 | 0.0005 | 0.0014 |
| 2 | 0.0019 | 0.0005 | 0.0014 |
| 3 | 0.0019 | 0.0005 | 0.0014 |
| 4 | 0.0019 | 0.0005 | 0.0014 |
| 5 | 0.0020 | 0.0005 | 0.0014 |
| 6 | 0.0020 | 0.0005 | 0.0014 |
| 7 | 0.0020 | 0.0005 | 0.0014 |
| 8 | 0.0020 | 0.0005 | 0.0014 |
| 9 | 0.0020 | 0.0005 | 0.0014 |
| 10 | 0.0020 | 0.0005 | 0.0014 |
| 11 | 0.0020 | 0.0006 | 0.0015 |
| 12 | 0.0020 | 0.0006 | 0.0015 |
| 13 | 0.0020 | 0.0006 | 0.0015 |
| 14 | 0.0020 | 0.0006 | 0.0015 |
| 15 | 0.0020 | 0.0006 | 0.0015 |
| 16 | 0.0020 | 0.0006 | 0.0015 |
| 17 | 0.0021 | 0.0006 | 0.0015 |
| 18 | 0.0021 | 0.0006 | 0.0015 |
| 19 | 0.0021 | 0.0006 | 0.0015 |
| 20 | 0.0021 | 0.0006 | 0.0015 |
| 21 | 0.0021 | 0.0006 | 0.0015 |
| 22 | 0.0021 | 0.0006 | 0.0015 |
| 23 | 0.0021 | 0.0006 | 0.0015 |
| 24 | 0.0021 | 0.0006 | 0.0015 |
| 25 | 0.0021 | 0.0006 | 0.0015 |
| 26 | 0.0021 | 0.0006 | 0.0016 |
| 27 | 0.0022 | 0.0006 | 0.0016 |
| 28 | 0.0022 | 0.0006 | 0.0016 |
| 29 | 0.0022 | 0.0006 | 0.0016 |
| 30 | 0.0022 | 0.0006 | 0.0016 |
| 31 | 0.0022 | 0.0006 | 0.0016 |
| 32 | 0.0022 | 0.0006 | 0.0016 |
| 33 | 0.0022 | 0.0006 | 0.0016 |
| 34 | 0.0022 | 0.0006 | 0.0016 |
| 35 | 0.0022 | 0.0006 | 0.0016 |
| 36 | 0.0022 | 0.0006 | 0.0016 |
| 37 | 0.0023 | 0.0006 | 0.0016 |
| 38 | 0.0023 | 0.0006 | 0.0016 |
| 39 | 0.0023 | 0.0006 | 0.0017 |
| 40 | 0.0023 | 0.0006 | 0.0017 |
| 41 | 0.0023 | 0.0006 | 0.0017 |
| 42 | 0.0023 | 0.0006 | 0.0017 |
| 43 | 0.0023 | 0.0006 | 0.0017 |
| 44 | 0.0023 | 0.0006 | 0.0017 |
| 45 | 0.0024 | 0.0006 | 0.0017 |
| 46 | 0.0024 | 0.0006 | 0.0017 |
| 47 | 0.0024 | 0.0007 | 0.0017 |
| 48 | 0.0024 | 0.0007 | 0.0017 |
| 49 | 0.0024 | 0.0007 | 0.0017 |
| 50 | 0.0024 | 0.0007 | 0.0018 |
| 51 | 0.0024 | 0.0007 | 0.0018 |
| 52 | 0.0024 | 0.0007 | 0.0018 |
| 53 | 0.0025 | 0.0007 | 0.0018 |
| 54 | 0.0025 | 0.0007 | 0.0018 |
| 55 | 0.0025 | 0.0007 | 0.0018 |
| 56 | 0.0025 | 0.0007 | 0.0018 |
| 57 | 0.0025 | 0.0007 | 0.0018 |

| | | | |
|---|---|---|---|
| 58 | 0.0025 | 0.0007 | 0.0018 |
| 59 | 0.0025 | 0.0007 | 0.0018 |
| 60 | 0.0026 | 0.0007 | 0.0019 |
| 61 | 0.0026 | 0.0007 | 0.0019 |
| 62 | 0.0026 | 0.0007 | 0.0019 |
| 63 | 0.0026 | 0.0007 | 0.0019 |
| 64 | 0.0026 | 0.0007 | 0.0019 |
| 65 | 0.0026 | 0.0007 | 0.0019 |
| 66 | 0.0026 | 0.0007 | 0.0019 |
| 67 | 0.0027 | 0.0007 | 0.0019 |
| 68 | 0.0027 | 0.0007 | 0.0019 |
| 69 | 0.0027 | 0.0007 | 0.0020 |
| 70 | 0.0027 | 0.0007 | 0.0020 |
| 71 | 0.0027 | 0.0008 | 0.0020 |
| 72 | 0.0028 | 0.0008 | 0.0020 |
| 73 | 0.0028 | 0.0008 | 0.0020 |
| 74 | 0.0028 | 0.0008 | 0.0020 |
| 75 | 0.0028 | 0.0008 | 0.0020 |
| 76 | 0.0028 | 0.0008 | 0.0020 |
| 77 | 0.0028 | 0.0008 | 0.0021 |
| 78 | 0.0029 | 0.0008 | 0.0021 |
| 79 | 0.0029 | 0.0008 | 0.0021 |
| 80 | 0.0029 | 0.0008 | 0.0021 |
| 81 | 0.0029 | 0.0008 | 0.0021 |
| 82 | 0.0029 | 0.0008 | 0.0021 |
| 83 | 0.0030 | 0.0008 | 0.0022 |
| 84 | 0.0030 | 0.0008 | 0.0022 |
| 85 | 0.0030 | 0.0008 | 0.0022 |
| 86 | 0.0030 | 0.0008 | 0.0022 |
| 87 | 0.0031 | 0.0008 | 0.0022 |
| 88 | 0.0031 | 0.0008 | 0.0022 |
| 89 | 0.0031 | 0.0009 | 0.0022 |
| 90 | 0.0031 | 0.0009 | 0.0023 |
| 91 | 0.0031 | 0.0009 | 0.0023 |
| 92 | 0.0032 | 0.0009 | 0.0023 |
| 93 | 0.0032 | 0.0009 | 0.0023 |
| 94 | 0.0032 | 0.0009 | 0.0023 |
| 95 | 0.0032 | 0.0009 | 0.0024 |
| 96 | 0.0033 | 0.0009 | 0.0024 |
| 97 | 0.0033 | 0.0009 | 0.0024 |
| 98 | 0.0033 | 0.0009 | 0.0024 |
| 99 | 0.0034 | 0.0009 | 0.0024 |
| 100 | 0.0034 | 0.0009 | 0.0024 |
| 101 | 0.0034 | 0.0009 | 0.0025 |
| 102 | 0.0034 | 0.0009 | 0.0025 |
| 103 | 0.0035 | 0.0010 | 0.0025 |
| 104 | 0.0035 | 0.0010 | 0.0025 |
| 105 | 0.0035 | 0.0010 | 0.0026 |
| 106 | 0.0036 | 0.0010 | 0.0026 |
| 107 | 0.0036 | 0.0010 | 0.0026 |
| 108 | 0.0036 | 0.0010 | 0.0026 |
| 109 | 0.0037 | 0.0010 | 0.0027 |
| 110 | 0.0037 | 0.0010 | 0.0027 |
| 111 | 0.0037 | 0.0010 | 0.0027 |
| 112 | 0.0038 | 0.0010 | 0.0027 |
| 113 | 0.0038 | 0.0010 | 0.0028 |
| 114 | 0.0038 | 0.0011 | 0.0028 |
| 115 | 0.0039 | 0.0011 | 0.0028 |
| 116 | 0.0039 | 0.0011 | 0.0028 |

| | | | |
|---|---|---|---|
| 117 | 0.0040 | 0.0011 | 0.0029 |
| 118 | 0.0040 | 0.0011 | 0.0029 |
| 119 | 0.0040 | 0.0011 | 0.0029 |
| 120 | 0.0041 | 0.0011 | 0.0030 |
| 121 | 0.0041 | 0.0011 | 0.0030 |
| 122 | 0.0042 | 0.0011 | 0.0030 |
| 123 | 0.0042 | 0.0012 | 0.0031 |
| 124 | 0.0043 | 0.0012 | 0.0031 |
| 125 | 0.0043 | 0.0012 | 0.0031 |
| 126 | 0.0044 | 0.0012 | 0.0032 |
| 127 | 0.0044 | 0.0012 | 0.0032 |
| 128 | 0.0045 | 0.0012 | 0.0032 |
| 129 | 0.0045 | 0.0012 | 0.0033 |
| 130 | 0.0046 | 0.0013 | 0.0033 |
| 131 | 0.0046 | 0.0013 | 0.0034 |
| 132 | 0.0047 | 0.0013 | 0.0034 |
| 133 | 0.0048 | 0.0013 | 0.0035 |
| 134 | 0.0048 | 0.0013 | 0.0035 |
| 135 | 0.0049 | 0.0013 | 0.0036 |
| 136 | 0.0049 | 0.0014 | 0.0036 |
| 137 | 0.0050 | 0.0014 | 0.0037 |
| 138 | 0.0051 | 0.0014 | 0.0037 |
| 139 | 0.0052 | 0.0014 | 0.0038 |
| 140 | 0.0052 | 0.0014 | 0.0038 |
| 141 | 0.0053 | 0.0015 | 0.0039 |
| 142 | 0.0054 | 0.0015 | 0.0039 |
| 143 | 0.0055 | 0.0015 | 0.0040 |
| 144 | 0.0056 | 0.0015 | 0.0040 |
| 145 | 0.0054 | 0.0015 | 0.0039 |
| 146 | 0.0055 | 0.0015 | 0.0040 |
| 147 | 0.0056 | 0.0015 | 0.0041 |
| 148 | 0.0057 | 0.0016 | 0.0041 |
| 149 | 0.0058 | 0.0016 | 0.0042 |
| 150 | 0.0059 | 0.0016 | 0.0043 |
| 151 | 0.0060 | 0.0017 | 0.0044 |
| 152 | 0.0061 | 0.0017 | 0.0044 |
| 153 | 0.0063 | 0.0017 | 0.0046 |
| 154 | 0.0064 | 0.0017 | 0.0046 |
| 155 | 0.0065 | 0.0018 | 0.0047 |
| 156 | 0.0066 | 0.0018 | 0.0048 |
| 157 | 0.0068 | 0.0019 | 0.0049 |
| 158 | 0.0069 | 0.0019 | 0.0050 |
| 159 | 0.0071 | 0.0020 | 0.0052 |
| 160 | 0.0073 | 0.0020 | 0.0053 |
| 161 | 0.0075 | 0.0021 | 0.0054 |
| 162 | 0.0076 | 0.0021 | 0.0055 |
| 163 | 0.0079 | 0.0022 | 0.0057 |
| 164 | 0.0080 | 0.0022 | 0.0058 |
| 165 | 0.0083 | 0.0023 | 0.0060 |
| 166 | 0.0085 | 0.0023 | 0.0062 |
| 167 | 0.0088 | 0.0024 | 0.0064 |
| 168 | 0.0090 | 0.0025 | 0.0066 |
| 169 | 0.0094 | 0.0026 | 0.0068 |
| 170 | 0.0097 | 0.0027 | 0.0070 |
| 171 | 0.0101 | 0.0028 | 0.0073 |
| 172 | 0.0104 | 0.0029 | 0.0075 |
| 173 | 0.0109 | 0.0030 | 0.0079 |
| 174 | 0.0112 | 0.0031 | 0.0081 |
| 175 | 0.0119 | 0.0033 | 0.0086 |

| | | | |
|---|---|---|---|
| 176 | 0.0122 | 0.0034 | 0.0089 |
| 177 | 0.0131 | 0.0036 | 0.0095 |
| 178 | 0.0135 | 0.0037 | 0.0098 |
| 179 | 0.0145 | 0.0040 | 0.0105 |
| 180 | 0.0151 | 0.0042 | 0.0110 |
| 181 | 0.0165 | 0.0045 | 0.0120 |
| 182 | 0.0173 | 0.0047 | 0.0125 |
| 183 | 0.0191 | 0.0053 | 0.0139 |
| 184 | 0.0202 | 0.0056 | 0.0147 |
| 185 | 0.0325 | 0.0089 | 0.0235 |
| 186 | 0.0346 | 0.0095 | 0.0251 |
| 187 | 0.0401 | 0.0105 | 0.0296 |
| 188 | 0.0438 | 0.0105 | 0.0333 |
| 189 | 0.0545 | 0.0105 | 0.0440 |
| 190 | 0.0627 | 0.0105 | 0.0522 |
| 191 | 0.0952 | 0.0105 | 0.0847 |
| 192 | 0.1382 | 0.0105 | 0.1277 |
| 193 | 0.5979 | 0.0105 | 0.5874 |
| 194 | 0.0749 | 0.0105 | 0.0644 |
| 195 | 0.0484 | 0.0105 | 0.0379 |
| 196 | 0.0371 | 0.0102 | 0.0269 |
| 197 | 0.0215 | 0.0059 | 0.0156 |
| 198 | 0.0181 | 0.0050 | 0.0132 |
| 199 | 0.0158 | 0.0043 | 0.0114 |
| 200 | 0.0140 | 0.0039 | 0.0102 |
| 201 | 0.0126 | 0.0035 | 0.0092 |
| 202 | 0.0115 | 0.0032 | 0.0084 |
| 203 | 0.0106 | 0.0029 | 0.0077 |
| 204 | 0.0099 | 0.0027 | 0.0072 |
| 205 | 0.0092 | 0.0025 | 0.0067 |
| 206 | 0.0087 | 0.0024 | 0.0063 |
| 207 | 0.0082 | 0.0023 | 0.0059 |
| 208 | 0.0078 | 0.0021 | 0.0056 |
| 209 | 0.0074 | 0.0020 | 0.0053 |
| 210 | 0.0070 | 0.0019 | 0.0051 |
| 211 | 0.0067 | 0.0018 | 0.0049 |
| 212 | 0.0064 | 0.0018 | 0.0047 |
| 213 | 0.0062 | 0.0017 | 0.0045 |
| 214 | 0.0060 | 0.0016 | 0.0043 |
| 215 | 0.0058 | 0.0016 | 0.0042 |
| 216 | 0.0056 | 0.0015 | 0.0040 |
| 217 | 0.0056 | 0.0015 | 0.0041 |
| 218 | 0.0054 | 0.0015 | 0.0039 |
| 219 | 0.0053 | 0.0015 | 0.0038 |
| 220 | 0.0051 | 0.0014 | 0.0037 |
| 221 | 0.0050 | 0.0014 | 0.0036 |
| 222 | 0.0049 | 0.0013 | 0.0035 |
| 223 | 0.0047 | 0.0013 | 0.0034 |
| 224 | 0.0046 | 0.0013 | 0.0033 |
| 225 | 0.0045 | 0.0012 | 0.0033 |
| 226 | 0.0044 | 0.0012 | 0.0032 |
| 227 | 0.0043 | 0.0012 | 0.0031 |
| 228 | 0.0042 | 0.0012 | 0.0030 |
| 229 | 0.0041 | 0.0011 | 0.0030 |
| 230 | 0.0040 | 0.0011 | 0.0029 |
| 231 | 0.0039 | 0.0011 | 0.0029 |
| 232 | 0.0039 | 0.0011 | 0.0028 |
| 233 | 0.0038 | 0.0010 | 0.0027 |
| 234 | 0.0037 | 0.0010 | 0.0027 |

| | | | |
|---|---|---|---|
| 235 | 0.0036 | 0.0010 | 0.0026 |
| 236 | 0.0036 | 0.0010 | 0.0026 |
| 237 | 0.0035 | 0.0010 | 0.0025 |
| 238 | 0.0035 | 0.0009 | 0.0025 |
| 239 | 0.0034 | 0.0009 | 0.0025 |
| 240 | 0.0033 | 0.0009 | 0.0024 |
| 241 | 0.0033 | 0.0009 | 0.0024 |
| 242 | 0.0032 | 0.0009 | 0.0023 |
| 243 | 0.0032 | 0.0009 | 0.0023 |
| 244 | 0.0031 | 0.0009 | 0.0023 |
| 245 | 0.0031 | 0.0008 | 0.0022 |
| 246 | 0.0030 | 0.0008 | 0.0022 |
| 247 | 0.0030 | 0.0008 | 0.0022 |
| 248 | 0.0030 | 0.0008 | 0.0021 |
| 249 | 0.0029 | 0.0008 | 0.0021 |
| 250 | 0.0029 | 0.0008 | 0.0021 |
| 251 | 0.0028 | 0.0008 | 0.0021 |
| 252 | 0.0028 | 0.0008 | 0.0020 |
| 253 | 0.0028 | 0.0008 | 0.0020 |
| 254 | 0.0027 | 0.0007 | 0.0020 |
| 255 | 0.0027 | 0.0007 | 0.0020 |
| 256 | 0.0027 | 0.0007 | 0.0019 |
| 257 | 0.0026 | 0.0007 | 0.0019 |
| 258 | 0.0026 | 0.0007 | 0.0019 |
| 259 | 0.0026 | 0.0007 | 0.0019 |
| 260 | 0.0025 | 0.0007 | 0.0018 |
| 261 | 0.0025 | 0.0007 | 0.0018 |
| 262 | 0.0025 | 0.0007 | 0.0018 |
| 263 | 0.0025 | 0.0007 | 0.0018 |
| 264 | 0.0024 | 0.0007 | 0.0018 |
| 265 | 0.0024 | 0.0007 | 0.0017 |
| 266 | 0.0024 | 0.0007 | 0.0017 |
| 267 | 0.0023 | 0.0006 | 0.0017 |
| 268 | 0.0023 | 0.0006 | 0.0017 |
| 269 | 0.0023 | 0.0006 | 0.0017 |
| 270 | 0.0023 | 0.0006 | 0.0016 |
| 271 | 0.0023 | 0.0006 | 0.0016 |
| 272 | 0.0022 | 0.0006 | 0.0016 |
| 273 | 0.0022 | 0.0006 | 0.0016 |
| 274 | 0.0022 | 0.0006 | 0.0016 |
| 275 | 0.0022 | 0.0006 | 0.0016 |
| 276 | 0.0021 | 0.0006 | 0.0016 |
| 277 | 0.0021 | 0.0006 | 0.0015 |
| 278 | 0.0021 | 0.0006 | 0.0015 |
| 279 | 0.0021 | 0.0006 | 0.0015 |
| 280 | 0.0021 | 0.0006 | 0.0015 |
| 281 | 0.0021 | 0.0006 | 0.0015 |
| 282 | 0.0020 | 0.0006 | 0.0015 |
| 283 | 0.0020 | 0.0006 | 0.0015 |
| 284 | 0.0020 | 0.0005 | 0.0014 |
| 285 | 0.0020 | 0.0005 | 0.0014 |
| 286 | 0.0020 | 0.0005 | 0.0014 |
| 287 | 0.0019 | 0.0005 | 0.0014 |
| 288 | 0.0019 | 0.0005 | 0.0014 |

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Total soil rain loss = 0.46(In)
Total effective rainfall = 2.04(In)
Peak flow rate in flood hydrograph = 3.10(CFS)

24 - H O U R  S T O R M
R u n o f f  H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 2.5 | 5.0 | 7.5 | 10.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.01 | Q | | | | |
| 0+15 | 0.0001 | 0.01 | Q | | | | |
| 0+20 | 0.0002 | 0.01 | Q | | | | |
| 0+25 | 0.0003 | 0.01 | Q | | | | |
| 0+30 | 0.0004 | 0.02 | Q | | | | |
| 0+35 | 0.0005 | 0.02 | Q | | | | |
| 0+40 | 0.0006 | 0.02 | Q | | | | |
| 0+45 | 0.0008 | 0.02 | Q | | | | |
| 0+50 | 0.0009 | 0.02 | Q | | | | |
| 0+55 | 0.0010 | 0.02 | Q | | | | |
| 1+ 0 | 0.0011 | 0.02 | Q | | | | |
| 1+ 5 | 0.0012 | 0.02 | Q | | | | |
| 1+10 | 0.0014 | 0.02 | Q | | | | |
| 1+15 | 0.0015 | 0.02 | Q | | | | |
| 1+20 | 0.0016 | 0.02 | Q | | | | |
| 1+25 | 0.0017 | 0.02 | Q | | | | |
| 1+30 | 0.0018 | 0.02 | Q | | | | |
| 1+35 | 0.0020 | 0.02 | Q | | | | |
| 1+40 | 0.0021 | 0.02 | Q | | | | |
| 1+45 | 0.0022 | 0.02 | Q | | | | |
| 1+50 | 0.0023 | 0.02 | Q | | | | |
| 1+55 | 0.0025 | 0.02 | Q | | | | |
| 2+ 0 | 0.0026 | 0.02 | Q | | | | |
| 2+ 5 | 0.0027 | 0.02 | Q | | | | |
| 2+10 | 0.0029 | 0.02 | Q | | | | |
| 2+15 | 0.0030 | 0.02 | Q | | | | |
| 2+20 | 0.0031 | 0.02 | Q | | | | |
| 2+25 | 0.0032 | 0.02 | Q | | | | |
| 2+30 | 0.0034 | 0.02 | Q | | | | |
| 2+35 | 0.0035 | 0.02 | Q | | | | |
| 2+40 | 0.0036 | 0.02 | Q | | | | |
| 2+45 | 0.0038 | 0.02 | Q | | | | |
| 2+50 | 0.0039 | 0.02 | Q | | | | |
| 2+55 | 0.0040 | 0.02 | Q | | | | |
| 3+ 0 | 0.0042 | 0.02 | Q | | | | |
| 3+ 5 | 0.0043 | 0.02 | QV | | | | |
| 3+10 | 0.0044 | 0.02 | QV | | | | |
| 3+15 | 0.0046 | 0.02 | QV | | | | |
| 3+20 | 0.0047 | 0.02 | QV | | | | |
| 3+25 | 0.0048 | 0.02 | QV | | | | |
| 3+30 | 0.0050 | 0.02 | QV | | | | |
| 3+35 | 0.0051 | 0.02 | QV | | | | |
| 3+40 | 0.0053 | 0.02 | QV | | | | |
| 3+45 | 0.0054 | 0.02 | QV | | | | |
| 3+50 | 0.0055 | 0.02 | QV | | | | |
| 3+55 | 0.0057 | 0.02 | QV | | | | |
| 4+ 0 | 0.0058 | 0.02 | QV | | | | |
| 4+ 5 | 0.0060 | 0.02 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4+10 | 0.0061 | 0.02 | QV | | | | |
| 4+15 | 0.0063 | 0.02 | QV | | | | |
| 4+20 | 0.0064 | 0.02 | QV | | | | |
| 4+25 | 0.0066 | 0.02 | QV | | | | |
| 4+30 | 0.0067 | 0.02 | QV | | | | |
| 4+35 | 0.0068 | 0.02 | QV | | | | |
| 4+40 | 0.0070 | 0.02 | QV | | | | |
| 4+45 | 0.0071 | 0.02 | QV | | | | |
| 4+50 | 0.0073 | 0.02 | QV | | | | |
| 4+55 | 0.0074 | 0.02 | QV | | | | |
| 5+ 0 | 0.0076 | 0.02 | QV | | | | |
| 5+ 5 | 0.0078 | 0.02 | QV | | | | |
| 5+10 | 0.0079 | 0.02 | QV | | | | |
| 5+15 | 0.0081 | 0.02 | QV | | | | |
| 5+20 | 0.0082 | 0.02 | QV | | | | |
| 5+25 | 0.0084 | 0.02 | QV | | | | |
| 5+30 | 0.0085 | 0.02 | Q V | | | | |
| 5+35 | 0.0087 | 0.02 | Q V | | | | |
| 5+40 | 0.0088 | 0.02 | Q V | | | | |
| 5+45 | 0.0090 | 0.02 | Q V | | | | |
| 5+50 | 0.0092 | 0.02 | Q V | | | | |
| 5+55 | 0.0093 | 0.02 | Q V | | | | |
| 6+ 0 | 0.0095 | 0.02 | Q V | | | | |
| 6+ 5 | 0.0097 | 0.02 | Q V | | | | |
| 6+10 | 0.0098 | 0.02 | Q V | | | | |
| 6+15 | 0.0100 | 0.02 | Q V | | | | |
| 6+20 | 0.0102 | 0.02 | Q V | | | | |
| 6+25 | 0.0103 | 0.02 | Q V | | | | |
| 6+30 | 0.0105 | 0.02 | Q V | | | | |
| 6+35 | 0.0107 | 0.02 | Q V | | | | |
| 6+40 | 0.0108 | 0.03 | Q V | | | | |
| 6+45 | 0.0110 | 0.03 | Q V | | | | |
| 6+50 | 0.0112 | 0.03 | Q V | | | | |
| 6+55 | 0.0114 | 0.03 | Q V | | | | |
| 7+ 0 | 0.0115 | 0.03 | Q V | | | | |
| 7+ 5 | 0.0117 | 0.03 | Q V | | | | |
| 7+10 | 0.0119 | 0.03 | Q V | | | | |
| 7+15 | 0.0121 | 0.03 | Q V | | | | |
| 7+20 | 0.0123 | 0.03 | Q V | | | | |
| 7+25 | 0.0125 | 0.03 | Q V | | | | |
| 7+30 | 0.0126 | 0.03 | Q V | | | | |
| 7+35 | 0.0128 | 0.03 | Q  V | | | | |
| 7+40 | 0.0130 | 0.03 | Q  V | | | | |
| 7+45 | 0.0132 | 0.03 | Q  V | | | | |
| 7+50 | 0.0134 | 0.03 | Q  V | | | | |
| 7+55 | 0.0136 | 0.03 | Q  V | | | | |
| 8+ 0 | 0.0138 | 0.03 | Q  V | | | | |
| 8+ 5 | 0.0140 | 0.03 | Q  V | | | | |
| 8+10 | 0.0142 | 0.03 | Q  V | | | | |
| 8+15 | 0.0144 | 0.03 | Q  V | | | | |
| 8+20 | 0.0146 | 0.03 | Q  V | | | | |
| 8+25 | 0.0148 | 0.03 | Q  V | | | | |
| 8+30 | 0.0150 | 0.03 | Q  V | | | | |
| 8+35 | 0.0152 | 0.03 | Q  V | | | | |
| 8+40 | 0.0154 | 0.03 | Q  V | | | | |
| 8+45 | 0.0156 | 0.03 | Q  V | | | | |
| 8+50 | 0.0158 | 0.03 | Q  V | | | | |
| 8+55 | 0.0160 | 0.03 | Q  V | | | | |
| 9+ 0 | 0.0162 | 0.03 | Q  V | | | | |

```
 9+ 5       0.0164      0.03  Q  V      |          |          |          |
 9+10       0.0167      0.03  Q  V      |          |          |          |
 9+15       0.0169      0.03  Q  V      |          |          |          |
 9+20       0.0171      0.03  Q   V     |          |          |          |
 9+25       0.0173      0.03  Q   V     |          |          |          |
 9+30       0.0176      0.03  Q   V     |          |          |          |
 9+35       0.0178      0.03  Q   V     |          |          |          |
 9+40       0.0180      0.03  Q   V     |          |          |          |
 9+45       0.0182      0.03  Q   V     |          |          |          |
 9+50       0.0185      0.03  Q   V     |          |          |          |
 9+55       0.0187      0.03  Q   V     |          |          |          |
10+ 0       0.0190      0.03  Q   V     |          |          |          |
10+ 5       0.0192      0.04  Q   V     |          |          |          |
10+10       0.0194      0.04  Q   V     |          |          |          |
10+15       0.0197      0.04  Q   V     |          |          |          |
10+20       0.0199      0.04  Q   V     |          |          |          |
10+25       0.0202      0.04  Q   V     |          |          |          |
10+30       0.0205      0.04  Q   V     |          |          |          |
10+35       0.0207      0.04  Q   V     |          |          |          |
10+40       0.0210      0.04  Q   V     |          |          |          |
10+45       0.0212      0.04  Q    V    |          |          |          |
10+50       0.0215      0.04  Q    V    |          |          |          |
10+55       0.0218      0.04  Q    V    |          |          |          |
11+ 0       0.0221      0.04  Q    V    |          |          |          |
11+ 5       0.0223      0.04  Q    V    |          |          |          |
11+10       0.0226      0.04  Q    V    |          |          |          |
11+15       0.0229      0.04  Q    V    |          |          |          |
11+20       0.0232      0.04  Q    V    |          |          |          |
11+25       0.0235      0.04  Q    V    |          |          |          |
11+30       0.0238      0.04  Q    V    |          |          |          |
11+35       0.0241      0.04  Q    V    |          |          |          |
11+40       0.0244      0.04  Q    V    |          |          |          |
11+45       0.0247      0.04  Q    V    |          |          |          |
11+50       0.0250      0.05  Q    V    |          |          |          |
11+55       0.0253      0.05  Q    V    |          |          |          |
12+ 0       0.0257      0.05  Q     V   |          |          |          |
12+ 5       0.0260      0.05  Q     V   |          |          |          |
12+10       0.0263      0.05  Q     V   |          |          |          |
12+15       0.0266      0.05  Q     V   |          |          |          |
12+20       0.0270      0.05  Q     V   |          |          |          |
12+25       0.0273      0.05  Q     V   |          |          |          |
12+30       0.0277      0.05  Q     V   |          |          |          |
12+35       0.0280      0.05  Q     V   |          |          |          |
12+40       0.0284      0.05  Q     V   |          |          |          |
12+45       0.0287      0.05  Q     V   |          |          |          |
12+50       0.0291      0.05  Q     V   |          |          |          |
12+55       0.0295      0.05  Q     V   |          |          |          |
13+ 0       0.0298      0.06  Q      V  |          |          |          |
13+ 5       0.0302      0.06  Q      V  |          |          |          |
13+10       0.0306      0.06  Q      V  |          |          |          |
13+15       0.0310      0.06  Q      V  |          |          |          |
13+20       0.0315      0.06  Q      V  |          |          |          |
13+25       0.0319      0.06  Q      V  |          |          |          |
13+30       0.0323      0.06  Q      V  |          |          |          |
13+35       0.0328      0.06  Q      V  |          |          |          |
13+40       0.0332      0.07  Q      V  |          |          |          |
13+45       0.0337      0.07  Q      V  |          |          |          |
13+50       0.0342      0.07  Q       V |          |          |          |
13+55       0.0347      0.07  Q       V |          |          |          |
```

```
14+ 0       0.0352      0.07  Q       V |         |         |         |
14+ 5       0.0357      0.08  Q       V |         |         |         |
14+10       0.0362      0.08  Q       V |         |         |         |
14+15       0.0368      0.08  Q       V |         |         |         |
14+20       0.0374      0.08  Q       V |         |         |         |
14+25       0.0380      0.09  Q       V |         |         |         |
14+30       0.0386      0.09  Q        V|         |         |         |
14+35       0.0392      0.09  Q        V|         |         |         |
14+40       0.0399      0.10  Q        V|         |         |         |
14+45       0.0406      0.10  Q        V|         |         |         |
14+50       0.0414      0.11  Q        V|         |         |         |
14+55       0.0421      0.11  Q        V|         |         |         |
15+ 0       0.0429      0.12  Q         V         |         |         |
15+ 5       0.0438      0.12  Q         V         |         |         |
15+10       0.0447      0.13  Q         V         |         |         |
15+15       0.0457      0.14  Q         V         |         |         |
15+20       0.0467      0.15  Q         |V        |         |         |
15+25       0.0479      0.17  Q         |V        |         |         |
15+30       0.0493      0.21  Q         |V        |         |         |
15+35       0.0510      0.25  |Q        | V       |         |         |
15+40       0.0531      0.29  |Q        | V       |         |         |
15+45       0.0554      0.34  |Q        |  V      |         |         |
15+50       0.0583      0.42  |Q        |  V      |         |         |
15+55       0.0619      0.52  | Q       |   V     |         |         |
16+ 0       0.0669      0.73  | Q       |    V    |         |         |
16+ 5       0.0761      1.33  |    Q    |      V  |         |         |
16+10       0.0975      3.10  |         | Q       | V       |         |
16+15       0.1150      2.55  |         Q         |      V  |         |
16+20       0.1248      1.42  |    Q    |         |        V|         |
16+25       0.1314      0.96  |  Q      |         |         V         |
16+30       0.1361      0.68  | Q       |         |         | V       |
16+35       0.1396      0.50  | Q       |         |         | V       |
16+40       0.1423      0.39  |Q        |         |         |  V      |
16+45       0.1444      0.31  |Q        |         |         |   V     |
16+50       0.1461      0.24  Q         |         |         |   V     |
16+55       0.1474      0.20  Q         |         |         |   V     |
17+ 0       0.1487      0.18  Q         |         |         |    V    |
17+ 5       0.1497      0.15  Q         |         |         |    V    |
17+10       0.1506      0.12  Q         |         |         |    V    |
17+15       0.1512      0.09  Q         |         |         |    V    |
17+20       0.1518      0.08  Q         |         |         |    V    |
17+25       0.1523      0.08  Q         |         |         |    V    |
17+30       0.1528      0.07  Q         |         |         |     V   |
17+35       0.1533      0.07  Q         |         |         |     V   |
17+40       0.1537      0.06  Q         |         |         |     V   |
17+45       0.1541      0.06  Q         |         |         |     V   |
17+50       0.1545      0.06  Q         |         |         |     V   |
17+55       0.1549      0.06  Q         |         |         |     V   |
18+ 0       0.1553      0.05  Q         |         |         |     V   |
18+ 5       0.1556      0.05  Q         |         |         |     V   |
18+10       0.1560      0.05  Q         |         |         |     V   |
18+15       0.1563      0.05  Q         |         |         |     V   |
18+20       0.1567      0.05  Q         |         |         |     V   |
18+25       0.1570      0.05  Q         |         |         |      V  |
18+30       0.1573      0.05  Q         |         |         |      V  |
18+35       0.1576      0.04  Q         |         |         |      V  |
18+40       0.1579      0.04  Q         |         |         |      V  |
18+45       0.1582      0.04  Q         |         |         |      V  |
18+50       0.1585      0.04  Q         |         |         |      V  |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18+55 | 0.1588 | 0.04 | Q | \| | \| | \| | V \| |
| 19+ 0 | 0.1590 | 0.04 | Q | \| | \| | \| | V \| |
| 19+ 5 | 0.1593 | 0.04 | Q | \| | \| | \| | V \| |
| 19+10 | 0.1596 | 0.04 | Q | \| | \| | \| | V \| |
| 19+15 | 0.1598 | 0.04 | Q | \| | \| | \| | V \| |
| 19+20 | 0.1601 | 0.04 | Q | \| | \| | \| | V \| |
| 19+25 | 0.1603 | 0.04 | Q | \| | \| | \| | V \| |
| 19+30 | 0.1605 | 0.03 | Q | \| | \| | \| | V \| |
| 19+35 | 0.1608 | 0.03 | Q | \| | \| | \| | V \| |
| 19+40 | 0.1610 | 0.03 | Q | \| | \| | \| | V \| |
| 19+45 | 0.1612 | 0.03 | Q | \| | \| | \| | V \| |
| 19+50 | 0.1614 | 0.03 | Q | \| | \| | \| | V \| |
| 19+55 | 0.1617 | 0.03 | Q | \| | \| | \| | V \| |
| 20+ 0 | 0.1619 | 0.03 | Q | \| | \| | \| | V \| |
| 20+ 5 | 0.1621 | 0.03 | Q | \| | \| | \| | V \| |
| 20+10 | 0.1623 | 0.03 | Q | \| | \| | \| | V \| |
| 20+15 | 0.1625 | 0.03 | Q | \| | \| | \| | V \| |
| 20+20 | 0.1627 | 0.03 | Q | \| | \| | \| | V \| |
| 20+25 | 0.1629 | 0.03 | Q | \| | \| | \| | V \| |
| 20+30 | 0.1631 | 0.03 | Q | \| | \| | \| | V \| |
| 20+35 | 0.1632 | 0.03 | Q | \| | \| | \| | V \| |
| 20+40 | 0.1634 | 0.03 | Q | \| | \| | \| | V \| |
| 20+45 | 0.1636 | 0.03 | Q | \| | \| | \| | V \| |
| 20+50 | 0.1638 | 0.03 | Q | \| | \| | \| | V \| |
| 20+55 | 0.1640 | 0.03 | Q | \| | \| | \| | V \| |
| 21+ 0 | 0.1641 | 0.03 | Q | \| | \| | \| | V \| |
| 21+ 5 | 0.1643 | 0.03 | Q | \| | \| | \| | V \| |
| 21+10 | 0.1645 | 0.02 | Q | \| | \| | \| | V \| |
| 21+15 | 0.1647 | 0.02 | Q | \| | \| | \| | V \| |
| 21+20 | 0.1648 | 0.02 | Q | \| | \| | \| | V \| |
| 21+25 | 0.1650 | 0.02 | Q | \| | \| | \| | V \| |
| 21+30 | 0.1651 | 0.02 | Q | \| | \| | \| | V \| |
| 21+35 | 0.1653 | 0.02 | Q | \| | \| | \| | V \| |
| 21+40 | 0.1655 | 0.02 | Q | \| | \| | \| | V\| |
| 21+45 | 0.1656 | 0.02 | Q | \| | \| | \| | V\| |
| 21+50 | 0.1658 | 0.02 | Q | \| | \| | \| | V\| |
| 21+55 | 0.1659 | 0.02 | Q | \| | \| | \| | V\| |
| 22+ 0 | 0.1661 | 0.02 | Q | \| | \| | \| | V\| |
| 22+ 5 | 0.1662 | 0.02 | Q | \| | \| | \| | V\| |
| 22+10 | 0.1664 | 0.02 | Q | \| | \| | \| | V\| |
| 22+15 | 0.1665 | 0.02 | Q | \| | \| | \| | V\| |
| 22+20 | 0.1667 | 0.02 | Q | \| | \| | \| | V\| |
| 22+25 | 0.1668 | 0.02 | Q | \| | \| | \| | V\| |
| 22+30 | 0.1670 | 0.02 | Q | \| | \| | \| | V\| |
| 22+35 | 0.1671 | 0.02 | Q | \| | \| | \| | V\| |
| 22+40 | 0.1672 | 0.02 | Q | \| | \| | \| | V\| |
| 22+45 | 0.1674 | 0.02 | Q | \| | \| | \| | V\| |
| 22+50 | 0.1675 | 0.02 | Q | \| | \| | \| | V\| |
| 22+55 | 0.1676 | 0.02 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.1678 | 0.02 | Q | \| | \| | \| | V\| |
| 23+ 5 | 0.1679 | 0.02 | Q | \| | \| | \| | V\| |
| 23+10 | 0.1680 | 0.02 | Q | \| | \| | \| | V\| |
| 23+15 | 0.1682 | 0.02 | Q | \| | \| | \| | V\| |
| 23+20 | 0.1683 | 0.02 | Q | \| | \| | \| | V\| |
| 23+25 | 0.1684 | 0.02 | Q | \| | \| | \| | V\| |
| 23+30 | 0.1685 | 0.02 | Q | \| | \| | \| | V\| |
| 23+35 | 0.1687 | 0.02 | Q | \| | \| | \| | V\| |
| 23+40 | 0.1688 | 0.02 | Q | \| | \| | \| | V\| |
| 23+45 | 0.1689 | 0.02 | Q | \| | \| | \| | V\| |

```
   23+50       0.1690      0.02  Q         |          |         |        V|
   23+55       0.1692      0.02  Q         |          |         |        V|
   24+ 0       0.1693      0.02  Q         |          |         |        V|
   24+ 5       0.1694      0.02  Q         |          |         |        V|
   24+10       0.1695      0.01  Q         |          |         |        V|
   24+15       0.1695      0.01  Q         |          |         |        V|
   24+20       0.1695      0.00  Q         |          |         |        V|
   24+25       0.1695      0.00  Q         |          |         |        V|
   24+30       0.1696      0.00  Q         |          |         |        V|
   24+35       0.1696      0.00  Q         |          |         |        V|
   24+40       0.1696      0.00  Q         |          |         |        V|
   24+45       0.1696      0.00  Q         |          |         |        V|
   24+50       0.1696      0.00  Q         |          |         |        V|
   24+55       0.1696      0.00  Q         |          |         |        V|
   25+ 0       0.1696      0.00  Q         |          |         |        V|
   25+ 5       0.1696      0.00  Q         |          |         |         V
-------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 2
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 1.55 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 1.55 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 1.55 | 24 | 2.49 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.0 | 92.8 | 1.55 | 1.000 | 0.140 | 0.900 | 0.126 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.126

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 1.40 | 0.900 | 78.0 | 92.8 | 0.78 | 0.704 |
| 0.15 | 0.100 | 98.0 | 98.0 | 0.20 | 0.908 |

Area-averaged catchment yield fraction, Y = 0.724
Area-averaged low loss fraction, Yb = 0.276
User entry of time of concentration = 0.160 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 1.55(Ac.)
Catchment Lag time = 0.128 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 65.1042
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.126(In/Hr)
Average low loss rate fraction (Yb) = 0.276 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.490(In)

Rainfall depth area reduction factors:
Using a total area of 1.55(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.603(In)
30-minute factor = 1.000 Adjusted rainfall = 1.031(In)
1-hour factor = 1.000 Adjusted rainfall = 1.270(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.490(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 18.75 (CFS)) | |
| 1 | 6.621 | 1.241 |
| 2 | 46.358 | 7.449 |
| 3 | 71.060 | 4.630 |
| 4 | 81.731 | 2.000 |
| 5 | 88.011 | 1.177 |
| 6 | 91.943 | 0.737 |
| 7 | 94.679 | 0.513 |
| 8 | 96.569 | 0.354 |
| 9 | 97.782 | 0.227 |
| 10 | 98.525 | 0.139 |
| 11 | 99.292 | 0.144 |
| 12 | 100.000 | 0.133 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6026 | 0.6026 |
| 2 | 0.7419 | 0.1393 |
| 3 | 0.8378 | 0.0960 |
| 4 | 0.9133 | 0.0755 |
| 5 | 0.9766 | 0.0632 |
| 6 | 1.0315 | 0.0549 |
| 7 | 1.0803 | 0.0488 |
| 8 | 1.1245 | 0.0442 |
| 9 | 1.1649 | 0.0404 |
| 10 | 1.2023 | 0.0374 |
| 11 | 1.2372 | 0.0349 |
| 12 | 1.2699 | 0.0327 |
| 13 | 1.2911 | 0.0212 |
| 14 | 1.3111 | 0.0200 |
| 15 | 1.3299 | 0.0189 |
| 16 | 1.3478 | 0.0179 |
| 17 | 1.3648 | 0.0170 |
| 18 | 1.3811 | 0.0162 |
| 19 | 1.3966 | 0.0155 |
| 20 | 1.4115 | 0.0149 |
| 21 | 1.4259 | 0.0143 |
| 22 | 1.4397 | 0.0138 |
| 23 | 1.4530 | 0.0133 |
| 24 | 1.4658 | 0.0129 |
| 25 | 1.4782 | 0.0124 |
| 26 | 1.4903 | 0.0120 |
| 27 | 1.5020 | 0.0117 |
| 28 | 1.5133 | 0.0113 |
| 29 | 1.5244 | 0.0110 |
| 30 | 1.5351 | 0.0107 |
| 31 | 1.5456 | 0.0105 |
| 32 | 1.5557 | 0.0102 |
| 33 | 1.5657 | 0.0099 |
| 34 | 1.5754 | 0.0097 |
| 35 | 1.5849 | 0.0095 |
| 36 | 1.5941 | 0.0093 |
| 37 | 1.6032 | 0.0091 |
| 38 | 1.6121 | 0.0089 |
| 39 | 1.6208 | 0.0087 |
| 40 | 1.6293 | 0.0085 |
| 41 | 1.6376 | 0.0083 |
| 42 | 1.6458 | 0.0082 |
| 43 | 1.6538 | 0.0080 |
| 44 | 1.6617 | 0.0079 |
| 45 | 1.6695 | 0.0077 |
| 46 | 1.6771 | 0.0076 |
| 47 | 1.6846 | 0.0075 |
| 48 | 1.6919 | 0.0074 |
| 49 | 1.6991 | 0.0072 |
| 50 | 1.7063 | 0.0071 |
| 51 | 1.7133 | 0.0070 |
| 52 | 1.7202 | 0.0069 |
| 53 | 1.7270 | 0.0068 |
| 54 | 1.7337 | 0.0067 |
| 55 | 1.7403 | 0.0066 |
| 56 | 1.7468 | 0.0065 |
| 57 | 1.7532 | 0.0064 |

| | | |
|---|---|---|
| 58 | 1.7595 | 0.0063 |
| 59 | 1.7657 | 0.0062 |
| 60 | 1.7719 | 0.0062 |
| 61 | 1.7779 | 0.0061 |
| 62 | 1.7839 | 0.0060 |
| 63 | 1.7898 | 0.0059 |
| 64 | 1.7957 | 0.0058 |
| 65 | 1.8015 | 0.0058 |
| 66 | 1.8072 | 0.0057 |
| 67 | 1.8128 | 0.0056 |
| 68 | 1.8184 | 0.0056 |
| 69 | 1.8239 | 0.0055 |
| 70 | 1.8293 | 0.0054 |
| 71 | 1.8347 | 0.0054 |
| 72 | 1.8400 | 0.0053 |
| 73 | 1.8455 | 0.0055 |
| 74 | 1.8510 | 0.0055 |
| 75 | 1.8565 | 0.0054 |
| 76 | 1.8618 | 0.0054 |
| 77 | 1.8671 | 0.0053 |
| 78 | 1.8724 | 0.0053 |
| 79 | 1.8776 | 0.0052 |
| 80 | 1.8828 | 0.0052 |
| 81 | 1.8879 | 0.0051 |
| 82 | 1.8930 | 0.0051 |
| 83 | 1.8980 | 0.0050 |
| 84 | 1.9029 | 0.0050 |
| 85 | 1.9079 | 0.0049 |
| 86 | 1.9127 | 0.0049 |
| 87 | 1.9176 | 0.0048 |
| 88 | 1.9224 | 0.0048 |
| 89 | 1.9271 | 0.0047 |
| 90 | 1.9318 | 0.0047 |
| 91 | 1.9365 | 0.0047 |
| 92 | 1.9411 | 0.0046 |
| 93 | 1.9457 | 0.0046 |
| 94 | 1.9502 | 0.0045 |
| 95 | 1.9547 | 0.0045 |
| 96 | 1.9592 | 0.0045 |
| 97 | 1.9636 | 0.0044 |
| 98 | 1.9680 | 0.0044 |
| 99 | 1.9724 | 0.0044 |
| 100 | 1.9767 | 0.0043 |
| 101 | 1.9810 | 0.0043 |
| 102 | 1.9853 | 0.0043 |
| 103 | 1.9895 | 0.0042 |
| 104 | 1.9937 | 0.0042 |
| 105 | 1.9979 | 0.0042 |
| 106 | 2.0020 | 0.0041 |
| 107 | 2.0061 | 0.0041 |
| 108 | 2.0102 | 0.0041 |
| 109 | 2.0143 | 0.0040 |
| 110 | 2.0183 | 0.0040 |
| 111 | 2.0223 | 0.0040 |
| 112 | 2.0262 | 0.0040 |
| 113 | 2.0302 | 0.0039 |
| 114 | 2.0341 | 0.0039 |
| 115 | 2.0380 | 0.0039 |
| 116 | 2.0418 | 0.0039 |

| | | |
|---|---|---|
| 117 | 2.0456 | 0.0038 |
| 118 | 2.0494 | 0.0038 |
| 119 | 2.0532 | 0.0038 |
| 120 | 2.0570 | 0.0038 |
| 121 | 2.0607 | 0.0037 |
| 122 | 2.0644 | 0.0037 |
| 123 | 2.0681 | 0.0037 |
| 124 | 2.0717 | 0.0037 |
| 125 | 2.0754 | 0.0036 |
| 126 | 2.0790 | 0.0036 |
| 127 | 2.0826 | 0.0036 |
| 128 | 2.0861 | 0.0036 |
| 129 | 2.0897 | 0.0035 |
| 130 | 2.0932 | 0.0035 |
| 131 | 2.0967 | 0.0035 |
| 132 | 2.1002 | 0.0035 |
| 133 | 2.1037 | 0.0035 |
| 134 | 2.1071 | 0.0034 |
| 135 | 2.1105 | 0.0034 |
| 136 | 2.1139 | 0.0034 |
| 137 | 2.1173 | 0.0034 |
| 138 | 2.1207 | 0.0034 |
| 139 | 2.1240 | 0.0033 |
| 140 | 2.1273 | 0.0033 |
| 141 | 2.1306 | 0.0033 |
| 142 | 2.1339 | 0.0033 |
| 143 | 2.1372 | 0.0033 |
| 144 | 2.1405 | 0.0033 |
| 145 | 2.1437 | 0.0032 |
| 146 | 2.1469 | 0.0032 |
| 147 | 2.1501 | 0.0032 |
| 148 | 2.1533 | 0.0032 |
| 149 | 2.1565 | 0.0032 |
| 150 | 2.1596 | 0.0032 |
| 151 | 2.1627 | 0.0031 |
| 152 | 2.1659 | 0.0031 |
| 153 | 2.1690 | 0.0031 |
| 154 | 2.1721 | 0.0031 |
| 155 | 2.1751 | 0.0031 |
| 156 | 2.1782 | 0.0031 |
| 157 | 2.1812 | 0.0030 |
| 158 | 2.1842 | 0.0030 |
| 159 | 2.1872 | 0.0030 |
| 160 | 2.1902 | 0.0030 |
| 161 | 2.1932 | 0.0030 |
| 162 | 2.1962 | 0.0030 |
| 163 | 2.1991 | 0.0030 |
| 164 | 2.2021 | 0.0029 |
| 165 | 2.2050 | 0.0029 |
| 166 | 2.2079 | 0.0029 |
| 167 | 2.2108 | 0.0029 |
| 168 | 2.2137 | 0.0029 |
| 169 | 2.2166 | 0.0029 |
| 170 | 2.2194 | 0.0029 |
| 171 | 2.2223 | 0.0028 |
| 172 | 2.2251 | 0.0028 |
| 173 | 2.2279 | 0.0028 |
| 174 | 2.2307 | 0.0028 |
| 175 | 2.2335 | 0.0028 |

| | | |
|---|---|---|
| 176 | 2.2363 | 0.0028 |
| 177 | 2.2390 | 0.0028 |
| 178 | 2.2418 | 0.0028 |
| 179 | 2.2445 | 0.0027 |
| 180 | 2.2473 | 0.0027 |
| 181 | 2.2500 | 0.0027 |
| 182 | 2.2527 | 0.0027 |
| 183 | 2.2554 | 0.0027 |
| 184 | 2.2581 | 0.0027 |
| 185 | 2.2607 | 0.0027 |
| 186 | 2.2634 | 0.0027 |
| 187 | 2.2661 | 0.0026 |
| 188 | 2.2687 | 0.0026 |
| 189 | 2.2713 | 0.0026 |
| 190 | 2.2739 | 0.0026 |
| 191 | 2.2765 | 0.0026 |
| 192 | 2.2791 | 0.0026 |
| 193 | 2.2817 | 0.0026 |
| 194 | 2.2843 | 0.0026 |
| 195 | 2.2869 | 0.0026 |
| 196 | 2.2894 | 0.0026 |
| 197 | 2.2920 | 0.0025 |
| 198 | 2.2945 | 0.0025 |
| 199 | 2.2970 | 0.0025 |
| 200 | 2.2995 | 0.0025 |
| 201 | 2.3020 | 0.0025 |
| 202 | 2.3045 | 0.0025 |
| 203 | 2.3070 | 0.0025 |
| 204 | 2.3095 | 0.0025 |
| 205 | 2.3120 | 0.0025 |
| 206 | 2.3144 | 0.0025 |
| 207 | 2.3169 | 0.0024 |
| 208 | 2.3193 | 0.0024 |
| 209 | 2.3217 | 0.0024 |
| 210 | 2.3242 | 0.0024 |
| 211 | 2.3266 | 0.0024 |
| 212 | 2.3290 | 0.0024 |
| 213 | 2.3314 | 0.0024 |
| 214 | 2.3337 | 0.0024 |
| 215 | 2.3361 | 0.0024 |
| 216 | 2.3385 | 0.0024 |
| 217 | 2.3408 | 0.0024 |
| 218 | 2.3432 | 0.0023 |
| 219 | 2.3455 | 0.0023 |
| 220 | 2.3479 | 0.0023 |
| 221 | 2.3502 | 0.0023 |
| 222 | 2.3525 | 0.0023 |
| 223 | 2.3548 | 0.0023 |
| 224 | 2.3571 | 0.0023 |
| 225 | 2.3594 | 0.0023 |
| 226 | 2.3617 | 0.0023 |
| 227 | 2.3640 | 0.0023 |
| 228 | 2.3662 | 0.0023 |
| 229 | 2.3685 | 0.0023 |
| 230 | 2.3708 | 0.0023 |
| 231 | 2.3730 | 0.0022 |
| 232 | 2.3752 | 0.0022 |
| 233 | 2.3775 | 0.0022 |
| 234 | 2.3797 | 0.0022 |

| | | |
|---|---|---|
| 235 | 2.3819 | 0.0022 |
| 236 | 2.3841 | 0.0022 |
| 237 | 2.3863 | 0.0022 |
| 238 | 2.3885 | 0.0022 |
| 239 | 2.3907 | 0.0022 |
| 240 | 2.3929 | 0.0022 |
| 241 | 2.3950 | 0.0022 |
| 242 | 2.3972 | 0.0022 |
| 243 | 2.3994 | 0.0022 |
| 244 | 2.4015 | 0.0022 |
| 245 | 2.4037 | 0.0021 |
| 246 | 2.4058 | 0.0021 |
| 247 | 2.4079 | 0.0021 |
| 248 | 2.4101 | 0.0021 |
| 249 | 2.4122 | 0.0021 |
| 250 | 2.4143 | 0.0021 |
| 251 | 2.4164 | 0.0021 |
| 252 | 2.4185 | 0.0021 |
| 253 | 2.4206 | 0.0021 |
| 254 | 2.4227 | 0.0021 |
| 255 | 2.4247 | 0.0021 |
| 256 | 2.4268 | 0.0021 |
| 257 | 2.4289 | 0.0021 |
| 258 | 2.4309 | 0.0021 |
| 259 | 2.4330 | 0.0021 |
| 260 | 2.4350 | 0.0020 |
| 261 | 2.4371 | 0.0020 |
| 262 | 2.4391 | 0.0020 |
| 263 | 2.4411 | 0.0020 |
| 264 | 2.4432 | 0.0020 |
| 265 | 2.4452 | 0.0020 |
| 266 | 2.4472 | 0.0020 |
| 267 | 2.4492 | 0.0020 |
| 268 | 2.4512 | 0.0020 |
| 269 | 2.4532 | 0.0020 |
| 270 | 2.4552 | 0.0020 |
| 271 | 2.4572 | 0.0020 |
| 272 | 2.4591 | 0.0020 |
| 273 | 2.4611 | 0.0020 |
| 274 | 2.4631 | 0.0020 |
| 275 | 2.4650 | 0.0020 |
| 276 | 2.4670 | 0.0020 |
| 277 | 2.4689 | 0.0019 |
| 278 | 2.4709 | 0.0019 |
| 279 | 2.4728 | 0.0019 |
| 280 | 2.4747 | 0.0019 |
| 281 | 2.4767 | 0.0019 |
| 282 | 2.4786 | 0.0019 |
| 283 | 2.4805 | 0.0019 |
| 284 | 2.4824 | 0.0019 |
| 285 | 2.4843 | 0.0019 |
| 286 | 2.4862 | 0.0019 |
| 287 | 2.4881 | 0.0019 |
| 288 | 2.4900 | 0.0019 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 1 | 0.0019 | 0.0005 | 0.0014 |
| 2 | 0.0019 | 0.0005 | 0.0014 |
| 3 | 0.0019 | 0.0005 | 0.0014 |
| 4 | 0.0019 | 0.0005 | 0.0014 |
| 5 | 0.0019 | 0.0005 | 0.0014 |
| 6 | 0.0019 | 0.0005 | 0.0014 |
| 7 | 0.0019 | 0.0005 | 0.0014 |
| 8 | 0.0019 | 0.0005 | 0.0014 |
| 9 | 0.0020 | 0.0005 | 0.0014 |
| 10 | 0.0020 | 0.0005 | 0.0014 |
| 11 | 0.0020 | 0.0005 | 0.0014 |
| 12 | 0.0020 | 0.0005 | 0.0014 |
| 13 | 0.0020 | 0.0005 | 0.0014 |
| 14 | 0.0020 | 0.0005 | 0.0014 |
| 15 | 0.0020 | 0.0006 | 0.0015 |
| 16 | 0.0020 | 0.0006 | 0.0015 |
| 17 | 0.0020 | 0.0006 | 0.0015 |
| 18 | 0.0020 | 0.0006 | 0.0015 |
| 19 | 0.0020 | 0.0006 | 0.0015 |
| 20 | 0.0020 | 0.0006 | 0.0015 |
| 21 | 0.0021 | 0.0006 | 0.0015 |
| 22 | 0.0021 | 0.0006 | 0.0015 |
| 23 | 0.0021 | 0.0006 | 0.0015 |
| 24 | 0.0021 | 0.0006 | 0.0015 |
| 25 | 0.0021 | 0.0006 | 0.0015 |
| 26 | 0.0021 | 0.0006 | 0.0015 |
| 27 | 0.0021 | 0.0006 | 0.0015 |
| 28 | 0.0021 | 0.0006 | 0.0015 |
| 29 | 0.0021 | 0.0006 | 0.0015 |
| 30 | 0.0021 | 0.0006 | 0.0016 |
| 31 | 0.0022 | 0.0006 | 0.0016 |
| 32 | 0.0022 | 0.0006 | 0.0016 |
| 33 | 0.0022 | 0.0006 | 0.0016 |
| 34 | 0.0022 | 0.0006 | 0.0016 |
| 35 | 0.0022 | 0.0006 | 0.0016 |
| 36 | 0.0022 | 0.0006 | 0.0016 |
| 37 | 0.0022 | 0.0006 | 0.0016 |
| 38 | 0.0022 | 0.0006 | 0.0016 |
| 39 | 0.0022 | 0.0006 | 0.0016 |
| 40 | 0.0023 | 0.0006 | 0.0016 |
| 41 | 0.0023 | 0.0006 | 0.0016 |
| 42 | 0.0023 | 0.0006 | 0.0016 |
| 43 | 0.0023 | 0.0006 | 0.0017 |
| 44 | 0.0023 | 0.0006 | 0.0017 |
| 45 | 0.0023 | 0.0006 | 0.0017 |
| 46 | 0.0023 | 0.0006 | 0.0017 |
| 47 | 0.0023 | 0.0006 | 0.0017 |
| 48 | 0.0023 | 0.0006 | 0.0017 |
| 49 | 0.0024 | 0.0007 | 0.0017 |
| 50 | 0.0024 | 0.0007 | 0.0017 |
| 51 | 0.0024 | 0.0007 | 0.0017 |
| 52 | 0.0024 | 0.0007 | 0.0017 |
| 53 | 0.0024 | 0.0007 | 0.0018 |
| 54 | 0.0024 | 0.0007 | 0.0018 |
| 55 | 0.0024 | 0.0007 | 0.0018 |
| 56 | 0.0025 | 0.0007 | 0.0018 |
| 57 | 0.0025 | 0.0007 | 0.0018 |
| 58 | 0.0025 | 0.0007 | 0.0018 |
| 59 | 0.0025 | 0.0007 | 0.0018 |

| | | | |
|---|---|---|---|
| 60 | 0.0025 | 0.0007 | 0.0018 |
| 61 | 0.0025 | 0.0007 | 0.0018 |
| 62 | 0.0025 | 0.0007 | 0.0018 |
| 63 | 0.0026 | 0.0007 | 0.0019 |
| 64 | 0.0026 | 0.0007 | 0.0019 |
| 65 | 0.0026 | 0.0007 | 0.0019 |
| 66 | 0.0026 | 0.0007 | 0.0019 |
| 67 | 0.0026 | 0.0007 | 0.0019 |
| 68 | 0.0026 | 0.0007 | 0.0019 |
| 69 | 0.0027 | 0.0007 | 0.0019 |
| 70 | 0.0027 | 0.0007 | 0.0019 |
| 71 | 0.0027 | 0.0007 | 0.0020 |
| 72 | 0.0027 | 0.0007 | 0.0020 |
| 73 | 0.0027 | 0.0008 | 0.0020 |
| 74 | 0.0027 | 0.0008 | 0.0020 |
| 75 | 0.0028 | 0.0008 | 0.0020 |
| 76 | 0.0028 | 0.0008 | 0.0020 |
| 77 | 0.0028 | 0.0008 | 0.0020 |
| 78 | 0.0028 | 0.0008 | 0.0020 |
| 79 | 0.0028 | 0.0008 | 0.0021 |
| 80 | 0.0029 | 0.0008 | 0.0021 |
| 81 | 0.0029 | 0.0008 | 0.0021 |
| 82 | 0.0029 | 0.0008 | 0.0021 |
| 83 | 0.0029 | 0.0008 | 0.0021 |
| 84 | 0.0029 | 0.0008 | 0.0021 |
| 85 | 0.0030 | 0.0008 | 0.0021 |
| 86 | 0.0030 | 0.0008 | 0.0022 |
| 87 | 0.0030 | 0.0008 | 0.0022 |
| 88 | 0.0030 | 0.0008 | 0.0022 |
| 89 | 0.0031 | 0.0008 | 0.0022 |
| 90 | 0.0031 | 0.0008 | 0.0022 |
| 91 | 0.0031 | 0.0009 | 0.0022 |
| 92 | 0.0031 | 0.0009 | 0.0023 |
| 93 | 0.0032 | 0.0009 | 0.0023 |
| 94 | 0.0032 | 0.0009 | 0.0023 |
| 95 | 0.0032 | 0.0009 | 0.0023 |
| 96 | 0.0032 | 0.0009 | 0.0023 |
| 97 | 0.0033 | 0.0009 | 0.0024 |
| 98 | 0.0033 | 0.0009 | 0.0024 |
| 99 | 0.0033 | 0.0009 | 0.0024 |
| 100 | 0.0033 | 0.0009 | 0.0024 |
| 101 | 0.0034 | 0.0009 | 0.0024 |
| 102 | 0.0034 | 0.0009 | 0.0024 |
| 103 | 0.0034 | 0.0009 | 0.0025 |
| 104 | 0.0034 | 0.0009 | 0.0025 |
| 105 | 0.0035 | 0.0010 | 0.0025 |
| 106 | 0.0035 | 0.0010 | 0.0025 |
| 107 | 0.0035 | 0.0010 | 0.0026 |
| 108 | 0.0036 | 0.0010 | 0.0026 |
| 109 | 0.0036 | 0.0010 | 0.0026 |
| 110 | 0.0036 | 0.0010 | 0.0026 |
| 111 | 0.0037 | 0.0010 | 0.0027 |
| 112 | 0.0037 | 0.0010 | 0.0027 |
| 113 | 0.0038 | 0.0010 | 0.0027 |
| 114 | 0.0038 | 0.0010 | 0.0027 |
| 115 | 0.0038 | 0.0011 | 0.0028 |
| 116 | 0.0039 | 0.0011 | 0.0028 |
| 117 | 0.0039 | 0.0011 | 0.0028 |
| 118 | 0.0039 | 0.0011 | 0.0028 |

| | | | |
|---|---|---|---|
| 119 | 0.0040 | 0.0011 | 0.0029 |
| 120 | 0.0040 | 0.0011 | 0.0029 |
| 121 | 0.0041 | 0.0011 | 0.0030 |
| 122 | 0.0041 | 0.0011 | 0.0030 |
| 123 | 0.0042 | 0.0011 | 0.0030 |
| 124 | 0.0042 | 0.0012 | 0.0030 |
| 125 | 0.0043 | 0.0012 | 0.0031 |
| 126 | 0.0043 | 0.0012 | 0.0031 |
| 127 | 0.0044 | 0.0012 | 0.0032 |
| 128 | 0.0044 | 0.0012 | 0.0032 |
| 129 | 0.0045 | 0.0012 | 0.0032 |
| 130 | 0.0045 | 0.0012 | 0.0033 |
| 131 | 0.0046 | 0.0013 | 0.0033 |
| 132 | 0.0046 | 0.0013 | 0.0033 |
| 133 | 0.0047 | 0.0013 | 0.0034 |
| 134 | 0.0047 | 0.0013 | 0.0034 |
| 135 | 0.0048 | 0.0013 | 0.0035 |
| 136 | 0.0049 | 0.0013 | 0.0035 |
| 137 | 0.0050 | 0.0014 | 0.0036 |
| 138 | 0.0050 | 0.0014 | 0.0036 |
| 139 | 0.0051 | 0.0014 | 0.0037 |
| 140 | 0.0052 | 0.0014 | 0.0037 |
| 141 | 0.0053 | 0.0015 | 0.0038 |
| 142 | 0.0053 | 0.0015 | 0.0039 |
| 143 | 0.0054 | 0.0015 | 0.0039 |
| 144 | 0.0055 | 0.0015 | 0.0040 |
| 145 | 0.0053 | 0.0015 | 0.0039 |
| 146 | 0.0054 | 0.0015 | 0.0039 |
| 147 | 0.0055 | 0.0015 | 0.0040 |
| 148 | 0.0056 | 0.0015 | 0.0040 |
| 149 | 0.0057 | 0.0016 | 0.0041 |
| 150 | 0.0058 | 0.0016 | 0.0042 |
| 151 | 0.0059 | 0.0016 | 0.0043 |
| 152 | 0.0060 | 0.0017 | 0.0043 |
| 153 | 0.0062 | 0.0017 | 0.0045 |
| 154 | 0.0062 | 0.0017 | 0.0045 |
| 155 | 0.0064 | 0.0018 | 0.0046 |
| 156 | 0.0065 | 0.0018 | 0.0047 |
| 157 | 0.0067 | 0.0018 | 0.0048 |
| 158 | 0.0068 | 0.0019 | 0.0049 |
| 159 | 0.0070 | 0.0019 | 0.0051 |
| 160 | 0.0071 | 0.0020 | 0.0052 |
| 161 | 0.0074 | 0.0020 | 0.0053 |
| 162 | 0.0075 | 0.0021 | 0.0054 |
| 163 | 0.0077 | 0.0021 | 0.0056 |
| 164 | 0.0079 | 0.0022 | 0.0057 |
| 165 | 0.0082 | 0.0023 | 0.0059 |
| 166 | 0.0083 | 0.0023 | 0.0060 |
| 167 | 0.0087 | 0.0024 | 0.0063 |
| 168 | 0.0089 | 0.0024 | 0.0064 |
| 169 | 0.0093 | 0.0026 | 0.0067 |
| 170 | 0.0095 | 0.0026 | 0.0069 |
| 171 | 0.0099 | 0.0027 | 0.0072 |
| 172 | 0.0102 | 0.0028 | 0.0074 |
| 173 | 0.0107 | 0.0030 | 0.0078 |
| 174 | 0.0110 | 0.0030 | 0.0080 |
| 175 | 0.0117 | 0.0032 | 0.0085 |
| 176 | 0.0120 | 0.0033 | 0.0087 |
| 177 | 0.0129 | 0.0035 | 0.0093 |

| | | | |
|---|---|---|---|
| 178 | 0.0133 | 0.0037 | 0.0096 |
| 179 | 0.0143 | 0.0040 | 0.0104 |
| 180 | 0.0149 | 0.0041 | 0.0108 |
| 181 | 0.0162 | 0.0045 | 0.0118 |
| 182 | 0.0170 | 0.0047 | 0.0123 |
| 183 | 0.0189 | 0.0052 | 0.0137 |
| 184 | 0.0200 | 0.0055 | 0.0145 |
| 185 | 0.0327 | 0.0090 | 0.0237 |
| 186 | 0.0349 | 0.0096 | 0.0253 |
| 187 | 0.0404 | 0.0105 | 0.0299 |
| 188 | 0.0442 | 0.0105 | 0.0337 |
| 189 | 0.0549 | 0.0105 | 0.0444 |
| 190 | 0.0632 | 0.0105 | 0.0527 |
| 191 | 0.0960 | 0.0105 | 0.0855 |
| 192 | 0.1393 | 0.0105 | 0.1288 |
| 193 | 0.6026 | 0.0105 | 0.5921 |
| 194 | 0.0755 | 0.0105 | 0.0650 |
| 195 | 0.0488 | 0.0105 | 0.0383 |
| 196 | 0.0374 | 0.0103 | 0.0271 |
| 197 | 0.0212 | 0.0059 | 0.0154 |
| 198 | 0.0179 | 0.0049 | 0.0130 |
| 199 | 0.0155 | 0.0043 | 0.0113 |
| 200 | 0.0138 | 0.0038 | 0.0100 |
| 201 | 0.0124 | 0.0034 | 0.0090 |
| 202 | 0.0113 | 0.0031 | 0.0082 |
| 203 | 0.0105 | 0.0029 | 0.0076 |
| 204 | 0.0097 | 0.0027 | 0.0070 |
| 205 | 0.0091 | 0.0025 | 0.0066 |
| 206 | 0.0085 | 0.0023 | 0.0062 |
| 207 | 0.0080 | 0.0022 | 0.0058 |
| 208 | 0.0076 | 0.0021 | 0.0055 |
| 209 | 0.0072 | 0.0020 | 0.0052 |
| 210 | 0.0069 | 0.0019 | 0.0050 |
| 211 | 0.0066 | 0.0018 | 0.0048 |
| 212 | 0.0063 | 0.0017 | 0.0046 |
| 213 | 0.0061 | 0.0017 | 0.0044 |
| 214 | 0.0058 | 0.0016 | 0.0042 |
| 215 | 0.0056 | 0.0016 | 0.0041 |
| 216 | 0.0054 | 0.0015 | 0.0039 |
| 217 | 0.0055 | 0.0015 | 0.0040 |
| 218 | 0.0054 | 0.0015 | 0.0039 |
| 219 | 0.0052 | 0.0014 | 0.0038 |
| 220 | 0.0051 | 0.0014 | 0.0037 |
| 221 | 0.0049 | 0.0014 | 0.0036 |
| 222 | 0.0048 | 0.0013 | 0.0035 |
| 223 | 0.0047 | 0.0013 | 0.0034 |
| 224 | 0.0045 | 0.0013 | 0.0033 |
| 225 | 0.0044 | 0.0012 | 0.0032 |
| 226 | 0.0043 | 0.0012 | 0.0031 |
| 227 | 0.0042 | 0.0012 | 0.0031 |
| 228 | 0.0041 | 0.0011 | 0.0030 |
| 229 | 0.0040 | 0.0011 | 0.0029 |
| 230 | 0.0040 | 0.0011 | 0.0029 |
| 231 | 0.0039 | 0.0011 | 0.0028 |
| 232 | 0.0038 | 0.0010 | 0.0028 |
| 233 | 0.0037 | 0.0010 | 0.0027 |
| 234 | 0.0037 | 0.0010 | 0.0026 |
| 235 | 0.0036 | 0.0010 | 0.0026 |
| 236 | 0.0035 | 0.0010 | 0.0026 |

| | | | |
|---|---|---|---|
| 237 | 0.0035 | 0.0010 | 0.0025 |
| 238 | 0.0034 | 0.0009 | 0.0025 |
| 239 | 0.0033 | 0.0009 | 0.0024 |
| 240 | 0.0033 | 0.0009 | 0.0024 |
| 241 | 0.0032 | 0.0009 | 0.0023 |
| 242 | 0.0032 | 0.0009 | 0.0023 |
| 243 | 0.0031 | 0.0009 | 0.0023 |
| 244 | 0.0031 | 0.0009 | 0.0022 |
| 245 | 0.0030 | 0.0008 | 0.0022 |
| 246 | 0.0030 | 0.0008 | 0.0022 |
| 247 | 0.0030 | 0.0008 | 0.0021 |
| 248 | 0.0029 | 0.0008 | 0.0021 |
| 249 | 0.0029 | 0.0008 | 0.0021 |
| 250 | 0.0028 | 0.0008 | 0.0020 |
| 251 | 0.0028 | 0.0008 | 0.0020 |
| 252 | 0.0028 | 0.0008 | 0.0020 |
| 253 | 0.0027 | 0.0007 | 0.0020 |
| 254 | 0.0027 | 0.0007 | 0.0019 |
| 255 | 0.0026 | 0.0007 | 0.0019 |
| 256 | 0.0026 | 0.0007 | 0.0019 |
| 257 | 0.0026 | 0.0007 | 0.0019 |
| 258 | 0.0026 | 0.0007 | 0.0018 |
| 259 | 0.0025 | 0.0007 | 0.0018 |
| 260 | 0.0025 | 0.0007 | 0.0018 |
| 261 | 0.0025 | 0.0007 | 0.0018 |
| 262 | 0.0024 | 0.0007 | 0.0018 |
| 263 | 0.0024 | 0.0007 | 0.0017 |
| 264 | 0.0024 | 0.0007 | 0.0017 |
| 265 | 0.0024 | 0.0007 | 0.0017 |
| 266 | 0.0023 | 0.0006 | 0.0017 |
| 267 | 0.0023 | 0.0006 | 0.0017 |
| 268 | 0.0023 | 0.0006 | 0.0017 |
| 269 | 0.0023 | 0.0006 | 0.0016 |
| 270 | 0.0022 | 0.0006 | 0.0016 |
| 271 | 0.0022 | 0.0006 | 0.0016 |
| 272 | 0.0022 | 0.0006 | 0.0016 |
| 273 | 0.0022 | 0.0006 | 0.0016 |
| 274 | 0.0022 | 0.0006 | 0.0016 |
| 275 | 0.0021 | 0.0006 | 0.0015 |
| 276 | 0.0021 | 0.0006 | 0.0015 |
| 277 | 0.0021 | 0.0006 | 0.0015 |
| 278 | 0.0021 | 0.0006 | 0.0015 |
| 279 | 0.0021 | 0.0006 | 0.0015 |
| 280 | 0.0020 | 0.0006 | 0.0015 |
| 281 | 0.0020 | 0.0006 | 0.0015 |
| 282 | 0.0020 | 0.0006 | 0.0014 |
| 283 | 0.0020 | 0.0005 | 0.0014 |
| 284 | 0.0020 | 0.0005 | 0.0014 |
| 285 | 0.0019 | 0.0005 | 0.0014 |
| 286 | 0.0019 | 0.0005 | 0.0014 |
| 287 | 0.0019 | 0.0005 | 0.0014 |
| 288 | 0.0019 | 0.0005 | 0.0014 |

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Total soil rain loss = 0.46(In)
Total effective rainfall = 2.03(In)
Peak flow rate in flood hydrograph = 5.39(CFS)

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24 - H O U R  S T O R M
R u n o f f  H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 2.5 | 5.0 | 7.5 | 10.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.01 | Q | | | | |
| 0+15 | 0.0002 | 0.02 | Q | | | | |
| 0+20 | 0.0004 | 0.02 | Q | | | | |
| 0+25 | 0.0005 | 0.02 | Q | | | | |
| 0+30 | 0.0007 | 0.02 | Q | | | | |
| 0+35 | 0.0009 | 0.02 | Q | | | | |
| 0+40 | 0.0010 | 0.03 | Q | | | | |
| 0+45 | 0.0012 | 0.03 | Q | | | | |
| 0+50 | 0.0014 | 0.03 | Q | | | | |
| 0+55 | 0.0016 | 0.03 | Q | | | | |
| 1+ 0 | 0.0017 | 0.03 | Q | | | | |
| 1+ 5 | 0.0019 | 0.03 | Q | | | | |
| 1+10 | 0.0021 | 0.03 | Q | | | | |
| 1+15 | 0.0023 | 0.03 | Q | | | | |
| 1+20 | 0.0025 | 0.03 | Q | | | | |
| 1+25 | 0.0027 | 0.03 | Q | | | | |
| 1+30 | 0.0029 | 0.03 | Q | | | | |
| 1+35 | 0.0031 | 0.03 | Q | | | | |
| 1+40 | 0.0032 | 0.03 | Q | | | | |
| 1+45 | 0.0034 | 0.03 | Q | | | | |
| 1+50 | 0.0036 | 0.03 | Q | | | | |
| 1+55 | 0.0038 | 0.03 | Q | | | | |
| 2+ 0 | 0.0040 | 0.03 | Q | | | | |
| 2+ 5 | 0.0042 | 0.03 | Q | | | | |
| 2+10 | 0.0044 | 0.03 | Q | | | | |
| 2+15 | 0.0046 | 0.03 | Q | | | | |
| 2+20 | 0.0048 | 0.03 | Q | | | | |
| 2+25 | 0.0050 | 0.03 | Q | | | | |
| 2+30 | 0.0052 | 0.03 | Q | | | | |
| 2+35 | 0.0054 | 0.03 | Q | | | | |
| 2+40 | 0.0056 | 0.03 | Q | | | | |
| 2+45 | 0.0058 | 0.03 | Q | | | | |
| 2+50 | 0.0060 | 0.03 | Q | | | | |
| 2+55 | 0.0062 | 0.03 | Q | | | | |
| 3+ 0 | 0.0064 | 0.03 | Q | | | | |
| 3+ 5 | 0.0066 | 0.03 | QV | | | | |
| 3+10 | 0.0068 | 0.03 | QV | | | | |
| 3+15 | 0.0070 | 0.03 | QV | | | | |
| 3+20 | 0.0072 | 0.03 | QV | | | | |
| 3+25 | 0.0074 | 0.03 | QV | | | | |
| 3+30 | 0.0076 | 0.03 | QV | | | | |
| 3+35 | 0.0079 | 0.03 | QV | | | | |
| 3+40 | 0.0081 | 0.03 | QV | | | | |
| 3+45 | 0.0083 | 0.03 | QV | | | | |
| 3+50 | 0.0085 | 0.03 | QV | | | | |
| 3+55 | 0.0087 | 0.03 | QV | | | | |
| 4+ 0 | 0.0089 | 0.03 | QV | | | | |
| 4+ 5 | 0.0092 | 0.03 | QV | | | | |
| 4+10 | 0.0094 | 0.03 | QV | | | | |
| 4+15 | 0.0096 | 0.03 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4+20 | 0.0098 | 0.03 | QV | | | | |
| 4+25 | 0.0100 | 0.03 | QV | | | | |
| 4+30 | 0.0103 | 0.03 | QV | | | | |
| 4+35 | 0.0105 | 0.03 | QV | | | | |
| 4+40 | 0.0107 | 0.03 | QV | | | | |
| 4+45 | 0.0109 | 0.03 | QV | | | | |
| 4+50 | 0.0112 | 0.03 | QV | | | | |
| 4+55 | 0.0114 | 0.03 | QV | | | | |
| 5+ 0 | 0.0116 | 0.03 | QV | | | | |
| 5+ 5 | 0.0119 | 0.03 | QV | | | | |
| 5+10 | 0.0121 | 0.03 | QV | | | | |
| 5+15 | 0.0123 | 0.03 | QV | | | | |
| 5+20 | 0.0126 | 0.03 | QV | | | | |
| 5+25 | 0.0128 | 0.03 | QV | | | | |
| 5+30 | 0.0131 | 0.03 | QV | | | | |
| 5+35 | 0.0133 | 0.04 | Q V | | | | |
| 5+40 | 0.0135 | 0.04 | Q V | | | | |
| 5+45 | 0.0138 | 0.04 | Q V | | | | |
| 5+50 | 0.0140 | 0.04 | Q V | | | | |
| 5+55 | 0.0143 | 0.04 | Q V | | | | |
| 6+ 0 | 0.0145 | 0.04 | Q V | | | | |
| 6+ 5 | 0.0148 | 0.04 | Q V | | | | |
| 6+10 | 0.0150 | 0.04 | Q V | | | | |
| 6+15 | 0.0153 | 0.04 | Q V | | | | |
| 6+20 | 0.0155 | 0.04 | Q V | | | | |
| 6+25 | 0.0158 | 0.04 | Q V | | | | |
| 6+30 | 0.0161 | 0.04 | Q V | | | | |
| 6+35 | 0.0163 | 0.04 | Q V | | | | |
| 6+40 | 0.0166 | 0.04 | Q V | | | | |
| 6+45 | 0.0169 | 0.04 | Q V | | | | |
| 6+50 | 0.0171 | 0.04 | Q V | | | | |
| 6+55 | 0.0174 | 0.04 | Q V | | | | |
| 7+ 0 | 0.0177 | 0.04 | Q V | | | | |
| 7+ 5 | 0.0179 | 0.04 | Q V | | | | |
| 7+10 | 0.0182 | 0.04 | Q V | | | | |
| 7+15 | 0.0185 | 0.04 | Q V | | | | |
| 7+20 | 0.0188 | 0.04 | Q V | | | | |
| 7+25 | 0.0190 | 0.04 | Q V | | | | |
| 7+30 | 0.0193 | 0.04 | Q V | | | | |
| 7+35 | 0.0196 | 0.04 | Q V | | | | |
| 7+40 | 0.0199 | 0.04 | Q  V | | | | |
| 7+45 | 0.0202 | 0.04 | Q  V | | | | |
| 7+50 | 0.0205 | 0.04 | Q  V | | | | |
| 7+55 | 0.0208 | 0.04 | Q  V | | | | |
| 8+ 0 | 0.0211 | 0.04 | Q  V | | | | |
| 8+ 5 | 0.0214 | 0.04 | Q  V | | | | |
| 8+10 | 0.0217 | 0.04 | Q  V | | | | |
| 8+15 | 0.0220 | 0.04 | Q  V | | | | |
| 8+20 | 0.0223 | 0.04 | Q  V | | | | |
| 8+25 | 0.0226 | 0.04 | Q  V | | | | |
| 8+30 | 0.0229 | 0.05 | Q  V | | | | |
| 8+35 | 0.0232 | 0.05 | Q  V | | | | |
| 8+40 | 0.0235 | 0.05 | Q  V | | | | |
| 8+45 | 0.0238 | 0.05 | Q  V | | | | |
| 8+50 | 0.0242 | 0.05 | Q  V | | | | |
| 8+55 | 0.0245 | 0.05 | Q  V | | | | |
| 9+ 0 | 0.0248 | 0.05 | Q  V | | | | |
| 9+ 5 | 0.0251 | 0.05 | Q  V | | | | |
| 9+10 | 0.0255 | 0.05 | Q  V | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 9+15 | 0.0258 | 0.05 | Q | V | \| | \| | \| | \| |
| 9+20 | 0.0262 | 0.05 | Q | V | \| | \| | \| | \| |
| 9+25 | 0.0265 | 0.05 | Q | V | \| | \| | \| | \| |
| 9+30 | 0.0268 | 0.05 | Q | V | \| | \| | \| | \| |
| 9+35 | 0.0272 | 0.05 | Q | V | \| | \| | \| | \| |
| 9+40 | 0.0275 | 0.05 | Q | V | \| | \| | \| | \| |
| 9+45 | 0.0279 | 0.05 | Q | V | \| | \| | \| | \| |
| 9+50 | 0.0283 | 0.05 | Q | V | \| | \| | \| | \| |
| 9+55 | 0.0286 | 0.05 | Q | V | \| | \| | \| | \| |
| 10+ 0 | 0.0290 | 0.05 | Q | V | \| | \| | \| | \| |
| 10+ 5 | 0.0294 | 0.05 | Q | V | \| | \| | \| | \| |
| 10+10 | 0.0297 | 0.05 | Q | V | \| | \| | \| | \| |
| 10+15 | 0.0301 | 0.06 | Q | V | \| | \| | \| | \| |
| 10+20 | 0.0305 | 0.06 | Q | V | \| | \| | \| | \| |
| 10+25 | 0.0309 | 0.06 | Q | V | \| | \| | \| | \| |
| 10+30 | 0.0313 | 0.06 | Q | V | \| | \| | \| | \| |
| 10+35 | 0.0317 | 0.06 | Q | V | \| | \| | \| | \| |
| 10+40 | 0.0321 | 0.06 | Q | V | \| | \| | \| | \| |
| 10+45 | 0.0325 | 0.06 | Q | V | \| | \| | \| | \| |
| 10+50 | 0.0329 | 0.06 | Q | V | \| | \| | \| | \| |
| 10+55 | 0.0333 | 0.06 | Q | V | \| | \| | \| | \| |
| 11+ 0 | 0.0337 | 0.06 | Q | V | \| | \| | \| | \| |
| 11+ 5 | 0.0342 | 0.06 | Q | V | \| | \| | \| | \| |
| 11+10 | 0.0346 | 0.06 | Q | V | \| | \| | \| | \| |
| 11+15 | 0.0350 | 0.06 | Q | V | \| | \| | \| | \| |
| 11+20 | 0.0355 | 0.06 | Q | V | \| | \| | \| | \| |
| 11+25 | 0.0359 | 0.07 | Q | V | \| | \| | \| | \| |
| 11+30 | 0.0364 | 0.07 | Q | V | \| | \| | \| | \| |
| 11+35 | 0.0368 | 0.07 | Q | V | \| | \| | \| | \| |
| 11+40 | 0.0373 | 0.07 | Q | V | \| | \| | \| | \| |
| 11+45 | 0.0378 | 0.07 | Q | V | \| | \| | \| | \| |
| 11+50 | 0.0383 | 0.07 | Q | V | \| | \| | \| | \| |
| 11+55 | 0.0388 | 0.07 | Q | V | \| | \| | \| | \| |
| 12+ 0 | 0.0393 | 0.07 | Q | V | \| | \| | \| | \| |
| 12+ 5 | 0.0398 | 0.07 | Q | V | \| | \| | \| | \| |
| 12+10 | 0.0403 | 0.07 | Q | V | \| | \| | \| | \| |
| 12+15 | 0.0408 | 0.07 | Q | V | \| | \| | \| | \| |
| 12+20 | 0.0413 | 0.07 | Q | V | \| | \| | \| | \| |
| 12+25 | 0.0418 | 0.07 | Q | V | \| | \| | \| | \| |
| 12+30 | 0.0423 | 0.08 | Q | V | \| | \| | \| | \| |
| 12+35 | 0.0428 | 0.08 | Q | V | \| | \| | \| | \| |
| 12+40 | 0.0434 | 0.08 | Q | V | \| | \| | \| | \| |
| 12+45 | 0.0439 | 0.08 | Q | V | \| | \| | \| | \| |
| 12+50 | 0.0445 | 0.08 | Q | V | \| | \| | \| | \| |
| 12+55 | 0.0451 | 0.08 | Q | V | \| | \| | \| | \| |
| 13+ 0 | 0.0456 | 0.08 | Q | V | \| | \| | \| | \| |
| 13+ 5 | 0.0462 | 0.09 | Q | V | \| | \| | \| | \| |
| 13+10 | 0.0468 | 0.09 | Q | V | \| | \| | \| | \| |
| 13+15 | 0.0475 | 0.09 | Q | V | \| | \| | \| | \| |
| 13+20 | 0.0481 | 0.09 | Q | V | \| | \| | \| | \| |
| 13+25 | 0.0487 | 0.09 | Q | V | \| | \| | \| | \| |
| 13+30 | 0.0494 | 0.10 | Q | V | \| | \| | \| | \| |
| 13+35 | 0.0501 | 0.10 | Q | V | \| | \| | \| | \| |
| 13+40 | 0.0508 | 0.10 | Q | V | \| | \| | \| | \| |
| 13+45 | 0.0515 | 0.10 | Q | V | \| | \| | \| | \| |
| 13+50 | 0.0523 | 0.11 | Q | V | \| | \| | \| | \| |
| 13+55 | 0.0530 | 0.11 | Q | V | \| | \| | \| | \| |
| 14+ 0 | 0.0538 | 0.11 | Q | V | \| | \| | \| | \| |
| 14+ 5 | 0.0546 | 0.12 | Q | V | \| | \| | \| | \| |

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14+10       0.0554      0.12  Q       V |         |         |         |
14+15       0.0563      0.12  Q       V |         |         |         |
14+20       0.0572      0.13  Q       V |         |         |         |
14+25       0.0581      0.13  Q       V |         |         |         |
14+30       0.0590      0.14  Q        V|         |         |         |
14+35       0.0600      0.14  Q        V|         |         |         |
14+40       0.0611      0.15  Q        V|         |         |         |
14+45       0.0621      0.16  Q        V|         |         |         |
14+50       0.0633      0.16  Q        V|         |         |         |
14+55       0.0645      0.17  Q        V|         |         |         |
15+ 0       0.0657      0.18  Q         V         |         |         |
15+ 5       0.0670      0.19  Q         V         |         |         |
15+10       0.0684      0.20  Q         V         |         |         |
15+15       0.0699      0.22  Q         V         |         |         |
15+20       0.0716      0.23  Q         V         |         |         |
15+25       0.0734      0.26  |Q        |V         |         |         |
15+30       0.0757      0.34  |Q        |V         |         |         |
15+35       0.0785      0.41  |Q        |V         |         |         |
15+40       0.0817      0.47  |Q        | V        |         |         |
15+45       0.0855      0.55  | Q       |  V       |         |         |
15+50       0.0902      0.68  | Q       |  V       |         |         |
15+55       0.0961      0.85  |  Q      |   V      |         |         |
16+ 0       0.1045      1.22  |   Q     |    V     |         |         |
16+ 5       0.1204      2.31  |        Q|       V  |         |         |
16+10       0.1575      5.39  |         |          |Q  V      |         |
16+15       0.1832      3.72  |         |   Q      |      V  |         |
16+20       0.1975      2.08  |       Q |          |         V         |
16+25       0.2072      1.41  |    Q    |          |         |V        |
16+30       0.2138      0.97  |  Q      |          |         | V       |
16+35       0.2188      0.72  | Q       |          |         |  V      |
16+40       0.2225      0.54  | Q       |          |         |  V      |
16+45       0.2254      0.42  |Q        |          |         |   V     |
16+50       0.2276      0.33  |Q        |          |         |   V     |
16+55       0.2297      0.29  |Q        |          |         |    V    |
17+ 0       0.2314      0.25  |Q        |          |         |    V    |
17+ 5       0.2325      0.16  Q         |          |         |    V    |
17+10       0.2335      0.14  Q         |          |         |    V    |
17+15       0.2344      0.13  Q         |          |         |    V    |
17+20       0.2352      0.12  Q         |          |         |    V    |
17+25       0.2360      0.11  Q         |          |         |     V   |
17+30       0.2367      0.11  Q         |          |         |     V   |
17+35       0.2374      0.10  Q         |          |         |     V   |
17+40       0.2381      0.10  Q         |          |         |     V   |
17+45       0.2387      0.09  Q         |          |         |     V   |
17+50       0.2393      0.09  Q         |          |         |     V   |
17+55       0.2399      0.08  Q         |          |         |     V   |
18+ 0       0.2405      0.08  Q         |          |         |     V   |
18+ 5       0.2410      0.08  Q         |          |         |     V   |
18+10       0.2415      0.08  Q         |          |         |     V   |
18+15       0.2421      0.08  Q         |          |         |     V   |
18+20       0.2426      0.07  Q         |          |         |      V  |
18+25       0.2431      0.07  Q         |          |         |      V  |
18+30       0.2435      0.07  Q         |          |         |      V  |
18+35       0.2440      0.07  Q         |          |         |      V  |
18+40       0.2444      0.07  Q         |          |         |      V  |
18+45       0.2449      0.06  Q         |          |         |      V  |
18+50       0.2453      0.06  Q         |          |         |      V  |
18+55       0.2457      0.06  Q         |          |         |      V  |
19+ 0       0.2461      0.06  Q         |          |         |      V  |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 19+ 5 | 0.2465 | 0.06 | Q | \| | \| | \| | V \| |
| 19+10 | 0.2469 | 0.06 | Q | \| | \| | \| | V \| |
| 19+15 | 0.2473 | 0.06 | Q | \| | \| | \| | V \| |
| 19+20 | 0.2477 | 0.05 | Q | \| | \| | \| | V \| |
| 19+25 | 0.2481 | 0.05 | Q | \| | \| | \| | V \| |
| 19+30 | 0.2484 | 0.05 | Q | \| | \| | \| | V \| |
| 19+35 | 0.2488 | 0.05 | Q | \| | \| | \| | V \| |
| 19+40 | 0.2491 | 0.05 | Q | \| | \| | \| | V \| |
| 19+45 | 0.2494 | 0.05 | Q | \| | \| | \| | V \| |
| 19+50 | 0.2498 | 0.05 | Q | \| | \| | \| | V \| |
| 19+55 | 0.2501 | 0.05 | Q | \| | \| | \| | V \| |
| 20+ 0 | 0.2504 | 0.05 | Q | \| | \| | \| | V \| |
| 20+ 5 | 0.2507 | 0.05 | Q | \| | \| | \| | V \| |
| 20+10 | 0.2510 | 0.04 | Q | \| | \| | \| | V \| |
| 20+15 | 0.2514 | 0.04 | Q | \| | \| | \| | V \| |
| 20+20 | 0.2517 | 0.04 | Q | \| | \| | \| | V \| |
| 20+25 | 0.2519 | 0.04 | Q | \| | \| | \| | V \| |
| 20+30 | 0.2522 | 0.04 | Q | \| | \| | \| | V \| |
| 20+35 | 0.2525 | 0.04 | Q | \| | \| | \| | V \| |
| 20+40 | 0.2528 | 0.04 | Q | \| | \| | \| | V \| |
| 20+45 | 0.2531 | 0.04 | Q | \| | \| | \| | V \| |
| 20+50 | 0.2534 | 0.04 | Q | \| | \| | \| | V \| |
| 20+55 | 0.2536 | 0.04 | Q | \| | \| | \| | V \| |
| 21+ 0 | 0.2539 | 0.04 | Q | \| | \| | \| | V \| |
| 21+ 5 | 0.2542 | 0.04 | Q | \| | \| | \| | V \| |
| 21+10 | 0.2544 | 0.04 | Q | \| | \| | \| | V \| |
| 21+15 | 0.2547 | 0.04 | Q | \| | \| | \| | V \| |
| 21+20 | 0.2549 | 0.04 | Q | \| | \| | \| | V \| |
| 21+25 | 0.2552 | 0.04 | Q | \| | \| | \| | V \| |
| 21+30 | 0.2554 | 0.04 | Q | \| | \| | \| | V \| |
| 21+35 | 0.2557 | 0.04 | Q | \| | \| | \| | V\| |
| 21+40 | 0.2559 | 0.03 | Q | \| | \| | \| | V\| |
| 21+45 | 0.2561 | 0.03 | Q | \| | \| | \| | V\| |
| 21+50 | 0.2564 | 0.03 | Q | \| | \| | \| | V\| |
| 21+55 | 0.2566 | 0.03 | Q | \| | \| | \| | V\| |
| 22+ 0 | 0.2568 | 0.03 | Q | \| | \| | \| | V\| |
| 22+ 5 | 0.2571 | 0.03 | Q | \| | \| | \| | V\| |
| 22+10 | 0.2573 | 0.03 | Q | \| | \| | \| | V\| |
| 22+15 | 0.2575 | 0.03 | Q | \| | \| | \| | V\| |
| 22+20 | 0.2577 | 0.03 | Q | \| | \| | \| | V\| |
| 22+25 | 0.2579 | 0.03 | Q | \| | \| | \| | V\| |
| 22+30 | 0.2581 | 0.03 | Q | \| | \| | \| | V\| |
| 22+35 | 0.2584 | 0.03 | Q | \| | \| | \| | V\| |
| 22+40 | 0.2586 | 0.03 | Q | \| | \| | \| | V\| |
| 22+45 | 0.2588 | 0.03 | Q | \| | \| | \| | V\| |
| 22+50 | 0.2590 | 0.03 | Q | \| | \| | \| | V\| |
| 22+55 | 0.2592 | 0.03 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.2594 | 0.03 | Q | \| | \| | \| | V\| |
| 23+ 5 | 0.2596 | 0.03 | Q | \| | \| | \| | V\| |
| 23+10 | 0.2598 | 0.03 | Q | \| | \| | \| | V\| |
| 23+15 | 0.2600 | 0.03 | Q | \| | \| | \| | V\| |
| 23+20 | 0.2602 | 0.03 | Q | \| | \| | \| | V\| |
| 23+25 | 0.2604 | 0.03 | Q | \| | \| | \| | V\| |
| 23+30 | 0.2606 | 0.03 | Q | \| | \| | \| | V\| |
| 23+35 | 0.2607 | 0.03 | Q | \| | \| | \| | V\| |
| 23+40 | 0.2609 | 0.03 | Q | \| | \| | \| | V\| |
| 23+45 | 0.2611 | 0.03 | Q | \| | \| | \| | V\| |
| 23+50 | 0.2613 | 0.03 | Q | \| | \| | \| | V\| |
| 23+55 | 0.2615 | 0.03 | Q | \| | \| | \| | V\| |

```
   24+ 0       0.2617      0.03  Q         |          |         |        V|
   24+ 5       0.2618      0.02  Q         |          |         |        V|
   24+10       0.2619      0.01  Q         |          |         |        V|
   24+15       0.2620      0.01  Q         |          |         |        V|
   24+20       0.2620      0.00  Q         |          |         |        V|
   24+25       0.2620      0.00  Q         |          |         |        V|
   24+30       0.2621      0.00  Q         |          |         |        V|
   24+35       0.2621      0.00  Q         |          |         |        V|
   24+40       0.2621      0.00  Q         |          |         |        V|
   24+45       0.2621      0.00  Q         |          |         |        V|
   24+50       0.2621      0.00  Q         |          |         |        V|
   24+55       0.2621      0.00  Q         |          |         |         V
-------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 3
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 4.92 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 4.92 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 4.92 | 24 | 2.48 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.0 | 92.8 | 4.92 | 1.000 | 0.140 | 0.900 | 0.126 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.126

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 4.43 | 0.900 | 78.0 | 92.8 | 0.78 | 0.703 |
| 0.49 | 0.100 | 98.0 | 98.0 | 0.20 | 0.908 |

Area-averaged catchment yield fraction, Y = 0.723
Area-averaged low loss fraction, Yb = 0.277
User entry of time of concentration = 0.250 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 4.92(Ac.)
Catchment Lag time = 0.200 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 41.6667
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.126(In/Hr)
Average low loss rate fraction (Yb) = 0.277 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.480(In)

Rainfall depth area reduction factors:
Using a total area of 4.92(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.602(In)
30-minute factor = 1.000 Adjusted rainfall = 1.031(In)
1-hour factor = 1.000 Adjusted rainfall = 1.270(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.480(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 59.50 (CFS)) | |
| 1 | 2.935 | 1.746 |
| 2 | 20.613 | 10.519 |
| 3 | 51.467 | 18.358 |
| 4 | 67.222 | 9.374 |
| 5 | 76.108 | 5.288 |
| 6 | 81.970 | 3.488 |
| 7 | 86.247 | 2.545 |
| 8 | 89.430 | 1.894 |
| 9 | 91.773 | 1.394 |
| 10 | 93.683 | 1.136 |
| 11 | 95.168 | 0.884 |
| 12 | 96.358 | 0.708 |
| 13 | 97.275 | 0.545 |

| | | |
|---|---|---|
| 14 | 97.918 | 0.383 |
| 15 | 98.357 | 0.261 |
| 16 | 98.850 | 0.294 |
| 17 | 99.345 | 0.295 |
| 18 | 99.682 | 0.201 |
| 19 | 100.000 | 0.189 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6025 | 0.6025 |
| 2 | 0.7418 | 0.1393 |
| 3 | 0.8377 | 0.0959 |
| 4 | 0.9132 | 0.0755 |
| 5 | 0.9764 | 0.0632 |
| 6 | 1.0313 | 0.0549 |
| 7 | 1.0801 | 0.0488 |
| 8 | 1.1243 | 0.0441 |
| 9 | 1.1647 | 0.0404 |
| 10 | 1.2021 | 0.0374 |
| 11 | 1.2370 | 0.0349 |
| 12 | 1.2697 | 0.0327 |
| 13 | 1.2909 | 0.0212 |
| 14 | 1.3109 | 0.0200 |
| 15 | 1.3298 | 0.0189 |
| 16 | 1.3477 | 0.0179 |
| 17 | 1.3647 | 0.0170 |
| 18 | 1.3809 | 0.0163 |
| 19 | 1.3965 | 0.0155 |
| 20 | 1.4114 | 0.0149 |
| 21 | 1.4257 | 0.0143 |
| 22 | 1.4395 | 0.0138 |
| 23 | 1.4528 | 0.0133 |
| 24 | 1.4657 | 0.0129 |
| 25 | 1.4782 | 0.0124 |
| 26 | 1.4902 | 0.0121 |
| 27 | 1.5019 | 0.0117 |
| 28 | 1.5133 | 0.0114 |
| 29 | 1.5243 | 0.0110 |
| 30 | 1.5350 | 0.0107 |
| 31 | 1.5455 | 0.0105 |
| 32 | 1.5557 | 0.0102 |
| 33 | 1.5656 | 0.0099 |
| 34 | 1.5753 | 0.0097 |
| 35 | 1.5848 | 0.0095 |
| 36 | 1.5941 | 0.0093 |
| 37 | 1.6032 | 0.0091 |
| 38 | 1.6120 | 0.0089 |
| 39 | 1.6207 | 0.0087 |
| 40 | 1.6292 | 0.0085 |
| 41 | 1.6376 | 0.0083 |
| 42 | 1.6458 | 0.0082 |
| 43 | 1.6538 | 0.0080 |
| 44 | 1.6617 | 0.0079 |
| 45 | 1.6694 | 0.0077 |
| 46 | 1.6771 | 0.0076 |
| 47 | 1.6845 | 0.0075 |
| 48 | 1.6919 | 0.0074 |
| 49 | 1.6991 | 0.0072 |
| 50 | 1.7062 | 0.0071 |

| | | |
|---|---|---|
| 51 | 1.7132 | 0.0070 |
| 52 | 1.7201 | 0.0069 |
| 53 | 1.7269 | 0.0068 |
| 54 | 1.7336 | 0.0067 |
| 55 | 1.7402 | 0.0066 |
| 56 | 1.7467 | 0.0065 |
| 57 | 1.7531 | 0.0064 |
| 58 | 1.7595 | 0.0063 |
| 59 | 1.7657 | 0.0062 |
| 60 | 1.7718 | 0.0062 |
| 61 | 1.7779 | 0.0061 |
| 62 | 1.7839 | 0.0060 |
| 63 | 1.7898 | 0.0059 |
| 64 | 1.7957 | 0.0058 |
| 65 | 1.8014 | 0.0058 |
| 66 | 1.8071 | 0.0057 |
| 67 | 1.8128 | 0.0056 |
| 68 | 1.8183 | 0.0056 |
| 69 | 1.8238 | 0.0055 |
| 70 | 1.8293 | 0.0054 |
| 71 | 1.8347 | 0.0054 |
| 72 | 1.8400 | 0.0053 |
| 73 | 1.8454 | 0.0055 |
| 74 | 1.8509 | 0.0054 |
| 75 | 1.8562 | 0.0054 |
| 76 | 1.8615 | 0.0053 |
| 77 | 1.8668 | 0.0052 |
| 78 | 1.8720 | 0.0052 |
| 79 | 1.8771 | 0.0051 |
| 80 | 1.8822 | 0.0051 |
| 81 | 1.8872 | 0.0050 |
| 82 | 1.8922 | 0.0050 |
| 83 | 1.8972 | 0.0049 |
| 84 | 1.9021 | 0.0049 |
| 85 | 1.9069 | 0.0049 |
| 86 | 1.9117 | 0.0048 |
| 87 | 1.9165 | 0.0048 |
| 88 | 1.9212 | 0.0047 |
| 89 | 1.9259 | 0.0047 |
| 90 | 1.9305 | 0.0046 |
| 91 | 1.9351 | 0.0046 |
| 92 | 1.9397 | 0.0046 |
| 93 | 1.9442 | 0.0045 |
| 94 | 1.9487 | 0.0045 |
| 95 | 1.9531 | 0.0044 |
| 96 | 1.9576 | 0.0044 |
| 97 | 1.9619 | 0.0044 |
| 98 | 1.9663 | 0.0043 |
| 99 | 1.9706 | 0.0043 |
| 100 | 1.9748 | 0.0043 |
| 101 | 1.9791 | 0.0042 |
| 102 | 1.9833 | 0.0042 |
| 103 | 1.9874 | 0.0042 |
| 104 | 1.9916 | 0.0041 |
| 105 | 1.9957 | 0.0041 |
| 106 | 1.9998 | 0.0041 |
| 107 | 2.0038 | 0.0040 |
| 108 | 2.0078 | 0.0040 |
| 109 | 2.0118 | 0.0040 |

| | | |
|---|---|---|
| 110 | 2.0158 | 0.0040 |
| 111 | 2.0197 | 0.0039 |
| 112 | 2.0236 | 0.0039 |
| 113 | 2.0275 | 0.0039 |
| 114 | 2.0313 | 0.0039 |
| 115 | 2.0352 | 0.0038 |
| 116 | 2.0390 | 0.0038 |
| 117 | 2.0427 | 0.0038 |
| 118 | 2.0465 | 0.0037 |
| 119 | 2.0502 | 0.0037 |
| 120 | 2.0539 | 0.0037 |
| 121 | 2.0576 | 0.0037 |
| 122 | 2.0612 | 0.0036 |
| 123 | 2.0649 | 0.0036 |
| 124 | 2.0685 | 0.0036 |
| 125 | 2.0720 | 0.0036 |
| 126 | 2.0756 | 0.0036 |
| 127 | 2.0791 | 0.0035 |
| 128 | 2.0826 | 0.0035 |
| 129 | 2.0861 | 0.0035 |
| 130 | 2.0896 | 0.0035 |
| 131 | 2.0931 | 0.0035 |
| 132 | 2.0965 | 0.0034 |
| 133 | 2.0999 | 0.0034 |
| 134 | 2.1033 | 0.0034 |
| 135 | 2.1067 | 0.0034 |
| 136 | 2.1100 | 0.0034 |
| 137 | 2.1133 | 0.0033 |
| 138 | 2.1167 | 0.0033 |
| 139 | 2.1199 | 0.0033 |
| 140 | 2.1232 | 0.0033 |
| 141 | 2.1265 | 0.0033 |
| 142 | 2.1297 | 0.0032 |
| 143 | 2.1329 | 0.0032 |
| 144 | 2.1361 | 0.0032 |
| 145 | 2.1393 | 0.0032 |
| 146 | 2.1425 | 0.0032 |
| 147 | 2.1456 | 0.0032 |
| 148 | 2.1488 | 0.0031 |
| 149 | 2.1519 | 0.0031 |
| 150 | 2.1550 | 0.0031 |
| 151 | 2.1581 | 0.0031 |
| 152 | 2.1612 | 0.0031 |
| 153 | 2.1642 | 0.0031 |
| 154 | 2.1672 | 0.0030 |
| 155 | 2.1703 | 0.0030 |
| 156 | 2.1733 | 0.0030 |
| 157 | 2.1763 | 0.0030 |
| 158 | 2.1792 | 0.0030 |
| 159 | 2.1822 | 0.0030 |
| 160 | 2.1852 | 0.0029 |
| 161 | 2.1881 | 0.0029 |
| 162 | 2.1910 | 0.0029 |
| 163 | 2.1939 | 0.0029 |
| 164 | 2.1968 | 0.0029 |
| 165 | 2.1997 | 0.0029 |
| 166 | 2.2025 | 0.0029 |
| 167 | 2.2054 | 0.0029 |
| 168 | 2.2082 | 0.0028 |

| | | |
|---|---|---|
| 169 | 2.2111 | 0.0028 |
| 170 | 2.2139 | 0.0028 |
| 171 | 2.2167 | 0.0028 |
| 172 | 2.2195 | 0.0028 |
| 173 | 2.2222 | 0.0028 |
| 174 | 2.2250 | 0.0028 |
| 175 | 2.2277 | 0.0027 |
| 176 | 2.2305 | 0.0027 |
| 177 | 2.2332 | 0.0027 |
| 178 | 2.2359 | 0.0027 |
| 179 | 2.2386 | 0.0027 |
| 180 | 2.2413 | 0.0027 |
| 181 | 2.2440 | 0.0027 |
| 182 | 2.2466 | 0.0027 |
| 183 | 2.2493 | 0.0027 |
| 184 | 2.2519 | 0.0026 |
| 185 | 2.2545 | 0.0026 |
| 186 | 2.2572 | 0.0026 |
| 187 | 2.2598 | 0.0026 |
| 188 | 2.2624 | 0.0026 |
| 189 | 2.2650 | 0.0026 |
| 190 | 2.2675 | 0.0026 |
| 191 | 2.2701 | 0.0026 |
| 192 | 2.2726 | 0.0026 |
| 193 | 2.2752 | 0.0025 |
| 194 | 2.2777 | 0.0025 |
| 195 | 2.2802 | 0.0025 |
| 196 | 2.2828 | 0.0025 |
| 197 | 2.2853 | 0.0025 |
| 198 | 2.2878 | 0.0025 |
| 199 | 2.2902 | 0.0025 |
| 200 | 2.2927 | 0.0025 |
| 201 | 2.2952 | 0.0025 |
| 202 | 2.2976 | 0.0025 |
| 203 | 2.3001 | 0.0024 |
| 204 | 2.3025 | 0.0024 |
| 205 | 2.3049 | 0.0024 |
| 206 | 2.3074 | 0.0024 |
| 207 | 2.3098 | 0.0024 |
| 208 | 2.3122 | 0.0024 |
| 209 | 2.3145 | 0.0024 |
| 210 | 2.3169 | 0.0024 |
| 211 | 2.3193 | 0.0024 |
| 212 | 2.3217 | 0.0024 |
| 213 | 2.3240 | 0.0024 |
| 214 | 2.3264 | 0.0023 |
| 215 | 2.3287 | 0.0023 |
| 216 | 2.3310 | 0.0023 |
| 217 | 2.3333 | 0.0023 |
| 218 | 2.3357 | 0.0023 |
| 219 | 2.3380 | 0.0023 |
| 220 | 2.3403 | 0.0023 |
| 221 | 2.3425 | 0.0023 |
| 222 | 2.3448 | 0.0023 |
| 223 | 2.3471 | 0.0023 |
| 224 | 2.3493 | 0.0023 |
| 225 | 2.3516 | 0.0023 |
| 226 | 2.3539 | 0.0022 |
| 227 | 2.3561 | 0.0022 |

| | | |
|---|---|---|
| 228 | 2.3583 | 0.0022 |
| 229 | 2.3605 | 0.0022 |
| 230 | 2.3628 | 0.0022 |
| 231 | 2.3650 | 0.0022 |
| 232 | 2.3672 | 0.0022 |
| 233 | 2.3694 | 0.0022 |
| 234 | 2.3715 | 0.0022 |
| 235 | 2.3737 | 0.0022 |
| 236 | 2.3759 | 0.0022 |
| 237 | 2.3781 | 0.0022 |
| 238 | 2.3802 | 0.0022 |
| 239 | 2.3824 | 0.0021 |
| 240 | 2.3845 | 0.0021 |
| 241 | 2.3866 | 0.0021 |
| 242 | 2.3888 | 0.0021 |
| 243 | 2.3909 | 0.0021 |
| 244 | 2.3930 | 0.0021 |
| 245 | 2.3951 | 0.0021 |
| 246 | 2.3972 | 0.0021 |
| 247 | 2.3993 | 0.0021 |
| 248 | 2.4014 | 0.0021 |
| 249 | 2.4035 | 0.0021 |
| 250 | 2.4056 | 0.0021 |
| 251 | 2.4076 | 0.0021 |
| 252 | 2.4097 | 0.0021 |
| 253 | 2.4118 | 0.0021 |
| 254 | 2.4138 | 0.0020 |
| 255 | 2.4158 | 0.0020 |
| 256 | 2.4179 | 0.0020 |
| 257 | 2.4199 | 0.0020 |
| 258 | 2.4219 | 0.0020 |
| 259 | 2.4240 | 0.0020 |
| 260 | 2.4260 | 0.0020 |
| 261 | 2.4280 | 0.0020 |
| 262 | 2.4300 | 0.0020 |
| 263 | 2.4320 | 0.0020 |
| 264 | 2.4340 | 0.0020 |
| 265 | 2.4359 | 0.0020 |
| 266 | 2.4379 | 0.0020 |
| 267 | 2.4399 | 0.0020 |
| 268 | 2.4418 | 0.0020 |
| 269 | 2.4438 | 0.0020 |
| 270 | 2.4458 | 0.0020 |
| 271 | 2.4477 | 0.0019 |
| 272 | 2.4496 | 0.0019 |
| 273 | 2.4516 | 0.0019 |
| 274 | 2.4535 | 0.0019 |
| 275 | 2.4554 | 0.0019 |
| 276 | 2.4574 | 0.0019 |
| 277 | 2.4593 | 0.0019 |
| 278 | 2.4612 | 0.0019 |
| 279 | 2.4631 | 0.0019 |
| 280 | 2.4650 | 0.0019 |
| 281 | 2.4669 | 0.0019 |
| 282 | 2.4688 | 0.0019 |
| 283 | 2.4707 | 0.0019 |
| 284 | 2.4725 | 0.0019 |
| 285 | 2.4744 | 0.0019 |
| 286 | 2.4763 | 0.0019 |

| | | |
|---|---|---|
| 287 | 2.4781 | 0.0019 |
| 288 | 2.4800 | 0.0019 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0019 | 0.0005 | 0.0013 |
| 2 | 0.0019 | 0.0005 | 0.0013 |
| 3 | 0.0019 | 0.0005 | 0.0014 |
| 4 | 0.0019 | 0.0005 | 0.0014 |
| 5 | 0.0019 | 0.0005 | 0.0014 |
| 6 | 0.0019 | 0.0005 | 0.0014 |
| 7 | 0.0019 | 0.0005 | 0.0014 |
| 8 | 0.0019 | 0.0005 | 0.0014 |
| 9 | 0.0019 | 0.0005 | 0.0014 |
| 10 | 0.0019 | 0.0005 | 0.0014 |
| 11 | 0.0019 | 0.0005 | 0.0014 |
| 12 | 0.0019 | 0.0005 | 0.0014 |
| 13 | 0.0020 | 0.0005 | 0.0014 |
| 14 | 0.0020 | 0.0005 | 0.0014 |
| 15 | 0.0020 | 0.0005 | 0.0014 |
| 16 | 0.0020 | 0.0005 | 0.0014 |
| 17 | 0.0020 | 0.0006 | 0.0014 |
| 18 | 0.0020 | 0.0006 | 0.0014 |
| 19 | 0.0020 | 0.0006 | 0.0015 |
| 20 | 0.0020 | 0.0006 | 0.0015 |
| 21 | 0.0020 | 0.0006 | 0.0015 |
| 22 | 0.0020 | 0.0006 | 0.0015 |
| 23 | 0.0020 | 0.0006 | 0.0015 |
| 24 | 0.0020 | 0.0006 | 0.0015 |
| 25 | 0.0021 | 0.0006 | 0.0015 |
| 26 | 0.0021 | 0.0006 | 0.0015 |
| 27 | 0.0021 | 0.0006 | 0.0015 |
| 28 | 0.0021 | 0.0006 | 0.0015 |
| 29 | 0.0021 | 0.0006 | 0.0015 |
| 30 | 0.0021 | 0.0006 | 0.0015 |
| 31 | 0.0021 | 0.0006 | 0.0015 |
| 32 | 0.0021 | 0.0006 | 0.0015 |
| 33 | 0.0021 | 0.0006 | 0.0016 |
| 34 | 0.0021 | 0.0006 | 0.0016 |
| 35 | 0.0022 | 0.0006 | 0.0016 |
| 36 | 0.0022 | 0.0006 | 0.0016 |
| 37 | 0.0022 | 0.0006 | 0.0016 |
| 38 | 0.0022 | 0.0006 | 0.0016 |
| 39 | 0.0022 | 0.0006 | 0.0016 |
| 40 | 0.0022 | 0.0006 | 0.0016 |
| 41 | 0.0022 | 0.0006 | 0.0016 |
| 42 | 0.0022 | 0.0006 | 0.0016 |
| 43 | 0.0023 | 0.0006 | 0.0016 |
| 44 | 0.0023 | 0.0006 | 0.0016 |
| 45 | 0.0023 | 0.0006 | 0.0016 |
| 46 | 0.0023 | 0.0006 | 0.0017 |
| 47 | 0.0023 | 0.0006 | 0.0017 |
| 48 | 0.0023 | 0.0006 | 0.0017 |
| 49 | 0.0023 | 0.0006 | 0.0017 |
| 50 | 0.0023 | 0.0006 | 0.0017 |
| 51 | 0.0024 | 0.0007 | 0.0017 |
| 52 | 0.0024 | 0.0007 | 0.0017 |

| | | | |
|---|---|---|---|
| 53 | 0.0024 | 0.0007 | 0.0017 |
| 54 | 0.0024 | 0.0007 | 0.0017 |
| 55 | 0.0024 | 0.0007 | 0.0017 |
| 56 | 0.0024 | 0.0007 | 0.0017 |
| 57 | 0.0024 | 0.0007 | 0.0018 |
| 58 | 0.0024 | 0.0007 | 0.0018 |
| 59 | 0.0025 | 0.0007 | 0.0018 |
| 60 | 0.0025 | 0.0007 | 0.0018 |
| 61 | 0.0025 | 0.0007 | 0.0018 |
| 62 | 0.0025 | 0.0007 | 0.0018 |
| 63 | 0.0025 | 0.0007 | 0.0018 |
| 64 | 0.0025 | 0.0007 | 0.0018 |
| 65 | 0.0026 | 0.0007 | 0.0018 |
| 66 | 0.0026 | 0.0007 | 0.0019 |
| 67 | 0.0026 | 0.0007 | 0.0019 |
| 68 | 0.0026 | 0.0007 | 0.0019 |
| 69 | 0.0026 | 0.0007 | 0.0019 |
| 70 | 0.0026 | 0.0007 | 0.0019 |
| 71 | 0.0027 | 0.0007 | 0.0019 |
| 72 | 0.0027 | 0.0007 | 0.0019 |
| 73 | 0.0027 | 0.0007 | 0.0019 |
| 74 | 0.0027 | 0.0007 | 0.0020 |
| 75 | 0.0027 | 0.0008 | 0.0020 |
| 76 | 0.0027 | 0.0008 | 0.0020 |
| 77 | 0.0028 | 0.0008 | 0.0020 |
| 78 | 0.0028 | 0.0008 | 0.0020 |
| 79 | 0.0028 | 0.0008 | 0.0020 |
| 80 | 0.0028 | 0.0008 | 0.0020 |
| 81 | 0.0028 | 0.0008 | 0.0021 |
| 82 | 0.0029 | 0.0008 | 0.0021 |
| 83 | 0.0029 | 0.0008 | 0.0021 |
| 84 | 0.0029 | 0.0008 | 0.0021 |
| 85 | 0.0029 | 0.0008 | 0.0021 |
| 86 | 0.0029 | 0.0008 | 0.0021 |
| 87 | 0.0030 | 0.0008 | 0.0021 |
| 88 | 0.0030 | 0.0008 | 0.0022 |
| 89 | 0.0030 | 0.0008 | 0.0022 |
| 90 | 0.0030 | 0.0008 | 0.0022 |
| 91 | 0.0031 | 0.0008 | 0.0022 |
| 92 | 0.0031 | 0.0008 | 0.0022 |
| 93 | 0.0031 | 0.0009 | 0.0022 |
| 94 | 0.0031 | 0.0009 | 0.0023 |
| 95 | 0.0032 | 0.0009 | 0.0023 |
| 96 | 0.0032 | 0.0009 | 0.0023 |
| 97 | 0.0032 | 0.0009 | 0.0023 |
| 98 | 0.0032 | 0.0009 | 0.0023 |
| 99 | 0.0033 | 0.0009 | 0.0024 |
| 100 | 0.0033 | 0.0009 | 0.0024 |
| 101 | 0.0033 | 0.0009 | 0.0024 |
| 102 | 0.0033 | 0.0009 | 0.0024 |
| 103 | 0.0034 | 0.0009 | 0.0024 |
| 104 | 0.0034 | 0.0009 | 0.0025 |
| 105 | 0.0034 | 0.0009 | 0.0025 |
| 106 | 0.0035 | 0.0010 | 0.0025 |
| 107 | 0.0035 | 0.0010 | 0.0025 |
| 108 | 0.0035 | 0.0010 | 0.0025 |
| 109 | 0.0036 | 0.0010 | 0.0026 |
| 110 | 0.0036 | 0.0010 | 0.0026 |
| 111 | 0.0036 | 0.0010 | 0.0026 |

| | | | |
|---|---|---|---|
| 112 | 0.0036 | 0.0010 | 0.0026 |
| 113 | 0.0037 | 0.0010 | 0.0027 |
| 114 | 0.0037 | 0.0010 | 0.0027 |
| 115 | 0.0038 | 0.0010 | 0.0027 |
| 116 | 0.0038 | 0.0011 | 0.0027 |
| 117 | 0.0039 | 0.0011 | 0.0028 |
| 118 | 0.0039 | 0.0011 | 0.0028 |
| 119 | 0.0039 | 0.0011 | 0.0028 |
| 120 | 0.0040 | 0.0011 | 0.0029 |
| 121 | 0.0040 | 0.0011 | 0.0029 |
| 122 | 0.0040 | 0.0011 | 0.0029 |
| 123 | 0.0041 | 0.0011 | 0.0030 |
| 124 | 0.0041 | 0.0011 | 0.0030 |
| 125 | 0.0042 | 0.0012 | 0.0030 |
| 126 | 0.0042 | 0.0012 | 0.0031 |
| 127 | 0.0043 | 0.0012 | 0.0031 |
| 128 | 0.0043 | 0.0012 | 0.0031 |
| 129 | 0.0044 | 0.0012 | 0.0032 |
| 130 | 0.0044 | 0.0012 | 0.0032 |
| 131 | 0.0045 | 0.0013 | 0.0033 |
| 132 | 0.0046 | 0.0013 | 0.0033 |
| 133 | 0.0046 | 0.0013 | 0.0034 |
| 134 | 0.0047 | 0.0013 | 0.0034 |
| 135 | 0.0048 | 0.0013 | 0.0034 |
| 136 | 0.0048 | 0.0013 | 0.0035 |
| 137 | 0.0049 | 0.0014 | 0.0035 |
| 138 | 0.0049 | 0.0014 | 0.0036 |
| 139 | 0.0050 | 0.0014 | 0.0036 |
| 140 | 0.0051 | 0.0014 | 0.0037 |
| 141 | 0.0052 | 0.0014 | 0.0038 |
| 142 | 0.0052 | 0.0015 | 0.0038 |
| 143 | 0.0054 | 0.0015 | 0.0039 |
| 144 | 0.0054 | 0.0015 | 0.0039 |
| 145 | 0.0053 | 0.0015 | 0.0038 |
| 146 | 0.0054 | 0.0015 | 0.0039 |
| 147 | 0.0055 | 0.0015 | 0.0040 |
| 148 | 0.0056 | 0.0015 | 0.0040 |
| 149 | 0.0057 | 0.0016 | 0.0041 |
| 150 | 0.0058 | 0.0016 | 0.0042 |
| 151 | 0.0059 | 0.0016 | 0.0043 |
| 152 | 0.0060 | 0.0017 | 0.0043 |
| 153 | 0.0062 | 0.0017 | 0.0044 |
| 154 | 0.0062 | 0.0017 | 0.0045 |
| 155 | 0.0064 | 0.0018 | 0.0046 |
| 156 | 0.0065 | 0.0018 | 0.0047 |
| 157 | 0.0067 | 0.0019 | 0.0048 |
| 158 | 0.0068 | 0.0019 | 0.0049 |
| 159 | 0.0070 | 0.0019 | 0.0051 |
| 160 | 0.0071 | 0.0020 | 0.0051 |
| 161 | 0.0074 | 0.0020 | 0.0053 |
| 162 | 0.0075 | 0.0021 | 0.0054 |
| 163 | 0.0077 | 0.0021 | 0.0056 |
| 164 | 0.0079 | 0.0022 | 0.0057 |
| 165 | 0.0082 | 0.0023 | 0.0059 |
| 166 | 0.0083 | 0.0023 | 0.0060 |
| 167 | 0.0087 | 0.0024 | 0.0063 |
| 168 | 0.0089 | 0.0025 | 0.0064 |
| 169 | 0.0093 | 0.0026 | 0.0067 |
| 170 | 0.0095 | 0.0026 | 0.0069 |

| | | | |
|---|---|---|---|
| 171 | 0.0099 | 0.0028 | 0.0072 |
| 172 | 0.0102 | 0.0028 | 0.0074 |
| 173 | 0.0107 | 0.0030 | 0.0078 |
| 174 | 0.0110 | 0.0031 | 0.0080 |
| 175 | 0.0117 | 0.0032 | 0.0085 |
| 176 | 0.0121 | 0.0033 | 0.0087 |
| 177 | 0.0129 | 0.0036 | 0.0093 |
| 178 | 0.0133 | 0.0037 | 0.0096 |
| 179 | 0.0143 | 0.0040 | 0.0104 |
| 180 | 0.0149 | 0.0041 | 0.0108 |
| 181 | 0.0163 | 0.0045 | 0.0118 |
| 182 | 0.0170 | 0.0047 | 0.0123 |
| 183 | 0.0189 | 0.0052 | 0.0136 |
| 184 | 0.0200 | 0.0055 | 0.0144 |
| 185 | 0.0327 | 0.0091 | 0.0237 |
| 186 | 0.0349 | 0.0096 | 0.0252 |
| 187 | 0.0404 | 0.0105 | 0.0299 |
| 188 | 0.0441 | 0.0105 | 0.0336 |
| 189 | 0.0549 | 0.0105 | 0.0444 |
| 190 | 0.0632 | 0.0105 | 0.0527 |
| 191 | 0.0959 | 0.0105 | 0.0854 |
| 192 | 0.1393 | 0.0105 | 0.1288 |
| 193 | 0.6025 | 0.0105 | 0.5920 |
| 194 | 0.0755 | 0.0105 | 0.0650 |
| 195 | 0.0488 | 0.0105 | 0.0383 |
| 196 | 0.0374 | 0.0103 | 0.0271 |
| 197 | 0.0212 | 0.0059 | 0.0154 |
| 198 | 0.0179 | 0.0050 | 0.0129 |
| 199 | 0.0155 | 0.0043 | 0.0112 |
| 200 | 0.0138 | 0.0038 | 0.0100 |
| 201 | 0.0124 | 0.0034 | 0.0090 |
| 202 | 0.0114 | 0.0031 | 0.0082 |
| 203 | 0.0105 | 0.0029 | 0.0076 |
| 204 | 0.0097 | 0.0027 | 0.0070 |
| 205 | 0.0091 | 0.0025 | 0.0066 |
| 206 | 0.0085 | 0.0024 | 0.0062 |
| 207 | 0.0080 | 0.0022 | 0.0058 |
| 208 | 0.0076 | 0.0021 | 0.0055 |
| 209 | 0.0072 | 0.0020 | 0.0052 |
| 210 | 0.0069 | 0.0019 | 0.0050 |
| 211 | 0.0066 | 0.0018 | 0.0048 |
| 212 | 0.0063 | 0.0017 | 0.0046 |
| 213 | 0.0061 | 0.0017 | 0.0044 |
| 214 | 0.0058 | 0.0016 | 0.0042 |
| 215 | 0.0056 | 0.0016 | 0.0041 |
| 216 | 0.0054 | 0.0015 | 0.0039 |
| 217 | 0.0055 | 0.0015 | 0.0040 |
| 218 | 0.0053 | 0.0015 | 0.0038 |
| 219 | 0.0051 | 0.0014 | 0.0037 |
| 220 | 0.0050 | 0.0014 | 0.0036 |
| 221 | 0.0049 | 0.0013 | 0.0035 |
| 222 | 0.0047 | 0.0013 | 0.0034 |
| 223 | 0.0046 | 0.0013 | 0.0033 |
| 224 | 0.0045 | 0.0012 | 0.0032 |
| 225 | 0.0044 | 0.0012 | 0.0032 |
| 226 | 0.0043 | 0.0012 | 0.0031 |
| 227 | 0.0042 | 0.0012 | 0.0030 |
| 228 | 0.0041 | 0.0011 | 0.0029 |
| 229 | 0.0040 | 0.0011 | 0.0029 |

| | | | |
|---|---|---|---|
| 230 | 0.0039 | 0.0011 | 0.0028 |
| 231 | 0.0038 | 0.0011 | 0.0028 |
| 232 | 0.0037 | 0.0010 | 0.0027 |
| 233 | 0.0037 | 0.0010 | 0.0027 |
| 234 | 0.0036 | 0.0010 | 0.0026 |
| 235 | 0.0035 | 0.0010 | 0.0026 |
| 236 | 0.0035 | 0.0010 | 0.0025 |
| 237 | 0.0034 | 0.0009 | 0.0025 |
| 238 | 0.0034 | 0.0009 | 0.0024 |
| 239 | 0.0033 | 0.0009 | 0.0024 |
| 240 | 0.0032 | 0.0009 | 0.0023 |
| 241 | 0.0032 | 0.0009 | 0.0023 |
| 242 | 0.0031 | 0.0009 | 0.0023 |
| 243 | 0.0031 | 0.0009 | 0.0022 |
| 244 | 0.0030 | 0.0008 | 0.0022 |
| 245 | 0.0030 | 0.0008 | 0.0022 |
| 246 | 0.0029 | 0.0008 | 0.0021 |
| 247 | 0.0029 | 0.0008 | 0.0021 |
| 248 | 0.0029 | 0.0008 | 0.0021 |
| 249 | 0.0028 | 0.0008 | 0.0020 |
| 250 | 0.0028 | 0.0008 | 0.0020 |
| 251 | 0.0027 | 0.0008 | 0.0020 |
| 252 | 0.0027 | 0.0007 | 0.0020 |
| 253 | 0.0027 | 0.0007 | 0.0019 |
| 254 | 0.0026 | 0.0007 | 0.0019 |
| 255 | 0.0026 | 0.0007 | 0.0019 |
| 256 | 0.0026 | 0.0007 | 0.0019 |
| 257 | 0.0025 | 0.0007 | 0.0018 |
| 258 | 0.0025 | 0.0007 | 0.0018 |
| 259 | 0.0025 | 0.0007 | 0.0018 |
| 260 | 0.0025 | 0.0007 | 0.0018 |
| 261 | 0.0024 | 0.0007 | 0.0018 |
| 262 | 0.0024 | 0.0007 | 0.0017 |
| 263 | 0.0024 | 0.0007 | 0.0017 |
| 264 | 0.0023 | 0.0006 | 0.0017 |
| 265 | 0.0023 | 0.0006 | 0.0017 |
| 266 | 0.0023 | 0.0006 | 0.0017 |
| 267 | 0.0023 | 0.0006 | 0.0016 |
| 268 | 0.0022 | 0.0006 | 0.0016 |
| 269 | 0.0022 | 0.0006 | 0.0016 |
| 270 | 0.0022 | 0.0006 | 0.0016 |
| 271 | 0.0022 | 0.0006 | 0.0016 |
| 272 | 0.0022 | 0.0006 | 0.0016 |
| 273 | 0.0021 | 0.0006 | 0.0015 |
| 274 | 0.0021 | 0.0006 | 0.0015 |
| 275 | 0.0021 | 0.0006 | 0.0015 |
| 276 | 0.0021 | 0.0006 | 0.0015 |
| 277 | 0.0021 | 0.0006 | 0.0015 |
| 278 | 0.0020 | 0.0006 | 0.0015 |
| 279 | 0.0020 | 0.0006 | 0.0015 |
| 280 | 0.0020 | 0.0006 | 0.0014 |
| 281 | 0.0020 | 0.0005 | 0.0014 |
| 282 | 0.0020 | 0.0005 | 0.0014 |
| 283 | 0.0019 | 0.0005 | 0.0014 |
| 284 | 0.0019 | 0.0005 | 0.0014 |
| 285 | 0.0019 | 0.0005 | 0.0014 |
| 286 | 0.0019 | 0.0005 | 0.0014 |
| 287 | 0.0019 | 0.0005 | 0.0014 |
| 288 | 0.0019 | 0.0005 | 0.0014 |

Total soil rain loss = 0.46(In)
Total effective rainfall = 2.02(In)
Peak flow rate in flood hydrograph = 13.76(CFS)

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.02 | Q | | | | |
| 0+15 | 0.0004 | 0.04 | Q | | | | |
| 0+20 | 0.0008 | 0.05 | Q | | | | |
| 0+25 | 0.0012 | 0.06 | Q | | | | |
| 0+30 | 0.0017 | 0.07 | Q | | | | |
| 0+35 | 0.0021 | 0.07 | Q | | | | |
| 0+40 | 0.0026 | 0.07 | Q | | | | |
| 0+45 | 0.0032 | 0.07 | Q | | | | |
| 0+50 | 0.0037 | 0.08 | Q | | | | |
| 0+55 | 0.0042 | 0.08 | Q | | | | |
| 1+ 0 | 0.0048 | 0.08 | Q | | | | |
| 1+ 5 | 0.0053 | 0.08 | Q | | | | |
| 1+10 | 0.0059 | 0.08 | Q | | | | |
| 1+15 | 0.0065 | 0.08 | Q | | | | |
| 1+20 | 0.0070 | 0.08 | Q | | | | |
| 1+25 | 0.0076 | 0.08 | Q | | | | |
| 1+30 | 0.0082 | 0.08 | Q | | | | |
| 1+35 | 0.0088 | 0.08 | Q | | | | |
| 1+40 | 0.0094 | 0.09 | Q | | | | |
| 1+45 | 0.0099 | 0.09 | Q | | | | |
| 1+50 | 0.0105 | 0.09 | Q | | | | |
| 1+55 | 0.0111 | 0.09 | Q | | | | |
| 2+ 0 | 0.0117 | 0.09 | Q | | | | |
| 2+ 5 | 0.0123 | 0.09 | Q | | | | |
| 2+10 | 0.0129 | 0.09 | Q | | | | |
| 2+15 | 0.0135 | 0.09 | Q | | | | |
| 2+20 | 0.0142 | 0.09 | Q | | | | |
| 2+25 | 0.0148 | 0.09 | Q | | | | |
| 2+30 | 0.0154 | 0.09 | Q | | | | |
| 2+35 | 0.0160 | 0.09 | Q | | | | |
| 2+40 | 0.0166 | 0.09 | Q | | | | |
| 2+45 | 0.0172 | 0.09 | Q | | | | |
| 2+50 | 0.0179 | 0.09 | Q | | | | |
| 2+55 | 0.0185 | 0.09 | Q | | | | |
| 3+ 0 | 0.0191 | 0.09 | Q | | | | |
| 3+ 5 | 0.0198 | 0.09 | Q | | | | |
| 3+10 | 0.0204 | 0.09 | Q | | | | |
| 3+15 | 0.0211 | 0.09 | QV | | | | |
| 3+20 | 0.0217 | 0.09 | QV | | | | |
| 3+25 | 0.0223 | 0.09 | QV | | | | |
| 3+30 | 0.0230 | 0.09 | QV | | | | |
| 3+35 | 0.0237 | 0.10 | QV | | | | |
| 3+40 | 0.0243 | 0.10 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+45 | 0.0250 | 0.10 | QV | | | | |
| 3+50 | 0.0256 | 0.10 | QV | | | | |
| 3+55 | 0.0263 | 0.10 | QV | | | | |
| 4+ 0 | 0.0270 | 0.10 | QV | | | | |
| 4+ 5 | 0.0277 | 0.10 | QV | | | | |
| 4+10 | 0.0283 | 0.10 | QV | | | | |
| 4+15 | 0.0290 | 0.10 | QV | | | | |
| 4+20 | 0.0297 | 0.10 | QV | | | | |
| 4+25 | 0.0304 | 0.10 | QV | | | | |
| 4+30 | 0.0311 | 0.10 | QV | | | | |
| 4+35 | 0.0318 | 0.10 | QV | | | | |
| 4+40 | 0.0325 | 0.10 | QV | | | | |
| 4+45 | 0.0332 | 0.10 | QV | | | | |
| 4+50 | 0.0339 | 0.10 | QV | | | | |
| 4+55 | 0.0346 | 0.10 | QV | | | | |
| 5+ 0 | 0.0354 | 0.10 | QV | | | | |
| 5+ 5 | 0.0361 | 0.11 | QV | | | | |
| 5+10 | 0.0368 | 0.11 | QV | | | | |
| 5+15 | 0.0375 | 0.11 | QV | | | | |
| 5+20 | 0.0383 | 0.11 | QV | | | | |
| 5+25 | 0.0390 | 0.11 | QV | | | | |
| 5+30 | 0.0398 | 0.11 | QV | | | | |
| 5+35 | 0.0405 | 0.11 | QV | | | | |
| 5+40 | 0.0413 | 0.11 | QV | | | | |
| 5+45 | 0.0420 | 0.11 | Q V | | | | |
| 5+50 | 0.0428 | 0.11 | Q V | | | | |
| 5+55 | 0.0436 | 0.11 | Q V | | | | |
| 6+ 0 | 0.0443 | 0.11 | Q V | | | | |
| 6+ 5 | 0.0451 | 0.11 | Q V | | | | |
| 6+10 | 0.0459 | 0.11 | Q V | | | | |
| 6+15 | 0.0467 | 0.11 | Q V | | | | |
| 6+20 | 0.0475 | 0.12 | Q V | | | | |
| 6+25 | 0.0483 | 0.12 | Q V | | | | |
| 6+30 | 0.0491 | 0.12 | Q V | | | | |
| 6+35 | 0.0499 | 0.12 | Q V | | | | |
| 6+40 | 0.0507 | 0.12 | Q V | | | | |
| 6+45 | 0.0515 | 0.12 | Q V | | | | |
| 6+50 | 0.0523 | 0.12 | Q V | | | | |
| 6+55 | 0.0532 | 0.12 | Q V | | | | |
| 7+ 0 | 0.0540 | 0.12 | Q V | | | | |
| 7+ 5 | 0.0548 | 0.12 | Q V | | | | |
| 7+10 | 0.0557 | 0.12 | Q V | | | | |
| 7+15 | 0.0566 | 0.12 | Q V | | | | |
| 7+20 | 0.0574 | 0.13 | Q V | | | | |
| 7+25 | 0.0583 | 0.13 | Q V | | | | |
| 7+30 | 0.0592 | 0.13 | Q V | | | | |
| 7+35 | 0.0600 | 0.13 | Q V | | | | |
| 7+40 | 0.0609 | 0.13 | Q V | | | | |
| 7+45 | 0.0618 | 0.13 | Q V | | | | |
| 7+50 | 0.0627 | 0.13 | Q  V | | | | |
| 7+55 | 0.0636 | 0.13 | Q  V | | | | |
| 8+ 0 | 0.0645 | 0.13 | Q  V | | | | |
| 8+ 5 | 0.0655 | 0.13 | Q  V | | | | |
| 8+10 | 0.0664 | 0.13 | Q  V | | | | |
| 8+15 | 0.0673 | 0.14 | Q  V | | | | |
| 8+20 | 0.0683 | 0.14 | Q  V | | | | |
| 8+25 | 0.0692 | 0.14 | Q  V | | | | |
| 8+30 | 0.0702 | 0.14 | Q  V | | | | |
| 8+35 | 0.0712 | 0.14 | Q  V | | | | |

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 8+40       0.0721      0.14  Q  V      |          |          |          |
 8+45       0.0731      0.14  Q  V      |          |          |          |
 8+50       0.0741      0.14  Q  V      |          |          |          |
 8+55       0.0751      0.15  Q  V      |          |          |          |
 9+ 0       0.0761      0.15  Q  V      |          |          |          |
 9+ 5       0.0771      0.15  Q  V      |          |          |          |
 9+10       0.0782      0.15  Q  V      |          |          |          |
 9+15       0.0792      0.15  Q  V      |          |          |          |
 9+20       0.0803      0.15  Q  V      |          |          |          |
 9+25       0.0813      0.15  Q  V      |          |          |          |
 9+30       0.0824      0.16  Q  V      |          |          |          |
 9+35       0.0835      0.16  Q   V     |          |          |          |
 9+40       0.0846      0.16  Q   V     |          |          |          |
 9+45       0.0857      0.16  Q   V     |          |          |          |
 9+50       0.0868      0.16  Q   V     |          |          |          |
 9+55       0.0879      0.16  Q   V     |          |          |          |
10+ 0       0.0890      0.16  Q   V     |          |          |          |
10+ 5       0.0902      0.17  Q   V     |          |          |          |
10+10       0.0913      0.17  Q   V     |          |          |          |
10+15       0.0925      0.17  Q   V     |          |          |          |
10+20       0.0937      0.17  Q   V     |          |          |          |
10+25       0.0949      0.17  Q   V     |          |          |          |
10+30       0.0961      0.18  Q   V     |          |          |          |
10+35       0.0973      0.18  Q   V     |          |          |          |
10+40       0.0985      0.18  Q   V     |          |          |          |
10+45       0.0998      0.18  Q   V     |          |          |          |
10+50       0.1011      0.18  Q   V     |          |          |          |
10+55       0.1023      0.19  Q   V     |          |          |          |
11+ 0       0.1036      0.19  Q    V    |          |          |          |
11+ 5       0.1050      0.19  Q    V    |          |          |          |
11+10       0.1063      0.19  Q    V    |          |          |          |
11+15       0.1076      0.20  Q    V    |          |          |          |
11+20       0.1090      0.20  Q    V    |          |          |          |
11+25       0.1104      0.20  Q    V    |          |          |          |
11+30       0.1118      0.20  Q    V    |          |          |          |
11+35       0.1132      0.21  Q    V    |          |          |          |
11+40       0.1146      0.21  Q    V    |          |          |          |
11+45       0.1161      0.21  Q    V    |          |          |          |
11+50       0.1176      0.22  Q    V    |          |          |          |
11+55       0.1191      0.22  Q    V    |          |          |          |
12+ 0       0.1206      0.22  Q    V    |          |          |          |
12+ 5       0.1222      0.22  Q    V    |          |          |          |
12+10       0.1237      0.23  Q    V    |          |          |          |
12+15       0.1253      0.23  Q     V   |          |          |          |
12+20       0.1269      0.23  Q     V   |          |          |          |
12+25       0.1285      0.23  Q     V   |          |          |          |
12+30       0.1301      0.24  Q     V   |          |          |          |
12+35       0.1317      0.24  Q     V   |          |          |          |
12+40       0.1334      0.24  Q     V   |          |          |          |
12+45       0.1351      0.25  Q     V   |          |          |          |
12+50       0.1369      0.25  Q     V   |          |          |          |
12+55       0.1386      0.26  Q     V   |          |          |          |
13+ 0       0.1405      0.26  Q     V   |          |          |          |
13+ 5       0.1423      0.27  Q     V   |          |          |          |
13+10       0.1442      0.27  Q     V   |          |          |          |
13+15       0.1461      0.28  Q      V  |          |          |          |
13+20       0.1481      0.28  Q      V  |          |          |          |
13+25       0.1501      0.29  Q      V  |          |          |          |
13+30       0.1521      0.30  Q      V  |          |          |          |
```

```
13+35       0.1542      0.31  Q      V  |          |          |          |
13+40       0.1564      0.31  Q      V  |          |          |          |
13+45       0.1586      0.32  Q      V  |          |          |          |
13+50       0.1609      0.33  Q      V  |          |          |          |
13+55       0.1632      0.34  Q      V  |          |          |          |
14+ 0       0.1656      0.35  Q      V  |          |          |          |
14+ 5       0.1680      0.36  Q       V |          |          |          |
14+10       0.1706      0.37  Q       V |          |          |          |
14+15       0.1732      0.38  Q       V |          |          |          |
14+20       0.1759      0.39  Q       V |          |          |          |
14+25       0.1787      0.41  Q       V |          |          |          |
14+30       0.1816      0.42  Q       V |          |          |          |
14+35       0.1846      0.44  Q       V |          |          |          |
14+40       0.1878      0.46  Q        V|          |          |          |
14+45       0.1910      0.47  Q        V|          |          |          |
14+50       0.1945      0.50  Q        V|          |          |          |
14+55       0.1980      0.52  |Q       V|          |          |          |
15+ 0       0.2018      0.54  |Q       V|          |          |          |
15+ 5       0.2057      0.57  |Q       V|          |          |          |
15+10       0.2099      0.61  |Q        V          |          |          |
15+15       0.2144      0.65  |Q        V          |          |          |
15+20       0.2191      0.69  |Q        V          |          |          |
15+25       0.2243      0.76  |Q        V          |          |          |
15+30       0.2305      0.89  |Q        |V         |          |          |
15+35       0.2381      1.11  | Q       |V         |          |          |
15+40       0.2470      1.30  | Q       |V         |          |          |
15+45       0.2575      1.51  |  Q      | V        |          |          |
15+50       0.2699      1.80  |  Q      |  V       |          |          |
15+55       0.2853      2.24  |   Q     |  V       |          |          |
16+ 0       0.3058      2.97  |    Q    |   V      |          |          |
16+ 5       0.3403      5.02  |         Q     V    |          |          |
16+10       0.4105     10.19  |         |        VQ          |          |
16+15       0.5053     13.76  |         |          |   V  Q   |          |
16+20       0.5641      8.54  |         |      Q   |      V   |          |
16+25       0.6034      5.70  |         |Q         |        V|          |
16+30       0.6320      4.15  |       Q |          |         V          |
16+35       0.6537      3.16  |     Q   |          |          |V         |
16+40       0.6708      2.49  |   Q     |          |          | V        |
16+45       0.6846      1.99  |  Q      |          |          |  V       |
16+50       0.6961      1.68  |  Q      |          |          |  V       |
16+55       0.7058      1.40  | Q       |          |          |   V      |
17+ 0       0.7140      1.19  | Q       |          |          |   V      |
17+ 5       0.7209      1.00  | Q       |          |          |   V      |
17+10       0.7267      0.84  |Q        |          |          |    V     |
17+15       0.7316      0.72  |Q        |          |          |    V     |
17+20       0.7363      0.68  |Q        |          |          |    V     |
17+25       0.7406      0.63  |Q        |          |          |    V     |
17+30       0.7444      0.54  |Q        |          |          |    V     |
17+35       0.7477      0.48  Q         |          |          |     V    |
17+40       0.7501      0.35  Q         |          |          |     V    |
17+45       0.7524      0.33  Q         |          |          |     V    |
17+50       0.7545      0.31  Q         |          |          |     V    |
17+55       0.7565      0.29  Q         |          |          |     V    |
18+ 0       0.7584      0.28  Q         |          |          |     V    |
18+ 5       0.7602      0.26  Q         |          |          |     V    |
18+10       0.7619      0.26  Q         |          |          |     V    |
18+15       0.7636      0.25  Q         |          |          |     V    |
18+20       0.7653      0.24  Q         |          |          |     V    |
18+25       0.7669      0.23  Q         |          |          |      V   |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18+30 | 0.7685 | 0.23 | Q | \| | \| | \| | V \| |
| 18+35 | 0.7700 | 0.22 | Q | \| | \| | \| | V \| |
| 18+40 | 0.7715 | 0.21 | Q | \| | \| | \| | V \| |
| 18+45 | 0.7729 | 0.21 | Q | \| | \| | \| | V \| |
| 18+50 | 0.7743 | 0.20 | Q | \| | \| | \| | V \| |
| 18+55 | 0.7756 | 0.20 | Q | \| | \| | \| | V \| |
| 19+ 0 | 0.7770 | 0.19 | Q | \| | \| | \| | V \| |
| 19+ 5 | 0.7782 | 0.19 | Q | \| | \| | \| | V \| |
| 19+10 | 0.7795 | 0.18 | Q | \| | \| | \| | V \| |
| 19+15 | 0.7807 | 0.18 | Q | \| | \| | \| | V \| |
| 19+20 | 0.7819 | 0.17 | Q | \| | \| | \| | V \| |
| 19+25 | 0.7831 | 0.17 | Q | \| | \| | \| | V \| |
| 19+30 | 0.7843 | 0.17 | Q | \| | \| | \| | V \| |
| 19+35 | 0.7854 | 0.16 | Q | \| | \| | \| | V \| |
| 19+40 | 0.7865 | 0.16 | Q | \| | \| | \| | V \| |
| 19+45 | 0.7876 | 0.16 | Q | \| | \| | \| | V \| |
| 19+50 | 0.7887 | 0.15 | Q | \| | \| | \| | V \| |
| 19+55 | 0.7897 | 0.15 | Q | \| | \| | \| | V \| |
| 20+ 0 | 0.7907 | 0.15 | Q | \| | \| | \| | V \| |
| 20+ 5 | 0.7917 | 0.15 | Q | \| | \| | \| | V \| |
| 20+10 | 0.7927 | 0.14 | Q | \| | \| | \| | V \| |
| 20+15 | 0.7937 | 0.14 | Q | \| | \| | \| | V \| |
| 20+20 | 0.7947 | 0.14 | Q | \| | \| | \| | V \| |
| 20+25 | 0.7956 | 0.14 | Q | \| | \| | \| | V \| |
| 20+30 | 0.7965 | 0.13 | Q | \| | \| | \| | V \| |
| 20+35 | 0.7974 | 0.13 | Q | \| | \| | \| | V \| |
| 20+40 | 0.7983 | 0.13 | Q | \| | \| | \| | V \| |
| 20+45 | 0.7992 | 0.13 | Q | \| | \| | \| | V \| |
| 20+50 | 0.8001 | 0.13 | Q | \| | \| | \| | V \| |
| 20+55 | 0.8009 | 0.12 | Q | \| | \| | \| | V \| |
| 21+ 0 | 0.8018 | 0.12 | Q | \| | \| | \| | V \| |
| 21+ 5 | 0.8026 | 0.12 | Q | \| | \| | \| | V \| |
| 21+10 | 0.8034 | 0.12 | Q | \| | \| | \| | V \| |
| 21+15 | 0.8043 | 0.12 | Q | \| | \| | \| | V \| |
| 21+20 | 0.8051 | 0.12 | Q | \| | \| | \| | V \| |
| 21+25 | 0.8058 | 0.11 | Q | \| | \| | \| | V \| |
| 21+30 | 0.8066 | 0.11 | Q | \| | \| | \| | V \| |
| 21+35 | 0.8074 | 0.11 | Q | \| | \| | \| | V \| |
| 21+40 | 0.8082 | 0.11 | Q | \| | \| | \| | V\| |
| 21+45 | 0.8089 | 0.11 | Q | \| | \| | \| | V\| |
| 21+50 | 0.8096 | 0.11 | Q | \| | \| | \| | V\| |
| 21+55 | 0.8104 | 0.11 | Q | \| | \| | \| | V\| |
| 22+ 0 | 0.8111 | 0.11 | Q | \| | \| | \| | V\| |
| 22+ 5 | 0.8118 | 0.10 | Q | \| | \| | \| | V\| |
| 22+10 | 0.8125 | 0.10 | Q | \| | \| | \| | V\| |
| 22+15 | 0.8132 | 0.10 | Q | \| | \| | \| | V\| |
| 22+20 | 0.8139 | 0.10 | Q | \| | \| | \| | V\| |
| 22+25 | 0.8146 | 0.10 | Q | \| | \| | \| | V\| |
| 22+30 | 0.8153 | 0.10 | Q | \| | \| | \| | V\| |
| 22+35 | 0.8160 | 0.10 | Q | \| | \| | \| | V\| |
| 22+40 | 0.8166 | 0.10 | Q | \| | \| | \| | V\| |
| 22+45 | 0.8173 | 0.10 | Q | \| | \| | \| | V\| |
| 22+50 | 0.8179 | 0.09 | Q | \| | \| | \| | V\| |
| 22+55 | 0.8186 | 0.09 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.8192 | 0.09 | Q | \| | \| | \| | V\| |
| 23+ 5 | 0.8198 | 0.09 | Q | \| | \| | \| | V\| |
| 23+10 | 0.8205 | 0.09 | Q | \| | \| | \| | V\| |
| 23+15 | 0.8211 | 0.09 | Q | \| | \| | \| | V\| |
| 23+20 | 0.8217 | 0.09 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+25 | 0.8223 | 0.09 | Q | \| | \| | \| | V\| |
| 23+30 | 0.8229 | 0.09 | Q | \| | \| | \| | V\| |
| 23+35 | 0.8235 | 0.09 | Q | \| | \| | \| | V\| |
| 23+40 | 0.8241 | 0.09 | Q | \| | \| | \| | V\| |
| 23+45 | 0.8247 | 0.09 | Q | \| | \| | \| | V\| |
| 23+50 | 0.8253 | 0.08 | Q | \| | \| | \| | V\| |
| 23+55 | 0.8258 | 0.08 | Q | \| | \| | \| | V\| |
| 24+ 0 | 0.8264 | 0.08 | Q | \| | \| | \| | V\| |
| 24+ 5 | 0.8270 | 0.08 | Q | \| | \| | \| | V\| |
| 24+10 | 0.8274 | 0.07 | Q | \| | \| | \| | V\| |
| 24+15 | 0.8277 | 0.04 | Q | \| | \| | \| | V\| |
| 24+20 | 0.8279 | 0.03 | Q | \| | \| | \| | V\| |
| 24+25 | 0.8280 | 0.02 | Q | \| | \| | \| | V\| |
| 24+30 | 0.8281 | 0.01 | Q | \| | \| | \| | V\| |
| 24+35 | 0.8282 | 0.01 | Q | \| | \| | \| | V\| |
| 24+40 | 0.8282 | 0.01 | Q | \| | \| | \| | V\| |
| 24+45 | 0.8283 | 0.01 | Q | \| | \| | \| | V\| |
| 24+50 | 0.8283 | 0.01 | Q | \| | \| | \| | V\| |
| 24+55 | 0.8284 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 0 | 0.8284 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 5 | 0.8284 | 0.00 | Q | \| | \| | \| | V\| |
| 25+10 | 0.8284 | 0.00 | Q | \| | \| | \| | V\| |
| 25+15 | 0.8284 | 0.00 | Q | \| | \| | \| | V\| |
| 25+20 | 0.8284 | 0.00 | Q | \| | \| | \| | V\| |
| 25+25 | 0.8284 | 0.00 | Q | \| | \| | \| | V\| |
| 25+30 | 0.8284 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 4
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 8.95 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 8.95 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 8.95 | 24 | 2.48 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.0 | 92.8 | 8.95 | 1.000 | 0.140 | 0.900 | 0.126 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.126

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 8.05 | 0.900 | 78.0 | 92.8 | 0.78 | 0.703 |
| 0.89 | 0.100 | 98.0 | 98.0 | 0.20 | 0.908 |

Area-averaged catchment yield fraction, Y = 0.723
Area-averaged low loss fraction, Yb = 0.277
User entry of time of concentration = 0.290 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 8.95(Ac.)
Catchment Lag time = 0.232 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 35.9195
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.126(In/Hr)
Average low loss rate fraction (Yb) = 0.277 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.480(In)

Rainfall depth area reduction factors:
Using a total area of 8.95(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.602(In)
30-minute factor = 1.000 Adjusted rainfall = 1.031(In)
1-hour factor = 1.000 Adjusted rainfall = 1.269(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.480(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 108.24 (CFS)) | |
| 1 | 2.324 | 2.516 |
| 2 | 14.291 | 12.953 |
| 3 | 42.610 | 30.652 |
| 4 | 61.158 | 20.076 |
| 5 | 71.110 | 10.772 |
| 6 | 77.762 | 7.200 |
| 7 | 82.485 | 5.112 |
| 8 | 86.128 | 3.943 |
| 9 | 88.974 | 3.081 |
| 10 | 91.100 | 2.300 |
| 11 | 92.881 | 1.928 |
| 12 | 94.341 | 1.581 |
| 13 | 95.534 | 1.291 |

| | | |
|---|---|---|
| 14 | 96.507 | 1.053 |
| 15 | 97.275 | 0.831 |
| 16 | 97.854 | 0.626 |
| 17 | 98.230 | 0.407 |
| 18 | 98.643 | 0.447 |
| 19 | 99.074 | 0.467 |
| 20 | 99.478 | 0.437 |
| 21 | 99.727 | 0.270 |
| 22 | 100.000 | 0.135 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6024 | 0.6024 |
| 2 | 0.7416 | 0.1392 |
| 3 | 0.8375 | 0.0959 |
| 4 | 0.9130 | 0.0755 |
| 5 | 0.9762 | 0.0632 |
| 6 | 1.0311 | 0.0549 |
| 7 | 1.0799 | 0.0488 |
| 8 | 1.1241 | 0.0441 |
| 9 | 1.1645 | 0.0404 |
| 10 | 1.2019 | 0.0374 |
| 11 | 1.2368 | 0.0349 |
| 12 | 1.2695 | 0.0327 |
| 13 | 1.2907 | 0.0212 |
| 14 | 1.3107 | 0.0200 |
| 15 | 1.3296 | 0.0189 |
| 16 | 1.3475 | 0.0179 |
| 17 | 1.3645 | 0.0170 |
| 18 | 1.3808 | 0.0163 |
| 19 | 1.3963 | 0.0156 |
| 20 | 1.4112 | 0.0149 |
| 21 | 1.4256 | 0.0143 |
| 22 | 1.4394 | 0.0138 |
| 23 | 1.4527 | 0.0133 |
| 24 | 1.4656 | 0.0129 |
| 25 | 1.4780 | 0.0125 |
| 26 | 1.4901 | 0.0121 |
| 27 | 1.5018 | 0.0117 |
| 28 | 1.5132 | 0.0114 |
| 29 | 1.5242 | 0.0110 |
| 30 | 1.5350 | 0.0107 |
| 31 | 1.5454 | 0.0105 |
| 32 | 1.5556 | 0.0102 |
| 33 | 1.5656 | 0.0100 |
| 34 | 1.5753 | 0.0097 |
| 35 | 1.5848 | 0.0095 |
| 36 | 1.5941 | 0.0093 |
| 37 | 1.6031 | 0.0091 |
| 38 | 1.6120 | 0.0089 |
| 39 | 1.6207 | 0.0087 |
| 40 | 1.6292 | 0.0085 |
| 41 | 1.6376 | 0.0083 |
| 42 | 1.6457 | 0.0082 |
| 43 | 1.6538 | 0.0080 |
| 44 | 1.6617 | 0.0079 |
| 45 | 1.6694 | 0.0077 |
| 46 | 1.6770 | 0.0076 |
| 47 | 1.6845 | 0.0075 |

| | | |
|---|---|---|
| 48 | 1.6919 | 0.0074 |
| 49 | 1.6991 | 0.0072 |
| 50 | 1.7062 | 0.0071 |
| 51 | 1.7132 | 0.0070 |
| 52 | 1.7201 | 0.0069 |
| 53 | 1.7269 | 0.0068 |
| 54 | 1.7336 | 0.0067 |
| 55 | 1.7402 | 0.0066 |
| 56 | 1.7467 | 0.0065 |
| 57 | 1.7531 | 0.0064 |
| 58 | 1.7594 | 0.0063 |
| 59 | 1.7657 | 0.0062 |
| 60 | 1.7718 | 0.0062 |
| 61 | 1.7779 | 0.0061 |
| 62 | 1.7839 | 0.0060 |
| 63 | 1.7898 | 0.0059 |
| 64 | 1.7956 | 0.0058 |
| 65 | 1.8014 | 0.0058 |
| 66 | 1.8071 | 0.0057 |
| 67 | 1.8127 | 0.0056 |
| 68 | 1.8183 | 0.0056 |
| 69 | 1.8238 | 0.0055 |
| 70 | 1.8293 | 0.0054 |
| 71 | 1.8346 | 0.0054 |
| 72 | 1.8399 | 0.0053 |
| 73 | 1.8454 | 0.0055 |
| 74 | 1.8508 | 0.0054 |
| 75 | 1.8562 | 0.0054 |
| 76 | 1.8615 | 0.0053 |
| 77 | 1.8667 | 0.0052 |
| 78 | 1.8719 | 0.0052 |
| 79 | 1.8771 | 0.0051 |
| 80 | 1.8822 | 0.0051 |
| 81 | 1.8872 | 0.0050 |
| 82 | 1.8922 | 0.0050 |
| 83 | 1.8971 | 0.0049 |
| 84 | 1.9020 | 0.0049 |
| 85 | 1.9069 | 0.0049 |
| 86 | 1.9117 | 0.0048 |
| 87 | 1.9165 | 0.0048 |
| 88 | 1.9212 | 0.0047 |
| 89 | 1.9259 | 0.0047 |
| 90 | 1.9305 | 0.0046 |
| 91 | 1.9351 | 0.0046 |
| 92 | 1.9397 | 0.0046 |
| 93 | 1.9442 | 0.0045 |
| 94 | 1.9487 | 0.0045 |
| 95 | 1.9531 | 0.0044 |
| 96 | 1.9575 | 0.0044 |
| 97 | 1.9619 | 0.0044 |
| 98 | 1.9662 | 0.0043 |
| 99 | 1.9705 | 0.0043 |
| 100 | 1.9748 | 0.0043 |
| 101 | 1.9790 | 0.0042 |
| 102 | 1.9833 | 0.0042 |
| 103 | 1.9874 | 0.0042 |
| 104 | 1.9916 | 0.0041 |
| 105 | 1.9957 | 0.0041 |
| 106 | 1.9997 | 0.0041 |

| | | |
|---|---|---|
| 107 | 2.0038 | 0.0040 |
| 108 | 2.0078 | 0.0040 |
| 109 | 2.0118 | 0.0040 |
| 110 | 2.0158 | 0.0040 |
| 111 | 2.0197 | 0.0039 |
| 112 | 2.0236 | 0.0039 |
| 113 | 2.0275 | 0.0039 |
| 114 | 2.0313 | 0.0039 |
| 115 | 2.0351 | 0.0038 |
| 116 | 2.0389 | 0.0038 |
| 117 | 2.0427 | 0.0038 |
| 118 | 2.0465 | 0.0037 |
| 119 | 2.0502 | 0.0037 |
| 120 | 2.0539 | 0.0037 |
| 121 | 2.0576 | 0.0037 |
| 122 | 2.0612 | 0.0036 |
| 123 | 2.0648 | 0.0036 |
| 124 | 2.0684 | 0.0036 |
| 125 | 2.0720 | 0.0036 |
| 126 | 2.0756 | 0.0036 |
| 127 | 2.0791 | 0.0035 |
| 128 | 2.0826 | 0.0035 |
| 129 | 2.0861 | 0.0035 |
| 130 | 2.0896 | 0.0035 |
| 131 | 2.0930 | 0.0035 |
| 132 | 2.0965 | 0.0034 |
| 133 | 2.0999 | 0.0034 |
| 134 | 2.1033 | 0.0034 |
| 135 | 2.1066 | 0.0034 |
| 136 | 2.1100 | 0.0034 |
| 137 | 2.1133 | 0.0033 |
| 138 | 2.1166 | 0.0033 |
| 139 | 2.1199 | 0.0033 |
| 140 | 2.1232 | 0.0033 |
| 141 | 2.1265 | 0.0033 |
| 142 | 2.1297 | 0.0032 |
| 143 | 2.1329 | 0.0032 |
| 144 | 2.1361 | 0.0032 |
| 145 | 2.1393 | 0.0032 |
| 146 | 2.1425 | 0.0032 |
| 147 | 2.1456 | 0.0032 |
| 148 | 2.1488 | 0.0031 |
| 149 | 2.1519 | 0.0031 |
| 150 | 2.1550 | 0.0031 |
| 151 | 2.1581 | 0.0031 |
| 152 | 2.1611 | 0.0031 |
| 153 | 2.1642 | 0.0031 |
| 154 | 2.1672 | 0.0030 |
| 155 | 2.1703 | 0.0030 |
| 156 | 2.1733 | 0.0030 |
| 157 | 2.1763 | 0.0030 |
| 158 | 2.1792 | 0.0030 |
| 159 | 2.1822 | 0.0030 |
| 160 | 2.1851 | 0.0029 |
| 161 | 2.1881 | 0.0029 |
| 162 | 2.1910 | 0.0029 |
| 163 | 2.1939 | 0.0029 |
| 164 | 2.1968 | 0.0029 |
| 165 | 2.1997 | 0.0029 |

| | | |
|---|---|---|
| 166 | 2.2025 | 0.0029 |
| 167 | 2.2054 | 0.0029 |
| 168 | 2.2082 | 0.0028 |
| 169 | 2.2110 | 0.0028 |
| 170 | 2.2139 | 0.0028 |
| 171 | 2.2166 | 0.0028 |
| 172 | 2.2194 | 0.0028 |
| 173 | 2.2222 | 0.0028 |
| 174 | 2.2250 | 0.0028 |
| 175 | 2.2277 | 0.0027 |
| 176 | 2.2304 | 0.0027 |
| 177 | 2.2332 | 0.0027 |
| 178 | 2.2359 | 0.0027 |
| 179 | 2.2386 | 0.0027 |
| 180 | 2.2413 | 0.0027 |
| 181 | 2.2439 | 0.0027 |
| 182 | 2.2466 | 0.0027 |
| 183 | 2.2493 | 0.0027 |
| 184 | 2.2519 | 0.0026 |
| 185 | 2.2545 | 0.0026 |
| 186 | 2.2571 | 0.0026 |
| 187 | 2.2598 | 0.0026 |
| 188 | 2.2624 | 0.0026 |
| 189 | 2.2649 | 0.0026 |
| 190 | 2.2675 | 0.0026 |
| 191 | 2.2701 | 0.0026 |
| 192 | 2.2726 | 0.0026 |
| 193 | 2.2752 | 0.0025 |
| 194 | 2.2777 | 0.0025 |
| 195 | 2.2802 | 0.0025 |
| 196 | 2.2827 | 0.0025 |
| 197 | 2.2852 | 0.0025 |
| 198 | 2.2877 | 0.0025 |
| 199 | 2.2902 | 0.0025 |
| 200 | 2.2927 | 0.0025 |
| 201 | 2.2952 | 0.0025 |
| 202 | 2.2976 | 0.0025 |
| 203 | 2.3001 | 0.0024 |
| 204 | 2.3025 | 0.0024 |
| 205 | 2.3049 | 0.0024 |
| 206 | 2.3073 | 0.0024 |
| 207 | 2.3097 | 0.0024 |
| 208 | 2.3121 | 0.0024 |
| 209 | 2.3145 | 0.0024 |
| 210 | 2.3169 | 0.0024 |
| 211 | 2.3193 | 0.0024 |
| 212 | 2.3216 | 0.0024 |
| 213 | 2.3240 | 0.0024 |
| 214 | 2.3263 | 0.0023 |
| 215 | 2.3287 | 0.0023 |
| 216 | 2.3310 | 0.0023 |
| 217 | 2.3333 | 0.0023 |
| 218 | 2.3356 | 0.0023 |
| 219 | 2.3379 | 0.0023 |
| 220 | 2.3402 | 0.0023 |
| 221 | 2.3425 | 0.0023 |
| 222 | 2.3448 | 0.0023 |
| 223 | 2.3471 | 0.0023 |
| 224 | 2.3493 | 0.0023 |

| | | |
|---|---|---|
| 225 | 2.3516 | 0.0023 |
| 226 | 2.3538 | 0.0022 |
| 227 | 2.3561 | 0.0022 |
| 228 | 2.3583 | 0.0022 |
| 229 | 2.3605 | 0.0022 |
| 230 | 2.3627 | 0.0022 |
| 231 | 2.3650 | 0.0022 |
| 232 | 2.3672 | 0.0022 |
| 233 | 2.3693 | 0.0022 |
| 234 | 2.3715 | 0.0022 |
| 235 | 2.3737 | 0.0022 |
| 236 | 2.3759 | 0.0022 |
| 237 | 2.3780 | 0.0022 |
| 238 | 2.3802 | 0.0022 |
| 239 | 2.3824 | 0.0021 |
| 240 | 2.3845 | 0.0021 |
| 241 | 2.3866 | 0.0021 |
| 242 | 2.3888 | 0.0021 |
| 243 | 2.3909 | 0.0021 |
| 244 | 2.3930 | 0.0021 |
| 245 | 2.3951 | 0.0021 |
| 246 | 2.3972 | 0.0021 |
| 247 | 2.3993 | 0.0021 |
| 248 | 2.4014 | 0.0021 |
| 249 | 2.4035 | 0.0021 |
| 250 | 2.4055 | 0.0021 |
| 251 | 2.4076 | 0.0021 |
| 252 | 2.4097 | 0.0021 |
| 253 | 2.4117 | 0.0021 |
| 254 | 2.4138 | 0.0020 |
| 255 | 2.4158 | 0.0020 |
| 256 | 2.4179 | 0.0020 |
| 257 | 2.4199 | 0.0020 |
| 258 | 2.4219 | 0.0020 |
| 259 | 2.4239 | 0.0020 |
| 260 | 2.4260 | 0.0020 |
| 261 | 2.4280 | 0.0020 |
| 262 | 2.4300 | 0.0020 |
| 263 | 2.4320 | 0.0020 |
| 264 | 2.4339 | 0.0020 |
| 265 | 2.4359 | 0.0020 |
| 266 | 2.4379 | 0.0020 |
| 267 | 2.4399 | 0.0020 |
| 268 | 2.4418 | 0.0020 |
| 269 | 2.4438 | 0.0020 |
| 270 | 2.4457 | 0.0020 |
| 271 | 2.4477 | 0.0019 |
| 272 | 2.4496 | 0.0019 |
| 273 | 2.4516 | 0.0019 |
| 274 | 2.4535 | 0.0019 |
| 275 | 2.4554 | 0.0019 |
| 276 | 2.4573 | 0.0019 |
| 277 | 2.4593 | 0.0019 |
| 278 | 2.4612 | 0.0019 |
| 279 | 2.4631 | 0.0019 |
| 280 | 2.4650 | 0.0019 |
| 281 | 2.4669 | 0.0019 |
| 282 | 2.4688 | 0.0019 |
| 283 | 2.4706 | 0.0019 |

| | | |
|---|---|---|
| 284 | 2.4725 | 0.0019 |
| 285 | 2.4744 | 0.0019 |
| 286 | 2.4763 | 0.0019 |
| 287 | 2.4781 | 0.0019 |
| 288 | 2.4800 | 0.0019 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0019 | 0.0005 | 0.0013 |
| 2 | 0.0019 | 0.0005 | 0.0013 |
| 3 | 0.0019 | 0.0005 | 0.0014 |
| 4 | 0.0019 | 0.0005 | 0.0014 |
| 5 | 0.0019 | 0.0005 | 0.0014 |
| 6 | 0.0019 | 0.0005 | 0.0014 |
| 7 | 0.0019 | 0.0005 | 0.0014 |
| 8 | 0.0019 | 0.0005 | 0.0014 |
| 9 | 0.0019 | 0.0005 | 0.0014 |
| 10 | 0.0019 | 0.0005 | 0.0014 |
| 11 | 0.0019 | 0.0005 | 0.0014 |
| 12 | 0.0019 | 0.0005 | 0.0014 |
| 13 | 0.0020 | 0.0005 | 0.0014 |
| 14 | 0.0020 | 0.0005 | 0.0014 |
| 15 | 0.0020 | 0.0005 | 0.0014 |
| 16 | 0.0020 | 0.0005 | 0.0014 |
| 17 | 0.0020 | 0.0006 | 0.0014 |
| 18 | 0.0020 | 0.0006 | 0.0014 |
| 19 | 0.0020 | 0.0006 | 0.0015 |
| 20 | 0.0020 | 0.0006 | 0.0015 |
| 21 | 0.0020 | 0.0006 | 0.0015 |
| 22 | 0.0020 | 0.0006 | 0.0015 |
| 23 | 0.0020 | 0.0006 | 0.0015 |
| 24 | 0.0020 | 0.0006 | 0.0015 |
| 25 | 0.0021 | 0.0006 | 0.0015 |
| 26 | 0.0021 | 0.0006 | 0.0015 |
| 27 | 0.0021 | 0.0006 | 0.0015 |
| 28 | 0.0021 | 0.0006 | 0.0015 |
| 29 | 0.0021 | 0.0006 | 0.0015 |
| 30 | 0.0021 | 0.0006 | 0.0015 |
| 31 | 0.0021 | 0.0006 | 0.0015 |
| 32 | 0.0021 | 0.0006 | 0.0015 |
| 33 | 0.0021 | 0.0006 | 0.0016 |
| 34 | 0.0021 | 0.0006 | 0.0016 |
| 35 | 0.0022 | 0.0006 | 0.0016 |
| 36 | 0.0022 | 0.0006 | 0.0016 |
| 37 | 0.0022 | 0.0006 | 0.0016 |
| 38 | 0.0022 | 0.0006 | 0.0016 |
| 39 | 0.0022 | 0.0006 | 0.0016 |
| 40 | 0.0022 | 0.0006 | 0.0016 |
| 41 | 0.0022 | 0.0006 | 0.0016 |
| 42 | 0.0022 | 0.0006 | 0.0016 |
| 43 | 0.0023 | 0.0006 | 0.0016 |
| 44 | 0.0023 | 0.0006 | 0.0016 |
| 45 | 0.0023 | 0.0006 | 0.0016 |
| 46 | 0.0023 | 0.0006 | 0.0017 |
| 47 | 0.0023 | 0.0006 | 0.0017 |
| 48 | 0.0023 | 0.0006 | 0.0017 |
| 49 | 0.0023 | 0.0006 | 0.0017 |

| | | | |
|---|---|---|---|
| 50 | 0.0023 | 0.0006 | 0.0017 |
| 51 | 0.0024 | 0.0007 | 0.0017 |
| 52 | 0.0024 | 0.0007 | 0.0017 |
| 53 | 0.0024 | 0.0007 | 0.0017 |
| 54 | 0.0024 | 0.0007 | 0.0017 |
| 55 | 0.0024 | 0.0007 | 0.0017 |
| 56 | 0.0024 | 0.0007 | 0.0017 |
| 57 | 0.0024 | 0.0007 | 0.0018 |
| 58 | 0.0024 | 0.0007 | 0.0018 |
| 59 | 0.0025 | 0.0007 | 0.0018 |
| 60 | 0.0025 | 0.0007 | 0.0018 |
| 61 | 0.0025 | 0.0007 | 0.0018 |
| 62 | 0.0025 | 0.0007 | 0.0018 |
| 63 | 0.0025 | 0.0007 | 0.0018 |
| 64 | 0.0025 | 0.0007 | 0.0018 |
| 65 | 0.0026 | 0.0007 | 0.0018 |
| 66 | 0.0026 | 0.0007 | 0.0019 |
| 67 | 0.0026 | 0.0007 | 0.0019 |
| 68 | 0.0026 | 0.0007 | 0.0019 |
| 69 | 0.0026 | 0.0007 | 0.0019 |
| 70 | 0.0026 | 0.0007 | 0.0019 |
| 71 | 0.0027 | 0.0007 | 0.0019 |
| 72 | 0.0027 | 0.0007 | 0.0019 |
| 73 | 0.0027 | 0.0007 | 0.0019 |
| 74 | 0.0027 | 0.0007 | 0.0020 |
| 75 | 0.0027 | 0.0008 | 0.0020 |
| 76 | 0.0027 | 0.0008 | 0.0020 |
| 77 | 0.0028 | 0.0008 | 0.0020 |
| 78 | 0.0028 | 0.0008 | 0.0020 |
| 79 | 0.0028 | 0.0008 | 0.0020 |
| 80 | 0.0028 | 0.0008 | 0.0020 |
| 81 | 0.0028 | 0.0008 | 0.0021 |
| 82 | 0.0029 | 0.0008 | 0.0021 |
| 83 | 0.0029 | 0.0008 | 0.0021 |
| 84 | 0.0029 | 0.0008 | 0.0021 |
| 85 | 0.0029 | 0.0008 | 0.0021 |
| 86 | 0.0029 | 0.0008 | 0.0021 |
| 87 | 0.0030 | 0.0008 | 0.0021 |
| 88 | 0.0030 | 0.0008 | 0.0022 |
| 89 | 0.0030 | 0.0008 | 0.0022 |
| 90 | 0.0030 | 0.0008 | 0.0022 |
| 91 | 0.0031 | 0.0008 | 0.0022 |
| 92 | 0.0031 | 0.0008 | 0.0022 |
| 93 | 0.0031 | 0.0009 | 0.0022 |
| 94 | 0.0031 | 0.0009 | 0.0023 |
| 95 | 0.0032 | 0.0009 | 0.0023 |
| 96 | 0.0032 | 0.0009 | 0.0023 |
| 97 | 0.0032 | 0.0009 | 0.0023 |
| 98 | 0.0032 | 0.0009 | 0.0023 |
| 99 | 0.0033 | 0.0009 | 0.0024 |
| 100 | 0.0033 | 0.0009 | 0.0024 |
| 101 | 0.0033 | 0.0009 | 0.0024 |
| 102 | 0.0033 | 0.0009 | 0.0024 |
| 103 | 0.0034 | 0.0009 | 0.0024 |
| 104 | 0.0034 | 0.0009 | 0.0025 |
| 105 | 0.0034 | 0.0009 | 0.0025 |
| 106 | 0.0035 | 0.0010 | 0.0025 |
| 107 | 0.0035 | 0.0010 | 0.0025 |
| 108 | 0.0035 | 0.0010 | 0.0025 |

| | | | |
|---|---|---|---|
| 109 | 0.0036 | 0.0010 | 0.0026 |
| 110 | 0.0036 | 0.0010 | 0.0026 |
| 111 | 0.0036 | 0.0010 | 0.0026 |
| 112 | 0.0036 | 0.0010 | 0.0026 |
| 113 | 0.0037 | 0.0010 | 0.0027 |
| 114 | 0.0037 | 0.0010 | 0.0027 |
| 115 | 0.0038 | 0.0010 | 0.0027 |
| 116 | 0.0038 | 0.0011 | 0.0027 |
| 117 | 0.0039 | 0.0011 | 0.0028 |
| 118 | 0.0039 | 0.0011 | 0.0028 |
| 119 | 0.0039 | 0.0011 | 0.0028 |
| 120 | 0.0040 | 0.0011 | 0.0029 |
| 121 | 0.0040 | 0.0011 | 0.0029 |
| 122 | 0.0040 | 0.0011 | 0.0029 |
| 123 | 0.0041 | 0.0011 | 0.0030 |
| 124 | 0.0041 | 0.0011 | 0.0030 |
| 125 | 0.0042 | 0.0012 | 0.0030 |
| 126 | 0.0042 | 0.0012 | 0.0031 |
| 127 | 0.0043 | 0.0012 | 0.0031 |
| 128 | 0.0043 | 0.0012 | 0.0031 |
| 129 | 0.0044 | 0.0012 | 0.0032 |
| 130 | 0.0044 | 0.0012 | 0.0032 |
| 131 | 0.0045 | 0.0013 | 0.0033 |
| 132 | 0.0046 | 0.0013 | 0.0033 |
| 133 | 0.0046 | 0.0013 | 0.0034 |
| 134 | 0.0047 | 0.0013 | 0.0034 |
| 135 | 0.0048 | 0.0013 | 0.0034 |
| 136 | 0.0048 | 0.0013 | 0.0035 |
| 137 | 0.0049 | 0.0014 | 0.0035 |
| 138 | 0.0049 | 0.0014 | 0.0036 |
| 139 | 0.0050 | 0.0014 | 0.0036 |
| 140 | 0.0051 | 0.0014 | 0.0037 |
| 141 | 0.0052 | 0.0014 | 0.0038 |
| 142 | 0.0052 | 0.0015 | 0.0038 |
| 143 | 0.0054 | 0.0015 | 0.0039 |
| 144 | 0.0054 | 0.0015 | 0.0039 |
| 145 | 0.0053 | 0.0015 | 0.0038 |
| 146 | 0.0054 | 0.0015 | 0.0039 |
| 147 | 0.0055 | 0.0015 | 0.0040 |
| 148 | 0.0056 | 0.0015 | 0.0040 |
| 149 | 0.0057 | 0.0016 | 0.0041 |
| 150 | 0.0058 | 0.0016 | 0.0042 |
| 151 | 0.0059 | 0.0016 | 0.0043 |
| 152 | 0.0060 | 0.0017 | 0.0043 |
| 153 | 0.0062 | 0.0017 | 0.0045 |
| 154 | 0.0062 | 0.0017 | 0.0045 |
| 155 | 0.0064 | 0.0018 | 0.0046 |
| 156 | 0.0065 | 0.0018 | 0.0047 |
| 157 | 0.0067 | 0.0019 | 0.0048 |
| 158 | 0.0068 | 0.0019 | 0.0049 |
| 159 | 0.0070 | 0.0019 | 0.0051 |
| 160 | 0.0071 | 0.0020 | 0.0051 |
| 161 | 0.0074 | 0.0020 | 0.0053 |
| 162 | 0.0075 | 0.0021 | 0.0054 |
| 163 | 0.0077 | 0.0021 | 0.0056 |
| 164 | 0.0079 | 0.0022 | 0.0057 |
| 165 | 0.0082 | 0.0023 | 0.0059 |
| 166 | 0.0083 | 0.0023 | 0.0060 |
| 167 | 0.0087 | 0.0024 | 0.0063 |

| | | | |
|---|---|---|---|
| 168 | 0.0089 | 0.0025 | 0.0064 |
| 169 | 0.0093 | 0.0026 | 0.0067 |
| 170 | 0.0095 | 0.0026 | 0.0069 |
| 171 | 0.0100 | 0.0028 | 0.0072 |
| 172 | 0.0102 | 0.0028 | 0.0074 |
| 173 | 0.0107 | 0.0030 | 0.0078 |
| 174 | 0.0110 | 0.0031 | 0.0080 |
| 175 | 0.0117 | 0.0032 | 0.0085 |
| 176 | 0.0121 | 0.0033 | 0.0087 |
| 177 | 0.0129 | 0.0036 | 0.0093 |
| 178 | 0.0133 | 0.0037 | 0.0096 |
| 179 | 0.0143 | 0.0040 | 0.0104 |
| 180 | 0.0149 | 0.0041 | 0.0108 |
| 181 | 0.0163 | 0.0045 | 0.0118 |
| 182 | 0.0170 | 0.0047 | 0.0123 |
| 183 | 0.0189 | 0.0052 | 0.0137 |
| 184 | 0.0200 | 0.0055 | 0.0145 |
| 185 | 0.0327 | 0.0090 | 0.0237 |
| 186 | 0.0349 | 0.0096 | 0.0252 |
| 187 | 0.0404 | 0.0105 | 0.0299 |
| 188 | 0.0441 | 0.0105 | 0.0336 |
| 189 | 0.0549 | 0.0105 | 0.0444 |
| 190 | 0.0632 | 0.0105 | 0.0527 |
| 191 | 0.0959 | 0.0105 | 0.0854 |
| 192 | 0.1392 | 0.0105 | 0.1287 |
| 193 | 0.6024 | 0.0105 | 0.5919 |
| 194 | 0.0755 | 0.0105 | 0.0650 |
| 195 | 0.0488 | 0.0105 | 0.0383 |
| 196 | 0.0374 | 0.0103 | 0.0270 |
| 197 | 0.0212 | 0.0059 | 0.0154 |
| 198 | 0.0179 | 0.0050 | 0.0130 |
| 199 | 0.0156 | 0.0043 | 0.0113 |
| 200 | 0.0138 | 0.0038 | 0.0100 |
| 201 | 0.0125 | 0.0034 | 0.0090 |
| 202 | 0.0114 | 0.0031 | 0.0082 |
| 203 | 0.0105 | 0.0029 | 0.0076 |
| 204 | 0.0097 | 0.0027 | 0.0070 |
| 205 | 0.0091 | 0.0025 | 0.0066 |
| 206 | 0.0085 | 0.0024 | 0.0062 |
| 207 | 0.0080 | 0.0022 | 0.0058 |
| 208 | 0.0076 | 0.0021 | 0.0055 |
| 209 | 0.0072 | 0.0020 | 0.0052 |
| 210 | 0.0069 | 0.0019 | 0.0050 |
| 211 | 0.0066 | 0.0018 | 0.0048 |
| 212 | 0.0063 | 0.0017 | 0.0046 |
| 213 | 0.0061 | 0.0017 | 0.0044 |
| 214 | 0.0058 | 0.0016 | 0.0042 |
| 215 | 0.0056 | 0.0016 | 0.0041 |
| 216 | 0.0054 | 0.0015 | 0.0039 |
| 217 | 0.0055 | 0.0015 | 0.0040 |
| 218 | 0.0053 | 0.0015 | 0.0038 |
| 219 | 0.0051 | 0.0014 | 0.0037 |
| 220 | 0.0050 | 0.0014 | 0.0036 |
| 221 | 0.0049 | 0.0013 | 0.0035 |
| 222 | 0.0047 | 0.0013 | 0.0034 |
| 223 | 0.0046 | 0.0013 | 0.0033 |
| 224 | 0.0045 | 0.0012 | 0.0032 |
| 225 | 0.0044 | 0.0012 | 0.0032 |
| 226 | 0.0043 | 0.0012 | 0.0031 |

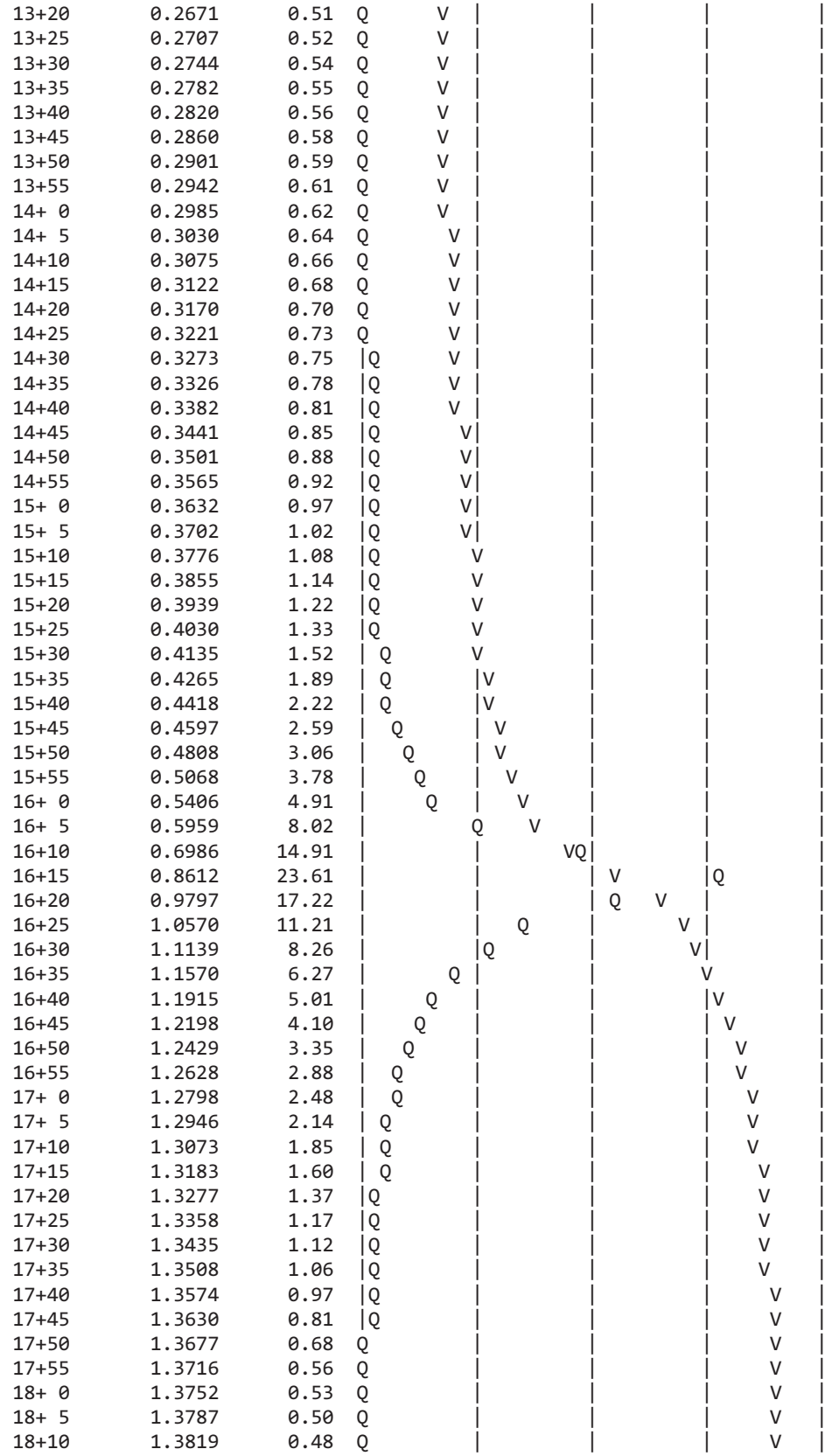
| | | | |
|---|---|---|---|
| 227 | 0.0042 | 0.0012 | 0.0030 |
| 228 | 0.0041 | 0.0011 | 0.0029 |
| 229 | 0.0040 | 0.0011 | 0.0029 |
| 230 | 0.0039 | 0.0011 | 0.0028 |
| 231 | 0.0038 | 0.0011 | 0.0028 |
| 232 | 0.0037 | 0.0010 | 0.0027 |
| 233 | 0.0037 | 0.0010 | 0.0027 |
| 234 | 0.0036 | 0.0010 | 0.0026 |
| 235 | 0.0035 | 0.0010 | 0.0026 |
| 236 | 0.0035 | 0.0010 | 0.0025 |
| 237 | 0.0034 | 0.0009 | 0.0025 |
| 238 | 0.0034 | 0.0009 | 0.0024 |
| 239 | 0.0033 | 0.0009 | 0.0024 |
| 240 | 0.0032 | 0.0009 | 0.0023 |
| 241 | 0.0032 | 0.0009 | 0.0023 |
| 242 | 0.0031 | 0.0009 | 0.0023 |
| 243 | 0.0031 | 0.0009 | 0.0022 |
| 244 | 0.0030 | 0.0008 | 0.0022 |
| 245 | 0.0030 | 0.0008 | 0.0022 |
| 246 | 0.0029 | 0.0008 | 0.0021 |
| 247 | 0.0029 | 0.0008 | 0.0021 |
| 248 | 0.0029 | 0.0008 | 0.0021 |
| 249 | 0.0028 | 0.0008 | 0.0020 |
| 250 | 0.0028 | 0.0008 | 0.0020 |
| 251 | 0.0027 | 0.0008 | 0.0020 |
| 252 | 0.0027 | 0.0007 | 0.0020 |
| 253 | 0.0027 | 0.0007 | 0.0019 |
| 254 | 0.0026 | 0.0007 | 0.0019 |
| 255 | 0.0026 | 0.0007 | 0.0019 |
| 256 | 0.0026 | 0.0007 | 0.0019 |
| 257 | 0.0025 | 0.0007 | 0.0018 |
| 258 | 0.0025 | 0.0007 | 0.0018 |
| 259 | 0.0025 | 0.0007 | 0.0018 |
| 260 | 0.0025 | 0.0007 | 0.0018 |
| 261 | 0.0024 | 0.0007 | 0.0018 |
| 262 | 0.0024 | 0.0007 | 0.0017 |
| 263 | 0.0024 | 0.0007 | 0.0017 |
| 264 | 0.0023 | 0.0006 | 0.0017 |
| 265 | 0.0023 | 0.0006 | 0.0017 |
| 266 | 0.0023 | 0.0006 | 0.0017 |
| 267 | 0.0023 | 0.0006 | 0.0016 |
| 268 | 0.0022 | 0.0006 | 0.0016 |
| 269 | 0.0022 | 0.0006 | 0.0016 |
| 270 | 0.0022 | 0.0006 | 0.0016 |
| 271 | 0.0022 | 0.0006 | 0.0016 |
| 272 | 0.0022 | 0.0006 | 0.0016 |
| 273 | 0.0021 | 0.0006 | 0.0015 |
| 274 | 0.0021 | 0.0006 | 0.0015 |
| 275 | 0.0021 | 0.0006 | 0.0015 |
| 276 | 0.0021 | 0.0006 | 0.0015 |
| 277 | 0.0021 | 0.0006 | 0.0015 |
| 278 | 0.0020 | 0.0006 | 0.0015 |
| 279 | 0.0020 | 0.0006 | 0.0015 |
| 280 | 0.0020 | 0.0006 | 0.0014 |
| 281 | 0.0020 | 0.0005 | 0.0014 |
| 282 | 0.0020 | 0.0005 | 0.0014 |
| 283 | 0.0019 | 0.0005 | 0.0014 |
| 284 | 0.0019 | 0.0005 | 0.0014 |
| 285 | 0.0019 | 0.0005 | 0.0014 |

```
     286              0.0019           0.0005              0.0014
     287              0.0019           0.0005              0.0014
     288              0.0019           0.0005              0.0014
     ----------------------------------------------------------------------
     ----------------------------------------------------------------------
     Total soil rain loss =      0.46(In)
     Total effective rainfall =      2.02(In)
     Peak flow rate in flood hydrograph =     23.61(CFS)
     ----------------------------------------------------------------------
     ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        24 - H O U R    S T O R M
                   R u n o f f      H y d r o g r a p h
     ----------------------------------------------------------------------
                Hydrograph in   5   Minute intervals ((CFS))

     ----------------------------------------------------------------------
Time(h+m) Volume Ac.Ft   Q(CFS)  0        7.5      15.0      22.5      30.0
----------------------------------------------------------------------
  0+ 5       0.0000      0.00  Q         |          |         |         |
  0+10       0.0002      0.02  Q         |          |         |         |
  0+15       0.0006      0.06  Q         |          |         |         |
  0+20       0.0012      0.09  Q         |          |         |         |
  0+25       0.0019      0.10  Q         |          |         |         |
  0+30       0.0027      0.11  Q         |          |         |         |
  0+35       0.0035      0.12  Q         |          |         |         |
  0+40       0.0044      0.13  Q         |          |         |         |
  0+45       0.0053      0.13  Q         |          |         |         |
  0+50       0.0063      0.14  Q         |          |         |         |
  0+55       0.0072      0.14  Q         |          |         |         |
  1+ 0       0.0082      0.14  Q         |          |         |         |
  1+ 5       0.0092      0.14  Q         |          |         |         |
  1+10       0.0102      0.15  Q         |          |         |         |
  1+15       0.0112      0.15  Q         |          |         |         |
  1+20       0.0122      0.15  Q         |          |         |         |
  1+25       0.0133      0.15  Q         |          |         |         |
  1+30       0.0143      0.15  Q         |          |         |         |
  1+35       0.0154      0.15  Q         |          |         |         |
  1+40       0.0164      0.15  Q         |          |         |         |
  1+45       0.0175      0.16  Q         |          |         |         |
  1+50       0.0186      0.16  Q         |          |         |         |
  1+55       0.0196      0.16  Q         |          |         |         |
  2+ 0       0.0207      0.16  Q         |          |         |         |
  2+ 5       0.0218      0.16  Q         |          |         |         |
  2+10       0.0229      0.16  Q         |          |         |         |
  2+15       0.0240      0.16  Q         |          |         |         |
  2+20       0.0251      0.16  Q         |          |         |         |
  2+25       0.0262      0.16  Q         |          |         |         |
  2+30       0.0273      0.16  Q         |          |         |         |
  2+35       0.0285      0.16  Q         |          |         |         |
  2+40       0.0296      0.16  Q         |          |         |         |
  2+45       0.0307      0.16  Q         |          |         |         |
  2+50       0.0319      0.16  Q         |          |         |         |
  2+55       0.0330      0.17  Q         |          |         |         |
  3+ 0       0.0341      0.17  Q         |          |         |         |
  3+ 5       0.0353      0.17  Q         |          |         |         |
  3+10       0.0364      0.17  Q         |          |         |         |
  3+15       0.0376      0.17  Q         |          |         |         |
  3+20       0.0388      0.17  QV        |          |         |         |
  3+25       0.0400      0.17  QV        |          |         |         |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+30 | 0.0411 | 0.17 | QV | | | | |
| 3+35 | 0.0423 | 0.17 | QV | | | | |
| 3+40 | 0.0435 | 0.17 | QV | | | | |
| 3+45 | 0.0447 | 0.17 | QV | | | | |
| 3+50 | 0.0459 | 0.18 | QV | | | | |
| 3+55 | 0.0471 | 0.18 | QV | | | | |
| 4+ 0 | 0.0484 | 0.18 | QV | | | | |
| 4+ 5 | 0.0496 | 0.18 | QV | | | | |
| 4+10 | 0.0508 | 0.18 | QV | | | | |
| 4+15 | 0.0521 | 0.18 | QV | | | | |
| 4+20 | 0.0533 | 0.18 | QV | | | | |
| 4+25 | 0.0546 | 0.18 | QV | | | | |
| 4+30 | 0.0558 | 0.18 | QV | | | | |
| 4+35 | 0.0571 | 0.18 | QV | | | | |
| 4+40 | 0.0584 | 0.18 | QV | | | | |
| 4+45 | 0.0596 | 0.19 | QV | | | | |
| 4+50 | 0.0609 | 0.19 | QV | | | | |
| 4+55 | 0.0622 | 0.19 | QV | | | | |
| 5+ 0 | 0.0635 | 0.19 | QV | | | | |
| 5+ 5 | 0.0648 | 0.19 | QV | | | | |
| 5+10 | 0.0661 | 0.19 | QV | | | | |
| 5+15 | 0.0675 | 0.19 | QV | | | | |
| 5+20 | 0.0688 | 0.19 | QV | | | | |
| 5+25 | 0.0701 | 0.19 | QV | | | | |
| 5+30 | 0.0715 | 0.20 | QV | | | | |
| 5+35 | 0.0728 | 0.20 | QV | | | | |
| 5+40 | 0.0742 | 0.20 | QV | | | | |
| 5+45 | 0.0756 | 0.20 | Q V | | | | |
| 5+50 | 0.0770 | 0.20 | Q V | | | | |
| 5+55 | 0.0784 | 0.20 | Q V | | | | |
| 6+ 0 | 0.0798 | 0.20 | Q V | | | | |
| 6+ 5 | 0.0812 | 0.20 | Q V | | | | |
| 6+10 | 0.0826 | 0.21 | Q V | | | | |
| 6+15 | 0.0840 | 0.21 | Q V | | | | |
| 6+20 | 0.0854 | 0.21 | Q V | | | | |
| 6+25 | 0.0869 | 0.21 | Q V | | | | |
| 6+30 | 0.0883 | 0.21 | Q V | | | | |
| 6+35 | 0.0898 | 0.21 | Q V | | | | |
| 6+40 | 0.0913 | 0.21 | Q V | | | | |
| 6+45 | 0.0928 | 0.22 | Q V | | | | |
| 6+50 | 0.0943 | 0.22 | Q V | | | | |
| 6+55 | 0.0958 | 0.22 | Q V | | | | |
| 7+ 0 | 0.0973 | 0.22 | Q V | | | | |
| 7+ 5 | 0.0988 | 0.22 | Q V | | | | |
| 7+10 | 0.1003 | 0.22 | Q V | | | | |
| 7+15 | 0.1019 | 0.22 | Q V | | | | |
| 7+20 | 0.1035 | 0.23 | Q V | | | | |
| 7+25 | 0.1050 | 0.23 | Q V | | | | |
| 7+30 | 0.1066 | 0.23 | Q V | | | | |
| 7+35 | 0.1082 | 0.23 | Q V | | | | |
| 7+40 | 0.1098 | 0.23 | Q V | | | | |
| 7+45 | 0.1114 | 0.23 | Q V | | | | |
| 7+50 | 0.1130 | 0.24 | Q  V | | | | |
| 7+55 | 0.1147 | 0.24 | Q  V | | | | |
| 8+ 0 | 0.1163 | 0.24 | Q  V | | | | |
| 8+ 5 | 0.1180 | 0.24 | Q  V | | | | |
| 8+10 | 0.1197 | 0.24 | Q  V | | | | |
| 8+15 | 0.1214 | 0.25 | Q  V | | | | |
| 8+20 | 0.1231 | 0.25 | Q  V | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8+25 | 0.1248 | 0.25 | Q | V | | | | |
| 8+30 | 0.1266 | 0.25 | Q | V | | | | |
| 8+35 | 0.1283 | 0.25 | Q | V | | | | |
| 8+40 | 0.1301 | 0.26 | Q | V | | | | |
| 8+45 | 0.1319 | 0.26 | Q | V | | | | |
| 8+50 | 0.1336 | 0.26 | Q | V | | | | |
| 8+55 | 0.1355 | 0.26 | Q | V | | | | |
| 9+ 0 | 0.1373 | 0.27 | Q | V | | | | |
| 9+ 5 | 0.1391 | 0.27 | Q | V | | | | |
| 9+10 | 0.1410 | 0.27 | Q | V | | | | |
| 9+15 | 0.1429 | 0.27 | Q | V | | | | |
| 9+20 | 0.1448 | 0.28 | Q | V | | | | |
| 9+25 | 0.1467 | 0.28 | Q | V | | | | |
| 9+30 | 0.1486 | 0.28 | Q | V | | | | |
| 9+35 | 0.1506 | 0.28 | Q | V | | | | |
| 9+40 | 0.1525 | 0.29 | Q | V | | | | |
| 9+45 | 0.1545 | 0.29 | Q | V | | | | |
| 9+50 | 0.1565 | 0.29 | Q | V | | | | |
| 9+55 | 0.1586 | 0.29 | Q | V | | | | |
| 10+ 0 | 0.1606 | 0.30 | Q | V | | | | |
| 10+ 5 | 0.1627 | 0.30 | Q | V | | | | |
| 10+10 | 0.1648 | 0.30 | Q | V | | | | |
| 10+15 | 0.1669 | 0.31 | Q | V | | | | |
| 10+20 | 0.1690 | 0.31 | Q | V | | | | |
| 10+25 | 0.1712 | 0.31 | Q | V | | | | |
| 10+30 | 0.1734 | 0.32 | Q | V | | | | |
| 10+35 | 0.1756 | 0.32 | Q | V | | | | |
| 10+40 | 0.1778 | 0.32 | Q | V | | | | |
| 10+45 | 0.1801 | 0.33 | Q | V | | | | |
| 10+50 | 0.1824 | 0.33 | Q | V | | | | |
| 10+55 | 0.1847 | 0.34 | Q | V | | | | |
| 11+ 0 | 0.1870 | 0.34 | Q | V | | | | |
| 11+ 5 | 0.1894 | 0.34 | Q | V | | | | |
| 11+10 | 0.1918 | 0.35 | Q | V | | | | |
| 11+15 | 0.1942 | 0.35 | Q | V | | | | |
| 11+20 | 0.1967 | 0.36 | Q | V | | | | |
| 11+25 | 0.1992 | 0.36 | Q | V | | | | |
| 11+30 | 0.2017 | 0.37 | Q | V | | | | |
| 11+35 | 0.2043 | 0.37 | Q | V | | | | |
| 11+40 | 0.2069 | 0.38 | Q | V | | | | |
| 11+45 | 0.2095 | 0.38 | Q | V | | | | |
| 11+50 | 0.2122 | 0.39 | Q | V | | | | |
| 11+55 | 0.2149 | 0.39 | Q | V | | | | |
| 12+ 0 | 0.2176 | 0.40 | Q | V | | | | |
| 12+ 5 | 0.2204 | 0.41 | Q | V | | | | |
| 12+10 | 0.2232 | 0.41 | Q | V | | | | |
| 12+15 | 0.2261 | 0.41 | Q | V | | | | |
| 12+20 | 0.2289 | 0.41 | Q | V | | | | |
| 12+25 | 0.2318 | 0.42 | Q | V | | | | |
| 12+30 | 0.2347 | 0.43 | Q | V | | | | |
| 12+35 | 0.2377 | 0.43 | Q | V | | | | |
| 12+40 | 0.2408 | 0.44 | Q | V | | | | |
| 12+45 | 0.2438 | 0.45 | Q | V | | | | |
| 12+50 | 0.2470 | 0.45 | Q | V | | | | |
| 12+55 | 0.2502 | 0.46 | Q | V | | | | |
| 13+ 0 | 0.2534 | 0.47 | Q | V | | | | |
| 13+ 5 | 0.2567 | 0.48 | Q | V | | | | |
| 13+10 | 0.2601 | 0.49 | Q | V | | | | |
| 13+15 | 0.2636 | 0.50 | Q | V | | | | |



| | | | |
|---|---|---|---|
| 13+20 | 0.2671 | 0.51 | Q V |
| 13+25 | 0.2707 | 0.52 | Q V |
| 13+30 | 0.2744 | 0.54 | Q V |
| 13+35 | 0.2782 | 0.55 | Q V |
| 13+40 | 0.2820 | 0.56 | Q V |
| 13+45 | 0.2860 | 0.58 | Q V |
| 13+50 | 0.2901 | 0.59 | Q V |
| 13+55 | 0.2942 | 0.61 | Q V |
| 14+ 0 | 0.2985 | 0.62 | Q V |
| 14+ 5 | 0.3030 | 0.64 | Q V |
| 14+10 | 0.3075 | 0.66 | Q V |
| 14+15 | 0.3122 | 0.68 | Q V |
| 14+20 | 0.3170 | 0.70 | Q V |
| 14+25 | 0.3221 | 0.73 | Q V |
| 14+30 | 0.3273 | 0.75 | Q V |
| 14+35 | 0.3326 | 0.78 | Q V |
| 14+40 | 0.3382 | 0.81 | Q V |
| 14+45 | 0.3441 | 0.85 | Q V |
| 14+50 | 0.3501 | 0.88 | Q V |
| 14+55 | 0.3565 | 0.92 | Q V |
| 15+ 0 | 0.3632 | 0.97 | Q V |
| 15+ 5 | 0.3702 | 1.02 | Q V |
| 15+10 | 0.3776 | 1.08 | Q V |
| 15+15 | 0.3855 | 1.14 | Q V |
| 15+20 | 0.3939 | 1.22 | Q V |
| 15+25 | 0.4030 | 1.33 | Q V |
| 15+30 | 0.4135 | 1.52 | Q V |
| 15+35 | 0.4265 | 1.89 | Q V |
| 15+40 | 0.4418 | 2.22 | Q V |
| 15+45 | 0.4597 | 2.59 | Q V |
| 15+50 | 0.4808 | 3.06 | Q V |
| 15+55 | 0.5068 | 3.78 | Q V |
| 16+ 0 | 0.5406 | 4.91 | Q V |
| 16+ 5 | 0.5959 | 8.02 | Q V |
| 16+10 | 0.6986 | 14.91 | VQ |
| 16+15 | 0.8612 | 23.61 | V Q |
| 16+20 | 0.9797 | 17.22 | Q V |
| 16+25 | 1.0570 | 11.21 | Q V |
| 16+30 | 1.1139 | 8.26 | Q V |
| 16+35 | 1.1570 | 6.27 | Q V |
| 16+40 | 1.1915 | 5.01 | Q V |
| 16+45 | 1.2198 | 4.10 | Q V |
| 16+50 | 1.2429 | 3.35 | Q V |
| 16+55 | 1.2628 | 2.88 | Q V |
| 17+ 0 | 1.2798 | 2.48 | Q V |
| 17+ 5 | 1.2946 | 2.14 | Q V |
| 17+10 | 1.3073 | 1.85 | Q V |
| 17+15 | 1.3183 | 1.60 | Q V |
| 17+20 | 1.3277 | 1.37 | Q V |
| 17+25 | 1.3358 | 1.17 | Q V |
| 17+30 | 1.3435 | 1.12 | Q V |
| 17+35 | 1.3508 | 1.06 | Q V |
| 17+40 | 1.3574 | 0.97 | Q V |
| 17+45 | 1.3630 | 0.81 | Q V |
| 17+50 | 1.3677 | 0.68 | Q V |
| 17+55 | 1.3716 | 0.56 | Q V |
| 18+ 0 | 1.3752 | 0.53 | Q V |
| 18+ 5 | 1.3787 | 0.50 | Q V |
| 18+10 | 1.3819 | 0.48 | Q V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18+15 | 1.3851 | 0.46 | Q | \| | \| | \| | V \| |
| 18+20 | 1.3882 | 0.45 | Q | \| | \| | \| | V \| |
| 18+25 | 1.3912 | 0.43 | Q | \| | \| | \| | V \| |
| 18+30 | 1.3941 | 0.42 | Q | \| | \| | \| | V \| |
| 18+35 | 1.3969 | 0.41 | Q | \| | \| | \| | V \| |
| 18+40 | 1.3996 | 0.40 | Q | \| | \| | \| | V \| |
| 18+45 | 1.4023 | 0.38 | Q | \| | \| | \| | V \| |
| 18+50 | 1.4049 | 0.37 | Q | \| | \| | \| | V \| |
| 18+55 | 1.4074 | 0.36 | Q | \| | \| | \| | V \| |
| 19+ 0 | 1.4098 | 0.35 | Q | \| | \| | \| | V \| |
| 19+ 5 | 1.4122 | 0.35 | Q | \| | \| | \| | V \| |
| 19+10 | 1.4145 | 0.34 | Q | \| | \| | \| | V \| |
| 19+15 | 1.4168 | 0.33 | Q | \| | \| | \| | V \| |
| 19+20 | 1.4190 | 0.32 | Q | \| | \| | \| | V \| |
| 19+25 | 1.4212 | 0.31 | Q | \| | \| | \| | V \| |
| 19+30 | 1.4233 | 0.31 | Q | \| | \| | \| | V \| |
| 19+35 | 1.4254 | 0.30 | Q | \| | \| | \| | V \| |
| 19+40 | 1.4274 | 0.30 | Q | \| | \| | \| | V \| |
| 19+45 | 1.4294 | 0.29 | Q | \| | \| | \| | V \| |
| 19+50 | 1.4314 | 0.28 | Q | \| | \| | \| | V \| |
| 19+55 | 1.4333 | 0.28 | Q | \| | \| | \| | V \| |
| 20+ 0 | 1.4352 | 0.27 | Q | \| | \| | \| | V \| |
| 20+ 5 | 1.4370 | 0.27 | Q | \| | \| | \| | V \| |
| 20+10 | 1.4388 | 0.26 | Q | \| | \| | \| | V \| |
| 20+15 | 1.4406 | 0.26 | Q | \| | \| | \| | V \| |
| 20+20 | 1.4424 | 0.25 | Q | \| | \| | \| | V \| |
| 20+25 | 1.4441 | 0.25 | Q | \| | \| | \| | V \| |
| 20+30 | 1.4458 | 0.25 | Q | \| | \| | \| | V \| |
| 20+35 | 1.4475 | 0.24 | Q | \| | \| | \| | V \| |
| 20+40 | 1.4491 | 0.24 | Q | \| | \| | \| | V \| |
| 20+45 | 1.4507 | 0.24 | Q | \| | \| | \| | V \| |
| 20+50 | 1.4523 | 0.23 | Q | \| | \| | \| | V \| |
| 20+55 | 1.4539 | 0.23 | Q | \| | \| | \| | V \| |
| 21+ 0 | 1.4555 | 0.22 | Q | \| | \| | \| | V \| |
| 21+ 5 | 1.4570 | 0.22 | Q | \| | \| | \| | V \| |
| 21+10 | 1.4585 | 0.22 | Q | \| | \| | \| | V \| |
| 21+15 | 1.4600 | 0.22 | Q | \| | \| | \| | V \| |
| 21+20 | 1.4614 | 0.21 | Q | \| | \| | \| | V \| |
| 21+25 | 1.4629 | 0.21 | Q | \| | \| | \| | V \| |
| 21+30 | 1.4643 | 0.21 | Q | \| | \| | \| | V \| |
| 21+35 | 1.4657 | 0.20 | Q | \| | \| | \| | V \| |
| 21+40 | 1.4671 | 0.20 | Q | \| | \| | \| | V\| |
| 21+45 | 1.4685 | 0.20 | Q | \| | \| | \| | V\| |
| 21+50 | 1.4698 | 0.20 | Q | \| | \| | \| | V\| |
| 21+55 | 1.4712 | 0.19 | Q | \| | \| | \| | V\| |
| 22+ 0 | 1.4725 | 0.19 | Q | \| | \| | \| | V\| |
| 22+ 5 | 1.4738 | 0.19 | Q | \| | \| | \| | V\| |
| 22+10 | 1.4751 | 0.19 | Q | \| | \| | \| | V\| |
| 22+15 | 1.4764 | 0.19 | Q | \| | \| | \| | V\| |
| 22+20 | 1.4777 | 0.18 | Q | \| | \| | \| | V\| |
| 22+25 | 1.4789 | 0.18 | Q | \| | \| | \| | V\| |
| 22+30 | 1.4802 | 0.18 | Q | \| | \| | \| | V\| |
| 22+35 | 1.4814 | 0.18 | Q | \| | \| | \| | V\| |
| 22+40 | 1.4826 | 0.18 | Q | \| | \| | \| | V\| |
| 22+45 | 1.4838 | 0.17 | Q | \| | \| | \| | V\| |
| 22+50 | 1.4850 | 0.17 | Q | \| | \| | \| | V\| |
| 22+55 | 1.4862 | 0.17 | Q | \| | \| | \| | V\| |
| 23+ 0 | 1.4873 | 0.17 | Q | \| | \| | \| | V\| |
| 23+ 5 | 1.4885 | 0.17 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+10 | 1.4896 | 0.17 | Q | \| | \| | \| | V\| |
| 23+15 | 1.4907 | 0.16 | Q | \| | \| | \| | V\| |
| 23+20 | 1.4919 | 0.16 | Q | \| | \| | \| | V\| |
| 23+25 | 1.4930 | 0.16 | Q | \| | \| | \| | V\| |
| 23+30 | 1.4941 | 0.16 | Q | \| | \| | \| | V\| |
| 23+35 | 1.4952 | 0.16 | Q | \| | \| | \| | V\| |
| 23+40 | 1.4962 | 0.16 | Q | \| | \| | \| | V\| |
| 23+45 | 1.4973 | 0.16 | Q | \| | \| | \| | V\| |
| 23+50 | 1.4984 | 0.15 | Q | \| | \| | \| | V\| |
| 23+55 | 1.4994 | 0.15 | Q | \| | \| | \| | V\| |
| 24+ 0 | 1.5005 | 0.15 | Q | \| | \| | \| | V\| |
| 24+ 5 | 1.5015 | 0.15 | Q | \| | \| | \| | V\| |
| 24+10 | 1.5024 | 0.13 | Q | \| | \| | \| | V\| |
| 24+15 | 1.5030 | 0.09 | Q | \| | \| | \| | V\| |
| 24+20 | 1.5034 | 0.06 | Q | \| | \| | \| | V\| |
| 24+25 | 1.5037 | 0.04 | Q | \| | \| | \| | V\| |
| 24+30 | 1.5039 | 0.03 | Q | \| | \| | \| | V\| |
| 24+35 | 1.5041 | 0.03 | Q | \| | \| | \| | V\| |
| 24+40 | 1.5042 | 0.02 | Q | \| | \| | \| | V\| |
| 24+45 | 1.5043 | 0.02 | Q | \| | \| | \| | V\| |
| 24+50 | 1.5044 | 0.01 | Q | \| | \| | \| | V\| |
| 24+55 | 1.5045 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 0 | 1.5045 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 5 | 1.5046 | 0.01 | Q | \| | \| | \| | V\| |
| 25+10 | 1.5046 | 0.00 | Q | \| | \| | \| | V\| |
| 25+15 | 1.5046 | 0.00 | Q | \| | \| | \| | V\| |
| 25+20 | 1.5047 | 0.00 | Q | \| | \| | \| | V\| |
| 25+25 | 1.5047 | 0.00 | Q | \| | \| | \| | V\| |
| 25+30 | 1.5047 | 0.00 | Q | \| | \| | \| | V\| |
| 25+35 | 1.5047 | 0.00 | Q | \| | \| | \| | V\| |
| 25+40 | 1.5047 | 0.00 | Q | \| | \| | \| | V\| |
| 25+45 | 1.5047 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 5
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 13.66 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 13.66 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 13.66 | 24 | 2.46 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.0 | 92.8 | 13.66 | 1.000 | 0.140 | 0.900 | 0.126 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.126

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 12.29 | 0.900 | 78.0 | 92.8 | 0.78 | 0.701 |
| 1.37 | 0.100 | 98.0 | 98.0 | 0.20 | 0.907 |

Area-averaged catchment yield fraction, Y = 0.722
Area-averaged low loss fraction, Yb = 0.278
User entry of time of concentration = 0.300 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 13.66(Ac.)
Catchment Lag time = 0.240 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 34.7222
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.126(In/Hr)
Average low loss rate fraction (Yb) = 0.278 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.460(In)

Rainfall depth area reduction factors:
Using a total area of 13.66(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.602(In)
30-minute factor = 0.999 Adjusted rainfall = 1.031(In)
1-hour factor = 0.999 Adjusted rainfall = 1.269(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.460(In)
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U n i t H y d r o g r a p h
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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 165.20 (CFS)) | |
| 1 | 2.206 | 3.644 |
| 2 | 13.132 | 18.050 |
| 3 | 40.437 | 45.109 |
| 4 | 59.629 | 31.706 |
| 5 | 69.886 | 16.944 |
| 6 | 76.724 | 11.297 |
| 7 | 81.579 | 8.020 |
| 8 | 85.290 | 6.130 |
| 9 | 88.266 | 4.917 |
| 10 | 90.463 | 3.630 |
| 11 | 92.296 | 3.028 |
| 12 | 93.829 | 2.533 |
| 13 | 95.057 | 2.027 |

| | | |
|---|---|---|
| 14 | 96.088 | 1.703 |
| 15 | 96.940 | 1.409 |
| 16 | 97.584 | 1.063 |
| 17 | 98.029 | 0.736 |
| 18 | 98.394 | 0.603 |
| 19 | 98.808 | 0.684 |
| 20 | 99.225 | 0.688 |
| 21 | 99.571 | 0.572 |
| 22 | 99.791 | 0.363 |
| 23 | 100.000 | 0.346 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6022 | 0.6022 |
| 2 | 0.7414 | 0.1392 |
| 3 | 0.8374 | 0.0959 |
| 4 | 0.9128 | 0.0755 |
| 5 | 0.9760 | 0.0632 |
| 6 | 1.0309 | 0.0549 |
| 7 | 1.0797 | 0.0488 |
| 8 | 1.1238 | 0.0441 |
| 9 | 1.1642 | 0.0404 |
| 10 | 1.2016 | 0.0374 |
| 11 | 1.2365 | 0.0349 |
| 12 | 1.2692 | 0.0327 |
| 13 | 1.2904 | 0.0212 |
| 14 | 1.3104 | 0.0200 |
| 15 | 1.3293 | 0.0189 |
| 16 | 1.3472 | 0.0179 |
| 17 | 1.3643 | 0.0170 |
| 18 | 1.3805 | 0.0163 |
| 19 | 1.3961 | 0.0156 |
| 20 | 1.4111 | 0.0149 |
| 21 | 1.4254 | 0.0144 |
| 22 | 1.4392 | 0.0138 |
| 23 | 1.4526 | 0.0133 |
| 24 | 1.4654 | 0.0129 |
| 25 | 1.4779 | 0.0125 |
| 26 | 1.4900 | 0.0121 |
| 27 | 1.5017 | 0.0117 |
| 28 | 1.5131 | 0.0114 |
| 29 | 1.5241 | 0.0111 |
| 30 | 1.5349 | 0.0108 |
| 31 | 1.5453 | 0.0105 |
| 32 | 1.5555 | 0.0102 |
| 33 | 1.5655 | 0.0100 |
| 34 | 1.5752 | 0.0097 |
| 35 | 1.5847 | 0.0095 |
| 36 | 1.5940 | 0.0093 |
| 37 | 1.6031 | 0.0091 |
| 38 | 1.6120 | 0.0089 |
| 39 | 1.6206 | 0.0087 |
| 40 | 1.6292 | 0.0085 |
| 41 | 1.6375 | 0.0083 |
| 42 | 1.6457 | 0.0082 |
| 43 | 1.6537 | 0.0080 |
| 44 | 1.6616 | 0.0079 |
| 45 | 1.6694 | 0.0077 |
| 46 | 1.6770 | 0.0076 |

| | | |
|---|---|---|
| 47 | 1.6845 | 0.0075 |
| 48 | 1.6918 | 0.0074 |
| 49 | 1.6991 | 0.0072 |
| 50 | 1.7062 | 0.0071 |
| 51 | 1.7132 | 0.0070 |
| 52 | 1.7201 | 0.0069 |
| 53 | 1.7269 | 0.0068 |
| 54 | 1.7336 | 0.0067 |
| 55 | 1.7402 | 0.0066 |
| 56 | 1.7467 | 0.0065 |
| 57 | 1.7531 | 0.0064 |
| 58 | 1.7594 | 0.0063 |
| 59 | 1.7656 | 0.0062 |
| 60 | 1.7718 | 0.0062 |
| 61 | 1.7779 | 0.0061 |
| 62 | 1.7838 | 0.0060 |
| 63 | 1.7898 | 0.0059 |
| 64 | 1.7956 | 0.0058 |
| 65 | 1.8014 | 0.0058 |
| 66 | 1.8071 | 0.0057 |
| 67 | 1.8127 | 0.0056 |
| 68 | 1.8183 | 0.0056 |
| 69 | 1.8238 | 0.0055 |
| 70 | 1.8292 | 0.0054 |
| 71 | 1.8346 | 0.0054 |
| 72 | 1.8399 | 0.0053 |
| 73 | 1.8452 | 0.0053 |
| 74 | 1.8505 | 0.0053 |
| 75 | 1.8557 | 0.0052 |
| 76 | 1.8609 | 0.0052 |
| 77 | 1.8660 | 0.0051 |
| 78 | 1.8710 | 0.0051 |
| 79 | 1.8760 | 0.0050 |
| 80 | 1.8810 | 0.0050 |
| 81 | 1.8859 | 0.0049 |
| 82 | 1.8907 | 0.0049 |
| 83 | 1.8955 | 0.0048 |
| 84 | 1.9003 | 0.0048 |
| 85 | 1.9050 | 0.0047 |
| 86 | 1.9097 | 0.0047 |
| 87 | 1.9143 | 0.0046 |
| 88 | 1.9189 | 0.0046 |
| 89 | 1.9235 | 0.0045 |
| 90 | 1.9280 | 0.0045 |
| 91 | 1.9324 | 0.0045 |
| 92 | 1.9369 | 0.0044 |
| 93 | 1.9413 | 0.0044 |
| 94 | 1.9456 | 0.0044 |
| 95 | 1.9499 | 0.0043 |
| 96 | 1.9542 | 0.0043 |
| 97 | 1.9585 | 0.0042 |
| 98 | 1.9627 | 0.0042 |
| 99 | 1.9669 | 0.0042 |
| 100 | 1.9710 | 0.0041 |
| 101 | 1.9751 | 0.0041 |
| 102 | 1.9792 | 0.0041 |
| 103 | 1.9832 | 0.0040 |
| 104 | 1.9873 | 0.0040 |
| 105 | 1.9913 | 0.0040 |

| | | |
|---|---|---|
| 106 | 1.9952 | 0.0040 |
| 107 | 1.9991 | 0.0039 |
| 108 | 2.0030 | 0.0039 |
| 109 | 2.0069 | 0.0039 |
| 110 | 2.0108 | 0.0038 |
| 111 | 2.0146 | 0.0038 |
| 112 | 2.0184 | 0.0038 |
| 113 | 2.0221 | 0.0038 |
| 114 | 2.0259 | 0.0037 |
| 115 | 2.0296 | 0.0037 |
| 116 | 2.0333 | 0.0037 |
| 117 | 2.0369 | 0.0037 |
| 118 | 2.0405 | 0.0036 |
| 119 | 2.0442 | 0.0036 |
| 120 | 2.0477 | 0.0036 |
| 121 | 2.0513 | 0.0036 |
| 122 | 2.0548 | 0.0035 |
| 123 | 2.0584 | 0.0035 |
| 124 | 2.0619 | 0.0035 |
| 125 | 2.0653 | 0.0035 |
| 126 | 2.0688 | 0.0035 |
| 127 | 2.0722 | 0.0034 |
| 128 | 2.0756 | 0.0034 |
| 129 | 2.0790 | 0.0034 |
| 130 | 2.0824 | 0.0034 |
| 131 | 2.0857 | 0.0033 |
| 132 | 2.0890 | 0.0033 |
| 133 | 2.0923 | 0.0033 |
| 134 | 2.0956 | 0.0033 |
| 135 | 2.0989 | 0.0033 |
| 136 | 2.1021 | 0.0032 |
| 137 | 2.1054 | 0.0032 |
| 138 | 2.1086 | 0.0032 |
| 139 | 2.1118 | 0.0032 |
| 140 | 2.1150 | 0.0032 |
| 141 | 2.1181 | 0.0032 |
| 142 | 2.1212 | 0.0031 |
| 143 | 2.1244 | 0.0031 |
| 144 | 2.1275 | 0.0031 |
| 145 | 2.1306 | 0.0031 |
| 146 | 2.1336 | 0.0031 |
| 147 | 2.1367 | 0.0031 |
| 148 | 2.1397 | 0.0030 |
| 149 | 2.1427 | 0.0030 |
| 150 | 2.1457 | 0.0030 |
| 151 | 2.1487 | 0.0030 |
| 152 | 2.1517 | 0.0030 |
| 153 | 2.1547 | 0.0030 |
| 154 | 2.1576 | 0.0029 |
| 155 | 2.1605 | 0.0029 |
| 156 | 2.1634 | 0.0029 |
| 157 | 2.1663 | 0.0029 |
| 158 | 2.1692 | 0.0029 |
| 159 | 2.1721 | 0.0029 |
| 160 | 2.1750 | 0.0029 |
| 161 | 2.1778 | 0.0028 |
| 162 | 2.1806 | 0.0028 |
| 163 | 2.1834 | 0.0028 |
| 164 | 2.1862 | 0.0028 |

| | | |
|---|---|---|
| 165 | 2.1890 | 0.0028 |
| 166 | 2.1918 | 0.0028 |
| 167 | 2.1945 | 0.0028 |
| 168 | 2.1973 | 0.0027 |
| 169 | 2.2000 | 0.0027 |
| 170 | 2.2028 | 0.0027 |
| 171 | 2.2055 | 0.0027 |
| 172 | 2.2082 | 0.0027 |
| 173 | 2.2108 | 0.0027 |
| 174 | 2.2135 | 0.0027 |
| 175 | 2.2162 | 0.0027 |
| 176 | 2.2188 | 0.0026 |
| 177 | 2.2214 | 0.0026 |
| 178 | 2.2241 | 0.0026 |
| 179 | 2.2267 | 0.0026 |
| 180 | 2.2293 | 0.0026 |
| 181 | 2.2319 | 0.0026 |
| 182 | 2.2345 | 0.0026 |
| 183 | 2.2370 | 0.0026 |
| 184 | 2.2396 | 0.0026 |
| 185 | 2.2421 | 0.0025 |
| 186 | 2.2447 | 0.0025 |
| 187 | 2.2472 | 0.0025 |
| 188 | 2.2497 | 0.0025 |
| 189 | 2.2522 | 0.0025 |
| 190 | 2.2547 | 0.0025 |
| 191 | 2.2572 | 0.0025 |
| 192 | 2.2596 | 0.0025 |
| 193 | 2.2621 | 0.0025 |
| 194 | 2.2645 | 0.0025 |
| 195 | 2.2670 | 0.0024 |
| 196 | 2.2694 | 0.0024 |
| 197 | 2.2718 | 0.0024 |
| 198 | 2.2742 | 0.0024 |
| 199 | 2.2766 | 0.0024 |
| 200 | 2.2790 | 0.0024 |
| 201 | 2.2814 | 0.0024 |
| 202 | 2.2838 | 0.0024 |
| 203 | 2.2862 | 0.0024 |
| 204 | 2.2885 | 0.0024 |
| 205 | 2.2909 | 0.0023 |
| 206 | 2.2932 | 0.0023 |
| 207 | 2.2955 | 0.0023 |
| 208 | 2.2978 | 0.0023 |
| 209 | 2.3002 | 0.0023 |
| 210 | 2.3025 | 0.0023 |
| 211 | 2.3047 | 0.0023 |
| 212 | 2.3070 | 0.0023 |
| 213 | 2.3093 | 0.0023 |
| 214 | 2.3116 | 0.0023 |
| 215 | 2.3138 | 0.0023 |
| 216 | 2.3161 | 0.0023 |
| 217 | 2.3183 | 0.0022 |
| 218 | 2.3206 | 0.0022 |
| 219 | 2.3228 | 0.0022 |
| 220 | 2.3250 | 0.0022 |
| 221 | 2.3272 | 0.0022 |
| 222 | 2.3294 | 0.0022 |
| 223 | 2.3316 | 0.0022 |

| | | |
|---|---|---|
| 224 | 2.3338 | 0.0022 |
| 225 | 2.3360 | 0.0022 |
| 226 | 2.3381 | 0.0022 |
| 227 | 2.3403 | 0.0022 |
| 228 | 2.3425 | 0.0022 |
| 229 | 2.3446 | 0.0021 |
| 230 | 2.3468 | 0.0021 |
| 231 | 2.3489 | 0.0021 |
| 232 | 2.3510 | 0.0021 |
| 233 | 2.3531 | 0.0021 |
| 234 | 2.3552 | 0.0021 |
| 235 | 2.3574 | 0.0021 |
| 236 | 2.3594 | 0.0021 |
| 237 | 2.3615 | 0.0021 |
| 238 | 2.3636 | 0.0021 |
| 239 | 2.3657 | 0.0021 |
| 240 | 2.3678 | 0.0021 |
| 241 | 2.3698 | 0.0021 |
| 242 | 2.3719 | 0.0021 |
| 243 | 2.3739 | 0.0020 |
| 244 | 2.3760 | 0.0020 |
| 245 | 2.3780 | 0.0020 |
| 246 | 2.3801 | 0.0020 |
| 247 | 2.3821 | 0.0020 |
| 248 | 2.3841 | 0.0020 |
| 249 | 2.3861 | 0.0020 |
| 250 | 2.3881 | 0.0020 |
| 251 | 2.3901 | 0.0020 |
| 252 | 2.3921 | 0.0020 |
| 253 | 2.3941 | 0.0020 |
| 254 | 2.3961 | 0.0020 |
| 255 | 2.3980 | 0.0020 |
| 256 | 2.4000 | 0.0020 |
| 257 | 2.4020 | 0.0020 |
| 258 | 2.4039 | 0.0020 |
| 259 | 2.4059 | 0.0019 |
| 260 | 2.4078 | 0.0019 |
| 261 | 2.4097 | 0.0019 |
| 262 | 2.4117 | 0.0019 |
| 263 | 2.4136 | 0.0019 |
| 264 | 2.4155 | 0.0019 |
| 265 | 2.4174 | 0.0019 |
| 266 | 2.4193 | 0.0019 |
| 267 | 2.4212 | 0.0019 |
| 268 | 2.4231 | 0.0019 |
| 269 | 2.4250 | 0.0019 |
| 270 | 2.4269 | 0.0019 |
| 271 | 2.4288 | 0.0019 |
| 272 | 2.4307 | 0.0019 |
| 273 | 2.4325 | 0.0019 |
| 274 | 2.4344 | 0.0019 |
| 275 | 2.4363 | 0.0019 |
| 276 | 2.4381 | 0.0019 |
| 277 | 2.4400 | 0.0018 |
| 278 | 2.4418 | 0.0018 |
| 279 | 2.4437 | 0.0018 |
| 280 | 2.4455 | 0.0018 |
| 281 | 2.4473 | 0.0018 |
| 282 | 2.4491 | 0.0018 |

| | | | |
|---|---|---|---|
| 283 | 2.4509 | 0.0018 | |
| 284 | 2.4528 | 0.0018 | |
| 285 | 2.4546 | 0.0018 | |
| 286 | 2.4564 | 0.0018 | |
| 287 | 2.4582 | 0.0018 | |
| 288 | 2.4600 | 0.0018 | |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0018 | 0.0005 | 0.0013 |
| 2 | 0.0018 | 0.0005 | 0.0013 |
| 3 | 0.0018 | 0.0005 | 0.0013 |
| 4 | 0.0018 | 0.0005 | 0.0013 |
| 5 | 0.0018 | 0.0005 | 0.0013 |
| 6 | 0.0018 | 0.0005 | 0.0013 |
| 7 | 0.0018 | 0.0005 | 0.0013 |
| 8 | 0.0018 | 0.0005 | 0.0013 |
| 9 | 0.0019 | 0.0005 | 0.0013 |
| 10 | 0.0019 | 0.0005 | 0.0013 |
| 11 | 0.0019 | 0.0005 | 0.0013 |
| 12 | 0.0019 | 0.0005 | 0.0014 |
| 13 | 0.0019 | 0.0005 | 0.0014 |
| 14 | 0.0019 | 0.0005 | 0.0014 |
| 15 | 0.0019 | 0.0005 | 0.0014 |
| 16 | 0.0019 | 0.0005 | 0.0014 |
| 17 | 0.0019 | 0.0005 | 0.0014 |
| 18 | 0.0019 | 0.0005 | 0.0014 |
| 19 | 0.0019 | 0.0005 | 0.0014 |
| 20 | 0.0019 | 0.0005 | 0.0014 |
| 21 | 0.0020 | 0.0005 | 0.0014 |
| 22 | 0.0020 | 0.0005 | 0.0014 |
| 23 | 0.0020 | 0.0005 | 0.0014 |
| 24 | 0.0020 | 0.0006 | 0.0014 |
| 25 | 0.0020 | 0.0006 | 0.0014 |
| 26 | 0.0020 | 0.0006 | 0.0014 |
| 27 | 0.0020 | 0.0006 | 0.0015 |
| 28 | 0.0020 | 0.0006 | 0.0015 |
| 29 | 0.0020 | 0.0006 | 0.0015 |
| 30 | 0.0020 | 0.0006 | 0.0015 |
| 31 | 0.0020 | 0.0006 | 0.0015 |
| 32 | 0.0021 | 0.0006 | 0.0015 |
| 33 | 0.0021 | 0.0006 | 0.0015 |
| 34 | 0.0021 | 0.0006 | 0.0015 |
| 35 | 0.0021 | 0.0006 | 0.0015 |
| 36 | 0.0021 | 0.0006 | 0.0015 |
| 37 | 0.0021 | 0.0006 | 0.0015 |
| 38 | 0.0021 | 0.0006 | 0.0015 |
| 39 | 0.0021 | 0.0006 | 0.0015 |
| 40 | 0.0021 | 0.0006 | 0.0015 |
| 41 | 0.0022 | 0.0006 | 0.0016 |
| 42 | 0.0022 | 0.0006 | 0.0016 |
| 43 | 0.0022 | 0.0006 | 0.0016 |
| 44 | 0.0022 | 0.0006 | 0.0016 |
| 45 | 0.0022 | 0.0006 | 0.0016 |
| 46 | 0.0022 | 0.0006 | 0.0016 |
| 47 | 0.0022 | 0.0006 | 0.0016 |
| 48 | 0.0022 | 0.0006 | 0.0016 |

| | | | |
|---|---|---|---|
| 49 | 0.0023 | 0.0006 | 0.0016 |
| 50 | 0.0023 | 0.0006 | 0.0016 |
| 51 | 0.0023 | 0.0006 | 0.0016 |
| 52 | 0.0023 | 0.0006 | 0.0016 |
| 53 | 0.0023 | 0.0006 | 0.0017 |
| 54 | 0.0023 | 0.0006 | 0.0017 |
| 55 | 0.0023 | 0.0006 | 0.0017 |
| 56 | 0.0023 | 0.0007 | 0.0017 |
| 57 | 0.0024 | 0.0007 | 0.0017 |
| 58 | 0.0024 | 0.0007 | 0.0017 |
| 59 | 0.0024 | 0.0007 | 0.0017 |
| 60 | 0.0024 | 0.0007 | 0.0017 |
| 61 | 0.0024 | 0.0007 | 0.0017 |
| 62 | 0.0024 | 0.0007 | 0.0017 |
| 63 | 0.0024 | 0.0007 | 0.0018 |
| 64 | 0.0025 | 0.0007 | 0.0018 |
| 65 | 0.0025 | 0.0007 | 0.0018 |
| 66 | 0.0025 | 0.0007 | 0.0018 |
| 67 | 0.0025 | 0.0007 | 0.0018 |
| 68 | 0.0025 | 0.0007 | 0.0018 |
| 69 | 0.0025 | 0.0007 | 0.0018 |
| 70 | 0.0025 | 0.0007 | 0.0018 |
| 71 | 0.0026 | 0.0007 | 0.0019 |
| 72 | 0.0026 | 0.0007 | 0.0019 |
| 73 | 0.0026 | 0.0007 | 0.0019 |
| 74 | 0.0026 | 0.0007 | 0.0019 |
| 75 | 0.0026 | 0.0007 | 0.0019 |
| 76 | 0.0026 | 0.0007 | 0.0019 |
| 77 | 0.0027 | 0.0007 | 0.0019 |
| 78 | 0.0027 | 0.0007 | 0.0019 |
| 79 | 0.0027 | 0.0008 | 0.0020 |
| 80 | 0.0027 | 0.0008 | 0.0020 |
| 81 | 0.0027 | 0.0008 | 0.0020 |
| 82 | 0.0028 | 0.0008 | 0.0020 |
| 83 | 0.0028 | 0.0008 | 0.0020 |
| 84 | 0.0028 | 0.0008 | 0.0020 |
| 85 | 0.0028 | 0.0008 | 0.0020 |
| 86 | 0.0028 | 0.0008 | 0.0020 |
| 87 | 0.0029 | 0.0008 | 0.0021 |
| 88 | 0.0029 | 0.0008 | 0.0021 |
| 89 | 0.0029 | 0.0008 | 0.0021 |
| 90 | 0.0029 | 0.0008 | 0.0021 |
| 91 | 0.0030 | 0.0008 | 0.0021 |
| 92 | 0.0030 | 0.0008 | 0.0021 |
| 93 | 0.0030 | 0.0008 | 0.0022 |
| 94 | 0.0030 | 0.0008 | 0.0022 |
| 95 | 0.0031 | 0.0009 | 0.0022 |
| 96 | 0.0031 | 0.0009 | 0.0022 |
| 97 | 0.0031 | 0.0009 | 0.0022 |
| 98 | 0.0031 | 0.0009 | 0.0023 |
| 99 | 0.0032 | 0.0009 | 0.0023 |
| 100 | 0.0032 | 0.0009 | 0.0023 |
| 101 | 0.0032 | 0.0009 | 0.0023 |
| 102 | 0.0032 | 0.0009 | 0.0023 |
| 103 | 0.0033 | 0.0009 | 0.0024 |
| 104 | 0.0033 | 0.0009 | 0.0024 |
| 105 | 0.0033 | 0.0009 | 0.0024 |
| 106 | 0.0033 | 0.0009 | 0.0024 |
| 107 | 0.0034 | 0.0009 | 0.0024 |

| | | | |
|---|---|---|---|
| 108 | 0.0034 | 0.0009 | 0.0025 |
| 109 | 0.0035 | 0.0010 | 0.0025 |
| 110 | 0.0035 | 0.0010 | 0.0025 |
| 111 | 0.0035 | 0.0010 | 0.0025 |
| 112 | 0.0035 | 0.0010 | 0.0026 |
| 113 | 0.0036 | 0.0010 | 0.0026 |
| 114 | 0.0036 | 0.0010 | 0.0026 |
| 115 | 0.0037 | 0.0010 | 0.0026 |
| 116 | 0.0037 | 0.0010 | 0.0027 |
| 117 | 0.0037 | 0.0010 | 0.0027 |
| 118 | 0.0038 | 0.0010 | 0.0027 |
| 119 | 0.0038 | 0.0011 | 0.0028 |
| 120 | 0.0038 | 0.0011 | 0.0028 |
| 121 | 0.0039 | 0.0011 | 0.0028 |
| 122 | 0.0039 | 0.0011 | 0.0028 |
| 123 | 0.0040 | 0.0011 | 0.0029 |
| 124 | 0.0040 | 0.0011 | 0.0029 |
| 125 | 0.0041 | 0.0011 | 0.0029 |
| 126 | 0.0041 | 0.0011 | 0.0030 |
| 127 | 0.0042 | 0.0012 | 0.0030 |
| 128 | 0.0042 | 0.0012 | 0.0030 |
| 129 | 0.0043 | 0.0012 | 0.0031 |
| 130 | 0.0043 | 0.0012 | 0.0031 |
| 131 | 0.0044 | 0.0012 | 0.0032 |
| 132 | 0.0044 | 0.0012 | 0.0032 |
| 133 | 0.0045 | 0.0013 | 0.0033 |
| 134 | 0.0045 | 0.0013 | 0.0033 |
| 135 | 0.0046 | 0.0013 | 0.0033 |
| 136 | 0.0047 | 0.0013 | 0.0034 |
| 137 | 0.0048 | 0.0013 | 0.0034 |
| 138 | 0.0048 | 0.0013 | 0.0035 |
| 139 | 0.0049 | 0.0014 | 0.0035 |
| 140 | 0.0050 | 0.0014 | 0.0036 |
| 141 | 0.0051 | 0.0014 | 0.0036 |
| 142 | 0.0051 | 0.0014 | 0.0037 |
| 143 | 0.0052 | 0.0015 | 0.0038 |
| 144 | 0.0053 | 0.0015 | 0.0038 |
| 145 | 0.0053 | 0.0015 | 0.0038 |
| 146 | 0.0054 | 0.0015 | 0.0039 |
| 147 | 0.0055 | 0.0015 | 0.0040 |
| 148 | 0.0056 | 0.0016 | 0.0040 |
| 149 | 0.0057 | 0.0016 | 0.0041 |
| 150 | 0.0058 | 0.0016 | 0.0042 |
| 151 | 0.0059 | 0.0016 | 0.0043 |
| 152 | 0.0060 | 0.0017 | 0.0043 |
| 153 | 0.0062 | 0.0017 | 0.0044 |
| 154 | 0.0062 | 0.0017 | 0.0045 |
| 155 | 0.0064 | 0.0018 | 0.0046 |
| 156 | 0.0065 | 0.0018 | 0.0047 |
| 157 | 0.0067 | 0.0019 | 0.0048 |
| 158 | 0.0068 | 0.0019 | 0.0049 |
| 159 | 0.0070 | 0.0020 | 0.0051 |
| 160 | 0.0071 | 0.0020 | 0.0051 |
| 161 | 0.0074 | 0.0020 | 0.0053 |
| 162 | 0.0075 | 0.0021 | 0.0054 |
| 163 | 0.0077 | 0.0022 | 0.0056 |
| 164 | 0.0079 | 0.0022 | 0.0057 |
| 165 | 0.0082 | 0.0023 | 0.0059 |
| 166 | 0.0083 | 0.0023 | 0.0060 |

| | | | |
|---|---|---|---|
| 167 | 0.0087 | 0.0024 | 0.0063 |
| 168 | 0.0089 | 0.0025 | 0.0064 |
| 169 | 0.0093 | 0.0026 | 0.0067 |
| 170 | 0.0095 | 0.0026 | 0.0069 |
| 171 | 0.0100 | 0.0028 | 0.0072 |
| 172 | 0.0102 | 0.0028 | 0.0074 |
| 173 | 0.0108 | 0.0030 | 0.0078 |
| 174 | 0.0111 | 0.0031 | 0.0080 |
| 175 | 0.0117 | 0.0033 | 0.0084 |
| 176 | 0.0121 | 0.0034 | 0.0087 |
| 177 | 0.0129 | 0.0036 | 0.0093 |
| 178 | 0.0133 | 0.0037 | 0.0096 |
| 179 | 0.0144 | 0.0040 | 0.0104 |
| 180 | 0.0149 | 0.0042 | 0.0108 |
| 181 | 0.0163 | 0.0045 | 0.0117 |
| 182 | 0.0170 | 0.0047 | 0.0123 |
| 183 | 0.0189 | 0.0053 | 0.0136 |
| 184 | 0.0200 | 0.0056 | 0.0144 |
| 185 | 0.0327 | 0.0091 | 0.0236 |
| 186 | 0.0349 | 0.0097 | 0.0251 |
| 187 | 0.0404 | 0.0105 | 0.0299 |
| 188 | 0.0441 | 0.0105 | 0.0336 |
| 189 | 0.0549 | 0.0105 | 0.0444 |
| 190 | 0.0632 | 0.0105 | 0.0527 |
| 191 | 0.0959 | 0.0105 | 0.0854 |
| 192 | 0.1392 | 0.0105 | 0.1287 |
| 193 | 0.6022 | 0.0105 | 0.5917 |
| 194 | 0.0755 | 0.0105 | 0.0650 |
| 195 | 0.0488 | 0.0105 | 0.0383 |
| 196 | 0.0374 | 0.0104 | 0.0270 |
| 197 | 0.0212 | 0.0059 | 0.0153 |
| 198 | 0.0179 | 0.0050 | 0.0129 |
| 199 | 0.0156 | 0.0043 | 0.0112 |
| 200 | 0.0138 | 0.0038 | 0.0100 |
| 201 | 0.0125 | 0.0035 | 0.0090 |
| 202 | 0.0114 | 0.0032 | 0.0082 |
| 203 | 0.0105 | 0.0029 | 0.0076 |
| 204 | 0.0097 | 0.0027 | 0.0070 |
| 205 | 0.0091 | 0.0025 | 0.0065 |
| 206 | 0.0085 | 0.0024 | 0.0061 |
| 207 | 0.0080 | 0.0022 | 0.0058 |
| 208 | 0.0076 | 0.0021 | 0.0055 |
| 209 | 0.0072 | 0.0020 | 0.0052 |
| 210 | 0.0069 | 0.0019 | 0.0050 |
| 211 | 0.0066 | 0.0018 | 0.0048 |
| 212 | 0.0063 | 0.0018 | 0.0046 |
| 213 | 0.0061 | 0.0017 | 0.0044 |
| 214 | 0.0058 | 0.0016 | 0.0042 |
| 215 | 0.0056 | 0.0016 | 0.0041 |
| 216 | 0.0054 | 0.0015 | 0.0039 |
| 217 | 0.0053 | 0.0015 | 0.0038 |
| 218 | 0.0052 | 0.0014 | 0.0037 |
| 219 | 0.0050 | 0.0014 | 0.0036 |
| 220 | 0.0049 | 0.0014 | 0.0035 |
| 221 | 0.0047 | 0.0013 | 0.0034 |
| 222 | 0.0046 | 0.0013 | 0.0033 |
| 223 | 0.0045 | 0.0012 | 0.0032 |
| 224 | 0.0044 | 0.0012 | 0.0031 |
| 225 | 0.0042 | 0.0012 | 0.0031 |

| | | | |
|---|---|---|---|
| 226 | 0.0041 | 0.0012 | 0.0030 |
| 227 | 0.0040 | 0.0011 | 0.0029 |
| 228 | 0.0040 | 0.0011 | 0.0029 |
| 229 | 0.0039 | 0.0011 | 0.0028 |
| 230 | 0.0038 | 0.0011 | 0.0027 |
| 231 | 0.0037 | 0.0010 | 0.0027 |
| 232 | 0.0036 | 0.0010 | 0.0026 |
| 233 | 0.0036 | 0.0010 | 0.0026 |
| 234 | 0.0035 | 0.0010 | 0.0025 |
| 235 | 0.0034 | 0.0010 | 0.0025 |
| 236 | 0.0034 | 0.0009 | 0.0024 |
| 237 | 0.0033 | 0.0009 | 0.0024 |
| 238 | 0.0032 | 0.0009 | 0.0023 |
| 239 | 0.0032 | 0.0009 | 0.0023 |
| 240 | 0.0031 | 0.0009 | 0.0023 |
| 241 | 0.0031 | 0.0009 | 0.0022 |
| 242 | 0.0030 | 0.0008 | 0.0022 |
| 243 | 0.0030 | 0.0008 | 0.0022 |
| 244 | 0.0029 | 0.0008 | 0.0021 |
| 245 | 0.0029 | 0.0008 | 0.0021 |
| 246 | 0.0029 | 0.0008 | 0.0021 |
| 247 | 0.0028 | 0.0008 | 0.0020 |
| 248 | 0.0028 | 0.0008 | 0.0020 |
| 249 | 0.0027 | 0.0008 | 0.0020 |
| 250 | 0.0027 | 0.0008 | 0.0019 |
| 251 | 0.0027 | 0.0007 | 0.0019 |
| 252 | 0.0026 | 0.0007 | 0.0019 |
| 253 | 0.0026 | 0.0007 | 0.0019 |
| 254 | 0.0026 | 0.0007 | 0.0018 |
| 255 | 0.0025 | 0.0007 | 0.0018 |
| 256 | 0.0025 | 0.0007 | 0.0018 |
| 257 | 0.0025 | 0.0007 | 0.0018 |
| 258 | 0.0024 | 0.0007 | 0.0018 |
| 259 | 0.0024 | 0.0007 | 0.0017 |
| 260 | 0.0024 | 0.0007 | 0.0017 |
| 261 | 0.0023 | 0.0007 | 0.0017 |
| 262 | 0.0023 | 0.0006 | 0.0017 |
| 263 | 0.0023 | 0.0006 | 0.0017 |
| 264 | 0.0023 | 0.0006 | 0.0016 |
| 265 | 0.0022 | 0.0006 | 0.0016 |
| 266 | 0.0022 | 0.0006 | 0.0016 |
| 267 | 0.0022 | 0.0006 | 0.0016 |
| 268 | 0.0022 | 0.0006 | 0.0016 |
| 269 | 0.0021 | 0.0006 | 0.0016 |
| 270 | 0.0021 | 0.0006 | 0.0015 |
| 271 | 0.0021 | 0.0006 | 0.0015 |
| 272 | 0.0021 | 0.0006 | 0.0015 |
| 273 | 0.0021 | 0.0006 | 0.0015 |
| 274 | 0.0020 | 0.0006 | 0.0015 |
| 275 | 0.0020 | 0.0006 | 0.0015 |
| 276 | 0.0020 | 0.0006 | 0.0014 |
| 277 | 0.0020 | 0.0006 | 0.0014 |
| 278 | 0.0020 | 0.0005 | 0.0014 |
| 279 | 0.0019 | 0.0005 | 0.0014 |
| 280 | 0.0019 | 0.0005 | 0.0014 |
| 281 | 0.0019 | 0.0005 | 0.0014 |
| 282 | 0.0019 | 0.0005 | 0.0014 |
| 283 | 0.0019 | 0.0005 | 0.0014 |
| 284 | 0.0019 | 0.0005 | 0.0013 |

| | | | |
|---|---|---|---|
| 285 | 0.0018 | 0.0005 | 0.0013 |
| 286 | 0.0018 | 0.0005 | 0.0013 |
| 287 | 0.0018 | 0.0005 | 0.0013 |
| 288 | 0.0018 | 0.0005 | 0.0013 |

Total soil rain loss = 0.46(In)
Total effective rainfall = 2.00(In)
Peak flow rate in flood hydrograph = 35.15(CFS)

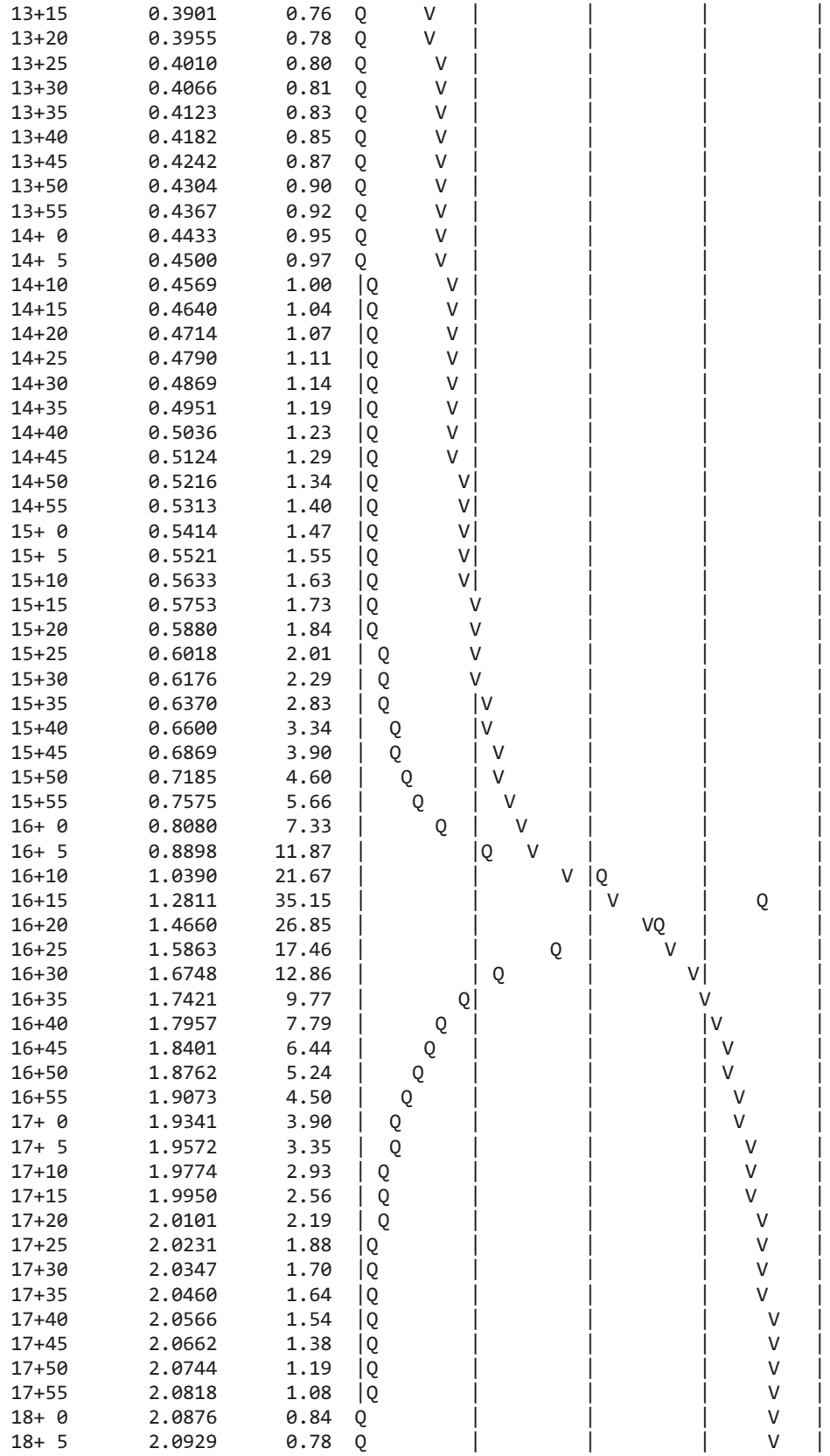
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 10.0 | 20.0 | 30.0 | 40.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0002 | 0.03 | Q | | | | |
| 0+15 | 0.0008 | 0.09 | Q | | | | |
| 0+20 | 0.0017 | 0.13 | Q | | | | |
| 0+25 | 0.0027 | 0.15 | Q | | | | |
| 0+30 | 0.0039 | 0.17 | Q | | | | |
| 0+35 | 0.0051 | 0.18 | Q | | | | |
| 0+40 | 0.0064 | 0.19 | Q | | | | |
| 0+45 | 0.0077 | 0.19 | Q | | | | |
| 0+50 | 0.0091 | 0.20 | Q | | | | |
| 0+55 | 0.0104 | 0.20 | Q | | | | |
| 1+ 0 | 0.0119 | 0.21 | Q | | | | |
| 1+ 5 | 0.0133 | 0.21 | Q | | | | |
| 1+10 | 0.0148 | 0.21 | Q | | | | |
| 1+15 | 0.0163 | 0.22 | Q | | | | |
| 1+20 | 0.0178 | 0.22 | Q | | | | |
| 1+25 | 0.0193 | 0.22 | Q | | | | |
| 1+30 | 0.0208 | 0.22 | Q | | | | |
| 1+35 | 0.0224 | 0.22 | Q | | | | |
| 1+40 | 0.0239 | 0.23 | Q | | | | |
| 1+45 | 0.0255 | 0.23 | Q | | | | |
| 1+50 | 0.0271 | 0.23 | Q | | | | |
| 1+55 | 0.0287 | 0.23 | Q | | | | |
| 2+ 0 | 0.0302 | 0.23 | Q | | | | |
| 2+ 5 | 0.0319 | 0.23 | Q | | | | |
| 2+10 | 0.0335 | 0.23 | Q | | | | |
| 2+15 | 0.0351 | 0.23 | Q | | | | |
| 2+20 | 0.0367 | 0.24 | Q | | | | |
| 2+25 | 0.0383 | 0.24 | Q | | | | |
| 2+30 | 0.0400 | 0.24 | Q | | | | |
| 2+35 | 0.0416 | 0.24 | Q | | | | |
| 2+40 | 0.0433 | 0.24 | Q | | | | |
| 2+45 | 0.0449 | 0.24 | Q | | | | |
| 2+50 | 0.0466 | 0.24 | Q | | | | |
| 2+55 | 0.0483 | 0.24 | Q | | | | |
| 3+ 0 | 0.0500 | 0.25 | Q | | | | |
| 3+ 5 | 0.0517 | 0.25 | Q | | | | |
| 3+10 | 0.0534 | 0.25 | Q | | | | |
| 3+15 | 0.0551 | 0.25 | Q | | | | |
| 3+20 | 0.0568 | 0.25 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+25 | 0.0586 | 0.25 | QV | | | | |
| 3+30 | 0.0603 | 0.25 | QV | | | | |
| 3+35 | 0.0620 | 0.25 | QV | | | | |
| 3+40 | 0.0638 | 0.26 | QV | | | | |
| 3+45 | 0.0656 | 0.26 | QV | | | | |
| 3+50 | 0.0673 | 0.26 | QV | | | | |
| 3+55 | 0.0691 | 0.26 | QV | | | | |
| 4+ 0 | 0.0709 | 0.26 | QV | | | | |
| 4+ 5 | 0.0727 | 0.26 | QV | | | | |
| 4+10 | 0.0745 | 0.26 | QV | | | | |
| 4+15 | 0.0764 | 0.26 | QV | | | | |
| 4+20 | 0.0782 | 0.27 | QV | | | | |
| 4+25 | 0.0800 | 0.27 | QV | | | | |
| 4+30 | 0.0819 | 0.27 | QV | | | | |
| 4+35 | 0.0838 | 0.27 | QV | | | | |
| 4+40 | 0.0856 | 0.27 | QV | | | | |
| 4+45 | 0.0875 | 0.27 | QV | | | | |
| 4+50 | 0.0894 | 0.28 | QV | | | | |
| 4+55 | 0.0913 | 0.28 | QV | | | | |
| 5+ 0 | 0.0932 | 0.28 | QV | | | | |
| 5+ 5 | 0.0952 | 0.28 | QV | | | | |
| 5+10 | 0.0971 | 0.28 | QV | | | | |
| 5+15 | 0.0991 | 0.28 | QV | | | | |
| 5+20 | 0.1010 | 0.29 | QV | | | | |
| 5+25 | 0.1030 | 0.29 | QV | | | | |
| 5+30 | 0.1050 | 0.29 | QV | | | | |
| 5+35 | 0.1070 | 0.29 | QV | | | | |
| 5+40 | 0.1090 | 0.29 | QV | | | | |
| 5+45 | 0.1110 | 0.29 | QV | | | | |
| 5+50 | 0.1131 | 0.30 | QV | | | | |
| 5+55 | 0.1151 | 0.30 | Q V | | | | |
| 6+ 0 | 0.1172 | 0.30 | Q V | | | | |
| 6+ 5 | 0.1192 | 0.30 | Q V | | | | |
| 6+10 | 0.1213 | 0.30 | Q V | | | | |
| 6+15 | 0.1234 | 0.31 | Q V | | | | |
| 6+20 | 0.1256 | 0.31 | Q V | | | | |
| 6+25 | 0.1277 | 0.31 | Q V | | | | |
| 6+30 | 0.1298 | 0.31 | Q V | | | | |
| 6+35 | 0.1320 | 0.31 | Q V | | | | |
| 6+40 | 0.1342 | 0.32 | Q V | | | | |
| 6+45 | 0.1363 | 0.32 | Q V | | | | |
| 6+50 | 0.1385 | 0.32 | Q V | | | | |
| 6+55 | 0.1408 | 0.32 | Q V | | | | |
| 7+ 0 | 0.1430 | 0.32 | Q V | | | | |
| 7+ 5 | 0.1453 | 0.33 | Q V | | | | |
| 7+10 | 0.1475 | 0.33 | Q V | | | | |
| 7+15 | 0.1498 | 0.33 | Q V | | | | |
| 7+20 | 0.1521 | 0.33 | Q V | | | | |
| 7+25 | 0.1544 | 0.34 | Q V | | | | |
| 7+30 | 0.1567 | 0.34 | Q V | | | | |
| 7+35 | 0.1591 | 0.34 | Q V | | | | |
| 7+40 | 0.1615 | 0.34 | Q V | | | | |
| 7+45 | 0.1638 | 0.35 | Q V | | | | |
| 7+50 | 0.1662 | 0.35 | Q V | | | | |
| 7+55 | 0.1687 | 0.35 | Q V | | | | |
| 8+ 0 | 0.1711 | 0.35 | Q  V | | | | |
| 8+ 5 | 0.1736 | 0.36 | Q  V | | | | |
| 8+10 | 0.1761 | 0.36 | Q  V | | | | |
| 8+15 | 0.1786 | 0.36 | Q  V | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8+20 | 0.1811 | 0.37 | Q | V | | | | |
| 8+25 | 0.1836 | 0.37 | Q | V | | | | |
| 8+30 | 0.1862 | 0.37 | Q | V | | | | |
| 8+35 | 0.1888 | 0.38 | Q | V | | | | |
| 8+40 | 0.1914 | 0.38 | Q | V | | | | |
| 8+45 | 0.1940 | 0.38 | Q | V | | | | |
| 8+50 | 0.1966 | 0.38 | Q | V | | | | |
| 8+55 | 0.1993 | 0.39 | Q | V | | | | |
| 9+ 0 | 0.2020 | 0.39 | Q | V | | | | |
| 9+ 5 | 0.2047 | 0.40 | Q | V | | | | |
| 9+10 | 0.2075 | 0.40 | Q | V | | | | |
| 9+15 | 0.2103 | 0.40 | Q | V | | | | |
| 9+20 | 0.2131 | 0.41 | Q | V | | | | |
| 9+25 | 0.2159 | 0.41 | Q | V | | | | |
| 9+30 | 0.2187 | 0.41 | Q | V | | | | |
| 9+35 | 0.2216 | 0.42 | Q | V | | | | |
| 9+40 | 0.2245 | 0.42 | Q | V | | | | |
| 9+45 | 0.2275 | 0.43 | Q | V | | | | |
| 9+50 | 0.2304 | 0.43 | Q | V | | | | |
| 9+55 | 0.2334 | 0.44 | Q | V | | | | |
| 10+ 0 | 0.2364 | 0.44 | Q | V | | | | |
| 10+ 5 | 0.2395 | 0.44 | Q | V | | | | |
| 10+10 | 0.2426 | 0.45 | Q | V | | | | |
| 10+15 | 0.2457 | 0.45 | Q | V | | | | |
| 10+20 | 0.2489 | 0.46 | Q | V | | | | |
| 10+25 | 0.2521 | 0.46 | Q | V | | | | |
| 10+30 | 0.2553 | 0.47 | Q | V | | | | |
| 10+35 | 0.2586 | 0.47 | Q | V | | | | |
| 10+40 | 0.2619 | 0.48 | Q | V | | | | |
| 10+45 | 0.2652 | 0.48 | Q | V | | | | |
| 10+50 | 0.2686 | 0.49 | Q | V | | | | |
| 10+55 | 0.2720 | 0.50 | Q | V | | | | |
| 11+ 0 | 0.2755 | 0.50 | Q | V | | | | |
| 11+ 5 | 0.2790 | 0.51 | Q | V | | | | |
| 11+10 | 0.2825 | 0.52 | Q | V | | | | |
| 11+15 | 0.2861 | 0.52 | Q | V | | | | |
| 11+20 | 0.2897 | 0.53 | Q | V | | | | |
| 11+25 | 0.2934 | 0.54 | Q | V | | | | |
| 11+30 | 0.2972 | 0.54 | Q | V | | | | |
| 11+35 | 0.3010 | 0.55 | Q | V | | | | |
| 11+40 | 0.3048 | 0.56 | Q | V | | | | |
| 11+45 | 0.3087 | 0.57 | Q | V | | | | |
| 11+50 | 0.3127 | 0.57 | Q | V | | | | |
| 11+55 | 0.3167 | 0.58 | Q | V | | | | |
| 12+ 0 | 0.3207 | 0.59 | Q | V | | | | |
| 12+ 5 | 0.3249 | 0.60 | Q | V | | | | |
| 12+10 | 0.3291 | 0.61 | Q | V | | | | |
| 12+15 | 0.3333 | 0.62 | Q | V | | | | |
| 12+20 | 0.3376 | 0.62 | Q | V | | | | |
| 12+25 | 0.3420 | 0.63 | Q | V | | | | |
| 12+30 | 0.3464 | 0.64 | Q | V | | | | |
| 12+35 | 0.3509 | 0.66 | Q | V | | | | |
| 12+40 | 0.3555 | 0.67 | Q | V | | | | |
| 12+45 | 0.3602 | 0.68 | Q | V | | | | |
| 12+50 | 0.3649 | 0.69 | Q | V | | | | |
| 12+55 | 0.3698 | 0.70 | Q | V | | | | |
| 13+ 0 | 0.3747 | 0.72 | Q | V | | | | |
| 13+ 5 | 0.3798 | 0.73 | Q | V | | | | |
| 13+10 | 0.3849 | 0.75 | Q | V | | | | |



| | | | |
|---|---|---|---|
| 13+15 | 0.3901 | 0.76 | |
| 13+20 | 0.3955 | 0.78 | |
| 13+25 | 0.4010 | 0.80 | |
| 13+30 | 0.4066 | 0.81 | |
| 13+35 | 0.4123 | 0.83 | |
| 13+40 | 0.4182 | 0.85 | |
| 13+45 | 0.4242 | 0.87 | |
| 13+50 | 0.4304 | 0.90 | |
| 13+55 | 0.4367 | 0.92 | |
| 14+ 0 | 0.4433 | 0.95 | |
| 14+ 5 | 0.4500 | 0.97 | |
| 14+10 | 0.4569 | 1.00 | |
| 14+15 | 0.4640 | 1.04 | |
| 14+20 | 0.4714 | 1.07 | |
| 14+25 | 0.4790 | 1.11 | |
| 14+30 | 0.4869 | 1.14 | |
| 14+35 | 0.4951 | 1.19 | |
| 14+40 | 0.5036 | 1.23 | |
| 14+45 | 0.5124 | 1.29 | |
| 14+50 | 0.5216 | 1.34 | |
| 14+55 | 0.5313 | 1.40 | |
| 15+ 0 | 0.5414 | 1.47 | |
| 15+ 5 | 0.5521 | 1.55 | |
| 15+10 | 0.5633 | 1.63 | |
| 15+15 | 0.5753 | 1.73 | |
| 15+20 | 0.5880 | 1.84 | |
| 15+25 | 0.6018 | 2.01 | |
| 15+30 | 0.6176 | 2.29 | |
| 15+35 | 0.6370 | 2.83 | |
| 15+40 | 0.6600 | 3.34 | |
| 15+45 | 0.6869 | 3.90 | |
| 15+50 | 0.7185 | 4.60 | |
| 15+55 | 0.7575 | 5.66 | |
| 16+ 0 | 0.8080 | 7.33 | |
| 16+ 5 | 0.8898 | 11.87 | |
| 16+10 | 1.0390 | 21.67 | |
| 16+15 | 1.2811 | 35.15 | |
| 16+20 | 1.4660 | 26.85 | |
| 16+25 | 1.5863 | 17.46 | |
| 16+30 | 1.6748 | 12.86 | |
| 16+35 | 1.7421 | 9.77 | |
| 16+40 | 1.7957 | 7.79 | |
| 16+45 | 1.8401 | 6.44 | |
| 16+50 | 1.8762 | 5.24 | |
| 16+55 | 1.9073 | 4.50 | |
| 17+ 0 | 1.9341 | 3.90 | |
| 17+ 5 | 1.9572 | 3.35 | |
| 17+10 | 1.9774 | 2.93 | |
| 17+15 | 1.9950 | 2.56 | |
| 17+20 | 2.0101 | 2.19 | |
| 17+25 | 2.0231 | 1.88 | |
| 17+30 | 2.0347 | 1.70 | |
| 17+35 | 2.0460 | 1.64 | |
| 17+40 | 2.0566 | 1.54 | |
| 17+45 | 2.0662 | 1.38 | |
| 17+50 | 2.0744 | 1.19 | |
| 17+55 | 2.0818 | 1.08 | |
| 18+ 0 | 2.0876 | 0.84 | |
| 18+ 5 | 2.0929 | 0.78 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18+10 | 2.0980 | 0.74 | Q | \| | \| | \| | V \| |
| 18+15 | 2.1029 | 0.71 | Q | \| | \| | \| | V \| |
| 18+20 | 2.1076 | 0.68 | Q | \| | \| | \| | V \| |
| 18+25 | 2.1121 | 0.66 | Q | \| | \| | \| | V \| |
| 18+30 | 2.1165 | 0.63 | Q | \| | \| | \| | V \| |
| 18+35 | 2.1207 | 0.61 | Q | \| | \| | \| | V \| |
| 18+40 | 2.1248 | 0.59 | Q | \| | \| | \| | V \| |
| 18+45 | 2.1288 | 0.58 | Q | \| | \| | \| | V \| |
| 18+50 | 2.1326 | 0.56 | Q | \| | \| | \| | V \| |
| 18+55 | 2.1364 | 0.54 | Q | \| | \| | \| | V \| |
| 19+ 0 | 2.1400 | 0.53 | Q | \| | \| | \| | V \| |
| 19+ 5 | 2.1436 | 0.52 | Q | \| | \| | \| | V \| |
| 19+10 | 2.1470 | 0.50 | Q | \| | \| | \| | V \| |
| 19+15 | 2.1504 | 0.49 | Q | \| | \| | \| | V \| |
| 19+20 | 2.1537 | 0.48 | Q | \| | \| | \| | V \| |
| 19+25 | 2.1570 | 0.47 | Q | \| | \| | \| | V \| |
| 19+30 | 2.1601 | 0.46 | Q | \| | \| | \| | V \| |
| 19+35 | 2.1632 | 0.45 | Q | \| | \| | \| | V \| |
| 19+40 | 2.1662 | 0.44 | Q | \| | \| | \| | V \| |
| 19+45 | 2.1692 | 0.43 | Q | \| | \| | \| | V \| |
| 19+50 | 2.1721 | 0.42 | Q | \| | \| | \| | V \| |
| 19+55 | 2.1749 | 0.41 | Q | \| | \| | \| | V \| |
| 20+ 0 | 2.1777 | 0.41 | Q | \| | \| | \| | V \| |
| 20+ 5 | 2.1805 | 0.40 | Q | \| | \| | \| | V \| |
| 20+10 | 2.1832 | 0.39 | Q | \| | \| | \| | V \| |
| 20+15 | 2.1858 | 0.38 | Q | \| | \| | \| | V \| |
| 20+20 | 2.1884 | 0.38 | Q | \| | \| | \| | V \| |
| 20+25 | 2.1910 | 0.37 | Q | \| | \| | \| | V \| |
| 20+30 | 2.1935 | 0.37 | Q | \| | \| | \| | V \| |
| 20+35 | 2.1960 | 0.36 | Q | \| | \| | \| | V \| |
| 20+40 | 2.1984 | 0.35 | Q | \| | \| | \| | V \| |
| 20+45 | 2.2008 | 0.35 | Q | \| | \| | \| | V \| |
| 20+50 | 2.2032 | 0.34 | Q | \| | \| | \| | V \| |
| 20+55 | 2.2055 | 0.34 | Q | \| | \| | \| | V \| |
| 21+ 0 | 2.2078 | 0.33 | Q | \| | \| | \| | V \| |
| 21+ 5 | 2.2101 | 0.33 | Q | \| | \| | \| | V \| |
| 21+10 | 2.2123 | 0.32 | Q | \| | \| | \| | V \| |
| 21+15 | 2.2145 | 0.32 | Q | \| | \| | \| | V \| |
| 21+20 | 2.2167 | 0.31 | Q | \| | \| | \| | V \| |
| 21+25 | 2.2188 | 0.31 | Q | \| | \| | \| | V \| |
| 21+30 | 2.2209 | 0.31 | Q | \| | \| | \| | V \| |
| 21+35 | 2.2230 | 0.30 | Q | \| | \| | \| | V \| |
| 21+40 | 2.2250 | 0.30 | Q | \| | \| | \| | V\| |
| 21+45 | 2.2271 | 0.30 | Q | \| | \| | \| | V\| |
| 21+50 | 2.2291 | 0.29 | Q | \| | \| | \| | V\| |
| 21+55 | 2.2311 | 0.29 | Q | \| | \| | \| | V\| |
| 22+ 0 | 2.2330 | 0.28 | Q | \| | \| | \| | V\| |
| 22+ 5 | 2.2350 | 0.28 | Q | \| | \| | \| | V\| |
| 22+10 | 2.2369 | 0.28 | Q | \| | \| | \| | V\| |
| 22+15 | 2.2388 | 0.27 | Q | \| | \| | \| | V\| |
| 22+20 | 2.2406 | 0.27 | Q | \| | \| | \| | V\| |
| 22+25 | 2.2425 | 0.27 | Q | \| | \| | \| | V\| |
| 22+30 | 2.2443 | 0.27 | Q | \| | \| | \| | V\| |
| 22+35 | 2.2461 | 0.26 | Q | \| | \| | \| | V\| |
| 22+40 | 2.2479 | 0.26 | Q | \| | \| | \| | V\| |
| 22+45 | 2.2497 | 0.26 | Q | \| | \| | \| | V\| |
| 22+50 | 2.2515 | 0.25 | Q | \| | \| | \| | V\| |
| 22+55 | 2.2532 | 0.25 | Q | \| | \| | \| | V\| |
| 23+ 0 | 2.2549 | 0.25 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+ 5 | 2.2566 | 0.25 | Q | \| | \| | \| | V\| |
| 23+10 | 2.2583 | 0.24 | Q | \| | \| | \| | V\| |
| 23+15 | 2.2600 | 0.24 | Q | \| | \| | \| | V\| |
| 23+20 | 2.2616 | 0.24 | Q | \| | \| | \| | V\| |
| 23+25 | 2.2632 | 0.24 | Q | \| | \| | \| | V\| |
| 23+30 | 2.2649 | 0.24 | Q | \| | \| | \| | V\| |
| 23+35 | 2.2665 | 0.23 | Q | \| | \| | \| | V\| |
| 23+40 | 2.2681 | 0.23 | Q | \| | \| | \| | V\| |
| 23+45 | 2.2696 | 0.23 | Q | \| | \| | \| | V\| |
| 23+50 | 2.2712 | 0.23 | Q | \| | \| | \| | V\| |
| 23+55 | 2.2728 | 0.22 | Q | \| | \| | \| | V\| |
| 24+ 0 | 2.2743 | 0.22 | Q | \| | \| | \| | V\| |
| 24+ 5 | 2.2758 | 0.22 | Q | \| | \| | \| | V\| |
| 24+10 | 2.2771 | 0.19 | Q | \| | \| | \| | V\| |
| 24+15 | 2.2780 | 0.13 | Q | \| | \| | \| | V\| |
| 24+20 | 2.2786 | 0.09 | Q | \| | \| | \| | V\| |
| 24+25 | 2.2791 | 0.07 | Q | \| | \| | \| | V\| |
| 24+30 | 2.2794 | 0.05 | Q | \| | \| | \| | V\| |
| 24+35 | 2.2797 | 0.04 | Q | \| | \| | \| | V\| |
| 24+40 | 2.2799 | 0.03 | Q | \| | \| | \| | V\| |
| 24+45 | 2.2801 | 0.03 | Q | \| | \| | \| | V\| |
| 24+50 | 2.2803 | 0.02 | Q | \| | \| | \| | V\| |
| 24+55 | 2.2804 | 0.02 | Q | \| | \| | \| | V\| |
| 25+ 0 | 2.2805 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 5 | 2.2806 | 0.01 | Q | \| | \| | \| | V\| |
| 25+10 | 2.2806 | 0.01 | Q | \| | \| | \| | V\| |
| 25+15 | 2.2807 | 0.01 | Q | \| | \| | \| | V\| |
| 25+20 | 2.2807 | 0.01 | Q | \| | \| | \| | V\| |
| 25+25 | 2.2807 | 0.00 | Q | \| | \| | \| | V\| |
| 25+30 | 2.2808 | 0.00 | Q | \| | \| | \| | V\| |
| 25+35 | 2.2808 | 0.00 | Q | \| | \| | \| | V\| |
| 25+40 | 2.2808 | 0.00 | Q | \| | \| | \| | V\| |
| 25+45 | 2.2808 | 0.00 | Q | \| | \| | \| | V\| |
| 25+50 | 2.2808 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 6
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 13.80 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 13.80 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 13.80 | 24 | 2.45 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.0 | 92.8 | 13.80 | 1.000 | 0.140 | 0.900 | 0.126 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.126

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 12.42 | 0.900 | 78.0 | 92.8 | 0.78 | 0.700 |
| 1.38 | 0.100 | 98.0 | 98.0 | 0.20 | 0.907 |

Area-averaged catchment yield fraction, Y = 0.721
Area-averaged low loss fraction, Yb = 0.279
User entry of time of concentration = 0.400 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 13.80(Ac.)
Catchment Lag time = 0.320 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 26.0417
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.126(In/Hr)
Average low loss rate fraction (Yb) = 0.279 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.450(In)

Rainfall depth area reduction factors:
Using a total area of 13.80(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.602(In)
30-minute factor = 0.999 Adjusted rainfall = 1.031(In)
1-hour factor = 0.999 Adjusted rainfall = 1.269(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.450(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 166.89 (CFS)) | |
| 1 | 1.429 | 2.385 |
| 2 | 7.072 | 9.418 |
| 3 | 21.935 | 24.805 |
| 4 | 43.929 | 36.706 |
| 5 | 58.081 | 23.619 |
| 6 | 66.645 | 14.293 |
| 7 | 72.800 | 10.271 |
| 8 | 77.460 | 7.778 |
| 9 | 81.078 | 6.038 |
| 10 | 83.994 | 4.866 |
| 11 | 86.510 | 4.199 |
| 12 | 88.598 | 3.486 |
| 13 | 90.217 | 2.702 |

| | | |
|---|---|---|
| 14 | 91.655 | 2.399 |
| 15 | 92.906 | 2.089 |
| 16 | 94.007 | 1.837 |
| 17 | 94.909 | 1.506 |
| 18 | 95.741 | 1.388 |
| 19 | 96.426 | 1.144 |
| 20 | 97.036 | 1.019 |
| 21 | 97.509 | 0.789 |
| 22 | 97.897 | 0.648 |
| 23 | 98.159 | 0.437 |
| 24 | 98.444 | 0.475 |
| 25 | 98.756 | 0.521 |
| 26 | 99.069 | 0.522 |
| 27 | 99.380 | 0.520 |
| 28 | 99.601 | 0.368 |
| 29 | 99.764 | 0.272 |
| 30 | 100.000 | 0.136 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6022 | 0.6022 |
| 2 | 0.7414 | 0.1392 |
| 3 | 0.8373 | 0.0959 |
| 4 | 0.9128 | 0.0755 |
| 5 | 0.9760 | 0.0632 |
| 6 | 1.0309 | 0.0549 |
| 7 | 1.0797 | 0.0488 |
| 8 | 1.1238 | 0.0441 |
| 9 | 1.1642 | 0.0404 |
| 10 | 1.2016 | 0.0374 |
| 11 | 1.2365 | 0.0349 |
| 12 | 1.2692 | 0.0327 |
| 13 | 1.2904 | 0.0212 |
| 14 | 1.3104 | 0.0200 |
| 15 | 1.3293 | 0.0189 |
| 16 | 1.3472 | 0.0179 |
| 17 | 1.3643 | 0.0170 |
| 18 | 1.3805 | 0.0163 |
| 19 | 1.3961 | 0.0156 |
| 20 | 1.4110 | 0.0149 |
| 21 | 1.4254 | 0.0144 |
| 22 | 1.4392 | 0.0138 |
| 23 | 1.4526 | 0.0133 |
| 24 | 1.4654 | 0.0129 |
| 25 | 1.4779 | 0.0125 |
| 26 | 1.4900 | 0.0121 |
| 27 | 1.5017 | 0.0117 |
| 28 | 1.5131 | 0.0114 |
| 29 | 1.5241 | 0.0111 |
| 30 | 1.5349 | 0.0108 |
| 31 | 1.5453 | 0.0105 |
| 32 | 1.5555 | 0.0102 |
| 33 | 1.5655 | 0.0100 |
| 34 | 1.5752 | 0.0097 |
| 35 | 1.5847 | 0.0095 |
| 36 | 1.5940 | 0.0093 |
| 37 | 1.6031 | 0.0091 |
| 38 | 1.6120 | 0.0089 |
| 39 | 1.6206 | 0.0087 |

| | | |
|---|---|---|
| 40 | 1.6292 | 0.0085 |
| 41 | 1.6375 | 0.0083 |
| 42 | 1.6457 | 0.0082 |
| 43 | 1.6537 | 0.0080 |
| 44 | 1.6616 | 0.0079 |
| 45 | 1.6694 | 0.0077 |
| 46 | 1.6770 | 0.0076 |
| 47 | 1.6845 | 0.0075 |
| 48 | 1.6918 | 0.0074 |
| 49 | 1.6990 | 0.0072 |
| 50 | 1.7062 | 0.0071 |
| 51 | 1.7132 | 0.0070 |
| 52 | 1.7201 | 0.0069 |
| 53 | 1.7269 | 0.0068 |
| 54 | 1.7336 | 0.0067 |
| 55 | 1.7402 | 0.0066 |
| 56 | 1.7467 | 0.0065 |
| 57 | 1.7531 | 0.0064 |
| 58 | 1.7594 | 0.0063 |
| 59 | 1.7656 | 0.0062 |
| 60 | 1.7718 | 0.0062 |
| 61 | 1.7779 | 0.0061 |
| 62 | 1.7838 | 0.0060 |
| 63 | 1.7898 | 0.0059 |
| 64 | 1.7956 | 0.0058 |
| 65 | 1.8014 | 0.0058 |
| 66 | 1.8071 | 0.0057 |
| 67 | 1.8127 | 0.0056 |
| 68 | 1.8183 | 0.0056 |
| 69 | 1.8238 | 0.0055 |
| 70 | 1.8292 | 0.0054 |
| 71 | 1.8346 | 0.0054 |
| 72 | 1.8399 | 0.0053 |
| 73 | 1.8452 | 0.0052 |
| 74 | 1.8504 | 0.0052 |
| 75 | 1.8555 | 0.0051 |
| 76 | 1.8606 | 0.0051 |
| 77 | 1.8656 | 0.0050 |
| 78 | 1.8706 | 0.0050 |
| 79 | 1.8755 | 0.0049 |
| 80 | 1.8804 | 0.0049 |
| 81 | 1.8852 | 0.0048 |
| 82 | 1.8900 | 0.0048 |
| 83 | 1.8948 | 0.0047 |
| 84 | 1.8994 | 0.0047 |
| 85 | 1.9041 | 0.0046 |
| 86 | 1.9087 | 0.0046 |
| 87 | 1.9133 | 0.0046 |
| 88 | 1.9178 | 0.0045 |
| 89 | 1.9223 | 0.0045 |
| 90 | 1.9267 | 0.0044 |
| 91 | 1.9311 | 0.0044 |
| 92 | 1.9355 | 0.0044 |
| 93 | 1.9398 | 0.0043 |
| 94 | 1.9441 | 0.0043 |
| 95 | 1.9483 | 0.0043 |
| 96 | 1.9526 | 0.0042 |
| 97 | 1.9568 | 0.0042 |
| 98 | 1.9609 | 0.0041 |

| | | |
|---|---|---|
| 99 | 1.9650 | 0.0041 |
| 100 | 1.9691 | 0.0041 |
| 101 | 1.9732 | 0.0041 |
| 102 | 1.9772 | 0.0040 |
| 103 | 1.9812 | 0.0040 |
| 104 | 1.9851 | 0.0040 |
| 105 | 1.9890 | 0.0039 |
| 106 | 1.9929 | 0.0039 |
| 107 | 1.9968 | 0.0039 |
| 108 | 2.0007 | 0.0038 |
| 109 | 2.0045 | 0.0038 |
| 110 | 2.0083 | 0.0038 |
| 111 | 2.0120 | 0.0038 |
| 112 | 2.0157 | 0.0037 |
| 113 | 2.0194 | 0.0037 |
| 114 | 2.0231 | 0.0037 |
| 115 | 2.0268 | 0.0037 |
| 116 | 2.0304 | 0.0036 |
| 117 | 2.0340 | 0.0036 |
| 118 | 2.0376 | 0.0036 |
| 119 | 2.0411 | 0.0036 |
| 120 | 2.0447 | 0.0035 |
| 121 | 2.0482 | 0.0035 |
| 122 | 2.0517 | 0.0035 |
| 123 | 2.0551 | 0.0035 |
| 124 | 2.0586 | 0.0034 |
| 125 | 2.0620 | 0.0034 |
| 126 | 2.0654 | 0.0034 |
| 127 | 2.0688 | 0.0034 |
| 128 | 2.0721 | 0.0034 |
| 129 | 2.0754 | 0.0033 |
| 130 | 2.0788 | 0.0033 |
| 131 | 2.0821 | 0.0033 |
| 132 | 2.0853 | 0.0033 |
| 133 | 2.0886 | 0.0033 |
| 134 | 2.0918 | 0.0032 |
| 135 | 2.0950 | 0.0032 |
| 136 | 2.0982 | 0.0032 |
| 137 | 2.1014 | 0.0032 |
| 138 | 2.1046 | 0.0032 |
| 139 | 2.1077 | 0.0031 |
| 140 | 2.1108 | 0.0031 |
| 141 | 2.1139 | 0.0031 |
| 142 | 2.1170 | 0.0031 |
| 143 | 2.1201 | 0.0031 |
| 144 | 2.1231 | 0.0031 |
| 145 | 2.1262 | 0.0030 |
| 146 | 2.1292 | 0.0030 |
| 147 | 2.1322 | 0.0030 |
| 148 | 2.1352 | 0.0030 |
| 149 | 2.1382 | 0.0030 |
| 150 | 2.1411 | 0.0030 |
| 151 | 2.1441 | 0.0029 |
| 152 | 2.1470 | 0.0029 |
| 153 | 2.1499 | 0.0029 |
| 154 | 2.1528 | 0.0029 |
| 155 | 2.1557 | 0.0029 |
| 156 | 2.1585 | 0.0029 |
| 157 | 2.1614 | 0.0029 |

| | | |
|---|---|---|
| 158 | 2.1642 | 0.0028 |
| 159 | 2.1670 | 0.0028 |
| 160 | 2.1699 | 0.0028 |
| 161 | 2.1726 | 0.0028 |
| 162 | 2.1754 | 0.0028 |
| 163 | 2.1782 | 0.0028 |
| 164 | 2.1809 | 0.0028 |
| 165 | 2.1837 | 0.0027 |
| 166 | 2.1864 | 0.0027 |
| 167 | 2.1891 | 0.0027 |
| 168 | 2.1918 | 0.0027 |
| 169 | 2.1945 | 0.0027 |
| 170 | 2.1972 | 0.0027 |
| 171 | 2.1999 | 0.0027 |
| 172 | 2.2025 | 0.0027 |
| 173 | 2.2051 | 0.0026 |
| 174 | 2.2078 | 0.0026 |
| 175 | 2.2104 | 0.0026 |
| 176 | 2.2130 | 0.0026 |
| 177 | 2.2156 | 0.0026 |
| 178 | 2.2182 | 0.0026 |
| 179 | 2.2207 | 0.0026 |
| 180 | 2.2233 | 0.0026 |
| 181 | 2.2258 | 0.0025 |
| 182 | 2.2284 | 0.0025 |
| 183 | 2.2309 | 0.0025 |
| 184 | 2.2334 | 0.0025 |
| 185 | 2.2359 | 0.0025 |
| 186 | 2.2384 | 0.0025 |
| 187 | 2.2409 | 0.0025 |
| 188 | 2.2434 | 0.0025 |
| 189 | 2.2458 | 0.0025 |
| 190 | 2.2483 | 0.0024 |
| 191 | 2.2507 | 0.0024 |
| 192 | 2.2531 | 0.0024 |
| 193 | 2.2555 | 0.0024 |
| 194 | 2.2580 | 0.0024 |
| 195 | 2.2604 | 0.0024 |
| 196 | 2.2627 | 0.0024 |
| 197 | 2.2651 | 0.0024 |
| 198 | 2.2675 | 0.0024 |
| 199 | 2.2699 | 0.0024 |
| 200 | 2.2722 | 0.0024 |
| 201 | 2.2745 | 0.0023 |
| 202 | 2.2769 | 0.0023 |
| 203 | 2.2792 | 0.0023 |
| 204 | 2.2815 | 0.0023 |
| 205 | 2.2838 | 0.0023 |
| 206 | 2.2861 | 0.0023 |
| 207 | 2.2884 | 0.0023 |
| 208 | 2.2907 | 0.0023 |
| 209 | 2.2930 | 0.0023 |
| 210 | 2.2952 | 0.0023 |
| 211 | 2.2975 | 0.0023 |
| 212 | 2.2997 | 0.0022 |
| 213 | 2.3020 | 0.0022 |
| 214 | 2.3042 | 0.0022 |
| 215 | 2.3064 | 0.0022 |
| 216 | 2.3086 | 0.0022 |

| | | |
|---|---|---|
| 217 | 2.3108 | 0.0022 |
| 218 | 2.3130 | 0.0022 |
| 219 | 2.3152 | 0.0022 |
| 220 | 2.3174 | 0.0022 |
| 221 | 2.3196 | 0.0022 |
| 222 | 2.3217 | 0.0022 |
| 223 | 2.3239 | 0.0022 |
| 224 | 2.3260 | 0.0021 |
| 225 | 2.3282 | 0.0021 |
| 226 | 2.3303 | 0.0021 |
| 227 | 2.3324 | 0.0021 |
| 228 | 2.3345 | 0.0021 |
| 229 | 2.3367 | 0.0021 |
| 230 | 2.3388 | 0.0021 |
| 231 | 2.3409 | 0.0021 |
| 232 | 2.3429 | 0.0021 |
| 233 | 2.3450 | 0.0021 |
| 234 | 2.3471 | 0.0021 |
| 235 | 2.3492 | 0.0021 |
| 236 | 2.3512 | 0.0021 |
| 237 | 2.3533 | 0.0021 |
| 238 | 2.3553 | 0.0020 |
| 239 | 2.3574 | 0.0020 |
| 240 | 2.3594 | 0.0020 |
| 241 | 2.3614 | 0.0020 |
| 242 | 2.3635 | 0.0020 |
| 243 | 2.3655 | 0.0020 |
| 244 | 2.3675 | 0.0020 |
| 245 | 2.3695 | 0.0020 |
| 246 | 2.3715 | 0.0020 |
| 247 | 2.3735 | 0.0020 |
| 248 | 2.3754 | 0.0020 |
| 249 | 2.3774 | 0.0020 |
| 250 | 2.3794 | 0.0020 |
| 251 | 2.3814 | 0.0020 |
| 252 | 2.3833 | 0.0020 |
| 253 | 2.3853 | 0.0020 |
| 254 | 2.3872 | 0.0019 |
| 255 | 2.3891 | 0.0019 |
| 256 | 2.3911 | 0.0019 |
| 257 | 2.3930 | 0.0019 |
| 258 | 2.3949 | 0.0019 |
| 259 | 2.3968 | 0.0019 |
| 260 | 2.3987 | 0.0019 |
| 261 | 2.4006 | 0.0019 |
| 262 | 2.4025 | 0.0019 |
| 263 | 2.4044 | 0.0019 |
| 264 | 2.4063 | 0.0019 |
| 265 | 2.4082 | 0.0019 |
| 266 | 2.4101 | 0.0019 |
| 267 | 2.4119 | 0.0019 |
| 268 | 2.4138 | 0.0019 |
| 269 | 2.4157 | 0.0019 |
| 270 | 2.4175 | 0.0019 |
| 271 | 2.4194 | 0.0018 |
| 272 | 2.4212 | 0.0018 |
| 273 | 2.4230 | 0.0018 |
| 274 | 2.4249 | 0.0018 |
| 275 | 2.4267 | 0.0018 |

| | | |
|---|---|---|
| 276 | 2.4285 | 0.0018 |
| 277 | 2.4303 | 0.0018 |
| 278 | 2.4321 | 0.0018 |
| 279 | 2.4339 | 0.0018 |
| 280 | 2.4357 | 0.0018 |
| 281 | 2.4375 | 0.0018 |
| 282 | 2.4393 | 0.0018 |
| 283 | 2.4411 | 0.0018 |
| 284 | 2.4429 | 0.0018 |
| 285 | 2.4447 | 0.0018 |
| 286 | 2.4464 | 0.0018 |
| 287 | 2.4482 | 0.0018 |
| 288 | 2.4500 | 0.0018 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0018 | 0.0005 | 0.0013 |
| 2 | 0.0018 | 0.0005 | 0.0013 |
| 3 | 0.0018 | 0.0005 | 0.0013 |
| 4 | 0.0018 | 0.0005 | 0.0013 |
| 5 | 0.0018 | 0.0005 | 0.0013 |
| 6 | 0.0018 | 0.0005 | 0.0013 |
| 7 | 0.0018 | 0.0005 | 0.0013 |
| 8 | 0.0018 | 0.0005 | 0.0013 |
| 9 | 0.0018 | 0.0005 | 0.0013 |
| 10 | 0.0018 | 0.0005 | 0.0013 |
| 11 | 0.0018 | 0.0005 | 0.0013 |
| 12 | 0.0018 | 0.0005 | 0.0013 |
| 13 | 0.0019 | 0.0005 | 0.0013 |
| 14 | 0.0019 | 0.0005 | 0.0013 |
| 15 | 0.0019 | 0.0005 | 0.0013 |
| 16 | 0.0019 | 0.0005 | 0.0014 |
| 17 | 0.0019 | 0.0005 | 0.0014 |
| 18 | 0.0019 | 0.0005 | 0.0014 |
| 19 | 0.0019 | 0.0005 | 0.0014 |
| 20 | 0.0019 | 0.0005 | 0.0014 |
| 21 | 0.0019 | 0.0005 | 0.0014 |
| 22 | 0.0019 | 0.0005 | 0.0014 |
| 23 | 0.0019 | 0.0005 | 0.0014 |
| 24 | 0.0019 | 0.0005 | 0.0014 |
| 25 | 0.0020 | 0.0005 | 0.0014 |
| 26 | 0.0020 | 0.0005 | 0.0014 |
| 27 | 0.0020 | 0.0006 | 0.0014 |
| 28 | 0.0020 | 0.0006 | 0.0014 |
| 29 | 0.0020 | 0.0006 | 0.0014 |
| 30 | 0.0020 | 0.0006 | 0.0014 |
| 31 | 0.0020 | 0.0006 | 0.0015 |
| 32 | 0.0020 | 0.0006 | 0.0015 |
| 33 | 0.0020 | 0.0006 | 0.0015 |
| 34 | 0.0020 | 0.0006 | 0.0015 |
| 35 | 0.0021 | 0.0006 | 0.0015 |
| 36 | 0.0021 | 0.0006 | 0.0015 |
| 37 | 0.0021 | 0.0006 | 0.0015 |
| 38 | 0.0021 | 0.0006 | 0.0015 |
| 39 | 0.0021 | 0.0006 | 0.0015 |
| 40 | 0.0021 | 0.0006 | 0.0015 |
| 41 | 0.0021 | 0.0006 | 0.0015 |

| | | | |
|---|---|---|---|
| 42 | 0.0021 | 0.0006 | 0.0015 |
| 43 | 0.0021 | 0.0006 | 0.0015 |
| 44 | 0.0021 | 0.0006 | 0.0015 |
| 45 | 0.0022 | 0.0006 | 0.0016 |
| 46 | 0.0022 | 0.0006 | 0.0016 |
| 47 | 0.0022 | 0.0006 | 0.0016 |
| 48 | 0.0022 | 0.0006 | 0.0016 |
| 49 | 0.0022 | 0.0006 | 0.0016 |
| 50 | 0.0022 | 0.0006 | 0.0016 |
| 51 | 0.0022 | 0.0006 | 0.0016 |
| 52 | 0.0022 | 0.0006 | 0.0016 |
| 53 | 0.0023 | 0.0006 | 0.0016 |
| 54 | 0.0023 | 0.0006 | 0.0016 |
| 55 | 0.0023 | 0.0006 | 0.0016 |
| 56 | 0.0023 | 0.0006 | 0.0017 |
| 57 | 0.0023 | 0.0006 | 0.0017 |
| 58 | 0.0023 | 0.0006 | 0.0017 |
| 59 | 0.0023 | 0.0007 | 0.0017 |
| 60 | 0.0024 | 0.0007 | 0.0017 |
| 61 | 0.0024 | 0.0007 | 0.0017 |
| 62 | 0.0024 | 0.0007 | 0.0017 |
| 63 | 0.0024 | 0.0007 | 0.0017 |
| 64 | 0.0024 | 0.0007 | 0.0017 |
| 65 | 0.0024 | 0.0007 | 0.0018 |
| 66 | 0.0024 | 0.0007 | 0.0018 |
| 67 | 0.0025 | 0.0007 | 0.0018 |
| 68 | 0.0025 | 0.0007 | 0.0018 |
| 69 | 0.0025 | 0.0007 | 0.0018 |
| 70 | 0.0025 | 0.0007 | 0.0018 |
| 71 | 0.0025 | 0.0007 | 0.0018 |
| 72 | 0.0025 | 0.0007 | 0.0018 |
| 73 | 0.0026 | 0.0007 | 0.0018 |
| 74 | 0.0026 | 0.0007 | 0.0019 |
| 75 | 0.0026 | 0.0007 | 0.0019 |
| 76 | 0.0026 | 0.0007 | 0.0019 |
| 77 | 0.0026 | 0.0007 | 0.0019 |
| 78 | 0.0026 | 0.0007 | 0.0019 |
| 79 | 0.0027 | 0.0007 | 0.0019 |
| 80 | 0.0027 | 0.0007 | 0.0019 |
| 81 | 0.0027 | 0.0008 | 0.0019 |
| 82 | 0.0027 | 0.0008 | 0.0020 |
| 83 | 0.0027 | 0.0008 | 0.0020 |
| 84 | 0.0028 | 0.0008 | 0.0020 |
| 85 | 0.0028 | 0.0008 | 0.0020 |
| 86 | 0.0028 | 0.0008 | 0.0020 |
| 87 | 0.0028 | 0.0008 | 0.0020 |
| 88 | 0.0028 | 0.0008 | 0.0020 |
| 89 | 0.0029 | 0.0008 | 0.0021 |
| 90 | 0.0029 | 0.0008 | 0.0021 |
| 91 | 0.0029 | 0.0008 | 0.0021 |
| 92 | 0.0029 | 0.0008 | 0.0021 |
| 93 | 0.0030 | 0.0008 | 0.0021 |
| 94 | 0.0030 | 0.0008 | 0.0021 |
| 95 | 0.0030 | 0.0008 | 0.0022 |
| 96 | 0.0030 | 0.0008 | 0.0022 |
| 97 | 0.0031 | 0.0009 | 0.0022 |
| 98 | 0.0031 | 0.0009 | 0.0022 |
| 99 | 0.0031 | 0.0009 | 0.0022 |
| 100 | 0.0031 | 0.0009 | 0.0023 |

| | | | |
|---|---|---|---|
| 101 | 0.0032 | 0.0009 | 0.0023 |
| 102 | 0.0032 | 0.0009 | 0.0023 |
| 103 | 0.0032 | 0.0009 | 0.0023 |
| 104 | 0.0032 | 0.0009 | 0.0023 |
| 105 | 0.0033 | 0.0009 | 0.0024 |
| 106 | 0.0033 | 0.0009 | 0.0024 |
| 107 | 0.0033 | 0.0009 | 0.0024 |
| 108 | 0.0034 | 0.0009 | 0.0024 |
| 109 | 0.0034 | 0.0009 | 0.0024 |
| 110 | 0.0034 | 0.0010 | 0.0025 |
| 111 | 0.0035 | 0.0010 | 0.0025 |
| 112 | 0.0035 | 0.0010 | 0.0025 |
| 113 | 0.0035 | 0.0010 | 0.0025 |
| 114 | 0.0036 | 0.0010 | 0.0026 |
| 115 | 0.0036 | 0.0010 | 0.0026 |
| 116 | 0.0036 | 0.0010 | 0.0026 |
| 117 | 0.0037 | 0.0010 | 0.0027 |
| 118 | 0.0037 | 0.0010 | 0.0027 |
| 119 | 0.0038 | 0.0010 | 0.0027 |
| 120 | 0.0038 | 0.0011 | 0.0027 |
| 121 | 0.0038 | 0.0011 | 0.0028 |
| 122 | 0.0039 | 0.0011 | 0.0028 |
| 123 | 0.0039 | 0.0011 | 0.0028 |
| 124 | 0.0040 | 0.0011 | 0.0029 |
| 125 | 0.0040 | 0.0011 | 0.0029 |
| 126 | 0.0041 | 0.0011 | 0.0029 |
| 127 | 0.0041 | 0.0011 | 0.0030 |
| 128 | 0.0041 | 0.0012 | 0.0030 |
| 129 | 0.0042 | 0.0012 | 0.0030 |
| 130 | 0.0043 | 0.0012 | 0.0031 |
| 131 | 0.0043 | 0.0012 | 0.0031 |
| 132 | 0.0044 | 0.0012 | 0.0031 |
| 133 | 0.0044 | 0.0012 | 0.0032 |
| 134 | 0.0045 | 0.0013 | 0.0032 |
| 135 | 0.0046 | 0.0013 | 0.0033 |
| 136 | 0.0046 | 0.0013 | 0.0033 |
| 137 | 0.0047 | 0.0013 | 0.0034 |
| 138 | 0.0047 | 0.0013 | 0.0034 |
| 139 | 0.0048 | 0.0013 | 0.0035 |
| 140 | 0.0049 | 0.0014 | 0.0035 |
| 141 | 0.0050 | 0.0014 | 0.0036 |
| 142 | 0.0050 | 0.0014 | 0.0036 |
| 143 | 0.0051 | 0.0014 | 0.0037 |
| 144 | 0.0052 | 0.0015 | 0.0037 |
| 145 | 0.0053 | 0.0015 | 0.0038 |
| 146 | 0.0054 | 0.0015 | 0.0039 |
| 147 | 0.0055 | 0.0015 | 0.0040 |
| 148 | 0.0056 | 0.0016 | 0.0040 |
| 149 | 0.0057 | 0.0016 | 0.0041 |
| 150 | 0.0058 | 0.0016 | 0.0042 |
| 151 | 0.0059 | 0.0017 | 0.0043 |
| 152 | 0.0060 | 0.0017 | 0.0043 |
| 153 | 0.0062 | 0.0017 | 0.0044 |
| 154 | 0.0062 | 0.0017 | 0.0045 |
| 155 | 0.0064 | 0.0018 | 0.0046 |
| 156 | 0.0065 | 0.0018 | 0.0047 |
| 157 | 0.0067 | 0.0019 | 0.0048 |
| 158 | 0.0068 | 0.0019 | 0.0049 |
| 159 | 0.0070 | 0.0020 | 0.0050 |

| | | | |
|---|---|---|---|
| 160 | 0.0071 | 0.0020 | 0.0051 |
| 161 | 0.0074 | 0.0021 | 0.0053 |
| 162 | 0.0075 | 0.0021 | 0.0054 |
| 163 | 0.0077 | 0.0022 | 0.0056 |
| 164 | 0.0079 | 0.0022 | 0.0057 |
| 165 | 0.0082 | 0.0023 | 0.0059 |
| 166 | 0.0083 | 0.0023 | 0.0060 |
| 167 | 0.0087 | 0.0024 | 0.0063 |
| 168 | 0.0089 | 0.0025 | 0.0064 |
| 169 | 0.0093 | 0.0026 | 0.0067 |
| 170 | 0.0095 | 0.0027 | 0.0068 |
| 171 | 0.0100 | 0.0028 | 0.0072 |
| 172 | 0.0102 | 0.0029 | 0.0074 |
| 173 | 0.0108 | 0.0030 | 0.0078 |
| 174 | 0.0111 | 0.0031 | 0.0080 |
| 175 | 0.0117 | 0.0033 | 0.0084 |
| 176 | 0.0121 | 0.0034 | 0.0087 |
| 177 | 0.0129 | 0.0036 | 0.0093 |
| 178 | 0.0133 | 0.0037 | 0.0096 |
| 179 | 0.0144 | 0.0040 | 0.0103 |
| 180 | 0.0149 | 0.0042 | 0.0108 |
| 181 | 0.0163 | 0.0045 | 0.0117 |
| 182 | 0.0170 | 0.0048 | 0.0123 |
| 183 | 0.0189 | 0.0053 | 0.0136 |
| 184 | 0.0200 | 0.0056 | 0.0144 |
| 185 | 0.0327 | 0.0091 | 0.0236 |
| 186 | 0.0349 | 0.0097 | 0.0251 |
| 187 | 0.0404 | 0.0105 | 0.0299 |
| 188 | 0.0441 | 0.0105 | 0.0336 |
| 189 | 0.0549 | 0.0105 | 0.0444 |
| 190 | 0.0632 | 0.0105 | 0.0527 |
| 191 | 0.0959 | 0.0105 | 0.0854 |
| 192 | 0.1392 | 0.0105 | 0.1287 |
| 193 | 0.6022 | 0.0105 | 0.5917 |
| 194 | 0.0755 | 0.0105 | 0.0650 |
| 195 | 0.0488 | 0.0105 | 0.0383 |
| 196 | 0.0374 | 0.0104 | 0.0269 |
| 197 | 0.0212 | 0.0059 | 0.0153 |
| 198 | 0.0179 | 0.0050 | 0.0129 |
| 199 | 0.0156 | 0.0043 | 0.0112 |
| 200 | 0.0138 | 0.0039 | 0.0100 |
| 201 | 0.0125 | 0.0035 | 0.0090 |
| 202 | 0.0114 | 0.0032 | 0.0082 |
| 203 | 0.0105 | 0.0029 | 0.0075 |
| 204 | 0.0097 | 0.0027 | 0.0070 |
| 205 | 0.0091 | 0.0025 | 0.0065 |
| 206 | 0.0085 | 0.0024 | 0.0061 |
| 207 | 0.0080 | 0.0022 | 0.0058 |
| 208 | 0.0076 | 0.0021 | 0.0055 |
| 209 | 0.0072 | 0.0020 | 0.0052 |
| 210 | 0.0069 | 0.0019 | 0.0050 |
| 211 | 0.0066 | 0.0018 | 0.0048 |
| 212 | 0.0063 | 0.0018 | 0.0046 |
| 213 | 0.0061 | 0.0017 | 0.0044 |
| 214 | 0.0058 | 0.0016 | 0.0042 |
| 215 | 0.0056 | 0.0016 | 0.0041 |
| 216 | 0.0054 | 0.0015 | 0.0039 |
| 217 | 0.0052 | 0.0015 | 0.0038 |
| 218 | 0.0051 | 0.0014 | 0.0037 |

| | | | |
|---|---|---|---|
| 219 | 0.0049 | 0.0014 | 0.0036 |
| 220 | 0.0048 | 0.0013 | 0.0034 |
| 221 | 0.0046 | 0.0013 | 0.0034 |
| 222 | 0.0045 | 0.0013 | 0.0033 |
| 223 | 0.0044 | 0.0012 | 0.0032 |
| 224 | 0.0043 | 0.0012 | 0.0031 |
| 225 | 0.0042 | 0.0012 | 0.0030 |
| 226 | 0.0041 | 0.0011 | 0.0029 |
| 227 | 0.0040 | 0.0011 | 0.0029 |
| 228 | 0.0039 | 0.0011 | 0.0028 |
| 229 | 0.0038 | 0.0011 | 0.0027 |
| 230 | 0.0037 | 0.0010 | 0.0027 |
| 231 | 0.0037 | 0.0010 | 0.0026 |
| 232 | 0.0036 | 0.0010 | 0.0026 |
| 233 | 0.0035 | 0.0010 | 0.0025 |
| 234 | 0.0034 | 0.0010 | 0.0025 |
| 235 | 0.0034 | 0.0009 | 0.0024 |
| 236 | 0.0033 | 0.0009 | 0.0024 |
| 237 | 0.0033 | 0.0009 | 0.0023 |
| 238 | 0.0032 | 0.0009 | 0.0023 |
| 239 | 0.0031 | 0.0009 | 0.0023 |
| 240 | 0.0031 | 0.0009 | 0.0022 |
| 241 | 0.0030 | 0.0008 | 0.0022 |
| 242 | 0.0030 | 0.0008 | 0.0022 |
| 243 | 0.0029 | 0.0008 | 0.0021 |
| 244 | 0.0029 | 0.0008 | 0.0021 |
| 245 | 0.0029 | 0.0008 | 0.0021 |
| 246 | 0.0028 | 0.0008 | 0.0020 |
| 247 | 0.0028 | 0.0008 | 0.0020 |
| 248 | 0.0027 | 0.0008 | 0.0020 |
| 249 | 0.0027 | 0.0008 | 0.0019 |
| 250 | 0.0027 | 0.0007 | 0.0019 |
| 251 | 0.0026 | 0.0007 | 0.0019 |
| 252 | 0.0026 | 0.0007 | 0.0019 |
| 253 | 0.0025 | 0.0007 | 0.0018 |
| 254 | 0.0025 | 0.0007 | 0.0018 |
| 255 | 0.0025 | 0.0007 | 0.0018 |
| 256 | 0.0024 | 0.0007 | 0.0018 |
| 257 | 0.0024 | 0.0007 | 0.0017 |
| 258 | 0.0024 | 0.0007 | 0.0017 |
| 259 | 0.0024 | 0.0007 | 0.0017 |
| 260 | 0.0023 | 0.0007 | 0.0017 |
| 261 | 0.0023 | 0.0006 | 0.0017 |
| 262 | 0.0023 | 0.0006 | 0.0016 |
| 263 | 0.0023 | 0.0006 | 0.0016 |
| 264 | 0.0022 | 0.0006 | 0.0016 |
| 265 | 0.0022 | 0.0006 | 0.0016 |
| 266 | 0.0022 | 0.0006 | 0.0016 |
| 267 | 0.0022 | 0.0006 | 0.0016 |
| 268 | 0.0021 | 0.0006 | 0.0015 |
| 269 | 0.0021 | 0.0006 | 0.0015 |
| 270 | 0.0021 | 0.0006 | 0.0015 |
| 271 | 0.0021 | 0.0006 | 0.0015 |
| 272 | 0.0020 | 0.0006 | 0.0015 |
| 273 | 0.0020 | 0.0006 | 0.0015 |
| 274 | 0.0020 | 0.0006 | 0.0014 |
| 275 | 0.0020 | 0.0006 | 0.0014 |
| 276 | 0.0020 | 0.0006 | 0.0014 |
| 277 | 0.0020 | 0.0005 | 0.0014 |

| | | | |
|---|---|---|---|
| 278 | 0.0019 | 0.0005 | 0.0014 |
| 279 | 0.0019 | 0.0005 | 0.0014 |
| 280 | 0.0019 | 0.0005 | 0.0014 |
| 281 | 0.0019 | 0.0005 | 0.0014 |
| 282 | 0.0019 | 0.0005 | 0.0013 |
| 283 | 0.0018 | 0.0005 | 0.0013 |
| 284 | 0.0018 | 0.0005 | 0.0013 |
| 285 | 0.0018 | 0.0005 | 0.0013 |
| 286 | 0.0018 | 0.0005 | 0.0013 |
| 287 | 0.0018 | 0.0005 | 0.0013 |
| 288 | 0.0018 | 0.0005 | 0.0013 |

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Total soil rain loss = 0.45(In)
Total effective rainfall = 2.00(In)
Peak flow rate in flood hydrograph = 29.65(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 7.5 | 15.0 | 22.5 | 30.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+15 | 0.0004 | 0.05 | Q | \| | \| | \| | \| |
| 0+20 | 0.0011 | 0.09 | Q | \| | \| | \| | \| |
| 0+25 | 0.0019 | 0.12 | Q | \| | \| | \| | \| |
| 0+30 | 0.0029 | 0.14 | Q | \| | \| | \| | \| |
| 0+35 | 0.0040 | 0.16 | Q | \| | \| | \| | \| |
| 0+40 | 0.0051 | 0.17 | Q | \| | \| | \| | \| |
| 0+45 | 0.0063 | 0.17 | Q | \| | \| | \| | \| |
| 0+50 | 0.0076 | 0.18 | Q | \| | \| | \| | \| |
| 0+55 | 0.0089 | 0.19 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0102 | 0.19 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0116 | 0.20 | Q | \| | \| | \| | \| |
| 1+10 | 0.0129 | 0.20 | Q | \| | \| | \| | \| |
| 1+15 | 0.0144 | 0.20 | Q | \| | \| | \| | \| |
| 1+20 | 0.0158 | 0.21 | Q | \| | \| | \| | \| |
| 1+25 | 0.0172 | 0.21 | Q | \| | \| | \| | \| |
| 1+30 | 0.0187 | 0.21 | Q | \| | \| | \| | \| |
| 1+35 | 0.0202 | 0.22 | Q | \| | \| | \| | \| |
| 1+40 | 0.0217 | 0.22 | Q | \| | \| | \| | \| |
| 1+45 | 0.0232 | 0.22 | Q | \| | \| | \| | \| |
| 1+50 | 0.0247 | 0.22 | Q | \| | \| | \| | \| |
| 1+55 | 0.0263 | 0.22 | Q | \| | \| | \| | \| |
| 2+ 0 | 0.0278 | 0.22 | Q | \| | \| | \| | \| |
| 2+ 5 | 0.0294 | 0.23 | Q | \| | \| | \| | \| |
| 2+10 | 0.0309 | 0.23 | Q | \| | \| | \| | \| |
| 2+15 | 0.0325 | 0.23 | Q | \| | \| | \| | \| |
| 2+20 | 0.0341 | 0.23 | Q | \| | \| | \| | \| |
| 2+25 | 0.0357 | 0.23 | Q | \| | \| | \| | \| |
| 2+30 | 0.0373 | 0.23 | Q | \| | \| | \| | \| |
| 2+35 | 0.0390 | 0.24 | Q | \| | \| | \| | \| |
| 2+40 | 0.0406 | 0.24 | Q | \| | \| | \| | \| |
| 2+45 | 0.0422 | 0.24 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+50 | 0.0439 | 0.24 | Q | | | | |
| 2+55 | 0.0455 | 0.24 | Q | | | | |
| 3+ 0 | 0.0472 | 0.24 | Q | | | | |
| 3+ 5 | 0.0489 | 0.24 | Q | | | | |
| 3+10 | 0.0505 | 0.24 | Q | | | | |
| 3+15 | 0.0522 | 0.24 | Q | | | | |
| 3+20 | 0.0539 | 0.25 | Q | | | | |
| 3+25 | 0.0556 | 0.25 | Q | | | | |
| 3+30 | 0.0573 | 0.25 | QV | | | | |
| 3+35 | 0.0590 | 0.25 | QV | | | | |
| 3+40 | 0.0608 | 0.25 | QV | | | | |
| 3+45 | 0.0625 | 0.25 | QV | | | | |
| 3+50 | 0.0642 | 0.25 | QV | | | | |
| 3+55 | 0.0660 | 0.25 | QV | | | | |
| 4+ 0 | 0.0678 | 0.26 | QV | | | | |
| 4+ 5 | 0.0695 | 0.26 | QV | | | | |
| 4+10 | 0.0713 | 0.26 | QV | | | | |
| 4+15 | 0.0731 | 0.26 | QV | | | | |
| 4+20 | 0.0749 | 0.26 | QV | | | | |
| 4+25 | 0.0767 | 0.26 | QV | | | | |
| 4+30 | 0.0786 | 0.26 | QV | | | | |
| 4+35 | 0.0804 | 0.27 | QV | | | | |
| 4+40 | 0.0822 | 0.27 | QV | | | | |
| 4+45 | 0.0841 | 0.27 | QV | | | | |
| 4+50 | 0.0859 | 0.27 | QV | | | | |
| 4+55 | 0.0878 | 0.27 | QV | | | | |
| 5+ 0 | 0.0897 | 0.27 | QV | | | | |
| 5+ 5 | 0.0916 | 0.28 | QV | | | | |
| 5+10 | 0.0935 | 0.28 | QV | | | | |
| 5+15 | 0.0954 | 0.28 | QV | | | | |
| 5+20 | 0.0974 | 0.28 | QV | | | | |
| 5+25 | 0.0993 | 0.28 | QV | | | | |
| 5+30 | 0.1012 | 0.28 | QV | | | | |
| 5+35 | 0.1032 | 0.29 | QV | | | | |
| 5+40 | 0.1052 | 0.29 | QV | | | | |
| 5+45 | 0.1072 | 0.29 | QV | | | | |
| 5+50 | 0.1092 | 0.29 | QV | | | | |
| 5+55 | 0.1112 | 0.29 | QV | | | | |
| 6+ 0 | 0.1132 | 0.29 | QV | | | | |
| 6+ 5 | 0.1153 | 0.30 | Q V | | | | |
| 6+10 | 0.1173 | 0.30 | Q V | | | | |
| 6+15 | 0.1194 | 0.30 | Q V | | | | |
| 6+20 | 0.1214 | 0.30 | Q V | | | | |
| 6+25 | 0.1235 | 0.30 | Q V | | | | |
| 6+30 | 0.1256 | 0.31 | Q V | | | | |
| 6+35 | 0.1278 | 0.31 | Q V | | | | |
| 6+40 | 0.1299 | 0.31 | Q V | | | | |
| 6+45 | 0.1320 | 0.31 | Q V | | | | |
| 6+50 | 0.1342 | 0.31 | Q V | | | | |
| 6+55 | 0.1364 | 0.32 | Q V | | | | |
| 7+ 0 | 0.1386 | 0.32 | Q V | | | | |
| 7+ 5 | 0.1408 | 0.32 | Q V | | | | |
| 7+10 | 0.1430 | 0.32 | Q V | | | | |
| 7+15 | 0.1453 | 0.33 | Q V | | | | |
| 7+20 | 0.1475 | 0.33 | Q V | | | | |
| 7+25 | 0.1498 | 0.33 | Q V | | | | |
| 7+30 | 0.1521 | 0.33 | Q V | | | | |
| 7+35 | 0.1544 | 0.33 | Q V | | | | |
| 7+40 | 0.1567 | 0.34 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7+45 | 0.1590 | 0.34 | Q V | \| | \| | \| | \| |
| 7+50 | 0.1614 | 0.34 | Q V | \| | \| | \| | \| |
| 7+55 | 0.1638 | 0.35 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.1662 | 0.35 | Q V | \| | \| | \| | \| |
| 8+ 5 | 0.1686 | 0.35 | Q V | \| | \| | \| | \| |
| 8+10 | 0.1710 | 0.35 | Q V | \| | \| | \| | \| |
| 8+15 | 0.1735 | 0.36 | Q V | \| | \| | \| | \| |
| 8+20 | 0.1759 | 0.36 | Q V | \| | \| | \| | \| |
| 8+25 | 0.1784 | 0.36 | Q V | \| | \| | \| | \| |
| 8+30 | 0.1809 | 0.36 | Q V | \| | \| | \| | \| |
| 8+35 | 0.1835 | 0.37 | Q V | \| | \| | \| | \| |
| 8+40 | 0.1860 | 0.37 | Q V | \| | \| | \| | \| |
| 8+45 | 0.1886 | 0.37 | Q V | \| | \| | \| | \| |
| 8+50 | 0.1912 | 0.38 | Q V | \| | \| | \| | \| |
| 8+55 | 0.1938 | 0.38 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.1965 | 0.38 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.1991 | 0.39 | Q V | \| | \| | \| | \| |
| 9+10 | 0.2018 | 0.39 | Q V | \| | \| | \| | \| |
| 9+15 | 0.2046 | 0.39 | Q V | \| | \| | \| | \| |
| 9+20 | 0.2073 | 0.40 | Q V | \| | \| | \| | \| |
| 9+25 | 0.2101 | 0.40 | Q V | \| | \| | \| | \| |
| 9+30 | 0.2129 | 0.41 | Q V | \| | \| | \| | \| |
| 9+35 | 0.2157 | 0.41 | Q V | \| | \| | \| | \| |
| 9+40 | 0.2185 | 0.41 | Q V | \| | \| | \| | \| |
| 9+45 | 0.2214 | 0.42 | Q V | \| | \| | \| | \| |
| 9+50 | 0.2243 | 0.42 | Q V | \| | \| | \| | \| |
| 9+55 | 0.2272 | 0.43 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.2302 | 0.43 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.2332 | 0.43 | Q V | \| | \| | \| | \| |
| 10+10 | 0.2362 | 0.44 | Q V | \| | \| | \| | \| |
| 10+15 | 0.2393 | 0.44 | Q V | \| | \| | \| | \| |
| 10+20 | 0.2424 | 0.45 | Q V | \| | \| | \| | \| |
| 10+25 | 0.2455 | 0.45 | Q V | \| | \| | \| | \| |
| 10+30 | 0.2486 | 0.46 | Q V | \| | \| | \| | \| |
| 10+35 | 0.2518 | 0.46 | Q V | \| | \| | \| | \| |
| 10+40 | 0.2551 | 0.47 | Q V | \| | \| | \| | \| |
| 10+45 | 0.2583 | 0.47 | Q V | \| | \| | \| | \| |
| 10+50 | 0.2616 | 0.48 | Q V | \| | \| | \| | \| |
| 10+55 | 0.2650 | 0.49 | Q V | \| | \| | \| | \| |
| 11+ 0 | 0.2684 | 0.49 | Q V | \| | \| | \| | \| |
| 11+ 5 | 0.2718 | 0.50 | Q V | \| | \| | \| | \| |
| 11+10 | 0.2752 | 0.50 | Q V | \| | \| | \| | \| |
| 11+15 | 0.2788 | 0.51 | Q V | \| | \| | \| | \| |
| 11+20 | 0.2823 | 0.52 | Q V | \| | \| | \| | \| |
| 11+25 | 0.2859 | 0.52 | Q V | \| | \| | \| | \| |
| 11+30 | 0.2896 | 0.53 | Q V | \| | \| | \| | \| |
| 11+35 | 0.2933 | 0.54 | Q V | \| | \| | \| | \| |
| 11+40 | 0.2970 | 0.54 | Q V | \| | \| | \| | \| |
| 11+45 | 0.3008 | 0.55 | Q V | \| | \| | \| | \| |
| 11+50 | 0.3047 | 0.56 | Q V | \| | \| | \| | \| |
| 11+55 | 0.3086 | 0.57 | Q V | \| | \| | \| | \| |
| 12+ 0 | 0.3125 | 0.58 | Q V | \| | \| | \| | \| |
| 12+ 5 | 0.3166 | 0.58 | Q V | \| | \| | \| | \| |
| 12+10 | 0.3207 | 0.59 | Q V | \| | \| | \| | \| |
| 12+15 | 0.3248 | 0.60 | Q V | \| | \| | \| | \| |
| 12+20 | 0.3290 | 0.61 | Q V | \| | \| | \| | \| |
| 12+25 | 0.3333 | 0.62 | Q V | \| | \| | \| | \| |
| 12+30 | 0.3377 | 0.63 | Q V | \| | \| | \| | \| |
| 12+35 | 0.3421 | 0.64 | Q V | \| | \| | \| | \| |

```
12+40       0.3466      0.66  Q     V   |          |          |          |
12+45       0.3512      0.67  Q     V   |          |          |          |
12+50       0.3559      0.68  Q     V   |          |          |          |
12+55       0.3607      0.69  Q     V   |          |          |          |
13+ 0       0.3655      0.71  Q     V   |          |          |          |
13+ 5       0.3705      0.72  Q     V   |          |          |          |
13+10       0.3755      0.73  Q     V   |          |          |          |
13+15       0.3807      0.75  Q     V   |          |          |          |
13+20       0.3860      0.76  |Q    V   |          |          |          |
13+25       0.3913      0.78  |Q    V   |          |          |          |
13+30       0.3968      0.80  |Q    V   |          |          |          |
13+35       0.4024      0.82  |Q     V  |          |          |          |
13+40       0.4082      0.84  |Q     V  |          |          |          |
13+45       0.4141      0.86  |Q     V  |          |          |          |
13+50       0.4201      0.88  |Q     V  |          |          |          |
13+55       0.4263      0.90  |Q     V  |          |          |          |
14+ 0       0.4327      0.92  |Q     V  |          |          |          |
14+ 5       0.4392      0.95  |Q     V  |          |          |          |
14+10       0.4460      0.98  |Q     V  |          |          |          |
14+15       0.4529      1.01  |Q     V  |          |          |          |
14+20       0.4601      1.04  |Q      V |          |          |          |
14+25       0.4674      1.07  |Q      V |          |          |          |
14+30       0.4751      1.11  |Q      V |          |          |          |
14+35       0.4830      1.15  |Q      V |          |          |          |
14+40       0.4912      1.19  |Q      V |          |          |          |
14+45       0.4997      1.24  |Q      V |          |          |          |
14+50       0.5086      1.29  |Q      V |          |          |          |
14+55       0.5179      1.35  |Q       V|          |          |          |
15+ 0       0.5276      1.41  |Q       V|          |          |          |
15+ 5       0.5377      1.48  |Q       V|          |          |          |
15+10       0.5484      1.55  | Q      V|          |          |          |
15+15       0.5597      1.64  | Q      V|          |          |          |
15+20       0.5718      1.74  | Q      V|          |          |          |
15+25       0.5847      1.88  | Q       V          |          |          |
15+30       0.5990      2.08  | Q       V          |          |          |
15+35       0.6158      2.43  |  Q      V          |          |          |
15+40       0.6360      2.93  |  Q      |V         |          |          |
15+45       0.6596      3.43  |   Q     |V         |          |          |
15+50       0.6873      4.02  |    Q    |V         |          |          |
15+55       0.7206      4.84  |     Q   | V        |          |          |
16+ 0       0.7628      6.12  |       Q |  V       |          |          |
16+ 5       0.8261      9.19  |         | Q V      |          |          |
16+10       0.9298     15.07  |         |     V   Q          |          |
16+15       1.0968     24.24  |         |        V|          | Q        |
16+20       1.3009     29.65  |         |         | V        |         Q|
16+25       1.4498     21.61  |         |         |    V  Q  |          |
16+30       1.5551     15.28  |         |         Q      V   |          |
16+35       1.6365     11.82  |         |    Q    |       V  |          |
16+40       1.7012      9.40  |         | Q       |        V|          |
16+45       1.7542      7.69  |         Q         |         V          |
16+50       1.7989      6.49  |       Q |         |         |V         |
16+55       1.8379      5.66  |      Q  |         |         | V        |
17+ 0       1.8717      4.90  |     Q   |         |         | V        |
17+ 5       1.9004      4.17  |    Q    |         |         |  V       |
17+10       1.9262      3.74  |   Q     |         |         |  V       |
17+15       1.9492      3.35  |   Q     |         |         |   V      |
17+20       1.9700      3.01  |   Q     |         |         |   V      |
17+25       1.9883      2.67  |  Q      |         |         |   V      |
17+30       2.0052      2.45  |  Q      |         |         |    V     |
```

```
17+35       2.0202      2.18  | Q       |         |         |    V    |
17+40       2.0339      1.98  | Q       |         |         |    V    |
17+45       2.0459      1.75  | Q       |         |         |    V    |
17+50       2.0567      1.57  | Q       |         |         |    V    |
17+55       2.0663      1.39  |Q        |         |         |     V   |
18+ 0       2.0756      1.35  |Q        |         |         |     V   |
18+ 5       2.0846      1.31  |Q        |         |         |     V   |
18+10       2.0932      1.25  |Q        |         |         |     V   |
18+15       2.1014      1.19  |Q        |         |         |     V   |
18+20       2.1086      1.04  |Q        |         |         |     V   |
18+25       2.1150      0.92  |Q        |         |         |     V   |
18+30       2.1204      0.79  |Q        |         |         |      V  |
18+35       2.1251      0.68  Q         |         |         |      V  |
18+40       2.1296      0.64  Q         |         |         |      V  |
18+45       2.1338      0.62  Q         |         |         |      V  |
18+50       2.1379      0.59  Q         |         |         |      V  |
18+55       2.1419      0.57  Q         |         |         |      V  |
19+ 0       2.1457      0.56  Q         |         |         |      V  |
19+ 5       2.1494      0.54  Q         |         |         |      V  |
19+10       2.1530      0.53  Q         |         |         |      V  |
19+15       2.1566      0.51  Q         |         |         |      V  |
19+20       2.1600      0.50  Q         |         |         |      V  |
19+25       2.1633      0.49  Q         |         |         |      V  |
19+30       2.1666      0.47  Q         |         |         |      V  |
19+35       2.1698      0.46  Q         |         |         |      V  |
19+40       2.1729      0.45  Q         |         |         |      V  |
19+45       2.1760      0.44  Q         |         |         |      V  |
19+50       2.1789      0.43  Q         |         |         |       V |
19+55       2.1819      0.42  Q         |         |         |       V |
20+ 0       2.1847      0.42  Q         |         |         |       V |
20+ 5       2.1875      0.41  Q         |         |         |       V |
20+10       2.1903      0.40  Q         |         |         |       V |
20+15       2.1930      0.39  Q         |         |         |       V |
20+20       2.1957      0.39  Q         |         |         |       V |
20+25       2.1983      0.38  Q         |         |         |       V |
20+30       2.2008      0.37  Q         |         |         |       V |
20+35       2.2033      0.37  Q         |         |         |       V |
20+40       2.2058      0.36  Q         |         |         |       V |
20+45       2.2083      0.35  Q         |         |         |       V |
20+50       2.2107      0.35  Q         |         |         |       V |
20+55       2.2130      0.34  Q         |         |         |       V |
21+ 0       2.2154      0.34  Q         |         |         |       V |
21+ 5       2.2177      0.33  Q         |         |         |       V |
21+10       2.2199      0.33  Q         |         |         |       V |
21+15       2.2221      0.32  Q         |         |         |       V |
21+20       2.2243      0.32  Q         |         |         |       V |
21+25       2.2265      0.31  Q         |         |         |       V |
21+30       2.2286      0.31  Q         |         |         |       V |
21+35       2.2307      0.31  Q         |         |         |       V |
21+40       2.2328      0.30  Q         |         |         |       V |
21+45       2.2349      0.30  Q         |         |         |        V|
21+50       2.2369      0.29  Q         |         |         |        V|
21+55       2.2389      0.29  Q         |         |         |        V|
22+ 0       2.2409      0.29  Q         |         |         |        V|
22+ 5       2.2428      0.28  Q         |         |         |        V|
22+10       2.2448      0.28  Q         |         |         |        V|
22+15       2.2467      0.28  Q         |         |         |        V|
22+20       2.2486      0.27  Q         |         |         |        V|
22+25       2.2504      0.27  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+30 | 2.2523 | 0.27 | Q | \| | \| | \| | V\| |
| 22+35 | 2.2541 | 0.26 | Q | \| | \| | \| | V\| |
| 22+40 | 2.2559 | 0.26 | Q | \| | \| | \| | V\| |
| 22+45 | 2.2577 | 0.26 | Q | \| | \| | \| | V\| |
| 22+50 | 2.2594 | 0.26 | Q | \| | \| | \| | V\| |
| 22+55 | 2.2612 | 0.25 | Q | \| | \| | \| | V\| |
| 23+ 0 | 2.2629 | 0.25 | Q | \| | \| | \| | V\| |
| 23+ 5 | 2.2646 | 0.25 | Q | \| | \| | \| | V\| |
| 23+10 | 2.2663 | 0.25 | Q | \| | \| | \| | V\| |
| 23+15 | 2.2680 | 0.24 | Q | \| | \| | \| | V\| |
| 23+20 | 2.2696 | 0.24 | Q | \| | \| | \| | V\| |
| 23+25 | 2.2713 | 0.24 | Q | \| | \| | \| | V\| |
| 23+30 | 2.2729 | 0.24 | Q | \| | \| | \| | V\| |
| 23+35 | 2.2745 | 0.23 | Q | \| | \| | \| | V\| |
| 23+40 | 2.2761 | 0.23 | Q | \| | \| | \| | V\| |
| 23+45 | 2.2777 | 0.23 | Q | \| | \| | \| | V\| |
| 23+50 | 2.2793 | 0.23 | Q | \| | \| | \| | V\| |
| 23+55 | 2.2808 | 0.23 | Q | \| | \| | \| | V\| |
| 24+ 0 | 2.2824 | 0.22 | Q | \| | \| | \| | V\| |
| 24+ 5 | 2.2839 | 0.22 | Q | \| | \| | \| | V\| |
| 24+10 | 2.2853 | 0.20 | Q | \| | \| | \| | V\| |
| 24+15 | 2.2865 | 0.17 | Q | \| | \| | \| | V\| |
| 24+20 | 2.2873 | 0.12 | Q | \| | \| | \| | V\| |
| 24+25 | 2.2880 | 0.09 | Q | \| | \| | \| | V\| |
| 24+30 | 2.2885 | 0.07 | Q | \| | \| | \| | V\| |
| 24+35 | 2.2889 | 0.06 | Q | \| | \| | \| | V\| |
| 24+40 | 2.2892 | 0.05 | Q | \| | \| | \| | V\| |
| 24+45 | 2.2895 | 0.04 | Q | \| | \| | \| | V\| |
| 24+50 | 2.2898 | 0.04 | Q | \| | \| | \| | V\| |
| 24+55 | 2.2900 | 0.03 | Q | \| | \| | \| | V\| |
| 25+ 0 | 2.2901 | 0.03 | Q | \| | \| | \| | V\| |
| 25+ 5 | 2.2903 | 0.02 | Q | \| | \| | \| | V\| |
| 25+10 | 2.2904 | 0.02 | Q | \| | \| | \| | V\| |
| 25+15 | 2.2905 | 0.02 | Q | \| | \| | \| | V\| |
| 25+20 | 2.2906 | 0.01 | Q | \| | \| | \| | V\| |
| 25+25 | 2.2907 | 0.01 | Q | \| | \| | \| | V\| |
| 25+30 | 2.2907 | 0.01 | Q | \| | \| | \| | V\| |
| 25+35 | 2.2908 | 0.01 | Q | \| | \| | \| | V\| |
| 25+40 | 2.2908 | 0.01 | Q | \| | \| | \| | V\| |
| 25+45 | 2.2909 | 0.01 | Q | \| | \| | \| | V\| |
| 25+50 | 2.2909 | 0.00 | Q | \| | \| | \| | V\| |
| 25+55 | 2.2909 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 0 | 2.2909 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 2.2910 | 0.00 | Q | \| | \| | \| | V\| |
| 26+10 | 2.2910 | 0.00 | Q | \| | \| | \| | V\| |
| 26+15 | 2.2910 | 0.00 | Q | \| | \| | \| | V\| |
| 26+20 | 2.2910 | 0.00 | Q | \| | \| | \| | V\| |
| 26+25 | 2.2910 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 7
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 14.99 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 14.99 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 14.99 | 24 | 2.44 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.0 | 92.8 | 14.99 | 1.000 | 0.140 | 0.900 | 0.126 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.126

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 13.49 | 0.900 | 78.0 | 92.8 | 0.78 | 0.699 |
| 1.50 | 0.100 | 98.0 | 98.0 | 0.20 | 0.906 |

Area-averaged catchment yield fraction, Y = 0.720
Area-averaged low loss fraction, Yb = 0.280
User entry of time of concentration = 0.490 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 14.99(Ac.)
Catchment Lag time = 0.392 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 21.2585
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.126(In/Hr)
Average low loss rate fraction (Yb) = 0.280 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.440(In)

Rainfall depth area reduction factors:
Using a total area of 14.99(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.602(In)
30-minute factor = 0.999 Adjusted rainfall = 1.031(In)
1-hour factor = 0.999 Adjusted rainfall = 1.269(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.440(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 181.29 (CFS)) | |
| 1 | 1.080 | 1.957 |
| 2 | 4.987 | 7.083 |
| 3 | 12.929 | 14.398 |
| 4 | 30.293 | 31.478 |
| 5 | 47.082 | 30.436 |
| 6 | 58.064 | 19.908 |
| 7 | 65.268 | 13.060 |
| 8 | 70.711 | 9.867 |
| 9 | 74.986 | 7.751 |
| 10 | 78.494 | 6.360 |
| 11 | 81.320 | 5.123 |
| 12 | 83.696 | 4.307 |
| 13 | 85.810 | 3.832 |

| | | |
|---|---|---|
| 14 | 87.659 | 3.353 |
| 15 | 89.192 | 2.779 |
| 16 | 90.449 | 2.278 |
| 17 | 91.618 | 2.120 |
| 18 | 92.652 | 1.873 |
| 19 | 93.601 | 1.721 |
| 20 | 94.394 | 1.439 |
| 21 | 95.117 | 1.310 |
| 22 | 95.781 | 1.204 |
| 23 | 96.336 | 1.006 |
| 24 | 96.869 | 0.966 |
| 25 | 97.275 | 0.735 |
| 26 | 97.656 | 0.691 |
| 27 | 97.934 | 0.503 |
| 28 | 98.146 | 0.385 |
| 29 | 98.371 | 0.409 |
| 30 | 98.626 | 0.461 |
| 31 | 98.881 | 0.462 |
| 32 | 99.136 | 0.462 |
| 33 | 99.390 | 0.462 |
| 34 | 99.576 | 0.336 |
| 35 | 99.709 | 0.241 |
| 36 | 99.842 | 0.241 |
| 37 | 100.000 | 0.120 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6022 | 0.6022 |
| 2 | 0.7414 | 0.1392 |
| 3 | 0.8373 | 0.0959 |
| 4 | 0.9128 | 0.0755 |
| 5 | 0.9760 | 0.0632 |
| 6 | 1.0308 | 0.0549 |
| 7 | 1.0796 | 0.0488 |
| 8 | 1.1238 | 0.0441 |
| 9 | 1.1642 | 0.0404 |
| 10 | 1.2016 | 0.0374 |
| 11 | 1.2364 | 0.0349 |
| 12 | 1.2691 | 0.0327 |
| 13 | 1.2904 | 0.0213 |
| 14 | 1.3104 | 0.0200 |
| 15 | 1.3292 | 0.0189 |
| 16 | 1.3472 | 0.0179 |
| 17 | 1.3642 | 0.0171 |
| 18 | 1.3805 | 0.0163 |
| 19 | 1.3961 | 0.0156 |
| 20 | 1.4110 | 0.0149 |
| 21 | 1.4254 | 0.0144 |
| 22 | 1.4392 | 0.0138 |
| 23 | 1.4525 | 0.0133 |
| 24 | 1.4654 | 0.0129 |
| 25 | 1.4779 | 0.0125 |
| 26 | 1.4899 | 0.0121 |
| 27 | 1.5016 | 0.0117 |
| 28 | 1.5130 | 0.0114 |
| 29 | 1.5241 | 0.0111 |
| 30 | 1.5348 | 0.0108 |
| 31 | 1.5453 | 0.0105 |
| 32 | 1.5555 | 0.0102 |

| | | |
|---|---|---|
| 33 | 1.5655 | 0.0100 |
| 34 | 1.5752 | 0.0097 |
| 35 | 1.5847 | 0.0095 |
| 36 | 1.5940 | 0.0093 |
| 37 | 1.6031 | 0.0091 |
| 38 | 1.6119 | 0.0089 |
| 39 | 1.6206 | 0.0087 |
| 40 | 1.6292 | 0.0085 |
| 41 | 1.6375 | 0.0083 |
| 42 | 1.6457 | 0.0082 |
| 43 | 1.6537 | 0.0080 |
| 44 | 1.6616 | 0.0079 |
| 45 | 1.6694 | 0.0077 |
| 46 | 1.6770 | 0.0076 |
| 47 | 1.6844 | 0.0075 |
| 48 | 1.6918 | 0.0074 |
| 49 | 1.6990 | 0.0072 |
| 50 | 1.7062 | 0.0071 |
| 51 | 1.7132 | 0.0070 |
| 52 | 1.7201 | 0.0069 |
| 53 | 1.7269 | 0.0068 |
| 54 | 1.7336 | 0.0067 |
| 55 | 1.7402 | 0.0066 |
| 56 | 1.7467 | 0.0065 |
| 57 | 1.7531 | 0.0064 |
| 58 | 1.7594 | 0.0063 |
| 59 | 1.7656 | 0.0062 |
| 60 | 1.7718 | 0.0062 |
| 61 | 1.7778 | 0.0061 |
| 62 | 1.7838 | 0.0060 |
| 63 | 1.7898 | 0.0059 |
| 64 | 1.7956 | 0.0058 |
| 65 | 1.8014 | 0.0058 |
| 66 | 1.8071 | 0.0057 |
| 67 | 1.8127 | 0.0056 |
| 68 | 1.8183 | 0.0056 |
| 69 | 1.8238 | 0.0055 |
| 70 | 1.8292 | 0.0054 |
| 71 | 1.8346 | 0.0054 |
| 72 | 1.8399 | 0.0053 |
| 73 | 1.8451 | 0.0052 |
| 74 | 1.8502 | 0.0051 |
| 75 | 1.8553 | 0.0051 |
| 76 | 1.8603 | 0.0050 |
| 77 | 1.8652 | 0.0050 |
| 78 | 1.8701 | 0.0049 |
| 79 | 1.8750 | 0.0049 |
| 80 | 1.8798 | 0.0048 |
| 81 | 1.8846 | 0.0048 |
| 82 | 1.8893 | 0.0047 |
| 83 | 1.8940 | 0.0047 |
| 84 | 1.8986 | 0.0046 |
| 85 | 1.9032 | 0.0046 |
| 86 | 1.9077 | 0.0045 |
| 87 | 1.9122 | 0.0045 |
| 88 | 1.9166 | 0.0045 |
| 89 | 1.9211 | 0.0044 |
| 90 | 1.9254 | 0.0044 |
| 91 | 1.9298 | 0.0043 |

| | | |
|---|---|---|
| 92 | 1.9341 | 0.0043 |
| 93 | 1.9383 | 0.0043 |
| 94 | 1.9426 | 0.0042 |
| 95 | 1.9467 | 0.0042 |
| 96 | 1.9509 | 0.0042 |
| 97 | 1.9550 | 0.0041 |
| 98 | 1.9591 | 0.0041 |
| 99 | 1.9632 | 0.0041 |
| 100 | 1.9672 | 0.0040 |
| 101 | 1.9712 | 0.0040 |
| 102 | 1.9751 | 0.0040 |
| 103 | 1.9791 | 0.0039 |
| 104 | 1.9830 | 0.0039 |
| 105 | 1.9868 | 0.0039 |
| 106 | 1.9907 | 0.0038 |
| 107 | 1.9945 | 0.0038 |
| 108 | 1.9983 | 0.0038 |
| 109 | 2.0020 | 0.0038 |
| 110 | 2.0057 | 0.0037 |
| 111 | 2.0094 | 0.0037 |
| 112 | 2.0131 | 0.0037 |
| 113 | 2.0168 | 0.0036 |
| 114 | 2.0204 | 0.0036 |
| 115 | 2.0240 | 0.0036 |
| 116 | 2.0275 | 0.0036 |
| 117 | 2.0311 | 0.0035 |
| 118 | 2.0346 | 0.0035 |
| 119 | 2.0381 | 0.0035 |
| 120 | 2.0416 | 0.0035 |
| 121 | 2.0450 | 0.0035 |
| 122 | 2.0485 | 0.0034 |
| 123 | 2.0519 | 0.0034 |
| 124 | 2.0553 | 0.0034 |
| 125 | 2.0586 | 0.0034 |
| 126 | 2.0620 | 0.0033 |
| 127 | 2.0653 | 0.0033 |
| 128 | 2.0686 | 0.0033 |
| 129 | 2.0719 | 0.0033 |
| 130 | 2.0751 | 0.0033 |
| 131 | 2.0784 | 0.0032 |
| 132 | 2.0816 | 0.0032 |
| 133 | 2.0848 | 0.0032 |
| 134 | 2.0880 | 0.0032 |
| 135 | 2.0911 | 0.0032 |
| 136 | 2.0943 | 0.0031 |
| 137 | 2.0974 | 0.0031 |
| 138 | 2.1005 | 0.0031 |
| 139 | 2.1036 | 0.0031 |
| 140 | 2.1067 | 0.0031 |
| 141 | 2.1097 | 0.0031 |
| 142 | 2.1128 | 0.0030 |
| 143 | 2.1158 | 0.0030 |
| 144 | 2.1188 | 0.0030 |
| 145 | 2.1218 | 0.0030 |
| 146 | 2.1248 | 0.0030 |
| 147 | 2.1277 | 0.0030 |
| 148 | 2.1307 | 0.0029 |
| 149 | 2.1336 | 0.0029 |
| 150 | 2.1365 | 0.0029 |

| | | |
|---|---|---|
| 151 | 2.1394 | 0.0029 |
| 152 | 2.1423 | 0.0029 |
| 153 | 2.1451 | 0.0029 |
| 154 | 2.1480 | 0.0028 |
| 155 | 2.1508 | 0.0028 |
| 156 | 2.1536 | 0.0028 |
| 157 | 2.1564 | 0.0028 |
| 158 | 2.1592 | 0.0028 |
| 159 | 2.1620 | 0.0028 |
| 160 | 2.1647 | 0.0028 |
| 161 | 2.1675 | 0.0027 |
| 162 | 2.1702 | 0.0027 |
| 163 | 2.1729 | 0.0027 |
| 164 | 2.1757 | 0.0027 |
| 165 | 2.1783 | 0.0027 |
| 166 | 2.1810 | 0.0027 |
| 167 | 2.1837 | 0.0027 |
| 168 | 2.1864 | 0.0027 |
| 169 | 2.1890 | 0.0026 |
| 170 | 2.1916 | 0.0026 |
| 171 | 2.1942 | 0.0026 |
| 172 | 2.1969 | 0.0026 |
| 173 | 2.1994 | 0.0026 |
| 174 | 2.2020 | 0.0026 |
| 175 | 2.2046 | 0.0026 |
| 176 | 2.2072 | 0.0026 |
| 177 | 2.2097 | 0.0025 |
| 178 | 2.2122 | 0.0025 |
| 179 | 2.2148 | 0.0025 |
| 180 | 2.2173 | 0.0025 |
| 181 | 2.2198 | 0.0025 |
| 182 | 2.2223 | 0.0025 |
| 183 | 2.2248 | 0.0025 |
| 184 | 2.2272 | 0.0025 |
| 185 | 2.2297 | 0.0025 |
| 186 | 2.2321 | 0.0024 |
| 187 | 2.2346 | 0.0024 |
| 188 | 2.2370 | 0.0024 |
| 189 | 2.2394 | 0.0024 |
| 190 | 2.2418 | 0.0024 |
| 191 | 2.2442 | 0.0024 |
| 192 | 2.2466 | 0.0024 |
| 193 | 2.2490 | 0.0024 |
| 194 | 2.2514 | 0.0024 |
| 195 | 2.2537 | 0.0024 |
| 196 | 2.2561 | 0.0023 |
| 197 | 2.2584 | 0.0023 |
| 198 | 2.2607 | 0.0023 |
| 199 | 2.2631 | 0.0023 |
| 200 | 2.2654 | 0.0023 |
| 201 | 2.2677 | 0.0023 |
| 202 | 2.2700 | 0.0023 |
| 203 | 2.2722 | 0.0023 |
| 204 | 2.2745 | 0.0023 |
| 205 | 2.2768 | 0.0023 |
| 206 | 2.2790 | 0.0023 |
| 207 | 2.2813 | 0.0022 |
| 208 | 2.2835 | 0.0022 |
| 209 | 2.2858 | 0.0022 |

| | | |
|---|---|---|
| 210 | 2.2880 | 0.0022 |
| 211 | 2.2902 | 0.0022 |
| 212 | 2.2924 | 0.0022 |
| 213 | 2.2946 | 0.0022 |
| 214 | 2.2968 | 0.0022 |
| 215 | 2.2990 | 0.0022 |
| 216 | 2.3011 | 0.0022 |
| 217 | 2.3033 | 0.0022 |
| 218 | 2.3055 | 0.0022 |
| 219 | 2.3076 | 0.0021 |
| 220 | 2.3098 | 0.0021 |
| 221 | 2.3119 | 0.0021 |
| 222 | 2.3140 | 0.0021 |
| 223 | 2.3161 | 0.0021 |
| 224 | 2.3182 | 0.0021 |
| 225 | 2.3203 | 0.0021 |
| 226 | 2.3224 | 0.0021 |
| 227 | 2.3245 | 0.0021 |
| 228 | 2.3266 | 0.0021 |
| 229 | 2.3287 | 0.0021 |
| 230 | 2.3308 | 0.0021 |
| 231 | 2.3328 | 0.0021 |
| 232 | 2.3349 | 0.0021 |
| 233 | 2.3369 | 0.0020 |
| 234 | 2.3390 | 0.0020 |
| 235 | 2.3410 | 0.0020 |
| 236 | 2.3430 | 0.0020 |
| 237 | 2.3450 | 0.0020 |
| 238 | 2.3470 | 0.0020 |
| 239 | 2.3490 | 0.0020 |
| 240 | 2.3510 | 0.0020 |
| 241 | 2.3530 | 0.0020 |
| 242 | 2.3550 | 0.0020 |
| 243 | 2.3570 | 0.0020 |
| 244 | 2.3590 | 0.0020 |
| 245 | 2.3609 | 0.0020 |
| 246 | 2.3629 | 0.0020 |
| 247 | 2.3648 | 0.0020 |
| 248 | 2.3668 | 0.0019 |
| 249 | 2.3687 | 0.0019 |
| 250 | 2.3707 | 0.0019 |
| 251 | 2.3726 | 0.0019 |
| 252 | 2.3745 | 0.0019 |
| 253 | 2.3764 | 0.0019 |
| 254 | 2.3783 | 0.0019 |
| 255 | 2.3802 | 0.0019 |
| 256 | 2.3821 | 0.0019 |
| 257 | 2.3840 | 0.0019 |
| 258 | 2.3859 | 0.0019 |
| 259 | 2.3878 | 0.0019 |
| 260 | 2.3897 | 0.0019 |
| 261 | 2.3915 | 0.0019 |
| 262 | 2.3934 | 0.0019 |
| 263 | 2.3953 | 0.0019 |
| 264 | 2.3971 | 0.0019 |
| 265 | 2.3990 | 0.0018 |
| 266 | 2.4008 | 0.0018 |
| 267 | 2.4026 | 0.0018 |
| 268 | 2.4045 | 0.0018 |

| | | |
|---|---|---|
| 269 | 2.4063 | 0.0018 |
| 270 | 2.4081 | 0.0018 |
| 271 | 2.4099 | 0.0018 |
| 272 | 2.4117 | 0.0018 |
| 273 | 2.4135 | 0.0018 |
| 274 | 2.4153 | 0.0018 |
| 275 | 2.4171 | 0.0018 |
| 276 | 2.4189 | 0.0018 |
| 277 | 2.4207 | 0.0018 |
| 278 | 2.4225 | 0.0018 |
| 279 | 2.4242 | 0.0018 |
| 280 | 2.4260 | 0.0018 |
| 281 | 2.4278 | 0.0018 |
| 282 | 2.4295 | 0.0018 |
| 283 | 2.4313 | 0.0018 |
| 284 | 2.4330 | 0.0017 |
| 285 | 2.4348 | 0.0017 |
| 286 | 2.4365 | 0.0017 |
| 287 | 2.4382 | 0.0017 |
| 288 | 2.4400 | 0.0017 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0017 | 0.0005 | 0.0012 |
| 2 | 0.0017 | 0.0005 | 0.0012 |
| 3 | 0.0017 | 0.0005 | 0.0013 |
| 4 | 0.0017 | 0.0005 | 0.0013 |
| 5 | 0.0018 | 0.0005 | 0.0013 |
| 6 | 0.0018 | 0.0005 | 0.0013 |
| 7 | 0.0018 | 0.0005 | 0.0013 |
| 8 | 0.0018 | 0.0005 | 0.0013 |
| 9 | 0.0018 | 0.0005 | 0.0013 |
| 10 | 0.0018 | 0.0005 | 0.0013 |
| 11 | 0.0018 | 0.0005 | 0.0013 |
| 12 | 0.0018 | 0.0005 | 0.0013 |
| 13 | 0.0018 | 0.0005 | 0.0013 |
| 14 | 0.0018 | 0.0005 | 0.0013 |
| 15 | 0.0018 | 0.0005 | 0.0013 |
| 16 | 0.0018 | 0.0005 | 0.0013 |
| 17 | 0.0019 | 0.0005 | 0.0013 |
| 18 | 0.0019 | 0.0005 | 0.0013 |
| 19 | 0.0019 | 0.0005 | 0.0013 |
| 20 | 0.0019 | 0.0005 | 0.0013 |
| 21 | 0.0019 | 0.0005 | 0.0014 |
| 22 | 0.0019 | 0.0005 | 0.0014 |
| 23 | 0.0019 | 0.0005 | 0.0014 |
| 24 | 0.0019 | 0.0005 | 0.0014 |
| 25 | 0.0019 | 0.0005 | 0.0014 |
| 26 | 0.0019 | 0.0005 | 0.0014 |
| 27 | 0.0019 | 0.0005 | 0.0014 |
| 28 | 0.0019 | 0.0005 | 0.0014 |
| 29 | 0.0020 | 0.0005 | 0.0014 |
| 30 | 0.0020 | 0.0006 | 0.0014 |
| 31 | 0.0020 | 0.0006 | 0.0014 |
| 32 | 0.0020 | 0.0006 | 0.0014 |
| 33 | 0.0020 | 0.0006 | 0.0014 |
| 34 | 0.0020 | 0.0006 | 0.0014 |

| | | | |
|---|---|---|---|
| 35 | 0.0020 | 0.0006 | 0.0015 |
| 36 | 0.0020 | 0.0006 | 0.0015 |
| 37 | 0.0020 | 0.0006 | 0.0015 |
| 38 | 0.0020 | 0.0006 | 0.0015 |
| 39 | 0.0021 | 0.0006 | 0.0015 |
| 40 | 0.0021 | 0.0006 | 0.0015 |
| 41 | 0.0021 | 0.0006 | 0.0015 |
| 42 | 0.0021 | 0.0006 | 0.0015 |
| 43 | 0.0021 | 0.0006 | 0.0015 |
| 44 | 0.0021 | 0.0006 | 0.0015 |
| 45 | 0.0021 | 0.0006 | 0.0015 |
| 46 | 0.0021 | 0.0006 | 0.0015 |
| 47 | 0.0021 | 0.0006 | 0.0015 |
| 48 | 0.0022 | 0.0006 | 0.0016 |
| 49 | 0.0022 | 0.0006 | 0.0016 |
| 50 | 0.0022 | 0.0006 | 0.0016 |
| 51 | 0.0022 | 0.0006 | 0.0016 |
| 52 | 0.0022 | 0.0006 | 0.0016 |
| 53 | 0.0022 | 0.0006 | 0.0016 |
| 54 | 0.0022 | 0.0006 | 0.0016 |
| 55 | 0.0022 | 0.0006 | 0.0016 |
| 56 | 0.0023 | 0.0006 | 0.0016 |
| 57 | 0.0023 | 0.0006 | 0.0016 |
| 58 | 0.0023 | 0.0006 | 0.0016 |
| 59 | 0.0023 | 0.0006 | 0.0017 |
| 60 | 0.0023 | 0.0006 | 0.0017 |
| 61 | 0.0023 | 0.0007 | 0.0017 |
| 62 | 0.0023 | 0.0007 | 0.0017 |
| 63 | 0.0024 | 0.0007 | 0.0017 |
| 64 | 0.0024 | 0.0007 | 0.0017 |
| 65 | 0.0024 | 0.0007 | 0.0017 |
| 66 | 0.0024 | 0.0007 | 0.0017 |
| 67 | 0.0024 | 0.0007 | 0.0017 |
| 68 | 0.0024 | 0.0007 | 0.0017 |
| 69 | 0.0024 | 0.0007 | 0.0018 |
| 70 | 0.0025 | 0.0007 | 0.0018 |
| 71 | 0.0025 | 0.0007 | 0.0018 |
| 72 | 0.0025 | 0.0007 | 0.0018 |
| 73 | 0.0025 | 0.0007 | 0.0018 |
| 74 | 0.0025 | 0.0007 | 0.0018 |
| 75 | 0.0025 | 0.0007 | 0.0018 |
| 76 | 0.0026 | 0.0007 | 0.0018 |
| 77 | 0.0026 | 0.0007 | 0.0019 |
| 78 | 0.0026 | 0.0007 | 0.0019 |
| 79 | 0.0026 | 0.0007 | 0.0019 |
| 80 | 0.0026 | 0.0007 | 0.0019 |
| 81 | 0.0027 | 0.0007 | 0.0019 |
| 82 | 0.0027 | 0.0007 | 0.0019 |
| 83 | 0.0027 | 0.0008 | 0.0019 |
| 84 | 0.0027 | 0.0008 | 0.0019 |
| 85 | 0.0027 | 0.0008 | 0.0020 |
| 86 | 0.0027 | 0.0008 | 0.0020 |
| 87 | 0.0028 | 0.0008 | 0.0020 |
| 88 | 0.0028 | 0.0008 | 0.0020 |
| 89 | 0.0028 | 0.0008 | 0.0020 |
| 90 | 0.0028 | 0.0008 | 0.0020 |
| 91 | 0.0029 | 0.0008 | 0.0021 |
| 92 | 0.0029 | 0.0008 | 0.0021 |
| 93 | 0.0029 | 0.0008 | 0.0021 |

| | | | |
|---|---|---|---|
| 94 | 0.0029 | 0.0008 | 0.0021 |
| 95 | 0.0030 | 0.0008 | 0.0021 |
| 96 | 0.0030 | 0.0008 | 0.0021 |
| 97 | 0.0030 | 0.0008 | 0.0022 |
| 98 | 0.0030 | 0.0008 | 0.0022 |
| 99 | 0.0031 | 0.0009 | 0.0022 |
| 100 | 0.0031 | 0.0009 | 0.0022 |
| 101 | 0.0031 | 0.0009 | 0.0022 |
| 102 | 0.0031 | 0.0009 | 0.0023 |
| 103 | 0.0032 | 0.0009 | 0.0023 |
| 104 | 0.0032 | 0.0009 | 0.0023 |
| 105 | 0.0032 | 0.0009 | 0.0023 |
| 106 | 0.0032 | 0.0009 | 0.0023 |
| 107 | 0.0033 | 0.0009 | 0.0024 |
| 108 | 0.0033 | 0.0009 | 0.0024 |
| 109 | 0.0033 | 0.0009 | 0.0024 |
| 110 | 0.0034 | 0.0009 | 0.0024 |
| 111 | 0.0034 | 0.0010 | 0.0025 |
| 112 | 0.0034 | 0.0010 | 0.0025 |
| 113 | 0.0035 | 0.0010 | 0.0025 |
| 114 | 0.0035 | 0.0010 | 0.0025 |
| 115 | 0.0035 | 0.0010 | 0.0026 |
| 116 | 0.0036 | 0.0010 | 0.0026 |
| 117 | 0.0036 | 0.0010 | 0.0026 |
| 118 | 0.0036 | 0.0010 | 0.0026 |
| 119 | 0.0037 | 0.0010 | 0.0027 |
| 120 | 0.0037 | 0.0010 | 0.0027 |
| 121 | 0.0038 | 0.0011 | 0.0027 |
| 122 | 0.0038 | 0.0011 | 0.0027 |
| 123 | 0.0039 | 0.0011 | 0.0028 |
| 124 | 0.0039 | 0.0011 | 0.0028 |
| 125 | 0.0040 | 0.0011 | 0.0028 |
| 126 | 0.0040 | 0.0011 | 0.0029 |
| 127 | 0.0041 | 0.0011 | 0.0029 |
| 128 | 0.0041 | 0.0011 | 0.0029 |
| 129 | 0.0042 | 0.0012 | 0.0030 |
| 130 | 0.0042 | 0.0012 | 0.0030 |
| 131 | 0.0043 | 0.0012 | 0.0031 |
| 132 | 0.0043 | 0.0012 | 0.0031 |
| 133 | 0.0044 | 0.0012 | 0.0031 |
| 134 | 0.0044 | 0.0012 | 0.0032 |
| 135 | 0.0045 | 0.0013 | 0.0032 |
| 136 | 0.0045 | 0.0013 | 0.0033 |
| 137 | 0.0046 | 0.0013 | 0.0033 |
| 138 | 0.0047 | 0.0013 | 0.0034 |
| 139 | 0.0048 | 0.0013 | 0.0034 |
| 140 | 0.0048 | 0.0013 | 0.0035 |
| 141 | 0.0049 | 0.0014 | 0.0035 |
| 142 | 0.0050 | 0.0014 | 0.0036 |
| 143 | 0.0051 | 0.0014 | 0.0036 |
| 144 | 0.0051 | 0.0014 | 0.0037 |
| 145 | 0.0053 | 0.0015 | 0.0038 |
| 146 | 0.0054 | 0.0015 | 0.0039 |
| 147 | 0.0055 | 0.0015 | 0.0040 |
| 148 | 0.0056 | 0.0016 | 0.0040 |
| 149 | 0.0057 | 0.0016 | 0.0041 |
| 150 | 0.0058 | 0.0016 | 0.0042 |
| 151 | 0.0059 | 0.0017 | 0.0043 |
| 152 | 0.0060 | 0.0017 | 0.0043 |

| | | | |
|---|---|---|---|
| 153 | 0.0062 | 0.0017 | 0.0044 |
| 154 | 0.0062 | 0.0017 | 0.0045 |
| 155 | 0.0064 | 0.0018 | 0.0046 |
| 156 | 0.0065 | 0.0018 | 0.0047 |
| 157 | 0.0067 | 0.0019 | 0.0048 |
| 158 | 0.0068 | 0.0019 | 0.0049 |
| 159 | 0.0070 | 0.0020 | 0.0050 |
| 160 | 0.0071 | 0.0020 | 0.0051 |
| 161 | 0.0074 | 0.0021 | 0.0053 |
| 162 | 0.0075 | 0.0021 | 0.0054 |
| 163 | 0.0077 | 0.0022 | 0.0056 |
| 164 | 0.0079 | 0.0022 | 0.0057 |
| 165 | 0.0082 | 0.0023 | 0.0059 |
| 166 | 0.0083 | 0.0023 | 0.0060 |
| 167 | 0.0087 | 0.0024 | 0.0063 |
| 168 | 0.0089 | 0.0025 | 0.0064 |
| 169 | 0.0093 | 0.0026 | 0.0067 |
| 170 | 0.0095 | 0.0027 | 0.0068 |
| 171 | 0.0100 | 0.0028 | 0.0072 |
| 172 | 0.0102 | 0.0029 | 0.0074 |
| 173 | 0.0108 | 0.0030 | 0.0077 |
| 174 | 0.0111 | 0.0031 | 0.0080 |
| 175 | 0.0117 | 0.0033 | 0.0084 |
| 176 | 0.0121 | 0.0034 | 0.0087 |
| 177 | 0.0129 | 0.0036 | 0.0093 |
| 178 | 0.0133 | 0.0037 | 0.0096 |
| 179 | 0.0144 | 0.0040 | 0.0103 |
| 180 | 0.0149 | 0.0042 | 0.0108 |
| 181 | 0.0163 | 0.0046 | 0.0117 |
| 182 | 0.0171 | 0.0048 | 0.0123 |
| 183 | 0.0189 | 0.0053 | 0.0136 |
| 184 | 0.0200 | 0.0056 | 0.0144 |
| 185 | 0.0327 | 0.0092 | 0.0235 |
| 186 | 0.0349 | 0.0098 | 0.0251 |
| 187 | 0.0404 | 0.0105 | 0.0299 |
| 188 | 0.0441 | 0.0105 | 0.0336 |
| 189 | 0.0549 | 0.0105 | 0.0444 |
| 190 | 0.0632 | 0.0105 | 0.0527 |
| 191 | 0.0959 | 0.0105 | 0.0854 |
| 192 | 0.1392 | 0.0105 | 0.1287 |
| 193 | 0.6022 | 0.0105 | 0.5917 |
| 194 | 0.0755 | 0.0105 | 0.0650 |
| 195 | 0.0488 | 0.0105 | 0.0383 |
| 196 | 0.0374 | 0.0105 | 0.0269 |
| 197 | 0.0213 | 0.0060 | 0.0153 |
| 198 | 0.0179 | 0.0050 | 0.0129 |
| 199 | 0.0156 | 0.0044 | 0.0112 |
| 200 | 0.0138 | 0.0039 | 0.0099 |
| 201 | 0.0125 | 0.0035 | 0.0090 |
| 202 | 0.0114 | 0.0032 | 0.0082 |
| 203 | 0.0105 | 0.0029 | 0.0075 |
| 204 | 0.0097 | 0.0027 | 0.0070 |
| 205 | 0.0091 | 0.0025 | 0.0065 |
| 206 | 0.0085 | 0.0024 | 0.0061 |
| 207 | 0.0080 | 0.0023 | 0.0058 |
| 208 | 0.0076 | 0.0021 | 0.0055 |
| 209 | 0.0072 | 0.0020 | 0.0052 |
| 210 | 0.0069 | 0.0019 | 0.0050 |
| 211 | 0.0066 | 0.0018 | 0.0047 |

| | | | |
|---|---|---|---|
| 212 | 0.0063 | 0.0018 | 0.0046 |
| 213 | 0.0061 | 0.0017 | 0.0044 |
| 214 | 0.0058 | 0.0016 | 0.0042 |
| 215 | 0.0056 | 0.0016 | 0.0041 |
| 216 | 0.0054 | 0.0015 | 0.0039 |
| 217 | 0.0052 | 0.0015 | 0.0037 |
| 218 | 0.0050 | 0.0014 | 0.0036 |
| 219 | 0.0049 | 0.0014 | 0.0035 |
| 220 | 0.0047 | 0.0013 | 0.0034 |
| 221 | 0.0046 | 0.0013 | 0.0033 |
| 222 | 0.0045 | 0.0012 | 0.0032 |
| 223 | 0.0043 | 0.0012 | 0.0031 |
| 224 | 0.0042 | 0.0012 | 0.0030 |
| 225 | 0.0041 | 0.0012 | 0.0030 |
| 226 | 0.0040 | 0.0011 | 0.0029 |
| 227 | 0.0039 | 0.0011 | 0.0028 |
| 228 | 0.0038 | 0.0011 | 0.0028 |
| 229 | 0.0038 | 0.0011 | 0.0027 |
| 230 | 0.0037 | 0.0010 | 0.0026 |
| 231 | 0.0036 | 0.0010 | 0.0026 |
| 232 | 0.0035 | 0.0010 | 0.0025 |
| 233 | 0.0035 | 0.0010 | 0.0025 |
| 234 | 0.0034 | 0.0009 | 0.0024 |
| 235 | 0.0033 | 0.0009 | 0.0024 |
| 236 | 0.0033 | 0.0009 | 0.0023 |
| 237 | 0.0032 | 0.0009 | 0.0023 |
| 238 | 0.0031 | 0.0009 | 0.0023 |
| 239 | 0.0031 | 0.0009 | 0.0022 |
| 240 | 0.0030 | 0.0009 | 0.0022 |
| 241 | 0.0030 | 0.0008 | 0.0022 |
| 242 | 0.0029 | 0.0008 | 0.0021 |
| 243 | 0.0029 | 0.0008 | 0.0021 |
| 244 | 0.0028 | 0.0008 | 0.0020 |
| 245 | 0.0028 | 0.0008 | 0.0020 |
| 246 | 0.0028 | 0.0008 | 0.0020 |
| 247 | 0.0027 | 0.0008 | 0.0020 |
| 248 | 0.0027 | 0.0008 | 0.0019 |
| 249 | 0.0026 | 0.0007 | 0.0019 |
| 250 | 0.0026 | 0.0007 | 0.0019 |
| 251 | 0.0026 | 0.0007 | 0.0019 |
| 252 | 0.0025 | 0.0007 | 0.0018 |
| 253 | 0.0025 | 0.0007 | 0.0018 |
| 254 | 0.0025 | 0.0007 | 0.0018 |
| 255 | 0.0024 | 0.0007 | 0.0018 |
| 256 | 0.0024 | 0.0007 | 0.0017 |
| 257 | 0.0024 | 0.0007 | 0.0017 |
| 258 | 0.0023 | 0.0007 | 0.0017 |
| 259 | 0.0023 | 0.0007 | 0.0017 |
| 260 | 0.0023 | 0.0006 | 0.0017 |
| 261 | 0.0023 | 0.0006 | 0.0016 |
| 262 | 0.0022 | 0.0006 | 0.0016 |
| 263 | 0.0022 | 0.0006 | 0.0016 |
| 264 | 0.0022 | 0.0006 | 0.0016 |
| 265 | 0.0022 | 0.0006 | 0.0016 |
| 266 | 0.0021 | 0.0006 | 0.0015 |
| 267 | 0.0021 | 0.0006 | 0.0015 |
| 268 | 0.0021 | 0.0006 | 0.0015 |
| 269 | 0.0021 | 0.0006 | 0.0015 |
| 270 | 0.0021 | 0.0006 | 0.0015 |

| | | | |
|---|---|---|---|
| 271 | 0.0020 | 0.0006 | 0.0015 |
| 272 | 0.0020 | 0.0006 | 0.0014 |
| 273 | 0.0020 | 0.0006 | 0.0014 |
| 274 | 0.0020 | 0.0006 | 0.0014 |
| 275 | 0.0020 | 0.0005 | 0.0014 |
| 276 | 0.0019 | 0.0005 | 0.0014 |
| 277 | 0.0019 | 0.0005 | 0.0014 |
| 278 | 0.0019 | 0.0005 | 0.0014 |
| 279 | 0.0019 | 0.0005 | 0.0014 |
| 280 | 0.0019 | 0.0005 | 0.0013 |
| 281 | 0.0018 | 0.0005 | 0.0013 |
| 282 | 0.0018 | 0.0005 | 0.0013 |
| 283 | 0.0018 | 0.0005 | 0.0013 |
| 284 | 0.0018 | 0.0005 | 0.0013 |
| 285 | 0.0018 | 0.0005 | 0.0013 |
| 286 | 0.0018 | 0.0005 | 0.0013 |
| 287 | 0.0018 | 0.0005 | 0.0013 |
| 288 | 0.0017 | 0.0005 | 0.0013 |

Total soil rain loss = 0.45(In)
Total effective rainfall = 1.99(In)
Peak flow rate in flood hydrograph = 27.61(CFS)

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 7.5 | 15.0 | 22.5 | 30.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.01 | Q | | | | |
| 0+15 | 0.0003 | 0.03 | Q | | | | |
| 0+20 | 0.0008 | 0.07 | Q | | | | |
| 0+25 | 0.0015 | 0.11 | Q | | | | |
| 0+30 | 0.0024 | 0.13 | Q | | | | |
| 0+35 | 0.0034 | 0.15 | Q | | | | |
| 0+40 | 0.0045 | 0.16 | Q | | | | |
| 0+45 | 0.0057 | 0.17 | Q | | | | |
| 0+50 | 0.0070 | 0.18 | Q | | | | |
| 0+55 | 0.0083 | 0.19 | Q | | | | |
| 1+ 0 | 0.0096 | 0.19 | Q | | | | |
| 1+ 5 | 0.0110 | 0.20 | Q | | | | |
| 1+10 | 0.0124 | 0.20 | Q | | | | |
| 1+15 | 0.0138 | 0.21 | Q | | | | |
| 1+20 | 0.0153 | 0.21 | Q | | | | |
| 1+25 | 0.0168 | 0.22 | Q | | | | |
| 1+30 | 0.0183 | 0.22 | Q | | | | |
| 1+35 | 0.0198 | 0.22 | Q | | | | |
| 1+40 | 0.0213 | 0.23 | Q | | | | |
| 1+45 | 0.0229 | 0.23 | Q | | | | |
| 1+50 | 0.0245 | 0.23 | Q | | | | |
| 1+55 | 0.0261 | 0.23 | Q | | | | |
| 2+ 0 | 0.0277 | 0.23 | Q | | | | |
| 2+ 5 | 0.0293 | 0.24 | Q | | | | |
| 2+10 | 0.0310 | 0.24 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+15 | 0.0326 | 0.24 | Q | | | | |
| 2+20 | 0.0343 | 0.24 | Q | | | | |
| 2+25 | 0.0360 | 0.24 | Q | | | | |
| 2+30 | 0.0377 | 0.25 | Q | | | | |
| 2+35 | 0.0394 | 0.25 | Q | | | | |
| 2+40 | 0.0411 | 0.25 | Q | | | | |
| 2+45 | 0.0428 | 0.25 | Q | | | | |
| 2+50 | 0.0446 | 0.25 | Q | | | | |
| 2+55 | 0.0463 | 0.25 | Q | | | | |
| 3+ 0 | 0.0481 | 0.26 | Q | | | | |
| 3+ 5 | 0.0498 | 0.26 | Q | | | | |
| 3+10 | 0.0516 | 0.26 | Q | | | | |
| 3+15 | 0.0534 | 0.26 | Q | | | | |
| 3+20 | 0.0552 | 0.26 | Q | | | | |
| 3+25 | 0.0570 | 0.26 | Q | | | | |
| 3+30 | 0.0588 | 0.26 | Q | | | | |
| 3+35 | 0.0606 | 0.26 | Q | | | | |
| 3+40 | 0.0625 | 0.27 | QV | | | | |
| 3+45 | 0.0643 | 0.27 | QV | | | | |
| 3+50 | 0.0661 | 0.27 | QV | | | | |
| 3+55 | 0.0680 | 0.27 | QV | | | | |
| 4+ 0 | 0.0699 | 0.27 | QV | | | | |
| 4+ 5 | 0.0718 | 0.27 | QV | | | | |
| 4+10 | 0.0736 | 0.27 | QV | | | | |
| 4+15 | 0.0755 | 0.28 | QV | | | | |
| 4+20 | 0.0775 | 0.28 | QV | | | | |
| 4+25 | 0.0794 | 0.28 | QV | | | | |
| 4+30 | 0.0813 | 0.28 | QV | | | | |
| 4+35 | 0.0832 | 0.28 | QV | | | | |
| 4+40 | 0.0852 | 0.28 | QV | | | | |
| 4+45 | 0.0872 | 0.29 | QV | | | | |
| 4+50 | 0.0891 | 0.29 | QV | | | | |
| 4+55 | 0.0911 | 0.29 | QV | | | | |
| 5+ 0 | 0.0931 | 0.29 | QV | | | | |
| 5+ 5 | 0.0951 | 0.29 | QV | | | | |
| 5+10 | 0.0971 | 0.29 | QV | | | | |
| 5+15 | 0.0992 | 0.29 | QV | | | | |
| 5+20 | 0.1012 | 0.30 | QV | | | | |
| 5+25 | 0.1033 | 0.30 | QV | | | | |
| 5+30 | 0.1053 | 0.30 | QV | | | | |
| 5+35 | 0.1074 | 0.30 | QV | | | | |
| 5+40 | 0.1095 | 0.30 | QV | | | | |
| 5+45 | 0.1116 | 0.31 | QV | | | | |
| 5+50 | 0.1137 | 0.31 | QV | | | | |
| 5+55 | 0.1159 | 0.31 | QV | | | | |
| 6+ 0 | 0.1180 | 0.31 | QV | | | | |
| 6+ 5 | 0.1202 | 0.31 | QV | | | | |
| 6+10 | 0.1224 | 0.32 | QV | | | | |
| 6+15 | 0.1245 | 0.32 | Q V | | | | |
| 6+20 | 0.1267 | 0.32 | Q V | | | | |
| 6+25 | 0.1290 | 0.32 | Q V | | | | |
| 6+30 | 0.1312 | 0.32 | Q V | | | | |
| 6+35 | 0.1334 | 0.33 | Q V | | | | |
| 6+40 | 0.1357 | 0.33 | Q V | | | | |
| 6+45 | 0.1380 | 0.33 | Q V | | | | |
| 6+50 | 0.1402 | 0.33 | Q V | | | | |
| 6+55 | 0.1426 | 0.33 | Q V | | | | |
| 7+ 0 | 0.1449 | 0.34 | Q V | | | | |
| 7+ 5 | 0.1472 | 0.34 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7+10 | 0.1496 | 0.34 | Q V | \| | \| | \| | \| |
| 7+15 | 0.1519 | 0.34 | Q V | \| | \| | \| | \| |
| 7+20 | 0.1543 | 0.35 | Q V | \| | \| | \| | \| |
| 7+25 | 0.1567 | 0.35 | Q V | \| | \| | \| | \| |
| 7+30 | 0.1591 | 0.35 | Q V | \| | \| | \| | \| |
| 7+35 | 0.1616 | 0.35 | Q V | \| | \| | \| | \| |
| 7+40 | 0.1640 | 0.36 | Q V | \| | \| | \| | \| |
| 7+45 | 0.1665 | 0.36 | Q V | \| | \| | \| | \| |
| 7+50 | 0.1690 | 0.36 | Q V | \| | \| | \| | \| |
| 7+55 | 0.1715 | 0.37 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.1741 | 0.37 | Q V | \| | \| | \| | \| |
| 8+ 5 | 0.1766 | 0.37 | Q V | \| | \| | \| | \| |
| 8+10 | 0.1792 | 0.37 | Q V | \| | \| | \| | \| |
| 8+15 | 0.1818 | 0.38 | Q V | \| | \| | \| | \| |
| 8+20 | 0.1844 | 0.38 | Q V | \| | \| | \| | \| |
| 8+25 | 0.1870 | 0.38 | Q  V | \| | \| | \| | \| |
| 8+30 | 0.1897 | 0.39 | Q  V | \| | \| | \| | \| |
| 8+35 | 0.1924 | 0.39 | Q  V | \| | \| | \| | \| |
| 8+40 | 0.1951 | 0.39 | Q  V | \| | \| | \| | \| |
| 8+45 | 0.1978 | 0.40 | Q  V | \| | \| | \| | \| |
| 8+50 | 0.2005 | 0.40 | Q  V | \| | \| | \| | \| |
| 8+55 | 0.2033 | 0.40 | Q  V | \| | \| | \| | \| |
| 9+ 0 | 0.2061 | 0.41 | Q  V | \| | \| | \| | \| |
| 9+ 5 | 0.2089 | 0.41 | Q  V | \| | \| | \| | \| |
| 9+10 | 0.2118 | 0.41 | Q  V | \| | \| | \| | \| |
| 9+15 | 0.2146 | 0.42 | Q  V | \| | \| | \| | \| |
| 9+20 | 0.2175 | 0.42 | Q  V | \| | \| | \| | \| |
| 9+25 | 0.2205 | 0.42 | Q  V | \| | \| | \| | \| |
| 9+30 | 0.2234 | 0.43 | Q  V | \| | \| | \| | \| |
| 9+35 | 0.2264 | 0.43 | Q  V | \| | \| | \| | \| |
| 9+40 | 0.2294 | 0.44 | Q  V | \| | \| | \| | \| |
| 9+45 | 0.2324 | 0.44 | Q  V | \| | \| | \| | \| |
| 9+50 | 0.2355 | 0.45 | Q  V | \| | \| | \| | \| |
| 9+55 | 0.2386 | 0.45 | Q  V | \| | \| | \| | \| |
| 10+ 0 | 0.2417 | 0.45 | Q  V | \| | \| | \| | \| |
| 10+ 5 | 0.2449 | 0.46 | Q  V | \| | \| | \| | \| |
| 10+10 | 0.2481 | 0.46 | Q   V | \| | \| | \| | \| |
| 10+15 | 0.2513 | 0.47 | Q   V | \| | \| | \| | \| |
| 10+20 | 0.2546 | 0.47 | Q   V | \| | \| | \| | \| |
| 10+25 | 0.2579 | 0.48 | Q   V | \| | \| | \| | \| |
| 10+30 | 0.2612 | 0.48 | Q   V | \| | \| | \| | \| |
| 10+35 | 0.2646 | 0.49 | Q   V | \| | \| | \| | \| |
| 10+40 | 0.2680 | 0.49 | Q   V | \| | \| | \| | \| |
| 10+45 | 0.2714 | 0.50 | Q   V | \| | \| | \| | \| |
| 10+50 | 0.2749 | 0.51 | Q   V | \| | \| | \| | \| |
| 10+55 | 0.2784 | 0.51 | Q   V | \| | \| | \| | \| |
| 11+ 0 | 0.2820 | 0.52 | Q   V | \| | \| | \| | \| |
| 11+ 5 | 0.2856 | 0.52 | Q   V | \| | \| | \| | \| |
| 11+10 | 0.2893 | 0.53 | Q   V | \| | \| | \| | \| |
| 11+15 | 0.2930 | 0.54 | Q   V | \| | \| | \| | \| |
| 11+20 | 0.2967 | 0.54 | Q   V | \| | \| | \| | \| |
| 11+25 | 0.3005 | 0.55 | Q   V | \| | \| | \| | \| |
| 11+30 | 0.3043 | 0.56 | Q   V | \| | \| | \| | \| |
| 11+35 | 0.3082 | 0.57 | Q   V | \| | \| | \| | \| |
| 11+40 | 0.3122 | 0.57 | Q    V | \| | \| | \| | \| |
| 11+45 | 0.3162 | 0.58 | Q    V | \| | \| | \| | \| |
| 11+50 | 0.3202 | 0.59 | Q    V | \| | \| | \| | \| |
| 11+55 | 0.3244 | 0.60 | Q    V | \| | \| | \| | \| |
| 12+ 0 | 0.3285 | 0.61 | Q    V | \| | \| | \| | \| |

```
12+ 5       0.3328      0.62  Q    V    |          |          |          |
12+10       0.3371      0.62  Q    V    |          |          |          |
12+15       0.3414      0.64  Q    V    |          |          |          |
12+20       0.3459      0.65  Q    V    |          |          |          |
12+25       0.3504      0.66  Q    V    |          |          |          |
12+30       0.3551      0.67  Q    V    |          |          |          |
12+35       0.3598      0.68  Q    V    |          |          |          |
12+40       0.3646      0.70  Q    V    |          |          |          |
12+45       0.3694      0.71  Q    V    |          |          |          |
12+50       0.3744      0.72  Q     V   |          |          |          |
12+55       0.3795      0.73  Q     V   |          |          |          |
13+ 0       0.3846      0.75  Q     V   |          |          |          |
13+ 5       0.3899      0.76  |Q    V   |          |          |          |
13+10       0.3952      0.78  |Q    V   |          |          |          |
13+15       0.4007      0.79  |Q    V   |          |          |          |
13+20       0.4063      0.81  |Q    V   |          |          |          |
13+25       0.4120      0.83  |Q    V   |          |          |          |
13+30       0.4178      0.85  |Q    V   |          |          |          |
13+35       0.4237      0.86  |Q    V   |          |          |          |
13+40       0.4298      0.88  |Q    V   |          |          |          |
13+45       0.4361      0.90  |Q     V  |          |          |          |
13+50       0.4425      0.93  |Q     V  |          |          |          |
13+55       0.4490      0.95  |Q     V  |          |          |          |
14+ 0       0.4557      0.98  |Q     V  |          |          |          |
14+ 5       0.4626      1.00  |Q     V  |          |          |          |
14+10       0.4697      1.03  |Q     V  |          |          |          |
14+15       0.4770      1.06  |Q     V  |          |          |          |
14+20       0.4845      1.09  |Q     V  |          |          |          |
14+25       0.4923      1.13  |Q     V  |          |          |          |
14+30       0.5003      1.16  |Q      V |          |          |          |
14+35       0.5086      1.20  |Q      V |          |          |          |
14+40       0.5172      1.25  |Q      V |          |          |          |
14+45       0.5261      1.29  |Q      V |          |          |          |
14+50       0.5354      1.35  |Q      V |          |          |          |
14+55       0.5450      1.40  |Q      V |          |          |          |
15+ 0       0.5551      1.46  |Q      V |          |          |          |
15+ 5       0.5657      1.53  | Q      V|          |          |          |
15+10       0.5768      1.61  | Q      V|          |          |          |
15+15       0.5884      1.70  | Q      V|          |          |          |
15+20       0.6008      1.80  | Q      V|          |          |          |
15+25       0.6140      1.92  | Q      V|          |          |          |
15+30       0.6286      2.11  | Q       V          |          |          |
15+35       0.6449      2.37  |  Q      V          |          |          |
15+40       0.6642      2.81  |  Q      V          |          |          |
15+45       0.6871      3.32  |   Q     |V         |          |          |
15+50       0.7139      3.89  |    Q    |V         |          |          |
15+55       0.7457      4.62  |     Q   | V        |          |          |
16+ 0       0.7853      5.75  |      Q  | V        |          |          |
16+ 5       0.8423      8.27  |         |Q V       |          |          |
16+10       0.9306     12.83  |         |    V Q   |          |          |
16+15       1.0582     18.53  |         |      V   |   Q      |          |
16+20       1.2484     27.61  |         |         V|          |     Q    |
16+25       1.4288     26.20  |         |          |  V       |   Q      |
16+30       1.5624     19.40  |         |          |    Q     |          |
16+35       1.6621     14.47  |         |        Q |     V    |          |
16+40       1.7418     11.57  |         |    Q     |       V  |          |
16+45       1.8072      9.50  |         | Q        |        V |          |
16+50       1.8626      8.04  |         Q          |         V          |
16+55       1.9098      6.85  |        Q|          |         V          |
```

```
17+ 0       1.9510      5.98  |      Q  |         |         |V        |
17+ 5       1.9879      5.36  |      Q  |         |         | V       |
17+10       2.0209      4.79  |     Q   |         |         | V       |
17+15       2.0499      4.21  |    Q    |         |         |  V      |
17+20       2.0755      3.72  |   Q     |         |         |  V      |
17+25       2.0992      3.43  |   Q     |         |         |  V      |
17+30       2.1207      3.13  |   Q     |         |         |   V     |
17+35       2.1406      2.88  |  Q      |         |         |   V     |
17+40       2.1584      2.60  |  Q      |         |         |   V     |
17+45       2.1750      2.40  |  Q      |         |         |    V    |
17+50       2.1903      2.22  | Q       |         |         |    V    |
17+55       2.2042      2.01  | Q       |         |         |    V    |
18+ 0       2.2172      1.89  | Q       |         |         |    V    |
18+ 5       2.2287      1.68  | Q       |         |         |    V    |
18+10       2.2395      1.57  | Q       |         |         |     V   |
18+15       2.2491      1.39  |Q        |         |         |     V   |
18+20       2.2579      1.28  |Q        |         |         |     V   |
18+25       2.2665      1.24  |Q        |         |         |     V   |
18+30       2.2749      1.23  |Q        |         |         |     V   |
18+35       2.2831      1.19  |Q        |         |         |     V   |
18+40       2.2910      1.14  |Q        |         |         |     V   |
18+45       2.2985      1.09  |Q        |         |         |      V  |
18+50       2.3052      0.97  |Q        |         |         |      V  |
18+55       2.3112      0.88  |Q        |         |         |      V  |
19+ 0       2.3169      0.82  |Q        |         |         |      V  |
19+ 5       2.3218      0.72  Q         |         |         |      V  |
19+10       2.3261      0.62  Q         |         |         |      V  |
19+15       2.3301      0.59  Q         |         |         |      V  |
19+20       2.3340      0.57  Q         |         |         |      V  |
19+25       2.3378      0.55  Q         |         |         |      V  |
19+30       2.3415      0.53  Q         |         |         |      V  |
19+35       2.3451      0.52  Q         |         |         |      V  |
19+40       2.3486      0.51  Q         |         |         |      V  |
19+45       2.3520      0.49  Q         |         |         |      V  |
19+50       2.3553      0.48  Q         |         |         |      V  |
19+55       2.3586      0.47  Q         |         |         |       V |
20+ 0       2.3618      0.46  Q         |         |         |       V |
20+ 5       2.3649      0.45  Q         |         |         |       V |
20+10       2.3679      0.44  Q         |         |         |       V |
20+15       2.3709      0.43  Q         |         |         |       V |
20+20       2.3738      0.43  Q         |         |         |       V |
20+25       2.3767      0.42  Q         |         |         |       V |
20+30       2.3795      0.41  Q         |         |         |       V |
20+35       2.3823      0.40  Q         |         |         |       V |
20+40       2.3850      0.40  Q         |         |         |       V |
20+45       2.3877      0.39  Q         |         |         |       V |
20+50       2.3903      0.38  Q         |         |         |       V |
20+55       2.3929      0.38  Q         |         |         |       V |
21+ 0       2.3955      0.37  Q         |         |         |       V |
21+ 5       2.3980      0.36  Q         |         |         |       V |
21+10       2.4005      0.36  Q         |         |         |       V |
21+15       2.4029      0.35  Q         |         |         |       V |
21+20       2.4053      0.35  Q         |         |         |       V |
21+25       2.4076      0.34  Q         |         |         |       V |
21+30       2.4100      0.34  Q         |         |         |       V |
21+35       2.4123      0.33  Q         |         |         |       V |
21+40       2.4145      0.33  Q         |         |         |       V |
21+45       2.4168      0.32  Q         |         |         |       V |
21+50       2.4190      0.32  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+55 | 2.4212 | 0.32 | Q | \| | \| | \| | V\| |
| 22+ 0 | 2.4233 | 0.31 | Q | \| | \| | \| | V\| |
| 22+ 5 | 2.4254 | 0.31 | Q | \| | \| | \| | V\| |
| 22+10 | 2.4275 | 0.30 | Q | \| | \| | \| | V\| |
| 22+15 | 2.4296 | 0.30 | Q | \| | \| | \| | V\| |
| 22+20 | 2.4316 | 0.30 | Q | \| | \| | \| | V\| |
| 22+25 | 2.4337 | 0.29 | Q | \| | \| | \| | V\| |
| 22+30 | 2.4357 | 0.29 | Q | \| | \| | \| | V\| |
| 22+35 | 2.4376 | 0.29 | Q | \| | \| | \| | V\| |
| 22+40 | 2.4396 | 0.28 | Q | \| | \| | \| | V\| |
| 22+45 | 2.4415 | 0.28 | Q | \| | \| | \| | V\| |
| 22+50 | 2.4434 | 0.28 | Q | \| | \| | \| | V\| |
| 22+55 | 2.4453 | 0.27 | Q | \| | \| | \| | V\| |
| 23+ 0 | 2.4472 | 0.27 | Q | \| | \| | \| | V\| |
| 23+ 5 | 2.4491 | 0.27 | Q | \| | \| | \| | V\| |
| 23+10 | 2.4509 | 0.27 | Q | \| | \| | \| | V\| |
| 23+15 | 2.4527 | 0.26 | Q | \| | \| | \| | V\| |
| 23+20 | 2.4545 | 0.26 | Q | \| | \| | \| | V\| |
| 23+25 | 2.4563 | 0.26 | Q | \| | \| | \| | V\| |
| 23+30 | 2.4580 | 0.26 | Q | \| | \| | \| | V\| |
| 23+35 | 2.4598 | 0.25 | Q | \| | \| | \| | V\| |
| 23+40 | 2.4615 | 0.25 | Q | \| | \| | \| | V\| |
| 23+45 | 2.4632 | 0.25 | Q | \| | \| | \| | V\| |
| 23+50 | 2.4649 | 0.25 | Q | \| | \| | \| | V\| |
| 23+55 | 2.4666 | 0.24 | Q | \| | \| | \| | V\| |
| 24+ 0 | 2.4683 | 0.24 | Q | \| | \| | \| | V\| |
| 24+ 5 | 2.4699 | 0.24 | Q | \| | \| | \| | V\| |
| 24+10 | 2.4714 | 0.23 | Q | \| | \| | \| | V\| |
| 24+15 | 2.4729 | 0.21 | Q | \| | \| | \| | V\| |
| 24+20 | 2.4740 | 0.17 | Q | \| | \| | \| | V\| |
| 24+25 | 2.4749 | 0.13 | Q | \| | \| | \| | V\| |
| 24+30 | 2.4756 | 0.10 | Q | \| | \| | \| | V\| |
| 24+35 | 2.4761 | 0.08 | Q | \| | \| | \| | V\| |
| 24+40 | 2.4766 | 0.07 | Q | \| | \| | \| | V\| |
| 24+45 | 2.4770 | 0.06 | Q | \| | \| | \| | V\| |
| 24+50 | 2.4774 | 0.05 | Q | \| | \| | \| | V\| |
| 24+55 | 2.4777 | 0.04 | Q | \| | \| | \| | V\| |
| 25+ 0 | 2.4780 | 0.04 | Q | \| | \| | \| | V\| |
| 25+ 5 | 2.4782 | 0.03 | Q | \| | \| | \| | V\| |
| 25+10 | 2.4784 | 0.03 | Q | \| | \| | \| | V\| |
| 25+15 | 2.4786 | 0.03 | Q | \| | \| | \| | V\| |
| 25+20 | 2.4787 | 0.02 | Q | \| | \| | \| | V\| |
| 25+25 | 2.4789 | 0.02 | Q | \| | \| | \| | V\| |
| 25+30 | 2.4790 | 0.02 | Q | \| | \| | \| | V\| |
| 25+35 | 2.4791 | 0.02 | Q | \| | \| | \| | V\| |
| 25+40 | 2.4792 | 0.01 | Q | \| | \| | \| | V\| |
| 25+45 | 2.4793 | 0.01 | Q | \| | \| | \| | V\| |
| 25+50 | 2.4793 | 0.01 | Q | \| | \| | \| | V\| |
| 25+55 | 2.4794 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 0 | 2.4794 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 5 | 2.4795 | 0.01 | Q | \| | \| | \| | V\| |
| 26+10 | 2.4795 | 0.01 | Q | \| | \| | \| | V\| |
| 26+15 | 2.4795 | 0.00 | Q | \| | \| | \| | V\| |
| 26+20 | 2.4796 | 0.00 | Q | \| | \| | \| | V\| |
| 26+25 | 2.4796 | 0.00 | Q | \| | \| | \| | V\| |
| 26+30 | 2.4796 | 0.00 | Q | \| | \| | \| | V\| |
| 26+35 | 2.4796 | 0.00 | Q | \| | \| | \| | V\| |
| 26+40 | 2.4796 | 0.00 | Q | \| | \| | \| | V\| |
| 26+45 | 2.4796 | 0.00 | Q | \| | \| | \| | V\| |

```
   26+50       2.4797      0.00  Q         |         |         |        V|
   26+55       2.4797      0.00  Q         |         |         |        V|
   27+ 0       2.4797      0.00  Q         |         |         |        V|
-----------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 8
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 8.97 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 8.97 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 8.97 | 24 | 2.42 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.0 | 92.8 | 8.97 | 1.000 | 0.140 | 0.900 | 0.126 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.126

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 8.07 | 0.900 | 78.0 | 92.8 | 0.78 | 0.697 |
| 0.90 | 0.100 | 98.0 | 98.0 | 0.20 | 0.905 |

Area-averaged catchment yield fraction, Y = 0.718
Area-averaged low loss fraction, Yb = 0.282
User entry of time of concentration = 0.300 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 8.97(Ac.)
Catchment Lag time = 0.240 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 34.7222
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.126(In/Hr)
Average low loss rate fraction (Yb) = 0.282 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.420(In)

Rainfall depth area reduction factors:
Using a total area of 8.97(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.602(In)
30-minute factor = 1.000 Adjusted rainfall = 1.031(In)
1-hour factor = 1.000 Adjusted rainfall = 1.269(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.420(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 108.48 (CFS)) | |
| 1 | 2.206 | 2.393 |
| 2 | 13.132 | 11.853 |
| 3 | 40.437 | 29.621 |
| 4 | 59.629 | 20.820 |
| 5 | 69.886 | 11.127 |
| 6 | 76.724 | 7.418 |
| 7 | 81.579 | 5.266 |
| 8 | 85.290 | 4.026 |
| 9 | 88.266 | 3.229 |
| 10 | 90.463 | 2.383 |
| 11 | 92.296 | 1.989 |
| 12 | 93.829 | 1.663 |
| 13 | 95.057 | 1.331 |

| | | |
|---|---|---|
| 14 | 96.088 | 1.118 |
| 15 | 96.940 | 0.925 |
| 16 | 97.584 | 0.698 |
| 17 | 98.029 | 0.483 |
| 18 | 98.394 | 0.396 |
| 19 | 98.808 | 0.449 |
| 20 | 99.225 | 0.452 |
| 21 | 99.571 | 0.376 |
| 22 | 99.791 | 0.238 |
| 23 | 100.000 | 0.227 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6024 | 0.6024 |
| 2 | 0.7416 | 0.1392 |
| 3 | 0.8375 | 0.0959 |
| 4 | 0.9130 | 0.0755 |
| 5 | 0.9762 | 0.0632 |
| 6 | 1.0311 | 0.0549 |
| 7 | 1.0799 | 0.0488 |
| 8 | 1.1241 | 0.0441 |
| 9 | 1.1645 | 0.0404 |
| 10 | 1.2019 | 0.0374 |
| 11 | 1.2368 | 0.0349 |
| 12 | 1.2695 | 0.0327 |
| 13 | 1.2907 | 0.0212 |
| 14 | 1.3107 | 0.0200 |
| 15 | 1.3296 | 0.0189 |
| 16 | 1.3475 | 0.0179 |
| 17 | 1.3645 | 0.0170 |
| 18 | 1.3808 | 0.0163 |
| 19 | 1.3963 | 0.0156 |
| 20 | 1.4112 | 0.0149 |
| 21 | 1.4256 | 0.0143 |
| 22 | 1.4394 | 0.0138 |
| 23 | 1.4527 | 0.0133 |
| 24 | 1.4656 | 0.0129 |
| 25 | 1.4780 | 0.0125 |
| 26 | 1.4901 | 0.0121 |
| 27 | 1.5018 | 0.0117 |
| 28 | 1.5132 | 0.0114 |
| 29 | 1.5242 | 0.0110 |
| 30 | 1.5350 | 0.0107 |
| 31 | 1.5454 | 0.0105 |
| 32 | 1.5556 | 0.0102 |
| 33 | 1.5656 | 0.0100 |
| 34 | 1.5753 | 0.0097 |
| 35 | 1.5848 | 0.0095 |
| 36 | 1.5941 | 0.0093 |
| 37 | 1.6031 | 0.0091 |
| 38 | 1.6120 | 0.0089 |
| 39 | 1.6207 | 0.0087 |
| 40 | 1.6292 | 0.0085 |
| 41 | 1.6376 | 0.0083 |
| 42 | 1.6457 | 0.0082 |
| 43 | 1.6538 | 0.0080 |
| 44 | 1.6617 | 0.0079 |
| 45 | 1.6694 | 0.0077 |
| 46 | 1.6770 | 0.0076 |

| | | |
|---|---|---|
| 47 | 1.6845 | 0.0075 |
| 48 | 1.6919 | 0.0074 |
| 49 | 1.6991 | 0.0072 |
| 50 | 1.7062 | 0.0071 |
| 51 | 1.7132 | 0.0070 |
| 52 | 1.7201 | 0.0069 |
| 53 | 1.7269 | 0.0068 |
| 54 | 1.7336 | 0.0067 |
| 55 | 1.7402 | 0.0066 |
| 56 | 1.7467 | 0.0065 |
| 57 | 1.7531 | 0.0064 |
| 58 | 1.7594 | 0.0063 |
| 59 | 1.7657 | 0.0062 |
| 60 | 1.7718 | 0.0062 |
| 61 | 1.7779 | 0.0061 |
| 62 | 1.7839 | 0.0060 |
| 63 | 1.7898 | 0.0059 |
| 64 | 1.7956 | 0.0058 |
| 65 | 1.8014 | 0.0058 |
| 66 | 1.8071 | 0.0057 |
| 67 | 1.8127 | 0.0056 |
| 68 | 1.8183 | 0.0056 |
| 69 | 1.8238 | 0.0055 |
| 70 | 1.8293 | 0.0054 |
| 71 | 1.8346 | 0.0054 |
| 72 | 1.8399 | 0.0053 |
| 73 | 1.8450 | 0.0050 |
| 74 | 1.8499 | 0.0050 |
| 75 | 1.8549 | 0.0049 |
| 76 | 1.8597 | 0.0049 |
| 77 | 1.8645 | 0.0048 |
| 78 | 1.8693 | 0.0048 |
| 79 | 1.8740 | 0.0047 |
| 80 | 1.8787 | 0.0047 |
| 81 | 1.8833 | 0.0046 |
| 82 | 1.8879 | 0.0046 |
| 83 | 1.8924 | 0.0045 |
| 84 | 1.8969 | 0.0045 |
| 85 | 1.9013 | 0.0044 |
| 86 | 1.9057 | 0.0044 |
| 87 | 1.9101 | 0.0044 |
| 88 | 1.9144 | 0.0043 |
| 89 | 1.9187 | 0.0043 |
| 90 | 1.9229 | 0.0042 |
| 91 | 1.9271 | 0.0042 |
| 92 | 1.9313 | 0.0042 |
| 93 | 1.9354 | 0.0041 |
| 94 | 1.9395 | 0.0041 |
| 95 | 1.9436 | 0.0041 |
| 96 | 1.9476 | 0.0040 |
| 97 | 1.9516 | 0.0040 |
| 98 | 1.9556 | 0.0040 |
| 99 | 1.9595 | 0.0039 |
| 100 | 1.9634 | 0.0039 |
| 101 | 1.9673 | 0.0039 |
| 102 | 1.9711 | 0.0038 |
| 103 | 1.9749 | 0.0038 |
| 104 | 1.9787 | 0.0038 |
| 105 | 1.9824 | 0.0037 |

| | | |
|---|---|---|
| 106 | 1.9861 | 0.0037 |
| 107 | 1.9898 | 0.0037 |
| 108 | 1.9935 | 0.0037 |
| 109 | 1.9971 | 0.0036 |
| 110 | 2.0007 | 0.0036 |
| 111 | 2.0043 | 0.0036 |
| 112 | 2.0079 | 0.0036 |
| 113 | 2.0114 | 0.0035 |
| 114 | 2.0149 | 0.0035 |
| 115 | 2.0184 | 0.0035 |
| 116 | 2.0218 | 0.0035 |
| 117 | 2.0253 | 0.0034 |
| 118 | 2.0287 | 0.0034 |
| 119 | 2.0321 | 0.0034 |
| 120 | 2.0354 | 0.0034 |
| 121 | 2.0388 | 0.0033 |
| 122 | 2.0421 | 0.0033 |
| 123 | 2.0454 | 0.0033 |
| 124 | 2.0487 | 0.0033 |
| 125 | 2.0519 | 0.0033 |
| 126 | 2.0552 | 0.0032 |
| 127 | 2.0584 | 0.0032 |
| 128 | 2.0616 | 0.0032 |
| 129 | 2.0647 | 0.0032 |
| 130 | 2.0679 | 0.0032 |
| 131 | 2.0710 | 0.0031 |
| 132 | 2.0741 | 0.0031 |
| 133 | 2.0772 | 0.0031 |
| 134 | 2.0803 | 0.0031 |
| 135 | 2.0834 | 0.0031 |
| 136 | 2.0864 | 0.0030 |
| 137 | 2.0894 | 0.0030 |
| 138 | 2.0924 | 0.0030 |
| 139 | 2.0954 | 0.0030 |
| 140 | 2.0984 | 0.0030 |
| 141 | 2.1014 | 0.0030 |
| 142 | 2.1043 | 0.0029 |
| 143 | 2.1072 | 0.0029 |
| 144 | 2.1101 | 0.0029 |
| 145 | 2.1130 | 0.0029 |
| 146 | 2.1159 | 0.0029 |
| 147 | 2.1187 | 0.0029 |
| 148 | 2.1216 | 0.0028 |
| 149 | 2.1244 | 0.0028 |
| 150 | 2.1272 | 0.0028 |
| 151 | 2.1300 | 0.0028 |
| 152 | 2.1328 | 0.0028 |
| 153 | 2.1356 | 0.0028 |
| 154 | 2.1383 | 0.0028 |
| 155 | 2.1411 | 0.0027 |
| 156 | 2.1438 | 0.0027 |
| 157 | 2.1465 | 0.0027 |
| 158 | 2.1492 | 0.0027 |
| 159 | 2.1519 | 0.0027 |
| 160 | 2.1545 | 0.0027 |
| 161 | 2.1572 | 0.0027 |
| 162 | 2.1598 | 0.0026 |
| 163 | 2.1625 | 0.0026 |
| 164 | 2.1651 | 0.0026 |

| | | |
|---|---|---|
| 165 | 2.1677 | 0.0026 |
| 166 | 2.1703 | 0.0026 |
| 167 | 2.1728 | 0.0026 |
| 168 | 2.1754 | 0.0026 |
| 169 | 2.1780 | 0.0026 |
| 170 | 2.1805 | 0.0025 |
| 171 | 2.1830 | 0.0025 |
| 172 | 2.1856 | 0.0025 |
| 173 | 2.1881 | 0.0025 |
| 174 | 2.1906 | 0.0025 |
| 175 | 2.1930 | 0.0025 |
| 176 | 2.1955 | 0.0025 |
| 177 | 2.1980 | 0.0025 |
| 178 | 2.2004 | 0.0024 |
| 179 | 2.2029 | 0.0024 |
| 180 | 2.2053 | 0.0024 |
| 181 | 2.2077 | 0.0024 |
| 182 | 2.2101 | 0.0024 |
| 183 | 2.2125 | 0.0024 |
| 184 | 2.2149 | 0.0024 |
| 185 | 2.2173 | 0.0024 |
| 186 | 2.2196 | 0.0024 |
| 187 | 2.2220 | 0.0024 |
| 188 | 2.2243 | 0.0023 |
| 189 | 2.2266 | 0.0023 |
| 190 | 2.2290 | 0.0023 |
| 191 | 2.2313 | 0.0023 |
| 192 | 2.2336 | 0.0023 |
| 193 | 2.2359 | 0.0023 |
| 194 | 2.2382 | 0.0023 |
| 195 | 2.2404 | 0.0023 |
| 196 | 2.2427 | 0.0023 |
| 197 | 2.2450 | 0.0023 |
| 198 | 2.2472 | 0.0022 |
| 199 | 2.2495 | 0.0022 |
| 200 | 2.2517 | 0.0022 |
| 201 | 2.2539 | 0.0022 |
| 202 | 2.2561 | 0.0022 |
| 203 | 2.2583 | 0.0022 |
| 204 | 2.2605 | 0.0022 |
| 205 | 2.2627 | 0.0022 |
| 206 | 2.2649 | 0.0022 |
| 207 | 2.2671 | 0.0022 |
| 208 | 2.2692 | 0.0022 |
| 209 | 2.2714 | 0.0022 |
| 210 | 2.2735 | 0.0021 |
| 211 | 2.2756 | 0.0021 |
| 212 | 2.2778 | 0.0021 |
| 213 | 2.2799 | 0.0021 |
| 214 | 2.2820 | 0.0021 |
| 215 | 2.2841 | 0.0021 |
| 216 | 2.2862 | 0.0021 |
| 217 | 2.2883 | 0.0021 |
| 218 | 2.2904 | 0.0021 |
| 219 | 2.2924 | 0.0021 |
| 220 | 2.2945 | 0.0021 |
| 221 | 2.2966 | 0.0021 |
| 222 | 2.2986 | 0.0021 |
| 223 | 2.3007 | 0.0020 |

| | | |
|---|---|---|
| 224 | 2.3027 | 0.0020 |
| 225 | 2.3047 | 0.0020 |
| 226 | 2.3067 | 0.0020 |
| 227 | 2.3088 | 0.0020 |
| 228 | 2.3108 | 0.0020 |
| 229 | 2.3128 | 0.0020 |
| 230 | 2.3148 | 0.0020 |
| 231 | 2.3167 | 0.0020 |
| 232 | 2.3187 | 0.0020 |
| 233 | 2.3207 | 0.0020 |
| 234 | 2.3227 | 0.0020 |
| 235 | 2.3246 | 0.0020 |
| 236 | 2.3266 | 0.0020 |
| 237 | 2.3285 | 0.0019 |
| 238 | 2.3305 | 0.0019 |
| 239 | 2.3324 | 0.0019 |
| 240 | 2.3343 | 0.0019 |
| 241 | 2.3362 | 0.0019 |
| 242 | 2.3381 | 0.0019 |
| 243 | 2.3401 | 0.0019 |
| 244 | 2.3420 | 0.0019 |
| 245 | 2.3438 | 0.0019 |
| 246 | 2.3457 | 0.0019 |
| 247 | 2.3476 | 0.0019 |
| 248 | 2.3495 | 0.0019 |
| 249 | 2.3514 | 0.0019 |
| 250 | 2.3532 | 0.0019 |
| 251 | 2.3551 | 0.0019 |
| 252 | 2.3569 | 0.0019 |
| 253 | 2.3588 | 0.0018 |
| 254 | 2.3606 | 0.0018 |
| 255 | 2.3625 | 0.0018 |
| 256 | 2.3643 | 0.0018 |
| 257 | 2.3661 | 0.0018 |
| 258 | 2.3679 | 0.0018 |
| 259 | 2.3697 | 0.0018 |
| 260 | 2.3715 | 0.0018 |
| 261 | 2.3733 | 0.0018 |
| 262 | 2.3751 | 0.0018 |
| 263 | 2.3769 | 0.0018 |
| 264 | 2.3787 | 0.0018 |
| 265 | 2.3805 | 0.0018 |
| 266 | 2.3823 | 0.0018 |
| 267 | 2.3840 | 0.0018 |
| 268 | 2.3858 | 0.0018 |
| 269 | 2.3875 | 0.0018 |
| 270 | 2.3893 | 0.0018 |
| 271 | 2.3910 | 0.0017 |
| 272 | 2.3928 | 0.0017 |
| 273 | 2.3945 | 0.0017 |
| 274 | 2.3963 | 0.0017 |
| 275 | 2.3980 | 0.0017 |
| 276 | 2.3997 | 0.0017 |
| 277 | 2.4014 | 0.0017 |
| 278 | 2.4031 | 0.0017 |
| 279 | 2.4048 | 0.0017 |
| 280 | 2.4065 | 0.0017 |
| 281 | 2.4082 | 0.0017 |
| 282 | 2.4099 | 0.0017 |

| | | |
|---|---|---|
| 283 | 2.4116 | 0.0017 |
| 284 | 2.4133 | 0.0017 |
| 285 | 2.4150 | 0.0017 |
| 286 | 2.4166 | 0.0017 |
| 287 | 2.4183 | 0.0017 |
| 288 | 2.4200 | 0.0017 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0017 | 0.0005 | 0.0012 |
| 2 | 0.0017 | 0.0005 | 0.0012 |
| 3 | 0.0017 | 0.0005 | 0.0012 |
| 4 | 0.0017 | 0.0005 | 0.0012 |
| 5 | 0.0017 | 0.0005 | 0.0012 |
| 6 | 0.0017 | 0.0005 | 0.0012 |
| 7 | 0.0017 | 0.0005 | 0.0012 |
| 8 | 0.0017 | 0.0005 | 0.0012 |
| 9 | 0.0017 | 0.0005 | 0.0012 |
| 10 | 0.0017 | 0.0005 | 0.0012 |
| 11 | 0.0017 | 0.0005 | 0.0012 |
| 12 | 0.0017 | 0.0005 | 0.0013 |
| 13 | 0.0018 | 0.0005 | 0.0013 |
| 14 | 0.0018 | 0.0005 | 0.0013 |
| 15 | 0.0018 | 0.0005 | 0.0013 |
| 16 | 0.0018 | 0.0005 | 0.0013 |
| 17 | 0.0018 | 0.0005 | 0.0013 |
| 18 | 0.0018 | 0.0005 | 0.0013 |
| 19 | 0.0018 | 0.0005 | 0.0013 |
| 20 | 0.0018 | 0.0005 | 0.0013 |
| 21 | 0.0018 | 0.0005 | 0.0013 |
| 22 | 0.0018 | 0.0005 | 0.0013 |
| 23 | 0.0018 | 0.0005 | 0.0013 |
| 24 | 0.0018 | 0.0005 | 0.0013 |
| 25 | 0.0019 | 0.0005 | 0.0013 |
| 26 | 0.0019 | 0.0005 | 0.0013 |
| 27 | 0.0019 | 0.0005 | 0.0013 |
| 28 | 0.0019 | 0.0005 | 0.0013 |
| 29 | 0.0019 | 0.0005 | 0.0014 |
| 30 | 0.0019 | 0.0005 | 0.0014 |
| 31 | 0.0019 | 0.0005 | 0.0014 |
| 32 | 0.0019 | 0.0005 | 0.0014 |
| 33 | 0.0019 | 0.0005 | 0.0014 |
| 34 | 0.0019 | 0.0005 | 0.0014 |
| 35 | 0.0019 | 0.0005 | 0.0014 |
| 36 | 0.0020 | 0.0006 | 0.0014 |
| 37 | 0.0020 | 0.0006 | 0.0014 |
| 38 | 0.0020 | 0.0006 | 0.0014 |
| 39 | 0.0020 | 0.0006 | 0.0014 |
| 40 | 0.0020 | 0.0006 | 0.0014 |
| 41 | 0.0020 | 0.0006 | 0.0014 |
| 42 | 0.0020 | 0.0006 | 0.0014 |
| 43 | 0.0020 | 0.0006 | 0.0015 |
| 44 | 0.0020 | 0.0006 | 0.0015 |
| 45 | 0.0021 | 0.0006 | 0.0015 |
| 46 | 0.0021 | 0.0006 | 0.0015 |
| 47 | 0.0021 | 0.0006 | 0.0015 |
| 48 | 0.0021 | 0.0006 | 0.0015 |

| | | | |
|---|---|---|---|
| 49 | 0.0021 | 0.0006 | 0.0015 |
| 50 | 0.0021 | 0.0006 | 0.0015 |
| 51 | 0.0021 | 0.0006 | 0.0015 |
| 52 | 0.0021 | 0.0006 | 0.0015 |
| 53 | 0.0021 | 0.0006 | 0.0015 |
| 54 | 0.0022 | 0.0006 | 0.0015 |
| 55 | 0.0022 | 0.0006 | 0.0016 |
| 56 | 0.0022 | 0.0006 | 0.0016 |
| 57 | 0.0022 | 0.0006 | 0.0016 |
| 58 | 0.0022 | 0.0006 | 0.0016 |
| 59 | 0.0022 | 0.0006 | 0.0016 |
| 60 | 0.0022 | 0.0006 | 0.0016 |
| 61 | 0.0022 | 0.0006 | 0.0016 |
| 62 | 0.0023 | 0.0006 | 0.0016 |
| 63 | 0.0023 | 0.0006 | 0.0016 |
| 64 | 0.0023 | 0.0006 | 0.0016 |
| 65 | 0.0023 | 0.0006 | 0.0017 |
| 66 | 0.0023 | 0.0007 | 0.0017 |
| 67 | 0.0023 | 0.0007 | 0.0017 |
| 68 | 0.0023 | 0.0007 | 0.0017 |
| 69 | 0.0024 | 0.0007 | 0.0017 |
| 70 | 0.0024 | 0.0007 | 0.0017 |
| 71 | 0.0024 | 0.0007 | 0.0017 |
| 72 | 0.0024 | 0.0007 | 0.0017 |
| 73 | 0.0024 | 0.0007 | 0.0017 |
| 74 | 0.0024 | 0.0007 | 0.0018 |
| 75 | 0.0025 | 0.0007 | 0.0018 |
| 76 | 0.0025 | 0.0007 | 0.0018 |
| 77 | 0.0025 | 0.0007 | 0.0018 |
| 78 | 0.0025 | 0.0007 | 0.0018 |
| 79 | 0.0025 | 0.0007 | 0.0018 |
| 80 | 0.0025 | 0.0007 | 0.0018 |
| 81 | 0.0026 | 0.0007 | 0.0018 |
| 82 | 0.0026 | 0.0007 | 0.0019 |
| 83 | 0.0026 | 0.0007 | 0.0019 |
| 84 | 0.0026 | 0.0007 | 0.0019 |
| 85 | 0.0026 | 0.0007 | 0.0019 |
| 86 | 0.0027 | 0.0007 | 0.0019 |
| 87 | 0.0027 | 0.0008 | 0.0019 |
| 88 | 0.0027 | 0.0008 | 0.0019 |
| 89 | 0.0027 | 0.0008 | 0.0020 |
| 90 | 0.0027 | 0.0008 | 0.0020 |
| 91 | 0.0028 | 0.0008 | 0.0020 |
| 92 | 0.0028 | 0.0008 | 0.0020 |
| 93 | 0.0028 | 0.0008 | 0.0020 |
| 94 | 0.0028 | 0.0008 | 0.0020 |
| 95 | 0.0029 | 0.0008 | 0.0021 |
| 96 | 0.0029 | 0.0008 | 0.0021 |
| 97 | 0.0029 | 0.0008 | 0.0021 |
| 98 | 0.0029 | 0.0008 | 0.0021 |
| 99 | 0.0030 | 0.0008 | 0.0021 |
| 100 | 0.0030 | 0.0008 | 0.0021 |
| 101 | 0.0030 | 0.0008 | 0.0022 |
| 102 | 0.0030 | 0.0009 | 0.0022 |
| 103 | 0.0031 | 0.0009 | 0.0022 |
| 104 | 0.0031 | 0.0009 | 0.0022 |
| 105 | 0.0031 | 0.0009 | 0.0022 |
| 106 | 0.0031 | 0.0009 | 0.0023 |
| 107 | 0.0032 | 0.0009 | 0.0023 |

| | | | |
|---|---|---|---|
| 108 | 0.0032 | 0.0009 | 0.0023 |
| 109 | 0.0032 | 0.0009 | 0.0023 |
| 110 | 0.0033 | 0.0009 | 0.0023 |
| 111 | 0.0033 | 0.0009 | 0.0024 |
| 112 | 0.0033 | 0.0009 | 0.0024 |
| 113 | 0.0034 | 0.0009 | 0.0024 |
| 114 | 0.0034 | 0.0010 | 0.0024 |
| 115 | 0.0034 | 0.0010 | 0.0025 |
| 116 | 0.0035 | 0.0010 | 0.0025 |
| 117 | 0.0035 | 0.0010 | 0.0025 |
| 118 | 0.0035 | 0.0010 | 0.0025 |
| 119 | 0.0036 | 0.0010 | 0.0026 |
| 120 | 0.0036 | 0.0010 | 0.0026 |
| 121 | 0.0037 | 0.0010 | 0.0026 |
| 122 | 0.0037 | 0.0010 | 0.0026 |
| 123 | 0.0037 | 0.0011 | 0.0027 |
| 124 | 0.0038 | 0.0011 | 0.0027 |
| 125 | 0.0038 | 0.0011 | 0.0028 |
| 126 | 0.0039 | 0.0011 | 0.0028 |
| 127 | 0.0039 | 0.0011 | 0.0028 |
| 128 | 0.0040 | 0.0011 | 0.0028 |
| 129 | 0.0040 | 0.0011 | 0.0029 |
| 130 | 0.0041 | 0.0011 | 0.0029 |
| 131 | 0.0041 | 0.0012 | 0.0030 |
| 132 | 0.0042 | 0.0012 | 0.0030 |
| 133 | 0.0042 | 0.0012 | 0.0030 |
| 134 | 0.0043 | 0.0012 | 0.0031 |
| 135 | 0.0044 | 0.0012 | 0.0031 |
| 136 | 0.0044 | 0.0012 | 0.0032 |
| 137 | 0.0045 | 0.0013 | 0.0032 |
| 138 | 0.0045 | 0.0013 | 0.0033 |
| 139 | 0.0046 | 0.0013 | 0.0033 |
| 140 | 0.0047 | 0.0013 | 0.0033 |
| 141 | 0.0048 | 0.0013 | 0.0034 |
| 142 | 0.0048 | 0.0014 | 0.0035 |
| 143 | 0.0049 | 0.0014 | 0.0035 |
| 144 | 0.0050 | 0.0014 | 0.0036 |
| 145 | 0.0053 | 0.0015 | 0.0038 |
| 146 | 0.0054 | 0.0015 | 0.0039 |
| 147 | 0.0055 | 0.0016 | 0.0039 |
| 148 | 0.0056 | 0.0016 | 0.0040 |
| 149 | 0.0057 | 0.0016 | 0.0041 |
| 150 | 0.0058 | 0.0016 | 0.0041 |
| 151 | 0.0059 | 0.0017 | 0.0042 |
| 152 | 0.0060 | 0.0017 | 0.0043 |
| 153 | 0.0062 | 0.0017 | 0.0044 |
| 154 | 0.0062 | 0.0018 | 0.0045 |
| 155 | 0.0064 | 0.0018 | 0.0046 |
| 156 | 0.0065 | 0.0018 | 0.0047 |
| 157 | 0.0067 | 0.0019 | 0.0048 |
| 158 | 0.0068 | 0.0019 | 0.0049 |
| 159 | 0.0070 | 0.0020 | 0.0050 |
| 160 | 0.0071 | 0.0020 | 0.0051 |
| 161 | 0.0074 | 0.0021 | 0.0053 |
| 162 | 0.0075 | 0.0021 | 0.0054 |
| 163 | 0.0077 | 0.0022 | 0.0056 |
| 164 | 0.0079 | 0.0022 | 0.0057 |
| 165 | 0.0082 | 0.0023 | 0.0059 |
| 166 | 0.0083 | 0.0024 | 0.0060 |

| | | | |
|---|---|---|---|
| 167 | 0.0087 | 0.0025 | 0.0062 |
| 168 | 0.0089 | 0.0025 | 0.0064 |
| 169 | 0.0093 | 0.0026 | 0.0067 |
| 170 | 0.0095 | 0.0027 | 0.0068 |
| 171 | 0.0100 | 0.0028 | 0.0071 |
| 172 | 0.0102 | 0.0029 | 0.0073 |
| 173 | 0.0107 | 0.0030 | 0.0077 |
| 174 | 0.0110 | 0.0031 | 0.0079 |
| 175 | 0.0117 | 0.0033 | 0.0084 |
| 176 | 0.0121 | 0.0034 | 0.0087 |
| 177 | 0.0129 | 0.0036 | 0.0092 |
| 178 | 0.0133 | 0.0038 | 0.0096 |
| 179 | 0.0143 | 0.0040 | 0.0103 |
| 180 | 0.0149 | 0.0042 | 0.0107 |
| 181 | 0.0163 | 0.0046 | 0.0117 |
| 182 | 0.0170 | 0.0048 | 0.0122 |
| 183 | 0.0189 | 0.0053 | 0.0136 |
| 184 | 0.0200 | 0.0056 | 0.0143 |
| 185 | 0.0327 | 0.0092 | 0.0235 |
| 186 | 0.0349 | 0.0098 | 0.0250 |
| 187 | 0.0404 | 0.0105 | 0.0299 |
| 188 | 0.0441 | 0.0105 | 0.0336 |
| 189 | 0.0549 | 0.0105 | 0.0444 |
| 190 | 0.0632 | 0.0105 | 0.0527 |
| 191 | 0.0959 | 0.0105 | 0.0854 |
| 192 | 0.1392 | 0.0105 | 0.1287 |
| 193 | 0.6024 | 0.0105 | 0.5919 |
| 194 | 0.0755 | 0.0105 | 0.0650 |
| 195 | 0.0488 | 0.0105 | 0.0383 |
| 196 | 0.0374 | 0.0105 | 0.0269 |
| 197 | 0.0212 | 0.0060 | 0.0152 |
| 198 | 0.0179 | 0.0051 | 0.0129 |
| 199 | 0.0156 | 0.0044 | 0.0112 |
| 200 | 0.0138 | 0.0039 | 0.0099 |
| 201 | 0.0125 | 0.0035 | 0.0089 |
| 202 | 0.0114 | 0.0032 | 0.0082 |
| 203 | 0.0105 | 0.0030 | 0.0075 |
| 204 | 0.0097 | 0.0027 | 0.0070 |
| 205 | 0.0091 | 0.0026 | 0.0065 |
| 206 | 0.0085 | 0.0024 | 0.0061 |
| 207 | 0.0080 | 0.0023 | 0.0058 |
| 208 | 0.0076 | 0.0021 | 0.0055 |
| 209 | 0.0072 | 0.0020 | 0.0052 |
| 210 | 0.0069 | 0.0019 | 0.0050 |
| 211 | 0.0066 | 0.0019 | 0.0047 |
| 212 | 0.0063 | 0.0018 | 0.0045 |
| 213 | 0.0061 | 0.0017 | 0.0044 |
| 214 | 0.0058 | 0.0016 | 0.0042 |
| 215 | 0.0056 | 0.0016 | 0.0040 |
| 216 | 0.0054 | 0.0015 | 0.0039 |
| 217 | 0.0050 | 0.0014 | 0.0036 |
| 218 | 0.0049 | 0.0014 | 0.0035 |
| 219 | 0.0047 | 0.0013 | 0.0034 |
| 220 | 0.0046 | 0.0013 | 0.0033 |
| 221 | 0.0044 | 0.0013 | 0.0032 |
| 222 | 0.0043 | 0.0012 | 0.0031 |
| 223 | 0.0042 | 0.0012 | 0.0030 |
| 224 | 0.0041 | 0.0012 | 0.0029 |
| 225 | 0.0040 | 0.0011 | 0.0029 |

| | | | |
|---|---|---|---|
| 226 | 0.0039 | 0.0011 | 0.0028 |
| 227 | 0.0038 | 0.0011 | 0.0027 |
| 228 | 0.0037 | 0.0010 | 0.0027 |
| 229 | 0.0036 | 0.0010 | 0.0026 |
| 230 | 0.0036 | 0.0010 | 0.0026 |
| 231 | 0.0035 | 0.0010 | 0.0025 |
| 232 | 0.0034 | 0.0010 | 0.0024 |
| 233 | 0.0033 | 0.0009 | 0.0024 |
| 234 | 0.0033 | 0.0009 | 0.0024 |
| 235 | 0.0032 | 0.0009 | 0.0023 |
| 236 | 0.0032 | 0.0009 | 0.0023 |
| 237 | 0.0031 | 0.0009 | 0.0022 |
| 238 | 0.0030 | 0.0009 | 0.0022 |
| 239 | 0.0030 | 0.0008 | 0.0021 |
| 240 | 0.0029 | 0.0008 | 0.0021 |
| 241 | 0.0029 | 0.0008 | 0.0021 |
| 242 | 0.0028 | 0.0008 | 0.0020 |
| 243 | 0.0028 | 0.0008 | 0.0020 |
| 244 | 0.0028 | 0.0008 | 0.0020 |
| 245 | 0.0027 | 0.0008 | 0.0019 |
| 246 | 0.0027 | 0.0008 | 0.0019 |
| 247 | 0.0026 | 0.0007 | 0.0019 |
| 248 | 0.0026 | 0.0007 | 0.0019 |
| 249 | 0.0026 | 0.0007 | 0.0018 |
| 250 | 0.0025 | 0.0007 | 0.0018 |
| 251 | 0.0025 | 0.0007 | 0.0018 |
| 252 | 0.0024 | 0.0007 | 0.0018 |
| 253 | 0.0024 | 0.0007 | 0.0017 |
| 254 | 0.0024 | 0.0007 | 0.0017 |
| 255 | 0.0024 | 0.0007 | 0.0017 |
| 256 | 0.0023 | 0.0007 | 0.0017 |
| 257 | 0.0023 | 0.0006 | 0.0016 |
| 258 | 0.0023 | 0.0006 | 0.0016 |
| 259 | 0.0022 | 0.0006 | 0.0016 |
| 260 | 0.0022 | 0.0006 | 0.0016 |
| 261 | 0.0022 | 0.0006 | 0.0016 |
| 262 | 0.0022 | 0.0006 | 0.0016 |
| 263 | 0.0021 | 0.0006 | 0.0015 |
| 264 | 0.0021 | 0.0006 | 0.0015 |
| 265 | 0.0021 | 0.0006 | 0.0015 |
| 266 | 0.0021 | 0.0006 | 0.0015 |
| 267 | 0.0020 | 0.0006 | 0.0015 |
| 268 | 0.0020 | 0.0006 | 0.0015 |
| 269 | 0.0020 | 0.0006 | 0.0014 |
| 270 | 0.0020 | 0.0006 | 0.0014 |
| 271 | 0.0020 | 0.0006 | 0.0014 |
| 272 | 0.0019 | 0.0005 | 0.0014 |
| 273 | 0.0019 | 0.0005 | 0.0014 |
| 274 | 0.0019 | 0.0005 | 0.0014 |
| 275 | 0.0019 | 0.0005 | 0.0014 |
| 276 | 0.0019 | 0.0005 | 0.0013 |
| 277 | 0.0018 | 0.0005 | 0.0013 |
| 278 | 0.0018 | 0.0005 | 0.0013 |
| 279 | 0.0018 | 0.0005 | 0.0013 |
| 280 | 0.0018 | 0.0005 | 0.0013 |
| 281 | 0.0018 | 0.0005 | 0.0013 |
| 282 | 0.0018 | 0.0005 | 0.0013 |
| 283 | 0.0017 | 0.0005 | 0.0013 |
| 284 | 0.0017 | 0.0005 | 0.0012 |

| | | | |
|---|---|---|---|
| 285 | 0.0017 | 0.0005 | 0.0012 |
| 286 | 0.0017 | 0.0005 | 0.0012 |
| 287 | 0.0017 | 0.0005 | 0.0012 |
| 288 | 0.0017 | 0.0005 | 0.0012 |

Total soil rain loss = 0.45(In)
Total effective rainfall = 1.97(In)
Peak flow rate in flood hydrograph = 23.09(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 7.5 | 15.0 | 22.5 | 30.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.02 | Q | | | | |
| 0+15 | 0.0005 | 0.05 | Q | | | | |
| 0+20 | 0.0010 | 0.08 | Q | | | | |
| 0+25 | 0.0017 | 0.09 | Q | | | | |
| 0+30 | 0.0024 | 0.10 | Q | | | | |
| 0+35 | 0.0031 | 0.11 | Q | | | | |
| 0+40 | 0.0039 | 0.11 | Q | | | | |
| 0+45 | 0.0047 | 0.12 | Q | | | | |
| 0+50 | 0.0055 | 0.12 | Q | | | | |
| 0+55 | 0.0063 | 0.12 | Q | | | | |
| 1+ 0 | 0.0072 | 0.13 | Q | | | | |
| 1+ 5 | 0.0081 | 0.13 | Q | | | | |
| 1+10 | 0.0090 | 0.13 | Q | | | | |
| 1+15 | 0.0099 | 0.13 | Q | | | | |
| 1+20 | 0.0108 | 0.13 | Q | | | | |
| 1+25 | 0.0117 | 0.13 | Q | | | | |
| 1+30 | 0.0126 | 0.13 | Q | | | | |
| 1+35 | 0.0136 | 0.14 | Q | | | | |
| 1+40 | 0.0145 | 0.14 | Q | | | | |
| 1+45 | 0.0155 | 0.14 | Q | | | | |
| 1+50 | 0.0164 | 0.14 | Q | | | | |
| 1+55 | 0.0174 | 0.14 | Q | | | | |
| 2+ 0 | 0.0184 | 0.14 | Q | | | | |
| 2+ 5 | 0.0193 | 0.14 | Q | | | | |
| 2+10 | 0.0203 | 0.14 | Q | | | | |
| 2+15 | 0.0213 | 0.14 | Q | | | | |
| 2+20 | 0.0223 | 0.14 | Q | | | | |
| 2+25 | 0.0233 | 0.14 | Q | | | | |
| 2+30 | 0.0243 | 0.14 | Q | | | | |
| 2+35 | 0.0253 | 0.15 | Q | | | | |
| 2+40 | 0.0263 | 0.15 | Q | | | | |
| 2+45 | 0.0273 | 0.15 | Q | | | | |
| 2+50 | 0.0283 | 0.15 | Q | | | | |
| 2+55 | 0.0293 | 0.15 | Q | | | | |
| 3+ 0 | 0.0303 | 0.15 | Q | | | | |
| 3+ 5 | 0.0314 | 0.15 | Q | | | | |
| 3+10 | 0.0324 | 0.15 | Q | | | | |
| 3+15 | 0.0335 | 0.15 | Q | | | | |
| 3+20 | 0.0345 | 0.15 | Q | | | | |

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|---|---|---|---|---|---|---|---|
| 3+25 | 0.0356 | 0.15 | Q | | | | |
| 3+30 | 0.0366 | 0.15 | Q | | | | |
| 3+35 | 0.0377 | 0.15 | QV | | | | |
| 3+40 | 0.0387 | 0.16 | QV | | | | |
| 3+45 | 0.0398 | 0.16 | QV | | | | |
| 3+50 | 0.0409 | 0.16 | QV | | | | |
| 3+55 | 0.0420 | 0.16 | QV | | | | |
| 4+ 0 | 0.0431 | 0.16 | QV | | | | |
| 4+ 5 | 0.0442 | 0.16 | QV | | | | |
| 4+10 | 0.0453 | 0.16 | QV | | | | |
| 4+15 | 0.0464 | 0.16 | QV | | | | |
| 4+20 | 0.0475 | 0.16 | QV | | | | |
| 4+25 | 0.0486 | 0.16 | QV | | | | |
| 4+30 | 0.0497 | 0.16 | QV | | | | |
| 4+35 | 0.0509 | 0.16 | QV | | | | |
| 4+40 | 0.0520 | 0.17 | QV | | | | |
| 4+45 | 0.0532 | 0.17 | QV | | | | |
| 4+50 | 0.0543 | 0.17 | QV | | | | |
| 4+55 | 0.0555 | 0.17 | QV | | | | |
| 5+ 0 | 0.0567 | 0.17 | QV | | | | |
| 5+ 5 | 0.0578 | 0.17 | QV | | | | |
| 5+10 | 0.0590 | 0.17 | QV | | | | |
| 5+15 | 0.0602 | 0.17 | QV | | | | |
| 5+20 | 0.0614 | 0.17 | QV | | | | |
| 5+25 | 0.0626 | 0.17 | QV | | | | |
| 5+30 | 0.0638 | 0.18 | QV | | | | |
| 5+35 | 0.0650 | 0.18 | QV | | | | |
| 5+40 | 0.0663 | 0.18 | QV | | | | |
| 5+45 | 0.0675 | 0.18 | QV | | | | |
| 5+50 | 0.0687 | 0.18 | QV | | | | |
| 5+55 | 0.0700 | 0.18 | QV | | | | |
| 6+ 0 | 0.0712 | 0.18 | QV | | | | |
| 6+ 5 | 0.0725 | 0.18 | QV | | | | |
| 6+10 | 0.0738 | 0.18 | Q V | | | | |
| 6+15 | 0.0751 | 0.19 | Q V | | | | |
| 6+20 | 0.0763 | 0.19 | Q V | | | | |
| 6+25 | 0.0776 | 0.19 | Q V | | | | |
| 6+30 | 0.0790 | 0.19 | Q V | | | | |
| 6+35 | 0.0803 | 0.19 | Q V | | | | |
| 6+40 | 0.0816 | 0.19 | Q V | | | | |
| 6+45 | 0.0829 | 0.19 | Q V | | | | |
| 6+50 | 0.0843 | 0.20 | Q V | | | | |
| 6+55 | 0.0856 | 0.20 | Q V | | | | |
| 7+ 0 | 0.0870 | 0.20 | Q V | | | | |
| 7+ 5 | 0.0884 | 0.20 | Q V | | | | |
| 7+10 | 0.0897 | 0.20 | Q V | | | | |
| 7+15 | 0.0911 | 0.20 | Q V | | | | |
| 7+20 | 0.0925 | 0.20 | Q V | | | | |
| 7+25 | 0.0940 | 0.21 | Q V | | | | |
| 7+30 | 0.0954 | 0.21 | Q V | | | | |
| 7+35 | 0.0968 | 0.21 | Q V | | | | |
| 7+40 | 0.0983 | 0.21 | Q V | | | | |
| 7+45 | 0.0997 | 0.21 | Q V | | | | |
| 7+50 | 0.1012 | 0.21 | Q V | | | | |
| 7+55 | 0.1027 | 0.21 | Q V | | | | |
| 8+ 0 | 0.1042 | 0.22 | Q V | | | | |
| 8+ 5 | 0.1057 | 0.22 | Q V | | | | |
| 8+10 | 0.1072 | 0.22 | Q V | | | | |
| 8+15 | 0.1087 | 0.22 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8+20 | 0.1102 | 0.22 | Q V | \| | \| | \| | \| |
| 8+25 | 0.1118 | 0.23 | Q V | \| | \| | \| | \| |
| 8+30 | 0.1134 | 0.23 | Q V | \| | \| | \| | \| |
| 8+35 | 0.1149 | 0.23 | Q V | \| | \| | \| | \| |
| 8+40 | 0.1165 | 0.23 | Q V | \| | \| | \| | \| |
| 8+45 | 0.1182 | 0.23 | Q V | \| | \| | \| | \| |
| 8+50 | 0.1198 | 0.24 | Q V | \| | \| | \| | \| |
| 8+55 | 0.1214 | 0.24 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.1231 | 0.24 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.1247 | 0.24 | Q V | \| | \| | \| | \| |
| 9+10 | 0.1264 | 0.24 | Q V | \| | \| | \| | \| |
| 9+15 | 0.1281 | 0.25 | Q V | \| | \| | \| | \| |
| 9+20 | 0.1298 | 0.25 | Q V | \| | \| | \| | \| |
| 9+25 | 0.1315 | 0.25 | Q V | \| | \| | \| | \| |
| 9+30 | 0.1333 | 0.25 | Q V | \| | \| | \| | \| |
| 9+35 | 0.1351 | 0.26 | Q V | \| | \| | \| | \| |
| 9+40 | 0.1368 | 0.26 | Q V | \| | \| | \| | \| |
| 9+45 | 0.1386 | 0.26 | Q V | \| | \| | \| | \| |
| 9+50 | 0.1405 | 0.26 | Q V | \| | \| | \| | \| |
| 9+55 | 0.1423 | 0.27 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.1441 | 0.27 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.1460 | 0.27 | Q V | \| | \| | \| | \| |
| 10+10 | 0.1479 | 0.28 | Q V | \| | \| | \| | \| |
| 10+15 | 0.1498 | 0.28 | Q V | \| | \| | \| | \| |
| 10+20 | 0.1518 | 0.28 | Q V | \| | \| | \| | \| |
| 10+25 | 0.1537 | 0.28 | Q V | \| | \| | \| | \| |
| 10+30 | 0.1557 | 0.29 | Q V | \| | \| | \| | \| |
| 10+35 | 0.1577 | 0.29 | Q V | \| | \| | \| | \| |
| 10+40 | 0.1597 | 0.29 | Q V | \| | \| | \| | \| |
| 10+45 | 0.1618 | 0.30 | Q V | \| | \| | \| | \| |
| 10+50 | 0.1639 | 0.30 | Q V | \| | \| | \| | \| |
| 10+55 | 0.1660 | 0.31 | Q V | \| | \| | \| | \| |
| 11+ 0 | 0.1681 | 0.31 | Q V | \| | \| | \| | \| |
| 11+ 5 | 0.1702 | 0.31 | Q V | \| | \| | \| | \| |
| 11+10 | 0.1724 | 0.32 | Q V | \| | \| | \| | \| |
| 11+15 | 0.1746 | 0.32 | Q V | \| | \| | \| | \| |
| 11+20 | 0.1769 | 0.32 | Q V | \| | \| | \| | \| |
| 11+25 | 0.1791 | 0.33 | Q V | \| | \| | \| | \| |
| 11+30 | 0.1814 | 0.33 | Q V | \| | \| | \| | \| |
| 11+35 | 0.1838 | 0.34 | Q V | \| | \| | \| | \| |
| 11+40 | 0.1861 | 0.34 | Q V | \| | \| | \| | \| |
| 11+45 | 0.1885 | 0.35 | Q V | \| | \| | \| | \| |
| 11+50 | 0.1910 | 0.35 | Q V | \| | \| | \| | \| |
| 11+55 | 0.1934 | 0.36 | Q V | \| | \| | \| | \| |
| 12+ 0 | 0.1959 | 0.36 | Q V | \| | \| | \| | \| |
| 12+ 5 | 0.1985 | 0.37 | Q V | \| | \| | \| | \| |
| 12+10 | 0.2011 | 0.38 | Q V | \| | \| | \| | \| |
| 12+15 | 0.2038 | 0.39 | Q V | \| | \| | \| | \| |
| 12+20 | 0.2065 | 0.40 | Q V | \| | \| | \| | \| |
| 12+25 | 0.2093 | 0.41 | Q V | \| | \| | \| | \| |
| 12+30 | 0.2122 | 0.42 | Q V | \| | \| | \| | \| |
| 12+35 | 0.2151 | 0.42 | Q V | \| | \| | \| | \| |
| 12+40 | 0.2181 | 0.43 | Q V | \| | \| | \| | \| |
| 12+45 | 0.2211 | 0.44 | Q V | \| | \| | \| | \| |
| 12+50 | 0.2242 | 0.45 | Q V | \| | \| | \| | \| |
| 12+55 | 0.2274 | 0.46 | Q V | \| | \| | \| | \| |
| 13+ 0 | 0.2306 | 0.47 | Q V | \| | \| | \| | \| |
| 13+ 5 | 0.2339 | 0.48 | Q V | \| | \| | \| | \| |
| 13+10 | 0.2372 | 0.49 | Q V | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|---|
| 13+15 | 0.2406 | 0.50 | Q | V | | | | |
| 13+20 | 0.2441 | 0.51 | Q | V | | | | |
| 13+25 | 0.2477 | 0.52 | Q | V | | | | |
| 13+30 | 0.2514 | 0.53 | Q | V | | | | |
| 13+35 | 0.2551 | 0.54 | Q | V | | | | |
| 13+40 | 0.2590 | 0.56 | Q | V | | | | |
| 13+45 | 0.2629 | 0.57 | Q | V | | | | |
| 13+50 | 0.2669 | 0.59 | Q | V | | | | |
| 13+55 | 0.2711 | 0.60 | Q | V | | | | |
| 14+ 0 | 0.2753 | 0.62 | Q | V | | | | |
| 14+ 5 | 0.2797 | 0.64 | Q | V | | | | |
| 14+10 | 0.2842 | 0.66 | Q | V | | | | |
| 14+15 | 0.2889 | 0.68 | Q | V | | | | |
| 14+20 | 0.2937 | 0.70 | Q | V | | | | |
| 14+25 | 0.2987 | 0.72 | Q | V | | | | |
| 14+30 | 0.3038 | 0.75 | Q | V | | | | |
| 14+35 | 0.3092 | 0.78 | Q | V | | | | |
| 14+40 | 0.3147 | 0.81 | Q | V | | | | |
| 14+45 | 0.3205 | 0.84 | Q | V | | | | |
| 14+50 | 0.3265 | 0.87 | Q | V | | | | |
| 14+55 | 0.3328 | 0.92 | Q | V | | | | |
| 15+ 0 | 0.3394 | 0.96 | Q | V | | | | |
| 15+ 5 | 0.3464 | 1.01 | Q | V | | | | |
| 15+10 | 0.3537 | 1.07 | Q | V | | | | |
| 15+15 | 0.3615 | 1.13 | Q | V | | | | |
| 15+20 | 0.3698 | 1.20 | Q | V | | | | |
| 15+25 | 0.3788 | 1.31 | Q | V | | | | |
| 15+30 | 0.3891 | 1.50 | Q | V | | | | |
| 15+35 | 0.4019 | 1.85 | Q | V | | | | |
| 15+40 | 0.4169 | 2.18 | Q | V | | | | |
| 15+45 | 0.4345 | 2.55 | Q | V | | | | |
| 15+50 | 0.4552 | 3.02 | Q | V | | | | |
| 15+55 | 0.4808 | 3.72 | Q | V | | | | |
| 16+ 0 | 0.5140 | 4.81 | Q | V | | | | |
| 16+ 5 | 0.5677 | 7.79 | Q | V | | | | |
| 16+10 | 0.6657 | 14.23 | Q | | | | | |
| 16+15 | 0.8247 | 23.09 | V | | Q | | | |
| 16+20 | 0.9461 | 17.64 | Q | V | | | | |
| 16+25 | 1.0251 | 11.46 | Q | | V | | | |
| 16+30 | 1.0833 | 8.44 | Q | | V | | | |
| 16+35 | 1.1274 | 6.41 | Q | | V | | | |
| 16+40 | 1.1626 | 5.11 | Q | | V | | | |
| 16+45 | 1.1917 | 4.22 | Q | | V | | | |
| 16+50 | 1.2154 | 3.44 | Q | | V | | | |
| 16+55 | 1.2357 | 2.95 | Q | | V | | | |
| 17+ 0 | 1.2533 | 2.56 | Q | | V | | | |
| 17+ 5 | 1.2684 | 2.19 | Q | | V | | | |
| 17+10 | 1.2816 | 1.92 | Q | | V | | | |
| 17+15 | 1.2932 | 1.68 | Q | | V | | | |
| 17+20 | 1.3031 | 1.44 | Q | | V | | | |
| 17+25 | 1.3116 | 1.23 | Q | | V | | | |
| 17+30 | 1.3192 | 1.11 | Q | | V | | | |
| 17+35 | 1.3266 | 1.07 | Q | | V | | | |
| 17+40 | 1.3335 | 1.01 | Q | | V | | | |
| 17+45 | 1.3398 | 0.91 | Q | | V | | | |
| 17+50 | 1.3451 | 0.78 | Q | | V | | | |
| 17+55 | 1.3500 | 0.71 | Q | | V | | | |
| 18+ 0 | 1.3538 | 0.55 | Q | | V | | | |
| 18+ 5 | 1.3573 | 0.51 | Q | | V | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18+10 | 1.3606 | 0.48 | Q | \| | \| | \| | V \| |
| 18+15 | 1.3637 | 0.45 | Q | \| | \| | \| | V \| |
| 18+20 | 1.3667 | 0.43 | Q | \| | \| | \| | V \| |
| 18+25 | 1.3695 | 0.41 | Q | \| | \| | \| | V \| |
| 18+30 | 1.3723 | 0.40 | Q | \| | \| | \| | V \| |
| 18+35 | 1.3749 | 0.38 | Q | \| | \| | \| | V \| |
| 18+40 | 1.3774 | 0.37 | Q | \| | \| | \| | V \| |
| 18+45 | 1.3799 | 0.36 | Q | \| | \| | \| | V \| |
| 18+50 | 1.3823 | 0.35 | Q | \| | \| | \| | V \| |
| 18+55 | 1.3846 | 0.34 | Q | \| | \| | \| | V \| |
| 19+ 0 | 1.3869 | 0.33 | Q | \| | \| | \| | V \| |
| 19+ 5 | 1.3891 | 0.32 | Q | \| | \| | \| | V \| |
| 19+10 | 1.3912 | 0.31 | Q | \| | \| | \| | V \| |
| 19+15 | 1.3933 | 0.30 | Q | \| | \| | \| | V \| |
| 19+20 | 1.3953 | 0.30 | Q | \| | \| | \| | V \| |
| 19+25 | 1.3973 | 0.29 | Q | \| | \| | \| | V \| |
| 19+30 | 1.3992 | 0.28 | Q | \| | \| | \| | V \| |
| 19+35 | 1.4011 | 0.28 | Q | \| | \| | \| | V \| |
| 19+40 | 1.4030 | 0.27 | Q | \| | \| | \| | V \| |
| 19+45 | 1.4048 | 0.26 | Q | \| | \| | \| | V \| |
| 19+50 | 1.4066 | 0.26 | Q | \| | \| | \| | V \| |
| 19+55 | 1.4083 | 0.25 | Q | \| | \| | \| | V \| |
| 20+ 0 | 1.4100 | 0.25 | Q | \| | \| | \| | V \| |
| 20+ 5 | 1.4117 | 0.24 | Q | \| | \| | \| | V \| |
| 20+10 | 1.4134 | 0.24 | Q | \| | \| | \| | V \| |
| 20+15 | 1.4150 | 0.24 | Q | \| | \| | \| | V \| |
| 20+20 | 1.4166 | 0.23 | Q | \| | \| | \| | V \| |
| 20+25 | 1.4181 | 0.23 | Q | \| | \| | \| | V \| |
| 20+30 | 1.4197 | 0.22 | Q | \| | \| | \| | V \| |
| 20+35 | 1.4212 | 0.22 | Q | \| | \| | \| | V \| |
| 20+40 | 1.4227 | 0.22 | Q | \| | \| | \| | V \| |
| 20+45 | 1.4242 | 0.21 | Q | \| | \| | \| | V \| |
| 20+50 | 1.4256 | 0.21 | Q | \| | \| | \| | V \| |
| 20+55 | 1.4270 | 0.21 | Q | \| | \| | \| | V \| |
| 21+ 0 | 1.4284 | 0.20 | Q | \| | \| | \| | V \| |
| 21+ 5 | 1.4298 | 0.20 | Q | \| | \| | \| | V \| |
| 21+10 | 1.4312 | 0.20 | Q | \| | \| | \| | V \| |
| 21+15 | 1.4325 | 0.19 | Q | \| | \| | \| | V \| |
| 21+20 | 1.4338 | 0.19 | Q | \| | \| | \| | V \| |
| 21+25 | 1.4351 | 0.19 | Q | \| | \| | \| | V \| |
| 21+30 | 1.4364 | 0.19 | Q | \| | \| | \| | V\| |
| 21+35 | 1.4377 | 0.18 | Q | \| | \| | \| | V\| |
| 21+40 | 1.4389 | 0.18 | Q | \| | \| | \| | V\| |
| 21+45 | 1.4402 | 0.18 | Q | \| | \| | \| | V\| |
| 21+50 | 1.4414 | 0.18 | Q | \| | \| | \| | V\| |
| 21+55 | 1.4426 | 0.18 | Q | \| | \| | \| | V\| |
| 22+ 0 | 1.4438 | 0.17 | Q | \| | \| | \| | V\| |
| 22+ 5 | 1.4450 | 0.17 | Q | \| | \| | \| | V\| |
| 22+10 | 1.4461 | 0.17 | Q | \| | \| | \| | V\| |
| 22+15 | 1.4473 | 0.17 | Q | \| | \| | \| | V\| |
| 22+20 | 1.4484 | 0.17 | Q | \| | \| | \| | V\| |
| 22+25 | 1.4496 | 0.16 | Q | \| | \| | \| | V\| |
| 22+30 | 1.4507 | 0.16 | Q | \| | \| | \| | V\| |
| 22+35 | 1.4518 | 0.16 | Q | \| | \| | \| | V\| |
| 22+40 | 1.4529 | 0.16 | Q | \| | \| | \| | V\| |
| 22+45 | 1.4539 | 0.16 | Q | \| | \| | \| | V\| |
| 22+50 | 1.4550 | 0.15 | Q | \| | \| | \| | V\| |
| 22+55 | 1.4561 | 0.15 | Q | \| | \| | \| | V\| |
| 23+ 0 | 1.4571 | 0.15 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+ 5 | 1.4581 | 0.15 | Q | \| | \| | \| | V\| |
| 23+10 | 1.4592 | 0.15 | Q | \| | \| | \| | V\| |
| 23+15 | 1.4602 | 0.15 | Q | \| | \| | \| | V\| |
| 23+20 | 1.4612 | 0.15 | Q | \| | \| | \| | V\| |
| 23+25 | 1.4622 | 0.14 | Q | \| | \| | \| | V\| |
| 23+30 | 1.4632 | 0.14 | Q | \| | \| | \| | V\| |
| 23+35 | 1.4641 | 0.14 | Q | \| | \| | \| | V\| |
| 23+40 | 1.4651 | 0.14 | Q | \| | \| | \| | V\| |
| 23+45 | 1.4661 | 0.14 | Q | \| | \| | \| | V\| |
| 23+50 | 1.4670 | 0.14 | Q | \| | \| | \| | V\| |
| 23+55 | 1.4680 | 0.14 | Q | \| | \| | \| | V\| |
| 24+ 0 | 1.4689 | 0.14 | Q | \| | \| | \| | V\| |
| 24+ 5 | 1.4698 | 0.13 | Q | \| | \| | \| | V\| |
| 24+10 | 1.4706 | 0.12 | Q | \| | \| | \| | V\| |
| 24+15 | 1.4711 | 0.08 | Q | \| | \| | \| | V\| |
| 24+20 | 1.4715 | 0.05 | Q | \| | \| | \| | V\| |
| 24+25 | 1.4718 | 0.04 | Q | \| | \| | \| | V\| |
| 24+30 | 1.4720 | 0.03 | Q | \| | \| | \| | V\| |
| 24+35 | 1.4722 | 0.02 | Q | \| | \| | \| | V\| |
| 24+40 | 1.4723 | 0.02 | Q | \| | \| | \| | V\| |
| 24+45 | 1.4724 | 0.02 | Q | \| | \| | \| | V\| |
| 24+50 | 1.4725 | 0.01 | Q | \| | \| | \| | V\| |
| 24+55 | 1.4726 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 0 | 1.4726 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 5 | 1.4727 | 0.01 | Q | \| | \| | \| | V\| |
| 25+10 | 1.4727 | 0.01 | Q | \| | \| | \| | V\| |
| 25+15 | 1.4728 | 0.00 | Q | \| | \| | \| | V\| |
| 25+20 | 1.4728 | 0.00 | Q | \| | \| | \| | V\| |
| 25+25 | 1.4728 | 0.00 | Q | \| | \| | \| | V\| |
| 25+30 | 1.4728 | 0.00 | Q | \| | \| | \| | V\| |
| 25+35 | 1.4728 | 0.00 | Q | \| | \| | \| | V\| |
| 25+40 | 1.4728 | 0.00 | Q | \| | \| | \| | V\| |
| 25+45 | 1.4728 | 0.00 | Q | \| | \| | \| | V\| |
| 25+50 | 1.4728 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 9
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 29.97 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 29.97 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 29.97 | 24 | 2.42 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.0 | 92.8 | 29.97 | 1.000 | 0.140 | 0.900 | 0.126 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.126

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 26.97 | 0.900 | 78.0 | 92.8 | 0.78 | 0.697 |
| 3.00 | 0.100 | 98.0 | 98.0 | 0.20 | 0.905 |

Area-averaged catchment yield fraction, Y = 0.718
Area-averaged low loss fraction, Yb = 0.282
User entry of time of concentration = 0.390 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 29.97(Ac.)
Catchment Lag time = 0.312 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 26.7094
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.126(In/Hr)
Average low loss rate fraction (Yb) = 0.282 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.420(In)

Rainfall depth area reduction factors:
Using a total area of 29.97(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.602(In)
30-minute factor = 0.999 Adjusted rainfall = 1.030(In)
1-hour factor = 0.999 Adjusted rainfall = 1.268(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.420(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 362.45 (CFS)) | |
| 1 | 1.482 | 5.371 |
| 2 | 7.420 | 21.522 |
| 3 | 23.386 | 57.870 |
| 4 | 45.504 | 80.167 |
| 5 | 59.274 | 49.907 |
| 6 | 67.621 | 30.254 |
| 7 | 73.654 | 21.868 |
| 8 | 78.228 | 16.577 |
| 9 | 81.762 | 12.808 |
| 10 | 84.638 | 10.426 |
| 11 | 87.117 | 8.985 |
| 12 | 89.115 | 7.242 |
| 13 | 90.695 | 5.727 |

| | | |
|---|---|---|
| 14 | 92.107 | 5.116 |
| 15 | 93.340 | 4.472 |
| 16 | 94.376 | 3.753 |
| 17 | 95.282 | 3.283 |
| 18 | 96.053 | 2.795 |
| 19 | 96.739 | 2.487 |
| 20 | 97.275 | 1.943 |
| 21 | 97.738 | 1.678 |
| 22 | 98.043 | 1.104 |
| 23 | 98.317 | 0.996 |
| 24 | 98.632 | 1.141 |
| 25 | 98.953 | 1.162 |
| 26 | 99.273 | 1.162 |
| 27 | 99.545 | 0.987 |
| 28 | 99.716 | 0.617 |
| 29 | 99.883 | 0.605 |
| 30 | 100.000 | 0.425 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6018 | 0.6018 |
| 2 | 0.7409 | 0.1391 |
| 3 | 0.8367 | 0.0958 |
| 4 | 0.9121 | 0.0754 |
| 5 | 0.9753 | 0.0632 |
| 6 | 1.0301 | 0.0548 |
| 7 | 1.0789 | 0.0488 |
| 8 | 1.1230 | 0.0441 |
| 9 | 1.1634 | 0.0404 |
| 10 | 1.2007 | 0.0374 |
| 11 | 1.2355 | 0.0348 |
| 12 | 1.2682 | 0.0327 |
| 13 | 1.2895 | 0.0213 |
| 14 | 1.3095 | 0.0200 |
| 15 | 1.3285 | 0.0189 |
| 16 | 1.3464 | 0.0180 |
| 17 | 1.3635 | 0.0171 |
| 18 | 1.3798 | 0.0163 |
| 19 | 1.3954 | 0.0156 |
| 20 | 1.4104 | 0.0150 |
| 21 | 1.4248 | 0.0144 |
| 22 | 1.4387 | 0.0139 |
| 23 | 1.4520 | 0.0134 |
| 24 | 1.4649 | 0.0129 |
| 25 | 1.4774 | 0.0125 |
| 26 | 1.4895 | 0.0121 |
| 27 | 1.5013 | 0.0117 |
| 28 | 1.5127 | 0.0114 |
| 29 | 1.5238 | 0.0111 |
| 30 | 1.5345 | 0.0108 |
| 31 | 1.5450 | 0.0105 |
| 32 | 1.5553 | 0.0102 |
| 33 | 1.5653 | 0.0100 |
| 34 | 1.5750 | 0.0098 |
| 35 | 1.5846 | 0.0095 |
| 36 | 1.5939 | 0.0093 |
| 37 | 1.6029 | 0.0091 |
| 38 | 1.6118 | 0.0089 |
| 39 | 1.6205 | 0.0087 |

| | | |
|---|---|---|
| 40 | 1.6290 | 0.0085 |
| 41 | 1.6374 | 0.0083 |
| 42 | 1.6456 | 0.0082 |
| 43 | 1.6536 | 0.0080 |
| 44 | 1.6615 | 0.0079 |
| 45 | 1.6692 | 0.0077 |
| 46 | 1.6768 | 0.0076 |
| 47 | 1.6843 | 0.0075 |
| 48 | 1.6917 | 0.0074 |
| 49 | 1.6989 | 0.0072 |
| 50 | 1.7060 | 0.0071 |
| 51 | 1.7131 | 0.0070 |
| 52 | 1.7200 | 0.0069 |
| 53 | 1.7267 | 0.0068 |
| 54 | 1.7334 | 0.0067 |
| 55 | 1.7400 | 0.0066 |
| 56 | 1.7465 | 0.0065 |
| 57 | 1.7530 | 0.0064 |
| 58 | 1.7593 | 0.0063 |
| 59 | 1.7655 | 0.0062 |
| 60 | 1.7717 | 0.0062 |
| 61 | 1.7777 | 0.0061 |
| 62 | 1.7837 | 0.0060 |
| 63 | 1.7897 | 0.0059 |
| 64 | 1.7955 | 0.0058 |
| 65 | 1.8013 | 0.0058 |
| 66 | 1.8070 | 0.0057 |
| 67 | 1.8126 | 0.0056 |
| 68 | 1.8182 | 0.0056 |
| 69 | 1.8237 | 0.0055 |
| 70 | 1.8291 | 0.0054 |
| 71 | 1.8345 | 0.0054 |
| 72 | 1.8398 | 0.0053 |
| 73 | 1.8449 | 0.0050 |
| 74 | 1.8498 | 0.0050 |
| 75 | 1.8547 | 0.0049 |
| 76 | 1.8596 | 0.0049 |
| 77 | 1.8644 | 0.0048 |
| 78 | 1.8692 | 0.0048 |
| 79 | 1.8739 | 0.0047 |
| 80 | 1.8786 | 0.0047 |
| 81 | 1.8832 | 0.0046 |
| 82 | 1.8877 | 0.0046 |
| 83 | 1.8923 | 0.0045 |
| 84 | 1.8968 | 0.0045 |
| 85 | 1.9012 | 0.0044 |
| 86 | 1.9056 | 0.0044 |
| 87 | 1.9100 | 0.0044 |
| 88 | 1.9143 | 0.0043 |
| 89 | 1.9186 | 0.0043 |
| 90 | 1.9228 | 0.0042 |
| 91 | 1.9270 | 0.0042 |
| 92 | 1.9312 | 0.0042 |
| 93 | 1.9353 | 0.0041 |
| 94 | 1.9394 | 0.0041 |
| 95 | 1.9435 | 0.0041 |
| 96 | 1.9475 | 0.0040 |
| 97 | 1.9515 | 0.0040 |
| 98 | 1.9555 | 0.0040 |

| | | |
|---|---|---|
| 99 | 1.9594 | 0.0039 |
| 100 | 1.9633 | 0.0039 |
| 101 | 1.9671 | 0.0039 |
| 102 | 1.9710 | 0.0038 |
| 103 | 1.9748 | 0.0038 |
| 104 | 1.9786 | 0.0038 |
| 105 | 1.9823 | 0.0037 |
| 106 | 1.9860 | 0.0037 |
| 107 | 1.9897 | 0.0037 |
| 108 | 1.9934 | 0.0037 |
| 109 | 1.9970 | 0.0036 |
| 110 | 2.0006 | 0.0036 |
| 111 | 2.0042 | 0.0036 |
| 112 | 2.0078 | 0.0036 |
| 113 | 2.0113 | 0.0035 |
| 114 | 2.0148 | 0.0035 |
| 115 | 2.0183 | 0.0035 |
| 116 | 2.0217 | 0.0035 |
| 117 | 2.0252 | 0.0034 |
| 118 | 2.0286 | 0.0034 |
| 119 | 2.0320 | 0.0034 |
| 120 | 2.0353 | 0.0034 |
| 121 | 2.0387 | 0.0033 |
| 122 | 2.0420 | 0.0033 |
| 123 | 2.0453 | 0.0033 |
| 124 | 2.0486 | 0.0033 |
| 125 | 2.0518 | 0.0033 |
| 126 | 2.0551 | 0.0032 |
| 127 | 2.0583 | 0.0032 |
| 128 | 2.0615 | 0.0032 |
| 129 | 2.0646 | 0.0032 |
| 130 | 2.0678 | 0.0032 |
| 131 | 2.0709 | 0.0031 |
| 132 | 2.0740 | 0.0031 |
| 133 | 2.0771 | 0.0031 |
| 134 | 2.0802 | 0.0031 |
| 135 | 2.0833 | 0.0031 |
| 136 | 2.0863 | 0.0030 |
| 137 | 2.0893 | 0.0030 |
| 138 | 2.0923 | 0.0030 |
| 139 | 2.0953 | 0.0030 |
| 140 | 2.0983 | 0.0030 |
| 141 | 2.1013 | 0.0030 |
| 142 | 2.1042 | 0.0029 |
| 143 | 2.1071 | 0.0029 |
| 144 | 2.1100 | 0.0029 |
| 145 | 2.1129 | 0.0029 |
| 146 | 2.1158 | 0.0029 |
| 147 | 2.1186 | 0.0029 |
| 148 | 2.1215 | 0.0028 |
| 149 | 2.1243 | 0.0028 |
| 150 | 2.1271 | 0.0028 |
| 151 | 2.1299 | 0.0028 |
| 152 | 2.1327 | 0.0028 |
| 153 | 2.1355 | 0.0028 |
| 154 | 2.1382 | 0.0028 |
| 155 | 2.1410 | 0.0027 |
| 156 | 2.1437 | 0.0027 |
| 157 | 2.1464 | 0.0027 |

| | | |
|---|---|---|
| 158 | 2.1491 | 0.0027 |
| 159 | 2.1518 | 0.0027 |
| 160 | 2.1544 | 0.0027 |
| 161 | 2.1571 | 0.0027 |
| 162 | 2.1597 | 0.0026 |
| 163 | 2.1624 | 0.0026 |
| 164 | 2.1650 | 0.0026 |
| 165 | 2.1676 | 0.0026 |
| 166 | 2.1702 | 0.0026 |
| 167 | 2.1728 | 0.0026 |
| 168 | 2.1753 | 0.0026 |
| 169 | 2.1779 | 0.0026 |
| 170 | 2.1804 | 0.0025 |
| 171 | 2.1829 | 0.0025 |
| 172 | 2.1855 | 0.0025 |
| 173 | 2.1880 | 0.0025 |
| 174 | 2.1905 | 0.0025 |
| 175 | 2.1929 | 0.0025 |
| 176 | 2.1954 | 0.0025 |
| 177 | 2.1979 | 0.0025 |
| 178 | 2.2003 | 0.0024 |
| 179 | 2.2028 | 0.0024 |
| 180 | 2.2052 | 0.0024 |
| 181 | 2.2076 | 0.0024 |
| 182 | 2.2100 | 0.0024 |
| 183 | 2.2124 | 0.0024 |
| 184 | 2.2148 | 0.0024 |
| 185 | 2.2172 | 0.0024 |
| 186 | 2.2195 | 0.0024 |
| 187 | 2.2219 | 0.0024 |
| 188 | 2.2242 | 0.0023 |
| 189 | 2.2266 | 0.0023 |
| 190 | 2.2289 | 0.0023 |
| 191 | 2.2312 | 0.0023 |
| 192 | 2.2335 | 0.0023 |
| 193 | 2.2358 | 0.0023 |
| 194 | 2.2381 | 0.0023 |
| 195 | 2.2404 | 0.0023 |
| 196 | 2.2426 | 0.0023 |
| 197 | 2.2449 | 0.0023 |
| 198 | 2.2471 | 0.0022 |
| 199 | 2.2494 | 0.0022 |
| 200 | 2.2516 | 0.0022 |
| 201 | 2.2538 | 0.0022 |
| 202 | 2.2560 | 0.0022 |
| 203 | 2.2582 | 0.0022 |
| 204 | 2.2604 | 0.0022 |
| 205 | 2.2626 | 0.0022 |
| 206 | 2.2648 | 0.0022 |
| 207 | 2.2670 | 0.0022 |
| 208 | 2.2691 | 0.0022 |
| 209 | 2.2713 | 0.0022 |
| 210 | 2.2734 | 0.0021 |
| 211 | 2.2756 | 0.0021 |
| 212 | 2.2777 | 0.0021 |
| 213 | 2.2798 | 0.0021 |
| 214 | 2.2819 | 0.0021 |
| 215 | 2.2840 | 0.0021 |
| 216 | 2.2861 | 0.0021 |

| | | |
|---|---|---|
| 217 | 2.2882 | 0.0021 |
| 218 | 2.2903 | 0.0021 |
| 219 | 2.2924 | 0.0021 |
| 220 | 2.2944 | 0.0021 |
| 221 | 2.2965 | 0.0021 |
| 222 | 2.2985 | 0.0021 |
| 223 | 2.3006 | 0.0020 |
| 224 | 2.3026 | 0.0020 |
| 225 | 2.3046 | 0.0020 |
| 226 | 2.3067 | 0.0020 |
| 227 | 2.3087 | 0.0020 |
| 228 | 2.3107 | 0.0020 |
| 229 | 2.3127 | 0.0020 |
| 230 | 2.3147 | 0.0020 |
| 231 | 2.3167 | 0.0020 |
| 232 | 2.3186 | 0.0020 |
| 233 | 2.3206 | 0.0020 |
| 234 | 2.3226 | 0.0020 |
| 235 | 2.3245 | 0.0020 |
| 236 | 2.3265 | 0.0020 |
| 237 | 2.3284 | 0.0019 |
| 238 | 2.3304 | 0.0019 |
| 239 | 2.3323 | 0.0019 |
| 240 | 2.3342 | 0.0019 |
| 241 | 2.3362 | 0.0019 |
| 242 | 2.3381 | 0.0019 |
| 243 | 2.3400 | 0.0019 |
| 244 | 2.3419 | 0.0019 |
| 245 | 2.3438 | 0.0019 |
| 246 | 2.3457 | 0.0019 |
| 247 | 2.3475 | 0.0019 |
| 248 | 2.3494 | 0.0019 |
| 249 | 2.3513 | 0.0019 |
| 250 | 2.3532 | 0.0019 |
| 251 | 2.3550 | 0.0019 |
| 252 | 2.3569 | 0.0019 |
| 253 | 2.3587 | 0.0018 |
| 254 | 2.3606 | 0.0018 |
| 255 | 2.3624 | 0.0018 |
| 256 | 2.3642 | 0.0018 |
| 257 | 2.3660 | 0.0018 |
| 258 | 2.3679 | 0.0018 |
| 259 | 2.3697 | 0.0018 |
| 260 | 2.3715 | 0.0018 |
| 261 | 2.3733 | 0.0018 |
| 262 | 2.3751 | 0.0018 |
| 263 | 2.3769 | 0.0018 |
| 264 | 2.3786 | 0.0018 |
| 265 | 2.3804 | 0.0018 |
| 266 | 2.3822 | 0.0018 |
| 267 | 2.3840 | 0.0018 |
| 268 | 2.3857 | 0.0018 |
| 269 | 2.3875 | 0.0018 |
| 270 | 2.3892 | 0.0018 |
| 271 | 2.3910 | 0.0017 |
| 272 | 2.3927 | 0.0017 |
| 273 | 2.3945 | 0.0017 |
| 274 | 2.3962 | 0.0017 |
| 275 | 2.3979 | 0.0017 |

| | | |
|---|---|---|
| 276 | 2.3996 | 0.0017 |
| 277 | 2.4014 | 0.0017 |
| 278 | 2.4031 | 0.0017 |
| 279 | 2.4048 | 0.0017 |
| 280 | 2.4065 | 0.0017 |
| 281 | 2.4082 | 0.0017 |
| 282 | 2.4099 | 0.0017 |
| 283 | 2.4115 | 0.0017 |
| 284 | 2.4132 | 0.0017 |
| 285 | 2.4149 | 0.0017 |
| 286 | 2.4166 | 0.0017 |
| 287 | 2.4182 | 0.0017 |
| 288 | 2.4199 | 0.0017 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0017 | 0.0005 | 0.0012 |
| 2 | 0.0017 | 0.0005 | 0.0012 |
| 3 | 0.0017 | 0.0005 | 0.0012 |
| 4 | 0.0017 | 0.0005 | 0.0012 |
| 5 | 0.0017 | 0.0005 | 0.0012 |
| 6 | 0.0017 | 0.0005 | 0.0012 |
| 7 | 0.0017 | 0.0005 | 0.0012 |
| 8 | 0.0017 | 0.0005 | 0.0012 |
| 9 | 0.0017 | 0.0005 | 0.0012 |
| 10 | 0.0017 | 0.0005 | 0.0012 |
| 11 | 0.0017 | 0.0005 | 0.0012 |
| 12 | 0.0017 | 0.0005 | 0.0013 |
| 13 | 0.0018 | 0.0005 | 0.0013 |
| 14 | 0.0018 | 0.0005 | 0.0013 |
| 15 | 0.0018 | 0.0005 | 0.0013 |
| 16 | 0.0018 | 0.0005 | 0.0013 |
| 17 | 0.0018 | 0.0005 | 0.0013 |
| 18 | 0.0018 | 0.0005 | 0.0013 |
| 19 | 0.0018 | 0.0005 | 0.0013 |
| 20 | 0.0018 | 0.0005 | 0.0013 |
| 21 | 0.0018 | 0.0005 | 0.0013 |
| 22 | 0.0018 | 0.0005 | 0.0013 |
| 23 | 0.0018 | 0.0005 | 0.0013 |
| 24 | 0.0018 | 0.0005 | 0.0013 |
| 25 | 0.0019 | 0.0005 | 0.0013 |
| 26 | 0.0019 | 0.0005 | 0.0013 |
| 27 | 0.0019 | 0.0005 | 0.0013 |
| 28 | 0.0019 | 0.0005 | 0.0013 |
| 29 | 0.0019 | 0.0005 | 0.0014 |
| 30 | 0.0019 | 0.0005 | 0.0014 |
| 31 | 0.0019 | 0.0005 | 0.0014 |
| 32 | 0.0019 | 0.0005 | 0.0014 |
| 33 | 0.0019 | 0.0005 | 0.0014 |
| 34 | 0.0019 | 0.0005 | 0.0014 |
| 35 | 0.0019 | 0.0005 | 0.0014 |
| 36 | 0.0020 | 0.0006 | 0.0014 |
| 37 | 0.0020 | 0.0006 | 0.0014 |
| 38 | 0.0020 | 0.0006 | 0.0014 |
| 39 | 0.0020 | 0.0006 | 0.0014 |
| 40 | 0.0020 | 0.0006 | 0.0014 |
| 41 | 0.0020 | 0.0006 | 0.0014 |

| | | | |
|---|---|---|---|
| 42 | 0.0020 | 0.0006 | 0.0014 |
| 43 | 0.0020 | 0.0006 | 0.0015 |
| 44 | 0.0020 | 0.0006 | 0.0015 |
| 45 | 0.0021 | 0.0006 | 0.0015 |
| 46 | 0.0021 | 0.0006 | 0.0015 |
| 47 | 0.0021 | 0.0006 | 0.0015 |
| 48 | 0.0021 | 0.0006 | 0.0015 |
| 49 | 0.0021 | 0.0006 | 0.0015 |
| 50 | 0.0021 | 0.0006 | 0.0015 |
| 51 | 0.0021 | 0.0006 | 0.0015 |
| 52 | 0.0021 | 0.0006 | 0.0015 |
| 53 | 0.0021 | 0.0006 | 0.0015 |
| 54 | 0.0022 | 0.0006 | 0.0015 |
| 55 | 0.0022 | 0.0006 | 0.0016 |
| 56 | 0.0022 | 0.0006 | 0.0016 |
| 57 | 0.0022 | 0.0006 | 0.0016 |
| 58 | 0.0022 | 0.0006 | 0.0016 |
| 59 | 0.0022 | 0.0006 | 0.0016 |
| 60 | 0.0022 | 0.0006 | 0.0016 |
| 61 | 0.0022 | 0.0006 | 0.0016 |
| 62 | 0.0023 | 0.0006 | 0.0016 |
| 63 | 0.0023 | 0.0006 | 0.0016 |
| 64 | 0.0023 | 0.0006 | 0.0016 |
| 65 | 0.0023 | 0.0007 | 0.0017 |
| 66 | 0.0023 | 0.0007 | 0.0017 |
| 67 | 0.0023 | 0.0007 | 0.0017 |
| 68 | 0.0023 | 0.0007 | 0.0017 |
| 69 | 0.0024 | 0.0007 | 0.0017 |
| 70 | 0.0024 | 0.0007 | 0.0017 |
| 71 | 0.0024 | 0.0007 | 0.0017 |
| 72 | 0.0024 | 0.0007 | 0.0017 |
| 73 | 0.0024 | 0.0007 | 0.0017 |
| 74 | 0.0024 | 0.0007 | 0.0018 |
| 75 | 0.0025 | 0.0007 | 0.0018 |
| 76 | 0.0025 | 0.0007 | 0.0018 |
| 77 | 0.0025 | 0.0007 | 0.0018 |
| 78 | 0.0025 | 0.0007 | 0.0018 |
| 79 | 0.0025 | 0.0007 | 0.0018 |
| 80 | 0.0025 | 0.0007 | 0.0018 |
| 81 | 0.0026 | 0.0007 | 0.0018 |
| 82 | 0.0026 | 0.0007 | 0.0019 |
| 83 | 0.0026 | 0.0007 | 0.0019 |
| 84 | 0.0026 | 0.0007 | 0.0019 |
| 85 | 0.0026 | 0.0007 | 0.0019 |
| 86 | 0.0027 | 0.0007 | 0.0019 |
| 87 | 0.0027 | 0.0008 | 0.0019 |
| 88 | 0.0027 | 0.0008 | 0.0019 |
| 89 | 0.0027 | 0.0008 | 0.0020 |
| 90 | 0.0027 | 0.0008 | 0.0020 |
| 91 | 0.0028 | 0.0008 | 0.0020 |
| 92 | 0.0028 | 0.0008 | 0.0020 |
| 93 | 0.0028 | 0.0008 | 0.0020 |
| 94 | 0.0028 | 0.0008 | 0.0020 |
| 95 | 0.0029 | 0.0008 | 0.0021 |
| 96 | 0.0029 | 0.0008 | 0.0021 |
| 97 | 0.0029 | 0.0008 | 0.0021 |
| 98 | 0.0029 | 0.0008 | 0.0021 |
| 99 | 0.0030 | 0.0008 | 0.0021 |
| 100 | 0.0030 | 0.0008 | 0.0021 |

| | | | |
|---|---|---|---|
| 101 | 0.0030 | 0.0008 | 0.0022 |
| 102 | 0.0030 | 0.0009 | 0.0022 |
| 103 | 0.0031 | 0.0009 | 0.0022 |
| 104 | 0.0031 | 0.0009 | 0.0022 |
| 105 | 0.0031 | 0.0009 | 0.0022 |
| 106 | 0.0031 | 0.0009 | 0.0023 |
| 107 | 0.0032 | 0.0009 | 0.0023 |
| 108 | 0.0032 | 0.0009 | 0.0023 |
| 109 | 0.0032 | 0.0009 | 0.0023 |
| 110 | 0.0033 | 0.0009 | 0.0023 |
| 111 | 0.0033 | 0.0009 | 0.0024 |
| 112 | 0.0033 | 0.0009 | 0.0024 |
| 113 | 0.0034 | 0.0009 | 0.0024 |
| 114 | 0.0034 | 0.0010 | 0.0024 |
| 115 | 0.0034 | 0.0010 | 0.0025 |
| 116 | 0.0035 | 0.0010 | 0.0025 |
| 117 | 0.0035 | 0.0010 | 0.0025 |
| 118 | 0.0035 | 0.0010 | 0.0025 |
| 119 | 0.0036 | 0.0010 | 0.0026 |
| 120 | 0.0036 | 0.0010 | 0.0026 |
| 121 | 0.0037 | 0.0010 | 0.0026 |
| 122 | 0.0037 | 0.0010 | 0.0026 |
| 123 | 0.0037 | 0.0011 | 0.0027 |
| 124 | 0.0038 | 0.0011 | 0.0027 |
| 125 | 0.0038 | 0.0011 | 0.0028 |
| 126 | 0.0039 | 0.0011 | 0.0028 |
| 127 | 0.0039 | 0.0011 | 0.0028 |
| 128 | 0.0040 | 0.0011 | 0.0028 |
| 129 | 0.0040 | 0.0011 | 0.0029 |
| 130 | 0.0041 | 0.0011 | 0.0029 |
| 131 | 0.0041 | 0.0012 | 0.0030 |
| 132 | 0.0042 | 0.0012 | 0.0030 |
| 133 | 0.0042 | 0.0012 | 0.0030 |
| 134 | 0.0043 | 0.0012 | 0.0031 |
| 135 | 0.0044 | 0.0012 | 0.0031 |
| 136 | 0.0044 | 0.0012 | 0.0032 |
| 137 | 0.0045 | 0.0013 | 0.0032 |
| 138 | 0.0045 | 0.0013 | 0.0033 |
| 139 | 0.0046 | 0.0013 | 0.0033 |
| 140 | 0.0047 | 0.0013 | 0.0033 |
| 141 | 0.0048 | 0.0013 | 0.0034 |
| 142 | 0.0048 | 0.0014 | 0.0035 |
| 143 | 0.0049 | 0.0014 | 0.0035 |
| 144 | 0.0050 | 0.0014 | 0.0036 |
| 145 | 0.0053 | 0.0015 | 0.0038 |
| 146 | 0.0054 | 0.0015 | 0.0039 |
| 147 | 0.0055 | 0.0016 | 0.0040 |
| 148 | 0.0056 | 0.0016 | 0.0040 |
| 149 | 0.0057 | 0.0016 | 0.0041 |
| 150 | 0.0058 | 0.0016 | 0.0041 |
| 151 | 0.0059 | 0.0017 | 0.0042 |
| 152 | 0.0060 | 0.0017 | 0.0043 |
| 153 | 0.0062 | 0.0017 | 0.0044 |
| 154 | 0.0062 | 0.0018 | 0.0045 |
| 155 | 0.0064 | 0.0018 | 0.0046 |
| 156 | 0.0065 | 0.0018 | 0.0047 |
| 157 | 0.0067 | 0.0019 | 0.0048 |
| 158 | 0.0068 | 0.0019 | 0.0049 |
| 159 | 0.0070 | 0.0020 | 0.0050 |

| | | | |
|---|---|---|---|
| 160 | 0.0071 | 0.0020 | 0.0051 |
| 161 | 0.0074 | 0.0021 | 0.0053 |
| 162 | 0.0075 | 0.0021 | 0.0054 |
| 163 | 0.0077 | 0.0022 | 0.0056 |
| 164 | 0.0079 | 0.0022 | 0.0057 |
| 165 | 0.0082 | 0.0023 | 0.0059 |
| 166 | 0.0083 | 0.0024 | 0.0060 |
| 167 | 0.0087 | 0.0025 | 0.0062 |
| 168 | 0.0089 | 0.0025 | 0.0064 |
| 169 | 0.0093 | 0.0026 | 0.0067 |
| 170 | 0.0095 | 0.0027 | 0.0068 |
| 171 | 0.0100 | 0.0028 | 0.0072 |
| 172 | 0.0102 | 0.0029 | 0.0074 |
| 173 | 0.0108 | 0.0030 | 0.0077 |
| 174 | 0.0111 | 0.0031 | 0.0080 |
| 175 | 0.0117 | 0.0033 | 0.0084 |
| 176 | 0.0121 | 0.0034 | 0.0087 |
| 177 | 0.0129 | 0.0036 | 0.0093 |
| 178 | 0.0134 | 0.0038 | 0.0096 |
| 179 | 0.0144 | 0.0041 | 0.0103 |
| 180 | 0.0150 | 0.0042 | 0.0107 |
| 181 | 0.0163 | 0.0046 | 0.0117 |
| 182 | 0.0171 | 0.0048 | 0.0123 |
| 183 | 0.0189 | 0.0053 | 0.0136 |
| 184 | 0.0200 | 0.0057 | 0.0144 |
| 185 | 0.0327 | 0.0092 | 0.0235 |
| 186 | 0.0348 | 0.0098 | 0.0250 |
| 187 | 0.0404 | 0.0105 | 0.0299 |
| 188 | 0.0441 | 0.0105 | 0.0336 |
| 189 | 0.0548 | 0.0105 | 0.0443 |
| 190 | 0.0632 | 0.0105 | 0.0526 |
| 191 | 0.0958 | 0.0105 | 0.0853 |
| 192 | 0.1391 | 0.0105 | 0.1286 |
| 193 | 0.6018 | 0.0105 | 0.5913 |
| 194 | 0.0754 | 0.0105 | 0.0649 |
| 195 | 0.0488 | 0.0105 | 0.0383 |
| 196 | 0.0374 | 0.0105 | 0.0269 |
| 197 | 0.0213 | 0.0060 | 0.0153 |
| 198 | 0.0180 | 0.0051 | 0.0129 |
| 199 | 0.0156 | 0.0044 | 0.0112 |
| 200 | 0.0139 | 0.0039 | 0.0099 |
| 201 | 0.0125 | 0.0035 | 0.0090 |
| 202 | 0.0114 | 0.0032 | 0.0082 |
| 203 | 0.0105 | 0.0030 | 0.0075 |
| 204 | 0.0098 | 0.0028 | 0.0070 |
| 205 | 0.0091 | 0.0026 | 0.0065 |
| 206 | 0.0085 | 0.0024 | 0.0061 |
| 207 | 0.0080 | 0.0023 | 0.0058 |
| 208 | 0.0076 | 0.0021 | 0.0055 |
| 209 | 0.0072 | 0.0020 | 0.0052 |
| 210 | 0.0069 | 0.0019 | 0.0050 |
| 211 | 0.0066 | 0.0019 | 0.0047 |
| 212 | 0.0063 | 0.0018 | 0.0045 |
| 213 | 0.0061 | 0.0017 | 0.0044 |
| 214 | 0.0058 | 0.0016 | 0.0042 |
| 215 | 0.0056 | 0.0016 | 0.0040 |
| 216 | 0.0054 | 0.0015 | 0.0039 |
| 217 | 0.0050 | 0.0014 | 0.0036 |
| 218 | 0.0049 | 0.0014 | 0.0035 |

| | | | |
|---|---|---|---|
| 219 | 0.0047 | 0.0013 | 0.0034 |
| 220 | 0.0046 | 0.0013 | 0.0033 |
| 221 | 0.0044 | 0.0013 | 0.0032 |
| 222 | 0.0043 | 0.0012 | 0.0031 |
| 223 | 0.0042 | 0.0012 | 0.0030 |
| 224 | 0.0041 | 0.0012 | 0.0029 |
| 225 | 0.0040 | 0.0011 | 0.0029 |
| 226 | 0.0039 | 0.0011 | 0.0028 |
| 227 | 0.0038 | 0.0011 | 0.0027 |
| 228 | 0.0037 | 0.0010 | 0.0027 |
| 229 | 0.0036 | 0.0010 | 0.0026 |
| 230 | 0.0036 | 0.0010 | 0.0026 |
| 231 | 0.0035 | 0.0010 | 0.0025 |
| 232 | 0.0034 | 0.0010 | 0.0024 |
| 233 | 0.0033 | 0.0009 | 0.0024 |
| 234 | 0.0033 | 0.0009 | 0.0024 |
| 235 | 0.0032 | 0.0009 | 0.0023 |
| 236 | 0.0032 | 0.0009 | 0.0023 |
| 237 | 0.0031 | 0.0009 | 0.0022 |
| 238 | 0.0030 | 0.0009 | 0.0022 |
| 239 | 0.0030 | 0.0008 | 0.0021 |
| 240 | 0.0029 | 0.0008 | 0.0021 |
| 241 | 0.0029 | 0.0008 | 0.0021 |
| 242 | 0.0028 | 0.0008 | 0.0020 |
| 243 | 0.0028 | 0.0008 | 0.0020 |
| 244 | 0.0028 | 0.0008 | 0.0020 |
| 245 | 0.0027 | 0.0008 | 0.0019 |
| 246 | 0.0027 | 0.0008 | 0.0019 |
| 247 | 0.0026 | 0.0007 | 0.0019 |
| 248 | 0.0026 | 0.0007 | 0.0019 |
| 249 | 0.0026 | 0.0007 | 0.0018 |
| 250 | 0.0025 | 0.0007 | 0.0018 |
| 251 | 0.0025 | 0.0007 | 0.0018 |
| 252 | 0.0024 | 0.0007 | 0.0018 |
| 253 | 0.0024 | 0.0007 | 0.0017 |
| 254 | 0.0024 | 0.0007 | 0.0017 |
| 255 | 0.0024 | 0.0007 | 0.0017 |
| 256 | 0.0023 | 0.0007 | 0.0017 |
| 257 | 0.0023 | 0.0006 | 0.0016 |
| 258 | 0.0023 | 0.0006 | 0.0016 |
| 259 | 0.0022 | 0.0006 | 0.0016 |
| 260 | 0.0022 | 0.0006 | 0.0016 |
| 261 | 0.0022 | 0.0006 | 0.0016 |
| 262 | 0.0022 | 0.0006 | 0.0016 |
| 263 | 0.0021 | 0.0006 | 0.0015 |
| 264 | 0.0021 | 0.0006 | 0.0015 |
| 265 | 0.0021 | 0.0006 | 0.0015 |
| 266 | 0.0021 | 0.0006 | 0.0015 |
| 267 | 0.0020 | 0.0006 | 0.0015 |
| 268 | 0.0020 | 0.0006 | 0.0015 |
| 269 | 0.0020 | 0.0006 | 0.0014 |
| 270 | 0.0020 | 0.0006 | 0.0014 |
| 271 | 0.0020 | 0.0006 | 0.0014 |
| 272 | 0.0019 | 0.0005 | 0.0014 |
| 273 | 0.0019 | 0.0005 | 0.0014 |
| 274 | 0.0019 | 0.0005 | 0.0014 |
| 275 | 0.0019 | 0.0005 | 0.0014 |
| 276 | 0.0019 | 0.0005 | 0.0013 |
| 277 | 0.0018 | 0.0005 | 0.0013 |

| | | | |
|---|---|---|---|
| 278 | 0.0018 | 0.0005 | 0.0013 |
| 279 | 0.0018 | 0.0005 | 0.0013 |
| 280 | 0.0018 | 0.0005 | 0.0013 |
| 281 | 0.0018 | 0.0005 | 0.0013 |
| 282 | 0.0018 | 0.0005 | 0.0013 |
| 283 | 0.0017 | 0.0005 | 0.0013 |
| 284 | 0.0017 | 0.0005 | 0.0012 |
| 285 | 0.0017 | 0.0005 | 0.0012 |
| 286 | 0.0017 | 0.0005 | 0.0012 |
| 287 | 0.0017 | 0.0005 | 0.0012 |
| 288 | 0.0017 | 0.0005 | 0.0012 |

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Total soil rain loss = 0.45(In)
Total effective rainfall = 1.97(In)
Peak flow rate in flood hydrograph = 64.58(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 17.5 | 35.0 | 52.5 | 70.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.01 | Q | \| | \| | \| | \| |
| 0+10 | 0.0003 | 0.03 | Q | \| | \| | \| | \| |
| 0+15 | 0.0010 | 0.10 | Q | \| | \| | \| | \| |
| 0+20 | 0.0023 | 0.20 | Q | \| | \| | \| | \| |
| 0+25 | 0.0041 | 0.26 | Q | \| | \| | \| | \| |
| 0+30 | 0.0061 | 0.30 | Q | \| | \| | \| | \| |
| 0+35 | 0.0084 | 0.32 | Q | \| | \| | \| | \| |
| 0+40 | 0.0107 | 0.34 | Q | \| | \| | \| | \| |
| 0+45 | 0.0132 | 0.36 | Q | \| | \| | \| | \| |
| 0+50 | 0.0158 | 0.37 | Q | \| | \| | \| | \| |
| 0+55 | 0.0184 | 0.39 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0212 | 0.40 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0240 | 0.41 | Q | \| | \| | \| | \| |
| 1+10 | 0.0268 | 0.41 | Q | \| | \| | \| | \| |
| 1+15 | 0.0297 | 0.42 | Q | \| | \| | \| | \| |
| 1+20 | 0.0326 | 0.43 | Q | \| | \| | \| | \| |
| 1+25 | 0.0356 | 0.43 | Q | \| | \| | \| | \| |
| 1+30 | 0.0386 | 0.44 | Q | \| | \| | \| | \| |
| 1+35 | 0.0417 | 0.44 | Q | \| | \| | \| | \| |
| 1+40 | 0.0448 | 0.45 | Q | \| | \| | \| | \| |
| 1+45 | 0.0479 | 0.45 | Q | \| | \| | \| | \| |
| 1+50 | 0.0510 | 0.45 | Q | \| | \| | \| | \| |
| 1+55 | 0.0542 | 0.46 | Q | \| | \| | \| | \| |
| 2+ 0 | 0.0573 | 0.46 | Q | \| | \| | \| | \| |
| 2+ 5 | 0.0605 | 0.46 | Q | \| | \| | \| | \| |
| 2+10 | 0.0638 | 0.47 | Q | \| | \| | \| | \| |
| 2+15 | 0.0670 | 0.47 | Q | \| | \| | \| | \| |
| 2+20 | 0.0703 | 0.47 | Q | \| | \| | \| | \| |
| 2+25 | 0.0736 | 0.48 | Q | \| | \| | \| | \| |
| 2+30 | 0.0769 | 0.48 | Q | \| | \| | \| | \| |
| 2+35 | 0.0802 | 0.48 | Q | \| | \| | \| | \| |
| 2+40 | 0.0836 | 0.49 | Q | \| | \| | \| | \| |
| 2+45 | 0.0869 | 0.49 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+50 | 0.0903 | 0.49 | Q | | | | |
| 2+55 | 0.0937 | 0.49 | Q | | | | |
| 3+ 0 | 0.0971 | 0.49 | Q | | | | |
| 3+ 5 | 0.1005 | 0.50 | Q | | | | |
| 3+10 | 0.1039 | 0.50 | Q | | | | |
| 3+15 | 0.1074 | 0.50 | Q | | | | |
| 3+20 | 0.1109 | 0.50 | Q | | | | |
| 3+25 | 0.1144 | 0.51 | Q | | | | |
| 3+30 | 0.1179 | 0.51 | Q | | | | |
| 3+35 | 0.1214 | 0.51 | Q | | | | |
| 3+40 | 0.1250 | 0.52 | QV | | | | |
| 3+45 | 0.1285 | 0.52 | QV | | | | |
| 3+50 | 0.1321 | 0.52 | QV | | | | |
| 3+55 | 0.1357 | 0.52 | QV | | | | |
| 4+ 0 | 0.1393 | 0.53 | QV | | | | |
| 4+ 5 | 0.1430 | 0.53 | QV | | | | |
| 4+10 | 0.1467 | 0.53 | QV | | | | |
| 4+15 | 0.1503 | 0.53 | QV | | | | |
| 4+20 | 0.1540 | 0.54 | QV | | | | |
| 4+25 | 0.1578 | 0.54 | QV | | | | |
| 4+30 | 0.1615 | 0.54 | QV | | | | |
| 4+35 | 0.1653 | 0.55 | QV | | | | |
| 4+40 | 0.1691 | 0.55 | QV | | | | |
| 4+45 | 0.1729 | 0.55 | QV | | | | |
| 4+50 | 0.1767 | 0.56 | QV | | | | |
| 4+55 | 0.1806 | 0.56 | QV | | | | |
| 5+ 0 | 0.1844 | 0.56 | QV | | | | |
| 5+ 5 | 0.1883 | 0.57 | QV | | | | |
| 5+10 | 0.1922 | 0.57 | QV | | | | |
| 5+15 | 0.1962 | 0.57 | QV | | | | |
| 5+20 | 0.2002 | 0.58 | QV | | | | |
| 5+25 | 0.2041 | 0.58 | QV | | | | |
| 5+30 | 0.2082 | 0.58 | QV | | | | |
| 5+35 | 0.2122 | 0.59 | QV | | | | |
| 5+40 | 0.2163 | 0.59 | QV | | | | |
| 5+45 | 0.2204 | 0.59 | QV | | | | |
| 5+50 | 0.2245 | 0.60 | QV | | | | |
| 5+55 | 0.2286 | 0.60 | QV | | | | |
| 6+ 0 | 0.2328 | 0.61 | QV | | | | |
| 6+ 5 | 0.2370 | 0.61 | QV | | | | |
| 6+10 | 0.2412 | 0.61 | QV | | | | |
| 6+15 | 0.2454 | 0.62 | QV | | | | |
| 6+20 | 0.2497 | 0.62 | Q V | | | | |
| 6+25 | 0.2540 | 0.63 | Q V | | | | |
| 6+30 | 0.2584 | 0.63 | Q V | | | | |
| 6+35 | 0.2627 | 0.63 | Q V | | | | |
| 6+40 | 0.2671 | 0.64 | Q V | | | | |
| 6+45 | 0.2715 | 0.64 | Q V | | | | |
| 6+50 | 0.2760 | 0.65 | Q V | | | | |
| 6+55 | 0.2805 | 0.65 | Q V | | | | |
| 7+ 0 | 0.2850 | 0.66 | Q V | | | | |
| 7+ 5 | 0.2895 | 0.66 | Q V | | | | |
| 7+10 | 0.2941 | 0.67 | Q V | | | | |
| 7+15 | 0.2987 | 0.67 | Q V | | | | |
| 7+20 | 0.3034 | 0.67 | Q V | | | | |
| 7+25 | 0.3081 | 0.68 | Q V | | | | |
| 7+30 | 0.3128 | 0.68 | Q V | | | | |
| 7+35 | 0.3175 | 0.69 | Q V | | | | |
| 7+40 | 0.3223 | 0.70 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7+45 | 0.3271 | 0.70 | Q V | \| | \| | \| | \| |
| 7+50 | 0.3320 | 0.71 | Q V | \| | \| | \| | \| |
| 7+55 | 0.3369 | 0.71 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.3418 | 0.72 | Q V | \| | \| | \| | \| |
| 8+ 5 | 0.3468 | 0.72 | Q V | \| | \| | \| | \| |
| 8+10 | 0.3518 | 0.73 | Q V | \| | \| | \| | \| |
| 8+15 | 0.3569 | 0.73 | Q V | \| | \| | \| | \| |
| 8+20 | 0.3620 | 0.74 | Q V | \| | \| | \| | \| |
| 8+25 | 0.3671 | 0.75 | Q V | \| | \| | \| | \| |
| 8+30 | 0.3723 | 0.75 | Q V | \| | \| | \| | \| |
| 8+35 | 0.3775 | 0.76 | Q V | \| | \| | \| | \| |
| 8+40 | 0.3828 | 0.77 | Q V | \| | \| | \| | \| |
| 8+45 | 0.3881 | 0.77 | Q V | \| | \| | \| | \| |
| 8+50 | 0.3935 | 0.78 | Q V | \| | \| | \| | \| |
| 8+55 | 0.3989 | 0.79 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.4044 | 0.79 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.4099 | 0.80 | Q V | \| | \| | \| | \| |
| 9+10 | 0.4154 | 0.81 | Q V | \| | \| | \| | \| |
| 9+15 | 0.4210 | 0.81 | Q V | \| | \| | \| | \| |
| 9+20 | 0.4267 | 0.82 | Q V | \| | \| | \| | \| |
| 9+25 | 0.4324 | 0.83 | Q V | \| | \| | \| | \| |
| 9+30 | 0.4382 | 0.84 | Q V | \| | \| | \| | \| |
| 9+35 | 0.4440 | 0.85 | Q V | \| | \| | \| | \| |
| 9+40 | 0.4499 | 0.85 | Q V | \| | \| | \| | \| |
| 9+45 | 0.4558 | 0.86 | Q V | \| | \| | \| | \| |
| 9+50 | 0.4618 | 0.87 | Q V | \| | \| | \| | \| |
| 9+55 | 0.4679 | 0.88 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.4740 | 0.89 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.4802 | 0.90 | Q V | \| | \| | \| | \| |
| 10+10 | 0.4865 | 0.91 | Q V | \| | \| | \| | \| |
| 10+15 | 0.4928 | 0.92 | Q V | \| | \| | \| | \| |
| 10+20 | 0.4992 | 0.93 | Q V | \| | \| | \| | \| |
| 10+25 | 0.5056 | 0.94 | Q V | \| | \| | \| | \| |
| 10+30 | 0.5122 | 0.95 | Q V | \| | \| | \| | \| |
| 10+35 | 0.5188 | 0.96 | Q V | \| | \| | \| | \| |
| 10+40 | 0.5254 | 0.97 | Q V | \| | \| | \| | \| |
| 10+45 | 0.5322 | 0.98 | Q V | \| | \| | \| | \| |
| 10+50 | 0.5390 | 0.99 | Q V | \| | \| | \| | \| |
| 10+55 | 0.5460 | 1.00 | Q V | \| | \| | \| | \| |
| 11+ 0 | 0.5530 | 1.02 | Q V | \| | \| | \| | \| |
| 11+ 5 | 0.5600 | 1.03 | Q V | \| | \| | \| | \| |
| 11+10 | 0.5672 | 1.04 | Q V | \| | \| | \| | \| |
| 11+15 | 0.5745 | 1.06 | Q V | \| | \| | \| | \| |
| 11+20 | 0.5819 | 1.07 | Q V | \| | \| | \| | \| |
| 11+25 | 0.5893 | 1.08 | Q V | \| | \| | \| | \| |
| 11+30 | 0.5969 | 1.10 | Q V | \| | \| | \| | \| |
| 11+35 | 0.6046 | 1.11 | Q V | \| | \| | \| | \| |
| 11+40 | 0.6123 | 1.13 | Q V | \| | \| | \| | \| |
| 11+45 | 0.6202 | 1.14 | Q V | \| | \| | \| | \| |
| 11+50 | 0.6282 | 1.16 | Q V | \| | \| | \| | \| |
| 11+55 | 0.6363 | 1.18 | Q V | \| | \| | \| | \| |
| 12+ 0 | 0.6445 | 1.20 | Q V | \| | \| | \| | \| |
| 12+ 5 | 0.6529 | 1.21 | Q V | \| | \| | \| | \| |
| 12+10 | 0.6614 | 1.24 | Q V | \| | \| | \| | \| |
| 12+15 | 0.6701 | 1.27 | Q V | \| | \| | \| | \| |
| 12+20 | 0.6791 | 1.30 | Q V | \| | \| | \| | \| |
| 12+25 | 0.6883 | 1.33 | Q V | \| | \| | \| | \| |
| 12+30 | 0.6976 | 1.36 | Q V | \| | \| | \| | \| |
| 12+35 | 0.7071 | 1.38 | Q V | \| | \| | \| | \| |

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12+40       0.7169      1.41  Q    V    |          |          |          |
12+45       0.7268      1.44  Q    V    |          |          |          |
12+50       0.7369      1.47  Q    V    |          |          |          |
12+55       0.7472      1.50  Q     V   |          |          |          |
13+ 0       0.7577      1.53  Q     V   |          |          |          |
13+ 5       0.7684      1.56  Q     V   |          |          |          |
13+10       0.7793      1.59  Q     V   |          |          |          |
13+15       0.7905      1.62  Q     V   |          |          |          |
13+20       0.8019      1.66  Q     V   |          |          |          |
13+25       0.8136      1.69  Q     V   |          |          |          |
13+30       0.8255      1.73  Q     V   |          |          |          |
13+35       0.8377      1.77  |Q    V   |          |          |          |
13+40       0.8502      1.81  |Q    V   |          |          |          |
13+45       0.8630      1.86  |Q     V  |          |          |          |
13+50       0.8761      1.90  |Q     V  |          |          |          |
13+55       0.8895      1.95  |Q     V  |          |          |          |
14+ 0       0.9033      2.01  |Q     V  |          |          |          |
14+ 5       0.9176      2.06  |Q     V  |          |          |          |
14+10       0.9322      2.12  |Q     V  |          |          |          |
14+15       0.9473      2.19  |Q     V  |          |          |          |
14+20       0.9628      2.26  |Q     V  |          |          |          |
14+25       0.9789      2.34  |Q     V  |          |          |          |
14+30       0.9956      2.42  |Q      V |          |          |          |
14+35       1.0128      2.50  |Q      V |          |          |          |
14+40       1.0307      2.60  |Q      V |          |          |          |
14+45       1.0493      2.70  |Q      V |          |          |          |
14+50       1.0686      2.81  |Q      V |          |          |          |
14+55       1.0888      2.93  |Q      V |          |          |          |
15+ 0       1.1100      3.07  |Q       V|          |          |          |
15+ 5       1.1321      3.22  |Q       V|          |          |          |
15+10       1.1555      3.39  |Q       V|          |          |          |
15+15       1.1802      3.59  | Q      V|          |          |          |
15+20       1.2064      3.81  | Q      V|          |          |          |
15+25       1.2347      4.10  | Q       V          |          |          |
15+30       1.2661      4.56  | Q       V          |          |          |
15+35       1.3029      5.35  |  Q      V          |          |          |
15+40       1.3472      6.43  |  Q      V          |          |          |
15+45       1.3991      7.53  |   Q     |V         |          |          |
15+50       1.4599      8.84  |    Q    |V         |          |          |
15+55       1.5334     10.66  |     Q   | V        |          |          |
16+ 0       1.6264     13.51  |      Q  |  V       |          |          |
16+ 5       1.7671     20.42  |         |Q  V      |          |          |
16+10       1.9994     33.73  |         |     V  Q |          |          |
16+15       2.3773     54.87  |         |        V |          |Q         |
16+20       2.8220     64.58  |         |          | V        |     Q    |
16+25       3.1394     46.09  |         |          |    VQ    |          |
16+30       3.3640     32.61  |         |       Q  |      V   |          |
16+35       3.5380     25.27  |         |   Q      |       V  |          |
16+40       3.6764     20.09  |         |Q         |        V |          |
16+45       3.7895     16.42  |        Q|          |         V          |
16+50       3.8852     13.91  |      Q  |          |         |V         |
16+55       3.9687     12.12  |     Q   |          |         | V        |
17+ 0       4.0400     10.36  |    Q    |          |         | V        |
17+ 5       4.1013      8.89  |    Q    |          |         |  V       |
17+10       4.1563      7.99  |   Q     |          |         |  V       |
17+15       4.2056      7.15  |   Q     |          |         |   V      |
17+20       4.2493      6.35  |  Q      |          |         |   V      |
17+25       4.2887      5.72  |  Q      |          |         |   V      |
17+30       4.3240      5.13  | Q       |          |         |    V     |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17+35 | 4.3561 | 4.66 | \| Q | \| | \| | \| | V \| |
| 17+40 | 4.3843 | 4.10 | \| Q | \| | \| | \| | V \| |
| 17+45 | 4.4099 | 3.71 | \| Q | \| | \| | \| | V \| |
| 17+50 | 4.4321 | 3.22 | \|Q | \| | \| | \| | V \| |
| 17+55 | 4.4529 | 3.02 | \|Q | \| | \| | \| | V \| |
| 18+ 0 | 4.4732 | 2.96 | \|Q | \| | \| | \| | V \| |
| 18+ 5 | 4.4928 | 2.84 | \|Q | \| | \| | \| | V \| |
| 18+10 | 4.5114 | 2.70 | \|Q | \| | \| | \| | V \| |
| 18+15 | 4.5284 | 2.46 | \|Q | \| | \| | \| | V \| |
| 18+20 | 4.5430 | 2.13 | \|Q | \| | \| | \| | V \| |
| 18+25 | 4.5566 | 1.97 | \|Q | \| | \| | \| | V \| |
| 18+30 | 4.5686 | 1.75 | Q | \| | \| | \| | V \| |
| 18+35 | 4.5785 | 1.43 | Q | \| | \| | \| | V \| |
| 18+40 | 4.5878 | 1.35 | Q | \| | \| | \| | V \| |
| 18+45 | 4.5967 | 1.29 | Q | \| | \| | \| | V \| |
| 18+50 | 4.6052 | 1.24 | Q | \| | \| | \| | V \| |
| 18+55 | 4.6135 | 1.20 | Q | \| | \| | \| | V \| |
| 19+ 0 | 4.6214 | 1.16 | Q | \| | \| | \| | V \| |
| 19+ 5 | 4.6292 | 1.12 | Q | \| | \| | \| | V \| |
| 19+10 | 4.6367 | 1.09 | Q | \| | \| | \| | V \| |
| 19+15 | 4.6440 | 1.06 | Q | \| | \| | \| | V \| |
| 19+20 | 4.6511 | 1.03 | Q | \| | \| | \| | V \| |
| 19+25 | 4.6580 | 1.00 | Q | \| | \| | \| | V \| |
| 19+30 | 4.6647 | 0.98 | Q | \| | \| | \| | V \| |
| 19+35 | 4.6713 | 0.96 | Q | \| | \| | \| | V \| |
| 19+40 | 4.6778 | 0.93 | Q | \| | \| | \| | V \| |
| 19+45 | 4.6840 | 0.91 | Q | \| | \| | \| | V \| |
| 19+50 | 4.6902 | 0.89 | Q | \| | \| | \| | V \| |
| 19+55 | 4.6962 | 0.88 | Q | \| | \| | \| | V \| |
| 20+ 0 | 4.7021 | 0.86 | Q | \| | \| | \| | V \| |
| 20+ 5 | 4.7079 | 0.84 | Q | \| | \| | \| | V \| |
| 20+10 | 4.7136 | 0.82 | Q | \| | \| | \| | V \| |
| 20+15 | 4.7192 | 0.81 | Q | \| | \| | \| | V \| |
| 20+20 | 4.7246 | 0.79 | Q | \| | \| | \| | V \| |
| 20+25 | 4.7300 | 0.78 | Q | \| | \| | \| | V \| |
| 20+30 | 4.7353 | 0.77 | Q | \| | \| | \| | V \| |
| 20+35 | 4.7405 | 0.75 | Q | \| | \| | \| | V \| |
| 20+40 | 4.7456 | 0.74 | Q | \| | \| | \| | V \| |
| 20+45 | 4.7506 | 0.73 | Q | \| | \| | \| | V \| |
| 20+50 | 4.7555 | 0.72 | Q | \| | \| | \| | V \| |
| 20+55 | 4.7604 | 0.71 | Q | \| | \| | \| | V \| |
| 21+ 0 | 4.7652 | 0.69 | Q | \| | \| | \| | V \| |
| 21+ 5 | 4.7699 | 0.68 | Q | \| | \| | \| | V \| |
| 21+10 | 4.7745 | 0.67 | Q | \| | \| | \| | V \| |
| 21+15 | 4.7791 | 0.66 | Q | \| | \| | \| | V \| |
| 21+20 | 4.7836 | 0.66 | Q | \| | \| | \| | V \| |
| 21+25 | 4.7881 | 0.65 | Q | \| | \| | \| | V \| |
| 21+30 | 4.7925 | 0.64 | Q | \| | \| | \| | V \| |
| 21+35 | 4.7968 | 0.63 | Q | \| | \| | \| | V \| |
| 21+40 | 4.8011 | 0.62 | Q | \| | \| | \| | V\| |
| 21+45 | 4.8053 | 0.61 | Q | \| | \| | \| | V\| |
| 21+50 | 4.8094 | 0.60 | Q | \| | \| | \| | V\| |
| 21+55 | 4.8135 | 0.60 | Q | \| | \| | \| | V\| |
| 22+ 0 | 4.8176 | 0.59 | Q | \| | \| | \| | V\| |
| 22+ 5 | 4.8216 | 0.58 | Q | \| | \| | \| | V\| |
| 22+10 | 4.8256 | 0.58 | Q | \| | \| | \| | V\| |
| 22+15 | 4.8295 | 0.57 | Q | \| | \| | \| | V\| |
| 22+20 | 4.8334 | 0.56 | Q | \| | \| | \| | V\| |
| 22+25 | 4.8372 | 0.56 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+30 | 4.8410 | 0.55 | Q | \| | \| | \| | V\| |
| 22+35 | 4.8447 | 0.54 | Q | \| | \| | \| | V\| |
| 22+40 | 4.8484 | 0.54 | Q | \| | \| | \| | V\| |
| 22+45 | 4.8521 | 0.53 | Q | \| | \| | \| | V\| |
| 22+50 | 4.8557 | 0.53 | Q | \| | \| | \| | V\| |
| 22+55 | 4.8593 | 0.52 | Q | \| | \| | \| | V\| |
| 23+ 0 | 4.8628 | 0.51 | Q | \| | \| | \| | V\| |
| 23+ 5 | 4.8663 | 0.51 | Q | \| | \| | \| | V\| |
| 23+10 | 4.8698 | 0.50 | Q | \| | \| | \| | V\| |
| 23+15 | 4.8732 | 0.50 | Q | \| | \| | \| | V\| |
| 23+20 | 4.8766 | 0.49 | Q | \| | \| | \| | V\| |
| 23+25 | 4.8800 | 0.49 | Q | \| | \| | \| | V\| |
| 23+30 | 4.8833 | 0.48 | Q | \| | \| | \| | V\| |
| 23+35 | 4.8866 | 0.48 | Q | \| | \| | \| | V\| |
| 23+40 | 4.8899 | 0.48 | Q | \| | \| | \| | V\| |
| 23+45 | 4.8931 | 0.47 | Q | \| | \| | \| | V\| |
| 23+50 | 4.8963 | 0.47 | Q | \| | \| | \| | V\| |
| 23+55 | 4.8995 | 0.46 | Q | \| | \| | \| | V\| |
| 24+ 0 | 4.9027 | 0.46 | Q | \| | \| | \| | V\| |
| 24+ 5 | 4.9058 | 0.45 | Q | \| | \| | \| | V\| |
| 24+10 | 4.9086 | 0.42 | Q | \| | \| | \| | V\| |
| 24+15 | 4.9110 | 0.35 | Q | \| | \| | \| | V\| |
| 24+20 | 4.9127 | 0.25 | Q | \| | \| | \| | V\| |
| 24+25 | 4.9140 | 0.19 | Q | \| | \| | \| | V\| |
| 24+30 | 4.9150 | 0.15 | Q | \| | \| | \| | V\| |
| 24+35 | 4.9158 | 0.12 | Q | \| | \| | \| | V\| |
| 24+40 | 4.9165 | 0.10 | Q | \| | \| | \| | V\| |
| 24+45 | 4.9171 | 0.08 | Q | \| | \| | \| | V\| |
| 24+50 | 4.9176 | 0.07 | Q | \| | \| | \| | V\| |
| 24+55 | 4.9180 | 0.06 | Q | \| | \| | \| | V\| |
| 25+ 0 | 4.9183 | 0.05 | Q | \| | \| | \| | V\| |
| 25+ 5 | 4.9186 | 0.04 | Q | \| | \| | \| | V\| |
| 25+10 | 4.9188 | 0.04 | Q | \| | \| | \| | V\| |
| 25+15 | 4.9191 | 0.03 | Q | \| | \| | \| | V\| |
| 25+20 | 4.9192 | 0.03 | Q | \| | \| | \| | V\| |
| 25+25 | 4.9194 | 0.02 | Q | \| | \| | \| | V\| |
| 25+30 | 4.9195 | 0.02 | Q | \| | \| | \| | V\| |
| 25+35 | 4.9196 | 0.01 | Q | \| | \| | \| | V\| |
| 25+40 | 4.9197 | 0.01 | Q | \| | \| | \| | V\| |
| 25+45 | 4.9198 | 0.01 | Q | \| | \| | \| | V\| |
| 25+50 | 4.9198 | 0.01 | Q | \| | \| | \| | V\| |
| 25+55 | 4.9199 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 0 | 4.9199 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 5 | 4.9199 | 0.00 | Q | \| | \| | \| | V\| |
| 26+10 | 4.9200 | 0.00 | Q | \| | \| | \| | V\| |
| 26+15 | 4.9200 | 0.00 | Q | \| | \| | \| | V\| |
| 26+20 | 4.9200 | 0.00 | Q | \| | \| | \| | V\| |
| 26+25 | 4.9200 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 10A
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 13.57 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 13.57 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 13.57 | 24 | 2.40 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.0 | 92.8 | 13.57 | 1.000 | 0.140 | 0.900 | 0.126 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.126

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 12.21 | 0.900 | 78.0 | 92.8 | 0.78 | 0.695 |
| 1.36 | 0.100 | 98.0 | 98.0 | 0.20 | 0.905 |

Area-averaged catchment yield fraction, Y = 0.716
Area-averaged low loss fraction, Yb = 0.284
User entry of time of concentration = 0.990 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 13.57(Ac.)
Catchment Lag time = 0.792 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 10.5219
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.126(In/Hr)
Average low loss rate fraction (Yb) = 0.284 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.400(In)

Rainfall depth area reduction factors:
Using a total area of 13.57(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.602(In)
30-minute factor = 0.999 Adjusted rainfall = 1.031(In)
1-hour factor = 0.999 Adjusted rainfall = 1.269(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.400(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 164.11 (CFS)) | |
| 1 | 0.463 | 0.760 |
| 2 | 1.666 | 1.975 |
| 3 | 3.583 | 3.146 |
| 4 | 6.221 | 4.329 |
| 5 | 9.707 | 5.722 |
| 6 | 15.544 | 9.579 |
| 7 | 24.534 | 14.753 |
| 8 | 34.636 | 16.579 |
| 9 | 43.126 | 13.932 |
| 10 | 49.818 | 10.983 |
| 11 | 55.382 | 9.131 |
| 12 | 59.759 | 7.184 |
| 13 | 63.335 | 5.869 |

| | | |
|---|---|---|
| 14 | 66.399 | 5.028 |
| 15 | 69.108 | 4.446 |
| 16 | 71.576 | 4.051 |
| 17 | 73.705 | 3.494 |
| 18 | 75.606 | 3.120 |
| 19 | 77.402 | 2.947 |
| 20 | 78.983 | 2.595 |
| 21 | 80.372 | 2.279 |
| 22 | 81.713 | 2.201 |
| 23 | 82.868 | 1.895 |
| 24 | 84.001 | 1.859 |
| 25 | 85.047 | 1.718 |
| 26 | 86.058 | 1.658 |
| 27 | 87.005 | 1.555 |
| 28 | 87.848 | 1.384 |
| 29 | 88.665 | 1.340 |
| 30 | 89.324 | 1.081 |
| 31 | 89.955 | 1.036 |
| 32 | 90.561 | 0.994 |
| 33 | 91.150 | 0.967 |
| 34 | 91.716 | 0.930 |
| 35 | 92.224 | 0.834 |
| 36 | 92.727 | 0.824 |
| 37 | 93.198 | 0.774 |
| 38 | 93.661 | 0.760 |
| 39 | 94.073 | 0.676 |
| 40 | 94.431 | 0.587 |
| 41 | 94.789 | 0.587 |
| 42 | 95.146 | 0.587 |
| 43 | 95.502 | 0.583 |
| 44 | 95.800 | 0.490 |
| 45 | 96.074 | 0.449 |
| 46 | 96.347 | 0.449 |
| 47 | 96.621 | 0.449 |
| 48 | 96.885 | 0.433 |
| 49 | 97.086 | 0.329 |
| 50 | 97.275 | 0.311 |
| 51 | 97.464 | 0.311 |
| 52 | 97.654 | 0.311 |
| 53 | 97.821 | 0.274 |
| 54 | 97.929 | 0.178 |
| 55 | 98.034 | 0.173 |
| 56 | 98.140 | 0.173 |
| 57 | 98.245 | 0.173 |
| 58 | 98.360 | 0.189 |
| 59 | 98.486 | 0.207 |
| 60 | 98.613 | 0.207 |
| 61 | 98.739 | 0.207 |
| 62 | 98.865 | 0.207 |
| 63 | 98.991 | 0.207 |
| 64 | 99.118 | 0.207 |
| 65 | 99.244 | 0.207 |
| 66 | 99.370 | 0.207 |
| 67 | 99.490 | 0.196 |
| 68 | 99.564 | 0.122 |
| 69 | 99.630 | 0.108 |
| 70 | 99.695 | 0.108 |
| 71 | 99.761 | 0.108 |
| 72 | 99.827 | 0.108 |

| | | |
|---|---|---|
| 73 | 99.893 | 0.108 |
| 74 | 99.958 | 0.108 |
| 75 | 100.000 | 0.068 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6022 | 0.6022 |
| 2 | 0.7415 | 0.1392 |
| 3 | 0.8374 | 0.0959 |
| 4 | 0.9128 | 0.0755 |
| 5 | 0.9760 | 0.0632 |
| 6 | 1.0309 | 0.0549 |
| 7 | 1.0797 | 0.0488 |
| 8 | 1.1238 | 0.0441 |
| 9 | 1.1642 | 0.0404 |
| 10 | 1.2016 | 0.0374 |
| 11 | 1.2365 | 0.0349 |
| 12 | 1.2692 | 0.0327 |
| 13 | 1.2904 | 0.0212 |
| 14 | 1.3104 | 0.0200 |
| 15 | 1.3293 | 0.0189 |
| 16 | 1.3472 | 0.0179 |
| 17 | 1.3643 | 0.0170 |
| 18 | 1.3806 | 0.0163 |
| 19 | 1.3961 | 0.0156 |
| 20 | 1.4111 | 0.0149 |
| 21 | 1.4254 | 0.0144 |
| 22 | 1.4392 | 0.0138 |
| 23 | 1.4526 | 0.0133 |
| 24 | 1.4654 | 0.0129 |
| 25 | 1.4779 | 0.0125 |
| 26 | 1.4900 | 0.0121 |
| 27 | 1.5017 | 0.0117 |
| 28 | 1.5131 | 0.0114 |
| 29 | 1.5241 | 0.0111 |
| 30 | 1.5349 | 0.0108 |
| 31 | 1.5453 | 0.0105 |
| 32 | 1.5555 | 0.0102 |
| 33 | 1.5655 | 0.0100 |
| 34 | 1.5752 | 0.0097 |
| 35 | 1.5847 | 0.0095 |
| 36 | 1.5940 | 0.0093 |
| 37 | 1.6031 | 0.0091 |
| 38 | 1.6120 | 0.0089 |
| 39 | 1.6206 | 0.0087 |
| 40 | 1.6292 | 0.0085 |
| 41 | 1.6375 | 0.0083 |
| 42 | 1.6457 | 0.0082 |
| 43 | 1.6537 | 0.0080 |
| 44 | 1.6616 | 0.0079 |
| 45 | 1.6694 | 0.0077 |
| 46 | 1.6770 | 0.0076 |
| 47 | 1.6845 | 0.0075 |
| 48 | 1.6918 | 0.0074 |
| 49 | 1.6991 | 0.0072 |
| 50 | 1.7062 | 0.0071 |
| 51 | 1.7132 | 0.0070 |
| 52 | 1.7201 | 0.0069 |
| 53 | 1.7269 | 0.0068 |

| | | |
|---|---|---|
| 54 | 1.7336 | 0.0067 |
| 55 | 1.7402 | 0.0066 |
| 56 | 1.7467 | 0.0065 |
| 57 | 1.7531 | 0.0064 |
| 58 | 1.7594 | 0.0063 |
| 59 | 1.7656 | 0.0062 |
| 60 | 1.7718 | 0.0062 |
| 61 | 1.7779 | 0.0061 |
| 62 | 1.7839 | 0.0060 |
| 63 | 1.7898 | 0.0059 |
| 64 | 1.7956 | 0.0058 |
| 65 | 1.8014 | 0.0058 |
| 66 | 1.8071 | 0.0057 |
| 67 | 1.8127 | 0.0056 |
| 68 | 1.8183 | 0.0056 |
| 69 | 1.8238 | 0.0055 |
| 70 | 1.8292 | 0.0054 |
| 71 | 1.8346 | 0.0054 |
| 72 | 1.8399 | 0.0053 |
| 73 | 1.8448 | 0.0049 |
| 74 | 1.8496 | 0.0048 |
| 75 | 1.8544 | 0.0048 |
| 76 | 1.8591 | 0.0047 |
| 77 | 1.8638 | 0.0047 |
| 78 | 1.8684 | 0.0046 |
| 79 | 1.8729 | 0.0046 |
| 80 | 1.8775 | 0.0045 |
| 81 | 1.8819 | 0.0045 |
| 82 | 1.8864 | 0.0044 |
| 83 | 1.8908 | 0.0044 |
| 84 | 1.8951 | 0.0043 |
| 85 | 1.8994 | 0.0043 |
| 86 | 1.9037 | 0.0043 |
| 87 | 1.9079 | 0.0042 |
| 88 | 1.9121 | 0.0042 |
| 89 | 1.9162 | 0.0041 |
| 90 | 1.9203 | 0.0041 |
| 91 | 1.9244 | 0.0041 |
| 92 | 1.9284 | 0.0040 |
| 93 | 1.9324 | 0.0040 |
| 94 | 1.9364 | 0.0040 |
| 95 | 1.9403 | 0.0039 |
| 96 | 1.9442 | 0.0039 |
| 97 | 1.9481 | 0.0039 |
| 98 | 1.9519 | 0.0038 |
| 99 | 1.9557 | 0.0038 |
| 100 | 1.9595 | 0.0038 |
| 101 | 1.9632 | 0.0037 |
| 102 | 1.9670 | 0.0037 |
| 103 | 1.9706 | 0.0037 |
| 104 | 1.9743 | 0.0037 |
| 105 | 1.9779 | 0.0036 |
| 106 | 1.9815 | 0.0036 |
| 107 | 1.9851 | 0.0036 |
| 108 | 1.9886 | 0.0035 |
| 109 | 1.9921 | 0.0035 |
| 110 | 1.9956 | 0.0035 |
| 111 | 1.9991 | 0.0035 |
| 112 | 2.0025 | 0.0034 |

| | | |
|---|---|---|
| 113 | 2.0060 | 0.0034 |
| 114 | 2.0093 | 0.0034 |
| 115 | 2.0127 | 0.0034 |
| 116 | 2.0161 | 0.0033 |
| 117 | 2.0194 | 0.0033 |
| 118 | 2.0227 | 0.0033 |
| 119 | 2.0259 | 0.0033 |
| 120 | 2.0292 | 0.0033 |
| 121 | 2.0324 | 0.0032 |
| 122 | 2.0356 | 0.0032 |
| 123 | 2.0388 | 0.0032 |
| 124 | 2.0420 | 0.0032 |
| 125 | 2.0451 | 0.0031 |
| 126 | 2.0483 | 0.0031 |
| 127 | 2.0514 | 0.0031 |
| 128 | 2.0545 | 0.0031 |
| 129 | 2.0575 | 0.0031 |
| 130 | 2.0606 | 0.0030 |
| 131 | 2.0636 | 0.0030 |
| 132 | 2.0666 | 0.0030 |
| 133 | 2.0696 | 0.0030 |
| 134 | 2.0726 | 0.0030 |
| 135 | 2.0755 | 0.0030 |
| 136 | 2.0785 | 0.0029 |
| 137 | 2.0814 | 0.0029 |
| 138 | 2.0843 | 0.0029 |
| 139 | 2.0872 | 0.0029 |
| 140 | 2.0900 | 0.0029 |
| 141 | 2.0929 | 0.0029 |
| 142 | 2.0957 | 0.0028 |
| 143 | 2.0986 | 0.0028 |
| 144 | 2.1014 | 0.0028 |
| 145 | 2.1042 | 0.0028 |
| 146 | 2.1069 | 0.0028 |
| 147 | 2.1097 | 0.0028 |
| 148 | 2.1124 | 0.0027 |
| 149 | 2.1152 | 0.0027 |
| 150 | 2.1179 | 0.0027 |
| 151 | 2.1206 | 0.0027 |
| 152 | 2.1233 | 0.0027 |
| 153 | 2.1259 | 0.0027 |
| 154 | 2.1286 | 0.0027 |
| 155 | 2.1312 | 0.0026 |
| 156 | 2.1339 | 0.0026 |
| 157 | 2.1365 | 0.0026 |
| 158 | 2.1391 | 0.0026 |
| 159 | 2.1417 | 0.0026 |
| 160 | 2.1442 | 0.0026 |
| 161 | 2.1468 | 0.0026 |
| 162 | 2.1493 | 0.0025 |
| 163 | 2.1519 | 0.0025 |
| 164 | 2.1544 | 0.0025 |
| 165 | 2.1569 | 0.0025 |
| 166 | 2.1594 | 0.0025 |
| 167 | 2.1619 | 0.0025 |
| 168 | 2.1644 | 0.0025 |
| 169 | 2.1668 | 0.0025 |
| 170 | 2.1693 | 0.0025 |
| 171 | 2.1717 | 0.0024 |

| | | |
|---|---|---|
| 172 | 2.1742 | 0.0024 |
| 173 | 2.1766 | 0.0024 |
| 174 | 2.1790 | 0.0024 |
| 175 | 2.1814 | 0.0024 |
| 176 | 2.1838 | 0.0024 |
| 177 | 2.1861 | 0.0024 |
| 178 | 2.1885 | 0.0024 |
| 179 | 2.1909 | 0.0024 |
| 180 | 2.1932 | 0.0023 |
| 181 | 2.1955 | 0.0023 |
| 182 | 2.1978 | 0.0023 |
| 183 | 2.2002 | 0.0023 |
| 184 | 2.2025 | 0.0023 |
| 185 | 2.2047 | 0.0023 |
| 186 | 2.2070 | 0.0023 |
| 187 | 2.2093 | 0.0023 |
| 188 | 2.2116 | 0.0023 |
| 189 | 2.2138 | 0.0023 |
| 190 | 2.2160 | 0.0022 |
| 191 | 2.2183 | 0.0022 |
| 192 | 2.2205 | 0.0022 |
| 193 | 2.2227 | 0.0022 |
| 194 | 2.2249 | 0.0022 |
| 195 | 2.2271 | 0.0022 |
| 196 | 2.2293 | 0.0022 |
| 197 | 2.2315 | 0.0022 |
| 198 | 2.2336 | 0.0022 |
| 199 | 2.2358 | 0.0022 |
| 200 | 2.2379 | 0.0021 |
| 201 | 2.2401 | 0.0021 |
| 202 | 2.2422 | 0.0021 |
| 203 | 2.2443 | 0.0021 |
| 204 | 2.2465 | 0.0021 |
| 205 | 2.2486 | 0.0021 |
| 206 | 2.2507 | 0.0021 |
| 207 | 2.2527 | 0.0021 |
| 208 | 2.2548 | 0.0021 |
| 209 | 2.2569 | 0.0021 |
| 210 | 2.2590 | 0.0021 |
| 211 | 2.2610 | 0.0021 |
| 212 | 2.2631 | 0.0021 |
| 213 | 2.2651 | 0.0020 |
| 214 | 2.2672 | 0.0020 |
| 215 | 2.2692 | 0.0020 |
| 216 | 2.2712 | 0.0020 |
| 217 | 2.2732 | 0.0020 |
| 218 | 2.2752 | 0.0020 |
| 219 | 2.2772 | 0.0020 |
| 220 | 2.2792 | 0.0020 |
| 221 | 2.2812 | 0.0020 |
| 222 | 2.2832 | 0.0020 |
| 223 | 2.2851 | 0.0020 |
| 224 | 2.2871 | 0.0020 |
| 225 | 2.2890 | 0.0020 |
| 226 | 2.2910 | 0.0019 |
| 227 | 2.2929 | 0.0019 |
| 228 | 2.2949 | 0.0019 |
| 229 | 2.2968 | 0.0019 |
| 230 | 2.2987 | 0.0019 |

| | | |
|---|---|---|
| 231 | 2.3006 | 0.0019 |
| 232 | 2.3025 | 0.0019 |
| 233 | 2.3044 | 0.0019 |
| 234 | 2.3063 | 0.0019 |
| 235 | 2.3082 | 0.0019 |
| 236 | 2.3101 | 0.0019 |
| 237 | 2.3120 | 0.0019 |
| 238 | 2.3138 | 0.0019 |
| 239 | 2.3157 | 0.0019 |
| 240 | 2.3175 | 0.0019 |
| 241 | 2.3194 | 0.0018 |
| 242 | 2.3212 | 0.0018 |
| 243 | 2.3231 | 0.0018 |
| 244 | 2.3249 | 0.0018 |
| 245 | 2.3267 | 0.0018 |
| 246 | 2.3285 | 0.0018 |
| 247 | 2.3303 | 0.0018 |
| 248 | 2.3321 | 0.0018 |
| 249 | 2.3339 | 0.0018 |
| 250 | 2.3357 | 0.0018 |
| 251 | 2.3375 | 0.0018 |
| 252 | 2.3393 | 0.0018 |
| 253 | 2.3411 | 0.0018 |
| 254 | 2.3429 | 0.0018 |
| 255 | 2.3446 | 0.0018 |
| 256 | 2.3464 | 0.0018 |
| 257 | 2.3481 | 0.0018 |
| 258 | 2.3499 | 0.0017 |
| 259 | 2.3516 | 0.0017 |
| 260 | 2.3534 | 0.0017 |
| 261 | 2.3551 | 0.0017 |
| 262 | 2.3568 | 0.0017 |
| 263 | 2.3585 | 0.0017 |
| 264 | 2.3603 | 0.0017 |
| 265 | 2.3620 | 0.0017 |
| 266 | 2.3637 | 0.0017 |
| 267 | 2.3654 | 0.0017 |
| 268 | 2.3671 | 0.0017 |
| 269 | 2.3688 | 0.0017 |
| 270 | 2.3705 | 0.0017 |
| 271 | 2.3721 | 0.0017 |
| 272 | 2.3738 | 0.0017 |
| 273 | 2.3755 | 0.0017 |
| 274 | 2.3771 | 0.0017 |
| 275 | 2.3788 | 0.0017 |
| 276 | 2.3805 | 0.0017 |
| 277 | 2.3821 | 0.0017 |
| 278 | 2.3838 | 0.0016 |
| 279 | 2.3854 | 0.0016 |
| 280 | 2.3870 | 0.0016 |
| 281 | 2.3887 | 0.0016 |
| 282 | 2.3903 | 0.0016 |
| 283 | 2.3919 | 0.0016 |
| 284 | 2.3935 | 0.0016 |
| 285 | 2.3951 | 0.0016 |
| 286 | 2.3968 | 0.0016 |
| 287 | 2.3984 | 0.0016 |
| 288 | 2.4000 | 0.0016 |

---

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0016 | 0.0005 | 0.0011 |
| 2 | 0.0016 | 0.0005 | 0.0011 |
| 3 | 0.0016 | 0.0005 | 0.0012 |
| 4 | 0.0016 | 0.0005 | 0.0012 |
| 5 | 0.0016 | 0.0005 | 0.0012 |
| 6 | 0.0016 | 0.0005 | 0.0012 |
| 7 | 0.0016 | 0.0005 | 0.0012 |
| 8 | 0.0016 | 0.0005 | 0.0012 |
| 9 | 0.0017 | 0.0005 | 0.0012 |
| 10 | 0.0017 | 0.0005 | 0.0012 |
| 11 | 0.0017 | 0.0005 | 0.0012 |
| 12 | 0.0017 | 0.0005 | 0.0012 |
| 13 | 0.0017 | 0.0005 | 0.0012 |
| 14 | 0.0017 | 0.0005 | 0.0012 |
| 15 | 0.0017 | 0.0005 | 0.0012 |
| 16 | 0.0017 | 0.0005 | 0.0012 |
| 17 | 0.0017 | 0.0005 | 0.0012 |
| 18 | 0.0017 | 0.0005 | 0.0012 |
| 19 | 0.0017 | 0.0005 | 0.0012 |
| 20 | 0.0017 | 0.0005 | 0.0012 |
| 21 | 0.0017 | 0.0005 | 0.0013 |
| 22 | 0.0018 | 0.0005 | 0.0013 |
| 23 | 0.0018 | 0.0005 | 0.0013 |
| 24 | 0.0018 | 0.0005 | 0.0013 |
| 25 | 0.0018 | 0.0005 | 0.0013 |
| 26 | 0.0018 | 0.0005 | 0.0013 |
| 27 | 0.0018 | 0.0005 | 0.0013 |
| 28 | 0.0018 | 0.0005 | 0.0013 |
| 29 | 0.0018 | 0.0005 | 0.0013 |
| 30 | 0.0018 | 0.0005 | 0.0013 |
| 31 | 0.0018 | 0.0005 | 0.0013 |
| 32 | 0.0018 | 0.0005 | 0.0013 |
| 33 | 0.0019 | 0.0005 | 0.0013 |
| 34 | 0.0019 | 0.0005 | 0.0013 |
| 35 | 0.0019 | 0.0005 | 0.0013 |
| 36 | 0.0019 | 0.0005 | 0.0013 |
| 37 | 0.0019 | 0.0005 | 0.0014 |
| 38 | 0.0019 | 0.0005 | 0.0014 |
| 39 | 0.0019 | 0.0005 | 0.0014 |
| 40 | 0.0019 | 0.0005 | 0.0014 |
| 41 | 0.0019 | 0.0005 | 0.0014 |
| 42 | 0.0019 | 0.0006 | 0.0014 |
| 43 | 0.0020 | 0.0006 | 0.0014 |
| 44 | 0.0020 | 0.0006 | 0.0014 |
| 45 | 0.0020 | 0.0006 | 0.0014 |
| 46 | 0.0020 | 0.0006 | 0.0014 |
| 47 | 0.0020 | 0.0006 | 0.0014 |
| 48 | 0.0020 | 0.0006 | 0.0014 |
| 49 | 0.0020 | 0.0006 | 0.0014 |
| 50 | 0.0020 | 0.0006 | 0.0015 |
| 51 | 0.0020 | 0.0006 | 0.0015 |
| 52 | 0.0021 | 0.0006 | 0.0015 |
| 53 | 0.0021 | 0.0006 | 0.0015 |
| 54 | 0.0021 | 0.0006 | 0.0015 |
| 55 | 0.0021 | 0.0006 | 0.0015 |

| | | | |
|---|---|---|---|
| 56 | 0.0021 | 0.0006 | 0.0015 |
| 57 | 0.0021 | 0.0006 | 0.0015 |
| 58 | 0.0021 | 0.0006 | 0.0015 |
| 59 | 0.0021 | 0.0006 | 0.0015 |
| 60 | 0.0021 | 0.0006 | 0.0015 |
| 61 | 0.0022 | 0.0006 | 0.0016 |
| 62 | 0.0022 | 0.0006 | 0.0016 |
| 63 | 0.0022 | 0.0006 | 0.0016 |
| 64 | 0.0022 | 0.0006 | 0.0016 |
| 65 | 0.0022 | 0.0006 | 0.0016 |
| 66 | 0.0022 | 0.0006 | 0.0016 |
| 67 | 0.0023 | 0.0006 | 0.0016 |
| 68 | 0.0023 | 0.0006 | 0.0016 |
| 69 | 0.0023 | 0.0006 | 0.0016 |
| 70 | 0.0023 | 0.0007 | 0.0016 |
| 71 | 0.0023 | 0.0007 | 0.0017 |
| 72 | 0.0023 | 0.0007 | 0.0017 |
| 73 | 0.0023 | 0.0007 | 0.0017 |
| 74 | 0.0024 | 0.0007 | 0.0017 |
| 75 | 0.0024 | 0.0007 | 0.0017 |
| 76 | 0.0024 | 0.0007 | 0.0017 |
| 77 | 0.0024 | 0.0007 | 0.0017 |
| 78 | 0.0024 | 0.0007 | 0.0017 |
| 79 | 0.0024 | 0.0007 | 0.0017 |
| 80 | 0.0025 | 0.0007 | 0.0018 |
| 81 | 0.0025 | 0.0007 | 0.0018 |
| 82 | 0.0025 | 0.0007 | 0.0018 |
| 83 | 0.0025 | 0.0007 | 0.0018 |
| 84 | 0.0025 | 0.0007 | 0.0018 |
| 85 | 0.0025 | 0.0007 | 0.0018 |
| 86 | 0.0026 | 0.0007 | 0.0018 |
| 87 | 0.0026 | 0.0007 | 0.0019 |
| 88 | 0.0026 | 0.0007 | 0.0019 |
| 89 | 0.0026 | 0.0007 | 0.0019 |
| 90 | 0.0026 | 0.0008 | 0.0019 |
| 91 | 0.0027 | 0.0008 | 0.0019 |
| 92 | 0.0027 | 0.0008 | 0.0019 |
| 93 | 0.0027 | 0.0008 | 0.0019 |
| 94 | 0.0027 | 0.0008 | 0.0020 |
| 95 | 0.0028 | 0.0008 | 0.0020 |
| 96 | 0.0028 | 0.0008 | 0.0020 |
| 97 | 0.0028 | 0.0008 | 0.0020 |
| 98 | 0.0028 | 0.0008 | 0.0020 |
| 99 | 0.0029 | 0.0008 | 0.0020 |
| 100 | 0.0029 | 0.0008 | 0.0021 |
| 101 | 0.0029 | 0.0008 | 0.0021 |
| 102 | 0.0029 | 0.0008 | 0.0021 |
| 103 | 0.0030 | 0.0008 | 0.0021 |
| 104 | 0.0030 | 0.0008 | 0.0021 |
| 105 | 0.0030 | 0.0009 | 0.0022 |
| 106 | 0.0030 | 0.0009 | 0.0022 |
| 107 | 0.0031 | 0.0009 | 0.0022 |
| 108 | 0.0031 | 0.0009 | 0.0022 |
| 109 | 0.0031 | 0.0009 | 0.0022 |
| 110 | 0.0031 | 0.0009 | 0.0023 |
| 111 | 0.0032 | 0.0009 | 0.0023 |
| 112 | 0.0032 | 0.0009 | 0.0023 |
| 113 | 0.0033 | 0.0009 | 0.0023 |
| 114 | 0.0033 | 0.0009 | 0.0023 |

| | | | |
|---|---|---|---|
| 115 | 0.0033 | 0.0009 | 0.0024 |
| 116 | 0.0033 | 0.0009 | 0.0024 |
| 117 | 0.0034 | 0.0010 | 0.0024 |
| 118 | 0.0034 | 0.0010 | 0.0024 |
| 119 | 0.0035 | 0.0010 | 0.0025 |
| 120 | 0.0035 | 0.0010 | 0.0025 |
| 121 | 0.0035 | 0.0010 | 0.0025 |
| 122 | 0.0036 | 0.0010 | 0.0026 |
| 123 | 0.0036 | 0.0010 | 0.0026 |
| 124 | 0.0037 | 0.0010 | 0.0026 |
| 125 | 0.0037 | 0.0011 | 0.0027 |
| 126 | 0.0037 | 0.0011 | 0.0027 |
| 127 | 0.0038 | 0.0011 | 0.0027 |
| 128 | 0.0038 | 0.0011 | 0.0027 |
| 129 | 0.0039 | 0.0011 | 0.0028 |
| 130 | 0.0039 | 0.0011 | 0.0028 |
| 131 | 0.0040 | 0.0011 | 0.0029 |
| 132 | 0.0040 | 0.0011 | 0.0029 |
| 133 | 0.0041 | 0.0012 | 0.0029 |
| 134 | 0.0041 | 0.0012 | 0.0030 |
| 135 | 0.0042 | 0.0012 | 0.0030 |
| 136 | 0.0043 | 0.0012 | 0.0031 |
| 137 | 0.0043 | 0.0012 | 0.0031 |
| 138 | 0.0044 | 0.0012 | 0.0031 |
| 139 | 0.0045 | 0.0013 | 0.0032 |
| 140 | 0.0045 | 0.0013 | 0.0032 |
| 141 | 0.0046 | 0.0013 | 0.0033 |
| 142 | 0.0047 | 0.0013 | 0.0033 |
| 143 | 0.0048 | 0.0014 | 0.0034 |
| 144 | 0.0048 | 0.0014 | 0.0034 |
| 145 | 0.0053 | 0.0015 | 0.0038 |
| 146 | 0.0054 | 0.0015 | 0.0039 |
| 147 | 0.0055 | 0.0016 | 0.0039 |
| 148 | 0.0056 | 0.0016 | 0.0040 |
| 149 | 0.0057 | 0.0016 | 0.0041 |
| 150 | 0.0058 | 0.0016 | 0.0041 |
| 151 | 0.0059 | 0.0017 | 0.0042 |
| 152 | 0.0060 | 0.0017 | 0.0043 |
| 153 | 0.0062 | 0.0017 | 0.0044 |
| 154 | 0.0062 | 0.0018 | 0.0045 |
| 155 | 0.0064 | 0.0018 | 0.0046 |
| 156 | 0.0065 | 0.0018 | 0.0047 |
| 157 | 0.0067 | 0.0019 | 0.0048 |
| 158 | 0.0068 | 0.0019 | 0.0049 |
| 159 | 0.0070 | 0.0020 | 0.0050 |
| 160 | 0.0071 | 0.0020 | 0.0051 |
| 161 | 0.0074 | 0.0021 | 0.0053 |
| 162 | 0.0075 | 0.0021 | 0.0054 |
| 163 | 0.0077 | 0.0022 | 0.0055 |
| 164 | 0.0079 | 0.0022 | 0.0056 |
| 165 | 0.0082 | 0.0023 | 0.0059 |
| 166 | 0.0083 | 0.0024 | 0.0060 |
| 167 | 0.0087 | 0.0025 | 0.0062 |
| 168 | 0.0089 | 0.0025 | 0.0064 |
| 169 | 0.0093 | 0.0026 | 0.0067 |
| 170 | 0.0095 | 0.0027 | 0.0068 |
| 171 | 0.0100 | 0.0028 | 0.0071 |
| 172 | 0.0102 | 0.0029 | 0.0073 |
| 173 | 0.0108 | 0.0031 | 0.0077 |

| | | | |
|---|---|---|---|
| 174 | 0.0111 | 0.0031 | 0.0079 |
| 175 | 0.0117 | 0.0033 | 0.0084 |
| 176 | 0.0121 | 0.0034 | 0.0086 |
| 177 | 0.0129 | 0.0037 | 0.0092 |
| 178 | 0.0133 | 0.0038 | 0.0095 |
| 179 | 0.0144 | 0.0041 | 0.0103 |
| 180 | 0.0149 | 0.0042 | 0.0107 |
| 181 | 0.0163 | 0.0046 | 0.0117 |
| 182 | 0.0170 | 0.0048 | 0.0122 |
| 183 | 0.0189 | 0.0054 | 0.0135 |
| 184 | 0.0200 | 0.0057 | 0.0143 |
| 185 | 0.0327 | 0.0093 | 0.0234 |
| 186 | 0.0349 | 0.0099 | 0.0250 |
| 187 | 0.0404 | 0.0105 | 0.0299 |
| 188 | 0.0441 | 0.0105 | 0.0336 |
| 189 | 0.0549 | 0.0105 | 0.0444 |
| 190 | 0.0632 | 0.0105 | 0.0527 |
| 191 | 0.0959 | 0.0105 | 0.0854 |
| 192 | 0.1392 | 0.0105 | 0.1287 |
| 193 | 0.6022 | 0.0105 | 0.5917 |
| 194 | 0.0755 | 0.0105 | 0.0650 |
| 195 | 0.0488 | 0.0105 | 0.0383 |
| 196 | 0.0374 | 0.0105 | 0.0269 |
| 197 | 0.0212 | 0.0060 | 0.0152 |
| 198 | 0.0179 | 0.0051 | 0.0128 |
| 199 | 0.0156 | 0.0044 | 0.0111 |
| 200 | 0.0138 | 0.0039 | 0.0099 |
| 201 | 0.0125 | 0.0035 | 0.0089 |
| 202 | 0.0114 | 0.0032 | 0.0081 |
| 203 | 0.0105 | 0.0030 | 0.0075 |
| 204 | 0.0097 | 0.0028 | 0.0070 |
| 205 | 0.0091 | 0.0026 | 0.0065 |
| 206 | 0.0085 | 0.0024 | 0.0061 |
| 207 | 0.0080 | 0.0023 | 0.0058 |
| 208 | 0.0076 | 0.0022 | 0.0055 |
| 209 | 0.0072 | 0.0021 | 0.0052 |
| 210 | 0.0069 | 0.0020 | 0.0049 |
| 211 | 0.0066 | 0.0019 | 0.0047 |
| 212 | 0.0063 | 0.0018 | 0.0045 |
| 213 | 0.0061 | 0.0017 | 0.0043 |
| 214 | 0.0058 | 0.0017 | 0.0042 |
| 215 | 0.0056 | 0.0016 | 0.0040 |
| 216 | 0.0054 | 0.0015 | 0.0039 |
| 217 | 0.0049 | 0.0014 | 0.0035 |
| 218 | 0.0047 | 0.0013 | 0.0034 |
| 219 | 0.0046 | 0.0013 | 0.0033 |
| 220 | 0.0044 | 0.0013 | 0.0032 |
| 221 | 0.0043 | 0.0012 | 0.0031 |
| 222 | 0.0042 | 0.0012 | 0.0030 |
| 223 | 0.0041 | 0.0012 | 0.0029 |
| 224 | 0.0040 | 0.0011 | 0.0028 |
| 225 | 0.0039 | 0.0011 | 0.0028 |
| 226 | 0.0038 | 0.0011 | 0.0027 |
| 227 | 0.0037 | 0.0010 | 0.0026 |
| 228 | 0.0036 | 0.0010 | 0.0026 |
| 229 | 0.0035 | 0.0010 | 0.0025 |
| 230 | 0.0034 | 0.0010 | 0.0025 |
| 231 | 0.0034 | 0.0010 | 0.0024 |
| 232 | 0.0033 | 0.0009 | 0.0024 |

| | | | |
|---|---|---|---|
| 233 | 0.0032 | 0.0009 | 0.0023 |
| 234 | 0.0032 | 0.0009 | 0.0023 |
| 235 | 0.0031 | 0.0009 | 0.0022 |
| 236 | 0.0030 | 0.0009 | 0.0022 |
| 237 | 0.0030 | 0.0008 | 0.0021 |
| 238 | 0.0029 | 0.0008 | 0.0021 |
| 239 | 0.0029 | 0.0008 | 0.0021 |
| 240 | 0.0028 | 0.0008 | 0.0020 |
| 241 | 0.0028 | 0.0008 | 0.0020 |
| 242 | 0.0027 | 0.0008 | 0.0020 |
| 243 | 0.0027 | 0.0008 | 0.0019 |
| 244 | 0.0027 | 0.0008 | 0.0019 |
| 245 | 0.0026 | 0.0007 | 0.0019 |
| 246 | 0.0026 | 0.0007 | 0.0018 |
| 247 | 0.0025 | 0.0007 | 0.0018 |
| 248 | 0.0025 | 0.0007 | 0.0018 |
| 249 | 0.0025 | 0.0007 | 0.0018 |
| 250 | 0.0024 | 0.0007 | 0.0017 |
| 251 | 0.0024 | 0.0007 | 0.0017 |
| 252 | 0.0024 | 0.0007 | 0.0017 |
| 253 | 0.0023 | 0.0007 | 0.0017 |
| 254 | 0.0023 | 0.0007 | 0.0016 |
| 255 | 0.0023 | 0.0006 | 0.0016 |
| 256 | 0.0022 | 0.0006 | 0.0016 |
| 257 | 0.0022 | 0.0006 | 0.0016 |
| 258 | 0.0022 | 0.0006 | 0.0016 |
| 259 | 0.0022 | 0.0006 | 0.0015 |
| 260 | 0.0021 | 0.0006 | 0.0015 |
| 261 | 0.0021 | 0.0006 | 0.0015 |
| 262 | 0.0021 | 0.0006 | 0.0015 |
| 263 | 0.0021 | 0.0006 | 0.0015 |
| 264 | 0.0020 | 0.0006 | 0.0015 |
| 265 | 0.0020 | 0.0006 | 0.0014 |
| 266 | 0.0020 | 0.0006 | 0.0014 |
| 267 | 0.0020 | 0.0006 | 0.0014 |
| 268 | 0.0019 | 0.0006 | 0.0014 |
| 269 | 0.0019 | 0.0005 | 0.0014 |
| 270 | 0.0019 | 0.0005 | 0.0014 |
| 271 | 0.0019 | 0.0005 | 0.0014 |
| 272 | 0.0019 | 0.0005 | 0.0013 |
| 273 | 0.0018 | 0.0005 | 0.0013 |
| 274 | 0.0018 | 0.0005 | 0.0013 |
| 275 | 0.0018 | 0.0005 | 0.0013 |
| 276 | 0.0018 | 0.0005 | 0.0013 |
| 277 | 0.0018 | 0.0005 | 0.0013 |
| 278 | 0.0018 | 0.0005 | 0.0013 |
| 279 | 0.0017 | 0.0005 | 0.0012 |
| 280 | 0.0017 | 0.0005 | 0.0012 |
| 281 | 0.0017 | 0.0005 | 0.0012 |
| 282 | 0.0017 | 0.0005 | 0.0012 |
| 283 | 0.0017 | 0.0005 | 0.0012 |
| 284 | 0.0017 | 0.0005 | 0.0012 |
| 285 | 0.0017 | 0.0005 | 0.0012 |
| 286 | 0.0016 | 0.0005 | 0.0012 |
| 287 | 0.0016 | 0.0005 | 0.0012 |
| 288 | 0.0016 | 0.0005 | 0.0012 |

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Total soil rain loss = 0.45(In)

Total effective rainfall = 1.95(In)
Peak flow rate in flood hydrograph = 15.91(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0000 | 0.00 | Q | | | | |
| 0+15 | 0.0001 | 0.01 | Q | | | | |
| 0+20 | 0.0002 | 0.01 | Q | | | | |
| 0+25 | 0.0003 | 0.02 | Q | | | | |
| 0+30 | 0.0005 | 0.03 | Q | | | | |
| 0+35 | 0.0008 | 0.05 | Q | | | | |
| 0+40 | 0.0013 | 0.07 | Q | | | | |
| 0+45 | 0.0018 | 0.08 | Q | | | | |
| 0+50 | 0.0025 | 0.09 | Q | | | | |
| 0+55 | 0.0032 | 0.11 | Q | | | | |
| 1+ 0 | 0.0040 | 0.11 | Q | | | | |
| 1+ 5 | 0.0048 | 0.12 | Q | | | | |
| 1+10 | 0.0057 | 0.13 | Q | | | | |
| 1+15 | 0.0066 | 0.13 | Q | | | | |
| 1+20 | 0.0076 | 0.14 | Q | | | | |
| 1+25 | 0.0086 | 0.14 | Q | | | | |
| 1+30 | 0.0096 | 0.15 | Q | | | | |
| 1+35 | 0.0106 | 0.15 | Q | | | | |
| 1+40 | 0.0117 | 0.16 | Q | | | | |
| 1+45 | 0.0128 | 0.16 | Q | | | | |
| 1+50 | 0.0139 | 0.16 | Q | | | | |
| 1+55 | 0.0150 | 0.16 | Q | | | | |
| 2+ 0 | 0.0162 | 0.17 | Q | | | | |
| 2+ 5 | 0.0173 | 0.17 | Q | | | | |
| 2+10 | 0.0185 | 0.17 | Q | | | | |
| 2+15 | 0.0197 | 0.18 | Q | | | | |
| 2+20 | 0.0210 | 0.18 | Q | | | | |
| 2+25 | 0.0222 | 0.18 | Q | | | | |
| 2+30 | 0.0235 | 0.18 | Q | | | | |
| 2+35 | 0.0247 | 0.18 | Q | | | | |
| 2+40 | 0.0260 | 0.19 | Q | | | | |
| 2+45 | 0.0273 | 0.19 | Q | | | | |
| 2+50 | 0.0286 | 0.19 | Q | | | | |
| 2+55 | 0.0299 | 0.19 | Q | | | | |
| 3+ 0 | 0.0313 | 0.19 | Q | | | | |
| 3+ 5 | 0.0326 | 0.20 | Q | | | | |
| 3+10 | 0.0340 | 0.20 | Q | | | | |
| 3+15 | 0.0354 | 0.20 | Q | | | | |
| 3+20 | 0.0367 | 0.20 | Q | | | | |
| 3+25 | 0.0381 | 0.20 | Q | | | | |
| 3+30 | 0.0396 | 0.20 | Q | | | | |
| 3+35 | 0.0410 | 0.21 | Q | | | | |
| 3+40 | 0.0424 | 0.21 | Q | | | | |
| 3+45 | 0.0438 | 0.21 | Q | | | | |
| 3+50 | 0.0453 | 0.21 | Q | | | | |
| 3+55 | 0.0468 | 0.21 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4+ 0 | 0.0482 | 0.21 | Q | | | | |
| 4+ 5 | 0.0497 | 0.22 | Q | | | | |
| 4+10 | 0.0512 | 0.22 | Q | | | | |
| 4+15 | 0.0527 | 0.22 | Q | | | | |
| 4+20 | 0.0542 | 0.22 | Q | | | | |
| 4+25 | 0.0558 | 0.22 | QV | | | | |
| 4+30 | 0.0573 | 0.22 | QV | | | | |
| 4+35 | 0.0588 | 0.22 | QV | | | | |
| 4+40 | 0.0604 | 0.23 | QV | | | | |
| 4+45 | 0.0619 | 0.23 | QV | | | | |
| 4+50 | 0.0635 | 0.23 | QV | | | | |
| 4+55 | 0.0651 | 0.23 | QV | | | | |
| 5+ 0 | 0.0667 | 0.23 | QV | | | | |
| 5+ 5 | 0.0683 | 0.23 | QV | | | | |
| 5+10 | 0.0699 | 0.23 | QV | | | | |
| 5+15 | 0.0715 | 0.24 | QV | | | | |
| 5+20 | 0.0732 | 0.24 | QV | | | | |
| 5+25 | 0.0748 | 0.24 | QV | | | | |
| 5+30 | 0.0765 | 0.24 | QV | | | | |
| 5+35 | 0.0782 | 0.24 | QV | | | | |
| 5+40 | 0.0798 | 0.24 | QV | | | | |
| 5+45 | 0.0815 | 0.25 | QV | | | | |
| 5+50 | 0.0832 | 0.25 | QV | | | | |
| 5+55 | 0.0850 | 0.25 | QV | | | | |
| 6+ 0 | 0.0867 | 0.25 | QV | | | | |
| 6+ 5 | 0.0884 | 0.25 | QV | | | | |
| 6+10 | 0.0902 | 0.25 | QV | | | | |
| 6+15 | 0.0919 | 0.26 | QV | | | | |
| 6+20 | 0.0937 | 0.26 | QV | | | | |
| 6+25 | 0.0955 | 0.26 | QV | | | | |
| 6+30 | 0.0973 | 0.26 | QV | | | | |
| 6+35 | 0.0991 | 0.26 | QV | | | | |
| 6+40 | 0.1009 | 0.26 | QV | | | | |
| 6+45 | 0.1027 | 0.27 | QV | | | | |
| 6+50 | 0.1046 | 0.27 | QV | | | | |
| 6+55 | 0.1064 | 0.27 | QV | | | | |
| 7+ 0 | 0.1083 | 0.27 | QV | | | | |
| 7+ 5 | 0.1102 | 0.27 | QV | | | | |
| 7+10 | 0.1121 | 0.27 | Q V | | | | |
| 7+15 | 0.1140 | 0.28 | Q V | | | | |
| 7+20 | 0.1159 | 0.28 | Q V | | | | |
| 7+25 | 0.1178 | 0.28 | Q V | | | | |
| 7+30 | 0.1198 | 0.28 | Q V | | | | |
| 7+35 | 0.1217 | 0.28 | Q V | | | | |
| 7+40 | 0.1237 | 0.29 | Q V | | | | |
| 7+45 | 0.1257 | 0.29 | Q V | | | | |
| 7+50 | 0.1277 | 0.29 | Q V | | | | |
| 7+55 | 0.1297 | 0.29 | Q V | | | | |
| 8+ 0 | 0.1317 | 0.29 | Q V | | | | |
| 8+ 5 | 0.1338 | 0.30 | Q V | | | | |
| 8+10 | 0.1358 | 0.30 | Q V | | | | |
| 8+15 | 0.1379 | 0.30 | Q V | | | | |
| 8+20 | 0.1400 | 0.30 | Q V | | | | |
| 8+25 | 0.1421 | 0.31 | Q V | | | | |
| 8+30 | 0.1442 | 0.31 | Q V | | | | |
| 8+35 | 0.1464 | 0.31 | Q V | | | | |
| 8+40 | 0.1485 | 0.31 | Q V | | | | |
| 8+45 | 0.1507 | 0.32 | Q V | | | | |
| 8+50 | 0.1529 | 0.32 | Q V | | | | |

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 8+55      0.1551      0.32  Q V       |          |          |          |
 9+ 0      0.1573      0.32  Q V       |          |          |          |
 9+ 5      0.1596      0.33  Q V       |          |          |          |
 9+10      0.1619      0.33  Q V       |          |          |          |
 9+15      0.1641      0.33  Q V       |          |          |          |
 9+20      0.1665      0.34  Q  V      |          |          |          |
 9+25      0.1688      0.34  Q  V      |          |          |          |
 9+30      0.1711      0.34  Q  V      |          |          |          |
 9+35      0.1735      0.34  Q  V      |          |          |          |
 9+40      0.1759      0.35  Q  V      |          |          |          |
 9+45      0.1783      0.35  Q  V      |          |          |          |
 9+50      0.1807      0.35  Q  V      |          |          |          |
 9+55      0.1832      0.36  Q  V      |          |          |          |
10+ 0      0.1857      0.36  Q  V      |          |          |          |
10+ 5      0.1882      0.36  Q  V      |          |          |          |
10+10      0.1907      0.37  Q  V      |          |          |          |
10+15      0.1933      0.37  Q  V      |          |          |          |
10+20      0.1959      0.37  Q  V      |          |          |          |
10+25      0.1985      0.38  Q  V      |          |          |          |
10+30      0.2011      0.38  Q  V      |          |          |          |
10+35      0.2038      0.39  Q  V      |          |          |          |
10+40      0.2065      0.39  Q  V      |          |          |          |
10+45      0.2092      0.39  Q  V      |          |          |          |
10+50      0.2119      0.40  Q  V      |          |          |          |
10+55      0.2147      0.40  Q  V      |          |          |          |
11+ 0      0.2175      0.41  Q  V      |          |          |          |
11+ 5      0.2204      0.41  Q  V      |          |          |          |
11+10      0.2232      0.42  Q   V     |          |          |          |
11+15      0.2261      0.42  Q   V     |          |          |          |
11+20      0.2291      0.43  Q   V     |          |          |          |
11+25      0.2321      0.43  Q   V     |          |          |          |
11+30      0.2351      0.44  Q   V     |          |          |          |
11+35      0.2381      0.44  Q   V     |          |          |          |
11+40      0.2412      0.45  Q   V     |          |          |          |
11+45      0.2443      0.45  Q   V     |          |          |          |
11+50      0.2475      0.46  Q   V     |          |          |          |
11+55      0.2507      0.47  Q   V     |          |          |          |
12+ 0      0.2540      0.47  Q   V     |          |          |          |
12+ 5      0.2573      0.48  Q   V     |          |          |          |
12+10      0.2606      0.49  Q   V     |          |          |          |
12+15      0.2640      0.49  Q   V     |          |          |          |
12+20      0.2675      0.50  |Q  V     |          |          |          |
12+25      0.2710      0.51  |Q  V     |          |          |          |
12+30      0.2746      0.52  |Q  V     |          |          |          |
12+35      0.2783      0.53  |Q   V    |          |          |          |
12+40      0.2821      0.55  |Q   V    |          |          |          |
12+45      0.2859      0.56  |Q   V    |          |          |          |
12+50      0.2899      0.57  |Q   V    |          |          |          |
12+55      0.2939      0.58  |Q   V    |          |          |          |
13+ 0      0.2980      0.60  |Q   V    |          |          |          |
13+ 5      0.3022      0.61  |Q   V    |          |          |          |
13+10      0.3064      0.62  |Q   V    |          |          |          |
13+15      0.3108      0.63  |Q   V    |          |          |          |
13+20      0.3152      0.64  |Q   V    |          |          |          |
13+25      0.3197      0.66  |Q   V    |          |          |          |
13+30      0.3244      0.67  |Q   V    |          |          |          |
13+35      0.3291      0.69  |Q   V    |          |          |          |
13+40      0.3339      0.70  |Q    V   |          |          |          |
13+45      0.3388      0.72  |Q    V   |          |          |          |
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13+50       0.3439      0.73  |Q    V   |          |          |          |
13+55       0.3490      0.75  |Q    V   |          |          |          |
14+ 0       0.3543      0.77  |Q    V   |          |          |          |
14+ 5       0.3597      0.78  |Q    V   |          |          |          |
14+10       0.3652      0.80  |Q    V   |          |          |          |
14+15       0.3709      0.82  |Q    V   |          |          |          |
14+20       0.3767      0.85  |Q    V   |          |          |          |
14+25       0.3827      0.87  |Q    V   |          |          |          |
14+30       0.3889      0.89  |Q     V  |          |          |          |
14+35       0.3952      0.92  |Q     V  |          |          |          |
14+40       0.4018      0.95  |Q     V  |          |          |          |
14+45       0.4085      0.98  |Q     V  |          |          |          |
14+50       0.4155      1.01  | Q    V  |          |          |          |
14+55       0.4227      1.05  | Q    V  |          |          |          |
15+ 0       0.4301      1.09  | Q    V  |          |          |          |
15+ 5       0.4379      1.13  | Q    V  |          |          |          |
15+10       0.4460      1.17  | Q     V |          |          |          |
15+15       0.4544      1.22  | Q     V |          |          |          |
15+20       0.4632      1.28  | Q     V |          |          |          |
15+25       0.4725      1.35  | Q     V |          |          |          |
15+30       0.4824      1.43  | Q     V |          |          |          |
15+35       0.4930      1.54  |  Q    V |          |          |          |
15+40       0.5045      1.67  |  Q     V|          |          |          |
15+45       0.5172      1.84  |  Q     V|          |          |          |
15+50       0.5315      2.07  |   Q    V|          |          |          |
15+55       0.5481      2.41  |   Q    V|          |          |          |
16+ 0       0.5679      2.88  |    Q    V          |          |          |
16+ 5       0.5943      3.83  |      Q  V          |          |          |
16+10       0.6292      5.07  |         QV         |          |          |
16+15       0.6728      6.34  |          | Q       |          |          |
16+20       0.7259      7.70  |          |  V Q    |          |          |
16+25       0.7901      9.32  |          |   V   Q |          |          |
16+30       0.8736     12.13  |          |    V    |   Q      |          |
16+35       0.9780     15.16  |          |      V  |          Q          |
16+40       1.0876     15.91  |          |        V|          |Q         |
16+45       1.1842     14.03  |          |         |V      Q  |          |
16+50       1.2658     11.85  |          |         | VQ       |          |
16+55       1.3360     10.19  |          |         Q   V      |          |
17+ 0       1.3949      8.56  |          |       Q |    V     |          |
17+ 5       1.4457      7.37  |          |   Q     |     V    |          |
17+10       1.4907      6.53  |          |  Q      |     V    |          |
17+15       1.5313      5.90  |          |Q        |      V   |          |
17+20       1.5686      5.41  |          Q         |       V  |          |
17+25       1.6021      4.87  |         Q|         |        V|          |
17+30       1.6329      4.47  |        Q |         |        V|          |
17+35       1.6618      4.19  |        Q |         |         V          |
17+40       1.6882      3.83  |       Q  |         |         V          |
17+45       1.7125      3.52  |       Q  |         |         |V         |
17+50       1.7355      3.34  |      Q   |         |         |V         |
17+55       1.7566      3.07  |      Q   |         |         |V         |
18+ 0       1.7769      2.94  |    Q     |         |         | V        |
18+ 5       1.7960      2.78  |    Q     |         |         | V        |
18+10       1.8143      2.65  |    Q     |         |         | V        |
18+15       1.8315      2.51  |    Q     |         |         |  V       |
18+20       1.8476      2.33  |   Q      |         |         |  V       |
18+25       1.8629      2.22  |   Q      |         |         |  V       |
18+30       1.8767      2.01  |   Q      |         |         |  V       |
18+35       1.8899      1.92  |  Q       |         |         |   V      |
18+40       1.9026      1.84  |  Q       |         |         |   V      |
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18+45       1.9147      1.77  |  Q      |         |         |   V     |
18+50       1.9264      1.69  |  Q      |         |         |   V     |
18+55       1.9374      1.60  |  Q      |         |         |    V    |
19+ 0       1.9481      1.55  |  Q      |         |         |    V    |
19+ 5       1.9582      1.48  | Q       |         |         |    V    |
19+10       1.9680      1.42  | Q       |         |         |    V    |
19+15       1.9772      1.34  | Q       |         |         |    V    |
19+20       1.9859      1.26  | Q       |         |         |    V    |
19+25       1.9943      1.22  | Q       |         |         |     V   |
19+30       2.0025      1.19  | Q       |         |         |     V   |
19+35       2.0104      1.15  | Q       |         |         |     V   |
19+40       2.0178      1.07  | Q       |         |         |     V   |
19+45       2.0248      1.02  | Q       |         |         |     V   |
19+50       2.0317      0.99  |Q        |         |         |     V   |
19+55       2.0383      0.97  |Q        |         |         |     V   |
20+ 0       2.0447      0.93  |Q        |         |         |      V  |
20+ 5       2.0505      0.85  |Q        |         |         |      V  |
20+10       2.0561      0.81  |Q        |         |         |      V  |
20+15       2.0615      0.79  |Q        |         |         |      V  |
20+20       2.0668      0.76  |Q        |         |         |      V  |
20+25       2.0717      0.72  |Q        |         |         |      V  |
20+30       2.0762      0.65  |Q        |         |         |      V  |
20+35       2.0806      0.63  |Q        |         |         |      V  |
20+40       2.0848      0.62  |Q        |         |         |      V  |
20+45       2.0891      0.61  |Q        |         |         |      V  |
20+50       2.0933      0.61  |Q        |         |         |      V  |
20+55       2.0975      0.62  |Q        |         |         |      V  |
21+ 0       2.1017      0.61  |Q        |         |         |       V |
21+ 5       2.1058      0.60  |Q        |         |         |       V |
21+10       2.1099      0.59  |Q        |         |         |       V |
21+15       2.1139      0.58  |Q        |         |         |       V |
21+20       2.1178      0.57  |Q        |         |         |       V |
21+25       2.1216      0.56  |Q        |         |         |       V |
21+30       2.1253      0.54  |Q        |         |         |       V |
21+35       2.1289      0.52  |Q        |         |         |       V |
21+40       2.1321      0.46  Q        |         |         |       V |
21+45       2.1352      0.44  Q        |         |         |       V |
21+50       2.1382      0.43  Q        |         |         |       V |
21+55       2.1411      0.42  Q        |         |         |       V |
22+ 0       2.1439      0.41  Q        |         |         |       V |
22+ 5       2.1467      0.40  Q        |         |         |       V |
22+10       2.1493      0.39  Q        |         |         |       V |
22+15       2.1517      0.35  Q        |         |         |       V |
22+20       2.1538      0.30  Q        |         |         |       V |
22+25       2.1558      0.29  Q        |         |         |        V|
22+30       2.1578      0.28  Q        |         |         |        V|
22+35       2.1597      0.28  Q        |         |         |        V|
22+40       2.1616      0.27  Q        |         |         |        V|
22+45       2.1634      0.27  Q        |         |         |        V|
22+50       2.1653      0.27  Q        |         |         |        V|
22+55       2.1671      0.26  Q        |         |         |        V|
23+ 0       2.1688      0.26  Q        |         |         |        V|
23+ 5       2.1706      0.25  Q        |         |         |        V|
23+10       2.1723      0.25  Q        |         |         |        V|
23+15       2.1740      0.25  Q        |         |         |        V|
23+20       2.1757      0.24  Q        |         |         |        V|
23+25       2.1773      0.24  Q        |         |         |        V|
23+30       2.1790      0.24  Q        |         |         |        V|
23+35       2.1806      0.23  Q        |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+40 | 2.1822 | 0.23 | Q | \| | \| | \| | V\| |
| 23+45 | 2.1838 | 0.23 | Q | \| | \| | \| | V\| |
| 23+50 | 2.1853 | 0.23 | Q | \| | \| | \| | V\| |
| 23+55 | 2.1869 | 0.22 | Q | \| | \| | \| | V\| |
| 24+ 0 | 2.1884 | 0.22 | Q | \| | \| | \| | V\| |
| 24+ 5 | 2.1899 | 0.22 | Q | \| | \| | \| | V\| |
| 24+10 | 2.1914 | 0.21 | Q | \| | \| | \| | V\| |
| 24+15 | 2.1928 | 0.21 | Q | \| | \| | \| | V\| |
| 24+20 | 2.1942 | 0.20 | Q | \| | \| | \| | V\| |
| 24+25 | 2.1955 | 0.19 | Q | \| | \| | \| | V\| |
| 24+30 | 2.1967 | 0.18 | Q | \| | \| | \| | V\| |
| 24+35 | 2.1978 | 0.16 | Q | \| | \| | \| | V\| |
| 24+40 | 2.1988 | 0.14 | Q | \| | \| | \| | V\| |
| 24+45 | 2.1996 | 0.12 | Q | \| | \| | \| | V\| |
| 24+50 | 2.2004 | 0.11 | Q | \| | \| | \| | V\| |
| 24+55 | 2.2010 | 0.10 | Q | \| | \| | \| | V\| |
| 25+ 0 | 2.2016 | 0.09 | Q | \| | \| | \| | V\| |
| 25+ 5 | 2.2022 | 0.08 | Q | \| | \| | \| | V\| |
| 25+10 | 2.2027 | 0.07 | Q | \| | \| | \| | V\| |
| 25+15 | 2.2032 | 0.07 | Q | \| | \| | \| | V\| |
| 25+20 | 2.2036 | 0.06 | Q | \| | \| | \| | V\| |
| 25+25 | 2.2040 | 0.06 | Q | \| | \| | \| | V\| |
| 25+30 | 2.2044 | 0.05 | Q | \| | \| | \| | V\| |
| 25+35 | 2.2047 | 0.05 | Q | \| | \| | \| | V\| |
| 25+40 | 2.2050 | 0.05 | Q | \| | \| | \| | V\| |
| 25+45 | 2.2053 | 0.04 | Q | \| | \| | \| | V\| |
| 25+50 | 2.2056 | 0.04 | Q | \| | \| | \| | V\| |
| 25+55 | 2.2059 | 0.04 | Q | \| | \| | \| | V\| |
| 26+ 0 | 2.2061 | 0.03 | Q | \| | \| | \| | V\| |
| 26+ 5 | 2.2063 | 0.03 | Q | \| | \| | \| | V\| |
| 26+10 | 2.2065 | 0.03 | Q | \| | \| | \| | V\| |
| 26+15 | 2.2067 | 0.03 | Q | \| | \| | \| | V\| |
| 26+20 | 2.2069 | 0.03 | Q | \| | \| | \| | V\| |
| 26+25 | 2.2071 | 0.02 | Q | \| | \| | \| | V\| |
| 26+30 | 2.2072 | 0.02 | Q | \| | \| | \| | V\| |
| 26+35 | 2.2074 | 0.02 | Q | \| | \| | \| | V\| |
| 26+40 | 2.2075 | 0.02 | Q | \| | \| | \| | V\| |
| 26+45 | 2.2077 | 0.02 | Q | \| | \| | \| | V\| |
| 26+50 | 2.2078 | 0.02 | Q | \| | \| | \| | V\| |
| 26+55 | 2.2079 | 0.02 | Q | \| | \| | \| | V\| |
| 27+ 0 | 2.2080 | 0.02 | Q | \| | \| | \| | V\| |
| 27+ 5 | 2.2081 | 0.01 | Q | \| | \| | \| | V\| |
| 27+10 | 2.2082 | 0.01 | Q | \| | \| | \| | V\| |
| 27+15 | 2.2083 | 0.01 | Q | \| | \| | \| | V\| |
| 27+20 | 2.2084 | 0.01 | Q | \| | \| | \| | V\| |
| 27+25 | 2.2084 | 0.01 | Q | \| | \| | \| | V\| |
| 27+30 | 2.2085 | 0.01 | Q | \| | \| | \| | V\| |
| 27+35 | 2.2086 | 0.01 | Q | \| | \| | \| | V\| |
| 27+40 | 2.2086 | 0.01 | Q | \| | \| | \| | V\| |
| 27+45 | 2.2087 | 0.01 | Q | \| | \| | \| | V\| |
| 27+50 | 2.2087 | 0.01 | Q | \| | \| | \| | V\| |
| 27+55 | 2.2088 | 0.01 | Q | \| | \| | \| | V\| |
| 28+ 0 | 2.2088 | 0.01 | Q | \| | \| | \| | V\| |
| 28+ 5 | 2.2089 | 0.01 | Q | \| | \| | \| | V\| |
| 28+10 | 2.2089 | 0.01 | Q | \| | \| | \| | V\| |
| 28+15 | 2.2090 | 0.01 | Q | \| | \| | \| | V\| |
| 28+20 | 2.2090 | 0.00 | Q | \| | \| | \| | V\| |
| 28+25 | 2.2090 | 0.00 | Q | \| | \| | \| | V\| |
| 28+30 | 2.2091 | 0.00 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 28+35 | 2.2091 | 0.00 | Q | \| | \| | \| | V\| |
| 28+40 | 2.2091 | 0.00 | Q | \| | \| | \| | V\| |
| 28+45 | 2.2091 | 0.00 | Q | \| | \| | \| | V\| |
| 28+50 | 2.2092 | 0.00 | Q | \| | \| | \| | V\| |
| 28+55 | 2.2092 | 0.00 | Q | \| | \| | \| | V\| |
| 29+ 0 | 2.2092 | 0.00 | Q | \| | \| | \| | V\| |
| 29+ 5 | 2.2092 | 0.00 | Q | \| | \| | \| | V\| |
| 29+10 | 2.2092 | 0.00 | Q | \| | \| | \| | V\| |
| 29+15 | 2.2092 | 0.00 | Q | \| | \| | \| | V\| |
| 29+20 | 2.2092 | 0.00 | Q | \| | \| | \| | V\| |
| 29+25 | 2.2093 | 0.00 | Q | \| | \| | \| | V\| |
| 29+30 | 2.2093 | 0.00 | Q | \| | \| | \| | V\| |
| 29+35 | 2.2093 | 0.00 | Q | \| | \| | \| | V\| |
| 29+40 | 2.2093 | 0.00 | Q | \| | \| | \| | V\| |
| 29+45 | 2.2093 | 0.00 | Q | \| | \| | \| | V\| |
| 29+50 | 2.2093 | 0.00 | Q | \| | \| | \| | V\| |
| 29+55 | 2.2093 | 0.00 | Q | \| | \| | \| | V\| |
| 30+ 0 | 2.2093 | 0.00 | Q | \| | \| | \| | V\| |
| 30+ 5 | 2.2093 | 0.00 | Q | \| | \| | \| | V\| |
| 30+10 | 2.2093 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/07/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 10B (BORROW PIT)
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 43.92 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 43.92 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 43.92 | 24 | 2.40 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 98.0 | 99.6 | 43.92 | 1.000 | 0.008 | 0.010 | 0.000 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.000

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 0.44 | 0.010 | 98.0 | 99.6 | 0.04 | 0.980 |
| 43.48 | 0.990 | 98.0 | 98.0 | 0.20 | 0.905 |

Area-averaged catchment yield fraction, Y = 0.905
Area-averaged low loss fraction, Yb = 0.095
Direct entry of lag time by user
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 43.92(Ac.)
Catchment Lag time = 0.500 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 16.6667
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.000(In/Hr)
Average low loss rate fraction (Yb) = 0.095 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.594(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.400(In)

Rainfall depth area reduction factors:
Using a total area of 43.92(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.601(In)
30-minute factor = 0.998 Adjusted rainfall = 1.029(In)
1-hour factor = 0.998 Adjusted rainfall = 1.267(In)
3-hour factor = 1.000 Adjusted rainfall = 1.594(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.400(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 531.16 (CFS)) | |
| 1 | 0.775 | 4.116 |
| 2 | 3.367 | 13.766 |
| 3 | 7.746 | 23.260 |
| 4 | 16.033 | 44.020 |
| 5 | 30.950 | 79.231 |
| 6 | 44.554 | 72.260 |
| 7 | 54.263 | 51.567 |
| 8 | 61.150 | 36.583 |
| 9 | 66.275 | 27.222 |
| 10 | 70.479 | 22.331 |
| 11 | 73.950 | 18.436 |
| 12 | 76.896 | 15.647 |
| 13 | 79.400 | 13.301 |

| | | |
|---|---|---|
| 14 | 81.550 | 11.420 |
| 15 | 83.400 | 9.826 |
| 16 | 85.100 | 9.030 |
| 17 | 86.667 | 8.321 |
| 18 | 88.033 | 7.259 |
| 19 | 89.200 | 6.197 |
| 20 | 90.192 | 5.267 |
| 21 | 91.133 | 5.002 |
| 22 | 92.000 | 4.603 |
| 23 | 92.792 | 4.205 |
| 24 | 93.533 | 3.939 |
| 25 | 94.183 | 3.453 |
| 26 | 94.750 | 3.010 |
| 27 | 95.317 | 3.010 |
| 28 | 95.817 | 2.656 |
| 29 | 96.250 | 2.302 |
| 30 | 96.683 | 2.302 |
| 31 | 97.050 | 1.948 |
| 32 | 97.350 | 1.593 |
| 33 | 97.650 | 1.593 |
| 34 | 97.883 | 1.239 |
| 35 | 98.050 | 0.885 |
| 36 | 98.217 | 0.885 |
| 37 | 98.400 | 0.974 |
| 38 | 98.600 | 1.062 |
| 39 | 98.800 | 1.062 |
| 40 | 99.000 | 1.062 |
| 41 | 99.200 | 1.062 |
| 42 | 99.400 | 1.062 |
| 43 | 99.552 | 0.808 |
| 44 | 99.656 | 0.553 |
| 45 | 99.760 | 0.553 |
| 46 | 99.865 | 0.553 |
| 47 | 100.000 | 0.277 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6014 | 0.6014 |
| 2 | 0.7404 | 0.1390 |
| 3 | 0.8362 | 0.0958 |
| 4 | 0.9115 | 0.0754 |
| 5 | 0.9746 | 0.0631 |
| 6 | 1.0294 | 0.0548 |
| 7 | 1.0782 | 0.0487 |
| 8 | 1.1222 | 0.0441 |
| 9 | 1.1626 | 0.0404 |
| 10 | 1.1999 | 0.0373 |
| 11 | 1.2347 | 0.0348 |
| 12 | 1.2674 | 0.0327 |
| 13 | 1.2887 | 0.0213 |
| 14 | 1.3088 | 0.0201 |
| 15 | 1.3278 | 0.0190 |
| 16 | 1.3458 | 0.0180 |
| 17 | 1.3629 | 0.0171 |
| 18 | 1.3792 | 0.0163 |
| 19 | 1.3949 | 0.0156 |
| 20 | 1.4099 | 0.0150 |
| 21 | 1.4243 | 0.0144 |
| 22 | 1.4382 | 0.0139 |

| | | |
|---|---|---|
| 23 | 1.4516 | 0.0134 |
| 24 | 1.4645 | 0.0129 |
| 25 | 1.4770 | 0.0125 |
| 26 | 1.4892 | 0.0121 |
| 27 | 1.5009 | 0.0118 |
| 28 | 1.5124 | 0.0114 |
| 29 | 1.5235 | 0.0111 |
| 30 | 1.5343 | 0.0108 |
| 31 | 1.5448 | 0.0105 |
| 32 | 1.5551 | 0.0103 |
| 33 | 1.5651 | 0.0100 |
| 34 | 1.5748 | 0.0098 |
| 35 | 1.5844 | 0.0095 |
| 36 | 1.5937 | 0.0093 |
| 37 | 1.6028 | 0.0091 |
| 38 | 1.6117 | 0.0089 |
| 39 | 1.6204 | 0.0087 |
| 40 | 1.6289 | 0.0085 |
| 41 | 1.6372 | 0.0084 |
| 42 | 1.6454 | 0.0082 |
| 43 | 1.6535 | 0.0080 |
| 44 | 1.6614 | 0.0079 |
| 45 | 1.6691 | 0.0078 |
| 46 | 1.6767 | 0.0076 |
| 47 | 1.6842 | 0.0075 |
| 48 | 1.6916 | 0.0074 |
| 49 | 1.6988 | 0.0072 |
| 50 | 1.7059 | 0.0071 |
| 51 | 1.7129 | 0.0070 |
| 52 | 1.7198 | 0.0069 |
| 53 | 1.7266 | 0.0068 |
| 54 | 1.7333 | 0.0067 |
| 55 | 1.7399 | 0.0066 |
| 56 | 1.7464 | 0.0065 |
| 57 | 1.7529 | 0.0064 |
| 58 | 1.7592 | 0.0063 |
| 59 | 1.7654 | 0.0062 |
| 60 | 1.7716 | 0.0062 |
| 61 | 1.7777 | 0.0061 |
| 62 | 1.7836 | 0.0060 |
| 63 | 1.7896 | 0.0059 |
| 64 | 1.7954 | 0.0058 |
| 65 | 1.8012 | 0.0058 |
| 66 | 1.8069 | 0.0057 |
| 67 | 1.8125 | 0.0056 |
| 68 | 1.8181 | 0.0056 |
| 69 | 1.8236 | 0.0055 |
| 70 | 1.8290 | 0.0054 |
| 71 | 1.8344 | 0.0054 |
| 72 | 1.8397 | 0.0053 |
| 73 | 1.8446 | 0.0049 |
| 74 | 1.8494 | 0.0048 |
| 75 | 1.8542 | 0.0048 |
| 76 | 1.8589 | 0.0047 |
| 77 | 1.8636 | 0.0047 |
| 78 | 1.8682 | 0.0046 |
| 79 | 1.8728 | 0.0046 |
| 80 | 1.8773 | 0.0045 |
| 81 | 1.8818 | 0.0045 |

| | | |
|---|---|---|
| 82 | 1.8862 | 0.0044 |
| 83 | 1.8906 | 0.0044 |
| 84 | 1.8949 | 0.0043 |
| 85 | 1.8992 | 0.0043 |
| 86 | 1.9035 | 0.0043 |
| 87 | 1.9077 | 0.0042 |
| 88 | 1.9119 | 0.0042 |
| 89 | 1.9161 | 0.0041 |
| 90 | 1.9202 | 0.0041 |
| 91 | 1.9242 | 0.0041 |
| 92 | 1.9283 | 0.0040 |
| 93 | 1.9323 | 0.0040 |
| 94 | 1.9362 | 0.0040 |
| 95 | 1.9402 | 0.0039 |
| 96 | 1.9441 | 0.0039 |
| 97 | 1.9479 | 0.0039 |
| 98 | 1.9518 | 0.0038 |
| 99 | 1.9556 | 0.0038 |
| 100 | 1.9593 | 0.0038 |
| 101 | 1.9631 | 0.0037 |
| 102 | 1.9668 | 0.0037 |
| 103 | 1.9705 | 0.0037 |
| 104 | 1.9741 | 0.0037 |
| 105 | 1.9778 | 0.0036 |
| 106 | 1.9814 | 0.0036 |
| 107 | 1.9849 | 0.0036 |
| 108 | 1.9885 | 0.0035 |
| 109 | 1.9920 | 0.0035 |
| 110 | 1.9955 | 0.0035 |
| 111 | 1.9989 | 0.0035 |
| 112 | 2.0024 | 0.0034 |
| 113 | 2.0058 | 0.0034 |
| 114 | 2.0092 | 0.0034 |
| 115 | 2.0126 | 0.0034 |
| 116 | 2.0159 | 0.0033 |
| 117 | 2.0192 | 0.0033 |
| 118 | 2.0225 | 0.0033 |
| 119 | 2.0258 | 0.0033 |
| 120 | 2.0290 | 0.0033 |
| 121 | 2.0323 | 0.0032 |
| 122 | 2.0355 | 0.0032 |
| 123 | 2.0387 | 0.0032 |
| 124 | 2.0418 | 0.0032 |
| 125 | 2.0450 | 0.0031 |
| 126 | 2.0481 | 0.0031 |
| 127 | 2.0512 | 0.0031 |
| 128 | 2.0543 | 0.0031 |
| 129 | 2.0574 | 0.0031 |
| 130 | 2.0604 | 0.0030 |
| 131 | 2.0635 | 0.0030 |
| 132 | 2.0665 | 0.0030 |
| 133 | 2.0695 | 0.0030 |
| 134 | 2.0724 | 0.0030 |
| 135 | 2.0754 | 0.0030 |
| 136 | 2.0783 | 0.0029 |
| 137 | 2.0812 | 0.0029 |
| 138 | 2.0842 | 0.0029 |
| 139 | 2.0870 | 0.0029 |
| 140 | 2.0899 | 0.0029 |

| | | |
|---|---|---|
| 141 | 2.0928 | 0.0029 |
| 142 | 2.0956 | 0.0028 |
| 143 | 2.0984 | 0.0028 |
| 144 | 2.1012 | 0.0028 |
| 145 | 2.1040 | 0.0028 |
| 146 | 2.1068 | 0.0028 |
| 147 | 2.1095 | 0.0028 |
| 148 | 2.1123 | 0.0027 |
| 149 | 2.1150 | 0.0027 |
| 150 | 2.1177 | 0.0027 |
| 151 | 2.1204 | 0.0027 |
| 152 | 2.1231 | 0.0027 |
| 153 | 2.1258 | 0.0027 |
| 154 | 2.1284 | 0.0027 |
| 155 | 2.1311 | 0.0026 |
| 156 | 2.1337 | 0.0026 |
| 157 | 2.1363 | 0.0026 |
| 158 | 2.1389 | 0.0026 |
| 159 | 2.1415 | 0.0026 |
| 160 | 2.1441 | 0.0026 |
| 161 | 2.1467 | 0.0026 |
| 162 | 2.1492 | 0.0025 |
| 163 | 2.1518 | 0.0025 |
| 164 | 2.1543 | 0.0025 |
| 165 | 2.1568 | 0.0025 |
| 166 | 2.1593 | 0.0025 |
| 167 | 2.1618 | 0.0025 |
| 168 | 2.1643 | 0.0025 |
| 169 | 2.1667 | 0.0025 |
| 170 | 2.1692 | 0.0025 |
| 171 | 2.1716 | 0.0024 |
| 172 | 2.1740 | 0.0024 |
| 173 | 2.1765 | 0.0024 |
| 174 | 2.1789 | 0.0024 |
| 175 | 2.1813 | 0.0024 |
| 176 | 2.1836 | 0.0024 |
| 177 | 2.1860 | 0.0024 |
| 178 | 2.1884 | 0.0024 |
| 179 | 2.1907 | 0.0024 |
| 180 | 2.1931 | 0.0023 |
| 181 | 2.1954 | 0.0023 |
| 182 | 2.1977 | 0.0023 |
| 183 | 2.2000 | 0.0023 |
| 184 | 2.2023 | 0.0023 |
| 185 | 2.2046 | 0.0023 |
| 186 | 2.2069 | 0.0023 |
| 187 | 2.2092 | 0.0023 |
| 188 | 2.2114 | 0.0023 |
| 189 | 2.2137 | 0.0023 |
| 190 | 2.2159 | 0.0022 |
| 191 | 2.2182 | 0.0022 |
| 192 | 2.2204 | 0.0022 |
| 193 | 2.2226 | 0.0022 |
| 194 | 2.2248 | 0.0022 |
| 195 | 2.2270 | 0.0022 |
| 196 | 2.2292 | 0.0022 |
| 197 | 2.2313 | 0.0022 |
| 198 | 2.2335 | 0.0022 |
| 199 | 2.2357 | 0.0022 |

| | | |
|---|---|---|
| 200 | 2.2378 | 0.0021 |
| 201 | 2.2400 | 0.0021 |
| 202 | 2.2421 | 0.0021 |
| 203 | 2.2442 | 0.0021 |
| 204 | 2.2463 | 0.0021 |
| 205 | 2.2484 | 0.0021 |
| 206 | 2.2505 | 0.0021 |
| 207 | 2.2526 | 0.0021 |
| 208 | 2.2547 | 0.0021 |
| 209 | 2.2568 | 0.0021 |
| 210 | 2.2589 | 0.0021 |
| 211 | 2.2609 | 0.0021 |
| 212 | 2.2630 | 0.0021 |
| 213 | 2.2650 | 0.0020 |
| 214 | 2.2670 | 0.0020 |
| 215 | 2.2691 | 0.0020 |
| 216 | 2.2711 | 0.0020 |
| 217 | 2.2731 | 0.0020 |
| 218 | 2.2751 | 0.0020 |
| 219 | 2.2771 | 0.0020 |
| 220 | 2.2791 | 0.0020 |
| 221 | 2.2811 | 0.0020 |
| 222 | 2.2830 | 0.0020 |
| 223 | 2.2850 | 0.0020 |
| 224 | 2.2870 | 0.0020 |
| 225 | 2.2889 | 0.0020 |
| 226 | 2.2909 | 0.0019 |
| 227 | 2.2928 | 0.0019 |
| 228 | 2.2948 | 0.0019 |
| 229 | 2.2967 | 0.0019 |
| 230 | 2.2986 | 0.0019 |
| 231 | 2.3005 | 0.0019 |
| 232 | 2.3024 | 0.0019 |
| 233 | 2.3043 | 0.0019 |
| 234 | 2.3062 | 0.0019 |
| 235 | 2.3081 | 0.0019 |
| 236 | 2.3100 | 0.0019 |
| 237 | 2.3118 | 0.0019 |
| 238 | 2.3137 | 0.0019 |
| 239 | 2.3156 | 0.0019 |
| 240 | 2.3174 | 0.0019 |
| 241 | 2.3193 | 0.0018 |
| 242 | 2.3211 | 0.0018 |
| 243 | 2.3230 | 0.0018 |
| 244 | 2.3248 | 0.0018 |
| 245 | 2.3266 | 0.0018 |
| 246 | 2.3284 | 0.0018 |
| 247 | 2.3302 | 0.0018 |
| 248 | 2.3320 | 0.0018 |
| 249 | 2.3338 | 0.0018 |
| 250 | 2.3356 | 0.0018 |
| 251 | 2.3374 | 0.0018 |
| 252 | 2.3392 | 0.0018 |
| 253 | 2.3410 | 0.0018 |
| 254 | 2.3428 | 0.0018 |
| 255 | 2.3445 | 0.0018 |
| 256 | 2.3463 | 0.0018 |
| 257 | 2.3480 | 0.0018 |
| 258 | 2.3498 | 0.0017 |

| | | |
|---|---|---|
| 259 | 2.3515 | 0.0017 |
| 260 | 2.3533 | 0.0017 |
| 261 | 2.3550 | 0.0017 |
| 262 | 2.3567 | 0.0017 |
| 263 | 2.3584 | 0.0017 |
| 264 | 2.3602 | 0.0017 |
| 265 | 2.3619 | 0.0017 |
| 266 | 2.3636 | 0.0017 |
| 267 | 2.3653 | 0.0017 |
| 268 | 2.3670 | 0.0017 |
| 269 | 2.3687 | 0.0017 |
| 270 | 2.3704 | 0.0017 |
| 271 | 2.3720 | 0.0017 |
| 272 | 2.3737 | 0.0017 |
| 273 | 2.3754 | 0.0017 |
| 274 | 2.3770 | 0.0017 |
| 275 | 2.3787 | 0.0017 |
| 276 | 2.3804 | 0.0017 |
| 277 | 2.3820 | 0.0017 |
| 278 | 2.3837 | 0.0016 |
| 279 | 2.3853 | 0.0016 |
| 280 | 2.3869 | 0.0016 |
| 281 | 2.3886 | 0.0016 |
| 282 | 2.3902 | 0.0016 |
| 283 | 2.3918 | 0.0016 |
| 284 | 2.3934 | 0.0016 |
| 285 | 2.3951 | 0.0016 |
| 286 | 2.3967 | 0.0016 |
| 287 | 2.3983 | 0.0016 |
| 288 | 2.3999 | 0.0016 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0016 | 0.0000 | 0.0016 |
| 2 | 0.0016 | 0.0000 | 0.0016 |
| 3 | 0.0016 | 0.0000 | 0.0016 |
| 4 | 0.0016 | 0.0000 | 0.0016 |
| 5 | 0.0016 | 0.0000 | 0.0016 |
| 6 | 0.0016 | 0.0000 | 0.0016 |
| 7 | 0.0016 | 0.0000 | 0.0016 |
| 8 | 0.0016 | 0.0000 | 0.0016 |
| 9 | 0.0017 | 0.0000 | 0.0016 |
| 10 | 0.0017 | 0.0000 | 0.0017 |
| 11 | 0.0017 | 0.0000 | 0.0017 |
| 12 | 0.0017 | 0.0000 | 0.0017 |
| 13 | 0.0017 | 0.0000 | 0.0017 |
| 14 | 0.0017 | 0.0000 | 0.0017 |
| 15 | 0.0017 | 0.0000 | 0.0017 |
| 16 | 0.0017 | 0.0000 | 0.0017 |
| 17 | 0.0017 | 0.0000 | 0.0017 |
| 18 | 0.0017 | 0.0000 | 0.0017 |
| 19 | 0.0017 | 0.0000 | 0.0017 |
| 20 | 0.0017 | 0.0000 | 0.0017 |
| 21 | 0.0017 | 0.0000 | 0.0017 |
| 22 | 0.0018 | 0.0000 | 0.0017 |
| 23 | 0.0018 | 0.0000 | 0.0018 |
| 24 | 0.0018 | 0.0000 | 0.0018 |

| | | | |
|---|---|---|---|
| 25 | 0.0018 | 0.0000 | 0.0018 |
| 26 | 0.0018 | 0.0000 | 0.0018 |
| 27 | 0.0018 | 0.0000 | 0.0018 |
| 28 | 0.0018 | 0.0000 | 0.0018 |
| 29 | 0.0018 | 0.0000 | 0.0018 |
| 30 | 0.0018 | 0.0000 | 0.0018 |
| 31 | 0.0018 | 0.0000 | 0.0018 |
| 32 | 0.0018 | 0.0000 | 0.0018 |
| 33 | 0.0019 | 0.0000 | 0.0018 |
| 34 | 0.0019 | 0.0000 | 0.0019 |
| 35 | 0.0019 | 0.0000 | 0.0019 |
| 36 | 0.0019 | 0.0000 | 0.0019 |
| 37 | 0.0019 | 0.0000 | 0.0019 |
| 38 | 0.0019 | 0.0000 | 0.0019 |
| 39 | 0.0019 | 0.0000 | 0.0019 |
| 40 | 0.0019 | 0.0000 | 0.0019 |
| 41 | 0.0019 | 0.0000 | 0.0019 |
| 42 | 0.0019 | 0.0000 | 0.0019 |
| 43 | 0.0020 | 0.0000 | 0.0019 |
| 44 | 0.0020 | 0.0000 | 0.0020 |
| 45 | 0.0020 | 0.0000 | 0.0020 |
| 46 | 0.0020 | 0.0000 | 0.0020 |
| 47 | 0.0020 | 0.0000 | 0.0020 |
| 48 | 0.0020 | 0.0000 | 0.0020 |
| 49 | 0.0020 | 0.0000 | 0.0020 |
| 50 | 0.0020 | 0.0000 | 0.0020 |
| 51 | 0.0020 | 0.0000 | 0.0020 |
| 52 | 0.0021 | 0.0000 | 0.0020 |
| 53 | 0.0021 | 0.0000 | 0.0021 |
| 54 | 0.0021 | 0.0000 | 0.0021 |
| 55 | 0.0021 | 0.0000 | 0.0021 |
| 56 | 0.0021 | 0.0000 | 0.0021 |
| 57 | 0.0021 | 0.0000 | 0.0021 |
| 58 | 0.0021 | 0.0000 | 0.0021 |
| 59 | 0.0021 | 0.0000 | 0.0021 |
| 60 | 0.0021 | 0.0000 | 0.0021 |
| 61 | 0.0022 | 0.0000 | 0.0022 |
| 62 | 0.0022 | 0.0000 | 0.0022 |
| 63 | 0.0022 | 0.0000 | 0.0022 |
| 64 | 0.0022 | 0.0000 | 0.0022 |
| 65 | 0.0022 | 0.0000 | 0.0022 |
| 66 | 0.0022 | 0.0000 | 0.0022 |
| 67 | 0.0023 | 0.0000 | 0.0022 |
| 68 | 0.0023 | 0.0000 | 0.0023 |
| 69 | 0.0023 | 0.0000 | 0.0023 |
| 70 | 0.0023 | 0.0000 | 0.0023 |
| 71 | 0.0023 | 0.0000 | 0.0023 |
| 72 | 0.0023 | 0.0000 | 0.0023 |
| 73 | 0.0023 | 0.0000 | 0.0023 |
| 74 | 0.0024 | 0.0000 | 0.0023 |
| 75 | 0.0024 | 0.0000 | 0.0024 |
| 76 | 0.0024 | 0.0000 | 0.0024 |
| 77 | 0.0024 | 0.0000 | 0.0024 |
| 78 | 0.0024 | 0.0000 | 0.0024 |
| 79 | 0.0024 | 0.0000 | 0.0024 |
| 80 | 0.0025 | 0.0000 | 0.0024 |
| 81 | 0.0025 | 0.0000 | 0.0025 |
| 82 | 0.0025 | 0.0000 | 0.0025 |
| 83 | 0.0025 | 0.0000 | 0.0025 |

| | | | |
|---|---|---|---|
| 84 | 0.0025 | 0.0000 | 0.0025 |
| 85 | 0.0025 | 0.0000 | 0.0025 |
| 86 | 0.0026 | 0.0000 | 0.0026 |
| 87 | 0.0026 | 0.0000 | 0.0026 |
| 88 | 0.0026 | 0.0000 | 0.0026 |
| 89 | 0.0026 | 0.0000 | 0.0026 |
| 90 | 0.0026 | 0.0000 | 0.0026 |
| 91 | 0.0027 | 0.0000 | 0.0027 |
| 92 | 0.0027 | 0.0000 | 0.0027 |
| 93 | 0.0027 | 0.0000 | 0.0027 |
| 94 | 0.0027 | 0.0000 | 0.0027 |
| 95 | 0.0028 | 0.0000 | 0.0028 |
| 96 | 0.0028 | 0.0000 | 0.0028 |
| 97 | 0.0028 | 0.0000 | 0.0028 |
| 98 | 0.0028 | 0.0000 | 0.0028 |
| 99 | 0.0029 | 0.0000 | 0.0028 |
| 100 | 0.0029 | 0.0000 | 0.0029 |
| 101 | 0.0029 | 0.0000 | 0.0029 |
| 102 | 0.0029 | 0.0000 | 0.0029 |
| 103 | 0.0030 | 0.0000 | 0.0029 |
| 104 | 0.0030 | 0.0000 | 0.0030 |
| 105 | 0.0030 | 0.0000 | 0.0030 |
| 106 | 0.0030 | 0.0000 | 0.0030 |
| 107 | 0.0031 | 0.0000 | 0.0031 |
| 108 | 0.0031 | 0.0000 | 0.0031 |
| 109 | 0.0031 | 0.0000 | 0.0031 |
| 110 | 0.0031 | 0.0000 | 0.0031 |
| 111 | 0.0032 | 0.0000 | 0.0032 |
| 112 | 0.0032 | 0.0000 | 0.0032 |
| 113 | 0.0033 | 0.0000 | 0.0032 |
| 114 | 0.0033 | 0.0000 | 0.0033 |
| 115 | 0.0033 | 0.0000 | 0.0033 |
| 116 | 0.0033 | 0.0000 | 0.0033 |
| 117 | 0.0034 | 0.0000 | 0.0034 |
| 118 | 0.0034 | 0.0000 | 0.0034 |
| 119 | 0.0035 | 0.0000 | 0.0035 |
| 120 | 0.0035 | 0.0000 | 0.0035 |
| 121 | 0.0035 | 0.0000 | 0.0035 |
| 122 | 0.0036 | 0.0000 | 0.0036 |
| 123 | 0.0036 | 0.0000 | 0.0036 |
| 124 | 0.0037 | 0.0000 | 0.0036 |
| 125 | 0.0037 | 0.0000 | 0.0037 |
| 126 | 0.0037 | 0.0000 | 0.0037 |
| 127 | 0.0038 | 0.0000 | 0.0038 |
| 128 | 0.0038 | 0.0000 | 0.0038 |
| 129 | 0.0039 | 0.0000 | 0.0039 |
| 130 | 0.0039 | 0.0000 | 0.0039 |
| 131 | 0.0040 | 0.0000 | 0.0040 |
| 132 | 0.0040 | 0.0000 | 0.0040 |
| 133 | 0.0041 | 0.0000 | 0.0041 |
| 134 | 0.0041 | 0.0000 | 0.0041 |
| 135 | 0.0042 | 0.0000 | 0.0042 |
| 136 | 0.0043 | 0.0000 | 0.0043 |
| 137 | 0.0043 | 0.0000 | 0.0043 |
| 138 | 0.0044 | 0.0000 | 0.0044 |
| 139 | 0.0045 | 0.0000 | 0.0045 |
| 140 | 0.0045 | 0.0000 | 0.0045 |
| 141 | 0.0046 | 0.0000 | 0.0046 |
| 142 | 0.0047 | 0.0000 | 0.0047 |

| | | | |
|---|---|---|---|
| 143 | 0.0048 | 0.0000 | 0.0048 |
| 144 | 0.0048 | 0.0000 | 0.0048 |
| 145 | 0.0053 | 0.0000 | 0.0053 |
| 146 | 0.0054 | 0.0000 | 0.0054 |
| 147 | 0.0055 | 0.0000 | 0.0055 |
| 148 | 0.0056 | 0.0000 | 0.0056 |
| 149 | 0.0057 | 0.0000 | 0.0057 |
| 150 | 0.0058 | 0.0000 | 0.0058 |
| 151 | 0.0059 | 0.0000 | 0.0059 |
| 152 | 0.0060 | 0.0000 | 0.0060 |
| 153 | 0.0062 | 0.0000 | 0.0061 |
| 154 | 0.0062 | 0.0000 | 0.0062 |
| 155 | 0.0064 | 0.0000 | 0.0064 |
| 156 | 0.0065 | 0.0000 | 0.0065 |
| 157 | 0.0067 | 0.0000 | 0.0067 |
| 158 | 0.0068 | 0.0000 | 0.0068 |
| 159 | 0.0070 | 0.0000 | 0.0070 |
| 160 | 0.0071 | 0.0000 | 0.0071 |
| 161 | 0.0074 | 0.0000 | 0.0074 |
| 162 | 0.0075 | 0.0000 | 0.0075 |
| 163 | 0.0078 | 0.0000 | 0.0077 |
| 164 | 0.0079 | 0.0000 | 0.0079 |
| 165 | 0.0082 | 0.0000 | 0.0082 |
| 166 | 0.0084 | 0.0000 | 0.0083 |
| 167 | 0.0087 | 0.0000 | 0.0087 |
| 168 | 0.0089 | 0.0000 | 0.0089 |
| 169 | 0.0093 | 0.0000 | 0.0093 |
| 170 | 0.0095 | 0.0000 | 0.0095 |
| 171 | 0.0100 | 0.0000 | 0.0100 |
| 172 | 0.0103 | 0.0000 | 0.0103 |
| 173 | 0.0108 | 0.0000 | 0.0108 |
| 174 | 0.0111 | 0.0000 | 0.0111 |
| 175 | 0.0118 | 0.0000 | 0.0118 |
| 176 | 0.0121 | 0.0000 | 0.0121 |
| 177 | 0.0129 | 0.0000 | 0.0129 |
| 178 | 0.0134 | 0.0000 | 0.0134 |
| 179 | 0.0144 | 0.0000 | 0.0144 |
| 180 | 0.0150 | 0.0000 | 0.0150 |
| 181 | 0.0163 | 0.0000 | 0.0163 |
| 182 | 0.0171 | 0.0000 | 0.0171 |
| 183 | 0.0190 | 0.0000 | 0.0190 |
| 184 | 0.0201 | 0.0000 | 0.0201 |
| 185 | 0.0327 | 0.0000 | 0.0326 |
| 186 | 0.0348 | 0.0000 | 0.0348 |
| 187 | 0.0404 | 0.0000 | 0.0404 |
| 188 | 0.0441 | 0.0000 | 0.0441 |
| 189 | 0.0548 | 0.0000 | 0.0548 |
| 190 | 0.0631 | 0.0000 | 0.0631 |
| 191 | 0.0958 | 0.0000 | 0.0958 |
| 192 | 0.1390 | 0.0000 | 0.1390 |
| 193 | 0.6014 | 0.0000 | 0.6014 |
| 194 | 0.0754 | 0.0000 | 0.0754 |
| 195 | 0.0487 | 0.0000 | 0.0487 |
| 196 | 0.0373 | 0.0000 | 0.0373 |
| 197 | 0.0213 | 0.0000 | 0.0213 |
| 198 | 0.0180 | 0.0000 | 0.0180 |
| 199 | 0.0156 | 0.0000 | 0.0156 |
| 200 | 0.0139 | 0.0000 | 0.0139 |
| 201 | 0.0125 | 0.0000 | 0.0125 |

| | | | |
|---|---|---|---|
| 202 | 0.0114 | 0.0000 | 0.0114 |
| 203 | 0.0105 | 0.0000 | 0.0105 |
| 204 | 0.0098 | 0.0000 | 0.0098 |
| 205 | 0.0091 | 0.0000 | 0.0091 |
| 206 | 0.0085 | 0.0000 | 0.0085 |
| 207 | 0.0080 | 0.0000 | 0.0080 |
| 208 | 0.0076 | 0.0000 | 0.0076 |
| 209 | 0.0072 | 0.0000 | 0.0072 |
| 210 | 0.0069 | 0.0000 | 0.0069 |
| 211 | 0.0066 | 0.0000 | 0.0066 |
| 212 | 0.0063 | 0.0000 | 0.0063 |
| 213 | 0.0061 | 0.0000 | 0.0061 |
| 214 | 0.0058 | 0.0000 | 0.0058 |
| 215 | 0.0056 | 0.0000 | 0.0056 |
| 216 | 0.0054 | 0.0000 | 0.0054 |
| 217 | 0.0049 | 0.0000 | 0.0049 |
| 218 | 0.0047 | 0.0000 | 0.0047 |
| 219 | 0.0046 | 0.0000 | 0.0046 |
| 220 | 0.0044 | 0.0000 | 0.0044 |
| 221 | 0.0043 | 0.0000 | 0.0043 |
| 222 | 0.0042 | 0.0000 | 0.0042 |
| 223 | 0.0041 | 0.0000 | 0.0041 |
| 224 | 0.0040 | 0.0000 | 0.0040 |
| 225 | 0.0039 | 0.0000 | 0.0039 |
| 226 | 0.0038 | 0.0000 | 0.0038 |
| 227 | 0.0037 | 0.0000 | 0.0037 |
| 228 | 0.0036 | 0.0000 | 0.0036 |
| 229 | 0.0035 | 0.0000 | 0.0035 |
| 230 | 0.0034 | 0.0000 | 0.0034 |
| 231 | 0.0034 | 0.0000 | 0.0034 |
| 232 | 0.0033 | 0.0000 | 0.0033 |
| 233 | 0.0032 | 0.0000 | 0.0032 |
| 234 | 0.0032 | 0.0000 | 0.0032 |
| 235 | 0.0031 | 0.0000 | 0.0031 |
| 236 | 0.0030 | 0.0000 | 0.0030 |
| 237 | 0.0030 | 0.0000 | 0.0030 |
| 238 | 0.0029 | 0.0000 | 0.0029 |
| 239 | 0.0029 | 0.0000 | 0.0029 |
| 240 | 0.0028 | 0.0000 | 0.0028 |
| 241 | 0.0028 | 0.0000 | 0.0028 |
| 242 | 0.0027 | 0.0000 | 0.0027 |
| 243 | 0.0027 | 0.0000 | 0.0027 |
| 244 | 0.0027 | 0.0000 | 0.0027 |
| 245 | 0.0026 | 0.0000 | 0.0026 |
| 246 | 0.0026 | 0.0000 | 0.0026 |
| 247 | 0.0025 | 0.0000 | 0.0025 |
| 248 | 0.0025 | 0.0000 | 0.0025 |
| 249 | 0.0025 | 0.0000 | 0.0025 |
| 250 | 0.0024 | 0.0000 | 0.0024 |
| 251 | 0.0024 | 0.0000 | 0.0024 |
| 252 | 0.0024 | 0.0000 | 0.0024 |
| 253 | 0.0023 | 0.0000 | 0.0023 |
| 254 | 0.0023 | 0.0000 | 0.0023 |
| 255 | 0.0023 | 0.0000 | 0.0023 |
| 256 | 0.0022 | 0.0000 | 0.0022 |
| 257 | 0.0022 | 0.0000 | 0.0022 |
| 258 | 0.0022 | 0.0000 | 0.0022 |
| 259 | 0.0022 | 0.0000 | 0.0022 |
| 260 | 0.0021 | 0.0000 | 0.0021 |

| | | | |
|---|---|---|---|
| 261 | 0.0021 | 0.0000 | 0.0021 |
| 262 | 0.0021 | 0.0000 | 0.0021 |
| 263 | 0.0021 | 0.0000 | 0.0021 |
| 264 | 0.0020 | 0.0000 | 0.0020 |
| 265 | 0.0020 | 0.0000 | 0.0020 |
| 266 | 0.0020 | 0.0000 | 0.0020 |
| 267 | 0.0020 | 0.0000 | 0.0020 |
| 268 | 0.0019 | 0.0000 | 0.0019 |
| 269 | 0.0019 | 0.0000 | 0.0019 |
| 270 | 0.0019 | 0.0000 | 0.0019 |
| 271 | 0.0019 | 0.0000 | 0.0019 |
| 272 | 0.0019 | 0.0000 | 0.0019 |
| 273 | 0.0018 | 0.0000 | 0.0018 |
| 274 | 0.0018 | 0.0000 | 0.0018 |
| 275 | 0.0018 | 0.0000 | 0.0018 |
| 276 | 0.0018 | 0.0000 | 0.0018 |
| 277 | 0.0018 | 0.0000 | 0.0018 |
| 278 | 0.0018 | 0.0000 | 0.0018 |
| 279 | 0.0017 | 0.0000 | 0.0017 |
| 280 | 0.0017 | 0.0000 | 0.0017 |
| 281 | 0.0017 | 0.0000 | 0.0017 |
| 282 | 0.0017 | 0.0000 | 0.0017 |
| 283 | 0.0017 | 0.0000 | 0.0017 |
| 284 | 0.0017 | 0.0000 | 0.0017 |
| 285 | 0.0017 | 0.0000 | 0.0016 |
| 286 | 0.0016 | 0.0000 | 0.0016 |
| 287 | 0.0016 | 0.0000 | 0.0016 |
| 288 | 0.0016 | 0.0000 | 0.0016 |

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Total soil rain loss = 0.00(In)
Total effective rainfall = 2.40(In)
Peak flow rate in flood hydrograph = 75.67(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 20.0 | 40.0 | 60.0 | 80.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.01 | Q | \| | \| | \| | \| |
| 0+10 | 0.0002 | 0.03 | Q | \| | \| | \| | \| |
| 0+15 | 0.0007 | 0.07 | Q | \| | \| | \| | \| |
| 0+20 | 0.0016 | 0.14 | Q | \| | \| | \| | \| |
| 0+25 | 0.0034 | 0.26 | Q | \| | \| | \| | \| |
| 0+30 | 0.0061 | 0.38 | Q | \| | \| | \| | \| |
| 0+35 | 0.0092 | 0.46 | Q | \| | \| | \| | \| |
| 0+40 | 0.0128 | 0.52 | Q | \| | \| | \| | \| |
| 0+45 | 0.0168 | 0.57 | Q | \| | \| | \| | \| |
| 0+50 | 0.0209 | 0.61 | Q | \| | \| | \| | \| |
| 0+55 | 0.0253 | 0.64 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0299 | 0.67 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0347 | 0.69 | Q | \| | \| | \| | \| |
| 1+10 | 0.0396 | 0.71 | Q | \| | \| | \| | \| |
| 1+15 | 0.0446 | 0.73 | Q | \| | \| | \| | \| |
| 1+20 | 0.0497 | 0.75 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+25 | 0.0550 | 0.76 | Q | | | | |
| 1+30 | 0.0604 | 0.78 | Q | | | | |
| 1+35 | 0.0658 | 0.79 | Q | | | | |
| 1+40 | 0.0714 | 0.80 | Q | | | | |
| 1+45 | 0.0770 | 0.82 | Q | | | | |
| 1+50 | 0.0827 | 0.83 | Q | | | | |
| 1+55 | 0.0885 | 0.84 | Q | | | | |
| 2+ 0 | 0.0943 | 0.85 | Q | | | | |
| 2+ 5 | 0.1002 | 0.86 | Q | | | | |
| 2+10 | 0.1062 | 0.87 | Q | | | | |
| 2+15 | 0.1122 | 0.88 | Q | | | | |
| 2+20 | 0.1183 | 0.88 | Q | | | | |
| 2+25 | 0.1244 | 0.89 | Q | | | | |
| 2+30 | 0.1306 | 0.90 | Q | | | | |
| 2+35 | 0.1369 | 0.91 | Q | | | | |
| 2+40 | 0.1432 | 0.91 | Q | | | | |
| 2+45 | 0.1495 | 0.92 | Q | | | | |
| 2+50 | 0.1559 | 0.93 | Q | | | | |
| 2+55 | 0.1623 | 0.93 | Q | | | | |
| 3+ 0 | 0.1688 | 0.94 | Q | | | | |
| 3+ 5 | 0.1753 | 0.95 | Q | | | | |
| 3+10 | 0.1818 | 0.95 | Q | | | | |
| 3+15 | 0.1884 | 0.96 | Q | | | | |
| 3+20 | 0.1951 | 0.96 | Q | | | | |
| 3+25 | 0.2018 | 0.97 | Q | | | | |
| 3+30 | 0.2085 | 0.98 | Q | | | | |
| 3+35 | 0.2153 | 0.98 | Q | | | | |
| 3+40 | 0.2221 | 0.99 | QV | | | | |
| 3+45 | 0.2290 | 1.00 | QV | | | | |
| 3+50 | 0.2359 | 1.00 | QV | | | | |
| 3+55 | 0.2428 | 1.01 | QV | | | | |
| 4+ 0 | 0.2498 | 1.01 | QV | | | | |
| 4+ 5 | 0.2568 | 1.02 | QV | | | | |
| 4+10 | 0.2638 | 1.02 | QV | | | | |
| 4+15 | 0.2709 | 1.03 | QV | | | | |
| 4+20 | 0.2781 | 1.04 | QV | | | | |
| 4+25 | 0.2852 | 1.04 | QV | | | | |
| 4+30 | 0.2924 | 1.05 | QV | | | | |
| 4+35 | 0.2997 | 1.05 | QV | | | | |
| 4+40 | 0.3070 | 1.06 | QV | | | | |
| 4+45 | 0.3143 | 1.06 | QV | | | | |
| 4+50 | 0.3217 | 1.07 | QV | | | | |
| 4+55 | 0.3291 | 1.08 | QV | | | | |
| 5+ 0 | 0.3365 | 1.08 | QV | | | | |
| 5+ 5 | 0.3440 | 1.09 | QV | | | | |
| 5+10 | 0.3516 | 1.10 | QV | | | | |
| 5+15 | 0.3592 | 1.10 | QV | | | | |
| 5+20 | 0.3668 | 1.11 | QV | | | | |
| 5+25 | 0.3745 | 1.11 | QV | | | | |
| 5+30 | 0.3822 | 1.12 | QV | | | | |
| 5+35 | 0.3900 | 1.13 | QV | | | | |
| 5+40 | 0.3978 | 1.13 | QV | | | | |
| 5+45 | 0.4057 | 1.14 | QV | | | | |
| 5+50 | 0.4136 | 1.15 | QV | | | | |
| 5+55 | 0.4215 | 1.16 | QV | | | | |
| 6+ 0 | 0.4295 | 1.16 | QV | | | | |
| 6+ 5 | 0.4376 | 1.17 | QV | | | | |
| 6+10 | 0.4457 | 1.18 | Q V | | | | |
| 6+15 | 0.4539 | 1.19 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+20 | 0.4621 | 1.19 | Q V | \| | \| | \| | \| |
| 6+25 | 0.4704 | 1.20 | Q V | \| | \| | \| | \| |
| 6+30 | 0.4787 | 1.21 | Q V | \| | \| | \| | \| |
| 6+35 | 0.4871 | 1.22 | Q V | \| | \| | \| | \| |
| 6+40 | 0.4955 | 1.23 | Q V | \| | \| | \| | \| |
| 6+45 | 0.5040 | 1.23 | Q V | \| | \| | \| | \| |
| 6+50 | 0.5126 | 1.24 | Q V | \| | \| | \| | \| |
| 6+55 | 0.5212 | 1.25 | Q V | \| | \| | \| | \| |
| 7+ 0 | 0.5299 | 1.26 | Q V | \| | \| | \| | \| |
| 7+ 5 | 0.5386 | 1.27 | Q V | \| | \| | \| | \| |
| 7+10 | 0.5474 | 1.28 | Q V | \| | \| | \| | \| |
| 7+15 | 0.5563 | 1.29 | Q V | \| | \| | \| | \| |
| 7+20 | 0.5652 | 1.30 | Q V | \| | \| | \| | \| |
| 7+25 | 0.5742 | 1.30 | Q V | \| | \| | \| | \| |
| 7+30 | 0.5832 | 1.31 | Q V | \| | \| | \| | \| |
| 7+35 | 0.5923 | 1.32 | Q V | \| | \| | \| | \| |
| 7+40 | 0.6015 | 1.33 | Q V | \| | \| | \| | \| |
| 7+45 | 0.6108 | 1.34 | Q V | \| | \| | \| | \| |
| 7+50 | 0.6201 | 1.35 | Q V | \| | \| | \| | \| |
| 7+55 | 0.6295 | 1.36 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.6390 | 1.37 | Q V | \| | \| | \| | \| |
| 8+ 5 | 0.6485 | 1.39 | Q V | \| | \| | \| | \| |
| 8+10 | 0.6581 | 1.40 | Q  V | \| | \| | \| | \| |
| 8+15 | 0.6678 | 1.41 | Q  V | \| | \| | \| | \| |
| 8+20 | 0.6776 | 1.42 | Q  V | \| | \| | \| | \| |
| 8+25 | 0.6874 | 1.43 | Q  V | \| | \| | \| | \| |
| 8+30 | 0.6974 | 1.44 | Q  V | \| | \| | \| | \| |
| 8+35 | 0.7074 | 1.45 | Q  V | \| | \| | \| | \| |
| 8+40 | 0.7175 | 1.47 | Q  V | \| | \| | \| | \| |
| 8+45 | 0.7277 | 1.48 | Q  V | \| | \| | \| | \| |
| 8+50 | 0.7379 | 1.49 | Q  V | \| | \| | \| | \| |
| 8+55 | 0.7483 | 1.50 | Q  V | \| | \| | \| | \| |
| 9+ 0 | 0.7587 | 1.52 | Q  V | \| | \| | \| | \| |
| 9+ 5 | 0.7693 | 1.53 | Q  V | \| | \| | \| | \| |
| 9+10 | 0.7799 | 1.54 | Q  V | \| | \| | \| | \| |
| 9+15 | 0.7907 | 1.56 | Q  V | \| | \| | \| | \| |
| 9+20 | 0.8015 | 1.57 | Q  V | \| | \| | \| | \| |
| 9+25 | 0.8124 | 1.59 | Q  V | \| | \| | \| | \| |
| 9+30 | 0.8234 | 1.60 | Q  V | \| | \| | \| | \| |
| 9+35 | 0.8346 | 1.62 | Q  V | \| | \| | \| | \| |
| 9+40 | 0.8458 | 1.63 | Q  V | \| | \| | \| | \| |
| 9+45 | 0.8572 | 1.65 | Q  V | \| | \| | \| | \| |
| 9+50 | 0.8686 | 1.66 | Q  V | \| | \| | \| | \| |
| 9+55 | 0.8802 | 1.68 | Q   V | \| | \| | \| | \| |
| 10+ 0 | 0.8919 | 1.70 | Q   V | \| | \| | \| | \| |
| 10+ 5 | 0.9037 | 1.71 | Q   V | \| | \| | \| | \| |
| 10+10 | 0.9156 | 1.73 | Q   V | \| | \| | \| | \| |
| 10+15 | 0.9277 | 1.75 | Q   V | \| | \| | \| | \| |
| 10+20 | 0.9399 | 1.77 | Q   V | \| | \| | \| | \| |
| 10+25 | 0.9522 | 1.79 | Q   V | \| | \| | \| | \| |
| 10+30 | 0.9646 | 1.81 | Q   V | \| | \| | \| | \| |
| 10+35 | 0.9772 | 1.83 | Q   V | \| | \| | \| | \| |
| 10+40 | 0.9900 | 1.85 | Q   V | \| | \| | \| | \| |
| 10+45 | 1.0028 | 1.87 | Q   V | \| | \| | \| | \| |
| 10+50 | 1.0158 | 1.89 | Q   V | \| | \| | \| | \| |
| 10+55 | 1.0290 | 1.91 | Q   V | \| | \| | \| | \| |
| 11+ 0 | 1.0423 | 1.93 | Q   V | \| | \| | \| | \| |
| 11+ 5 | 1.0558 | 1.96 | Q   V | \| | \| | \| | \| |
| 11+10 | 1.0695 | 1.98 | Q   V | \| | \| | \| | \| |

| | | | | | | |
|---|---|---|---|---|---|---|
| 11+15 | 1.0833 | 2.01 | Q V | \| | \| | \| |
| 11+20 | 1.0973 | 2.03 | Q V | \| | \| | \| |
| 11+25 | 1.1114 | 2.06 | Q V | \| | \| | \| |
| 11+30 | 1.1258 | 2.08 | Q V | \| | \| | \| |
| 11+35 | 1.1403 | 2.11 | Q V | \| | \| | \| |
| 11+40 | 1.1550 | 2.14 | Q V | \| | \| | \| |
| 11+45 | 1.1700 | 2.17 | Q V | \| | \| | \| |
| 11+50 | 1.1851 | 2.20 | Q V | \| | \| | \| |
| 11+55 | 1.2005 | 2.23 | Q V | \| | \| | \| |
| 12+ 0 | 1.2160 | 2.26 | Q V | \| | \| | \| |
| 12+ 5 | 1.2319 | 2.30 | Q V | \| | \| | \| |
| 12+10 | 1.2479 | 2.34 | Q V | \| | \| | \| |
| 12+15 | 1.2643 | 2.38 | Q V | \| | \| | \| |
| 12+20 | 1.2811 | 2.43 | Q V | \| | \| | \| |
| 12+25 | 1.2983 | 2.50 | Q V | \| | \| | \| |
| 12+30 | 1.3161 | 2.57 | Q V | \| | \| | \| |
| 12+35 | 1.3342 | 2.63 | Q V | \| | \| | \| |
| 12+40 | 1.3528 | 2.69 | Q V | \| | \| | \| |
| 12+45 | 1.3717 | 2.75 | Q V | \| | \| | \| |
| 12+50 | 1.3910 | 2.81 | Q V | \| | \| | \| |
| 12+55 | 1.4107 | 2.86 | Q V | \| | \| | \| |
| 13+ 0 | 1.4308 | 2.92 | Q V | \| | \| | \| |
| 13+ 5 | 1.4514 | 2.98 | Q V | \| | \| | \| |
| 13+10 | 1.4723 | 3.04 | Q V | \| | \| | \| |
| 13+15 | 1.4937 | 3.10 | Q V | \| | \| | \| |
| 13+20 | 1.5155 | 3.17 | Q V | \| | \| | \| |
| 13+25 | 1.5378 | 3.24 | Q V | \| | \| | \| |
| 13+30 | 1.5606 | 3.31 | Q V | \| | \| | \| |
| 13+35 | 1.5839 | 3.38 | Q V | \| | \| | \| |
| 13+40 | 1.6077 | 3.46 | Q V | \| | \| | \| |
| 13+45 | 1.6321 | 3.54 | Q V | \| | \| | \| |
| 13+50 | 1.6570 | 3.62 | Q V | \| | \| | \| |
| 13+55 | 1.6826 | 3.71 | Q V | \| | \| | \| |
| 14+ 0 | 1.7088 | 3.81 | Q V | \| | \| | \| |
| 14+ 5 | 1.7357 | 3.91 | Q V | \| | \| | \| |
| 14+10 | 1.7634 | 4.01 | Q V | \| | \| | \| |
| 14+15 | 1.7918 | 4.13 | Q V | \| | \| | \| |
| 14+20 | 1.8211 | 4.25 | Q V | \| | \| | \| |
| 14+25 | 1.8513 | 4.39 | Q V | \| | \| | \| |
| 14+30 | 1.8825 | 4.53 | Q V | \| | \| | \| |
| 14+35 | 1.9147 | 4.68 | Q V | \| | \| | \| |
| 14+40 | 1.9481 | 4.84 | Q V | \| | \| | \| |
| 14+45 | 1.9826 | 5.02 | Q V | \| | \| | \| |
| 14+50 | 2.0185 | 5.20 | Q V | \| | \| | \| |
| 14+55 | 2.0557 | 5.41 | Q V | \| | \| | \| |
| 15+ 0 | 2.0946 | 5.64 | Q V | \| | \| | \| |
| 15+ 5 | 2.1351 | 5.89 | Q V | \| | \| | \| |
| 15+10 | 2.1776 | 6.16 | Q V | \| | \| | \| |
| 15+15 | 2.2222 | 6.48 | Q V | \| | \| | \| |
| 15+20 | 2.2692 | 6.82 | Q V | \| | \| | \| |
| 15+25 | 2.3192 | 7.27 | Q V | \| | \| | \| |
| 15+30 | 2.3734 | 7.86 | Q V | \| | \| | \| |
| 15+35 | 2.4329 | 8.65 | Q V | \| | \| | \| |
| 15+40 | 2.5001 | 9.75 | Q V | \| | \| | \| |
| 15+45 | 2.5785 | 11.39 | Q V | \| | \| | \| |
| 15+50 | 2.6697 | 13.23 | Q V | \| | \| | \| |
| 15+55 | 2.7753 | 15.34 | Q V | \| | \| | \| |
| 16+ 0 | 2.8996 | 18.06 | Q V | \| | \| | \| |
| 16+ 5 | 3.0625 | 23.65 | Q V | \| | \| | \| |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 16+10 | 3.2868 | 32.58 | \| | \| | VQ | \| | \| | \| |
| 16+15 | 3.5781 | 42.30 | \| | \| | V | \|Q | \| | \| |
| 16+20 | 3.9718 | 57.16 | \| | \| | V | \| | Q | \| |
| 16+25 | 4.4929 | 75.67 | \| | \| | V | \| | \| | Q \| |
| 16+30 | 4.9752 | 70.02 | \| | \| | \| V | \| | Q | \| |
| 16+35 | 5.3610 | 56.02 | \| | \| | \| | V Q | \| | \| |
| 16+40 | 5.6687 | 44.69 | \| | \| | \| Q | V | \| | \| |
| 16+45 | 5.9198 | 36.45 | \| | \| | Q | \| | V | \| | \| |
| 16+50 | 6.1339 | 31.09 | \| | Q | \| | \| | V | \| | \| |
| 16+55 | 6.3190 | 26.87 | \| | Q | \| | \| | V | \| | \| |
| 17+ 0 | 6.4818 | 23.65 | \|Q | \| | \| | \| | V | \| | \| |
| 17+ 5 | 6.6263 | 20.98 | Q | \| | \| | \| | V | \| | \| |
| 17+10 | 6.7556 | 18.78 | Q \| | \| | \| | \| | V | \| | \| |
| 17+15 | 6.8722 | 16.93 | Q \| | \| | \| | \| | \| V | \| | \| |
| 17+20 | 6.9798 | 15.62 | Q \| | \| | \| | \| | \| V | \| | \| |
| 17+25 | 7.0792 | 14.43 | Q \| | \| | \| | \| | \| V | \| | \| |
| 17+30 | 7.1696 | 13.13 | Q \| | \| | \| | \| | \| V | \| | \| |
| 17+35 | 7.2517 | 11.92 | Q \| | \| | \| | \| | \| V | \| | \| |
| 17+40 | 7.3266 | 10.88 | Q \| | \| | \| | \| | \| V | \| | \| |
| 17+45 | 7.3971 | 10.23 | Q \| | \| | \| | \| | \| V | \| | \| |
| 17+50 | 7.4630 | 9.57 | Q \| | \| | \| | \| | \| V | \| | \| |
| 17+55 | 7.5247 | 8.96 | Q \| | \| | \| | \| | \| V | \| | \| |
| 18+ 0 | 7.5827 | 8.42 | Q \| | \| | \| | \| | \| V | \| | \| |
| 18+ 5 | 7.6365 | 7.81 | Q \| | \| | \| | \| | \| V | \| | \| |
| 18+10 | 7.6866 | 7.26 | Q \| | \| | \| | \| | \| V | \| | \| |
| 18+15 | 7.7343 | 6.94 | Q \| | \| | \| | \| | \| V | \| | \| |
| 18+20 | 7.7787 | 6.45 | Q \| | \| | \| | \| | \| V | \| | \| |
| 18+25 | 7.8199 | 5.98 | Q \| | \| | \| | \| | \| V | \| | \| |
| 18+30 | 7.8591 | 5.69 | Q \| | \| | \| | \| | \| V | \| | \| |
| 18+35 | 7.8952 | 5.25 | Q \| | \| | \| | \| | \| V | \| | \| |
| 18+40 | 7.9286 | 4.84 | Q \| | \| | \| | \| | \| V | \| | \| |
| 18+45 | 7.9604 | 4.62 | Q \| | \| | \| | \| | \| V | \| | \| |
| 18+50 | 7.9896 | 4.24 | Q \| | \| | \| | \| | \| V | \| | \| |
| 18+55 | 8.0165 | 3.90 | \|Q | \| | \| | \| | \| V | \| | \| |
| 19+ 0 | 8.0425 | 3.78 | \|Q | \| | \| | \| | \| V | \| | \| |
| 19+ 5 | 8.0681 | 3.72 | \|Q | \| | \| | \| | \| V | \| | \| |
| 19+10 | 8.0933 | 3.66 | \|Q | \| | \| | \| | \| V | \| | \| |
| 19+15 | 8.1178 | 3.56 | \|Q | \| | \| | \| | \| V | \| | \| |
| 19+20 | 8.1416 | 3.46 | \|Q | \| | \| | \| | \| V | \| | \| |
| 19+25 | 8.1647 | 3.34 | \|Q | \| | \| | \| | \| V | \| | \| |
| 19+30 | 8.1867 | 3.21 | \|Q | \| | \| | \| | \| V | \| | \| |
| 19+35 | 8.2070 | 2.95 | \|Q | \| | \| | \| | \| V | \| | \| |
| 19+40 | 8.2256 | 2.70 | \|Q | \| | \| | \| | \| V | \| | \| |
| 19+45 | 8.2434 | 2.58 | \|Q | \| | \| | \| | \| V | \| | \| |
| 19+50 | 8.2603 | 2.46 | \|Q | \| | \| | \| | \| V | \| | \| |
| 19+55 | 8.2754 | 2.20 | \|Q | \| | \| | \| | \| V | \| | \| |
| 20+ 0 | 8.2890 | 1.97 | Q | \| | \| | \| | \| V | \| | \| |
| 20+ 5 | 8.3020 | 1.89 | Q | \| | \| | \| | \| V | \| | \| |
| 20+10 | 8.3147 | 1.83 | Q | \| | \| | \| | \| V | \| | \| |
| 20+15 | 8.3269 | 1.78 | Q | \| | \| | \| | \| V | \| | \| |
| 20+20 | 8.3389 | 1.74 | Q | \| | \| | \| | \| V | \| | \| |
| 20+25 | 8.3505 | 1.69 | Q | \| | \| | \| | \| V | \| | \| |
| 20+30 | 8.3619 | 1.66 | Q | \| | \| | \| | \| V | \| | \| |
| 20+35 | 8.3731 | 1.62 | Q | \| | \| | \| | \| V | \| | \| |
| 20+40 | 8.3840 | 1.59 | Q | \| | \| | \| | \| V | \| | \| |
| 20+45 | 8.3948 | 1.56 | Q | \| | \| | \| | \| V | \| | \| |
| 20+50 | 8.4053 | 1.53 | Q | \| | \| | \| | \| V | \| | \| |
| 20+55 | 8.4156 | 1.50 | Q | \| | \| | \| | \| V | \| | \| |
| 21+ 0 | 8.4257 | 1.47 | Q | \| | \| | \| | \| V | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+ 5 | 8.4357 | 1.44 | Q | \| | \| | \| | V \| |
| 21+10 | 8.4454 | 1.42 | Q | \| | \| | \| | V \| |
| 21+15 | 8.4551 | 1.40 | Q | \| | \| | \| | V \| |
| 21+20 | 8.4645 | 1.37 | Q | \| | \| | \| | V \| |
| 21+25 | 8.4738 | 1.35 | Q | \| | \| | \| | V \| |
| 21+30 | 8.4830 | 1.33 | Q | \| | \| | \| | V \| |
| 21+35 | 8.4920 | 1.31 | Q | \| | \| | \| | V \| |
| 21+40 | 8.5009 | 1.29 | Q | \| | \| | \| | V \| |
| 21+45 | 8.5096 | 1.27 | Q | \| | \| | \| | V \| |
| 21+50 | 8.5182 | 1.25 | Q | \| | \| | \| | V \| |
| 21+55 | 8.5267 | 1.23 | Q | \| | \| | \| | V \| |
| 22+ 0 | 8.5351 | 1.22 | Q | \| | \| | \| | V \| |
| 22+ 5 | 8.5434 | 1.20 | Q | \| | \| | \| | V \| |
| 22+10 | 8.5516 | 1.19 | Q | \| | \| | \| | V\| |
| 22+15 | 8.5596 | 1.17 | Q | \| | \| | \| | V\| |
| 22+20 | 8.5676 | 1.16 | Q | \| | \| | \| | V\| |
| 22+25 | 8.5755 | 1.14 | Q | \| | \| | \| | V\| |
| 22+30 | 8.5832 | 1.13 | Q | \| | \| | \| | V\| |
| 22+35 | 8.5909 | 1.11 | Q | \| | \| | \| | V\| |
| 22+40 | 8.5985 | 1.10 | Q | \| | \| | \| | V\| |
| 22+45 | 8.6059 | 1.09 | Q | \| | \| | \| | V\| |
| 22+50 | 8.6133 | 1.07 | Q | \| | \| | \| | V\| |
| 22+55 | 8.6207 | 1.06 | Q | \| | \| | \| | V\| |
| 23+ 0 | 8.6279 | 1.05 | Q | \| | \| | \| | V\| |
| 23+ 5 | 8.6350 | 1.04 | Q | \| | \| | \| | V\| |
| 23+10 | 8.6421 | 1.03 | Q | \| | \| | \| | V\| |
| 23+15 | 8.6491 | 1.02 | Q | \| | \| | \| | V\| |
| 23+20 | 8.6560 | 1.01 | Q | \| | \| | \| | V\| |
| 23+25 | 8.6629 | 0.99 | Q | \| | \| | \| | V\| |
| 23+30 | 8.6697 | 0.98 | Q | \| | \| | \| | V\| |
| 23+35 | 8.6764 | 0.97 | Q | \| | \| | \| | V\| |
| 23+40 | 8.6830 | 0.96 | Q | \| | \| | \| | V\| |
| 23+45 | 8.6896 | 0.95 | Q | \| | \| | \| | V\| |
| 23+50 | 8.6961 | 0.95 | Q | \| | \| | \| | V\| |
| 23+55 | 8.7025 | 0.94 | Q | \| | \| | \| | V\| |
| 24+ 0 | 8.7089 | 0.93 | Q | \| | \| | \| | V\| |
| 24+ 5 | 8.7152 | 0.91 | Q | \| | \| | \| | V\| |
| 24+10 | 8.7213 | 0.88 | Q | \| | \| | \| | V\| |
| 24+15 | 8.7270 | 0.84 | Q | \| | \| | \| | V\| |
| 24+20 | 8.7323 | 0.76 | Q | \| | \| | \| | V\| |
| 24+25 | 8.7366 | 0.63 | Q | \| | \| | \| | V\| |
| 24+30 | 8.7401 | 0.51 | Q | \| | \| | \| | V\| |
| 24+35 | 8.7429 | 0.42 | Q | \| | \| | \| | V\| |
| 24+40 | 8.7454 | 0.36 | Q | \| | \| | \| | V\| |
| 24+45 | 8.7475 | 0.31 | Q | \| | \| | \| | V\| |
| 24+50 | 8.7494 | 0.27 | Q | \| | \| | \| | V\| |
| 24+55 | 8.7511 | 0.24 | Q | \| | \| | \| | V\| |
| 25+ 0 | 8.7525 | 0.21 | Q | \| | \| | \| | V\| |
| 25+ 5 | 8.7538 | 0.19 | Q | \| | \| | \| | V\| |
| 25+10 | 8.7550 | 0.17 | Q | \| | \| | \| | V\| |
| 25+15 | 8.7560 | 0.15 | Q | \| | \| | \| | V\| |
| 25+20 | 8.7570 | 0.14 | Q | \| | \| | \| | V\| |
| 25+25 | 8.7578 | 0.12 | Q | \| | \| | \| | V\| |
| 25+30 | 8.7586 | 0.11 | Q | \| | \| | \| | V\| |
| 25+35 | 8.7593 | 0.10 | Q | \| | \| | \| | V\| |
| 25+40 | 8.7599 | 0.09 | Q | \| | \| | \| | V\| |
| 25+45 | 8.7604 | 0.08 | Q | \| | \| | \| | V\| |
| 25+50 | 8.7609 | 0.07 | Q | \| | \| | \| | V\| |
| 25+55 | 8.7614 | 0.07 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+ 0 | 8.7618 | 0.06 | Q | \| | \| | \| | V\| |
| 26+ 5 | 8.7621 | 0.05 | Q | \| | \| | \| | V\| |
| 26+10 | 8.7625 | 0.05 | Q | \| | \| | \| | V\| |
| 26+15 | 8.7627 | 0.04 | Q | \| | \| | \| | V\| |
| 26+20 | 8.7630 | 0.04 | Q | \| | \| | \| | V\| |
| 26+25 | 8.7632 | 0.03 | Q | \| | \| | \| | V\| |
| 26+30 | 8.7634 | 0.03 | Q | \| | \| | \| | V\| |
| 26+35 | 8.7636 | 0.03 | Q | \| | \| | \| | V\| |
| 26+40 | 8.7638 | 0.02 | Q | \| | \| | \| | V\| |
| 26+45 | 8.7639 | 0.02 | Q | \| | \| | \| | V\| |
| 26+50 | 8.7640 | 0.02 | Q | \| | \| | \| | V\| |
| 26+55 | 8.7641 | 0.02 | Q | \| | \| | \| | V\| |
| 27+ 0 | 8.7642 | 0.02 | Q | \| | \| | \| | V\| |
| 27+ 5 | 8.7643 | 0.01 | Q | \| | \| | \| | V\| |
| 27+10 | 8.7644 | 0.01 | Q | \| | \| | \| | V\| |
| 27+15 | 8.7645 | 0.01 | Q | \| | \| | \| | V\| |
| 27+20 | 8.7645 | 0.01 | Q | \| | \| | \| | V\| |
| 27+25 | 8.7646 | 0.01 | Q | \| | \| | \| | V\| |
| 27+30 | 8.7646 | 0.00 | Q | \| | \| | \| | V\| |
| 27+35 | 8.7646 | 0.00 | Q | \| | \| | \| | V\| |
| 27+40 | 8.7646 | 0.00 | Q | \| | \| | \| | V\| |
| 27+45 | 8.7647 | 0.00 | Q | \| | \| | \| | V\| |
| 27+50 | 8.7647 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 11
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 9.20 | 1 | 1.28 |
| Rainfall data for year 100 | | |
| 9.20 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 9.20 | 24 | 2.38 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.0 | 92.8 | 9.20 | 1.000 | 0.140 | 0.900 | 0.126 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.126

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 8.28 | 0.900 | 78.0 | 92.8 | 0.78 | 0.693 |
| 0.92 | 0.100 | 98.0 | 98.0 | 0.20 | 0.904 |

Area-averaged catchment yield fraction, Y = 0.714
Area-averaged low loss fraction, Yb = 0.286
User entry of time of concentration = 0.300 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 9.20(Ac.)
Catchment Lag time = 0.240 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 34.7222
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.126(In/Hr)
Average low loss rate fraction (Yb) = 0.286 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.607(In)
Computed peak 30-minute rainfall = 1.040(In)
Specified peak 1-hour rainfall = 1.280(In)
Computed peak 3-hour rainfall = 1.599(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.380(In)

Rainfall depth area reduction factors:
Using a total area of 9.20(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.607(In)
30-minute factor = 1.000 Adjusted rainfall = 1.039(In)
1-hour factor = 1.000 Adjusted rainfall = 1.279(In)
3-hour factor = 1.000 Adjusted rainfall = 1.599(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.380(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 111.26 (CFS)) | |
| 1 | 2.206 | 2.454 |
| 2 | 13.132 | 12.157 |
| 3 | 40.437 | 30.381 |
| 4 | 59.629 | 21.354 |
| 5 | 69.886 | 11.412 |
| 6 | 76.724 | 7.608 |
| 7 | 81.579 | 5.401 |
| 8 | 85.290 | 4.129 |
| 9 | 88.266 | 3.311 |
| 10 | 90.463 | 2.445 |
| 11 | 92.296 | 2.040 |
| 12 | 93.829 | 1.706 |
| 13 | 95.057 | 1.365 |

| | | |
|---|---|---|
| 14 | 96.088 | 1.147 |
| 15 | 96.940 | 0.949 |
| 16 | 97.584 | 0.716 |
| 17 | 98.029 | 0.495 |
| 18 | 98.394 | 0.406 |
| 19 | 98.808 | 0.461 |
| 20 | 99.225 | 0.464 |
| 21 | 99.571 | 0.385 |
| 22 | 99.791 | 0.244 |
| 23 | 100.000 | 0.233 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6071 | 0.6071 |
| 2 | 0.7474 | 0.1403 |
| 3 | 0.8441 | 0.0967 |
| 4 | 0.9202 | 0.0761 |
| 5 | 0.9839 | 0.0637 |
| 6 | 1.0392 | 0.0553 |
| 7 | 1.0884 | 0.0492 |
| 8 | 1.1329 | 0.0445 |
| 9 | 1.1737 | 0.0407 |
| 10 | 1.2113 | 0.0377 |
| 11 | 1.2465 | 0.0351 |
| 12 | 1.2794 | 0.0330 |
| 13 | 1.3004 | 0.0209 |
| 14 | 1.3201 | 0.0197 |
| 15 | 1.3387 | 0.0186 |
| 16 | 1.3563 | 0.0176 |
| 17 | 1.3731 | 0.0168 |
| 18 | 1.3891 | 0.0160 |
| 19 | 1.4045 | 0.0153 |
| 20 | 1.4192 | 0.0147 |
| 21 | 1.4333 | 0.0141 |
| 22 | 1.4469 | 0.0136 |
| 23 | 1.4600 | 0.0131 |
| 24 | 1.4726 | 0.0127 |
| 25 | 1.4849 | 0.0122 |
| 26 | 1.4968 | 0.0119 |
| 27 | 1.5083 | 0.0115 |
| 28 | 1.5194 | 0.0112 |
| 29 | 1.5303 | 0.0109 |
| 30 | 1.5408 | 0.0106 |
| 31 | 1.5511 | 0.0103 |
| 32 | 1.5612 | 0.0100 |
| 33 | 1.5709 | 0.0098 |
| 34 | 1.5805 | 0.0095 |
| 35 | 1.5898 | 0.0093 |
| 36 | 1.5989 | 0.0091 |
| 37 | 1.6078 | 0.0089 |
| 38 | 1.6165 | 0.0087 |
| 39 | 1.6250 | 0.0085 |
| 40 | 1.6334 | 0.0084 |
| 41 | 1.6416 | 0.0082 |
| 42 | 1.6496 | 0.0080 |
| 43 | 1.6575 | 0.0079 |
| 44 | 1.6652 | 0.0077 |
| 45 | 1.6728 | 0.0076 |
| 46 | 1.6803 | 0.0075 |

| | | |
|---|---|---|
| 47 | 1.6876 | 0.0073 |
| 48 | 1.6949 | 0.0072 |
| 49 | 1.7020 | 0.0071 |
| 50 | 1.7089 | 0.0070 |
| 51 | 1.7158 | 0.0069 |
| 52 | 1.7226 | 0.0068 |
| 53 | 1.7292 | 0.0067 |
| 54 | 1.7358 | 0.0066 |
| 55 | 1.7422 | 0.0065 |
| 56 | 1.7486 | 0.0064 |
| 57 | 1.7549 | 0.0063 |
| 58 | 1.7611 | 0.0062 |
| 59 | 1.7672 | 0.0061 |
| 60 | 1.7732 | 0.0060 |
| 61 | 1.7792 | 0.0059 |
| 62 | 1.7850 | 0.0059 |
| 63 | 1.7908 | 0.0058 |
| 64 | 1.7966 | 0.0057 |
| 65 | 1.8022 | 0.0057 |
| 66 | 1.8078 | 0.0056 |
| 67 | 1.8133 | 0.0055 |
| 68 | 1.8188 | 0.0055 |
| 69 | 1.8242 | 0.0054 |
| 70 | 1.8295 | 0.0053 |
| 71 | 1.8347 | 0.0053 |
| 72 | 1.8399 | 0.0052 |
| 73 | 1.8447 | 0.0047 |
| 74 | 1.8493 | 0.0047 |
| 75 | 1.8539 | 0.0046 |
| 76 | 1.8585 | 0.0046 |
| 77 | 1.8630 | 0.0045 |
| 78 | 1.8675 | 0.0045 |
| 79 | 1.8719 | 0.0044 |
| 80 | 1.8763 | 0.0044 |
| 81 | 1.8806 | 0.0043 |
| 82 | 1.8849 | 0.0043 |
| 83 | 1.8892 | 0.0042 |
| 84 | 1.8934 | 0.0042 |
| 85 | 1.8975 | 0.0042 |
| 86 | 1.9016 | 0.0041 |
| 87 | 1.9057 | 0.0041 |
| 88 | 1.9098 | 0.0040 |
| 89 | 1.9138 | 0.0040 |
| 90 | 1.9178 | 0.0040 |
| 91 | 1.9217 | 0.0039 |
| 92 | 1.9256 | 0.0039 |
| 93 | 1.9295 | 0.0039 |
| 94 | 1.9333 | 0.0038 |
| 95 | 1.9371 | 0.0038 |
| 96 | 1.9409 | 0.0038 |
| 97 | 1.9446 | 0.0037 |
| 98 | 1.9483 | 0.0037 |
| 99 | 1.9520 | 0.0037 |
| 100 | 1.9556 | 0.0036 |
| 101 | 1.9593 | 0.0036 |
| 102 | 1.9628 | 0.0036 |
| 103 | 1.9664 | 0.0036 |
| 104 | 1.9699 | 0.0035 |
| 105 | 1.9734 | 0.0035 |

| | | |
|---|---|---|
| 106 | 1.9769 | 0.0035 |
| 107 | 1.9804 | 0.0034 |
| 108 | 1.9838 | 0.0034 |
| 109 | 1.9872 | 0.0034 |
| 110 | 1.9906 | 0.0034 |
| 111 | 1.9939 | 0.0033 |
| 112 | 1.9972 | 0.0033 |
| 113 | 2.0005 | 0.0033 |
| 114 | 2.0038 | 0.0033 |
| 115 | 2.0070 | 0.0033 |
| 116 | 2.0103 | 0.0032 |
| 117 | 2.0135 | 0.0032 |
| 118 | 2.0167 | 0.0032 |
| 119 | 2.0198 | 0.0032 |
| 120 | 2.0230 | 0.0031 |
| 121 | 2.0261 | 0.0031 |
| 122 | 2.0292 | 0.0031 |
| 123 | 2.0323 | 0.0031 |
| 124 | 2.0353 | 0.0031 |
| 125 | 2.0384 | 0.0030 |
| 126 | 2.0414 | 0.0030 |
| 127 | 2.0444 | 0.0030 |
| 128 | 2.0474 | 0.0030 |
| 129 | 2.0503 | 0.0030 |
| 130 | 2.0533 | 0.0029 |
| 131 | 2.0562 | 0.0029 |
| 132 | 2.0591 | 0.0029 |
| 133 | 2.0620 | 0.0029 |
| 134 | 2.0648 | 0.0029 |
| 135 | 2.0677 | 0.0029 |
| 136 | 2.0705 | 0.0028 |
| 137 | 2.0733 | 0.0028 |
| 138 | 2.0761 | 0.0028 |
| 139 | 2.0789 | 0.0028 |
| 140 | 2.0817 | 0.0028 |
| 141 | 2.0844 | 0.0028 |
| 142 | 2.0872 | 0.0027 |
| 143 | 2.0899 | 0.0027 |
| 144 | 2.0926 | 0.0027 |
| 145 | 2.0953 | 0.0027 |
| 146 | 2.0980 | 0.0027 |
| 147 | 2.1006 | 0.0027 |
| 148 | 2.1033 | 0.0026 |
| 149 | 2.1059 | 0.0026 |
| 150 | 2.1085 | 0.0026 |
| 151 | 2.1111 | 0.0026 |
| 152 | 2.1137 | 0.0026 |
| 153 | 2.1163 | 0.0026 |
| 154 | 2.1189 | 0.0026 |
| 155 | 2.1214 | 0.0025 |
| 156 | 2.1239 | 0.0025 |
| 157 | 2.1265 | 0.0025 |
| 158 | 2.1290 | 0.0025 |
| 159 | 2.1315 | 0.0025 |
| 160 | 2.1339 | 0.0025 |
| 161 | 2.1364 | 0.0025 |
| 162 | 2.1389 | 0.0025 |
| 163 | 2.1413 | 0.0024 |
| 164 | 2.1437 | 0.0024 |

| | | |
|---|---|---|
| 165 | 2.1462 | 0.0024 |
| 166 | 2.1486 | 0.0024 |
| 167 | 2.1510 | 0.0024 |
| 168 | 2.1534 | 0.0024 |
| 169 | 2.1557 | 0.0024 |
| 170 | 2.1581 | 0.0024 |
| 171 | 2.1604 | 0.0024 |
| 172 | 2.1628 | 0.0023 |
| 173 | 2.1651 | 0.0023 |
| 174 | 2.1674 | 0.0023 |
| 175 | 2.1697 | 0.0023 |
| 176 | 2.1720 | 0.0023 |
| 177 | 2.1743 | 0.0023 |
| 178 | 2.1766 | 0.0023 |
| 179 | 2.1789 | 0.0023 |
| 180 | 2.1811 | 0.0023 |
| 181 | 2.1834 | 0.0022 |
| 182 | 2.1856 | 0.0022 |
| 183 | 2.1878 | 0.0022 |
| 184 | 2.1900 | 0.0022 |
| 185 | 2.1922 | 0.0022 |
| 186 | 2.1944 | 0.0022 |
| 187 | 2.1966 | 0.0022 |
| 188 | 2.1988 | 0.0022 |
| 189 | 2.2010 | 0.0022 |
| 190 | 2.2031 | 0.0022 |
| 191 | 2.2053 | 0.0021 |
| 192 | 2.2074 | 0.0021 |
| 193 | 2.2095 | 0.0021 |
| 194 | 2.2117 | 0.0021 |
| 195 | 2.2138 | 0.0021 |
| 196 | 2.2159 | 0.0021 |
| 197 | 2.2180 | 0.0021 |
| 198 | 2.2201 | 0.0021 |
| 199 | 2.2221 | 0.0021 |
| 200 | 2.2242 | 0.0021 |
| 201 | 2.2263 | 0.0021 |
| 202 | 2.2283 | 0.0021 |
| 203 | 2.2304 | 0.0020 |
| 204 | 2.2324 | 0.0020 |
| 205 | 2.2344 | 0.0020 |
| 206 | 2.2364 | 0.0020 |
| 207 | 2.2384 | 0.0020 |
| 208 | 2.2405 | 0.0020 |
| 209 | 2.2424 | 0.0020 |
| 210 | 2.2444 | 0.0020 |
| 211 | 2.2464 | 0.0020 |
| 212 | 2.2484 | 0.0020 |
| 213 | 2.2504 | 0.0020 |
| 214 | 2.2523 | 0.0020 |
| 215 | 2.2543 | 0.0020 |
| 216 | 2.2562 | 0.0019 |
| 217 | 2.2581 | 0.0019 |
| 218 | 2.2601 | 0.0019 |
| 219 | 2.2620 | 0.0019 |
| 220 | 2.2639 | 0.0019 |
| 221 | 2.2658 | 0.0019 |
| 222 | 2.2677 | 0.0019 |
| 223 | 2.2696 | 0.0019 |

| | | |
|---|---|---|
| 224 | 2.2715 | 0.0019 |
| 225 | 2.2734 | 0.0019 |
| 226 | 2.2752 | 0.0019 |
| 227 | 2.2771 | 0.0019 |
| 228 | 2.2790 | 0.0019 |
| 229 | 2.2808 | 0.0019 |
| 230 | 2.2827 | 0.0018 |
| 231 | 2.2845 | 0.0018 |
| 232 | 2.2863 | 0.0018 |
| 233 | 2.2882 | 0.0018 |
| 234 | 2.2900 | 0.0018 |
| 235 | 2.2918 | 0.0018 |
| 236 | 2.2936 | 0.0018 |
| 237 | 2.2954 | 0.0018 |
| 238 | 2.2972 | 0.0018 |
| 239 | 2.2990 | 0.0018 |
| 240 | 2.3008 | 0.0018 |
| 241 | 2.3025 | 0.0018 |
| 242 | 2.3043 | 0.0018 |
| 243 | 2.3061 | 0.0018 |
| 244 | 2.3078 | 0.0018 |
| 245 | 2.3096 | 0.0018 |
| 246 | 2.3113 | 0.0017 |
| 247 | 2.3131 | 0.0017 |
| 248 | 2.3148 | 0.0017 |
| 249 | 2.3165 | 0.0017 |
| 250 | 2.3183 | 0.0017 |
| 251 | 2.3200 | 0.0017 |
| 252 | 2.3217 | 0.0017 |
| 253 | 2.3234 | 0.0017 |
| 254 | 2.3251 | 0.0017 |
| 255 | 2.3268 | 0.0017 |
| 256 | 2.3285 | 0.0017 |
| 257 | 2.3302 | 0.0017 |
| 258 | 2.3319 | 0.0017 |
| 259 | 2.3335 | 0.0017 |
| 260 | 2.3352 | 0.0017 |
| 261 | 2.3369 | 0.0017 |
| 262 | 2.3385 | 0.0017 |
| 263 | 2.3402 | 0.0017 |
| 264 | 2.3418 | 0.0016 |
| 265 | 2.3435 | 0.0016 |
| 266 | 2.3451 | 0.0016 |
| 267 | 2.3468 | 0.0016 |
| 268 | 2.3484 | 0.0016 |
| 269 | 2.3500 | 0.0016 |
| 270 | 2.3516 | 0.0016 |
| 271 | 2.3532 | 0.0016 |
| 272 | 2.3549 | 0.0016 |
| 273 | 2.3565 | 0.0016 |
| 274 | 2.3581 | 0.0016 |
| 275 | 2.3597 | 0.0016 |
| 276 | 2.3612 | 0.0016 |
| 277 | 2.3628 | 0.0016 |
| 278 | 2.3644 | 0.0016 |
| 279 | 2.3660 | 0.0016 |
| 280 | 2.3676 | 0.0016 |
| 281 | 2.3691 | 0.0016 |
| 282 | 2.3707 | 0.0016 |

| | | |
|---|---|---|
| 283 | 2.3722 | 0.0016 |
| 284 | 2.3738 | 0.0016 |
| 285 | 2.3754 | 0.0015 |
| 286 | 2.3769 | 0.0015 |
| 287 | 2.3784 | 0.0015 |
| 288 | 2.3800 | 0.0015 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0015 | 0.0004 | 0.0011 |
| 2 | 0.0015 | 0.0004 | 0.0011 |
| 3 | 0.0015 | 0.0004 | 0.0011 |
| 4 | 0.0016 | 0.0004 | 0.0011 |
| 5 | 0.0016 | 0.0004 | 0.0011 |
| 6 | 0.0016 | 0.0004 | 0.0011 |
| 7 | 0.0016 | 0.0005 | 0.0011 |
| 8 | 0.0016 | 0.0005 | 0.0011 |
| 9 | 0.0016 | 0.0005 | 0.0011 |
| 10 | 0.0016 | 0.0005 | 0.0011 |
| 11 | 0.0016 | 0.0005 | 0.0011 |
| 12 | 0.0016 | 0.0005 | 0.0011 |
| 13 | 0.0016 | 0.0005 | 0.0012 |
| 14 | 0.0016 | 0.0005 | 0.0012 |
| 15 | 0.0016 | 0.0005 | 0.0012 |
| 16 | 0.0016 | 0.0005 | 0.0012 |
| 17 | 0.0016 | 0.0005 | 0.0012 |
| 18 | 0.0017 | 0.0005 | 0.0012 |
| 19 | 0.0017 | 0.0005 | 0.0012 |
| 20 | 0.0017 | 0.0005 | 0.0012 |
| 21 | 0.0017 | 0.0005 | 0.0012 |
| 22 | 0.0017 | 0.0005 | 0.0012 |
| 23 | 0.0017 | 0.0005 | 0.0012 |
| 24 | 0.0017 | 0.0005 | 0.0012 |
| 25 | 0.0017 | 0.0005 | 0.0012 |
| 26 | 0.0017 | 0.0005 | 0.0012 |
| 27 | 0.0017 | 0.0005 | 0.0012 |
| 28 | 0.0017 | 0.0005 | 0.0012 |
| 29 | 0.0017 | 0.0005 | 0.0012 |
| 30 | 0.0018 | 0.0005 | 0.0013 |
| 31 | 0.0018 | 0.0005 | 0.0013 |
| 32 | 0.0018 | 0.0005 | 0.0013 |
| 33 | 0.0018 | 0.0005 | 0.0013 |
| 34 | 0.0018 | 0.0005 | 0.0013 |
| 35 | 0.0018 | 0.0005 | 0.0013 |
| 36 | 0.0018 | 0.0005 | 0.0013 |
| 37 | 0.0018 | 0.0005 | 0.0013 |
| 38 | 0.0018 | 0.0005 | 0.0013 |
| 39 | 0.0018 | 0.0005 | 0.0013 |
| 40 | 0.0018 | 0.0005 | 0.0013 |
| 41 | 0.0019 | 0.0005 | 0.0013 |
| 42 | 0.0019 | 0.0005 | 0.0013 |
| 43 | 0.0019 | 0.0005 | 0.0013 |
| 44 | 0.0019 | 0.0005 | 0.0013 |
| 45 | 0.0019 | 0.0005 | 0.0014 |
| 46 | 0.0019 | 0.0005 | 0.0014 |
| 47 | 0.0019 | 0.0005 | 0.0014 |
| 48 | 0.0019 | 0.0006 | 0.0014 |

| | | | |
|---|---|---|---|
| 49 | 0.0019 | 0.0006 | 0.0014 |
| 50 | 0.0020 | 0.0006 | 0.0014 |
| 51 | 0.0020 | 0.0006 | 0.0014 |
| 52 | 0.0020 | 0.0006 | 0.0014 |
| 53 | 0.0020 | 0.0006 | 0.0014 |
| 54 | 0.0020 | 0.0006 | 0.0014 |
| 55 | 0.0020 | 0.0006 | 0.0014 |
| 56 | 0.0020 | 0.0006 | 0.0014 |
| 57 | 0.0020 | 0.0006 | 0.0015 |
| 58 | 0.0020 | 0.0006 | 0.0015 |
| 59 | 0.0021 | 0.0006 | 0.0015 |
| 60 | 0.0021 | 0.0006 | 0.0015 |
| 61 | 0.0021 | 0.0006 | 0.0015 |
| 62 | 0.0021 | 0.0006 | 0.0015 |
| 63 | 0.0021 | 0.0006 | 0.0015 |
| 64 | 0.0021 | 0.0006 | 0.0015 |
| 65 | 0.0021 | 0.0006 | 0.0015 |
| 66 | 0.0021 | 0.0006 | 0.0015 |
| 67 | 0.0022 | 0.0006 | 0.0015 |
| 68 | 0.0022 | 0.0006 | 0.0016 |
| 69 | 0.0022 | 0.0006 | 0.0016 |
| 70 | 0.0022 | 0.0006 | 0.0016 |
| 71 | 0.0022 | 0.0006 | 0.0016 |
| 72 | 0.0022 | 0.0006 | 0.0016 |
| 73 | 0.0023 | 0.0006 | 0.0016 |
| 74 | 0.0023 | 0.0006 | 0.0016 |
| 75 | 0.0023 | 0.0007 | 0.0016 |
| 76 | 0.0023 | 0.0007 | 0.0016 |
| 77 | 0.0023 | 0.0007 | 0.0017 |
| 78 | 0.0023 | 0.0007 | 0.0017 |
| 79 | 0.0024 | 0.0007 | 0.0017 |
| 80 | 0.0024 | 0.0007 | 0.0017 |
| 81 | 0.0024 | 0.0007 | 0.0017 |
| 82 | 0.0024 | 0.0007 | 0.0017 |
| 83 | 0.0024 | 0.0007 | 0.0017 |
| 84 | 0.0024 | 0.0007 | 0.0017 |
| 85 | 0.0025 | 0.0007 | 0.0018 |
| 86 | 0.0025 | 0.0007 | 0.0018 |
| 87 | 0.0025 | 0.0007 | 0.0018 |
| 88 | 0.0025 | 0.0007 | 0.0018 |
| 89 | 0.0025 | 0.0007 | 0.0018 |
| 90 | 0.0025 | 0.0007 | 0.0018 |
| 91 | 0.0026 | 0.0007 | 0.0018 |
| 92 | 0.0026 | 0.0007 | 0.0018 |
| 93 | 0.0026 | 0.0007 | 0.0019 |
| 94 | 0.0026 | 0.0008 | 0.0019 |
| 95 | 0.0027 | 0.0008 | 0.0019 |
| 96 | 0.0027 | 0.0008 | 0.0019 |
| 97 | 0.0027 | 0.0008 | 0.0019 |
| 98 | 0.0027 | 0.0008 | 0.0019 |
| 99 | 0.0028 | 0.0008 | 0.0020 |
| 100 | 0.0028 | 0.0008 | 0.0020 |
| 101 | 0.0028 | 0.0008 | 0.0020 |
| 102 | 0.0028 | 0.0008 | 0.0020 |
| 103 | 0.0029 | 0.0008 | 0.0020 |
| 104 | 0.0029 | 0.0008 | 0.0020 |
| 105 | 0.0029 | 0.0008 | 0.0021 |
| 106 | 0.0029 | 0.0008 | 0.0021 |
| 107 | 0.0030 | 0.0008 | 0.0021 |

| | | | |
|---|---|---|---|
| 108 | 0.0030 | 0.0009 | 0.0021 |
| 109 | 0.0030 | 0.0009 | 0.0022 |
| 110 | 0.0030 | 0.0009 | 0.0022 |
| 111 | 0.0031 | 0.0009 | 0.0022 |
| 112 | 0.0031 | 0.0009 | 0.0022 |
| 113 | 0.0031 | 0.0009 | 0.0022 |
| 114 | 0.0032 | 0.0009 | 0.0023 |
| 115 | 0.0032 | 0.0009 | 0.0023 |
| 116 | 0.0032 | 0.0009 | 0.0023 |
| 117 | 0.0033 | 0.0009 | 0.0023 |
| 118 | 0.0033 | 0.0009 | 0.0024 |
| 119 | 0.0033 | 0.0010 | 0.0024 |
| 120 | 0.0034 | 0.0010 | 0.0024 |
| 121 | 0.0034 | 0.0010 | 0.0024 |
| 122 | 0.0034 | 0.0010 | 0.0025 |
| 123 | 0.0035 | 0.0010 | 0.0025 |
| 124 | 0.0035 | 0.0010 | 0.0025 |
| 125 | 0.0036 | 0.0010 | 0.0026 |
| 126 | 0.0036 | 0.0010 | 0.0026 |
| 127 | 0.0037 | 0.0011 | 0.0026 |
| 128 | 0.0037 | 0.0011 | 0.0026 |
| 129 | 0.0038 | 0.0011 | 0.0027 |
| 130 | 0.0038 | 0.0011 | 0.0027 |
| 131 | 0.0039 | 0.0011 | 0.0028 |
| 132 | 0.0039 | 0.0011 | 0.0028 |
| 133 | 0.0040 | 0.0011 | 0.0028 |
| 134 | 0.0040 | 0.0011 | 0.0029 |
| 135 | 0.0041 | 0.0012 | 0.0029 |
| 136 | 0.0041 | 0.0012 | 0.0029 |
| 137 | 0.0042 | 0.0012 | 0.0030 |
| 138 | 0.0042 | 0.0012 | 0.0030 |
| 139 | 0.0043 | 0.0012 | 0.0031 |
| 140 | 0.0044 | 0.0013 | 0.0031 |
| 141 | 0.0045 | 0.0013 | 0.0032 |
| 142 | 0.0045 | 0.0013 | 0.0032 |
| 143 | 0.0046 | 0.0013 | 0.0033 |
| 144 | 0.0047 | 0.0013 | 0.0033 |
| 145 | 0.0052 | 0.0015 | 0.0037 |
| 146 | 0.0053 | 0.0015 | 0.0038 |
| 147 | 0.0054 | 0.0015 | 0.0038 |
| 148 | 0.0055 | 0.0016 | 0.0039 |
| 149 | 0.0056 | 0.0016 | 0.0040 |
| 150 | 0.0057 | 0.0016 | 0.0040 |
| 151 | 0.0058 | 0.0017 | 0.0041 |
| 152 | 0.0059 | 0.0017 | 0.0042 |
| 153 | 0.0060 | 0.0017 | 0.0043 |
| 154 | 0.0061 | 0.0017 | 0.0044 |
| 155 | 0.0063 | 0.0018 | 0.0045 |
| 156 | 0.0064 | 0.0018 | 0.0046 |
| 157 | 0.0066 | 0.0019 | 0.0047 |
| 158 | 0.0067 | 0.0019 | 0.0048 |
| 159 | 0.0069 | 0.0020 | 0.0049 |
| 160 | 0.0070 | 0.0020 | 0.0050 |
| 161 | 0.0072 | 0.0021 | 0.0052 |
| 162 | 0.0073 | 0.0021 | 0.0052 |
| 163 | 0.0076 | 0.0022 | 0.0054 |
| 164 | 0.0077 | 0.0022 | 0.0055 |
| 165 | 0.0080 | 0.0023 | 0.0057 |
| 166 | 0.0082 | 0.0023 | 0.0058 |

| | | | |
|---|---|---|---|
| 167 | 0.0085 | 0.0024 | 0.0061 |
| 168 | 0.0087 | 0.0025 | 0.0062 |
| 169 | 0.0091 | 0.0026 | 0.0065 |
| 170 | 0.0093 | 0.0027 | 0.0067 |
| 171 | 0.0098 | 0.0028 | 0.0070 |
| 172 | 0.0100 | 0.0029 | 0.0072 |
| 173 | 0.0106 | 0.0030 | 0.0075 |
| 174 | 0.0109 | 0.0031 | 0.0078 |
| 175 | 0.0115 | 0.0033 | 0.0082 |
| 176 | 0.0119 | 0.0034 | 0.0085 |
| 177 | 0.0127 | 0.0036 | 0.0090 |
| 178 | 0.0131 | 0.0037 | 0.0094 |
| 179 | 0.0141 | 0.0040 | 0.0101 |
| 180 | 0.0147 | 0.0042 | 0.0105 |
| 181 | 0.0160 | 0.0046 | 0.0114 |
| 182 | 0.0168 | 0.0048 | 0.0120 |
| 183 | 0.0186 | 0.0053 | 0.0133 |
| 184 | 0.0197 | 0.0056 | 0.0141 |
| 185 | 0.0330 | 0.0094 | 0.0235 |
| 186 | 0.0351 | 0.0100 | 0.0251 |
| 187 | 0.0407 | 0.0105 | 0.0302 |
| 188 | 0.0445 | 0.0105 | 0.0340 |
| 189 | 0.0553 | 0.0105 | 0.0448 |
| 190 | 0.0637 | 0.0105 | 0.0532 |
| 191 | 0.0967 | 0.0105 | 0.0862 |
| 192 | 0.1403 | 0.0105 | 0.1298 |
| 193 | 0.6071 | 0.0105 | 0.5966 |
| 194 | 0.0761 | 0.0105 | 0.0656 |
| 195 | 0.0492 | 0.0105 | 0.0387 |
| 196 | 0.0377 | 0.0105 | 0.0272 |
| 197 | 0.0209 | 0.0060 | 0.0150 |
| 198 | 0.0176 | 0.0050 | 0.0126 |
| 199 | 0.0153 | 0.0044 | 0.0109 |
| 200 | 0.0136 | 0.0039 | 0.0097 |
| 201 | 0.0122 | 0.0035 | 0.0087 |
| 202 | 0.0112 | 0.0032 | 0.0080 |
| 203 | 0.0103 | 0.0029 | 0.0073 |
| 204 | 0.0095 | 0.0027 | 0.0068 |
| 205 | 0.0089 | 0.0025 | 0.0064 |
| 206 | 0.0084 | 0.0024 | 0.0060 |
| 207 | 0.0079 | 0.0023 | 0.0056 |
| 208 | 0.0075 | 0.0021 | 0.0053 |
| 209 | 0.0071 | 0.0020 | 0.0051 |
| 210 | 0.0068 | 0.0019 | 0.0048 |
| 211 | 0.0065 | 0.0018 | 0.0046 |
| 212 | 0.0062 | 0.0018 | 0.0044 |
| 213 | 0.0059 | 0.0017 | 0.0042 |
| 214 | 0.0057 | 0.0016 | 0.0041 |
| 215 | 0.0055 | 0.0016 | 0.0039 |
| 216 | 0.0053 | 0.0015 | 0.0038 |
| 217 | 0.0047 | 0.0013 | 0.0034 |
| 218 | 0.0046 | 0.0013 | 0.0033 |
| 219 | 0.0044 | 0.0013 | 0.0032 |
| 220 | 0.0043 | 0.0012 | 0.0031 |
| 221 | 0.0042 | 0.0012 | 0.0030 |
| 222 | 0.0040 | 0.0012 | 0.0029 |
| 223 | 0.0039 | 0.0011 | 0.0028 |
| 224 | 0.0038 | 0.0011 | 0.0027 |
| 225 | 0.0037 | 0.0011 | 0.0027 |

| | | | |
|---|---|---|---|
| 226 | 0.0036 | 0.0010 | 0.0026 |
| 227 | 0.0036 | 0.0010 | 0.0025 |
| 228 | 0.0035 | 0.0010 | 0.0025 |
| 229 | 0.0034 | 0.0010 | 0.0024 |
| 230 | 0.0033 | 0.0009 | 0.0024 |
| 231 | 0.0033 | 0.0009 | 0.0023 |
| 232 | 0.0032 | 0.0009 | 0.0023 |
| 233 | 0.0031 | 0.0009 | 0.0022 |
| 234 | 0.0031 | 0.0009 | 0.0022 |
| 235 | 0.0030 | 0.0009 | 0.0021 |
| 236 | 0.0029 | 0.0008 | 0.0021 |
| 237 | 0.0029 | 0.0008 | 0.0021 |
| 238 | 0.0028 | 0.0008 | 0.0020 |
| 239 | 0.0028 | 0.0008 | 0.0020 |
| 240 | 0.0027 | 0.0008 | 0.0020 |
| 241 | 0.0027 | 0.0008 | 0.0019 |
| 242 | 0.0026 | 0.0008 | 0.0019 |
| 243 | 0.0026 | 0.0007 | 0.0019 |
| 244 | 0.0026 | 0.0007 | 0.0018 |
| 245 | 0.0025 | 0.0007 | 0.0018 |
| 246 | 0.0025 | 0.0007 | 0.0018 |
| 247 | 0.0024 | 0.0007 | 0.0017 |
| 248 | 0.0024 | 0.0007 | 0.0017 |
| 249 | 0.0024 | 0.0007 | 0.0017 |
| 250 | 0.0023 | 0.0007 | 0.0017 |
| 251 | 0.0023 | 0.0007 | 0.0016 |
| 252 | 0.0023 | 0.0007 | 0.0016 |
| 253 | 0.0022 | 0.0006 | 0.0016 |
| 254 | 0.0022 | 0.0006 | 0.0016 |
| 255 | 0.0022 | 0.0006 | 0.0016 |
| 256 | 0.0022 | 0.0006 | 0.0015 |
| 257 | 0.0021 | 0.0006 | 0.0015 |
| 258 | 0.0021 | 0.0006 | 0.0015 |
| 259 | 0.0021 | 0.0006 | 0.0015 |
| 260 | 0.0021 | 0.0006 | 0.0015 |
| 261 | 0.0020 | 0.0006 | 0.0014 |
| 262 | 0.0020 | 0.0006 | 0.0014 |
| 263 | 0.0020 | 0.0006 | 0.0014 |
| 264 | 0.0020 | 0.0006 | 0.0014 |
| 265 | 0.0019 | 0.0006 | 0.0014 |
| 266 | 0.0019 | 0.0005 | 0.0014 |
| 267 | 0.0019 | 0.0005 | 0.0014 |
| 268 | 0.0019 | 0.0005 | 0.0013 |
| 269 | 0.0019 | 0.0005 | 0.0013 |
| 270 | 0.0018 | 0.0005 | 0.0013 |
| 271 | 0.0018 | 0.0005 | 0.0013 |
| 272 | 0.0018 | 0.0005 | 0.0013 |
| 273 | 0.0018 | 0.0005 | 0.0013 |
| 274 | 0.0018 | 0.0005 | 0.0013 |
| 275 | 0.0017 | 0.0005 | 0.0012 |
| 276 | 0.0017 | 0.0005 | 0.0012 |
| 277 | 0.0017 | 0.0005 | 0.0012 |
| 278 | 0.0017 | 0.0005 | 0.0012 |
| 279 | 0.0017 | 0.0005 | 0.0012 |
| 280 | 0.0017 | 0.0005 | 0.0012 |
| 281 | 0.0016 | 0.0005 | 0.0012 |
| 282 | 0.0016 | 0.0005 | 0.0012 |
| 283 | 0.0016 | 0.0005 | 0.0012 |
| 284 | 0.0016 | 0.0005 | 0.0011 |

| | | | |
|---|---|---|---|
| 285 | 0.0016 | 0.0005 | 0.0011 |
| 286 | 0.0016 | 0.0004 | 0.0011 |
| 287 | 0.0016 | 0.0004 | 0.0011 |
| 288 | 0.0015 | 0.0004 | 0.0011 |

Total soil rain loss = 0.44(In)
Total effective rainfall = 1.94(In)
Peak flow rate in flood hydrograph = 23.87(CFS)

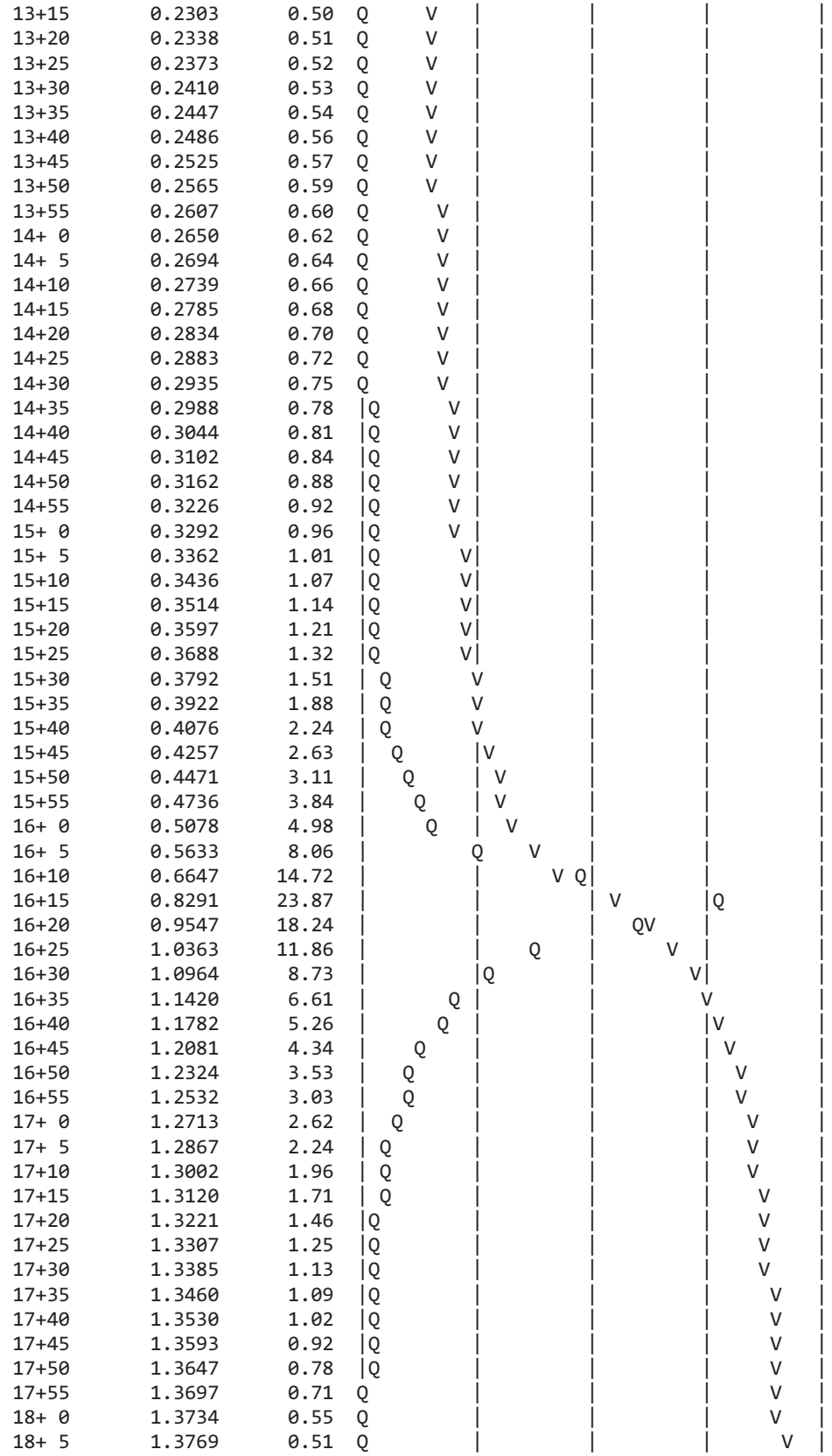
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 7.5 | 15.0 | 22.5 | 30.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.02 | Q | | | | |
| 0+15 | 0.0005 | 0.05 | Q | | | | |
| 0+20 | 0.0010 | 0.07 | Q | | | | |
| 0+25 | 0.0016 | 0.09 | Q | | | | |
| 0+30 | 0.0022 | 0.09 | Q | | | | |
| 0+35 | 0.0029 | 0.10 | Q | | | | |
| 0+40 | 0.0036 | 0.11 | Q | | | | |
| 0+45 | 0.0044 | 0.11 | Q | | | | |
| 0+50 | 0.0052 | 0.11 | Q | | | | |
| 0+55 | 0.0060 | 0.12 | Q | | | | |
| 1+ 0 | 0.0068 | 0.12 | Q | | | | |
| 1+ 5 | 0.0076 | 0.12 | Q | | | | |
| 1+10 | 0.0085 | 0.12 | Q | | | | |
| 1+15 | 0.0093 | 0.12 | Q | | | | |
| 1+20 | 0.0102 | 0.12 | Q | | | | |
| 1+25 | 0.0110 | 0.13 | Q | | | | |
| 1+30 | 0.0119 | 0.13 | Q | | | | |
| 1+35 | 0.0128 | 0.13 | Q | | | | |
| 1+40 | 0.0137 | 0.13 | Q | | | | |
| 1+45 | 0.0146 | 0.13 | Q | | | | |
| 1+50 | 0.0155 | 0.13 | Q | | | | |
| 1+55 | 0.0164 | 0.13 | Q | | | | |
| 2+ 0 | 0.0173 | 0.13 | Q | | | | |
| 2+ 5 | 0.0182 | 0.13 | Q | | | | |
| 2+10 | 0.0192 | 0.13 | Q | | | | |
| 2+15 | 0.0201 | 0.13 | Q | | | | |
| 2+20 | 0.0210 | 0.14 | Q | | | | |
| 2+25 | 0.0219 | 0.14 | Q | | | | |
| 2+30 | 0.0229 | 0.14 | Q | | | | |
| 2+35 | 0.0238 | 0.14 | Q | | | | |
| 2+40 | 0.0248 | 0.14 | Q | | | | |
| 2+45 | 0.0257 | 0.14 | Q | | | | |
| 2+50 | 0.0267 | 0.14 | Q | | | | |
| 2+55 | 0.0277 | 0.14 | Q | | | | |
| 3+ 0 | 0.0286 | 0.14 | Q | | | | |
| 3+ 5 | 0.0296 | 0.14 | Q | | | | |
| 3+10 | 0.0306 | 0.14 | Q | | | | |
| 3+15 | 0.0316 | 0.14 | Q | | | | |
| 3+20 | 0.0326 | 0.14 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+25 | 0.0335 | 0.14 | Q | | | | |
| 3+30 | 0.0345 | 0.15 | Q | | | | |
| 3+35 | 0.0355 | 0.15 | Q | | | | |
| 3+40 | 0.0366 | 0.15 | Q | | | | |
| 3+45 | 0.0376 | 0.15 | QV | | | | |
| 3+50 | 0.0386 | 0.15 | QV | | | | |
| 3+55 | 0.0396 | 0.15 | QV | | | | |
| 4+ 0 | 0.0407 | 0.15 | QV | | | | |
| 4+ 5 | 0.0417 | 0.15 | QV | | | | |
| 4+10 | 0.0427 | 0.15 | QV | | | | |
| 4+15 | 0.0438 | 0.15 | QV | | | | |
| 4+20 | 0.0448 | 0.15 | QV | | | | |
| 4+25 | 0.0459 | 0.15 | QV | | | | |
| 4+30 | 0.0470 | 0.15 | QV | | | | |
| 4+35 | 0.0480 | 0.16 | QV | | | | |
| 4+40 | 0.0491 | 0.16 | QV | | | | |
| 4+45 | 0.0502 | 0.16 | QV | | | | |
| 4+50 | 0.0513 | 0.16 | QV | | | | |
| 4+55 | 0.0524 | 0.16 | QV | | | | |
| 5+ 0 | 0.0535 | 0.16 | QV | | | | |
| 5+ 5 | 0.0546 | 0.16 | QV | | | | |
| 5+10 | 0.0557 | 0.16 | QV | | | | |
| 5+15 | 0.0569 | 0.16 | QV | | | | |
| 5+20 | 0.0580 | 0.16 | QV | | | | |
| 5+25 | 0.0591 | 0.17 | QV | | | | |
| 5+30 | 0.0603 | 0.17 | QV | | | | |
| 5+35 | 0.0614 | 0.17 | QV | | | | |
| 5+40 | 0.0626 | 0.17 | QV | | | | |
| 5+45 | 0.0638 | 0.17 | QV | | | | |
| 5+50 | 0.0649 | 0.17 | QV | | | | |
| 5+55 | 0.0661 | 0.17 | QV | | | | |
| 6+ 0 | 0.0673 | 0.17 | QV | | | | |
| 6+ 5 | 0.0685 | 0.17 | QV | | | | |
| 6+10 | 0.0697 | 0.18 | QV | | | | |
| 6+15 | 0.0709 | 0.18 | QV | | | | |
| 6+20 | 0.0721 | 0.18 | QV | | | | |
| 6+25 | 0.0734 | 0.18 | QV | | | | |
| 6+30 | 0.0746 | 0.18 | Q V | | | | |
| 6+35 | 0.0759 | 0.18 | Q V | | | | |
| 6+40 | 0.0771 | 0.18 | Q V | | | | |
| 6+45 | 0.0784 | 0.18 | Q V | | | | |
| 6+50 | 0.0797 | 0.19 | Q V | | | | |
| 6+55 | 0.0809 | 0.19 | Q V | | | | |
| 7+ 0 | 0.0822 | 0.19 | Q V | | | | |
| 7+ 5 | 0.0835 | 0.19 | Q V | | | | |
| 7+10 | 0.0849 | 0.19 | Q V | | | | |
| 7+15 | 0.0862 | 0.19 | Q V | | | | |
| 7+20 | 0.0875 | 0.19 | Q V | | | | |
| 7+25 | 0.0888 | 0.19 | Q V | | | | |
| 7+30 | 0.0902 | 0.20 | Q V | | | | |
| 7+35 | 0.0916 | 0.20 | Q V | | | | |
| 7+40 | 0.0929 | 0.20 | Q V | | | | |
| 7+45 | 0.0943 | 0.20 | Q V | | | | |
| 7+50 | 0.0957 | 0.20 | Q V | | | | |
| 7+55 | 0.0971 | 0.20 | Q V | | | | |
| 8+ 0 | 0.0985 | 0.21 | Q V | | | | |
| 8+ 5 | 0.1000 | 0.21 | Q V | | | | |
| 8+10 | 0.1014 | 0.21 | Q V | | | | |
| 8+15 | 0.1029 | 0.21 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8+20 | 0.1043 | 0.21 | Q V | \| | \| | \| | \| |
| 8+25 | 0.1058 | 0.21 | Q V | \| | \| | \| | \| |
| 8+30 | 0.1073 | 0.22 | Q V | \| | \| | \| | \| |
| 8+35 | 0.1088 | 0.22 | Q V | \| | \| | \| | \| |
| 8+40 | 0.1103 | 0.22 | Q V | \| | \| | \| | \| |
| 8+45 | 0.1118 | 0.22 | Q V | \| | \| | \| | \| |
| 8+50 | 0.1134 | 0.22 | Q V | \| | \| | \| | \| |
| 8+55 | 0.1149 | 0.23 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.1165 | 0.23 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.1181 | 0.23 | Q V | \| | \| | \| | \| |
| 9+10 | 0.1197 | 0.23 | Q V | \| | \| | \| | \| |
| 9+15 | 0.1213 | 0.23 | Q V | \| | \| | \| | \| |
| 9+20 | 0.1229 | 0.24 | Q V | \| | \| | \| | \| |
| 9+25 | 0.1246 | 0.24 | Q V | \| | \| | \| | \| |
| 9+30 | 0.1262 | 0.24 | Q V | \| | \| | \| | \| |
| 9+35 | 0.1279 | 0.24 | Q V | \| | \| | \| | \| |
| 9+40 | 0.1296 | 0.25 | Q V | \| | \| | \| | \| |
| 9+45 | 0.1313 | 0.25 | Q V | \| | \| | \| | \| |
| 9+50 | 0.1331 | 0.25 | Q V | \| | \| | \| | \| |
| 9+55 | 0.1348 | 0.25 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.1366 | 0.26 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.1384 | 0.26 | Q V | \| | \| | \| | \| |
| 10+10 | 0.1402 | 0.26 | Q V | \| | \| | \| | \| |
| 10+15 | 0.1420 | 0.27 | Q V | \| | \| | \| | \| |
| 10+20 | 0.1438 | 0.27 | Q V | \| | \| | \| | \| |
| 10+25 | 0.1457 | 0.27 | Q V | \| | \| | \| | \| |
| 10+30 | 0.1476 | 0.27 | Q V | \| | \| | \| | \| |
| 10+35 | 0.1495 | 0.28 | Q V | \| | \| | \| | \| |
| 10+40 | 0.1514 | 0.28 | Q V | \| | \| | \| | \| |
| 10+45 | 0.1534 | 0.28 | Q V | \| | \| | \| | \| |
| 10+50 | 0.1554 | 0.29 | Q V | \| | \| | \| | \| |
| 10+55 | 0.1574 | 0.29 | Q V | \| | \| | \| | \| |
| 11+ 0 | 0.1594 | 0.29 | Q V | \| | \| | \| | \| |
| 11+ 5 | 0.1615 | 0.30 | Q V | \| | \| | \| | \| |
| 11+10 | 0.1636 | 0.30 | Q V | \| | \| | \| | \| |
| 11+15 | 0.1657 | 0.31 | Q V | \| | \| | \| | \| |
| 11+20 | 0.1678 | 0.31 | Q V | \| | \| | \| | \| |
| 11+25 | 0.1700 | 0.31 | Q V | \| | \| | \| | \| |
| 11+30 | 0.1722 | 0.32 | Q V | \| | \| | \| | \| |
| 11+35 | 0.1744 | 0.32 | Q V | \| | \| | \| | \| |
| 11+40 | 0.1767 | 0.33 | Q V | \| | \| | \| | \| |
| 11+45 | 0.1790 | 0.33 | Q V | \| | \| | \| | \| |
| 11+50 | 0.1813 | 0.34 | Q V | \| | \| | \| | \| |
| 11+55 | 0.1836 | 0.34 | Q V | \| | \| | \| | \| |
| 12+ 0 | 0.1860 | 0.35 | Q V | \| | \| | \| | \| |
| 12+ 5 | 0.1885 | 0.35 | Q V | \| | \| | \| | \| |
| 12+10 | 0.1910 | 0.36 | Q V | \| | \| | \| | \| |
| 12+15 | 0.1936 | 0.38 | Q V | \| | \| | \| | \| |
| 12+20 | 0.1963 | 0.39 | Q V | \| | \| | \| | \| |
| 12+25 | 0.1991 | 0.40 | Q V | \| | \| | \| | \| |
| 12+30 | 0.2019 | 0.41 | Q V | \| | \| | \| | \| |
| 12+35 | 0.2048 | 0.42 | Q V | \| | \| | \| | \| |
| 12+40 | 0.2078 | 0.43 | Q V | \| | \| | \| | \| |
| 12+45 | 0.2108 | 0.44 | Q V | \| | \| | \| | \| |
| 12+50 | 0.2139 | 0.45 | Q V | \| | \| | \| | \| |
| 12+55 | 0.2170 | 0.46 | Q V | \| | \| | \| | \| |
| 13+ 0 | 0.2202 | 0.47 | Q V | \| | \| | \| | \| |
| 13+ 5 | 0.2235 | 0.48 | Q V | \| | \| | \| | \| |
| 13+10 | 0.2268 | 0.49 | Q V | \| | \| | \| | \| |



| | | | |
|---|---|---|---|
| 13+15 | 0.2303 | 0.50 | Q V \| \| \| \| |
| 13+20 | 0.2338 | 0.51 | Q V \| \| \| \| |
| 13+25 | 0.2373 | 0.52 | Q V \| \| \| \| |
| 13+30 | 0.2410 | 0.53 | Q V \| \| \| \| |
| 13+35 | 0.2447 | 0.54 | Q V \| \| \| \| |
| 13+40 | 0.2486 | 0.56 | Q V \| \| \| \| |
| 13+45 | 0.2525 | 0.57 | Q V \| \| \| \| |
| 13+50 | 0.2565 | 0.59 | Q V \| \| \| \| |
| 13+55 | 0.2607 | 0.60 | Q V \| \| \| \| |
| 14+ 0 | 0.2650 | 0.62 | Q V \| \| \| \| |
| 14+ 5 | 0.2694 | 0.64 | Q V \| \| \| \| |
| 14+10 | 0.2739 | 0.66 | Q V \| \| \| \| |
| 14+15 | 0.2785 | 0.68 | Q V \| \| \| \| |
| 14+20 | 0.2834 | 0.70 | Q V \| \| \| \| |
| 14+25 | 0.2883 | 0.72 | Q V \| \| \| \| |
| 14+30 | 0.2935 | 0.75 | Q V \| \| \| \| |
| 14+35 | 0.2988 | 0.78 | \|Q V \| \| \| \| |
| 14+40 | 0.3044 | 0.81 | \|Q V \| \| \| \| |
| 14+45 | 0.3102 | 0.84 | \|Q V \| \| \| \| |
| 14+50 | 0.3162 | 0.88 | \|Q V \| \| \| \| |
| 14+55 | 0.3226 | 0.92 | \|Q V \| \| \| \| |
| 15+ 0 | 0.3292 | 0.96 | \|Q V \| \| \| \| |
| 15+ 5 | 0.3362 | 1.01 | \|Q V\| \| \| \| |
| 15+10 | 0.3436 | 1.07 | \|Q V\| \| \| \| |
| 15+15 | 0.3514 | 1.14 | \|Q V\| \| \| \| |
| 15+20 | 0.3597 | 1.21 | \|Q V\| \| \| \| |
| 15+25 | 0.3688 | 1.32 | \|Q V\| \| \| \| |
| 15+30 | 0.3792 | 1.51 | \| Q V \| \| \| |
| 15+35 | 0.3922 | 1.88 | \| Q V \| \| \| |
| 15+40 | 0.4076 | 2.24 | \| Q V \| \| \| |
| 15+45 | 0.4257 | 2.63 | \| Q \|V \| \| \| |
| 15+50 | 0.4471 | 3.11 | \| Q \| V \| \| \| |
| 15+55 | 0.4736 | 3.84 | \| Q \| V \| \| \| |
| 16+ 0 | 0.5078 | 4.98 | \| Q \| V \| \| \| |
| 16+ 5 | 0.5633 | 8.06 | \| Q V \| \| \| |
| 16+10 | 0.6647 | 14.72 | \| \| V Q\| \| \| |
| 16+15 | 0.8291 | 23.87 | \| \| \| V \|Q \| |
| 16+20 | 0.9547 | 18.24 | \| \| \| QV \| \| |
| 16+25 | 1.0363 | 11.86 | \| \| Q \| V \| \| |
| 16+30 | 1.0964 | 8.73 | \| \|Q \| V\| \| |
| 16+35 | 1.1420 | 6.61 | \| Q \| \| V \| |
| 16+40 | 1.1782 | 5.26 | \| Q \| \| \|V \| |
| 16+45 | 1.2081 | 4.34 | \| Q \| \| \| V \| |
| 16+50 | 1.2324 | 3.53 | \| Q \| \| \| V \| |
| 16+55 | 1.2532 | 3.03 | \| Q \| \| \| V \| |
| 17+ 0 | 1.2713 | 2.62 | \| Q \| \| \| V \| |
| 17+ 5 | 1.2867 | 2.24 | \| Q \| \| \| V \| |
| 17+10 | 1.3002 | 1.96 | \| Q \| \| \| V \| |
| 17+15 | 1.3120 | 1.71 | \| Q \| \| \| V \| |
| 17+20 | 1.3221 | 1.46 | \|Q \| \| \| V \| |
| 17+25 | 1.3307 | 1.25 | \|Q \| \| \| V \| |
| 17+30 | 1.3385 | 1.13 | \|Q \| \| \| V \| |
| 17+35 | 1.3460 | 1.09 | \|Q \| \| \| V \| |
| 17+40 | 1.3530 | 1.02 | \|Q \| \| \| V \| |
| 17+45 | 1.3593 | 0.92 | \|Q \| \| \| V \| |
| 17+50 | 1.3647 | 0.78 | \|Q \| \| \| V \| |
| 17+55 | 1.3697 | 0.71 | Q \| \| \| V \| |
| 18+ 0 | 1.3734 | 0.55 | Q \| \| \| V \| |
| 18+ 5 | 1.3769 | 0.51 | Q \| \| \| V \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18+10 | 1.3802 | 0.48 | Q | \| | \| | \| | V \| |
| 18+15 | 1.3833 | 0.45 | Q | \| | \| | \| | V \| |
| 18+20 | 1.3862 | 0.42 | Q | \| | \| | \| | V \| |
| 18+25 | 1.3890 | 0.40 | Q | \| | \| | \| | V \| |
| 18+30 | 1.3916 | 0.39 | Q | \| | \| | \| | V \| |
| 18+35 | 1.3942 | 0.37 | Q | \| | \| | \| | V \| |
| 18+40 | 1.3967 | 0.36 | Q | \| | \| | \| | V \| |
| 18+45 | 1.3990 | 0.34 | Q | \| | \| | \| | V \| |
| 18+50 | 1.4013 | 0.33 | Q | \| | \| | \| | V \| |
| 18+55 | 1.4036 | 0.32 | Q | \| | \| | \| | V \| |
| 19+ 0 | 1.4057 | 0.31 | Q | \| | \| | \| | V \| |
| 19+ 5 | 1.4078 | 0.31 | Q | \| | \| | \| | V \| |
| 19+10 | 1.4099 | 0.30 | Q | \| | \| | \| | V \| |
| 19+15 | 1.4119 | 0.29 | Q | \| | \| | \| | V \| |
| 19+20 | 1.4138 | 0.28 | Q | \| | \| | \| | V \| |
| 19+25 | 1.4157 | 0.28 | Q | \| | \| | \| | V \| |
| 19+30 | 1.4175 | 0.27 | Q | \| | \| | \| | V \| |
| 19+35 | 1.4194 | 0.26 | Q | \| | \| | \| | V \| |
| 19+40 | 1.4211 | 0.26 | Q | \| | \| | \| | V \| |
| 19+45 | 1.4229 | 0.25 | Q | \| | \| | \| | V \| |
| 19+50 | 1.4245 | 0.25 | Q | \| | \| | \| | V \| |
| 19+55 | 1.4262 | 0.24 | Q | \| | \| | \| | V \| |
| 20+ 0 | 1.4278 | 0.24 | Q | \| | \| | \| | V \| |
| 20+ 5 | 1.4294 | 0.23 | Q | \| | \| | \| | V \| |
| 20+10 | 1.4310 | 0.23 | Q | \| | \| | \| | V \| |
| 20+15 | 1.4325 | 0.22 | Q | \| | \| | \| | V \| |
| 20+20 | 1.4341 | 0.22 | Q | \| | \| | \| | V \| |
| 20+25 | 1.4355 | 0.22 | Q | \| | \| | \| | V \| |
| 20+30 | 1.4370 | 0.21 | Q | \| | \| | \| | V \| |
| 20+35 | 1.4384 | 0.21 | Q | \| | \| | \| | V \| |
| 20+40 | 1.4399 | 0.21 | Q | \| | \| | \| | V \| |
| 20+45 | 1.4413 | 0.20 | Q | \| | \| | \| | V \| |
| 20+50 | 1.4426 | 0.20 | Q | \| | \| | \| | V \| |
| 20+55 | 1.4440 | 0.20 | Q | \| | \| | \| | V \| |
| 21+ 0 | 1.4453 | 0.19 | Q | \| | \| | \| | V \| |
| 21+ 5 | 1.4466 | 0.19 | Q | \| | \| | \| | V \| |
| 21+10 | 1.4479 | 0.19 | Q | \| | \| | \| | V \| |
| 21+15 | 1.4492 | 0.18 | Q | \| | \| | \| | V \| |
| 21+20 | 1.4504 | 0.18 | Q | \| | \| | \| | V\| |
| 21+25 | 1.4517 | 0.18 | Q | \| | \| | \| | V\| |
| 21+30 | 1.4529 | 0.18 | Q | \| | \| | \| | V\| |
| 21+35 | 1.4541 | 0.17 | Q | \| | \| | \| | V\| |
| 21+40 | 1.4553 | 0.17 | Q | \| | \| | \| | V\| |
| 21+45 | 1.4564 | 0.17 | Q | \| | \| | \| | V\| |
| 21+50 | 1.4576 | 0.17 | Q | \| | \| | \| | V\| |
| 21+55 | 1.4587 | 0.17 | Q | \| | \| | \| | V\| |
| 22+ 0 | 1.4599 | 0.16 | Q | \| | \| | \| | V\| |
| 22+ 5 | 1.4610 | 0.16 | Q | \| | \| | \| | V\| |
| 22+10 | 1.4621 | 0.16 | Q | \| | \| | \| | V\| |
| 22+15 | 1.4632 | 0.16 | Q | \| | \| | \| | V\| |
| 22+20 | 1.4643 | 0.16 | Q | \| | \| | \| | V\| |
| 22+25 | 1.4653 | 0.15 | Q | \| | \| | \| | V\| |
| 22+30 | 1.4664 | 0.15 | Q | \| | \| | \| | V\| |
| 22+35 | 1.4674 | 0.15 | Q | \| | \| | \| | V\| |
| 22+40 | 1.4685 | 0.15 | Q | \| | \| | \| | V\| |
| 22+45 | 1.4695 | 0.15 | Q | \| | \| | \| | V\| |
| 22+50 | 1.4705 | 0.15 | Q | \| | \| | \| | V\| |
| 22+55 | 1.4715 | 0.14 | Q | \| | \| | \| | V\| |
| 23+ 0 | 1.4725 | 0.14 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+ 5 | 1.4734 | 0.14 | Q | \| | \| | \| | V\| |
| 23+10 | 1.4744 | 0.14 | Q | \| | \| | \| | V\| |
| 23+15 | 1.4754 | 0.14 | Q | \| | \| | \| | V\| |
| 23+20 | 1.4763 | 0.14 | Q | \| | \| | \| | V\| |
| 23+25 | 1.4772 | 0.14 | Q | \| | \| | \| | V\| |
| 23+30 | 1.4782 | 0.13 | Q | \| | \| | \| | V\| |
| 23+35 | 1.4791 | 0.13 | Q | \| | \| | \| | V\| |
| 23+40 | 1.4800 | 0.13 | Q | \| | \| | \| | V\| |
| 23+45 | 1.4809 | 0.13 | Q | \| | \| | \| | V\| |
| 23+50 | 1.4818 | 0.13 | Q | \| | \| | \| | V\| |
| 23+55 | 1.4827 | 0.13 | Q | \| | \| | \| | V\| |
| 24+ 0 | 1.4836 | 0.13 | Q | \| | \| | \| | V\| |
| 24+ 5 | 1.4844 | 0.12 | Q | \| | \| | \| | V\| |
| 24+10 | 1.4852 | 0.11 | Q | \| | \| | \| | V\| |
| 24+15 | 1.4857 | 0.08 | Q | \| | \| | \| | V\| |
| 24+20 | 1.4861 | 0.05 | Q | \| | \| | \| | V\| |
| 24+25 | 1.4863 | 0.04 | Q | \| | \| | \| | V\| |
| 24+30 | 1.4865 | 0.03 | Q | \| | \| | \| | V\| |
| 24+35 | 1.4867 | 0.02 | Q | \| | \| | \| | V\| |
| 24+40 | 1.4868 | 0.02 | Q | \| | \| | \| | V\| |
| 24+45 | 1.4869 | 0.01 | Q | \| | \| | \| | V\| |
| 24+50 | 1.4870 | 0.01 | Q | \| | \| | \| | V\| |
| 24+55 | 1.4871 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 0 | 1.4871 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 5 | 1.4872 | 0.01 | Q | \| | \| | \| | V\| |
| 25+10 | 1.4872 | 0.00 | Q | \| | \| | \| | V\| |
| 25+15 | 1.4872 | 0.00 | Q | \| | \| | \| | V\| |
| 25+20 | 1.4872 | 0.00 | Q | \| | \| | \| | V\| |
| 25+25 | 1.4873 | 0.00 | Q | \| | \| | \| | V\| |
| 25+30 | 1.4873 | 0.00 | Q | \| | \| | \| | V\| |
| 25+35 | 1.4873 | 0.00 | Q | \| | \| | \| | V\| |
| 25+40 | 1.4873 | 0.00 | Q | \| | \| | \| | V\| |
| 25+45 | 1.4873 | 0.00 | Q | \| | \| | \| | V\| |
| 25+50 | 1.4873 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 12
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 0.87 | 1 | 1.28 |
| Rainfall data for year 100 | | |
| 0.87 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 0.87 | 24 | 2.37 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.0 | 92.8 | 0.87 | 1.000 | 0.140 | 0.900 | 0.126 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.126

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 0.78 | 0.900 | 78.0 | 92.8 | 0.78 | 0.692 |
| 0.09 | 0.100 | 98.0 | 98.0 | 0.20 | 0.904 |

Area-averaged catchment yield fraction, Y = 0.713
Area-averaged low loss fraction, Yb = 0.287
User entry of time of concentration = 0.150 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 0.87(Ac.)
Catchment Lag time = 0.120 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 69.4444
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.126(In/Hr)
Average low loss rate fraction (Yb) = 0.287 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.607(In)
Computed peak 30-minute rainfall = 1.040(In)
Specified peak 1-hour rainfall = 1.280(In)
Computed peak 3-hour rainfall = 1.599(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.370(In)

Rainfall depth area reduction factors:
Using a total area of 0.87(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.607(In)
30-minute factor = 1.000 Adjusted rainfall = 1.040(In)
1-hour factor = 1.000 Adjusted rainfall = 1.280(In)
3-hour factor = 1.000 Adjusted rainfall = 1.599(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.370(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 10.52 (CFS)) | |
| 1 | 7.669 | 0.807 |
| 2 | 50.033 | 4.457 |
| 3 | 73.305 | 2.449 |
| 4 | 83.434 | 1.066 |
| 5 | 89.365 | 0.624 |
| 6 | 93.063 | 0.389 |
| 7 | 95.572 | 0.264 |
| 8 | 97.262 | 0.178 |
| 9 | 98.212 | 0.100 |
| 10 | 99.017 | 0.085 |
| 11 | 99.681 | 0.070 |
| 12 | 100.000 | 0.034 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6073 | 0.6073 |
| 2 | 0.7477 | 0.1404 |
| 3 | 0.8445 | 0.0967 |
| 4 | 0.9206 | 0.0761 |
| 5 | 0.9843 | 0.0637 |
| 6 | 1.0396 | 0.0553 |
| 7 | 1.0888 | 0.0492 |
| 8 | 1.1334 | 0.0445 |
| 9 | 1.1741 | 0.0408 |
| 10 | 1.2118 | 0.0377 |
| 11 | 1.2470 | 0.0351 |
| 12 | 1.2799 | 0.0330 |
| 13 | 1.3009 | 0.0209 |
| 14 | 1.3205 | 0.0197 |
| 15 | 1.3391 | 0.0186 |
| 16 | 1.3568 | 0.0176 |
| 17 | 1.3735 | 0.0168 |
| 18 | 1.3895 | 0.0160 |
| 19 | 1.4048 | 0.0153 |
| 20 | 1.4195 | 0.0147 |
| 21 | 1.4336 | 0.0141 |
| 22 | 1.4472 | 0.0136 |
| 23 | 1.4603 | 0.0131 |
| 24 | 1.4729 | 0.0126 |
| 25 | 1.4851 | 0.0122 |
| 26 | 1.4970 | 0.0118 |
| 27 | 1.5085 | 0.0115 |
| 28 | 1.5196 | 0.0112 |
| 29 | 1.5305 | 0.0108 |
| 30 | 1.5410 | 0.0105 |
| 31 | 1.5513 | 0.0103 |
| 32 | 1.5613 | 0.0100 |
| 33 | 1.5710 | 0.0098 |
| 34 | 1.5806 | 0.0095 |
| 35 | 1.5899 | 0.0093 |
| 36 | 1.5990 | 0.0091 |
| 37 | 1.6079 | 0.0089 |
| 38 | 1.6166 | 0.0087 |
| 39 | 1.6251 | 0.0085 |
| 40 | 1.6335 | 0.0084 |
| 41 | 1.6417 | 0.0082 |
| 42 | 1.6497 | 0.0080 |
| 43 | 1.6576 | 0.0079 |
| 44 | 1.6653 | 0.0077 |
| 45 | 1.6729 | 0.0076 |
| 46 | 1.6804 | 0.0075 |
| 47 | 1.6877 | 0.0073 |
| 48 | 1.6949 | 0.0072 |
| 49 | 1.7020 | 0.0071 |
| 50 | 1.7090 | 0.0070 |
| 51 | 1.7159 | 0.0069 |
| 52 | 1.7226 | 0.0068 |
| 53 | 1.7293 | 0.0067 |
| 54 | 1.7358 | 0.0066 |
| 55 | 1.7423 | 0.0065 |
| 56 | 1.7487 | 0.0064 |
| 57 | 1.7550 | 0.0063 |

| | | |
|---|---|---|
| 58 | 1.7612 | 0.0062 |
| 59 | 1.7673 | 0.0061 |
| 60 | 1.7733 | 0.0060 |
| 61 | 1.7792 | 0.0059 |
| 62 | 1.7851 | 0.0059 |
| 63 | 1.7909 | 0.0058 |
| 64 | 1.7966 | 0.0057 |
| 65 | 1.8023 | 0.0057 |
| 66 | 1.8079 | 0.0056 |
| 67 | 1.8134 | 0.0055 |
| 68 | 1.8188 | 0.0054 |
| 69 | 1.8242 | 0.0054 |
| 70 | 1.8295 | 0.0053 |
| 71 | 1.8348 | 0.0053 |
| 72 | 1.8400 | 0.0052 |
| 73 | 1.8446 | 0.0046 |
| 74 | 1.8492 | 0.0046 |
| 75 | 1.8538 | 0.0045 |
| 76 | 1.8582 | 0.0045 |
| 77 | 1.8627 | 0.0044 |
| 78 | 1.8671 | 0.0044 |
| 79 | 1.8714 | 0.0043 |
| 80 | 1.8757 | 0.0043 |
| 81 | 1.8800 | 0.0043 |
| 82 | 1.8842 | 0.0042 |
| 83 | 1.8884 | 0.0042 |
| 84 | 1.8925 | 0.0041 |
| 85 | 1.8966 | 0.0041 |
| 86 | 1.9007 | 0.0041 |
| 87 | 1.9047 | 0.0040 |
| 88 | 1.9087 | 0.0040 |
| 89 | 1.9126 | 0.0039 |
| 90 | 1.9165 | 0.0039 |
| 91 | 1.9204 | 0.0039 |
| 92 | 1.9242 | 0.0038 |
| 93 | 1.9280 | 0.0038 |
| 94 | 1.9318 | 0.0038 |
| 95 | 1.9355 | 0.0037 |
| 96 | 1.9392 | 0.0037 |
| 97 | 1.9429 | 0.0037 |
| 98 | 1.9465 | 0.0036 |
| 99 | 1.9502 | 0.0036 |
| 100 | 1.9537 | 0.0036 |
| 101 | 1.9573 | 0.0036 |
| 102 | 1.9608 | 0.0035 |
| 103 | 1.9643 | 0.0035 |
| 104 | 1.9678 | 0.0035 |
| 105 | 1.9712 | 0.0034 |
| 106 | 1.9746 | 0.0034 |
| 107 | 1.9780 | 0.0034 |
| 108 | 1.9814 | 0.0034 |
| 109 | 1.9847 | 0.0033 |
| 110 | 1.9880 | 0.0033 |
| 111 | 1.9913 | 0.0033 |
| 112 | 1.9946 | 0.0033 |
| 113 | 1.9978 | 0.0032 |
| 114 | 2.0010 | 0.0032 |
| 115 | 2.0042 | 0.0032 |
| 116 | 2.0074 | 0.0032 |

| | | |
|---|---|---|
| 117 | 2.0106 | 0.0031 |
| 118 | 2.0137 | 0.0031 |
| 119 | 2.0168 | 0.0031 |
| 120 | 2.0199 | 0.0031 |
| 121 | 2.0229 | 0.0031 |
| 122 | 2.0260 | 0.0030 |
| 123 | 2.0290 | 0.0030 |
| 124 | 2.0320 | 0.0030 |
| 125 | 2.0350 | 0.0030 |
| 126 | 2.0379 | 0.0030 |
| 127 | 2.0409 | 0.0029 |
| 128 | 2.0438 | 0.0029 |
| 129 | 2.0467 | 0.0029 |
| 130 | 2.0496 | 0.0029 |
| 131 | 2.0525 | 0.0029 |
| 132 | 2.0553 | 0.0029 |
| 133 | 2.0582 | 0.0028 |
| 134 | 2.0610 | 0.0028 |
| 135 | 2.0638 | 0.0028 |
| 136 | 2.0666 | 0.0028 |
| 137 | 2.0693 | 0.0028 |
| 138 | 2.0721 | 0.0027 |
| 139 | 2.0748 | 0.0027 |
| 140 | 2.0775 | 0.0027 |
| 141 | 2.0802 | 0.0027 |
| 142 | 2.0829 | 0.0027 |
| 143 | 2.0856 | 0.0027 |
| 144 | 2.0882 | 0.0027 |
| 145 | 2.0909 | 0.0026 |
| 146 | 2.0935 | 0.0026 |
| 147 | 2.0961 | 0.0026 |
| 148 | 2.0987 | 0.0026 |
| 149 | 2.1013 | 0.0026 |
| 150 | 2.1039 | 0.0026 |
| 151 | 2.1064 | 0.0026 |
| 152 | 2.1090 | 0.0025 |
| 153 | 2.1115 | 0.0025 |
| 154 | 2.1140 | 0.0025 |
| 155 | 2.1165 | 0.0025 |
| 156 | 2.1190 | 0.0025 |
| 157 | 2.1215 | 0.0025 |
| 158 | 2.1239 | 0.0025 |
| 159 | 2.1264 | 0.0024 |
| 160 | 2.1288 | 0.0024 |
| 161 | 2.1312 | 0.0024 |
| 162 | 2.1336 | 0.0024 |
| 163 | 2.1360 | 0.0024 |
| 164 | 2.1384 | 0.0024 |
| 165 | 2.1408 | 0.0024 |
| 166 | 2.1432 | 0.0024 |
| 167 | 2.1455 | 0.0024 |
| 168 | 2.1479 | 0.0023 |
| 169 | 2.1502 | 0.0023 |
| 170 | 2.1525 | 0.0023 |
| 171 | 2.1548 | 0.0023 |
| 172 | 2.1571 | 0.0023 |
| 173 | 2.1594 | 0.0023 |
| 174 | 2.1617 | 0.0023 |
| 175 | 2.1639 | 0.0023 |

| | | |
|---|---|---|
| 176 | 2.1662 | 0.0023 |
| 177 | 2.1684 | 0.0022 |
| 178 | 2.1707 | 0.0022 |
| 179 | 2.1729 | 0.0022 |
| 180 | 2.1751 | 0.0022 |
| 181 | 2.1773 | 0.0022 |
| 182 | 2.1795 | 0.0022 |
| 183 | 2.1817 | 0.0022 |
| 184 | 2.1838 | 0.0022 |
| 185 | 2.1860 | 0.0022 |
| 186 | 2.1882 | 0.0022 |
| 187 | 2.1903 | 0.0021 |
| 188 | 2.1924 | 0.0021 |
| 189 | 2.1946 | 0.0021 |
| 190 | 2.1967 | 0.0021 |
| 191 | 2.1988 | 0.0021 |
| 192 | 2.2009 | 0.0021 |
| 193 | 2.2030 | 0.0021 |
| 194 | 2.2050 | 0.0021 |
| 195 | 2.2071 | 0.0021 |
| 196 | 2.2092 | 0.0021 |
| 197 | 2.2112 | 0.0021 |
| 198 | 2.2133 | 0.0020 |
| 199 | 2.2153 | 0.0020 |
| 200 | 2.2173 | 0.0020 |
| 201 | 2.2194 | 0.0020 |
| 202 | 2.2214 | 0.0020 |
| 203 | 2.2234 | 0.0020 |
| 204 | 2.2254 | 0.0020 |
| 205 | 2.2274 | 0.0020 |
| 206 | 2.2293 | 0.0020 |
| 207 | 2.2313 | 0.0020 |
| 208 | 2.2333 | 0.0020 |
| 209 | 2.2352 | 0.0020 |
| 210 | 2.2372 | 0.0019 |
| 211 | 2.2391 | 0.0019 |
| 212 | 2.2411 | 0.0019 |
| 213 | 2.2430 | 0.0019 |
| 214 | 2.2449 | 0.0019 |
| 215 | 2.2468 | 0.0019 |
| 216 | 2.2487 | 0.0019 |
| 217 | 2.2506 | 0.0019 |
| 218 | 2.2525 | 0.0019 |
| 219 | 2.2544 | 0.0019 |
| 220 | 2.2563 | 0.0019 |
| 221 | 2.2581 | 0.0019 |
| 222 | 2.2600 | 0.0019 |
| 223 | 2.2619 | 0.0019 |
| 224 | 2.2637 | 0.0018 |
| 225 | 2.2655 | 0.0018 |
| 226 | 2.2674 | 0.0018 |
| 227 | 2.2692 | 0.0018 |
| 228 | 2.2710 | 0.0018 |
| 229 | 2.2728 | 0.0018 |
| 230 | 2.2747 | 0.0018 |
| 231 | 2.2765 | 0.0018 |
| 232 | 2.2783 | 0.0018 |
| 233 | 2.2800 | 0.0018 |
| 234 | 2.2818 | 0.0018 |

| | | |
|---|---|---|
| 235 | 2.2836 | 0.0018 |
| 236 | 2.2854 | 0.0018 |
| 237 | 2.2871 | 0.0018 |
| 238 | 2.2889 | 0.0018 |
| 239 | 2.2907 | 0.0018 |
| 240 | 2.2924 | 0.0017 |
| 241 | 2.2941 | 0.0017 |
| 242 | 2.2959 | 0.0017 |
| 243 | 2.2976 | 0.0017 |
| 244 | 2.2993 | 0.0017 |
| 245 | 2.3010 | 0.0017 |
| 246 | 2.3028 | 0.0017 |
| 247 | 2.3045 | 0.0017 |
| 248 | 2.3062 | 0.0017 |
| 249 | 2.3079 | 0.0017 |
| 250 | 2.3095 | 0.0017 |
| 251 | 2.3112 | 0.0017 |
| 252 | 2.3129 | 0.0017 |
| 253 | 2.3146 | 0.0017 |
| 254 | 2.3163 | 0.0017 |
| 255 | 2.3179 | 0.0017 |
| 256 | 2.3196 | 0.0017 |
| 257 | 2.3212 | 0.0017 |
| 258 | 2.3229 | 0.0016 |
| 259 | 2.3245 | 0.0016 |
| 260 | 2.3261 | 0.0016 |
| 261 | 2.3278 | 0.0016 |
| 262 | 2.3294 | 0.0016 |
| 263 | 2.3310 | 0.0016 |
| 264 | 2.3326 | 0.0016 |
| 265 | 2.3343 | 0.0016 |
| 266 | 2.3359 | 0.0016 |
| 267 | 2.3375 | 0.0016 |
| 268 | 2.3391 | 0.0016 |
| 269 | 2.3406 | 0.0016 |
| 270 | 2.3422 | 0.0016 |
| 271 | 2.3438 | 0.0016 |
| 272 | 2.3454 | 0.0016 |
| 273 | 2.3470 | 0.0016 |
| 274 | 2.3485 | 0.0016 |
| 275 | 2.3501 | 0.0016 |
| 276 | 2.3517 | 0.0016 |
| 277 | 2.3532 | 0.0016 |
| 278 | 2.3548 | 0.0015 |
| 279 | 2.3563 | 0.0015 |
| 280 | 2.3578 | 0.0015 |
| 281 | 2.3594 | 0.0015 |
| 282 | 2.3609 | 0.0015 |
| 283 | 2.3624 | 0.0015 |
| 284 | 2.3640 | 0.0015 |
| 285 | 2.3655 | 0.0015 |
| 286 | 2.3670 | 0.0015 |
| 287 | 2.3685 | 0.0015 |
| 288 | 2.3700 | 0.0015 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 1 | 0.0015 | 0.0004 | 0.0011 |
| 2 | 0.0015 | 0.0004 | 0.0011 |
| 3 | 0.0015 | 0.0004 | 0.0011 |
| 4 | 0.0015 | 0.0004 | 0.0011 |
| 5 | 0.0015 | 0.0004 | 0.0011 |
| 6 | 0.0015 | 0.0004 | 0.0011 |
| 7 | 0.0015 | 0.0004 | 0.0011 |
| 8 | 0.0015 | 0.0004 | 0.0011 |
| 9 | 0.0016 | 0.0004 | 0.0011 |
| 10 | 0.0016 | 0.0004 | 0.0011 |
| 11 | 0.0016 | 0.0005 | 0.0011 |
| 12 | 0.0016 | 0.0005 | 0.0011 |
| 13 | 0.0016 | 0.0005 | 0.0011 |
| 14 | 0.0016 | 0.0005 | 0.0011 |
| 15 | 0.0016 | 0.0005 | 0.0011 |
| 16 | 0.0016 | 0.0005 | 0.0011 |
| 17 | 0.0016 | 0.0005 | 0.0012 |
| 18 | 0.0016 | 0.0005 | 0.0012 |
| 19 | 0.0016 | 0.0005 | 0.0012 |
| 20 | 0.0016 | 0.0005 | 0.0012 |
| 21 | 0.0016 | 0.0005 | 0.0012 |
| 22 | 0.0017 | 0.0005 | 0.0012 |
| 23 | 0.0017 | 0.0005 | 0.0012 |
| 24 | 0.0017 | 0.0005 | 0.0012 |
| 25 | 0.0017 | 0.0005 | 0.0012 |
| 26 | 0.0017 | 0.0005 | 0.0012 |
| 27 | 0.0017 | 0.0005 | 0.0012 |
| 28 | 0.0017 | 0.0005 | 0.0012 |
| 29 | 0.0017 | 0.0005 | 0.0012 |
| 30 | 0.0017 | 0.0005 | 0.0012 |
| 31 | 0.0017 | 0.0005 | 0.0012 |
| 32 | 0.0017 | 0.0005 | 0.0012 |
| 33 | 0.0017 | 0.0005 | 0.0012 |
| 34 | 0.0018 | 0.0005 | 0.0013 |
| 35 | 0.0018 | 0.0005 | 0.0013 |
| 36 | 0.0018 | 0.0005 | 0.0013 |
| 37 | 0.0018 | 0.0005 | 0.0013 |
| 38 | 0.0018 | 0.0005 | 0.0013 |
| 39 | 0.0018 | 0.0005 | 0.0013 |
| 40 | 0.0018 | 0.0005 | 0.0013 |
| 41 | 0.0018 | 0.0005 | 0.0013 |
| 42 | 0.0018 | 0.0005 | 0.0013 |
| 43 | 0.0018 | 0.0005 | 0.0013 |
| 44 | 0.0018 | 0.0005 | 0.0013 |
| 45 | 0.0019 | 0.0005 | 0.0013 |
| 46 | 0.0019 | 0.0005 | 0.0013 |
| 47 | 0.0019 | 0.0005 | 0.0013 |
| 48 | 0.0019 | 0.0005 | 0.0013 |
| 49 | 0.0019 | 0.0005 | 0.0014 |
| 50 | 0.0019 | 0.0005 | 0.0014 |
| 51 | 0.0019 | 0.0006 | 0.0014 |
| 52 | 0.0019 | 0.0006 | 0.0014 |
| 53 | 0.0019 | 0.0006 | 0.0014 |
| 54 | 0.0020 | 0.0006 | 0.0014 |
| 55 | 0.0020 | 0.0006 | 0.0014 |
| 56 | 0.0020 | 0.0006 | 0.0014 |
| 57 | 0.0020 | 0.0006 | 0.0014 |
| 58 | 0.0020 | 0.0006 | 0.0014 |
| 59 | 0.0020 | 0.0006 | 0.0014 |

| | | | |
|---|---|---|---|
| 60 | 0.0020 | 0.0006 | 0.0014 |
| 61 | 0.0020 | 0.0006 | 0.0015 |
| 62 | 0.0021 | 0.0006 | 0.0015 |
| 63 | 0.0021 | 0.0006 | 0.0015 |
| 64 | 0.0021 | 0.0006 | 0.0015 |
| 65 | 0.0021 | 0.0006 | 0.0015 |
| 66 | 0.0021 | 0.0006 | 0.0015 |
| 67 | 0.0021 | 0.0006 | 0.0015 |
| 68 | 0.0021 | 0.0006 | 0.0015 |
| 69 | 0.0022 | 0.0006 | 0.0015 |
| 70 | 0.0022 | 0.0006 | 0.0015 |
| 71 | 0.0022 | 0.0006 | 0.0016 |
| 72 | 0.0022 | 0.0006 | 0.0016 |
| 73 | 0.0022 | 0.0006 | 0.0016 |
| 74 | 0.0022 | 0.0006 | 0.0016 |
| 75 | 0.0022 | 0.0006 | 0.0016 |
| 76 | 0.0023 | 0.0006 | 0.0016 |
| 77 | 0.0023 | 0.0007 | 0.0016 |
| 78 | 0.0023 | 0.0007 | 0.0016 |
| 79 | 0.0023 | 0.0007 | 0.0016 |
| 80 | 0.0023 | 0.0007 | 0.0017 |
| 81 | 0.0023 | 0.0007 | 0.0017 |
| 82 | 0.0024 | 0.0007 | 0.0017 |
| 83 | 0.0024 | 0.0007 | 0.0017 |
| 84 | 0.0024 | 0.0007 | 0.0017 |
| 85 | 0.0024 | 0.0007 | 0.0017 |
| 86 | 0.0024 | 0.0007 | 0.0017 |
| 87 | 0.0024 | 0.0007 | 0.0017 |
| 88 | 0.0025 | 0.0007 | 0.0018 |
| 89 | 0.0025 | 0.0007 | 0.0018 |
| 90 | 0.0025 | 0.0007 | 0.0018 |
| 91 | 0.0025 | 0.0007 | 0.0018 |
| 92 | 0.0025 | 0.0007 | 0.0018 |
| 93 | 0.0026 | 0.0007 | 0.0018 |
| 94 | 0.0026 | 0.0007 | 0.0018 |
| 95 | 0.0026 | 0.0007 | 0.0019 |
| 96 | 0.0026 | 0.0008 | 0.0019 |
| 97 | 0.0027 | 0.0008 | 0.0019 |
| 98 | 0.0027 | 0.0008 | 0.0019 |
| 99 | 0.0027 | 0.0008 | 0.0019 |
| 100 | 0.0027 | 0.0008 | 0.0019 |
| 101 | 0.0027 | 0.0008 | 0.0020 |
| 102 | 0.0028 | 0.0008 | 0.0020 |
| 103 | 0.0028 | 0.0008 | 0.0020 |
| 104 | 0.0028 | 0.0008 | 0.0020 |
| 105 | 0.0029 | 0.0008 | 0.0020 |
| 106 | 0.0029 | 0.0008 | 0.0020 |
| 107 | 0.0029 | 0.0008 | 0.0021 |
| 108 | 0.0029 | 0.0008 | 0.0021 |
| 109 | 0.0030 | 0.0008 | 0.0021 |
| 110 | 0.0030 | 0.0009 | 0.0021 |
| 111 | 0.0030 | 0.0009 | 0.0022 |
| 112 | 0.0030 | 0.0009 | 0.0022 |
| 113 | 0.0031 | 0.0009 | 0.0022 |
| 114 | 0.0031 | 0.0009 | 0.0022 |
| 115 | 0.0031 | 0.0009 | 0.0022 |
| 116 | 0.0032 | 0.0009 | 0.0023 |
| 117 | 0.0032 | 0.0009 | 0.0023 |
| 118 | 0.0032 | 0.0009 | 0.0023 |

| | | | |
|---|---|---|---|
| 119 | 0.0033 | 0.0009 | 0.0023 |
| 120 | 0.0033 | 0.0009 | 0.0024 |
| 121 | 0.0034 | 0.0010 | 0.0024 |
| 122 | 0.0034 | 0.0010 | 0.0024 |
| 123 | 0.0034 | 0.0010 | 0.0025 |
| 124 | 0.0035 | 0.0010 | 0.0025 |
| 125 | 0.0035 | 0.0010 | 0.0025 |
| 126 | 0.0036 | 0.0010 | 0.0025 |
| 127 | 0.0036 | 0.0010 | 0.0026 |
| 128 | 0.0036 | 0.0010 | 0.0026 |
| 129 | 0.0037 | 0.0011 | 0.0026 |
| 130 | 0.0037 | 0.0011 | 0.0027 |
| 131 | 0.0038 | 0.0011 | 0.0027 |
| 132 | 0.0038 | 0.0011 | 0.0027 |
| 133 | 0.0039 | 0.0011 | 0.0028 |
| 134 | 0.0039 | 0.0011 | 0.0028 |
| 135 | 0.0040 | 0.0012 | 0.0029 |
| 136 | 0.0041 | 0.0012 | 0.0029 |
| 137 | 0.0041 | 0.0012 | 0.0029 |
| 138 | 0.0042 | 0.0012 | 0.0030 |
| 139 | 0.0043 | 0.0012 | 0.0030 |
| 140 | 0.0043 | 0.0012 | 0.0031 |
| 141 | 0.0044 | 0.0013 | 0.0031 |
| 142 | 0.0044 | 0.0013 | 0.0032 |
| 143 | 0.0045 | 0.0013 | 0.0032 |
| 144 | 0.0046 | 0.0013 | 0.0033 |
| 145 | 0.0052 | 0.0015 | 0.0037 |
| 146 | 0.0053 | 0.0015 | 0.0038 |
| 147 | 0.0054 | 0.0015 | 0.0038 |
| 148 | 0.0054 | 0.0016 | 0.0039 |
| 149 | 0.0056 | 0.0016 | 0.0040 |
| 150 | 0.0057 | 0.0016 | 0.0040 |
| 151 | 0.0058 | 0.0017 | 0.0041 |
| 152 | 0.0059 | 0.0017 | 0.0042 |
| 153 | 0.0060 | 0.0017 | 0.0043 |
| 154 | 0.0061 | 0.0018 | 0.0044 |
| 155 | 0.0063 | 0.0018 | 0.0045 |
| 156 | 0.0064 | 0.0018 | 0.0045 |
| 157 | 0.0066 | 0.0019 | 0.0047 |
| 158 | 0.0067 | 0.0019 | 0.0047 |
| 159 | 0.0069 | 0.0020 | 0.0049 |
| 160 | 0.0070 | 0.0020 | 0.0050 |
| 161 | 0.0072 | 0.0021 | 0.0051 |
| 162 | 0.0073 | 0.0021 | 0.0052 |
| 163 | 0.0076 | 0.0022 | 0.0054 |
| 164 | 0.0077 | 0.0022 | 0.0055 |
| 165 | 0.0080 | 0.0023 | 0.0057 |
| 166 | 0.0082 | 0.0023 | 0.0058 |
| 167 | 0.0085 | 0.0024 | 0.0061 |
| 168 | 0.0087 | 0.0025 | 0.0062 |
| 169 | 0.0091 | 0.0026 | 0.0065 |
| 170 | 0.0093 | 0.0027 | 0.0066 |
| 171 | 0.0098 | 0.0028 | 0.0070 |
| 172 | 0.0100 | 0.0029 | 0.0071 |
| 173 | 0.0105 | 0.0030 | 0.0075 |
| 174 | 0.0108 | 0.0031 | 0.0077 |
| 175 | 0.0115 | 0.0033 | 0.0082 |
| 176 | 0.0118 | 0.0034 | 0.0084 |
| 177 | 0.0126 | 0.0036 | 0.0090 |

| | | | |
|---|---|---|---|
| 178 | 0.0131 | 0.0038 | 0.0093 |
| 179 | 0.0141 | 0.0040 | 0.0101 |
| 180 | 0.0147 | 0.0042 | 0.0105 |
| 181 | 0.0160 | 0.0046 | 0.0114 |
| 182 | 0.0168 | 0.0048 | 0.0120 |
| 183 | 0.0186 | 0.0053 | 0.0133 |
| 184 | 0.0197 | 0.0056 | 0.0140 |
| 185 | 0.0330 | 0.0095 | 0.0235 |
| 186 | 0.0351 | 0.0101 | 0.0251 |
| 187 | 0.0408 | 0.0105 | 0.0303 |
| 188 | 0.0445 | 0.0105 | 0.0340 |
| 189 | 0.0553 | 0.0105 | 0.0448 |
| 190 | 0.0637 | 0.0105 | 0.0532 |
| 191 | 0.0967 | 0.0105 | 0.0862 |
| 192 | 0.1404 | 0.0105 | 0.1299 |
| 193 | 0.6073 | 0.0105 | 0.5968 |
| 194 | 0.0761 | 0.0105 | 0.0656 |
| 195 | 0.0492 | 0.0105 | 0.0387 |
| 196 | 0.0377 | 0.0105 | 0.0272 |
| 197 | 0.0209 | 0.0060 | 0.0149 |
| 198 | 0.0176 | 0.0051 | 0.0126 |
| 199 | 0.0153 | 0.0044 | 0.0109 |
| 200 | 0.0136 | 0.0039 | 0.0097 |
| 201 | 0.0122 | 0.0035 | 0.0087 |
| 202 | 0.0112 | 0.0032 | 0.0080 |
| 203 | 0.0103 | 0.0029 | 0.0073 |
| 204 | 0.0095 | 0.0027 | 0.0068 |
| 205 | 0.0089 | 0.0026 | 0.0063 |
| 206 | 0.0084 | 0.0024 | 0.0060 |
| 207 | 0.0079 | 0.0023 | 0.0056 |
| 208 | 0.0075 | 0.0021 | 0.0053 |
| 209 | 0.0071 | 0.0020 | 0.0051 |
| 210 | 0.0068 | 0.0019 | 0.0048 |
| 211 | 0.0065 | 0.0019 | 0.0046 |
| 212 | 0.0062 | 0.0018 | 0.0044 |
| 213 | 0.0059 | 0.0017 | 0.0042 |
| 214 | 0.0057 | 0.0016 | 0.0041 |
| 215 | 0.0055 | 0.0016 | 0.0039 |
| 216 | 0.0053 | 0.0015 | 0.0038 |
| 217 | 0.0046 | 0.0013 | 0.0033 |
| 218 | 0.0045 | 0.0013 | 0.0032 |
| 219 | 0.0043 | 0.0012 | 0.0031 |
| 220 | 0.0042 | 0.0012 | 0.0030 |
| 221 | 0.0041 | 0.0012 | 0.0029 |
| 222 | 0.0040 | 0.0011 | 0.0028 |
| 223 | 0.0039 | 0.0011 | 0.0028 |
| 224 | 0.0038 | 0.0011 | 0.0027 |
| 225 | 0.0037 | 0.0011 | 0.0026 |
| 226 | 0.0036 | 0.0010 | 0.0026 |
| 227 | 0.0035 | 0.0010 | 0.0025 |
| 228 | 0.0034 | 0.0010 | 0.0024 |
| 229 | 0.0033 | 0.0010 | 0.0024 |
| 230 | 0.0033 | 0.0009 | 0.0023 |
| 231 | 0.0032 | 0.0009 | 0.0023 |
| 232 | 0.0031 | 0.0009 | 0.0022 |
| 233 | 0.0031 | 0.0009 | 0.0022 |
| 234 | 0.0030 | 0.0009 | 0.0021 |
| 235 | 0.0029 | 0.0008 | 0.0021 |
| 236 | 0.0029 | 0.0008 | 0.0021 |

| | | | |
|---|---|---|---|
| 237 | 0.0028 | 0.0008 | 0.0020 |
| 238 | 0.0028 | 0.0008 | 0.0020 |
| 239 | 0.0027 | 0.0008 | 0.0019 |
| 240 | 0.0027 | 0.0008 | 0.0019 |
| 241 | 0.0026 | 0.0008 | 0.0019 |
| 242 | 0.0026 | 0.0007 | 0.0019 |
| 243 | 0.0026 | 0.0007 | 0.0018 |
| 244 | 0.0025 | 0.0007 | 0.0018 |
| 245 | 0.0025 | 0.0007 | 0.0018 |
| 246 | 0.0024 | 0.0007 | 0.0017 |
| 247 | 0.0024 | 0.0007 | 0.0017 |
| 248 | 0.0024 | 0.0007 | 0.0017 |
| 249 | 0.0023 | 0.0007 | 0.0017 |
| 250 | 0.0023 | 0.0007 | 0.0016 |
| 251 | 0.0023 | 0.0006 | 0.0016 |
| 252 | 0.0022 | 0.0006 | 0.0016 |
| 253 | 0.0022 | 0.0006 | 0.0016 |
| 254 | 0.0022 | 0.0006 | 0.0015 |
| 255 | 0.0021 | 0.0006 | 0.0015 |
| 256 | 0.0021 | 0.0006 | 0.0015 |
| 257 | 0.0021 | 0.0006 | 0.0015 |
| 258 | 0.0021 | 0.0006 | 0.0015 |
| 259 | 0.0020 | 0.0006 | 0.0015 |
| 260 | 0.0020 | 0.0006 | 0.0014 |
| 261 | 0.0020 | 0.0006 | 0.0014 |
| 262 | 0.0020 | 0.0006 | 0.0014 |
| 263 | 0.0019 | 0.0006 | 0.0014 |
| 264 | 0.0019 | 0.0006 | 0.0014 |
| 265 | 0.0019 | 0.0005 | 0.0014 |
| 266 | 0.0019 | 0.0005 | 0.0013 |
| 267 | 0.0019 | 0.0005 | 0.0013 |
| 268 | 0.0018 | 0.0005 | 0.0013 |
| 269 | 0.0018 | 0.0005 | 0.0013 |
| 270 | 0.0018 | 0.0005 | 0.0013 |
| 271 | 0.0018 | 0.0005 | 0.0013 |
| 272 | 0.0018 | 0.0005 | 0.0013 |
| 273 | 0.0017 | 0.0005 | 0.0012 |
| 274 | 0.0017 | 0.0005 | 0.0012 |
| 275 | 0.0017 | 0.0005 | 0.0012 |
| 276 | 0.0017 | 0.0005 | 0.0012 |
| 277 | 0.0017 | 0.0005 | 0.0012 |
| 278 | 0.0017 | 0.0005 | 0.0012 |
| 279 | 0.0016 | 0.0005 | 0.0012 |
| 280 | 0.0016 | 0.0005 | 0.0012 |
| 281 | 0.0016 | 0.0005 | 0.0011 |
| 282 | 0.0016 | 0.0005 | 0.0011 |
| 283 | 0.0016 | 0.0005 | 0.0011 |
| 284 | 0.0016 | 0.0004 | 0.0011 |
| 285 | 0.0016 | 0.0004 | 0.0011 |
| 286 | 0.0015 | 0.0004 | 0.0011 |
| 287 | 0.0015 | 0.0004 | 0.0011 |
| 288 | 0.0015 | 0.0004 | 0.0011 |

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Total soil rain loss = 0.44(In)
Total effective rainfall = 1.93(In)
Peak flow rate in flood hydrograph = 3.19(CFS)

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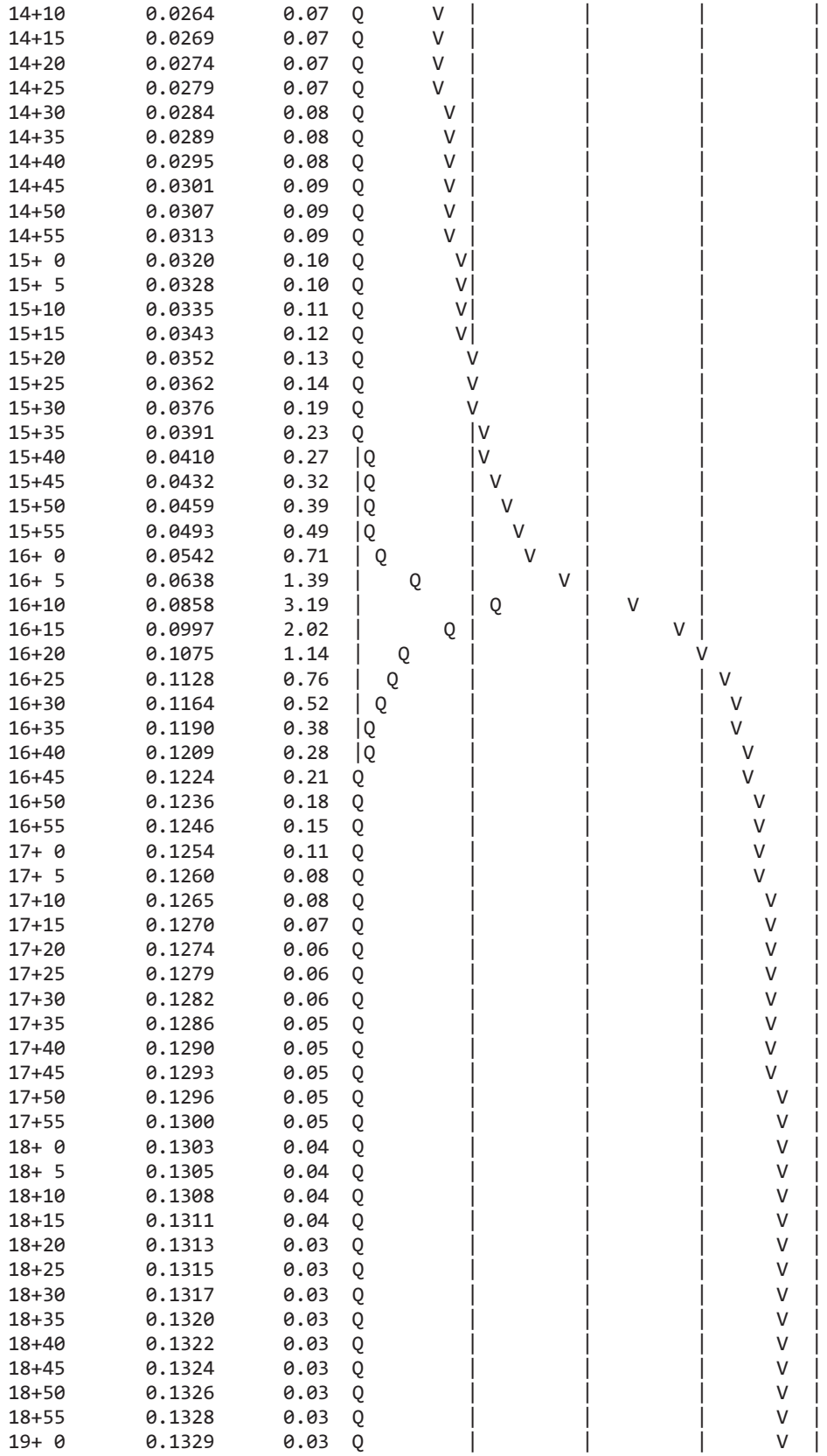
24 - H O U R  S T O R M
R u n o f f  H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 2.5 | 5.0 | 7.5 | 10.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0000 | 0.01 | Q | | | | |
| 0+15 | 0.0001 | 0.01 | Q | | | | |
| 0+20 | 0.0002 | 0.01 | Q | | | | |
| 0+25 | 0.0002 | 0.01 | Q | | | | |
| 0+30 | 0.0003 | 0.01 | Q | | | | |
| 0+35 | 0.0004 | 0.01 | Q | | | | |
| 0+40 | 0.0005 | 0.01 | Q | | | | |
| 0+45 | 0.0005 | 0.01 | Q | | | | |
| 0+50 | 0.0006 | 0.01 | Q | | | | |
| 0+55 | 0.0007 | 0.01 | Q | | | | |
| 1+ 0 | 0.0008 | 0.01 | Q | | | | |
| 1+ 5 | 0.0009 | 0.01 | Q | | | | |
| 1+10 | 0.0009 | 0.01 | Q | | | | |
| 1+15 | 0.0010 | 0.01 | Q | | | | |
| 1+20 | 0.0011 | 0.01 | Q | | | | |
| 1+25 | 0.0012 | 0.01 | Q | | | | |
| 1+30 | 0.0013 | 0.01 | Q | | | | |
| 1+35 | 0.0014 | 0.01 | Q | | | | |
| 1+40 | 0.0014 | 0.01 | Q | | | | |
| 1+45 | 0.0015 | 0.01 | Q | | | | |
| 1+50 | 0.0016 | 0.01 | Q | | | | |
| 1+55 | 0.0017 | 0.01 | Q | | | | |
| 2+ 0 | 0.0018 | 0.01 | Q | | | | |
| 2+ 5 | 0.0019 | 0.01 | Q | | | | |
| 2+10 | 0.0020 | 0.01 | Q | | | | |
| 2+15 | 0.0020 | 0.01 | Q | | | | |
| 2+20 | 0.0021 | 0.01 | Q | | | | |
| 2+25 | 0.0022 | 0.01 | Q | | | | |
| 2+30 | 0.0023 | 0.01 | Q | | | | |
| 2+35 | 0.0024 | 0.01 | Q | | | | |
| 2+40 | 0.0025 | 0.01 | Q | | | | |
| 2+45 | 0.0026 | 0.01 | Q | | | | |
| 2+50 | 0.0027 | 0.01 | Q | | | | |
| 2+55 | 0.0027 | 0.01 | Q | | | | |
| 3+ 0 | 0.0028 | 0.01 | Q | | | | |
| 3+ 5 | 0.0029 | 0.01 | Q | | | | |
| 3+10 | 0.0030 | 0.01 | Q | | | | |
| 3+15 | 0.0031 | 0.01 | Q | | | | |
| 3+20 | 0.0032 | 0.01 | Q | | | | |
| 3+25 | 0.0033 | 0.01 | Q | | | | |
| 3+30 | 0.0034 | 0.01 | Q | | | | |
| 3+35 | 0.0035 | 0.01 | Q | | | | |
| 3+40 | 0.0036 | 0.01 | QV | | | | |
| 3+45 | 0.0037 | 0.01 | QV | | | | |
| 3+50 | 0.0038 | 0.01 | QV | | | | |
| 3+55 | 0.0039 | 0.01 | QV | | | | |
| 4+ 0 | 0.0040 | 0.01 | QV | | | | |
| 4+ 5 | 0.0041 | 0.01 | QV | | | | |
| 4+10 | 0.0042 | 0.01 | QV | | | | |
| 4+15 | 0.0043 | 0.01 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4+20 | 0.0044 | 0.01 | QV | | | | |
| 4+25 | 0.0045 | 0.01 | QV | | | | |
| 4+30 | 0.0046 | 0.01 | QV | | | | |
| 4+35 | 0.0047 | 0.01 | QV | | | | |
| 4+40 | 0.0048 | 0.01 | QV | | | | |
| 4+45 | 0.0049 | 0.01 | QV | | | | |
| 4+50 | 0.0050 | 0.01 | QV | | | | |
| 4+55 | 0.0051 | 0.01 | QV | | | | |
| 5+ 0 | 0.0052 | 0.02 | QV | | | | |
| 5+ 5 | 0.0053 | 0.02 | QV | | | | |
| 5+10 | 0.0054 | 0.02 | QV | | | | |
| 5+15 | 0.0055 | 0.02 | QV | | | | |
| 5+20 | 0.0056 | 0.02 | QV | | | | |
| 5+25 | 0.0057 | 0.02 | QV | | | | |
| 5+30 | 0.0058 | 0.02 | QV | | | | |
| 5+35 | 0.0059 | 0.02 | QV | | | | |
| 5+40 | 0.0060 | 0.02 | QV | | | | |
| 5+45 | 0.0061 | 0.02 | QV | | | | |
| 5+50 | 0.0062 | 0.02 | QV | | | | |
| 5+55 | 0.0064 | 0.02 | QV | | | | |
| 6+ 0 | 0.0065 | 0.02 | QV | | | | |
| 6+ 5 | 0.0066 | 0.02 | QV | | | | |
| 6+10 | 0.0067 | 0.02 | QV | | | | |
| 6+15 | 0.0068 | 0.02 | QV | | | | |
| 6+20 | 0.0069 | 0.02 | QV | | | | |
| 6+25 | 0.0070 | 0.02 | Q V | | | | |
| 6+30 | 0.0072 | 0.02 | Q V | | | | |
| 6+35 | 0.0073 | 0.02 | Q V | | | | |
| 6+40 | 0.0074 | 0.02 | Q V | | | | |
| 6+45 | 0.0075 | 0.02 | Q V | | | | |
| 6+50 | 0.0076 | 0.02 | Q V | | | | |
| 6+55 | 0.0077 | 0.02 | Q V | | | | |
| 7+ 0 | 0.0079 | 0.02 | Q V | | | | |
| 7+ 5 | 0.0080 | 0.02 | Q V | | | | |
| 7+10 | 0.0081 | 0.02 | Q V | | | | |
| 7+15 | 0.0082 | 0.02 | Q V | | | | |
| 7+20 | 0.0084 | 0.02 | Q V | | | | |
| 7+25 | 0.0085 | 0.02 | Q V | | | | |
| 7+30 | 0.0086 | 0.02 | Q V | | | | |
| 7+35 | 0.0087 | 0.02 | Q V | | | | |
| 7+40 | 0.0089 | 0.02 | Q V | | | | |
| 7+45 | 0.0090 | 0.02 | Q V | | | | |
| 7+50 | 0.0091 | 0.02 | Q V | | | | |
| 7+55 | 0.0093 | 0.02 | Q V | | | | |
| 8+ 0 | 0.0094 | 0.02 | Q V | | | | |
| 8+ 5 | 0.0095 | 0.02 | Q V | | | | |
| 8+10 | 0.0097 | 0.02 | Q V | | | | |
| 8+15 | 0.0098 | 0.02 | Q V | | | | |
| 8+20 | 0.0099 | 0.02 | Q V | | | | |
| 8+25 | 0.0101 | 0.02 | Q V | | | | |
| 8+30 | 0.0102 | 0.02 | Q V | | | | |
| 8+35 | 0.0104 | 0.02 | Q V | | | | |
| 8+40 | 0.0105 | 0.02 | Q  V | | | | |
| 8+45 | 0.0107 | 0.02 | Q  V | | | | |
| 8+50 | 0.0108 | 0.02 | Q  V | | | | |
| 8+55 | 0.0109 | 0.02 | Q  V | | | | |
| 9+ 0 | 0.0111 | 0.02 | Q  V | | | | |
| 9+ 5 | 0.0112 | 0.02 | Q  V | | | | |
| 9+10 | 0.0114 | 0.02 | Q  V | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 9+15 | 0.0116 | 0.02 | Q | V | | | | |
| 9+20 | 0.0117 | 0.02 | Q | V | | | | |
| 9+25 | 0.0119 | 0.02 | Q | V | | | | |
| 9+30 | 0.0120 | 0.02 | Q | V | | | | |
| 9+35 | 0.0122 | 0.02 | Q | V | | | | |
| 9+40 | 0.0123 | 0.02 | Q | V | | | | |
| 9+45 | 0.0125 | 0.02 | Q | V | | | | |
| 9+50 | 0.0127 | 0.02 | Q | V | | | | |
| 9+55 | 0.0128 | 0.02 | Q | V | | | | |
| 10+ 0 | 0.0130 | 0.02 | Q | V | | | | |
| 10+ 5 | 0.0132 | 0.02 | Q | V | | | | |
| 10+10 | 0.0133 | 0.02 | Q | V | | | | |
| 10+15 | 0.0135 | 0.03 | Q | V | | | | |
| 10+20 | 0.0137 | 0.03 | Q | V | | | | |
| 10+25 | 0.0139 | 0.03 | Q | V | | | | |
| 10+30 | 0.0140 | 0.03 | Q | V | | | | |
| 10+35 | 0.0142 | 0.03 | Q | V | | | | |
| 10+40 | 0.0144 | 0.03 | Q | V | | | | |
| 10+45 | 0.0146 | 0.03 | Q | V | | | | |
| 10+50 | 0.0148 | 0.03 | Q | V | | | | |
| 10+55 | 0.0150 | 0.03 | Q | V | | | | |
| 11+ 0 | 0.0152 | 0.03 | Q | V | | | | |
| 11+ 5 | 0.0154 | 0.03 | Q | V | | | | |
| 11+10 | 0.0156 | 0.03 | Q | V | | | | |
| 11+15 | 0.0158 | 0.03 | Q | V | | | | |
| 11+20 | 0.0160 | 0.03 | Q | V | | | | |
| 11+25 | 0.0162 | 0.03 | Q | V | | | | |
| 11+30 | 0.0164 | 0.03 | Q | V | | | | |
| 11+35 | 0.0166 | 0.03 | Q | V | | | | |
| 11+40 | 0.0168 | 0.03 | Q | V | | | | |
| 11+45 | 0.0170 | 0.03 | Q | V | | | | |
| 11+50 | 0.0173 | 0.03 | Q | V | | | | |
| 11+55 | 0.0175 | 0.03 | Q | V | | | | |
| 12+ 0 | 0.0177 | 0.03 | Q | V | | | | |
| 12+ 5 | 0.0179 | 0.03 | Q | V | | | | |
| 12+10 | 0.0182 | 0.04 | Q | V | | | | |
| 12+15 | 0.0185 | 0.04 | Q | V | | | | |
| 12+20 | 0.0187 | 0.04 | Q | V | | | | |
| 12+25 | 0.0190 | 0.04 | Q | V | | | | |
| 12+30 | 0.0193 | 0.04 | Q | V | | | | |
| 12+35 | 0.0196 | 0.04 | Q | V | | | | |
| 12+40 | 0.0199 | 0.04 | Q | V | | | | |
| 12+45 | 0.0202 | 0.04 | Q | V | | | | |
| 12+50 | 0.0205 | 0.04 | Q | V | | | | |
| 12+55 | 0.0208 | 0.04 | Q | V | | | | |
| 13+ 0 | 0.0211 | 0.05 | Q | V | | | | |
| 13+ 5 | 0.0214 | 0.05 | Q | V | | | | |
| 13+10 | 0.0217 | 0.05 | Q | V | | | | |
| 13+15 | 0.0221 | 0.05 | Q | V | | | | |
| 13+20 | 0.0224 | 0.05 | Q | V | | | | |
| 13+25 | 0.0228 | 0.05 | Q | V | | | | |
| 13+30 | 0.0231 | 0.05 | Q | V | | | | |
| 13+35 | 0.0235 | 0.05 | Q | V | | | | |
| 13+40 | 0.0239 | 0.06 | Q | V | | | | |
| 13+45 | 0.0243 | 0.06 | Q | V | | | | |
| 13+50 | 0.0247 | 0.06 | Q | V | | | | |
| 13+55 | 0.0251 | 0.06 | Q | V | | | | |
| 14+ 0 | 0.0255 | 0.06 | Q | V | | | | |
| 14+ 5 | 0.0260 | 0.06 | Q | V | | | | |



| | | | |
|---|---|---|---|
| 14+10 | 0.0264 | 0.07 | |
| 14+15 | 0.0269 | 0.07 | |
| 14+20 | 0.0274 | 0.07 | |
| 14+25 | 0.0279 | 0.07 | |
| 14+30 | 0.0284 | 0.08 | |
| 14+35 | 0.0289 | 0.08 | |
| 14+40 | 0.0295 | 0.08 | |
| 14+45 | 0.0301 | 0.09 | |
| 14+50 | 0.0307 | 0.09 | |
| 14+55 | 0.0313 | 0.09 | |
| 15+ 0 | 0.0320 | 0.10 | |
| 15+ 5 | 0.0328 | 0.10 | |
| 15+10 | 0.0335 | 0.11 | |
| 15+15 | 0.0343 | 0.12 | |
| 15+20 | 0.0352 | 0.13 | |
| 15+25 | 0.0362 | 0.14 | |
| 15+30 | 0.0376 | 0.19 | |
| 15+35 | 0.0391 | 0.23 | |
| 15+40 | 0.0410 | 0.27 | |
| 15+45 | 0.0432 | 0.32 | |
| 15+50 | 0.0459 | 0.39 | |
| 15+55 | 0.0493 | 0.49 | |
| 16+ 0 | 0.0542 | 0.71 | |
| 16+ 5 | 0.0638 | 1.39 | |
| 16+10 | 0.0858 | 3.19 | |
| 16+15 | 0.0997 | 2.02 | |
| 16+20 | 0.1075 | 1.14 | |
| 16+25 | 0.1128 | 0.76 | |
| 16+30 | 0.1164 | 0.52 | |
| 16+35 | 0.1190 | 0.38 | |
| 16+40 | 0.1209 | 0.28 | |
| 16+45 | 0.1224 | 0.21 | |
| 16+50 | 0.1236 | 0.18 | |
| 16+55 | 0.1246 | 0.15 | |
| 17+ 0 | 0.1254 | 0.11 | |
| 17+ 5 | 0.1260 | 0.08 | |
| 17+10 | 0.1265 | 0.08 | |
| 17+15 | 0.1270 | 0.07 | |
| 17+20 | 0.1274 | 0.06 | |
| 17+25 | 0.1279 | 0.06 | |
| 17+30 | 0.1282 | 0.06 | |
| 17+35 | 0.1286 | 0.05 | |
| 17+40 | 0.1290 | 0.05 | |
| 17+45 | 0.1293 | 0.05 | |
| 17+50 | 0.1296 | 0.05 | |
| 17+55 | 0.1300 | 0.05 | |
| 18+ 0 | 0.1303 | 0.04 | |
| 18+ 5 | 0.1305 | 0.04 | |
| 18+10 | 0.1308 | 0.04 | |
| 18+15 | 0.1311 | 0.04 | |
| 18+20 | 0.1313 | 0.03 | |
| 18+25 | 0.1315 | 0.03 | |
| 18+30 | 0.1317 | 0.03 | |
| 18+35 | 0.1320 | 0.03 | |
| 18+40 | 0.1322 | 0.03 | |
| 18+45 | 0.1324 | 0.03 | |
| 18+50 | 0.1326 | 0.03 | |
| 18+55 | 0.1328 | 0.03 | |
| 19+ 0 | 0.1329 | 0.03 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 19+ 5 | 0.1331 | 0.03 | Q | \| | \| | \| | V \| |
| 19+10 | 0.1333 | 0.03 | Q | \| | \| | \| | V \| |
| 19+15 | 0.1335 | 0.03 | Q | \| | \| | \| | V \| |
| 19+20 | 0.1336 | 0.02 | Q | \| | \| | \| | V \| |
| 19+25 | 0.1338 | 0.02 | Q | \| | \| | \| | V \| |
| 19+30 | 0.1340 | 0.02 | Q | \| | \| | \| | V \| |
| 19+35 | 0.1341 | 0.02 | Q | \| | \| | \| | V \| |
| 19+40 | 0.1343 | 0.02 | Q | \| | \| | \| | V \| |
| 19+45 | 0.1344 | 0.02 | Q | \| | \| | \| | V \| |
| 19+50 | 0.1346 | 0.02 | Q | \| | \| | \| | V \| |
| 19+55 | 0.1347 | 0.02 | Q | \| | \| | \| | V \| |
| 20+ 0 | 0.1349 | 0.02 | Q | \| | \| | \| | V \| |
| 20+ 5 | 0.1350 | 0.02 | Q | \| | \| | \| | V \| |
| 20+10 | 0.1352 | 0.02 | Q | \| | \| | \| | V \| |
| 20+15 | 0.1353 | 0.02 | Q | \| | \| | \| | V \| |
| 20+20 | 0.1354 | 0.02 | Q | \| | \| | \| | V \| |
| 20+25 | 0.1356 | 0.02 | Q | \| | \| | \| | V \| |
| 20+30 | 0.1357 | 0.02 | Q | \| | \| | \| | V \| |
| 20+35 | 0.1358 | 0.02 | Q | \| | \| | \| | V \| |
| 20+40 | 0.1360 | 0.02 | Q | \| | \| | \| | V \| |
| 20+45 | 0.1361 | 0.02 | Q | \| | \| | \| | V \| |
| 20+50 | 0.1362 | 0.02 | Q | \| | \| | \| | V \| |
| 20+55 | 0.1363 | 0.02 | Q | \| | \| | \| | V \| |
| 21+ 0 | 0.1364 | 0.02 | Q | \| | \| | \| | V \| |
| 21+ 5 | 0.1366 | 0.02 | Q | \| | \| | \| | V \| |
| 21+10 | 0.1367 | 0.02 | Q | \| | \| | \| | V\| |
| 21+15 | 0.1368 | 0.02 | Q | \| | \| | \| | V\| |
| 21+20 | 0.1369 | 0.02 | Q | \| | \| | \| | V\| |
| 21+25 | 0.1370 | 0.02 | Q | \| | \| | \| | V\| |
| 21+30 | 0.1371 | 0.02 | Q | \| | \| | \| | V\| |
| 21+35 | 0.1372 | 0.02 | Q | \| | \| | \| | V\| |
| 21+40 | 0.1373 | 0.02 | Q | \| | \| | \| | V\| |
| 21+45 | 0.1374 | 0.02 | Q | \| | \| | \| | V\| |
| 21+50 | 0.1375 | 0.02 | Q | \| | \| | \| | V\| |
| 21+55 | 0.1376 | 0.01 | Q | \| | \| | \| | V\| |
| 22+ 0 | 0.1377 | 0.01 | Q | \| | \| | \| | V\| |
| 22+ 5 | 0.1378 | 0.01 | Q | \| | \| | \| | V\| |
| 22+10 | 0.1379 | 0.01 | Q | \| | \| | \| | V\| |
| 22+15 | 0.1380 | 0.01 | Q | \| | \| | \| | V\| |
| 22+20 | 0.1381 | 0.01 | Q | \| | \| | \| | V\| |
| 22+25 | 0.1382 | 0.01 | Q | \| | \| | \| | V\| |
| 22+30 | 0.1383 | 0.01 | Q | \| | \| | \| | V\| |
| 22+35 | 0.1384 | 0.01 | Q | \| | \| | \| | V\| |
| 22+40 | 0.1385 | 0.01 | Q | \| | \| | \| | V\| |
| 22+45 | 0.1386 | 0.01 | Q | \| | \| | \| | V\| |
| 22+50 | 0.1387 | 0.01 | Q | \| | \| | \| | V\| |
| 22+55 | 0.1388 | 0.01 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.1389 | 0.01 | Q | \| | \| | \| | V\| |
| 23+ 5 | 0.1390 | 0.01 | Q | \| | \| | \| | V\| |
| 23+10 | 0.1391 | 0.01 | Q | \| | \| | \| | V\| |
| 23+15 | 0.1391 | 0.01 | Q | \| | \| | \| | V\| |
| 23+20 | 0.1392 | 0.01 | Q | \| | \| | \| | V\| |
| 23+25 | 0.1393 | 0.01 | Q | \| | \| | \| | V\| |
| 23+30 | 0.1394 | 0.01 | Q | \| | \| | \| | V\| |
| 23+35 | 0.1395 | 0.01 | Q | \| | \| | \| | V\| |
| 23+40 | 0.1396 | 0.01 | Q | \| | \| | \| | V\| |
| 23+45 | 0.1396 | 0.01 | Q | \| | \| | \| | V\| |
| 23+50 | 0.1397 | 0.01 | Q | \| | \| | \| | V\| |
| 23+55 | 0.1398 | 0.01 | Q | \| | \| | \| | V\| |

```
   24+ 0       0.1399      0.01  Q         |          |         |        V|
   24+ 5       0.1400      0.01  Q         |          |         |        V|
   24+10       0.1400      0.01  Q         |          |         |        V|
   24+15       0.1400      0.00  Q         |          |         |        V|
   24+20       0.1400      0.00  Q         |          |         |        V|
   24+25       0.1400      0.00  Q         |          |         |        V|
   24+30       0.1401      0.00  Q         |          |         |        V|
   24+35       0.1401      0.00  Q         |          |         |        V|
   24+40       0.1401      0.00  Q         |          |         |        V|
   24+45       0.1401      0.00  Q         |          |         |        V|
   24+50       0.1401      0.00  Q         |          |         |        V|
   24+55       0.1401      0.00  Q         |          |         |         V
-------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 13
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 16.85 | 1 | 1.28 |
| Rainfall data for year 100 | | |
| 16.85 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 16.85 | 24 | 2.39 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.0 | 92.8 | 16.85 | 1.000 | 0.140 | 0.900 | 0.126 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.126

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 15.17 | 0.900 | 78.0 | 92.8 | 0.78 | 0.694 |
| 1.68 | 0.100 | 98.0 | 98.0 | 0.20 | 0.904 |

Area-averaged catchment yield fraction, Y = 0.715
Area-averaged low loss fraction, Yb = 0.285
User entry of time of concentration = 0.570 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 16.85(Ac.)
Catchment Lag time = 0.456 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 18.2749
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.126(In/Hr)
Average low loss rate fraction (Yb) = 0.285 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.607(In)
Computed peak 30-minute rainfall = 1.040(In)
Specified peak 1-hour rainfall = 1.280(In)
Computed peak 3-hour rainfall = 1.599(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.390(In)

Rainfall depth area reduction factors:
Using a total area of 16.85(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.607(In)
30-minute factor = 0.999 Adjusted rainfall = 1.039(In)
1-hour factor = 0.999 Adjusted rainfall = 1.279(In)
3-hour factor = 1.000 Adjusted rainfall = 1.599(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.390(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 203.78 (CFS)) | |
| 1 | 0.877 | 1.787 |
| 2 | 3.897 | 6.154 |
| 3 | 9.247 | 10.901 |
| 4 | 20.616 | 23.168 |
| 5 | 37.389 | 34.181 |
| 6 | 50.022 | 25.742 |
| 7 | 58.867 | 18.025 |
| 8 | 64.964 | 12.424 |
| 9 | 69.767 | 9.788 |
| 10 | 73.683 | 7.980 |
| 11 | 76.931 | 6.619 |
| 12 | 79.641 | 5.523 |
| 13 | 81.950 | 4.704 |

| | | |
|---|---|---|
| 14 | 83.934 | 4.043 |
| 15 | 85.739 | 3.678 |
| 16 | 87.360 | 3.305 |
| 17 | 88.760 | 2.853 |
| 18 | 89.887 | 2.295 |
| 19 | 90.933 | 2.131 |
| 20 | 91.904 | 1.978 |
| 21 | 92.774 | 1.774 |
| 22 | 93.587 | 1.656 |
| 23 | 94.280 | 1.413 |
| 24 | 94.902 | 1.266 |
| 25 | 95.513 | 1.245 |
| 26 | 96.016 | 1.026 |
| 27 | 96.491 | 0.968 |
| 28 | 96.937 | 0.907 |
| 29 | 97.275 | 0.690 |
| 30 | 97.604 | 0.670 |
| 31 | 97.873 | 0.549 |
| 32 | 98.057 | 0.374 |
| 33 | 98.240 | 0.373 |
| 34 | 98.446 | 0.421 |
| 35 | 98.666 | 0.447 |
| 36 | 98.885 | 0.447 |
| 37 | 99.104 | 0.447 |
| 38 | 99.324 | 0.447 |
| 39 | 99.518 | 0.395 |
| 40 | 99.637 | 0.243 |
| 41 | 99.751 | 0.233 |
| 42 | 99.865 | 0.233 |
| 43 | 100.000 | 0.116 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6069 | 0.6069 |
| 2 | 0.7472 | 0.1403 |
| 3 | 0.8438 | 0.0966 |
| 4 | 0.9199 | 0.0761 |
| 5 | 0.9836 | 0.0637 |
| 6 | 1.0389 | 0.0553 |
| 7 | 1.0880 | 0.0492 |
| 8 | 1.1325 | 0.0445 |
| 9 | 1.1732 | 0.0407 |
| 10 | 1.2109 | 0.0377 |
| 11 | 1.2460 | 0.0351 |
| 12 | 1.2790 | 0.0330 |
| 13 | 1.3000 | 0.0210 |
| 14 | 1.3197 | 0.0197 |
| 15 | 1.3383 | 0.0186 |
| 16 | 1.3560 | 0.0177 |
| 17 | 1.3728 | 0.0168 |
| 18 | 1.3888 | 0.0160 |
| 19 | 1.4042 | 0.0153 |
| 20 | 1.4189 | 0.0147 |
| 21 | 1.4330 | 0.0141 |
| 22 | 1.4466 | 0.0136 |
| 23 | 1.4597 | 0.0131 |
| 24 | 1.4724 | 0.0127 |
| 25 | 1.4847 | 0.0123 |
| 26 | 1.4965 | 0.0119 |

| | | |
|---|---|---|
| 27 | 1.5081 | 0.0115 |
| 28 | 1.5192 | 0.0112 |
| 29 | 1.5301 | 0.0109 |
| 30 | 1.5407 | 0.0106 |
| 31 | 1.5510 | 0.0103 |
| 32 | 1.5610 | 0.0100 |
| 33 | 1.5708 | 0.0098 |
| 34 | 1.5804 | 0.0096 |
| 35 | 1.5897 | 0.0093 |
| 36 | 1.5988 | 0.0091 |
| 37 | 1.6077 | 0.0089 |
| 38 | 1.6164 | 0.0087 |
| 39 | 1.6250 | 0.0085 |
| 40 | 1.6333 | 0.0084 |
| 41 | 1.6415 | 0.0082 |
| 42 | 1.6496 | 0.0080 |
| 43 | 1.6574 | 0.0079 |
| 44 | 1.6652 | 0.0077 |
| 45 | 1.6728 | 0.0076 |
| 46 | 1.6802 | 0.0075 |
| 47 | 1.6876 | 0.0073 |
| 48 | 1.6948 | 0.0072 |
| 49 | 1.7019 | 0.0071 |
| 50 | 1.7089 | 0.0070 |
| 51 | 1.7157 | 0.0069 |
| 52 | 1.7225 | 0.0068 |
| 53 | 1.7292 | 0.0067 |
| 54 | 1.7357 | 0.0066 |
| 55 | 1.7422 | 0.0065 |
| 56 | 1.7486 | 0.0064 |
| 57 | 1.7548 | 0.0063 |
| 58 | 1.7610 | 0.0062 |
| 59 | 1.7671 | 0.0061 |
| 60 | 1.7732 | 0.0060 |
| 61 | 1.7791 | 0.0059 |
| 62 | 1.7850 | 0.0059 |
| 63 | 1.7908 | 0.0058 |
| 64 | 1.7965 | 0.0057 |
| 65 | 1.8022 | 0.0057 |
| 66 | 1.8078 | 0.0056 |
| 67 | 1.8133 | 0.0055 |
| 68 | 1.8187 | 0.0055 |
| 69 | 1.8241 | 0.0054 |
| 70 | 1.8294 | 0.0053 |
| 71 | 1.8347 | 0.0053 |
| 72 | 1.8399 | 0.0052 |
| 73 | 1.8447 | 0.0048 |
| 74 | 1.8494 | 0.0047 |
| 75 | 1.8541 | 0.0047 |
| 76 | 1.8588 | 0.0046 |
| 77 | 1.8634 | 0.0046 |
| 78 | 1.8679 | 0.0045 |
| 79 | 1.8724 | 0.0045 |
| 80 | 1.8768 | 0.0044 |
| 81 | 1.8812 | 0.0044 |
| 82 | 1.8856 | 0.0044 |
| 83 | 1.8899 | 0.0043 |
| 84 | 1.8942 | 0.0043 |
| 85 | 1.8984 | 0.0042 |

| | | |
|---|---|---|
| 86 | 1.9026 | 0.0042 |
| 87 | 1.9068 | 0.0042 |
| 88 | 1.9109 | 0.0041 |
| 89 | 1.9150 | 0.0041 |
| 90 | 1.9190 | 0.0040 |
| 91 | 1.9230 | 0.0040 |
| 92 | 1.9270 | 0.0040 |
| 93 | 1.9309 | 0.0039 |
| 94 | 1.9348 | 0.0039 |
| 95 | 1.9387 | 0.0039 |
| 96 | 1.9425 | 0.0038 |
| 97 | 1.9463 | 0.0038 |
| 98 | 1.9501 | 0.0038 |
| 99 | 1.9538 | 0.0037 |
| 100 | 1.9575 | 0.0037 |
| 101 | 1.9612 | 0.0037 |
| 102 | 1.9649 | 0.0036 |
| 103 | 1.9685 | 0.0036 |
| 104 | 1.9721 | 0.0036 |
| 105 | 1.9757 | 0.0036 |
| 106 | 1.9792 | 0.0035 |
| 107 | 1.9827 | 0.0035 |
| 108 | 1.9862 | 0.0035 |
| 109 | 1.9896 | 0.0035 |
| 110 | 1.9931 | 0.0034 |
| 111 | 1.9965 | 0.0034 |
| 112 | 1.9999 | 0.0034 |
| 113 | 2.0032 | 0.0034 |
| 114 | 2.0065 | 0.0033 |
| 115 | 2.0099 | 0.0033 |
| 116 | 2.0131 | 0.0033 |
| 117 | 2.0164 | 0.0033 |
| 118 | 2.0196 | 0.0032 |
| 119 | 2.0229 | 0.0032 |
| 120 | 2.0261 | 0.0032 |
| 121 | 2.0292 | 0.0032 |
| 122 | 2.0324 | 0.0032 |
| 123 | 2.0355 | 0.0031 |
| 124 | 2.0386 | 0.0031 |
| 125 | 2.0417 | 0.0031 |
| 126 | 2.0448 | 0.0031 |
| 127 | 2.0478 | 0.0031 |
| 128 | 2.0509 | 0.0030 |
| 129 | 2.0539 | 0.0030 |
| 130 | 2.0569 | 0.0030 |
| 131 | 2.0599 | 0.0030 |
| 132 | 2.0628 | 0.0030 |
| 133 | 2.0658 | 0.0029 |
| 134 | 2.0687 | 0.0029 |
| 135 | 2.0716 | 0.0029 |
| 136 | 2.0745 | 0.0029 |
| 137 | 2.0773 | 0.0029 |
| 138 | 2.0802 | 0.0029 |
| 139 | 2.0830 | 0.0028 |
| 140 | 2.0859 | 0.0028 |
| 141 | 2.0887 | 0.0028 |
| 142 | 2.0914 | 0.0028 |
| 143 | 2.0942 | 0.0028 |
| 144 | 2.0970 | 0.0028 |

| | | |
|---|---|---|
| 145 | 2.0997 | 0.0027 |
| 146 | 2.1024 | 0.0027 |
| 147 | 2.1051 | 0.0027 |
| 148 | 2.1078 | 0.0027 |
| 149 | 2.1105 | 0.0027 |
| 150 | 2.1132 | 0.0027 |
| 151 | 2.1158 | 0.0027 |
| 152 | 2.1185 | 0.0026 |
| 153 | 2.1211 | 0.0026 |
| 154 | 2.1237 | 0.0026 |
| 155 | 2.1263 | 0.0026 |
| 156 | 2.1289 | 0.0026 |
| 157 | 2.1314 | 0.0026 |
| 158 | 2.1340 | 0.0026 |
| 159 | 2.1365 | 0.0025 |
| 160 | 2.1391 | 0.0025 |
| 161 | 2.1416 | 0.0025 |
| 162 | 2.1441 | 0.0025 |
| 163 | 2.1466 | 0.0025 |
| 164 | 2.1491 | 0.0025 |
| 165 | 2.1515 | 0.0025 |
| 166 | 2.1540 | 0.0025 |
| 167 | 2.1564 | 0.0024 |
| 168 | 2.1589 | 0.0024 |
| 169 | 2.1613 | 0.0024 |
| 170 | 2.1637 | 0.0024 |
| 171 | 2.1661 | 0.0024 |
| 172 | 2.1685 | 0.0024 |
| 173 | 2.1708 | 0.0024 |
| 174 | 2.1732 | 0.0024 |
| 175 | 2.1755 | 0.0024 |
| 176 | 2.1779 | 0.0023 |
| 177 | 2.1802 | 0.0023 |
| 178 | 2.1825 | 0.0023 |
| 179 | 2.1848 | 0.0023 |
| 180 | 2.1871 | 0.0023 |
| 181 | 2.1894 | 0.0023 |
| 182 | 2.1917 | 0.0023 |
| 183 | 2.1940 | 0.0023 |
| 184 | 2.1962 | 0.0023 |
| 185 | 2.1985 | 0.0022 |
| 186 | 2.2007 | 0.0022 |
| 187 | 2.2029 | 0.0022 |
| 188 | 2.2052 | 0.0022 |
| 189 | 2.2074 | 0.0022 |
| 190 | 2.2096 | 0.0022 |
| 191 | 2.2118 | 0.0022 |
| 192 | 2.2139 | 0.0022 |
| 193 | 2.2161 | 0.0022 |
| 194 | 2.2183 | 0.0022 |
| 195 | 2.2204 | 0.0022 |
| 196 | 2.2226 | 0.0021 |
| 197 | 2.2247 | 0.0021 |
| 198 | 2.2268 | 0.0021 |
| 199 | 2.2289 | 0.0021 |
| 200 | 2.2311 | 0.0021 |
| 201 | 2.2332 | 0.0021 |
| 202 | 2.2352 | 0.0021 |
| 203 | 2.2373 | 0.0021 |

| | | |
|---|---|---|
| 204 | 2.2394 | 0.0021 |
| 205 | 2.2415 | 0.0021 |
| 206 | 2.2435 | 0.0021 |
| 207 | 2.2456 | 0.0021 |
| 208 | 2.2476 | 0.0020 |
| 209 | 2.2497 | 0.0020 |
| 210 | 2.2517 | 0.0020 |
| 211 | 2.2537 | 0.0020 |
| 212 | 2.2557 | 0.0020 |
| 213 | 2.2577 | 0.0020 |
| 214 | 2.2597 | 0.0020 |
| 215 | 2.2617 | 0.0020 |
| 216 | 2.2637 | 0.0020 |
| 217 | 2.2657 | 0.0020 |
| 218 | 2.2676 | 0.0020 |
| 219 | 2.2696 | 0.0020 |
| 220 | 2.2715 | 0.0020 |
| 221 | 2.2735 | 0.0019 |
| 222 | 2.2754 | 0.0019 |
| 223 | 2.2773 | 0.0019 |
| 224 | 2.2793 | 0.0019 |
| 225 | 2.2812 | 0.0019 |
| 226 | 2.2831 | 0.0019 |
| 227 | 2.2850 | 0.0019 |
| 228 | 2.2869 | 0.0019 |
| 229 | 2.2888 | 0.0019 |
| 230 | 2.2907 | 0.0019 |
| 231 | 2.2925 | 0.0019 |
| 232 | 2.2944 | 0.0019 |
| 233 | 2.2963 | 0.0019 |
| 234 | 2.2981 | 0.0019 |
| 235 | 2.3000 | 0.0018 |
| 236 | 2.3018 | 0.0018 |
| 237 | 2.3037 | 0.0018 |
| 238 | 2.3055 | 0.0018 |
| 239 | 2.3073 | 0.0018 |
| 240 | 2.3091 | 0.0018 |
| 241 | 2.3109 | 0.0018 |
| 242 | 2.3128 | 0.0018 |
| 243 | 2.3146 | 0.0018 |
| 244 | 2.3163 | 0.0018 |
| 245 | 2.3181 | 0.0018 |
| 246 | 2.3199 | 0.0018 |
| 247 | 2.3217 | 0.0018 |
| 248 | 2.3235 | 0.0018 |
| 249 | 2.3252 | 0.0018 |
| 250 | 2.3270 | 0.0018 |
| 251 | 2.3287 | 0.0018 |
| 252 | 2.3305 | 0.0017 |
| 253 | 2.3322 | 0.0017 |
| 254 | 2.3340 | 0.0017 |
| 255 | 2.3357 | 0.0017 |
| 256 | 2.3374 | 0.0017 |
| 257 | 2.3391 | 0.0017 |
| 258 | 2.3409 | 0.0017 |
| 259 | 2.3426 | 0.0017 |
| 260 | 2.3443 | 0.0017 |
| 261 | 2.3460 | 0.0017 |
| 262 | 2.3477 | 0.0017 |

| | | |
|---|---|---|
| 263 | 2.3494 | 0.0017 |
| 264 | 2.3510 | 0.0017 |
| 265 | 2.3527 | 0.0017 |
| 266 | 2.3544 | 0.0017 |
| 267 | 2.3561 | 0.0017 |
| 268 | 2.3577 | 0.0017 |
| 269 | 2.3594 | 0.0017 |
| 270 | 2.3610 | 0.0017 |
| 271 | 2.3627 | 0.0016 |
| 272 | 2.3643 | 0.0016 |
| 273 | 2.3660 | 0.0016 |
| 274 | 2.3676 | 0.0016 |
| 275 | 2.3692 | 0.0016 |
| 276 | 2.3708 | 0.0016 |
| 277 | 2.3725 | 0.0016 |
| 278 | 2.3741 | 0.0016 |
| 279 | 2.3757 | 0.0016 |
| 280 | 2.3773 | 0.0016 |
| 281 | 2.3789 | 0.0016 |
| 282 | 2.3805 | 0.0016 |
| 283 | 2.3821 | 0.0016 |
| 284 | 2.3837 | 0.0016 |
| 285 | 2.3852 | 0.0016 |
| 286 | 2.3868 | 0.0016 |
| 287 | 2.3884 | 0.0016 |
| 288 | 2.3899 | 0.0016 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0016 | 0.0004 | 0.0011 |
| 2 | 0.0016 | 0.0004 | 0.0011 |
| 3 | 0.0016 | 0.0005 | 0.0011 |
| 4 | 0.0016 | 0.0005 | 0.0011 |
| 5 | 0.0016 | 0.0005 | 0.0011 |
| 6 | 0.0016 | 0.0005 | 0.0011 |
| 7 | 0.0016 | 0.0005 | 0.0012 |
| 8 | 0.0016 | 0.0005 | 0.0012 |
| 9 | 0.0016 | 0.0005 | 0.0012 |
| 10 | 0.0016 | 0.0005 | 0.0012 |
| 11 | 0.0016 | 0.0005 | 0.0012 |
| 12 | 0.0016 | 0.0005 | 0.0012 |
| 13 | 0.0017 | 0.0005 | 0.0012 |
| 14 | 0.0017 | 0.0005 | 0.0012 |
| 15 | 0.0017 | 0.0005 | 0.0012 |
| 16 | 0.0017 | 0.0005 | 0.0012 |
| 17 | 0.0017 | 0.0005 | 0.0012 |
| 18 | 0.0017 | 0.0005 | 0.0012 |
| 19 | 0.0017 | 0.0005 | 0.0012 |
| 20 | 0.0017 | 0.0005 | 0.0012 |
| 21 | 0.0017 | 0.0005 | 0.0012 |
| 22 | 0.0017 | 0.0005 | 0.0012 |
| 23 | 0.0017 | 0.0005 | 0.0012 |
| 24 | 0.0017 | 0.0005 | 0.0012 |
| 25 | 0.0017 | 0.0005 | 0.0012 |
| 26 | 0.0018 | 0.0005 | 0.0013 |
| 27 | 0.0018 | 0.0005 | 0.0013 |
| 28 | 0.0018 | 0.0005 | 0.0013 |

| | | | |
|---|---|---|---|
| 29 | 0.0018 | 0.0005 | 0.0013 |
| 30 | 0.0018 | 0.0005 | 0.0013 |
| 31 | 0.0018 | 0.0005 | 0.0013 |
| 32 | 0.0018 | 0.0005 | 0.0013 |
| 33 | 0.0018 | 0.0005 | 0.0013 |
| 34 | 0.0018 | 0.0005 | 0.0013 |
| 35 | 0.0018 | 0.0005 | 0.0013 |
| 36 | 0.0018 | 0.0005 | 0.0013 |
| 37 | 0.0019 | 0.0005 | 0.0013 |
| 38 | 0.0019 | 0.0005 | 0.0013 |
| 39 | 0.0019 | 0.0005 | 0.0013 |
| 40 | 0.0019 | 0.0005 | 0.0013 |
| 41 | 0.0019 | 0.0005 | 0.0014 |
| 42 | 0.0019 | 0.0005 | 0.0014 |
| 43 | 0.0019 | 0.0005 | 0.0014 |
| 44 | 0.0019 | 0.0005 | 0.0014 |
| 45 | 0.0019 | 0.0006 | 0.0014 |
| 46 | 0.0019 | 0.0006 | 0.0014 |
| 47 | 0.0020 | 0.0006 | 0.0014 |
| 48 | 0.0020 | 0.0006 | 0.0014 |
| 49 | 0.0020 | 0.0006 | 0.0014 |
| 50 | 0.0020 | 0.0006 | 0.0014 |
| 51 | 0.0020 | 0.0006 | 0.0014 |
| 52 | 0.0020 | 0.0006 | 0.0014 |
| 53 | 0.0020 | 0.0006 | 0.0014 |
| 54 | 0.0020 | 0.0006 | 0.0015 |
| 55 | 0.0021 | 0.0006 | 0.0015 |
| 56 | 0.0021 | 0.0006 | 0.0015 |
| 57 | 0.0021 | 0.0006 | 0.0015 |
| 58 | 0.0021 | 0.0006 | 0.0015 |
| 59 | 0.0021 | 0.0006 | 0.0015 |
| 60 | 0.0021 | 0.0006 | 0.0015 |
| 61 | 0.0021 | 0.0006 | 0.0015 |
| 62 | 0.0021 | 0.0006 | 0.0015 |
| 63 | 0.0022 | 0.0006 | 0.0015 |
| 64 | 0.0022 | 0.0006 | 0.0015 |
| 65 | 0.0022 | 0.0006 | 0.0016 |
| 66 | 0.0022 | 0.0006 | 0.0016 |
| 67 | 0.0022 | 0.0006 | 0.0016 |
| 68 | 0.0022 | 0.0006 | 0.0016 |
| 69 | 0.0022 | 0.0006 | 0.0016 |
| 70 | 0.0022 | 0.0006 | 0.0016 |
| 71 | 0.0023 | 0.0006 | 0.0016 |
| 72 | 0.0023 | 0.0006 | 0.0016 |
| 73 | 0.0023 | 0.0007 | 0.0016 |
| 74 | 0.0023 | 0.0007 | 0.0017 |
| 75 | 0.0023 | 0.0007 | 0.0017 |
| 76 | 0.0023 | 0.0007 | 0.0017 |
| 77 | 0.0024 | 0.0007 | 0.0017 |
| 78 | 0.0024 | 0.0007 | 0.0017 |
| 79 | 0.0024 | 0.0007 | 0.0017 |
| 80 | 0.0024 | 0.0007 | 0.0017 |
| 81 | 0.0024 | 0.0007 | 0.0017 |
| 82 | 0.0024 | 0.0007 | 0.0017 |
| 83 | 0.0025 | 0.0007 | 0.0018 |
| 84 | 0.0025 | 0.0007 | 0.0018 |
| 85 | 0.0025 | 0.0007 | 0.0018 |
| 86 | 0.0025 | 0.0007 | 0.0018 |
| 87 | 0.0025 | 0.0007 | 0.0018 |

| | | | |
|---|---|---|---|
| 88 | 0.0026 | 0.0007 | 0.0018 |
| 89 | 0.0026 | 0.0007 | 0.0018 |
| 90 | 0.0026 | 0.0007 | 0.0019 |
| 91 | 0.0026 | 0.0007 | 0.0019 |
| 92 | 0.0026 | 0.0008 | 0.0019 |
| 93 | 0.0027 | 0.0008 | 0.0019 |
| 94 | 0.0027 | 0.0008 | 0.0019 |
| 95 | 0.0027 | 0.0008 | 0.0019 |
| 96 | 0.0027 | 0.0008 | 0.0019 |
| 97 | 0.0028 | 0.0008 | 0.0020 |
| 98 | 0.0028 | 0.0008 | 0.0020 |
| 99 | 0.0028 | 0.0008 | 0.0020 |
| 100 | 0.0028 | 0.0008 | 0.0020 |
| 101 | 0.0029 | 0.0008 | 0.0020 |
| 102 | 0.0029 | 0.0008 | 0.0021 |
| 103 | 0.0029 | 0.0008 | 0.0021 |
| 104 | 0.0029 | 0.0008 | 0.0021 |
| 105 | 0.0030 | 0.0008 | 0.0021 |
| 106 | 0.0030 | 0.0008 | 0.0021 |
| 107 | 0.0030 | 0.0009 | 0.0022 |
| 108 | 0.0030 | 0.0009 | 0.0022 |
| 109 | 0.0031 | 0.0009 | 0.0022 |
| 110 | 0.0031 | 0.0009 | 0.0022 |
| 111 | 0.0031 | 0.0009 | 0.0022 |
| 112 | 0.0032 | 0.0009 | 0.0023 |
| 113 | 0.0032 | 0.0009 | 0.0023 |
| 114 | 0.0032 | 0.0009 | 0.0023 |
| 115 | 0.0033 | 0.0009 | 0.0023 |
| 116 | 0.0033 | 0.0009 | 0.0023 |
| 117 | 0.0033 | 0.0009 | 0.0024 |
| 118 | 0.0034 | 0.0010 | 0.0024 |
| 119 | 0.0034 | 0.0010 | 0.0024 |
| 120 | 0.0034 | 0.0010 | 0.0025 |
| 121 | 0.0035 | 0.0010 | 0.0025 |
| 122 | 0.0035 | 0.0010 | 0.0025 |
| 123 | 0.0036 | 0.0010 | 0.0025 |
| 124 | 0.0036 | 0.0010 | 0.0026 |
| 125 | 0.0036 | 0.0010 | 0.0026 |
| 126 | 0.0037 | 0.0010 | 0.0026 |
| 127 | 0.0037 | 0.0011 | 0.0027 |
| 128 | 0.0038 | 0.0011 | 0.0027 |
| 129 | 0.0038 | 0.0011 | 0.0027 |
| 130 | 0.0039 | 0.0011 | 0.0028 |
| 131 | 0.0039 | 0.0011 | 0.0028 |
| 132 | 0.0040 | 0.0011 | 0.0028 |
| 133 | 0.0040 | 0.0012 | 0.0029 |
| 134 | 0.0041 | 0.0012 | 0.0029 |
| 135 | 0.0042 | 0.0012 | 0.0030 |
| 136 | 0.0042 | 0.0012 | 0.0030 |
| 137 | 0.0043 | 0.0012 | 0.0031 |
| 138 | 0.0043 | 0.0012 | 0.0031 |
| 139 | 0.0044 | 0.0013 | 0.0031 |
| 140 | 0.0044 | 0.0013 | 0.0032 |
| 141 | 0.0045 | 0.0013 | 0.0032 |
| 142 | 0.0046 | 0.0013 | 0.0033 |
| 143 | 0.0047 | 0.0013 | 0.0034 |
| 144 | 0.0047 | 0.0014 | 0.0034 |
| 145 | 0.0052 | 0.0015 | 0.0037 |
| 146 | 0.0053 | 0.0015 | 0.0038 |

| | | | |
|---|---|---|---|
| 147 | 0.0054 | 0.0015 | 0.0039 |
| 148 | 0.0055 | 0.0016 | 0.0039 |
| 149 | 0.0056 | 0.0016 | 0.0040 |
| 150 | 0.0057 | 0.0016 | 0.0040 |
| 151 | 0.0058 | 0.0017 | 0.0041 |
| 152 | 0.0059 | 0.0017 | 0.0042 |
| 153 | 0.0060 | 0.0017 | 0.0043 |
| 154 | 0.0061 | 0.0017 | 0.0044 |
| 155 | 0.0063 | 0.0018 | 0.0045 |
| 156 | 0.0064 | 0.0018 | 0.0046 |
| 157 | 0.0066 | 0.0019 | 0.0047 |
| 158 | 0.0067 | 0.0019 | 0.0048 |
| 159 | 0.0069 | 0.0020 | 0.0049 |
| 160 | 0.0070 | 0.0020 | 0.0050 |
| 161 | 0.0072 | 0.0021 | 0.0052 |
| 162 | 0.0073 | 0.0021 | 0.0052 |
| 163 | 0.0076 | 0.0022 | 0.0054 |
| 164 | 0.0077 | 0.0022 | 0.0055 |
| 165 | 0.0080 | 0.0023 | 0.0057 |
| 166 | 0.0082 | 0.0023 | 0.0059 |
| 167 | 0.0085 | 0.0024 | 0.0061 |
| 168 | 0.0087 | 0.0025 | 0.0062 |
| 169 | 0.0091 | 0.0026 | 0.0065 |
| 170 | 0.0093 | 0.0027 | 0.0067 |
| 171 | 0.0098 | 0.0028 | 0.0070 |
| 172 | 0.0100 | 0.0029 | 0.0072 |
| 173 | 0.0106 | 0.0030 | 0.0076 |
| 174 | 0.0109 | 0.0031 | 0.0078 |
| 175 | 0.0115 | 0.0033 | 0.0082 |
| 176 | 0.0119 | 0.0034 | 0.0085 |
| 177 | 0.0127 | 0.0036 | 0.0091 |
| 178 | 0.0131 | 0.0037 | 0.0094 |
| 179 | 0.0141 | 0.0040 | 0.0101 |
| 180 | 0.0147 | 0.0042 | 0.0105 |
| 181 | 0.0160 | 0.0046 | 0.0115 |
| 182 | 0.0168 | 0.0048 | 0.0120 |
| 183 | 0.0186 | 0.0053 | 0.0133 |
| 184 | 0.0197 | 0.0056 | 0.0141 |
| 185 | 0.0330 | 0.0094 | 0.0236 |
| 186 | 0.0351 | 0.0100 | 0.0251 |
| 187 | 0.0407 | 0.0105 | 0.0302 |
| 188 | 0.0445 | 0.0105 | 0.0340 |
| 189 | 0.0553 | 0.0105 | 0.0448 |
| 190 | 0.0637 | 0.0105 | 0.0532 |
| 191 | 0.0966 | 0.0105 | 0.0861 |
| 192 | 0.1403 | 0.0105 | 0.1298 |
| 193 | 0.6069 | 0.0105 | 0.5964 |
| 194 | 0.0761 | 0.0105 | 0.0656 |
| 195 | 0.0492 | 0.0105 | 0.0387 |
| 196 | 0.0377 | 0.0105 | 0.0272 |
| 197 | 0.0210 | 0.0060 | 0.0150 |
| 198 | 0.0177 | 0.0050 | 0.0126 |
| 199 | 0.0153 | 0.0044 | 0.0110 |
| 200 | 0.0136 | 0.0039 | 0.0097 |
| 201 | 0.0123 | 0.0035 | 0.0088 |
| 202 | 0.0112 | 0.0032 | 0.0080 |
| 203 | 0.0103 | 0.0029 | 0.0074 |
| 204 | 0.0096 | 0.0027 | 0.0068 |
| 205 | 0.0089 | 0.0025 | 0.0064 |

| | | | |
|---|---|---|---|
| 206 | 0.0084 | 0.0024 | 0.0060 |
| 207 | 0.0079 | 0.0022 | 0.0056 |
| 208 | 0.0075 | 0.0021 | 0.0053 |
| 209 | 0.0071 | 0.0020 | 0.0051 |
| 210 | 0.0068 | 0.0019 | 0.0048 |
| 211 | 0.0065 | 0.0018 | 0.0046 |
| 212 | 0.0062 | 0.0018 | 0.0044 |
| 213 | 0.0059 | 0.0017 | 0.0043 |
| 214 | 0.0057 | 0.0016 | 0.0041 |
| 215 | 0.0055 | 0.0016 | 0.0039 |
| 216 | 0.0053 | 0.0015 | 0.0038 |
| 217 | 0.0048 | 0.0014 | 0.0034 |
| 218 | 0.0046 | 0.0013 | 0.0033 |
| 219 | 0.0045 | 0.0013 | 0.0032 |
| 220 | 0.0044 | 0.0012 | 0.0031 |
| 221 | 0.0042 | 0.0012 | 0.0030 |
| 222 | 0.0041 | 0.0012 | 0.0029 |
| 223 | 0.0040 | 0.0011 | 0.0029 |
| 224 | 0.0039 | 0.0011 | 0.0028 |
| 225 | 0.0038 | 0.0011 | 0.0027 |
| 226 | 0.0037 | 0.0011 | 0.0027 |
| 227 | 0.0036 | 0.0010 | 0.0026 |
| 228 | 0.0035 | 0.0010 | 0.0025 |
| 229 | 0.0035 | 0.0010 | 0.0025 |
| 230 | 0.0034 | 0.0010 | 0.0024 |
| 231 | 0.0033 | 0.0009 | 0.0024 |
| 232 | 0.0032 | 0.0009 | 0.0023 |
| 233 | 0.0032 | 0.0009 | 0.0023 |
| 234 | 0.0031 | 0.0009 | 0.0022 |
| 235 | 0.0031 | 0.0009 | 0.0022 |
| 236 | 0.0030 | 0.0009 | 0.0021 |
| 237 | 0.0029 | 0.0008 | 0.0021 |
| 238 | 0.0029 | 0.0008 | 0.0021 |
| 239 | 0.0028 | 0.0008 | 0.0020 |
| 240 | 0.0028 | 0.0008 | 0.0020 |
| 241 | 0.0027 | 0.0008 | 0.0020 |
| 242 | 0.0027 | 0.0008 | 0.0019 |
| 243 | 0.0027 | 0.0008 | 0.0019 |
| 244 | 0.0026 | 0.0007 | 0.0019 |
| 245 | 0.0026 | 0.0007 | 0.0018 |
| 246 | 0.0025 | 0.0007 | 0.0018 |
| 247 | 0.0025 | 0.0007 | 0.0018 |
| 248 | 0.0025 | 0.0007 | 0.0018 |
| 249 | 0.0024 | 0.0007 | 0.0017 |
| 250 | 0.0024 | 0.0007 | 0.0017 |
| 251 | 0.0024 | 0.0007 | 0.0017 |
| 252 | 0.0023 | 0.0007 | 0.0017 |
| 253 | 0.0023 | 0.0007 | 0.0016 |
| 254 | 0.0023 | 0.0006 | 0.0016 |
| 255 | 0.0022 | 0.0006 | 0.0016 |
| 256 | 0.0022 | 0.0006 | 0.0016 |
| 257 | 0.0022 | 0.0006 | 0.0016 |
| 258 | 0.0021 | 0.0006 | 0.0015 |
| 259 | 0.0021 | 0.0006 | 0.0015 |
| 260 | 0.0021 | 0.0006 | 0.0015 |
| 261 | 0.0021 | 0.0006 | 0.0015 |
| 262 | 0.0020 | 0.0006 | 0.0015 |
| 263 | 0.0020 | 0.0006 | 0.0014 |
| 264 | 0.0020 | 0.0006 | 0.0014 |

| | | | |
|---|---|---|---|
| 265 | 0.0020 | 0.0006 | 0.0014 |
| 266 | 0.0020 | 0.0006 | 0.0014 |
| 267 | 0.0019 | 0.0005 | 0.0014 |
| 268 | 0.0019 | 0.0005 | 0.0014 |
| 269 | 0.0019 | 0.0005 | 0.0014 |
| 270 | 0.0019 | 0.0005 | 0.0013 |
| 271 | 0.0018 | 0.0005 | 0.0013 |
| 272 | 0.0018 | 0.0005 | 0.0013 |
| 273 | 0.0018 | 0.0005 | 0.0013 |
| 274 | 0.0018 | 0.0005 | 0.0013 |
| 275 | 0.0018 | 0.0005 | 0.0013 |
| 276 | 0.0018 | 0.0005 | 0.0013 |
| 277 | 0.0017 | 0.0005 | 0.0012 |
| 278 | 0.0017 | 0.0005 | 0.0012 |
| 279 | 0.0017 | 0.0005 | 0.0012 |
| 280 | 0.0017 | 0.0005 | 0.0012 |
| 281 | 0.0017 | 0.0005 | 0.0012 |
| 282 | 0.0017 | 0.0005 | 0.0012 |
| 283 | 0.0016 | 0.0005 | 0.0012 |
| 284 | 0.0016 | 0.0005 | 0.0012 |
| 285 | 0.0016 | 0.0005 | 0.0012 |
| 286 | 0.0016 | 0.0005 | 0.0011 |
| 287 | 0.0016 | 0.0005 | 0.0011 |
| 288 | 0.0016 | 0.0004 | 0.0011 |

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Total soil rain loss = 0.44(In)
Total effective rainfall = 1.95(In)
Peak flow rate in flood hydrograph = 29.59(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 7.5 | 15.0 | 22.5 | 30.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+15 | 0.0002 | 0.02 | Q | \| | \| | \| | \| |
| 0+20 | 0.0005 | 0.05 | Q | \| | \| | \| | \| |
| 0+25 | 0.0011 | 0.09 | Q | \| | \| | \| | \| |
| 0+30 | 0.0019 | 0.11 | Q | \| | \| | \| | \| |
| 0+35 | 0.0029 | 0.14 | Q | \| | \| | \| | \| |
| 0+40 | 0.0039 | 0.15 | Q | \| | \| | \| | \| |
| 0+45 | 0.0050 | 0.16 | Q | \| | \| | \| | \| |
| 0+50 | 0.0062 | 0.17 | Q | \| | \| | \| | \| |
| 0+55 | 0.0074 | 0.18 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0087 | 0.19 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0100 | 0.19 | Q | \| | \| | \| | \| |
| 1+10 | 0.0114 | 0.20 | Q | \| | \| | \| | \| |
| 1+15 | 0.0128 | 0.20 | Q | \| | \| | \| | \| |
| 1+20 | 0.0142 | 0.21 | Q | \| | \| | \| | \| |
| 1+25 | 0.0157 | 0.21 | Q | \| | \| | \| | \| |
| 1+30 | 0.0172 | 0.22 | Q | \| | \| | \| | \| |
| 1+35 | 0.0187 | 0.22 | Q | \| | \| | \| | \| |
| 1+40 | 0.0202 | 0.22 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+45 | 0.0217 | 0.22 | Q | | | | |
| 1+50 | 0.0233 | 0.23 | Q | | | | |
| 1+55 | 0.0249 | 0.23 | Q | | | | |
| 2+ 0 | 0.0265 | 0.23 | Q | | | | |
| 2+ 5 | 0.0281 | 0.24 | Q | | | | |
| 2+10 | 0.0298 | 0.24 | Q | | | | |
| 2+15 | 0.0314 | 0.24 | Q | | | | |
| 2+20 | 0.0331 | 0.24 | Q | | | | |
| 2+25 | 0.0348 | 0.24 | Q | | | | |
| 2+30 | 0.0364 | 0.25 | Q | | | | |
| 2+35 | 0.0382 | 0.25 | Q | | | | |
| 2+40 | 0.0399 | 0.25 | Q | | | | |
| 2+45 | 0.0416 | 0.25 | Q | | | | |
| 2+50 | 0.0433 | 0.25 | Q | | | | |
| 2+55 | 0.0451 | 0.25 | Q | | | | |
| 3+ 0 | 0.0468 | 0.26 | Q | | | | |
| 3+ 5 | 0.0486 | 0.26 | Q | | | | |
| 3+10 | 0.0504 | 0.26 | Q | | | | |
| 3+15 | 0.0522 | 0.26 | Q | | | | |
| 3+20 | 0.0540 | 0.26 | Q | | | | |
| 3+25 | 0.0558 | 0.26 | Q | | | | |
| 3+30 | 0.0577 | 0.27 | Q | | | | |
| 3+35 | 0.0595 | 0.27 | Q | | | | |
| 3+40 | 0.0614 | 0.27 | Q | | | | |
| 3+45 | 0.0632 | 0.27 | Q | | | | |
| 3+50 | 0.0651 | 0.27 | Q | | | | |
| 3+55 | 0.0670 | 0.27 | Q | | | | |
| 4+ 0 | 0.0689 | 0.27 | QV | | | | |
| 4+ 5 | 0.0708 | 0.28 | QV | | | | |
| 4+10 | 0.0727 | 0.28 | QV | | | | |
| 4+15 | 0.0746 | 0.28 | QV | | | | |
| 4+20 | 0.0765 | 0.28 | QV | | | | |
| 4+25 | 0.0785 | 0.28 | QV | | | | |
| 4+30 | 0.0804 | 0.28 | QV | | | | |
| 4+35 | 0.0824 | 0.29 | QV | | | | |
| 4+40 | 0.0844 | 0.29 | QV | | | | |
| 4+45 | 0.0864 | 0.29 | QV | | | | |
| 4+50 | 0.0884 | 0.29 | QV | | | | |
| 4+55 | 0.0904 | 0.29 | QV | | | | |
| 5+ 0 | 0.0924 | 0.29 | QV | | | | |
| 5+ 5 | 0.0944 | 0.30 | QV | | | | |
| 5+10 | 0.0965 | 0.30 | QV | | | | |
| 5+15 | 0.0985 | 0.30 | QV | | | | |
| 5+20 | 0.1006 | 0.30 | QV | | | | |
| 5+25 | 0.1027 | 0.30 | QV | | | | |
| 5+30 | 0.1048 | 0.30 | QV | | | | |
| 5+35 | 0.1069 | 0.31 | QV | | | | |
| 5+40 | 0.1090 | 0.31 | QV | | | | |
| 5+45 | 0.1111 | 0.31 | QV | | | | |
| 5+50 | 0.1133 | 0.31 | QV | | | | |
| 5+55 | 0.1154 | 0.31 | QV | | | | |
| 6+ 0 | 0.1176 | 0.32 | QV | | | | |
| 6+ 5 | 0.1198 | 0.32 | QV | | | | |
| 6+10 | 0.1220 | 0.32 | QV | | | | |
| 6+15 | 0.1242 | 0.32 | QV | | | | |
| 6+20 | 0.1265 | 0.32 | QV | | | | |
| 6+25 | 0.1287 | 0.33 | QV | | | | |
| 6+30 | 0.1310 | 0.33 | QV | | | | |
| 6+35 | 0.1332 | 0.33 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+40 | 0.1355 | 0.33 | QV | \| | \| | \| | \| |
| 6+45 | 0.1378 | 0.33 | Q V | \| | \| | \| | \| |
| 6+50 | 0.1401 | 0.34 | Q V | \| | \| | \| | \| |
| 6+55 | 0.1425 | 0.34 | Q V | \| | \| | \| | \| |
| 7+ 0 | 0.1448 | 0.34 | Q V | \| | \| | \| | \| |
| 7+ 5 | 0.1472 | 0.34 | Q V | \| | \| | \| | \| |
| 7+10 | 0.1496 | 0.35 | Q V | \| | \| | \| | \| |
| 7+15 | 0.1520 | 0.35 | Q V | \| | \| | \| | \| |
| 7+20 | 0.1544 | 0.35 | Q V | \| | \| | \| | \| |
| 7+25 | 0.1569 | 0.35 | Q V | \| | \| | \| | \| |
| 7+30 | 0.1593 | 0.36 | Q V | \| | \| | \| | \| |
| 7+35 | 0.1618 | 0.36 | Q V | \| | \| | \| | \| |
| 7+40 | 0.1643 | 0.36 | Q V | \| | \| | \| | \| |
| 7+45 | 0.1668 | 0.36 | Q V | \| | \| | \| | \| |
| 7+50 | 0.1693 | 0.37 | Q V | \| | \| | \| | \| |
| 7+55 | 0.1719 | 0.37 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.1745 | 0.37 | Q V | \| | \| | \| | \| |
| 8+ 5 | 0.1770 | 0.38 | Q V | \| | \| | \| | \| |
| 8+10 | 0.1797 | 0.38 | Q V | \| | \| | \| | \| |
| 8+15 | 0.1823 | 0.38 | Q V | \| | \| | \| | \| |
| 8+20 | 0.1849 | 0.39 | Q V | \| | \| | \| | \| |
| 8+25 | 0.1876 | 0.39 | Q V | \| | \| | \| | \| |
| 8+30 | 0.1903 | 0.39 | Q V | \| | \| | \| | \| |
| 8+35 | 0.1930 | 0.40 | Q V | \| | \| | \| | \| |
| 8+40 | 0.1958 | 0.40 | Q V | \| | \| | \| | \| |
| 8+45 | 0.1986 | 0.40 | Q V | \| | \| | \| | \| |
| 8+50 | 0.2013 | 0.41 | Q V | \| | \| | \| | \| |
| 8+55 | 0.2042 | 0.41 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.2070 | 0.41 | Q  V | \| | \| | \| | \| |
| 9+ 5 | 0.2099 | 0.42 | Q  V | \| | \| | \| | \| |
| 9+10 | 0.2128 | 0.42 | Q  V | \| | \| | \| | \| |
| 9+15 | 0.2157 | 0.42 | Q  V | \| | \| | \| | \| |
| 9+20 | 0.2186 | 0.43 | Q  V | \| | \| | \| | \| |
| 9+25 | 0.2216 | 0.43 | Q  V | \| | \| | \| | \| |
| 9+30 | 0.2246 | 0.44 | Q  V | \| | \| | \| | \| |
| 9+35 | 0.2276 | 0.44 | Q  V | \| | \| | \| | \| |
| 9+40 | 0.2307 | 0.44 | Q  V | \| | \| | \| | \| |
| 9+45 | 0.2338 | 0.45 | Q  V | \| | \| | \| | \| |
| 9+50 | 0.2369 | 0.45 | Q  V | \| | \| | \| | \| |
| 9+55 | 0.2400 | 0.46 | Q  V | \| | \| | \| | \| |
| 10+ 0 | 0.2432 | 0.46 | Q  V | \| | \| | \| | \| |
| 10+ 5 | 0.2464 | 0.47 | Q  V | \| | \| | \| | \| |
| 10+10 | 0.2497 | 0.47 | Q  V | \| | \| | \| | \| |
| 10+15 | 0.2529 | 0.48 | Q  V | \| | \| | \| | \| |
| 10+20 | 0.2563 | 0.48 | Q  V | \| | \| | \| | \| |
| 10+25 | 0.2596 | 0.49 | Q  V | \| | \| | \| | \| |
| 10+30 | 0.2630 | 0.49 | Q  V | \| | \| | \| | \| |
| 10+35 | 0.2664 | 0.50 | Q  V | \| | \| | \| | \| |
| 10+40 | 0.2699 | 0.50 | Q  V | \| | \| | \| | \| |
| 10+45 | 0.2734 | 0.51 | Q   V | \| | \| | \| | \| |
| 10+50 | 0.2769 | 0.51 | Q   V | \| | \| | \| | \| |
| 10+55 | 0.2805 | 0.52 | Q   V | \| | \| | \| | \| |
| 11+ 0 | 0.2842 | 0.53 | Q   V | \| | \| | \| | \| |
| 11+ 5 | 0.2878 | 0.53 | Q   V | \| | \| | \| | \| |
| 11+10 | 0.2916 | 0.54 | Q   V | \| | \| | \| | \| |
| 11+15 | 0.2953 | 0.55 | Q   V | \| | \| | \| | \| |
| 11+20 | 0.2991 | 0.55 | Q   V | \| | \| | \| | \| |
| 11+25 | 0.3030 | 0.56 | Q   V | \| | \| | \| | \| |
| 11+30 | 0.3069 | 0.57 | Q   V | \| | \| | \| | \| |

```
11+35       0.3109      0.58  Q   V     |          |          |          |
11+40       0.3149      0.58  Q   V     |          |          |          |
11+45       0.3190      0.59  Q   V     |          |          |          |
11+50       0.3231      0.60  Q   V     |          |          |          |
11+55       0.3273      0.61  Q   V     |          |          |          |
12+ 0       0.3315      0.62  Q   V     |          |          |          |
12+ 5       0.3358      0.63  Q   V     |          |          |          |
12+10       0.3402      0.64  Q   V     |          |          |          |
12+15       0.3447      0.65  Q    V    |          |          |          |
12+20       0.3493      0.67  Q    V    |          |          |          |
12+25       0.3540      0.69  Q    V    |          |          |          |
12+30       0.3589      0.70  Q    V    |          |          |          |
12+35       0.3638      0.72  Q    V    |          |          |          |
12+40       0.3689      0.74  Q    V    |          |          |          |
12+45       0.3741      0.75  |Q   V    |          |          |          |
12+50       0.3793      0.77  |Q   V    |          |          |          |
12+55       0.3847      0.78  |Q   V    |          |          |          |
13+ 0       0.3902      0.80  |Q   V    |          |          |          |
13+ 5       0.3958      0.81  |Q   V    |          |          |          |
13+10       0.4015      0.83  |Q   V    |          |          |          |
13+15       0.4073      0.85  |Q   V    |          |          |          |
13+20       0.4133      0.86  |Q    V   |          |          |          |
13+25       0.4194      0.88  |Q    V   |          |          |          |
13+30       0.4256      0.90  |Q    V   |          |          |          |
13+35       0.4320      0.92  |Q    V   |          |          |          |
13+40       0.4385      0.94  |Q    V   |          |          |          |
13+45       0.4451      0.97  |Q    V   |          |          |          |
13+50       0.4520      0.99  |Q    V   |          |          |          |
13+55       0.4590      1.02  |Q    V   |          |          |          |
14+ 0       0.4661      1.04  |Q    V   |          |          |          |
14+ 5       0.4735      1.07  |Q    V   |          |          |          |
14+10       0.4811      1.10  |Q     V  |          |          |          |
14+15       0.4889      1.13  |Q     V  |          |          |          |
14+20       0.4969      1.16  |Q     V  |          |          |          |
14+25       0.5052      1.20  |Q     V  |          |          |          |
14+30       0.5137      1.24  |Q     V  |          |          |          |
14+35       0.5225      1.28  |Q     V  |          |          |          |
14+40       0.5317      1.33  |Q     V  |          |          |          |
14+45       0.5412      1.38  |Q     V  |          |          |          |
14+50       0.5510      1.43  |Q      V |          |          |          |
14+55       0.5612      1.49  |Q      V |          |          |          |
15+ 0       0.5719      1.55  | Q     V |          |          |          |
15+ 5       0.5831      1.62  | Q     V |          |          |          |
15+10       0.5948      1.70  | Q     V |          |          |          |
15+15       0.6071      1.79  | Q     V |          |          |          |
15+20       0.6201      1.89  | Q      V|          |          |          |
15+25       0.6340      2.02  | Q      V|          |          |          |
15+30       0.6492      2.20  | Q      V|          |          |          |
15+35       0.6660      2.44  |  Q     V|          |          |          |
15+40       0.6854      2.82  |  Q      V          |          |          |
15+45       0.7086      3.36  |   Q     V          |          |          |
15+50       0.7359      3.96  |    Q    V          |          |          |
15+55       0.7683      4.71  |     Q   |V         |          |          |
16+ 0       0.8081      5.78  |      Q  |V         |          |          |
16+ 5       0.8641      8.14  |         Q V        |          |          |
16+10       0.9476     12.12  |          |  V  Q   |          |          |
16+15       1.0622     16.64  |          |    V    | Q        |          |
16+20       1.2292     24.26  |          |      V  |          | Q        |
16+25       1.4330     29.59  |          |         V          |         Q|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 16+30 | 1.5991 | 24.11 | \| | \| | V \| | Q \| | |
| 16+35 | 1.7274 | 18.63 | \| | \| | QV \| | \| | |
| 16+40 | 1.8262 | 14.34 | \| | Q\| | V \| | \| | |
| 16+45 | 1.9073 | 11.78 | \| | Q \| | V \| | \| | |
| 16+50 | 1.9757 | 9.93 | \| | Q \| | V \| | \| | |
| 16+55 | 2.0345 | 8.53 | \| | Q\| | V\| | \| | |
| 17+ 0 | 2.0855 | 7.41 | \| | Q\| | V \| | \| | |
| 17+ 5 | 2.1305 | 6.54 | \| | Q \| | \| V \| | \| | |
| 17+10 | 2.1706 | 5.82 | \| | Q \| | \| V \| | \| | |
| 17+15 | 2.2072 | 5.31 | \| | Q \| | \| V \| | \| | |
| 17+20 | 2.2404 | 4.83 | \| | Q \| | \| V \| | \| | |
| 17+25 | 2.2703 | 4.33 | \| | Q \| | \| V \| | \| | |
| 17+30 | 2.2966 | 3.83 | \| | Q \| | \| V \| | \| | |
| 17+35 | 2.3211 | 3.55 | \| | Q \| | \| V \| | \| | |
| 17+40 | 2.3439 | 3.31 | \| | Q \| | \| V \| | \| | |
| 17+45 | 2.3649 | 3.05 | \| | Q \| | \| V \| | \| | |
| 17+50 | 2.3845 | 2.85 | \| | Q \| | \| V \| | \| | |
| 17+55 | 2.4024 | 2.60 | \| | Q \| | \| V \| | \| | |
| 18+ 0 | 2.4189 | 2.41 | \| | Q \| | \| V \| | \| | |
| 18+ 5 | 2.4347 | 2.28 | \| | Q \| | \| V \| | \| | |
| 18+10 | 2.4489 | 2.07 | \| Q \| | \| | \| V \| | \| | |
| 18+15 | 2.4623 | 1.95 | \| Q \| | \| | \| V \| | \| | |
| 18+20 | 2.4749 | 1.82 | \| Q \| | \| | \| V \| | \| | |
| 18+25 | 2.4860 | 1.62 | \| Q \| | \| | \| V \| | \| | |
| 18+30 | 2.4965 | 1.52 | \| Q \| | \| | \| V \| | \| | |
| 18+35 | 2.5061 | 1.39 | \|Q \| | \| | \| V \| | \| | |
| 18+40 | 2.5146 | 1.24 | \|Q \| | \| | \| V \| | \| | |
| 18+45 | 2.5229 | 1.20 | \|Q \| | \| | \| V \| | \| | |
| 18+50 | 2.5311 | 1.19 | \|Q \| | \| | \| V \| | \| | |
| 18+55 | 2.5392 | 1.17 | \|Q \| | \| | \| V \| | \| | |
| 19+ 0 | 2.5470 | 1.14 | \|Q \| | \| | \| V \| | \| | |
| 19+ 5 | 2.5546 | 1.10 | \|Q \| | \| | \| V \| | \| | |
| 19+10 | 2.5619 | 1.06 | \|Q \| | \| | \| V \| | \| | |
| 19+15 | 2.5686 | 0.98 | \|Q \| | \| | \| V \| | \| | |
| 19+20 | 2.5746 | 0.86 | \|Q \| | \| | \| V \| | \| | |
| 19+25 | 2.5801 | 0.81 | \|Q \| | \| | \| V \| | \| | |
| 19+30 | 2.5854 | 0.77 | \|Q \| | \| | \| V \| | \| | |
| 19+35 | 2.5900 | 0.66 | Q \| | \| | \| V \| | \| | |
| 19+40 | 2.5939 | 0.57 | Q \| | \| | \| V \| | \| | |
| 19+45 | 2.5977 | 0.55 | Q \| | \| | \| V \| | \| V \| | |
| 19+50 | 2.6014 | 0.53 | Q \| | \| | \| V \| | \| V \| | |
| 19+55 | 2.6049 | 0.51 | Q \| | \| | \| V \| | \| V \| | |
| 20+ 0 | 2.6083 | 0.50 | Q \| | \| | \| V \| | \| V \| | |
| 20+ 5 | 2.6117 | 0.49 | Q \| | \| | \| V \| | \| V \| | |
| 20+10 | 2.6150 | 0.47 | Q \| | \| | \| V \| | \| V \| | |
| 20+15 | 2.6181 | 0.46 | Q \| | \| | \| V \| | \| V \| | |
| 20+20 | 2.6213 | 0.45 | Q \| | \| | \| V \| | \| V \| | |
| 20+25 | 2.6243 | 0.44 | Q \| | \| | \| V \| | \| V \| | |
| 20+30 | 2.6273 | 0.44 | Q \| | \| | \| V \| | \| V \| | |
| 20+35 | 2.6303 | 0.43 | Q \| | \| | \| V \| | \| V \| | |
| 20+40 | 2.6331 | 0.42 | Q \| | \| | \| V \| | \| V \| | |
| 20+45 | 2.6360 | 0.41 | Q \| | \| | \| V \| | \| V \| | |
| 20+50 | 2.6387 | 0.40 | Q \| | \| | \| V \| | \| V \| | |
| 20+55 | 2.6415 | 0.40 | Q \| | \| | \| V \| | \| V \| | |
| 21+ 0 | 2.6442 | 0.39 | Q \| | \| | \| V \| | \| V \| | |
| 21+ 5 | 2.6468 | 0.38 | Q \| | \| | \| V \| | \| V \| | |
| 21+10 | 2.6494 | 0.38 | Q \| | \| | \| V \| | \| V \| | |
| 21+15 | 2.6519 | 0.37 | Q \| | \| | \| V \| | \| V \| | |
| 21+20 | 2.6544 | 0.36 | Q \| | \| | \| V \| | \| V \| | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+25 | 2.6569 | 0.36 | Q | \| | \| | \| | V \| |
| 21+30 | 2.6593 | 0.35 | Q | \| | \| | \| | V \| |
| 21+35 | 2.6617 | 0.35 | Q | \| | \| | \| | V \| |
| 21+40 | 2.6641 | 0.34 | Q | \| | \| | \| | V \| |
| 21+45 | 2.6664 | 0.34 | Q | \| | \| | \| | V\| |
| 21+50 | 2.6687 | 0.33 | Q | \| | \| | \| | V\| |
| 21+55 | 2.6710 | 0.33 | Q | \| | \| | \| | V\| |
| 22+ 0 | 2.6732 | 0.32 | Q | \| | \| | \| | V\| |
| 22+ 5 | 2.6754 | 0.32 | Q | \| | \| | \| | V\| |
| 22+10 | 2.6776 | 0.32 | Q | \| | \| | \| | V\| |
| 22+15 | 2.6797 | 0.31 | Q | \| | \| | \| | V\| |
| 22+20 | 2.6819 | 0.31 | Q | \| | \| | \| | V\| |
| 22+25 | 2.6840 | 0.30 | Q | \| | \| | \| | V\| |
| 22+30 | 2.6860 | 0.30 | Q | \| | \| | \| | V\| |
| 22+35 | 2.6881 | 0.30 | Q | \| | \| | \| | V\| |
| 22+40 | 2.6901 | 0.29 | Q | \| | \| | \| | V\| |
| 22+45 | 2.6921 | 0.29 | Q | \| | \| | \| | V\| |
| 22+50 | 2.6941 | 0.29 | Q | \| | \| | \| | V\| |
| 22+55 | 2.6960 | 0.28 | Q | \| | \| | \| | V\| |
| 23+ 0 | 2.6980 | 0.28 | Q | \| | \| | \| | V\| |
| 23+ 5 | 2.6999 | 0.28 | Q | \| | \| | \| | V\| |
| 23+10 | 2.7018 | 0.27 | Q | \| | \| | \| | V\| |
| 23+15 | 2.7036 | 0.27 | Q | \| | \| | \| | V\| |
| 23+20 | 2.7055 | 0.27 | Q | \| | \| | \| | V\| |
| 23+25 | 2.7073 | 0.27 | Q | \| | \| | \| | V\| |
| 23+30 | 2.7091 | 0.26 | Q | \| | \| | \| | V\| |
| 23+35 | 2.7109 | 0.26 | Q | \| | \| | \| | V\| |
| 23+40 | 2.7127 | 0.26 | Q | \| | \| | \| | V\| |
| 23+45 | 2.7145 | 0.26 | Q | \| | \| | \| | V\| |
| 23+50 | 2.7162 | 0.25 | Q | \| | \| | \| | V\| |
| 23+55 | 2.7179 | 0.25 | Q | \| | \| | \| | V\| |
| 24+ 0 | 2.7196 | 0.25 | Q | \| | \| | \| | V\| |
| 24+ 5 | 2.7213 | 0.24 | Q | \| | \| | \| | V\| |
| 24+10 | 2.7229 | 0.23 | Q | \| | \| | \| | V\| |
| 24+15 | 2.7245 | 0.22 | Q | \| | \| | \| | V\| |
| 24+20 | 2.7258 | 0.19 | Q | \| | \| | \| | V\| |
| 24+25 | 2.7268 | 0.15 | Q | \| | \| | \| | V\| |
| 24+30 | 2.7277 | 0.12 | Q | \| | \| | \| | V\| |
| 24+35 | 2.7284 | 0.10 | Q | \| | \| | \| | V\| |
| 24+40 | 2.7290 | 0.09 | Q | \| | \| | \| | V\| |
| 24+45 | 2.7295 | 0.07 | Q | \| | \| | \| | V\| |
| 24+50 | 2.7299 | 0.06 | Q | \| | \| | \| | V\| |
| 24+55 | 2.7303 | 0.06 | Q | \| | \| | \| | V\| |
| 25+ 0 | 2.7307 | 0.05 | Q | \| | \| | \| | V\| |
| 25+ 5 | 2.7310 | 0.04 | Q | \| | \| | \| | V\| |
| 25+10 | 2.7312 | 0.04 | Q | \| | \| | \| | V\| |
| 25+15 | 2.7315 | 0.04 | Q | \| | \| | \| | V\| |
| 25+20 | 2.7317 | 0.03 | Q | \| | \| | \| | V\| |
| 25+25 | 2.7319 | 0.03 | Q | \| | \| | \| | V\| |
| 25+30 | 2.7321 | 0.02 | Q | \| | \| | \| | V\| |
| 25+35 | 2.7322 | 0.02 | Q | \| | \| | \| | V\| |
| 25+40 | 2.7323 | 0.02 | Q | \| | \| | \| | V\| |
| 25+45 | 2.7325 | 0.02 | Q | \| | \| | \| | V\| |
| 25+50 | 2.7326 | 0.02 | Q | \| | \| | \| | V\| |
| 25+55 | 2.7327 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 0 | 2.7327 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 5 | 2.7328 | 0.01 | Q | \| | \| | \| | V\| |
| 26+10 | 2.7329 | 0.01 | Q | \| | \| | \| | V\| |
| 26+15 | 2.7329 | 0.01 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+20 | 2.7330 | 0.01 | Q | \| | \| | \| | V\| |
| 26+25 | 2.7330 | 0.01 | Q | \| | \| | \| | V\| |
| 26+30 | 2.7331 | 0.01 | Q | \| | \| | \| | V\| |
| 26+35 | 2.7331 | 0.00 | Q | \| | \| | \| | V\| |
| 26+40 | 2.7331 | 0.00 | Q | \| | \| | \| | V\| |
| 26+45 | 2.7332 | 0.00 | Q | \| | \| | \| | V\| |
| 26+50 | 2.7332 | 0.00 | Q | \| | \| | \| | V\| |
| 26+55 | 2.7332 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 0 | 2.7332 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 5 | 2.7332 | 0.00 | Q | \| | \| | \| | V\| |
| 27+10 | 2.7332 | 0.00 | Q | \| | \| | \| | V\| |
| 27+15 | 2.7333 | 0.00 | Q | \| | \| | \| | V\| |
| 27+20 | 2.7333 | 0.00 | Q | \| | \| | \| | V\| |
| 27+25 | 2.7333 | 0.00 | Q | \| | \| | \| | V\| |
| 27+30 | 2.7333 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 14
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 18.15 | 1 | 1.29 |
| Rainfall data for year 100 | | |
| 18.15 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 18.15 | 24 | 2.39 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.0 | 92.8 | 18.15 | 1.000 | 0.140 | 0.900 | 0.126 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.126

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 16.34 | 0.900 | 78.0 | 92.8 | 0.78 | 0.694 |
| 1.81 | 0.100 | 98.0 | 98.0 | 0.20 | 0.904 |

Area-averaged catchment yield fraction, Y = 0.715
Area-averaged low loss fraction, Yb = 0.285
User entry of time of concentration = 0.520 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 18.15(Ac.)
Catchment Lag time = 0.416 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 20.0321
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.126(In/Hr)
Average low loss rate fraction (Yb) = 0.285 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.612(In)
Computed peak 30-minute rainfall = 1.048(In)
Specified peak 1-hour rainfall = 1.290(In)
Computed peak 3-hour rainfall = 1.604(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.390(In)

Rainfall depth area reduction factors:
Using a total area of 18.15(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.612(In)
30-minute factor = 0.999 Adjusted rainfall = 1.047(In)
1-hour factor = 0.999 Adjusted rainfall = 1.289(In)
3-hour factor = 1.000 Adjusted rainfall = 1.604(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.390(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 219.50 (CFS)) | |
| 1 | 0.995 | 2.183 |
| 2 | 4.516 | 7.729 |
| 3 | 11.300 | 14.893 |
| 4 | 26.240 | 32.793 |
| 5 | 43.399 | 37.665 |
| 6 | 55.091 | 25.663 |
| 7 | 62.875 | 17.085 |
| 8 | 68.500 | 12.349 |
| 9 | 73.033 | 9.948 |
| 10 | 76.661 | 7.963 |
| 11 | 79.664 | 6.593 |
| 12 | 82.167 | 5.493 |
| 13 | 84.311 | 4.706 |

| | | |
|---|---|---|
| 14 | 86.250 | 4.256 |
| 15 | 87.937 | 3.704 |
| 16 | 89.330 | 3.057 |
| 17 | 90.508 | 2.585 |
| 18 | 91.609 | 2.418 |
| 19 | 92.585 | 2.143 |
| 20 | 93.487 | 1.980 |
| 21 | 94.262 | 1.701 |
| 22 | 94.943 | 1.495 |
| 23 | 95.601 | 1.444 |
| 24 | 96.140 | 1.181 |
| 25 | 96.660 | 1.143 |
| 26 | 97.095 | 0.954 |
| 27 | 97.455 | 0.791 |
| 28 | 97.792 | 0.739 |
| 29 | 98.009 | 0.476 |
| 30 | 98.210 | 0.440 |
| 31 | 98.432 | 0.488 |
| 32 | 98.672 | 0.528 |
| 33 | 98.913 | 0.528 |
| 34 | 99.153 | 0.528 |
| 35 | 99.393 | 0.527 |
| 36 | 99.570 | 0.387 |
| 37 | 99.695 | 0.275 |
| 38 | 99.820 | 0.275 |
| 39 | 100.000 | 0.137 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6116 | 0.6116 |
| 2 | 0.7530 | 0.1414 |
| 3 | 0.8504 | 0.0974 |
| 4 | 0.9270 | 0.0766 |
| 5 | 0.9912 | 0.0642 |
| 6 | 1.0469 | 0.0557 |
| 7 | 1.0965 | 0.0496 |
| 8 | 1.1413 | 0.0448 |
| 9 | 1.1823 | 0.0410 |
| 10 | 1.2203 | 0.0380 |
| 11 | 1.2557 | 0.0354 |
| 12 | 1.2889 | 0.0332 |
| 13 | 1.3096 | 0.0207 |
| 14 | 1.3290 | 0.0194 |
| 15 | 1.3474 | 0.0184 |
| 16 | 1.3648 | 0.0174 |
| 17 | 1.3813 | 0.0166 |
| 18 | 1.3971 | 0.0158 |
| 19 | 1.4122 | 0.0151 |
| 20 | 1.4267 | 0.0145 |
| 21 | 1.4406 | 0.0139 |
| 22 | 1.4540 | 0.0134 |
| 23 | 1.4669 | 0.0129 |
| 24 | 1.4794 | 0.0125 |
| 25 | 1.4915 | 0.0121 |
| 26 | 1.5031 | 0.0117 |
| 27 | 1.5145 | 0.0113 |
| 28 | 1.5255 | 0.0110 |
| 29 | 1.5361 | 0.0107 |
| 30 | 1.5465 | 0.0104 |

| | | |
|---|---|---|
| 31 | 1.5567 | 0.0101 |
| 32 | 1.5665 | 0.0099 |
| 33 | 1.5761 | 0.0096 |
| 34 | 1.5855 | 0.0094 |
| 35 | 1.5947 | 0.0092 |
| 36 | 1.6036 | 0.0090 |
| 37 | 1.6124 | 0.0087 |
| 38 | 1.6209 | 0.0085 |
| 39 | 1.6293 | 0.0084 |
| 40 | 1.6375 | 0.0082 |
| 41 | 1.6455 | 0.0080 |
| 42 | 1.6534 | 0.0079 |
| 43 | 1.6611 | 0.0077 |
| 44 | 1.6687 | 0.0076 |
| 45 | 1.6762 | 0.0075 |
| 46 | 1.6835 | 0.0073 |
| 47 | 1.6907 | 0.0072 |
| 48 | 1.6978 | 0.0071 |
| 49 | 1.7047 | 0.0070 |
| 50 | 1.7116 | 0.0068 |
| 51 | 1.7183 | 0.0067 |
| 52 | 1.7249 | 0.0066 |
| 53 | 1.7315 | 0.0065 |
| 54 | 1.7379 | 0.0064 |
| 55 | 1.7442 | 0.0063 |
| 56 | 1.7505 | 0.0062 |
| 57 | 1.7566 | 0.0062 |
| 58 | 1.7627 | 0.0061 |
| 59 | 1.7687 | 0.0060 |
| 60 | 1.7746 | 0.0059 |
| 61 | 1.7804 | 0.0058 |
| 62 | 1.7861 | 0.0057 |
| 63 | 1.7918 | 0.0057 |
| 64 | 1.7974 | 0.0056 |
| 65 | 1.8030 | 0.0055 |
| 66 | 1.8084 | 0.0055 |
| 67 | 1.8138 | 0.0054 |
| 68 | 1.8192 | 0.0053 |
| 69 | 1.8244 | 0.0053 |
| 70 | 1.8296 | 0.0052 |
| 71 | 1.8348 | 0.0052 |
| 72 | 1.8399 | 0.0051 |
| 73 | 1.8447 | 0.0048 |
| 74 | 1.8494 | 0.0047 |
| 75 | 1.8541 | 0.0047 |
| 76 | 1.8588 | 0.0046 |
| 77 | 1.8634 | 0.0046 |
| 78 | 1.8679 | 0.0045 |
| 79 | 1.8724 | 0.0045 |
| 80 | 1.8768 | 0.0044 |
| 81 | 1.8812 | 0.0044 |
| 82 | 1.8856 | 0.0044 |
| 83 | 1.8899 | 0.0043 |
| 84 | 1.8942 | 0.0043 |
| 85 | 1.8984 | 0.0042 |
| 86 | 1.9026 | 0.0042 |
| 87 | 1.9068 | 0.0042 |
| 88 | 1.9109 | 0.0041 |
| 89 | 1.9150 | 0.0041 |

| | | |
|---|---|---|
| 90 | 1.9190 | 0.0040 |
| 91 | 1.9230 | 0.0040 |
| 92 | 1.9270 | 0.0040 |
| 93 | 1.9309 | 0.0039 |
| 94 | 1.9348 | 0.0039 |
| 95 | 1.9387 | 0.0039 |
| 96 | 1.9425 | 0.0038 |
| 97 | 1.9463 | 0.0038 |
| 98 | 1.9501 | 0.0038 |
| 99 | 1.9538 | 0.0037 |
| 100 | 1.9575 | 0.0037 |
| 101 | 1.9612 | 0.0037 |
| 102 | 1.9649 | 0.0036 |
| 103 | 1.9685 | 0.0036 |
| 104 | 1.9721 | 0.0036 |
| 105 | 1.9756 | 0.0036 |
| 106 | 1.9792 | 0.0035 |
| 107 | 1.9827 | 0.0035 |
| 108 | 1.9862 | 0.0035 |
| 109 | 1.9896 | 0.0035 |
| 110 | 1.9931 | 0.0034 |
| 111 | 1.9965 | 0.0034 |
| 112 | 1.9999 | 0.0034 |
| 113 | 2.0032 | 0.0034 |
| 114 | 2.0065 | 0.0033 |
| 115 | 2.0098 | 0.0033 |
| 116 | 2.0131 | 0.0033 |
| 117 | 2.0164 | 0.0033 |
| 118 | 2.0196 | 0.0032 |
| 119 | 2.0229 | 0.0032 |
| 120 | 2.0261 | 0.0032 |
| 121 | 2.0292 | 0.0032 |
| 122 | 2.0324 | 0.0032 |
| 123 | 2.0355 | 0.0031 |
| 124 | 2.0386 | 0.0031 |
| 125 | 2.0417 | 0.0031 |
| 126 | 2.0448 | 0.0031 |
| 127 | 2.0478 | 0.0031 |
| 128 | 2.0509 | 0.0030 |
| 129 | 2.0539 | 0.0030 |
| 130 | 2.0569 | 0.0030 |
| 131 | 2.0599 | 0.0030 |
| 132 | 2.0628 | 0.0030 |
| 133 | 2.0658 | 0.0029 |
| 134 | 2.0687 | 0.0029 |
| 135 | 2.0716 | 0.0029 |
| 136 | 2.0745 | 0.0029 |
| 137 | 2.0773 | 0.0029 |
| 138 | 2.0802 | 0.0029 |
| 139 | 2.0830 | 0.0028 |
| 140 | 2.0858 | 0.0028 |
| 141 | 2.0886 | 0.0028 |
| 142 | 2.0914 | 0.0028 |
| 143 | 2.0942 | 0.0028 |
| 144 | 2.0970 | 0.0028 |
| 145 | 2.0997 | 0.0027 |
| 146 | 2.1024 | 0.0027 |
| 147 | 2.1051 | 0.0027 |
| 148 | 2.1078 | 0.0027 |

| | | |
|---|---|---|
| 149 | 2.1105 | 0.0027 |
| 150 | 2.1132 | 0.0027 |
| 151 | 2.1158 | 0.0027 |
| 152 | 2.1185 | 0.0026 |
| 153 | 2.1211 | 0.0026 |
| 154 | 2.1237 | 0.0026 |
| 155 | 2.1263 | 0.0026 |
| 156 | 2.1289 | 0.0026 |
| 157 | 2.1314 | 0.0026 |
| 158 | 2.1340 | 0.0026 |
| 159 | 2.1365 | 0.0025 |
| 160 | 2.1391 | 0.0025 |
| 161 | 2.1416 | 0.0025 |
| 162 | 2.1441 | 0.0025 |
| 163 | 2.1466 | 0.0025 |
| 164 | 2.1491 | 0.0025 |
| 165 | 2.1515 | 0.0025 |
| 166 | 2.1540 | 0.0025 |
| 167 | 2.1564 | 0.0024 |
| 168 | 2.1588 | 0.0024 |
| 169 | 2.1613 | 0.0024 |
| 170 | 2.1637 | 0.0024 |
| 171 | 2.1661 | 0.0024 |
| 172 | 2.1685 | 0.0024 |
| 173 | 2.1708 | 0.0024 |
| 174 | 2.1732 | 0.0024 |
| 175 | 2.1755 | 0.0024 |
| 176 | 2.1779 | 0.0023 |
| 177 | 2.1802 | 0.0023 |
| 178 | 2.1825 | 0.0023 |
| 179 | 2.1848 | 0.0023 |
| 180 | 2.1871 | 0.0023 |
| 181 | 2.1894 | 0.0023 |
| 182 | 2.1917 | 0.0023 |
| 183 | 2.1940 | 0.0023 |
| 184 | 2.1962 | 0.0023 |
| 185 | 2.1985 | 0.0022 |
| 186 | 2.2007 | 0.0022 |
| 187 | 2.2029 | 0.0022 |
| 188 | 2.2052 | 0.0022 |
| 189 | 2.2074 | 0.0022 |
| 190 | 2.2096 | 0.0022 |
| 191 | 2.2117 | 0.0022 |
| 192 | 2.2139 | 0.0022 |
| 193 | 2.2161 | 0.0022 |
| 194 | 2.2183 | 0.0022 |
| 195 | 2.2204 | 0.0022 |
| 196 | 2.2226 | 0.0021 |
| 197 | 2.2247 | 0.0021 |
| 198 | 2.2268 | 0.0021 |
| 199 | 2.2289 | 0.0021 |
| 200 | 2.2310 | 0.0021 |
| 201 | 2.2331 | 0.0021 |
| 202 | 2.2352 | 0.0021 |
| 203 | 2.2373 | 0.0021 |
| 204 | 2.2394 | 0.0021 |
| 205 | 2.2415 | 0.0021 |
| 206 | 2.2435 | 0.0021 |
| 207 | 2.2456 | 0.0021 |

| | | |
|---|---|---|
| 208 | 2.2476 | 0.0020 |
| 209 | 2.2497 | 0.0020 |
| 210 | 2.2517 | 0.0020 |
| 211 | 2.2537 | 0.0020 |
| 212 | 2.2557 | 0.0020 |
| 213 | 2.2577 | 0.0020 |
| 214 | 2.2597 | 0.0020 |
| 215 | 2.2617 | 0.0020 |
| 216 | 2.2637 | 0.0020 |
| 217 | 2.2657 | 0.0020 |
| 218 | 2.2676 | 0.0020 |
| 219 | 2.2696 | 0.0020 |
| 220 | 2.2715 | 0.0020 |
| 221 | 2.2735 | 0.0019 |
| 222 | 2.2754 | 0.0019 |
| 223 | 2.2773 | 0.0019 |
| 224 | 2.2793 | 0.0019 |
| 225 | 2.2812 | 0.0019 |
| 226 | 2.2831 | 0.0019 |
| 227 | 2.2850 | 0.0019 |
| 228 | 2.2869 | 0.0019 |
| 229 | 2.2888 | 0.0019 |
| 230 | 2.2907 | 0.0019 |
| 231 | 2.2925 | 0.0019 |
| 232 | 2.2944 | 0.0019 |
| 233 | 2.2963 | 0.0019 |
| 234 | 2.2981 | 0.0019 |
| 235 | 2.3000 | 0.0018 |
| 236 | 2.3018 | 0.0018 |
| 237 | 2.3037 | 0.0018 |
| 238 | 2.3055 | 0.0018 |
| 239 | 2.3073 | 0.0018 |
| 240 | 2.3091 | 0.0018 |
| 241 | 2.3109 | 0.0018 |
| 242 | 2.3127 | 0.0018 |
| 243 | 2.3145 | 0.0018 |
| 244 | 2.3163 | 0.0018 |
| 245 | 2.3181 | 0.0018 |
| 246 | 2.3199 | 0.0018 |
| 247 | 2.3217 | 0.0018 |
| 248 | 2.3235 | 0.0018 |
| 249 | 2.3252 | 0.0018 |
| 250 | 2.3270 | 0.0018 |
| 251 | 2.3287 | 0.0018 |
| 252 | 2.3305 | 0.0017 |
| 253 | 2.3322 | 0.0017 |
| 254 | 2.3340 | 0.0017 |
| 255 | 2.3357 | 0.0017 |
| 256 | 2.3374 | 0.0017 |
| 257 | 2.3391 | 0.0017 |
| 258 | 2.3409 | 0.0017 |
| 259 | 2.3426 | 0.0017 |
| 260 | 2.3443 | 0.0017 |
| 261 | 2.3460 | 0.0017 |
| 262 | 2.3477 | 0.0017 |
| 263 | 2.3493 | 0.0017 |
| 264 | 2.3510 | 0.0017 |
| 265 | 2.3527 | 0.0017 |
| 266 | 2.3544 | 0.0017 |

| | | |
|---|---|---|
| 267 | 2.3560 | 0.0017 |
| 268 | 2.3577 | 0.0017 |
| 269 | 2.3594 | 0.0017 |
| 270 | 2.3610 | 0.0017 |
| 271 | 2.3627 | 0.0016 |
| 272 | 2.3643 | 0.0016 |
| 273 | 2.3659 | 0.0016 |
| 274 | 2.3676 | 0.0016 |
| 275 | 2.3692 | 0.0016 |
| 276 | 2.3708 | 0.0016 |
| 277 | 2.3724 | 0.0016 |
| 278 | 2.3741 | 0.0016 |
| 279 | 2.3757 | 0.0016 |
| 280 | 2.3773 | 0.0016 |
| 281 | 2.3789 | 0.0016 |
| 282 | 2.3805 | 0.0016 |
| 283 | 2.3821 | 0.0016 |
| 284 | 2.3836 | 0.0016 |
| 285 | 2.3852 | 0.0016 |
| 286 | 2.3868 | 0.0016 |
| 287 | 2.3884 | 0.0016 |
| 288 | 2.3899 | 0.0016 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0016 | 0.0004 | 0.0011 |
| 2 | 0.0016 | 0.0004 | 0.0011 |
| 3 | 0.0016 | 0.0005 | 0.0011 |
| 4 | 0.0016 | 0.0005 | 0.0011 |
| 5 | 0.0016 | 0.0005 | 0.0011 |
| 6 | 0.0016 | 0.0005 | 0.0011 |
| 7 | 0.0016 | 0.0005 | 0.0012 |
| 8 | 0.0016 | 0.0005 | 0.0012 |
| 9 | 0.0016 | 0.0005 | 0.0012 |
| 10 | 0.0016 | 0.0005 | 0.0012 |
| 11 | 0.0016 | 0.0005 | 0.0012 |
| 12 | 0.0016 | 0.0005 | 0.0012 |
| 13 | 0.0017 | 0.0005 | 0.0012 |
| 14 | 0.0017 | 0.0005 | 0.0012 |
| 15 | 0.0017 | 0.0005 | 0.0012 |
| 16 | 0.0017 | 0.0005 | 0.0012 |
| 17 | 0.0017 | 0.0005 | 0.0012 |
| 18 | 0.0017 | 0.0005 | 0.0012 |
| 19 | 0.0017 | 0.0005 | 0.0012 |
| 20 | 0.0017 | 0.0005 | 0.0012 |
| 21 | 0.0017 | 0.0005 | 0.0012 |
| 22 | 0.0017 | 0.0005 | 0.0012 |
| 23 | 0.0017 | 0.0005 | 0.0012 |
| 24 | 0.0017 | 0.0005 | 0.0012 |
| 25 | 0.0017 | 0.0005 | 0.0012 |
| 26 | 0.0018 | 0.0005 | 0.0013 |
| 27 | 0.0018 | 0.0005 | 0.0013 |
| 28 | 0.0018 | 0.0005 | 0.0013 |
| 29 | 0.0018 | 0.0005 | 0.0013 |
| 30 | 0.0018 | 0.0005 | 0.0013 |
| 31 | 0.0018 | 0.0005 | 0.0013 |
| 32 | 0.0018 | 0.0005 | 0.0013 |

| | | | |
|---|---|---|---|
| 33 | 0.0018 | 0.0005 | 0.0013 |
| 34 | 0.0018 | 0.0005 | 0.0013 |
| 35 | 0.0018 | 0.0005 | 0.0013 |
| 36 | 0.0018 | 0.0005 | 0.0013 |
| 37 | 0.0019 | 0.0005 | 0.0013 |
| 38 | 0.0019 | 0.0005 | 0.0013 |
| 39 | 0.0019 | 0.0005 | 0.0013 |
| 40 | 0.0019 | 0.0005 | 0.0013 |
| 41 | 0.0019 | 0.0005 | 0.0014 |
| 42 | 0.0019 | 0.0005 | 0.0014 |
| 43 | 0.0019 | 0.0005 | 0.0014 |
| 44 | 0.0019 | 0.0005 | 0.0014 |
| 45 | 0.0019 | 0.0006 | 0.0014 |
| 46 | 0.0019 | 0.0006 | 0.0014 |
| 47 | 0.0020 | 0.0006 | 0.0014 |
| 48 | 0.0020 | 0.0006 | 0.0014 |
| 49 | 0.0020 | 0.0006 | 0.0014 |
| 50 | 0.0020 | 0.0006 | 0.0014 |
| 51 | 0.0020 | 0.0006 | 0.0014 |
| 52 | 0.0020 | 0.0006 | 0.0014 |
| 53 | 0.0020 | 0.0006 | 0.0014 |
| 54 | 0.0020 | 0.0006 | 0.0015 |
| 55 | 0.0021 | 0.0006 | 0.0015 |
| 56 | 0.0021 | 0.0006 | 0.0015 |
| 57 | 0.0021 | 0.0006 | 0.0015 |
| 58 | 0.0021 | 0.0006 | 0.0015 |
| 59 | 0.0021 | 0.0006 | 0.0015 |
| 60 | 0.0021 | 0.0006 | 0.0015 |
| 61 | 0.0021 | 0.0006 | 0.0015 |
| 62 | 0.0021 | 0.0006 | 0.0015 |
| 63 | 0.0022 | 0.0006 | 0.0015 |
| 64 | 0.0022 | 0.0006 | 0.0015 |
| 65 | 0.0022 | 0.0006 | 0.0016 |
| 66 | 0.0022 | 0.0006 | 0.0016 |
| 67 | 0.0022 | 0.0006 | 0.0016 |
| 68 | 0.0022 | 0.0006 | 0.0016 |
| 69 | 0.0022 | 0.0006 | 0.0016 |
| 70 | 0.0022 | 0.0006 | 0.0016 |
| 71 | 0.0023 | 0.0006 | 0.0016 |
| 72 | 0.0023 | 0.0006 | 0.0016 |
| 73 | 0.0023 | 0.0007 | 0.0016 |
| 74 | 0.0023 | 0.0007 | 0.0017 |
| 75 | 0.0023 | 0.0007 | 0.0017 |
| 76 | 0.0023 | 0.0007 | 0.0017 |
| 77 | 0.0024 | 0.0007 | 0.0017 |
| 78 | 0.0024 | 0.0007 | 0.0017 |
| 79 | 0.0024 | 0.0007 | 0.0017 |
| 80 | 0.0024 | 0.0007 | 0.0017 |
| 81 | 0.0024 | 0.0007 | 0.0017 |
| 82 | 0.0024 | 0.0007 | 0.0017 |
| 83 | 0.0025 | 0.0007 | 0.0018 |
| 84 | 0.0025 | 0.0007 | 0.0018 |
| 85 | 0.0025 | 0.0007 | 0.0018 |
| 86 | 0.0025 | 0.0007 | 0.0018 |
| 87 | 0.0025 | 0.0007 | 0.0018 |
| 88 | 0.0026 | 0.0007 | 0.0018 |
| 89 | 0.0026 | 0.0007 | 0.0018 |
| 90 | 0.0026 | 0.0007 | 0.0019 |
| 91 | 0.0026 | 0.0007 | 0.0019 |

| | | | |
|---|---|---|---|
| 92 | 0.0026 | 0.0008 | 0.0019 |
| 93 | 0.0027 | 0.0008 | 0.0019 |
| 94 | 0.0027 | 0.0008 | 0.0019 |
| 95 | 0.0027 | 0.0008 | 0.0019 |
| 96 | 0.0027 | 0.0008 | 0.0019 |
| 97 | 0.0028 | 0.0008 | 0.0020 |
| 98 | 0.0028 | 0.0008 | 0.0020 |
| 99 | 0.0028 | 0.0008 | 0.0020 |
| 100 | 0.0028 | 0.0008 | 0.0020 |
| 101 | 0.0029 | 0.0008 | 0.0020 |
| 102 | 0.0029 | 0.0008 | 0.0021 |
| 103 | 0.0029 | 0.0008 | 0.0021 |
| 104 | 0.0029 | 0.0008 | 0.0021 |
| 105 | 0.0030 | 0.0008 | 0.0021 |
| 106 | 0.0030 | 0.0008 | 0.0021 |
| 107 | 0.0030 | 0.0009 | 0.0022 |
| 108 | 0.0030 | 0.0009 | 0.0022 |
| 109 | 0.0031 | 0.0009 | 0.0022 |
| 110 | 0.0031 | 0.0009 | 0.0022 |
| 111 | 0.0031 | 0.0009 | 0.0022 |
| 112 | 0.0032 | 0.0009 | 0.0023 |
| 113 | 0.0032 | 0.0009 | 0.0023 |
| 114 | 0.0032 | 0.0009 | 0.0023 |
| 115 | 0.0033 | 0.0009 | 0.0023 |
| 116 | 0.0033 | 0.0009 | 0.0023 |
| 117 | 0.0033 | 0.0009 | 0.0024 |
| 118 | 0.0034 | 0.0010 | 0.0024 |
| 119 | 0.0034 | 0.0010 | 0.0024 |
| 120 | 0.0034 | 0.0010 | 0.0025 |
| 121 | 0.0035 | 0.0010 | 0.0025 |
| 122 | 0.0035 | 0.0010 | 0.0025 |
| 123 | 0.0036 | 0.0010 | 0.0025 |
| 124 | 0.0036 | 0.0010 | 0.0026 |
| 125 | 0.0036 | 0.0010 | 0.0026 |
| 126 | 0.0037 | 0.0010 | 0.0026 |
| 127 | 0.0037 | 0.0011 | 0.0027 |
| 128 | 0.0038 | 0.0011 | 0.0027 |
| 129 | 0.0038 | 0.0011 | 0.0027 |
| 130 | 0.0039 | 0.0011 | 0.0028 |
| 131 | 0.0039 | 0.0011 | 0.0028 |
| 132 | 0.0040 | 0.0011 | 0.0028 |
| 133 | 0.0040 | 0.0012 | 0.0029 |
| 134 | 0.0041 | 0.0012 | 0.0029 |
| 135 | 0.0042 | 0.0012 | 0.0030 |
| 136 | 0.0042 | 0.0012 | 0.0030 |
| 137 | 0.0043 | 0.0012 | 0.0031 |
| 138 | 0.0043 | 0.0012 | 0.0031 |
| 139 | 0.0044 | 0.0013 | 0.0031 |
| 140 | 0.0044 | 0.0013 | 0.0032 |
| 141 | 0.0045 | 0.0013 | 0.0032 |
| 142 | 0.0046 | 0.0013 | 0.0033 |
| 143 | 0.0047 | 0.0013 | 0.0034 |
| 144 | 0.0047 | 0.0014 | 0.0034 |
| 145 | 0.0051 | 0.0015 | 0.0036 |
| 146 | 0.0052 | 0.0015 | 0.0037 |
| 147 | 0.0053 | 0.0015 | 0.0038 |
| 148 | 0.0053 | 0.0015 | 0.0038 |
| 149 | 0.0055 | 0.0016 | 0.0039 |
| 150 | 0.0055 | 0.0016 | 0.0040 |

| | | | |
|---|---|---|---|
| 151 | 0.0057 | 0.0016 | 0.0041 |
| 152 | 0.0057 | 0.0016 | 0.0041 |
| 153 | 0.0059 | 0.0017 | 0.0042 |
| 154 | 0.0060 | 0.0017 | 0.0043 |
| 155 | 0.0062 | 0.0018 | 0.0044 |
| 156 | 0.0062 | 0.0018 | 0.0045 |
| 157 | 0.0064 | 0.0018 | 0.0046 |
| 158 | 0.0065 | 0.0019 | 0.0047 |
| 159 | 0.0067 | 0.0019 | 0.0048 |
| 160 | 0.0068 | 0.0019 | 0.0049 |
| 161 | 0.0071 | 0.0020 | 0.0051 |
| 162 | 0.0072 | 0.0020 | 0.0051 |
| 163 | 0.0075 | 0.0021 | 0.0053 |
| 164 | 0.0076 | 0.0022 | 0.0054 |
| 165 | 0.0079 | 0.0022 | 0.0056 |
| 166 | 0.0080 | 0.0023 | 0.0057 |
| 167 | 0.0084 | 0.0024 | 0.0060 |
| 168 | 0.0085 | 0.0024 | 0.0061 |
| 169 | 0.0090 | 0.0026 | 0.0064 |
| 170 | 0.0092 | 0.0026 | 0.0066 |
| 171 | 0.0096 | 0.0027 | 0.0069 |
| 172 | 0.0099 | 0.0028 | 0.0071 |
| 173 | 0.0104 | 0.0030 | 0.0074 |
| 174 | 0.0107 | 0.0030 | 0.0076 |
| 175 | 0.0113 | 0.0032 | 0.0081 |
| 176 | 0.0117 | 0.0033 | 0.0084 |
| 177 | 0.0125 | 0.0036 | 0.0089 |
| 178 | 0.0129 | 0.0037 | 0.0092 |
| 179 | 0.0139 | 0.0040 | 0.0099 |
| 180 | 0.0145 | 0.0041 | 0.0104 |
| 181 | 0.0158 | 0.0045 | 0.0113 |
| 182 | 0.0166 | 0.0047 | 0.0118 |
| 183 | 0.0184 | 0.0052 | 0.0131 |
| 184 | 0.0194 | 0.0055 | 0.0139 |
| 185 | 0.0332 | 0.0095 | 0.0237 |
| 186 | 0.0354 | 0.0101 | 0.0253 |
| 187 | 0.0410 | 0.0105 | 0.0305 |
| 188 | 0.0448 | 0.0105 | 0.0343 |
| 189 | 0.0557 | 0.0105 | 0.0452 |
| 190 | 0.0642 | 0.0105 | 0.0537 |
| 191 | 0.0974 | 0.0105 | 0.0869 |
| 192 | 0.1414 | 0.0105 | 0.1309 |
| 193 | 0.6116 | 0.0105 | 0.6011 |
| 194 | 0.0766 | 0.0105 | 0.0661 |
| 195 | 0.0496 | 0.0105 | 0.0391 |
| 196 | 0.0380 | 0.0105 | 0.0275 |
| 197 | 0.0207 | 0.0059 | 0.0148 |
| 198 | 0.0174 | 0.0050 | 0.0124 |
| 199 | 0.0151 | 0.0043 | 0.0108 |
| 200 | 0.0134 | 0.0038 | 0.0096 |
| 201 | 0.0121 | 0.0034 | 0.0086 |
| 202 | 0.0110 | 0.0031 | 0.0079 |
| 203 | 0.0101 | 0.0029 | 0.0072 |
| 204 | 0.0094 | 0.0027 | 0.0067 |
| 205 | 0.0087 | 0.0025 | 0.0062 |
| 206 | 0.0082 | 0.0023 | 0.0059 |
| 207 | 0.0077 | 0.0022 | 0.0055 |
| 208 | 0.0073 | 0.0021 | 0.0052 |
| 209 | 0.0070 | 0.0020 | 0.0050 |

| | | | |
|---|---|---|---|
| 210 | 0.0066 | 0.0019 | 0.0047 |
| 211 | 0.0063 | 0.0018 | 0.0045 |
| 212 | 0.0061 | 0.0017 | 0.0043 |
| 213 | 0.0058 | 0.0017 | 0.0042 |
| 214 | 0.0056 | 0.0016 | 0.0040 |
| 215 | 0.0054 | 0.0015 | 0.0039 |
| 216 | 0.0052 | 0.0015 | 0.0037 |
| 217 | 0.0048 | 0.0014 | 0.0034 |
| 218 | 0.0046 | 0.0013 | 0.0033 |
| 219 | 0.0045 | 0.0013 | 0.0032 |
| 220 | 0.0044 | 0.0012 | 0.0031 |
| 221 | 0.0042 | 0.0012 | 0.0030 |
| 222 | 0.0041 | 0.0012 | 0.0029 |
| 223 | 0.0040 | 0.0011 | 0.0029 |
| 224 | 0.0039 | 0.0011 | 0.0028 |
| 225 | 0.0038 | 0.0011 | 0.0027 |
| 226 | 0.0037 | 0.0011 | 0.0027 |
| 227 | 0.0036 | 0.0010 | 0.0026 |
| 228 | 0.0035 | 0.0010 | 0.0025 |
| 229 | 0.0035 | 0.0010 | 0.0025 |
| 230 | 0.0034 | 0.0010 | 0.0024 |
| 231 | 0.0033 | 0.0009 | 0.0024 |
| 232 | 0.0032 | 0.0009 | 0.0023 |
| 233 | 0.0032 | 0.0009 | 0.0023 |
| 234 | 0.0031 | 0.0009 | 0.0022 |
| 235 | 0.0031 | 0.0009 | 0.0022 |
| 236 | 0.0030 | 0.0009 | 0.0021 |
| 237 | 0.0029 | 0.0008 | 0.0021 |
| 238 | 0.0029 | 0.0008 | 0.0021 |
| 239 | 0.0028 | 0.0008 | 0.0020 |
| 240 | 0.0028 | 0.0008 | 0.0020 |
| 241 | 0.0027 | 0.0008 | 0.0020 |
| 242 | 0.0027 | 0.0008 | 0.0019 |
| 243 | 0.0027 | 0.0008 | 0.0019 |
| 244 | 0.0026 | 0.0007 | 0.0019 |
| 245 | 0.0026 | 0.0007 | 0.0018 |
| 246 | 0.0025 | 0.0007 | 0.0018 |
| 247 | 0.0025 | 0.0007 | 0.0018 |
| 248 | 0.0025 | 0.0007 | 0.0018 |
| 249 | 0.0024 | 0.0007 | 0.0017 |
| 250 | 0.0024 | 0.0007 | 0.0017 |
| 251 | 0.0024 | 0.0007 | 0.0017 |
| 252 | 0.0023 | 0.0007 | 0.0017 |
| 253 | 0.0023 | 0.0007 | 0.0016 |
| 254 | 0.0023 | 0.0006 | 0.0016 |
| 255 | 0.0022 | 0.0006 | 0.0016 |
| 256 | 0.0022 | 0.0006 | 0.0016 |
| 257 | 0.0022 | 0.0006 | 0.0016 |
| 258 | 0.0021 | 0.0006 | 0.0015 |
| 259 | 0.0021 | 0.0006 | 0.0015 |
| 260 | 0.0021 | 0.0006 | 0.0015 |
| 261 | 0.0021 | 0.0006 | 0.0015 |
| 262 | 0.0020 | 0.0006 | 0.0015 |
| 263 | 0.0020 | 0.0006 | 0.0014 |
| 264 | 0.0020 | 0.0006 | 0.0014 |
| 265 | 0.0020 | 0.0006 | 0.0014 |
| 266 | 0.0020 | 0.0006 | 0.0014 |
| 267 | 0.0019 | 0.0005 | 0.0014 |
| 268 | 0.0019 | 0.0005 | 0.0014 |

| | | | |
|---|---|---|---|
| 269 | 0.0019 | 0.0005 | 0.0014 |
| 270 | 0.0019 | 0.0005 | 0.0013 |
| 271 | 0.0018 | 0.0005 | 0.0013 |
| 272 | 0.0018 | 0.0005 | 0.0013 |
| 273 | 0.0018 | 0.0005 | 0.0013 |
| 274 | 0.0018 | 0.0005 | 0.0013 |
| 275 | 0.0018 | 0.0005 | 0.0013 |
| 276 | 0.0018 | 0.0005 | 0.0013 |
| 277 | 0.0017 | 0.0005 | 0.0012 |
| 278 | 0.0017 | 0.0005 | 0.0012 |
| 279 | 0.0017 | 0.0005 | 0.0012 |
| 280 | 0.0017 | 0.0005 | 0.0012 |
| 281 | 0.0017 | 0.0005 | 0.0012 |
| 282 | 0.0017 | 0.0005 | 0.0012 |
| 283 | 0.0016 | 0.0005 | 0.0012 |
| 284 | 0.0016 | 0.0005 | 0.0012 |
| 285 | 0.0016 | 0.0005 | 0.0012 |
| 286 | 0.0016 | 0.0005 | 0.0011 |
| 287 | 0.0016 | 0.0005 | 0.0011 |
| 288 | 0.0016 | 0.0004 | 0.0011 |

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Total soil rain loss = 0.44(In)
Total effective rainfall = 1.95(In)
Peak flow rate in flood hydrograph = 32.65(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 10.0 | 20.0 | 30.0 | 40.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.01 | Q | | | | |
| 0+15 | 0.0003 | 0.03 | Q | | | | |
| 0+20 | 0.0007 | 0.06 | Q | | | | |
| 0+25 | 0.0015 | 0.11 | Q | | | | |
| 0+30 | 0.0024 | 0.14 | Q | | | | |
| 0+35 | 0.0035 | 0.16 | Q | | | | |
| 0+40 | 0.0047 | 0.17 | Q | | | | |
| 0+45 | 0.0059 | 0.18 | Q | | | | |
| 0+50 | 0.0072 | 0.19 | Q | | | | |
| 0+55 | 0.0086 | 0.20 | Q | | | | |
| 1+ 0 | 0.0101 | 0.21 | Q | | | | |
| 1+ 5 | 0.0115 | 0.21 | Q | | | | |
| 1+10 | 0.0130 | 0.22 | Q | | | | |
| 1+15 | 0.0146 | 0.22 | Q | | | | |
| 1+20 | 0.0162 | 0.23 | Q | | | | |
| 1+25 | 0.0178 | 0.23 | Q | | | | |
| 1+30 | 0.0194 | 0.24 | Q | | | | |
| 1+35 | 0.0210 | 0.24 | Q | | | | |
| 1+40 | 0.0227 | 0.24 | Q | | | | |
| 1+45 | 0.0244 | 0.25 | Q | | | | |
| 1+50 | 0.0261 | 0.25 | Q | | | | |
| 1+55 | 0.0279 | 0.25 | Q | | | | |
| 2+ 0 | 0.0296 | 0.25 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+ 5 | 0.0314 | 0.26 | Q | | | | |
| 2+10 | 0.0332 | 0.26 | Q | | | | |
| 2+15 | 0.0350 | 0.26 | Q | | | | |
| 2+20 | 0.0368 | 0.26 | Q | | | | |
| 2+25 | 0.0386 | 0.27 | Q | | | | |
| 2+30 | 0.0405 | 0.27 | Q | | | | |
| 2+35 | 0.0423 | 0.27 | Q | | | | |
| 2+40 | 0.0442 | 0.27 | Q | | | | |
| 2+45 | 0.0460 | 0.27 | Q | | | | |
| 2+50 | 0.0479 | 0.27 | Q | | | | |
| 2+55 | 0.0498 | 0.28 | Q | | | | |
| 3+ 0 | 0.0518 | 0.28 | Q | | | | |
| 3+ 5 | 0.0537 | 0.28 | Q | | | | |
| 3+10 | 0.0556 | 0.28 | Q | | | | |
| 3+15 | 0.0576 | 0.28 | Q | | | | |
| 3+20 | 0.0595 | 0.28 | Q | | | | |
| 3+25 | 0.0615 | 0.29 | Q | | | | |
| 3+30 | 0.0635 | 0.29 | Q | | | | |
| 3+35 | 0.0655 | 0.29 | Q | | | | |
| 3+40 | 0.0675 | 0.29 | Q | | | | |
| 3+45 | 0.0695 | 0.29 | Q | | | | |
| 3+50 | 0.0715 | 0.29 | Q | | | | |
| 3+55 | 0.0735 | 0.30 | Q | | | | |
| 4+ 0 | 0.0756 | 0.30 | QV | | | | |
| 4+ 5 | 0.0776 | 0.30 | QV | | | | |
| 4+10 | 0.0797 | 0.30 | QV | | | | |
| 4+15 | 0.0818 | 0.30 | QV | | | | |
| 4+20 | 0.0839 | 0.30 | QV | | | | |
| 4+25 | 0.0860 | 0.30 | QV | | | | |
| 4+30 | 0.0881 | 0.31 | QV | | | | |
| 4+35 | 0.0902 | 0.31 | QV | | | | |
| 4+40 | 0.0923 | 0.31 | QV | | | | |
| 4+45 | 0.0945 | 0.31 | QV | | | | |
| 4+50 | 0.0967 | 0.31 | QV | | | | |
| 4+55 | 0.0988 | 0.32 | QV | | | | |
| 5+ 0 | 0.1010 | 0.32 | QV | | | | |
| 5+ 5 | 0.1032 | 0.32 | QV | | | | |
| 5+10 | 0.1054 | 0.32 | QV | | | | |
| 5+15 | 0.1076 | 0.32 | QV | | | | |
| 5+20 | 0.1099 | 0.32 | QV | | | | |
| 5+25 | 0.1121 | 0.33 | QV | | | | |
| 5+30 | 0.1144 | 0.33 | QV | | | | |
| 5+35 | 0.1167 | 0.33 | QV | | | | |
| 5+40 | 0.1190 | 0.33 | QV | | | | |
| 5+45 | 0.1213 | 0.33 | QV | | | | |
| 5+50 | 0.1236 | 0.34 | QV | | | | |
| 5+55 | 0.1259 | 0.34 | QV | | | | |
| 6+ 0 | 0.1283 | 0.34 | QV | | | | |
| 6+ 5 | 0.1306 | 0.34 | QV | | | | |
| 6+10 | 0.1330 | 0.35 | QV | | | | |
| 6+15 | 0.1354 | 0.35 | QV | | | | |
| 6+20 | 0.1378 | 0.35 | QV | | | | |
| 6+25 | 0.1403 | 0.35 | QV | | | | |
| 6+30 | 0.1427 | 0.35 | QV | | | | |
| 6+35 | 0.1452 | 0.36 | QV | | | | |
| 6+40 | 0.1476 | 0.36 | Q V | | | | |
| 6+45 | 0.1501 | 0.36 | Q V | | | | |
| 6+50 | 0.1526 | 0.36 | Q V | | | | |
| 6+55 | 0.1552 | 0.37 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7+ 0 | 0.1577 | 0.37 | Q V | \| | \| | \| | \| |
| 7+ 5 | 0.1603 | 0.37 | Q V | \| | \| | \| | \| |
| 7+10 | 0.1629 | 0.37 | Q V | \| | \| | \| | \| |
| 7+15 | 0.1655 | 0.38 | Q V | \| | \| | \| | \| |
| 7+20 | 0.1681 | 0.38 | Q V | \| | \| | \| | \| |
| 7+25 | 0.1707 | 0.38 | Q V | \| | \| | \| | \| |
| 7+30 | 0.1734 | 0.39 | Q V | \| | \| | \| | \| |
| 7+35 | 0.1761 | 0.39 | Q V | \| | \| | \| | \| |
| 7+40 | 0.1788 | 0.39 | Q V | \| | \| | \| | \| |
| 7+45 | 0.1815 | 0.39 | Q V | \| | \| | \| | \| |
| 7+50 | 0.1842 | 0.40 | Q V | \| | \| | \| | \| |
| 7+55 | 0.1870 | 0.40 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.1898 | 0.40 | Q V | \| | \| | \| | \| |
| 8+ 5 | 0.1926 | 0.41 | Q V | \| | \| | \| | \| |
| 8+10 | 0.1954 | 0.41 | Q V | \| | \| | \| | \| |
| 8+15 | 0.1983 | 0.41 | Q V | \| | \| | \| | \| |
| 8+20 | 0.2011 | 0.42 | Q V | \| | \| | \| | \| |
| 8+25 | 0.2040 | 0.42 | Q V | \| | \| | \| | \| |
| 8+30 | 0.2069 | 0.42 | Q V | \| | \| | \| | \| |
| 8+35 | 0.2099 | 0.43 | Q V | \| | \| | \| | \| |
| 8+40 | 0.2129 | 0.43 | Q V | \| | \| | \| | \| |
| 8+45 | 0.2159 | 0.44 | Q V | \| | \| | \| | \| |
| 8+50 | 0.2189 | 0.44 | Q V | \| | \| | \| | \| |
| 8+55 | 0.2219 | 0.44 | Q  V | \| | \| | \| | \| |
| 9+ 0 | 0.2250 | 0.45 | Q  V | \| | \| | \| | \| |
| 9+ 5 | 0.2281 | 0.45 | Q  V | \| | \| | \| | \| |
| 9+10 | 0.2312 | 0.45 | Q  V | \| | \| | \| | \| |
| 9+15 | 0.2344 | 0.46 | Q  V | \| | \| | \| | \| |
| 9+20 | 0.2376 | 0.46 | Q  V | \| | \| | \| | \| |
| 9+25 | 0.2408 | 0.47 | Q  V | \| | \| | \| | \| |
| 9+30 | 0.2441 | 0.47 | Q  V | \| | \| | \| | \| |
| 9+35 | 0.2473 | 0.48 | Q  V | \| | \| | \| | \| |
| 9+40 | 0.2506 | 0.48 | Q  V | \| | \| | \| | \| |
| 9+45 | 0.2540 | 0.49 | Q  V | \| | \| | \| | \| |
| 9+50 | 0.2574 | 0.49 | Q  V | \| | \| | \| | \| |
| 9+55 | 0.2608 | 0.50 | Q  V | \| | \| | \| | \| |
| 10+ 0 | 0.2642 | 0.50 | Q  V | \| | \| | \| | \| |
| 10+ 5 | 0.2677 | 0.51 | Q  V | \| | \| | \| | \| |
| 10+10 | 0.2712 | 0.51 | Q  V | \| | \| | \| | \| |
| 10+15 | 0.2748 | 0.52 | Q  V | \| | \| | \| | \| |
| 10+20 | 0.2784 | 0.52 | Q  V | \| | \| | \| | \| |
| 10+25 | 0.2820 | 0.53 | Q  V | \| | \| | \| | \| |
| 10+30 | 0.2857 | 0.53 | Q  V | \| | \| | \| | \| |
| 10+35 | 0.2894 | 0.54 | Q  V | \| | \| | \| | \| |
| 10+40 | 0.2932 | 0.55 | Q  V | \| | \| | \| | \| |
| 10+45 | 0.2970 | 0.55 | Q   V | \| | \| | \| | \| |
| 10+50 | 0.3008 | 0.56 | Q   V | \| | \| | \| | \| |
| 10+55 | 0.3047 | 0.56 | Q   V | \| | \| | \| | \| |
| 11+ 0 | 0.3086 | 0.57 | Q   V | \| | \| | \| | \| |
| 11+ 5 | 0.3126 | 0.58 | Q   V | \| | \| | \| | \| |
| 11+10 | 0.3167 | 0.59 | Q   V | \| | \| | \| | \| |
| 11+15 | 0.3207 | 0.59 | Q   V | \| | \| | \| | \| |
| 11+20 | 0.3249 | 0.60 | Q   V | \| | \| | \| | \| |
| 11+25 | 0.3291 | 0.61 | Q   V | \| | \| | \| | \| |
| 11+30 | 0.3333 | 0.62 | Q   V | \| | \| | \| | \| |
| 11+35 | 0.3376 | 0.63 | Q   V | \| | \| | \| | \| |
| 11+40 | 0.3420 | 0.63 | Q   V | \| | \| | \| | \| |
| 11+45 | 0.3464 | 0.64 | Q   V | \| | \| | \| | \| |
| 11+50 | 0.3509 | 0.65 | Q   V | \| | \| | \| | \| |

```
11+55       0.3555      0.66  Q   V     |          |          |          |
12+ 0       0.3601      0.67  Q   V     |          |          |          |
12+ 5       0.3648      0.68  Q   V     |          |          |          |
12+10       0.3695      0.69  Q    V    |          |          |          |
12+15       0.3744      0.71  Q    V    |          |          |          |
12+20       0.3794      0.72  Q    V    |          |          |          |
12+25       0.3845      0.74  Q    V    |          |          |          |
12+30       0.3897      0.76  Q    V    |          |          |          |
12+35       0.3950      0.77  Q    V    |          |          |          |
12+40       0.4005      0.79  Q    V    |          |          |          |
12+45       0.4060      0.80  Q    V    |          |          |          |
12+50       0.4117      0.82  Q    V    |          |          |          |
12+55       0.4174      0.84  Q    V    |          |          |          |
13+ 0       0.4233      0.85  Q    V    |          |          |          |
13+ 5       0.4293      0.87  Q    V    |          |          |          |
13+10       0.4354      0.89  Q    V    |          |          |          |
13+15       0.4416      0.91  Q    V    |          |          |          |
13+20       0.4480      0.93  Q     V   |          |          |          |
13+25       0.4545      0.95  Q     V   |          |          |          |
13+30       0.4612      0.97  Q     V   |          |          |          |
13+35       0.4680      0.99  Q     V   |          |          |          |
13+40       0.4750      1.01  |Q    V   |          |          |          |
13+45       0.4821      1.04  |Q    V   |          |          |          |
13+50       0.4894      1.06  |Q    V   |          |          |          |
13+55       0.4969      1.09  |Q    V   |          |          |          |
14+ 0       0.5046      1.12  |Q    V   |          |          |          |
14+ 5       0.5125      1.15  |Q    V   |          |          |          |
14+10       0.5206      1.18  |Q     V  |          |          |          |
14+15       0.5290      1.21  |Q     V  |          |          |          |
14+20       0.5376      1.25  |Q     V  |          |          |          |
14+25       0.5465      1.29  |Q     V  |          |          |          |
14+30       0.5557      1.34  |Q     V  |          |          |          |
14+35       0.5652      1.38  |Q     V  |          |          |          |
14+40       0.5751      1.43  |Q     V  |          |          |          |
14+45       0.5853      1.48  |Q     V  |          |          |          |
14+50       0.5959      1.54  |Q      V |          |          |          |
14+55       0.6070      1.61  |Q      V |          |          |          |
15+ 0       0.6186      1.68  |Q      V |          |          |          |
15+ 5       0.6307      1.76  |Q      V |          |          |          |
15+10       0.6434      1.85  |Q      V |          |          |          |
15+15       0.6568      1.94  |Q      V |          |          |          |
15+20       0.6709      2.06  | Q      V|          |          |          |
15+25       0.6861      2.20  | Q      V|          |          |          |
15+30       0.7028      2.42  | Q      V|          |          |          |
15+35       0.7215      2.72  | Q      V|          |          |          |
15+40       0.7437      3.22  |  Q      V          |          |          |
15+45       0.7702      3.85  |  Q      V          |          |          |
15+50       0.8016      4.55  |   Q     V          |          |          |
15+55       0.8390      5.43  |    Q    |V         |          |          |
16+ 0       0.8854      6.73  |     Q   | V        |          |          |
16+ 5       0.9516      9.62  |        Q| V        |          |          |
16+10       1.0527     14.68  |         |   Q      |          |          |
16+15       1.1959     20.79  |         |     V   Q          |          |
16+20       1.4091     30.96  |         |        V|          Q          |
16+25       1.6340     32.65  |         |         | V        | Q        |
16+30       1.8052     24.86  |         |         |   Q      |          |
16+35       1.9338     18.67  |         |       Q |     V    |          |
16+40       2.0347     14.65  |         |   Q     |      V   |          |
16+45       2.1181     12.11  |         | Q       |       V  |          |
```

```
16+50       2.1879     10.14  |         Q          |        V|         |
16+55       2.2478      8.70  |       Q  |         |         V         |
17+ 0       2.2998      7.55  |      Q   |         |         |V        |
17+ 5       2.3458      6.68  |     Q    |         |         |V        |
17+10       2.3874      6.04  |     Q    |         |         | V       |
17+15       2.4246      5.40  |    Q     |         |         | V       |
17+20       2.4573      4.75  |   Q      |         |         |  V      |
17+25       2.4866      4.25  |   Q      |         |         |  V      |
17+30       2.5138      3.94  |  Q       |         |         |   V     |
17+35       2.5386      3.60  |  Q       |         |         |   V     |
17+40       2.5616      3.34  |  Q       |         |         |   V     |
17+45       2.5824      3.03  |  Q       |         |         |    V    |
17+50       2.6016      2.78  | Q        |         |         |    V    |
17+55       2.6196      2.61  | Q        |         |         |    V    |
18+ 0       2.6358      2.36  | Q        |         |         |    V    |
18+ 5       2.6510      2.22  | Q        |         |         |    V    |
18+10       2.6649      2.01  | Q        |         |         |     V   |
18+15       2.6774      1.83  |Q         |         |         |     V   |
18+20       2.6891      1.70  |Q         |         |         |     V   |
18+25       2.6994      1.48  |Q         |         |         |     V   |
18+30       2.7090      1.41  |Q         |         |         |     V   |
18+35       2.7186      1.38  |Q         |         |         |     V   |
18+40       2.7279      1.36  |Q         |         |         |      V  |
18+45       2.7370      1.32  |Q         |         |         |      V  |
18+50       2.7457      1.27  |Q         |         |         |      V  |
18+55       2.7540      1.21  |Q         |         |         |      V  |
19+ 0       2.7614      1.07  |Q         |         |         |      V  |
19+ 5       2.7680      0.96  Q          |         |         |      V  |
19+10       2.7743      0.90  Q          |         |         |      V  |
19+15       2.7796      0.78  Q          |         |         |      V  |
19+20       2.7842      0.67  Q          |         |         |      V  |
19+25       2.7886      0.64  Q          |         |         |      V  |
19+30       2.7928      0.61  Q          |         |         |      V  |
19+35       2.7969      0.59  Q          |         |         |      V  |
19+40       2.8008      0.58  Q          |         |         |       V |
19+45       2.8047      0.56  Q          |         |         |       V |
19+50       2.8085      0.55  Q          |         |         |       V |
19+55       2.8121      0.53  Q          |         |         |       V |
20+ 0       2.8157      0.52  Q          |         |         |       V |
20+ 5       2.8192      0.51  Q          |         |         |       V |
20+10       2.8226      0.50  Q          |         |         |       V |
20+15       2.8260      0.49  Q          |         |         |       V |
20+20       2.8292      0.48  Q          |         |         |       V |
20+25       2.8325      0.47  Q          |         |         |       V |
20+30       2.8356      0.46  Q          |         |         |       V |
20+35       2.8387      0.45  Q          |         |         |       V |
20+40       2.8417      0.44  Q          |         |         |       V |
20+45       2.8447      0.43  Q          |         |         |       V |
20+50       2.8477      0.43  Q          |         |         |       V |
20+55       2.8505      0.42  Q          |         |         |       V |
21+ 0       2.8534      0.41  Q          |         |         |       V |
21+ 5       2.8562      0.40  Q          |         |         |       V |
21+10       2.8589      0.40  Q          |         |         |       V |
21+15       2.8616      0.39  Q          |         |         |       V |
21+20       2.8643      0.39  Q          |         |         |       V |
21+25       2.8669      0.38  Q          |         |         |       V |
21+30       2.8695      0.37  Q          |         |         |       V |
21+35       2.8720      0.37  Q          |         |         |       V |
21+40       2.8745      0.36  Q          |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+45 | 2.8770 | 0.36 | Q | \| | \| | \| | V\| |
| 21+50 | 2.8794 | 0.35 | Q | \| | \| | \| | V\| |
| 21+55 | 2.8819 | 0.35 | Q | \| | \| | \| | V\| |
| 22+ 0 | 2.8842 | 0.35 | Q | \| | \| | \| | V\| |
| 22+ 5 | 2.8866 | 0.34 | Q | \| | \| | \| | V\| |
| 22+10 | 2.8889 | 0.34 | Q | \| | \| | \| | V\| |
| 22+15 | 2.8912 | 0.33 | Q | \| | \| | \| | V\| |
| 22+20 | 2.8934 | 0.33 | Q | \| | \| | \| | V\| |
| 22+25 | 2.8957 | 0.32 | Q | \| | \| | \| | V\| |
| 22+30 | 2.8979 | 0.32 | Q | \| | \| | \| | V\| |
| 22+35 | 2.9001 | 0.32 | Q | \| | \| | \| | V\| |
| 22+40 | 2.9022 | 0.31 | Q | \| | \| | \| | V\| |
| 22+45 | 2.9044 | 0.31 | Q | \| | \| | \| | V\| |
| 22+50 | 2.9065 | 0.31 | Q | \| | \| | \| | V\| |
| 22+55 | 2.9085 | 0.30 | Q | \| | \| | \| | V\| |
| 23+ 0 | 2.9106 | 0.30 | Q | \| | \| | \| | V\| |
| 23+ 5 | 2.9126 | 0.30 | Q | \| | \| | \| | V\| |
| 23+10 | 2.9147 | 0.29 | Q | \| | \| | \| | V\| |
| 23+15 | 2.9167 | 0.29 | Q | \| | \| | \| | V\| |
| 23+20 | 2.9186 | 0.29 | Q | \| | \| | \| | V\| |
| 23+25 | 2.9206 | 0.28 | Q | \| | \| | \| | V\| |
| 23+30 | 2.9225 | 0.28 | Q | \| | \| | \| | V\| |
| 23+35 | 2.9244 | 0.28 | Q | \| | \| | \| | V\| |
| 23+40 | 2.9263 | 0.28 | Q | \| | \| | \| | V\| |
| 23+45 | 2.9282 | 0.27 | Q | \| | \| | \| | V\| |
| 23+50 | 2.9301 | 0.27 | Q | \| | \| | \| | V\| |
| 23+55 | 2.9319 | 0.27 | Q | \| | \| | \| | V\| |
| 24+ 0 | 2.9337 | 0.27 | Q | \| | \| | \| | V\| |
| 24+ 5 | 2.9355 | 0.26 | Q | \| | \| | \| | V\| |
| 24+10 | 2.9373 | 0.25 | Q | \| | \| | \| | V\| |
| 24+15 | 2.9388 | 0.23 | Q | \| | \| | \| | V\| |
| 24+20 | 2.9402 | 0.19 | Q | \| | \| | \| | V\| |
| 24+25 | 2.9412 | 0.15 | Q | \| | \| | \| | V\| |
| 24+30 | 2.9420 | 0.12 | Q | \| | \| | \| | V\| |
| 24+35 | 2.9427 | 0.10 | Q | \| | \| | \| | V\| |
| 24+40 | 2.9432 | 0.08 | Q | \| | \| | \| | V\| |
| 24+45 | 2.9437 | 0.07 | Q | \| | \| | \| | V\| |
| 24+50 | 2.9441 | 0.06 | Q | \| | \| | \| | V\| |
| 24+55 | 2.9445 | 0.05 | Q | \| | \| | \| | V\| |
| 25+ 0 | 2.9448 | 0.05 | Q | \| | \| | \| | V\| |
| 25+ 5 | 2.9451 | 0.04 | Q | \| | \| | \| | V\| |
| 25+10 | 2.9454 | 0.04 | Q | \| | \| | \| | V\| |
| 25+15 | 2.9456 | 0.03 | Q | \| | \| | \| | V\| |
| 25+20 | 2.9458 | 0.03 | Q | \| | \| | \| | V\| |
| 25+25 | 2.9459 | 0.02 | Q | \| | \| | \| | V\| |
| 25+30 | 2.9461 | 0.02 | Q | \| | \| | \| | V\| |
| 25+35 | 2.9462 | 0.02 | Q | \| | \| | \| | V\| |
| 25+40 | 2.9463 | 0.02 | Q | \| | \| | \| | V\| |
| 25+45 | 2.9464 | 0.01 | Q | \| | \| | \| | V\| |
| 25+50 | 2.9465 | 0.01 | Q | \| | \| | \| | V\| |
| 25+55 | 2.9466 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 0 | 2.9467 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 5 | 2.9467 | 0.01 | Q | \| | \| | \| | V\| |
| 26+10 | 2.9468 | 0.01 | Q | \| | \| | \| | V\| |
| 26+15 | 2.9468 | 0.01 | Q | \| | \| | \| | V\| |
| 26+20 | 2.9469 | 0.01 | Q | \| | \| | \| | V\| |
| 26+25 | 2.9469 | 0.00 | Q | \| | \| | \| | V\| |
| 26+30 | 2.9469 | 0.00 | Q | \| | \| | \| | V\| |
| 26+35 | 2.9469 | 0.00 | Q | \| | \| | \| | V\| |

```
   26+40       2.9470      0.00  Q         |          |         |        V|
   26+45       2.9470      0.00  Q         |          |         |        V|
   26+50       2.9470      0.00  Q         |          |         |        V|
   26+55       2.9470      0.00  Q         |          |         |        V|
   27+ 0       2.9470      0.00  Q         |          |         |        V|
   27+ 5       2.9470      0.00  Q         |          |         |        V|
   27+10       2.9470      0.00  Q         |          |         |         V
-------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 15
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 197.08 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 197.08 | 6 | 1.83 |
| Rainfall data for year 100 | | |
| 197.08 | 24 | 2.43 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 71.0 | 87.8 | 197.08 | 1.000 | 0.233 | 0.772 | 0.180 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.180

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 152.15 | 0.772 | 71.0 | 87.8 | 1.39 | 0.538 |
| 44.93 | 0.228 | 98.0 | 98.0 | 0.20 | 0.906 |

Area-averaged catchment yield fraction, Y = 0.622
Area-averaged low loss fraction, Yb = 0.378
User entry of time of concentration = 1.600 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 197.08(Ac.)
Catchment Lag time = 1.280 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 6.5104
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.180(In/Hr)
Average low loss rate fraction (Yb) = 0.378 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.589(In)
Specified peak 6-hour rainfall = 1.830(In)
Specified peak 24-hour rainfall = 2.430(In)

Rainfall depth area reduction factors:
Using a total area of 197.08(Ac.) (Ref: fig. E-4)

5-minute factor = 0.991 Adjusted rainfall = 0.597(In)
30-minute factor = 0.991 Adjusted rainfall = 1.022(In)
1-hour factor = 0.991 Adjusted rainfall = 1.258(In)
3-hour factor = 0.999 Adjusted rainfall = 1.587(In)
6-hour factor = 0.999 Adjusted rainfall = 1.829(In)
24-hour factor = 1.000 Adjusted rainfall = 2.429(In)
---

U n i t H y d r o g r a p h

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 2383.44 (CFS)) | |
| 1 | 0.286 | 6.828 |
| 2 | 0.861 | 13.695 |
| 3 | 1.734 | 20.815 |
| 4 | 2.835 | 26.228 |
| 5 | 4.266 | 34.103 |
| 6 | 5.897 | 38.876 |
| 7 | 7.919 | 48.194 |
| 8 | 10.208 | 54.553 |
| 9 | 13.917 | 88.404 |
| 10 | 18.283 | 104.077 |
| 11 | 24.500 | 148.170 |
| 12 | 31.041 | 155.893 |
| 13 | 36.761 | 136.351 |

| | | |
|---|---|---|
| 14 | 42.114 | 127.571 |
| 15 | 46.417 | 102.554 |
| 16 | 50.423 | 95.496 |
| 17 | 53.859 | 81.896 |
| 18 | 57.015 | 75.219 |
| 19 | 59.550 | 60.413 |
| 20 | 61.900 | 56.011 |
| 21 | 63.941 | 48.637 |
| 22 | 65.851 | 45.530 |
| 23 | 67.572 | 41.019 |
| 24 | 69.219 | 39.249 |
| 25 | 70.781 | 37.239 |
| 26 | 72.203 | 33.894 |
| 27 | 73.504 | 31.008 |
| 28 | 74.710 | 28.752 |
| 29 | 75.855 | 27.285 |
| 30 | 76.966 | 26.466 |
| 31 | 78.050 | 25.850 |
| 32 | 78.970 | 21.931 |
| 33 | 79.830 | 20.483 |
| 34 | 80.689 | 20.483 |
| 35 | 81.533 | 20.122 |
| 36 | 82.261 | 17.342 |
| 37 | 82.964 | 16.759 |
| 38 | 83.667 | 16.759 |
| 39 | 84.356 | 16.423 |
| 40 | 84.987 | 15.045 |
| 41 | 85.613 | 14.896 |
| 42 | 86.238 | 14.896 |
| 43 | 86.832 | 14.179 |
| 44 | 87.356 | 12.485 |
| 45 | 87.877 | 12.414 |
| 46 | 88.398 | 12.414 |
| 47 | 88.864 | 11.100 |
| 48 | 89.255 | 9.320 |
| 49 | 89.645 | 9.310 |
| 50 | 90.036 | 9.308 |
| 51 | 90.411 | 8.952 |
| 52 | 90.776 | 8.690 |
| 53 | 91.141 | 8.690 |
| 54 | 91.504 | 8.654 |
| 55 | 91.831 | 7.807 |
| 56 | 92.144 | 7.448 |
| 57 | 92.456 | 7.448 |
| 58 | 92.767 | 7.399 |
| 59 | 93.058 | 6.939 |
| 60 | 93.344 | 6.828 |
| 61 | 93.631 | 6.828 |
| 62 | 93.907 | 6.584 |
| 63 | 94.135 | 5.426 |
| 64 | 94.356 | 5.276 |
| 65 | 94.577 | 5.276 |
| 66 | 94.799 | 5.276 |
| 67 | 95.020 | 5.276 |
| 68 | 95.241 | 5.276 |
| 69 | 95.463 | 5.276 |
| 70 | 95.664 | 4.795 |
| 71 | 95.834 | 4.043 |
| 72 | 96.003 | 4.034 |

| | | |
|---|---|---|
| 73 | 96.172 | 4.034 |
| 74 | 96.341 | 4.034 |
| 75 | 96.511 | 4.034 |
| 76 | 96.680 | 4.034 |
| 77 | 96.848 | 4.010 |
| 78 | 96.982 | 3.190 |
| 79 | 97.099 | 2.793 |
| 80 | 97.216 | 2.793 |
| 81 | 97.334 | 2.793 |
| 82 | 97.451 | 2.793 |
| 83 | 97.568 | 2.793 |
| 84 | 97.685 | 2.793 |
| 85 | 97.795 | 2.625 |
| 86 | 97.866 | 1.695 |
| 87 | 97.932 | 1.552 |
| 88 | 97.997 | 1.552 |
| 89 | 98.062 | 1.552 |
| 90 | 98.127 | 1.552 |
| 91 | 98.192 | 1.552 |
| 92 | 98.257 | 1.552 |
| 93 | 98.327 | 1.661 |
| 94 | 98.405 | 1.858 |
| 95 | 98.483 | 1.862 |
| 96 | 98.561 | 1.862 |
| 97 | 98.639 | 1.862 |
| 98 | 98.717 | 1.862 |
| 99 | 98.795 | 1.862 |
| 100 | 98.873 | 1.862 |
| 101 | 98.952 | 1.862 |
| 102 | 99.030 | 1.862 |
| 103 | 99.108 | 1.862 |
| 104 | 99.186 | 1.862 |
| 105 | 99.264 | 1.862 |
| 106 | 99.342 | 1.862 |
| 107 | 99.420 | 1.862 |
| 108 | 99.494 | 1.759 |
| 109 | 99.540 | 1.090 |
| 110 | 99.581 | 0.970 |
| 111 | 99.621 | 0.970 |
| 112 | 99.662 | 0.970 |
| 113 | 99.703 | 0.970 |
| 114 | 99.743 | 0.970 |
| 115 | 99.784 | 0.970 |
| 116 | 99.825 | 0.970 |
| 117 | 99.865 | 0.970 |
| 118 | 99.906 | 0.970 |
| 119 | 99.947 | 0.970 |
| 120 | 100.000 | 0.485 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5971 | 0.5971 |
| 2 | 0.7351 | 0.1380 |
| 3 | 0.8301 | 0.0951 |
| 4 | 0.9050 | 0.0748 |
| 5 | 0.9676 | 0.0627 |
| 6 | 1.0220 | 0.0544 |
| 7 | 1.0704 | 0.0484 |
| 8 | 1.1142 | 0.0438 |

| | | |
|---|---|---|
| 9 | 1.1542 | 0.0401 |
| 10 | 1.1913 | 0.0371 |
| 11 | 1.2258 | 0.0346 |
| 12 | 1.2583 | 0.0324 |
| 13 | 1.2797 | 0.0215 |
| 14 | 1.2999 | 0.0202 |
| 15 | 1.3190 | 0.0191 |
| 16 | 1.3371 | 0.0181 |
| 17 | 1.3543 | 0.0172 |
| 18 | 1.3708 | 0.0165 |
| 19 | 1.3865 | 0.0157 |
| 20 | 1.4017 | 0.0151 |
| 21 | 1.4162 | 0.0145 |
| 22 | 1.4302 | 0.0140 |
| 23 | 1.4437 | 0.0135 |
| 24 | 1.4567 | 0.0130 |
| 25 | 1.4693 | 0.0126 |
| 26 | 1.4815 | 0.0122 |
| 27 | 1.4934 | 0.0119 |
| 28 | 1.5049 | 0.0115 |
| 29 | 1.5161 | 0.0112 |
| 30 | 1.5270 | 0.0109 |
| 31 | 1.5376 | 0.0106 |
| 32 | 1.5480 | 0.0103 |
| 33 | 1.5581 | 0.0101 |
| 34 | 1.5679 | 0.0099 |
| 35 | 1.5776 | 0.0096 |
| 36 | 1.5870 | 0.0094 |
| 37 | 1.5959 | 0.0089 |
| 38 | 1.6046 | 0.0087 |
| 39 | 1.6132 | 0.0086 |
| 40 | 1.6216 | 0.0084 |
| 41 | 1.6298 | 0.0082 |
| 42 | 1.6378 | 0.0081 |
| 43 | 1.6457 | 0.0079 |
| 44 | 1.6535 | 0.0078 |
| 45 | 1.6611 | 0.0076 |
| 46 | 1.6686 | 0.0075 |
| 47 | 1.6760 | 0.0074 |
| 48 | 1.6832 | 0.0072 |
| 49 | 1.6903 | 0.0071 |
| 50 | 1.6973 | 0.0070 |
| 51 | 1.7042 | 0.0069 |
| 52 | 1.7110 | 0.0068 |
| 53 | 1.7177 | 0.0067 |
| 54 | 1.7243 | 0.0066 |
| 55 | 1.7308 | 0.0065 |
| 56 | 1.7372 | 0.0064 |
| 57 | 1.7435 | 0.0063 |
| 58 | 1.7497 | 0.0062 |
| 59 | 1.7558 | 0.0061 |
| 60 | 1.7619 | 0.0061 |
| 61 | 1.7679 | 0.0060 |
| 62 | 1.7737 | 0.0059 |
| 63 | 1.7796 | 0.0058 |
| 64 | 1.7853 | 0.0057 |
| 65 | 1.7910 | 0.0057 |
| 66 | 1.7966 | 0.0056 |
| 67 | 1.8021 | 0.0055 |

| | | |
|---|---|---|
| 68 | 1.8076 | 0.0055 |
| 69 | 1.8130 | 0.0054 |
| 70 | 1.8184 | 0.0053 |
| 71 | 1.8236 | 0.0053 |
| 72 | 1.8289 | 0.0052 |
| 73 | 1.8340 | 0.0052 |
| 74 | 1.8392 | 0.0051 |
| 75 | 1.8442 | 0.0051 |
| 76 | 1.8492 | 0.0050 |
| 77 | 1.8542 | 0.0050 |
| 78 | 1.8591 | 0.0049 |
| 79 | 1.8640 | 0.0049 |
| 80 | 1.8688 | 0.0048 |
| 81 | 1.8735 | 0.0048 |
| 82 | 1.8782 | 0.0047 |
| 83 | 1.8829 | 0.0047 |
| 84 | 1.8875 | 0.0046 |
| 85 | 1.8921 | 0.0046 |
| 86 | 1.8967 | 0.0045 |
| 87 | 1.9012 | 0.0045 |
| 88 | 1.9056 | 0.0045 |
| 89 | 1.9100 | 0.0044 |
| 90 | 1.9144 | 0.0044 |
| 91 | 1.9187 | 0.0043 |
| 92 | 1.9230 | 0.0043 |
| 93 | 1.9273 | 0.0043 |
| 94 | 1.9315 | 0.0042 |
| 95 | 1.9357 | 0.0042 |
| 96 | 1.9399 | 0.0042 |
| 97 | 1.9440 | 0.0041 |
| 98 | 1.9481 | 0.0041 |
| 99 | 1.9521 | 0.0041 |
| 100 | 1.9562 | 0.0040 |
| 101 | 1.9602 | 0.0040 |
| 102 | 1.9641 | 0.0040 |
| 103 | 1.9680 | 0.0039 |
| 104 | 1.9719 | 0.0039 |
| 105 | 1.9758 | 0.0039 |
| 106 | 1.9796 | 0.0038 |
| 107 | 1.9835 | 0.0038 |
| 108 | 1.9872 | 0.0038 |
| 109 | 1.9910 | 0.0038 |
| 110 | 1.9947 | 0.0037 |
| 111 | 1.9984 | 0.0037 |
| 112 | 2.0021 | 0.0037 |
| 113 | 2.0058 | 0.0036 |
| 114 | 2.0094 | 0.0036 |
| 115 | 2.0130 | 0.0036 |
| 116 | 2.0165 | 0.0036 |
| 117 | 2.0201 | 0.0035 |
| 118 | 2.0236 | 0.0035 |
| 119 | 2.0271 | 0.0035 |
| 120 | 2.0306 | 0.0035 |
| 121 | 2.0340 | 0.0035 |
| 122 | 2.0375 | 0.0034 |
| 123 | 2.0409 | 0.0034 |
| 124 | 2.0443 | 0.0034 |
| 125 | 2.0476 | 0.0034 |
| 126 | 2.0510 | 0.0033 |

| | | |
|---|---|---|
| 127 | 2.0543 | 0.0033 |
| 128 | 2.0576 | 0.0033 |
| 129 | 2.0609 | 0.0033 |
| 130 | 2.0642 | 0.0033 |
| 131 | 2.0674 | 0.0032 |
| 132 | 2.0706 | 0.0032 |
| 133 | 2.0738 | 0.0032 |
| 134 | 2.0770 | 0.0032 |
| 135 | 2.0802 | 0.0032 |
| 136 | 2.0833 | 0.0031 |
| 137 | 2.0865 | 0.0031 |
| 138 | 2.0896 | 0.0031 |
| 139 | 2.0927 | 0.0031 |
| 140 | 2.0957 | 0.0031 |
| 141 | 2.0988 | 0.0031 |
| 142 | 2.1018 | 0.0030 |
| 143 | 2.1049 | 0.0030 |
| 144 | 2.1079 | 0.0030 |
| 145 | 2.1108 | 0.0030 |
| 146 | 2.1138 | 0.0030 |
| 147 | 2.1168 | 0.0030 |
| 148 | 2.1197 | 0.0029 |
| 149 | 2.1226 | 0.0029 |
| 150 | 2.1256 | 0.0029 |
| 151 | 2.1285 | 0.0029 |
| 152 | 2.1313 | 0.0029 |
| 153 | 2.1342 | 0.0029 |
| 154 | 2.1370 | 0.0028 |
| 155 | 2.1399 | 0.0028 |
| 156 | 2.1427 | 0.0028 |
| 157 | 2.1455 | 0.0028 |
| 158 | 2.1483 | 0.0028 |
| 159 | 2.1511 | 0.0028 |
| 160 | 2.1538 | 0.0028 |
| 161 | 2.1566 | 0.0028 |
| 162 | 2.1593 | 0.0027 |
| 163 | 2.1621 | 0.0027 |
| 164 | 2.1648 | 0.0027 |
| 165 | 2.1675 | 0.0027 |
| 166 | 2.1701 | 0.0027 |
| 167 | 2.1728 | 0.0027 |
| 168 | 2.1755 | 0.0027 |
| 169 | 2.1781 | 0.0026 |
| 170 | 2.1808 | 0.0026 |
| 171 | 2.1834 | 0.0026 |
| 172 | 2.1860 | 0.0026 |
| 173 | 2.1886 | 0.0026 |
| 174 | 2.1912 | 0.0026 |
| 175 | 2.1937 | 0.0026 |
| 176 | 2.1963 | 0.0026 |
| 177 | 2.1989 | 0.0026 |
| 178 | 2.2014 | 0.0025 |
| 179 | 2.2039 | 0.0025 |
| 180 | 2.2064 | 0.0025 |
| 181 | 2.2089 | 0.0025 |
| 182 | 2.2114 | 0.0025 |
| 183 | 2.2139 | 0.0025 |
| 184 | 2.2164 | 0.0025 |
| 185 | 2.2189 | 0.0025 |

| | | |
|---|---|---|
| 186 | 2.2213 | 0.0025 |
| 187 | 2.2237 | 0.0024 |
| 188 | 2.2262 | 0.0024 |
| 189 | 2.2286 | 0.0024 |
| 190 | 2.2310 | 0.0024 |
| 191 | 2.2334 | 0.0024 |
| 192 | 2.2358 | 0.0024 |
| 193 | 2.2382 | 0.0024 |
| 194 | 2.2405 | 0.0024 |
| 195 | 2.2429 | 0.0024 |
| 196 | 2.2453 | 0.0024 |
| 197 | 2.2476 | 0.0023 |
| 198 | 2.2499 | 0.0023 |
| 199 | 2.2523 | 0.0023 |
| 200 | 2.2546 | 0.0023 |
| 201 | 2.2569 | 0.0023 |
| 202 | 2.2592 | 0.0023 |
| 203 | 2.2615 | 0.0023 |
| 204 | 2.2637 | 0.0023 |
| 205 | 2.2660 | 0.0023 |
| 206 | 2.2683 | 0.0023 |
| 207 | 2.2705 | 0.0023 |
| 208 | 2.2728 | 0.0022 |
| 209 | 2.2750 | 0.0022 |
| 210 | 2.2772 | 0.0022 |
| 211 | 2.2794 | 0.0022 |
| 212 | 2.2816 | 0.0022 |
| 213 | 2.2838 | 0.0022 |
| 214 | 2.2860 | 0.0022 |
| 215 | 2.2882 | 0.0022 |
| 216 | 2.2904 | 0.0022 |
| 217 | 2.2926 | 0.0022 |
| 218 | 2.2947 | 0.0022 |
| 219 | 2.2969 | 0.0022 |
| 220 | 2.2990 | 0.0021 |
| 221 | 2.3011 | 0.0021 |
| 222 | 2.3033 | 0.0021 |
| 223 | 2.3054 | 0.0021 |
| 224 | 2.3075 | 0.0021 |
| 225 | 2.3096 | 0.0021 |
| 226 | 2.3117 | 0.0021 |
| 227 | 2.3138 | 0.0021 |
| 228 | 2.3159 | 0.0021 |
| 229 | 2.3180 | 0.0021 |
| 230 | 2.3200 | 0.0021 |
| 231 | 2.3221 | 0.0021 |
| 232 | 2.3242 | 0.0021 |
| 233 | 2.3262 | 0.0020 |
| 234 | 2.3282 | 0.0020 |
| 235 | 2.3303 | 0.0020 |
| 236 | 2.3323 | 0.0020 |
| 237 | 2.3343 | 0.0020 |
| 238 | 2.3363 | 0.0020 |
| 239 | 2.3384 | 0.0020 |
| 240 | 2.3404 | 0.0020 |
| 241 | 2.3423 | 0.0020 |
| 242 | 2.3443 | 0.0020 |
| 243 | 2.3463 | 0.0020 |
| 244 | 2.3483 | 0.0020 |

| | | |
|---|---|---|
| 245 | 2.3503 | 0.0020 |
| 246 | 2.3522 | 0.0020 |
| 247 | 2.3542 | 0.0020 |
| 248 | 2.3561 | 0.0019 |
| 249 | 2.3581 | 0.0019 |
| 250 | 2.3600 | 0.0019 |
| 251 | 2.3619 | 0.0019 |
| 252 | 2.3639 | 0.0019 |
| 253 | 2.3658 | 0.0019 |
| 254 | 2.3677 | 0.0019 |
| 255 | 2.3696 | 0.0019 |
| 256 | 2.3715 | 0.0019 |
| 257 | 2.3734 | 0.0019 |
| 258 | 2.3753 | 0.0019 |
| 259 | 2.3772 | 0.0019 |
| 260 | 2.3790 | 0.0019 |
| 261 | 2.3809 | 0.0019 |
| 262 | 2.3828 | 0.0019 |
| 263 | 2.3846 | 0.0019 |
| 264 | 2.3865 | 0.0019 |
| 265 | 2.3883 | 0.0018 |
| 266 | 2.3902 | 0.0018 |
| 267 | 2.3920 | 0.0018 |
| 268 | 2.3939 | 0.0018 |
| 269 | 2.3957 | 0.0018 |
| 270 | 2.3975 | 0.0018 |
| 271 | 2.3993 | 0.0018 |
| 272 | 2.4011 | 0.0018 |
| 273 | 2.4029 | 0.0018 |
| 274 | 2.4047 | 0.0018 |
| 275 | 2.4065 | 0.0018 |
| 276 | 2.4083 | 0.0018 |
| 277 | 2.4101 | 0.0018 |
| 278 | 2.4119 | 0.0018 |
| 279 | 2.4137 | 0.0018 |
| 280 | 2.4154 | 0.0018 |
| 281 | 2.4172 | 0.0018 |
| 282 | 2.4189 | 0.0018 |
| 283 | 2.4207 | 0.0018 |
| 284 | 2.4225 | 0.0017 |
| 285 | 2.4242 | 0.0017 |
| 286 | 2.4259 | 0.0017 |
| 287 | 2.4277 | 0.0017 |
| 288 | 2.4294 | 0.0017 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0017 | 0.0007 | 0.0011 |
| 2 | 0.0017 | 0.0007 | 0.0011 |
| 3 | 0.0017 | 0.0007 | 0.0011 |
| 4 | 0.0017 | 0.0007 | 0.0011 |
| 5 | 0.0018 | 0.0007 | 0.0011 |
| 6 | 0.0018 | 0.0007 | 0.0011 |
| 7 | 0.0018 | 0.0007 | 0.0011 |
| 8 | 0.0018 | 0.0007 | 0.0011 |
| 9 | 0.0018 | 0.0007 | 0.0011 |
| 10 | 0.0018 | 0.0007 | 0.0011 |

| | | | |
|---|---|---|---|
| 11 | 0.0018 | 0.0007 | 0.0011 |
| 12 | 0.0018 | 0.0007 | 0.0011 |
| 13 | 0.0018 | 0.0007 | 0.0011 |
| 14 | 0.0018 | 0.0007 | 0.0011 |
| 15 | 0.0018 | 0.0007 | 0.0011 |
| 16 | 0.0018 | 0.0007 | 0.0011 |
| 17 | 0.0019 | 0.0007 | 0.0012 |
| 18 | 0.0019 | 0.0007 | 0.0012 |
| 19 | 0.0019 | 0.0007 | 0.0012 |
| 20 | 0.0019 | 0.0007 | 0.0012 |
| 21 | 0.0019 | 0.0007 | 0.0012 |
| 22 | 0.0019 | 0.0007 | 0.0012 |
| 23 | 0.0019 | 0.0007 | 0.0012 |
| 24 | 0.0019 | 0.0007 | 0.0012 |
| 25 | 0.0019 | 0.0007 | 0.0012 |
| 26 | 0.0019 | 0.0007 | 0.0012 |
| 27 | 0.0019 | 0.0007 | 0.0012 |
| 28 | 0.0019 | 0.0007 | 0.0012 |
| 29 | 0.0020 | 0.0007 | 0.0012 |
| 30 | 0.0020 | 0.0007 | 0.0012 |
| 31 | 0.0020 | 0.0007 | 0.0012 |
| 32 | 0.0020 | 0.0008 | 0.0012 |
| 33 | 0.0020 | 0.0008 | 0.0012 |
| 34 | 0.0020 | 0.0008 | 0.0012 |
| 35 | 0.0020 | 0.0008 | 0.0013 |
| 36 | 0.0020 | 0.0008 | 0.0013 |
| 37 | 0.0020 | 0.0008 | 0.0013 |
| 38 | 0.0020 | 0.0008 | 0.0013 |
| 39 | 0.0021 | 0.0008 | 0.0013 |
| 40 | 0.0021 | 0.0008 | 0.0013 |
| 41 | 0.0021 | 0.0008 | 0.0013 |
| 42 | 0.0021 | 0.0008 | 0.0013 |
| 43 | 0.0021 | 0.0008 | 0.0013 |
| 44 | 0.0021 | 0.0008 | 0.0013 |
| 45 | 0.0021 | 0.0008 | 0.0013 |
| 46 | 0.0021 | 0.0008 | 0.0013 |
| 47 | 0.0022 | 0.0008 | 0.0013 |
| 48 | 0.0022 | 0.0008 | 0.0013 |
| 49 | 0.0022 | 0.0008 | 0.0014 |
| 50 | 0.0022 | 0.0008 | 0.0014 |
| 51 | 0.0022 | 0.0008 | 0.0014 |
| 52 | 0.0022 | 0.0008 | 0.0014 |
| 53 | 0.0022 | 0.0008 | 0.0014 |
| 54 | 0.0022 | 0.0008 | 0.0014 |
| 55 | 0.0023 | 0.0009 | 0.0014 |
| 56 | 0.0023 | 0.0009 | 0.0014 |
| 57 | 0.0023 | 0.0009 | 0.0014 |
| 58 | 0.0023 | 0.0009 | 0.0014 |
| 59 | 0.0023 | 0.0009 | 0.0014 |
| 60 | 0.0023 | 0.0009 | 0.0014 |
| 61 | 0.0023 | 0.0009 | 0.0015 |
| 62 | 0.0023 | 0.0009 | 0.0015 |
| 63 | 0.0024 | 0.0009 | 0.0015 |
| 64 | 0.0024 | 0.0009 | 0.0015 |
| 65 | 0.0024 | 0.0009 | 0.0015 |
| 66 | 0.0024 | 0.0009 | 0.0015 |
| 67 | 0.0024 | 0.0009 | 0.0015 |
| 68 | 0.0024 | 0.0009 | 0.0015 |
| 69 | 0.0025 | 0.0009 | 0.0015 |

| | | | |
|---|---|---|---|
| 70 | 0.0025 | 0.0009 | 0.0015 |
| 71 | 0.0025 | 0.0009 | 0.0015 |
| 72 | 0.0025 | 0.0009 | 0.0016 |
| 73 | 0.0025 | 0.0010 | 0.0016 |
| 74 | 0.0025 | 0.0010 | 0.0016 |
| 75 | 0.0026 | 0.0010 | 0.0016 |
| 76 | 0.0026 | 0.0010 | 0.0016 |
| 77 | 0.0026 | 0.0010 | 0.0016 |
| 78 | 0.0026 | 0.0010 | 0.0016 |
| 79 | 0.0026 | 0.0010 | 0.0016 |
| 80 | 0.0026 | 0.0010 | 0.0016 |
| 81 | 0.0027 | 0.0010 | 0.0017 |
| 82 | 0.0027 | 0.0010 | 0.0017 |
| 83 | 0.0027 | 0.0010 | 0.0017 |
| 84 | 0.0027 | 0.0010 | 0.0017 |
| 85 | 0.0027 | 0.0010 | 0.0017 |
| 86 | 0.0028 | 0.0010 | 0.0017 |
| 87 | 0.0028 | 0.0011 | 0.0017 |
| 88 | 0.0028 | 0.0011 | 0.0017 |
| 89 | 0.0028 | 0.0011 | 0.0018 |
| 90 | 0.0028 | 0.0011 | 0.0018 |
| 91 | 0.0029 | 0.0011 | 0.0018 |
| 92 | 0.0029 | 0.0011 | 0.0018 |
| 93 | 0.0029 | 0.0011 | 0.0018 |
| 94 | 0.0029 | 0.0011 | 0.0018 |
| 95 | 0.0030 | 0.0011 | 0.0018 |
| 96 | 0.0030 | 0.0011 | 0.0018 |
| 97 | 0.0030 | 0.0011 | 0.0019 |
| 98 | 0.0030 | 0.0011 | 0.0019 |
| 99 | 0.0031 | 0.0012 | 0.0019 |
| 100 | 0.0031 | 0.0012 | 0.0019 |
| 101 | 0.0031 | 0.0012 | 0.0019 |
| 102 | 0.0031 | 0.0012 | 0.0019 |
| 103 | 0.0032 | 0.0012 | 0.0020 |
| 104 | 0.0032 | 0.0012 | 0.0020 |
| 105 | 0.0032 | 0.0012 | 0.0020 |
| 106 | 0.0032 | 0.0012 | 0.0020 |
| 107 | 0.0033 | 0.0012 | 0.0020 |
| 108 | 0.0033 | 0.0012 | 0.0021 |
| 109 | 0.0033 | 0.0013 | 0.0021 |
| 110 | 0.0034 | 0.0013 | 0.0021 |
| 111 | 0.0034 | 0.0013 | 0.0021 |
| 112 | 0.0034 | 0.0013 | 0.0021 |
| 113 | 0.0035 | 0.0013 | 0.0022 |
| 114 | 0.0035 | 0.0013 | 0.0022 |
| 115 | 0.0035 | 0.0013 | 0.0022 |
| 116 | 0.0036 | 0.0014 | 0.0022 |
| 117 | 0.0036 | 0.0014 | 0.0023 |
| 118 | 0.0036 | 0.0014 | 0.0023 |
| 119 | 0.0037 | 0.0014 | 0.0023 |
| 120 | 0.0037 | 0.0014 | 0.0023 |
| 121 | 0.0038 | 0.0014 | 0.0024 |
| 122 | 0.0038 | 0.0014 | 0.0024 |
| 123 | 0.0039 | 0.0015 | 0.0024 |
| 124 | 0.0039 | 0.0015 | 0.0024 |
| 125 | 0.0040 | 0.0015 | 0.0025 |
| 126 | 0.0040 | 0.0015 | 0.0025 |
| 127 | 0.0041 | 0.0015 | 0.0025 |
| 128 | 0.0041 | 0.0015 | 0.0025 |

| | | | |
|---|---|---|---|
| 129 | 0.0042 | 0.0016 | 0.0026 |
| 130 | 0.0042 | 0.0016 | 0.0026 |
| 131 | 0.0043 | 0.0016 | 0.0027 |
| 132 | 0.0043 | 0.0016 | 0.0027 |
| 133 | 0.0044 | 0.0017 | 0.0027 |
| 134 | 0.0044 | 0.0017 | 0.0027 |
| 135 | 0.0045 | 0.0017 | 0.0028 |
| 136 | 0.0045 | 0.0017 | 0.0028 |
| 137 | 0.0046 | 0.0017 | 0.0029 |
| 138 | 0.0047 | 0.0018 | 0.0029 |
| 139 | 0.0048 | 0.0018 | 0.0030 |
| 140 | 0.0048 | 0.0018 | 0.0030 |
| 141 | 0.0049 | 0.0019 | 0.0031 |
| 142 | 0.0050 | 0.0019 | 0.0031 |
| 143 | 0.0051 | 0.0019 | 0.0031 |
| 144 | 0.0051 | 0.0019 | 0.0032 |
| 145 | 0.0052 | 0.0020 | 0.0033 |
| 146 | 0.0053 | 0.0020 | 0.0033 |
| 147 | 0.0054 | 0.0020 | 0.0034 |
| 148 | 0.0055 | 0.0021 | 0.0034 |
| 149 | 0.0056 | 0.0021 | 0.0035 |
| 150 | 0.0057 | 0.0021 | 0.0035 |
| 151 | 0.0058 | 0.0022 | 0.0036 |
| 152 | 0.0059 | 0.0022 | 0.0037 |
| 153 | 0.0061 | 0.0023 | 0.0038 |
| 154 | 0.0061 | 0.0023 | 0.0038 |
| 155 | 0.0063 | 0.0024 | 0.0039 |
| 156 | 0.0064 | 0.0024 | 0.0040 |
| 157 | 0.0066 | 0.0025 | 0.0041 |
| 158 | 0.0067 | 0.0025 | 0.0042 |
| 159 | 0.0069 | 0.0026 | 0.0043 |
| 160 | 0.0070 | 0.0026 | 0.0044 |
| 161 | 0.0072 | 0.0027 | 0.0045 |
| 162 | 0.0074 | 0.0028 | 0.0046 |
| 163 | 0.0076 | 0.0029 | 0.0047 |
| 164 | 0.0078 | 0.0029 | 0.0048 |
| 165 | 0.0081 | 0.0030 | 0.0050 |
| 166 | 0.0082 | 0.0031 | 0.0051 |
| 167 | 0.0086 | 0.0032 | 0.0053 |
| 168 | 0.0087 | 0.0033 | 0.0054 |
| 169 | 0.0094 | 0.0036 | 0.0059 |
| 170 | 0.0096 | 0.0036 | 0.0060 |
| 171 | 0.0101 | 0.0038 | 0.0063 |
| 172 | 0.0103 | 0.0039 | 0.0064 |
| 173 | 0.0109 | 0.0041 | 0.0068 |
| 174 | 0.0112 | 0.0042 | 0.0070 |
| 175 | 0.0119 | 0.0045 | 0.0074 |
| 176 | 0.0122 | 0.0046 | 0.0076 |
| 177 | 0.0130 | 0.0049 | 0.0081 |
| 178 | 0.0135 | 0.0051 | 0.0084 |
| 179 | 0.0145 | 0.0055 | 0.0090 |
| 180 | 0.0151 | 0.0057 | 0.0094 |
| 181 | 0.0165 | 0.0062 | 0.0102 |
| 182 | 0.0172 | 0.0065 | 0.0107 |
| 183 | 0.0191 | 0.0072 | 0.0119 |
| 184 | 0.0202 | 0.0076 | 0.0126 |
| 185 | 0.0324 | 0.0123 | 0.0202 |
| 186 | 0.0346 | 0.0131 | 0.0215 |
| 187 | 0.0401 | 0.0150 | 0.0251 |

| | | | |
|---|---|---|---|
| 188 | 0.0438 | 0.0150 | 0.0288 |
| 189 | 0.0544 | 0.0150 | 0.0394 |
| 190 | 0.0627 | 0.0150 | 0.0477 |
| 191 | 0.0951 | 0.0150 | 0.0801 |
| 192 | 0.1380 | 0.0150 | 0.1230 |
| 193 | 0.5971 | 0.0150 | 0.5821 |
| 194 | 0.0748 | 0.0150 | 0.0599 |
| 195 | 0.0484 | 0.0150 | 0.0334 |
| 196 | 0.0371 | 0.0140 | 0.0231 |
| 197 | 0.0215 | 0.0081 | 0.0133 |
| 198 | 0.0181 | 0.0068 | 0.0113 |
| 199 | 0.0157 | 0.0060 | 0.0098 |
| 200 | 0.0140 | 0.0053 | 0.0087 |
| 201 | 0.0126 | 0.0048 | 0.0078 |
| 202 | 0.0115 | 0.0044 | 0.0072 |
| 203 | 0.0106 | 0.0040 | 0.0066 |
| 204 | 0.0099 | 0.0037 | 0.0061 |
| 205 | 0.0089 | 0.0034 | 0.0056 |
| 206 | 0.0084 | 0.0032 | 0.0052 |
| 207 | 0.0079 | 0.0030 | 0.0049 |
| 208 | 0.0075 | 0.0028 | 0.0047 |
| 209 | 0.0071 | 0.0027 | 0.0044 |
| 210 | 0.0068 | 0.0026 | 0.0042 |
| 211 | 0.0065 | 0.0025 | 0.0040 |
| 212 | 0.0062 | 0.0024 | 0.0039 |
| 213 | 0.0060 | 0.0023 | 0.0037 |
| 214 | 0.0057 | 0.0022 | 0.0036 |
| 215 | 0.0055 | 0.0021 | 0.0034 |
| 216 | 0.0053 | 0.0020 | 0.0033 |
| 217 | 0.0052 | 0.0020 | 0.0032 |
| 218 | 0.0050 | 0.0019 | 0.0031 |
| 219 | 0.0049 | 0.0018 | 0.0030 |
| 220 | 0.0047 | 0.0018 | 0.0029 |
| 221 | 0.0046 | 0.0017 | 0.0028 |
| 222 | 0.0045 | 0.0017 | 0.0028 |
| 223 | 0.0043 | 0.0016 | 0.0027 |
| 224 | 0.0042 | 0.0016 | 0.0026 |
| 225 | 0.0041 | 0.0016 | 0.0026 |
| 226 | 0.0040 | 0.0015 | 0.0025 |
| 227 | 0.0039 | 0.0015 | 0.0024 |
| 228 | 0.0038 | 0.0015 | 0.0024 |
| 229 | 0.0038 | 0.0014 | 0.0023 |
| 230 | 0.0037 | 0.0014 | 0.0023 |
| 231 | 0.0036 | 0.0014 | 0.0022 |
| 232 | 0.0035 | 0.0013 | 0.0022 |
| 233 | 0.0035 | 0.0013 | 0.0021 |
| 234 | 0.0034 | 0.0013 | 0.0021 |
| 235 | 0.0033 | 0.0013 | 0.0021 |
| 236 | 0.0033 | 0.0012 | 0.0020 |
| 237 | 0.0032 | 0.0012 | 0.0020 |
| 238 | 0.0031 | 0.0012 | 0.0020 |
| 239 | 0.0031 | 0.0012 | 0.0019 |
| 240 | 0.0030 | 0.0011 | 0.0019 |
| 241 | 0.0030 | 0.0011 | 0.0019 |
| 242 | 0.0029 | 0.0011 | 0.0018 |
| 243 | 0.0029 | 0.0011 | 0.0018 |
| 244 | 0.0028 | 0.0011 | 0.0018 |
| 245 | 0.0028 | 0.0011 | 0.0017 |
| 246 | 0.0028 | 0.0010 | 0.0017 |

| | | | |
|---|---|---|---|
| 247 | 0.0027 | 0.0010 | 0.0017 |
| 248 | 0.0027 | 0.0010 | 0.0017 |
| 249 | 0.0026 | 0.0010 | 0.0016 |
| 250 | 0.0026 | 0.0010 | 0.0016 |
| 251 | 0.0026 | 0.0010 | 0.0016 |
| 252 | 0.0025 | 0.0010 | 0.0016 |
| 253 | 0.0025 | 0.0009 | 0.0016 |
| 254 | 0.0025 | 0.0009 | 0.0015 |
| 255 | 0.0024 | 0.0009 | 0.0015 |
| 256 | 0.0024 | 0.0009 | 0.0015 |
| 257 | 0.0024 | 0.0009 | 0.0015 |
| 258 | 0.0024 | 0.0009 | 0.0015 |
| 259 | 0.0023 | 0.0009 | 0.0014 |
| 260 | 0.0023 | 0.0009 | 0.0014 |
| 261 | 0.0023 | 0.0009 | 0.0014 |
| 262 | 0.0022 | 0.0008 | 0.0014 |
| 263 | 0.0022 | 0.0008 | 0.0014 |
| 264 | 0.0022 | 0.0008 | 0.0014 |
| 265 | 0.0022 | 0.0008 | 0.0013 |
| 266 | 0.0021 | 0.0008 | 0.0013 |
| 267 | 0.0021 | 0.0008 | 0.0013 |
| 268 | 0.0021 | 0.0008 | 0.0013 |
| 269 | 0.0021 | 0.0008 | 0.0013 |
| 270 | 0.0021 | 0.0008 | 0.0013 |
| 271 | 0.0020 | 0.0008 | 0.0013 |
| 272 | 0.0020 | 0.0008 | 0.0013 |
| 273 | 0.0020 | 0.0008 | 0.0012 |
| 274 | 0.0020 | 0.0007 | 0.0012 |
| 275 | 0.0020 | 0.0007 | 0.0012 |
| 276 | 0.0019 | 0.0007 | 0.0012 |
| 277 | 0.0019 | 0.0007 | 0.0012 |
| 278 | 0.0019 | 0.0007 | 0.0012 |
| 279 | 0.0019 | 0.0007 | 0.0012 |
| 280 | 0.0019 | 0.0007 | 0.0012 |
| 281 | 0.0018 | 0.0007 | 0.0011 |
| 282 | 0.0018 | 0.0007 | 0.0011 |
| 283 | 0.0018 | 0.0007 | 0.0011 |
| 284 | 0.0018 | 0.0007 | 0.0011 |
| 285 | 0.0018 | 0.0007 | 0.0011 |
| 286 | 0.0018 | 0.0007 | 0.0011 |
| 287 | 0.0018 | 0.0007 | 0.0011 |
| 288 | 0.0017 | 0.0007 | 0.0011 |

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Total soil rain loss = 0.62(In)
Total effective rainfall = 1.81(In)
Peak flow rate in flood hydrograph = 155.79(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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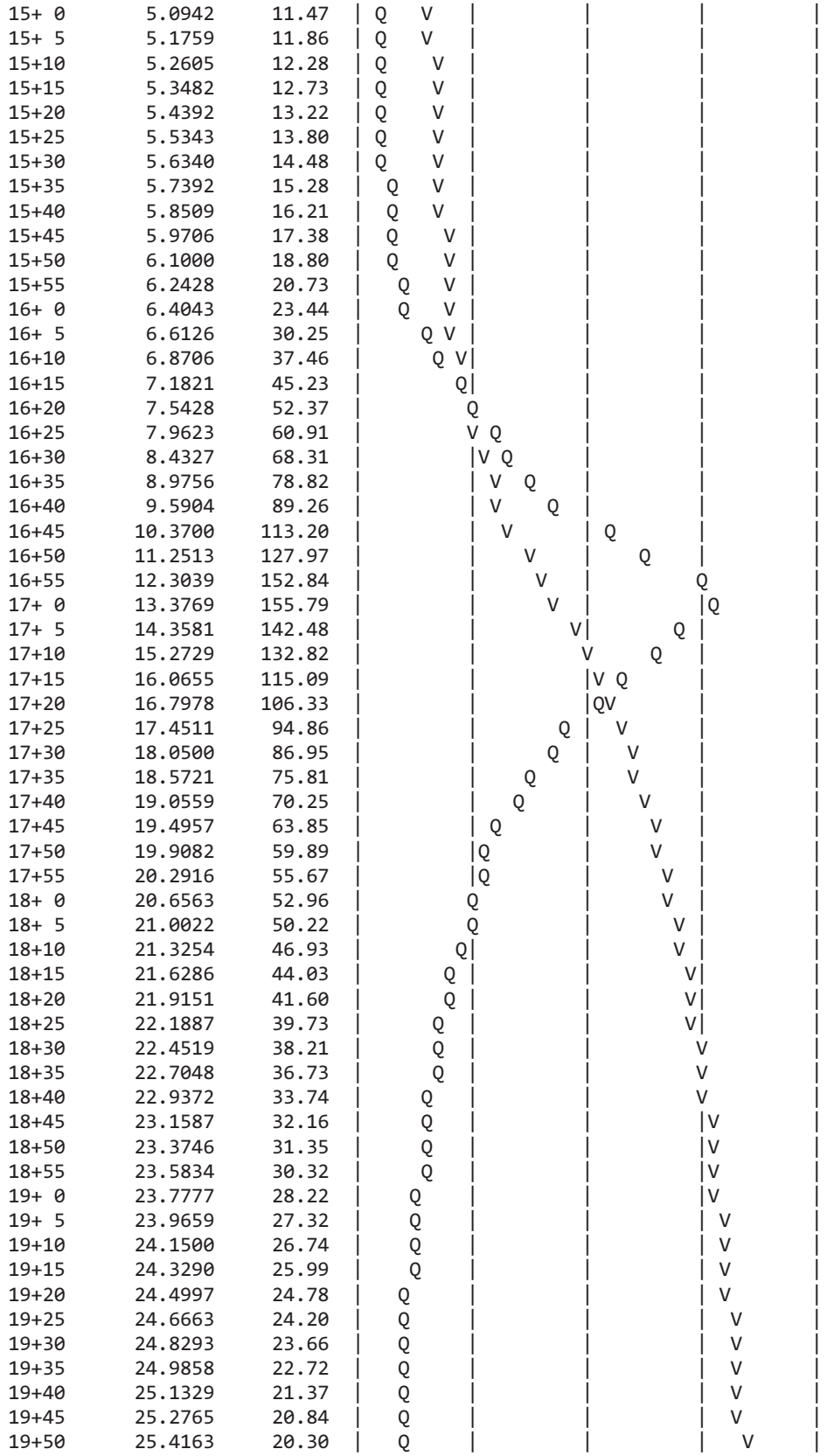
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 50.0 | 100.0 | 150.0 | 200.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+10 | 0.0002 | 0.02 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+15 | 0.0005 | 0.04 | Q | | | | |
| 0+20 | 0.0010 | 0.07 | Q | | | | |
| 0+25 | 0.0018 | 0.11 | Q | | | | |
| 0+30 | 0.0028 | 0.15 | Q | | | | |
| 0+35 | 0.0042 | 0.20 | Q | | | | |
| 0+40 | 0.0060 | 0.26 | Q | | | | |
| 0+45 | 0.0085 | 0.36 | Q | | | | |
| 0+50 | 0.0118 | 0.47 | Q | | | | |
| 0+55 | 0.0162 | 0.64 | Q | | | | |
| 1+ 0 | 0.0217 | 0.81 | Q | | | | |
| 1+ 5 | 0.0283 | 0.96 | Q | | | | |
| 1+10 | 0.0359 | 1.10 | Q | | | | |
| 1+15 | 0.0442 | 1.21 | Q | | | | |
| 1+20 | 0.0533 | 1.32 | Q | | | | |
| 1+25 | 0.0630 | 1.41 | Q | | | | |
| 1+30 | 0.0734 | 1.50 | Q | | | | |
| 1+35 | 0.0842 | 1.57 | Q | | | | |
| 1+40 | 0.0955 | 1.64 | Q | | | | |
| 1+45 | 0.1072 | 1.70 | Q | | | | |
| 1+50 | 0.1192 | 1.75 | Q | | | | |
| 1+55 | 0.1317 | 1.81 | Q | | | | |
| 2+ 0 | 0.1445 | 1.86 | Q | | | | |
| 2+ 5 | 0.1576 | 1.90 | Q | | | | |
| 2+10 | 0.1710 | 1.95 | Q | | | | |
| 2+15 | 0.1847 | 1.99 | Q | | | | |
| 2+20 | 0.1987 | 2.03 | Q | | | | |
| 2+25 | 0.2130 | 2.07 | Q | | | | |
| 2+30 | 0.2275 | 2.11 | Q | | | | |
| 2+35 | 0.2423 | 2.15 | Q | | | | |
| 2+40 | 0.2573 | 2.18 | Q | | | | |
| 2+45 | 0.2725 | 2.21 | Q | | | | |
| 2+50 | 0.2879 | 2.24 | Q | | | | |
| 2+55 | 0.3036 | 2.27 | Q | | | | |
| 3+ 0 | 0.3195 | 2.30 | Q | | | | |
| 3+ 5 | 0.3355 | 2.33 | Q | | | | |
| 3+10 | 0.3518 | 2.36 | Q | | | | |
| 3+15 | 0.3683 | 2.39 | Q | | | | |
| 3+20 | 0.3849 | 2.42 | Q | | | | |
| 3+25 | 0.4018 | 2.45 | Q | | | | |
| 3+30 | 0.4188 | 2.47 | Q | | | | |
| 3+35 | 0.4360 | 2.50 | Q | | | | |
| 3+40 | 0.4534 | 2.53 | Q | | | | |
| 3+45 | 0.4710 | 2.55 | Q | | | | |
| 3+50 | 0.4887 | 2.58 | Q | | | | |
| 3+55 | 0.5066 | 2.60 | Q | | | | |
| 4+ 0 | 0.5247 | 2.62 | Q | | | | |
| 4+ 5 | 0.5430 | 2.65 | Q | | | | |
| 4+10 | 0.5613 | 2.67 | Q | | | | |
| 4+15 | 0.5799 | 2.69 | Q | | | | |
| 4+20 | 0.5986 | 2.72 | Q | | | | |
| 4+25 | 0.6175 | 2.74 | Q | | | | |
| 4+30 | 0.6365 | 2.76 | Q | | | | |
| 4+35 | 0.6557 | 2.79 | Q | | | | |
| 4+40 | 0.6751 | 2.81 | Q | | | | |
| 4+45 | 0.6945 | 2.83 | Q | | | | |
| 4+50 | 0.7142 | 2.85 | Q | | | | |
| 4+55 | 0.7340 | 2.88 | Q | | | | |
| 5+ 0 | 0.7540 | 2.90 | QV | | | | |
| 5+ 5 | 0.7741 | 2.92 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+10 | 0.7944 | 2.94 | QV | | | | |
| 5+15 | 0.8148 | 2.97 | QV | | | | |
| 5+20 | 0.8354 | 2.99 | QV | | | | |
| 5+25 | 0.8561 | 3.01 | QV | | | | |
| 5+30 | 0.8770 | 3.03 | QV | | | | |
| 5+35 | 0.8981 | 3.06 | QV | | | | |
| 5+40 | 0.9192 | 3.08 | QV | | | | |
| 5+45 | 0.9406 | 3.10 | QV | | | | |
| 5+50 | 0.9621 | 3.12 | QV | | | | |
| 5+55 | 0.9838 | 3.15 | QV | | | | |
| 6+ 0 | 1.0056 | 3.17 | QV | | | | |
| 6+ 5 | 1.0276 | 3.19 | QV | | | | |
| 6+10 | 1.0497 | 3.21 | QV | | | | |
| 6+15 | 1.0720 | 3.24 | QV | | | | |
| 6+20 | 1.0944 | 3.26 | QV | | | | |
| 6+25 | 1.1171 | 3.28 | QV | | | | |
| 6+30 | 1.1398 | 3.31 | QV | | | | |
| 6+35 | 1.1628 | 3.33 | QV | | | | |
| 6+40 | 1.1859 | 3.35 | QV | | | | |
| 6+45 | 1.2091 | 3.38 | QV | | | | |
| 6+50 | 1.2325 | 3.40 | QV | | | | |
| 6+55 | 1.2561 | 3.42 | QV | | | | |
| 7+ 0 | 1.2799 | 3.45 | QV | | | | |
| 7+ 5 | 1.3038 | 3.47 | QV | | | | |
| 7+10 | 1.3279 | 3.50 | QV | | | | |
| 7+15 | 1.3521 | 3.52 | QV | | | | |
| 7+20 | 1.3766 | 3.55 | QV | | | | |
| 7+25 | 1.4011 | 3.57 | QV | | | | |
| 7+30 | 1.4259 | 3.60 | QV | | | | |
| 7+35 | 1.4509 | 3.62 | QV | | | | |
| 7+40 | 1.4760 | 3.65 | QV | | | | |
| 7+45 | 1.5013 | 3.67 | Q V | | | | |
| 7+50 | 1.5268 | 3.70 | Q V | | | | |
| 7+55 | 1.5524 | 3.73 | Q V | | | | |
| 8+ 0 | 1.5783 | 3.76 | Q V | | | | |
| 8+ 5 | 1.6044 | 3.78 | Q V | | | | |
| 8+10 | 1.6306 | 3.81 | Q V | | | | |
| 8+15 | 1.6571 | 3.84 | Q V | | | | |
| 8+20 | 1.6837 | 3.87 | Q V | | | | |
| 8+25 | 1.7106 | 3.90 | Q V | | | | |
| 8+30 | 1.7377 | 3.93 | Q V | | | | |
| 8+35 | 1.7650 | 3.96 | Q V | | | | |
| 8+40 | 1.7925 | 3.99 | Q V | | | | |
| 8+45 | 1.8202 | 4.03 | Q V | | | | |
| 8+50 | 1.8481 | 4.06 | Q V | | | | |
| 8+55 | 1.8763 | 4.09 | Q V | | | | |
| 9+ 0 | 1.9047 | 4.12 | Q V | | | | |
| 9+ 5 | 1.9334 | 4.16 | Q V | | | | |
| 9+10 | 1.9622 | 4.19 | Q V | | | | |
| 9+15 | 1.9913 | 4.23 | Q V | | | | |
| 9+20 | 2.0207 | 4.26 | Q V | | | | |
| 9+25 | 2.0503 | 4.30 | Q V | | | | |
| 9+30 | 2.0801 | 4.33 | Q V | | | | |
| 9+35 | 2.1102 | 4.37 | Q V | | | | |
| 9+40 | 2.1406 | 4.41 | Q V | | | | |
| 9+45 | 2.1712 | 4.45 | Q V | | | | |
| 9+50 | 2.2021 | 4.49 | Q V | | | | |
| 9+55 | 2.2333 | 4.53 | Q  V | | | | |
| 10+ 0 | 2.2647 | 4.57 | Q  V | | | | |

```
10+ 5       2.2964      4.61  Q  V      |          |          |          |
10+10       2.3284      4.65  Q  V      |          |          |          |
10+15       2.3607      4.69  Q  V      |          |          |          |
10+20       2.3933      4.73  Q  V      |          |          |          |
10+25       2.4262      4.78  Q  V      |          |          |          |
10+30       2.4594      4.82  Q  V      |          |          |          |
10+35       2.4929      4.87  Q  V      |          |          |          |
10+40       2.5268      4.91  Q  V      |          |          |          |
10+45       2.5609      4.96  Q  V      |          |          |          |
10+50       2.5954      5.01  |Q V      |          |          |          |
10+55       2.6303      5.06  |Q V      |          |          |          |
11+ 0       2.6655      5.11  |Q V      |          |          |          |
11+ 5       2.7011      5.17  |Q V      |          |          |          |
11+10       2.7370      5.22  |Q V      |          |          |          |
11+15       2.7734      5.27  |Q V      |          |          |          |
11+20       2.8101      5.33  |Q V      |          |          |          |
11+25       2.8472      5.39  |Q V      |          |          |          |
11+30       2.8847      5.45  |Q V      |          |          |          |
11+35       2.9226      5.51  |Q V      |          |          |          |
11+40       2.9610      5.57  |Q V      |          |          |          |
11+45       2.9998      5.64  |Q  V     |          |          |          |
11+50       3.0391      5.70  |Q  V     |          |          |          |
11+55       3.0788      5.77  |Q  V     |          |          |          |
12+ 0       3.1191      5.84  |Q  V     |          |          |          |
12+ 5       3.1598      5.91  |Q  V     |          |          |          |
12+10       3.2010      5.99  |Q  V     |          |          |          |
12+15       3.2428      6.06  |Q  V     |          |          |          |
12+20       3.2850      6.14  |Q  V     |          |          |          |
12+25       3.3279      6.22  |Q  V     |          |          |          |
12+30       3.3713      6.30  |Q  V     |          |          |          |
12+35       3.4153      6.39  |Q  V     |          |          |          |
12+40       3.4599      6.48  |Q  V     |          |          |          |
12+45       3.5052      6.57  |Q  V     |          |          |          |
12+50       3.5511      6.66  |Q  V     |          |          |          |
12+55       3.5976      6.76  |Q  V     |          |          |          |
13+ 0       3.6449      6.86  |Q  V     |          |          |          |
13+ 5       3.6929      6.97  |Q  V     |          |          |          |
13+10       3.7416      7.08  |Q   V    |          |          |          |
13+15       3.7912      7.19  |Q   V    |          |          |          |
13+20       3.8415      7.31  |Q   V    |          |          |          |
13+25       3.8927      7.43  |Q   V    |          |          |          |
13+30       3.9447      7.56  |Q   V    |          |          |          |
13+35       3.9976      7.69  |Q   V    |          |          |          |
13+40       4.0515      7.83  |Q   V    |          |          |          |
13+45       4.1064      7.97  |Q   V    |          |          |          |
13+50       4.1624      8.12  |Q   V    |          |          |          |
13+55       4.2194      8.28  |Q   V    |          |          |          |
14+ 0       4.2775      8.44  |Q   V    |          |          |          |
14+ 5       4.3369      8.62  |Q   V    |          |          |          |
14+10       4.3975      8.80  |Q   V    |          |          |          |
14+15       4.4595      9.00  |Q   V    |          |          |          |
14+20       4.5228      9.20  |Q    V   |          |          |          |
14+25       4.5878      9.42  |Q    V   |          |          |          |
14+30       4.6543      9.66  |Q    V   |          |          |          |
14+35       4.7225      9.91  |Q    V   |          |          |          |
14+40       4.7925     10.17  | Q   V   |          |          |          |
14+45       4.8645     10.46  | Q   V   |          |          |          |
14+50       4.9387     10.77  | Q   V   |          |          |          |
14+55       5.0152     11.11  | Q   V   |          |          |          |
```



| | | | |
|---|---|---|---|
| 15+ 0 | 5.0942 | 11.47 | Q V |
| 15+ 5 | 5.1759 | 11.86 | Q V |
| 15+10 | 5.2605 | 12.28 | Q V |
| 15+15 | 5.3482 | 12.73 | Q V |
| 15+20 | 5.4392 | 13.22 | Q V |
| 15+25 | 5.5343 | 13.80 | Q V |
| 15+30 | 5.6340 | 14.48 | Q V |
| 15+35 | 5.7392 | 15.28 | Q V |
| 15+40 | 5.8509 | 16.21 | Q V |
| 15+45 | 5.9706 | 17.38 | Q V |
| 15+50 | 6.1000 | 18.80 | Q V |
| 15+55 | 6.2428 | 20.73 | Q V |
| 16+ 0 | 6.4043 | 23.44 | Q V |
| 16+ 5 | 6.6126 | 30.25 | Q V |
| 16+10 | 6.8706 | 37.46 | Q V |
| 16+15 | 7.1821 | 45.23 | Q |
| 16+20 | 7.5428 | 52.37 | Q |
| 16+25 | 7.9623 | 60.91 | V Q |
| 16+30 | 8.4327 | 68.31 | V Q |
| 16+35 | 8.9756 | 78.82 | V Q |
| 16+40 | 9.5904 | 89.26 | V Q |
| 16+45 | 10.3700 | 113.20 | V Q |
| 16+50 | 11.2513 | 127.97 | V Q |
| 16+55 | 12.3039 | 152.84 | V Q |
| 17+ 0 | 13.3769 | 155.79 | V Q |
| 17+ 5 | 14.3581 | 142.48 | V Q |
| 17+10 | 15.2729 | 132.82 | V Q |
| 17+15 | 16.0655 | 115.09 | V Q |
| 17+20 | 16.7978 | 106.33 | QV |
| 17+25 | 17.4511 | 94.86 | Q V |
| 17+30 | 18.0500 | 86.95 | Q V |
| 17+35 | 18.5721 | 75.81 | Q V |
| 17+40 | 19.0559 | 70.25 | Q V |
| 17+45 | 19.4957 | 63.85 | Q V |
| 17+50 | 19.9082 | 59.89 | Q V |
| 17+55 | 20.2916 | 55.67 | Q V |
| 18+ 0 | 20.6563 | 52.96 | Q V |
| 18+ 5 | 21.0022 | 50.22 | Q V |
| 18+10 | 21.3254 | 46.93 | Q V |
| 18+15 | 21.6286 | 44.03 | Q V |
| 18+20 | 21.9151 | 41.60 | Q V |
| 18+25 | 22.1887 | 39.73 | Q V |
| 18+30 | 22.4519 | 38.21 | Q V |
| 18+35 | 22.7048 | 36.73 | Q V |
| 18+40 | 22.9372 | 33.74 | Q V |
| 18+45 | 23.1587 | 32.16 | Q V |
| 18+50 | 23.3746 | 31.35 | Q V |
| 18+55 | 23.5834 | 30.32 | Q V |
| 19+ 0 | 23.7777 | 28.22 | Q V |
| 19+ 5 | 23.9659 | 27.32 | Q V |
| 19+10 | 24.1500 | 26.74 | Q V |
| 19+15 | 24.3290 | 25.99 | Q V |
| 19+20 | 24.4997 | 24.78 | Q V |
| 19+25 | 24.6663 | 24.20 | Q V |
| 19+30 | 24.8293 | 23.66 | Q V |
| 19+35 | 24.9858 | 22.72 | Q V |
| 19+40 | 25.1329 | 21.37 | Q V |
| 19+45 | 25.2765 | 20.84 | Q V |
| 19+50 | 25.4163 | 20.30 | Q V |

```
19+55      25.5478     19.09  |  Q      |         |         |   V     |
20+ 0      25.6701     17.77  |  Q      |         |         |   V     |
20+ 5      25.7900     17.40  |  Q      |         |         |   V     |
20+10      25.9076     17.08  |  Q      |         |         |   V     |
20+15      26.0220     16.60  |  Q      |         |         |   V     |
20+20      26.1335     16.20  |  Q      |         |         |    V    |
20+25      26.2432     15.93  |  Q      |         |         |    V    |
20+30      26.3507     15.60  |  Q      |         |         |    V    |
20+35      26.4531     14.88  | Q       |         |         |    V    |
20+40      26.5526     14.44  | Q       |         |         |    V    |
20+45      26.6504     14.20  | Q       |         |         |    V    |
20+50      26.7463     13.92  | Q       |         |         |    V    |
20+55      26.8390     13.46  | Q       |         |         |     V   |
21+ 0      26.9297     13.17  | Q       |         |         |     V   |
21+ 5      27.0186     12.91  | Q       |         |         |     V   |
21+10      27.1046     12.49  | Q       |         |         |     V   |
21+15      27.1849     11.66  | Q       |         |         |     V   |
21+20      27.2633     11.38  | Q       |         |         |     V   |
21+25      27.3405     11.21  | Q       |         |         |     V   |
21+30      27.4167     11.05  | Q       |         |         |     V   |
21+35      27.4917     10.90  | Q       |         |         |     V   |
21+40      27.5656     10.73  | Q       |         |         |      V  |
21+45      27.6380     10.51  | Q       |         |         |      V  |
21+50      27.7072     10.04  | Q       |         |         |      V  |
21+55      27.7724      9.48  |Q        |         |         |      V  |
22+ 0      27.8366      9.31  |Q        |         |         |      V  |
22+ 5      27.8998      9.18  |Q        |         |         |      V  |
22+10      27.9621      9.04  |Q        |         |         |      V  |
22+15      28.0234      8.91  |Q        |         |         |      V  |
22+20      28.0836      8.74  |Q        |         |         |      V  |
22+25      28.1423      8.52  |Q        |         |         |      V  |
22+30      28.1968      7.92  |Q        |         |         |      V  |
22+35      28.2489      7.56  |Q        |         |         |      V  |
22+40      28.3000      7.42  |Q        |         |         |       V |
22+45      28.3503      7.31  |Q        |         |         |       V |
22+50      28.3998      7.19  |Q        |         |         |       V |
22+55      28.4485      7.07  |Q        |         |         |       V |
23+ 0      28.4961      6.91  |Q        |         |         |       V |
23+ 5      28.5418      6.64  |Q        |         |         |       V |
23+10      28.5832      6.02  |Q        |         |         |       V |
23+15      28.6234      5.83  |Q        |         |         |       V |
23+20      28.6629      5.74  |Q        |         |         |       V |
23+25      28.7020      5.68  |Q        |         |         |       V |
23+30      28.7408      5.62  |Q        |         |         |       V |
23+35      28.7792      5.58  |Q        |         |         |       V |
23+40      28.8174      5.55  |Q        |         |         |       V |
23+45      28.8559      5.58  |Q        |         |         |       V |
23+50      28.8948      5.65  |Q        |         |         |       V |
23+55      28.9335      5.62  |Q        |         |         |       V |
24+ 0      28.9719      5.57  |Q        |         |         |       V |
24+ 5      29.0099      5.52  |Q        |         |         |        V|
24+10      29.0475      5.46  |Q        |         |         |        V|
24+15      29.0847      5.39  |Q        |         |         |        V|
24+20      29.1213      5.32  |Q        |         |         |        V|
24+25      29.1573      5.23  |Q        |         |         |        V|
24+30      29.1926      5.13  |Q        |         |         |        V|
24+35      29.2272      5.03  |Q        |         |         |        V|
24+40      29.2610      4.91  Q        |         |         |        V|
24+45      29.2937      4.75  Q        |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24+50 | 29.3251 | 4.56 | Q | \| | \| | \| | V\| |
| 24+55 | 29.3547 | 4.30 | Q | \| | \| | \| | V\| |
| 25+ 0 | 29.3819 | 3.95 | Q | \| | \| | \| | V\| |
| 25+ 5 | 29.4051 | 3.37 | Q | \| | \| | \| | V\| |
| 25+10 | 29.4264 | 3.09 | Q | \| | \| | \| | V\| |
| 25+15 | 29.4465 | 2.92 | Q | \| | \| | \| | V\| |
| 25+20 | 29.4656 | 2.77 | Q | \| | \| | \| | V\| |
| 25+25 | 29.4838 | 2.64 | Q | \| | \| | \| | V\| |
| 25+30 | 29.5011 | 2.51 | Q | \| | \| | \| | V\| |
| 25+35 | 29.5176 | 2.40 | Q | \| | \| | \| | V\| |
| 25+40 | 29.5334 | 2.29 | Q | \| | \| | \| | V\| |
| 25+45 | 29.5485 | 2.19 | Q | \| | \| | \| | V\| |
| 25+50 | 29.5627 | 2.06 | Q | \| | \| | \| | V\| |
| 25+55 | 29.5758 | 1.91 | Q | \| | \| | \| | V\| |
| 26+ 0 | 29.5862 | 1.51 | Q | \| | \| | \| | V\| |
| 26+ 5 | 29.5941 | 1.15 | Q | \| | \| | \| | V\| |
| 26+10 | 29.6014 | 1.06 | Q | \| | \| | \| | V\| |
| 26+15 | 29.6082 | 0.99 | Q | \| | \| | \| | V\| |
| 26+20 | 29.6146 | 0.93 | Q | \| | \| | \| | V\| |
| 26+25 | 29.6207 | 0.88 | Q | \| | \| | \| | V\| |
| 26+30 | 29.6265 | 0.84 | Q | \| | \| | \| | V\| |
| 26+35 | 29.6319 | 0.79 | Q | \| | \| | \| | V\| |
| 26+40 | 29.6371 | 0.75 | Q | \| | \| | \| | V\| |
| 26+45 | 29.6421 | 0.72 | Q | \| | \| | \| | V\| |
| 26+50 | 29.6468 | 0.69 | Q | \| | \| | \| | V\| |
| 26+55 | 29.6513 | 0.65 | Q | \| | \| | \| | V\| |
| 27+ 0 | 29.6556 | 0.62 | Q | \| | \| | \| | V\| |
| 27+ 5 | 29.6597 | 0.60 | Q | \| | \| | \| | V\| |
| 27+10 | 29.6636 | 0.57 | Q | \| | \| | \| | V\| |
| 27+15 | 29.6674 | 0.54 | Q | \| | \| | \| | V\| |
| 27+20 | 29.6710 | 0.52 | Q | \| | \| | \| | V\| |
| 27+25 | 29.6744 | 0.50 | Q | \| | \| | \| | V\| |
| 27+30 | 29.6776 | 0.47 | Q | \| | \| | \| | V\| |
| 27+35 | 29.6807 | 0.45 | Q | \| | \| | \| | V\| |
| 27+40 | 29.6837 | 0.43 | Q | \| | \| | \| | V\| |
| 27+45 | 29.6866 | 0.41 | Q | \| | \| | \| | V\| |
| 27+50 | 29.6893 | 0.39 | Q | \| | \| | \| | V\| |
| 27+55 | 29.6919 | 0.38 | Q | \| | \| | \| | V\| |
| 28+ 0 | 29.6944 | 0.36 | Q | \| | \| | \| | V\| |
| 28+ 5 | 29.6967 | 0.35 | Q | \| | \| | \| | V\| |
| 28+10 | 29.6990 | 0.33 | Q | \| | \| | \| | V\| |
| 28+15 | 29.7012 | 0.32 | Q | \| | \| | \| | V\| |
| 28+20 | 29.7033 | 0.31 | Q | \| | \| | \| | V\| |
| 28+25 | 29.7054 | 0.29 | Q | \| | \| | \| | V\| |
| 28+30 | 29.7073 | 0.28 | Q | \| | \| | \| | V\| |
| 28+35 | 29.7091 | 0.27 | Q | \| | \| | \| | V\| |
| 28+40 | 29.7109 | 0.26 | Q | \| | \| | \| | V\| |
| 28+45 | 29.7126 | 0.25 | Q | \| | \| | \| | V\| |
| 28+50 | 29.7142 | 0.23 | Q | \| | \| | \| | V\| |
| 28+55 | 29.7157 | 0.22 | Q | \| | \| | \| | V\| |
| 29+ 0 | 29.7172 | 0.21 | Q | \| | \| | \| | V\| |
| 29+ 5 | 29.7186 | 0.20 | Q | \| | \| | \| | V\| |
| 29+10 | 29.7200 | 0.20 | Q | \| | \| | \| | V\| |
| 29+15 | 29.7213 | 0.19 | Q | \| | \| | \| | V\| |
| 29+20 | 29.7225 | 0.18 | Q | \| | \| | \| | V\| |
| 29+25 | 29.7237 | 0.17 | Q | \| | \| | \| | V\| |
| 29+30 | 29.7248 | 0.16 | Q | \| | \| | \| | V\| |
| 29+35 | 29.7259 | 0.16 | Q | \| | \| | \| | V\| |
| 29+40 | 29.7269 | 0.15 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 29+45 | 29.7279 | 0.14 | Q | \| | \| | \| | V\| |
| 29+50 | 29.7288 | 0.14 | Q | \| | \| | \| | V\| |
| 29+55 | 29.7297 | 0.13 | Q | \| | \| | \| | V\| |
| 30+ 0 | 29.7306 | 0.12 | Q | \| | \| | \| | V\| |
| 30+ 5 | 29.7314 | 0.12 | Q | \| | \| | \| | V\| |
| 30+10 | 29.7321 | 0.11 | Q | \| | \| | \| | V\| |
| 30+15 | 29.7329 | 0.11 | Q | \| | \| | \| | V\| |
| 30+20 | 29.7336 | 0.10 | Q | \| | \| | \| | V\| |
| 30+25 | 29.7342 | 0.10 | Q | \| | \| | \| | V\| |
| 30+30 | 29.7349 | 0.09 | Q | \| | \| | \| | V\| |
| 30+35 | 29.7355 | 0.09 | Q | \| | \| | \| | V\| |
| 30+40 | 29.7360 | 0.08 | Q | \| | \| | \| | V\| |
| 30+45 | 29.7366 | 0.08 | Q | \| | \| | \| | V\| |
| 30+50 | 29.7371 | 0.08 | Q | \| | \| | \| | V\| |
| 30+55 | 29.7376 | 0.07 | Q | \| | \| | \| | V\| |
| 31+ 0 | 29.7381 | 0.07 | Q | \| | \| | \| | V\| |
| 31+ 5 | 29.7385 | 0.06 | Q | \| | \| | \| | V\| |
| 31+10 | 29.7390 | 0.06 | Q | \| | \| | \| | V\| |
| 31+15 | 29.7394 | 0.06 | Q | \| | \| | \| | V\| |
| 31+20 | 29.7398 | 0.06 | Q | \| | \| | \| | V\| |
| 31+25 | 29.7402 | 0.06 | Q | \| | \| | \| | V\| |
| 31+30 | 29.7405 | 0.05 | Q | \| | \| | \| | V\| |
| 31+35 | 29.7409 | 0.05 | Q | \| | \| | \| | V\| |
| 31+40 | 29.7412 | 0.05 | Q | \| | \| | \| | V\| |
| 31+45 | 29.7415 | 0.05 | Q | \| | \| | \| | V\| |
| 31+50 | 29.7418 | 0.04 | Q | \| | \| | \| | V\| |
| 31+55 | 29.7421 | 0.04 | Q | \| | \| | \| | V\| |
| 32+ 0 | 29.7424 | 0.04 | Q | \| | \| | \| | V\| |
| 32+ 5 | 29.7427 | 0.04 | Q | \| | \| | \| | V\| |
| 32+10 | 29.7429 | 0.03 | Q | \| | \| | \| | V\| |
| 32+15 | 29.7431 | 0.03 | Q | \| | \| | \| | V\| |
| 32+20 | 29.7433 | 0.03 | Q | \| | \| | \| | V\| |
| 32+25 | 29.7435 | 0.03 | Q | \| | \| | \| | V\| |
| 32+30 | 29.7437 | 0.03 | Q | \| | \| | \| | V\| |
| 32+35 | 29.7439 | 0.02 | Q | \| | \| | \| | V\| |
| 32+40 | 29.7440 | 0.02 | Q | \| | \| | \| | V\| |
| 32+45 | 29.7441 | 0.02 | Q | \| | \| | \| | V\| |
| 32+50 | 29.7443 | 0.02 | Q | \| | \| | \| | V\| |
| 32+55 | 29.7444 | 0.01 | Q | \| | \| | \| | V\| |
| 33+ 0 | 29.7444 | 0.01 | Q | \| | \| | \| | V\| |
| 33+ 5 | 29.7445 | 0.01 | Q | \| | \| | \| | V\| |
| 33+10 | 29.7446 | 0.01 | Q | \| | \| | \| | V\| |
| 33+15 | 29.7447 | 0.01 | Q | \| | \| | \| | V\| |
| 33+20 | 29.7447 | 0.01 | Q | \| | \| | \| | V\| |
| 33+25 | 29.7448 | 0.01 | Q | \| | \| | \| | V\| |
| 33+30 | 29.7448 | 0.01 | Q | \| | \| | \| | V\| |
| 33+35 | 29.7448 | 0.00 | Q | \| | \| | \| | V\| |
| 33+40 | 29.7449 | 0.00 | Q | \| | \| | \| | V\| |
| 33+45 | 29.7449 | 0.00 | Q | \| | \| | \| | V\| |
| 33+50 | 29.7449 | 0.00 | Q | \| | \| | \| | V\| |
| 33+55 | 29.7449 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/07/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 16 (LINED EVAPORATION PONDS)
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 158.96 | 1 | 1.27 |
| Rainfall data for year 100 | | |
| 158.96 | 6 | 1.83 |
| Rainfall data for year 100 | | |
| 158.96 | 24 | 2.44 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 98.0 | 99.6 | 158.96 | 1.000 | 0.008 | 0.010 | 0.000 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.000

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 1.59 | 0.010 | 98.0 | 99.6 | 0.04 | 0.981 |
| 157.37 | 0.990 | 98.0 | 98.0 | 0.20 | 0.906 |

Area-averaged catchment yield fraction, Y = 0.907
Area-averaged low loss fraction, Yb = 0.093
Direct entry of lag time by user
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 158.96(Ac.)
Catchment Lag time = 0.500 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 16.6667
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.000(In/Hr)
Average low loss rate fraction (Yb) = 0.093 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.603(In)
Computed peak 30-minute rainfall = 1.032(In)
Specified peak 1-hour rainfall = 1.270(In)
Computed peak 3-hour rainfall = 1.589(In)
Specified peak 6-hour rainfall = 1.830(In)
Specified peak 24-hour rainfall = 2.440(In)

Rainfall depth area reduction factors:
Using a total area of 158.96(Ac.) (Ref: fig. E-4)

5-minute factor = 0.993 Adjusted rainfall = 0.598(In)
30-minute factor = 0.993 Adjusted rainfall = 1.024(In)
1-hour factor = 0.993 Adjusted rainfall = 1.261(In)
3-hour factor = 0.999 Adjusted rainfall = 1.587(In)
6-hour factor = 1.000 Adjusted rainfall = 1.829(In)
24-hour factor = 1.000 Adjusted rainfall = 2.440(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 1922.42 (CFS)) | |
| 1 | 0.775 | 14.899 |
| 2 | 3.367 | 49.823 |
| 3 | 7.746 | 84.186 |
| 4 | 16.033 | 159.321 |
| 5 | 30.950 | 286.761 |
| 6 | 44.554 | 261.530 |
| 7 | 54.263 | 186.635 |
| 8 | 61.150 | 132.407 |
| 9 | 66.275 | 98.524 |
| 10 | 70.479 | 80.822 |
| 11 | 73.950 | 66.724 |
| 12 | 76.896 | 56.631 |
| 13 | 79.400 | 48.141 |

| | | |
|---|---|---|
| 14 | 81.550 | 41.332 |
| 15 | 83.400 | 35.565 |
| 16 | 85.100 | 32.681 |
| 17 | 86.667 | 30.118 |
| 18 | 88.033 | 26.273 |
| 19 | 89.200 | 22.428 |
| 20 | 90.192 | 19.064 |
| 21 | 91.133 | 18.103 |
| 22 | 92.000 | 16.661 |
| 23 | 92.792 | 15.219 |
| 24 | 93.533 | 14.258 |
| 25 | 94.183 | 12.496 |
| 26 | 94.750 | 10.894 |
| 27 | 95.317 | 10.894 |
| 28 | 95.817 | 9.612 |
| 29 | 96.250 | 8.330 |
| 30 | 96.683 | 8.330 |
| 31 | 97.050 | 7.049 |
| 32 | 97.350 | 5.767 |
| 33 | 97.650 | 5.767 |
| 34 | 97.883 | 4.486 |
| 35 | 98.050 | 3.204 |
| 36 | 98.217 | 3.204 |
| 37 | 98.400 | 3.524 |
| 38 | 98.600 | 3.845 |
| 39 | 98.800 | 3.845 |
| 40 | 99.000 | 3.845 |
| 41 | 99.200 | 3.845 |
| 42 | 99.400 | 3.845 |
| 43 | 99.552 | 2.924 |
| 44 | 99.656 | 2.003 |
| 45 | 99.760 | 2.003 |
| 46 | 99.865 | 2.003 |
| 47 | 100.000 | 1.001 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5981 | 0.5981 |
| 2 | 0.7364 | 0.1383 |
| 3 | 0.8316 | 0.0953 |
| 4 | 0.9066 | 0.0750 |
| 5 | 0.9694 | 0.0628 |
| 6 | 1.0239 | 0.0545 |
| 7 | 1.0723 | 0.0485 |
| 8 | 1.1162 | 0.0438 |
| 9 | 1.1563 | 0.0401 |
| 10 | 1.1934 | 0.0371 |
| 11 | 1.2281 | 0.0346 |
| 12 | 1.2605 | 0.0325 |
| 13 | 1.2819 | 0.0213 |
| 14 | 1.3020 | 0.0201 |
| 15 | 1.3210 | 0.0190 |
| 16 | 1.3390 | 0.0180 |
| 17 | 1.3561 | 0.0171 |
| 18 | 1.3725 | 0.0164 |
| 19 | 1.3881 | 0.0157 |
| 20 | 1.4032 | 0.0150 |
| 21 | 1.4176 | 0.0144 |
| 22 | 1.4315 | 0.0139 |

| | | |
|---|---|---|
| 23 | 1.4449 | 0.0134 |
| 24 | 1.4579 | 0.0130 |
| 25 | 1.4704 | 0.0125 |
| 26 | 1.4826 | 0.0122 |
| 27 | 1.4944 | 0.0118 |
| 28 | 1.5058 | 0.0114 |
| 29 | 1.5169 | 0.0111 |
| 30 | 1.5278 | 0.0108 |
| 31 | 1.5383 | 0.0105 |
| 32 | 1.5486 | 0.0103 |
| 33 | 1.5586 | 0.0100 |
| 34 | 1.5684 | 0.0098 |
| 35 | 1.5780 | 0.0096 |
| 36 | 1.5873 | 0.0094 |
| 37 | 1.5963 | 0.0089 |
| 38 | 1.6050 | 0.0087 |
| 39 | 1.6135 | 0.0085 |
| 40 | 1.6219 | 0.0084 |
| 41 | 1.6301 | 0.0082 |
| 42 | 1.6382 | 0.0081 |
| 43 | 1.6461 | 0.0079 |
| 44 | 1.6538 | 0.0078 |
| 45 | 1.6615 | 0.0076 |
| 46 | 1.6689 | 0.0075 |
| 47 | 1.6763 | 0.0074 |
| 48 | 1.6835 | 0.0072 |
| 49 | 1.6906 | 0.0071 |
| 50 | 1.6976 | 0.0070 |
| 51 | 1.7045 | 0.0069 |
| 52 | 1.7113 | 0.0068 |
| 53 | 1.7180 | 0.0067 |
| 54 | 1.7246 | 0.0066 |
| 55 | 1.7311 | 0.0065 |
| 56 | 1.7375 | 0.0064 |
| 57 | 1.7438 | 0.0063 |
| 58 | 1.7500 | 0.0062 |
| 59 | 1.7561 | 0.0061 |
| 60 | 1.7621 | 0.0060 |
| 61 | 1.7681 | 0.0060 |
| 62 | 1.7740 | 0.0059 |
| 63 | 1.7798 | 0.0058 |
| 64 | 1.7856 | 0.0057 |
| 65 | 1.7912 | 0.0057 |
| 66 | 1.7968 | 0.0056 |
| 67 | 1.8024 | 0.0055 |
| 68 | 1.8078 | 0.0055 |
| 69 | 1.8132 | 0.0054 |
| 70 | 1.8186 | 0.0053 |
| 71 | 1.8239 | 0.0053 |
| 72 | 1.8291 | 0.0052 |
| 73 | 1.8343 | 0.0052 |
| 74 | 1.8395 | 0.0052 |
| 75 | 1.8447 | 0.0051 |
| 76 | 1.8498 | 0.0051 |
| 77 | 1.8548 | 0.0050 |
| 78 | 1.8598 | 0.0050 |
| 79 | 1.8647 | 0.0049 |
| 80 | 1.8696 | 0.0049 |
| 81 | 1.8744 | 0.0048 |

| | | |
|---|---|---|
| 82 | 1.8792 | 0.0048 |
| 83 | 1.8839 | 0.0047 |
| 84 | 1.8886 | 0.0047 |
| 85 | 1.8933 | 0.0046 |
| 86 | 1.8979 | 0.0046 |
| 87 | 1.9024 | 0.0046 |
| 88 | 1.9070 | 0.0045 |
| 89 | 1.9114 | 0.0045 |
| 90 | 1.9159 | 0.0044 |
| 91 | 1.9203 | 0.0044 |
| 92 | 1.9246 | 0.0044 |
| 93 | 1.9290 | 0.0043 |
| 94 | 1.9333 | 0.0043 |
| 95 | 1.9375 | 0.0043 |
| 96 | 1.9417 | 0.0042 |
| 97 | 1.9459 | 0.0042 |
| 98 | 1.9501 | 0.0042 |
| 99 | 1.9542 | 0.0041 |
| 100 | 1.9583 | 0.0041 |
| 101 | 1.9623 | 0.0041 |
| 102 | 1.9663 | 0.0040 |
| 103 | 1.9703 | 0.0040 |
| 104 | 1.9743 | 0.0040 |
| 105 | 1.9782 | 0.0039 |
| 106 | 1.9821 | 0.0039 |
| 107 | 1.9860 | 0.0039 |
| 108 | 1.9898 | 0.0038 |
| 109 | 1.9936 | 0.0038 |
| 110 | 1.9974 | 0.0038 |
| 111 | 2.0012 | 0.0038 |
| 112 | 2.0049 | 0.0037 |
| 113 | 2.0086 | 0.0037 |
| 114 | 2.0123 | 0.0037 |
| 115 | 2.0160 | 0.0037 |
| 116 | 2.0196 | 0.0036 |
| 117 | 2.0232 | 0.0036 |
| 118 | 2.0268 | 0.0036 |
| 119 | 2.0303 | 0.0036 |
| 120 | 2.0339 | 0.0035 |
| 121 | 2.0374 | 0.0035 |
| 122 | 2.0409 | 0.0035 |
| 123 | 2.0443 | 0.0035 |
| 124 | 2.0478 | 0.0034 |
| 125 | 2.0512 | 0.0034 |
| 126 | 2.0546 | 0.0034 |
| 127 | 2.0580 | 0.0034 |
| 128 | 2.0613 | 0.0034 |
| 129 | 2.0646 | 0.0033 |
| 130 | 2.0680 | 0.0033 |
| 131 | 2.0713 | 0.0033 |
| 132 | 2.0745 | 0.0033 |
| 133 | 2.0778 | 0.0033 |
| 134 | 2.0810 | 0.0032 |
| 135 | 2.0842 | 0.0032 |
| 136 | 2.0874 | 0.0032 |
| 137 | 2.0906 | 0.0032 |
| 138 | 2.0938 | 0.0032 |
| 139 | 2.0969 | 0.0031 |
| 140 | 2.1000 | 0.0031 |

| | | |
|---|---|---|
| 141 | 2.1031 | 0.0031 |
| 142 | 2.1062 | 0.0031 |
| 143 | 2.1093 | 0.0031 |
| 144 | 2.1124 | 0.0031 |
| 145 | 2.1154 | 0.0030 |
| 146 | 2.1184 | 0.0030 |
| 147 | 2.1214 | 0.0030 |
| 148 | 2.1244 | 0.0030 |
| 149 | 2.1274 | 0.0030 |
| 150 | 2.1304 | 0.0030 |
| 151 | 2.1333 | 0.0029 |
| 152 | 2.1362 | 0.0029 |
| 153 | 2.1391 | 0.0029 |
| 154 | 2.1420 | 0.0029 |
| 155 | 2.1449 | 0.0029 |
| 156 | 2.1478 | 0.0029 |
| 157 | 2.1506 | 0.0029 |
| 158 | 2.1535 | 0.0028 |
| 159 | 2.1563 | 0.0028 |
| 160 | 2.1591 | 0.0028 |
| 161 | 2.1619 | 0.0028 |
| 162 | 2.1647 | 0.0028 |
| 163 | 2.1675 | 0.0028 |
| 164 | 2.1702 | 0.0028 |
| 165 | 2.1730 | 0.0027 |
| 166 | 2.1757 | 0.0027 |
| 167 | 2.1784 | 0.0027 |
| 168 | 2.1811 | 0.0027 |
| 169 | 2.1838 | 0.0027 |
| 170 | 2.1865 | 0.0027 |
| 171 | 2.1891 | 0.0027 |
| 172 | 2.1918 | 0.0027 |
| 173 | 2.1944 | 0.0026 |
| 174 | 2.1971 | 0.0026 |
| 175 | 2.1997 | 0.0026 |
| 176 | 2.2023 | 0.0026 |
| 177 | 2.2049 | 0.0026 |
| 178 | 2.2075 | 0.0026 |
| 179 | 2.2100 | 0.0026 |
| 180 | 2.2126 | 0.0026 |
| 181 | 2.2151 | 0.0025 |
| 182 | 2.2177 | 0.0025 |
| 183 | 2.2202 | 0.0025 |
| 184 | 2.2227 | 0.0025 |
| 185 | 2.2252 | 0.0025 |
| 186 | 2.2277 | 0.0025 |
| 187 | 2.2302 | 0.0025 |
| 188 | 2.2327 | 0.0025 |
| 189 | 2.2351 | 0.0025 |
| 190 | 2.2376 | 0.0025 |
| 191 | 2.2400 | 0.0024 |
| 192 | 2.2425 | 0.0024 |
| 193 | 2.2449 | 0.0024 |
| 194 | 2.2473 | 0.0024 |
| 195 | 2.2497 | 0.0024 |
| 196 | 2.2521 | 0.0024 |
| 197 | 2.2545 | 0.0024 |
| 198 | 2.2568 | 0.0024 |
| 199 | 2.2592 | 0.0024 |

| | | |
|---|---|---|
| 200 | 2.2616 | 0.0024 |
| 201 | 2.2639 | 0.0023 |
| 202 | 2.2662 | 0.0023 |
| 203 | 2.2686 | 0.0023 |
| 204 | 2.2709 | 0.0023 |
| 205 | 2.2732 | 0.0023 |
| 206 | 2.2755 | 0.0023 |
| 207 | 2.2778 | 0.0023 |
| 208 | 2.2801 | 0.0023 |
| 209 | 2.2823 | 0.0023 |
| 210 | 2.2846 | 0.0023 |
| 211 | 2.2868 | 0.0023 |
| 212 | 2.2891 | 0.0022 |
| 213 | 2.2913 | 0.0022 |
| 214 | 2.2936 | 0.0022 |
| 215 | 2.2958 | 0.0022 |
| 216 | 2.2980 | 0.0022 |
| 217 | 2.3002 | 0.0022 |
| 218 | 2.3024 | 0.0022 |
| 219 | 2.3046 | 0.0022 |
| 220 | 2.3068 | 0.0022 |
| 221 | 2.3089 | 0.0022 |
| 222 | 2.3111 | 0.0022 |
| 223 | 2.3133 | 0.0022 |
| 224 | 2.3154 | 0.0022 |
| 225 | 2.3176 | 0.0021 |
| 226 | 2.3197 | 0.0021 |
| 227 | 2.3218 | 0.0021 |
| 228 | 2.3240 | 0.0021 |
| 229 | 2.3261 | 0.0021 |
| 230 | 2.3282 | 0.0021 |
| 231 | 2.3303 | 0.0021 |
| 232 | 2.3324 | 0.0021 |
| 233 | 2.3344 | 0.0021 |
| 234 | 2.3365 | 0.0021 |
| 235 | 2.3386 | 0.0021 |
| 236 | 2.3407 | 0.0021 |
| 237 | 2.3427 | 0.0021 |
| 238 | 2.3448 | 0.0021 |
| 239 | 2.3468 | 0.0020 |
| 240 | 2.3488 | 0.0020 |
| 241 | 2.3509 | 0.0020 |
| 242 | 2.3529 | 0.0020 |
| 243 | 2.3549 | 0.0020 |
| 244 | 2.3569 | 0.0020 |
| 245 | 2.3589 | 0.0020 |
| 246 | 2.3609 | 0.0020 |
| 247 | 2.3629 | 0.0020 |
| 248 | 2.3649 | 0.0020 |
| 249 | 2.3669 | 0.0020 |
| 250 | 2.3689 | 0.0020 |
| 251 | 2.3708 | 0.0020 |
| 252 | 2.3728 | 0.0020 |
| 253 | 2.3747 | 0.0020 |
| 254 | 2.3767 | 0.0019 |
| 255 | 2.3786 | 0.0019 |
| 256 | 2.3806 | 0.0019 |
| 257 | 2.3825 | 0.0019 |
| 258 | 2.3844 | 0.0019 |

| | | |
|---|---|---|
| 259 | 2.3863 | 0.0019 |
| 260 | 2.3882 | 0.0019 |
| 261 | 2.3901 | 0.0019 |
| 262 | 2.3920 | 0.0019 |
| 263 | 2.3939 | 0.0019 |
| 264 | 2.3958 | 0.0019 |
| 265 | 2.3977 | 0.0019 |
| 266 | 2.3996 | 0.0019 |
| 267 | 2.4014 | 0.0019 |
| 268 | 2.4033 | 0.0019 |
| 269 | 2.4052 | 0.0019 |
| 270 | 2.4070 | 0.0019 |
| 271 | 2.4089 | 0.0018 |
| 272 | 2.4107 | 0.0018 |
| 273 | 2.4126 | 0.0018 |
| 274 | 2.4144 | 0.0018 |
| 275 | 2.4162 | 0.0018 |
| 276 | 2.4180 | 0.0018 |
| 277 | 2.4199 | 0.0018 |
| 278 | 2.4217 | 0.0018 |
| 279 | 2.4235 | 0.0018 |
| 280 | 2.4253 | 0.0018 |
| 281 | 2.4271 | 0.0018 |
| 282 | 2.4289 | 0.0018 |
| 283 | 2.4307 | 0.0018 |
| 284 | 2.4324 | 0.0018 |
| 285 | 2.4342 | 0.0018 |
| 286 | 2.4360 | 0.0018 |
| 287 | 2.4378 | 0.0018 |
| 288 | 2.4395 | 0.0018 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0018 | 0.0000 | 0.0018 |
| 2 | 0.0018 | 0.0000 | 0.0018 |
| 3 | 0.0018 | 0.0000 | 0.0018 |
| 4 | 0.0018 | 0.0000 | 0.0018 |
| 5 | 0.0018 | 0.0000 | 0.0018 |
| 6 | 0.0018 | 0.0000 | 0.0018 |
| 7 | 0.0018 | 0.0000 | 0.0018 |
| 8 | 0.0018 | 0.0000 | 0.0018 |
| 9 | 0.0018 | 0.0000 | 0.0018 |
| 10 | 0.0018 | 0.0000 | 0.0018 |
| 11 | 0.0018 | 0.0000 | 0.0018 |
| 12 | 0.0018 | 0.0000 | 0.0018 |
| 13 | 0.0019 | 0.0000 | 0.0018 |
| 14 | 0.0019 | 0.0000 | 0.0019 |
| 15 | 0.0019 | 0.0000 | 0.0019 |
| 16 | 0.0019 | 0.0000 | 0.0019 |
| 17 | 0.0019 | 0.0000 | 0.0019 |
| 18 | 0.0019 | 0.0000 | 0.0019 |
| 19 | 0.0019 | 0.0000 | 0.0019 |
| 20 | 0.0019 | 0.0000 | 0.0019 |
| 21 | 0.0019 | 0.0000 | 0.0019 |
| 22 | 0.0019 | 0.0000 | 0.0019 |
| 23 | 0.0019 | 0.0000 | 0.0019 |
| 24 | 0.0019 | 0.0000 | 0.0019 |

| | | | |
|---|---|---|---|
| 25 | 0.0020 | 0.0000 | 0.0020 |
| 26 | 0.0020 | 0.0000 | 0.0020 |
| 27 | 0.0020 | 0.0000 | 0.0020 |
| 28 | 0.0020 | 0.0000 | 0.0020 |
| 29 | 0.0020 | 0.0000 | 0.0020 |
| 30 | 0.0020 | 0.0000 | 0.0020 |
| 31 | 0.0020 | 0.0000 | 0.0020 |
| 32 | 0.0020 | 0.0000 | 0.0020 |
| 33 | 0.0020 | 0.0000 | 0.0020 |
| 34 | 0.0020 | 0.0000 | 0.0020 |
| 35 | 0.0021 | 0.0000 | 0.0021 |
| 36 | 0.0021 | 0.0000 | 0.0021 |
| 37 | 0.0021 | 0.0000 | 0.0021 |
| 38 | 0.0021 | 0.0000 | 0.0021 |
| 39 | 0.0021 | 0.0000 | 0.0021 |
| 40 | 0.0021 | 0.0000 | 0.0021 |
| 41 | 0.0021 | 0.0000 | 0.0021 |
| 42 | 0.0021 | 0.0000 | 0.0021 |
| 43 | 0.0021 | 0.0000 | 0.0021 |
| 44 | 0.0022 | 0.0000 | 0.0021 |
| 45 | 0.0022 | 0.0000 | 0.0022 |
| 46 | 0.0022 | 0.0000 | 0.0022 |
| 47 | 0.0022 | 0.0000 | 0.0022 |
| 48 | 0.0022 | 0.0000 | 0.0022 |
| 49 | 0.0022 | 0.0000 | 0.0022 |
| 50 | 0.0022 | 0.0000 | 0.0022 |
| 51 | 0.0022 | 0.0000 | 0.0022 |
| 52 | 0.0022 | 0.0000 | 0.0022 |
| 53 | 0.0023 | 0.0000 | 0.0023 |
| 54 | 0.0023 | 0.0000 | 0.0023 |
| 55 | 0.0023 | 0.0000 | 0.0023 |
| 56 | 0.0023 | 0.0000 | 0.0023 |
| 57 | 0.0023 | 0.0000 | 0.0023 |
| 58 | 0.0023 | 0.0000 | 0.0023 |
| 59 | 0.0023 | 0.0000 | 0.0023 |
| 60 | 0.0024 | 0.0000 | 0.0023 |
| 61 | 0.0024 | 0.0000 | 0.0024 |
| 62 | 0.0024 | 0.0000 | 0.0024 |
| 63 | 0.0024 | 0.0000 | 0.0024 |
| 64 | 0.0024 | 0.0000 | 0.0024 |
| 65 | 0.0024 | 0.0000 | 0.0024 |
| 66 | 0.0024 | 0.0000 | 0.0024 |
| 67 | 0.0025 | 0.0000 | 0.0025 |
| 68 | 0.0025 | 0.0000 | 0.0025 |
| 69 | 0.0025 | 0.0000 | 0.0025 |
| 70 | 0.0025 | 0.0000 | 0.0025 |
| 71 | 0.0025 | 0.0000 | 0.0025 |
| 72 | 0.0025 | 0.0000 | 0.0025 |
| 73 | 0.0026 | 0.0000 | 0.0026 |
| 74 | 0.0026 | 0.0000 | 0.0026 |
| 75 | 0.0026 | 0.0000 | 0.0026 |
| 76 | 0.0026 | 0.0000 | 0.0026 |
| 77 | 0.0026 | 0.0000 | 0.0026 |
| 78 | 0.0026 | 0.0000 | 0.0026 |
| 79 | 0.0027 | 0.0000 | 0.0027 |
| 80 | 0.0027 | 0.0000 | 0.0027 |
| 81 | 0.0027 | 0.0000 | 0.0027 |
| 82 | 0.0027 | 0.0000 | 0.0027 |
| 83 | 0.0027 | 0.0000 | 0.0027 |

| | | | |
|---|---|---|---|
| 84 | 0.0028 | 0.0000 | 0.0027 |
| 85 | 0.0028 | 0.0000 | 0.0028 |
| 86 | 0.0028 | 0.0000 | 0.0028 |
| 87 | 0.0028 | 0.0000 | 0.0028 |
| 88 | 0.0028 | 0.0000 | 0.0028 |
| 89 | 0.0029 | 0.0000 | 0.0029 |
| 90 | 0.0029 | 0.0000 | 0.0029 |
| 91 | 0.0029 | 0.0000 | 0.0029 |
| 92 | 0.0029 | 0.0000 | 0.0029 |
| 93 | 0.0030 | 0.0000 | 0.0030 |
| 94 | 0.0030 | 0.0000 | 0.0030 |
| 95 | 0.0030 | 0.0000 | 0.0030 |
| 96 | 0.0030 | 0.0000 | 0.0030 |
| 97 | 0.0031 | 0.0000 | 0.0030 |
| 98 | 0.0031 | 0.0000 | 0.0031 |
| 99 | 0.0031 | 0.0000 | 0.0031 |
| 100 | 0.0031 | 0.0000 | 0.0031 |
| 101 | 0.0032 | 0.0000 | 0.0032 |
| 102 | 0.0032 | 0.0000 | 0.0032 |
| 103 | 0.0032 | 0.0000 | 0.0032 |
| 104 | 0.0032 | 0.0000 | 0.0032 |
| 105 | 0.0033 | 0.0000 | 0.0033 |
| 106 | 0.0033 | 0.0000 | 0.0033 |
| 107 | 0.0033 | 0.0000 | 0.0033 |
| 108 | 0.0034 | 0.0000 | 0.0033 |
| 109 | 0.0034 | 0.0000 | 0.0034 |
| 110 | 0.0034 | 0.0000 | 0.0034 |
| 111 | 0.0035 | 0.0000 | 0.0035 |
| 112 | 0.0035 | 0.0000 | 0.0035 |
| 113 | 0.0035 | 0.0000 | 0.0035 |
| 114 | 0.0036 | 0.0000 | 0.0035 |
| 115 | 0.0036 | 0.0000 | 0.0036 |
| 116 | 0.0036 | 0.0000 | 0.0036 |
| 117 | 0.0037 | 0.0000 | 0.0037 |
| 118 | 0.0037 | 0.0000 | 0.0037 |
| 119 | 0.0038 | 0.0000 | 0.0038 |
| 120 | 0.0038 | 0.0000 | 0.0038 |
| 121 | 0.0038 | 0.0000 | 0.0038 |
| 122 | 0.0039 | 0.0000 | 0.0039 |
| 123 | 0.0039 | 0.0000 | 0.0039 |
| 124 | 0.0040 | 0.0000 | 0.0040 |
| 125 | 0.0040 | 0.0000 | 0.0040 |
| 126 | 0.0041 | 0.0000 | 0.0040 |
| 127 | 0.0041 | 0.0000 | 0.0041 |
| 128 | 0.0042 | 0.0000 | 0.0041 |
| 129 | 0.0042 | 0.0000 | 0.0042 |
| 130 | 0.0043 | 0.0000 | 0.0042 |
| 131 | 0.0043 | 0.0000 | 0.0043 |
| 132 | 0.0044 | 0.0000 | 0.0044 |
| 133 | 0.0044 | 0.0000 | 0.0044 |
| 134 | 0.0045 | 0.0000 | 0.0045 |
| 135 | 0.0046 | 0.0000 | 0.0046 |
| 136 | 0.0046 | 0.0000 | 0.0046 |
| 137 | 0.0047 | 0.0000 | 0.0047 |
| 138 | 0.0047 | 0.0000 | 0.0047 |
| 139 | 0.0048 | 0.0000 | 0.0048 |
| 140 | 0.0049 | 0.0000 | 0.0049 |
| 141 | 0.0050 | 0.0000 | 0.0050 |
| 142 | 0.0050 | 0.0000 | 0.0050 |

| | | | |
|---|---|---|---|
| 143 | 0.0051 | 0.0000 | 0.0051 |
| 144 | 0.0052 | 0.0000 | 0.0052 |
| 145 | 0.0052 | 0.0000 | 0.0052 |
| 146 | 0.0053 | 0.0000 | 0.0053 |
| 147 | 0.0054 | 0.0000 | 0.0054 |
| 148 | 0.0055 | 0.0000 | 0.0055 |
| 149 | 0.0056 | 0.0000 | 0.0056 |
| 150 | 0.0057 | 0.0000 | 0.0057 |
| 151 | 0.0058 | 0.0000 | 0.0058 |
| 152 | 0.0059 | 0.0000 | 0.0059 |
| 153 | 0.0060 | 0.0000 | 0.0060 |
| 154 | 0.0061 | 0.0000 | 0.0061 |
| 155 | 0.0063 | 0.0000 | 0.0063 |
| 156 | 0.0064 | 0.0000 | 0.0064 |
| 157 | 0.0066 | 0.0000 | 0.0066 |
| 158 | 0.0067 | 0.0000 | 0.0067 |
| 159 | 0.0069 | 0.0000 | 0.0069 |
| 160 | 0.0070 | 0.0000 | 0.0070 |
| 161 | 0.0072 | 0.0000 | 0.0072 |
| 162 | 0.0074 | 0.0000 | 0.0074 |
| 163 | 0.0076 | 0.0000 | 0.0076 |
| 164 | 0.0078 | 0.0000 | 0.0078 |
| 165 | 0.0081 | 0.0000 | 0.0080 |
| 166 | 0.0082 | 0.0000 | 0.0082 |
| 167 | 0.0085 | 0.0000 | 0.0085 |
| 168 | 0.0087 | 0.0000 | 0.0087 |
| 169 | 0.0094 | 0.0000 | 0.0093 |
| 170 | 0.0096 | 0.0000 | 0.0096 |
| 171 | 0.0100 | 0.0000 | 0.0100 |
| 172 | 0.0103 | 0.0000 | 0.0103 |
| 173 | 0.0108 | 0.0000 | 0.0108 |
| 174 | 0.0111 | 0.0000 | 0.0111 |
| 175 | 0.0118 | 0.0000 | 0.0118 |
| 176 | 0.0122 | 0.0000 | 0.0121 |
| 177 | 0.0130 | 0.0000 | 0.0130 |
| 178 | 0.0134 | 0.0000 | 0.0134 |
| 179 | 0.0144 | 0.0000 | 0.0144 |
| 180 | 0.0150 | 0.0000 | 0.0150 |
| 181 | 0.0164 | 0.0000 | 0.0164 |
| 182 | 0.0171 | 0.0000 | 0.0171 |
| 183 | 0.0190 | 0.0000 | 0.0190 |
| 184 | 0.0201 | 0.0000 | 0.0201 |
| 185 | 0.0325 | 0.0000 | 0.0325 |
| 186 | 0.0346 | 0.0000 | 0.0346 |
| 187 | 0.0401 | 0.0000 | 0.0401 |
| 188 | 0.0438 | 0.0000 | 0.0438 |
| 189 | 0.0545 | 0.0000 | 0.0545 |
| 190 | 0.0628 | 0.0000 | 0.0628 |
| 191 | 0.0953 | 0.0000 | 0.0952 |
| 192 | 0.1383 | 0.0000 | 0.1382 |
| 193 | 0.5981 | 0.0000 | 0.5981 |
| 194 | 0.0750 | 0.0000 | 0.0750 |
| 195 | 0.0485 | 0.0000 | 0.0485 |
| 196 | 0.0371 | 0.0000 | 0.0371 |
| 197 | 0.0213 | 0.0000 | 0.0213 |
| 198 | 0.0180 | 0.0000 | 0.0180 |
| 199 | 0.0157 | 0.0000 | 0.0157 |
| 200 | 0.0139 | 0.0000 | 0.0139 |
| 201 | 0.0125 | 0.0000 | 0.0125 |

| | | | |
|---|---|---|---|
| 202 | 0.0114 | 0.0000 | 0.0114 |
| 203 | 0.0105 | 0.0000 | 0.0105 |
| 204 | 0.0098 | 0.0000 | 0.0098 |
| 205 | 0.0089 | 0.0000 | 0.0089 |
| 206 | 0.0084 | 0.0000 | 0.0084 |
| 207 | 0.0079 | 0.0000 | 0.0079 |
| 208 | 0.0075 | 0.0000 | 0.0075 |
| 209 | 0.0071 | 0.0000 | 0.0071 |
| 210 | 0.0068 | 0.0000 | 0.0068 |
| 211 | 0.0065 | 0.0000 | 0.0065 |
| 212 | 0.0062 | 0.0000 | 0.0062 |
| 213 | 0.0060 | 0.0000 | 0.0060 |
| 214 | 0.0057 | 0.0000 | 0.0057 |
| 215 | 0.0055 | 0.0000 | 0.0055 |
| 216 | 0.0053 | 0.0000 | 0.0053 |
| 217 | 0.0052 | 0.0000 | 0.0052 |
| 218 | 0.0051 | 0.0000 | 0.0051 |
| 219 | 0.0049 | 0.0000 | 0.0049 |
| 220 | 0.0048 | 0.0000 | 0.0048 |
| 221 | 0.0046 | 0.0000 | 0.0046 |
| 222 | 0.0045 | 0.0000 | 0.0045 |
| 223 | 0.0044 | 0.0000 | 0.0044 |
| 224 | 0.0043 | 0.0000 | 0.0043 |
| 225 | 0.0042 | 0.0000 | 0.0042 |
| 226 | 0.0041 | 0.0000 | 0.0041 |
| 227 | 0.0040 | 0.0000 | 0.0040 |
| 228 | 0.0039 | 0.0000 | 0.0039 |
| 229 | 0.0038 | 0.0000 | 0.0038 |
| 230 | 0.0037 | 0.0000 | 0.0037 |
| 231 | 0.0037 | 0.0000 | 0.0036 |
| 232 | 0.0036 | 0.0000 | 0.0036 |
| 233 | 0.0035 | 0.0000 | 0.0035 |
| 234 | 0.0034 | 0.0000 | 0.0034 |
| 235 | 0.0034 | 0.0000 | 0.0034 |
| 236 | 0.0033 | 0.0000 | 0.0033 |
| 237 | 0.0033 | 0.0000 | 0.0032 |
| 238 | 0.0032 | 0.0000 | 0.0032 |
| 239 | 0.0031 | 0.0000 | 0.0031 |
| 240 | 0.0031 | 0.0000 | 0.0031 |
| 241 | 0.0030 | 0.0000 | 0.0030 |
| 242 | 0.0030 | 0.0000 | 0.0030 |
| 243 | 0.0029 | 0.0000 | 0.0029 |
| 244 | 0.0029 | 0.0000 | 0.0029 |
| 245 | 0.0029 | 0.0000 | 0.0028 |
| 246 | 0.0028 | 0.0000 | 0.0028 |
| 247 | 0.0028 | 0.0000 | 0.0028 |
| 248 | 0.0027 | 0.0000 | 0.0027 |
| 249 | 0.0027 | 0.0000 | 0.0027 |
| 250 | 0.0027 | 0.0000 | 0.0026 |
| 251 | 0.0026 | 0.0000 | 0.0026 |
| 252 | 0.0026 | 0.0000 | 0.0026 |
| 253 | 0.0025 | 0.0000 | 0.0025 |
| 254 | 0.0025 | 0.0000 | 0.0025 |
| 255 | 0.0025 | 0.0000 | 0.0025 |
| 256 | 0.0025 | 0.0000 | 0.0024 |
| 257 | 0.0024 | 0.0000 | 0.0024 |
| 258 | 0.0024 | 0.0000 | 0.0024 |
| 259 | 0.0024 | 0.0000 | 0.0024 |
| 260 | 0.0023 | 0.0000 | 0.0023 |

| | | | |
|---|---|---|---|
| 261 | 0.0023 | 0.0000 | 0.0023 |
| 262 | 0.0023 | 0.0000 | 0.0023 |
| 263 | 0.0023 | 0.0000 | 0.0022 |
| 264 | 0.0022 | 0.0000 | 0.0022 |
| 265 | 0.0022 | 0.0000 | 0.0022 |
| 266 | 0.0022 | 0.0000 | 0.0022 |
| 267 | 0.0022 | 0.0000 | 0.0022 |
| 268 | 0.0021 | 0.0000 | 0.0021 |
| 269 | 0.0021 | 0.0000 | 0.0021 |
| 270 | 0.0021 | 0.0000 | 0.0021 |
| 271 | 0.0021 | 0.0000 | 0.0021 |
| 272 | 0.0021 | 0.0000 | 0.0020 |
| 273 | 0.0020 | 0.0000 | 0.0020 |
| 274 | 0.0020 | 0.0000 | 0.0020 |
| 275 | 0.0020 | 0.0000 | 0.0020 |
| 276 | 0.0020 | 0.0000 | 0.0020 |
| 277 | 0.0020 | 0.0000 | 0.0019 |
| 278 | 0.0019 | 0.0000 | 0.0019 |
| 279 | 0.0019 | 0.0000 | 0.0019 |
| 280 | 0.0019 | 0.0000 | 0.0019 |
| 281 | 0.0019 | 0.0000 | 0.0019 |
| 282 | 0.0019 | 0.0000 | 0.0019 |
| 283 | 0.0018 | 0.0000 | 0.0018 |
| 284 | 0.0018 | 0.0000 | 0.0018 |
| 285 | 0.0018 | 0.0000 | 0.0018 |
| 286 | 0.0018 | 0.0000 | 0.0018 |
| 287 | 0.0018 | 0.0000 | 0.0018 |
| 288 | 0.0018 | 0.0000 | 0.0018 |

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Total soil rain loss = 0.00(In)
Total effective rainfall = 2.44(In)
Peak flow rate in flood hydrograph = 272.42(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 75.0 | 150.0 | 225.0 | 300.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0002 | 0.03 | Q | \| | \| | \| | \| |
| 0+10 | 0.0010 | 0.11 | Q | \| | \| | \| | \| |
| 0+15 | 0.0028 | 0.26 | Q | \| | \| | \| | \| |
| 0+20 | 0.0065 | 0.54 | Q | \| | \| | \| | \| |
| 0+25 | 0.0137 | 1.05 | Q | \| | \| | \| | \| |
| 0+30 | 0.0241 | 1.51 | Q | \| | \| | \| | \| |
| 0+35 | 0.0368 | 1.84 | Q | \| | \| | \| | \| |
| 0+40 | 0.0512 | 2.08 | Q | \| | \| | \| | \| |
| 0+45 | 0.0668 | 2.27 | Q | \| | \| | \| | \| |
| 0+50 | 0.0834 | 2.42 | Q | \| | \| | \| | \| |
| 0+55 | 0.1010 | 2.54 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.1193 | 2.66 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.1382 | 2.75 | Q | \| | \| | \| | \| |
| 1+10 | 0.1577 | 2.84 | Q | \| | \| | \| | \| |
| 1+15 | 0.1778 | 2.91 | Q | \| | \| | \| | \| |
| 1+20 | 0.1983 | 2.98 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+25 | 0.2193 | 3.05 | Q | | | | |
| 1+30 | 0.2407 | 3.11 | Q | | | | |
| 1+35 | 0.2624 | 3.16 | Q | | | | |
| 1+40 | 0.2845 | 3.21 | Q | | | | |
| 1+45 | 0.3069 | 3.25 | Q | | | | |
| 1+50 | 0.3296 | 3.30 | Q | | | | |
| 1+55 | 0.3526 | 3.34 | Q | | | | |
| 2+ 0 | 0.3758 | 3.38 | Q | | | | |
| 2+ 5 | 0.3993 | 3.41 | Q | | | | |
| 2+10 | 0.4231 | 3.45 | Q | | | | |
| 2+15 | 0.4471 | 3.48 | Q | | | | |
| 2+20 | 0.4713 | 3.52 | Q | | | | |
| 2+25 | 0.4957 | 3.55 | Q | | | | |
| 2+30 | 0.5204 | 3.58 | Q | | | | |
| 2+35 | 0.5452 | 3.61 | Q | | | | |
| 2+40 | 0.5703 | 3.64 | Q | | | | |
| 2+45 | 0.5955 | 3.66 | Q | | | | |
| 2+50 | 0.6209 | 3.69 | Q | | | | |
| 2+55 | 0.6465 | 3.71 | Q | | | | |
| 3+ 0 | 0.6722 | 3.73 | Q | | | | |
| 3+ 5 | 0.6981 | 3.76 | Q | | | | |
| 3+10 | 0.7241 | 3.78 | Q | | | | |
| 3+15 | 0.7504 | 3.81 | Q | | | | |
| 3+20 | 0.7768 | 3.84 | Q | | | | |
| 3+25 | 0.8034 | 3.86 | Q | | | | |
| 3+30 | 0.8302 | 3.89 | QV | | | | |
| 3+35 | 0.8571 | 3.91 | QV | | | | |
| 3+40 | 0.8842 | 3.93 | QV | | | | |
| 3+45 | 0.9115 | 3.96 | QV | | | | |
| 3+50 | 0.9389 | 3.98 | QV | | | | |
| 3+55 | 0.9665 | 4.00 | QV | | | | |
| 4+ 0 | 0.9942 | 4.03 | QV | | | | |
| 4+ 5 | 1.0221 | 4.05 | QV | | | | |
| 4+10 | 1.0501 | 4.07 | QV | | | | |
| 4+15 | 1.0782 | 4.09 | QV | | | | |
| 4+20 | 1.1065 | 4.11 | QV | | | | |
| 4+25 | 1.1350 | 4.13 | QV | | | | |
| 4+30 | 1.1636 | 4.16 | QV | | | | |
| 4+35 | 1.1924 | 4.18 | QV | | | | |
| 4+40 | 1.2213 | 4.20 | QV | | | | |
| 4+45 | 1.2504 | 4.22 | QV | | | | |
| 4+50 | 1.2797 | 4.25 | QV | | | | |
| 4+55 | 1.3091 | 4.27 | QV | | | | |
| 5+ 0 | 1.3387 | 4.30 | QV | | | | |
| 5+ 5 | 1.3684 | 4.32 | QV | | | | |
| 5+10 | 1.3983 | 4.34 | QV | | | | |
| 5+15 | 1.4284 | 4.37 | QV | | | | |
| 5+20 | 1.4587 | 4.39 | QV | | | | |
| 5+25 | 1.4891 | 4.42 | QV | | | | |
| 5+30 | 1.5198 | 4.45 | QV | | | | |
| 5+35 | 1.5506 | 4.47 | QV | | | | |
| 5+40 | 1.5816 | 4.50 | QV | | | | |
| 5+45 | 1.6127 | 4.53 | Q V | | | | |
| 5+50 | 1.6441 | 4.55 | Q V | | | | |
| 5+55 | 1.6756 | 4.58 | Q V | | | | |
| 6+ 0 | 1.7074 | 4.61 | Q V | | | | |
| 6+ 5 | 1.7393 | 4.64 | Q V | | | | |
| 6+10 | 1.7715 | 4.67 | Q V | | | | |
| 6+15 | 1.8038 | 4.70 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+20 | 1.8364 | 4.73 | Q V | \| | \| | \| | \| |
| 6+25 | 1.8691 | 4.76 | Q V | \| | \| | \| | \| |
| 6+30 | 1.9021 | 4.79 | Q V | \| | \| | \| | \| |
| 6+35 | 1.9353 | 4.82 | Q V | \| | \| | \| | \| |
| 6+40 | 1.9687 | 4.85 | Q V | \| | \| | \| | \| |
| 6+45 | 2.0023 | 4.88 | Q V | \| | \| | \| | \| |
| 6+50 | 2.0362 | 4.91 | Q V | \| | \| | \| | \| |
| 6+55 | 2.0703 | 4.95 | Q V | \| | \| | \| | \| |
| 7+ 0 | 2.1046 | 4.98 | Q V | \| | \| | \| | \| |
| 7+ 5 | 2.1391 | 5.02 | Q V | \| | \| | \| | \| |
| 7+10 | 2.1739 | 5.05 | Q V | \| | \| | \| | \| |
| 7+15 | 2.2089 | 5.09 | Q V | \| | \| | \| | \| |
| 7+20 | 2.2442 | 5.12 | Q V | \| | \| | \| | \| |
| 7+25 | 2.2797 | 5.16 | Q V | \| | \| | \| | \| |
| 7+30 | 2.3155 | 5.19 | Q V | \| | \| | \| | \| |
| 7+35 | 2.3515 | 5.23 | Q V | \| | \| | \| | \| |
| 7+40 | 2.3878 | 5.27 | Q V | \| | \| | \| | \| |
| 7+45 | 2.4244 | 5.31 | Q  V | \| | \| | \| | \| |
| 7+50 | 2.4612 | 5.35 | Q  V | \| | \| | \| | \| |
| 7+55 | 2.4983 | 5.39 | Q  V | \| | \| | \| | \| |
| 8+ 0 | 2.5357 | 5.43 | Q  V | \| | \| | \| | \| |
| 8+ 5 | 2.5734 | 5.47 | Q  V | \| | \| | \| | \| |
| 8+10 | 2.6113 | 5.51 | Q  V | \| | \| | \| | \| |
| 8+15 | 2.6496 | 5.56 | Q  V | \| | \| | \| | \| |
| 8+20 | 2.6882 | 5.60 | Q  V | \| | \| | \| | \| |
| 8+25 | 2.7270 | 5.64 | Q  V | \| | \| | \| | \| |
| 8+30 | 2.7662 | 5.69 | Q  V | \| | \| | \| | \| |
| 8+35 | 2.8057 | 5.74 | Q  V | \| | \| | \| | \| |
| 8+40 | 2.8456 | 5.78 | Q  V | \| | \| | \| | \| |
| 8+45 | 2.8857 | 5.83 | Q  V | \| | \| | \| | \| |
| 8+50 | 2.9262 | 5.88 | Q  V | \| | \| | \| | \| |
| 8+55 | 2.9670 | 5.93 | Q  V | \| | \| | \| | \| |
| 9+ 0 | 3.0082 | 5.98 | Q  V | \| | \| | \| | \| |
| 9+ 5 | 3.0498 | 6.03 | Q  V | \| | \| | \| | \| |
| 9+10 | 3.0917 | 6.08 | Q  V | \| | \| | \| | \| |
| 9+15 | 3.1339 | 6.14 | Q  V | \| | \| | \| | \| |
| 9+20 | 3.1766 | 6.19 | Q  V | \| | \| | \| | \| |
| 9+25 | 3.2196 | 6.25 | Q  V | \| | \| | \| | \| |
| 9+30 | 3.2630 | 6.31 | Q   V | \| | \| | \| | \| |
| 9+35 | 3.3069 | 6.36 | Q   V | \| | \| | \| | \| |
| 9+40 | 3.3511 | 6.42 | Q   V | \| | \| | \| | \| |
| 9+45 | 3.3958 | 6.48 | Q   V | \| | \| | \| | \| |
| 9+50 | 3.4408 | 6.55 | Q   V | \| | \| | \| | \| |
| 9+55 | 3.4864 | 6.61 | Q   V | \| | \| | \| | \| |
| 10+ 0 | 3.5323 | 6.68 | Q   V | \| | \| | \| | \| |
| 10+ 5 | 3.5788 | 6.74 | Q   V | \| | \| | \| | \| |
| 10+10 | 3.6257 | 6.81 | Q   V | \| | \| | \| | \| |
| 10+15 | 3.6731 | 6.88 | Q   V | \| | \| | \| | \| |
| 10+20 | 3.7209 | 6.95 | Q   V | \| | \| | \| | \| |
| 10+25 | 3.7693 | 7.02 | Q   V | \| | \| | \| | \| |
| 10+30 | 3.8182 | 7.10 | Q   V | \| | \| | \| | \| |
| 10+35 | 3.8676 | 7.17 | Q   V | \| | \| | \| | \| |
| 10+40 | 3.9175 | 7.25 | Q   V | \| | \| | \| | \| |
| 10+45 | 3.9680 | 7.33 | Q   V | \| | \| | \| | \| |
| 10+50 | 4.0191 | 7.42 | Q   V | \| | \| | \| | \| |
| 10+55 | 4.0708 | 7.50 | \|Q   V | \| | \| | \| | \| |
| 11+ 0 | 4.1230 | 7.59 | \|Q   V | \| | \| | \| | \| |
| 11+ 5 | 4.1759 | 7.68 | \|Q   V | \| | \| | \| | \| |
| 11+10 | 4.2294 | 7.77 | \|Q   V | \| | \| | \| | \| |

```
11+15       4.2835      7.86  |Q   V    |          |          |          |
11+20       4.3383      7.96  |Q   V    |          |          |          |
11+25       4.3938      8.06  |Q   V    |          |          |          |
11+30       4.4500      8.16  |Q   V    |          |          |          |
11+35       4.5069      8.26  |Q   V    |          |          |          |
11+40       4.5646      8.37  |Q   V    |          |          |          |
11+45       4.6230      8.49  |Q   V    |          |          |          |
11+50       4.6822      8.60  |Q   V    |          |          |          |
11+55       4.7423      8.72  |Q   V    |          |          |          |
12+ 0       4.8032      8.84  |Q   V    |          |          |          |
12+ 5       4.8649      8.97  |Q    V   |          |          |          |
12+10       4.9276      9.09  |Q    V   |          |          |          |
12+15       4.9911      9.22  |Q    V   |          |          |          |
12+20       5.0554      9.35  |Q    V   |          |          |          |
12+25       5.1207      9.47  |Q    V   |          |          |          |
12+30       5.1868      9.60  |Q    V   |          |          |          |
12+35       5.2538      9.74  |Q    V   |          |          |          |
12+40       5.3219      9.89  |Q    V   |          |          |          |
12+45       5.3911     10.05  |Q    V   |          |          |          |
12+50       5.4614     10.21  |Q    V   |          |          |          |
12+55       5.5329     10.39  |Q    V   |          |          |          |
13+ 0       5.6057     10.57  |Q    V   |          |          |          |
13+ 5       5.6798     10.76  |Q     V  |          |          |          |
13+10       5.7553     10.96  |Q     V  |          |          |          |
13+15       5.8322     11.17  |Q     V  |          |          |          |
13+20       5.9106     11.39  |Q     V  |          |          |          |
13+25       5.9906     11.62  |Q     V  |          |          |          |
13+30       6.0723     11.86  |Q     V  |          |          |          |
13+35       6.1557     12.11  |Q     V  |          |          |          |
13+40       6.2410     12.38  |Q     V  |          |          |          |
13+45       6.3282     12.66  |Q     V  |          |          |          |
13+50       6.4174     12.95  |Q     V  |          |          |          |
13+55       6.5088     13.27  |Q      V |          |          |          |
14+ 0       6.6024     13.60  |Q      V |          |          |          |
14+ 5       6.6985     13.96  |Q      V |          |          |          |
14+10       6.7973     14.34  |Q      V |          |          |          |
14+15       6.8989     14.76  |Q      V |          |          |          |
14+20       7.0037     15.22  | Q     V |          |          |          |
14+25       7.1121     15.74  | Q     V |          |          |          |
14+30       7.2244     16.29  | Q     V |          |          |          |
14+35       7.3405     16.87  | Q      V|          |          |          |
14+40       7.4608     17.47  | Q      V|          |          |          |
14+45       7.5856     18.12  | Q      V|          |          |          |
14+50       7.7152     18.81  | Q      V|          |          |          |
14+55       7.8499     19.57  | Q      V|          |          |          |
15+ 0       7.9903     20.39  | Q      V|          |          |          |
15+ 5       8.1371     21.30  | Q       V          |          |          |
15+10       8.2907     22.31  | Q       V          |          |          |
15+15       8.4521     23.44  |  Q      V          |          |          |
15+20       8.6222     24.70  |  Q      V          |          |          |
15+25       8.8034     26.30  |  Q      V          |          |          |
15+30       8.9993     28.45  |  Q      |V         |          |          |
15+35       9.2147     31.27  |   Q     |V         |          |          |
15+40       9.4574     35.24  |   Q     |V         |          |          |
15+45       9.7406     41.12  |    Q    | V        |          |          |
15+50      10.0692     47.72  |     Q   | V        |          |          |
15+55      10.4498     55.27  |      Q  | V        |          |          |
16+ 0      10.8979     65.05  |       Q |  V       |          |          |
16+ 5      11.4844     85.16  |         |Q  V      |          |          |
```

| | | | |
|---|---|---|---|
| 16+10 | 12.2923 | 117.30 | \|  \|  Q  \|  \|  \| |
| 16+15 | 13.3411 | 152.29 | \|  \|  V  Q  \|  \| |
| 16+20 | 14.7584 | 205.79 | \|  \|  V \|  Q  \| |
| 16+25 | 16.6346 | 272.42 | \|  \|  V  \|  Q \| |
| 16+30 | 18.3707 | 252.10 | \|  \|  \| V  \|  Q  \| |
| 16+35 | 19.7597 | 201.68 | \|  \|  \|  V Q  \|  \| |
| 16+40 | 20.8681 | 160.93 | \|  \|  \|Q  V  \|  \| |
| 16+45 | 21.7723 | 131.30 | \|  \|  Q \|  V  \|  \| |
| 16+50 | 22.5438 | 112.02 | \|  \|  Q  \|  V  \|  \| |
| 16+55 | 23.2109 | 96.85 | \|  \| Q  \|  V \|  \| |
| 17+ 0 | 23.7981 | 85.27 | \|  \|Q  \|  V\|  \| |
| 17+ 5 | 24.3191 | 75.65 | \|  \| Q  \|  V  \|  \| |
| 17+10 | 24.7854 | 67.71 | \|  \| Q\|  \|  V  \|  \| |
| 17+15 | 25.2059 | 61.05 | \|  \| Q \|  \|  \|V  \| |
| 17+20 | 25.5936 | 56.30 | \|  \| Q  \|  \|  \|V  \| |
| 17+25 | 25.9515 | 51.97 | \|  \| Q  \|  \|  \|  \| V  \| |
| 17+30 | 26.2770 | 47.26 | \|  \| Q  \|  \|  \|  \| V  \| |
| 17+35 | 26.5723 | 42.88 | \|  \| Q  \|  \|  \|  \| V  \| |
| 17+40 | 26.8416 | 39.10 | \|  \| Q  \|  \|  \|  \|  V  \| |
| 17+45 | 27.0947 | 36.76 | \|  \|  Q  \|  \|  \|  \|  V  \| |
| 17+50 | 27.3315 | 34.38 | \|  \|  Q  \|  \|  \|  \|  V  \| |
| 17+55 | 27.5529 | 32.15 | \|  \|  Q  \|  \|  \|  \|  \|  V  \| |
| 18+ 0 | 27.7612 | 30.24 | \|  \|  Q  \|  \|  \|  \|  \|  V  \| |
| 18+ 5 | 27.9543 | 28.04 | \|  \|  Q  \|  \|  \|  \|  \|  V  \| |
| 18+10 | 28.1338 | 26.07 | \|  \|  Q  \|  \|  \|  \|  \|  V  \| |
| 18+15 | 28.3056 | 24.94 | \|  \|  Q  \|  \|  \|  \|  \|  \|  V  \| |
| 18+20 | 28.4658 | 23.25 | \|  \|  Q  \|  \|  \|  \|  \|  \|  V  \| |
| 18+25 | 28.6151 | 21.68 | \|  Q  \|  \|  \|  \|  \|  \|  V  \| |
| 18+30 | 28.7581 | 20.77 | \|  Q  \|  \|  \|  \|  \|  \|  V  \| |
| 18+35 | 28.8908 | 19.26 | \|  Q  \|  \|  \|  \|  \|  \|  V  \| |
| 18+40 | 29.0136 | 17.84 | \|  Q  \|  \|  \|  \|  \|  \|  V  \| |
| 18+45 | 29.1312 | 17.07 | \|  Q  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 18+50 | 29.2396 | 15.74 | \|  Q  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 18+55 | 29.3398 | 14.55 | \|Q  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 19+ 0 | 29.4370 | 14.11 | \|Q  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 19+ 5 | 29.5327 | 13.90 | \|Q  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 19+10 | 29.6271 | 13.71 | \|Q  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 19+15 | 29.7190 | 13.35 | \|Q  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 19+20 | 29.8084 | 12.98 | \|Q  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 19+25 | 29.8950 | 12.57 | \|Q  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 19+30 | 29.9783 | 12.09 | \|Q  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 19+35 | 30.0551 | 11.15 | \|Q  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 19+40 | 30.1257 | 10.25 | \|Q  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 19+45 | 30.1934 | 9.83 | \|Q  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 19+50 | 30.2579 | 9.38 | \|Q  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 19+55 | 30.3162 | 8.46 | \|Q  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 20+ 0 | 30.3686 | 7.62 | \|Q  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 20+ 5 | 30.4192 | 7.35 | Q  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 20+10 | 30.4683 | 7.12 | Q  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 20+15 | 30.5160 | 6.93 | Q  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 20+20 | 30.5627 | 6.77 | Q  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 20+25 | 30.6082 | 6.62 | Q  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 20+30 | 30.6528 | 6.48 | Q  \|  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 20+35 | 30.6965 | 6.34 | Q  \|  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 20+40 | 30.7393 | 6.22 | Q  \|  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 20+45 | 30.7814 | 6.10 | Q  \|  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 20+50 | 30.8226 | 5.99 | Q  \|  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 20+55 | 30.8631 | 5.88 | Q  \|  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |
| 21+ 0 | 30.9029 | 5.78 | Q  \|  \|  \|  \|  \|  \|  \|  \|  \|  V  \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+ 5 | 30.9420 | 5.68 | Q | \| | \| | \| | V \| |
| 21+10 | 30.9805 | 5.59 | Q | \| | \| | \| | V \| |
| 21+15 | 31.0183 | 5.50 | Q | \| | \| | \| | V \| |
| 21+20 | 31.0556 | 5.41 | Q | \| | \| | \| | V \| |
| 21+25 | 31.0923 | 5.33 | Q | \| | \| | \| | V \| |
| 21+30 | 31.1284 | 5.25 | Q | \| | \| | \| | V \| |
| 21+35 | 31.1640 | 5.17 | Q | \| | \| | \| | V \| |
| 21+40 | 31.1991 | 5.10 | Q | \| | \| | \| | V \| |
| 21+45 | 31.2337 | 5.02 | Q | \| | \| | \| | V \| |
| 21+50 | 31.2679 | 4.95 | Q | \| | \| | \| | V \| |
| 21+55 | 31.3015 | 4.89 | Q | \| | \| | \| | V \| |
| 22+ 0 | 31.3347 | 4.82 | Q | \| | \| | \| | V \| |
| 22+ 5 | 31.3675 | 4.76 | Q | \| | \| | \| | V \| |
| 22+10 | 31.3998 | 4.70 | Q | \| | \| | \| | V \| |
| 22+15 | 31.4317 | 4.64 | Q | \| | \| | \| | V \| |
| 22+20 | 31.4633 | 4.58 | Q | \| | \| | \| | V\| |
| 22+25 | 31.4944 | 4.52 | Q | \| | \| | \| | V\| |
| 22+30 | 31.5252 | 4.47 | Q | \| | \| | \| | V\| |
| 22+35 | 31.5556 | 4.41 | Q | \| | \| | \| | V\| |
| 22+40 | 31.5856 | 4.36 | Q | \| | \| | \| | V\| |
| 22+45 | 31.6153 | 4.31 | Q | \| | \| | \| | V\| |
| 22+50 | 31.6447 | 4.26 | Q | \| | \| | \| | V\| |
| 22+55 | 31.6737 | 4.22 | Q | \| | \| | \| | V\| |
| 23+ 0 | 31.7024 | 4.17 | Q | \| | \| | \| | V\| |
| 23+ 5 | 31.7308 | 4.12 | Q | \| | \| | \| | V\| |
| 23+10 | 31.7589 | 4.08 | Q | \| | \| | \| | V\| |
| 23+15 | 31.7867 | 4.04 | Q | \| | \| | \| | V\| |
| 23+20 | 31.8142 | 3.99 | Q | \| | \| | \| | V\| |
| 23+25 | 31.8415 | 3.95 | Q | \| | \| | \| | V\| |
| 23+30 | 31.8684 | 3.91 | Q | \| | \| | \| | V\| |
| 23+35 | 31.8951 | 3.87 | Q | \| | \| | \| | V\| |
| 23+40 | 31.9215 | 3.84 | Q | \| | \| | \| | V\| |
| 23+45 | 31.9476 | 3.80 | Q | \| | \| | \| | V\| |
| 23+50 | 31.9736 | 3.76 | Q | \| | \| | \| | V\| |
| 23+55 | 31.9992 | 3.73 | Q | \| | \| | \| | V\| |
| 24+ 0 | 32.0246 | 3.69 | Q | \| | \| | \| | V\| |
| 24+ 5 | 32.0496 | 3.63 | Q | \| | \| | \| | V\| |
| 24+10 | 32.0738 | 3.51 | Q | \| | \| | \| | V\| |
| 24+15 | 32.0967 | 3.33 | Q | \| | \| | \| | V\| |
| 24+20 | 32.1175 | 3.02 | Q | \| | \| | \| | V\| |
| 24+25 | 32.1347 | 2.49 | Q | \| | \| | \| | V\| |
| 24+30 | 32.1486 | 2.01 | Q | \| | \| | \| | V\| |
| 24+35 | 32.1600 | 1.67 | Q | \| | \| | \| | V\| |
| 24+40 | 32.1698 | 1.42 | Q | \| | \| | \| | V\| |
| 24+45 | 32.1783 | 1.23 | Q | \| | \| | \| | V\| |
| 24+50 | 32.1857 | 1.08 | Q | \| | \| | \| | V\| |
| 24+55 | 32.1923 | 0.95 | Q | \| | \| | \| | V\| |
| 25+ 0 | 32.1981 | 0.85 | Q | \| | \| | \| | V\| |
| 25+ 5 | 32.2033 | 0.75 | Q | \| | \| | \| | V\| |
| 25+10 | 32.2080 | 0.67 | Q | \| | \| | \| | V\| |
| 25+15 | 32.2122 | 0.61 | Q | \| | \| | \| | V\| |
| 25+20 | 32.2159 | 0.54 | Q | \| | \| | \| | V\| |
| 25+25 | 32.2193 | 0.49 | Q | \| | \| | \| | V\| |
| 25+30 | 32.2223 | 0.44 | Q | \| | \| | \| | V\| |
| 25+35 | 32.2250 | 0.39 | Q | \| | \| | \| | V\| |
| 25+40 | 32.2274 | 0.36 | Q | \| | \| | \| | V\| |
| 25+45 | 32.2296 | 0.32 | Q | \| | \| | \| | V\| |
| 25+50 | 32.2316 | 0.29 | Q | \| | \| | \| | V\| |
| 25+55 | 32.2334 | 0.26 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+ 0 | 32.2350 | 0.23 | Q | \| | \| | \| | V\| |
| 26+ 5 | 32.2364 | 0.21 | Q | \| | \| | \| | V\| |
| 26+10 | 32.2377 | 0.19 | Q | \| | \| | \| | V\| |
| 26+15 | 32.2388 | 0.17 | Q | \| | \| | \| | V\| |
| 26+20 | 32.2399 | 0.15 | Q | \| | \| | \| | V\| |
| 26+25 | 32.2408 | 0.13 | Q | \| | \| | \| | V\| |
| 26+30 | 32.2416 | 0.12 | Q | \| | \| | \| | V\| |
| 26+35 | 32.2423 | 0.10 | Q | \| | \| | \| | V\| |
| 26+40 | 32.2429 | 0.09 | Q | \| | \| | \| | V\| |
| 26+45 | 32.2435 | 0.08 | Q | \| | \| | \| | V\| |
| 26+50 | 32.2440 | 0.07 | Q | \| | \| | \| | V\| |
| 26+55 | 32.2444 | 0.07 | Q | \| | \| | \| | V\| |
| 27+ 0 | 32.2448 | 0.06 | Q | \| | \| | \| | V\| |
| 27+ 5 | 32.2452 | 0.05 | Q | \| | \| | \| | V\| |
| 27+10 | 32.2455 | 0.05 | Q | \| | \| | \| | V\| |
| 27+15 | 32.2458 | 0.04 | Q | \| | \| | \| | V\| |
| 27+20 | 32.2460 | 0.03 | Q | \| | \| | \| | V\| |
| 27+25 | 32.2462 | 0.02 | Q | \| | \| | \| | V\| |
| 27+30 | 32.2463 | 0.02 | Q | \| | \| | \| | V\| |
| 27+35 | 32.2464 | 0.01 | Q | \| | \| | \| | V\| |
| 27+40 | 32.2464 | 0.01 | Q | \| | \| | \| | V\| |
| 27+45 | 32.2465 | 0.01 | Q | \| | \| | \| | V\| |
| 27+50 | 32.2465 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 17
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 148.48 | 1 | 1.30 |
| Rainfall data for year 100 | | |
| 148.48 | 6 | 1.83 |
| Rainfall data for year 100 | | |
| 148.48 | 24 | 2.43 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 77.9 | 92.7 | 148.48 | 1.000 | 0.141 | 0.943 | 0.133 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.133

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 140.02 | 0.943 | 77.9 | 92.7 | 0.78 | 0.696 |
| 8.46 | 0.057 | 98.0 | 98.0 | 0.20 | 0.906 |

Area-averaged catchment yield fraction, Y = 0.708
Area-averaged low loss fraction, Yb = 0.292
User entry of time of concentration = 0.650 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 148.48(Ac.)
Catchment Lag time = 0.520 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 16.0256
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.133(In/Hr)
Average low loss rate fraction (Yb) = 0.292 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.617(In)
Computed peak 30-minute rainfall = 1.056(In)
Specified peak 1-hour rainfall = 1.300(In)
Computed peak 3-hour rainfall = 1.603(In)
Specified peak 6-hour rainfall = 1.830(In)
Specified peak 24-hour rainfall = 2.430(In)

Rainfall depth area reduction factors:
Using a total area of 148.48(Ac.) (Ref: fig. E-4)

5-minute factor = 0.993 Adjusted rainfall = 0.613(In)
30-minute factor = 0.993 Adjusted rainfall = 1.049(In)
1-hour factor = 0.993 Adjusted rainfall = 1.291(In)
3-hour factor = 0.999 Adjusted rainfall = 1.602(In)
6-hour factor = 1.000 Adjusted rainfall = 1.829(In)
24-hour factor = 1.000 Adjusted rainfall = 2.430(In)
---

U n i t H y d r o g r a p h

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 1795.68 (CFS)) | |
| 1 | 0.736 | 13.219 |
| 2 | 3.163 | 43.571 |
| 3 | 7.243 | 73.272 |
| 4 | 14.463 | 129.652 |
| 5 | 28.208 | 246.817 |
| 6 | 42.044 | 248.445 |
| 7 | 52.111 | 180.776 |
| 8 | 59.430 | 131.427 |
| 9 | 64.732 | 95.204 |
| 10 | 69.014 | 76.880 |
| 11 | 72.646 | 65.233 |
| 12 | 75.630 | 53.579 |
| 13 | 78.276 | 47.509 |

| | | |
|---|---|---|
| 14 | 80.458 | 39.179 |
| 15 | 82.396 | 34.803 |
| 16 | 84.112 | 30.808 |
| 17 | 85.685 | 28.247 |
| 18 | 87.133 | 26.001 |
| 19 | 88.405 | 22.855 |
| 20 | 89.450 | 18.758 |
| 21 | 90.395 | 16.968 |
| 22 | 91.293 | 16.131 |
| 23 | 92.108 | 14.625 |
| 24 | 92.865 | 13.606 |
| 25 | 93.576 | 12.752 |
| 26 | 94.194 | 11.110 |
| 27 | 94.739 | 9.784 |
| 28 | 95.284 | 9.784 |
| 29 | 95.775 | 8.810 |
| 30 | 96.192 | 7.489 |
| 31 | 96.608 | 7.482 |
| 32 | 96.984 | 6.745 |
| 33 | 97.275 | 5.226 |
| 34 | 97.563 | 5.180 |
| 35 | 97.822 | 4.648 |
| 36 | 97.989 | 2.996 |
| 37 | 98.149 | 2.878 |
| 38 | 98.315 | 2.968 |
| 39 | 98.504 | 3.398 |
| 40 | 98.696 | 3.453 |
| 41 | 98.888 | 3.453 |
| 42 | 99.081 | 3.453 |
| 43 | 99.273 | 3.453 |
| 44 | 99.461 | 3.369 |
| 45 | 99.582 | 2.181 |
| 46 | 99.682 | 1.799 |
| 47 | 99.782 | 1.799 |
| 48 | 99.883 | 1.799 |
| 49 | 100.000 | 0.899 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6126 | 0.6126 |
| 2 | 0.7542 | 0.1416 |
| 3 | 0.8517 | 0.0975 |
| 4 | 0.9285 | 0.0768 |
| 5 | 0.9928 | 0.0643 |
| 6 | 1.0486 | 0.0558 |
| 7 | 1.0982 | 0.0496 |
| 8 | 1.1431 | 0.0449 |
| 9 | 1.1842 | 0.0411 |
| 10 | 1.2222 | 0.0380 |
| 11 | 1.2577 | 0.0355 |
| 12 | 1.2910 | 0.0333 |
| 13 | 1.3114 | 0.0205 |
| 14 | 1.3306 | 0.0192 |
| 15 | 1.3488 | 0.0182 |
| 16 | 1.3660 | 0.0172 |
| 17 | 1.3824 | 0.0164 |
| 18 | 1.3980 | 0.0156 |
| 19 | 1.4129 | 0.0149 |
| 20 | 1.4272 | 0.0143 |

| | | |
|---|---|---|
| 21 | 1.4409 | 0.0137 |
| 22 | 1.4542 | 0.0132 |
| 23 | 1.4669 | 0.0128 |
| 24 | 1.4792 | 0.0123 |
| 25 | 1.4911 | 0.0119 |
| 26 | 1.5027 | 0.0115 |
| 27 | 1.5138 | 0.0112 |
| 28 | 1.5247 | 0.0109 |
| 29 | 1.5352 | 0.0105 |
| 30 | 1.5455 | 0.0103 |
| 31 | 1.5555 | 0.0100 |
| 32 | 1.5652 | 0.0097 |
| 33 | 1.5747 | 0.0095 |
| 34 | 1.5840 | 0.0093 |
| 35 | 1.5930 | 0.0090 |
| 36 | 1.6018 | 0.0088 |
| 37 | 1.6103 | 0.0084 |
| 38 | 1.6185 | 0.0082 |
| 39 | 1.6266 | 0.0081 |
| 40 | 1.6345 | 0.0079 |
| 41 | 1.6422 | 0.0077 |
| 42 | 1.6498 | 0.0076 |
| 43 | 1.6573 | 0.0074 |
| 44 | 1.6646 | 0.0073 |
| 45 | 1.6717 | 0.0072 |
| 46 | 1.6788 | 0.0070 |
| 47 | 1.6857 | 0.0069 |
| 48 | 1.6925 | 0.0068 |
| 49 | 1.6992 | 0.0067 |
| 50 | 1.7058 | 0.0066 |
| 51 | 1.7123 | 0.0065 |
| 52 | 1.7187 | 0.0064 |
| 53 | 1.7249 | 0.0063 |
| 54 | 1.7311 | 0.0062 |
| 55 | 1.7372 | 0.0061 |
| 56 | 1.7432 | 0.0060 |
| 57 | 1.7491 | 0.0059 |
| 58 | 1.7550 | 0.0058 |
| 59 | 1.7607 | 0.0058 |
| 60 | 1.7664 | 0.0057 |
| 61 | 1.7720 | 0.0056 |
| 62 | 1.7775 | 0.0055 |
| 63 | 1.7830 | 0.0055 |
| 64 | 1.7884 | 0.0054 |
| 65 | 1.7937 | 0.0053 |
| 66 | 1.7989 | 0.0053 |
| 67 | 1.8041 | 0.0052 |
| 68 | 1.8092 | 0.0051 |
| 69 | 1.8143 | 0.0051 |
| 70 | 1.8193 | 0.0050 |
| 71 | 1.8243 | 0.0049 |
| 72 | 1.8292 | 0.0049 |
| 73 | 1.8343 | 0.0052 |
| 74 | 1.8394 | 0.0051 |
| 75 | 1.8445 | 0.0051 |
| 76 | 1.8495 | 0.0050 |
| 77 | 1.8545 | 0.0050 |
| 78 | 1.8594 | 0.0049 |
| 79 | 1.8642 | 0.0049 |

| | | |
|---|---|---|
| 80 | 1.8690 | 0.0048 |
| 81 | 1.8738 | 0.0048 |
| 82 | 1.8785 | 0.0047 |
| 83 | 1.8832 | 0.0047 |
| 84 | 1.8878 | 0.0046 |
| 85 | 1.8924 | 0.0046 |
| 86 | 1.8969 | 0.0045 |
| 87 | 1.9014 | 0.0045 |
| 88 | 1.9059 | 0.0045 |
| 89 | 1.9103 | 0.0044 |
| 90 | 1.9147 | 0.0044 |
| 91 | 1.9190 | 0.0043 |
| 92 | 1.9233 | 0.0043 |
| 93 | 1.9276 | 0.0043 |
| 94 | 1.9318 | 0.0042 |
| 95 | 1.9360 | 0.0042 |
| 96 | 1.9401 | 0.0042 |
| 97 | 1.9443 | 0.0041 |
| 98 | 1.9483 | 0.0041 |
| 99 | 1.9524 | 0.0041 |
| 100 | 1.9564 | 0.0040 |
| 101 | 1.9604 | 0.0040 |
| 102 | 1.9644 | 0.0040 |
| 103 | 1.9683 | 0.0039 |
| 104 | 1.9722 | 0.0039 |
| 105 | 1.9761 | 0.0039 |
| 106 | 1.9799 | 0.0038 |
| 107 | 1.9837 | 0.0038 |
| 108 | 1.9875 | 0.0038 |
| 109 | 1.9912 | 0.0038 |
| 110 | 1.9950 | 0.0037 |
| 111 | 1.9987 | 0.0037 |
| 112 | 2.0023 | 0.0037 |
| 113 | 2.0060 | 0.0036 |
| 114 | 2.0096 | 0.0036 |
| 115 | 2.0132 | 0.0036 |
| 116 | 2.0168 | 0.0036 |
| 117 | 2.0203 | 0.0035 |
| 118 | 2.0239 | 0.0035 |
| 119 | 2.0274 | 0.0035 |
| 120 | 2.0308 | 0.0035 |
| 121 | 2.0343 | 0.0035 |
| 122 | 2.0377 | 0.0034 |
| 123 | 2.0411 | 0.0034 |
| 124 | 2.0445 | 0.0034 |
| 125 | 2.0479 | 0.0034 |
| 126 | 2.0512 | 0.0033 |
| 127 | 2.0545 | 0.0033 |
| 128 | 2.0579 | 0.0033 |
| 129 | 2.0611 | 0.0033 |
| 130 | 2.0644 | 0.0033 |
| 131 | 2.0676 | 0.0032 |
| 132 | 2.0709 | 0.0032 |
| 133 | 2.0741 | 0.0032 |
| 134 | 2.0772 | 0.0032 |
| 135 | 2.0804 | 0.0032 |
| 136 | 2.0836 | 0.0031 |
| 137 | 2.0867 | 0.0031 |
| 138 | 2.0898 | 0.0031 |

| | | |
|---|---|---|
| 139 | 2.0929 | 0.0031 |
| 140 | 2.0960 | 0.0031 |
| 141 | 2.0990 | 0.0031 |
| 142 | 2.1021 | 0.0030 |
| 143 | 2.1051 | 0.0030 |
| 144 | 2.1081 | 0.0030 |
| 145 | 2.1111 | 0.0030 |
| 146 | 2.1140 | 0.0030 |
| 147 | 2.1170 | 0.0030 |
| 148 | 2.1199 | 0.0029 |
| 149 | 2.1229 | 0.0029 |
| 150 | 2.1258 | 0.0029 |
| 151 | 2.1287 | 0.0029 |
| 152 | 2.1315 | 0.0029 |
| 153 | 2.1344 | 0.0029 |
| 154 | 2.1373 | 0.0028 |
| 155 | 2.1401 | 0.0028 |
| 156 | 2.1429 | 0.0028 |
| 157 | 2.1457 | 0.0028 |
| 158 | 2.1485 | 0.0028 |
| 159 | 2.1513 | 0.0028 |
| 160 | 2.1541 | 0.0028 |
| 161 | 2.1568 | 0.0027 |
| 162 | 2.1595 | 0.0027 |
| 163 | 2.1623 | 0.0027 |
| 164 | 2.1650 | 0.0027 |
| 165 | 2.1677 | 0.0027 |
| 166 | 2.1704 | 0.0027 |
| 167 | 2.1730 | 0.0027 |
| 168 | 2.1757 | 0.0027 |
| 169 | 2.1783 | 0.0026 |
| 170 | 2.1810 | 0.0026 |
| 171 | 2.1836 | 0.0026 |
| 172 | 2.1862 | 0.0026 |
| 173 | 2.1888 | 0.0026 |
| 174 | 2.1914 | 0.0026 |
| 175 | 2.1939 | 0.0026 |
| 176 | 2.1965 | 0.0026 |
| 177 | 2.1991 | 0.0025 |
| 178 | 2.2016 | 0.0025 |
| 179 | 2.2041 | 0.0025 |
| 180 | 2.2066 | 0.0025 |
| 181 | 2.2091 | 0.0025 |
| 182 | 2.2116 | 0.0025 |
| 183 | 2.2141 | 0.0025 |
| 184 | 2.2166 | 0.0025 |
| 185 | 2.2190 | 0.0025 |
| 186 | 2.2215 | 0.0025 |
| 187 | 2.2239 | 0.0024 |
| 188 | 2.2264 | 0.0024 |
| 189 | 2.2288 | 0.0024 |
| 190 | 2.2312 | 0.0024 |
| 191 | 2.2336 | 0.0024 |
| 192 | 2.2360 | 0.0024 |
| 193 | 2.2384 | 0.0024 |
| 194 | 2.2407 | 0.0024 |
| 195 | 2.2431 | 0.0024 |
| 196 | 2.2454 | 0.0024 |
| 197 | 2.2478 | 0.0023 |

| | | |
|---|---|---|
| 198 | 2.2501 | 0.0023 |
| 199 | 2.2524 | 0.0023 |
| 200 | 2.2548 | 0.0023 |
| 201 | 2.2571 | 0.0023 |
| 202 | 2.2594 | 0.0023 |
| 203 | 2.2616 | 0.0023 |
| 204 | 2.2639 | 0.0023 |
| 205 | 2.2662 | 0.0023 |
| 206 | 2.2684 | 0.0023 |
| 207 | 2.2707 | 0.0023 |
| 208 | 2.2729 | 0.0022 |
| 209 | 2.2752 | 0.0022 |
| 210 | 2.2774 | 0.0022 |
| 211 | 2.2796 | 0.0022 |
| 212 | 2.2818 | 0.0022 |
| 213 | 2.2840 | 0.0022 |
| 214 | 2.2862 | 0.0022 |
| 215 | 2.2884 | 0.0022 |
| 216 | 2.2906 | 0.0022 |
| 217 | 2.2927 | 0.0022 |
| 218 | 2.2949 | 0.0022 |
| 219 | 2.2970 | 0.0022 |
| 220 | 2.2992 | 0.0021 |
| 221 | 2.3013 | 0.0021 |
| 222 | 2.3035 | 0.0021 |
| 223 | 2.3056 | 0.0021 |
| 224 | 2.3077 | 0.0021 |
| 225 | 2.3098 | 0.0021 |
| 226 | 2.3119 | 0.0021 |
| 227 | 2.3140 | 0.0021 |
| 228 | 2.3161 | 0.0021 |
| 229 | 2.3181 | 0.0021 |
| 230 | 2.3202 | 0.0021 |
| 231 | 2.3223 | 0.0021 |
| 232 | 2.3243 | 0.0021 |
| 233 | 2.3264 | 0.0020 |
| 234 | 2.3284 | 0.0020 |
| 235 | 2.3305 | 0.0020 |
| 236 | 2.3325 | 0.0020 |
| 237 | 2.3345 | 0.0020 |
| 238 | 2.3365 | 0.0020 |
| 239 | 2.3385 | 0.0020 |
| 240 | 2.3405 | 0.0020 |
| 241 | 2.3425 | 0.0020 |
| 242 | 2.3445 | 0.0020 |
| 243 | 2.3465 | 0.0020 |
| 244 | 2.3485 | 0.0020 |
| 245 | 2.3504 | 0.0020 |
| 246 | 2.3524 | 0.0020 |
| 247 | 2.3543 | 0.0020 |
| 248 | 2.3563 | 0.0019 |
| 249 | 2.3582 | 0.0019 |
| 250 | 2.3602 | 0.0019 |
| 251 | 2.3621 | 0.0019 |
| 252 | 2.3640 | 0.0019 |
| 253 | 2.3659 | 0.0019 |
| 254 | 2.3679 | 0.0019 |
| 255 | 2.3698 | 0.0019 |
| 256 | 2.3717 | 0.0019 |

| | | |
|---|---|---|
| 257 | 2.3736 | 0.0019 |
| 258 | 2.3754 | 0.0019 |
| 259 | 2.3773 | 0.0019 |
| 260 | 2.3792 | 0.0019 |
| 261 | 2.3811 | 0.0019 |
| 262 | 2.3829 | 0.0019 |
| 263 | 2.3848 | 0.0019 |
| 264 | 2.3866 | 0.0019 |
| 265 | 2.3885 | 0.0018 |
| 266 | 2.3903 | 0.0018 |
| 267 | 2.3922 | 0.0018 |
| 268 | 2.3940 | 0.0018 |
| 269 | 2.3958 | 0.0018 |
| 270 | 2.3977 | 0.0018 |
| 271 | 2.3995 | 0.0018 |
| 272 | 2.4013 | 0.0018 |
| 273 | 2.4031 | 0.0018 |
| 274 | 2.4049 | 0.0018 |
| 275 | 2.4067 | 0.0018 |
| 276 | 2.4085 | 0.0018 |
| 277 | 2.4103 | 0.0018 |
| 278 | 2.4120 | 0.0018 |
| 279 | 2.4138 | 0.0018 |
| 280 | 2.4156 | 0.0018 |
| 281 | 2.4173 | 0.0018 |
| 282 | 2.4191 | 0.0018 |
| 283 | 2.4209 | 0.0018 |
| 284 | 2.4226 | 0.0017 |
| 285 | 2.4243 | 0.0017 |
| 286 | 2.4261 | 0.0017 |
| 287 | 2.4278 | 0.0017 |
| 288 | 2.4295 | 0.0017 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0017 | 0.0005 | 0.0012 |
| 2 | 0.0017 | 0.0005 | 0.0012 |
| 3 | 0.0017 | 0.0005 | 0.0012 |
| 4 | 0.0017 | 0.0005 | 0.0012 |
| 5 | 0.0018 | 0.0005 | 0.0012 |
| 6 | 0.0018 | 0.0005 | 0.0012 |
| 7 | 0.0018 | 0.0005 | 0.0013 |
| 8 | 0.0018 | 0.0005 | 0.0013 |
| 9 | 0.0018 | 0.0005 | 0.0013 |
| 10 | 0.0018 | 0.0005 | 0.0013 |
| 11 | 0.0018 | 0.0005 | 0.0013 |
| 12 | 0.0018 | 0.0005 | 0.0013 |
| 13 | 0.0018 | 0.0005 | 0.0013 |
| 14 | 0.0018 | 0.0005 | 0.0013 |
| 15 | 0.0018 | 0.0005 | 0.0013 |
| 16 | 0.0018 | 0.0005 | 0.0013 |
| 17 | 0.0019 | 0.0005 | 0.0013 |
| 18 | 0.0019 | 0.0005 | 0.0013 |
| 19 | 0.0019 | 0.0005 | 0.0013 |
| 20 | 0.0019 | 0.0005 | 0.0013 |
| 21 | 0.0019 | 0.0006 | 0.0013 |
| 22 | 0.0019 | 0.0006 | 0.0013 |

| | | | |
|---|---|---|---|
| 23 | 0.0019 | 0.0006 | 0.0013 |
| 24 | 0.0019 | 0.0006 | 0.0014 |
| 25 | 0.0019 | 0.0006 | 0.0014 |
| 26 | 0.0019 | 0.0006 | 0.0014 |
| 27 | 0.0019 | 0.0006 | 0.0014 |
| 28 | 0.0019 | 0.0006 | 0.0014 |
| 29 | 0.0020 | 0.0006 | 0.0014 |
| 30 | 0.0020 | 0.0006 | 0.0014 |
| 31 | 0.0020 | 0.0006 | 0.0014 |
| 32 | 0.0020 | 0.0006 | 0.0014 |
| 33 | 0.0020 | 0.0006 | 0.0014 |
| 34 | 0.0020 | 0.0006 | 0.0014 |
| 35 | 0.0020 | 0.0006 | 0.0014 |
| 36 | 0.0020 | 0.0006 | 0.0014 |
| 37 | 0.0020 | 0.0006 | 0.0014 |
| 38 | 0.0020 | 0.0006 | 0.0014 |
| 39 | 0.0021 | 0.0006 | 0.0015 |
| 40 | 0.0021 | 0.0006 | 0.0015 |
| 41 | 0.0021 | 0.0006 | 0.0015 |
| 42 | 0.0021 | 0.0006 | 0.0015 |
| 43 | 0.0021 | 0.0006 | 0.0015 |
| 44 | 0.0021 | 0.0006 | 0.0015 |
| 45 | 0.0021 | 0.0006 | 0.0015 |
| 46 | 0.0021 | 0.0006 | 0.0015 |
| 47 | 0.0022 | 0.0006 | 0.0015 |
| 48 | 0.0022 | 0.0006 | 0.0015 |
| 49 | 0.0022 | 0.0006 | 0.0015 |
| 50 | 0.0022 | 0.0006 | 0.0015 |
| 51 | 0.0022 | 0.0006 | 0.0016 |
| 52 | 0.0022 | 0.0006 | 0.0016 |
| 53 | 0.0022 | 0.0006 | 0.0016 |
| 54 | 0.0022 | 0.0007 | 0.0016 |
| 55 | 0.0023 | 0.0007 | 0.0016 |
| 56 | 0.0023 | 0.0007 | 0.0016 |
| 57 | 0.0023 | 0.0007 | 0.0016 |
| 58 | 0.0023 | 0.0007 | 0.0016 |
| 59 | 0.0023 | 0.0007 | 0.0016 |
| 60 | 0.0023 | 0.0007 | 0.0016 |
| 61 | 0.0023 | 0.0007 | 0.0017 |
| 62 | 0.0023 | 0.0007 | 0.0017 |
| 63 | 0.0024 | 0.0007 | 0.0017 |
| 64 | 0.0024 | 0.0007 | 0.0017 |
| 65 | 0.0024 | 0.0007 | 0.0017 |
| 66 | 0.0024 | 0.0007 | 0.0017 |
| 67 | 0.0024 | 0.0007 | 0.0017 |
| 68 | 0.0024 | 0.0007 | 0.0017 |
| 69 | 0.0025 | 0.0007 | 0.0017 |
| 70 | 0.0025 | 0.0007 | 0.0017 |
| 71 | 0.0025 | 0.0007 | 0.0018 |
| 72 | 0.0025 | 0.0007 | 0.0018 |
| 73 | 0.0025 | 0.0007 | 0.0018 |
| 74 | 0.0025 | 0.0007 | 0.0018 |
| 75 | 0.0025 | 0.0007 | 0.0018 |
| 76 | 0.0026 | 0.0007 | 0.0018 |
| 77 | 0.0026 | 0.0008 | 0.0018 |
| 78 | 0.0026 | 0.0008 | 0.0018 |
| 79 | 0.0026 | 0.0008 | 0.0019 |
| 80 | 0.0026 | 0.0008 | 0.0019 |
| 81 | 0.0027 | 0.0008 | 0.0019 |

| | | | |
|---|---|---|---|
| 82 | 0.0027 | 0.0008 | 0.0019 |
| 83 | 0.0027 | 0.0008 | 0.0019 |
| 84 | 0.0027 | 0.0008 | 0.0019 |
| 85 | 0.0027 | 0.0008 | 0.0019 |
| 86 | 0.0027 | 0.0008 | 0.0019 |
| 87 | 0.0028 | 0.0008 | 0.0020 |
| 88 | 0.0028 | 0.0008 | 0.0020 |
| 89 | 0.0028 | 0.0008 | 0.0020 |
| 90 | 0.0028 | 0.0008 | 0.0020 |
| 91 | 0.0029 | 0.0008 | 0.0020 |
| 92 | 0.0029 | 0.0008 | 0.0020 |
| 93 | 0.0029 | 0.0008 | 0.0021 |
| 94 | 0.0029 | 0.0009 | 0.0021 |
| 95 | 0.0030 | 0.0009 | 0.0021 |
| 96 | 0.0030 | 0.0009 | 0.0021 |
| 97 | 0.0030 | 0.0009 | 0.0021 |
| 98 | 0.0030 | 0.0009 | 0.0021 |
| 99 | 0.0031 | 0.0009 | 0.0022 |
| 100 | 0.0031 | 0.0009 | 0.0022 |
| 101 | 0.0031 | 0.0009 | 0.0022 |
| 102 | 0.0031 | 0.0009 | 0.0022 |
| 103 | 0.0032 | 0.0009 | 0.0022 |
| 104 | 0.0032 | 0.0009 | 0.0023 |
| 105 | 0.0032 | 0.0009 | 0.0023 |
| 106 | 0.0032 | 0.0009 | 0.0023 |
| 107 | 0.0033 | 0.0010 | 0.0023 |
| 108 | 0.0033 | 0.0010 | 0.0023 |
| 109 | 0.0033 | 0.0010 | 0.0024 |
| 110 | 0.0034 | 0.0010 | 0.0024 |
| 111 | 0.0034 | 0.0010 | 0.0024 |
| 112 | 0.0034 | 0.0010 | 0.0024 |
| 113 | 0.0035 | 0.0010 | 0.0025 |
| 114 | 0.0035 | 0.0010 | 0.0025 |
| 115 | 0.0035 | 0.0010 | 0.0025 |
| 116 | 0.0036 | 0.0010 | 0.0025 |
| 117 | 0.0036 | 0.0011 | 0.0026 |
| 118 | 0.0036 | 0.0011 | 0.0026 |
| 119 | 0.0037 | 0.0011 | 0.0026 |
| 120 | 0.0037 | 0.0011 | 0.0026 |
| 121 | 0.0038 | 0.0011 | 0.0027 |
| 122 | 0.0038 | 0.0011 | 0.0027 |
| 123 | 0.0039 | 0.0011 | 0.0027 |
| 124 | 0.0039 | 0.0011 | 0.0028 |
| 125 | 0.0040 | 0.0012 | 0.0028 |
| 126 | 0.0040 | 0.0012 | 0.0028 |
| 127 | 0.0041 | 0.0012 | 0.0029 |
| 128 | 0.0041 | 0.0012 | 0.0029 |
| 129 | 0.0042 | 0.0012 | 0.0029 |
| 130 | 0.0042 | 0.0012 | 0.0030 |
| 131 | 0.0043 | 0.0012 | 0.0030 |
| 132 | 0.0043 | 0.0013 | 0.0030 |
| 133 | 0.0044 | 0.0013 | 0.0031 |
| 134 | 0.0044 | 0.0013 | 0.0031 |
| 135 | 0.0045 | 0.0013 | 0.0032 |
| 136 | 0.0045 | 0.0013 | 0.0032 |
| 137 | 0.0046 | 0.0014 | 0.0033 |
| 138 | 0.0047 | 0.0014 | 0.0033 |
| 139 | 0.0048 | 0.0014 | 0.0034 |
| 140 | 0.0048 | 0.0014 | 0.0034 |

| | | | |
|---|---|---|---|
| 141 | 0.0049 | 0.0014 | 0.0035 |
| 142 | 0.0050 | 0.0014 | 0.0035 |
| 143 | 0.0051 | 0.0015 | 0.0036 |
| 144 | 0.0051 | 0.0015 | 0.0036 |
| 145 | 0.0049 | 0.0014 | 0.0035 |
| 146 | 0.0049 | 0.0014 | 0.0035 |
| 147 | 0.0051 | 0.0015 | 0.0036 |
| 148 | 0.0051 | 0.0015 | 0.0036 |
| 149 | 0.0053 | 0.0015 | 0.0037 |
| 150 | 0.0053 | 0.0016 | 0.0038 |
| 151 | 0.0055 | 0.0016 | 0.0039 |
| 152 | 0.0055 | 0.0016 | 0.0039 |
| 153 | 0.0057 | 0.0017 | 0.0040 |
| 154 | 0.0058 | 0.0017 | 0.0041 |
| 155 | 0.0059 | 0.0017 | 0.0042 |
| 156 | 0.0060 | 0.0018 | 0.0042 |
| 157 | 0.0062 | 0.0018 | 0.0044 |
| 158 | 0.0063 | 0.0018 | 0.0044 |
| 159 | 0.0065 | 0.0019 | 0.0046 |
| 160 | 0.0066 | 0.0019 | 0.0047 |
| 161 | 0.0068 | 0.0020 | 0.0048 |
| 162 | 0.0069 | 0.0020 | 0.0049 |
| 163 | 0.0072 | 0.0021 | 0.0051 |
| 164 | 0.0073 | 0.0021 | 0.0052 |
| 165 | 0.0076 | 0.0022 | 0.0054 |
| 166 | 0.0077 | 0.0023 | 0.0055 |
| 167 | 0.0081 | 0.0024 | 0.0057 |
| 168 | 0.0082 | 0.0024 | 0.0058 |
| 169 | 0.0088 | 0.0026 | 0.0063 |
| 170 | 0.0090 | 0.0026 | 0.0064 |
| 171 | 0.0095 | 0.0028 | 0.0067 |
| 172 | 0.0097 | 0.0028 | 0.0069 |
| 173 | 0.0103 | 0.0030 | 0.0073 |
| 174 | 0.0105 | 0.0031 | 0.0075 |
| 175 | 0.0112 | 0.0033 | 0.0079 |
| 176 | 0.0115 | 0.0034 | 0.0082 |
| 177 | 0.0123 | 0.0036 | 0.0087 |
| 178 | 0.0128 | 0.0037 | 0.0090 |
| 179 | 0.0137 | 0.0040 | 0.0097 |
| 180 | 0.0143 | 0.0042 | 0.0101 |
| 181 | 0.0156 | 0.0046 | 0.0110 |
| 182 | 0.0164 | 0.0048 | 0.0116 |
| 183 | 0.0182 | 0.0053 | 0.0129 |
| 184 | 0.0192 | 0.0056 | 0.0136 |
| 185 | 0.0333 | 0.0097 | 0.0235 |
| 186 | 0.0355 | 0.0104 | 0.0251 |
| 187 | 0.0411 | 0.0111 | 0.0300 |
| 188 | 0.0449 | 0.0111 | 0.0338 |
| 189 | 0.0558 | 0.0111 | 0.0447 |
| 190 | 0.0643 | 0.0111 | 0.0532 |
| 191 | 0.0975 | 0.0111 | 0.0865 |
| 192 | 0.1416 | 0.0111 | 0.1305 |
| 193 | 0.6126 | 0.0111 | 0.6015 |
| 194 | 0.0768 | 0.0111 | 0.0657 |
| 195 | 0.0496 | 0.0111 | 0.0385 |
| 196 | 0.0380 | 0.0111 | 0.0269 |
| 197 | 0.0205 | 0.0060 | 0.0145 |
| 198 | 0.0172 | 0.0050 | 0.0122 |
| 199 | 0.0149 | 0.0044 | 0.0106 |

| | | | |
|---|---|---|---|
| 200 | 0.0132 | 0.0039 | 0.0094 |
| 201 | 0.0119 | 0.0035 | 0.0084 |
| 202 | 0.0109 | 0.0032 | 0.0077 |
| 203 | 0.0100 | 0.0029 | 0.0071 |
| 204 | 0.0093 | 0.0027 | 0.0066 |
| 205 | 0.0084 | 0.0025 | 0.0060 |
| 206 | 0.0079 | 0.0023 | 0.0056 |
| 207 | 0.0074 | 0.0022 | 0.0053 |
| 208 | 0.0070 | 0.0021 | 0.0050 |
| 209 | 0.0067 | 0.0020 | 0.0047 |
| 210 | 0.0064 | 0.0019 | 0.0045 |
| 211 | 0.0061 | 0.0018 | 0.0043 |
| 212 | 0.0058 | 0.0017 | 0.0041 |
| 213 | 0.0056 | 0.0016 | 0.0040 |
| 214 | 0.0054 | 0.0016 | 0.0038 |
| 215 | 0.0052 | 0.0015 | 0.0037 |
| 216 | 0.0050 | 0.0015 | 0.0035 |
| 217 | 0.0052 | 0.0015 | 0.0037 |
| 218 | 0.0050 | 0.0015 | 0.0035 |
| 219 | 0.0049 | 0.0014 | 0.0034 |
| 220 | 0.0047 | 0.0014 | 0.0033 |
| 221 | 0.0046 | 0.0013 | 0.0032 |
| 222 | 0.0045 | 0.0013 | 0.0032 |
| 223 | 0.0043 | 0.0013 | 0.0031 |
| 224 | 0.0042 | 0.0012 | 0.0030 |
| 225 | 0.0041 | 0.0012 | 0.0029 |
| 226 | 0.0040 | 0.0012 | 0.0028 |
| 227 | 0.0039 | 0.0011 | 0.0028 |
| 228 | 0.0038 | 0.0011 | 0.0027 |
| 229 | 0.0038 | 0.0011 | 0.0027 |
| 230 | 0.0037 | 0.0011 | 0.0026 |
| 231 | 0.0036 | 0.0011 | 0.0025 |
| 232 | 0.0035 | 0.0010 | 0.0025 |
| 233 | 0.0035 | 0.0010 | 0.0024 |
| 234 | 0.0034 | 0.0010 | 0.0024 |
| 235 | 0.0033 | 0.0010 | 0.0024 |
| 236 | 0.0033 | 0.0010 | 0.0023 |
| 237 | 0.0032 | 0.0009 | 0.0023 |
| 238 | 0.0031 | 0.0009 | 0.0022 |
| 239 | 0.0031 | 0.0009 | 0.0022 |
| 240 | 0.0030 | 0.0009 | 0.0022 |
| 241 | 0.0030 | 0.0009 | 0.0021 |
| 242 | 0.0029 | 0.0009 | 0.0021 |
| 243 | 0.0029 | 0.0008 | 0.0020 |
| 244 | 0.0028 | 0.0008 | 0.0020 |
| 245 | 0.0028 | 0.0008 | 0.0020 |
| 246 | 0.0028 | 0.0008 | 0.0020 |
| 247 | 0.0027 | 0.0008 | 0.0019 |
| 248 | 0.0027 | 0.0008 | 0.0019 |
| 249 | 0.0026 | 0.0008 | 0.0019 |
| 250 | 0.0026 | 0.0008 | 0.0018 |
| 251 | 0.0026 | 0.0008 | 0.0018 |
| 252 | 0.0025 | 0.0007 | 0.0018 |
| 253 | 0.0025 | 0.0007 | 0.0018 |
| 254 | 0.0025 | 0.0007 | 0.0017 |
| 255 | 0.0024 | 0.0007 | 0.0017 |
| 256 | 0.0024 | 0.0007 | 0.0017 |
| 257 | 0.0024 | 0.0007 | 0.0017 |
| 258 | 0.0024 | 0.0007 | 0.0017 |

| | | | |
|---|---|---|---|
| 259 | 0.0023 | 0.0007 | 0.0016 |
| 260 | 0.0023 | 0.0007 | 0.0016 |
| 261 | 0.0023 | 0.0007 | 0.0016 |
| 262 | 0.0022 | 0.0007 | 0.0016 |
| 263 | 0.0022 | 0.0006 | 0.0016 |
| 264 | 0.0022 | 0.0006 | 0.0016 |
| 265 | 0.0022 | 0.0006 | 0.0015 |
| 266 | 0.0021 | 0.0006 | 0.0015 |
| 267 | 0.0021 | 0.0006 | 0.0015 |
| 268 | 0.0021 | 0.0006 | 0.0015 |
| 269 | 0.0021 | 0.0006 | 0.0015 |
| 270 | 0.0021 | 0.0006 | 0.0015 |
| 271 | 0.0020 | 0.0006 | 0.0014 |
| 272 | 0.0020 | 0.0006 | 0.0014 |
| 273 | 0.0020 | 0.0006 | 0.0014 |
| 274 | 0.0020 | 0.0006 | 0.0014 |
| 275 | 0.0020 | 0.0006 | 0.0014 |
| 276 | 0.0019 | 0.0006 | 0.0014 |
| 277 | 0.0019 | 0.0006 | 0.0014 |
| 278 | 0.0019 | 0.0006 | 0.0013 |
| 279 | 0.0019 | 0.0005 | 0.0013 |
| 280 | 0.0019 | 0.0005 | 0.0013 |
| 281 | 0.0018 | 0.0005 | 0.0013 |
| 282 | 0.0018 | 0.0005 | 0.0013 |
| 283 | 0.0018 | 0.0005 | 0.0013 |
| 284 | 0.0018 | 0.0005 | 0.0013 |
| 285 | 0.0018 | 0.0005 | 0.0013 |
| 286 | 0.0018 | 0.0005 | 0.0013 |
| 287 | 0.0018 | 0.0005 | 0.0012 |
| 288 | 0.0017 | 0.0005 | 0.0012 |

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Total soil rain loss = 0.46(In)
Total effective rainfall = 1.97(In)
Peak flow rate in flood hydrograph = 231.00(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 75.0 | 150.0 | 225.0 | 300.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0001 | 0.02 | Q | \| | \| | \| | \| |
| 0+10 | 0.0006 | 0.07 | Q | \| | \| | \| | \| |
| 0+15 | 0.0017 | 0.16 | Q | \| | \| | \| | \| |
| 0+20 | 0.0039 | 0.32 | Q | \| | \| | \| | \| |
| 0+25 | 0.0082 | 0.62 | Q | \| | \| | \| | \| |
| 0+30 | 0.0146 | 0.93 | Q | \| | \| | \| | \| |
| 0+35 | 0.0225 | 1.15 | Q | \| | \| | \| | \| |
| 0+40 | 0.0316 | 1.32 | Q | \| | \| | \| | \| |
| 0+45 | 0.0415 | 1.44 | Q | \| | \| | \| | \| |
| 0+50 | 0.0522 | 1.54 | Q | \| | \| | \| | \| |
| 0+55 | 0.0634 | 1.63 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0751 | 1.70 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0872 | 1.77 | Q | \| | \| | \| | \| |
| 1+10 | 0.0998 | 1.82 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+15 | 0.1127 | 1.87 | Q | | | | |
| 1+20 | 0.1259 | 1.92 | Q | | | | |
| 1+25 | 0.1394 | 1.96 | Q | | | | |
| 1+30 | 0.1532 | 2.00 | Q | | | | |
| 1+35 | 0.1672 | 2.04 | Q | | | | |
| 1+40 | 0.1815 | 2.07 | Q | | | | |
| 1+45 | 0.1959 | 2.10 | Q | | | | |
| 1+50 | 0.2106 | 2.13 | Q | | | | |
| 1+55 | 0.2254 | 2.16 | Q | | | | |
| 2+ 0 | 0.2405 | 2.18 | Q | | | | |
| 2+ 5 | 0.2557 | 2.21 | Q | | | | |
| 2+10 | 0.2711 | 2.23 | Q | | | | |
| 2+15 | 0.2866 | 2.25 | Q | | | | |
| 2+20 | 0.3023 | 2.28 | Q | | | | |
| 2+25 | 0.3181 | 2.30 | Q | | | | |
| 2+30 | 0.3341 | 2.32 | Q | | | | |
| 2+35 | 0.3502 | 2.34 | Q | | | | |
| 2+40 | 0.3664 | 2.36 | Q | | | | |
| 2+45 | 0.3828 | 2.37 | Q | | | | |
| 2+50 | 0.3992 | 2.39 | Q | | | | |
| 2+55 | 0.4158 | 2.41 | Q | | | | |
| 3+ 0 | 0.4325 | 2.42 | Q | | | | |
| 3+ 5 | 0.4493 | 2.44 | Q | | | | |
| 3+10 | 0.4662 | 2.46 | Q | | | | |
| 3+15 | 0.4833 | 2.47 | Q | | | | |
| 3+20 | 0.5004 | 2.49 | Q | | | | |
| 3+25 | 0.5177 | 2.50 | Q | | | | |
| 3+30 | 0.5350 | 2.52 | Q | | | | |
| 3+35 | 0.5525 | 2.54 | Q | | | | |
| 3+40 | 0.5701 | 2.56 | Q | | | | |
| 3+45 | 0.5878 | 2.57 | Q | | | | |
| 3+50 | 0.6056 | 2.59 | Q | | | | |
| 3+55 | 0.6235 | 2.60 | QV | | | | |
| 4+ 0 | 0.6416 | 2.62 | QV | | | | |
| 4+ 5 | 0.6597 | 2.63 | QV | | | | |
| 4+10 | 0.6779 | 2.65 | QV | | | | |
| 4+15 | 0.6962 | 2.66 | QV | | | | |
| 4+20 | 0.7147 | 2.67 | QV | | | | |
| 4+25 | 0.7332 | 2.69 | QV | | | | |
| 4+30 | 0.7518 | 2.70 | QV | | | | |
| 4+35 | 0.7705 | 2.72 | QV | | | | |
| 4+40 | 0.7893 | 2.73 | QV | | | | |
| 4+45 | 0.8083 | 2.75 | QV | | | | |
| 4+50 | 0.8273 | 2.76 | QV | | | | |
| 4+55 | 0.8464 | 2.78 | QV | | | | |
| 5+ 0 | 0.8657 | 2.79 | QV | | | | |
| 5+ 5 | 0.8850 | 2.81 | QV | | | | |
| 5+10 | 0.9045 | 2.83 | QV | | | | |
| 5+15 | 0.9241 | 2.84 | QV | | | | |
| 5+20 | 0.9437 | 2.86 | QV | | | | |
| 5+25 | 0.9635 | 2.88 | QV | | | | |
| 5+30 | 0.9835 | 2.89 | QV | | | | |
| 5+35 | 1.0035 | 2.91 | QV | | | | |
| 5+40 | 1.0237 | 2.93 | QV | | | | |
| 5+45 | 1.0439 | 2.94 | QV | | | | |
| 5+50 | 1.0643 | 2.96 | QV | | | | |
| 5+55 | 1.0849 | 2.98 | QV | | | | |
| 6+ 0 | 1.1055 | 3.00 | QV | | | | |
| 6+ 5 | 1.1263 | 3.02 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+10 | 1.1472 | 3.04 | QV | | | | |
| 6+15 | 1.1682 | 3.05 | QV | | | | |
| 6+20 | 1.1894 | 3.07 | QV | | | | |
| 6+25 | 1.2107 | 3.09 | QV | | | | |
| 6+30 | 1.2322 | 3.11 | Q V | | | | |
| 6+35 | 1.2537 | 3.13 | Q V | | | | |
| 6+40 | 1.2755 | 3.15 | Q V | | | | |
| 6+45 | 1.2973 | 3.18 | Q V | | | | |
| 6+50 | 1.3193 | 3.20 | Q V | | | | |
| 6+55 | 1.3415 | 3.22 | Q V | | | | |
| 7+ 0 | 1.3638 | 3.24 | Q V | | | | |
| 7+ 5 | 1.3863 | 3.26 | Q V | | | | |
| 7+10 | 1.4089 | 3.28 | Q V | | | | |
| 7+15 | 1.4317 | 3.31 | Q V | | | | |
| 7+20 | 1.4546 | 3.33 | Q V | | | | |
| 7+25 | 1.4777 | 3.35 | Q V | | | | |
| 7+30 | 1.5010 | 3.38 | Q V | | | | |
| 7+35 | 1.5244 | 3.40 | Q V | | | | |
| 7+40 | 1.5480 | 3.43 | Q V | | | | |
| 7+45 | 1.5718 | 3.45 | Q V | | | | |
| 7+50 | 1.5958 | 3.48 | Q V | | | | |
| 7+55 | 1.6199 | 3.50 | Q V | | | | |
| 8+ 0 | 1.6442 | 3.53 | Q V | | | | |
| 8+ 5 | 1.6687 | 3.56 | Q V | | | | |
| 8+10 | 1.6934 | 3.58 | Q V | | | | |
| 8+15 | 1.7183 | 3.61 | Q V | | | | |
| 8+20 | 1.7434 | 3.64 | Q V | | | | |
| 8+25 | 1.7686 | 3.67 | Q V | | | | |
| 8+30 | 1.7941 | 3.70 | Q V | | | | |
| 8+35 | 1.8198 | 3.73 | Q V | | | | |
| 8+40 | 1.8457 | 3.76 | Q  V | | | | |
| 8+45 | 1.8718 | 3.79 | Q  V | | | | |
| 8+50 | 1.8981 | 3.82 | Q  V | | | | |
| 8+55 | 1.9247 | 3.86 | Q  V | | | | |
| 9+ 0 | 1.9515 | 3.89 | Q  V | | | | |
| 9+ 5 | 1.9785 | 3.92 | Q  V | | | | |
| 9+10 | 2.0057 | 3.96 | Q  V | | | | |
| 9+15 | 2.0332 | 3.99 | Q  V | | | | |
| 9+20 | 2.0609 | 4.03 | Q  V | | | | |
| 9+25 | 2.0889 | 4.06 | Q  V | | | | |
| 9+30 | 2.1171 | 4.10 | Q  V | | | | |
| 9+35 | 2.1456 | 4.14 | Q  V | | | | |
| 9+40 | 2.1744 | 4.18 | Q  V | | | | |
| 9+45 | 2.2034 | 4.22 | Q  V | | | | |
| 9+50 | 2.2327 | 4.26 | Q  V | | | | |
| 9+55 | 2.2623 | 4.30 | Q  V | | | | |
| 10+ 0 | 2.2922 | 4.34 | Q  V | | | | |
| 10+ 5 | 2.3224 | 4.38 | Q  V | | | | |
| 10+10 | 2.3529 | 4.43 | Q  V | | | | |
| 10+15 | 2.3837 | 4.47 | Q  V | | | | |
| 10+20 | 2.4148 | 4.52 | Q  V | | | | |
| 10+25 | 2.4462 | 4.57 | Q   V | | | | |
| 10+30 | 2.4780 | 4.61 | Q   V | | | | |
| 10+35 | 2.5101 | 4.66 | Q   V | | | | |
| 10+40 | 2.5426 | 4.71 | Q   V | | | | |
| 10+45 | 2.5754 | 4.77 | Q   V | | | | |
| 10+50 | 2.6086 | 4.82 | Q   V | | | | |
| 10+55 | 2.6422 | 4.87 | Q   V | | | | |
| 11+ 0 | 2.6761 | 4.93 | Q   V | | | | |

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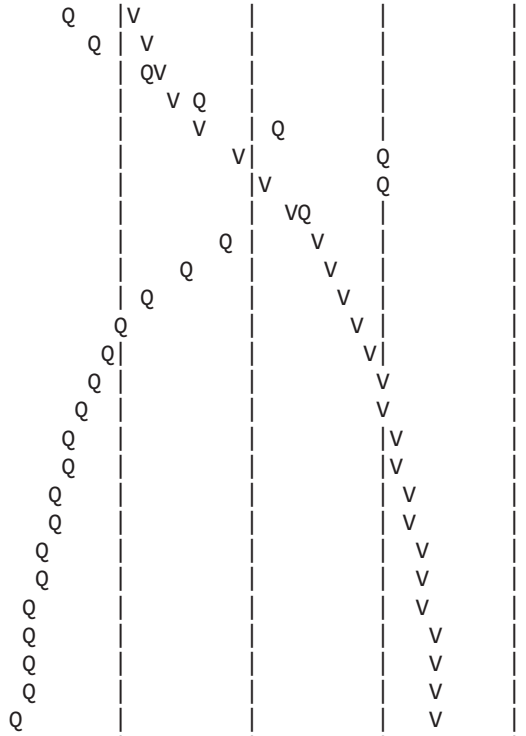
11+ 5       2.7105      4.99  Q   V     |          |          |          |
11+10       2.7453      5.05  Q   V     |          |          |          |
11+15       2.7804      5.11  Q   V     |          |          |          |
11+20       2.8161      5.17  Q   V     |          |          |          |
11+25       2.8521      5.24  Q   V     |          |          |          |
11+30       2.8886      5.30  Q   V     |          |          |          |
11+35       2.9256      5.37  Q   V     |          |          |          |
11+40       2.9631      5.44  Q   V     |          |          |          |
11+45       3.0011      5.51  Q   V     |          |          |          |
11+50       3.0396      5.59  Q    V    |          |          |          |
11+55       3.0786      5.67  Q    V    |          |          |          |
12+ 0       3.1181      5.74  Q    V    |          |          |          |
12+ 5       3.1582      5.82  Q    V    |          |          |          |
12+10       3.1989      5.90  Q    V    |          |          |          |
12+15       3.2400      5.97  Q    V    |          |          |          |
12+20       3.2815      6.03  Q    V    |          |          |          |
12+25       3.3232      6.06  Q    V    |          |          |          |
12+30       3.3652      6.10  Q    V    |          |          |          |
12+35       3.4075      6.15  Q    V    |          |          |          |
12+40       3.4504      6.22  Q    V    |          |          |          |
12+45       3.4938      6.30  Q    V    |          |          |          |
12+50       3.5378      6.39  Q    V    |          |          |          |
12+55       3.5826      6.49  Q    V    |          |          |          |
13+ 0       3.6280      6.60  Q    V    |          |          |          |
13+ 5       3.6742      6.71  Q     V   |          |          |          |
13+10       3.7212      6.82  Q     V   |          |          |          |
13+15       3.7690      6.95  Q     V   |          |          |          |
13+20       3.8178      7.08  Q     V   |          |          |          |
13+25       3.8675      7.22  Q     V   |          |          |          |
13+30       3.9183      7.37  Q     V   |          |          |          |
13+35       3.9700      7.52  |Q    V   |          |          |          |
13+40       4.0230      7.68  |Q    V   |          |          |          |
13+45       4.0771      7.86  |Q    V   |          |          |          |
13+50       4.1324      8.04  |Q    V   |          |          |          |
13+55       4.1891      8.23  |Q    V   |          |          |          |
14+ 0       4.2472      8.43  |Q    V   |          |          |          |
14+ 5       4.3068      8.65  |Q     V  |          |          |          |
14+10       4.3680      8.89  |Q     V  |          |          |          |
14+15       4.4310      9.15  |Q     V  |          |          |          |
14+20       4.4960      9.43  |Q     V  |          |          |          |
14+25       4.5632      9.76  |Q     V  |          |          |          |
14+30       4.6327     10.10  |Q     V  |          |          |          |
14+35       4.7047     10.46  |Q     V  |          |          |          |
14+40       4.7793     10.83  |Q     V  |          |          |          |
14+45       4.8567     11.23  |Q     V  |          |          |          |
14+50       4.9371     11.67  |Q      V |          |          |          |
14+55       5.0207     12.14  |Q      V |          |          |          |
15+ 0       5.1078     12.65  |Q      V |          |          |          |
15+ 5       5.1989     13.22  |Q      V |          |          |          |
15+10       5.2942     13.85  |Q      V |          |          |          |
15+15       5.3945     14.55  |Q      V |          |          |          |
15+20       5.5001     15.34  | Q      V|          |          |          |
15+25       5.6128     16.36  | Q      V|          |          |          |
15+30       5.7350     17.75  | Q      V|          |          |          |
15+35       5.8700     19.61  | Q      V|          |          |          |
15+40       6.0231     22.23  | Q      V|          |          |          |
15+45       6.2045     26.33  |  Q      V          |          |          |
15+50       6.4199     31.29  |   Q     V          |          |          |
15+55       6.6765     37.26  |   Q     V          |          |          |
```

| | | | |
|---|---|---|---|
| 16+ 0 | 6.9896 | 45.46 |  |
| 16+ 5 | 7.4244 | 63.14 | |
| 16+10 | 8.0543 | 91.46 | |
| 16+15 | 8.8962 | 122.25 | |
| 16+20 | 10.0423 | 166.41 | |
| 16+25 | 11.6332 | 231.00 | |
| 16+30 | 13.1893 | 225.95 | |
| 16+35 | 14.4294 | 180.06 | |
| 16+40 | 15.4100 | 142.39 | |
| 16+45 | 16.1867 | 112.77 | |
| 16+50 | 16.8373 | 94.48 | |
| 16+55 | 17.3999 | 81.69 | |
| 17+ 0 | 17.8847 | 70.40 | |
| 17+ 5 | 18.3177 | 62.87 | |
| 17+10 | 18.6966 | 55.01 | |
| 17+15 | 19.0390 | 49.72 | |
| 17+20 | 19.3499 | 45.13 | |
| 17+25 | 19.6360 | 41.55 | |
| 17+30 | 19.8996 | 38.28 | |
| 17+35 | 20.1386 | 34.70 | |
| 17+40 | 20.3517 | 30.94 | |
| 17+45 | 20.5487 | 28.60 | |
| 17+50 | 20.7340 | 26.91 | |
| 17+55 | 20.9064 | 25.02 | |
| 18+ 0 | 21.0681 | 23.48 | |
| 18+ 5 | 21.2199 | 22.04 | |
| 18+10 | 21.3597 | 20.30 | |
| 18+15 | 21.4895 | 18.85 | |
| 18+20 | 21.6141 | 18.09 | |
| 18+25 | 21.7305 | 16.91 | |
| 18+30 | 21.8382 | 15.63 | |
| 18+35 | 21.9416 | 15.02 | |
| 18+40 | 22.0382 | 14.03 | |
| 18+45 | 22.1258 | 12.72 | |
| 18+50 | 22.2096 | 12.17 | |
| 18+55 | 22.2880 | 11.38 | |
| 19+ 0 | 22.3579 | 10.14 | |
| 19+ 5 | 22.4253 | 9.79 | |
| 19+10 | 22.4915 | 9.61 | |
| 19+15 | 22.5578 | 9.63 | |
| 19+20 | 22.6230 | 9.46 | |
| 19+25 | 22.6867 | 9.24 | |
| 19+30 | 22.7486 | 9.00 | |
| 19+35 | 22.8086 | 8.71 | |
| 19+40 | 22.8658 | 8.31 | |
| 19+45 | 22.9165 | 7.37 | |
| 19+50 | 22.9639 | 6.88 | |
| 19+55 | 23.0093 | 6.59 | |
| 20+ 0 | 23.0525 | 6.27 | |
| 20+ 5 | 23.0904 | 5.50 | |
| 20+10 | 23.1235 | 4.81 | |
| 20+15 | 23.1553 | 4.63 | |
| 20+20 | 23.1862 | 4.48 | |
| 20+25 | 23.2163 | 4.37 | |
| 20+30 | 23.2457 | 4.27 | |
| 20+35 | 23.2745 | 4.18 | |
| 20+40 | 23.3027 | 4.09 | |
| 20+45 | 23.3303 | 4.01 | |
| 20+50 | 23.3574 | 3.94 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20+55 | 23.3841 | 3.87 | Q | \| | \| | \| | V \| |
| 21+ 0 | 23.4102 | 3.80 | Q | \| | \| | \| | V \| |
| 21+ 5 | 23.4359 | 3.73 | Q | \| | \| | \| | V \| |
| 21+10 | 23.4612 | 3.67 | Q | \| | \| | \| | V \| |
| 21+15 | 23.4860 | 3.61 | Q | \| | \| | \| | V \| |
| 21+20 | 23.5105 | 3.55 | Q | \| | \| | \| | V \| |
| 21+25 | 23.5346 | 3.50 | Q | \| | \| | \| | V \| |
| 21+30 | 23.5583 | 3.44 | Q | \| | \| | \| | V \| |
| 21+35 | 23.5817 | 3.39 | Q | \| | \| | \| | V \| |
| 21+40 | 23.6047 | 3.34 | Q | \| | \| | \| | V \| |
| 21+45 | 23.6274 | 3.30 | Q | \| | \| | \| | V \| |
| 21+50 | 23.6498 | 3.25 | Q | \| | \| | \| | V \| |
| 21+55 | 23.6719 | 3.21 | Q | \| | \| | \| | V \| |
| 22+ 0 | 23.6937 | 3.16 | Q | \| | \| | \| | V\| |
| 22+ 5 | 23.7152 | 3.12 | Q | \| | \| | \| | V\| |
| 22+10 | 23.7364 | 3.08 | Q | \| | \| | \| | V\| |
| 22+15 | 23.7573 | 3.04 | Q | \| | \| | \| | V\| |
| 22+20 | 23.7780 | 3.00 | Q | \| | \| | \| | V\| |
| 22+25 | 23.7984 | 2.96 | Q | \| | \| | \| | V\| |
| 22+30 | 23.8186 | 2.93 | Q | \| | \| | \| | V\| |
| 22+35 | 23.8385 | 2.89 | Q | \| | \| | \| | V\| |
| 22+40 | 23.8582 | 2.86 | Q | \| | \| | \| | V\| |
| 22+45 | 23.8776 | 2.83 | Q | \| | \| | \| | V\| |
| 22+50 | 23.8969 | 2.79 | Q | \| | \| | \| | V\| |
| 22+55 | 23.9159 | 2.76 | Q | \| | \| | \| | V\| |
| 23+ 0 | 23.9347 | 2.73 | Q | \| | \| | \| | V\| |
| 23+ 5 | 23.9533 | 2.70 | Q | \| | \| | \| | V\| |
| 23+10 | 23.9717 | 2.67 | Q | \| | \| | \| | V\| |
| 23+15 | 23.9899 | 2.64 | Q | \| | \| | \| | V\| |
| 23+20 | 24.0079 | 2.62 | Q | \| | \| | \| | V\| |
| 23+25 | 24.0257 | 2.59 | Q | \| | \| | \| | V\| |
| 23+30 | 24.0434 | 2.56 | Q | \| | \| | \| | V\| |
| 23+35 | 24.0608 | 2.54 | Q | \| | \| | \| | V\| |
| 23+40 | 24.0781 | 2.51 | Q | \| | \| | \| | V\| |
| 23+45 | 24.0952 | 2.49 | Q | \| | \| | \| | V\| |
| 23+50 | 24.1122 | 2.46 | Q | \| | \| | \| | V\| |
| 23+55 | 24.1290 | 2.44 | Q | \| | \| | \| | V\| |
| 24+ 0 | 24.1456 | 2.41 | Q | \| | \| | \| | V\| |
| 24+ 5 | 24.1620 | 2.38 | Q | \| | \| | \| | V\| |
| 24+10 | 24.1778 | 2.30 | Q | \| | \| | \| | V\| |
| 24+15 | 24.1929 | 2.19 | Q | \| | \| | \| | V\| |
| 24+20 | 24.2068 | 2.01 | Q | \| | \| | \| | V\| |
| 24+25 | 24.2184 | 1.69 | Q | \| | \| | \| | V\| |
| 24+30 | 24.2279 | 1.37 | Q | \| | \| | \| | V\| |
| 24+35 | 24.2357 | 1.14 | Q | \| | \| | \| | V\| |
| 24+40 | 24.2424 | 0.97 | Q | \| | \| | \| | V\| |
| 24+45 | 24.2482 | 0.84 | Q | \| | \| | \| | V\| |
| 24+50 | 24.2534 | 0.74 | Q | \| | \| | \| | V\| |
| 24+55 | 24.2579 | 0.66 | Q | \| | \| | \| | V\| |
| 25+ 0 | 24.2619 | 0.58 | Q | \| | \| | \| | V\| |
| 25+ 5 | 24.2655 | 0.52 | Q | \| | \| | \| | V\| |
| 25+10 | 24.2687 | 0.47 | Q | \| | \| | \| | V\| |
| 25+15 | 24.2716 | 0.42 | Q | \| | \| | \| | V\| |
| 25+20 | 24.2742 | 0.38 | Q | \| | \| | \| | V\| |
| 25+25 | 24.2766 | 0.34 | Q | \| | \| | \| | V\| |
| 25+30 | 24.2787 | 0.31 | Q | \| | \| | \| | V\| |
| 25+35 | 24.2806 | 0.28 | Q | \| | \| | \| | V\| |
| 25+40 | 24.2823 | 0.25 | Q | \| | \| | \| | V\| |
| 25+45 | 24.2839 | 0.23 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+50 | 24.2853 | 0.21 | Q | \| | \| | \| | V\| |
| 25+55 | 24.2866 | 0.19 | Q | \| | \| | \| | V\| |
| 26+ 0 | 24.2878 | 0.17 | Q | \| | \| | \| | V\| |
| 26+ 5 | 24.2888 | 0.15 | Q | \| | \| | \| | V\| |
| 26+10 | 24.2897 | 0.14 | Q | \| | \| | \| | V\| |
| 26+15 | 24.2906 | 0.12 | Q | \| | \| | \| | V\| |
| 26+20 | 24.2913 | 0.11 | Q | \| | \| | \| | V\| |
| 26+25 | 24.2920 | 0.10 | Q | \| | \| | \| | V\| |
| 26+30 | 24.2926 | 0.09 | Q | \| | \| | \| | V\| |
| 26+35 | 24.2931 | 0.08 | Q | \| | \| | \| | V\| |
| 26+40 | 24.2936 | 0.07 | Q | \| | \| | \| | V\| |
| 26+45 | 24.2941 | 0.06 | Q | \| | \| | \| | V\| |
| 26+50 | 24.2944 | 0.06 | Q | \| | \| | \| | V\| |
| 26+55 | 24.2948 | 0.05 | Q | \| | \| | \| | V\| |
| 27+ 0 | 24.2951 | 0.04 | Q | \| | \| | \| | V\| |
| 27+ 5 | 24.2954 | 0.04 | Q | \| | \| | \| | V\| |
| 27+10 | 24.2956 | 0.04 | Q | \| | \| | \| | V\| |
| 27+15 | 24.2958 | 0.03 | Q | \| | \| | \| | V\| |
| 27+20 | 24.2960 | 0.03 | Q | \| | \| | \| | V\| |
| 27+25 | 24.2962 | 0.02 | Q | \| | \| | \| | V\| |
| 27+30 | 24.2963 | 0.02 | Q | \| | \| | \| | V\| |
| 27+35 | 24.2964 | 0.01 | Q | \| | \| | \| | V\| |
| 27+40 | 24.2965 | 0.01 | Q | \| | \| | \| | V\| |
| 27+45 | 24.2966 | 0.01 | Q | \| | \| | \| | V\| |
| 27+50 | 24.2966 | 0.01 | Q | \| | \| | \| | V\| |
| 27+55 | 24.2966 | 0.00 | Q | \| | \| | \| | V\| |
| 28+ 0 | 24.2966 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 18
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 48.06 | 1 | 1.33 |
| Rainfall data for year 100 | | |
| 48.06 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 48.06 | 24 | 2.48 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 73.6 | 89.9 | 48.06 | 1.000 | 0.195 | 0.928 | 0.181 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.181

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 44.60 | 0.928 | 73.6 | 89.9 | 1.13 | 0.606 |
| 3.46 | 0.072 | 98.0 | 98.0 | 0.20 | 0.908 |

Area-averaged catchment yield fraction, Y = 0.628
Area-averaged low loss fraction, Yb = 0.372
User entry of time of concentration = 0.370 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 48.06(Ac.)
Catchment Lag time = 0.296 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 28.1532
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.181(In/Hr)
Average low loss rate fraction (Yb) = 0.372 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.631(In)
Computed peak 30-minute rainfall = 1.080(In)
Specified peak 1-hour rainfall = 1.330(In)
Computed peak 3-hour rainfall = 1.623(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.480(In)

Rainfall depth area reduction factors:
Using a total area of 48.06(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.630(In)
30-minute factor = 0.998 Adjusted rainfall = 1.078(In)
1-hour factor = 0.998 Adjusted rainfall = 1.327(In)
3-hour factor = 1.000 Adjusted rainfall = 1.622(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.480(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 581.23 (CFS)) | |
| 1 | 1.601 | 9.305 |
| 2 | 8.240 | 38.590 |
| 3 | 26.567 | 106.517 |
| 4 | 48.689 | 128.578 |
| 5 | 61.622 | 75.171 |
| 6 | 69.597 | 46.352 |
| 7 | 75.378 | 33.606 |
| 8 | 79.766 | 25.502 |
| 9 | 83.142 | 19.622 |
| 10 | 85.964 | 16.399 |
| 11 | 88.315 | 13.669 |
| 12 | 90.114 | 10.454 |
| 13 | 91.671 | 9.049 |

| | | |
|---|---|---|
| 14 | 93.017 | 7.825 |
| 15 | 94.173 | 6.720 |
| 16 | 95.137 | 5.599 |
| 17 | 95.978 | 4.888 |
| 18 | 96.703 | 4.217 |
| 19 | 97.275 | 3.323 |
| 20 | 97.758 | 2.804 |
| 21 | 98.071 | 1.824 |
| 22 | 98.366 | 1.714 |
| 23 | 98.701 | 1.948 |
| 24 | 99.039 | 1.964 |
| 25 | 99.376 | 1.955 |
| 26 | 99.612 | 1.374 |
| 27 | 99.788 | 1.023 |
| 28 | 100.000 | 0.511 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6297 | 0.6297 |
| 2 | 0.7752 | 0.1455 |
| 3 | 0.8755 | 0.1003 |
| 4 | 0.9544 | 0.0789 |
| 5 | 1.0205 | 0.0661 |
| 6 | 1.0779 | 0.0574 |
| 7 | 1.1289 | 0.0510 |
| 8 | 1.1750 | 0.0461 |
| 9 | 1.2173 | 0.0423 |
| 10 | 1.2564 | 0.0391 |
| 11 | 1.2928 | 0.0364 |
| 12 | 1.3270 | 0.0342 |
| 13 | 1.3466 | 0.0196 |
| 14 | 1.3650 | 0.0184 |
| 15 | 1.3823 | 0.0173 |
| 16 | 1.3987 | 0.0164 |
| 17 | 1.4143 | 0.0156 |
| 18 | 1.4292 | 0.0149 |
| 19 | 1.4434 | 0.0142 |
| 20 | 1.4570 | 0.0136 |
| 21 | 1.4701 | 0.0131 |
| 22 | 1.4826 | 0.0126 |
| 23 | 1.4947 | 0.0121 |
| 24 | 1.5064 | 0.0117 |
| 25 | 1.5177 | 0.0113 |
| 26 | 1.5286 | 0.0109 |
| 27 | 1.5392 | 0.0106 |
| 28 | 1.5495 | 0.0103 |
| 29 | 1.5595 | 0.0100 |
| 30 | 1.5692 | 0.0097 |
| 31 | 1.5786 | 0.0094 |
| 32 | 1.5878 | 0.0092 |
| 33 | 1.5968 | 0.0090 |
| 34 | 1.6055 | 0.0087 |
| 35 | 1.6141 | 0.0085 |
| 36 | 1.6224 | 0.0083 |
| 37 | 1.6305 | 0.0081 |
| 38 | 1.6384 | 0.0079 |
| 39 | 1.6461 | 0.0077 |
| 40 | 1.6537 | 0.0076 |
| 41 | 1.6611 | 0.0074 |

| | | |
|---|---|---|
| 42 | 1.6684 | 0.0073 |
| 43 | 1.6755 | 0.0071 |
| 44 | 1.6825 | 0.0070 |
| 45 | 1.6894 | 0.0069 |
| 46 | 1.6962 | 0.0067 |
| 47 | 1.7028 | 0.0066 |
| 48 | 1.7093 | 0.0065 |
| 49 | 1.7157 | 0.0064 |
| 50 | 1.7220 | 0.0063 |
| 51 | 1.7282 | 0.0062 |
| 52 | 1.7343 | 0.0061 |
| 53 | 1.7403 | 0.0060 |
| 54 | 1.7462 | 0.0059 |
| 55 | 1.7520 | 0.0058 |
| 56 | 1.7578 | 0.0057 |
| 57 | 1.7634 | 0.0057 |
| 58 | 1.7690 | 0.0056 |
| 59 | 1.7745 | 0.0055 |
| 60 | 1.7799 | 0.0054 |
| 61 | 1.7852 | 0.0053 |
| 62 | 1.7905 | 0.0053 |
| 63 | 1.7957 | 0.0052 |
| 64 | 1.8008 | 0.0051 |
| 65 | 1.8059 | 0.0051 |
| 66 | 1.8109 | 0.0050 |
| 67 | 1.8159 | 0.0049 |
| 68 | 1.8208 | 0.0049 |
| 69 | 1.8256 | 0.0048 |
| 70 | 1.8303 | 0.0048 |
| 71 | 1.8351 | 0.0047 |
| 72 | 1.8397 | 0.0047 |
| 73 | 1.8452 | 0.0055 |
| 74 | 1.8506 | 0.0054 |
| 75 | 1.8560 | 0.0054 |
| 76 | 1.8613 | 0.0053 |
| 77 | 1.8665 | 0.0052 |
| 78 | 1.8717 | 0.0052 |
| 79 | 1.8769 | 0.0051 |
| 80 | 1.8819 | 0.0051 |
| 81 | 1.8870 | 0.0050 |
| 82 | 1.8920 | 0.0050 |
| 83 | 1.8969 | 0.0049 |
| 84 | 1.9018 | 0.0049 |
| 85 | 1.9067 | 0.0049 |
| 86 | 1.9115 | 0.0048 |
| 87 | 1.9163 | 0.0048 |
| 88 | 1.9210 | 0.0047 |
| 89 | 1.9257 | 0.0047 |
| 90 | 1.9303 | 0.0046 |
| 91 | 1.9349 | 0.0046 |
| 92 | 1.9395 | 0.0046 |
| 93 | 1.9440 | 0.0045 |
| 94 | 1.9485 | 0.0045 |
| 95 | 1.9529 | 0.0044 |
| 96 | 1.9573 | 0.0044 |
| 97 | 1.9617 | 0.0044 |
| 98 | 1.9660 | 0.0043 |
| 99 | 1.9703 | 0.0043 |
| 100 | 1.9746 | 0.0043 |

| | | |
|---|---|---|
| 101 | 1.9788 | 0.0042 |
| 102 | 1.9830 | 0.0042 |
| 103 | 1.9872 | 0.0042 |
| 104 | 1.9914 | 0.0041 |
| 105 | 1.9955 | 0.0041 |
| 106 | 1.9995 | 0.0041 |
| 107 | 2.0036 | 0.0040 |
| 108 | 2.0076 | 0.0040 |
| 109 | 2.0116 | 0.0040 |
| 110 | 2.0156 | 0.0040 |
| 111 | 2.0195 | 0.0039 |
| 112 | 2.0234 | 0.0039 |
| 113 | 2.0273 | 0.0039 |
| 114 | 2.0311 | 0.0039 |
| 115 | 2.0350 | 0.0038 |
| 116 | 2.0387 | 0.0038 |
| 117 | 2.0425 | 0.0038 |
| 118 | 2.0463 | 0.0037 |
| 119 | 2.0500 | 0.0037 |
| 120 | 2.0537 | 0.0037 |
| 121 | 2.0574 | 0.0037 |
| 122 | 2.0610 | 0.0037 |
| 123 | 2.0646 | 0.0036 |
| 124 | 2.0682 | 0.0036 |
| 125 | 2.0718 | 0.0036 |
| 126 | 2.0754 | 0.0036 |
| 127 | 2.0789 | 0.0035 |
| 128 | 2.0824 | 0.0035 |
| 129 | 2.0859 | 0.0035 |
| 130 | 2.0894 | 0.0035 |
| 131 | 2.0929 | 0.0035 |
| 132 | 2.0963 | 0.0034 |
| 133 | 2.0997 | 0.0034 |
| 134 | 2.1031 | 0.0034 |
| 135 | 2.1065 | 0.0034 |
| 136 | 2.1098 | 0.0034 |
| 137 | 2.1131 | 0.0033 |
| 138 | 2.1165 | 0.0033 |
| 139 | 2.1197 | 0.0033 |
| 140 | 2.1230 | 0.0033 |
| 141 | 2.1263 | 0.0033 |
| 142 | 2.1295 | 0.0032 |
| 143 | 2.1327 | 0.0032 |
| 144 | 2.1359 | 0.0032 |
| 145 | 2.1391 | 0.0032 |
| 146 | 2.1423 | 0.0032 |
| 147 | 2.1454 | 0.0032 |
| 148 | 2.1486 | 0.0031 |
| 149 | 2.1517 | 0.0031 |
| 150 | 2.1548 | 0.0031 |
| 151 | 2.1579 | 0.0031 |
| 152 | 2.1610 | 0.0031 |
| 153 | 2.1640 | 0.0031 |
| 154 | 2.1671 | 0.0030 |
| 155 | 2.1701 | 0.0030 |
| 156 | 2.1731 | 0.0030 |
| 157 | 2.1761 | 0.0030 |
| 158 | 2.1791 | 0.0030 |
| 159 | 2.1820 | 0.0030 |

| | | |
|---|---|---|
| 160 | 2.1850 | 0.0029 |
| 161 | 2.1879 | 0.0029 |
| 162 | 2.1908 | 0.0029 |
| 163 | 2.1937 | 0.0029 |
| 164 | 2.1966 | 0.0029 |
| 165 | 2.1995 | 0.0029 |
| 166 | 2.2024 | 0.0029 |
| 167 | 2.2052 | 0.0029 |
| 168 | 2.2080 | 0.0028 |
| 169 | 2.2109 | 0.0028 |
| 170 | 2.2137 | 0.0028 |
| 171 | 2.2165 | 0.0028 |
| 172 | 2.2193 | 0.0028 |
| 173 | 2.2220 | 0.0028 |
| 174 | 2.2248 | 0.0028 |
| 175 | 2.2275 | 0.0027 |
| 176 | 2.2303 | 0.0027 |
| 177 | 2.2330 | 0.0027 |
| 178 | 2.2357 | 0.0027 |
| 179 | 2.2384 | 0.0027 |
| 180 | 2.2411 | 0.0027 |
| 181 | 2.2438 | 0.0027 |
| 182 | 2.2464 | 0.0027 |
| 183 | 2.2491 | 0.0027 |
| 184 | 2.2517 | 0.0026 |
| 185 | 2.2544 | 0.0026 |
| 186 | 2.2570 | 0.0026 |
| 187 | 2.2596 | 0.0026 |
| 188 | 2.2622 | 0.0026 |
| 189 | 2.2648 | 0.0026 |
| 190 | 2.2674 | 0.0026 |
| 191 | 2.2699 | 0.0026 |
| 192 | 2.2725 | 0.0026 |
| 193 | 2.2750 | 0.0025 |
| 194 | 2.2776 | 0.0025 |
| 195 | 2.2801 | 0.0025 |
| 196 | 2.2826 | 0.0025 |
| 197 | 2.2851 | 0.0025 |
| 198 | 2.2876 | 0.0025 |
| 199 | 2.2901 | 0.0025 |
| 200 | 2.2925 | 0.0025 |
| 201 | 2.2950 | 0.0025 |
| 202 | 2.2975 | 0.0025 |
| 203 | 2.2999 | 0.0024 |
| 204 | 2.3023 | 0.0024 |
| 205 | 2.3048 | 0.0024 |
| 206 | 2.3072 | 0.0024 |
| 207 | 2.3096 | 0.0024 |
| 208 | 2.3120 | 0.0024 |
| 209 | 2.3144 | 0.0024 |
| 210 | 2.3168 | 0.0024 |
| 211 | 2.3191 | 0.0024 |
| 212 | 2.3215 | 0.0024 |
| 213 | 2.3238 | 0.0024 |
| 214 | 2.3262 | 0.0023 |
| 215 | 2.3285 | 0.0023 |
| 216 | 2.3309 | 0.0023 |
| 217 | 2.3332 | 0.0023 |
| 218 | 2.3355 | 0.0023 |

| | | |
|---|---|---|
| 219 | 2.3378 | 0.0023 |
| 220 | 2.3401 | 0.0023 |
| 221 | 2.3424 | 0.0023 |
| 222 | 2.3447 | 0.0023 |
| 223 | 2.3469 | 0.0023 |
| 224 | 2.3492 | 0.0023 |
| 225 | 2.3514 | 0.0023 |
| 226 | 2.3537 | 0.0022 |
| 227 | 2.3559 | 0.0022 |
| 228 | 2.3582 | 0.0022 |
| 229 | 2.3604 | 0.0022 |
| 230 | 2.3626 | 0.0022 |
| 231 | 2.3648 | 0.0022 |
| 232 | 2.3670 | 0.0022 |
| 233 | 2.3692 | 0.0022 |
| 234 | 2.3714 | 0.0022 |
| 235 | 2.3736 | 0.0022 |
| 236 | 2.3757 | 0.0022 |
| 237 | 2.3779 | 0.0022 |
| 238 | 2.3801 | 0.0022 |
| 239 | 2.3822 | 0.0022 |
| 240 | 2.3844 | 0.0021 |
| 241 | 2.3865 | 0.0021 |
| 242 | 2.3886 | 0.0021 |
| 243 | 2.3907 | 0.0021 |
| 244 | 2.3929 | 0.0021 |
| 245 | 2.3950 | 0.0021 |
| 246 | 2.3971 | 0.0021 |
| 247 | 2.3992 | 0.0021 |
| 248 | 2.4013 | 0.0021 |
| 249 | 2.4033 | 0.0021 |
| 250 | 2.4054 | 0.0021 |
| 251 | 2.4075 | 0.0021 |
| 252 | 2.4095 | 0.0021 |
| 253 | 2.4116 | 0.0021 |
| 254 | 2.4137 | 0.0020 |
| 255 | 2.4157 | 0.0020 |
| 256 | 2.4177 | 0.0020 |
| 257 | 2.4198 | 0.0020 |
| 258 | 2.4218 | 0.0020 |
| 259 | 2.4238 | 0.0020 |
| 260 | 2.4258 | 0.0020 |
| 261 | 2.4278 | 0.0020 |
| 262 | 2.4298 | 0.0020 |
| 263 | 2.4318 | 0.0020 |
| 264 | 2.4338 | 0.0020 |
| 265 | 2.4358 | 0.0020 |
| 266 | 2.4378 | 0.0020 |
| 267 | 2.4397 | 0.0020 |
| 268 | 2.4417 | 0.0020 |
| 269 | 2.4437 | 0.0020 |
| 270 | 2.4456 | 0.0020 |
| 271 | 2.4476 | 0.0019 |
| 272 | 2.4495 | 0.0019 |
| 273 | 2.4514 | 0.0019 |
| 274 | 2.4534 | 0.0019 |
| 275 | 2.4553 | 0.0019 |
| 276 | 2.4572 | 0.0019 |
| 277 | 2.4591 | 0.0019 |

| | | |
|---|---|---|
| 278 | 2.4610 | 0.0019 |
| 279 | 2.4630 | 0.0019 |
| 280 | 2.4649 | 0.0019 |
| 281 | 2.4667 | 0.0019 |
| 282 | 2.4686 | 0.0019 |
| 283 | 2.4705 | 0.0019 |
| 284 | 2.4724 | 0.0019 |
| 285 | 2.4743 | 0.0019 |
| 286 | 2.4761 | 0.0019 |
| 287 | 2.4780 | 0.0019 |
| 288 | 2.4799 | 0.0019 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0019 | 0.0007 | 0.0012 |
| 2 | 0.0019 | 0.0007 | 0.0012 |
| 3 | 0.0019 | 0.0007 | 0.0012 |
| 4 | 0.0019 | 0.0007 | 0.0012 |
| 5 | 0.0019 | 0.0007 | 0.0012 |
| 6 | 0.0019 | 0.0007 | 0.0012 |
| 7 | 0.0019 | 0.0007 | 0.0012 |
| 8 | 0.0019 | 0.0007 | 0.0012 |
| 9 | 0.0019 | 0.0007 | 0.0012 |
| 10 | 0.0019 | 0.0007 | 0.0012 |
| 11 | 0.0019 | 0.0007 | 0.0012 |
| 12 | 0.0019 | 0.0007 | 0.0012 |
| 13 | 0.0020 | 0.0007 | 0.0012 |
| 14 | 0.0020 | 0.0007 | 0.0012 |
| 15 | 0.0020 | 0.0007 | 0.0012 |
| 16 | 0.0020 | 0.0007 | 0.0012 |
| 17 | 0.0020 | 0.0007 | 0.0012 |
| 18 | 0.0020 | 0.0007 | 0.0013 |
| 19 | 0.0020 | 0.0007 | 0.0013 |
| 20 | 0.0020 | 0.0007 | 0.0013 |
| 21 | 0.0020 | 0.0008 | 0.0013 |
| 22 | 0.0020 | 0.0008 | 0.0013 |
| 23 | 0.0020 | 0.0008 | 0.0013 |
| 24 | 0.0020 | 0.0008 | 0.0013 |
| 25 | 0.0021 | 0.0008 | 0.0013 |
| 26 | 0.0021 | 0.0008 | 0.0013 |
| 27 | 0.0021 | 0.0008 | 0.0013 |
| 28 | 0.0021 | 0.0008 | 0.0013 |
| 29 | 0.0021 | 0.0008 | 0.0013 |
| 30 | 0.0021 | 0.0008 | 0.0013 |
| 31 | 0.0021 | 0.0008 | 0.0013 |
| 32 | 0.0021 | 0.0008 | 0.0013 |
| 33 | 0.0021 | 0.0008 | 0.0013 |
| 34 | 0.0022 | 0.0008 | 0.0014 |
| 35 | 0.0022 | 0.0008 | 0.0014 |
| 36 | 0.0022 | 0.0008 | 0.0014 |
| 37 | 0.0022 | 0.0008 | 0.0014 |
| 38 | 0.0022 | 0.0008 | 0.0014 |
| 39 | 0.0022 | 0.0008 | 0.0014 |
| 40 | 0.0022 | 0.0008 | 0.0014 |
| 41 | 0.0022 | 0.0008 | 0.0014 |
| 42 | 0.0022 | 0.0008 | 0.0014 |
| 43 | 0.0023 | 0.0008 | 0.0014 |

| | | | |
|---|---|---|---|
| 44 | 0.0023 | 0.0008 | 0.0014 |
| 45 | 0.0023 | 0.0008 | 0.0014 |
| 46 | 0.0023 | 0.0009 | 0.0014 |
| 47 | 0.0023 | 0.0009 | 0.0014 |
| 48 | 0.0023 | 0.0009 | 0.0015 |
| 49 | 0.0023 | 0.0009 | 0.0015 |
| 50 | 0.0023 | 0.0009 | 0.0015 |
| 51 | 0.0024 | 0.0009 | 0.0015 |
| 52 | 0.0024 | 0.0009 | 0.0015 |
| 53 | 0.0024 | 0.0009 | 0.0015 |
| 54 | 0.0024 | 0.0009 | 0.0015 |
| 55 | 0.0024 | 0.0009 | 0.0015 |
| 56 | 0.0024 | 0.0009 | 0.0015 |
| 57 | 0.0024 | 0.0009 | 0.0015 |
| 58 | 0.0024 | 0.0009 | 0.0015 |
| 59 | 0.0025 | 0.0009 | 0.0015 |
| 60 | 0.0025 | 0.0009 | 0.0016 |
| 61 | 0.0025 | 0.0009 | 0.0016 |
| 62 | 0.0025 | 0.0009 | 0.0016 |
| 63 | 0.0025 | 0.0009 | 0.0016 |
| 64 | 0.0025 | 0.0009 | 0.0016 |
| 65 | 0.0026 | 0.0010 | 0.0016 |
| 66 | 0.0026 | 0.0010 | 0.0016 |
| 67 | 0.0026 | 0.0010 | 0.0016 |
| 68 | 0.0026 | 0.0010 | 0.0016 |
| 69 | 0.0026 | 0.0010 | 0.0016 |
| 70 | 0.0026 | 0.0010 | 0.0017 |
| 71 | 0.0027 | 0.0010 | 0.0017 |
| 72 | 0.0027 | 0.0010 | 0.0017 |
| 73 | 0.0027 | 0.0010 | 0.0017 |
| 74 | 0.0027 | 0.0010 | 0.0017 |
| 75 | 0.0027 | 0.0010 | 0.0017 |
| 76 | 0.0027 | 0.0010 | 0.0017 |
| 77 | 0.0028 | 0.0010 | 0.0017 |
| 78 | 0.0028 | 0.0010 | 0.0017 |
| 79 | 0.0028 | 0.0010 | 0.0018 |
| 80 | 0.0028 | 0.0010 | 0.0018 |
| 81 | 0.0028 | 0.0011 | 0.0018 |
| 82 | 0.0029 | 0.0011 | 0.0018 |
| 83 | 0.0029 | 0.0011 | 0.0018 |
| 84 | 0.0029 | 0.0011 | 0.0018 |
| 85 | 0.0029 | 0.0011 | 0.0018 |
| 86 | 0.0029 | 0.0011 | 0.0018 |
| 87 | 0.0030 | 0.0011 | 0.0019 |
| 88 | 0.0030 | 0.0011 | 0.0019 |
| 89 | 0.0030 | 0.0011 | 0.0019 |
| 90 | 0.0030 | 0.0011 | 0.0019 |
| 91 | 0.0031 | 0.0011 | 0.0019 |
| 92 | 0.0031 | 0.0011 | 0.0019 |
| 93 | 0.0031 | 0.0012 | 0.0019 |
| 94 | 0.0031 | 0.0012 | 0.0020 |
| 95 | 0.0032 | 0.0012 | 0.0020 |
| 96 | 0.0032 | 0.0012 | 0.0020 |
| 97 | 0.0032 | 0.0012 | 0.0020 |
| 98 | 0.0032 | 0.0012 | 0.0020 |
| 99 | 0.0033 | 0.0012 | 0.0020 |
| 100 | 0.0033 | 0.0012 | 0.0021 |
| 101 | 0.0033 | 0.0012 | 0.0021 |
| 102 | 0.0033 | 0.0012 | 0.0021 |

| | | | |
|---|---|---|---|
| 103 | 0.0034 | 0.0013 | 0.0021 |
| 104 | 0.0034 | 0.0013 | 0.0021 |
| 105 | 0.0034 | 0.0013 | 0.0022 |
| 106 | 0.0035 | 0.0013 | 0.0022 |
| 107 | 0.0035 | 0.0013 | 0.0022 |
| 108 | 0.0035 | 0.0013 | 0.0022 |
| 109 | 0.0036 | 0.0013 | 0.0022 |
| 110 | 0.0036 | 0.0013 | 0.0022 |
| 111 | 0.0036 | 0.0013 | 0.0023 |
| 112 | 0.0037 | 0.0014 | 0.0023 |
| 113 | 0.0037 | 0.0014 | 0.0023 |
| 114 | 0.0037 | 0.0014 | 0.0023 |
| 115 | 0.0038 | 0.0014 | 0.0024 |
| 116 | 0.0038 | 0.0014 | 0.0024 |
| 117 | 0.0039 | 0.0014 | 0.0024 |
| 118 | 0.0039 | 0.0014 | 0.0024 |
| 119 | 0.0039 | 0.0015 | 0.0025 |
| 120 | 0.0040 | 0.0015 | 0.0025 |
| 121 | 0.0040 | 0.0015 | 0.0025 |
| 122 | 0.0040 | 0.0015 | 0.0025 |
| 123 | 0.0041 | 0.0015 | 0.0026 |
| 124 | 0.0041 | 0.0015 | 0.0026 |
| 125 | 0.0042 | 0.0016 | 0.0026 |
| 126 | 0.0042 | 0.0016 | 0.0027 |
| 127 | 0.0043 | 0.0016 | 0.0027 |
| 128 | 0.0043 | 0.0016 | 0.0027 |
| 129 | 0.0044 | 0.0016 | 0.0028 |
| 130 | 0.0044 | 0.0017 | 0.0028 |
| 131 | 0.0045 | 0.0017 | 0.0028 |
| 132 | 0.0046 | 0.0017 | 0.0029 |
| 133 | 0.0046 | 0.0017 | 0.0029 |
| 134 | 0.0047 | 0.0017 | 0.0029 |
| 135 | 0.0048 | 0.0018 | 0.0030 |
| 136 | 0.0048 | 0.0018 | 0.0030 |
| 137 | 0.0049 | 0.0018 | 0.0031 |
| 138 | 0.0049 | 0.0018 | 0.0031 |
| 139 | 0.0050 | 0.0019 | 0.0032 |
| 140 | 0.0051 | 0.0019 | 0.0032 |
| 141 | 0.0052 | 0.0019 | 0.0033 |
| 142 | 0.0052 | 0.0020 | 0.0033 |
| 143 | 0.0054 | 0.0020 | 0.0034 |
| 144 | 0.0054 | 0.0020 | 0.0034 |
| 145 | 0.0047 | 0.0017 | 0.0029 |
| 146 | 0.0047 | 0.0018 | 0.0030 |
| 147 | 0.0048 | 0.0018 | 0.0030 |
| 148 | 0.0049 | 0.0018 | 0.0031 |
| 149 | 0.0050 | 0.0019 | 0.0031 |
| 150 | 0.0051 | 0.0019 | 0.0032 |
| 151 | 0.0052 | 0.0019 | 0.0033 |
| 152 | 0.0053 | 0.0020 | 0.0033 |
| 153 | 0.0054 | 0.0020 | 0.0034 |
| 154 | 0.0055 | 0.0020 | 0.0034 |
| 155 | 0.0057 | 0.0021 | 0.0035 |
| 156 | 0.0057 | 0.0021 | 0.0036 |
| 157 | 0.0059 | 0.0022 | 0.0037 |
| 158 | 0.0060 | 0.0022 | 0.0038 |
| 159 | 0.0062 | 0.0023 | 0.0039 |
| 160 | 0.0063 | 0.0023 | 0.0040 |
| 161 | 0.0065 | 0.0024 | 0.0041 |

| | | | |
|---|---|---|---|
| 162 | 0.0066 | 0.0025 | 0.0042 |
| 163 | 0.0069 | 0.0026 | 0.0043 |
| 164 | 0.0070 | 0.0026 | 0.0044 |
| 165 | 0.0073 | 0.0027 | 0.0046 |
| 166 | 0.0074 | 0.0028 | 0.0047 |
| 167 | 0.0077 | 0.0029 | 0.0049 |
| 168 | 0.0079 | 0.0029 | 0.0050 |
| 169 | 0.0083 | 0.0031 | 0.0052 |
| 170 | 0.0085 | 0.0032 | 0.0054 |
| 171 | 0.0090 | 0.0033 | 0.0056 |
| 172 | 0.0092 | 0.0034 | 0.0058 |
| 173 | 0.0097 | 0.0036 | 0.0061 |
| 174 | 0.0100 | 0.0037 | 0.0063 |
| 175 | 0.0106 | 0.0039 | 0.0067 |
| 176 | 0.0109 | 0.0041 | 0.0069 |
| 177 | 0.0117 | 0.0043 | 0.0073 |
| 178 | 0.0121 | 0.0045 | 0.0076 |
| 179 | 0.0131 | 0.0049 | 0.0082 |
| 180 | 0.0136 | 0.0051 | 0.0085 |
| 181 | 0.0149 | 0.0055 | 0.0093 |
| 182 | 0.0156 | 0.0058 | 0.0098 |
| 183 | 0.0173 | 0.0064 | 0.0109 |
| 184 | 0.0184 | 0.0068 | 0.0115 |
| 185 | 0.0342 | 0.0127 | 0.0215 |
| 186 | 0.0364 | 0.0136 | 0.0229 |
| 187 | 0.0423 | 0.0150 | 0.0272 |
| 188 | 0.0461 | 0.0150 | 0.0311 |
| 189 | 0.0574 | 0.0150 | 0.0423 |
| 190 | 0.0661 | 0.0150 | 0.0510 |
| 191 | 0.1003 | 0.0150 | 0.0852 |
| 192 | 0.1455 | 0.0150 | 0.1305 |
| 193 | 0.6297 | 0.0150 | 0.6146 |
| 194 | 0.0789 | 0.0150 | 0.0639 |
| 195 | 0.0510 | 0.0150 | 0.0360 |
| 196 | 0.0391 | 0.0145 | 0.0246 |
| 197 | 0.0196 | 0.0073 | 0.0123 |
| 198 | 0.0164 | 0.0061 | 0.0103 |
| 199 | 0.0142 | 0.0053 | 0.0089 |
| 200 | 0.0126 | 0.0047 | 0.0079 |
| 201 | 0.0113 | 0.0042 | 0.0071 |
| 202 | 0.0103 | 0.0038 | 0.0065 |
| 203 | 0.0094 | 0.0035 | 0.0059 |
| 204 | 0.0087 | 0.0033 | 0.0055 |
| 205 | 0.0081 | 0.0030 | 0.0051 |
| 206 | 0.0076 | 0.0028 | 0.0048 |
| 207 | 0.0071 | 0.0027 | 0.0045 |
| 208 | 0.0067 | 0.0025 | 0.0042 |
| 209 | 0.0064 | 0.0024 | 0.0040 |
| 210 | 0.0061 | 0.0023 | 0.0038 |
| 211 | 0.0058 | 0.0022 | 0.0037 |
| 212 | 0.0056 | 0.0021 | 0.0035 |
| 213 | 0.0053 | 0.0020 | 0.0034 |
| 214 | 0.0051 | 0.0019 | 0.0032 |
| 215 | 0.0049 | 0.0018 | 0.0031 |
| 216 | 0.0048 | 0.0018 | 0.0030 |
| 217 | 0.0055 | 0.0020 | 0.0034 |
| 218 | 0.0053 | 0.0020 | 0.0033 |
| 219 | 0.0051 | 0.0019 | 0.0032 |
| 220 | 0.0050 | 0.0019 | 0.0031 |

| | | | |
|---|---|---|---|
| 221 | 0.0049 | 0.0018 | 0.0030 |
| 222 | 0.0047 | 0.0018 | 0.0030 |
| 223 | 0.0046 | 0.0017 | 0.0029 |
| 224 | 0.0045 | 0.0017 | 0.0028 |
| 225 | 0.0044 | 0.0016 | 0.0027 |
| 226 | 0.0043 | 0.0016 | 0.0027 |
| 227 | 0.0042 | 0.0016 | 0.0026 |
| 228 | 0.0041 | 0.0015 | 0.0026 |
| 229 | 0.0040 | 0.0015 | 0.0025 |
| 230 | 0.0039 | 0.0015 | 0.0025 |
| 231 | 0.0038 | 0.0014 | 0.0024 |
| 232 | 0.0037 | 0.0014 | 0.0024 |
| 233 | 0.0037 | 0.0014 | 0.0023 |
| 234 | 0.0036 | 0.0013 | 0.0023 |
| 235 | 0.0035 | 0.0013 | 0.0022 |
| 236 | 0.0035 | 0.0013 | 0.0022 |
| 237 | 0.0034 | 0.0013 | 0.0021 |
| 238 | 0.0034 | 0.0012 | 0.0021 |
| 239 | 0.0033 | 0.0012 | 0.0021 |
| 240 | 0.0032 | 0.0012 | 0.0020 |
| 241 | 0.0032 | 0.0012 | 0.0020 |
| 242 | 0.0031 | 0.0012 | 0.0020 |
| 243 | 0.0031 | 0.0011 | 0.0019 |
| 244 | 0.0030 | 0.0011 | 0.0019 |
| 245 | 0.0030 | 0.0011 | 0.0019 |
| 246 | 0.0029 | 0.0011 | 0.0019 |
| 247 | 0.0029 | 0.0011 | 0.0018 |
| 248 | 0.0029 | 0.0011 | 0.0018 |
| 249 | 0.0028 | 0.0011 | 0.0018 |
| 250 | 0.0028 | 0.0010 | 0.0017 |
| 251 | 0.0027 | 0.0010 | 0.0017 |
| 252 | 0.0027 | 0.0010 | 0.0017 |
| 253 | 0.0027 | 0.0010 | 0.0017 |
| 254 | 0.0026 | 0.0010 | 0.0017 |
| 255 | 0.0026 | 0.0010 | 0.0016 |
| 256 | 0.0026 | 0.0010 | 0.0016 |
| 257 | 0.0025 | 0.0009 | 0.0016 |
| 258 | 0.0025 | 0.0009 | 0.0016 |
| 259 | 0.0025 | 0.0009 | 0.0016 |
| 260 | 0.0025 | 0.0009 | 0.0015 |
| 261 | 0.0024 | 0.0009 | 0.0015 |
| 262 | 0.0024 | 0.0009 | 0.0015 |
| 263 | 0.0024 | 0.0009 | 0.0015 |
| 264 | 0.0023 | 0.0009 | 0.0015 |
| 265 | 0.0023 | 0.0009 | 0.0015 |
| 266 | 0.0023 | 0.0009 | 0.0014 |
| 267 | 0.0023 | 0.0008 | 0.0014 |
| 268 | 0.0022 | 0.0008 | 0.0014 |
| 269 | 0.0022 | 0.0008 | 0.0014 |
| 270 | 0.0022 | 0.0008 | 0.0014 |
| 271 | 0.0022 | 0.0008 | 0.0014 |
| 272 | 0.0022 | 0.0008 | 0.0014 |
| 273 | 0.0021 | 0.0008 | 0.0013 |
| 274 | 0.0021 | 0.0008 | 0.0013 |
| 275 | 0.0021 | 0.0008 | 0.0013 |
| 276 | 0.0021 | 0.0008 | 0.0013 |
| 277 | 0.0021 | 0.0008 | 0.0013 |
| 278 | 0.0020 | 0.0008 | 0.0013 |
| 279 | 0.0020 | 0.0008 | 0.0013 |

| | | | |
|---|---|---|---|
| 280 | 0.0020 | 0.0007 | 0.0013 |
| 281 | 0.0020 | 0.0007 | 0.0012 |
| 282 | 0.0020 | 0.0007 | 0.0012 |
| 283 | 0.0019 | 0.0007 | 0.0012 |
| 284 | 0.0019 | 0.0007 | 0.0012 |
| 285 | 0.0019 | 0.0007 | 0.0012 |
| 286 | 0.0019 | 0.0007 | 0.0012 |
| 287 | 0.0019 | 0.0007 | 0.0012 |
| 288 | 0.0019 | 0.0007 | 0.0012 |

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Total soil rain loss = 0.60(In)
Total effective rainfall = 1.87(In)
Peak flow rate in flood hydrograph = 106.10(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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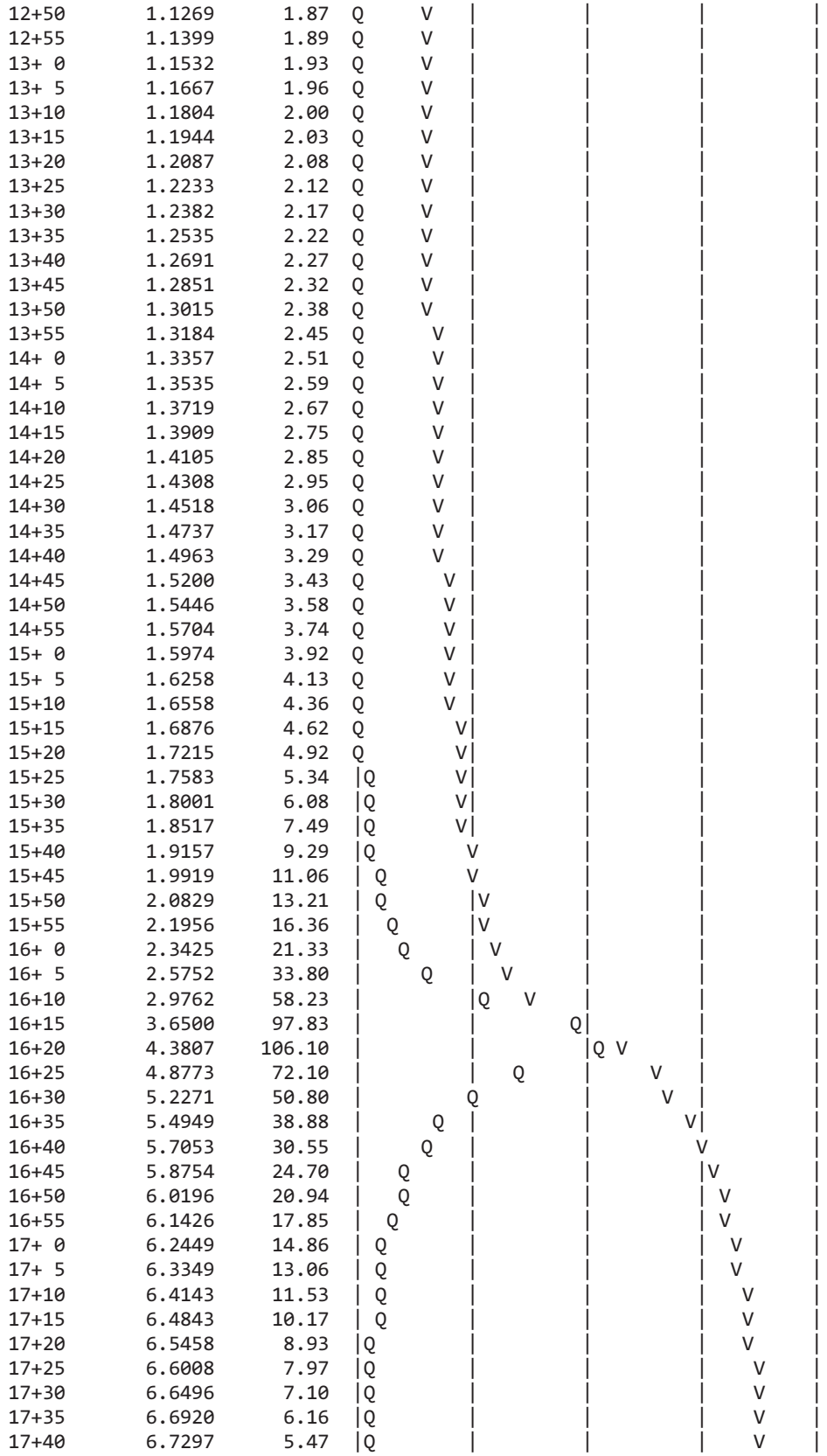
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 50.0 | 100.0 | 150.0 | 200.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+10 | 0.0005 | 0.06 | Q | \| | \| | \| | \| |
| 0+15 | 0.0017 | 0.18 | Q | \| | \| | \| | \| |
| 0+20 | 0.0040 | 0.33 | Q | \| | \| | \| | \| |
| 0+25 | 0.0069 | 0.42 | Q | \| | \| | \| | \| |
| 0+30 | 0.0101 | 0.48 | Q | \| | \| | \| | \| |
| 0+35 | 0.0137 | 0.52 | Q | \| | \| | \| | \| |
| 0+40 | 0.0175 | 0.55 | Q | \| | \| | \| | \| |
| 0+45 | 0.0214 | 0.57 | Q | \| | \| | \| | \| |
| 0+50 | 0.0255 | 0.60 | Q | \| | \| | \| | \| |
| 0+55 | 0.0298 | 0.61 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0341 | 0.63 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0385 | 0.64 | Q | \| | \| | \| | \| |
| 1+10 | 0.0430 | 0.65 | Q | \| | \| | \| | \| |
| 1+15 | 0.0476 | 0.66 | Q | \| | \| | \| | \| |
| 1+20 | 0.0522 | 0.67 | Q | \| | \| | \| | \| |
| 1+25 | 0.0569 | 0.68 | Q | \| | \| | \| | \| |
| 1+30 | 0.0617 | 0.69 | Q | \| | \| | \| | \| |
| 1+35 | 0.0665 | 0.70 | Q | \| | \| | \| | \| |
| 1+40 | 0.0713 | 0.70 | Q | \| | \| | \| | \| |
| 1+45 | 0.0762 | 0.71 | Q | \| | \| | \| | \| |
| 1+50 | 0.0811 | 0.71 | Q | \| | \| | \| | \| |
| 1+55 | 0.0861 | 0.72 | Q | \| | \| | \| | \| |
| 2+ 0 | 0.0911 | 0.72 | Q | \| | \| | \| | \| |
| 2+ 5 | 0.0961 | 0.73 | Q | \| | \| | \| | \| |
| 2+10 | 0.1012 | 0.74 | Q | \| | \| | \| | \| |
| 2+15 | 0.1063 | 0.74 | Q | \| | \| | \| | \| |
| 2+20 | 0.1114 | 0.74 | Q | \| | \| | \| | \| |
| 2+25 | 0.1165 | 0.75 | Q | \| | \| | \| | \| |
| 2+30 | 0.1217 | 0.75 | Q | \| | \| | \| | \| |
| 2+35 | 0.1269 | 0.75 | Q | \| | \| | \| | \| |
| 2+40 | 0.1321 | 0.76 | Q | \| | \| | \| | \| |
| 2+45 | 0.1374 | 0.76 | Q | \| | \| | \| | \| |
| 2+50 | 0.1427 | 0.77 | Q | \| | \| | \| | \| |
| 2+55 | 0.1479 | 0.77 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+ 0 | 0.1533 | 0.77 | Q | | | | |
| 3+ 5 | 0.1586 | 0.78 | Q | | | | |
| 3+10 | 0.1640 | 0.78 | Q | | | | |
| 3+15 | 0.1694 | 0.78 | Q | | | | |
| 3+20 | 0.1748 | 0.79 | Q | | | | |
| 3+25 | 0.1803 | 0.79 | Q | | | | |
| 3+30 | 0.1858 | 0.80 | Q | | | | |
| 3+35 | 0.1913 | 0.80 | QV | | | | |
| 3+40 | 0.1968 | 0.80 | QV | | | | |
| 3+45 | 0.2024 | 0.81 | QV | | | | |
| 3+50 | 0.2080 | 0.81 | QV | | | | |
| 3+55 | 0.2136 | 0.82 | QV | | | | |
| 4+ 0 | 0.2192 | 0.82 | QV | | | | |
| 4+ 5 | 0.2249 | 0.83 | QV | | | | |
| 4+10 | 0.2306 | 0.83 | QV | | | | |
| 4+15 | 0.2364 | 0.83 | QV | | | | |
| 4+20 | 0.2422 | 0.84 | QV | | | | |
| 4+25 | 0.2480 | 0.84 | QV | | | | |
| 4+30 | 0.2538 | 0.85 | QV | | | | |
| 4+35 | 0.2597 | 0.85 | QV | | | | |
| 4+40 | 0.2656 | 0.86 | QV | | | | |
| 4+45 | 0.2715 | 0.86 | QV | | | | |
| 4+50 | 0.2775 | 0.87 | QV | | | | |
| 4+55 | 0.2835 | 0.87 | QV | | | | |
| 5+ 0 | 0.2895 | 0.88 | QV | | | | |
| 5+ 5 | 0.2956 | 0.88 | QV | | | | |
| 5+10 | 0.3017 | 0.89 | QV | | | | |
| 5+15 | 0.3078 | 0.89 | QV | | | | |
| 5+20 | 0.3140 | 0.90 | QV | | | | |
| 5+25 | 0.3202 | 0.90 | QV | | | | |
| 5+30 | 0.3265 | 0.91 | QV | | | | |
| 5+35 | 0.3328 | 0.91 | QV | | | | |
| 5+40 | 0.3391 | 0.92 | QV | | | | |
| 5+45 | 0.3455 | 0.92 | QV | | | | |
| 5+50 | 0.3519 | 0.93 | QV | | | | |
| 5+55 | 0.3583 | 0.94 | QV | | | | |
| 6+ 0 | 0.3648 | 0.94 | QV | | | | |
| 6+ 5 | 0.3713 | 0.95 | QV | | | | |
| 6+10 | 0.3779 | 0.95 | Q V | | | | |
| 6+15 | 0.3845 | 0.96 | Q V | | | | |
| 6+20 | 0.3911 | 0.97 | Q V | | | | |
| 6+25 | 0.3978 | 0.97 | Q V | | | | |
| 6+30 | 0.4046 | 0.98 | Q V | | | | |
| 6+35 | 0.4113 | 0.98 | Q V | | | | |
| 6+40 | 0.4182 | 0.99 | Q V | | | | |
| 6+45 | 0.4250 | 1.00 | Q V | | | | |
| 6+50 | 0.4320 | 1.00 | Q V | | | | |
| 6+55 | 0.4389 | 1.01 | Q V | | | | |
| 7+ 0 | 0.4459 | 1.02 | Q V | | | | |
| 7+ 5 | 0.4530 | 1.03 | Q V | | | | |
| 7+10 | 0.4601 | 1.03 | Q V | | | | |
| 7+15 | 0.4673 | 1.04 | Q V | | | | |
| 7+20 | 0.4745 | 1.05 | Q V | | | | |
| 7+25 | 0.4818 | 1.06 | Q V | | | | |
| 7+30 | 0.4891 | 1.06 | Q V | | | | |
| 7+35 | 0.4965 | 1.07 | Q V | | | | |
| 7+40 | 0.5039 | 1.08 | Q V | | | | |
| 7+45 | 0.5114 | 1.09 | Q V | | | | |
| 7+50 | 0.5189 | 1.09 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7+55 | 0.5265 | 1.10 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.5342 | 1.11 | Q V | \| | \| | \| | \| |
| 8+ 5 | 0.5419 | 1.12 | Q V | \| | \| | \| | \| |
| 8+10 | 0.5496 | 1.13 | Q V | \| | \| | \| | \| |
| 8+15 | 0.5575 | 1.14 | Q V | \| | \| | \| | \| |
| 8+20 | 0.5654 | 1.15 | Q V | \| | \| | \| | \| |
| 8+25 | 0.5733 | 1.16 | Q V | \| | \| | \| | \| |
| 8+30 | 0.5814 | 1.17 | Q V | \| | \| | \| | \| |
| 8+35 | 0.5895 | 1.18 | Q V | \| | \| | \| | \| |
| 8+40 | 0.5976 | 1.19 | Q V | \| | \| | \| | \| |
| 8+45 | 0.6059 | 1.20 | Q V | \| | \| | \| | \| |
| 8+50 | 0.6142 | 1.21 | Q V | \| | \| | \| | \| |
| 8+55 | 0.6225 | 1.22 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.6310 | 1.23 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.6395 | 1.24 | Q V | \| | \| | \| | \| |
| 9+10 | 0.6481 | 1.25 | Q V | \| | \| | \| | \| |
| 9+15 | 0.6568 | 1.26 | Q V | \| | \| | \| | \| |
| 9+20 | 0.6655 | 1.27 | Q V | \| | \| | \| | \| |
| 9+25 | 0.6744 | 1.28 | Q V | \| | \| | \| | \| |
| 9+30 | 0.6833 | 1.30 | Q V | \| | \| | \| | \| |
| 9+35 | 0.6923 | 1.31 | Q V | \| | \| | \| | \| |
| 9+40 | 0.7014 | 1.32 | Q V | \| | \| | \| | \| |
| 9+45 | 0.7106 | 1.33 | Q V | \| | \| | \| | \| |
| 9+50 | 0.7198 | 1.35 | Q V | \| | \| | \| | \| |
| 9+55 | 0.7292 | 1.36 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.7387 | 1.37 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.7482 | 1.39 | Q V | \| | \| | \| | \| |
| 10+10 | 0.7579 | 1.40 | Q V | \| | \| | \| | \| |
| 10+15 | 0.7676 | 1.42 | Q V | \| | \| | \| | \| |
| 10+20 | 0.7775 | 1.43 | Q V | \| | \| | \| | \| |
| 10+25 | 0.7874 | 1.45 | Q V | \| | \| | \| | \| |
| 10+30 | 0.7975 | 1.46 | Q V | \| | \| | \| | \| |
| 10+35 | 0.8077 | 1.48 | Q V | \| | \| | \| | \| |
| 10+40 | 0.8180 | 1.50 | Q V | \| | \| | \| | \| |
| 10+45 | 0.8284 | 1.51 | Q V | \| | \| | \| | \| |
| 10+50 | 0.8389 | 1.53 | Q V | \| | \| | \| | \| |
| 10+55 | 0.8496 | 1.55 | Q V | \| | \| | \| | \| |
| 11+ 0 | 0.8604 | 1.57 | Q V | \| | \| | \| | \| |
| 11+ 5 | 0.8713 | 1.59 | Q V | \| | \| | \| | \| |
| 11+10 | 0.8824 | 1.60 | Q V | \| | \| | \| | \| |
| 11+15 | 0.8935 | 1.62 | Q V | \| | \| | \| | \| |
| 11+20 | 0.9049 | 1.65 | Q V | \| | \| | \| | \| |
| 11+25 | 0.9164 | 1.67 | Q V | \| | \| | \| | \| |
| 11+30 | 0.9280 | 1.69 | Q V | \| | \| | \| | \| |
| 11+35 | 0.9398 | 1.71 | Q V | \| | \| | \| | \| |
| 11+40 | 0.9517 | 1.73 | Q V | \| | \| | \| | \| |
| 11+45 | 0.9638 | 1.76 | Q V | \| | \| | \| | \| |
| 11+50 | 0.9761 | 1.78 | Q V | \| | \| | \| | \| |
| 11+55 | 0.9886 | 1.81 | Q V | \| | \| | \| | \| |
| 12+ 0 | 1.0012 | 1.84 | Q V | \| | \| | \| | \| |
| 12+ 5 | 1.0140 | 1.86 | Q V | \| | \| | \| | \| |
| 12+10 | 1.0269 | 1.86 | Q V | \| | \| | \| | \| |
| 12+15 | 1.0395 | 1.84 | Q V | \| | \| | \| | \| |
| 12+20 | 1.0519 | 1.79 | Q V | \| | \| | \| | \| |
| 12+25 | 1.0641 | 1.78 | Q V | \| | \| | \| | \| |
| 12+30 | 1.0764 | 1.79 | Q V | \| | \| | \| | \| |
| 12+35 | 1.0888 | 1.80 | Q V | \| | \| | \| | \| |
| 12+40 | 1.1014 | 1.82 | Q V | \| | \| | \| | \| |
| 12+45 | 1.1140 | 1.84 | Q V | \| | \| | \| | \| |



| | | | |
|---|---|---|---|
| 12+50 | 1.1269 | 1.87 | Q V |
| 12+55 | 1.1399 | 1.89 | Q V |
| 13+ 0 | 1.1532 | 1.93 | Q V |
| 13+ 5 | 1.1667 | 1.96 | Q V |
| 13+10 | 1.1804 | 2.00 | Q V |
| 13+15 | 1.1944 | 2.03 | Q V |
| 13+20 | 1.2087 | 2.08 | Q V |
| 13+25 | 1.2233 | 2.12 | Q V |
| 13+30 | 1.2382 | 2.17 | Q V |
| 13+35 | 1.2535 | 2.22 | Q V |
| 13+40 | 1.2691 | 2.27 | Q V |
| 13+45 | 1.2851 | 2.32 | Q V |
| 13+50 | 1.3015 | 2.38 | Q V |
| 13+55 | 1.3184 | 2.45 | Q V |
| 14+ 0 | 1.3357 | 2.51 | Q V |
| 14+ 5 | 1.3535 | 2.59 | Q V |
| 14+10 | 1.3719 | 2.67 | Q V |
| 14+15 | 1.3909 | 2.75 | Q V |
| 14+20 | 1.4105 | 2.85 | Q V |
| 14+25 | 1.4308 | 2.95 | Q V |
| 14+30 | 1.4518 | 3.06 | Q V |
| 14+35 | 1.4737 | 3.17 | Q V |
| 14+40 | 1.4963 | 3.29 | Q V |
| 14+45 | 1.5200 | 3.43 | Q V |
| 14+50 | 1.5446 | 3.58 | Q V |
| 14+55 | 1.5704 | 3.74 | Q V |
| 15+ 0 | 1.5974 | 3.92 | Q V |
| 15+ 5 | 1.6258 | 4.13 | Q V |
| 15+10 | 1.6558 | 4.36 | Q V |
| 15+15 | 1.6876 | 4.62 | Q V |
| 15+20 | 1.7215 | 4.92 | Q V |
| 15+25 | 1.7583 | 5.34 | Q V |
| 15+30 | 1.8001 | 6.08 | Q V |
| 15+35 | 1.8517 | 7.49 | Q V |
| 15+40 | 1.9157 | 9.29 | Q V |
| 15+45 | 1.9919 | 11.06 | Q V |
| 15+50 | 2.0829 | 13.21 | Q V |
| 15+55 | 2.1956 | 16.36 | Q V |
| 16+ 0 | 2.3425 | 21.33 | Q V |
| 16+ 5 | 2.5752 | 33.80 | Q V |
| 16+10 | 2.9762 | 58.23 | Q V |
| 16+15 | 3.6500 | 97.83 | Q |
| 16+20 | 4.3807 | 106.10 | Q V |
| 16+25 | 4.8773 | 72.10 | Q V |
| 16+30 | 5.2271 | 50.80 | Q V |
| 16+35 | 5.4949 | 38.88 | Q V |
| 16+40 | 5.7053 | 30.55 | Q V |
| 16+45 | 5.8754 | 24.70 | Q V |
| 16+50 | 6.0196 | 20.94 | Q V |
| 16+55 | 6.1426 | 17.85 | Q V |
| 17+ 0 | 6.2449 | 14.86 | Q V |
| 17+ 5 | 6.3349 | 13.06 | Q V |
| 17+10 | 6.4143 | 11.53 | Q V |
| 17+15 | 6.4843 | 10.17 | Q V |
| 17+20 | 6.5458 | 8.93 | Q V |
| 17+25 | 6.6008 | 7.97 | Q V |
| 17+30 | 6.6496 | 7.10 | Q V |
| 17+35 | 6.6920 | 6.16 | Q V |
| 17+40 | 6.7297 | 5.47 | Q V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17+45 | 6.7616 | 4.64 | Q | \| | \| | \| | V \| |
| 17+50 | 6.7916 | 4.34 | Q | \| | \| | \| | V \| |
| 17+55 | 6.8209 | 4.27 | Q | \| | \| | \| | V \| |
| 18+ 0 | 6.8490 | 4.07 | Q | \| | \| | \| | V \| |
| 18+ 5 | 6.8754 | 3.83 | Q | \| | \| | \| | V \| |
| 18+10 | 6.8981 | 3.31 | Q | \| | \| | \| | V \| |
| 18+15 | 6.9183 | 2.93 | Q | \| | \| | \| | V \| |
| 18+20 | 6.9357 | 2.51 | Q | \| | \| | \| | V \| |
| 18+25 | 6.9503 | 2.12 | Q | \| | \| | \| | V \| |
| 18+30 | 6.9642 | 2.03 | Q | \| | \| | \| | V \| |
| 18+35 | 6.9777 | 1.95 | Q | \| | \| | \| | V \| |
| 18+40 | 6.9907 | 1.89 | Q | \| | \| | \| | V \| |
| 18+45 | 7.0033 | 1.84 | Q | \| | \| | \| | V \| |
| 18+50 | 7.0156 | 1.79 | Q | \| | \| | \| | V \| |
| 18+55 | 7.0276 | 1.74 | Q | \| | \| | \| | V \| |
| 19+ 0 | 7.0393 | 1.69 | Q | \| | \| | \| | V \| |
| 19+ 5 | 7.0506 | 1.65 | Q | \| | \| | \| | V \| |
| 19+10 | 7.0618 | 1.61 | Q | \| | \| | \| | V \| |
| 19+15 | 7.0726 | 1.58 | Q | \| | \| | \| | V \| |
| 19+20 | 7.0832 | 1.54 | Q | \| | \| | \| | V \| |
| 19+25 | 7.0936 | 1.51 | Q | \| | \| | \| | V \| |
| 19+30 | 7.1037 | 1.47 | Q | \| | \| | \| | V \| |
| 19+35 | 7.1137 | 1.44 | Q | \| | \| | \| | V \| |
| 19+40 | 7.1234 | 1.41 | Q | \| | \| | \| | V \| |
| 19+45 | 7.1329 | 1.38 | Q | \| | \| | \| | V \| |
| 19+50 | 7.1423 | 1.36 | Q | \| | \| | \| | V \| |
| 19+55 | 7.1515 | 1.33 | Q | \| | \| | \| | V \| |
| 20+ 0 | 7.1605 | 1.31 | Q | \| | \| | \| | V \| |
| 20+ 5 | 7.1693 | 1.28 | Q | \| | \| | \| | V \| |
| 20+10 | 7.1780 | 1.26 | Q | \| | \| | \| | V \| |
| 20+15 | 7.1865 | 1.24 | Q | \| | \| | \| | V \| |
| 20+20 | 7.1949 | 1.22 | Q | \| | \| | \| | V \| |
| 20+25 | 7.2031 | 1.20 | Q | \| | \| | \| | V \| |
| 20+30 | 7.2112 | 1.18 | Q | \| | \| | \| | V \| |
| 20+35 | 7.2192 | 1.16 | Q | \| | \| | \| | V \| |
| 20+40 | 7.2270 | 1.14 | Q | \| | \| | \| | V \| |
| 20+45 | 7.2347 | 1.12 | Q | \| | \| | \| | V \| |
| 20+50 | 7.2423 | 1.10 | Q | \| | \| | \| | V \| |
| 20+55 | 7.2498 | 1.09 | Q | \| | \| | \| | V \| |
| 21+ 0 | 7.2571 | 1.07 | Q | \| | \| | \| | V \| |
| 21+ 5 | 7.2644 | 1.05 | Q | \| | \| | \| | V \| |
| 21+10 | 7.2716 | 1.04 | Q | \| | \| | \| | V \| |
| 21+15 | 7.2786 | 1.02 | Q | \| | \| | \| | V \| |
| 21+20 | 7.2856 | 1.01 | Q | \| | \| | \| | V \| |
| 21+25 | 7.2924 | 1.00 | Q | \| | \| | \| | V \| |
| 21+30 | 7.2992 | 0.98 | Q | \| | \| | \| | V \| |
| 21+35 | 7.3059 | 0.97 | Q | \| | \| | \| | V \| |
| 21+40 | 7.3125 | 0.96 | Q | \| | \| | \| | V\| |
| 21+45 | 7.3190 | 0.95 | Q | \| | \| | \| | V\| |
| 21+50 | 7.3254 | 0.93 | Q | \| | \| | \| | V\| |
| 21+55 | 7.3318 | 0.92 | Q | \| | \| | \| | V\| |
| 22+ 0 | 7.3381 | 0.91 | Q | \| | \| | \| | V\| |
| 22+ 5 | 7.3443 | 0.90 | Q | \| | \| | \| | V\| |
| 22+10 | 7.3504 | 0.89 | Q | \| | \| | \| | V\| |
| 22+15 | 7.3565 | 0.88 | Q | \| | \| | \| | V\| |
| 22+20 | 7.3625 | 0.87 | Q | \| | \| | \| | V\| |
| 22+25 | 7.3684 | 0.86 | Q | \| | \| | \| | V\| |
| 22+30 | 7.3742 | 0.85 | Q | \| | \| | \| | V\| |
| 22+35 | 7.3800 | 0.84 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+40 | 7.3858 | 0.83 | Q | \| | \| | \| | V\| |
| 22+45 | 7.3914 | 0.82 | Q | \| | \| | \| | V\| |
| 22+50 | 7.3971 | 0.82 | Q | \| | \| | \| | V\| |
| 22+55 | 7.4026 | 0.81 | Q | \| | \| | \| | V\| |
| 23+ 0 | 7.4081 | 0.80 | Q | \| | \| | \| | V\| |
| 23+ 5 | 7.4136 | 0.79 | Q | \| | \| | \| | V\| |
| 23+10 | 7.4190 | 0.78 | Q | \| | \| | \| | V\| |
| 23+15 | 7.4243 | 0.78 | Q | \| | \| | \| | V\| |
| 23+20 | 7.4296 | 0.77 | Q | \| | \| | \| | V\| |
| 23+25 | 7.4348 | 0.76 | Q | \| | \| | \| | V\| |
| 23+30 | 7.4400 | 0.75 | Q | \| | \| | \| | V\| |
| 23+35 | 7.4451 | 0.75 | Q | \| | \| | \| | V\| |
| 23+40 | 7.4502 | 0.74 | Q | \| | \| | \| | V\| |
| 23+45 | 7.4553 | 0.73 | Q | \| | \| | \| | V\| |
| 23+50 | 7.4603 | 0.73 | Q | \| | \| | \| | V\| |
| 23+55 | 7.4652 | 0.72 | Q | \| | \| | \| | V\| |
| 24+ 0 | 7.4701 | 0.71 | Q | \| | \| | \| | V\| |
| 24+ 5 | 7.4749 | 0.70 | Q | \| | \| | \| | V\| |
| 24+10 | 7.4794 | 0.65 | Q | \| | \| | \| | V\| |
| 24+15 | 7.4829 | 0.52 | Q | \| | \| | \| | V\| |
| 24+20 | 7.4854 | 0.36 | Q | \| | \| | \| | V\| |
| 24+25 | 7.4873 | 0.27 | Q | \| | \| | \| | V\| |
| 24+30 | 7.4888 | 0.22 | Q | \| | \| | \| | V\| |
| 24+35 | 7.4900 | 0.17 | Q | \| | \| | \| | V\| |
| 24+40 | 7.4910 | 0.14 | Q | \| | \| | \| | V\| |
| 24+45 | 7.4918 | 0.12 | Q | \| | \| | \| | V\| |
| 24+50 | 7.4925 | 0.10 | Q | \| | \| | \| | V\| |
| 24+55 | 7.4930 | 0.08 | Q | \| | \| | \| | V\| |
| 25+ 0 | 7.4935 | 0.07 | Q | \| | \| | \| | V\| |
| 25+ 5 | 7.4939 | 0.06 | Q | \| | \| | \| | V\| |
| 25+10 | 7.4942 | 0.05 | Q | \| | \| | \| | V\| |
| 25+15 | 7.4945 | 0.04 | Q | \| | \| | \| | V\| |
| 25+20 | 7.4947 | 0.03 | Q | \| | \| | \| | V\| |
| 25+25 | 7.4949 | 0.03 | Q | \| | \| | \| | V\| |
| 25+30 | 7.4951 | 0.02 | Q | \| | \| | \| | V\| |
| 25+35 | 7.4952 | 0.02 | Q | \| | \| | \| | V\| |
| 25+40 | 7.4953 | 0.01 | Q | \| | \| | \| | V\| |
| 25+45 | 7.4954 | 0.01 | Q | \| | \| | \| | V\| |
| 25+50 | 7.4955 | 0.01 | Q | \| | \| | \| | V\| |
| 25+55 | 7.4955 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 0 | 7.4956 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 5 | 7.4956 | 0.00 | Q | \| | \| | \| | V\| |
| 26+10 | 7.4956 | 0.00 | Q | \| | \| | \| | V\| |
| 26+15 | 7.4956 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 19
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 7.87 | 1 | 1.35 |
| Rainfall data for year 100 | | |
| 7.87 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 7.87 | 24 | 2.48 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 62.0 | 80.6 | 7.87 | 1.000 | 0.360 | 1.000 | 0.360 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.360

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 7.87 | 1.000 | 62.0 | 80.6 | 2.41 | 0.366 |

Area-averaged catchment yield fraction, Y = 0.366
Area-averaged low loss fraction, Yb = 0.634
User entry of time of concentration = 0.580 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 7.87(Ac.)
Catchment Lag time = 0.464 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 17.9598
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.360(In/Hr)
Average low loss rate fraction (Yb) = 0.634 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.641(In)
Computed peak 30-minute rainfall = 1.097(In)
Specified peak 1-hour rainfall = 1.350(In)
Computed peak 3-hour rainfall = 1.632(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.480(In)

Rainfall depth area reduction factors:
Using a total area of 7.87(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.640(In)
30-minute factor = 1.000 Adjusted rainfall = 1.096(In)
1-hour factor = 1.000 Adjusted rainfall = 1.350(In)
3-hour factor = 1.000 Adjusted rainfall = 1.632(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.480(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 95.18 (CFS)) | |
| 1 | 0.857 | 0.815 |
| 2 | 3.791 | 2.793 |
| 3 | 8.920 | 4.881 |
| 4 | 19.662 | 10.225 |
| 5 | 36.203 | 15.743 |
| 6 | 49.017 | 12.197 |
| 7 | 58.041 | 8.589 |
| 8 | 64.275 | 5.933 |
| 9 | 69.111 | 4.603 |
| 10 | 73.109 | 3.805 |
| 11 | 76.367 | 3.101 |
| 12 | 79.157 | 2.655 |
| 13 | 81.486 | 2.216 |
| 14 | 83.485 | 1.903 |

| | | |
|---|---|---|
| 15 | 85.300 | 1.728 |
| 16 | 86.956 | 1.576 |
| 17 | 88.391 | 1.366 |
| 18 | 89.558 | 1.110 |
| 19 | 90.606 | 0.998 |
| 20 | 91.593 | 0.940 |
| 21 | 92.472 | 0.836 |
| 22 | 93.290 | 0.779 |
| 23 | 94.033 | 0.707 |
| 24 | 94.650 | 0.588 |
| 25 | 95.260 | 0.581 |
| 26 | 95.807 | 0.520 |
| 27 | 96.274 | 0.445 |
| 28 | 96.739 | 0.443 |
| 29 | 97.113 | 0.356 |
| 30 | 97.437 | 0.308 |
| 31 | 97.750 | 0.298 |
| 32 | 97.957 | 0.198 |
| 33 | 98.137 | 0.171 |
| 34 | 98.323 | 0.177 |
| 35 | 98.535 | 0.202 |
| 36 | 98.751 | 0.205 |
| 37 | 98.966 | 0.205 |
| 38 | 99.182 | 0.205 |
| 39 | 99.397 | 0.205 |
| 40 | 99.559 | 0.154 |
| 41 | 99.671 | 0.107 |
| 42 | 99.783 | 0.107 |
| 43 | 99.896 | 0.107 |
| 44 | 100.000 | 0.099 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6404 | 0.6404 |
| 2 | 0.7884 | 0.1480 |
| 3 | 0.8903 | 0.1020 |
| 4 | 0.9706 | 0.0803 |
| 5 | 1.0378 | 0.0672 |
| 6 | 1.0961 | 0.0583 |
| 7 | 1.1480 | 0.0519 |
| 8 | 1.1949 | 0.0469 |
| 9 | 1.2379 | 0.0430 |
| 10 | 1.2777 | 0.0398 |
| 11 | 1.3147 | 0.0371 |
| 12 | 1.3495 | 0.0348 |
| 13 | 1.3683 | 0.0188 |
| 14 | 1.3860 | 0.0177 |
| 15 | 1.4027 | 0.0167 |
| 16 | 1.4184 | 0.0158 |
| 17 | 1.4334 | 0.0150 |
| 18 | 1.4476 | 0.0143 |
| 19 | 1.4612 | 0.0136 |
| 20 | 1.4743 | 0.0130 |
| 21 | 1.4868 | 0.0125 |
| 22 | 1.4988 | 0.0120 |
| 23 | 1.5104 | 0.0116 |
| 24 | 1.5216 | 0.0112 |
| 25 | 1.5323 | 0.0108 |
| 26 | 1.5428 | 0.0104 |

| | | |
|---|---|---|
| 27 | 1.5529 | 0.0101 |
| 28 | 1.5627 | 0.0098 |
| 29 | 1.5722 | 0.0095 |
| 30 | 1.5815 | 0.0093 |
| 31 | 1.5905 | 0.0090 |
| 32 | 1.5993 | 0.0088 |
| 33 | 1.6078 | 0.0085 |
| 34 | 1.6161 | 0.0083 |
| 35 | 1.6243 | 0.0081 |
| 36 | 1.6322 | 0.0079 |
| 37 | 1.6399 | 0.0077 |
| 38 | 1.6475 | 0.0076 |
| 39 | 1.6549 | 0.0074 |
| 40 | 1.6622 | 0.0073 |
| 41 | 1.6693 | 0.0071 |
| 42 | 1.6763 | 0.0070 |
| 43 | 1.6831 | 0.0068 |
| 44 | 1.6898 | 0.0067 |
| 45 | 1.6964 | 0.0066 |
| 46 | 1.7028 | 0.0065 |
| 47 | 1.7092 | 0.0063 |
| 48 | 1.7154 | 0.0062 |
| 49 | 1.7215 | 0.0061 |
| 50 | 1.7276 | 0.0060 |
| 51 | 1.7335 | 0.0059 |
| 52 | 1.7393 | 0.0058 |
| 53 | 1.7450 | 0.0057 |
| 54 | 1.7507 | 0.0056 |
| 55 | 1.7563 | 0.0056 |
| 56 | 1.7617 | 0.0055 |
| 57 | 1.7671 | 0.0054 |
| 58 | 1.7725 | 0.0053 |
| 59 | 1.7777 | 0.0052 |
| 60 | 1.7829 | 0.0052 |
| 61 | 1.7880 | 0.0051 |
| 62 | 1.7930 | 0.0050 |
| 63 | 1.7980 | 0.0050 |
| 64 | 1.8029 | 0.0049 |
| 65 | 1.8077 | 0.0048 |
| 66 | 1.8125 | 0.0048 |
| 67 | 1.8172 | 0.0047 |
| 68 | 1.8219 | 0.0047 |
| 69 | 1.8265 | 0.0046 |
| 70 | 1.8310 | 0.0045 |
| 71 | 1.8355 | 0.0045 |
| 72 | 1.8400 | 0.0044 |
| 73 | 1.8454 | 0.0055 |
| 74 | 1.8508 | 0.0054 |
| 75 | 1.8562 | 0.0054 |
| 76 | 1.8615 | 0.0053 |
| 77 | 1.8667 | 0.0052 |
| 78 | 1.8719 | 0.0052 |
| 79 | 1.8771 | 0.0051 |
| 80 | 1.8822 | 0.0051 |
| 81 | 1.8872 | 0.0050 |
| 82 | 1.8922 | 0.0050 |
| 83 | 1.8972 | 0.0049 |
| 84 | 1.9021 | 0.0049 |
| 85 | 1.9069 | 0.0049 |

| | | |
|---|---|---|
| 86 | 1.9117 | 0.0048 |
| 87 | 1.9165 | 0.0048 |
| 88 | 1.9212 | 0.0047 |
| 89 | 1.9259 | 0.0047 |
| 90 | 1.9305 | 0.0046 |
| 91 | 1.9351 | 0.0046 |
| 92 | 1.9397 | 0.0046 |
| 93 | 1.9442 | 0.0045 |
| 94 | 1.9487 | 0.0045 |
| 95 | 1.9531 | 0.0044 |
| 96 | 1.9575 | 0.0044 |
| 97 | 1.9619 | 0.0044 |
| 98 | 1.9662 | 0.0043 |
| 99 | 1.9706 | 0.0043 |
| 100 | 1.9748 | 0.0043 |
| 101 | 1.9791 | 0.0042 |
| 102 | 1.9833 | 0.0042 |
| 103 | 1.9874 | 0.0042 |
| 104 | 1.9916 | 0.0041 |
| 105 | 1.9957 | 0.0041 |
| 106 | 1.9998 | 0.0041 |
| 107 | 2.0038 | 0.0040 |
| 108 | 2.0078 | 0.0040 |
| 109 | 2.0118 | 0.0040 |
| 110 | 2.0158 | 0.0040 |
| 111 | 2.0197 | 0.0039 |
| 112 | 2.0236 | 0.0039 |
| 113 | 2.0275 | 0.0039 |
| 114 | 2.0313 | 0.0039 |
| 115 | 2.0352 | 0.0038 |
| 116 | 2.0390 | 0.0038 |
| 117 | 2.0427 | 0.0038 |
| 118 | 2.0465 | 0.0037 |
| 119 | 2.0502 | 0.0037 |
| 120 | 2.0539 | 0.0037 |
| 121 | 2.0576 | 0.0037 |
| 122 | 2.0612 | 0.0036 |
| 123 | 2.0648 | 0.0036 |
| 124 | 2.0684 | 0.0036 |
| 125 | 2.0720 | 0.0036 |
| 126 | 2.0756 | 0.0036 |
| 127 | 2.0791 | 0.0035 |
| 128 | 2.0826 | 0.0035 |
| 129 | 2.0861 | 0.0035 |
| 130 | 2.0896 | 0.0035 |
| 131 | 2.0930 | 0.0035 |
| 132 | 2.0965 | 0.0034 |
| 133 | 2.0999 | 0.0034 |
| 134 | 2.1033 | 0.0034 |
| 135 | 2.1066 | 0.0034 |
| 136 | 2.1100 | 0.0034 |
| 137 | 2.1133 | 0.0033 |
| 138 | 2.1166 | 0.0033 |
| 139 | 2.1199 | 0.0033 |
| 140 | 2.1232 | 0.0033 |
| 141 | 2.1265 | 0.0033 |
| 142 | 2.1297 | 0.0032 |
| 143 | 2.1329 | 0.0032 |
| 144 | 2.1361 | 0.0032 |

| | | |
|---|---|---|
| 145 | 2.1393 | 0.0032 |
| 146 | 2.1425 | 0.0032 |
| 147 | 2.1456 | 0.0032 |
| 148 | 2.1488 | 0.0031 |
| 149 | 2.1519 | 0.0031 |
| 150 | 2.1550 | 0.0031 |
| 151 | 2.1581 | 0.0031 |
| 152 | 2.1611 | 0.0031 |
| 153 | 2.1642 | 0.0031 |
| 154 | 2.1672 | 0.0030 |
| 155 | 2.1703 | 0.0030 |
| 156 | 2.1733 | 0.0030 |
| 157 | 2.1763 | 0.0030 |
| 158 | 2.1792 | 0.0030 |
| 159 | 2.1822 | 0.0030 |
| 160 | 2.1851 | 0.0029 |
| 161 | 2.1881 | 0.0029 |
| 162 | 2.1910 | 0.0029 |
| 163 | 2.1939 | 0.0029 |
| 164 | 2.1968 | 0.0029 |
| 165 | 2.1997 | 0.0029 |
| 166 | 2.2025 | 0.0029 |
| 167 | 2.2054 | 0.0029 |
| 168 | 2.2082 | 0.0028 |
| 169 | 2.2110 | 0.0028 |
| 170 | 2.2139 | 0.0028 |
| 171 | 2.2167 | 0.0028 |
| 172 | 2.2194 | 0.0028 |
| 173 | 2.2222 | 0.0028 |
| 174 | 2.2250 | 0.0028 |
| 175 | 2.2277 | 0.0027 |
| 176 | 2.2305 | 0.0027 |
| 177 | 2.2332 | 0.0027 |
| 178 | 2.2359 | 0.0027 |
| 179 | 2.2386 | 0.0027 |
| 180 | 2.2413 | 0.0027 |
| 181 | 2.2439 | 0.0027 |
| 182 | 2.2466 | 0.0027 |
| 183 | 2.2493 | 0.0027 |
| 184 | 2.2519 | 0.0026 |
| 185 | 2.2545 | 0.0026 |
| 186 | 2.2572 | 0.0026 |
| 187 | 2.2598 | 0.0026 |
| 188 | 2.2624 | 0.0026 |
| 189 | 2.2649 | 0.0026 |
| 190 | 2.2675 | 0.0026 |
| 191 | 2.2701 | 0.0026 |
| 192 | 2.2726 | 0.0026 |
| 193 | 2.2752 | 0.0025 |
| 194 | 2.2777 | 0.0025 |
| 195 | 2.2802 | 0.0025 |
| 196 | 2.2827 | 0.0025 |
| 197 | 2.2853 | 0.0025 |
| 198 | 2.2877 | 0.0025 |
| 199 | 2.2902 | 0.0025 |
| 200 | 2.2927 | 0.0025 |
| 201 | 2.2952 | 0.0025 |
| 202 | 2.2976 | 0.0025 |
| 203 | 2.3001 | 0.0024 |

| | | |
|---|---|---|
| 204 | 2.3025 | 0.0024 |
| 205 | 2.3049 | 0.0024 |
| 206 | 2.3073 | 0.0024 |
| 207 | 2.3097 | 0.0024 |
| 208 | 2.3121 | 0.0024 |
| 209 | 2.3145 | 0.0024 |
| 210 | 2.3169 | 0.0024 |
| 211 | 2.3193 | 0.0024 |
| 212 | 2.3216 | 0.0024 |
| 213 | 2.3240 | 0.0024 |
| 214 | 2.3263 | 0.0023 |
| 215 | 2.3287 | 0.0023 |
| 216 | 2.3310 | 0.0023 |
| 217 | 2.3333 | 0.0023 |
| 218 | 2.3356 | 0.0023 |
| 219 | 2.3379 | 0.0023 |
| 220 | 2.3402 | 0.0023 |
| 221 | 2.3425 | 0.0023 |
| 222 | 2.3448 | 0.0023 |
| 223 | 2.3471 | 0.0023 |
| 224 | 2.3493 | 0.0023 |
| 225 | 2.3516 | 0.0023 |
| 226 | 2.3538 | 0.0022 |
| 227 | 2.3561 | 0.0022 |
| 228 | 2.3583 | 0.0022 |
| 229 | 2.3605 | 0.0022 |
| 230 | 2.3627 | 0.0022 |
| 231 | 2.3650 | 0.0022 |
| 232 | 2.3672 | 0.0022 |
| 233 | 2.3694 | 0.0022 |
| 234 | 2.3715 | 0.0022 |
| 235 | 2.3737 | 0.0022 |
| 236 | 2.3759 | 0.0022 |
| 237 | 2.3781 | 0.0022 |
| 238 | 2.3802 | 0.0022 |
| 239 | 2.3824 | 0.0021 |
| 240 | 2.3845 | 0.0021 |
| 241 | 2.3866 | 0.0021 |
| 242 | 2.3888 | 0.0021 |
| 243 | 2.3909 | 0.0021 |
| 244 | 2.3930 | 0.0021 |
| 245 | 2.3951 | 0.0021 |
| 246 | 2.3972 | 0.0021 |
| 247 | 2.3993 | 0.0021 |
| 248 | 2.4014 | 0.0021 |
| 249 | 2.4035 | 0.0021 |
| 250 | 2.4056 | 0.0021 |
| 251 | 2.4076 | 0.0021 |
| 252 | 2.4097 | 0.0021 |
| 253 | 2.4117 | 0.0021 |
| 254 | 2.4138 | 0.0020 |
| 255 | 2.4158 | 0.0020 |
| 256 | 2.4179 | 0.0020 |
| 257 | 2.4199 | 0.0020 |
| 258 | 2.4219 | 0.0020 |
| 259 | 2.4239 | 0.0020 |
| 260 | 2.4260 | 0.0020 |
| 261 | 2.4280 | 0.0020 |
| 262 | 2.4300 | 0.0020 |

| | | |
|---|---|---|
| 263 | 2.4320 | 0.0020 |
| 264 | 2.4339 | 0.0020 |
| 265 | 2.4359 | 0.0020 |
| 266 | 2.4379 | 0.0020 |
| 267 | 2.4399 | 0.0020 |
| 268 | 2.4418 | 0.0020 |
| 269 | 2.4438 | 0.0020 |
| 270 | 2.4457 | 0.0020 |
| 271 | 2.4477 | 0.0019 |
| 272 | 2.4496 | 0.0019 |
| 273 | 2.4516 | 0.0019 |
| 274 | 2.4535 | 0.0019 |
| 275 | 2.4554 | 0.0019 |
| 276 | 2.4574 | 0.0019 |
| 277 | 2.4593 | 0.0019 |
| 278 | 2.4612 | 0.0019 |
| 279 | 2.4631 | 0.0019 |
| 280 | 2.4650 | 0.0019 |
| 281 | 2.4669 | 0.0019 |
| 282 | 2.4688 | 0.0019 |
| 283 | 2.4706 | 0.0019 |
| 284 | 2.4725 | 0.0019 |
| 285 | 2.4744 | 0.0019 |
| 286 | 2.4763 | 0.0019 |
| 287 | 2.4781 | 0.0019 |
| 288 | 2.4800 | 0.0019 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0019 | 0.0012 | 0.0007 |
| 2 | 0.0019 | 0.0012 | 0.0007 |
| 3 | 0.0019 | 0.0012 | 0.0007 |
| 4 | 0.0019 | 0.0012 | 0.0007 |
| 5 | 0.0019 | 0.0012 | 0.0007 |
| 6 | 0.0019 | 0.0012 | 0.0007 |
| 7 | 0.0019 | 0.0012 | 0.0007 |
| 8 | 0.0019 | 0.0012 | 0.0007 |
| 9 | 0.0019 | 0.0012 | 0.0007 |
| 10 | 0.0019 | 0.0012 | 0.0007 |
| 11 | 0.0019 | 0.0012 | 0.0007 |
| 12 | 0.0019 | 0.0012 | 0.0007 |
| 13 | 0.0020 | 0.0012 | 0.0007 |
| 14 | 0.0020 | 0.0012 | 0.0007 |
| 15 | 0.0020 | 0.0013 | 0.0007 |
| 16 | 0.0020 | 0.0013 | 0.0007 |
| 17 | 0.0020 | 0.0013 | 0.0007 |
| 18 | 0.0020 | 0.0013 | 0.0007 |
| 19 | 0.0020 | 0.0013 | 0.0007 |
| 20 | 0.0020 | 0.0013 | 0.0007 |
| 21 | 0.0020 | 0.0013 | 0.0007 |
| 22 | 0.0020 | 0.0013 | 0.0007 |
| 23 | 0.0020 | 0.0013 | 0.0007 |
| 24 | 0.0020 | 0.0013 | 0.0007 |
| 25 | 0.0021 | 0.0013 | 0.0008 |
| 26 | 0.0021 | 0.0013 | 0.0008 |
| 27 | 0.0021 | 0.0013 | 0.0008 |
| 28 | 0.0021 | 0.0013 | 0.0008 |

| | | | |
|---|---|---|---|
| 29 | 0.0021 | 0.0013 | 0.0008 |
| 30 | 0.0021 | 0.0013 | 0.0008 |
| 31 | 0.0021 | 0.0013 | 0.0008 |
| 32 | 0.0021 | 0.0014 | 0.0008 |
| 33 | 0.0021 | 0.0014 | 0.0008 |
| 34 | 0.0021 | 0.0014 | 0.0008 |
| 35 | 0.0022 | 0.0014 | 0.0008 |
| 36 | 0.0022 | 0.0014 | 0.0008 |
| 37 | 0.0022 | 0.0014 | 0.0008 |
| 38 | 0.0022 | 0.0014 | 0.0008 |
| 39 | 0.0022 | 0.0014 | 0.0008 |
| 40 | 0.0022 | 0.0014 | 0.0008 |
| 41 | 0.0022 | 0.0014 | 0.0008 |
| 42 | 0.0022 | 0.0014 | 0.0008 |
| 43 | 0.0023 | 0.0014 | 0.0008 |
| 44 | 0.0023 | 0.0014 | 0.0008 |
| 45 | 0.0023 | 0.0014 | 0.0008 |
| 46 | 0.0023 | 0.0015 | 0.0008 |
| 47 | 0.0023 | 0.0015 | 0.0008 |
| 48 | 0.0023 | 0.0015 | 0.0008 |
| 49 | 0.0023 | 0.0015 | 0.0009 |
| 50 | 0.0023 | 0.0015 | 0.0009 |
| 51 | 0.0024 | 0.0015 | 0.0009 |
| 52 | 0.0024 | 0.0015 | 0.0009 |
| 53 | 0.0024 | 0.0015 | 0.0009 |
| 54 | 0.0024 | 0.0015 | 0.0009 |
| 55 | 0.0024 | 0.0015 | 0.0009 |
| 56 | 0.0024 | 0.0015 | 0.0009 |
| 57 | 0.0024 | 0.0015 | 0.0009 |
| 58 | 0.0024 | 0.0016 | 0.0009 |
| 59 | 0.0025 | 0.0016 | 0.0009 |
| 60 | 0.0025 | 0.0016 | 0.0009 |
| 61 | 0.0025 | 0.0016 | 0.0009 |
| 62 | 0.0025 | 0.0016 | 0.0009 |
| 63 | 0.0025 | 0.0016 | 0.0009 |
| 64 | 0.0025 | 0.0016 | 0.0009 |
| 65 | 0.0026 | 0.0016 | 0.0009 |
| 66 | 0.0026 | 0.0016 | 0.0009 |
| 67 | 0.0026 | 0.0016 | 0.0009 |
| 68 | 0.0026 | 0.0016 | 0.0009 |
| 69 | 0.0026 | 0.0017 | 0.0010 |
| 70 | 0.0026 | 0.0017 | 0.0010 |
| 71 | 0.0027 | 0.0017 | 0.0010 |
| 72 | 0.0027 | 0.0017 | 0.0010 |
| 73 | 0.0027 | 0.0017 | 0.0010 |
| 74 | 0.0027 | 0.0017 | 0.0010 |
| 75 | 0.0027 | 0.0017 | 0.0010 |
| 76 | 0.0027 | 0.0017 | 0.0010 |
| 77 | 0.0028 | 0.0018 | 0.0010 |
| 78 | 0.0028 | 0.0018 | 0.0010 |
| 79 | 0.0028 | 0.0018 | 0.0010 |
| 80 | 0.0028 | 0.0018 | 0.0010 |
| 81 | 0.0028 | 0.0018 | 0.0010 |
| 82 | 0.0029 | 0.0018 | 0.0010 |
| 83 | 0.0029 | 0.0018 | 0.0011 |
| 84 | 0.0029 | 0.0018 | 0.0011 |
| 85 | 0.0029 | 0.0019 | 0.0011 |
| 86 | 0.0029 | 0.0019 | 0.0011 |
| 87 | 0.0030 | 0.0019 | 0.0011 |

| | | | |
|---|---|---|---|
| 88 | 0.0030 | 0.0019 | 0.0011 |
| 89 | 0.0030 | 0.0019 | 0.0011 |
| 90 | 0.0030 | 0.0019 | 0.0011 |
| 91 | 0.0031 | 0.0019 | 0.0011 |
| 92 | 0.0031 | 0.0019 | 0.0011 |
| 93 | 0.0031 | 0.0020 | 0.0011 |
| 94 | 0.0031 | 0.0020 | 0.0011 |
| 95 | 0.0032 | 0.0020 | 0.0012 |
| 96 | 0.0032 | 0.0020 | 0.0012 |
| 97 | 0.0032 | 0.0020 | 0.0012 |
| 98 | 0.0032 | 0.0020 | 0.0012 |
| 99 | 0.0033 | 0.0021 | 0.0012 |
| 100 | 0.0033 | 0.0021 | 0.0012 |
| 101 | 0.0033 | 0.0021 | 0.0012 |
| 102 | 0.0033 | 0.0021 | 0.0012 |
| 103 | 0.0034 | 0.0021 | 0.0012 |
| 104 | 0.0034 | 0.0022 | 0.0012 |
| 105 | 0.0034 | 0.0022 | 0.0013 |
| 106 | 0.0035 | 0.0022 | 0.0013 |
| 107 | 0.0035 | 0.0022 | 0.0013 |
| 108 | 0.0035 | 0.0022 | 0.0013 |
| 109 | 0.0036 | 0.0023 | 0.0013 |
| 110 | 0.0036 | 0.0023 | 0.0013 |
| 111 | 0.0036 | 0.0023 | 0.0013 |
| 112 | 0.0036 | 0.0023 | 0.0013 |
| 113 | 0.0037 | 0.0023 | 0.0014 |
| 114 | 0.0037 | 0.0024 | 0.0014 |
| 115 | 0.0038 | 0.0024 | 0.0014 |
| 116 | 0.0038 | 0.0024 | 0.0014 |
| 117 | 0.0039 | 0.0024 | 0.0014 |
| 118 | 0.0039 | 0.0025 | 0.0014 |
| 119 | 0.0039 | 0.0025 | 0.0014 |
| 120 | 0.0040 | 0.0025 | 0.0014 |
| 121 | 0.0040 | 0.0025 | 0.0015 |
| 122 | 0.0040 | 0.0026 | 0.0015 |
| 123 | 0.0041 | 0.0026 | 0.0015 |
| 124 | 0.0041 | 0.0026 | 0.0015 |
| 125 | 0.0042 | 0.0027 | 0.0015 |
| 126 | 0.0042 | 0.0027 | 0.0015 |
| 127 | 0.0043 | 0.0027 | 0.0016 |
| 128 | 0.0043 | 0.0028 | 0.0016 |
| 129 | 0.0044 | 0.0028 | 0.0016 |
| 130 | 0.0044 | 0.0028 | 0.0016 |
| 131 | 0.0045 | 0.0029 | 0.0017 |
| 132 | 0.0046 | 0.0029 | 0.0017 |
| 133 | 0.0046 | 0.0029 | 0.0017 |
| 134 | 0.0047 | 0.0030 | 0.0017 |
| 135 | 0.0048 | 0.0030 | 0.0017 |
| 136 | 0.0048 | 0.0031 | 0.0018 |
| 137 | 0.0049 | 0.0031 | 0.0018 |
| 138 | 0.0049 | 0.0031 | 0.0018 |
| 139 | 0.0050 | 0.0032 | 0.0018 |
| 140 | 0.0051 | 0.0032 | 0.0019 |
| 141 | 0.0052 | 0.0033 | 0.0019 |
| 142 | 0.0052 | 0.0033 | 0.0019 |
| 143 | 0.0054 | 0.0034 | 0.0020 |
| 144 | 0.0054 | 0.0034 | 0.0020 |
| 145 | 0.0044 | 0.0028 | 0.0016 |
| 146 | 0.0045 | 0.0029 | 0.0016 |

| | | | |
|---|---|---|---|
| 147 | 0.0046 | 0.0029 | 0.0017 |
| 148 | 0.0047 | 0.0030 | 0.0017 |
| 149 | 0.0048 | 0.0030 | 0.0017 |
| 150 | 0.0048 | 0.0031 | 0.0018 |
| 151 | 0.0050 | 0.0032 | 0.0018 |
| 152 | 0.0050 | 0.0032 | 0.0018 |
| 153 | 0.0052 | 0.0033 | 0.0019 |
| 154 | 0.0052 | 0.0033 | 0.0019 |
| 155 | 0.0054 | 0.0034 | 0.0020 |
| 156 | 0.0055 | 0.0035 | 0.0020 |
| 157 | 0.0056 | 0.0036 | 0.0021 |
| 158 | 0.0057 | 0.0036 | 0.0021 |
| 159 | 0.0059 | 0.0038 | 0.0022 |
| 160 | 0.0060 | 0.0038 | 0.0022 |
| 161 | 0.0062 | 0.0040 | 0.0023 |
| 162 | 0.0063 | 0.0040 | 0.0023 |
| 163 | 0.0066 | 0.0042 | 0.0024 |
| 164 | 0.0067 | 0.0043 | 0.0025 |
| 165 | 0.0070 | 0.0044 | 0.0025 |
| 166 | 0.0071 | 0.0045 | 0.0026 |
| 167 | 0.0074 | 0.0047 | 0.0027 |
| 168 | 0.0076 | 0.0048 | 0.0028 |
| 169 | 0.0079 | 0.0050 | 0.0029 |
| 170 | 0.0081 | 0.0052 | 0.0030 |
| 171 | 0.0085 | 0.0054 | 0.0031 |
| 172 | 0.0088 | 0.0056 | 0.0032 |
| 173 | 0.0093 | 0.0059 | 0.0034 |
| 174 | 0.0095 | 0.0060 | 0.0035 |
| 175 | 0.0101 | 0.0064 | 0.0037 |
| 176 | 0.0104 | 0.0066 | 0.0038 |
| 177 | 0.0112 | 0.0071 | 0.0041 |
| 178 | 0.0116 | 0.0073 | 0.0042 |
| 179 | 0.0125 | 0.0079 | 0.0046 |
| 180 | 0.0130 | 0.0083 | 0.0048 |
| 181 | 0.0143 | 0.0090 | 0.0052 |
| 182 | 0.0150 | 0.0095 | 0.0055 |
| 183 | 0.0167 | 0.0106 | 0.0061 |
| 184 | 0.0177 | 0.0112 | 0.0065 |
| 185 | 0.0348 | 0.0221 | 0.0127 |
| 186 | 0.0371 | 0.0235 | 0.0135 |
| 187 | 0.0430 | 0.0273 | 0.0157 |
| 188 | 0.0469 | 0.0298 | 0.0172 |
| 189 | 0.0583 | 0.0300 | 0.0284 |
| 190 | 0.0672 | 0.0300 | 0.0372 |
| 191 | 0.1020 | 0.0300 | 0.0720 |
| 192 | 0.1480 | 0.0300 | 0.1181 |
| 193 | 0.6404 | 0.0300 | 0.6104 |
| 194 | 0.0803 | 0.0300 | 0.0503 |
| 195 | 0.0519 | 0.0300 | 0.0219 |
| 196 | 0.0398 | 0.0252 | 0.0145 |
| 197 | 0.0188 | 0.0119 | 0.0069 |
| 198 | 0.0158 | 0.0100 | 0.0058 |
| 199 | 0.0136 | 0.0086 | 0.0050 |
| 200 | 0.0120 | 0.0076 | 0.0044 |
| 201 | 0.0108 | 0.0068 | 0.0039 |
| 202 | 0.0098 | 0.0062 | 0.0036 |
| 203 | 0.0090 | 0.0057 | 0.0033 |
| 204 | 0.0083 | 0.0053 | 0.0030 |
| 205 | 0.0077 | 0.0049 | 0.0028 |

| | | | |
|---|---|---|---|
| 206 | 0.0073 | 0.0046 | 0.0027 |
| 207 | 0.0068 | 0.0043 | 0.0025 |
| 208 | 0.0065 | 0.0041 | 0.0024 |
| 209 | 0.0061 | 0.0039 | 0.0022 |
| 210 | 0.0058 | 0.0037 | 0.0021 |
| 211 | 0.0056 | 0.0035 | 0.0020 |
| 212 | 0.0053 | 0.0034 | 0.0019 |
| 213 | 0.0051 | 0.0032 | 0.0019 |
| 214 | 0.0049 | 0.0031 | 0.0018 |
| 215 | 0.0047 | 0.0030 | 0.0017 |
| 216 | 0.0045 | 0.0029 | 0.0017 |
| 217 | 0.0055 | 0.0035 | 0.0020 |
| 218 | 0.0053 | 0.0034 | 0.0019 |
| 219 | 0.0051 | 0.0033 | 0.0019 |
| 220 | 0.0050 | 0.0032 | 0.0018 |
| 221 | 0.0049 | 0.0031 | 0.0018 |
| 222 | 0.0047 | 0.0030 | 0.0017 |
| 223 | 0.0046 | 0.0029 | 0.0017 |
| 224 | 0.0045 | 0.0028 | 0.0016 |
| 225 | 0.0044 | 0.0028 | 0.0016 |
| 226 | 0.0043 | 0.0027 | 0.0016 |
| 227 | 0.0042 | 0.0026 | 0.0015 |
| 228 | 0.0041 | 0.0026 | 0.0015 |
| 229 | 0.0040 | 0.0025 | 0.0015 |
| 230 | 0.0039 | 0.0025 | 0.0014 |
| 231 | 0.0038 | 0.0024 | 0.0014 |
| 232 | 0.0037 | 0.0024 | 0.0014 |
| 233 | 0.0037 | 0.0023 | 0.0013 |
| 234 | 0.0036 | 0.0023 | 0.0013 |
| 235 | 0.0035 | 0.0022 | 0.0013 |
| 236 | 0.0035 | 0.0022 | 0.0013 |
| 237 | 0.0034 | 0.0022 | 0.0012 |
| 238 | 0.0034 | 0.0021 | 0.0012 |
| 239 | 0.0033 | 0.0021 | 0.0012 |
| 240 | 0.0032 | 0.0021 | 0.0012 |
| 241 | 0.0032 | 0.0020 | 0.0012 |
| 242 | 0.0031 | 0.0020 | 0.0011 |
| 243 | 0.0031 | 0.0020 | 0.0011 |
| 244 | 0.0030 | 0.0019 | 0.0011 |
| 245 | 0.0030 | 0.0019 | 0.0011 |
| 246 | 0.0029 | 0.0019 | 0.0011 |
| 247 | 0.0029 | 0.0018 | 0.0011 |
| 248 | 0.0029 | 0.0018 | 0.0010 |
| 249 | 0.0028 | 0.0018 | 0.0010 |
| 250 | 0.0028 | 0.0018 | 0.0010 |
| 251 | 0.0027 | 0.0017 | 0.0010 |
| 252 | 0.0027 | 0.0017 | 0.0010 |
| 253 | 0.0027 | 0.0017 | 0.0010 |
| 254 | 0.0026 | 0.0017 | 0.0010 |
| 255 | 0.0026 | 0.0017 | 0.0010 |
| 256 | 0.0026 | 0.0016 | 0.0009 |
| 257 | 0.0025 | 0.0016 | 0.0009 |
| 258 | 0.0025 | 0.0016 | 0.0009 |
| 259 | 0.0025 | 0.0016 | 0.0009 |
| 260 | 0.0025 | 0.0016 | 0.0009 |
| 261 | 0.0024 | 0.0015 | 0.0009 |
| 262 | 0.0024 | 0.0015 | 0.0009 |
| 263 | 0.0024 | 0.0015 | 0.0009 |
| 264 | 0.0023 | 0.0015 | 0.0009 |

| | | | |
|---|---|---|---|
| 265 | 0.0023 | 0.0015 | 0.0008 |
| 266 | 0.0023 | 0.0015 | 0.0008 |
| 267 | 0.0023 | 0.0014 | 0.0008 |
| 268 | 0.0022 | 0.0014 | 0.0008 |
| 269 | 0.0022 | 0.0014 | 0.0008 |
| 270 | 0.0022 | 0.0014 | 0.0008 |
| 271 | 0.0022 | 0.0014 | 0.0008 |
| 272 | 0.0022 | 0.0014 | 0.0008 |
| 273 | 0.0021 | 0.0014 | 0.0008 |
| 274 | 0.0021 | 0.0013 | 0.0008 |
| 275 | 0.0021 | 0.0013 | 0.0008 |
| 276 | 0.0021 | 0.0013 | 0.0008 |
| 277 | 0.0021 | 0.0013 | 0.0008 |
| 278 | 0.0020 | 0.0013 | 0.0007 |
| 279 | 0.0020 | 0.0013 | 0.0007 |
| 280 | 0.0020 | 0.0013 | 0.0007 |
| 281 | 0.0020 | 0.0013 | 0.0007 |
| 282 | 0.0020 | 0.0012 | 0.0007 |
| 283 | 0.0019 | 0.0012 | 0.0007 |
| 284 | 0.0019 | 0.0012 | 0.0007 |
| 285 | 0.0019 | 0.0012 | 0.0007 |
| 286 | 0.0019 | 0.0012 | 0.0007 |
| 287 | 0.0019 | 0.0012 | 0.0007 |
| 288 | 0.0019 | 0.0012 | 0.0007 |

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Total soil rain loss = 1.05(In)
Total effective rainfall = 1.43(In)
Peak flow rate in flood hydrograph = 12.94(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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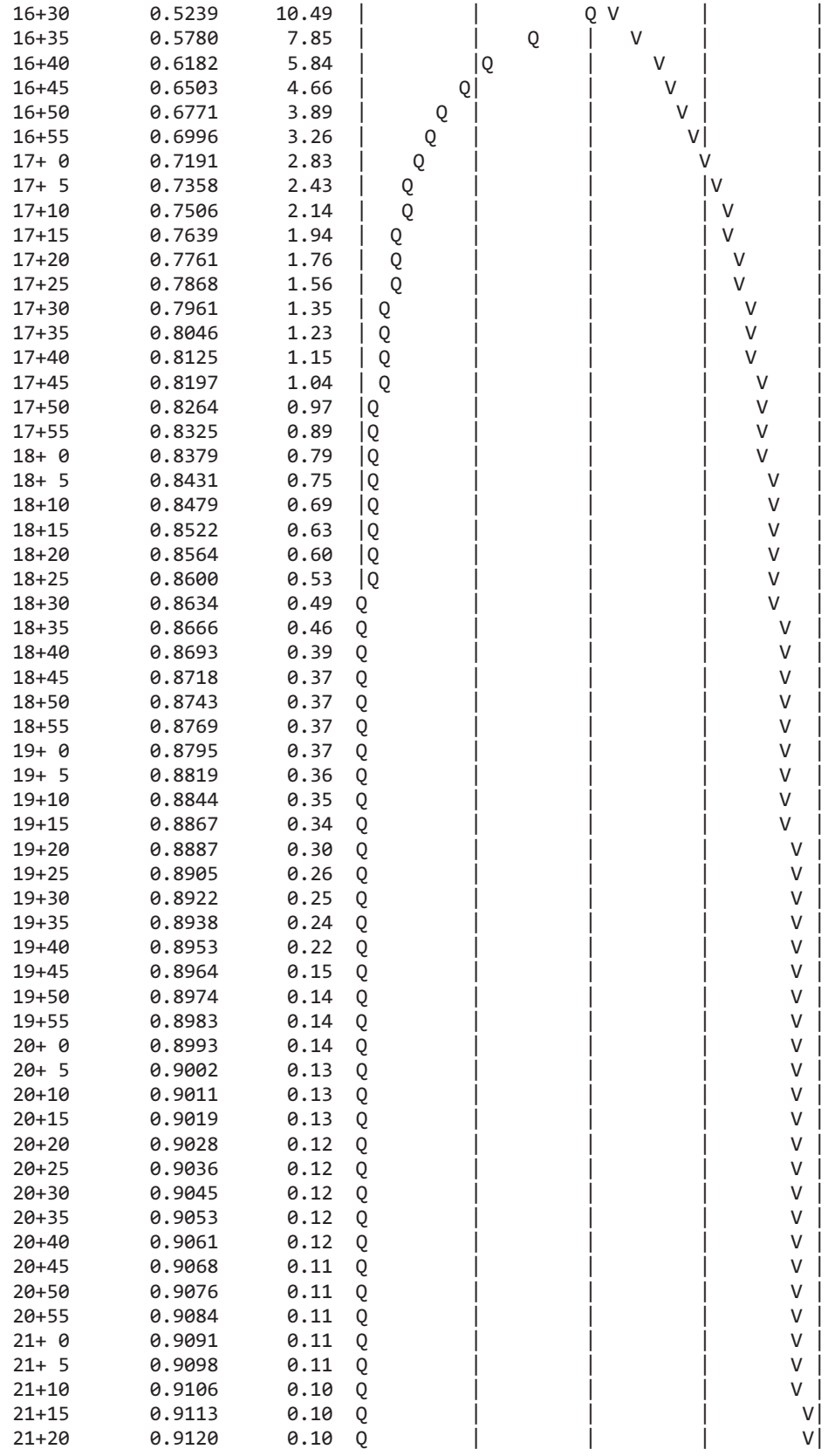
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+15 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+20 | 0.0001 | 0.01 | Q | \| | \| | \| | \| |
| 0+25 | 0.0003 | 0.02 | Q | \| | \| | \| | \| |
| 0+30 | 0.0005 | 0.03 | Q | \| | \| | \| | \| |
| 0+35 | 0.0008 | 0.04 | Q | \| | \| | \| | \| |
| 0+40 | 0.0011 | 0.04 | Q | \| | \| | \| | \| |
| 0+45 | 0.0014 | 0.05 | Q | \| | \| | \| | \| |
| 0+50 | 0.0017 | 0.05 | Q | \| | \| | \| | \| |
| 0+55 | 0.0021 | 0.05 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0024 | 0.05 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0028 | 0.05 | Q | \| | \| | \| | \| |
| 1+10 | 0.0032 | 0.06 | Q | \| | \| | \| | \| |
| 1+15 | 0.0036 | 0.06 | Q | \| | \| | \| | \| |
| 1+20 | 0.0040 | 0.06 | Q | \| | \| | \| | \| |
| 1+25 | 0.0044 | 0.06 | Q | \| | \| | \| | \| |
| 1+30 | 0.0048 | 0.06 | Q | \| | \| | \| | \| |
| 1+35 | 0.0052 | 0.06 | Q | \| | \| | \| | \| |
| 1+40 | 0.0057 | 0.06 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+45 | 0.0061 | 0.06 | Q | | | | |
| 1+50 | 0.0065 | 0.06 | Q | | | | |
| 1+55 | 0.0070 | 0.06 | Q | | | | |
| 2+ 0 | 0.0074 | 0.07 | Q | | | | |
| 2+ 5 | 0.0079 | 0.07 | Q | | | | |
| 2+10 | 0.0083 | 0.07 | Q | | | | |
| 2+15 | 0.0088 | 0.07 | Q | | | | |
| 2+20 | 0.0093 | 0.07 | Q | | | | |
| 2+25 | 0.0098 | 0.07 | Q | | | | |
| 2+30 | 0.0102 | 0.07 | Q | | | | |
| 2+35 | 0.0107 | 0.07 | Q | | | | |
| 2+40 | 0.0112 | 0.07 | Q | | | | |
| 2+45 | 0.0117 | 0.07 | Q | | | | |
| 2+50 | 0.0122 | 0.07 | Q | | | | |
| 2+55 | 0.0127 | 0.07 | Q | | | | |
| 3+ 0 | 0.0132 | 0.07 | Q | | | | |
| 3+ 5 | 0.0137 | 0.07 | Q | | | | |
| 3+10 | 0.0142 | 0.07 | Q | | | | |
| 3+15 | 0.0147 | 0.07 | Q | | | | |
| 3+20 | 0.0152 | 0.07 | Q | | | | |
| 3+25 | 0.0157 | 0.07 | Q | | | | |
| 3+30 | 0.0162 | 0.07 | Q | | | | |
| 3+35 | 0.0167 | 0.08 | Q | | | | |
| 3+40 | 0.0172 | 0.08 | Q | | | | |
| 3+45 | 0.0178 | 0.08 | Q | | | | |
| 3+50 | 0.0183 | 0.08 | Q | | | | |
| 3+55 | 0.0188 | 0.08 | Q | | | | |
| 4+ 0 | 0.0193 | 0.08 | Q | | | | |
| 4+ 5 | 0.0199 | 0.08 | Q | | | | |
| 4+10 | 0.0204 | 0.08 | Q | | | | |
| 4+15 | 0.0210 | 0.08 | Q | | | | |
| 4+20 | 0.0215 | 0.08 | Q | | | | |
| 4+25 | 0.0220 | 0.08 | Q | | | | |
| 4+30 | 0.0226 | 0.08 | Q | | | | |
| 4+35 | 0.0231 | 0.08 | Q | | | | |
| 4+40 | 0.0237 | 0.08 | QV | | | | |
| 4+45 | 0.0243 | 0.08 | QV | | | | |
| 4+50 | 0.0248 | 0.08 | QV | | | | |
| 4+55 | 0.0254 | 0.08 | QV | | | | |
| 5+ 0 | 0.0259 | 0.08 | QV | | | | |
| 5+ 5 | 0.0265 | 0.08 | QV | | | | |
| 5+10 | 0.0271 | 0.08 | QV | | | | |
| 5+15 | 0.0277 | 0.08 | QV | | | | |
| 5+20 | 0.0282 | 0.08 | QV | | | | |
| 5+25 | 0.0288 | 0.08 | QV | | | | |
| 5+30 | 0.0294 | 0.09 | QV | | | | |
| 5+35 | 0.0300 | 0.09 | QV | | | | |
| 5+40 | 0.0306 | 0.09 | QV | | | | |
| 5+45 | 0.0312 | 0.09 | QV | | | | |
| 5+50 | 0.0318 | 0.09 | QV | | | | |
| 5+55 | 0.0324 | 0.09 | QV | | | | |
| 6+ 0 | 0.0330 | 0.09 | QV | | | | |
| 6+ 5 | 0.0336 | 0.09 | QV | | | | |
| 6+10 | 0.0342 | 0.09 | QV | | | | |
| 6+15 | 0.0349 | 0.09 | QV | | | | |
| 6+20 | 0.0355 | 0.09 | QV | | | | |
| 6+25 | 0.0361 | 0.09 | QV | | | | |
| 6+30 | 0.0367 | 0.09 | QV | | | | |
| 6+35 | 0.0374 | 0.09 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+40 | 0.0380 | 0.09 | QV | | | | |
| 6+45 | 0.0387 | 0.09 | QV | | | | |
| 6+50 | 0.0393 | 0.09 | QV | | | | |
| 6+55 | 0.0400 | 0.09 | QV | | | | |
| 7+ 0 | 0.0406 | 0.10 | QV | | | | |
| 7+ 5 | 0.0413 | 0.10 | QV | | | | |
| 7+10 | 0.0419 | 0.10 | QV | | | | |
| 7+15 | 0.0426 | 0.10 | QV | | | | |
| 7+20 | 0.0433 | 0.10 | QV | | | | |
| 7+25 | 0.0440 | 0.10 | QV | | | | |
| 7+30 | 0.0446 | 0.10 | QV | | | | |
| 7+35 | 0.0453 | 0.10 | QV | | | | |
| 7+40 | 0.0460 | 0.10 | QV | | | | |
| 7+45 | 0.0467 | 0.10 | Q V | | | | |
| 7+50 | 0.0474 | 0.10 | Q V | | | | |
| 7+55 | 0.0481 | 0.10 | Q V | | | | |
| 8+ 0 | 0.0489 | 0.10 | Q V | | | | |
| 8+ 5 | 0.0496 | 0.10 | Q V | | | | |
| 8+10 | 0.0503 | 0.11 | Q V | | | | |
| 8+15 | 0.0510 | 0.11 | Q V | | | | |
| 8+20 | 0.0518 | 0.11 | Q V | | | | |
| 8+25 | 0.0525 | 0.11 | Q V | | | | |
| 8+30 | 0.0533 | 0.11 | Q V | | | | |
| 8+35 | 0.0540 | 0.11 | Q V | | | | |
| 8+40 | 0.0548 | 0.11 | Q V | | | | |
| 8+45 | 0.0556 | 0.11 | Q V | | | | |
| 8+50 | 0.0563 | 0.11 | Q V | | | | |
| 8+55 | 0.0571 | 0.11 | Q V | | | | |
| 9+ 0 | 0.0579 | 0.11 | Q V | | | | |
| 9+ 5 | 0.0587 | 0.12 | Q V | | | | |
| 9+10 | 0.0595 | 0.12 | Q V | | | | |
| 9+15 | 0.0603 | 0.12 | Q V | | | | |
| 9+20 | 0.0611 | 0.12 | Q V | | | | |
| 9+25 | 0.0619 | 0.12 | Q V | | | | |
| 9+30 | 0.0628 | 0.12 | Q V | | | | |
| 9+35 | 0.0636 | 0.12 | Q V | | | | |
| 9+40 | 0.0644 | 0.12 | Q V | | | | |
| 9+45 | 0.0653 | 0.12 | Q V | | | | |
| 9+50 | 0.0662 | 0.13 | Q V | | | | |
| 9+55 | 0.0670 | 0.13 | Q V | | | | |
| 10+ 0 | 0.0679 | 0.13 | Q V | | | | |
| 10+ 5 | 0.0688 | 0.13 | Q V | | | | |
| 10+10 | 0.0697 | 0.13 | Q V | | | | |
| 10+15 | 0.0706 | 0.13 | Q  V | | | | |
| 10+20 | 0.0715 | 0.13 | Q  V | | | | |
| 10+25 | 0.0724 | 0.13 | Q  V | | | | |
| 10+30 | 0.0734 | 0.14 | Q  V | | | | |
| 10+35 | 0.0743 | 0.14 | Q  V | | | | |
| 10+40 | 0.0753 | 0.14 | Q  V | | | | |
| 10+45 | 0.0762 | 0.14 | Q  V | | | | |
| 10+50 | 0.0772 | 0.14 | Q  V | | | | |
| 10+55 | 0.0782 | 0.14 | Q  V | | | | |
| 11+ 0 | 0.0792 | 0.14 | Q  V | | | | |
| 11+ 5 | 0.0802 | 0.15 | Q  V | | | | |
| 11+10 | 0.0812 | 0.15 | Q  V | | | | |
| 11+15 | 0.0823 | 0.15 | Q  V | | | | |
| 11+20 | 0.0833 | 0.15 | Q  V | | | | |
| 11+25 | 0.0844 | 0.15 | Q  V | | | | |
| 11+30 | 0.0854 | 0.16 | Q  V | | | | |

```
11+35       0.0865      0.16  Q  V      |          |          |          |
11+40       0.0876      0.16  Q  V      |          |          |          |
11+45       0.0887      0.16  Q  V      |          |          |          |
11+50       0.0899      0.16  Q  V      |          |          |          |
11+55       0.0910      0.17  Q  V      |          |          |          |
12+ 0       0.0922      0.17  Q  V      |          |          |          |
12+ 5       0.0933      0.17  Q  V      |          |          |          |
12+10       0.0945      0.17  Q   V     |          |          |          |
12+15       0.0957      0.17  Q   V     |          |          |          |
12+20       0.0969      0.17  Q   V     |          |          |          |
12+25       0.0981      0.17  Q   V     |          |          |          |
12+30       0.0992      0.17  Q   V     |          |          |          |
12+35       0.1003      0.16  Q   V     |          |          |          |
12+40       0.1015      0.17  Q   V     |          |          |          |
12+45       0.1026      0.17  Q   V     |          |          |          |
12+50       0.1038      0.17  Q   V     |          |          |          |
12+55       0.1049      0.17  Q   V     |          |          |          |
13+ 0       0.1061      0.17  Q   V     |          |          |          |
13+ 5       0.1073      0.17  Q   V     |          |          |          |
13+10       0.1085      0.18  Q   V     |          |          |          |
13+15       0.1098      0.18  Q   V     |          |          |          |
13+20       0.1110      0.18  Q   V     |          |          |          |
13+25       0.1123      0.19  Q   V     |          |          |          |
13+30       0.1136      0.19  Q   V     |          |          |          |
13+35       0.1149      0.19  Q   V     |          |          |          |
13+40       0.1163      0.20  Q   V     |          |          |          |
13+45       0.1177      0.20  Q    V    |          |          |          |
13+50       0.1191      0.21  Q    V    |          |          |          |
13+55       0.1206      0.21  Q    V    |          |          |          |
14+ 0       0.1221      0.22  Q    V    |          |          |          |
14+ 5       0.1236      0.22  Q    V    |          |          |          |
14+10       0.1252      0.23  Q    V    |          |          |          |
14+15       0.1268      0.24  Q    V    |          |          |          |
14+20       0.1285      0.24  Q    V    |          |          |          |
14+25       0.1302      0.25  Q    V    |          |          |          |
14+30       0.1319      0.26  Q    V    |          |          |          |
14+35       0.1338      0.27  Q    V    |          |          |          |
14+40       0.1357      0.28  Q    V    |          |          |          |
14+45       0.1377      0.29  Q    V    |          |          |          |
14+50       0.1397      0.30  Q    V    |          |          |          |
14+55       0.1418      0.31  Q     V   |          |          |          |
15+ 0       0.1441      0.32  Q     V   |          |          |          |
15+ 5       0.1464      0.34  Q     V   |          |          |          |
15+10       0.1489      0.36  Q     V   |          |          |          |
15+15       0.1514      0.37  Q     V   |          |          |          |
15+20       0.1542      0.40  Q     V   |          |          |          |
15+25       0.1571      0.43  Q     V   |          |          |          |
15+30       0.1603      0.47  Q     V   |          |          |          |
15+35       0.1640      0.53  |Q     V   |          |          |          |
15+40       0.1683      0.63  |Q     V   |          |          |          |
15+45       0.1737      0.78  |Q     V   |          |          |          |
15+50       0.1802      0.95  |Q     V   |          |          |          |
15+55       0.1884      1.18  | Q     V  |          |          |          |
16+ 0       0.1992      1.58  |  Q    V  |          |          |          |
16+ 5       0.2173      2.62  |    Q   V|          |          |          |
16+10       0.2480      4.46  |       Q V          |          |          |
16+15       0.2930      6.54  |         | VQ       |          |          |
16+20       0.3625     10.09  |         |    V    Q          |          |
16+25       0.4516     12.94  |         |        V|    Q     |          |
```

| | | | |
|---|---|---|---|
| 16+30 | 0.5239 | 10.49 |  |
| 16+35 | 0.5780 | 7.85 | |
| 16+40 | 0.6182 | 5.84 | |
| 16+45 | 0.6503 | 4.66 | |
| 16+50 | 0.6771 | 3.89 | |
| 16+55 | 0.6996 | 3.26 | |
| 17+ 0 | 0.7191 | 2.83 | |
| 17+ 5 | 0.7358 | 2.43 | |
| 17+10 | 0.7506 | 2.14 | |
| 17+15 | 0.7639 | 1.94 | |
| 17+20 | 0.7761 | 1.76 | |
| 17+25 | 0.7868 | 1.56 | |
| 17+30 | 0.7961 | 1.35 | |
| 17+35 | 0.8046 | 1.23 | |
| 17+40 | 0.8125 | 1.15 | |
| 17+45 | 0.8197 | 1.04 | |
| 17+50 | 0.8264 | 0.97 | |
| 17+55 | 0.8325 | 0.89 | |
| 18+ 0 | 0.8379 | 0.79 | |
| 18+ 5 | 0.8431 | 0.75 | |
| 18+10 | 0.8479 | 0.69 | |
| 18+15 | 0.8522 | 0.63 | |
| 18+20 | 0.8564 | 0.60 | |
| 18+25 | 0.8600 | 0.53 | |
| 18+30 | 0.8634 | 0.49 | |
| 18+35 | 0.8666 | 0.46 | |
| 18+40 | 0.8693 | 0.39 | |
| 18+45 | 0.8718 | 0.37 | |
| 18+50 | 0.8743 | 0.37 | |
| 18+55 | 0.8769 | 0.37 | |
| 19+ 0 | 0.8795 | 0.37 | |
| 19+ 5 | 0.8819 | 0.36 | |
| 19+10 | 0.8844 | 0.35 | |
| 19+15 | 0.8867 | 0.34 | |
| 19+20 | 0.8887 | 0.30 | |
| 19+25 | 0.8905 | 0.26 | |
| 19+30 | 0.8922 | 0.25 | |
| 19+35 | 0.8938 | 0.24 | |
| 19+40 | 0.8953 | 0.22 | |
| 19+45 | 0.8964 | 0.15 | |
| 19+50 | 0.8974 | 0.14 | |
| 19+55 | 0.8983 | 0.14 | |
| 20+ 0 | 0.8993 | 0.14 | |
| 20+ 5 | 0.9002 | 0.13 | |
| 20+10 | 0.9011 | 0.13 | |
| 20+15 | 0.9019 | 0.13 | |
| 20+20 | 0.9028 | 0.12 | |
| 20+25 | 0.9036 | 0.12 | |
| 20+30 | 0.9045 | 0.12 | |
| 20+35 | 0.9053 | 0.12 | |
| 20+40 | 0.9061 | 0.12 | |
| 20+45 | 0.9068 | 0.11 | |
| 20+50 | 0.9076 | 0.11 | |
| 20+55 | 0.9084 | 0.11 | |
| 21+ 0 | 0.9091 | 0.11 | |
| 21+ 5 | 0.9098 | 0.11 | |
| 21+10 | 0.9106 | 0.10 | |
| 21+15 | 0.9113 | 0.10 | |
| 21+20 | 0.9120 | 0.10 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+25 | 0.9127 | 0.10 | Q | \| | \| | \| | V\| |
| 21+30 | 0.9133 | 0.10 | Q | \| | \| | \| | V\| |
| 21+35 | 0.9140 | 0.10 | Q | \| | \| | \| | V\| |
| 21+40 | 0.9147 | 0.10 | Q | \| | \| | \| | V\| |
| 21+45 | 0.9153 | 0.09 | Q | \| | \| | \| | V\| |
| 21+50 | 0.9160 | 0.09 | Q | \| | \| | \| | V\| |
| 21+55 | 0.9166 | 0.09 | Q | \| | \| | \| | V\| |
| 22+ 0 | 0.9172 | 0.09 | Q | \| | \| | \| | V\| |
| 22+ 5 | 0.9178 | 0.09 | Q | \| | \| | \| | V\| |
| 22+10 | 0.9185 | 0.09 | Q | \| | \| | \| | V\| |
| 22+15 | 0.9191 | 0.09 | Q | \| | \| | \| | V\| |
| 22+20 | 0.9197 | 0.09 | Q | \| | \| | \| | V\| |
| 22+25 | 0.9202 | 0.09 | Q | \| | \| | \| | V\| |
| 22+30 | 0.9208 | 0.08 | Q | \| | \| | \| | V\| |
| 22+35 | 0.9214 | 0.08 | Q | \| | \| | \| | V\| |
| 22+40 | 0.9220 | 0.08 | Q | \| | \| | \| | V\| |
| 22+45 | 0.9225 | 0.08 | Q | \| | \| | \| | V\| |
| 22+50 | 0.9231 | 0.08 | Q | \| | \| | \| | V\| |
| 22+55 | 0.9236 | 0.08 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.9242 | 0.08 | Q | \| | \| | \| | V\| |
| 23+ 5 | 0.9247 | 0.08 | Q | \| | \| | \| | V\| |
| 23+10 | 0.9253 | 0.08 | Q | \| | \| | \| | V\| |
| 23+15 | 0.9258 | 0.08 | Q | \| | \| | \| | V\| |
| 23+20 | 0.9263 | 0.08 | Q | \| | \| | \| | V\| |
| 23+25 | 0.9268 | 0.08 | Q | \| | \| | \| | V\| |
| 23+30 | 0.9273 | 0.07 | Q | \| | \| | \| | V\| |
| 23+35 | 0.9278 | 0.07 | Q | \| | \| | \| | V\| |
| 23+40 | 0.9283 | 0.07 | Q | \| | \| | \| | V\| |
| 23+45 | 0.9288 | 0.07 | Q | \| | \| | \| | V\| |
| 23+50 | 0.9293 | 0.07 | Q | \| | \| | \| | V\| |
| 23+55 | 0.9298 | 0.07 | Q | \| | \| | \| | V\| |
| 24+ 0 | 0.9303 | 0.07 | Q | \| | \| | \| | V\| |
| 24+ 5 | 0.9308 | 0.07 | Q | \| | \| | \| | V\| |
| 24+10 | 0.9312 | 0.07 | Q | \| | \| | \| | V\| |
| 24+15 | 0.9317 | 0.06 | Q | \| | \| | \| | V\| |
| 24+20 | 0.9320 | 0.06 | Q | \| | \| | \| | V\| |
| 24+25 | 0.9323 | 0.04 | Q | \| | \| | \| | V\| |
| 24+30 | 0.9326 | 0.04 | Q | \| | \| | \| | V\| |
| 24+35 | 0.9328 | 0.03 | Q | \| | \| | \| | V\| |
| 24+40 | 0.9330 | 0.02 | Q | \| | \| | \| | V\| |
| 24+45 | 0.9331 | 0.02 | Q | \| | \| | \| | V\| |
| 24+50 | 0.9332 | 0.02 | Q | \| | \| | \| | V\| |
| 24+55 | 0.9334 | 0.02 | Q | \| | \| | \| | V\| |
| 25+ 0 | 0.9335 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 5 | 0.9335 | 0.01 | Q | \| | \| | \| | V\| |
| 25+10 | 0.9336 | 0.01 | Q | \| | \| | \| | V\| |
| 25+15 | 0.9337 | 0.01 | Q | \| | \| | \| | V\| |
| 25+20 | 0.9338 | 0.01 | Q | \| | \| | \| | V\| |
| 25+25 | 0.9338 | 0.01 | Q | \| | \| | \| | V\| |
| 25+30 | 0.9339 | 0.01 | Q | \| | \| | \| | V\| |
| 25+35 | 0.9339 | 0.01 | Q | \| | \| | \| | V\| |
| 25+40 | 0.9339 | 0.01 | Q | \| | \| | \| | V\| |
| 25+45 | 0.9340 | 0.01 | Q | \| | \| | \| | V\| |
| 25+50 | 0.9340 | 0.00 | Q | \| | \| | \| | V\| |
| 25+55 | 0.9340 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 0 | 0.9341 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 0.9341 | 0.00 | Q | \| | \| | \| | V\| |
| 26+10 | 0.9341 | 0.00 | Q | \| | \| | \| | V\| |
| 26+15 | 0.9341 | 0.00 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+20 | 0.9341 | 0.00 | Q | \| | \| | \| | V\| |
| 26+25 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 26+30 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 26+35 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 26+40 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 26+45 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 26+50 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 26+55 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 0 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 5 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 27+10 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 27+15 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 27+20 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 27+25 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 27+30 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |
| 27+35 | 0.9342 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 20
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 24.41 | 1 | 1.36 |
| Rainfall data for year 100 | | |
| 24.41 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 24.41 | 24 | 2.48 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 77.2 | 92.3 | 24.41 | 1.000 | 0.149 | 0.905 | 0.135 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.135

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 22.09 | 0.905 | 77.2 | 92.3 | 0.83 | 0.686 |
| 2.32 | 0.095 | 98.0 | 98.0 | 0.20 | 0.908 |

Area-averaged catchment yield fraction, Y = 0.707
Area-averaged low loss fraction, Yb = 0.293
User entry of time of concentration = 0.480 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 24.41(Ac.)
Catchment Lag time = 0.384 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 21.7014
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.135(In/Hr)
Average low loss rate fraction (Yb) = 0.293 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.645(In)
Computed peak 30-minute rainfall = 1.105(In)
Specified peak 1-hour rainfall = 1.360(In)
Computed peak 3-hour rainfall = 1.637(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.480(In)

Rainfall depth area reduction factors:
Using a total area of 24.41(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.645(In)
30-minute factor = 0.999 Adjusted rainfall = 1.103(In)
1-hour factor = 0.999 Adjusted rainfall = 1.358(In)
3-hour factor = 1.000 Adjusted rainfall = 1.637(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.480(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 295.21 (CFS)) | |
| 1 | 1.111 | 3.280 |
| 2 | 5.164 | 11.964 |
| 3 | 13.587 | 24.867 |
| 4 | 31.738 | 53.584 |
| 5 | 48.298 | 48.884 |
| 6 | 59.038 | 31.708 |
| 7 | 66.079 | 20.784 |
| 8 | 71.449 | 15.853 |
| 9 | 75.653 | 12.411 |
| 10 | 79.095 | 10.162 |
| 11 | 81.874 | 8.203 |
| 12 | 84.223 | 6.934 |
| 13 | 86.323 | 6.199 |

| | | |
|---|---|---|
| 14 | 88.131 | 5.337 |
| 15 | 89.580 | 4.279 |
| 16 | 90.837 | 3.710 |
| 17 | 91.986 | 3.393 |
| 18 | 93.007 | 3.013 |
| 19 | 93.930 | 2.726 |
| 20 | 94.688 | 2.238 |
| 21 | 95.420 | 2.160 |
| 22 | 96.031 | 1.804 |
| 23 | 96.595 | 1.666 |
| 24 | 97.080 | 1.430 |
| 25 | 97.470 | 1.154 |
| 26 | 97.824 | 1.043 |
| 27 | 98.051 | 0.671 |
| 28 | 98.271 | 0.649 |
| 29 | 98.522 | 0.742 |
| 30 | 98.782 | 0.769 |
| 31 | 99.043 | 0.769 |
| 32 | 99.303 | 0.769 |
| 33 | 99.529 | 0.667 |
| 34 | 99.669 | 0.412 |
| 35 | 99.804 | 0.400 |
| 36 | 100.000 | 0.200 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6446 | 0.6446 |
| 2 | 0.7936 | 0.1490 |
| 3 | 0.8962 | 0.1026 |
| 4 | 0.9770 | 0.0808 |
| 5 | 1.0447 | 0.0676 |
| 6 | 1.1034 | 0.0587 |
| 7 | 1.1556 | 0.0522 |
| 8 | 1.2029 | 0.0472 |
| 9 | 1.2461 | 0.0433 |
| 10 | 1.2861 | 0.0400 |
| 11 | 1.3234 | 0.0373 |
| 12 | 1.3584 | 0.0350 |
| 13 | 1.3770 | 0.0186 |
| 14 | 1.3944 | 0.0174 |
| 15 | 1.4108 | 0.0164 |
| 16 | 1.4264 | 0.0155 |
| 17 | 1.4411 | 0.0147 |
| 18 | 1.4552 | 0.0140 |
| 19 | 1.4686 | 0.0134 |
| 20 | 1.4814 | 0.0128 |
| 21 | 1.4937 | 0.0123 |
| 22 | 1.5055 | 0.0118 |
| 23 | 1.5169 | 0.0114 |
| 24 | 1.5279 | 0.0110 |
| 25 | 1.5385 | 0.0106 |
| 26 | 1.5488 | 0.0103 |
| 27 | 1.5588 | 0.0099 |
| 28 | 1.5684 | 0.0096 |
| 29 | 1.5778 | 0.0094 |
| 30 | 1.5869 | 0.0091 |
| 31 | 1.5957 | 0.0089 |
| 32 | 1.6043 | 0.0086 |
| 33 | 1.6127 | 0.0084 |

| | | |
|---|---|---|
| 34 | 1.6209 | 0.0082 |
| 35 | 1.6289 | 0.0080 |
| 36 | 1.6367 | 0.0078 |
| 37 | 1.6443 | 0.0076 |
| 38 | 1.6517 | 0.0074 |
| 39 | 1.6590 | 0.0073 |
| 40 | 1.6661 | 0.0071 |
| 41 | 1.6730 | 0.0070 |
| 42 | 1.6798 | 0.0068 |
| 43 | 1.6865 | 0.0067 |
| 44 | 1.6931 | 0.0066 |
| 45 | 1.6995 | 0.0064 |
| 46 | 1.7058 | 0.0063 |
| 47 | 1.7120 | 0.0062 |
| 48 | 1.7181 | 0.0061 |
| 49 | 1.7241 | 0.0060 |
| 50 | 1.7300 | 0.0059 |
| 51 | 1.7358 | 0.0058 |
| 52 | 1.7415 | 0.0057 |
| 53 | 1.7471 | 0.0056 |
| 54 | 1.7526 | 0.0055 |
| 55 | 1.7581 | 0.0054 |
| 56 | 1.7634 | 0.0054 |
| 57 | 1.7687 | 0.0053 |
| 58 | 1.7739 | 0.0052 |
| 59 | 1.7790 | 0.0051 |
| 60 | 1.7841 | 0.0051 |
| 61 | 1.7891 | 0.0050 |
| 62 | 1.7940 | 0.0049 |
| 63 | 1.7989 | 0.0049 |
| 64 | 1.8036 | 0.0048 |
| 65 | 1.8084 | 0.0047 |
| 66 | 1.8130 | 0.0047 |
| 67 | 1.8176 | 0.0046 |
| 68 | 1.8222 | 0.0046 |
| 69 | 1.8267 | 0.0045 |
| 70 | 1.8311 | 0.0044 |
| 71 | 1.8355 | 0.0044 |
| 72 | 1.8399 | 0.0043 |
| 73 | 1.8453 | 0.0055 |
| 74 | 1.8507 | 0.0054 |
| 75 | 1.8561 | 0.0054 |
| 76 | 1.8614 | 0.0053 |
| 77 | 1.8667 | 0.0052 |
| 78 | 1.8718 | 0.0052 |
| 79 | 1.8770 | 0.0051 |
| 80 | 1.8821 | 0.0051 |
| 81 | 1.8871 | 0.0050 |
| 82 | 1.8921 | 0.0050 |
| 83 | 1.8971 | 0.0049 |
| 84 | 1.9020 | 0.0049 |
| 85 | 1.9068 | 0.0049 |
| 86 | 1.9116 | 0.0048 |
| 87 | 1.9164 | 0.0048 |
| 88 | 1.9211 | 0.0047 |
| 89 | 1.9258 | 0.0047 |
| 90 | 1.9304 | 0.0046 |
| 91 | 1.9350 | 0.0046 |
| 92 | 1.9396 | 0.0046 |

| | | |
|---|---|---|
| 93 | 1.9441 | 0.0045 |
| 94 | 1.9486 | 0.0045 |
| 95 | 1.9530 | 0.0044 |
| 96 | 1.9574 | 0.0044 |
| 97 | 1.9618 | 0.0044 |
| 98 | 1.9662 | 0.0043 |
| 99 | 1.9705 | 0.0043 |
| 100 | 1.9747 | 0.0043 |
| 101 | 1.9790 | 0.0042 |
| 102 | 1.9832 | 0.0042 |
| 103 | 1.9873 | 0.0042 |
| 104 | 1.9915 | 0.0041 |
| 105 | 1.9956 | 0.0041 |
| 106 | 1.9997 | 0.0041 |
| 107 | 2.0037 | 0.0040 |
| 108 | 2.0077 | 0.0040 |
| 109 | 2.0117 | 0.0040 |
| 110 | 2.0157 | 0.0040 |
| 111 | 2.0196 | 0.0039 |
| 112 | 2.0235 | 0.0039 |
| 113 | 2.0274 | 0.0039 |
| 114 | 2.0312 | 0.0039 |
| 115 | 2.0351 | 0.0038 |
| 116 | 2.0389 | 0.0038 |
| 117 | 2.0426 | 0.0038 |
| 118 | 2.0464 | 0.0037 |
| 119 | 2.0501 | 0.0037 |
| 120 | 2.0538 | 0.0037 |
| 121 | 2.0575 | 0.0037 |
| 122 | 2.0611 | 0.0036 |
| 123 | 2.0648 | 0.0036 |
| 124 | 2.0684 | 0.0036 |
| 125 | 2.0719 | 0.0036 |
| 126 | 2.0755 | 0.0036 |
| 127 | 2.0790 | 0.0035 |
| 128 | 2.0826 | 0.0035 |
| 129 | 2.0860 | 0.0035 |
| 130 | 2.0895 | 0.0035 |
| 131 | 2.0930 | 0.0035 |
| 132 | 2.0964 | 0.0034 |
| 133 | 2.0998 | 0.0034 |
| 134 | 2.1032 | 0.0034 |
| 135 | 2.1066 | 0.0034 |
| 136 | 2.1099 | 0.0034 |
| 137 | 2.1133 | 0.0033 |
| 138 | 2.1166 | 0.0033 |
| 139 | 2.1199 | 0.0033 |
| 140 | 2.1231 | 0.0033 |
| 141 | 2.1264 | 0.0033 |
| 142 | 2.1296 | 0.0032 |
| 143 | 2.1328 | 0.0032 |
| 144 | 2.1361 | 0.0032 |
| 145 | 2.1392 | 0.0032 |
| 146 | 2.1424 | 0.0032 |
| 147 | 2.1456 | 0.0032 |
| 148 | 2.1487 | 0.0031 |
| 149 | 2.1518 | 0.0031 |
| 150 | 2.1549 | 0.0031 |
| 151 | 2.1580 | 0.0031 |

| | | |
|---|---|---|
| 152 | 2.1611 | 0.0031 |
| 153 | 2.1641 | 0.0031 |
| 154 | 2.1672 | 0.0030 |
| 155 | 2.1702 | 0.0030 |
| 156 | 2.1732 | 0.0030 |
| 157 | 2.1762 | 0.0030 |
| 158 | 2.1792 | 0.0030 |
| 159 | 2.1821 | 0.0030 |
| 160 | 2.1851 | 0.0029 |
| 161 | 2.1880 | 0.0029 |
| 162 | 2.1909 | 0.0029 |
| 163 | 2.1938 | 0.0029 |
| 164 | 2.1967 | 0.0029 |
| 165 | 2.1996 | 0.0029 |
| 166 | 2.2025 | 0.0029 |
| 167 | 2.2053 | 0.0029 |
| 168 | 2.2081 | 0.0028 |
| 169 | 2.2110 | 0.0028 |
| 170 | 2.2138 | 0.0028 |
| 171 | 2.2166 | 0.0028 |
| 172 | 2.2194 | 0.0028 |
| 173 | 2.2221 | 0.0028 |
| 174 | 2.2249 | 0.0028 |
| 175 | 2.2276 | 0.0027 |
| 176 | 2.2304 | 0.0027 |
| 177 | 2.2331 | 0.0027 |
| 178 | 2.2358 | 0.0027 |
| 179 | 2.2385 | 0.0027 |
| 180 | 2.2412 | 0.0027 |
| 181 | 2.2439 | 0.0027 |
| 182 | 2.2465 | 0.0027 |
| 183 | 2.2492 | 0.0027 |
| 184 | 2.2518 | 0.0026 |
| 185 | 2.2545 | 0.0026 |
| 186 | 2.2571 | 0.0026 |
| 187 | 2.2597 | 0.0026 |
| 188 | 2.2623 | 0.0026 |
| 189 | 2.2649 | 0.0026 |
| 190 | 2.2675 | 0.0026 |
| 191 | 2.2700 | 0.0026 |
| 192 | 2.2726 | 0.0026 |
| 193 | 2.2751 | 0.0025 |
| 194 | 2.2776 | 0.0025 |
| 195 | 2.2802 | 0.0025 |
| 196 | 2.2827 | 0.0025 |
| 197 | 2.2852 | 0.0025 |
| 198 | 2.2877 | 0.0025 |
| 199 | 2.2902 | 0.0025 |
| 200 | 2.2926 | 0.0025 |
| 201 | 2.2951 | 0.0025 |
| 202 | 2.2976 | 0.0025 |
| 203 | 2.3000 | 0.0024 |
| 204 | 2.3024 | 0.0024 |
| 205 | 2.3049 | 0.0024 |
| 206 | 2.3073 | 0.0024 |
| 207 | 2.3097 | 0.0024 |
| 208 | 2.3121 | 0.0024 |
| 209 | 2.3145 | 0.0024 |
| 210 | 2.3169 | 0.0024 |

| | | |
|---|---|---|
| 211 | 2.3192 | 0.0024 |
| 212 | 2.3216 | 0.0024 |
| 213 | 2.3239 | 0.0024 |
| 214 | 2.3263 | 0.0023 |
| 215 | 2.3286 | 0.0023 |
| 216 | 2.3309 | 0.0023 |
| 217 | 2.3333 | 0.0023 |
| 218 | 2.3356 | 0.0023 |
| 219 | 2.3379 | 0.0023 |
| 220 | 2.3402 | 0.0023 |
| 221 | 2.3425 | 0.0023 |
| 222 | 2.3447 | 0.0023 |
| 223 | 2.3470 | 0.0023 |
| 224 | 2.3493 | 0.0023 |
| 225 | 2.3515 | 0.0023 |
| 226 | 2.3538 | 0.0022 |
| 227 | 2.3560 | 0.0022 |
| 228 | 2.3582 | 0.0022 |
| 229 | 2.3605 | 0.0022 |
| 230 | 2.3627 | 0.0022 |
| 231 | 2.3649 | 0.0022 |
| 232 | 2.3671 | 0.0022 |
| 233 | 2.3693 | 0.0022 |
| 234 | 2.3715 | 0.0022 |
| 235 | 2.3737 | 0.0022 |
| 236 | 2.3758 | 0.0022 |
| 237 | 2.3780 | 0.0022 |
| 238 | 2.3801 | 0.0022 |
| 239 | 2.3823 | 0.0022 |
| 240 | 2.3844 | 0.0021 |
| 241 | 2.3866 | 0.0021 |
| 242 | 2.3887 | 0.0021 |
| 243 | 2.3908 | 0.0021 |
| 244 | 2.3929 | 0.0021 |
| 245 | 2.3951 | 0.0021 |
| 246 | 2.3972 | 0.0021 |
| 247 | 2.3993 | 0.0021 |
| 248 | 2.4013 | 0.0021 |
| 249 | 2.4034 | 0.0021 |
| 250 | 2.4055 | 0.0021 |
| 251 | 2.4076 | 0.0021 |
| 252 | 2.4096 | 0.0021 |
| 253 | 2.4117 | 0.0021 |
| 254 | 2.4137 | 0.0020 |
| 255 | 2.4158 | 0.0020 |
| 256 | 2.4178 | 0.0020 |
| 257 | 2.4198 | 0.0020 |
| 258 | 2.4219 | 0.0020 |
| 259 | 2.4239 | 0.0020 |
| 260 | 2.4259 | 0.0020 |
| 261 | 2.4279 | 0.0020 |
| 262 | 2.4299 | 0.0020 |
| 263 | 2.4319 | 0.0020 |
| 264 | 2.4339 | 0.0020 |
| 265 | 2.4359 | 0.0020 |
| 266 | 2.4378 | 0.0020 |
| 267 | 2.4398 | 0.0020 |
| 268 | 2.4418 | 0.0020 |
| 269 | 2.4437 | 0.0020 |

| | | |
|---|---|---|
| 270 | 2.4457 | 0.0020 |
| 271 | 2.4476 | 0.0019 |
| 272 | 2.4496 | 0.0019 |
| 273 | 2.4515 | 0.0019 |
| 274 | 2.4535 | 0.0019 |
| 275 | 2.4554 | 0.0019 |
| 276 | 2.4573 | 0.0019 |
| 277 | 2.4592 | 0.0019 |
| 278 | 2.4611 | 0.0019 |
| 279 | 2.4630 | 0.0019 |
| 280 | 2.4649 | 0.0019 |
| 281 | 2.4668 | 0.0019 |
| 282 | 2.4687 | 0.0019 |
| 283 | 2.4706 | 0.0019 |
| 284 | 2.4725 | 0.0019 |
| 285 | 2.4743 | 0.0019 |
| 286 | 2.4762 | 0.0019 |
| 287 | 2.4781 | 0.0019 |
| 288 | 2.4799 | 0.0019 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0019 | 0.0005 | 0.0013 |
| 2 | 0.0019 | 0.0005 | 0.0013 |
| 3 | 0.0019 | 0.0005 | 0.0013 |
| 4 | 0.0019 | 0.0005 | 0.0013 |
| 5 | 0.0019 | 0.0006 | 0.0013 |
| 6 | 0.0019 | 0.0006 | 0.0013 |
| 7 | 0.0019 | 0.0006 | 0.0013 |
| 8 | 0.0019 | 0.0006 | 0.0014 |
| 9 | 0.0019 | 0.0006 | 0.0014 |
| 10 | 0.0019 | 0.0006 | 0.0014 |
| 11 | 0.0019 | 0.0006 | 0.0014 |
| 12 | 0.0019 | 0.0006 | 0.0014 |
| 13 | 0.0020 | 0.0006 | 0.0014 |
| 14 | 0.0020 | 0.0006 | 0.0014 |
| 15 | 0.0020 | 0.0006 | 0.0014 |
| 16 | 0.0020 | 0.0006 | 0.0014 |
| 17 | 0.0020 | 0.0006 | 0.0014 |
| 18 | 0.0020 | 0.0006 | 0.0014 |
| 19 | 0.0020 | 0.0006 | 0.0014 |
| 20 | 0.0020 | 0.0006 | 0.0014 |
| 21 | 0.0020 | 0.0006 | 0.0014 |
| 22 | 0.0020 | 0.0006 | 0.0014 |
| 23 | 0.0020 | 0.0006 | 0.0014 |
| 24 | 0.0020 | 0.0006 | 0.0014 |
| 25 | 0.0021 | 0.0006 | 0.0015 |
| 26 | 0.0021 | 0.0006 | 0.0015 |
| 27 | 0.0021 | 0.0006 | 0.0015 |
| 28 | 0.0021 | 0.0006 | 0.0015 |
| 29 | 0.0021 | 0.0006 | 0.0015 |
| 30 | 0.0021 | 0.0006 | 0.0015 |
| 31 | 0.0021 | 0.0006 | 0.0015 |
| 32 | 0.0021 | 0.0006 | 0.0015 |
| 33 | 0.0021 | 0.0006 | 0.0015 |
| 34 | 0.0022 | 0.0006 | 0.0015 |
| 35 | 0.0022 | 0.0006 | 0.0015 |

| | | | |
|---|---|---|---|
| 36 | 0.0022 | 0.0006 | 0.0015 |
| 37 | 0.0022 | 0.0006 | 0.0015 |
| 38 | 0.0022 | 0.0006 | 0.0016 |
| 39 | 0.0022 | 0.0006 | 0.0016 |
| 40 | 0.0022 | 0.0006 | 0.0016 |
| 41 | 0.0022 | 0.0007 | 0.0016 |
| 42 | 0.0022 | 0.0007 | 0.0016 |
| 43 | 0.0023 | 0.0007 | 0.0016 |
| 44 | 0.0023 | 0.0007 | 0.0016 |
| 45 | 0.0023 | 0.0007 | 0.0016 |
| 46 | 0.0023 | 0.0007 | 0.0016 |
| 47 | 0.0023 | 0.0007 | 0.0016 |
| 48 | 0.0023 | 0.0007 | 0.0016 |
| 49 | 0.0023 | 0.0007 | 0.0016 |
| 50 | 0.0023 | 0.0007 | 0.0017 |
| 51 | 0.0024 | 0.0007 | 0.0017 |
| 52 | 0.0024 | 0.0007 | 0.0017 |
| 53 | 0.0024 | 0.0007 | 0.0017 |
| 54 | 0.0024 | 0.0007 | 0.0017 |
| 55 | 0.0024 | 0.0007 | 0.0017 |
| 56 | 0.0024 | 0.0007 | 0.0017 |
| 57 | 0.0024 | 0.0007 | 0.0017 |
| 58 | 0.0024 | 0.0007 | 0.0017 |
| 59 | 0.0025 | 0.0007 | 0.0017 |
| 60 | 0.0025 | 0.0007 | 0.0017 |
| 61 | 0.0025 | 0.0007 | 0.0018 |
| 62 | 0.0025 | 0.0007 | 0.0018 |
| 63 | 0.0025 | 0.0007 | 0.0018 |
| 64 | 0.0025 | 0.0007 | 0.0018 |
| 65 | 0.0026 | 0.0007 | 0.0018 |
| 66 | 0.0026 | 0.0008 | 0.0018 |
| 67 | 0.0026 | 0.0008 | 0.0018 |
| 68 | 0.0026 | 0.0008 | 0.0018 |
| 69 | 0.0026 | 0.0008 | 0.0019 |
| 70 | 0.0026 | 0.0008 | 0.0019 |
| 71 | 0.0027 | 0.0008 | 0.0019 |
| 72 | 0.0027 | 0.0008 | 0.0019 |
| 73 | 0.0027 | 0.0008 | 0.0019 |
| 74 | 0.0027 | 0.0008 | 0.0019 |
| 75 | 0.0027 | 0.0008 | 0.0019 |
| 76 | 0.0027 | 0.0008 | 0.0019 |
| 77 | 0.0028 | 0.0008 | 0.0020 |
| 78 | 0.0028 | 0.0008 | 0.0020 |
| 79 | 0.0028 | 0.0008 | 0.0020 |
| 80 | 0.0028 | 0.0008 | 0.0020 |
| 81 | 0.0028 | 0.0008 | 0.0020 |
| 82 | 0.0029 | 0.0008 | 0.0020 |
| 83 | 0.0029 | 0.0008 | 0.0020 |
| 84 | 0.0029 | 0.0008 | 0.0020 |
| 85 | 0.0029 | 0.0009 | 0.0021 |
| 86 | 0.0029 | 0.0009 | 0.0021 |
| 87 | 0.0030 | 0.0009 | 0.0021 |
| 88 | 0.0030 | 0.0009 | 0.0021 |
| 89 | 0.0030 | 0.0009 | 0.0021 |
| 90 | 0.0030 | 0.0009 | 0.0021 |
| 91 | 0.0031 | 0.0009 | 0.0022 |
| 92 | 0.0031 | 0.0009 | 0.0022 |
| 93 | 0.0031 | 0.0009 | 0.0022 |
| 94 | 0.0031 | 0.0009 | 0.0022 |

| | | | |
|---|---|---|---|
| 95 | 0.0032 | 0.0009 | 0.0022 |
| 96 | 0.0032 | 0.0009 | 0.0022 |
| 97 | 0.0032 | 0.0009 | 0.0023 |
| 98 | 0.0032 | 0.0009 | 0.0023 |
| 99 | 0.0033 | 0.0010 | 0.0023 |
| 100 | 0.0033 | 0.0010 | 0.0023 |
| 101 | 0.0033 | 0.0010 | 0.0023 |
| 102 | 0.0033 | 0.0010 | 0.0024 |
| 103 | 0.0034 | 0.0010 | 0.0024 |
| 104 | 0.0034 | 0.0010 | 0.0024 |
| 105 | 0.0034 | 0.0010 | 0.0024 |
| 106 | 0.0035 | 0.0010 | 0.0024 |
| 107 | 0.0035 | 0.0010 | 0.0025 |
| 108 | 0.0035 | 0.0010 | 0.0025 |
| 109 | 0.0036 | 0.0010 | 0.0025 |
| 110 | 0.0036 | 0.0010 | 0.0025 |
| 111 | 0.0036 | 0.0011 | 0.0026 |
| 112 | 0.0036 | 0.0011 | 0.0026 |
| 113 | 0.0037 | 0.0011 | 0.0026 |
| 114 | 0.0037 | 0.0011 | 0.0026 |
| 115 | 0.0038 | 0.0011 | 0.0027 |
| 116 | 0.0038 | 0.0011 | 0.0027 |
| 117 | 0.0039 | 0.0011 | 0.0027 |
| 118 | 0.0039 | 0.0011 | 0.0027 |
| 119 | 0.0039 | 0.0012 | 0.0028 |
| 120 | 0.0040 | 0.0012 | 0.0028 |
| 121 | 0.0040 | 0.0012 | 0.0028 |
| 122 | 0.0040 | 0.0012 | 0.0029 |
| 123 | 0.0041 | 0.0012 | 0.0029 |
| 124 | 0.0041 | 0.0012 | 0.0029 |
| 125 | 0.0042 | 0.0012 | 0.0030 |
| 126 | 0.0042 | 0.0012 | 0.0030 |
| 127 | 0.0043 | 0.0013 | 0.0030 |
| 128 | 0.0043 | 0.0013 | 0.0031 |
| 129 | 0.0044 | 0.0013 | 0.0031 |
| 130 | 0.0044 | 0.0013 | 0.0031 |
| 131 | 0.0045 | 0.0013 | 0.0032 |
| 132 | 0.0046 | 0.0013 | 0.0032 |
| 133 | 0.0046 | 0.0014 | 0.0033 |
| 134 | 0.0047 | 0.0014 | 0.0033 |
| 135 | 0.0048 | 0.0014 | 0.0034 |
| 136 | 0.0048 | 0.0014 | 0.0034 |
| 137 | 0.0049 | 0.0014 | 0.0035 |
| 138 | 0.0049 | 0.0014 | 0.0035 |
| 139 | 0.0050 | 0.0015 | 0.0036 |
| 140 | 0.0051 | 0.0015 | 0.0036 |
| 141 | 0.0052 | 0.0015 | 0.0037 |
| 142 | 0.0052 | 0.0015 | 0.0037 |
| 143 | 0.0054 | 0.0016 | 0.0038 |
| 144 | 0.0054 | 0.0016 | 0.0038 |
| 145 | 0.0043 | 0.0013 | 0.0031 |
| 146 | 0.0044 | 0.0013 | 0.0031 |
| 147 | 0.0045 | 0.0013 | 0.0032 |
| 148 | 0.0046 | 0.0013 | 0.0032 |
| 149 | 0.0047 | 0.0014 | 0.0033 |
| 150 | 0.0047 | 0.0014 | 0.0033 |
| 151 | 0.0049 | 0.0014 | 0.0034 |
| 152 | 0.0049 | 0.0014 | 0.0035 |
| 153 | 0.0051 | 0.0015 | 0.0036 |

| | | | |
|---|---|---|---|
| 154 | 0.0051 | 0.0015 | 0.0036 |
| 155 | 0.0053 | 0.0015 | 0.0037 |
| 156 | 0.0054 | 0.0016 | 0.0038 |
| 157 | 0.0055 | 0.0016 | 0.0039 |
| 158 | 0.0056 | 0.0016 | 0.0040 |
| 159 | 0.0058 | 0.0017 | 0.0041 |
| 160 | 0.0059 | 0.0017 | 0.0042 |
| 161 | 0.0061 | 0.0018 | 0.0043 |
| 162 | 0.0062 | 0.0018 | 0.0044 |
| 163 | 0.0064 | 0.0019 | 0.0046 |
| 164 | 0.0066 | 0.0019 | 0.0046 |
| 165 | 0.0068 | 0.0020 | 0.0048 |
| 166 | 0.0070 | 0.0020 | 0.0049 |
| 167 | 0.0073 | 0.0021 | 0.0051 |
| 168 | 0.0074 | 0.0022 | 0.0052 |
| 169 | 0.0078 | 0.0023 | 0.0055 |
| 170 | 0.0080 | 0.0023 | 0.0057 |
| 171 | 0.0084 | 0.0025 | 0.0059 |
| 172 | 0.0086 | 0.0025 | 0.0061 |
| 173 | 0.0091 | 0.0027 | 0.0064 |
| 174 | 0.0094 | 0.0027 | 0.0066 |
| 175 | 0.0099 | 0.0029 | 0.0070 |
| 176 | 0.0103 | 0.0030 | 0.0073 |
| 177 | 0.0110 | 0.0032 | 0.0078 |
| 178 | 0.0114 | 0.0033 | 0.0081 |
| 179 | 0.0123 | 0.0036 | 0.0087 |
| 180 | 0.0128 | 0.0038 | 0.0091 |
| 181 | 0.0140 | 0.0041 | 0.0099 |
| 182 | 0.0147 | 0.0043 | 0.0104 |
| 183 | 0.0164 | 0.0048 | 0.0116 |
| 184 | 0.0174 | 0.0051 | 0.0123 |
| 185 | 0.0350 | 0.0102 | 0.0248 |
| 186 | 0.0373 | 0.0109 | 0.0264 |
| 187 | 0.0433 | 0.0112 | 0.0320 |
| 188 | 0.0472 | 0.0112 | 0.0360 |
| 189 | 0.0587 | 0.0112 | 0.0475 |
| 190 | 0.0676 | 0.0112 | 0.0564 |
| 191 | 0.1026 | 0.0112 | 0.0914 |
| 192 | 0.1490 | 0.0112 | 0.1378 |
| 193 | 0.6446 | 0.0112 | 0.6334 |
| 194 | 0.0808 | 0.0112 | 0.0695 |
| 195 | 0.0522 | 0.0112 | 0.0410 |
| 196 | 0.0400 | 0.0112 | 0.0288 |
| 197 | 0.0186 | 0.0054 | 0.0131 |
| 198 | 0.0155 | 0.0045 | 0.0110 |
| 199 | 0.0134 | 0.0039 | 0.0095 |
| 200 | 0.0118 | 0.0035 | 0.0084 |
| 201 | 0.0106 | 0.0031 | 0.0075 |
| 202 | 0.0096 | 0.0028 | 0.0068 |
| 203 | 0.0089 | 0.0026 | 0.0063 |
| 204 | 0.0082 | 0.0024 | 0.0058 |
| 205 | 0.0076 | 0.0022 | 0.0054 |
| 206 | 0.0071 | 0.0021 | 0.0050 |
| 207 | 0.0067 | 0.0020 | 0.0047 |
| 208 | 0.0063 | 0.0018 | 0.0045 |
| 209 | 0.0060 | 0.0018 | 0.0042 |
| 210 | 0.0057 | 0.0017 | 0.0040 |
| 211 | 0.0054 | 0.0016 | 0.0038 |
| 212 | 0.0052 | 0.0015 | 0.0037 |

| | | | |
|---|---|---|---|
| 213 | 0.0050 | 0.0015 | 0.0035 |
| 214 | 0.0048 | 0.0014 | 0.0034 |
| 215 | 0.0046 | 0.0013 | 0.0033 |
| 216 | 0.0044 | 0.0013 | 0.0031 |
| 217 | 0.0055 | 0.0016 | 0.0039 |
| 218 | 0.0053 | 0.0016 | 0.0037 |
| 219 | 0.0051 | 0.0015 | 0.0036 |
| 220 | 0.0050 | 0.0015 | 0.0035 |
| 221 | 0.0049 | 0.0014 | 0.0034 |
| 222 | 0.0047 | 0.0014 | 0.0033 |
| 223 | 0.0046 | 0.0013 | 0.0033 |
| 224 | 0.0045 | 0.0013 | 0.0032 |
| 225 | 0.0044 | 0.0013 | 0.0031 |
| 226 | 0.0043 | 0.0012 | 0.0030 |
| 227 | 0.0042 | 0.0012 | 0.0029 |
| 228 | 0.0041 | 0.0012 | 0.0029 |
| 229 | 0.0040 | 0.0012 | 0.0028 |
| 230 | 0.0039 | 0.0011 | 0.0028 |
| 231 | 0.0038 | 0.0011 | 0.0027 |
| 232 | 0.0037 | 0.0011 | 0.0027 |
| 233 | 0.0037 | 0.0011 | 0.0026 |
| 234 | 0.0036 | 0.0011 | 0.0025 |
| 235 | 0.0035 | 0.0010 | 0.0025 |
| 236 | 0.0035 | 0.0010 | 0.0025 |
| 237 | 0.0034 | 0.0010 | 0.0024 |
| 238 | 0.0034 | 0.0010 | 0.0024 |
| 239 | 0.0033 | 0.0010 | 0.0023 |
| 240 | 0.0032 | 0.0009 | 0.0023 |
| 241 | 0.0032 | 0.0009 | 0.0023 |
| 242 | 0.0031 | 0.0009 | 0.0022 |
| 243 | 0.0031 | 0.0009 | 0.0022 |
| 244 | 0.0030 | 0.0009 | 0.0021 |
| 245 | 0.0030 | 0.0009 | 0.0021 |
| 246 | 0.0029 | 0.0009 | 0.0021 |
| 247 | 0.0029 | 0.0009 | 0.0021 |
| 248 | 0.0029 | 0.0008 | 0.0020 |
| 249 | 0.0028 | 0.0008 | 0.0020 |
| 250 | 0.0028 | 0.0008 | 0.0020 |
| 251 | 0.0027 | 0.0008 | 0.0019 |
| 252 | 0.0027 | 0.0008 | 0.0019 |
| 253 | 0.0027 | 0.0008 | 0.0019 |
| 254 | 0.0026 | 0.0008 | 0.0019 |
| 255 | 0.0026 | 0.0008 | 0.0018 |
| 256 | 0.0026 | 0.0008 | 0.0018 |
| 257 | 0.0025 | 0.0007 | 0.0018 |
| 258 | 0.0025 | 0.0007 | 0.0018 |
| 259 | 0.0025 | 0.0007 | 0.0018 |
| 260 | 0.0025 | 0.0007 | 0.0017 |
| 261 | 0.0024 | 0.0007 | 0.0017 |
| 262 | 0.0024 | 0.0007 | 0.0017 |
| 263 | 0.0024 | 0.0007 | 0.0017 |
| 264 | 0.0023 | 0.0007 | 0.0017 |
| 265 | 0.0023 | 0.0007 | 0.0016 |
| 266 | 0.0023 | 0.0007 | 0.0016 |
| 267 | 0.0023 | 0.0007 | 0.0016 |
| 268 | 0.0022 | 0.0007 | 0.0016 |
| 269 | 0.0022 | 0.0007 | 0.0016 |
| 270 | 0.0022 | 0.0006 | 0.0016 |
| 271 | 0.0022 | 0.0006 | 0.0015 |

| | | | |
|---|---|---|---|
| 272 | 0.0022 | 0.0006 | 0.0015 |
| 273 | 0.0021 | 0.0006 | 0.0015 |
| 274 | 0.0021 | 0.0006 | 0.0015 |
| 275 | 0.0021 | 0.0006 | 0.0015 |
| 276 | 0.0021 | 0.0006 | 0.0015 |
| 277 | 0.0021 | 0.0006 | 0.0015 |
| 278 | 0.0020 | 0.0006 | 0.0014 |
| 279 | 0.0020 | 0.0006 | 0.0014 |
| 280 | 0.0020 | 0.0006 | 0.0014 |
| 281 | 0.0020 | 0.0006 | 0.0014 |
| 282 | 0.0020 | 0.0006 | 0.0014 |
| 283 | 0.0019 | 0.0006 | 0.0014 |
| 284 | 0.0019 | 0.0006 | 0.0014 |
| 285 | 0.0019 | 0.0006 | 0.0014 |
| 286 | 0.0019 | 0.0006 | 0.0013 |
| 287 | 0.0019 | 0.0006 | 0.0013 |
| 288 | 0.0019 | 0.0005 | 0.0013 |

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Total soil rain loss = 0.46(In)
Total effective rainfall = 2.02(In)
Peak flow rate in flood hydrograph = 49.38(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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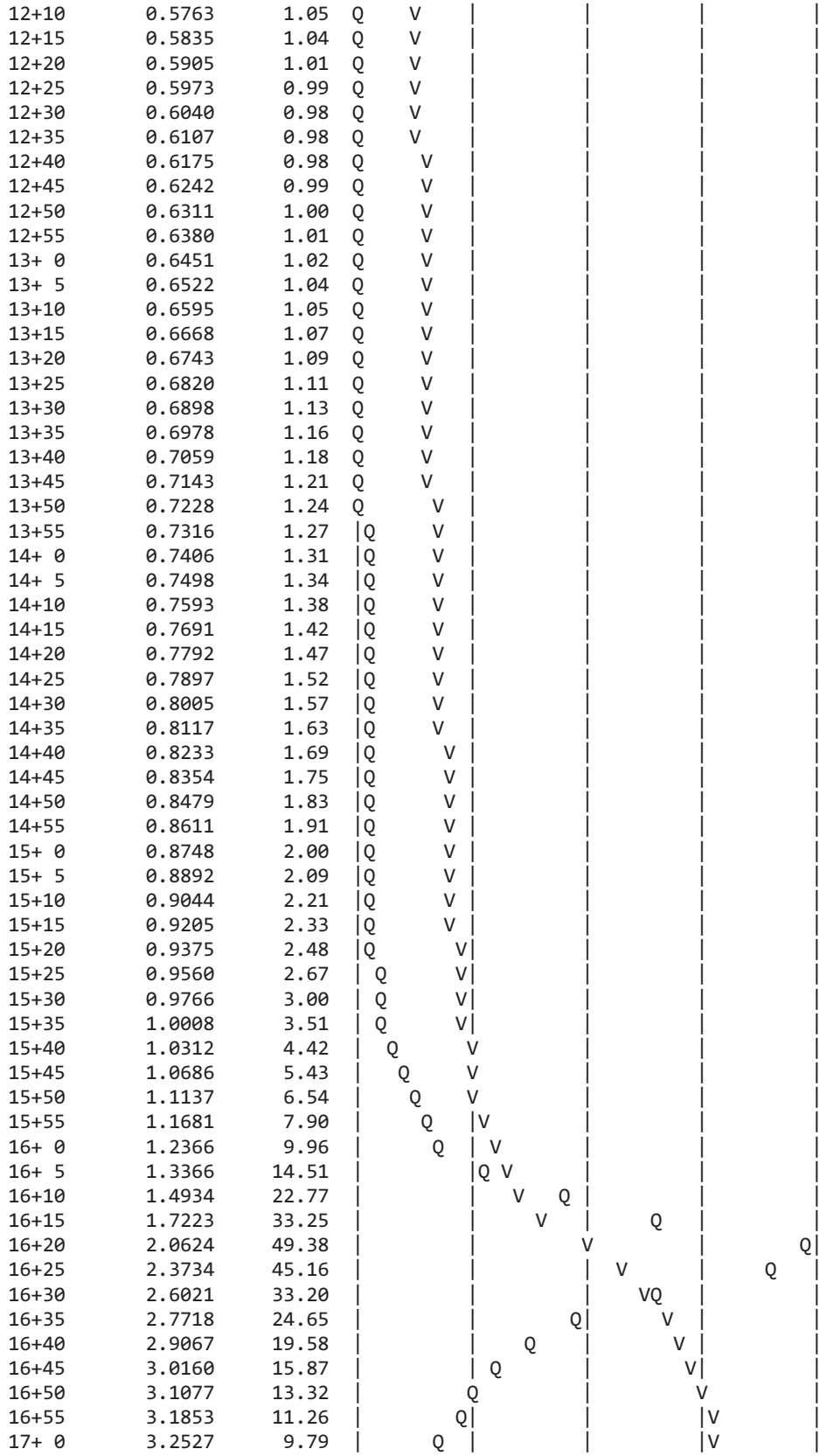
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 12.5 | 25.0 | 37.5 | 50.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0002 | 0.02 | Q | \| | \| | \| | \| |
| 0+15 | 0.0005 | 0.05 | Q | \| | \| | \| | \| |
| 0+20 | 0.0014 | 0.12 | Q | \| | \| | \| | \| |
| 0+25 | 0.0027 | 0.19 | Q | \| | \| | \| | \| |
| 0+30 | 0.0043 | 0.23 | Q | \| | \| | \| | \| |
| 0+35 | 0.0060 | 0.26 | Q | \| | \| | \| | \| |
| 0+40 | 0.0080 | 0.28 | Q | \| | \| | \| | \| |
| 0+45 | 0.0100 | 0.30 | Q | \| | \| | \| | \| |
| 0+50 | 0.0122 | 0.31 | Q | \| | \| | \| | \| |
| 0+55 | 0.0144 | 0.32 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0167 | 0.34 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0191 | 0.34 | Q | \| | \| | \| | \| |
| 1+10 | 0.0215 | 0.35 | Q | \| | \| | \| | \| |
| 1+15 | 0.0240 | 0.36 | Q | \| | \| | \| | \| |
| 1+20 | 0.0265 | 0.37 | Q | \| | \| | \| | \| |
| 1+25 | 0.0291 | 0.37 | Q | \| | \| | \| | \| |
| 1+30 | 0.0317 | 0.38 | Q | \| | \| | \| | \| |
| 1+35 | 0.0343 | 0.38 | Q | \| | \| | \| | \| |
| 1+40 | 0.0370 | 0.39 | Q | \| | \| | \| | \| |
| 1+45 | 0.0397 | 0.39 | Q | \| | \| | \| | \| |
| 1+50 | 0.0425 | 0.40 | Q | \| | \| | \| | \| |
| 1+55 | 0.0452 | 0.40 | Q | \| | \| | \| | \| |
| 2+ 0 | 0.0480 | 0.40 | Q | \| | \| | \| | \| |
| 2+ 5 | 0.0508 | 0.41 | Q | \| | \| | \| | \| |
| 2+10 | 0.0536 | 0.41 | Q | \| | \| | \| | \| |
| 2+15 | 0.0565 | 0.41 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+20 | 0.0594 | 0.42 | Q | | | | |
| 2+25 | 0.0622 | 0.42 | Q | | | | |
| 2+30 | 0.0651 | 0.42 | Q | | | | |
| 2+35 | 0.0681 | 0.43 | Q | | | | |
| 2+40 | 0.0710 | 0.43 | Q | | | | |
| 2+45 | 0.0740 | 0.43 | Q | | | | |
| 2+50 | 0.0770 | 0.43 | Q | | | | |
| 2+55 | 0.0800 | 0.44 | Q | | | | |
| 3+ 0 | 0.0830 | 0.44 | Q | | | | |
| 3+ 5 | 0.0860 | 0.44 | Q | | | | |
| 3+10 | 0.0891 | 0.44 | Q | | | | |
| 3+15 | 0.0922 | 0.45 | Q | | | | |
| 3+20 | 0.0952 | 0.45 | Q | | | | |
| 3+25 | 0.0983 | 0.45 | Q | | | | |
| 3+30 | 0.1015 | 0.45 | Q | | | | |
| 3+35 | 0.1046 | 0.45 | QV | | | | |
| 3+40 | 0.1077 | 0.46 | QV | | | | |
| 3+45 | 0.1109 | 0.46 | QV | | | | |
| 3+50 | 0.1141 | 0.46 | QV | | | | |
| 3+55 | 0.1172 | 0.46 | QV | | | | |
| 4+ 0 | 0.1205 | 0.47 | QV | | | | |
| 4+ 5 | 0.1237 | 0.47 | QV | | | | |
| 4+10 | 0.1269 | 0.47 | QV | | | | |
| 4+15 | 0.1302 | 0.47 | QV | | | | |
| 4+20 | 0.1335 | 0.48 | QV | | | | |
| 4+25 | 0.1368 | 0.48 | QV | | | | |
| 4+30 | 0.1401 | 0.48 | QV | | | | |
| 4+35 | 0.1434 | 0.48 | QV | | | | |
| 4+40 | 0.1467 | 0.49 | QV | | | | |
| 4+45 | 0.1501 | 0.49 | QV | | | | |
| 4+50 | 0.1535 | 0.49 | QV | | | | |
| 4+55 | 0.1569 | 0.49 | QV | | | | |
| 5+ 0 | 0.1603 | 0.50 | QV | | | | |
| 5+ 5 | 0.1638 | 0.50 | QV | | | | |
| 5+10 | 0.1672 | 0.50 | QV | | | | |
| 5+15 | 0.1707 | 0.51 | QV | | | | |
| 5+20 | 0.1742 | 0.51 | QV | | | | |
| 5+25 | 0.1777 | 0.51 | QV | | | | |
| 5+30 | 0.1813 | 0.51 | QV | | | | |
| 5+35 | 0.1848 | 0.52 | QV | | | | |
| 5+40 | 0.1884 | 0.52 | QV | | | | |
| 5+45 | 0.1920 | 0.52 | QV | | | | |
| 5+50 | 0.1957 | 0.53 | QV | | | | |
| 5+55 | 0.1993 | 0.53 | QV | | | | |
| 6+ 0 | 0.2030 | 0.53 | QV | | | | |
| 6+ 5 | 0.2067 | 0.54 | Q V | | | | |
| 6+10 | 0.2104 | 0.54 | Q V | | | | |
| 6+15 | 0.2141 | 0.54 | Q V | | | | |
| 6+20 | 0.2179 | 0.55 | Q V | | | | |
| 6+25 | 0.2217 | 0.55 | Q V | | | | |
| 6+30 | 0.2255 | 0.55 | Q V | | | | |
| 6+35 | 0.2294 | 0.56 | Q V | | | | |
| 6+40 | 0.2332 | 0.56 | Q V | | | | |
| 6+45 | 0.2371 | 0.57 | Q V | | | | |
| 6+50 | 0.2410 | 0.57 | Q V | | | | |
| 6+55 | 0.2450 | 0.57 | Q V | | | | |
| 7+ 0 | 0.2489 | 0.58 | Q V | | | | |
| 7+ 5 | 0.2529 | 0.58 | Q V | | | | |
| 7+10 | 0.2570 | 0.58 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7+15 | 0.2610 | 0.59 | Q V | \| | \| | \| | \| |
| 7+20 | 0.2651 | 0.59 | Q V | \| | \| | \| | \| |
| 7+25 | 0.2692 | 0.60 | Q V | \| | \| | \| | \| |
| 7+30 | 0.2734 | 0.60 | Q V | \| | \| | \| | \| |
| 7+35 | 0.2775 | 0.61 | Q V | \| | \| | \| | \| |
| 7+40 | 0.2817 | 0.61 | Q V | \| | \| | \| | \| |
| 7+45 | 0.2860 | 0.61 | Q V | \| | \| | \| | \| |
| 7+50 | 0.2902 | 0.62 | Q V | \| | \| | \| | \| |
| 7+55 | 0.2945 | 0.62 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.2989 | 0.63 | Q V | \| | \| | \| | \| |
| 8+ 5 | 0.3032 | 0.63 | Q V | \| | \| | \| | \| |
| 8+10 | 0.3076 | 0.64 | Q V | \| | \| | \| | \| |
| 8+15 | 0.3120 | 0.64 | Q V | \| | \| | \| | \| |
| 8+20 | 0.3165 | 0.65 | Q V | \| | \| | \| | \| |
| 8+25 | 0.3210 | 0.65 | Q V | \| | \| | \| | \| |
| 8+30 | 0.3256 | 0.66 | Q V | \| | \| | \| | \| |
| 8+35 | 0.3301 | 0.66 | Q V | \| | \| | \| | \| |
| 8+40 | 0.3347 | 0.67 | Q V | \| | \| | \| | \| |
| 8+45 | 0.3394 | 0.68 | Q V | \| | \| | \| | \| |
| 8+50 | 0.3441 | 0.68 | Q V | \| | \| | \| | \| |
| 8+55 | 0.3488 | 0.69 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.3536 | 0.69 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.3584 | 0.70 | Q V | \| | \| | \| | \| |
| 9+10 | 0.3632 | 0.70 | Q V | \| | \| | \| | \| |
| 9+15 | 0.3681 | 0.71 | Q V | \| | \| | \| | \| |
| 9+20 | 0.3731 | 0.72 | Q V | \| | \| | \| | \| |
| 9+25 | 0.3781 | 0.72 | Q V | \| | \| | \| | \| |
| 9+30 | 0.3831 | 0.73 | Q V | \| | \| | \| | \| |
| 9+35 | 0.3882 | 0.74 | Q V | \| | \| | \| | \| |
| 9+40 | 0.3933 | 0.74 | Q V | \| | \| | \| | \| |
| 9+45 | 0.3985 | 0.75 | Q V | \| | \| | \| | \| |
| 9+50 | 0.4037 | 0.76 | Q V | \| | \| | \| | \| |
| 9+55 | 0.4090 | 0.77 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.4143 | 0.77 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.4197 | 0.78 | Q V | \| | \| | \| | \| |
| 10+10 | 0.4252 | 0.79 | Q V | \| | \| | \| | \| |
| 10+15 | 0.4306 | 0.80 | Q V | \| | \| | \| | \| |
| 10+20 | 0.4362 | 0.81 | Q V | \| | \| | \| | \| |
| 10+25 | 0.4418 | 0.81 | Q V | \| | \| | \| | \| |
| 10+30 | 0.4475 | 0.82 | Q V | \| | \| | \| | \| |
| 10+35 | 0.4532 | 0.83 | Q V | \| | \| | \| | \| |
| 10+40 | 0.4590 | 0.84 | Q V | \| | \| | \| | \| |
| 10+45 | 0.4649 | 0.85 | Q V | \| | \| | \| | \| |
| 10+50 | 0.4708 | 0.86 | Q V | \| | \| | \| | \| |
| 10+55 | 0.4768 | 0.87 | Q V | \| | \| | \| | \| |
| 11+ 0 | 0.4829 | 0.88 | Q V | \| | \| | \| | \| |
| 11+ 5 | 0.4890 | 0.89 | Q V | \| | \| | \| | \| |
| 11+10 | 0.4952 | 0.90 | Q V | \| | \| | \| | \| |
| 11+15 | 0.5015 | 0.91 | Q V | \| | \| | \| | \| |
| 11+20 | 0.5079 | 0.92 | Q V | \| | \| | \| | \| |
| 11+25 | 0.5143 | 0.94 | Q V | \| | \| | \| | \| |
| 11+30 | 0.5209 | 0.95 | Q V | \| | \| | \| | \| |
| 11+35 | 0.5275 | 0.96 | Q V | \| | \| | \| | \| |
| 11+40 | 0.5342 | 0.97 | Q V | \| | \| | \| | \| |
| 11+45 | 0.5410 | 0.99 | Q V | \| | \| | \| | \| |
| 11+50 | 0.5479 | 1.00 | Q V | \| | \| | \| | \| |
| 11+55 | 0.5548 | 1.01 | Q V | \| | \| | \| | \| |
| 12+ 0 | 0.5619 | 1.03 | Q V | \| | \| | \| | \| |
| 12+ 5 | 0.5691 | 1.04 | Q V | \| | \| | \| | \| |



| | | | |
|---|---|---|---|
| 12+10 | 0.5763 | 1.05 | |
| 12+15 | 0.5835 | 1.04 | |
| 12+20 | 0.5905 | 1.01 | |
| 12+25 | 0.5973 | 0.99 | |
| 12+30 | 0.6040 | 0.98 | |
| 12+35 | 0.6107 | 0.98 | |
| 12+40 | 0.6175 | 0.98 | |
| 12+45 | 0.6242 | 0.99 | |
| 12+50 | 0.6311 | 1.00 | |
| 12+55 | 0.6380 | 1.01 | |
| 13+ 0 | 0.6451 | 1.02 | |
| 13+ 5 | 0.6522 | 1.04 | |
| 13+10 | 0.6595 | 1.05 | |
| 13+15 | 0.6668 | 1.07 | |
| 13+20 | 0.6743 | 1.09 | |
| 13+25 | 0.6820 | 1.11 | |
| 13+30 | 0.6898 | 1.13 | |
| 13+35 | 0.6978 | 1.16 | |
| 13+40 | 0.7059 | 1.18 | |
| 13+45 | 0.7143 | 1.21 | |
| 13+50 | 0.7228 | 1.24 | |
| 13+55 | 0.7316 | 1.27 | |
| 14+ 0 | 0.7406 | 1.31 | |
| 14+ 5 | 0.7498 | 1.34 | |
| 14+10 | 0.7593 | 1.38 | |
| 14+15 | 0.7691 | 1.42 | |
| 14+20 | 0.7792 | 1.47 | |
| 14+25 | 0.7897 | 1.52 | |
| 14+30 | 0.8005 | 1.57 | |
| 14+35 | 0.8117 | 1.63 | |
| 14+40 | 0.8233 | 1.69 | |
| 14+45 | 0.8354 | 1.75 | |
| 14+50 | 0.8479 | 1.83 | |
| 14+55 | 0.8611 | 1.91 | |
| 15+ 0 | 0.8748 | 2.00 | |
| 15+ 5 | 0.8892 | 2.09 | |
| 15+10 | 0.9044 | 2.21 | |
| 15+15 | 0.9205 | 2.33 | |
| 15+20 | 0.9375 | 2.48 | |
| 15+25 | 0.9560 | 2.67 | |
| 15+30 | 0.9766 | 3.00 | |
| 15+35 | 1.0008 | 3.51 | |
| 15+40 | 1.0312 | 4.42 | |
| 15+45 | 1.0686 | 5.43 | |
| 15+50 | 1.1137 | 6.54 | |
| 15+55 | 1.1681 | 7.90 | |
| 16+ 0 | 1.2366 | 9.96 | |
| 16+ 5 | 1.3366 | 14.51 | |
| 16+10 | 1.4934 | 22.77 | |
| 16+15 | 1.7223 | 33.25 | |
| 16+20 | 2.0624 | 49.38 | |
| 16+25 | 2.3734 | 45.16 | |
| 16+30 | 2.6021 | 33.20 | |
| 16+35 | 2.7718 | 24.65 | |
| 16+40 | 2.9067 | 19.58 | |
| 16+45 | 3.0160 | 15.87 | |
| 16+50 | 3.1077 | 13.32 | |
| 16+55 | 3.1853 | 11.26 | |
| 17+ 0 | 3.2527 | 9.79 | |

```
17+ 5       3.3129      8.74  |     Q   |         |         | V       |
17+10       3.3659      7.70  |     Q   |         |         | V       |
17+15       3.4117      6.65  |    Q    |         |         |  V      |
17+20       3.4526      5.95  |   Q     |         |         |  V      |
17+25       3.4900      5.43  |   Q     |         |         |   V     |
17+30       3.5240      4.92  |  Q      |         |         |   V     |
17+35       3.5549      4.49  |  Q      |         |         |   V     |
17+40       3.5824      3.99  |  Q      |         |         |   V     |
17+45       3.6081      3.73  | Q       |         |         |    V    |
17+50       3.6311      3.34  | Q       |         |         |    V    |
17+55       3.6524      3.08  | Q       |         |         |    V    |
18+ 0       3.6716      2.79  | Q       |         |         |    V    |
18+ 5       3.6887      2.49  |Q        |         |         |     V   |
18+10       3.7046      2.30  |Q        |         |         |     V   |
18+15       3.7184      2.01  |Q        |         |         |     V   |
18+20       3.7320      1.97  |Q        |         |         |     V   |
18+25       3.7456      1.99  |Q        |         |         |     V   |
18+30       3.7591      1.96  |Q        |         |         |     V   |
18+35       3.7723      1.91  |Q        |         |         |     V   |
18+40       3.7849      1.84  |Q        |         |         |     V   |
18+45       3.7966      1.69  |Q        |         |         |      V  |
18+50       3.8068      1.48  |Q        |         |         |      V  |
18+55       3.8163      1.38  |Q        |         |         |      V  |
19+ 0       3.8245      1.19  Q         |         |         |      V  |
19+ 5       3.8316      1.03  Q         |         |         |      V  |
19+10       3.8383      0.98  Q         |         |         |      V  |
19+15       3.8449      0.95  Q         |         |         |      V  |
19+20       3.8512      0.92  Q         |         |         |      V  |
19+25       3.8574      0.90  Q         |         |         |      V  |
19+30       3.8635      0.88  Q         |         |         |      V  |
19+35       3.8694      0.86  Q         |         |         |      V  |
19+40       3.8751      0.84  Q         |         |         |      V  |
19+45       3.8808      0.82  Q         |         |         |      V  |
19+50       3.8863      0.80  Q         |         |         |      V  |
19+55       3.8918      0.79  Q         |         |         |      V  |
20+ 0       3.8971      0.77  Q         |         |         |       V |
20+ 5       3.9023      0.76  Q         |         |         |       V |
20+10       3.9074      0.74  Q         |         |         |       V |
20+15       3.9124      0.73  Q         |         |         |       V |
20+20       3.9174      0.72  Q         |         |         |       V |
20+25       3.9222      0.70  Q         |         |         |       V |
20+30       3.9270      0.69  Q         |         |         |       V |
20+35       3.9317      0.68  Q         |         |         |       V |
20+40       3.9363      0.67  Q         |         |         |       V |
20+45       3.9408      0.66  Q         |         |         |       V |
20+50       3.9453      0.65  Q         |         |         |       V |
20+55       3.9497      0.64  Q         |         |         |       V |
21+ 0       3.9541      0.63  Q         |         |         |       V |
21+ 5       3.9583      0.62  Q         |         |         |       V |
21+10       3.9625      0.61  Q         |         |         |       V |
21+15       3.9667      0.60  Q         |         |         |       V |
21+20       3.9708      0.59  Q         |         |         |       V |
21+25       3.9748      0.58  Q         |         |         |       V |
21+30       3.9788      0.58  Q         |         |         |       V |
21+35       3.9827      0.57  Q         |         |         |       V |
21+40       3.9865      0.56  Q         |         |         |       V |
21+45       3.9903      0.55  Q         |         |         |       V |
21+50       3.9941      0.55  Q         |         |         |       V |
21+55       3.9978      0.54  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+ 0 | 4.0015 | 0.53 | Q | \| | \| | \| | V\| |
| 22+ 5 | 4.0051 | 0.53 | Q | \| | \| | \| | V\| |
| 22+10 | 4.0087 | 0.52 | Q | \| | \| | \| | V\| |
| 22+15 | 4.0122 | 0.51 | Q | \| | \| | \| | V\| |
| 22+20 | 4.0157 | 0.51 | Q | \| | \| | \| | V\| |
| 22+25 | 4.0192 | 0.50 | Q | \| | \| | \| | V\| |
| 22+30 | 4.0226 | 0.50 | Q | \| | \| | \| | V\| |
| 22+35 | 4.0260 | 0.49 | Q | \| | \| | \| | V\| |
| 22+40 | 4.0293 | 0.49 | Q | \| | \| | \| | V\| |
| 22+45 | 4.0326 | 0.48 | Q | \| | \| | \| | V\| |
| 22+50 | 4.0359 | 0.47 | Q | \| | \| | \| | V\| |
| 22+55 | 4.0391 | 0.47 | Q | \| | \| | \| | V\| |
| 23+ 0 | 4.0424 | 0.46 | Q | \| | \| | \| | V\| |
| 23+ 5 | 4.0455 | 0.46 | Q | \| | \| | \| | V\| |
| 23+10 | 4.0487 | 0.46 | Q | \| | \| | \| | V\| |
| 23+15 | 4.0518 | 0.45 | Q | \| | \| | \| | V\| |
| 23+20 | 4.0548 | 0.45 | Q | \| | \| | \| | V\| |
| 23+25 | 4.0579 | 0.44 | Q | \| | \| | \| | V\| |
| 23+30 | 4.0609 | 0.44 | Q | \| | \| | \| | V\| |
| 23+35 | 4.0639 | 0.43 | Q | \| | \| | \| | V\| |
| 23+40 | 4.0668 | 0.43 | Q | \| | \| | \| | V\| |
| 23+45 | 4.0698 | 0.43 | Q | \| | \| | \| | V\| |
| 23+50 | 4.0727 | 0.42 | Q | \| | \| | \| | V\| |
| 23+55 | 4.0756 | 0.42 | Q | \| | \| | \| | V\| |
| 24+ 0 | 4.0784 | 0.41 | Q | \| | \| | \| | V\| |
| 24+ 5 | 4.0812 | 0.41 | Q | \| | \| | \| | V\| |
| 24+10 | 4.0839 | 0.39 | Q | \| | \| | \| | V\| |
| 24+15 | 4.0863 | 0.35 | Q | \| | \| | \| | V\| |
| 24+20 | 4.0882 | 0.28 | Q | \| | \| | \| | V\| |
| 24+25 | 4.0897 | 0.21 | Q | \| | \| | \| | V\| |
| 24+30 | 4.0908 | 0.17 | Q | \| | \| | \| | V\| |
| 24+35 | 4.0918 | 0.14 | Q | \| | \| | \| | V\| |
| 24+40 | 4.0926 | 0.12 | Q | \| | \| | \| | V\| |
| 24+45 | 4.0933 | 0.10 | Q | \| | \| | \| | V\| |
| 24+50 | 4.0939 | 0.09 | Q | \| | \| | \| | V\| |
| 24+55 | 4.0944 | 0.07 | Q | \| | \| | \| | V\| |
| 25+ 0 | 4.0948 | 0.06 | Q | \| | \| | \| | V\| |
| 25+ 5 | 4.0952 | 0.06 | Q | \| | \| | \| | V\| |
| 25+10 | 4.0955 | 0.05 | Q | \| | \| | \| | V\| |
| 25+15 | 4.0958 | 0.04 | Q | \| | \| | \| | V\| |
| 25+20 | 4.0961 | 0.04 | Q | \| | \| | \| | V\| |
| 25+25 | 4.0963 | 0.03 | Q | \| | \| | \| | V\| |
| 25+30 | 4.0965 | 0.03 | Q | \| | \| | \| | V\| |
| 25+35 | 4.0967 | 0.02 | Q | \| | \| | \| | V\| |
| 25+40 | 4.0968 | 0.02 | Q | \| | \| | \| | V\| |
| 25+45 | 4.0969 | 0.02 | Q | \| | \| | \| | V\| |
| 25+50 | 4.0970 | 0.02 | Q | \| | \| | \| | V\| |
| 25+55 | 4.0971 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 0 | 4.0972 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 5 | 4.0973 | 0.01 | Q | \| | \| | \| | V\| |
| 26+10 | 4.0973 | 0.01 | Q | \| | \| | \| | V\| |
| 26+15 | 4.0974 | 0.01 | Q | \| | \| | \| | V\| |
| 26+20 | 4.0974 | 0.01 | Q | \| | \| | \| | V\| |
| 26+25 | 4.0975 | 0.01 | Q | \| | \| | \| | V\| |
| 26+30 | 4.0975 | 0.00 | Q | \| | \| | \| | V\| |
| 26+35 | 4.0975 | 0.00 | Q | \| | \| | \| | V\| |
| 26+40 | 4.0975 | 0.00 | Q | \| | \| | \| | V\| |
| 26+45 | 4.0975 | 0.00 | Q | \| | \| | \| | V\| |
| 26+50 | 4.0975 | 0.00 | Q | \| | \| | \| | V\| |

```
   26+55       4.0975      0.00  Q         |         |         |         V
-----------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 21
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 9.89 | 1 | 1.36 |
| Rainfall data for year 100 | | |
| 9.89 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 9.89 | 24 | 2.47 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.0 | 92.8 | 9.89 | 1.000 | 0.140 | 0.900 | 0.126 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.126

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 8.90 | 0.900 | 78.0 | 92.8 | 0.78 | 0.702 |
| 0.99 | 0.100 | 98.0 | 98.0 | 0.20 | 0.907 |

Area-averaged catchment yield fraction, Y = 0.722
Area-averaged low loss fraction, Yb = 0.278
User entry of time of concentration = 0.460 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 9.89(Ac.)
Catchment Lag time = 0.368 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 22.6449
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.126(In/Hr)
Average low loss rate fraction (Yb) = 0.278 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.645(In)
Computed peak 30-minute rainfall = 1.105(In)
Specified peak 1-hour rainfall = 1.360(In)
Computed peak 3-hour rainfall = 1.637(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.470(In)

Rainfall depth area reduction factors:
Using a total area of 9.89(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.645(In)
30-minute factor = 1.000 Adjusted rainfall = 1.104(In)
1-hour factor = 1.000 Adjusted rainfall = 1.359(In)
3-hour factor = 1.000 Adjusted rainfall = 1.637(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.470(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 119.61 (CFS)) | |
| 1 | 1.178 | 1.409 |
| 2 | 5.552 | 5.231 |
| 3 | 15.131 | 11.458 |
| 4 | 34.714 | 23.422 |
| 5 | 50.752 | 19.183 |
| 6 | 60.938 | 12.183 |
| 7 | 67.717 | 8.108 |
| 8 | 72.933 | 6.238 |
| 9 | 77.018 | 4.886 |
| 10 | 80.296 | 3.920 |
| 11 | 82.979 | 3.210 |
| 12 | 85.300 | 2.775 |
| 13 | 87.341 | 2.442 |

| | | |
|---|---|---|
| 14 | 89.028 | 2.018 |
| 15 | 90.382 | 1.619 |
| 16 | 91.629 | 1.491 |
| 17 | 92.726 | 1.312 |
| 18 | 93.724 | 1.193 |
| 19 | 94.544 | 0.981 |
| 20 | 95.312 | 0.919 |
| 21 | 95.970 | 0.787 |
| 22 | 96.559 | 0.704 |
| 23 | 97.071 | 0.613 |
| 24 | 97.479 | 0.488 |
| 25 | 97.840 | 0.433 |
| 26 | 98.074 | 0.280 |
| 27 | 98.307 | 0.278 |
| 28 | 98.573 | 0.318 |
| 29 | 98.845 | 0.325 |
| 30 | 99.116 | 0.325 |
| 31 | 99.388 | 0.324 |
| 32 | 99.583 | 0.234 |
| 33 | 99.725 | 0.169 |
| 34 | 99.866 | 0.169 |
| 35 | 100.000 | 0.160 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6450 | 0.6450 |
| 2 | 0.7941 | 0.1491 |
| 3 | 0.8968 | 0.1027 |
| 4 | 0.9777 | 0.0808 |
| 5 | 1.0454 | 0.0677 |
| 6 | 1.1042 | 0.0588 |
| 7 | 1.1564 | 0.0523 |
| 8 | 1.2037 | 0.0473 |
| 9 | 1.2470 | 0.0433 |
| 10 | 1.2870 | 0.0400 |
| 11 | 1.3243 | 0.0373 |
| 12 | 1.3594 | 0.0350 |
| 13 | 1.3779 | 0.0185 |
| 14 | 1.3953 | 0.0174 |
| 15 | 1.4116 | 0.0164 |
| 16 | 1.4271 | 0.0155 |
| 17 | 1.4418 | 0.0147 |
| 18 | 1.4558 | 0.0140 |
| 19 | 1.4692 | 0.0134 |
| 20 | 1.4820 | 0.0128 |
| 21 | 1.4943 | 0.0123 |
| 22 | 1.5061 | 0.0118 |
| 23 | 1.5174 | 0.0114 |
| 24 | 1.5284 | 0.0110 |
| 25 | 1.5390 | 0.0106 |
| 26 | 1.5492 | 0.0102 |
| 27 | 1.5591 | 0.0099 |
| 28 | 1.5687 | 0.0096 |
| 29 | 1.5781 | 0.0093 |
| 30 | 1.5872 | 0.0091 |
| 31 | 1.5960 | 0.0088 |
| 32 | 1.6046 | 0.0086 |
| 33 | 1.6129 | 0.0084 |
| 34 | 1.6211 | 0.0082 |

| | | |
|---|---|---|
| 35 | 1.6291 | 0.0080 |
| 36 | 1.6368 | 0.0078 |
| 37 | 1.6444 | 0.0076 |
| 38 | 1.6518 | 0.0074 |
| 39 | 1.6591 | 0.0073 |
| 40 | 1.6662 | 0.0071 |
| 41 | 1.6732 | 0.0070 |
| 42 | 1.6800 | 0.0068 |
| 43 | 1.6867 | 0.0067 |
| 44 | 1.6932 | 0.0066 |
| 45 | 1.6997 | 0.0064 |
| 46 | 1.7060 | 0.0063 |
| 47 | 1.7122 | 0.0062 |
| 48 | 1.7183 | 0.0061 |
| 49 | 1.7243 | 0.0060 |
| 50 | 1.7301 | 0.0059 |
| 51 | 1.7359 | 0.0058 |
| 52 | 1.7416 | 0.0057 |
| 53 | 1.7472 | 0.0056 |
| 54 | 1.7528 | 0.0055 |
| 55 | 1.7582 | 0.0054 |
| 56 | 1.7635 | 0.0054 |
| 57 | 1.7688 | 0.0053 |
| 58 | 1.7740 | 0.0052 |
| 59 | 1.7791 | 0.0051 |
| 60 | 1.7842 | 0.0051 |
| 61 | 1.7892 | 0.0050 |
| 62 | 1.7941 | 0.0049 |
| 63 | 1.7989 | 0.0049 |
| 64 | 1.8037 | 0.0048 |
| 65 | 1.8085 | 0.0047 |
| 66 | 1.8131 | 0.0047 |
| 67 | 1.8177 | 0.0046 |
| 68 | 1.8223 | 0.0045 |
| 69 | 1.8268 | 0.0045 |
| 70 | 1.8312 | 0.0044 |
| 71 | 1.8356 | 0.0044 |
| 72 | 1.8399 | 0.0043 |
| 73 | 1.8453 | 0.0054 |
| 74 | 1.8507 | 0.0053 |
| 75 | 1.8560 | 0.0053 |
| 76 | 1.8612 | 0.0052 |
| 77 | 1.8664 | 0.0052 |
| 78 | 1.8715 | 0.0051 |
| 79 | 1.8766 | 0.0051 |
| 80 | 1.8816 | 0.0050 |
| 81 | 1.8866 | 0.0050 |
| 82 | 1.8915 | 0.0049 |
| 83 | 1.8964 | 0.0049 |
| 84 | 1.9012 | 0.0048 |
| 85 | 1.9060 | 0.0048 |
| 86 | 1.9107 | 0.0047 |
| 87 | 1.9154 | 0.0047 |
| 88 | 1.9201 | 0.0047 |
| 89 | 1.9247 | 0.0046 |
| 90 | 1.9293 | 0.0046 |
| 91 | 1.9338 | 0.0045 |
| 92 | 1.9383 | 0.0045 |
| 93 | 1.9427 | 0.0045 |

| | | |
|---|---|---|
| 94 | 1.9472 | 0.0044 |
| 95 | 1.9515 | 0.0044 |
| 96 | 1.9559 | 0.0043 |
| 97 | 1.9602 | 0.0043 |
| 98 | 1.9645 | 0.0043 |
| 99 | 1.9687 | 0.0042 |
| 100 | 1.9729 | 0.0042 |
| 101 | 1.9771 | 0.0042 |
| 102 | 1.9812 | 0.0041 |
| 103 | 1.9853 | 0.0041 |
| 104 | 1.9894 | 0.0041 |
| 105 | 1.9935 | 0.0040 |
| 106 | 1.9975 | 0.0040 |
| 107 | 2.0015 | 0.0040 |
| 108 | 2.0054 | 0.0040 |
| 109 | 2.0094 | 0.0039 |
| 110 | 2.0133 | 0.0039 |
| 111 | 2.0171 | 0.0039 |
| 112 | 2.0210 | 0.0038 |
| 113 | 2.0248 | 0.0038 |
| 114 | 2.0286 | 0.0038 |
| 115 | 2.0324 | 0.0038 |
| 116 | 2.0361 | 0.0037 |
| 117 | 2.0398 | 0.0037 |
| 118 | 2.0435 | 0.0037 |
| 119 | 2.0472 | 0.0037 |
| 120 | 2.0508 | 0.0036 |
| 121 | 2.0544 | 0.0036 |
| 122 | 2.0580 | 0.0036 |
| 123 | 2.0616 | 0.0036 |
| 124 | 2.0652 | 0.0035 |
| 125 | 2.0687 | 0.0035 |
| 126 | 2.0722 | 0.0035 |
| 127 | 2.0757 | 0.0035 |
| 128 | 2.0791 | 0.0035 |
| 129 | 2.0826 | 0.0034 |
| 130 | 2.0860 | 0.0034 |
| 131 | 2.0894 | 0.0034 |
| 132 | 2.0928 | 0.0034 |
| 133 | 2.0961 | 0.0034 |
| 134 | 2.0995 | 0.0033 |
| 135 | 2.1028 | 0.0033 |
| 136 | 2.1061 | 0.0033 |
| 137 | 2.1094 | 0.0033 |
| 138 | 2.1126 | 0.0033 |
| 139 | 2.1159 | 0.0032 |
| 140 | 2.1191 | 0.0032 |
| 141 | 2.1223 | 0.0032 |
| 142 | 2.1255 | 0.0032 |
| 143 | 2.1287 | 0.0032 |
| 144 | 2.1318 | 0.0032 |
| 145 | 2.1349 | 0.0031 |
| 146 | 2.1381 | 0.0031 |
| 147 | 2.1412 | 0.0031 |
| 148 | 2.1443 | 0.0031 |
| 149 | 2.1473 | 0.0031 |
| 150 | 2.1504 | 0.0031 |
| 151 | 2.1534 | 0.0030 |
| 152 | 2.1564 | 0.0030 |

| | | |
|---|---|---|
| 153 | 2.1594 | 0.0030 |
| 154 | 2.1624 | 0.0030 |
| 155 | 2.1654 | 0.0030 |
| 156 | 2.1684 | 0.0030 |
| 157 | 2.1713 | 0.0029 |
| 158 | 2.1742 | 0.0029 |
| 159 | 2.1772 | 0.0029 |
| 160 | 2.1801 | 0.0029 |
| 161 | 2.1829 | 0.0029 |
| 162 | 2.1858 | 0.0029 |
| 163 | 2.1887 | 0.0029 |
| 164 | 2.1915 | 0.0028 |
| 165 | 2.1944 | 0.0028 |
| 166 | 2.1972 | 0.0028 |
| 167 | 2.2000 | 0.0028 |
| 168 | 2.2028 | 0.0028 |
| 169 | 2.2055 | 0.0028 |
| 170 | 2.2083 | 0.0028 |
| 171 | 2.2111 | 0.0028 |
| 172 | 2.2138 | 0.0027 |
| 173 | 2.2165 | 0.0027 |
| 174 | 2.2192 | 0.0027 |
| 175 | 2.2220 | 0.0027 |
| 176 | 2.2246 | 0.0027 |
| 177 | 2.2273 | 0.0027 |
| 178 | 2.2300 | 0.0027 |
| 179 | 2.2326 | 0.0027 |
| 180 | 2.2353 | 0.0026 |
| 181 | 2.2379 | 0.0026 |
| 182 | 2.2405 | 0.0026 |
| 183 | 2.2431 | 0.0026 |
| 184 | 2.2457 | 0.0026 |
| 185 | 2.2483 | 0.0026 |
| 186 | 2.2509 | 0.0026 |
| 187 | 2.2535 | 0.0026 |
| 188 | 2.2560 | 0.0026 |
| 189 | 2.2586 | 0.0025 |
| 190 | 2.2611 | 0.0025 |
| 191 | 2.2636 | 0.0025 |
| 192 | 2.2661 | 0.0025 |
| 193 | 2.2686 | 0.0025 |
| 194 | 2.2711 | 0.0025 |
| 195 | 2.2736 | 0.0025 |
| 196 | 2.2761 | 0.0025 |
| 197 | 2.2786 | 0.0025 |
| 198 | 2.2810 | 0.0025 |
| 199 | 2.2834 | 0.0024 |
| 200 | 2.2859 | 0.0024 |
| 201 | 2.2883 | 0.0024 |
| 202 | 2.2907 | 0.0024 |
| 203 | 2.2931 | 0.0024 |
| 204 | 2.2955 | 0.0024 |
| 205 | 2.2979 | 0.0024 |
| 206 | 2.3003 | 0.0024 |
| 207 | 2.3026 | 0.0024 |
| 208 | 2.3050 | 0.0024 |
| 209 | 2.3073 | 0.0023 |
| 210 | 2.3097 | 0.0023 |
| 211 | 2.3120 | 0.0023 |

| | | |
|---|---|---|
| 212 | 2.3143 | 0.0023 |
| 213 | 2.3167 | 0.0023 |
| 214 | 2.3190 | 0.0023 |
| 215 | 2.3213 | 0.0023 |
| 216 | 2.3236 | 0.0023 |
| 217 | 2.3258 | 0.0023 |
| 218 | 2.3281 | 0.0023 |
| 219 | 2.3304 | 0.0023 |
| 220 | 2.3326 | 0.0023 |
| 221 | 2.3349 | 0.0022 |
| 222 | 2.3371 | 0.0022 |
| 223 | 2.3393 | 0.0022 |
| 224 | 2.3416 | 0.0022 |
| 225 | 2.3438 | 0.0022 |
| 226 | 2.3460 | 0.0022 |
| 227 | 2.3482 | 0.0022 |
| 228 | 2.3504 | 0.0022 |
| 229 | 2.3526 | 0.0022 |
| 230 | 2.3548 | 0.0022 |
| 231 | 2.3569 | 0.0022 |
| 232 | 2.3591 | 0.0022 |
| 233 | 2.3612 | 0.0022 |
| 234 | 2.3634 | 0.0021 |
| 235 | 2.3655 | 0.0021 |
| 236 | 2.3677 | 0.0021 |
| 237 | 2.3698 | 0.0021 |
| 238 | 2.3719 | 0.0021 |
| 239 | 2.3740 | 0.0021 |
| 240 | 2.3761 | 0.0021 |
| 241 | 2.3782 | 0.0021 |
| 242 | 2.3803 | 0.0021 |
| 243 | 2.3824 | 0.0021 |
| 244 | 2.3845 | 0.0021 |
| 245 | 2.3866 | 0.0021 |
| 246 | 2.3886 | 0.0021 |
| 247 | 2.3907 | 0.0021 |
| 248 | 2.3927 | 0.0021 |
| 249 | 2.3948 | 0.0020 |
| 250 | 2.3968 | 0.0020 |
| 251 | 2.3989 | 0.0020 |
| 252 | 2.4009 | 0.0020 |
| 253 | 2.4029 | 0.0020 |
| 254 | 2.4049 | 0.0020 |
| 255 | 2.4069 | 0.0020 |
| 256 | 2.4089 | 0.0020 |
| 257 | 2.4109 | 0.0020 |
| 258 | 2.4129 | 0.0020 |
| 259 | 2.4149 | 0.0020 |
| 260 | 2.4169 | 0.0020 |
| 261 | 2.4189 | 0.0020 |
| 262 | 2.4208 | 0.0020 |
| 263 | 2.4228 | 0.0020 |
| 264 | 2.4247 | 0.0020 |
| 265 | 2.4267 | 0.0019 |
| 266 | 2.4286 | 0.0019 |
| 267 | 2.4306 | 0.0019 |
| 268 | 2.4325 | 0.0019 |
| 269 | 2.4344 | 0.0019 |
| 270 | 2.4363 | 0.0019 |

| | | |
|---|---|---|
| 271 | 2.4383 | 0.0019 |
| 272 | 2.4402 | 0.0019 |
| 273 | 2.4421 | 0.0019 |
| 274 | 2.4440 | 0.0019 |
| 275 | 2.4459 | 0.0019 |
| 276 | 2.4477 | 0.0019 |
| 277 | 2.4496 | 0.0019 |
| 278 | 2.4515 | 0.0019 |
| 279 | 2.4534 | 0.0019 |
| 280 | 2.4552 | 0.0019 |
| 281 | 2.4571 | 0.0019 |
| 282 | 2.4589 | 0.0019 |
| 283 | 2.4608 | 0.0018 |
| 284 | 2.4626 | 0.0018 |
| 285 | 2.4645 | 0.0018 |
| 286 | 2.4663 | 0.0018 |
| 287 | 2.4681 | 0.0018 |
| 288 | 2.4700 | 0.0018 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0018 | 0.0005 | 0.0013 |
| 2 | 0.0018 | 0.0005 | 0.0013 |
| 3 | 0.0018 | 0.0005 | 0.0013 |
| 4 | 0.0018 | 0.0005 | 0.0013 |
| 5 | 0.0019 | 0.0005 | 0.0013 |
| 6 | 0.0019 | 0.0005 | 0.0013 |
| 7 | 0.0019 | 0.0005 | 0.0014 |
| 8 | 0.0019 | 0.0005 | 0.0014 |
| 9 | 0.0019 | 0.0005 | 0.0014 |
| 10 | 0.0019 | 0.0005 | 0.0014 |
| 11 | 0.0019 | 0.0005 | 0.0014 |
| 12 | 0.0019 | 0.0005 | 0.0014 |
| 13 | 0.0019 | 0.0005 | 0.0014 |
| 14 | 0.0019 | 0.0005 | 0.0014 |
| 15 | 0.0019 | 0.0005 | 0.0014 |
| 16 | 0.0019 | 0.0005 | 0.0014 |
| 17 | 0.0020 | 0.0005 | 0.0014 |
| 18 | 0.0020 | 0.0005 | 0.0014 |
| 19 | 0.0020 | 0.0005 | 0.0014 |
| 20 | 0.0020 | 0.0005 | 0.0014 |
| 21 | 0.0020 | 0.0006 | 0.0014 |
| 22 | 0.0020 | 0.0006 | 0.0014 |
| 23 | 0.0020 | 0.0006 | 0.0015 |
| 24 | 0.0020 | 0.0006 | 0.0015 |
| 25 | 0.0020 | 0.0006 | 0.0015 |
| 26 | 0.0020 | 0.0006 | 0.0015 |
| 27 | 0.0020 | 0.0006 | 0.0015 |
| 28 | 0.0021 | 0.0006 | 0.0015 |
| 29 | 0.0021 | 0.0006 | 0.0015 |
| 30 | 0.0021 | 0.0006 | 0.0015 |
| 31 | 0.0021 | 0.0006 | 0.0015 |
| 32 | 0.0021 | 0.0006 | 0.0015 |
| 33 | 0.0021 | 0.0006 | 0.0015 |
| 34 | 0.0021 | 0.0006 | 0.0015 |
| 35 | 0.0021 | 0.0006 | 0.0015 |
| 36 | 0.0021 | 0.0006 | 0.0015 |

| | | | |
|---|---|---|---|
| 37 | 0.0021 | 0.0006 | 0.0016 |
| 38 | 0.0022 | 0.0006 | 0.0016 |
| 39 | 0.0022 | 0.0006 | 0.0016 |
| 40 | 0.0022 | 0.0006 | 0.0016 |
| 41 | 0.0022 | 0.0006 | 0.0016 |
| 42 | 0.0022 | 0.0006 | 0.0016 |
| 43 | 0.0022 | 0.0006 | 0.0016 |
| 44 | 0.0022 | 0.0006 | 0.0016 |
| 45 | 0.0022 | 0.0006 | 0.0016 |
| 46 | 0.0022 | 0.0006 | 0.0016 |
| 47 | 0.0023 | 0.0006 | 0.0016 |
| 48 | 0.0023 | 0.0006 | 0.0016 |
| 49 | 0.0023 | 0.0006 | 0.0017 |
| 50 | 0.0023 | 0.0006 | 0.0017 |
| 51 | 0.0023 | 0.0006 | 0.0017 |
| 52 | 0.0023 | 0.0006 | 0.0017 |
| 53 | 0.0023 | 0.0006 | 0.0017 |
| 54 | 0.0023 | 0.0007 | 0.0017 |
| 55 | 0.0024 | 0.0007 | 0.0017 |
| 56 | 0.0024 | 0.0007 | 0.0017 |
| 57 | 0.0024 | 0.0007 | 0.0017 |
| 58 | 0.0024 | 0.0007 | 0.0017 |
| 59 | 0.0024 | 0.0007 | 0.0018 |
| 60 | 0.0024 | 0.0007 | 0.0018 |
| 61 | 0.0025 | 0.0007 | 0.0018 |
| 62 | 0.0025 | 0.0007 | 0.0018 |
| 63 | 0.0025 | 0.0007 | 0.0018 |
| 64 | 0.0025 | 0.0007 | 0.0018 |
| 65 | 0.0025 | 0.0007 | 0.0018 |
| 66 | 0.0025 | 0.0007 | 0.0018 |
| 67 | 0.0025 | 0.0007 | 0.0018 |
| 68 | 0.0026 | 0.0007 | 0.0018 |
| 69 | 0.0026 | 0.0007 | 0.0019 |
| 70 | 0.0026 | 0.0007 | 0.0019 |
| 71 | 0.0026 | 0.0007 | 0.0019 |
| 72 | 0.0026 | 0.0007 | 0.0019 |
| 73 | 0.0026 | 0.0007 | 0.0019 |
| 74 | 0.0027 | 0.0007 | 0.0019 |
| 75 | 0.0027 | 0.0007 | 0.0019 |
| 76 | 0.0027 | 0.0007 | 0.0019 |
| 77 | 0.0027 | 0.0008 | 0.0020 |
| 78 | 0.0027 | 0.0008 | 0.0020 |
| 79 | 0.0028 | 0.0008 | 0.0020 |
| 80 | 0.0028 | 0.0008 | 0.0020 |
| 81 | 0.0028 | 0.0008 | 0.0020 |
| 82 | 0.0028 | 0.0008 | 0.0020 |
| 83 | 0.0028 | 0.0008 | 0.0020 |
| 84 | 0.0028 | 0.0008 | 0.0021 |
| 85 | 0.0029 | 0.0008 | 0.0021 |
| 86 | 0.0029 | 0.0008 | 0.0021 |
| 87 | 0.0029 | 0.0008 | 0.0021 |
| 88 | 0.0029 | 0.0008 | 0.0021 |
| 89 | 0.0030 | 0.0008 | 0.0021 |
| 90 | 0.0030 | 0.0008 | 0.0021 |
| 91 | 0.0030 | 0.0008 | 0.0022 |
| 92 | 0.0030 | 0.0008 | 0.0022 |
| 93 | 0.0031 | 0.0008 | 0.0022 |
| 94 | 0.0031 | 0.0009 | 0.0022 |
| 95 | 0.0031 | 0.0009 | 0.0022 |

| | | | |
|---|---|---|---|
| 96 | 0.0031 | 0.0009 | 0.0023 |
| 97 | 0.0032 | 0.0009 | 0.0023 |
| 98 | 0.0032 | 0.0009 | 0.0023 |
| 99 | 0.0032 | 0.0009 | 0.0023 |
| 100 | 0.0032 | 0.0009 | 0.0023 |
| 101 | 0.0033 | 0.0009 | 0.0024 |
| 102 | 0.0033 | 0.0009 | 0.0024 |
| 103 | 0.0033 | 0.0009 | 0.0024 |
| 104 | 0.0033 | 0.0009 | 0.0024 |
| 105 | 0.0034 | 0.0009 | 0.0024 |
| 106 | 0.0034 | 0.0009 | 0.0025 |
| 107 | 0.0034 | 0.0010 | 0.0025 |
| 108 | 0.0035 | 0.0010 | 0.0025 |
| 109 | 0.0035 | 0.0010 | 0.0025 |
| 110 | 0.0035 | 0.0010 | 0.0025 |
| 111 | 0.0036 | 0.0010 | 0.0026 |
| 112 | 0.0036 | 0.0010 | 0.0026 |
| 113 | 0.0036 | 0.0010 | 0.0026 |
| 114 | 0.0037 | 0.0010 | 0.0026 |
| 115 | 0.0037 | 0.0010 | 0.0027 |
| 116 | 0.0037 | 0.0010 | 0.0027 |
| 117 | 0.0038 | 0.0011 | 0.0027 |
| 118 | 0.0038 | 0.0011 | 0.0028 |
| 119 | 0.0039 | 0.0011 | 0.0028 |
| 120 | 0.0039 | 0.0011 | 0.0028 |
| 121 | 0.0040 | 0.0011 | 0.0029 |
| 122 | 0.0040 | 0.0011 | 0.0029 |
| 123 | 0.0040 | 0.0011 | 0.0029 |
| 124 | 0.0041 | 0.0011 | 0.0029 |
| 125 | 0.0041 | 0.0011 | 0.0030 |
| 126 | 0.0042 | 0.0012 | 0.0030 |
| 127 | 0.0042 | 0.0012 | 0.0031 |
| 128 | 0.0043 | 0.0012 | 0.0031 |
| 129 | 0.0043 | 0.0012 | 0.0031 |
| 130 | 0.0044 | 0.0012 | 0.0032 |
| 131 | 0.0045 | 0.0012 | 0.0032 |
| 132 | 0.0045 | 0.0012 | 0.0032 |
| 133 | 0.0046 | 0.0013 | 0.0033 |
| 134 | 0.0046 | 0.0013 | 0.0033 |
| 135 | 0.0047 | 0.0013 | 0.0034 |
| 136 | 0.0047 | 0.0013 | 0.0034 |
| 137 | 0.0048 | 0.0013 | 0.0035 |
| 138 | 0.0049 | 0.0014 | 0.0035 |
| 139 | 0.0050 | 0.0014 | 0.0036 |
| 140 | 0.0050 | 0.0014 | 0.0036 |
| 141 | 0.0051 | 0.0014 | 0.0037 |
| 142 | 0.0052 | 0.0014 | 0.0037 |
| 143 | 0.0053 | 0.0015 | 0.0038 |
| 144 | 0.0053 | 0.0015 | 0.0039 |
| 145 | 0.0043 | 0.0012 | 0.0031 |
| 146 | 0.0044 | 0.0012 | 0.0032 |
| 147 | 0.0045 | 0.0012 | 0.0032 |
| 148 | 0.0045 | 0.0013 | 0.0033 |
| 149 | 0.0047 | 0.0013 | 0.0034 |
| 150 | 0.0047 | 0.0013 | 0.0034 |
| 151 | 0.0049 | 0.0013 | 0.0035 |
| 152 | 0.0049 | 0.0014 | 0.0036 |
| 153 | 0.0051 | 0.0014 | 0.0037 |
| 154 | 0.0051 | 0.0014 | 0.0037 |

| | | | |
|---|---|---|---|
| 155 | 0.0053 | 0.0015 | 0.0038 |
| 156 | 0.0054 | 0.0015 | 0.0039 |
| 157 | 0.0055 | 0.0015 | 0.0040 |
| 158 | 0.0056 | 0.0016 | 0.0041 |
| 159 | 0.0058 | 0.0016 | 0.0042 |
| 160 | 0.0059 | 0.0016 | 0.0043 |
| 161 | 0.0061 | 0.0017 | 0.0044 |
| 162 | 0.0062 | 0.0017 | 0.0045 |
| 163 | 0.0064 | 0.0018 | 0.0046 |
| 164 | 0.0066 | 0.0018 | 0.0047 |
| 165 | 0.0068 | 0.0019 | 0.0049 |
| 166 | 0.0070 | 0.0019 | 0.0050 |
| 167 | 0.0073 | 0.0020 | 0.0052 |
| 168 | 0.0074 | 0.0021 | 0.0054 |
| 169 | 0.0078 | 0.0022 | 0.0056 |
| 170 | 0.0080 | 0.0022 | 0.0058 |
| 171 | 0.0084 | 0.0023 | 0.0060 |
| 172 | 0.0086 | 0.0024 | 0.0062 |
| 173 | 0.0091 | 0.0025 | 0.0066 |
| 174 | 0.0093 | 0.0026 | 0.0067 |
| 175 | 0.0099 | 0.0028 | 0.0072 |
| 176 | 0.0102 | 0.0028 | 0.0074 |
| 177 | 0.0110 | 0.0030 | 0.0079 |
| 178 | 0.0114 | 0.0032 | 0.0082 |
| 179 | 0.0123 | 0.0034 | 0.0089 |
| 180 | 0.0128 | 0.0036 | 0.0092 |
| 181 | 0.0140 | 0.0039 | 0.0101 |
| 182 | 0.0147 | 0.0041 | 0.0106 |
| 183 | 0.0164 | 0.0045 | 0.0118 |
| 184 | 0.0174 | 0.0048 | 0.0126 |
| 185 | 0.0350 | 0.0097 | 0.0253 |
| 186 | 0.0373 | 0.0104 | 0.0270 |
| 187 | 0.0433 | 0.0105 | 0.0328 |
| 188 | 0.0473 | 0.0105 | 0.0368 |
| 189 | 0.0588 | 0.0105 | 0.0483 |
| 190 | 0.0677 | 0.0105 | 0.0572 |
| 191 | 0.1027 | 0.0105 | 0.0922 |
| 192 | 0.1491 | 0.0105 | 0.1386 |
| 193 | 0.6450 | 0.0105 | 0.6345 |
| 194 | 0.0808 | 0.0105 | 0.0703 |
| 195 | 0.0523 | 0.0105 | 0.0418 |
| 196 | 0.0400 | 0.0105 | 0.0295 |
| 197 | 0.0185 | 0.0051 | 0.0134 |
| 198 | 0.0155 | 0.0043 | 0.0112 |
| 199 | 0.0134 | 0.0037 | 0.0097 |
| 200 | 0.0118 | 0.0033 | 0.0085 |
| 201 | 0.0106 | 0.0029 | 0.0076 |
| 202 | 0.0096 | 0.0027 | 0.0069 |
| 203 | 0.0088 | 0.0024 | 0.0064 |
| 204 | 0.0082 | 0.0023 | 0.0059 |
| 205 | 0.0076 | 0.0021 | 0.0055 |
| 206 | 0.0071 | 0.0020 | 0.0051 |
| 207 | 0.0067 | 0.0019 | 0.0048 |
| 208 | 0.0063 | 0.0018 | 0.0046 |
| 209 | 0.0060 | 0.0017 | 0.0043 |
| 210 | 0.0057 | 0.0016 | 0.0041 |
| 211 | 0.0054 | 0.0015 | 0.0039 |
| 212 | 0.0052 | 0.0014 | 0.0038 |
| 213 | 0.0050 | 0.0014 | 0.0036 |

| | | | |
|---|---|---|---|
| 214 | 0.0048 | 0.0013 | 0.0035 |
| 215 | 0.0046 | 0.0013 | 0.0033 |
| 216 | 0.0044 | 0.0012 | 0.0032 |
| 217 | 0.0054 | 0.0015 | 0.0039 |
| 218 | 0.0052 | 0.0015 | 0.0038 |
| 219 | 0.0051 | 0.0014 | 0.0037 |
| 220 | 0.0049 | 0.0014 | 0.0036 |
| 221 | 0.0048 | 0.0013 | 0.0035 |
| 222 | 0.0047 | 0.0013 | 0.0034 |
| 223 | 0.0045 | 0.0013 | 0.0033 |
| 224 | 0.0044 | 0.0012 | 0.0032 |
| 225 | 0.0043 | 0.0012 | 0.0031 |
| 226 | 0.0042 | 0.0012 | 0.0030 |
| 227 | 0.0041 | 0.0011 | 0.0030 |
| 228 | 0.0040 | 0.0011 | 0.0029 |
| 229 | 0.0039 | 0.0011 | 0.0028 |
| 230 | 0.0038 | 0.0011 | 0.0028 |
| 231 | 0.0038 | 0.0010 | 0.0027 |
| 232 | 0.0037 | 0.0010 | 0.0027 |
| 233 | 0.0036 | 0.0010 | 0.0026 |
| 234 | 0.0035 | 0.0010 | 0.0026 |
| 235 | 0.0035 | 0.0010 | 0.0025 |
| 236 | 0.0034 | 0.0009 | 0.0025 |
| 237 | 0.0034 | 0.0009 | 0.0024 |
| 238 | 0.0033 | 0.0009 | 0.0024 |
| 239 | 0.0032 | 0.0009 | 0.0023 |
| 240 | 0.0032 | 0.0009 | 0.0023 |
| 241 | 0.0031 | 0.0009 | 0.0023 |
| 242 | 0.0031 | 0.0009 | 0.0022 |
| 243 | 0.0030 | 0.0008 | 0.0022 |
| 244 | 0.0030 | 0.0008 | 0.0022 |
| 245 | 0.0029 | 0.0008 | 0.0021 |
| 246 | 0.0029 | 0.0008 | 0.0021 |
| 247 | 0.0029 | 0.0008 | 0.0021 |
| 248 | 0.0028 | 0.0008 | 0.0020 |
| 249 | 0.0028 | 0.0008 | 0.0020 |
| 250 | 0.0027 | 0.0008 | 0.0020 |
| 251 | 0.0027 | 0.0008 | 0.0020 |
| 252 | 0.0027 | 0.0007 | 0.0019 |
| 253 | 0.0026 | 0.0007 | 0.0019 |
| 254 | 0.0026 | 0.0007 | 0.0019 |
| 255 | 0.0026 | 0.0007 | 0.0019 |
| 256 | 0.0025 | 0.0007 | 0.0018 |
| 257 | 0.0025 | 0.0007 | 0.0018 |
| 258 | 0.0025 | 0.0007 | 0.0018 |
| 259 | 0.0024 | 0.0007 | 0.0018 |
| 260 | 0.0024 | 0.0007 | 0.0017 |
| 261 | 0.0024 | 0.0007 | 0.0017 |
| 262 | 0.0024 | 0.0007 | 0.0017 |
| 263 | 0.0023 | 0.0006 | 0.0017 |
| 264 | 0.0023 | 0.0006 | 0.0017 |
| 265 | 0.0023 | 0.0006 | 0.0016 |
| 266 | 0.0023 | 0.0006 | 0.0016 |
| 267 | 0.0022 | 0.0006 | 0.0016 |
| 268 | 0.0022 | 0.0006 | 0.0016 |
| 269 | 0.0022 | 0.0006 | 0.0016 |
| 270 | 0.0022 | 0.0006 | 0.0016 |
| 271 | 0.0021 | 0.0006 | 0.0015 |
| 272 | 0.0021 | 0.0006 | 0.0015 |

| | | | |
|---|---|---|---|
| 273 | 0.0021 | 0.0006 | 0.0015 |
| 274 | 0.0021 | 0.0006 | 0.0015 |
| 275 | 0.0021 | 0.0006 | 0.0015 |
| 276 | 0.0020 | 0.0006 | 0.0015 |
| 277 | 0.0020 | 0.0006 | 0.0015 |
| 278 | 0.0020 | 0.0006 | 0.0014 |
| 279 | 0.0020 | 0.0006 | 0.0014 |
| 280 | 0.0020 | 0.0005 | 0.0014 |
| 281 | 0.0019 | 0.0005 | 0.0014 |
| 282 | 0.0019 | 0.0005 | 0.0014 |
| 283 | 0.0019 | 0.0005 | 0.0014 |
| 284 | 0.0019 | 0.0005 | 0.0014 |
| 285 | 0.0019 | 0.0005 | 0.0014 |
| 286 | 0.0019 | 0.0005 | 0.0013 |
| 287 | 0.0018 | 0.0005 | 0.0013 |
| 288 | 0.0018 | 0.0005 | 0.0013 |

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Total soil rain loss = 0.43(In)
Total effective rainfall = 2.04(In)
Peak flow rate in flood hydrograph = 21.10(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 7.5 | 15.0 | 22.5 | 30.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.01 | Q | | | | |
| 0+15 | 0.0002 | 0.02 | Q | | | | |
| 0+20 | 0.0006 | 0.05 | Q | | | | |
| 0+25 | 0.0012 | 0.08 | Q | | | | |
| 0+30 | 0.0018 | 0.10 | Q | | | | |
| 0+35 | 0.0026 | 0.11 | Q | | | | |
| 0+40 | 0.0034 | 0.12 | Q | | | | |
| 0+45 | 0.0042 | 0.12 | Q | | | | |
| 0+50 | 0.0051 | 0.13 | Q | | | | |
| 0+55 | 0.0060 | 0.13 | Q | | | | |
| 1+ 0 | 0.0070 | 0.14 | Q | | | | |
| 1+ 5 | 0.0080 | 0.14 | Q | | | | |
| 1+10 | 0.0090 | 0.15 | Q | | | | |
| 1+15 | 0.0100 | 0.15 | Q | | | | |
| 1+20 | 0.0110 | 0.15 | Q | | | | |
| 1+25 | 0.0121 | 0.15 | Q | | | | |
| 1+30 | 0.0131 | 0.16 | Q | | | | |
| 1+35 | 0.0142 | 0.16 | Q | | | | |
| 1+40 | 0.0153 | 0.16 | Q | | | | |
| 1+45 | 0.0164 | 0.16 | Q | | | | |
| 1+50 | 0.0175 | 0.16 | Q | | | | |
| 1+55 | 0.0187 | 0.16 | Q | | | | |
| 2+ 0 | 0.0198 | 0.17 | Q | | | | |
| 2+ 5 | 0.0210 | 0.17 | Q | | | | |
| 2+10 | 0.0221 | 0.17 | Q | | | | |
| 2+15 | 0.0233 | 0.17 | Q | | | | |
| 2+20 | 0.0244 | 0.17 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+25 | 0.0256 | 0.17 | Q | | | | |
| 2+30 | 0.0268 | 0.17 | Q | | | | |
| 2+35 | 0.0280 | 0.17 | Q | | | | |
| 2+40 | 0.0292 | 0.17 | Q | | | | |
| 2+45 | 0.0304 | 0.18 | Q | | | | |
| 2+50 | 0.0316 | 0.18 | Q | | | | |
| 2+55 | 0.0329 | 0.18 | Q | | | | |
| 3+ 0 | 0.0341 | 0.18 | Q | | | | |
| 3+ 5 | 0.0353 | 0.18 | Q | | | | |
| 3+10 | 0.0366 | 0.18 | Q | | | | |
| 3+15 | 0.0378 | 0.18 | Q | | | | |
| 3+20 | 0.0391 | 0.18 | Q | | | | |
| 3+25 | 0.0404 | 0.18 | Q | | | | |
| 3+30 | 0.0416 | 0.18 | Q | | | | |
| 3+35 | 0.0429 | 0.19 | QV | | | | |
| 3+40 | 0.0442 | 0.19 | QV | | | | |
| 3+45 | 0.0455 | 0.19 | QV | | | | |
| 3+50 | 0.0468 | 0.19 | QV | | | | |
| 3+55 | 0.0481 | 0.19 | QV | | | | |
| 4+ 0 | 0.0494 | 0.19 | QV | | | | |
| 4+ 5 | 0.0507 | 0.19 | QV | | | | |
| 4+10 | 0.0520 | 0.19 | QV | | | | |
| 4+15 | 0.0533 | 0.19 | QV | | | | |
| 4+20 | 0.0547 | 0.19 | QV | | | | |
| 4+25 | 0.0560 | 0.20 | QV | | | | |
| 4+30 | 0.0574 | 0.20 | QV | | | | |
| 4+35 | 0.0587 | 0.20 | QV | | | | |
| 4+40 | 0.0601 | 0.20 | QV | | | | |
| 4+45 | 0.0615 | 0.20 | QV | | | | |
| 4+50 | 0.0629 | 0.20 | QV | | | | |
| 4+55 | 0.0642 | 0.20 | QV | | | | |
| 5+ 0 | 0.0656 | 0.20 | QV | | | | |
| 5+ 5 | 0.0670 | 0.20 | QV | | | | |
| 5+10 | 0.0685 | 0.21 | QV | | | | |
| 5+15 | 0.0699 | 0.21 | QV | | | | |
| 5+20 | 0.0713 | 0.21 | QV | | | | |
| 5+25 | 0.0727 | 0.21 | QV | | | | |
| 5+30 | 0.0742 | 0.21 | QV | | | | |
| 5+35 | 0.0756 | 0.21 | QV | | | | |
| 5+40 | 0.0771 | 0.21 | QV | | | | |
| 5+45 | 0.0786 | 0.21 | QV | | | | |
| 5+50 | 0.0801 | 0.22 | QV | | | | |
| 5+55 | 0.0816 | 0.22 | QV | | | | |
| 6+ 0 | 0.0831 | 0.22 | QV | | | | |
| 6+ 5 | 0.0846 | 0.22 | Q V | | | | |
| 6+10 | 0.0861 | 0.22 | Q V | | | | |
| 6+15 | 0.0876 | 0.22 | Q V | | | | |
| 6+20 | 0.0891 | 0.22 | Q V | | | | |
| 6+25 | 0.0907 | 0.22 | Q V | | | | |
| 6+30 | 0.0923 | 0.23 | Q V | | | | |
| 6+35 | 0.0938 | 0.23 | Q V | | | | |
| 6+40 | 0.0954 | 0.23 | Q V | | | | |
| 6+45 | 0.0970 | 0.23 | Q V | | | | |
| 6+50 | 0.0986 | 0.23 | Q V | | | | |
| 6+55 | 0.1002 | 0.23 | Q V | | | | |
| 7+ 0 | 0.1018 | 0.24 | Q V | | | | |
| 7+ 5 | 0.1035 | 0.24 | Q V | | | | |
| 7+10 | 0.1051 | 0.24 | Q V | | | | |
| 7+15 | 0.1068 | 0.24 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7+20 | 0.1084 | 0.24 | Q V | \| | \| | \| | \| |
| 7+25 | 0.1101 | 0.24 | Q V | \| | \| | \| | \| |
| 7+30 | 0.1118 | 0.25 | Q V | \| | \| | \| | \| |
| 7+35 | 0.1135 | 0.25 | Q V | \| | \| | \| | \| |
| 7+40 | 0.1152 | 0.25 | Q V | \| | \| | \| | \| |
| 7+45 | 0.1169 | 0.25 | Q V | \| | \| | \| | \| |
| 7+50 | 0.1187 | 0.25 | Q V | \| | \| | \| | \| |
| 7+55 | 0.1204 | 0.25 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.1222 | 0.26 | Q V | \| | \| | \| | \| |
| 8+ 5 | 0.1240 | 0.26 | Q V | \| | \| | \| | \| |
| 8+10 | 0.1258 | 0.26 | Q V | \| | \| | \| | \| |
| 8+15 | 0.1276 | 0.26 | Q V | \| | \| | \| | \| |
| 8+20 | 0.1294 | 0.27 | Q V | \| | \| | \| | \| |
| 8+25 | 0.1313 | 0.27 | Q V | \| | \| | \| | \| |
| 8+30 | 0.1331 | 0.27 | Q V | \| | \| | \| | \| |
| 8+35 | 0.1350 | 0.27 | Q V | \| | \| | \| | \| |
| 8+40 | 0.1369 | 0.27 | Q V | \| | \| | \| | \| |
| 8+45 | 0.1388 | 0.28 | Q V | \| | \| | \| | \| |
| 8+50 | 0.1407 | 0.28 | Q V | \| | \| | \| | \| |
| 8+55 | 0.1426 | 0.28 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.1446 | 0.28 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.1465 | 0.29 | Q V | \| | \| | \| | \| |
| 9+10 | 0.1485 | 0.29 | Q V | \| | \| | \| | \| |
| 9+15 | 0.1505 | 0.29 | Q V | \| | \| | \| | \| |
| 9+20 | 0.1526 | 0.29 | Q V | \| | \| | \| | \| |
| 9+25 | 0.1546 | 0.30 | Q V | \| | \| | \| | \| |
| 9+30 | 0.1567 | 0.30 | Q V | \| | \| | \| | \| |
| 9+35 | 0.1587 | 0.30 | Q V | \| | \| | \| | \| |
| 9+40 | 0.1608 | 0.30 | Q V | \| | \| | \| | \| |
| 9+45 | 0.1629 | 0.31 | Q V | \| | \| | \| | \| |
| 9+50 | 0.1651 | 0.31 | Q V | \| | \| | \| | \| |
| 9+55 | 0.1672 | 0.31 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.1694 | 0.32 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.1716 | 0.32 | Q V | \| | \| | \| | \| |
| 10+10 | 0.1739 | 0.32 | Q V | \| | \| | \| | \| |
| 10+15 | 0.1761 | 0.33 | Q V | \| | \| | \| | \| |
| 10+20 | 0.1784 | 0.33 | Q V | \| | \| | \| | \| |
| 10+25 | 0.1807 | 0.33 | Q V | \| | \| | \| | \| |
| 10+30 | 0.1830 | 0.34 | Q V | \| | \| | \| | \| |
| 10+35 | 0.1853 | 0.34 | Q V | \| | \| | \| | \| |
| 10+40 | 0.1877 | 0.34 | Q V | \| | \| | \| | \| |
| 10+45 | 0.1901 | 0.35 | Q V | \| | \| | \| | \| |
| 10+50 | 0.1925 | 0.35 | Q V | \| | \| | \| | \| |
| 10+55 | 0.1950 | 0.36 | Q V | \| | \| | \| | \| |
| 11+ 0 | 0.1975 | 0.36 | Q V | \| | \| | \| | \| |
| 11+ 5 | 0.2000 | 0.37 | Q V | \| | \| | \| | \| |
| 11+10 | 0.2025 | 0.37 | Q V | \| | \| | \| | \| |
| 11+15 | 0.2051 | 0.37 | Q V | \| | \| | \| | \| |
| 11+20 | 0.2077 | 0.38 | Q V | \| | \| | \| | \| |
| 11+25 | 0.2104 | 0.38 | Q V | \| | \| | \| | \| |
| 11+30 | 0.2130 | 0.39 | Q V | \| | \| | \| | \| |
| 11+35 | 0.2157 | 0.39 | Q V | \| | \| | \| | \| |
| 11+40 | 0.2185 | 0.40 | Q V | \| | \| | \| | \| |
| 11+45 | 0.2213 | 0.40 | Q V | \| | \| | \| | \| |
| 11+50 | 0.2241 | 0.41 | Q V | \| | \| | \| | \| |
| 11+55 | 0.2270 | 0.42 | Q V | \| | \| | \| | \| |
| 12+ 0 | 0.2299 | 0.42 | Q V | \| | \| | \| | \| |
| 12+ 5 | 0.2328 | 0.43 | Q V | \| | \| | \| | \| |
| 12+10 | 0.2358 | 0.43 | Q V | \| | \| | \| | \| |

```
12+15       0.2387      0.43  Q    V    |          |          |          |
12+20       0.2416      0.41  Q    V    |          |          |          |
12+25       0.2443      0.41  Q    V    |          |          |          |
12+30       0.2471      0.40  Q    V    |          |          |          |
12+35       0.2499      0.40  Q    V    |          |          |          |
12+40       0.2527      0.40  Q     V   |          |          |          |
12+45       0.2555      0.41  Q     V   |          |          |          |
12+50       0.2583      0.41  Q     V   |          |          |          |
12+55       0.2612      0.42  Q     V   |          |          |          |
13+ 0       0.2641      0.42  Q     V   |          |          |          |
13+ 5       0.2671      0.43  Q     V   |          |          |          |
13+10       0.2701      0.44  Q     V   |          |          |          |
13+15       0.2731      0.44  Q     V   |          |          |          |
13+20       0.2762      0.45  Q     V   |          |          |          |
13+25       0.2794      0.46  Q     V   |          |          |          |
13+30       0.2827      0.47  Q     V   |          |          |          |
13+35       0.2860      0.48  Q     V   |          |          |          |
13+40       0.2894      0.49  Q     V   |          |          |          |
13+45       0.2928      0.50  Q     V   |          |          |          |
13+50       0.2964      0.52  Q      V  |          |          |          |
13+55       0.3000      0.53  Q      V  |          |          |          |
14+ 0       0.3038      0.54  Q      V  |          |          |          |
14+ 5       0.3076      0.56  Q      V  |          |          |          |
14+10       0.3116      0.58  Q      V  |          |          |          |
14+15       0.3157      0.59  Q      V  |          |          |          |
14+20       0.3199      0.61  Q      V  |          |          |          |
14+25       0.3242      0.63  Q      V  |          |          |          |
14+30       0.3287      0.65  Q      V  |          |          |          |
14+35       0.3334      0.68  Q      V  |          |          |          |
14+40       0.3382      0.70  Q       V |          |          |          |
14+45       0.3433      0.73  Q       V |          |          |          |
14+50       0.3485      0.76  |Q      V |          |          |          |
14+55       0.3540      0.79  |Q      V |          |          |          |
15+ 0       0.3597      0.83  |Q      V |          |          |          |
15+ 5       0.3657      0.87  |Q      V |          |          |          |
15+10       0.3721      0.92  |Q      V |          |          |          |
15+15       0.3788      0.97  |Q       V|          |          |          |
15+20       0.3859      1.03  |Q       V|          |          |          |
15+25       0.3936      1.12  |Q       V|          |          |          |
15+30       0.4023      1.26  |Q       V|          |          |          |
15+35       0.4126      1.49  |Q       V|          |          |          |
15+40       0.4256      1.89  | Q       V          |          |          |
15+45       0.4415      2.32  |  Q      V          |          |          |
15+50       0.4607      2.78  |  Q      V          |          |          |
15+55       0.4839      3.36  |   Q     |V         |          |          |
16+ 0       0.5131      4.24  |    Q    | V        |          |          |
16+ 5       0.5558      6.20  |       Q |  V       |          |          |
16+10       0.6232      9.80  |         |  QV      |          |          |
16+15       0.7235     14.56  |         |      V Q |          |          |
16+20       0.8688     21.10  |         |         V|        Q |          |
16+25       0.9930     18.02  |         |          |  VQ      |          |
16+30       1.0832     13.09  |         |      Q   |    V     |          |
16+35       1.1506      9.80  |         |  Q       |      V   |          |
16+40       1.2043      7.79  |         Q          |       V  |          |
16+45       1.2478      6.32  |       Q  |         |        V |          |
16+50       1.2841      5.26  |      Q   |         |         V|          |
16+55       1.3149      4.48  |    Q     |         |          |V         |
17+ 0       1.3420      3.93  |    Q     |         |          |V         |
17+ 5       1.3660      3.48  |   Q      |         |          | V        |
```

```
17+10       1.3867      3.02  |   Q     |         |         |  V      |
17+15       1.4047      2.61  |  Q      |         |         |  V      |
17+20       1.4212      2.38  |  Q      |         |         |  V      |
17+25       1.4360      2.15  | Q       |         |         |   V     |
17+30       1.4495      1.96  | Q       |         |         |   V     |
17+35       1.4614      1.74  | Q       |         |         |   V     |
17+40       1.4725      1.60  | Q       |         |         |    V    |
17+45       1.4824      1.45  |Q        |         |         |    V    |
17+50       1.4915      1.32  |Q        |         |         |    V    |
17+55       1.4997      1.20  |Q        |         |         |    V    |
18+ 0       1.5070      1.06  |Q        |         |         |    V    |
18+ 5       1.5137      0.97  |Q        |         |         |     V   |
18+10       1.5195      0.85  |Q        |         |         |     V   |
18+15       1.5252      0.82  |Q        |         |         |     V   |
18+20       1.5309      0.83  |Q        |         |         |     V   |
18+25       1.5366      0.82  |Q        |         |         |     V   |
18+30       1.5421      0.80  |Q        |         |         |     V   |
18+35       1.5473      0.77  |Q        |         |         |     V   |
18+40       1.5521      0.68  Q         |         |         |      V  |
18+45       1.5563      0.62  Q         |         |         |      V  |
18+50       1.5604      0.59  Q         |         |         |      V  |
18+55       1.5641      0.55  Q         |         |         |      V  |
19+ 0       1.5671      0.43  Q         |         |         |      V  |
19+ 5       1.5699      0.41  Q         |         |         |      V  |
19+10       1.5727      0.40  Q         |         |         |      V  |
19+15       1.5753      0.38  Q         |         |         |      V  |
19+20       1.5779      0.37  Q         |         |         |      V  |
19+25       1.5804      0.36  Q         |         |         |      V  |
19+30       1.5828      0.36  Q         |         |         |      V  |
19+35       1.5852      0.35  Q         |         |         |      V  |
19+40       1.5876      0.34  Q         |         |         |      V  |
19+45       1.5899      0.33  Q         |         |         |      V  |
19+50       1.5921      0.33  Q         |         |         |      V  |
19+55       1.5943      0.32  Q         |         |         |       V |
20+ 0       1.5965      0.31  Q         |         |         |       V |
20+ 5       1.5986      0.31  Q         |         |         |       V |
20+10       1.6007      0.30  Q         |         |         |       V |
20+15       1.6027      0.30  Q         |         |         |       V |
20+20       1.6047      0.29  Q         |         |         |       V |
20+25       1.6067      0.29  Q         |         |         |       V |
20+30       1.6087      0.28  Q         |         |         |       V |
20+35       1.6106      0.28  Q         |         |         |       V |
20+40       1.6124      0.27  Q         |         |         |       V |
20+45       1.6143      0.27  Q         |         |         |       V |
20+50       1.6161      0.26  Q         |         |         |       V |
20+55       1.6179      0.26  Q         |         |         |       V |
21+ 0       1.6196      0.26  Q         |         |         |       V |
21+ 5       1.6214      0.25  Q         |         |         |       V |
21+10       1.6231      0.25  Q         |         |         |       V |
21+15       1.6248      0.24  Q         |         |         |       V |
21+20       1.6264      0.24  Q         |         |         |       V |
21+25       1.6281      0.24  Q         |         |         |       V |
21+30       1.6297      0.23  Q         |         |         |       V |
21+35       1.6313      0.23  Q         |         |         |       V |
21+40       1.6328      0.23  Q         |         |         |       V |
21+45       1.6344      0.22  Q         |         |         |       V |
21+50       1.6359      0.22  Q         |         |         |        V|
21+55       1.6374      0.22  Q         |         |         |        V|
22+ 0       1.6389      0.22  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+ 5 | 1.6404 | 0.21 | Q | \| | \| | \| | V\| |
| 22+10 | 1.6418 | 0.21 | Q | \| | \| | \| | V\| |
| 22+15 | 1.6433 | 0.21 | Q | \| | \| | \| | V\| |
| 22+20 | 1.6447 | 0.21 | Q | \| | \| | \| | V\| |
| 22+25 | 1.6461 | 0.20 | Q | \| | \| | \| | V\| |
| 22+30 | 1.6475 | 0.20 | Q | \| | \| | \| | V\| |
| 22+35 | 1.6489 | 0.20 | Q | \| | \| | \| | V\| |
| 22+40 | 1.6502 | 0.20 | Q | \| | \| | \| | V\| |
| 22+45 | 1.6516 | 0.20 | Q | \| | \| | \| | V\| |
| 22+50 | 1.6529 | 0.19 | Q | \| | \| | \| | V\| |
| 22+55 | 1.6542 | 0.19 | Q | \| | \| | \| | V\| |
| 23+ 0 | 1.6555 | 0.19 | Q | \| | \| | \| | V\| |
| 23+ 5 | 1.6568 | 0.19 | Q | \| | \| | \| | V\| |
| 23+10 | 1.6581 | 0.19 | Q | \| | \| | \| | V\| |
| 23+15 | 1.6593 | 0.18 | Q | \| | \| | \| | V\| |
| 23+20 | 1.6606 | 0.18 | Q | \| | \| | \| | V\| |
| 23+25 | 1.6618 | 0.18 | Q | \| | \| | \| | V\| |
| 23+30 | 1.6630 | 0.18 | Q | \| | \| | \| | V\| |
| 23+35 | 1.6643 | 0.18 | Q | \| | \| | \| | V\| |
| 23+40 | 1.6655 | 0.17 | Q | \| | \| | \| | V\| |
| 23+45 | 1.6666 | 0.17 | Q | \| | \| | \| | V\| |
| 23+50 | 1.6678 | 0.17 | Q | \| | \| | \| | V\| |
| 23+55 | 1.6690 | 0.17 | Q | \| | \| | \| | V\| |
| 24+ 0 | 1.6702 | 0.17 | Q | \| | \| | \| | V\| |
| 24+ 5 | 1.6713 | 0.16 | Q | \| | \| | \| | V\| |
| 24+10 | 1.6724 | 0.16 | Q | \| | \| | \| | V\| |
| 24+15 | 1.6733 | 0.14 | Q | \| | \| | \| | V\| |
| 24+20 | 1.6741 | 0.11 | Q | \| | \| | \| | V\| |
| 24+25 | 1.6746 | 0.08 | Q | \| | \| | \| | V\| |
| 24+30 | 1.6751 | 0.07 | Q | \| | \| | \| | V\| |
| 24+35 | 1.6755 | 0.05 | Q | \| | \| | \| | V\| |
| 24+40 | 1.6758 | 0.05 | Q | \| | \| | \| | V\| |
| 24+45 | 1.6760 | 0.04 | Q | \| | \| | \| | V\| |
| 24+50 | 1.6763 | 0.03 | Q | \| | \| | \| | V\| |
| 24+55 | 1.6765 | 0.03 | Q | \| | \| | \| | V\| |
| 25+ 0 | 1.6766 | 0.02 | Q | \| | \| | \| | V\| |
| 25+ 5 | 1.6768 | 0.02 | Q | \| | \| | \| | V\| |
| 25+10 | 1.6769 | 0.02 | Q | \| | \| | \| | V\| |
| 25+15 | 1.6770 | 0.02 | Q | \| | \| | \| | V\| |
| 25+20 | 1.6771 | 0.01 | Q | \| | \| | \| | V\| |
| 25+25 | 1.6772 | 0.01 | Q | \| | \| | \| | V\| |
| 25+30 | 1.6773 | 0.01 | Q | \| | \| | \| | V\| |
| 25+35 | 1.6773 | 0.01 | Q | \| | \| | \| | V\| |
| 25+40 | 1.6774 | 0.01 | Q | \| | \| | \| | V\| |
| 25+45 | 1.6774 | 0.01 | Q | \| | \| | \| | V\| |
| 25+50 | 1.6775 | 0.01 | Q | \| | \| | \| | V\| |
| 25+55 | 1.6775 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 0 | 1.6775 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 1.6776 | 0.00 | Q | \| | \| | \| | V\| |
| 26+10 | 1.6776 | 0.00 | Q | \| | \| | \| | V\| |
| 26+15 | 1.6776 | 0.00 | Q | \| | \| | \| | V\| |
| 26+20 | 1.6776 | 0.00 | Q | \| | \| | \| | V\| |
| 26+25 | 1.6776 | 0.00 | Q | \| | \| | \| | V\| |
| 26+30 | 1.6776 | 0.00 | Q | \| | \| | \| | V\| |
| 26+35 | 1.6776 | 0.00 | Q | \| | \| | \| | V\| |
| 26+40 | 1.6776 | 0.00 | Q | \| | \| | \| | V\| |
| 26+45 | 1.6777 | 0.00 | Q | \| | \| | \| | V\| |
| 26+50 | 1.6777 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 22
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 3.73 | 1 | 1.36 |
| Rainfall data for year 100 | | |
| 3.73 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 3.73 | 24 | 2.47 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.0 | 92.8 | 3.73 | 1.000 | 0.140 | 0.900 | 0.126 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.126

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 3.36 | 0.900 | 78.0 | 92.8 | 0.78 | 0.702 |
| 0.37 | 0.100 | 98.0 | 98.0 | 0.20 | 0.907 |

Area-averaged catchment yield fraction, Y = 0.722
Area-averaged low loss fraction, Yb = 0.278
User entry of time of concentration = 0.220 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 3.73(Ac.)
Catchment Lag time = 0.176 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 47.3485
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.126(In/Hr)
Average low loss rate fraction (Yb) = 0.278 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.645(In)
Computed peak 30-minute rainfall = 1.105(In)
Specified peak 1-hour rainfall = 1.360(In)
Computed peak 3-hour rainfall = 1.637(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.470(In)

Rainfall depth area reduction factors:
Using a total area of 3.73(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.645(In)
30-minute factor = 1.000 Adjusted rainfall = 1.104(In)
1-hour factor = 1.000 Adjusted rainfall = 1.360(In)
3-hour factor = 1.000 Adjusted rainfall = 1.637(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.470(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 45.11 (CFS)) | |
| 1 | 3.621 | 1.634 |
| 2 | 27.374 | 10.715 |
| 3 | 58.032 | 13.830 |
| 4 | 71.898 | 6.255 |
| 5 | 79.947 | 3.631 |
| 6 | 85.264 | 2.398 |
| 7 | 89.111 | 1.735 |
| 8 | 91.816 | 1.220 |
| 9 | 93.936 | 0.957 |
| 10 | 95.547 | 0.727 |
| 11 | 96.789 | 0.560 |
| 12 | 97.673 | 0.399 |
| 13 | 98.224 | 0.248 |

| | | |
|---|---|---|
| 14 | 98.770 | 0.247 |
| 15 | 99.332 | 0.253 |
| 16 | 99.712 | 0.171 |
| 17 | 100.000 | 0.130 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6452 | 0.6452 |
| 2 | 0.7944 | 0.1491 |
| 3 | 0.8971 | 0.1027 |
| 4 | 0.9780 | 0.0809 |
| 5 | 1.0457 | 0.0677 |
| 6 | 1.1045 | 0.0588 |
| 7 | 1.1567 | 0.0523 |
| 8 | 1.2040 | 0.0473 |
| 9 | 1.2473 | 0.0433 |
| 10 | 1.2874 | 0.0401 |
| 11 | 1.3247 | 0.0373 |
| 12 | 1.3598 | 0.0350 |
| 13 | 1.3783 | 0.0185 |
| 14 | 1.3956 | 0.0174 |
| 15 | 1.4120 | 0.0164 |
| 16 | 1.4274 | 0.0155 |
| 17 | 1.4421 | 0.0147 |
| 18 | 1.4561 | 0.0140 |
| 19 | 1.4695 | 0.0134 |
| 20 | 1.4822 | 0.0128 |
| 21 | 1.4945 | 0.0123 |
| 22 | 1.5063 | 0.0118 |
| 23 | 1.5176 | 0.0113 |
| 24 | 1.5286 | 0.0109 |
| 25 | 1.5392 | 0.0106 |
| 26 | 1.5494 | 0.0102 |
| 27 | 1.5593 | 0.0099 |
| 28 | 1.5689 | 0.0096 |
| 29 | 1.5782 | 0.0093 |
| 30 | 1.5873 | 0.0091 |
| 31 | 1.5961 | 0.0088 |
| 32 | 1.6047 | 0.0086 |
| 33 | 1.6130 | 0.0084 |
| 34 | 1.6212 | 0.0082 |
| 35 | 1.6291 | 0.0080 |
| 36 | 1.6369 | 0.0078 |
| 37 | 1.6445 | 0.0076 |
| 38 | 1.6519 | 0.0074 |
| 39 | 1.6592 | 0.0073 |
| 40 | 1.6663 | 0.0071 |
| 41 | 1.6732 | 0.0070 |
| 42 | 1.6800 | 0.0068 |
| 43 | 1.6867 | 0.0067 |
| 44 | 1.6933 | 0.0066 |
| 45 | 1.6997 | 0.0064 |
| 46 | 1.7060 | 0.0063 |
| 47 | 1.7122 | 0.0062 |
| 48 | 1.7183 | 0.0061 |
| 49 | 1.7243 | 0.0060 |
| 50 | 1.7302 | 0.0059 |
| 51 | 1.7360 | 0.0058 |
| 52 | 1.7417 | 0.0057 |

| | | |
|---|---|---|
| 53 | 1.7473 | 0.0056 |
| 54 | 1.7528 | 0.0055 |
| 55 | 1.7582 | 0.0054 |
| 56 | 1.7636 | 0.0054 |
| 57 | 1.7689 | 0.0053 |
| 58 | 1.7741 | 0.0052 |
| 59 | 1.7792 | 0.0051 |
| 60 | 1.7842 | 0.0051 |
| 61 | 1.7892 | 0.0050 |
| 62 | 1.7941 | 0.0049 |
| 63 | 1.7990 | 0.0048 |
| 64 | 1.8038 | 0.0048 |
| 65 | 1.8085 | 0.0047 |
| 66 | 1.8132 | 0.0047 |
| 67 | 1.8178 | 0.0046 |
| 68 | 1.8223 | 0.0045 |
| 69 | 1.8268 | 0.0045 |
| 70 | 1.8313 | 0.0044 |
| 71 | 1.8356 | 0.0044 |
| 72 | 1.8400 | 0.0043 |
| 73 | 1.8454 | 0.0054 |
| 74 | 1.8507 | 0.0053 |
| 75 | 1.8560 | 0.0053 |
| 76 | 1.8612 | 0.0052 |
| 77 | 1.8664 | 0.0052 |
| 78 | 1.8715 | 0.0051 |
| 79 | 1.8766 | 0.0051 |
| 80 | 1.8816 | 0.0050 |
| 81 | 1.8866 | 0.0050 |
| 82 | 1.8915 | 0.0049 |
| 83 | 1.8964 | 0.0049 |
| 84 | 1.9012 | 0.0048 |
| 85 | 1.9060 | 0.0048 |
| 86 | 1.9107 | 0.0047 |
| 87 | 1.9154 | 0.0047 |
| 88 | 1.9201 | 0.0047 |
| 89 | 1.9247 | 0.0046 |
| 90 | 1.9293 | 0.0046 |
| 91 | 1.9338 | 0.0045 |
| 92 | 1.9383 | 0.0045 |
| 93 | 1.9428 | 0.0045 |
| 94 | 1.9472 | 0.0044 |
| 95 | 1.9516 | 0.0044 |
| 96 | 1.9559 | 0.0043 |
| 97 | 1.9602 | 0.0043 |
| 98 | 1.9645 | 0.0043 |
| 99 | 1.9687 | 0.0042 |
| 100 | 1.9730 | 0.0042 |
| 101 | 1.9771 | 0.0042 |
| 102 | 1.9813 | 0.0041 |
| 103 | 1.9854 | 0.0041 |
| 104 | 1.9895 | 0.0041 |
| 105 | 1.9935 | 0.0040 |
| 106 | 1.9975 | 0.0040 |
| 107 | 2.0015 | 0.0040 |
| 108 | 2.0055 | 0.0040 |
| 109 | 2.0094 | 0.0039 |
| 110 | 2.0133 | 0.0039 |
| 111 | 2.0172 | 0.0039 |

| | | |
|---|---|---|
| 112 | 2.0210 | 0.0038 |
| 113 | 2.0248 | 0.0038 |
| 114 | 2.0286 | 0.0038 |
| 115 | 2.0324 | 0.0038 |
| 116 | 2.0361 | 0.0037 |
| 117 | 2.0399 | 0.0037 |
| 118 | 2.0435 | 0.0037 |
| 119 | 2.0472 | 0.0037 |
| 120 | 2.0509 | 0.0036 |
| 121 | 2.0545 | 0.0036 |
| 122 | 2.0581 | 0.0036 |
| 123 | 2.0616 | 0.0036 |
| 124 | 2.0652 | 0.0035 |
| 125 | 2.0687 | 0.0035 |
| 126 | 2.0722 | 0.0035 |
| 127 | 2.0757 | 0.0035 |
| 128 | 2.0792 | 0.0035 |
| 129 | 2.0826 | 0.0034 |
| 130 | 2.0860 | 0.0034 |
| 131 | 2.0894 | 0.0034 |
| 132 | 2.0928 | 0.0034 |
| 133 | 2.0962 | 0.0034 |
| 134 | 2.0995 | 0.0033 |
| 135 | 2.1028 | 0.0033 |
| 136 | 2.1061 | 0.0033 |
| 137 | 2.1094 | 0.0033 |
| 138 | 2.1127 | 0.0033 |
| 139 | 2.1159 | 0.0032 |
| 140 | 2.1191 | 0.0032 |
| 141 | 2.1223 | 0.0032 |
| 142 | 2.1255 | 0.0032 |
| 143 | 2.1287 | 0.0032 |
| 144 | 2.1318 | 0.0032 |
| 145 | 2.1350 | 0.0031 |
| 146 | 2.1381 | 0.0031 |
| 147 | 2.1412 | 0.0031 |
| 148 | 2.1443 | 0.0031 |
| 149 | 2.1473 | 0.0031 |
| 150 | 2.1504 | 0.0031 |
| 151 | 2.1534 | 0.0030 |
| 152 | 2.1565 | 0.0030 |
| 153 | 2.1595 | 0.0030 |
| 154 | 2.1625 | 0.0030 |
| 155 | 2.1654 | 0.0030 |
| 156 | 2.1684 | 0.0030 |
| 157 | 2.1713 | 0.0029 |
| 158 | 2.1743 | 0.0029 |
| 159 | 2.1772 | 0.0029 |
| 160 | 2.1801 | 0.0029 |
| 161 | 2.1830 | 0.0029 |
| 162 | 2.1858 | 0.0029 |
| 163 | 2.1887 | 0.0029 |
| 164 | 2.1915 | 0.0028 |
| 165 | 2.1944 | 0.0028 |
| 166 | 2.1972 | 0.0028 |
| 167 | 2.2000 | 0.0028 |
| 168 | 2.2028 | 0.0028 |
| 169 | 2.2056 | 0.0028 |
| 170 | 2.2083 | 0.0028 |

| | | |
|---|---|---|
| 171 | 2.2111 | 0.0028 |
| 172 | 2.2138 | 0.0027 |
| 173 | 2.2166 | 0.0027 |
| 174 | 2.2193 | 0.0027 |
| 175 | 2.2220 | 0.0027 |
| 176 | 2.2247 | 0.0027 |
| 177 | 2.2273 | 0.0027 |
| 178 | 2.2300 | 0.0027 |
| 179 | 2.2327 | 0.0027 |
| 180 | 2.2353 | 0.0026 |
| 181 | 2.2379 | 0.0026 |
| 182 | 2.2406 | 0.0026 |
| 183 | 2.2432 | 0.0026 |
| 184 | 2.2458 | 0.0026 |
| 185 | 2.2484 | 0.0026 |
| 186 | 2.2509 | 0.0026 |
| 187 | 2.2535 | 0.0026 |
| 188 | 2.2561 | 0.0026 |
| 189 | 2.2586 | 0.0025 |
| 190 | 2.2611 | 0.0025 |
| 191 | 2.2637 | 0.0025 |
| 192 | 2.2662 | 0.0025 |
| 193 | 2.2687 | 0.0025 |
| 194 | 2.2712 | 0.0025 |
| 195 | 2.2736 | 0.0025 |
| 196 | 2.2761 | 0.0025 |
| 197 | 2.2786 | 0.0025 |
| 198 | 2.2810 | 0.0025 |
| 199 | 2.2835 | 0.0024 |
| 200 | 2.2859 | 0.0024 |
| 201 | 2.2883 | 0.0024 |
| 202 | 2.2907 | 0.0024 |
| 203 | 2.2931 | 0.0024 |
| 204 | 2.2955 | 0.0024 |
| 205 | 2.2979 | 0.0024 |
| 206 | 2.3003 | 0.0024 |
| 207 | 2.3027 | 0.0024 |
| 208 | 2.3050 | 0.0024 |
| 209 | 2.3074 | 0.0023 |
| 210 | 2.3097 | 0.0023 |
| 211 | 2.3120 | 0.0023 |
| 212 | 2.3144 | 0.0023 |
| 213 | 2.3167 | 0.0023 |
| 214 | 2.3190 | 0.0023 |
| 215 | 2.3213 | 0.0023 |
| 216 | 2.3236 | 0.0023 |
| 217 | 2.3259 | 0.0023 |
| 218 | 2.3281 | 0.0023 |
| 219 | 2.3304 | 0.0023 |
| 220 | 2.3327 | 0.0023 |
| 221 | 2.3349 | 0.0022 |
| 222 | 2.3371 | 0.0022 |
| 223 | 2.3394 | 0.0022 |
| 224 | 2.3416 | 0.0022 |
| 225 | 2.3438 | 0.0022 |
| 226 | 2.3460 | 0.0022 |
| 227 | 2.3482 | 0.0022 |
| 228 | 2.3504 | 0.0022 |
| 229 | 2.3526 | 0.0022 |

| | | |
|---|---|---|
| 230 | 2.3548 | 0.0022 |
| 231 | 2.3570 | 0.0022 |
| 232 | 2.3591 | 0.0022 |
| 233 | 2.3613 | 0.0022 |
| 234 | 2.3634 | 0.0021 |
| 235 | 2.3656 | 0.0021 |
| 236 | 2.3677 | 0.0021 |
| 237 | 2.3698 | 0.0021 |
| 238 | 2.3719 | 0.0021 |
| 239 | 2.3741 | 0.0021 |
| 240 | 2.3762 | 0.0021 |
| 241 | 2.3783 | 0.0021 |
| 242 | 2.3804 | 0.0021 |
| 243 | 2.3824 | 0.0021 |
| 244 | 2.3845 | 0.0021 |
| 245 | 2.3866 | 0.0021 |
| 246 | 2.3887 | 0.0021 |
| 247 | 2.3907 | 0.0021 |
| 248 | 2.3928 | 0.0021 |
| 249 | 2.3948 | 0.0020 |
| 250 | 2.3969 | 0.0020 |
| 251 | 2.3989 | 0.0020 |
| 252 | 2.4009 | 0.0020 |
| 253 | 2.4029 | 0.0020 |
| 254 | 2.4050 | 0.0020 |
| 255 | 2.4070 | 0.0020 |
| 256 | 2.4090 | 0.0020 |
| 257 | 2.4110 | 0.0020 |
| 258 | 2.4129 | 0.0020 |
| 259 | 2.4149 | 0.0020 |
| 260 | 2.4169 | 0.0020 |
| 261 | 2.4189 | 0.0020 |
| 262 | 2.4208 | 0.0020 |
| 263 | 2.4228 | 0.0020 |
| 264 | 2.4248 | 0.0020 |
| 265 | 2.4267 | 0.0019 |
| 266 | 2.4286 | 0.0019 |
| 267 | 2.4306 | 0.0019 |
| 268 | 2.4325 | 0.0019 |
| 269 | 2.4344 | 0.0019 |
| 270 | 2.4364 | 0.0019 |
| 271 | 2.4383 | 0.0019 |
| 272 | 2.4402 | 0.0019 |
| 273 | 2.4421 | 0.0019 |
| 274 | 2.4440 | 0.0019 |
| 275 | 2.4459 | 0.0019 |
| 276 | 2.4478 | 0.0019 |
| 277 | 2.4496 | 0.0019 |
| 278 | 2.4515 | 0.0019 |
| 279 | 2.4534 | 0.0019 |
| 280 | 2.4553 | 0.0019 |
| 281 | 2.4571 | 0.0019 |
| 282 | 2.4590 | 0.0019 |
| 283 | 2.4608 | 0.0018 |
| 284 | 2.4627 | 0.0018 |
| 285 | 2.4645 | 0.0018 |
| 286 | 2.4663 | 0.0018 |
| 287 | 2.4682 | 0.0018 |
| 288 | 2.4700 | 0.0018 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0018 | 0.0005 | 0.0013 |
| 2 | 0.0018 | 0.0005 | 0.0013 |
| 3 | 0.0018 | 0.0005 | 0.0013 |
| 4 | 0.0018 | 0.0005 | 0.0013 |
| 5 | 0.0019 | 0.0005 | 0.0013 |
| 6 | 0.0019 | 0.0005 | 0.0013 |
| 7 | 0.0019 | 0.0005 | 0.0014 |
| 8 | 0.0019 | 0.0005 | 0.0014 |
| 9 | 0.0019 | 0.0005 | 0.0014 |
| 10 | 0.0019 | 0.0005 | 0.0014 |
| 11 | 0.0019 | 0.0005 | 0.0014 |
| 12 | 0.0019 | 0.0005 | 0.0014 |
| 13 | 0.0019 | 0.0005 | 0.0014 |
| 14 | 0.0019 | 0.0005 | 0.0014 |
| 15 | 0.0019 | 0.0005 | 0.0014 |
| 16 | 0.0019 | 0.0005 | 0.0014 |
| 17 | 0.0020 | 0.0005 | 0.0014 |
| 18 | 0.0020 | 0.0005 | 0.0014 |
| 19 | 0.0020 | 0.0005 | 0.0014 |
| 20 | 0.0020 | 0.0005 | 0.0014 |
| 21 | 0.0020 | 0.0006 | 0.0014 |
| 22 | 0.0020 | 0.0006 | 0.0014 |
| 23 | 0.0020 | 0.0006 | 0.0015 |
| 24 | 0.0020 | 0.0006 | 0.0015 |
| 25 | 0.0020 | 0.0006 | 0.0015 |
| 26 | 0.0020 | 0.0006 | 0.0015 |
| 27 | 0.0020 | 0.0006 | 0.0015 |
| 28 | 0.0021 | 0.0006 | 0.0015 |
| 29 | 0.0021 | 0.0006 | 0.0015 |
| 30 | 0.0021 | 0.0006 | 0.0015 |
| 31 | 0.0021 | 0.0006 | 0.0015 |
| 32 | 0.0021 | 0.0006 | 0.0015 |
| 33 | 0.0021 | 0.0006 | 0.0015 |
| 34 | 0.0021 | 0.0006 | 0.0015 |
| 35 | 0.0021 | 0.0006 | 0.0015 |
| 36 | 0.0021 | 0.0006 | 0.0015 |
| 37 | 0.0021 | 0.0006 | 0.0016 |
| 38 | 0.0022 | 0.0006 | 0.0016 |
| 39 | 0.0022 | 0.0006 | 0.0016 |
| 40 | 0.0022 | 0.0006 | 0.0016 |
| 41 | 0.0022 | 0.0006 | 0.0016 |
| 42 | 0.0022 | 0.0006 | 0.0016 |
| 43 | 0.0022 | 0.0006 | 0.0016 |
| 44 | 0.0022 | 0.0006 | 0.0016 |
| 45 | 0.0022 | 0.0006 | 0.0016 |
| 46 | 0.0022 | 0.0006 | 0.0016 |
| 47 | 0.0023 | 0.0006 | 0.0016 |
| 48 | 0.0023 | 0.0006 | 0.0016 |
| 49 | 0.0023 | 0.0006 | 0.0017 |
| 50 | 0.0023 | 0.0006 | 0.0017 |
| 51 | 0.0023 | 0.0006 | 0.0017 |
| 52 | 0.0023 | 0.0006 | 0.0017 |
| 53 | 0.0023 | 0.0006 | 0.0017 |
| 54 | 0.0023 | 0.0007 | 0.0017 |

| | | | |
|---|---|---|---|
| 55 | 0.0024 | 0.0007 | 0.0017 |
| 56 | 0.0024 | 0.0007 | 0.0017 |
| 57 | 0.0024 | 0.0007 | 0.0017 |
| 58 | 0.0024 | 0.0007 | 0.0017 |
| 59 | 0.0024 | 0.0007 | 0.0018 |
| 60 | 0.0024 | 0.0007 | 0.0018 |
| 61 | 0.0025 | 0.0007 | 0.0018 |
| 62 | 0.0025 | 0.0007 | 0.0018 |
| 63 | 0.0025 | 0.0007 | 0.0018 |
| 64 | 0.0025 | 0.0007 | 0.0018 |
| 65 | 0.0025 | 0.0007 | 0.0018 |
| 66 | 0.0025 | 0.0007 | 0.0018 |
| 67 | 0.0025 | 0.0007 | 0.0018 |
| 68 | 0.0026 | 0.0007 | 0.0018 |
| 69 | 0.0026 | 0.0007 | 0.0019 |
| 70 | 0.0026 | 0.0007 | 0.0019 |
| 71 | 0.0026 | 0.0007 | 0.0019 |
| 72 | 0.0026 | 0.0007 | 0.0019 |
| 73 | 0.0026 | 0.0007 | 0.0019 |
| 74 | 0.0027 | 0.0007 | 0.0019 |
| 75 | 0.0027 | 0.0007 | 0.0019 |
| 76 | 0.0027 | 0.0007 | 0.0019 |
| 77 | 0.0027 | 0.0008 | 0.0020 |
| 78 | 0.0027 | 0.0008 | 0.0020 |
| 79 | 0.0028 | 0.0008 | 0.0020 |
| 80 | 0.0028 | 0.0008 | 0.0020 |
| 81 | 0.0028 | 0.0008 | 0.0020 |
| 82 | 0.0028 | 0.0008 | 0.0020 |
| 83 | 0.0028 | 0.0008 | 0.0020 |
| 84 | 0.0028 | 0.0008 | 0.0021 |
| 85 | 0.0029 | 0.0008 | 0.0021 |
| 86 | 0.0029 | 0.0008 | 0.0021 |
| 87 | 0.0029 | 0.0008 | 0.0021 |
| 88 | 0.0029 | 0.0008 | 0.0021 |
| 89 | 0.0030 | 0.0008 | 0.0021 |
| 90 | 0.0030 | 0.0008 | 0.0021 |
| 91 | 0.0030 | 0.0008 | 0.0022 |
| 92 | 0.0030 | 0.0008 | 0.0022 |
| 93 | 0.0031 | 0.0008 | 0.0022 |
| 94 | 0.0031 | 0.0009 | 0.0022 |
| 95 | 0.0031 | 0.0009 | 0.0022 |
| 96 | 0.0031 | 0.0009 | 0.0023 |
| 97 | 0.0032 | 0.0009 | 0.0023 |
| 98 | 0.0032 | 0.0009 | 0.0023 |
| 99 | 0.0032 | 0.0009 | 0.0023 |
| 100 | 0.0032 | 0.0009 | 0.0023 |
| 101 | 0.0033 | 0.0009 | 0.0024 |
| 102 | 0.0033 | 0.0009 | 0.0024 |
| 103 | 0.0033 | 0.0009 | 0.0024 |
| 104 | 0.0033 | 0.0009 | 0.0024 |
| 105 | 0.0034 | 0.0009 | 0.0024 |
| 106 | 0.0034 | 0.0009 | 0.0025 |
| 107 | 0.0034 | 0.0010 | 0.0025 |
| 108 | 0.0035 | 0.0010 | 0.0025 |
| 109 | 0.0035 | 0.0010 | 0.0025 |
| 110 | 0.0035 | 0.0010 | 0.0025 |
| 111 | 0.0036 | 0.0010 | 0.0026 |
| 112 | 0.0036 | 0.0010 | 0.0026 |
| 113 | 0.0036 | 0.0010 | 0.0026 |

| | | | |
|---|---|---|---|
| 114 | 0.0037 | 0.0010 | 0.0026 |
| 115 | 0.0037 | 0.0010 | 0.0027 |
| 116 | 0.0037 | 0.0010 | 0.0027 |
| 117 | 0.0038 | 0.0011 | 0.0027 |
| 118 | 0.0038 | 0.0011 | 0.0028 |
| 119 | 0.0039 | 0.0011 | 0.0028 |
| 120 | 0.0039 | 0.0011 | 0.0028 |
| 121 | 0.0040 | 0.0011 | 0.0029 |
| 122 | 0.0040 | 0.0011 | 0.0029 |
| 123 | 0.0040 | 0.0011 | 0.0029 |
| 124 | 0.0041 | 0.0011 | 0.0029 |
| 125 | 0.0041 | 0.0011 | 0.0030 |
| 126 | 0.0042 | 0.0012 | 0.0030 |
| 127 | 0.0042 | 0.0012 | 0.0031 |
| 128 | 0.0043 | 0.0012 | 0.0031 |
| 129 | 0.0043 | 0.0012 | 0.0031 |
| 130 | 0.0044 | 0.0012 | 0.0032 |
| 131 | 0.0045 | 0.0012 | 0.0032 |
| 132 | 0.0045 | 0.0012 | 0.0032 |
| 133 | 0.0046 | 0.0013 | 0.0033 |
| 134 | 0.0046 | 0.0013 | 0.0033 |
| 135 | 0.0047 | 0.0013 | 0.0034 |
| 136 | 0.0047 | 0.0013 | 0.0034 |
| 137 | 0.0048 | 0.0013 | 0.0035 |
| 138 | 0.0049 | 0.0014 | 0.0035 |
| 139 | 0.0050 | 0.0014 | 0.0036 |
| 140 | 0.0050 | 0.0014 | 0.0036 |
| 141 | 0.0051 | 0.0014 | 0.0037 |
| 142 | 0.0052 | 0.0014 | 0.0037 |
| 143 | 0.0053 | 0.0015 | 0.0038 |
| 144 | 0.0053 | 0.0015 | 0.0039 |
| 145 | 0.0043 | 0.0012 | 0.0031 |
| 146 | 0.0044 | 0.0012 | 0.0032 |
| 147 | 0.0045 | 0.0012 | 0.0032 |
| 148 | 0.0045 | 0.0013 | 0.0033 |
| 149 | 0.0047 | 0.0013 | 0.0034 |
| 150 | 0.0047 | 0.0013 | 0.0034 |
| 151 | 0.0048 | 0.0013 | 0.0035 |
| 152 | 0.0049 | 0.0014 | 0.0036 |
| 153 | 0.0051 | 0.0014 | 0.0037 |
| 154 | 0.0051 | 0.0014 | 0.0037 |
| 155 | 0.0053 | 0.0015 | 0.0038 |
| 156 | 0.0054 | 0.0015 | 0.0039 |
| 157 | 0.0055 | 0.0015 | 0.0040 |
| 158 | 0.0056 | 0.0016 | 0.0041 |
| 159 | 0.0058 | 0.0016 | 0.0042 |
| 160 | 0.0059 | 0.0016 | 0.0043 |
| 161 | 0.0061 | 0.0017 | 0.0044 |
| 162 | 0.0062 | 0.0017 | 0.0045 |
| 163 | 0.0064 | 0.0018 | 0.0046 |
| 164 | 0.0066 | 0.0018 | 0.0047 |
| 165 | 0.0068 | 0.0019 | 0.0049 |
| 166 | 0.0070 | 0.0019 | 0.0050 |
| 167 | 0.0073 | 0.0020 | 0.0052 |
| 168 | 0.0074 | 0.0021 | 0.0054 |
| 169 | 0.0078 | 0.0022 | 0.0056 |
| 170 | 0.0080 | 0.0022 | 0.0057 |
| 171 | 0.0084 | 0.0023 | 0.0060 |
| 172 | 0.0086 | 0.0024 | 0.0062 |

| | | | |
|---|---|---|---|
| 173 | 0.0091 | 0.0025 | 0.0065 |
| 174 | 0.0093 | 0.0026 | 0.0067 |
| 175 | 0.0099 | 0.0027 | 0.0072 |
| 176 | 0.0102 | 0.0028 | 0.0074 |
| 177 | 0.0109 | 0.0030 | 0.0079 |
| 178 | 0.0113 | 0.0031 | 0.0082 |
| 179 | 0.0123 | 0.0034 | 0.0089 |
| 180 | 0.0128 | 0.0035 | 0.0092 |
| 181 | 0.0140 | 0.0039 | 0.0101 |
| 182 | 0.0147 | 0.0041 | 0.0106 |
| 183 | 0.0164 | 0.0045 | 0.0118 |
| 184 | 0.0174 | 0.0048 | 0.0125 |
| 185 | 0.0350 | 0.0097 | 0.0253 |
| 186 | 0.0373 | 0.0104 | 0.0270 |
| 187 | 0.0433 | 0.0105 | 0.0328 |
| 188 | 0.0473 | 0.0105 | 0.0368 |
| 189 | 0.0588 | 0.0105 | 0.0483 |
| 190 | 0.0677 | 0.0105 | 0.0572 |
| 191 | 0.1027 | 0.0105 | 0.0922 |
| 192 | 0.1491 | 0.0105 | 0.1386 |
| 193 | 0.6452 | 0.0105 | 0.6347 |
| 194 | 0.0809 | 0.0105 | 0.0704 |
| 195 | 0.0523 | 0.0105 | 0.0418 |
| 196 | 0.0401 | 0.0105 | 0.0296 |
| 197 | 0.0185 | 0.0051 | 0.0134 |
| 198 | 0.0155 | 0.0043 | 0.0112 |
| 199 | 0.0134 | 0.0037 | 0.0096 |
| 200 | 0.0118 | 0.0033 | 0.0085 |
| 201 | 0.0106 | 0.0029 | 0.0076 |
| 202 | 0.0096 | 0.0027 | 0.0069 |
| 203 | 0.0088 | 0.0024 | 0.0064 |
| 204 | 0.0082 | 0.0023 | 0.0059 |
| 205 | 0.0076 | 0.0021 | 0.0055 |
| 206 | 0.0071 | 0.0020 | 0.0051 |
| 207 | 0.0067 | 0.0019 | 0.0048 |
| 208 | 0.0063 | 0.0018 | 0.0046 |
| 209 | 0.0060 | 0.0017 | 0.0043 |
| 210 | 0.0057 | 0.0016 | 0.0041 |
| 211 | 0.0054 | 0.0015 | 0.0039 |
| 212 | 0.0052 | 0.0014 | 0.0038 |
| 213 | 0.0050 | 0.0014 | 0.0036 |
| 214 | 0.0048 | 0.0013 | 0.0035 |
| 215 | 0.0046 | 0.0013 | 0.0033 |
| 216 | 0.0044 | 0.0012 | 0.0032 |
| 217 | 0.0054 | 0.0015 | 0.0039 |
| 218 | 0.0052 | 0.0015 | 0.0038 |
| 219 | 0.0051 | 0.0014 | 0.0037 |
| 220 | 0.0049 | 0.0014 | 0.0036 |
| 221 | 0.0048 | 0.0013 | 0.0035 |
| 222 | 0.0047 | 0.0013 | 0.0034 |
| 223 | 0.0045 | 0.0013 | 0.0033 |
| 224 | 0.0044 | 0.0012 | 0.0032 |
| 225 | 0.0043 | 0.0012 | 0.0031 |
| 226 | 0.0042 | 0.0012 | 0.0030 |
| 227 | 0.0041 | 0.0011 | 0.0030 |
| 228 | 0.0040 | 0.0011 | 0.0029 |
| 229 | 0.0039 | 0.0011 | 0.0028 |
| 230 | 0.0038 | 0.0011 | 0.0028 |
| 231 | 0.0038 | 0.0010 | 0.0027 |

| | | | |
|---|---|---|---|
| 232 | 0.0037 | 0.0010 | 0.0027 |
| 233 | 0.0036 | 0.0010 | 0.0026 |
| 234 | 0.0035 | 0.0010 | 0.0026 |
| 235 | 0.0035 | 0.0010 | 0.0025 |
| 236 | 0.0034 | 0.0009 | 0.0025 |
| 237 | 0.0034 | 0.0009 | 0.0024 |
| 238 | 0.0033 | 0.0009 | 0.0024 |
| 239 | 0.0032 | 0.0009 | 0.0023 |
| 240 | 0.0032 | 0.0009 | 0.0023 |
| 241 | 0.0031 | 0.0009 | 0.0023 |
| 242 | 0.0031 | 0.0009 | 0.0022 |
| 243 | 0.0030 | 0.0008 | 0.0022 |
| 244 | 0.0030 | 0.0008 | 0.0022 |
| 245 | 0.0029 | 0.0008 | 0.0021 |
| 246 | 0.0029 | 0.0008 | 0.0021 |
| 247 | 0.0029 | 0.0008 | 0.0021 |
| 248 | 0.0028 | 0.0008 | 0.0020 |
| 249 | 0.0028 | 0.0008 | 0.0020 |
| 250 | 0.0027 | 0.0008 | 0.0020 |
| 251 | 0.0027 | 0.0008 | 0.0020 |
| 252 | 0.0027 | 0.0007 | 0.0019 |
| 253 | 0.0026 | 0.0007 | 0.0019 |
| 254 | 0.0026 | 0.0007 | 0.0019 |
| 255 | 0.0026 | 0.0007 | 0.0019 |
| 256 | 0.0025 | 0.0007 | 0.0018 |
| 257 | 0.0025 | 0.0007 | 0.0018 |
| 258 | 0.0025 | 0.0007 | 0.0018 |
| 259 | 0.0024 | 0.0007 | 0.0018 |
| 260 | 0.0024 | 0.0007 | 0.0017 |
| 261 | 0.0024 | 0.0007 | 0.0017 |
| 262 | 0.0024 | 0.0007 | 0.0017 |
| 263 | 0.0023 | 0.0006 | 0.0017 |
| 264 | 0.0023 | 0.0006 | 0.0017 |
| 265 | 0.0023 | 0.0006 | 0.0016 |
| 266 | 0.0023 | 0.0006 | 0.0016 |
| 267 | 0.0022 | 0.0006 | 0.0016 |
| 268 | 0.0022 | 0.0006 | 0.0016 |
| 269 | 0.0022 | 0.0006 | 0.0016 |
| 270 | 0.0022 | 0.0006 | 0.0016 |
| 271 | 0.0021 | 0.0006 | 0.0015 |
| 272 | 0.0021 | 0.0006 | 0.0015 |
| 273 | 0.0021 | 0.0006 | 0.0015 |
| 274 | 0.0021 | 0.0006 | 0.0015 |
| 275 | 0.0021 | 0.0006 | 0.0015 |
| 276 | 0.0020 | 0.0006 | 0.0015 |
| 277 | 0.0020 | 0.0006 | 0.0015 |
| 278 | 0.0020 | 0.0006 | 0.0014 |
| 279 | 0.0020 | 0.0006 | 0.0014 |
| 280 | 0.0020 | 0.0005 | 0.0014 |
| 281 | 0.0019 | 0.0005 | 0.0014 |
| 282 | 0.0019 | 0.0005 | 0.0014 |
| 283 | 0.0019 | 0.0005 | 0.0014 |
| 284 | 0.0019 | 0.0005 | 0.0014 |
| 285 | 0.0019 | 0.0005 | 0.0014 |
| 286 | 0.0019 | 0.0005 | 0.0013 |
| 287 | 0.0018 | 0.0005 | 0.0013 |
| 288 | 0.0018 | 0.0005 | 0.0013 |

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Total soil rain loss = 0.43(In)
Total effective rainfall = 2.04(In)
Peak flow rate in flood hydrograph = 11.15(CFS)

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++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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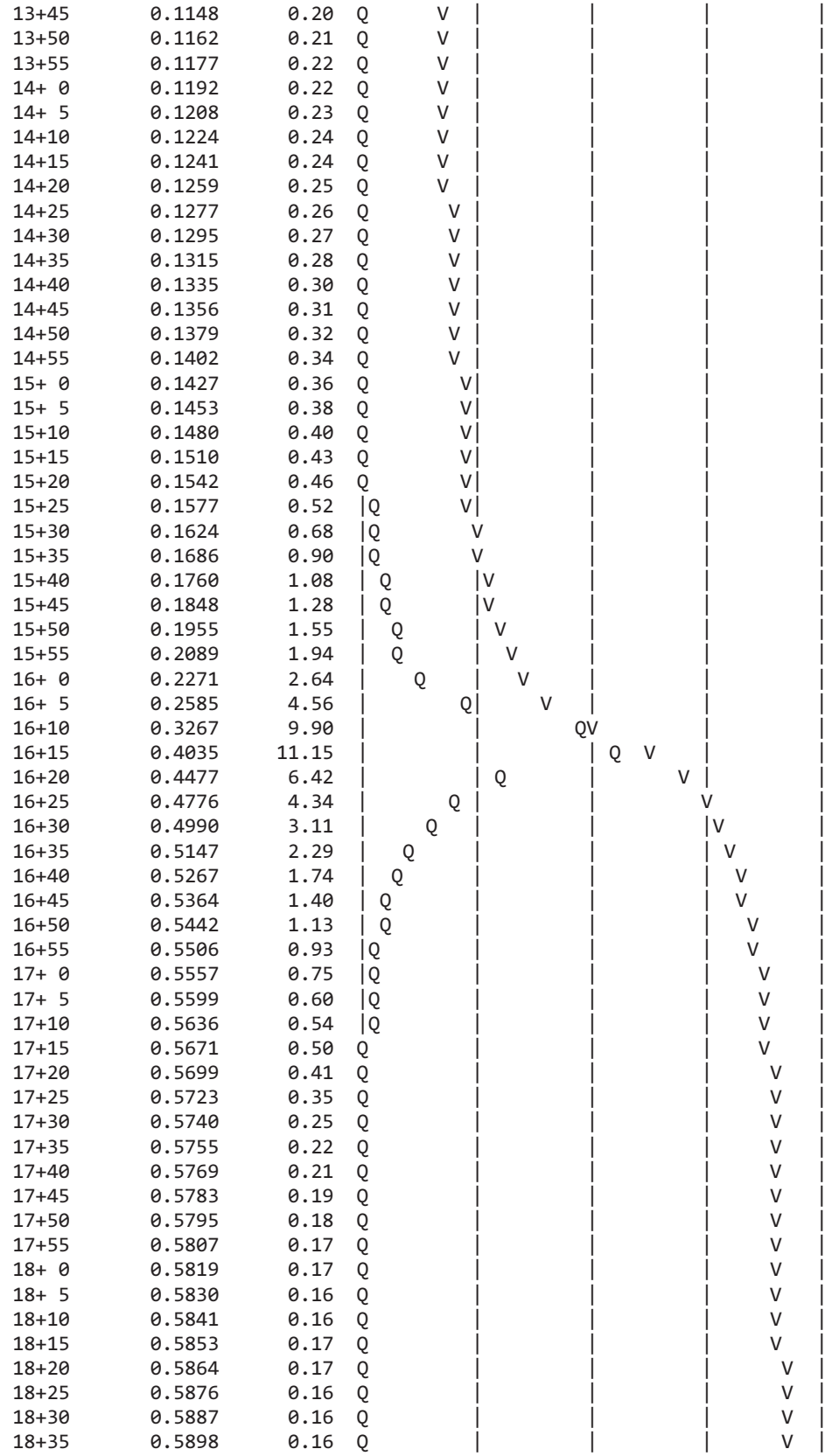
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.02 | Q | | | | |
| 0+15 | 0.0004 | 0.03 | Q | | | | |
| 0+20 | 0.0007 | 0.04 | Q | | | | |
| 0+25 | 0.0010 | 0.05 | Q | | | | |
| 0+30 | 0.0013 | 0.05 | Q | | | | |
| 0+35 | 0.0017 | 0.05 | Q | | | | |
| 0+40 | 0.0021 | 0.06 | Q | | | | |
| 0+45 | 0.0025 | 0.06 | Q | | | | |
| 0+50 | 0.0029 | 0.06 | Q | | | | |
| 0+55 | 0.0033 | 0.06 | Q | | | | |
| 1+ 0 | 0.0037 | 0.06 | Q | | | | |
| 1+ 5 | 0.0041 | 0.06 | Q | | | | |
| 1+10 | 0.0046 | 0.06 | Q | | | | |
| 1+15 | 0.0050 | 0.06 | Q | | | | |
| 1+20 | 0.0054 | 0.06 | Q | | | | |
| 1+25 | 0.0058 | 0.06 | Q | | | | |
| 1+30 | 0.0063 | 0.06 | Q | | | | |
| 1+35 | 0.0067 | 0.06 | Q | | | | |
| 1+40 | 0.0071 | 0.06 | Q | | | | |
| 1+45 | 0.0076 | 0.06 | Q | | | | |
| 1+50 | 0.0080 | 0.06 | Q | | | | |
| 1+55 | 0.0085 | 0.06 | Q | | | | |
| 2+ 0 | 0.0089 | 0.06 | Q | | | | |
| 2+ 5 | 0.0094 | 0.07 | Q | | | | |
| 2+10 | 0.0098 | 0.07 | Q | | | | |
| 2+15 | 0.0103 | 0.07 | Q | | | | |
| 2+20 | 0.0107 | 0.07 | Q | | | | |
| 2+25 | 0.0112 | 0.07 | Q | | | | |
| 2+30 | 0.0116 | 0.07 | Q | | | | |
| 2+35 | 0.0121 | 0.07 | Q | | | | |
| 2+40 | 0.0126 | 0.07 | Q | | | | |
| 2+45 | 0.0130 | 0.07 | Q | | | | |
| 2+50 | 0.0135 | 0.07 | Q | | | | |
| 2+55 | 0.0140 | 0.07 | Q | | | | |
| 3+ 0 | 0.0144 | 0.07 | Q | | | | |
| 3+ 5 | 0.0149 | 0.07 | Q | | | | |
| 3+10 | 0.0154 | 0.07 | Q | | | | |
| 3+15 | 0.0159 | 0.07 | QV | | | | |
| 3+20 | 0.0164 | 0.07 | QV | | | | |
| 3+25 | 0.0168 | 0.07 | QV | | | | |
| 3+30 | 0.0173 | 0.07 | QV | | | | |
| 3+35 | 0.0178 | 0.07 | QV | | | | |
| 3+40 | 0.0183 | 0.07 | QV | | | | |
| 3+45 | 0.0188 | 0.07 | QV | | | | |
| 3+50 | 0.0193 | 0.07 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+55 | 0.0198 | 0.07 | QV | | | | |
| 4+ 0 | 0.0203 | 0.07 | QV | | | | |
| 4+ 5 | 0.0208 | 0.07 | QV | | | | |
| 4+10 | 0.0213 | 0.07 | QV | | | | |
| 4+15 | 0.0218 | 0.07 | QV | | | | |
| 4+20 | 0.0223 | 0.07 | QV | | | | |
| 4+25 | 0.0228 | 0.07 | QV | | | | |
| 4+30 | 0.0234 | 0.08 | QV | | | | |
| 4+35 | 0.0239 | 0.08 | QV | | | | |
| 4+40 | 0.0244 | 0.08 | QV | | | | |
| 4+45 | 0.0249 | 0.08 | QV | | | | |
| 4+50 | 0.0255 | 0.08 | QV | | | | |
| 4+55 | 0.0260 | 0.08 | QV | | | | |
| 5+ 0 | 0.0265 | 0.08 | QV | | | | |
| 5+ 5 | 0.0271 | 0.08 | QV | | | | |
| 5+10 | 0.0276 | 0.08 | QV | | | | |
| 5+15 | 0.0282 | 0.08 | QV | | | | |
| 5+20 | 0.0287 | 0.08 | QV | | | | |
| 5+25 | 0.0293 | 0.08 | QV | | | | |
| 5+30 | 0.0298 | 0.08 | QV | | | | |
| 5+35 | 0.0304 | 0.08 | QV | | | | |
| 5+40 | 0.0310 | 0.08 | QV | | | | |
| 5+45 | 0.0315 | 0.08 | QV | | | | |
| 5+50 | 0.0321 | 0.08 | Q V | | | | |
| 5+55 | 0.0327 | 0.08 | Q V | | | | |
| 6+ 0 | 0.0332 | 0.08 | Q V | | | | |
| 6+ 5 | 0.0338 | 0.08 | Q V | | | | |
| 6+10 | 0.0344 | 0.08 | Q V | | | | |
| 6+15 | 0.0350 | 0.09 | Q V | | | | |
| 6+20 | 0.0356 | 0.09 | Q V | | | | |
| 6+25 | 0.0362 | 0.09 | Q V | | | | |
| 6+30 | 0.0368 | 0.09 | Q V | | | | |
| 6+35 | 0.0374 | 0.09 | Q V | | | | |
| 6+40 | 0.0380 | 0.09 | Q V | | | | |
| 6+45 | 0.0386 | 0.09 | Q V | | | | |
| 6+50 | 0.0392 | 0.09 | Q V | | | | |
| 6+55 | 0.0398 | 0.09 | Q V | | | | |
| 7+ 0 | 0.0405 | 0.09 | Q V | | | | |
| 7+ 5 | 0.0411 | 0.09 | Q V | | | | |
| 7+10 | 0.0417 | 0.09 | Q V | | | | |
| 7+15 | 0.0424 | 0.09 | Q V | | | | |
| 7+20 | 0.0430 | 0.09 | Q V | | | | |
| 7+25 | 0.0437 | 0.09 | Q V | | | | |
| 7+30 | 0.0443 | 0.09 | Q V | | | | |
| 7+35 | 0.0450 | 0.10 | Q V | | | | |
| 7+40 | 0.0456 | 0.10 | Q V | | | | |
| 7+45 | 0.0463 | 0.10 | Q V | | | | |
| 7+50 | 0.0470 | 0.10 | Q V | | | | |
| 7+55 | 0.0477 | 0.10 | Q  V | | | | |
| 8+ 0 | 0.0483 | 0.10 | Q  V | | | | |
| 8+ 5 | 0.0490 | 0.10 | Q  V | | | | |
| 8+10 | 0.0497 | 0.10 | Q  V | | | | |
| 8+15 | 0.0504 | 0.10 | Q  V | | | | |
| 8+20 | 0.0511 | 0.10 | Q  V | | | | |
| 8+25 | 0.0518 | 0.10 | Q  V | | | | |
| 8+30 | 0.0526 | 0.10 | Q  V | | | | |
| 8+35 | 0.0533 | 0.11 | Q  V | | | | |
| 8+40 | 0.0540 | 0.11 | Q  V | | | | |
| 8+45 | 0.0548 | 0.11 | Q  V | | | | |

```
 8+50       0.0555      0.11  Q  V      |          |          |          |
 8+55       0.0563      0.11  Q  V      |          |          |          |
 9+ 0       0.0570      0.11  Q  V      |          |          |          |
 9+ 5       0.0578      0.11  Q  V      |          |          |          |
 9+10       0.0585      0.11  Q  V      |          |          |          |
 9+15       0.0593      0.11  Q  V      |          |          |          |
 9+20       0.0601      0.11  Q  V      |          |          |          |
 9+25       0.0609      0.12  Q  V      |          |          |          |
 9+30       0.0617      0.12  Q  V      |          |          |          |
 9+35       0.0625      0.12  Q  V      |          |          |          |
 9+40       0.0633      0.12  Q   V     |          |          |          |
 9+45       0.0641      0.12  Q   V     |          |          |          |
 9+50       0.0650      0.12  Q   V     |          |          |          |
 9+55       0.0658      0.12  Q   V     |          |          |          |
10+ 0       0.0667      0.12  Q   V     |          |          |          |
10+ 5       0.0675      0.12  Q   V     |          |          |          |
10+10       0.0684      0.13  Q   V     |          |          |          |
10+15       0.0693      0.13  Q   V     |          |          |          |
10+20       0.0702      0.13  Q   V     |          |          |          |
10+25       0.0711      0.13  Q   V     |          |          |          |
10+30       0.0720      0.13  Q   V     |          |          |          |
10+35       0.0729      0.13  Q   V     |          |          |          |
10+40       0.0738      0.13  Q   V     |          |          |          |
10+45       0.0747      0.14  Q   V     |          |          |          |
10+50       0.0757      0.14  Q   V     |          |          |          |
10+55       0.0767      0.14  Q   V     |          |          |          |
11+ 0       0.0776      0.14  Q   V     |          |          |          |
11+ 5       0.0786      0.14  Q   V     |          |          |          |
11+10       0.0796      0.14  Q    V    |          |          |          |
11+15       0.0806      0.15  Q    V    |          |          |          |
11+20       0.0816      0.15  Q    V    |          |          |          |
11+25       0.0827      0.15  Q    V    |          |          |          |
11+30       0.0837      0.15  Q    V    |          |          |          |
11+35       0.0848      0.15  Q    V    |          |          |          |
11+40       0.0859      0.16  Q    V    |          |          |          |
11+45       0.0870      0.16  Q    V    |          |          |          |
11+50       0.0881      0.16  Q    V    |          |          |          |
11+55       0.0892      0.16  Q    V    |          |          |          |
12+ 0       0.0904      0.17  Q    V    |          |          |          |
12+ 5       0.0915      0.17  Q    V    |          |          |          |
12+10       0.0926      0.16  Q    V    |          |          |          |
12+15       0.0937      0.15  Q    V    |          |          |          |
12+20       0.0947      0.15  Q    V    |          |          |          |
12+25       0.0958      0.15  Q     V   |          |          |          |
12+30       0.0968      0.15  Q     V   |          |          |          |
12+35       0.0979      0.15  Q     V   |          |          |          |
12+40       0.0989      0.15  Q     V   |          |          |          |
12+45       0.1000      0.16  Q     V   |          |          |          |
12+50       0.1011      0.16  Q     V   |          |          |          |
12+55       0.1022      0.16  Q     V   |          |          |          |
13+ 0       0.1033      0.16  Q     V   |          |          |          |
13+ 5       0.1045      0.17  Q     V   |          |          |          |
13+10       0.1057      0.17  Q     V   |          |          |          |
13+15       0.1069      0.18  Q     V   |          |          |          |
13+20       0.1081      0.18  Q     V   |          |          |          |
13+25       0.1094      0.18  Q     V   |          |          |          |
13+30       0.1107      0.19  Q     V   |          |          |          |
13+35       0.1120      0.19  Q      V  |          |          |          |
13+40       0.1134      0.20  Q      V  |          |          |          |
```



| | | | |
|---|---|---|---|
| 13+45 | 0.1148 | 0.20 | Q V |
| 13+50 | 0.1162 | 0.21 | Q V |
| 13+55 | 0.1177 | 0.22 | Q V |
| 14+ 0 | 0.1192 | 0.22 | Q V |
| 14+ 5 | 0.1208 | 0.23 | Q V |
| 14+10 | 0.1224 | 0.24 | Q V |
| 14+15 | 0.1241 | 0.24 | Q V |
| 14+20 | 0.1259 | 0.25 | Q V |
| 14+25 | 0.1277 | 0.26 | Q V |
| 14+30 | 0.1295 | 0.27 | Q V |
| 14+35 | 0.1315 | 0.28 | Q V |
| 14+40 | 0.1335 | 0.30 | Q V |
| 14+45 | 0.1356 | 0.31 | Q V |
| 14+50 | 0.1379 | 0.32 | Q V |
| 14+55 | 0.1402 | 0.34 | Q V |
| 15+ 0 | 0.1427 | 0.36 | Q V |
| 15+ 5 | 0.1453 | 0.38 | Q V |
| 15+10 | 0.1480 | 0.40 | Q V |
| 15+15 | 0.1510 | 0.43 | Q V |
| 15+20 | 0.1542 | 0.46 | Q V |
| 15+25 | 0.1577 | 0.52 | Q V |
| 15+30 | 0.1624 | 0.68 | Q V |
| 15+35 | 0.1686 | 0.90 | Q V |
| 15+40 | 0.1760 | 1.08 | Q V |
| 15+45 | 0.1848 | 1.28 | Q V |
| 15+50 | 0.1955 | 1.55 | Q V |
| 15+55 | 0.2089 | 1.94 | Q V |
| 16+ 0 | 0.2271 | 2.64 | Q V |
| 16+ 5 | 0.2585 | 4.56 | Q V |
| 16+10 | 0.3267 | 9.90 | QV |
| 16+15 | 0.4035 | 11.15 | Q V |
| 16+20 | 0.4477 | 6.42 | Q V |
| 16+25 | 0.4776 | 4.34 | Q V |
| 16+30 | 0.4990 | 3.11 | Q V |
| 16+35 | 0.5147 | 2.29 | Q V |
| 16+40 | 0.5267 | 1.74 | Q V |
| 16+45 | 0.5364 | 1.40 | Q V |
| 16+50 | 0.5442 | 1.13 | Q V |
| 16+55 | 0.5506 | 0.93 | Q V |
| 17+ 0 | 0.5557 | 0.75 | Q V |
| 17+ 5 | 0.5599 | 0.60 | Q V |
| 17+10 | 0.5636 | 0.54 | Q V |
| 17+15 | 0.5671 | 0.50 | Q V |
| 17+20 | 0.5699 | 0.41 | Q V |
| 17+25 | 0.5723 | 0.35 | Q V |
| 17+30 | 0.5740 | 0.25 | Q V |
| 17+35 | 0.5755 | 0.22 | Q V |
| 17+40 | 0.5769 | 0.21 | Q V |
| 17+45 | 0.5783 | 0.19 | Q V |
| 17+50 | 0.5795 | 0.18 | Q V |
| 17+55 | 0.5807 | 0.17 | Q V |
| 18+ 0 | 0.5819 | 0.17 | Q V |
| 18+ 5 | 0.5830 | 0.16 | Q V |
| 18+10 | 0.5841 | 0.16 | Q V |
| 18+15 | 0.5853 | 0.17 | Q V |
| 18+20 | 0.5864 | 0.17 | Q V |
| 18+25 | 0.5876 | 0.16 | Q V |
| 18+30 | 0.5887 | 0.16 | Q V |
| 18+35 | 0.5898 | 0.16 | Q V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18+40 | 0.5908 | 0.15 | Q | \| | \| | \| | V \| |
| 18+45 | 0.5919 | 0.15 | Q | \| | \| | \| | V \| |
| 18+50 | 0.5929 | 0.15 | Q | \| | \| | \| | V \| |
| 18+55 | 0.5939 | 0.14 | Q | \| | \| | \| | V \| |
| 19+ 0 | 0.5949 | 0.14 | Q | \| | \| | \| | V \| |
| 19+ 5 | 0.5958 | 0.14 | Q | \| | \| | \| | V \| |
| 19+10 | 0.5967 | 0.13 | Q | \| | \| | \| | V \| |
| 19+15 | 0.5976 | 0.13 | Q | \| | \| | \| | V \| |
| 19+20 | 0.5985 | 0.13 | Q | \| | \| | \| | V \| |
| 19+25 | 0.5994 | 0.13 | Q | \| | \| | \| | V \| |
| 19+30 | 0.6003 | 0.12 | Q | \| | \| | \| | V \| |
| 19+35 | 0.6011 | 0.12 | Q | \| | \| | \| | V \| |
| 19+40 | 0.6019 | 0.12 | Q | \| | \| | \| | V \| |
| 19+45 | 0.6027 | 0.12 | Q | \| | \| | \| | V \| |
| 19+50 | 0.6035 | 0.11 | Q | \| | \| | \| | V \| |
| 19+55 | 0.6043 | 0.11 | Q | \| | \| | \| | V \| |
| 20+ 0 | 0.6050 | 0.11 | Q | \| | \| | \| | V \| |
| 20+ 5 | 0.6058 | 0.11 | Q | \| | \| | \| | V \| |
| 20+10 | 0.6065 | 0.11 | Q | \| | \| | \| | V \| |
| 20+15 | 0.6072 | 0.10 | Q | \| | \| | \| | V \| |
| 20+20 | 0.6079 | 0.10 | Q | \| | \| | \| | V \| |
| 20+25 | 0.6086 | 0.10 | Q | \| | \| | \| | V \| |
| 20+30 | 0.6093 | 0.10 | Q | \| | \| | \| | V \| |
| 20+35 | 0.6100 | 0.10 | Q | \| | \| | \| | V \| |
| 20+40 | 0.6106 | 0.10 | Q | \| | \| | \| | V \| |
| 20+45 | 0.6113 | 0.09 | Q | \| | \| | \| | V \| |
| 20+50 | 0.6119 | 0.09 | Q | \| | \| | \| | V \| |
| 20+55 | 0.6126 | 0.09 | Q | \| | \| | \| | V \| |
| 21+ 0 | 0.6132 | 0.09 | Q | \| | \| | \| | V \| |
| 21+ 5 | 0.6138 | 0.09 | Q | \| | \| | \| | V \| |
| 21+10 | 0.6144 | 0.09 | Q | \| | \| | \| | V \| |
| 21+15 | 0.6150 | 0.09 | Q | \| | \| | \| | V \| |
| 21+20 | 0.6156 | 0.09 | Q | \| | \| | \| | V \| |
| 21+25 | 0.6162 | 0.08 | Q | \| | \| | \| | V \| |
| 21+30 | 0.6168 | 0.08 | Q | \| | \| | \| | V \| |
| 21+35 | 0.6174 | 0.08 | Q | \| | \| | \| | V\| |
| 21+40 | 0.6179 | 0.08 | Q | \| | \| | \| | V\| |
| 21+45 | 0.6185 | 0.08 | Q | \| | \| | \| | V\| |
| 21+50 | 0.6190 | 0.08 | Q | \| | \| | \| | V\| |
| 21+55 | 0.6196 | 0.08 | Q | \| | \| | \| | V\| |
| 22+ 0 | 0.6201 | 0.08 | Q | \| | \| | \| | V\| |
| 22+ 5 | 0.6206 | 0.08 | Q | \| | \| | \| | V\| |
| 22+10 | 0.6212 | 0.08 | Q | \| | \| | \| | V\| |
| 22+15 | 0.6217 | 0.08 | Q | \| | \| | \| | V\| |
| 22+20 | 0.6222 | 0.07 | Q | \| | \| | \| | V\| |
| 22+25 | 0.6227 | 0.07 | Q | \| | \| | \| | V\| |
| 22+30 | 0.6232 | 0.07 | Q | \| | \| | \| | V\| |
| 22+35 | 0.6237 | 0.07 | Q | \| | \| | \| | V\| |
| 22+40 | 0.6242 | 0.07 | Q | \| | \| | \| | V\| |
| 22+45 | 0.6247 | 0.07 | Q | \| | \| | \| | V\| |
| 22+50 | 0.6252 | 0.07 | Q | \| | \| | \| | V\| |
| 22+55 | 0.6256 | 0.07 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.6261 | 0.07 | Q | \| | \| | \| | V\| |
| 23+ 5 | 0.6266 | 0.07 | Q | \| | \| | \| | V\| |
| 23+10 | 0.6270 | 0.07 | Q | \| | \| | \| | V\| |
| 23+15 | 0.6275 | 0.07 | Q | \| | \| | \| | V\| |
| 23+20 | 0.6280 | 0.07 | Q | \| | \| | \| | V\| |
| 23+25 | 0.6284 | 0.07 | Q | \| | \| | \| | V\| |
| 23+30 | 0.6289 | 0.06 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+35 | 0.6293 | 0.06 | Q | \| | \| | \| | V\| |
| 23+40 | 0.6297 | 0.06 | Q | \| | \| | \| | V\| |
| 23+45 | 0.6302 | 0.06 | Q | \| | \| | \| | V\| |
| 23+50 | 0.6306 | 0.06 | Q | \| | \| | \| | V\| |
| 23+55 | 0.6310 | 0.06 | Q | \| | \| | \| | V\| |
| 24+ 0 | 0.6314 | 0.06 | Q | \| | \| | \| | V\| |
| 24+ 5 | 0.6319 | 0.06 | Q | \| | \| | \| | V\| |
| 24+10 | 0.6322 | 0.04 | Q | \| | \| | \| | V\| |
| 24+15 | 0.6323 | 0.03 | Q | \| | \| | \| | V\| |
| 24+20 | 0.6324 | 0.02 | Q | \| | \| | \| | V\| |
| 24+25 | 0.6325 | 0.01 | Q | \| | \| | \| | V\| |
| 24+30 | 0.6326 | 0.01 | Q | \| | \| | \| | V\| |
| 24+35 | 0.6326 | 0.01 | Q | \| | \| | \| | V\| |
| 24+40 | 0.6327 | 0.00 | Q | \| | \| | \| | V\| |
| 24+45 | 0.6327 | 0.00 | Q | \| | \| | \| | V\| |
| 24+50 | 0.6327 | 0.00 | Q | \| | \| | \| | V\| |
| 24+55 | 0.6327 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 0 | 0.6327 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 5 | 0.6328 | 0.00 | Q | \| | \| | \| | V\| |
| 25+10 | 0.6328 | 0.00 | Q | \| | \| | \| | V\| |
| 25+15 | 0.6328 | 0.00 | Q | \| | \| | \| | V\| |
| 25+20 | 0.6328 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 23
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 69.41 | 1 | 1.36 |
| Rainfall data for year 100 | | |
| 69.41 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 69.41 | 24 | 2.48 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.0 | 92.8 | 69.41 | 1.000 | 0.140 | 0.900 | 0.126 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.126

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 62.47 | 0.900 | 78.0 | 92.8 | 0.78 | 0.703 |
| 6.94 | 0.100 | 98.0 | 98.0 | 0.20 | 0.908 |

Area-averaged catchment yield fraction, Y = 0.723
Area-averaged low loss fraction, Yb = 0.277
User entry of time of concentration = 0.890 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 69.41(Ac.)
Catchment Lag time = 0.712 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 11.7041
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.126(In/Hr)
Average low loss rate fraction (Yb) = 0.277 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.645(In)
Computed peak 30-minute rainfall = 1.105(In)
Specified peak 1-hour rainfall = 1.360(In)
Computed peak 3-hour rainfall = 1.637(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.480(In)

Rainfall depth area reduction factors:
Using a total area of 69.41(Ac.) (Ref: fig. E-4)

5-minute factor = 0.997 Adjusted rainfall = 0.643(In)
30-minute factor = 0.997 Adjusted rainfall = 1.101(In)
1-hour factor = 0.997 Adjusted rainfall = 1.356(In)
3-hour factor = 1.000 Adjusted rainfall = 1.636(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.480(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 839.43 (CFS)) | |
| 1 | 0.515 | 4.323 |
| 2 | 1.952 | 12.059 |
| 3 | 4.265 | 19.421 |
| 4 | 7.485 | 27.032 |
| 5 | 12.339 | 40.746 |
| 6 | 20.677 | 69.991 |
| 7 | 32.058 | 95.533 |
| 8 | 41.893 | 82.560 |
| 9 | 49.524 | 64.057 |
| 10 | 55.699 | 51.827 |
| 11 | 60.448 | 39.867 |
| 12 | 64.277 | 32.139 |
| 13 | 67.519 | 27.217 |

| | | |
|---|---|---|
| 14 | 70.418 | 24.338 |
| 15 | 72.942 | 21.182 |
| 16 | 75.129 | 18.360 |
| 17 | 77.144 | 16.914 |
| 18 | 78.935 | 15.035 |
| 19 | 80.481 | 12.982 |
| 20 | 81.942 | 12.259 |
| 21 | 83.213 | 10.670 |
| 22 | 84.448 | 10.369 |
| 23 | 85.581 | 9.508 |
| 24 | 86.681 | 9.232 |
| 25 | 87.640 | 8.053 |
| 26 | 88.561 | 7.727 |
| 27 | 89.310 | 6.287 |
| 28 | 90.011 | 5.884 |
| 29 | 90.680 | 5.618 |
| 30 | 91.335 | 5.498 |
| 31 | 91.935 | 5.037 |
| 32 | 92.497 | 4.716 |
| 33 | 93.037 | 4.535 |
| 34 | 93.552 | 4.323 |
| 35 | 94.027 | 3.989 |
| 36 | 94.427 | 3.356 |
| 37 | 94.825 | 3.340 |
| 38 | 95.223 | 3.340 |
| 39 | 95.606 | 3.221 |
| 40 | 95.920 | 2.633 |
| 41 | 96.224 | 2.554 |
| 42 | 96.529 | 2.554 |
| 43 | 96.829 | 2.524 |
| 44 | 97.064 | 1.972 |
| 45 | 97.275 | 1.768 |
| 46 | 97.486 | 1.768 |
| 47 | 97.696 | 1.768 |
| 48 | 97.859 | 1.369 |
| 49 | 97.976 | 0.982 |
| 50 | 98.094 | 0.982 |
| 51 | 98.211 | 0.982 |
| 52 | 98.334 | 1.036 |
| 53 | 98.474 | 1.172 |
| 54 | 98.614 | 1.179 |
| 55 | 98.754 | 1.179 |
| 56 | 98.895 | 1.179 |
| 57 | 99.035 | 1.179 |
| 58 | 99.176 | 1.179 |
| 59 | 99.316 | 1.179 |
| 60 | 99.456 | 1.169 |
| 61 | 99.551 | 0.798 |
| 62 | 99.624 | 0.614 |
| 63 | 99.697 | 0.614 |
| 64 | 99.770 | 0.614 |
| 65 | 99.843 | 0.614 |
| 66 | 99.916 | 0.614 |
| 67 | 100.000 | 0.307 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6432 | 0.6432 |
| 2 | 0.7919 | 0.1487 |

| | | |
|---|---|---|
| 3 | 0.8943 | 0.1024 |
| 4 | 0.9750 | 0.0806 |
| 5 | 1.0425 | 0.0675 |
| 6 | 1.1011 | 0.0586 |
| 7 | 1.1532 | 0.0521 |
| 8 | 1.2003 | 0.0471 |
| 9 | 1.2435 | 0.0432 |
| 10 | 1.2834 | 0.0399 |
| 11 | 1.3206 | 0.0372 |
| 12 | 1.3556 | 0.0349 |
| 13 | 1.3743 | 0.0187 |
| 14 | 1.3918 | 0.0176 |
| 15 | 1.4084 | 0.0165 |
| 16 | 1.4241 | 0.0157 |
| 17 | 1.4389 | 0.0149 |
| 18 | 1.4531 | 0.0142 |
| 19 | 1.4666 | 0.0135 |
| 20 | 1.4795 | 0.0129 |
| 21 | 1.4920 | 0.0124 |
| 22 | 1.5039 | 0.0119 |
| 23 | 1.5154 | 0.0115 |
| 24 | 1.5265 | 0.0111 |
| 25 | 1.5372 | 0.0107 |
| 26 | 1.5475 | 0.0104 |
| 27 | 1.5576 | 0.0100 |
| 28 | 1.5673 | 0.0097 |
| 29 | 1.5768 | 0.0094 |
| 30 | 1.5860 | 0.0092 |
| 31 | 1.5949 | 0.0089 |
| 32 | 1.6036 | 0.0087 |
| 33 | 1.6121 | 0.0085 |
| 34 | 1.6203 | 0.0083 |
| 35 | 1.6284 | 0.0081 |
| 36 | 1.6363 | 0.0079 |
| 37 | 1.6439 | 0.0076 |
| 38 | 1.6513 | 0.0074 |
| 39 | 1.6585 | 0.0073 |
| 40 | 1.6657 | 0.0071 |
| 41 | 1.6726 | 0.0070 |
| 42 | 1.6794 | 0.0068 |
| 43 | 1.6861 | 0.0067 |
| 44 | 1.6927 | 0.0066 |
| 45 | 1.6991 | 0.0064 |
| 46 | 1.7055 | 0.0063 |
| 47 | 1.7117 | 0.0062 |
| 48 | 1.7178 | 0.0061 |
| 49 | 1.7238 | 0.0060 |
| 50 | 1.7297 | 0.0059 |
| 51 | 1.7355 | 0.0058 |
| 52 | 1.7412 | 0.0057 |
| 53 | 1.7468 | 0.0056 |
| 54 | 1.7523 | 0.0055 |
| 55 | 1.7578 | 0.0054 |
| 56 | 1.7631 | 0.0054 |
| 57 | 1.7684 | 0.0053 |
| 58 | 1.7736 | 0.0052 |
| 59 | 1.7787 | 0.0051 |
| 60 | 1.7838 | 0.0051 |
| 61 | 1.7888 | 0.0050 |

| | | |
|---|---|---|
| 62 | 1.7937 | 0.0049 |
| 63 | 1.7986 | 0.0049 |
| 64 | 1.8033 | 0.0048 |
| 65 | 1.8081 | 0.0047 |
| 66 | 1.8127 | 0.0047 |
| 67 | 1.8174 | 0.0046 |
| 68 | 1.8219 | 0.0046 |
| 69 | 1.8264 | 0.0045 |
| 70 | 1.8309 | 0.0044 |
| 71 | 1.8353 | 0.0044 |
| 72 | 1.8396 | 0.0043 |
| 73 | 1.8451 | 0.0055 |
| 74 | 1.8505 | 0.0054 |
| 75 | 1.8558 | 0.0054 |
| 76 | 1.8612 | 0.0053 |
| 77 | 1.8664 | 0.0052 |
| 78 | 1.8716 | 0.0052 |
| 79 | 1.8767 | 0.0051 |
| 80 | 1.8818 | 0.0051 |
| 81 | 1.8869 | 0.0050 |
| 82 | 1.8919 | 0.0050 |
| 83 | 1.8968 | 0.0049 |
| 84 | 1.9017 | 0.0049 |
| 85 | 1.9066 | 0.0049 |
| 86 | 1.9114 | 0.0048 |
| 87 | 1.9161 | 0.0048 |
| 88 | 1.9209 | 0.0047 |
| 89 | 1.9255 | 0.0047 |
| 90 | 1.9302 | 0.0046 |
| 91 | 1.9348 | 0.0046 |
| 92 | 1.9393 | 0.0046 |
| 93 | 1.9439 | 0.0045 |
| 94 | 1.9484 | 0.0045 |
| 95 | 1.9528 | 0.0044 |
| 96 | 1.9572 | 0.0044 |
| 97 | 1.9616 | 0.0044 |
| 98 | 1.9659 | 0.0043 |
| 99 | 1.9702 | 0.0043 |
| 100 | 1.9745 | 0.0043 |
| 101 | 1.9787 | 0.0042 |
| 102 | 1.9829 | 0.0042 |
| 103 | 1.9871 | 0.0042 |
| 104 | 1.9912 | 0.0041 |
| 105 | 1.9954 | 0.0041 |
| 106 | 1.9994 | 0.0041 |
| 107 | 2.0035 | 0.0040 |
| 108 | 2.0075 | 0.0040 |
| 109 | 2.0115 | 0.0040 |
| 110 | 2.0155 | 0.0040 |
| 111 | 2.0194 | 0.0039 |
| 112 | 2.0233 | 0.0039 |
| 113 | 2.0272 | 0.0039 |
| 114 | 2.0310 | 0.0039 |
| 115 | 2.0348 | 0.0038 |
| 116 | 2.0386 | 0.0038 |
| 117 | 2.0424 | 0.0038 |
| 118 | 2.0462 | 0.0037 |
| 119 | 2.0499 | 0.0037 |
| 120 | 2.0536 | 0.0037 |

| | | |
|---|---|---|
| 121 | 2.0573 | 0.0037 |
| 122 | 2.0609 | 0.0037 |
| 123 | 2.0645 | 0.0036 |
| 124 | 2.0681 | 0.0036 |
| 125 | 2.0717 | 0.0036 |
| 126 | 2.0753 | 0.0036 |
| 127 | 2.0788 | 0.0035 |
| 128 | 2.0823 | 0.0035 |
| 129 | 2.0858 | 0.0035 |
| 130 | 2.0893 | 0.0035 |
| 131 | 2.0927 | 0.0035 |
| 132 | 2.0962 | 0.0034 |
| 133 | 2.0996 | 0.0034 |
| 134 | 2.1030 | 0.0034 |
| 135 | 2.1064 | 0.0034 |
| 136 | 2.1097 | 0.0034 |
| 137 | 2.1130 | 0.0033 |
| 138 | 2.1163 | 0.0033 |
| 139 | 2.1196 | 0.0033 |
| 140 | 2.1229 | 0.0033 |
| 141 | 2.1262 | 0.0033 |
| 142 | 2.1294 | 0.0032 |
| 143 | 2.1326 | 0.0032 |
| 144 | 2.1358 | 0.0032 |
| 145 | 2.1390 | 0.0032 |
| 146 | 2.1422 | 0.0032 |
| 147 | 2.1453 | 0.0032 |
| 148 | 2.1485 | 0.0031 |
| 149 | 2.1516 | 0.0031 |
| 150 | 2.1547 | 0.0031 |
| 151 | 2.1578 | 0.0031 |
| 152 | 2.1609 | 0.0031 |
| 153 | 2.1639 | 0.0031 |
| 154 | 2.1670 | 0.0030 |
| 155 | 2.1700 | 0.0030 |
| 156 | 2.1730 | 0.0030 |
| 157 | 2.1760 | 0.0030 |
| 158 | 2.1790 | 0.0030 |
| 159 | 2.1819 | 0.0030 |
| 160 | 2.1849 | 0.0029 |
| 161 | 2.1878 | 0.0029 |
| 162 | 2.1907 | 0.0029 |
| 163 | 2.1936 | 0.0029 |
| 164 | 2.1965 | 0.0029 |
| 165 | 2.1994 | 0.0029 |
| 166 | 2.2023 | 0.0029 |
| 167 | 2.2051 | 0.0029 |
| 168 | 2.2080 | 0.0028 |
| 169 | 2.2108 | 0.0028 |
| 170 | 2.2136 | 0.0028 |
| 171 | 2.2164 | 0.0028 |
| 172 | 2.2192 | 0.0028 |
| 173 | 2.2219 | 0.0028 |
| 174 | 2.2247 | 0.0028 |
| 175 | 2.2275 | 0.0027 |
| 176 | 2.2302 | 0.0027 |
| 177 | 2.2329 | 0.0027 |
| 178 | 2.2356 | 0.0027 |
| 179 | 2.2383 | 0.0027 |

| | | |
|---|---|---|
| 180 | 2.2410 | 0.0027 |
| 181 | 2.2437 | 0.0027 |
| 182 | 2.2464 | 0.0027 |
| 183 | 2.2490 | 0.0027 |
| 184 | 2.2516 | 0.0026 |
| 185 | 2.2543 | 0.0026 |
| 186 | 2.2569 | 0.0026 |
| 187 | 2.2595 | 0.0026 |
| 188 | 2.2621 | 0.0026 |
| 189 | 2.2647 | 0.0026 |
| 190 | 2.2673 | 0.0026 |
| 191 | 2.2698 | 0.0026 |
| 192 | 2.2724 | 0.0026 |
| 193 | 2.2749 | 0.0025 |
| 194 | 2.2775 | 0.0025 |
| 195 | 2.2800 | 0.0025 |
| 196 | 2.2825 | 0.0025 |
| 197 | 2.2850 | 0.0025 |
| 198 | 2.2875 | 0.0025 |
| 199 | 2.2900 | 0.0025 |
| 200 | 2.2925 | 0.0025 |
| 201 | 2.2949 | 0.0025 |
| 202 | 2.2974 | 0.0025 |
| 203 | 2.2998 | 0.0024 |
| 204 | 2.3023 | 0.0024 |
| 205 | 2.3047 | 0.0024 |
| 206 | 2.3071 | 0.0024 |
| 207 | 2.3095 | 0.0024 |
| 208 | 2.3119 | 0.0024 |
| 209 | 2.3143 | 0.0024 |
| 210 | 2.3167 | 0.0024 |
| 211 | 2.3190 | 0.0024 |
| 212 | 2.3214 | 0.0024 |
| 213 | 2.3238 | 0.0024 |
| 214 | 2.3261 | 0.0023 |
| 215 | 2.3284 | 0.0023 |
| 216 | 2.3308 | 0.0023 |
| 217 | 2.3331 | 0.0023 |
| 218 | 2.3354 | 0.0023 |
| 219 | 2.3377 | 0.0023 |
| 220 | 2.3400 | 0.0023 |
| 221 | 2.3423 | 0.0023 |
| 222 | 2.3446 | 0.0023 |
| 223 | 2.3468 | 0.0023 |
| 224 | 2.3491 | 0.0023 |
| 225 | 2.3514 | 0.0023 |
| 226 | 2.3536 | 0.0022 |
| 227 | 2.3559 | 0.0022 |
| 228 | 2.3581 | 0.0022 |
| 229 | 2.3603 | 0.0022 |
| 230 | 2.3625 | 0.0022 |
| 231 | 2.3647 | 0.0022 |
| 232 | 2.3669 | 0.0022 |
| 233 | 2.3691 | 0.0022 |
| 234 | 2.3713 | 0.0022 |
| 235 | 2.3735 | 0.0022 |
| 236 | 2.3757 | 0.0022 |
| 237 | 2.3778 | 0.0022 |
| 238 | 2.3800 | 0.0022 |

| | | |
|---|---|---|
| 239 | 2.3821 | 0.0022 |
| 240 | 2.3843 | 0.0021 |
| 241 | 2.3864 | 0.0021 |
| 242 | 2.3885 | 0.0021 |
| 243 | 2.3907 | 0.0021 |
| 244 | 2.3928 | 0.0021 |
| 245 | 2.3949 | 0.0021 |
| 246 | 2.3970 | 0.0021 |
| 247 | 2.3991 | 0.0021 |
| 248 | 2.4012 | 0.0021 |
| 249 | 2.4033 | 0.0021 |
| 250 | 2.4053 | 0.0021 |
| 251 | 2.4074 | 0.0021 |
| 252 | 2.4095 | 0.0021 |
| 253 | 2.4115 | 0.0021 |
| 254 | 2.4136 | 0.0021 |
| 255 | 2.4156 | 0.0020 |
| 256 | 2.4177 | 0.0020 |
| 257 | 2.4197 | 0.0020 |
| 258 | 2.4217 | 0.0020 |
| 259 | 2.4237 | 0.0020 |
| 260 | 2.4257 | 0.0020 |
| 261 | 2.4278 | 0.0020 |
| 262 | 2.4298 | 0.0020 |
| 263 | 2.4317 | 0.0020 |
| 264 | 2.4337 | 0.0020 |
| 265 | 2.4357 | 0.0020 |
| 266 | 2.4377 | 0.0020 |
| 267 | 2.4397 | 0.0020 |
| 268 | 2.4416 | 0.0020 |
| 269 | 2.4436 | 0.0020 |
| 270 | 2.4455 | 0.0020 |
| 271 | 2.4475 | 0.0019 |
| 272 | 2.4494 | 0.0019 |
| 273 | 2.4514 | 0.0019 |
| 274 | 2.4533 | 0.0019 |
| 275 | 2.4552 | 0.0019 |
| 276 | 2.4572 | 0.0019 |
| 277 | 2.4591 | 0.0019 |
| 278 | 2.4610 | 0.0019 |
| 279 | 2.4629 | 0.0019 |
| 280 | 2.4648 | 0.0019 |
| 281 | 2.4667 | 0.0019 |
| 282 | 2.4686 | 0.0019 |
| 283 | 2.4704 | 0.0019 |
| 284 | 2.4723 | 0.0019 |
| 285 | 2.4742 | 0.0019 |
| 286 | 2.4761 | 0.0019 |
| 287 | 2.4779 | 0.0019 |
| 288 | 2.4798 | 0.0019 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0019 | 0.0005 | 0.0013 |
| 2 | 0.0019 | 0.0005 | 0.0013 |
| 3 | 0.0019 | 0.0005 | 0.0014 |
| 4 | 0.0019 | 0.0005 | 0.0014 |

| | | | |
|---|---|---|---|
| 5 | 0.0019 | 0.0005 | 0.0014 |
| 6 | 0.0019 | 0.0005 | 0.0014 |
| 7 | 0.0019 | 0.0005 | 0.0014 |
| 8 | 0.0019 | 0.0005 | 0.0014 |
| 9 | 0.0019 | 0.0005 | 0.0014 |
| 10 | 0.0019 | 0.0005 | 0.0014 |
| 11 | 0.0019 | 0.0005 | 0.0014 |
| 12 | 0.0019 | 0.0005 | 0.0014 |
| 13 | 0.0020 | 0.0005 | 0.0014 |
| 14 | 0.0020 | 0.0005 | 0.0014 |
| 15 | 0.0020 | 0.0005 | 0.0014 |
| 16 | 0.0020 | 0.0005 | 0.0014 |
| 17 | 0.0020 | 0.0006 | 0.0014 |
| 18 | 0.0020 | 0.0006 | 0.0014 |
| 19 | 0.0020 | 0.0006 | 0.0015 |
| 20 | 0.0020 | 0.0006 | 0.0015 |
| 21 | 0.0020 | 0.0006 | 0.0015 |
| 22 | 0.0020 | 0.0006 | 0.0015 |
| 23 | 0.0020 | 0.0006 | 0.0015 |
| 24 | 0.0021 | 0.0006 | 0.0015 |
| 25 | 0.0021 | 0.0006 | 0.0015 |
| 26 | 0.0021 | 0.0006 | 0.0015 |
| 27 | 0.0021 | 0.0006 | 0.0015 |
| 28 | 0.0021 | 0.0006 | 0.0015 |
| 29 | 0.0021 | 0.0006 | 0.0015 |
| 30 | 0.0021 | 0.0006 | 0.0015 |
| 31 | 0.0021 | 0.0006 | 0.0015 |
| 32 | 0.0021 | 0.0006 | 0.0015 |
| 33 | 0.0021 | 0.0006 | 0.0016 |
| 34 | 0.0022 | 0.0006 | 0.0016 |
| 35 | 0.0022 | 0.0006 | 0.0016 |
| 36 | 0.0022 | 0.0006 | 0.0016 |
| 37 | 0.0022 | 0.0006 | 0.0016 |
| 38 | 0.0022 | 0.0006 | 0.0016 |
| 39 | 0.0022 | 0.0006 | 0.0016 |
| 40 | 0.0022 | 0.0006 | 0.0016 |
| 41 | 0.0022 | 0.0006 | 0.0016 |
| 42 | 0.0022 | 0.0006 | 0.0016 |
| 43 | 0.0023 | 0.0006 | 0.0016 |
| 44 | 0.0023 | 0.0006 | 0.0016 |
| 45 | 0.0023 | 0.0006 | 0.0016 |
| 46 | 0.0023 | 0.0006 | 0.0017 |
| 47 | 0.0023 | 0.0006 | 0.0017 |
| 48 | 0.0023 | 0.0006 | 0.0017 |
| 49 | 0.0023 | 0.0006 | 0.0017 |
| 50 | 0.0023 | 0.0006 | 0.0017 |
| 51 | 0.0024 | 0.0007 | 0.0017 |
| 52 | 0.0024 | 0.0007 | 0.0017 |
| 53 | 0.0024 | 0.0007 | 0.0017 |
| 54 | 0.0024 | 0.0007 | 0.0017 |
| 55 | 0.0024 | 0.0007 | 0.0017 |
| 56 | 0.0024 | 0.0007 | 0.0017 |
| 57 | 0.0024 | 0.0007 | 0.0018 |
| 58 | 0.0024 | 0.0007 | 0.0018 |
| 59 | 0.0025 | 0.0007 | 0.0018 |
| 60 | 0.0025 | 0.0007 | 0.0018 |
| 61 | 0.0025 | 0.0007 | 0.0018 |
| 62 | 0.0025 | 0.0007 | 0.0018 |
| 63 | 0.0025 | 0.0007 | 0.0018 |

| | | | |
|---|---|---|---|
| 64 | 0.0025 | 0.0007 | 0.0018 |
| 65 | 0.0026 | 0.0007 | 0.0018 |
| 66 | 0.0026 | 0.0007 | 0.0019 |
| 67 | 0.0026 | 0.0007 | 0.0019 |
| 68 | 0.0026 | 0.0007 | 0.0019 |
| 69 | 0.0026 | 0.0007 | 0.0019 |
| 70 | 0.0026 | 0.0007 | 0.0019 |
| 71 | 0.0027 | 0.0007 | 0.0019 |
| 72 | 0.0027 | 0.0007 | 0.0019 |
| 73 | 0.0027 | 0.0007 | 0.0019 |
| 74 | 0.0027 | 0.0007 | 0.0020 |
| 75 | 0.0027 | 0.0008 | 0.0020 |
| 76 | 0.0027 | 0.0008 | 0.0020 |
| 77 | 0.0028 | 0.0008 | 0.0020 |
| 78 | 0.0028 | 0.0008 | 0.0020 |
| 79 | 0.0028 | 0.0008 | 0.0020 |
| 80 | 0.0028 | 0.0008 | 0.0020 |
| 81 | 0.0028 | 0.0008 | 0.0021 |
| 82 | 0.0029 | 0.0008 | 0.0021 |
| 83 | 0.0029 | 0.0008 | 0.0021 |
| 84 | 0.0029 | 0.0008 | 0.0021 |
| 85 | 0.0029 | 0.0008 | 0.0021 |
| 86 | 0.0029 | 0.0008 | 0.0021 |
| 87 | 0.0030 | 0.0008 | 0.0021 |
| 88 | 0.0030 | 0.0008 | 0.0022 |
| 89 | 0.0030 | 0.0008 | 0.0022 |
| 90 | 0.0030 | 0.0008 | 0.0022 |
| 91 | 0.0031 | 0.0008 | 0.0022 |
| 92 | 0.0031 | 0.0008 | 0.0022 |
| 93 | 0.0031 | 0.0009 | 0.0022 |
| 94 | 0.0031 | 0.0009 | 0.0023 |
| 95 | 0.0032 | 0.0009 | 0.0023 |
| 96 | 0.0032 | 0.0009 | 0.0023 |
| 97 | 0.0032 | 0.0009 | 0.0023 |
| 98 | 0.0032 | 0.0009 | 0.0023 |
| 99 | 0.0033 | 0.0009 | 0.0024 |
| 100 | 0.0033 | 0.0009 | 0.0024 |
| 101 | 0.0033 | 0.0009 | 0.0024 |
| 102 | 0.0033 | 0.0009 | 0.0024 |
| 103 | 0.0034 | 0.0009 | 0.0024 |
| 104 | 0.0034 | 0.0009 | 0.0025 |
| 105 | 0.0034 | 0.0009 | 0.0025 |
| 106 | 0.0035 | 0.0010 | 0.0025 |
| 107 | 0.0035 | 0.0010 | 0.0025 |
| 108 | 0.0035 | 0.0010 | 0.0025 |
| 109 | 0.0036 | 0.0010 | 0.0026 |
| 110 | 0.0036 | 0.0010 | 0.0026 |
| 111 | 0.0036 | 0.0010 | 0.0026 |
| 112 | 0.0037 | 0.0010 | 0.0026 |
| 113 | 0.0037 | 0.0010 | 0.0027 |
| 114 | 0.0037 | 0.0010 | 0.0027 |
| 115 | 0.0038 | 0.0010 | 0.0027 |
| 116 | 0.0038 | 0.0011 | 0.0027 |
| 117 | 0.0039 | 0.0011 | 0.0028 |
| 118 | 0.0039 | 0.0011 | 0.0028 |
| 119 | 0.0039 | 0.0011 | 0.0028 |
| 120 | 0.0040 | 0.0011 | 0.0029 |
| 121 | 0.0040 | 0.0011 | 0.0029 |
| 122 | 0.0040 | 0.0011 | 0.0029 |

| | | | |
|---|---|---|---|
| 123 | 0.0041 | 0.0011 | 0.0030 |
| 124 | 0.0041 | 0.0011 | 0.0030 |
| 125 | 0.0042 | 0.0012 | 0.0030 |
| 126 | 0.0042 | 0.0012 | 0.0031 |
| 127 | 0.0043 | 0.0012 | 0.0031 |
| 128 | 0.0043 | 0.0012 | 0.0031 |
| 129 | 0.0044 | 0.0012 | 0.0032 |
| 130 | 0.0044 | 0.0012 | 0.0032 |
| 131 | 0.0045 | 0.0013 | 0.0033 |
| 132 | 0.0046 | 0.0013 | 0.0033 |
| 133 | 0.0046 | 0.0013 | 0.0034 |
| 134 | 0.0047 | 0.0013 | 0.0034 |
| 135 | 0.0048 | 0.0013 | 0.0034 |
| 136 | 0.0048 | 0.0013 | 0.0035 |
| 137 | 0.0049 | 0.0014 | 0.0035 |
| 138 | 0.0049 | 0.0014 | 0.0036 |
| 139 | 0.0050 | 0.0014 | 0.0036 |
| 140 | 0.0051 | 0.0014 | 0.0037 |
| 141 | 0.0052 | 0.0014 | 0.0038 |
| 142 | 0.0052 | 0.0015 | 0.0038 |
| 143 | 0.0054 | 0.0015 | 0.0039 |
| 144 | 0.0054 | 0.0015 | 0.0039 |
| 145 | 0.0043 | 0.0012 | 0.0031 |
| 146 | 0.0044 | 0.0012 | 0.0032 |
| 147 | 0.0045 | 0.0012 | 0.0033 |
| 148 | 0.0046 | 0.0013 | 0.0033 |
| 149 | 0.0047 | 0.0013 | 0.0034 |
| 150 | 0.0047 | 0.0013 | 0.0034 |
| 151 | 0.0049 | 0.0013 | 0.0035 |
| 152 | 0.0049 | 0.0014 | 0.0036 |
| 153 | 0.0051 | 0.0014 | 0.0037 |
| 154 | 0.0051 | 0.0014 | 0.0037 |
| 155 | 0.0053 | 0.0015 | 0.0038 |
| 156 | 0.0054 | 0.0015 | 0.0039 |
| 157 | 0.0055 | 0.0015 | 0.0040 |
| 158 | 0.0056 | 0.0016 | 0.0041 |
| 159 | 0.0058 | 0.0016 | 0.0042 |
| 160 | 0.0059 | 0.0016 | 0.0043 |
| 161 | 0.0061 | 0.0017 | 0.0044 |
| 162 | 0.0062 | 0.0017 | 0.0045 |
| 163 | 0.0064 | 0.0018 | 0.0047 |
| 164 | 0.0066 | 0.0018 | 0.0047 |
| 165 | 0.0068 | 0.0019 | 0.0049 |
| 166 | 0.0070 | 0.0019 | 0.0050 |
| 167 | 0.0073 | 0.0020 | 0.0053 |
| 168 | 0.0074 | 0.0021 | 0.0054 |
| 169 | 0.0079 | 0.0022 | 0.0057 |
| 170 | 0.0081 | 0.0022 | 0.0058 |
| 171 | 0.0085 | 0.0023 | 0.0061 |
| 172 | 0.0087 | 0.0024 | 0.0063 |
| 173 | 0.0092 | 0.0025 | 0.0066 |
| 174 | 0.0094 | 0.0026 | 0.0068 |
| 175 | 0.0100 | 0.0028 | 0.0073 |
| 176 | 0.0104 | 0.0029 | 0.0075 |
| 177 | 0.0111 | 0.0031 | 0.0080 |
| 178 | 0.0115 | 0.0032 | 0.0083 |
| 179 | 0.0124 | 0.0034 | 0.0090 |
| 180 | 0.0129 | 0.0036 | 0.0094 |
| 181 | 0.0142 | 0.0039 | 0.0102 |

| | | | |
|---|---|---|---|
| 182 | 0.0149 | 0.0041 | 0.0108 |
| 183 | 0.0165 | 0.0046 | 0.0120 |
| 184 | 0.0176 | 0.0049 | 0.0127 |
| 185 | 0.0349 | 0.0097 | 0.0253 |
| 186 | 0.0372 | 0.0103 | 0.0269 |
| 187 | 0.0432 | 0.0105 | 0.0327 |
| 188 | 0.0471 | 0.0105 | 0.0366 |
| 189 | 0.0586 | 0.0105 | 0.0481 |
| 190 | 0.0675 | 0.0105 | 0.0570 |
| 191 | 0.1024 | 0.0105 | 0.0919 |
| 192 | 0.1487 | 0.0105 | 0.1382 |
| 193 | 0.6432 | 0.0105 | 0.6327 |
| 194 | 0.0806 | 0.0105 | 0.0701 |
| 195 | 0.0521 | 0.0105 | 0.0416 |
| 196 | 0.0399 | 0.0105 | 0.0294 |
| 197 | 0.0187 | 0.0052 | 0.0135 |
| 198 | 0.0157 | 0.0043 | 0.0113 |
| 199 | 0.0135 | 0.0037 | 0.0098 |
| 200 | 0.0119 | 0.0033 | 0.0086 |
| 201 | 0.0107 | 0.0030 | 0.0077 |
| 202 | 0.0097 | 0.0027 | 0.0070 |
| 203 | 0.0089 | 0.0025 | 0.0065 |
| 204 | 0.0083 | 0.0023 | 0.0060 |
| 205 | 0.0076 | 0.0021 | 0.0055 |
| 206 | 0.0071 | 0.0020 | 0.0051 |
| 207 | 0.0067 | 0.0019 | 0.0048 |
| 208 | 0.0063 | 0.0017 | 0.0046 |
| 209 | 0.0060 | 0.0017 | 0.0043 |
| 210 | 0.0057 | 0.0016 | 0.0041 |
| 211 | 0.0054 | 0.0015 | 0.0039 |
| 212 | 0.0052 | 0.0014 | 0.0038 |
| 213 | 0.0050 | 0.0014 | 0.0036 |
| 214 | 0.0048 | 0.0013 | 0.0035 |
| 215 | 0.0046 | 0.0013 | 0.0033 |
| 216 | 0.0044 | 0.0012 | 0.0032 |
| 217 | 0.0055 | 0.0015 | 0.0040 |
| 218 | 0.0053 | 0.0015 | 0.0038 |
| 219 | 0.0051 | 0.0014 | 0.0037 |
| 220 | 0.0050 | 0.0014 | 0.0036 |
| 221 | 0.0049 | 0.0013 | 0.0035 |
| 222 | 0.0047 | 0.0013 | 0.0034 |
| 223 | 0.0046 | 0.0013 | 0.0033 |
| 224 | 0.0045 | 0.0012 | 0.0032 |
| 225 | 0.0044 | 0.0012 | 0.0032 |
| 226 | 0.0043 | 0.0012 | 0.0031 |
| 227 | 0.0042 | 0.0012 | 0.0030 |
| 228 | 0.0041 | 0.0011 | 0.0030 |
| 229 | 0.0040 | 0.0011 | 0.0029 |
| 230 | 0.0039 | 0.0011 | 0.0028 |
| 231 | 0.0038 | 0.0011 | 0.0028 |
| 232 | 0.0037 | 0.0010 | 0.0027 |
| 233 | 0.0037 | 0.0010 | 0.0027 |
| 234 | 0.0036 | 0.0010 | 0.0026 |
| 235 | 0.0035 | 0.0010 | 0.0026 |
| 236 | 0.0035 | 0.0010 | 0.0025 |
| 237 | 0.0034 | 0.0009 | 0.0025 |
| 238 | 0.0034 | 0.0009 | 0.0024 |
| 239 | 0.0033 | 0.0009 | 0.0024 |
| 240 | 0.0032 | 0.0009 | 0.0023 |

| | | | |
|---|---|---|---|
| 241 | 0.0032 | 0.0009 | 0.0023 |
| 242 | 0.0031 | 0.0009 | 0.0023 |
| 243 | 0.0031 | 0.0009 | 0.0022 |
| 244 | 0.0030 | 0.0008 | 0.0022 |
| 245 | 0.0030 | 0.0008 | 0.0022 |
| 246 | 0.0029 | 0.0008 | 0.0021 |
| 247 | 0.0029 | 0.0008 | 0.0021 |
| 248 | 0.0029 | 0.0008 | 0.0021 |
| 249 | 0.0028 | 0.0008 | 0.0020 |
| 250 | 0.0028 | 0.0008 | 0.0020 |
| 251 | 0.0027 | 0.0008 | 0.0020 |
| 252 | 0.0027 | 0.0008 | 0.0020 |
| 253 | 0.0027 | 0.0007 | 0.0019 |
| 254 | 0.0026 | 0.0007 | 0.0019 |
| 255 | 0.0026 | 0.0007 | 0.0019 |
| 256 | 0.0026 | 0.0007 | 0.0019 |
| 257 | 0.0025 | 0.0007 | 0.0018 |
| 258 | 0.0025 | 0.0007 | 0.0018 |
| 259 | 0.0025 | 0.0007 | 0.0018 |
| 260 | 0.0025 | 0.0007 | 0.0018 |
| 261 | 0.0024 | 0.0007 | 0.0018 |
| 262 | 0.0024 | 0.0007 | 0.0017 |
| 263 | 0.0024 | 0.0007 | 0.0017 |
| 264 | 0.0023 | 0.0006 | 0.0017 |
| 265 | 0.0023 | 0.0006 | 0.0017 |
| 266 | 0.0023 | 0.0006 | 0.0017 |
| 267 | 0.0023 | 0.0006 | 0.0016 |
| 268 | 0.0022 | 0.0006 | 0.0016 |
| 269 | 0.0022 | 0.0006 | 0.0016 |
| 270 | 0.0022 | 0.0006 | 0.0016 |
| 271 | 0.0022 | 0.0006 | 0.0016 |
| 272 | 0.0022 | 0.0006 | 0.0016 |
| 273 | 0.0021 | 0.0006 | 0.0015 |
| 274 | 0.0021 | 0.0006 | 0.0015 |
| 275 | 0.0021 | 0.0006 | 0.0015 |
| 276 | 0.0021 | 0.0006 | 0.0015 |
| 277 | 0.0021 | 0.0006 | 0.0015 |
| 278 | 0.0020 | 0.0006 | 0.0015 |
| 279 | 0.0020 | 0.0006 | 0.0015 |
| 280 | 0.0020 | 0.0006 | 0.0014 |
| 281 | 0.0020 | 0.0005 | 0.0014 |
| 282 | 0.0020 | 0.0005 | 0.0014 |
| 283 | 0.0019 | 0.0005 | 0.0014 |
| 284 | 0.0019 | 0.0005 | 0.0014 |
| 285 | 0.0019 | 0.0005 | 0.0014 |
| 286 | 0.0019 | 0.0005 | 0.0014 |
| 287 | 0.0019 | 0.0005 | 0.0014 |
| 288 | 0.0019 | 0.0005 | 0.0014 |

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Total soil rain loss = 0.44(In)
Total effective rainfall = 2.04(In)
Peak flow rate in flood hydrograph = 95.46(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 25.0 | 50.0 | 75.0 | 100.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.01 | Q | | | | |
| 0+10 | 0.0002 | 0.02 | Q | | | | |
| 0+15 | 0.0005 | 0.05 | Q | | | | |
| 0+20 | 0.0011 | 0.08 | Q | | | | |
| 0+25 | 0.0021 | 0.14 | Q | | | | |
| 0+30 | 0.0037 | 0.23 | Q | | | | |
| 0+35 | 0.0062 | 0.36 | Q | | | | |
| 0+40 | 0.0095 | 0.48 | Q | | | | |
| 0+45 | 0.0133 | 0.56 | Q | | | | |
| 0+50 | 0.0177 | 0.64 | Q | | | | |
| 0+55 | 0.0225 | 0.69 | Q | | | | |
| 1+ 0 | 0.0276 | 0.74 | Q | | | | |
| 1+ 5 | 0.0329 | 0.78 | Q | | | | |
| 1+10 | 0.0385 | 0.81 | Q | | | | |
| 1+15 | 0.0444 | 0.85 | Q | | | | |
| 1+20 | 0.0504 | 0.87 | Q | | | | |
| 1+25 | 0.0566 | 0.90 | Q | | | | |
| 1+30 | 0.0629 | 0.92 | Q | | | | |
| 1+35 | 0.0694 | 0.95 | Q | | | | |
| 1+40 | 0.0761 | 0.97 | Q | | | | |
| 1+45 | 0.0829 | 0.98 | Q | | | | |
| 1+50 | 0.0898 | 1.00 | Q | | | | |
| 1+55 | 0.0968 | 1.02 | Q | | | | |
| 2+ 0 | 0.1040 | 1.04 | Q | | | | |
| 2+ 5 | 0.1112 | 1.05 | Q | | | | |
| 2+10 | 0.1186 | 1.07 | Q | | | | |
| 2+15 | 0.1260 | 1.08 | Q | | | | |
| 2+20 | 0.1335 | 1.09 | Q | | | | |
| 2+25 | 0.1412 | 1.11 | Q | | | | |
| 2+30 | 0.1489 | 1.12 | Q | | | | |
| 2+35 | 0.1566 | 1.13 | Q | | | | |
| 2+40 | 0.1645 | 1.14 | Q | | | | |
| 2+45 | 0.1724 | 1.15 | Q | | | | |
| 2+50 | 0.1805 | 1.16 | Q | | | | |
| 2+55 | 0.1886 | 1.18 | Q | | | | |
| 3+ 0 | 0.1967 | 1.19 | Q | | | | |
| 3+ 5 | 0.2050 | 1.20 | Q | | | | |
| 3+10 | 0.2133 | 1.21 | Q | | | | |
| 3+15 | 0.2216 | 1.22 | Q | | | | |
| 3+20 | 0.2301 | 1.22 | Q | | | | |
| 3+25 | 0.2386 | 1.23 | Q | | | | |
| 3+30 | 0.2471 | 1.24 | Q | | | | |
| 3+35 | 0.2558 | 1.25 | Q | | | | |
| 3+40 | 0.2644 | 1.26 | Q | | | | |
| 3+45 | 0.2732 | 1.27 | Q | | | | |
| 3+50 | 0.2820 | 1.28 | Q | | | | |
| 3+55 | 0.2909 | 1.29 | Q | | | | |
| 4+ 0 | 0.2998 | 1.30 | QV | | | | |
| 4+ 5 | 0.3088 | 1.30 | QV | | | | |
| 4+10 | 0.3178 | 1.31 | QV | | | | |
| 4+15 | 0.3269 | 1.32 | QV | | | | |
| 4+20 | 0.3361 | 1.33 | QV | | | | |
| 4+25 | 0.3453 | 1.34 | QV | | | | |
| 4+30 | 0.3545 | 1.35 | QV | | | | |
| 4+35 | 0.3639 | 1.35 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4+40 | 0.3733 | 1.36 | QV | | | | |
| 4+45 | 0.3827 | 1.37 | QV | | | | |
| 4+50 | 0.3922 | 1.38 | QV | | | | |
| 4+55 | 0.4018 | 1.39 | QV | | | | |
| 5+ 0 | 0.4114 | 1.40 | QV | | | | |
| 5+ 5 | 0.4211 | 1.41 | QV | | | | |
| 5+10 | 0.4309 | 1.42 | QV | | | | |
| 5+15 | 0.4407 | 1.42 | QV | | | | |
| 5+20 | 0.4506 | 1.43 | QV | | | | |
| 5+25 | 0.4605 | 1.44 | QV | | | | |
| 5+30 | 0.4705 | 1.45 | QV | | | | |
| 5+35 | 0.4806 | 1.46 | QV | | | | |
| 5+40 | 0.4907 | 1.47 | QV | | | | |
| 5+45 | 0.5008 | 1.48 | QV | | | | |
| 5+50 | 0.5111 | 1.49 | QV | | | | |
| 5+55 | 0.5214 | 1.49 | QV | | | | |
| 6+ 0 | 0.5317 | 1.50 | QV | | | | |
| 6+ 5 | 0.5421 | 1.51 | QV | | | | |
| 6+10 | 0.5526 | 1.52 | QV | | | | |
| 6+15 | 0.5632 | 1.53 | QV | | | | |
| 6+20 | 0.5738 | 1.54 | QV | | | | |
| 6+25 | 0.5844 | 1.55 | QV | | | | |
| 6+30 | 0.5952 | 1.56 | Q V | | | | |
| 6+35 | 0.6060 | 1.57 | Q V | | | | |
| 6+40 | 0.6169 | 1.58 | Q V | | | | |
| 6+45 | 0.6278 | 1.59 | Q V | | | | |
| 6+50 | 0.6388 | 1.60 | Q V | | | | |
| 6+55 | 0.6499 | 1.61 | Q V | | | | |
| 7+ 0 | 0.6611 | 1.62 | Q V | | | | |
| 7+ 5 | 0.6723 | 1.63 | Q V | | | | |
| 7+10 | 0.6836 | 1.64 | Q V | | | | |
| 7+15 | 0.6950 | 1.65 | Q V | | | | |
| 7+20 | 0.7065 | 1.66 | Q V | | | | |
| 7+25 | 0.7180 | 1.68 | Q V | | | | |
| 7+30 | 0.7296 | 1.69 | Q V | | | | |
| 7+35 | 0.7413 | 1.70 | Q V | | | | |
| 7+40 | 0.7531 | 1.71 | Q V | | | | |
| 7+45 | 0.7649 | 1.72 | Q V | | | | |
| 7+50 | 0.7769 | 1.73 | Q V | | | | |
| 7+55 | 0.7889 | 1.75 | Q V | | | | |
| 8+ 0 | 0.8010 | 1.76 | Q V | | | | |
| 8+ 5 | 0.8133 | 1.77 | Q V | | | | |
| 8+10 | 0.8256 | 1.79 | Q V | | | | |
| 8+15 | 0.8379 | 1.80 | Q V | | | | |
| 8+20 | 0.8504 | 1.81 | Q V | | | | |
| 8+25 | 0.8630 | 1.83 | Q V | | | | |
| 8+30 | 0.8757 | 1.84 | Q V | | | | |
| 8+35 | 0.8885 | 1.86 | Q  V | | | | |
| 8+40 | 0.9013 | 1.87 | Q  V | | | | |
| 8+45 | 0.9143 | 1.88 | Q  V | | | | |
| 8+50 | 0.9274 | 1.90 | Q  V | | | | |
| 8+55 | 0.9406 | 1.91 | Q  V | | | | |
| 9+ 0 | 0.9539 | 1.93 | Q  V | | | | |
| 9+ 5 | 0.9673 | 1.95 | Q  V | | | | |
| 9+10 | 0.9808 | 1.96 | Q  V | | | | |
| 9+15 | 0.9944 | 1.98 | Q  V | | | | |
| 9+20 | 1.0082 | 2.00 | Q  V | | | | |
| 9+25 | 1.0221 | 2.01 | Q  V | | | | |
| 9+30 | 1.0360 | 2.03 | Q  V | | | | |

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 9+35       1.0502      2.05  Q  V      |          |          |          |
 9+40       1.0644      2.07  Q  V      |          |          |          |
 9+45       1.0788      2.09  Q  V      |          |          |          |
 9+50       1.0933      2.11  Q  V      |          |          |          |
 9+55       1.1079      2.12  Q  V      |          |          |          |
10+ 0       1.1227      2.14  Q  V      |          |          |          |
10+ 5       1.1376      2.17  Q  V      |          |          |          |
10+10       1.1526      2.19  Q  V      |          |          |          |
10+15       1.1678      2.21  Q  V      |          |          |          |
10+20       1.1832      2.23  Q   V     |          |          |          |
10+25       1.1987      2.25  Q   V     |          |          |          |
10+30       1.2143      2.27  Q   V     |          |          |          |
10+35       1.2302      2.30  Q   V     |          |          |          |
10+40       1.2462      2.32  Q   V     |          |          |          |
10+45       1.2623      2.35  Q   V     |          |          |          |
10+50       1.2786      2.37  Q   V     |          |          |          |
10+55       1.2951      2.40  Q   V     |          |          |          |
11+ 0       1.3118      2.42  Q   V     |          |          |          |
11+ 5       1.3287      2.45  Q   V     |          |          |          |
11+10       1.3458      2.48  Q   V     |          |          |          |
11+15       1.3630      2.51  |Q  V     |          |          |          |
11+20       1.3805      2.53  |Q  V     |          |          |          |
11+25       1.3981      2.56  |Q  V     |          |          |          |
11+30       1.4160      2.60  |Q  V     |          |          |          |
11+35       1.4341      2.63  |Q  V     |          |          |          |
11+40       1.4524      2.66  |Q  V     |          |          |          |
11+45       1.4710      2.69  |Q  V     |          |          |          |
11+50       1.4898      2.73  |Q   V    |          |          |          |
11+55       1.5088      2.76  |Q   V    |          |          |          |
12+ 0       1.5281      2.80  |Q   V    |          |          |          |
12+ 5       1.5476      2.83  |Q   V    |          |          |          |
12+10       1.5673      2.86  |Q   V    |          |          |          |
12+15       1.5872      2.89  |Q   V    |          |          |          |
12+20       1.6072      2.90  |Q   V    |          |          |          |
12+25       1.6272      2.91  |Q   V    |          |          |          |
12+30       1.6472      2.89  |Q   V    |          |          |          |
12+35       1.6668      2.86  |Q   V    |          |          |          |
12+40       1.6863      2.83  |Q   V    |          |          |          |
12+45       1.7057      2.82  |Q   V    |          |          |          |
12+50       1.7252      2.82  |Q   V    |          |          |          |
12+55       1.7447      2.83  |Q   V    |          |          |          |
13+ 0       1.7644      2.86  |Q   V    |          |          |          |
13+ 5       1.7842      2.88  |Q    V   |          |          |          |
13+10       1.8043      2.91  |Q    V   |          |          |          |
13+15       1.8246      2.95  |Q    V   |          |          |          |
13+20       1.8452      2.99  |Q    V   |          |          |          |
13+25       1.8661      3.03  |Q    V   |          |          |          |
13+30       1.8873      3.08  |Q    V   |          |          |          |
13+35       1.9089      3.13  |Q    V   |          |          |          |
13+40       1.9309      3.19  |Q    V   |          |          |          |
13+45       1.9533      3.25  |Q    V   |          |          |          |
13+50       1.9761      3.32  |Q    V   |          |          |          |
13+55       1.9994      3.38  |Q    V   |          |          |          |
14+ 0       2.0232      3.46  |Q    V   |          |          |          |
14+ 5       2.0476      3.54  |Q    V   |          |          |          |
14+10       2.0725      3.62  |Q     V  |          |          |          |
14+15       2.0981      3.72  |Q     V  |          |          |          |
14+20       2.1244      3.81  |Q     V  |          |          |          |
14+25       2.1514      3.92  |Q     V  |          |          |          |
```

| | | | |
|---|---|---|---|
| 14+30 | 2.1792 | 4.04 | Q V \| \| \| \| |
| 14+35 | 2.2079 | 4.17 | Q V \| \| \| \| |
| 14+40 | 2.2376 | 4.30 | Q V \| \| \| \| |
| 14+45 | 2.2682 | 4.45 | Q V \| \| \| \| |
| 14+50 | 2.3000 | 4.61 | Q V \| \| \| \| |
| 14+55 | 2.3329 | 4.78 | Q V \| \| \| \| |
| 15+ 0 | 2.3671 | 4.97 | Q V \| \| \| \| |
| 15+ 5 | 2.4027 | 5.17 | Q V \| \| \| \| |
| 15+10 | 2.4399 | 5.40 | Q V \| \| \| \| |
| 15+15 | 2.4788 | 5.65 | Q V \| \| \| \| |
| 15+20 | 2.5196 | 5.93 | Q V \| \| \| \| |
| 15+25 | 2.5629 | 6.29 | Q V \| \| \| \| |
| 15+30 | 2.6097 | 6.79 | Q V \| \| \| \| |
| 15+35 | 2.6609 | 7.44 | Q V \| \| \| \| |
| 15+40 | 2.7179 | 8.27 | Q V \| \| \| \| |
| 15+45 | 2.7827 | 9.42 | Q V \| \| \| \| |
| 15+50 | 2.8594 | 11.13 | Q V \| \| \| \| |
| 15+55 | 2.9527 | 13.55 | Q V \| \| \| \| |
| 16+ 0 | 3.0674 | 16.66 | Q V \| \| \| \| |
| 16+ 5 | 3.2238 | 22.70 | QV \| \| \| \| |
| 16+10 | 3.4374 | 31.02 | \|VQ \| \| \| |
| 16+15 | 3.7097 | 39.54 | \| V Q \| \| \| |
| 16+20 | 4.0462 | 48.86 | \| V Q\| \| \| |
| 16+25 | 4.4734 | 62.02 | \| V \| Q \| \| |
| 16+30 | 5.0365 | 81.77 | \| V \| \| Q \| |
| 16+35 | 5.6939 | 95.46 | \| V\| \| \| Q |
| 16+40 | 6.2838 | 85.65 | \| \|V \| Q \| |
| 16+45 | 6.7760 | 71.47 | \| \| V Q \| \| |
| 16+50 | 7.1908 | 60.23 | \| \| Q \| \| |
| 16+55 | 7.5316 | 49.48 | \| \| Q\| V \| \| |
| 17+ 0 | 7.8199 | 41.86 | \| \| Q \| V \| \| |
| 17+ 5 | 8.0715 | 36.54 | \| Q \| V \| \| |
| 17+10 | 8.2974 | 32.80 | \| Q \| V \| \| |
| 17+15 | 8.4993 | 29.30 | \|Q \| V \| \| |
| 17+20 | 8.6804 | 26.30 | Q \| V\| \| |
| 17+25 | 8.8471 | 24.20 | Q\| \| V\| \| |
| 17+30 | 8.9988 | 22.03 | Q \| \| V \| |
| 17+35 | 9.1360 | 19.92 | Q \| \| V \| |
| 17+40 | 9.2644 | 18.64 | Q \| \| \|V \| |
| 17+45 | 9.3818 | 17.04 | Q \| \| \|V \| |
| 17+50 | 9.4933 | 16.20 | Q \| \| \| V \| |
| 17+55 | 9.5976 | 15.13 | Q \| \| \| V \| |
| 18+ 0 | 9.6966 | 14.38 | Q \| \| \| V \| |
| 18+ 5 | 9.7875 | 13.20 | Q \| \| \| V \| |
| 18+10 | 9.8734 | 12.47 | Q \| \| \| V \| |
| 18+15 | 9.9508 | 11.24 | Q \| \| \| V \| |
| 18+20 | 10.0239 | 10.63 | Q \| \| \| V \| |
| 18+25 | 10.0940 | 10.17 | Q \| \| \| V \| |
| 18+30 | 10.1616 | 9.82 | Q \| \| \| V \| |
| 18+35 | 10.2260 | 9.35 | Q \| \| \| V \| |
| 18+40 | 10.2878 | 8.96 | Q \| \| \| V \| |
| 18+45 | 10.3472 | 8.64 | Q \| \| \| V \| |
| 18+50 | 10.4043 | 8.29 | Q \| \| \| V \| |
| 18+55 | 10.4585 | 7.86 | Q \| \| \| V \| |
| 19+ 0 | 10.5088 | 7.31 | Q \| \| \| V \| |
| 19+ 5 | 10.5578 | 7.11 | Q \| \| \| V \| |
| 19+10 | 10.6054 | 6.92 | Q \| \| \| V \| |
| 19+15 | 10.6512 | 6.65 | Q \| \| \| V \| |
| 19+20 | 10.6935 | 6.15 | Q \| \| \| V \| |

```
19+25      10.7344      5.94  | Q       |         |         |     V   |
19+30      10.7741      5.76  | Q       |         |         |     V   |
19+35      10.8124      5.55  | Q       |         |         |     V   |
19+40      10.8474      5.09  | Q       |         |         |     V   |
19+45      10.8806      4.83  |Q        |         |         |     V   |
19+50      10.9129      4.68  |Q        |         |         |     V   |
19+55      10.9441      4.53  |Q        |         |         |      V  |
20+ 0      10.9728      4.17  |Q        |         |         |      V  |
20+ 5      10.9993      3.85  |Q        |         |         |      V  |
20+10      11.0253      3.77  |Q        |         |         |      V  |
20+15      11.0509      3.71  |Q        |         |         |      V  |
20+20      11.0763      3.70  |Q        |         |         |      V  |
20+25      11.1020      3.73  |Q        |         |         |      V  |
20+30      11.1274      3.68  |Q        |         |         |      V  |
20+35      11.1524      3.63  |Q        |         |         |      V  |
20+40      11.1770      3.57  |Q        |         |         |      V  |
20+45      11.2012      3.51  |Q        |         |         |      V  |
20+50      11.2249      3.44  |Q        |         |         |       V |
20+55      11.2480      3.35  |Q        |         |         |       V |
21+ 0      11.2703      3.24  |Q        |         |         |       V |
21+ 5      11.2905      2.93  |Q        |         |         |       V |
21+10      11.3093      2.74  |Q        |         |         |       V |
21+15      11.3277      2.66  |Q        |         |         |       V |
21+20      11.3455      2.59  |Q        |         |         |       V |
21+25      11.3627      2.51  |Q        |         |         |       V |
21+30      11.3793      2.41  Q        |         |         |       V |
21+35      11.3941      2.14  Q        |         |         |       V |
21+40      11.4072      1.90  Q        |         |         |       V |
21+45      11.4199      1.84  Q        |         |         |       V |
21+50      11.4322      1.80  Q        |         |         |       V |
21+55      11.4444      1.76  Q        |         |         |       V |
22+ 0      11.4563      1.73  Q        |         |         |       V |
22+ 5      11.4680      1.70  Q        |         |         |       V |
22+10      11.4796      1.68  Q        |         |         |       V |
22+15      11.4909      1.65  Q        |         |         |       V |
22+20      11.5022      1.63  Q        |         |         |       V |
22+25      11.5132      1.61  Q        |         |         |       V |
22+30      11.5241      1.58  Q        |         |         |        V|
22+35      11.5349      1.56  Q        |         |         |        V|
22+40      11.5455      1.54  Q        |         |         |        V|
22+45      11.5560      1.52  Q        |         |         |        V|
22+50      11.5664      1.51  Q        |         |         |        V|
22+55      11.5766      1.49  Q        |         |         |        V|
23+ 0      11.5868      1.47  Q        |         |         |        V|
23+ 5      11.5968      1.45  Q        |         |         |        V|
23+10      11.6067      1.44  Q        |         |         |        V|
23+15      11.6165      1.42  Q        |         |         |        V|
23+20      11.6261      1.41  Q        |         |         |        V|
23+25      11.6357      1.39  Q        |         |         |        V|
23+30      11.6452      1.37  Q        |         |         |        V|
23+35      11.6546      1.36  Q        |         |         |        V|
23+40      11.6638      1.35  Q        |         |         |        V|
23+45      11.6730      1.33  Q        |         |         |        V|
23+50      11.6821      1.32  Q        |         |         |        V|
23+55      11.6910      1.30  Q        |         |         |        V|
24+ 0      11.6999      1.29  Q        |         |         |        V|
24+ 5      11.7087      1.27  Q        |         |         |        V|
24+10      11.7173      1.24  Q        |         |         |        V|
24+15      11.7256      1.21  Q        |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24+20 | 11.7335 | 1.16 | Q | \| | \| | \| | V\| |
| 24+25 | 11.7411 | 1.09 | Q | \| | \| | \| | V\| |
| 24+30 | 11.7479 | 0.99 | Q | \| | \| | \| | V\| |
| 24+35 | 11.7537 | 0.85 | Q | \| | \| | \| | V\| |
| 24+40 | 11.7588 | 0.73 | Q | \| | \| | \| | V\| |
| 24+45 | 11.7632 | 0.64 | Q | \| | \| | \| | V\| |
| 24+50 | 11.7670 | 0.56 | Q | \| | \| | \| | V\| |
| 24+55 | 11.7705 | 0.50 | Q | \| | \| | \| | V\| |
| 25+ 0 | 11.7737 | 0.46 | Q | \| | \| | \| | V\| |
| 25+ 5 | 11.7765 | 0.42 | Q | \| | \| | \| | V\| |
| 25+10 | 11.7791 | 0.38 | Q | \| | \| | \| | V\| |
| 25+15 | 11.7815 | 0.35 | Q | \| | \| | \| | V\| |
| 25+20 | 11.7837 | 0.32 | Q | \| | \| | \| | V\| |
| 25+25 | 11.7857 | 0.29 | Q | \| | \| | \| | V\| |
| 25+30 | 11.7876 | 0.27 | Q | \| | \| | \| | V\| |
| 25+35 | 11.7893 | 0.25 | Q | \| | \| | \| | V\| |
| 25+40 | 11.7909 | 0.23 | Q | \| | \| | \| | V\| |
| 25+45 | 11.7924 | 0.21 | Q | \| | \| | \| | V\| |
| 25+50 | 11.7937 | 0.20 | Q | \| | \| | \| | V\| |
| 25+55 | 11.7950 | 0.18 | Q | \| | \| | \| | V\| |
| 26+ 0 | 11.7962 | 0.17 | Q | \| | \| | \| | V\| |
| 26+ 5 | 11.7972 | 0.16 | Q | \| | \| | \| | V\| |
| 26+10 | 11.7982 | 0.15 | Q | \| | \| | \| | V\| |
| 26+15 | 11.7992 | 0.14 | Q | \| | \| | \| | V\| |
| 26+20 | 11.8000 | 0.13 | Q | \| | \| | \| | V\| |
| 26+25 | 11.8009 | 0.12 | Q | \| | \| | \| | V\| |
| 26+30 | 11.8016 | 0.11 | Q | \| | \| | \| | V\| |
| 26+35 | 11.8023 | 0.10 | Q | \| | \| | \| | V\| |
| 26+40 | 11.8030 | 0.09 | Q | \| | \| | \| | V\| |
| 26+45 | 11.8036 | 0.09 | Q | \| | \| | \| | V\| |
| 26+50 | 11.8041 | 0.08 | Q | \| | \| | \| | V\| |
| 26+55 | 11.8046 | 0.07 | Q | \| | \| | \| | V\| |
| 27+ 0 | 11.8051 | 0.07 | Q | \| | \| | \| | V\| |
| 27+ 5 | 11.8055 | 0.06 | Q | \| | \| | \| | V\| |
| 27+10 | 11.8059 | 0.06 | Q | \| | \| | \| | V\| |
| 27+15 | 11.8063 | 0.05 | Q | \| | \| | \| | V\| |
| 27+20 | 11.8067 | 0.05 | Q | \| | \| | \| | V\| |
| 27+25 | 11.8070 | 0.05 | Q | \| | \| | \| | V\| |
| 27+30 | 11.8073 | 0.04 | Q | \| | \| | \| | V\| |
| 27+35 | 11.8075 | 0.04 | Q | \| | \| | \| | V\| |
| 27+40 | 11.8078 | 0.04 | Q | \| | \| | \| | V\| |
| 27+45 | 11.8080 | 0.03 | Q | \| | \| | \| | V\| |
| 27+50 | 11.8082 | 0.03 | Q | \| | \| | \| | V\| |
| 27+55 | 11.8084 | 0.03 | Q | \| | \| | \| | V\| |
| 28+ 0 | 11.8086 | 0.03 | Q | \| | \| | \| | V\| |
| 28+ 5 | 11.8087 | 0.02 | Q | \| | \| | \| | V\| |
| 28+10 | 11.8089 | 0.02 | Q | \| | \| | \| | V\| |
| 28+15 | 11.8090 | 0.02 | Q | \| | \| | \| | V\| |
| 28+20 | 11.8092 | 0.02 | Q | \| | \| | \| | V\| |
| 28+25 | 11.8093 | 0.02 | Q | \| | \| | \| | V\| |
| 28+30 | 11.8094 | 0.02 | Q | \| | \| | \| | V\| |
| 28+35 | 11.8095 | 0.01 | Q | \| | \| | \| | V\| |
| 28+40 | 11.8096 | 0.01 | Q | \| | \| | \| | V\| |
| 28+45 | 11.8097 | 0.01 | Q | \| | \| | \| | V\| |
| 28+50 | 11.8097 | 0.01 | Q | \| | \| | \| | V\| |
| 28+55 | 11.8098 | 0.01 | Q | \| | \| | \| | V\| |
| 29+ 0 | 11.8098 | 0.01 | Q | \| | \| | \| | V\| |
| 29+ 5 | 11.8098 | 0.00 | Q | \| | \| | \| | V\| |
| 29+10 | 11.8099 | 0.00 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 29+15 | 11.8099 | 0.00 | Q | \| | \| | \| | V\| |
| 29+20 | 11.8099 | 0.00 | Q | \| | \| | \| | V\| |
| 29+25 | 11.8099 | 0.00 | Q | \| | \| | \| | V\| |
| 29+30 | 11.8099 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 24
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 293.06 | 1 | 1.35 |
| Rainfall data for year 100 | | |
| 293.06 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 293.06 | 24 | 2.49 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 73.4 | 89.7 | 293.06 | 1.000 | 0.198 | 0.928 | 0.183 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.183

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 271.96 | 0.928 | 73.4 | 89.7 | 1.15 | 0.603 |
| 21.10 | 0.072 | 98.0 | 98.0 | 0.20 | 0.908 |

Area-averaged catchment yield fraction, Y = 0.625
Area-averaged low loss fraction, Yb = 0.375
User entry of time of concentration = 1.630 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 293.06(Ac.)
Catchment Lag time = 1.304 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 6.3906
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.183(In/Hr)
Average low loss rate fraction (Yb) = 0.375 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.641(In)
Computed peak 30-minute rainfall = 1.097(In)
Specified peak 1-hour rainfall = 1.350(In)
Computed peak 3-hour rainfall = 1.632(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.490(In)

Rainfall depth area reduction factors:
Using a total area of 293.06(Ac.) (Ref: fig. E-4)

5-minute factor = 0.986 Adjusted rainfall = 0.632(In)
30-minute factor = 0.986 Adjusted rainfall = 1.081(In)
1-hour factor = 0.986 Adjusted rainfall = 1.331(In)
3-hour factor = 0.998 Adjusted rainfall = 1.629(In)
6-hour factor = 0.999 Adjusted rainfall = 1.838(In)
24-hour factor = 1.000 Adjusted rainfall = 2.489(In)
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U n i t H y d r o g r a p h

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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 3544.19 (CFS)) | |
| 1 | 0.281 | 9.966 |
| 2 | 0.844 | 19.949 |
| 3 | 1.684 | 29.771 |
| 4 | 2.760 | 38.121 |
| 5 | 4.132 | 48.635 |
| 6 | 5.722 | 56.344 |
| 7 | 7.657 | 68.594 |
| 8 | 9.834 | 77.169 |
| 9 | 13.265 | 121.582 |
| 10 | 17.414 | 147.062 |
| 11 | 23.212 | 205.473 |
| 12 | 29.718 | 230.605 |
| 13 | 35.479 | 204.186 |

| | | |
|---|---|---|
| 14 | 40.884 | 191.559 |
| 15 | 45.305 | 156.671 |
| 16 | 49.347 | 143.273 |
| 17 | 52.831 | 123.484 |
| 18 | 56.086 | 115.362 |
| 19 | 58.699 | 92.593 |
| 20 | 61.108 | 85.396 |
| 21 | 63.174 | 73.223 |
| 22 | 65.132 | 69.393 |
| 23 | 66.860 | 61.242 |
| 24 | 68.526 | 59.037 |
| 25 | 70.077 | 54.964 |
| 26 | 71.569 | 52.877 |
| 27 | 72.870 | 46.129 |
| 28 | 74.119 | 44.268 |
| 29 | 75.255 | 40.264 |
| 30 | 76.369 | 39.468 |
| 31 | 77.445 | 38.156 |
| 32 | 78.462 | 36.031 |
| 33 | 79.316 | 30.255 |
| 34 | 80.159 | 29.897 |
| 35 | 81.003 | 29.897 |
| 36 | 81.798 | 28.192 |
| 37 | 82.492 | 24.579 |
| 38 | 83.182 | 24.461 |
| 39 | 83.872 | 24.461 |
| 40 | 84.533 | 23.409 |
| 41 | 85.147 | 21.763 |
| 42 | 85.760 | 21.744 |
| 43 | 86.374 | 21.744 |
| 44 | 86.939 | 20.046 |
| 45 | 87.451 | 18.121 |
| 46 | 87.962 | 18.120 |
| 47 | 88.473 | 18.113 |
| 48 | 88.913 | 15.608 |
| 49 | 89.297 | 13.590 |
| 50 | 89.680 | 13.590 |
| 51 | 90.063 | 13.580 |
| 52 | 90.430 | 13.016 |
| 53 | 90.788 | 12.684 |
| 54 | 91.146 | 12.684 |
| 55 | 91.503 | 12.635 |
| 56 | 91.825 | 11.406 |
| 57 | 92.131 | 10.872 |
| 58 | 92.438 | 10.872 |
| 59 | 92.743 | 10.825 |
| 60 | 93.031 | 10.175 |
| 61 | 93.312 | 9.966 |
| 62 | 93.593 | 9.966 |
| 63 | 93.869 | 9.777 |
| 64 | 94.097 | 8.098 |
| 65 | 94.315 | 7.701 |
| 66 | 94.532 | 7.701 |
| 67 | 94.749 | 7.701 |
| 68 | 94.966 | 7.701 |
| 69 | 95.184 | 7.701 |
| 70 | 95.401 | 7.701 |
| 71 | 95.610 | 7.392 |
| 72 | 95.780 | 6.046 |

| | | |
|---|---|---|
| 73 | 95.946 | 5.889 |
| 74 | 96.112 | 5.889 |
| 75 | 96.279 | 5.889 |
| 76 | 96.445 | 5.889 |
| 77 | 96.611 | 5.889 |
| 78 | 96.777 | 5.889 |
| 79 | 96.928 | 5.366 |
| 80 | 97.045 | 4.129 |
| 81 | 97.160 | 4.077 |
| 82 | 97.275 | 4.077 |
| 83 | 97.390 | 4.077 |
| 84 | 97.505 | 4.077 |
| 85 | 97.620 | 4.077 |
| 86 | 97.735 | 4.077 |
| 87 | 97.828 | 3.283 |
| 88 | 97.892 | 2.269 |
| 89 | 97.956 | 2.265 |
| 90 | 98.020 | 2.265 |
| 91 | 98.083 | 2.265 |
| 92 | 98.147 | 2.265 |
| 93 | 98.211 | 2.265 |
| 94 | 98.275 | 2.268 |
| 95 | 98.347 | 2.539 |
| 96 | 98.424 | 2.718 |
| 97 | 98.500 | 2.718 |
| 98 | 98.577 | 2.718 |
| 99 | 98.654 | 2.718 |
| 100 | 98.730 | 2.718 |
| 101 | 98.807 | 2.718 |
| 102 | 98.884 | 2.718 |
| 103 | 98.960 | 2.718 |
| 104 | 99.037 | 2.718 |
| 105 | 99.114 | 2.718 |
| 106 | 99.190 | 2.718 |
| 107 | 99.267 | 2.718 |
| 108 | 99.344 | 2.718 |
| 109 | 99.421 | 2.718 |
| 110 | 99.493 | 2.578 |
| 111 | 99.539 | 1.603 |
| 112 | 99.578 | 1.416 |
| 113 | 99.618 | 1.416 |
| 114 | 99.658 | 1.416 |
| 115 | 99.698 | 1.416 |
| 116 | 99.738 | 1.416 |
| 117 | 99.778 | 1.416 |
| 118 | 99.818 | 1.416 |
| 119 | 99.858 | 1.416 |
| 120 | 99.898 | 1.416 |
| 121 | 99.938 | 1.416 |
| 122 | 99.978 | 1.416 |
| 123 | 100.000 | 0.785 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6318 | 0.6318 |
| 2 | 0.7778 | 0.1460 |
| 3 | 0.8784 | 0.1006 |
| 4 | 0.9576 | 0.0792 |
| 5 | 1.0239 | 0.0663 |

| | | |
|---|---|---|
| 6 | 1.0815 | 0.0576 |
| 7 | 1.1327 | 0.0512 |
| 8 | 1.1790 | 0.0463 |
| 9 | 1.2214 | 0.0424 |
| 10 | 1.2606 | 0.0392 |
| 11 | 1.2971 | 0.0366 |
| 12 | 1.3315 | 0.0343 |
| 13 | 1.3512 | 0.0197 |
| 14 | 1.3697 | 0.0185 |
| 15 | 1.3872 | 0.0175 |
| 16 | 1.4038 | 0.0166 |
| 17 | 1.4195 | 0.0157 |
| 18 | 1.4345 | 0.0150 |
| 19 | 1.4488 | 0.0143 |
| 20 | 1.4625 | 0.0137 |
| 21 | 1.4757 | 0.0132 |
| 22 | 1.4884 | 0.0127 |
| 23 | 1.5006 | 0.0122 |
| 24 | 1.5124 | 0.0118 |
| 25 | 1.5238 | 0.0114 |
| 26 | 1.5348 | 0.0110 |
| 27 | 1.5455 | 0.0107 |
| 28 | 1.5559 | 0.0104 |
| 29 | 1.5659 | 0.0101 |
| 30 | 1.5757 | 0.0098 |
| 31 | 1.5853 | 0.0095 |
| 32 | 1.5945 | 0.0093 |
| 33 | 1.6036 | 0.0090 |
| 34 | 1.6124 | 0.0088 |
| 35 | 1.6210 | 0.0086 |
| 36 | 1.6294 | 0.0084 |
| 37 | 1.6372 | 0.0078 |
| 38 | 1.6448 | 0.0076 |
| 39 | 1.6523 | 0.0075 |
| 40 | 1.6596 | 0.0073 |
| 41 | 1.6667 | 0.0071 |
| 42 | 1.6737 | 0.0070 |
| 43 | 1.6806 | 0.0069 |
| 44 | 1.6873 | 0.0067 |
| 45 | 1.6939 | 0.0066 |
| 46 | 1.7004 | 0.0065 |
| 47 | 1.7068 | 0.0064 |
| 48 | 1.7131 | 0.0063 |
| 49 | 1.7192 | 0.0062 |
| 50 | 1.7253 | 0.0061 |
| 51 | 1.7312 | 0.0060 |
| 52 | 1.7371 | 0.0059 |
| 53 | 1.7429 | 0.0058 |
| 54 | 1.7486 | 0.0057 |
| 55 | 1.7541 | 0.0056 |
| 56 | 1.7597 | 0.0055 |
| 57 | 1.7651 | 0.0054 |
| 58 | 1.7704 | 0.0053 |
| 59 | 1.7757 | 0.0053 |
| 60 | 1.7809 | 0.0052 |
| 61 | 1.7860 | 0.0051 |
| 62 | 1.7911 | 0.0051 |
| 63 | 1.7961 | 0.0050 |
| 64 | 1.8010 | 0.0049 |

| | | |
|---|---|---|
| 65 | 1.8059 | 0.0049 |
| 66 | 1.8107 | 0.0048 |
| 67 | 1.8154 | 0.0047 |
| 68 | 1.8201 | 0.0047 |
| 69 | 1.8248 | 0.0046 |
| 70 | 1.8293 | 0.0046 |
| 71 | 1.8338 | 0.0045 |
| 72 | 1.8383 | 0.0045 |
| 73 | 1.8439 | 0.0056 |
| 74 | 1.8494 | 0.0055 |
| 75 | 1.8548 | 0.0054 |
| 76 | 1.8602 | 0.0054 |
| 77 | 1.8655 | 0.0053 |
| 78 | 1.8708 | 0.0053 |
| 79 | 1.8760 | 0.0052 |
| 80 | 1.8811 | 0.0052 |
| 81 | 1.8863 | 0.0051 |
| 82 | 1.8913 | 0.0051 |
| 83 | 1.8964 | 0.0050 |
| 84 | 1.9013 | 0.0050 |
| 85 | 1.9062 | 0.0049 |
| 86 | 1.9111 | 0.0049 |
| 87 | 1.9160 | 0.0048 |
| 88 | 1.9208 | 0.0048 |
| 89 | 1.9255 | 0.0048 |
| 90 | 1.9302 | 0.0047 |
| 91 | 1.9349 | 0.0047 |
| 92 | 1.9395 | 0.0046 |
| 93 | 1.9441 | 0.0046 |
| 94 | 1.9487 | 0.0046 |
| 95 | 1.9532 | 0.0045 |
| 96 | 1.9576 | 0.0045 |
| 97 | 1.9621 | 0.0044 |
| 98 | 1.9665 | 0.0044 |
| 99 | 1.9709 | 0.0044 |
| 100 | 1.9752 | 0.0043 |
| 101 | 1.9795 | 0.0043 |
| 102 | 1.9838 | 0.0043 |
| 103 | 1.9880 | 0.0042 |
| 104 | 1.9922 | 0.0042 |
| 105 | 1.9964 | 0.0042 |
| 106 | 2.0005 | 0.0041 |
| 107 | 2.0046 | 0.0041 |
| 108 | 2.0087 | 0.0041 |
| 109 | 2.0128 | 0.0041 |
| 110 | 2.0168 | 0.0040 |
| 111 | 2.0208 | 0.0040 |
| 112 | 2.0247 | 0.0040 |
| 113 | 2.0287 | 0.0039 |
| 114 | 2.0326 | 0.0039 |
| 115 | 2.0365 | 0.0039 |
| 116 | 2.0403 | 0.0039 |
| 117 | 2.0442 | 0.0038 |
| 118 | 2.0480 | 0.0038 |
| 119 | 2.0518 | 0.0038 |
| 120 | 2.0555 | 0.0038 |
| 121 | 2.0592 | 0.0037 |
| 122 | 2.0630 | 0.0037 |
| 123 | 2.0666 | 0.0037 |

| | | |
|---|---|---|
| 124 | 2.0703 | 0.0037 |
| 125 | 2.0739 | 0.0036 |
| 126 | 2.0776 | 0.0036 |
| 127 | 2.0811 | 0.0036 |
| 128 | 2.0847 | 0.0036 |
| 129 | 2.0883 | 0.0035 |
| 130 | 2.0918 | 0.0035 |
| 131 | 2.0953 | 0.0035 |
| 132 | 2.0988 | 0.0035 |
| 133 | 2.1023 | 0.0035 |
| 134 | 2.1057 | 0.0034 |
| 135 | 2.1091 | 0.0034 |
| 136 | 2.1125 | 0.0034 |
| 137 | 2.1159 | 0.0034 |
| 138 | 2.1193 | 0.0034 |
| 139 | 2.1226 | 0.0033 |
| 140 | 2.1260 | 0.0033 |
| 141 | 2.1293 | 0.0033 |
| 142 | 2.1326 | 0.0033 |
| 143 | 2.1358 | 0.0033 |
| 144 | 2.1391 | 0.0033 |
| 145 | 2.1423 | 0.0032 |
| 146 | 2.1456 | 0.0032 |
| 147 | 2.1488 | 0.0032 |
| 148 | 2.1519 | 0.0032 |
| 149 | 2.1551 | 0.0032 |
| 150 | 2.1583 | 0.0032 |
| 151 | 2.1614 | 0.0031 |
| 152 | 2.1645 | 0.0031 |
| 153 | 2.1676 | 0.0031 |
| 154 | 2.1707 | 0.0031 |
| 155 | 2.1738 | 0.0031 |
| 156 | 2.1769 | 0.0031 |
| 157 | 2.1799 | 0.0030 |
| 158 | 2.1829 | 0.0030 |
| 159 | 2.1859 | 0.0030 |
| 160 | 2.1889 | 0.0030 |
| 161 | 2.1919 | 0.0030 |
| 162 | 2.1949 | 0.0030 |
| 163 | 2.1978 | 0.0030 |
| 164 | 2.2008 | 0.0029 |
| 165 | 2.2037 | 0.0029 |
| 166 | 2.2066 | 0.0029 |
| 167 | 2.2095 | 0.0029 |
| 168 | 2.2124 | 0.0029 |
| 169 | 2.2153 | 0.0029 |
| 170 | 2.2181 | 0.0029 |
| 171 | 2.2210 | 0.0028 |
| 172 | 2.2238 | 0.0028 |
| 173 | 2.2266 | 0.0028 |
| 174 | 2.2294 | 0.0028 |
| 175 | 2.2322 | 0.0028 |
| 176 | 2.2350 | 0.0028 |
| 177 | 2.2378 | 0.0028 |
| 178 | 2.2406 | 0.0028 |
| 179 | 2.2433 | 0.0027 |
| 180 | 2.2460 | 0.0027 |
| 181 | 2.2488 | 0.0027 |
| 182 | 2.2515 | 0.0027 |

| | | |
|---|---|---|
| 183 | 2.2542 | 0.0027 |
| 184 | 2.2569 | 0.0027 |
| 185 | 2.2595 | 0.0027 |
| 186 | 2.2622 | 0.0027 |
| 187 | 2.2648 | 0.0027 |
| 188 | 2.2675 | 0.0026 |
| 189 | 2.2701 | 0.0026 |
| 190 | 2.2727 | 0.0026 |
| 191 | 2.2753 | 0.0026 |
| 192 | 2.2779 | 0.0026 |
| 193 | 2.2805 | 0.0026 |
| 194 | 2.2831 | 0.0026 |
| 195 | 2.2857 | 0.0026 |
| 196 | 2.2882 | 0.0026 |
| 197 | 2.2908 | 0.0025 |
| 198 | 2.2933 | 0.0025 |
| 199 | 2.2959 | 0.0025 |
| 200 | 2.2984 | 0.0025 |
| 201 | 2.3009 | 0.0025 |
| 202 | 2.3034 | 0.0025 |
| 203 | 2.3059 | 0.0025 |
| 204 | 2.3083 | 0.0025 |
| 205 | 2.3108 | 0.0025 |
| 206 | 2.3133 | 0.0025 |
| 207 | 2.3157 | 0.0025 |
| 208 | 2.3182 | 0.0024 |
| 209 | 2.3206 | 0.0024 |
| 210 | 2.3230 | 0.0024 |
| 211 | 2.3254 | 0.0024 |
| 212 | 2.3278 | 0.0024 |
| 213 | 2.3302 | 0.0024 |
| 214 | 2.3326 | 0.0024 |
| 215 | 2.3350 | 0.0024 |
| 216 | 2.3374 | 0.0024 |
| 217 | 2.3397 | 0.0024 |
| 218 | 2.3421 | 0.0024 |
| 219 | 2.3444 | 0.0023 |
| 220 | 2.3468 | 0.0023 |
| 221 | 2.3491 | 0.0023 |
| 222 | 2.3514 | 0.0023 |
| 223 | 2.3537 | 0.0023 |
| 224 | 2.3560 | 0.0023 |
| 225 | 2.3583 | 0.0023 |
| 226 | 2.3606 | 0.0023 |
| 227 | 2.3629 | 0.0023 |
| 228 | 2.3652 | 0.0023 |
| 229 | 2.3674 | 0.0023 |
| 230 | 2.3697 | 0.0023 |
| 231 | 2.3719 | 0.0022 |
| 232 | 2.3742 | 0.0022 |
| 233 | 2.3764 | 0.0022 |
| 234 | 2.3786 | 0.0022 |
| 235 | 2.3808 | 0.0022 |
| 236 | 2.3831 | 0.0022 |
| 237 | 2.3853 | 0.0022 |
| 238 | 2.3875 | 0.0022 |
| 239 | 2.3896 | 0.0022 |
| 240 | 2.3918 | 0.0022 |
| 241 | 2.3940 | 0.0022 |

| | | |
|---|---|---|
| 242 | 2.3962 | 0.0022 |
| 243 | 2.3983 | 0.0022 |
| 244 | 2.4005 | 0.0022 |
| 245 | 2.4026 | 0.0021 |
| 246 | 2.4048 | 0.0021 |
| 247 | 2.4069 | 0.0021 |
| 248 | 2.4090 | 0.0021 |
| 249 | 2.4112 | 0.0021 |
| 250 | 2.4133 | 0.0021 |
| 251 | 2.4154 | 0.0021 |
| 252 | 2.4175 | 0.0021 |
| 253 | 2.4196 | 0.0021 |
| 254 | 2.4217 | 0.0021 |
| 255 | 2.4237 | 0.0021 |
| 256 | 2.4258 | 0.0021 |
| 257 | 2.4279 | 0.0021 |
| 258 | 2.4299 | 0.0021 |
| 259 | 2.4320 | 0.0021 |
| 260 | 2.4340 | 0.0020 |
| 261 | 2.4361 | 0.0020 |
| 262 | 2.4381 | 0.0020 |
| 263 | 2.4402 | 0.0020 |
| 264 | 2.4422 | 0.0020 |
| 265 | 2.4442 | 0.0020 |
| 266 | 2.4462 | 0.0020 |
| 267 | 2.4482 | 0.0020 |
| 268 | 2.4502 | 0.0020 |
| 269 | 2.4522 | 0.0020 |
| 270 | 2.4542 | 0.0020 |
| 271 | 2.4562 | 0.0020 |
| 272 | 2.4582 | 0.0020 |
| 273 | 2.4602 | 0.0020 |
| 274 | 2.4621 | 0.0020 |
| 275 | 2.4641 | 0.0020 |
| 276 | 2.4660 | 0.0020 |
| 277 | 2.4680 | 0.0020 |
| 278 | 2.4699 | 0.0019 |
| 279 | 2.4719 | 0.0019 |
| 280 | 2.4738 | 0.0019 |
| 281 | 2.4757 | 0.0019 |
| 282 | 2.4777 | 0.0019 |
| 283 | 2.4796 | 0.0019 |
| 284 | 2.4815 | 0.0019 |
| 285 | 2.4834 | 0.0019 |
| 286 | 2.4853 | 0.0019 |
| 287 | 2.4872 | 0.0019 |
| 288 | 2.4891 | 0.0019 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0019 | 0.0007 | 0.0012 |
| 2 | 0.0019 | 0.0007 | 0.0012 |
| 3 | 0.0019 | 0.0007 | 0.0012 |
| 4 | 0.0019 | 0.0007 | 0.0012 |
| 5 | 0.0019 | 0.0007 | 0.0012 |
| 6 | 0.0019 | 0.0007 | 0.0012 |
| 7 | 0.0019 | 0.0007 | 0.0012 |

| | | | |
|---|---|---|---|
| 8 | 0.0019 | 0.0007 | 0.0012 |
| 9 | 0.0020 | 0.0007 | 0.0012 |
| 10 | 0.0020 | 0.0007 | 0.0012 |
| 11 | 0.0020 | 0.0007 | 0.0012 |
| 12 | 0.0020 | 0.0007 | 0.0012 |
| 13 | 0.0020 | 0.0007 | 0.0012 |
| 14 | 0.0020 | 0.0007 | 0.0012 |
| 15 | 0.0020 | 0.0008 | 0.0013 |
| 16 | 0.0020 | 0.0008 | 0.0013 |
| 17 | 0.0020 | 0.0008 | 0.0013 |
| 18 | 0.0020 | 0.0008 | 0.0013 |
| 19 | 0.0020 | 0.0008 | 0.0013 |
| 20 | 0.0020 | 0.0008 | 0.0013 |
| 21 | 0.0021 | 0.0008 | 0.0013 |
| 22 | 0.0021 | 0.0008 | 0.0013 |
| 23 | 0.0021 | 0.0008 | 0.0013 |
| 24 | 0.0021 | 0.0008 | 0.0013 |
| 25 | 0.0021 | 0.0008 | 0.0013 |
| 26 | 0.0021 | 0.0008 | 0.0013 |
| 27 | 0.0021 | 0.0008 | 0.0013 |
| 28 | 0.0021 | 0.0008 | 0.0013 |
| 29 | 0.0021 | 0.0008 | 0.0013 |
| 30 | 0.0021 | 0.0008 | 0.0013 |
| 31 | 0.0022 | 0.0008 | 0.0013 |
| 32 | 0.0022 | 0.0008 | 0.0014 |
| 33 | 0.0022 | 0.0008 | 0.0014 |
| 34 | 0.0022 | 0.0008 | 0.0014 |
| 35 | 0.0022 | 0.0008 | 0.0014 |
| 36 | 0.0022 | 0.0008 | 0.0014 |
| 37 | 0.0022 | 0.0008 | 0.0014 |
| 38 | 0.0022 | 0.0008 | 0.0014 |
| 39 | 0.0022 | 0.0008 | 0.0014 |
| 40 | 0.0023 | 0.0008 | 0.0014 |
| 41 | 0.0023 | 0.0009 | 0.0014 |
| 42 | 0.0023 | 0.0009 | 0.0014 |
| 43 | 0.0023 | 0.0009 | 0.0014 |
| 44 | 0.0023 | 0.0009 | 0.0014 |
| 45 | 0.0023 | 0.0009 | 0.0014 |
| 46 | 0.0023 | 0.0009 | 0.0015 |
| 47 | 0.0023 | 0.0009 | 0.0015 |
| 48 | 0.0024 | 0.0009 | 0.0015 |
| 49 | 0.0024 | 0.0009 | 0.0015 |
| 50 | 0.0024 | 0.0009 | 0.0015 |
| 51 | 0.0024 | 0.0009 | 0.0015 |
| 52 | 0.0024 | 0.0009 | 0.0015 |
| 53 | 0.0024 | 0.0009 | 0.0015 |
| 54 | 0.0024 | 0.0009 | 0.0015 |
| 55 | 0.0025 | 0.0009 | 0.0015 |
| 56 | 0.0025 | 0.0009 | 0.0015 |
| 57 | 0.0025 | 0.0009 | 0.0015 |
| 58 | 0.0025 | 0.0009 | 0.0016 |
| 59 | 0.0025 | 0.0009 | 0.0016 |
| 60 | 0.0025 | 0.0009 | 0.0016 |
| 61 | 0.0025 | 0.0010 | 0.0016 |
| 62 | 0.0025 | 0.0010 | 0.0016 |
| 63 | 0.0026 | 0.0010 | 0.0016 |
| 64 | 0.0026 | 0.0010 | 0.0016 |
| 65 | 0.0026 | 0.0010 | 0.0016 |
| 66 | 0.0026 | 0.0010 | 0.0016 |

| | | | |
|---|---|---|---|
| 67 | 0.0026 | 0.0010 | 0.0016 |
| 68 | 0.0026 | 0.0010 | 0.0017 |
| 69 | 0.0027 | 0.0010 | 0.0017 |
| 70 | 0.0027 | 0.0010 | 0.0017 |
| 71 | 0.0027 | 0.0010 | 0.0017 |
| 72 | 0.0027 | 0.0010 | 0.0017 |
| 73 | 0.0027 | 0.0010 | 0.0017 |
| 74 | 0.0027 | 0.0010 | 0.0017 |
| 75 | 0.0028 | 0.0010 | 0.0017 |
| 76 | 0.0028 | 0.0010 | 0.0017 |
| 77 | 0.0028 | 0.0011 | 0.0018 |
| 78 | 0.0028 | 0.0011 | 0.0018 |
| 79 | 0.0028 | 0.0011 | 0.0018 |
| 80 | 0.0029 | 0.0011 | 0.0018 |
| 81 | 0.0029 | 0.0011 | 0.0018 |
| 82 | 0.0029 | 0.0011 | 0.0018 |
| 83 | 0.0029 | 0.0011 | 0.0018 |
| 84 | 0.0029 | 0.0011 | 0.0018 |
| 85 | 0.0030 | 0.0011 | 0.0019 |
| 86 | 0.0030 | 0.0011 | 0.0019 |
| 87 | 0.0030 | 0.0011 | 0.0019 |
| 88 | 0.0030 | 0.0011 | 0.0019 |
| 89 | 0.0031 | 0.0011 | 0.0019 |
| 90 | 0.0031 | 0.0012 | 0.0019 |
| 91 | 0.0031 | 0.0012 | 0.0019 |
| 92 | 0.0031 | 0.0012 | 0.0019 |
| 93 | 0.0032 | 0.0012 | 0.0020 |
| 94 | 0.0032 | 0.0012 | 0.0020 |
| 95 | 0.0032 | 0.0012 | 0.0020 |
| 96 | 0.0032 | 0.0012 | 0.0020 |
| 97 | 0.0033 | 0.0012 | 0.0020 |
| 98 | 0.0033 | 0.0012 | 0.0020 |
| 99 | 0.0033 | 0.0012 | 0.0021 |
| 100 | 0.0033 | 0.0012 | 0.0021 |
| 101 | 0.0034 | 0.0013 | 0.0021 |
| 102 | 0.0034 | 0.0013 | 0.0021 |
| 103 | 0.0034 | 0.0013 | 0.0021 |
| 104 | 0.0034 | 0.0013 | 0.0022 |
| 105 | 0.0035 | 0.0013 | 0.0022 |
| 106 | 0.0035 | 0.0013 | 0.0022 |
| 107 | 0.0035 | 0.0013 | 0.0022 |
| 108 | 0.0036 | 0.0013 | 0.0022 |
| 109 | 0.0036 | 0.0014 | 0.0023 |
| 110 | 0.0036 | 0.0014 | 0.0023 |
| 111 | 0.0037 | 0.0014 | 0.0023 |
| 112 | 0.0037 | 0.0014 | 0.0023 |
| 113 | 0.0038 | 0.0014 | 0.0023 |
| 114 | 0.0038 | 0.0014 | 0.0024 |
| 115 | 0.0038 | 0.0014 | 0.0024 |
| 116 | 0.0039 | 0.0014 | 0.0024 |
| 117 | 0.0039 | 0.0015 | 0.0024 |
| 118 | 0.0039 | 0.0015 | 0.0025 |
| 119 | 0.0040 | 0.0015 | 0.0025 |
| 120 | 0.0040 | 0.0015 | 0.0025 |
| 121 | 0.0041 | 0.0015 | 0.0025 |
| 122 | 0.0041 | 0.0015 | 0.0026 |
| 123 | 0.0042 | 0.0016 | 0.0026 |
| 124 | 0.0042 | 0.0016 | 0.0026 |
| 125 | 0.0043 | 0.0016 | 0.0027 |

| | | | |
|---|---|---|---|
| 126 | 0.0043 | 0.0016 | 0.0027 |
| 127 | 0.0044 | 0.0016 | 0.0027 |
| 128 | 0.0044 | 0.0017 | 0.0028 |
| 129 | 0.0045 | 0.0017 | 0.0028 |
| 130 | 0.0045 | 0.0017 | 0.0028 |
| 131 | 0.0046 | 0.0017 | 0.0029 |
| 132 | 0.0046 | 0.0017 | 0.0029 |
| 133 | 0.0047 | 0.0018 | 0.0029 |
| 134 | 0.0048 | 0.0018 | 0.0030 |
| 135 | 0.0048 | 0.0018 | 0.0030 |
| 136 | 0.0049 | 0.0018 | 0.0030 |
| 137 | 0.0050 | 0.0019 | 0.0031 |
| 138 | 0.0050 | 0.0019 | 0.0031 |
| 139 | 0.0051 | 0.0019 | 0.0032 |
| 140 | 0.0052 | 0.0019 | 0.0032 |
| 141 | 0.0053 | 0.0020 | 0.0033 |
| 142 | 0.0053 | 0.0020 | 0.0033 |
| 143 | 0.0054 | 0.0020 | 0.0034 |
| 144 | 0.0055 | 0.0021 | 0.0034 |
| 145 | 0.0045 | 0.0017 | 0.0028 |
| 146 | 0.0045 | 0.0017 | 0.0028 |
| 147 | 0.0046 | 0.0017 | 0.0029 |
| 148 | 0.0047 | 0.0018 | 0.0029 |
| 149 | 0.0048 | 0.0018 | 0.0030 |
| 150 | 0.0049 | 0.0018 | 0.0030 |
| 151 | 0.0050 | 0.0019 | 0.0031 |
| 152 | 0.0051 | 0.0019 | 0.0032 |
| 153 | 0.0052 | 0.0020 | 0.0032 |
| 154 | 0.0053 | 0.0020 | 0.0033 |
| 155 | 0.0054 | 0.0020 | 0.0034 |
| 156 | 0.0055 | 0.0021 | 0.0034 |
| 157 | 0.0057 | 0.0021 | 0.0035 |
| 158 | 0.0058 | 0.0022 | 0.0036 |
| 159 | 0.0060 | 0.0022 | 0.0037 |
| 160 | 0.0061 | 0.0023 | 0.0038 |
| 161 | 0.0063 | 0.0024 | 0.0039 |
| 162 | 0.0064 | 0.0024 | 0.0040 |
| 163 | 0.0066 | 0.0025 | 0.0041 |
| 164 | 0.0067 | 0.0025 | 0.0042 |
| 165 | 0.0070 | 0.0026 | 0.0044 |
| 166 | 0.0071 | 0.0027 | 0.0045 |
| 167 | 0.0075 | 0.0028 | 0.0047 |
| 168 | 0.0076 | 0.0029 | 0.0048 |
| 169 | 0.0084 | 0.0032 | 0.0053 |
| 170 | 0.0086 | 0.0032 | 0.0054 |
| 171 | 0.0090 | 0.0034 | 0.0056 |
| 172 | 0.0093 | 0.0035 | 0.0058 |
| 173 | 0.0098 | 0.0037 | 0.0061 |
| 174 | 0.0101 | 0.0038 | 0.0063 |
| 175 | 0.0107 | 0.0040 | 0.0067 |
| 176 | 0.0110 | 0.0041 | 0.0069 |
| 177 | 0.0118 | 0.0044 | 0.0074 |
| 178 | 0.0122 | 0.0046 | 0.0076 |
| 179 | 0.0132 | 0.0049 | 0.0082 |
| 180 | 0.0137 | 0.0052 | 0.0086 |
| 181 | 0.0150 | 0.0056 | 0.0094 |
| 182 | 0.0157 | 0.0059 | 0.0098 |
| 183 | 0.0175 | 0.0066 | 0.0109 |
| 184 | 0.0185 | 0.0070 | 0.0116 |

| | | | |
|---|---|---|---|
| 185 | 0.0343 | 0.0129 | 0.0214 |
| 186 | 0.0366 | 0.0137 | 0.0228 |
| 187 | 0.0424 | 0.0153 | 0.0271 |
| 188 | 0.0463 | 0.0153 | 0.0310 |
| 189 | 0.0576 | 0.0153 | 0.0423 |
| 190 | 0.0663 | 0.0153 | 0.0510 |
| 191 | 0.1006 | 0.0153 | 0.0853 |
| 192 | 0.1460 | 0.0153 | 0.1308 |
| 193 | 0.6318 | 0.0153 | 0.6165 |
| 194 | 0.0792 | 0.0153 | 0.0639 |
| 195 | 0.0512 | 0.0153 | 0.0359 |
| 196 | 0.0392 | 0.0147 | 0.0245 |
| 197 | 0.0197 | 0.0074 | 0.0123 |
| 198 | 0.0166 | 0.0062 | 0.0103 |
| 199 | 0.0143 | 0.0054 | 0.0089 |
| 200 | 0.0127 | 0.0048 | 0.0079 |
| 201 | 0.0114 | 0.0043 | 0.0071 |
| 202 | 0.0104 | 0.0039 | 0.0065 |
| 203 | 0.0095 | 0.0036 | 0.0060 |
| 204 | 0.0088 | 0.0033 | 0.0055 |
| 205 | 0.0078 | 0.0029 | 0.0049 |
| 206 | 0.0073 | 0.0027 | 0.0046 |
| 207 | 0.0069 | 0.0026 | 0.0043 |
| 208 | 0.0065 | 0.0024 | 0.0041 |
| 209 | 0.0062 | 0.0023 | 0.0038 |
| 210 | 0.0059 | 0.0022 | 0.0037 |
| 211 | 0.0056 | 0.0021 | 0.0035 |
| 212 | 0.0053 | 0.0020 | 0.0033 |
| 213 | 0.0051 | 0.0019 | 0.0032 |
| 214 | 0.0049 | 0.0019 | 0.0031 |
| 215 | 0.0047 | 0.0018 | 0.0030 |
| 216 | 0.0046 | 0.0017 | 0.0029 |
| 217 | 0.0056 | 0.0021 | 0.0035 |
| 218 | 0.0054 | 0.0020 | 0.0034 |
| 219 | 0.0052 | 0.0020 | 0.0033 |
| 220 | 0.0051 | 0.0019 | 0.0032 |
| 221 | 0.0049 | 0.0018 | 0.0031 |
| 222 | 0.0048 | 0.0018 | 0.0030 |
| 223 | 0.0047 | 0.0018 | 0.0029 |
| 224 | 0.0046 | 0.0017 | 0.0028 |
| 225 | 0.0044 | 0.0017 | 0.0028 |
| 226 | 0.0043 | 0.0016 | 0.0027 |
| 227 | 0.0042 | 0.0016 | 0.0026 |
| 228 | 0.0041 | 0.0016 | 0.0026 |
| 229 | 0.0041 | 0.0015 | 0.0025 |
| 230 | 0.0040 | 0.0015 | 0.0025 |
| 231 | 0.0039 | 0.0015 | 0.0024 |
| 232 | 0.0038 | 0.0014 | 0.0024 |
| 233 | 0.0037 | 0.0014 | 0.0023 |
| 234 | 0.0037 | 0.0014 | 0.0023 |
| 235 | 0.0036 | 0.0013 | 0.0022 |
| 236 | 0.0035 | 0.0013 | 0.0022 |
| 237 | 0.0035 | 0.0013 | 0.0022 |
| 238 | 0.0034 | 0.0013 | 0.0021 |
| 239 | 0.0033 | 0.0013 | 0.0021 |
| 240 | 0.0033 | 0.0012 | 0.0021 |
| 241 | 0.0032 | 0.0012 | 0.0020 |
| 242 | 0.0032 | 0.0012 | 0.0020 |
| 243 | 0.0031 | 0.0012 | 0.0020 |

| | | | |
|---|---|---|---|
| 244 | 0.0031 | 0.0012 | 0.0019 |
| 245 | 0.0030 | 0.0011 | 0.0019 |
| 246 | 0.0030 | 0.0011 | 0.0019 |
| 247 | 0.0030 | 0.0011 | 0.0018 |
| 248 | 0.0029 | 0.0011 | 0.0018 |
| 249 | 0.0029 | 0.0011 | 0.0018 |
| 250 | 0.0028 | 0.0011 | 0.0018 |
| 251 | 0.0028 | 0.0010 | 0.0017 |
| 252 | 0.0028 | 0.0010 | 0.0017 |
| 253 | 0.0027 | 0.0010 | 0.0017 |
| 254 | 0.0027 | 0.0010 | 0.0017 |
| 255 | 0.0027 | 0.0010 | 0.0017 |
| 256 | 0.0026 | 0.0010 | 0.0016 |
| 257 | 0.0026 | 0.0010 | 0.0016 |
| 258 | 0.0026 | 0.0010 | 0.0016 |
| 259 | 0.0025 | 0.0009 | 0.0016 |
| 260 | 0.0025 | 0.0009 | 0.0016 |
| 261 | 0.0025 | 0.0009 | 0.0015 |
| 262 | 0.0024 | 0.0009 | 0.0015 |
| 263 | 0.0024 | 0.0009 | 0.0015 |
| 264 | 0.0024 | 0.0009 | 0.0015 |
| 265 | 0.0024 | 0.0009 | 0.0015 |
| 266 | 0.0023 | 0.0009 | 0.0015 |
| 267 | 0.0023 | 0.0009 | 0.0014 |
| 268 | 0.0023 | 0.0009 | 0.0014 |
| 269 | 0.0023 | 0.0008 | 0.0014 |
| 270 | 0.0022 | 0.0008 | 0.0014 |
| 271 | 0.0022 | 0.0008 | 0.0014 |
| 272 | 0.0022 | 0.0008 | 0.0014 |
| 273 | 0.0022 | 0.0008 | 0.0014 |
| 274 | 0.0022 | 0.0008 | 0.0013 |
| 275 | 0.0021 | 0.0008 | 0.0013 |
| 276 | 0.0021 | 0.0008 | 0.0013 |
| 277 | 0.0021 | 0.0008 | 0.0013 |
| 278 | 0.0021 | 0.0008 | 0.0013 |
| 279 | 0.0021 | 0.0008 | 0.0013 |
| 280 | 0.0020 | 0.0008 | 0.0013 |
| 281 | 0.0020 | 0.0008 | 0.0013 |
| 282 | 0.0020 | 0.0008 | 0.0013 |
| 283 | 0.0020 | 0.0007 | 0.0012 |
| 284 | 0.0020 | 0.0007 | 0.0012 |
| 285 | 0.0020 | 0.0007 | 0.0012 |
| 286 | 0.0019 | 0.0007 | 0.0012 |
| 287 | 0.0019 | 0.0007 | 0.0012 |
| 288 | 0.0019 | 0.0007 | 0.0012 |

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Total soil rain loss = 0.61(In)
Total effective rainfall = 1.88(In)
Peak flow rate in flood hydrograph = 242.92(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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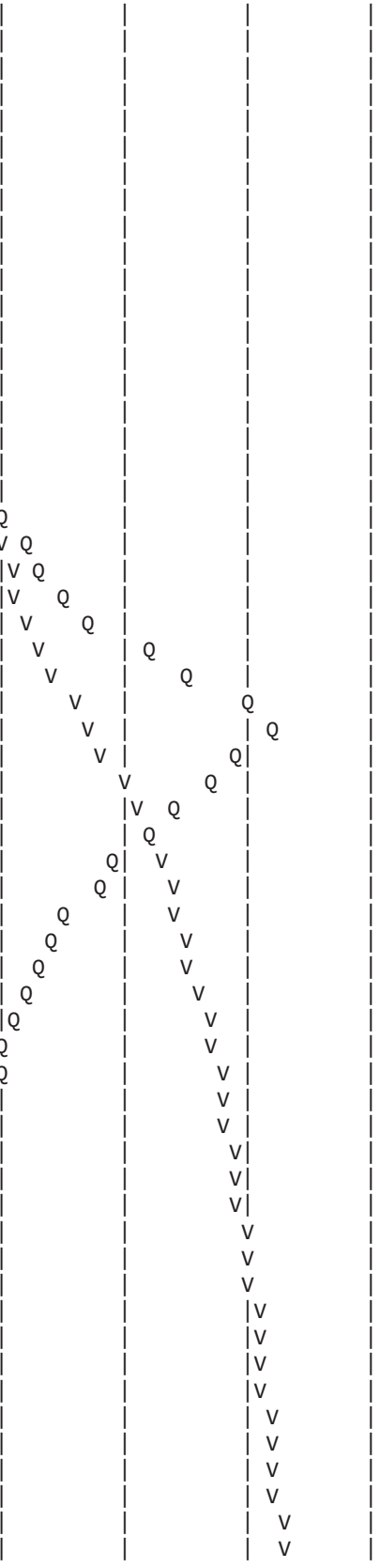
Time(h+m) Volume Ac.Ft Q(CFS) 0 75.0 150.0 225.0 300.0

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0001 | 0.01 | Q | | | | |
| 0+10 | 0.0003 | 0.04 | Q | | | | |
| 0+15 | 0.0008 | 0.07 | Q | | | | |
| 0+20 | 0.0016 | 0.12 | Q | | | | |
| 0+25 | 0.0028 | 0.17 | Q | | | | |
| 0+30 | 0.0045 | 0.24 | Q | | | | |
| 0+35 | 0.0067 | 0.32 | Q | | | | |
| 0+40 | 0.0096 | 0.42 | Q | | | | |
| 0+45 | 0.0134 | 0.56 | Q | | | | |
| 0+50 | 0.0185 | 0.74 | Q | | | | |
| 0+55 | 0.0253 | 0.98 | Q | | | | |
| 1+ 0 | 0.0339 | 1.26 | Q | | | | |
| 1+ 5 | 0.0443 | 1.51 | Q | | | | |
| 1+10 | 0.0563 | 1.74 | Q | | | | |
| 1+15 | 0.0696 | 1.93 | Q | | | | |
| 1+20 | 0.0841 | 2.11 | Q | | | | |
| 1+25 | 0.0997 | 2.26 | Q | | | | |
| 1+30 | 0.1162 | 2.41 | Q | | | | |
| 1+35 | 0.1336 | 2.53 | Q | | | | |
| 1+40 | 0.1518 | 2.64 | Q | | | | |
| 1+45 | 0.1707 | 2.74 | Q | | | | |
| 1+50 | 0.1902 | 2.83 | Q | | | | |
| 1+55 | 0.2102 | 2.91 | Q | | | | |
| 2+ 0 | 0.2309 | 3.00 | Q | | | | |
| 2+ 5 | 0.2521 | 3.07 | Q | | | | |
| 2+10 | 0.2738 | 3.15 | Q | | | | |
| 2+15 | 0.2959 | 3.22 | Q | | | | |
| 2+20 | 0.3185 | 3.29 | Q | | | | |
| 2+25 | 0.3416 | 3.35 | Q | | | | |
| 2+30 | 0.3651 | 3.41 | Q | | | | |
| 2+35 | 0.3890 | 3.47 | Q | | | | |
| 2+40 | 0.4133 | 3.53 | Q | | | | |
| 2+45 | 0.4379 | 3.58 | Q | | | | |
| 2+50 | 0.4629 | 3.63 | Q | | | | |
| 2+55 | 0.4883 | 3.68 | Q | | | | |
| 3+ 0 | 0.5140 | 3.73 | Q | | | | |
| 3+ 5 | 0.5400 | 3.78 | Q | | | | |
| 3+10 | 0.5663 | 3.82 | Q | | | | |
| 3+15 | 0.5930 | 3.87 | Q | | | | |
| 3+20 | 0.6200 | 3.92 | Q | | | | |
| 3+25 | 0.6472 | 3.96 | Q | | | | |
| 3+30 | 0.6748 | 4.00 | Q | | | | |
| 3+35 | 0.7027 | 4.05 | Q | | | | |
| 3+40 | 0.7309 | 4.09 | Q | | | | |
| 3+45 | 0.7594 | 4.13 | Q | | | | |
| 3+50 | 0.7881 | 4.17 | Q | | | | |
| 3+55 | 0.8172 | 4.22 | Q | | | | |
| 4+ 0 | 0.8465 | 4.26 | Q | | | | |
| 4+ 5 | 0.8760 | 4.29 | Q | | | | |
| 4+10 | 0.9058 | 4.33 | Q | | | | |
| 4+15 | 0.9359 | 4.37 | Q | | | | |
| 4+20 | 0.9662 | 4.40 | Q | | | | |
| 4+25 | 0.9968 | 4.44 | Q | | | | |
| 4+30 | 1.0277 | 4.48 | Q | | | | |
| 4+35 | 1.0587 | 4.52 | Q | | | | |
| 4+40 | 1.0901 | 4.55 | Q | | | | |
| 4+45 | 1.1217 | 4.59 | Q | | | | |
| 4+50 | 1.1535 | 4.62 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4+55 | 1.1856 | 4.66 | QV | | | | |
| 5+ 0 | 1.2180 | 4.70 | QV | | | | |
| 5+ 5 | 1.2506 | 4.73 | QV | | | | |
| 5+10 | 1.2834 | 4.77 | QV | | | | |
| 5+15 | 1.3165 | 4.81 | QV | | | | |
| 5+20 | 1.3499 | 4.84 | QV | | | | |
| 5+25 | 1.3835 | 4.88 | QV | | | | |
| 5+30 | 1.4173 | 4.91 | QV | | | | |
| 5+35 | 1.4514 | 4.95 | QV | | | | |
| 5+40 | 1.4857 | 4.98 | QV | | | | |
| 5+45 | 1.5203 | 5.02 | QV | | | | |
| 5+50 | 1.5551 | 5.06 | QV | | | | |
| 5+55 | 1.5902 | 5.10 | QV | | | | |
| 6+ 0 | 1.6256 | 5.13 | QV | | | | |
| 6+ 5 | 1.6612 | 5.17 | QV | | | | |
| 6+10 | 1.6970 | 5.20 | QV | | | | |
| 6+15 | 1.7331 | 5.24 | QV | | | | |
| 6+20 | 1.7694 | 5.28 | QV | | | | |
| 6+25 | 1.8060 | 5.32 | QV | | | | |
| 6+30 | 1.8429 | 5.35 | QV | | | | |
| 6+35 | 1.8800 | 5.39 | QV | | | | |
| 6+40 | 1.9174 | 5.43 | QV | | | | |
| 6+45 | 1.9551 | 5.47 | QV | | | | |
| 6+50 | 1.9930 | 5.50 | QV | | | | |
| 6+55 | 2.0311 | 5.54 | QV | | | | |
| 7+ 0 | 2.0696 | 5.58 | QV | | | | |
| 7+ 5 | 2.1083 | 5.62 | QV | | | | |
| 7+10 | 2.1473 | 5.66 | QV | | | | |
| 7+15 | 2.1865 | 5.70 | QV | | | | |
| 7+20 | 2.2260 | 5.74 | QV | | | | |
| 7+25 | 2.2658 | 5.78 | QV | | | | |
| 7+30 | 2.3059 | 5.82 | Q V | | | | |
| 7+35 | 2.3462 | 5.86 | Q V | | | | |
| 7+40 | 2.3869 | 5.90 | Q V | | | | |
| 7+45 | 2.4278 | 5.94 | Q V | | | | |
| 7+50 | 2.4690 | 5.98 | Q V | | | | |
| 7+55 | 2.5105 | 6.03 | Q V | | | | |
| 8+ 0 | 2.5523 | 6.07 | Q V | | | | |
| 8+ 5 | 2.5944 | 6.11 | Q V | | | | |
| 8+10 | 2.6368 | 6.16 | Q V | | | | |
| 8+15 | 2.6796 | 6.21 | Q V | | | | |
| 8+20 | 2.7226 | 6.25 | Q V | | | | |
| 8+25 | 2.7660 | 6.30 | Q V | | | | |
| 8+30 | 2.8098 | 6.35 | Q V | | | | |
| 8+35 | 2.8538 | 6.40 | Q V | | | | |
| 8+40 | 2.8982 | 6.45 | Q V | | | | |
| 8+45 | 2.9430 | 6.50 | Q V | | | | |
| 8+50 | 2.9881 | 6.55 | Q V | | | | |
| 8+55 | 3.0336 | 6.60 | Q V | | | | |
| 9+ 0 | 3.0794 | 6.66 | Q V | | | | |
| 9+ 5 | 3.1256 | 6.71 | Q V | | | | |
| 9+10 | 3.1722 | 6.76 | Q V | | | | |
| 9+15 | 3.2191 | 6.82 | Q V | | | | |
| 9+20 | 3.2665 | 6.87 | Q V | | | | |
| 9+25 | 3.3142 | 6.93 | Q V | | | | |
| 9+30 | 3.3623 | 6.99 | Q V | | | | |
| 9+35 | 3.4109 | 7.05 | Q V | | | | |
| 9+40 | 3.4598 | 7.11 | Q  V | | | | |
| 9+45 | 3.5091 | 7.17 | Q  V | | | | |

```
 9+50       3.5589      7.23  Q  V      |          |          |          |
 9+55       3.6091      7.29  Q  V      |          |          |          |
10+ 0       3.6598      7.36  Q  V      |          |          |          |
10+ 5       3.7109      7.42  Q  V      |          |          |          |
10+10       3.7625      7.49  Q  V      |          |          |          |
10+15       3.8145      7.55  |Q V      |          |          |          |
10+20       3.8670      7.62  |Q V      |          |          |          |
10+25       3.9200      7.69  |Q V      |          |          |          |
10+30       3.9734      7.76  |Q V      |          |          |          |
10+35       4.0274      7.83  |Q V      |          |          |          |
10+40       4.0819      7.91  |Q V      |          |          |          |
10+45       4.1368      7.98  |Q V      |          |          |          |
10+50       4.1924      8.06  |Q V      |          |          |          |
10+55       4.2484      8.14  |Q V      |          |          |          |
11+ 0       4.3051      8.22  |Q V      |          |          |          |
11+ 5       4.3622      8.30  |Q V      |          |          |          |
11+10       4.4200      8.39  |Q V      |          |          |          |
11+15       4.4784      8.48  |Q V      |          |          |          |
11+20       4.5374      8.57  |Q V      |          |          |          |
11+25       4.5970      8.66  |Q  V     |          |          |          |
11+30       4.6573      8.75  |Q  V     |          |          |          |
11+35       4.7182      8.85  |Q  V     |          |          |          |
11+40       4.7798      8.94  |Q  V     |          |          |          |
11+45       4.8421      9.04  |Q  V     |          |          |          |
11+50       4.9051      9.15  |Q  V     |          |          |          |
11+55       4.9688      9.26  |Q  V     |          |          |          |
12+ 0       5.0333      9.36  |Q  V     |          |          |          |
12+ 5       5.0985      9.47  |Q  V     |          |          |          |
12+10       5.1645      9.57  |Q  V     |          |          |          |
12+15       5.2311      9.67  |Q  V     |          |          |          |
12+20       5.2983      9.76  |Q  V     |          |          |          |
12+25       5.3662      9.86  |Q  V     |          |          |          |
12+30       5.4347      9.94  |Q  V     |          |          |          |
12+35       5.5037     10.03  |Q  V     |          |          |          |
12+40       5.5734     10.11  |Q  V     |          |          |          |
12+45       5.6433     10.16  |Q  V     |          |          |          |
12+50       5.7136     10.20  |Q  V     |          |          |          |
12+55       5.7839     10.20  |Q   V    |          |          |          |
13+ 0       5.8540     10.19  |Q   V    |          |          |          |
13+ 5       5.9242     10.20  |Q   V    |          |          |          |
13+10       5.9946     10.22  |Q   V    |          |          |          |
13+15       6.0653     10.27  |Q   V    |          |          |          |
13+20       6.1364     10.33  |Q   V    |          |          |          |
13+25       6.2082     10.41  |Q   V    |          |          |          |
13+30       6.2805     10.51  |Q   V    |          |          |          |
13+35       6.3537     10.63  |Q   V    |          |          |          |
13+40       6.4278     10.75  |Q   V    |          |          |          |
13+45       6.5028     10.90  |Q   V    |          |          |          |
13+50       6.5790     11.06  |Q   V    |          |          |          |
13+55       6.6563     11.23  |Q   V    |          |          |          |
14+ 0       6.7349     11.41  |Q   V    |          |          |          |
14+ 5       6.8148     11.61  |Q   V    |          |          |          |
14+10       6.8962     11.82  |Q    V   |          |          |          |
14+15       6.9793     12.06  |Q    V   |          |          |          |
14+20       7.0640     12.31  |Q    V   |          |          |          |
14+25       7.1507     12.58  |Q    V   |          |          |          |
14+30       7.2393     12.87  |Q    V   |          |          |          |
14+35       7.3302     13.19  |Q    V   |          |          |          |
14+40       7.4233     13.53  |Q    V   |          |          |          |
```

| | | | |
|---|---|---|---|
| 14+45 | 7.5191 | 13.91 |  |
| 14+50 | 7.6178 | 14.32 | |
| 14+55 | 7.7195 | 14.78 | |
| 15+ 0 | 7.8248 | 15.28 | |
| 15+ 5 | 7.9337 | 15.81 | |
| 15+10 | 8.0465 | 16.39 | |
| 15+15 | 8.1636 | 17.00 | |
| 15+20 | 8.2853 | 17.67 | |
| 15+25 | 8.4126 | 18.49 | |
| 15+30 | 8.5467 | 19.46 | |
| 15+35 | 8.6889 | 20.64 | |
| 15+40 | 8.8407 | 22.05 | |
| 15+45 | 9.0047 | 23.81 | |
| 15+50 | 9.1837 | 25.99 | |
| 15+55 | 9.3832 | 28.97 | |
| 16+ 0 | 9.6115 | 33.15 | |
| 16+ 5 | 9.9124 | 43.69 | |
| 16+10 | 10.2904 | 54.88 | |
| 16+15 | 10.7500 | 66.73 | |
| 16+20 | 11.2891 | 78.29 | |
| 16+25 | 11.9172 | 91.19 | |
| 16+30 | 12.6276 | 103.16 | |
| 16+35 | 13.4446 | 118.62 | |
| 16+40 | 14.3694 | 134.28 | |
| 16+45 | 15.5318 | 168.78 | |
| 16+50 | 16.8637 | 193.39 | |
| 16+55 | 18.4480 | 230.05 | |
| 17+ 0 | 20.1210 | 242.92 | |
| 17+ 5 | 21.6646 | 224.13 | |
| 17+10 | 23.1073 | 209.48 | |
| 17+15 | 24.3651 | 182.64 | |
| 17+20 | 25.5161 | 167.11 | |
| 17+25 | 26.5432 | 149.13 | |
| 17+30 | 27.4897 | 137.44 | |
| 17+35 | 28.3110 | 119.25 | |
| 17+40 | 29.0680 | 109.92 | |
| 17+45 | 29.7499 | 99.02 | |
| 17+50 | 30.3905 | 93.02 | |
| 17+55 | 30.9795 | 85.52 | |
| 18+ 0 | 31.5405 | 81.46 | |
| 18+ 5 | 32.0686 | 76.67 | |
| 18+10 | 32.5710 | 72.96 | |
| 18+15 | 33.0335 | 67.14 | |
| 18+20 | 33.4746 | 64.06 | |
| 18+25 | 33.8891 | 60.17 | |
| 18+30 | 34.2893 | 58.11 | |
| 18+35 | 34.6735 | 55.79 | |
| 18+40 | 35.0383 | 52.98 | |
| 18+45 | 35.3730 | 48.60 | |
| 18+50 | 35.6986 | 47.28 | |
| 18+55 | 36.0168 | 46.20 | |
| 19+ 0 | 36.3215 | 44.24 | |
| 19+ 5 | 36.6072 | 41.48 | |
| 19+10 | 36.8872 | 40.66 | |
| 19+15 | 37.1621 | 39.91 | |
| 19+20 | 37.4279 | 38.59 | |
| 19+25 | 37.6830 | 37.05 | |
| 19+30 | 37.9334 | 36.35 | |
| 19+35 | 38.1784 | 35.57 | |

```
19+40      38.4117     33.87  |   Q     |         |         |  V      |
19+45      38.6331     32.15  |   Q     |         |         |  V      |
19+50      38.8497     31.45  |   Q     |         |         |  V      |
19+55      39.0606     30.63  |   Q     |         |         |   V     |
20+ 0      39.2572     28.54  |  Q      |         |         |   V     |
20+ 5      39.4423     26.87  |  Q      |         |         |   V     |
20+10      39.6238     26.36  |  Q      |         |         |   V     |
20+15      39.8022     25.90  |  Q      |         |         |   V     |
20+20      39.9757     25.19  |  Q      |         |         |   V     |
20+25      40.1454     24.64  |  Q      |         |         |    V    |
20+30      40.3124     24.25  |  Q      |         |         |    V    |
20+35      40.4762     23.78  |  Q      |         |         |    V    |
20+40      40.6327     22.71  |  Q      |         |         |    V    |
20+45      40.7845     22.06  | Q       |         |         |    V    |
20+50      40.9340     21.70  | Q       |         |         |    V    |
20+55      41.0808     21.31  | Q       |         |         |    V    |
21+ 0      41.2228     20.63  | Q       |         |         |     V   |
21+ 5      41.3619     20.19  | Q       |         |         |     V   |
21+10      41.4983     19.82  | Q       |         |         |     V   |
21+15      41.6311     19.28  | Q       |         |         |     V   |
21+20      41.7552     18.02  | Q       |         |         |     V   |
21+25      41.8757     17.49  | Q       |         |         |     V   |
21+30      41.9944     17.24  | Q       |         |         |     V   |
21+35      42.1115     17.01  | Q       |         |         |     V   |
21+40      42.2272     16.79  | Q       |         |         |     V   |
21+45      42.3412     16.56  | Q       |         |         |     V   |
21+50      42.4532     16.26  | Q       |         |         |      V  |
21+55      42.5617     15.76  | Q       |         |         |      V  |
22+ 0      42.6633     14.75  |Q        |         |         |      V  |
22+ 5      42.7626     14.41  |Q        |         |         |      V  |
22+10      42.8604     14.20  |Q        |         |         |      V  |
22+15      42.9568     14.01  |Q        |         |         |      V  |
22+20      43.0520     13.81  |Q        |         |         |      V  |
22+25      43.1456     13.60  |Q        |         |         |      V  |
22+30      43.2373     13.32  |Q        |         |         |      V  |
22+35      43.3250     12.72  |Q        |         |         |      V  |
22+40      43.4063     11.81  |Q        |         |         |      V  |
22+45      43.4859     11.56  |Q        |         |         |      V  |
22+50      43.5643     11.38  |Q        |         |         |       V |
22+55      43.6415     11.21  |Q        |         |         |       V |
23+ 0      43.7175     11.04  |Q        |         |         |       V |
23+ 5      43.7922     10.84  |Q        |         |         |       V |
23+10      43.8651     10.58  |Q        |         |         |       V |
23+15      43.9332      9.89  |Q        |         |         |       V |
23+20      43.9961      9.14  |Q        |         |         |       V |
23+25      44.0580      8.99  |Q        |         |         |       V |
23+30      44.1192      8.87  |Q        |         |         |       V |
23+35      44.1797      8.79  |Q        |         |         |       V |
23+40      44.2398      8.72  |Q        |         |         |       V |
23+45      44.2995      8.67  |Q        |         |         |       V |
23+50      44.3590      8.65  |Q        |         |         |       V |
23+55      44.4194      8.76  |Q        |         |         |       V |
24+ 0      44.4800      8.81  |Q        |         |         |       V |
24+ 5      44.5403      8.75  |Q        |         |         |       V |
24+10      44.6000      8.67  |Q        |         |         |       V |
24+15      44.6590      8.57  |Q        |         |         |        V|
24+20      44.7172      8.46  |Q        |         |         |        V|
24+25      44.7746      8.33  |Q        |         |         |        V|
24+30      44.8311      8.20  |Q        |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24+35 | 44.8865 | 8.05 | \|Q | \| | \| | \| | V\| |
| 24+40 | 44.9408 | 7.88 | \|Q | \| | \| | \| | V\| |
| 24+45 | 44.9935 | 7.65 | \|Q | \| | \| | \| | V\| |
| 24+50 | 45.0444 | 7.39 | Q | \| | \| | \| | V\| |
| 24+55 | 45.0930 | 7.05 | Q | \| | \| | \| | V\| |
| 25+ 0 | 45.1389 | 6.67 | Q | \| | \| | \| | V\| |
| 25+ 5 | 45.1822 | 6.28 | Q | \| | \| | \| | V\| |
| 25+10 | 45.2220 | 5.79 | Q | \| | \| | \| | V\| |
| 25+15 | 45.2560 | 4.93 | Q | \| | \| | \| | V\| |
| 25+20 | 45.2873 | 4.55 | Q | \| | \| | \| | V\| |
| 25+25 | 45.3170 | 4.32 | Q | \| | \| | \| | V\| |
| 25+30 | 45.3454 | 4.12 | Q | \| | \| | \| | V\| |
| 25+35 | 45.3726 | 3.95 | Q | \| | \| | \| | V\| |
| 25+40 | 45.3987 | 3.79 | Q | \| | \| | \| | V\| |
| 25+45 | 45.4238 | 3.64 | Q | \| | \| | \| | V\| |
| 25+50 | 45.4478 | 3.50 | Q | \| | \| | \| | V\| |
| 25+55 | 45.4709 | 3.35 | Q | \| | \| | \| | V\| |
| 26+ 0 | 45.4930 | 3.20 | Q | \| | \| | \| | V\| |
| 26+ 5 | 45.5138 | 3.02 | Q | \| | \| | \| | V\| |
| 26+10 | 45.5331 | 2.80 | Q | \| | \| | \| | V\| |
| 26+15 | 45.5485 | 2.24 | Q | \| | \| | \| | V\| |
| 26+20 | 45.5598 | 1.65 | Q | \| | \| | \| | V\| |
| 26+25 | 45.5702 | 1.51 | Q | \| | \| | \| | V\| |
| 26+30 | 45.5800 | 1.41 | Q | \| | \| | \| | V\| |
| 26+35 | 45.5891 | 1.33 | Q | \| | \| | \| | V\| |
| 26+40 | 45.5978 | 1.26 | Q | \| | \| | \| | V\| |
| 26+45 | 45.6061 | 1.20 | Q | \| | \| | \| | V\| |
| 26+50 | 45.6140 | 1.15 | Q | \| | \| | \| | V\| |
| 26+55 | 45.6216 | 1.10 | Q | \| | \| | \| | V\| |
| 27+ 0 | 45.6288 | 1.05 | Q | \| | \| | \| | V\| |
| 27+ 5 | 45.6357 | 1.00 | Q | \| | \| | \| | V\| |
| 27+10 | 45.6423 | 0.96 | Q | \| | \| | \| | V\| |
| 27+15 | 45.6486 | 0.92 | Q | \| | \| | \| | V\| |
| 27+20 | 45.6546 | 0.88 | Q | \| | \| | \| | V\| |
| 27+25 | 45.6604 | 0.84 | Q | \| | \| | \| | V\| |
| 27+30 | 45.6659 | 0.80 | Q | \| | \| | \| | V\| |
| 27+35 | 45.6711 | 0.77 | Q | \| | \| | \| | V\| |
| 27+40 | 45.6762 | 0.73 | Q | \| | \| | \| | V\| |
| 27+45 | 45.6810 | 0.70 | Q | \| | \| | \| | V\| |
| 27+50 | 45.6856 | 0.67 | Q | \| | \| | \| | V\| |
| 27+55 | 45.6901 | 0.64 | Q | \| | \| | \| | V\| |
| 28+ 0 | 45.6943 | 0.62 | Q | \| | \| | \| | V\| |
| 28+ 5 | 45.6984 | 0.59 | Q | \| | \| | \| | V\| |
| 28+10 | 45.7023 | 0.57 | Q | \| | \| | \| | V\| |
| 28+15 | 45.7061 | 0.55 | Q | \| | \| | \| | V\| |
| 28+20 | 45.7097 | 0.52 | Q | \| | \| | \| | V\| |
| 28+25 | 45.7132 | 0.50 | Q | \| | \| | \| | V\| |
| 28+30 | 45.7165 | 0.48 | Q | \| | \| | \| | V\| |
| 28+35 | 45.7197 | 0.46 | Q | \| | \| | \| | V\| |
| 28+40 | 45.7227 | 0.44 | Q | \| | \| | \| | V\| |
| 28+45 | 45.7256 | 0.42 | Q | \| | \| | \| | V\| |
| 28+50 | 45.7284 | 0.41 | Q | \| | \| | \| | V\| |
| 28+55 | 45.7311 | 0.39 | Q | \| | \| | \| | V\| |
| 29+ 0 | 45.7337 | 0.37 | Q | \| | \| | \| | V\| |
| 29+ 5 | 45.7361 | 0.36 | Q | \| | \| | \| | V\| |
| 29+10 | 45.7384 | 0.34 | Q | \| | \| | \| | V\| |
| 29+15 | 45.7407 | 0.32 | Q | \| | \| | \| | V\| |
| 29+20 | 45.7428 | 0.31 | Q | \| | \| | \| | V\| |
| 29+25 | 45.7449 | 0.30 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 29+30 | 45.7468 | 0.29 | Q | \| | \| | \| | V\| |
| 29+35 | 45.7487 | 0.27 | Q | \| | \| | \| | V\| |
| 29+40 | 45.7505 | 0.26 | Q | \| | \| | \| | V\| |
| 29+45 | 45.7522 | 0.25 | Q | \| | \| | \| | V\| |
| 29+50 | 45.7539 | 0.24 | Q | \| | \| | \| | V\| |
| 29+55 | 45.7554 | 0.23 | Q | \| | \| | \| | V\| |
| 30+ 0 | 45.7569 | 0.22 | Q | \| | \| | \| | V\| |
| 30+ 5 | 45.7584 | 0.21 | Q | \| | \| | \| | V\| |
| 30+10 | 45.7597 | 0.20 | Q | \| | \| | \| | V\| |
| 30+15 | 45.7610 | 0.19 | Q | \| | \| | \| | V\| |
| 30+20 | 45.7623 | 0.18 | Q | \| | \| | \| | V\| |
| 30+25 | 45.7634 | 0.17 | Q | \| | \| | \| | V\| |
| 30+30 | 45.7646 | 0.16 | Q | \| | \| | \| | V\| |
| 30+35 | 45.7656 | 0.15 | Q | \| | \| | \| | V\| |
| 30+40 | 45.7666 | 0.15 | Q | \| | \| | \| | V\| |
| 30+45 | 45.7676 | 0.14 | Q | \| | \| | \| | V\| |
| 30+50 | 45.7686 | 0.14 | Q | \| | \| | \| | V\| |
| 30+55 | 45.7694 | 0.13 | Q | \| | \| | \| | V\| |
| 31+ 0 | 45.7703 | 0.12 | Q | \| | \| | \| | V\| |
| 31+ 5 | 45.7711 | 0.12 | Q | \| | \| | \| | V\| |
| 31+10 | 45.7719 | 0.11 | Q | \| | \| | \| | V\| |
| 31+15 | 45.7726 | 0.11 | Q | \| | \| | \| | V\| |
| 31+20 | 45.7733 | 0.10 | Q | \| | \| | \| | V\| |
| 31+25 | 45.7740 | 0.10 | Q | \| | \| | \| | V\| |
| 31+30 | 45.7746 | 0.10 | Q | \| | \| | \| | V\| |
| 31+35 | 45.7753 | 0.09 | Q | \| | \| | \| | V\| |
| 31+40 | 45.7759 | 0.09 | Q | \| | \| | \| | V\| |
| 31+45 | 45.7765 | 0.08 | Q | \| | \| | \| | V\| |
| 31+50 | 45.7770 | 0.08 | Q | \| | \| | \| | V\| |
| 31+55 | 45.7775 | 0.08 | Q | \| | \| | \| | V\| |
| 32+ 0 | 45.7781 | 0.07 | Q | \| | \| | \| | V\| |
| 32+ 5 | 45.7785 | 0.07 | Q | \| | \| | \| | V\| |
| 32+10 | 45.7790 | 0.07 | Q | \| | \| | \| | V\| |
| 32+15 | 45.7794 | 0.06 | Q | \| | \| | \| | V\| |
| 32+20 | 45.7798 | 0.06 | Q | \| | \| | \| | V\| |
| 32+25 | 45.7802 | 0.05 | Q | \| | \| | \| | V\| |
| 32+30 | 45.7805 | 0.05 | Q | \| | \| | \| | V\| |
| 32+35 | 45.7809 | 0.05 | Q | \| | \| | \| | V\| |
| 32+40 | 45.7811 | 0.04 | Q | \| | \| | \| | V\| |
| 32+45 | 45.7814 | 0.04 | Q | \| | \| | \| | V\| |
| 32+50 | 45.7817 | 0.04 | Q | \| | \| | \| | V\| |
| 32+55 | 45.7819 | 0.03 | Q | \| | \| | \| | V\| |
| 33+ 0 | 45.7821 | 0.03 | Q | \| | \| | \| | V\| |
| 33+ 5 | 45.7823 | 0.03 | Q | \| | \| | \| | V\| |
| 33+10 | 45.7824 | 0.02 | Q | \| | \| | \| | V\| |
| 33+15 | 45.7826 | 0.02 | Q | \| | \| | \| | V\| |
| 33+20 | 45.7827 | 0.02 | Q | \| | \| | \| | V\| |
| 33+25 | 45.7828 | 0.02 | Q | \| | \| | \| | V\| |
| 33+30 | 45.7829 | 0.01 | Q | \| | \| | \| | V\| |
| 33+35 | 45.7830 | 0.01 | Q | \| | \| | \| | V\| |
| 33+40 | 45.7831 | 0.01 | Q | \| | \| | \| | V\| |
| 33+45 | 45.7831 | 0.01 | Q | \| | \| | \| | V\| |
| 33+50 | 45.7832 | 0.01 | Q | \| | \| | \| | V\| |
| 33+55 | 45.7832 | 0.01 | Q | \| | \| | \| | V\| |
| 34+ 0 | 45.7833 | 0.00 | Q | \| | \| | \| | V\| |
| 34+ 5 | 45.7833 | 0.00 | Q | \| | \| | \| | V\| |
| 34+10 | 45.7833 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 25
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 279.91 | 1 | 1.36 |
| Rainfall data for year 100 | | |
| 279.91 | 6 | 1.83 |
| Rainfall data for year 100 | | |
| 279.91 | 24 | 2.51 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 74.8 | 90.8 | 279.91 | 1.000 | 0.177 | 0.919 | 0.162 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.162

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 257.24 | 0.919 | 74.8 | 90.8 | 1.01 | 0.640 |
| 22.67 | 0.081 | 98.0 | 98.0 | 0.20 | 0.909 |

Area-averaged catchment yield fraction, Y = 0.662
Area-averaged low loss fraction, Yb = 0.338
User entry of time of concentration = 1.620 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 279.91(Ac.)
Catchment Lag time = 1.296 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 6.4300
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.162(In/Hr)
Average low loss rate fraction (Yb) = 0.338 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.645(In)
Computed peak 30-minute rainfall = 1.105(In)
Specified peak 1-hour rainfall = 1.360(In)
Computed peak 3-hour rainfall = 1.631(In)
Specified peak 6-hour rainfall = 1.830(In)
Specified peak 24-hour rainfall = 2.510(In)

Rainfall depth area reduction factors:
Using a total area of 279.91(Ac.) (Ref: fig. E-4)

5-minute factor = 0.987 Adjusted rainfall = 0.637(In)
30-minute factor = 0.987 Adjusted rainfall = 1.090(In)
1-hour factor = 0.987 Adjusted rainfall = 1.342(In)
3-hour factor = 0.998 Adjusted rainfall = 1.629(In)
6-hour factor = 0.999 Adjusted rainfall = 1.828(In)
24-hour factor = 1.000 Adjusted rainfall = 2.509(In)
---

U n i t H y d r o g r a p h

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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 3385.16 (CFS)) | |
| 1 | 0.283 | 9.577 |
| 2 | 0.850 | 19.182 |
| 3 | 1.701 | 28.809 |
| 4 | 2.784 | 36.677 |
| 5 | 4.176 | 47.116 |
| 6 | 5.779 | 54.252 |
| 7 | 7.743 | 66.507 |
| 8 | 9.953 | 74.796 |
| 9 | 13.479 | 119.384 |
| 10 | 17.691 | 142.584 |
| 11 | 23.636 | 201.226 |
| 12 | 30.159 | 220.827 |
| 13 | 35.901 | 194.385 |

| | | |
|---|---|---|
| 14 | 41.299 | 182.711 |
| 15 | 45.671 | 147.997 |
| 16 | 49.709 | 136.686 |
| 17 | 53.170 | 117.166 |
| 18 | 56.402 | 109.427 |
| 19 | 58.979 | 87.226 |
| 20 | 61.376 | 81.127 |
| 21 | 63.427 | 69.429 |
| 22 | 65.374 | 65.930 |
| 23 | 67.094 | 58.234 |
| 24 | 68.757 | 56.285 |
| 25 | 70.309 | 52.521 |
| 26 | 71.784 | 49.933 |
| 27 | 73.079 | 43.856 |
| 28 | 74.318 | 41.928 |
| 29 | 75.453 | 38.431 |
| 30 | 76.567 | 37.695 |
| 31 | 77.648 | 36.590 |
| 32 | 78.635 | 33.423 |
| 33 | 79.485 | 28.774 |
| 34 | 80.334 | 28.732 |
| 35 | 81.182 | 28.732 |
| 36 | 81.953 | 26.078 |
| 37 | 82.647 | 23.508 |
| 38 | 83.342 | 23.508 |
| 39 | 84.036 | 23.489 |
| 40 | 84.683 | 21.907 |
| 41 | 85.300 | 20.896 |
| 42 | 85.917 | 20.896 |
| 43 | 86.532 | 20.802 |
| 44 | 87.077 | 18.440 |
| 45 | 87.591 | 17.413 |
| 46 | 88.105 | 17.413 |
| 47 | 88.612 | 17.156 |
| 48 | 89.026 | 13.997 |
| 49 | 89.411 | 13.060 |
| 50 | 89.797 | 13.060 |
| 51 | 90.180 | 12.970 |
| 52 | 90.544 | 12.318 |
| 53 | 90.904 | 12.189 |
| 54 | 91.264 | 12.189 |
| 55 | 91.616 | 11.908 |
| 56 | 91.930 | 10.611 |
| 57 | 92.238 | 10.448 |
| 58 | 92.547 | 10.448 |
| 59 | 92.850 | 10.247 |
| 60 | 93.134 | 9.622 |
| 61 | 93.417 | 9.577 |
| 62 | 93.700 | 9.577 |
| 63 | 93.962 | 8.895 |
| 64 | 94.182 | 7.448 |
| 65 | 94.401 | 7.401 |
| 66 | 94.620 | 7.401 |
| 67 | 94.838 | 7.401 |
| 68 | 95.057 | 7.401 |
| 69 | 95.276 | 7.401 |
| 70 | 95.494 | 7.400 |
| 71 | 95.686 | 6.502 |
| 72 | 95.853 | 5.659 |

| | | |
|---|---|---|
| 73 | 96.021 | 5.659 |
| 74 | 96.188 | 5.659 |
| 75 | 96.355 | 5.659 |
| 76 | 96.522 | 5.659 |
| 77 | 96.689 | 5.659 |
| 78 | 96.855 | 5.609 |
| 79 | 96.986 | 4.421 |
| 80 | 97.101 | 3.918 |
| 81 | 97.217 | 3.918 |
| 82 | 97.333 | 3.918 |
| 83 | 97.449 | 3.918 |
| 84 | 97.564 | 3.918 |
| 85 | 97.680 | 3.918 |
| 86 | 97.790 | 3.731 |
| 87 | 97.862 | 2.427 |
| 88 | 97.926 | 2.177 |
| 89 | 97.991 | 2.177 |
| 90 | 98.055 | 2.177 |
| 91 | 98.119 | 2.177 |
| 92 | 98.183 | 2.177 |
| 93 | 98.248 | 2.177 |
| 94 | 98.315 | 2.280 |
| 95 | 98.392 | 2.591 |
| 96 | 98.469 | 2.612 |
| 97 | 98.546 | 2.612 |
| 98 | 98.623 | 2.612 |
| 99 | 98.700 | 2.612 |
| 100 | 98.777 | 2.612 |
| 101 | 98.855 | 2.612 |
| 102 | 98.932 | 2.612 |
| 103 | 99.009 | 2.612 |
| 104 | 99.086 | 2.612 |
| 105 | 99.163 | 2.612 |
| 106 | 99.240 | 2.612 |
| 107 | 99.318 | 2.612 |
| 108 | 99.395 | 2.612 |
| 109 | 99.472 | 2.600 |
| 110 | 99.526 | 1.828 |
| 111 | 99.566 | 1.360 |
| 112 | 99.606 | 1.360 |
| 113 | 99.646 | 1.360 |
| 114 | 99.686 | 1.360 |
| 115 | 99.726 | 1.360 |
| 116 | 99.767 | 1.360 |
| 117 | 99.807 | 1.360 |
| 118 | 99.847 | 1.360 |
| 119 | 99.887 | 1.360 |
| 120 | 99.927 | 1.360 |
| 121 | 99.968 | 1.360 |
| 122 | 100.000 | 1.096 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6369 | 0.6369 |
| 2 | 0.7841 | 0.1472 |
| 3 | 0.8855 | 0.1014 |
| 4 | 0.9653 | 0.0798 |
| 5 | 1.0321 | 0.0668 |
| 6 | 1.0902 | 0.0580 |

| | | |
|---|---|---|
| 7 | 1.1418 | 0.0516 |
| 8 | 1.1884 | 0.0467 |
| 9 | 1.2312 | 0.0427 |
| 10 | 1.2707 | 0.0395 |
| 11 | 1.3076 | 0.0369 |
| 12 | 1.3422 | 0.0346 |
| 13 | 1.3612 | 0.0191 |
| 14 | 1.3791 | 0.0179 |
| 15 | 1.3960 | 0.0169 |
| 16 | 1.4119 | 0.0160 |
| 17 | 1.4271 | 0.0152 |
| 18 | 1.4415 | 0.0144 |
| 19 | 1.4553 | 0.0138 |
| 20 | 1.4685 | 0.0132 |
| 21 | 1.4812 | 0.0127 |
| 22 | 1.4934 | 0.0122 |
| 23 | 1.5052 | 0.0117 |
| 24 | 1.5165 | 0.0113 |
| 25 | 1.5274 | 0.0109 |
| 26 | 1.5380 | 0.0106 |
| 27 | 1.5483 | 0.0103 |
| 28 | 1.5582 | 0.0100 |
| 29 | 1.5679 | 0.0097 |
| 30 | 1.5773 | 0.0094 |
| 31 | 1.5864 | 0.0091 |
| 32 | 1.5953 | 0.0089 |
| 33 | 1.6040 | 0.0087 |
| 34 | 1.6124 | 0.0085 |
| 35 | 1.6207 | 0.0083 |
| 36 | 1.6288 | 0.0081 |
| 37 | 1.6362 | 0.0075 |
| 38 | 1.6435 | 0.0073 |
| 39 | 1.6507 | 0.0071 |
| 40 | 1.6576 | 0.0070 |
| 41 | 1.6645 | 0.0068 |
| 42 | 1.6712 | 0.0067 |
| 43 | 1.6778 | 0.0066 |
| 44 | 1.6842 | 0.0064 |
| 45 | 1.6905 | 0.0063 |
| 46 | 1.6967 | 0.0062 |
| 47 | 1.7028 | 0.0061 |
| 48 | 1.7088 | 0.0060 |
| 49 | 1.7147 | 0.0059 |
| 50 | 1.7205 | 0.0058 |
| 51 | 1.7262 | 0.0057 |
| 52 | 1.7318 | 0.0056 |
| 53 | 1.7373 | 0.0055 |
| 54 | 1.7427 | 0.0054 |
| 55 | 1.7481 | 0.0053 |
| 56 | 1.7533 | 0.0053 |
| 57 | 1.7585 | 0.0052 |
| 58 | 1.7636 | 0.0051 |
| 59 | 1.7687 | 0.0050 |
| 60 | 1.7736 | 0.0050 |
| 61 | 1.7785 | 0.0049 |
| 62 | 1.7834 | 0.0048 |
| 63 | 1.7881 | 0.0048 |
| 64 | 1.7928 | 0.0047 |
| 65 | 1.7975 | 0.0046 |

| | | |
|---|---|---|
| 66 | 1.8021 | 0.0046 |
| 67 | 1.8066 | 0.0045 |
| 68 | 1.8110 | 0.0045 |
| 69 | 1.8155 | 0.0044 |
| 70 | 1.8198 | 0.0044 |
| 71 | 1.8241 | 0.0043 |
| 72 | 1.8284 | 0.0043 |
| 73 | 1.8342 | 0.0058 |
| 74 | 1.8399 | 0.0057 |
| 75 | 1.8455 | 0.0056 |
| 76 | 1.8511 | 0.0056 |
| 77 | 1.8566 | 0.0055 |
| 78 | 1.8621 | 0.0055 |
| 79 | 1.8675 | 0.0054 |
| 80 | 1.8729 | 0.0054 |
| 81 | 1.8782 | 0.0053 |
| 82 | 1.8835 | 0.0053 |
| 83 | 1.8887 | 0.0052 |
| 84 | 1.8939 | 0.0052 |
| 85 | 1.8990 | 0.0051 |
| 86 | 1.9041 | 0.0051 |
| 87 | 1.9091 | 0.0050 |
| 88 | 1.9141 | 0.0050 |
| 89 | 1.9191 | 0.0049 |
| 90 | 1.9240 | 0.0049 |
| 91 | 1.9288 | 0.0049 |
| 92 | 1.9336 | 0.0048 |
| 93 | 1.9384 | 0.0048 |
| 94 | 1.9432 | 0.0047 |
| 95 | 1.9479 | 0.0047 |
| 96 | 1.9525 | 0.0047 |
| 97 | 1.9571 | 0.0046 |
| 98 | 1.9617 | 0.0046 |
| 99 | 1.9663 | 0.0046 |
| 100 | 1.9708 | 0.0045 |
| 101 | 1.9753 | 0.0045 |
| 102 | 1.9797 | 0.0044 |
| 103 | 1.9841 | 0.0044 |
| 104 | 1.9885 | 0.0044 |
| 105 | 1.9929 | 0.0043 |
| 106 | 1.9972 | 0.0043 |
| 107 | 2.0015 | 0.0043 |
| 108 | 2.0057 | 0.0043 |
| 109 | 2.0100 | 0.0042 |
| 110 | 2.0142 | 0.0042 |
| 111 | 2.0183 | 0.0042 |
| 112 | 2.0225 | 0.0041 |
| 113 | 2.0266 | 0.0041 |
| 114 | 2.0306 | 0.0041 |
| 115 | 2.0347 | 0.0041 |
| 116 | 2.0387 | 0.0040 |
| 117 | 2.0427 | 0.0040 |
| 118 | 2.0467 | 0.0040 |
| 119 | 2.0506 | 0.0039 |
| 120 | 2.0546 | 0.0039 |
| 121 | 2.0585 | 0.0039 |
| 122 | 2.0623 | 0.0039 |
| 123 | 2.0662 | 0.0038 |
| 124 | 2.0700 | 0.0038 |

| | | |
|---|---|---|
| 125 | 2.0738 | 0.0038 |
| 126 | 2.0776 | 0.0038 |
| 127 | 2.0813 | 0.0038 |
| 128 | 2.0851 | 0.0037 |
| 129 | 2.0888 | 0.0037 |
| 130 | 2.0925 | 0.0037 |
| 131 | 2.0961 | 0.0037 |
| 132 | 2.0998 | 0.0036 |
| 133 | 2.1034 | 0.0036 |
| 134 | 2.1070 | 0.0036 |
| 135 | 2.1106 | 0.0036 |
| 136 | 2.1141 | 0.0036 |
| 137 | 2.1177 | 0.0035 |
| 138 | 2.1212 | 0.0035 |
| 139 | 2.1247 | 0.0035 |
| 140 | 2.1282 | 0.0035 |
| 141 | 2.1316 | 0.0035 |
| 142 | 2.1351 | 0.0034 |
| 143 | 2.1385 | 0.0034 |
| 144 | 2.1419 | 0.0034 |
| 145 | 2.1453 | 0.0034 |
| 146 | 2.1486 | 0.0034 |
| 147 | 2.1520 | 0.0034 |
| 148 | 2.1553 | 0.0033 |
| 149 | 2.1586 | 0.0033 |
| 150 | 2.1619 | 0.0033 |
| 151 | 2.1652 | 0.0033 |
| 152 | 2.1685 | 0.0033 |
| 153 | 2.1717 | 0.0032 |
| 154 | 2.1750 | 0.0032 |
| 155 | 2.1782 | 0.0032 |
| 156 | 2.1814 | 0.0032 |
| 157 | 2.1846 | 0.0032 |
| 158 | 2.1877 | 0.0032 |
| 159 | 2.1909 | 0.0032 |
| 160 | 2.1940 | 0.0031 |
| 161 | 2.1972 | 0.0031 |
| 162 | 2.2003 | 0.0031 |
| 163 | 2.2034 | 0.0031 |
| 164 | 2.2064 | 0.0031 |
| 165 | 2.2095 | 0.0031 |
| 166 | 2.2125 | 0.0031 |
| 167 | 2.2156 | 0.0030 |
| 168 | 2.2186 | 0.0030 |
| 169 | 2.2216 | 0.0030 |
| 170 | 2.2246 | 0.0030 |
| 171 | 2.2276 | 0.0030 |
| 172 | 2.2306 | 0.0030 |
| 173 | 2.2335 | 0.0030 |
| 174 | 2.2365 | 0.0029 |
| 175 | 2.2394 | 0.0029 |
| 176 | 2.2423 | 0.0029 |
| 177 | 2.2452 | 0.0029 |
| 178 | 2.2481 | 0.0029 |
| 179 | 2.2510 | 0.0029 |
| 180 | 2.2538 | 0.0029 |
| 181 | 2.2567 | 0.0029 |
| 182 | 2.2595 | 0.0028 |
| 183 | 2.2624 | 0.0028 |

| | | |
|---|---|---|
| 184 | 2.2652 | 0.0028 |
| 185 | 2.2680 | 0.0028 |
| 186 | 2.2708 | 0.0028 |
| 187 | 2.2735 | 0.0028 |
| 188 | 2.2763 | 0.0028 |
| 189 | 2.2791 | 0.0028 |
| 190 | 2.2818 | 0.0027 |
| 191 | 2.2846 | 0.0027 |
| 192 | 2.2873 | 0.0027 |
| 193 | 2.2900 | 0.0027 |
| 194 | 2.2927 | 0.0027 |
| 195 | 2.2954 | 0.0027 |
| 196 | 2.2981 | 0.0027 |
| 197 | 2.3007 | 0.0027 |
| 198 | 2.3034 | 0.0027 |
| 199 | 2.3061 | 0.0027 |
| 200 | 2.3087 | 0.0026 |
| 201 | 2.3113 | 0.0026 |
| 202 | 2.3140 | 0.0026 |
| 203 | 2.3166 | 0.0026 |
| 204 | 2.3192 | 0.0026 |
| 205 | 2.3218 | 0.0026 |
| 206 | 2.3243 | 0.0026 |
| 207 | 2.3269 | 0.0026 |
| 208 | 2.3295 | 0.0026 |
| 209 | 2.3320 | 0.0026 |
| 210 | 2.3346 | 0.0025 |
| 211 | 2.3371 | 0.0025 |
| 212 | 2.3396 | 0.0025 |
| 213 | 2.3421 | 0.0025 |
| 214 | 2.3446 | 0.0025 |
| 215 | 2.3471 | 0.0025 |
| 216 | 2.3496 | 0.0025 |
| 217 | 2.3521 | 0.0025 |
| 218 | 2.3546 | 0.0025 |
| 219 | 2.3570 | 0.0025 |
| 220 | 2.3595 | 0.0025 |
| 221 | 2.3619 | 0.0024 |
| 222 | 2.3644 | 0.0024 |
| 223 | 2.3668 | 0.0024 |
| 224 | 2.3692 | 0.0024 |
| 225 | 2.3716 | 0.0024 |
| 226 | 2.3740 | 0.0024 |
| 227 | 2.3764 | 0.0024 |
| 228 | 2.3788 | 0.0024 |
| 229 | 2.3812 | 0.0024 |
| 230 | 2.3836 | 0.0024 |
| 231 | 2.3859 | 0.0024 |
| 232 | 2.3883 | 0.0024 |
| 233 | 2.3906 | 0.0023 |
| 234 | 2.3930 | 0.0023 |
| 235 | 2.3953 | 0.0023 |
| 236 | 2.3976 | 0.0023 |
| 237 | 2.3999 | 0.0023 |
| 238 | 2.4022 | 0.0023 |
| 239 | 2.4045 | 0.0023 |
| 240 | 2.4068 | 0.0023 |
| 241 | 2.4091 | 0.0023 |
| 242 | 2.4114 | 0.0023 |

| | | |
|---|---|---|
| 243 | 2.4137 | 0.0023 |
| 244 | 2.4159 | 0.0023 |
| 245 | 2.4182 | 0.0023 |
| 246 | 2.4204 | 0.0022 |
| 247 | 2.4227 | 0.0022 |
| 248 | 2.4249 | 0.0022 |
| 249 | 2.4271 | 0.0022 |
| 250 | 2.4294 | 0.0022 |
| 251 | 2.4316 | 0.0022 |
| 252 | 2.4338 | 0.0022 |
| 253 | 2.4360 | 0.0022 |
| 254 | 2.4382 | 0.0022 |
| 255 | 2.4404 | 0.0022 |
| 256 | 2.4426 | 0.0022 |
| 257 | 2.4447 | 0.0022 |
| 258 | 2.4469 | 0.0022 |
| 259 | 2.4491 | 0.0022 |
| 260 | 2.4512 | 0.0022 |
| 261 | 2.4534 | 0.0021 |
| 262 | 2.4555 | 0.0021 |
| 263 | 2.4576 | 0.0021 |
| 264 | 2.4598 | 0.0021 |
| 265 | 2.4619 | 0.0021 |
| 266 | 2.4640 | 0.0021 |
| 267 | 2.4661 | 0.0021 |
| 268 | 2.4682 | 0.0021 |
| 269 | 2.4703 | 0.0021 |
| 270 | 2.4724 | 0.0021 |
| 271 | 2.4745 | 0.0021 |
| 272 | 2.4766 | 0.0021 |
| 273 | 2.4787 | 0.0021 |
| 274 | 2.4807 | 0.0021 |
| 275 | 2.4828 | 0.0021 |
| 276 | 2.4849 | 0.0021 |
| 277 | 2.4869 | 0.0021 |
| 278 | 2.4890 | 0.0020 |
| 279 | 2.4910 | 0.0020 |
| 280 | 2.4930 | 0.0020 |
| 281 | 2.4951 | 0.0020 |
| 282 | 2.4971 | 0.0020 |
| 283 | 2.4991 | 0.0020 |
| 284 | 2.5011 | 0.0020 |
| 285 | 2.5031 | 0.0020 |
| 286 | 2.5051 | 0.0020 |
| 287 | 2.5071 | 0.0020 |
| 288 | 2.5091 | 0.0020 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0020 | 0.0007 | 0.0013 |
| 2 | 0.0020 | 0.0007 | 0.0013 |
| 3 | 0.0020 | 0.0007 | 0.0013 |
| 4 | 0.0020 | 0.0007 | 0.0013 |
| 5 | 0.0020 | 0.0007 | 0.0013 |
| 6 | 0.0020 | 0.0007 | 0.0013 |
| 7 | 0.0020 | 0.0007 | 0.0014 |
| 8 | 0.0020 | 0.0007 | 0.0014 |

| | | | |
|---|---|---|---|
| 9 | 0.0021 | 0.0007 | 0.0014 |
| 10 | 0.0021 | 0.0007 | 0.0014 |
| 11 | 0.0021 | 0.0007 | 0.0014 |
| 12 | 0.0021 | 0.0007 | 0.0014 |
| 13 | 0.0021 | 0.0007 | 0.0014 |
| 14 | 0.0021 | 0.0007 | 0.0014 |
| 15 | 0.0021 | 0.0007 | 0.0014 |
| 16 | 0.0021 | 0.0007 | 0.0014 |
| 17 | 0.0021 | 0.0007 | 0.0014 |
| 18 | 0.0021 | 0.0007 | 0.0014 |
| 19 | 0.0021 | 0.0007 | 0.0014 |
| 20 | 0.0022 | 0.0007 | 0.0014 |
| 21 | 0.0022 | 0.0007 | 0.0014 |
| 22 | 0.0022 | 0.0007 | 0.0014 |
| 23 | 0.0022 | 0.0007 | 0.0014 |
| 24 | 0.0022 | 0.0007 | 0.0015 |
| 25 | 0.0022 | 0.0007 | 0.0015 |
| 26 | 0.0022 | 0.0007 | 0.0015 |
| 27 | 0.0022 | 0.0008 | 0.0015 |
| 28 | 0.0022 | 0.0008 | 0.0015 |
| 29 | 0.0022 | 0.0008 | 0.0015 |
| 30 | 0.0023 | 0.0008 | 0.0015 |
| 31 | 0.0023 | 0.0008 | 0.0015 |
| 32 | 0.0023 | 0.0008 | 0.0015 |
| 33 | 0.0023 | 0.0008 | 0.0015 |
| 34 | 0.0023 | 0.0008 | 0.0015 |
| 35 | 0.0023 | 0.0008 | 0.0015 |
| 36 | 0.0023 | 0.0008 | 0.0015 |
| 37 | 0.0023 | 0.0008 | 0.0015 |
| 38 | 0.0023 | 0.0008 | 0.0016 |
| 39 | 0.0024 | 0.0008 | 0.0016 |
| 40 | 0.0024 | 0.0008 | 0.0016 |
| 41 | 0.0024 | 0.0008 | 0.0016 |
| 42 | 0.0024 | 0.0008 | 0.0016 |
| 43 | 0.0024 | 0.0008 | 0.0016 |
| 44 | 0.0024 | 0.0008 | 0.0016 |
| 45 | 0.0024 | 0.0008 | 0.0016 |
| 46 | 0.0024 | 0.0008 | 0.0016 |
| 47 | 0.0025 | 0.0008 | 0.0016 |
| 48 | 0.0025 | 0.0008 | 0.0016 |
| 49 | 0.0025 | 0.0008 | 0.0016 |
| 50 | 0.0025 | 0.0008 | 0.0017 |
| 51 | 0.0025 | 0.0009 | 0.0017 |
| 52 | 0.0025 | 0.0009 | 0.0017 |
| 53 | 0.0025 | 0.0009 | 0.0017 |
| 54 | 0.0026 | 0.0009 | 0.0017 |
| 55 | 0.0026 | 0.0009 | 0.0017 |
| 56 | 0.0026 | 0.0009 | 0.0017 |
| 57 | 0.0026 | 0.0009 | 0.0017 |
| 58 | 0.0026 | 0.0009 | 0.0017 |
| 59 | 0.0026 | 0.0009 | 0.0017 |
| 60 | 0.0026 | 0.0009 | 0.0017 |
| 61 | 0.0027 | 0.0009 | 0.0018 |
| 62 | 0.0027 | 0.0009 | 0.0018 |
| 63 | 0.0027 | 0.0009 | 0.0018 |
| 64 | 0.0027 | 0.0009 | 0.0018 |
| 65 | 0.0027 | 0.0009 | 0.0018 |
| 66 | 0.0027 | 0.0009 | 0.0018 |
| 67 | 0.0028 | 0.0009 | 0.0018 |

| | | | |
|---|---|---|---|
| 68 | 0.0028 | 0.0009 | 0.0018 |
| 69 | 0.0028 | 0.0009 | 0.0018 |
| 70 | 0.0028 | 0.0009 | 0.0019 |
| 71 | 0.0028 | 0.0010 | 0.0019 |
| 72 | 0.0028 | 0.0010 | 0.0019 |
| 73 | 0.0029 | 0.0010 | 0.0019 |
| 74 | 0.0029 | 0.0010 | 0.0019 |
| 75 | 0.0029 | 0.0010 | 0.0019 |
| 76 | 0.0029 | 0.0010 | 0.0019 |
| 77 | 0.0029 | 0.0010 | 0.0019 |
| 78 | 0.0030 | 0.0010 | 0.0020 |
| 79 | 0.0030 | 0.0010 | 0.0020 |
| 80 | 0.0030 | 0.0010 | 0.0020 |
| 81 | 0.0030 | 0.0010 | 0.0020 |
| 82 | 0.0030 | 0.0010 | 0.0020 |
| 83 | 0.0031 | 0.0010 | 0.0020 |
| 84 | 0.0031 | 0.0010 | 0.0020 |
| 85 | 0.0031 | 0.0011 | 0.0021 |
| 86 | 0.0031 | 0.0011 | 0.0021 |
| 87 | 0.0032 | 0.0011 | 0.0021 |
| 88 | 0.0032 | 0.0011 | 0.0021 |
| 89 | 0.0032 | 0.0011 | 0.0021 |
| 90 | 0.0032 | 0.0011 | 0.0021 |
| 91 | 0.0032 | 0.0011 | 0.0022 |
| 92 | 0.0033 | 0.0011 | 0.0022 |
| 93 | 0.0033 | 0.0011 | 0.0022 |
| 94 | 0.0033 | 0.0011 | 0.0022 |
| 95 | 0.0034 | 0.0011 | 0.0022 |
| 96 | 0.0034 | 0.0011 | 0.0022 |
| 97 | 0.0034 | 0.0012 | 0.0023 |
| 98 | 0.0034 | 0.0012 | 0.0023 |
| 99 | 0.0035 | 0.0012 | 0.0023 |
| 100 | 0.0035 | 0.0012 | 0.0023 |
| 101 | 0.0035 | 0.0012 | 0.0023 |
| 102 | 0.0035 | 0.0012 | 0.0023 |
| 103 | 0.0036 | 0.0012 | 0.0024 |
| 104 | 0.0036 | 0.0012 | 0.0024 |
| 105 | 0.0036 | 0.0012 | 0.0024 |
| 106 | 0.0037 | 0.0012 | 0.0024 |
| 107 | 0.0037 | 0.0013 | 0.0025 |
| 108 | 0.0037 | 0.0013 | 0.0025 |
| 109 | 0.0038 | 0.0013 | 0.0025 |
| 110 | 0.0038 | 0.0013 | 0.0025 |
| 111 | 0.0038 | 0.0013 | 0.0025 |
| 112 | 0.0039 | 0.0013 | 0.0026 |
| 113 | 0.0039 | 0.0013 | 0.0026 |
| 114 | 0.0039 | 0.0013 | 0.0026 |
| 115 | 0.0040 | 0.0014 | 0.0026 |
| 116 | 0.0040 | 0.0014 | 0.0027 |
| 117 | 0.0041 | 0.0014 | 0.0027 |
| 118 | 0.0041 | 0.0014 | 0.0027 |
| 119 | 0.0042 | 0.0014 | 0.0028 |
| 120 | 0.0042 | 0.0014 | 0.0028 |
| 121 | 0.0043 | 0.0014 | 0.0028 |
| 122 | 0.0043 | 0.0014 | 0.0028 |
| 123 | 0.0043 | 0.0015 | 0.0029 |
| 124 | 0.0044 | 0.0015 | 0.0029 |
| 125 | 0.0044 | 0.0015 | 0.0029 |
| 126 | 0.0045 | 0.0015 | 0.0030 |

| | | | |
|---|---|---|---|
| 127 | 0.0046 | 0.0015 | 0.0030 |
| 128 | 0.0046 | 0.0016 | 0.0030 |
| 129 | 0.0047 | 0.0016 | 0.0031 |
| 130 | 0.0047 | 0.0016 | 0.0031 |
| 131 | 0.0048 | 0.0016 | 0.0032 |
| 132 | 0.0048 | 0.0016 | 0.0032 |
| 133 | 0.0049 | 0.0017 | 0.0032 |
| 134 | 0.0049 | 0.0017 | 0.0033 |
| 135 | 0.0050 | 0.0017 | 0.0033 |
| 136 | 0.0051 | 0.0017 | 0.0034 |
| 137 | 0.0052 | 0.0017 | 0.0034 |
| 138 | 0.0052 | 0.0018 | 0.0035 |
| 139 | 0.0053 | 0.0018 | 0.0035 |
| 140 | 0.0054 | 0.0018 | 0.0036 |
| 141 | 0.0055 | 0.0019 | 0.0036 |
| 142 | 0.0055 | 0.0019 | 0.0037 |
| 143 | 0.0056 | 0.0019 | 0.0037 |
| 144 | 0.0057 | 0.0019 | 0.0038 |
| 145 | 0.0043 | 0.0014 | 0.0028 |
| 146 | 0.0043 | 0.0015 | 0.0029 |
| 147 | 0.0044 | 0.0015 | 0.0029 |
| 148 | 0.0045 | 0.0015 | 0.0030 |
| 149 | 0.0046 | 0.0016 | 0.0030 |
| 150 | 0.0046 | 0.0016 | 0.0031 |
| 151 | 0.0048 | 0.0016 | 0.0032 |
| 152 | 0.0048 | 0.0016 | 0.0032 |
| 153 | 0.0050 | 0.0017 | 0.0033 |
| 154 | 0.0050 | 0.0017 | 0.0033 |
| 155 | 0.0052 | 0.0018 | 0.0034 |
| 156 | 0.0053 | 0.0018 | 0.0035 |
| 157 | 0.0054 | 0.0018 | 0.0036 |
| 158 | 0.0055 | 0.0019 | 0.0036 |
| 159 | 0.0057 | 0.0019 | 0.0038 |
| 160 | 0.0058 | 0.0020 | 0.0038 |
| 161 | 0.0060 | 0.0020 | 0.0040 |
| 162 | 0.0061 | 0.0021 | 0.0040 |
| 163 | 0.0063 | 0.0021 | 0.0042 |
| 164 | 0.0064 | 0.0022 | 0.0043 |
| 165 | 0.0067 | 0.0023 | 0.0044 |
| 166 | 0.0068 | 0.0023 | 0.0045 |
| 167 | 0.0071 | 0.0024 | 0.0047 |
| 168 | 0.0073 | 0.0025 | 0.0048 |
| 169 | 0.0081 | 0.0027 | 0.0053 |
| 170 | 0.0083 | 0.0028 | 0.0055 |
| 171 | 0.0087 | 0.0029 | 0.0057 |
| 172 | 0.0089 | 0.0030 | 0.0059 |
| 173 | 0.0094 | 0.0032 | 0.0062 |
| 174 | 0.0097 | 0.0033 | 0.0064 |
| 175 | 0.0103 | 0.0035 | 0.0068 |
| 176 | 0.0106 | 0.0036 | 0.0070 |
| 177 | 0.0113 | 0.0038 | 0.0075 |
| 178 | 0.0117 | 0.0040 | 0.0078 |
| 179 | 0.0127 | 0.0043 | 0.0084 |
| 180 | 0.0132 | 0.0045 | 0.0087 |
| 181 | 0.0144 | 0.0049 | 0.0096 |
| 182 | 0.0152 | 0.0051 | 0.0100 |
| 183 | 0.0169 | 0.0057 | 0.0112 |
| 184 | 0.0179 | 0.0060 | 0.0118 |
| 185 | 0.0346 | 0.0117 | 0.0229 |

| | | | |
|---|---|---|---|
| 186 | 0.0369 | 0.0125 | 0.0244 |
| 187 | 0.0427 | 0.0135 | 0.0292 |
| 188 | 0.0467 | 0.0135 | 0.0331 |
| 189 | 0.0580 | 0.0135 | 0.0445 |
| 190 | 0.0668 | 0.0135 | 0.0533 |
| 191 | 0.1014 | 0.0135 | 0.0879 |
| 192 | 0.1472 | 0.0135 | 0.1337 |
| 193 | 0.6369 | 0.0135 | 0.6233 |
| 194 | 0.0798 | 0.0135 | 0.0663 |
| 195 | 0.0516 | 0.0135 | 0.0381 |
| 196 | 0.0395 | 0.0134 | 0.0262 |
| 197 | 0.0191 | 0.0064 | 0.0126 |
| 198 | 0.0160 | 0.0054 | 0.0106 |
| 199 | 0.0138 | 0.0047 | 0.0091 |
| 200 | 0.0122 | 0.0041 | 0.0081 |
| 201 | 0.0109 | 0.0037 | 0.0072 |
| 202 | 0.0100 | 0.0034 | 0.0066 |
| 203 | 0.0091 | 0.0031 | 0.0060 |
| 204 | 0.0085 | 0.0029 | 0.0056 |
| 205 | 0.0075 | 0.0025 | 0.0049 |
| 206 | 0.0070 | 0.0024 | 0.0046 |
| 207 | 0.0066 | 0.0022 | 0.0043 |
| 208 | 0.0062 | 0.0021 | 0.0041 |
| 209 | 0.0059 | 0.0020 | 0.0039 |
| 210 | 0.0056 | 0.0019 | 0.0037 |
| 211 | 0.0053 | 0.0018 | 0.0035 |
| 212 | 0.0051 | 0.0017 | 0.0034 |
| 213 | 0.0049 | 0.0017 | 0.0032 |
| 214 | 0.0047 | 0.0016 | 0.0031 |
| 215 | 0.0045 | 0.0015 | 0.0030 |
| 216 | 0.0044 | 0.0015 | 0.0029 |
| 217 | 0.0058 | 0.0020 | 0.0038 |
| 218 | 0.0056 | 0.0019 | 0.0037 |
| 219 | 0.0054 | 0.0018 | 0.0036 |
| 220 | 0.0053 | 0.0018 | 0.0035 |
| 221 | 0.0051 | 0.0017 | 0.0034 |
| 222 | 0.0050 | 0.0017 | 0.0033 |
| 223 | 0.0049 | 0.0016 | 0.0032 |
| 224 | 0.0047 | 0.0016 | 0.0031 |
| 225 | 0.0046 | 0.0016 | 0.0031 |
| 226 | 0.0045 | 0.0015 | 0.0030 |
| 227 | 0.0044 | 0.0015 | 0.0029 |
| 228 | 0.0043 | 0.0015 | 0.0029 |
| 229 | 0.0042 | 0.0014 | 0.0028 |
| 230 | 0.0041 | 0.0014 | 0.0027 |
| 231 | 0.0041 | 0.0014 | 0.0027 |
| 232 | 0.0040 | 0.0013 | 0.0026 |
| 233 | 0.0039 | 0.0013 | 0.0026 |
| 234 | 0.0038 | 0.0013 | 0.0025 |
| 235 | 0.0038 | 0.0013 | 0.0025 |
| 236 | 0.0037 | 0.0012 | 0.0024 |
| 237 | 0.0036 | 0.0012 | 0.0024 |
| 238 | 0.0036 | 0.0012 | 0.0024 |
| 239 | 0.0035 | 0.0012 | 0.0023 |
| 240 | 0.0034 | 0.0012 | 0.0023 |
| 241 | 0.0034 | 0.0011 | 0.0022 |
| 242 | 0.0033 | 0.0011 | 0.0022 |
| 243 | 0.0033 | 0.0011 | 0.0022 |
| 244 | 0.0032 | 0.0011 | 0.0021 |

| | | | |
|---|---|---|---|
| 245 | 0.0032 | 0.0011 | 0.0021 |
| 246 | 0.0031 | 0.0011 | 0.0021 |
| 247 | 0.0031 | 0.0010 | 0.0020 |
| 248 | 0.0031 | 0.0010 | 0.0020 |
| 249 | 0.0030 | 0.0010 | 0.0020 |
| 250 | 0.0030 | 0.0010 | 0.0020 |
| 251 | 0.0029 | 0.0010 | 0.0019 |
| 252 | 0.0029 | 0.0010 | 0.0019 |
| 253 | 0.0029 | 0.0010 | 0.0019 |
| 254 | 0.0028 | 0.0010 | 0.0019 |
| 255 | 0.0028 | 0.0009 | 0.0018 |
| 256 | 0.0027 | 0.0009 | 0.0018 |
| 257 | 0.0027 | 0.0009 | 0.0018 |
| 258 | 0.0027 | 0.0009 | 0.0018 |
| 259 | 0.0027 | 0.0009 | 0.0018 |
| 260 | 0.0026 | 0.0009 | 0.0017 |
| 261 | 0.0026 | 0.0009 | 0.0017 |
| 262 | 0.0026 | 0.0009 | 0.0017 |
| 263 | 0.0025 | 0.0009 | 0.0017 |
| 264 | 0.0025 | 0.0008 | 0.0017 |
| 265 | 0.0025 | 0.0008 | 0.0016 |
| 266 | 0.0025 | 0.0008 | 0.0016 |
| 267 | 0.0024 | 0.0008 | 0.0016 |
| 268 | 0.0024 | 0.0008 | 0.0016 |
| 269 | 0.0024 | 0.0008 | 0.0016 |
| 270 | 0.0024 | 0.0008 | 0.0016 |
| 271 | 0.0023 | 0.0008 | 0.0015 |
| 272 | 0.0023 | 0.0008 | 0.0015 |
| 273 | 0.0023 | 0.0008 | 0.0015 |
| 274 | 0.0023 | 0.0008 | 0.0015 |
| 275 | 0.0022 | 0.0008 | 0.0015 |
| 276 | 0.0022 | 0.0008 | 0.0015 |
| 277 | 0.0022 | 0.0007 | 0.0015 |
| 278 | 0.0022 | 0.0007 | 0.0014 |
| 279 | 0.0022 | 0.0007 | 0.0014 |
| 280 | 0.0021 | 0.0007 | 0.0014 |
| 281 | 0.0021 | 0.0007 | 0.0014 |
| 282 | 0.0021 | 0.0007 | 0.0014 |
| 283 | 0.0021 | 0.0007 | 0.0014 |
| 284 | 0.0021 | 0.0007 | 0.0014 |
| 285 | 0.0021 | 0.0007 | 0.0014 |
| 286 | 0.0020 | 0.0007 | 0.0013 |
| 287 | 0.0020 | 0.0007 | 0.0013 |
| 288 | 0.0020 | 0.0007 | 0.0013 |

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Total soil rain loss = 0.55(In)
Total effective rainfall = 1.96(In)
Peak flow rate in flood hydrograph = 237.71(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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Time(h+m) Volume Ac.Ft Q(CFS) 0 75.0 150.0 225.0 300.0

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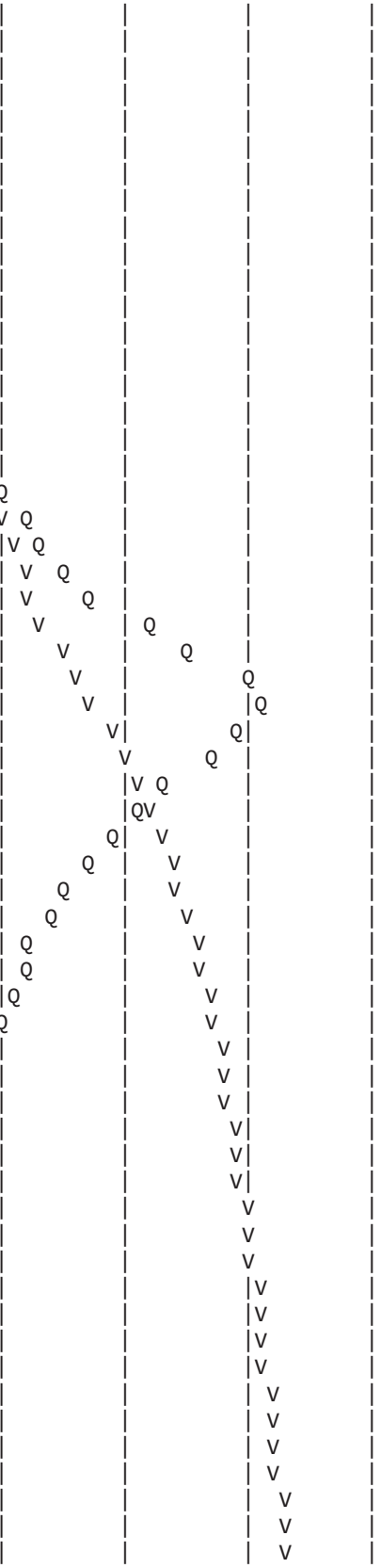
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0001 | 0.01 | Q | | | | |
| 0+10 | 0.0003 | 0.04 | Q | | | | |
| 0+15 | 0.0009 | 0.08 | Q | | | | |
| 0+20 | 0.0017 | 0.12 | Q | | | | |
| 0+25 | 0.0030 | 0.19 | Q | | | | |
| 0+30 | 0.0048 | 0.26 | Q | | | | |
| 0+35 | 0.0072 | 0.35 | Q | | | | |
| 0+40 | 0.0103 | 0.45 | Q | | | | |
| 0+45 | 0.0145 | 0.61 | Q | | | | |
| 0+50 | 0.0200 | 0.80 | Q | | | | |
| 0+55 | 0.0273 | 1.07 | Q | | | | |
| 1+ 0 | 0.0367 | 1.36 | Q | | | | |
| 1+ 5 | 0.0479 | 1.62 | Q | | | | |
| 1+10 | 0.0607 | 1.87 | Q | | | | |
| 1+15 | 0.0750 | 2.07 | Q | | | | |
| 1+20 | 0.0906 | 2.26 | Q | | | | |
| 1+25 | 0.1073 | 2.43 | Q | | | | |
| 1+30 | 0.1250 | 2.58 | Q | | | | |
| 1+35 | 0.1437 | 2.70 | Q | | | | |
| 1+40 | 0.1631 | 2.82 | Q | | | | |
| 1+45 | 0.1833 | 2.93 | Q | | | | |
| 1+50 | 0.2041 | 3.03 | Q | | | | |
| 1+55 | 0.2256 | 3.12 | Q | | | | |
| 2+ 0 | 0.2476 | 3.20 | Q | | | | |
| 2+ 5 | 0.2703 | 3.29 | Q | | | | |
| 2+10 | 0.2934 | 3.37 | Q | | | | |
| 2+15 | 0.3171 | 3.44 | Q | | | | |
| 2+20 | 0.3413 | 3.51 | Q | | | | |
| 2+25 | 0.3659 | 3.57 | Q | | | | |
| 2+30 | 0.3909 | 3.64 | Q | | | | |
| 2+35 | 0.4164 | 3.70 | Q | | | | |
| 2+40 | 0.4424 | 3.76 | Q | | | | |
| 2+45 | 0.4687 | 3.82 | Q | | | | |
| 2+50 | 0.4953 | 3.87 | Q | | | | |
| 2+55 | 0.5224 | 3.93 | Q | | | | |
| 3+ 0 | 0.5498 | 3.98 | Q | | | | |
| 3+ 5 | 0.5776 | 4.03 | Q | | | | |
| 3+10 | 0.6056 | 4.08 | Q | | | | |
| 3+15 | 0.6341 | 4.13 | Q | | | | |
| 3+20 | 0.6628 | 4.18 | Q | | | | |
| 3+25 | 0.6919 | 4.22 | Q | | | | |
| 3+30 | 0.7213 | 4.27 | Q | | | | |
| 3+35 | 0.7511 | 4.32 | Q | | | | |
| 3+40 | 0.7811 | 4.36 | Q | | | | |
| 3+45 | 0.8114 | 4.41 | Q | | | | |
| 3+50 | 0.8421 | 4.45 | Q | | | | |
| 3+55 | 0.8730 | 4.49 | Q | | | | |
| 4+ 0 | 0.9042 | 4.53 | Q | | | | |
| 4+ 5 | 0.9357 | 4.57 | Q | | | | |
| 4+10 | 0.9675 | 4.61 | Q | | | | |
| 4+15 | 0.9995 | 4.65 | Q | | | | |
| 4+20 | 1.0318 | 4.69 | Q | | | | |
| 4+25 | 1.0644 | 4.73 | Q | | | | |
| 4+30 | 1.0972 | 4.77 | Q | | | | |
| 4+35 | 1.1303 | 4.81 | Q | | | | |
| 4+40 | 1.1637 | 4.85 | QV | | | | |
| 4+45 | 1.1974 | 4.88 | QV | | | | |
| 4+50 | 1.2313 | 4.92 | QV | | | | |
| 4+55 | 1.2654 | 4.96 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+ 0 | 1.2999 | 5.00 | QV | \| | \| | \| | \| |
| 5+ 5 | 1.3346 | 5.04 | QV | \| | \| | \| | \| |
| 5+10 | 1.3695 | 5.08 | QV | \| | \| | \| | \| |
| 5+15 | 1.4048 | 5.12 | QV | \| | \| | \| | \| |
| 5+20 | 1.4403 | 5.15 | QV | \| | \| | \| | \| |
| 5+25 | 1.4760 | 5.19 | QV | \| | \| | \| | \| |
| 5+30 | 1.5120 | 5.23 | QV | \| | \| | \| | \| |
| 5+35 | 1.5482 | 5.26 | QV | \| | \| | \| | \| |
| 5+40 | 1.5848 | 5.30 | QV | \| | \| | \| | \| |
| 5+45 | 1.6216 | 5.34 | QV | \| | \| | \| | \| |
| 5+50 | 1.6586 | 5.38 | QV | \| | \| | \| | \| |
| 5+55 | 1.6959 | 5.42 | QV | \| | \| | \| | \| |
| 6+ 0 | 1.7335 | 5.46 | QV | \| | \| | \| | \| |
| 6+ 5 | 1.7714 | 5.49 | QV | \| | \| | \| | \| |
| 6+10 | 1.8095 | 5.53 | QV | \| | \| | \| | \| |
| 6+15 | 1.8478 | 5.57 | QV | \| | \| | \| | \| |
| 6+20 | 1.8865 | 5.61 | QV | \| | \| | \| | \| |
| 6+25 | 1.9254 | 5.65 | QV | \| | \| | \| | \| |
| 6+30 | 1.9646 | 5.69 | QV | \| | \| | \| | \| |
| 6+35 | 2.0040 | 5.73 | QV | \| | \| | \| | \| |
| 6+40 | 2.0438 | 5.77 | QV | \| | \| | \| | \| |
| 6+45 | 2.0838 | 5.81 | QV | \| | \| | \| | \| |
| 6+50 | 2.1241 | 5.85 | QV | \| | \| | \| | \| |
| 6+55 | 2.1646 | 5.89 | QV | \| | \| | \| | \| |
| 7+ 0 | 2.2054 | 5.93 | QV | \| | \| | \| | \| |
| 7+ 5 | 2.2466 | 5.97 | QV | \| | \| | \| | \| |
| 7+10 | 2.2880 | 6.01 | Q V | \| | \| | \| | \| |
| 7+15 | 2.3297 | 6.05 | Q V | \| | \| | \| | \| |
| 7+20 | 2.3716 | 6.09 | Q V | \| | \| | \| | \| |
| 7+25 | 2.4139 | 6.14 | Q V | \| | \| | \| | \| |
| 7+30 | 2.4564 | 6.18 | Q V | \| | \| | \| | \| |
| 7+35 | 2.4993 | 6.22 | Q V | \| | \| | \| | \| |
| 7+40 | 2.5424 | 6.26 | Q V | \| | \| | \| | \| |
| 7+45 | 2.5858 | 6.31 | Q V | \| | \| | \| | \| |
| 7+50 | 2.6296 | 6.35 | Q V | \| | \| | \| | \| |
| 7+55 | 2.6736 | 6.40 | Q V | \| | \| | \| | \| |
| 8+ 0 | 2.7180 | 6.44 | Q V | \| | \| | \| | \| |
| 8+ 5 | 2.7627 | 6.49 | Q V | \| | \| | \| | \| |
| 8+10 | 2.8077 | 6.54 | Q V | \| | \| | \| | \| |
| 8+15 | 2.8531 | 6.59 | Q V | \| | \| | \| | \| |
| 8+20 | 2.8988 | 6.63 | Q V | \| | \| | \| | \| |
| 8+25 | 2.9448 | 6.68 | Q V | \| | \| | \| | \| |
| 8+30 | 2.9912 | 6.74 | Q V | \| | \| | \| | \| |
| 8+35 | 3.0379 | 6.79 | Q V | \| | \| | \| | \| |
| 8+40 | 3.0850 | 6.84 | Q V | \| | \| | \| | \| |
| 8+45 | 3.1325 | 6.89 | Q V | \| | \| | \| | \| |
| 8+50 | 3.1803 | 6.95 | Q V | \| | \| | \| | \| |
| 8+55 | 3.2285 | 7.00 | Q V | \| | \| | \| | \| |
| 9+ 0 | 3.2771 | 7.06 | Q V | \| | \| | \| | \| |
| 9+ 5 | 3.3261 | 7.11 | Q V | \| | \| | \| | \| |
| 9+10 | 3.3755 | 7.17 | Q V | \| | \| | \| | \| |
| 9+15 | 3.4253 | 7.23 | Q  V | \| | \| | \| | \| |
| 9+20 | 3.4755 | 7.29 | Q  V | \| | \| | \| | \| |
| 9+25 | 3.5260 | 7.34 | Q  V | \| | \| | \| | \| |
| 9+30 | 3.5770 | 7.40 | Q  V | \| | \| | \| | \| |
| 9+35 | 3.6284 | 7.47 | Q  V | \| | \| | \| | \| |
| 9+40 | 3.6803 | 7.53 | \|Q V | \| | \| | \| | \| |
| 9+45 | 3.7326 | 7.59 | \|Q V | \| | \| | \| | \| |
| 9+50 | 3.7853 | 7.66 | \|Q V | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 9+55 | 3.8385 | 7.72 | Q V | | | | |
| 10+ 0 | 3.8921 | 7.79 | Q V | | | | |
| 10+ 5 | 3.9462 | 7.86 | Q V | | | | |
| 10+10 | 4.0008 | 7.93 | Q V | | | | |
| 10+15 | 4.0559 | 8.00 | Q V | | | | |
| 10+20 | 4.1115 | 8.07 | Q V | | | | |
| 10+25 | 4.1675 | 8.14 | Q V | | | | |
| 10+30 | 4.2241 | 8.21 | Q V | | | | |
| 10+35 | 4.2812 | 8.29 | Q V | | | | |
| 10+40 | 4.3388 | 8.37 | Q V | | | | |
| 10+45 | 4.3970 | 8.45 | Q V | | | | |
| 10+50 | 4.4557 | 8.53 | Q V | | | | |
| 10+55 | 4.5150 | 8.61 | Q V | | | | |
| 11+ 0 | 4.5749 | 8.69 | Q V | | | | |
| 11+ 5 | 4.6354 | 8.78 | Q V | | | | |
| 11+10 | 4.6965 | 8.87 | Q V | | | | |
| 11+15 | 4.7582 | 8.96 | Q V | | | | |
| 11+20 | 4.8205 | 9.05 | Q V | | | | |
| 11+25 | 4.8836 | 9.15 | Q V | | | | |
| 11+30 | 4.9472 | 9.25 | Q V | | | | |
| 11+35 | 5.0116 | 9.35 | Q V | | | | |
| 11+40 | 5.0767 | 9.45 | Q V | | | | |
| 11+45 | 5.1425 | 9.55 | Q V | | | | |
| 11+50 | 5.2090 | 9.66 | Q V | | | | |
| 11+55 | 5.2763 | 9.77 | Q V | | | | |
| 12+ 0 | 5.3444 | 9.89 | Q V | | | | |
| 12+ 5 | 5.4133 | 10.00 | Q V | | | | |
| 12+10 | 5.4828 | 10.10 | Q V | | | | |
| 12+15 | 5.5530 | 10.19 | Q V | | | | |
| 12+20 | 5.6238 | 10.28 | Q V | | | | |
| 12+25 | 5.6952 | 10.36 | Q V | | | | |
| 12+30 | 5.7671 | 10.44 | Q V | | | | |
| 12+35 | 5.8395 | 10.51 | Q V | | | | |
| 12+40 | 5.9123 | 10.57 | Q V | | | | |
| 12+45 | 5.9852 | 10.59 | Q V | | | | |
| 12+50 | 6.0582 | 10.59 | Q V | | | | |
| 12+55 | 6.1308 | 10.54 | Q V | | | | |
| 13+ 0 | 6.2028 | 10.46 | Q V | | | | |
| 13+ 5 | 6.2746 | 10.42 | Q V | | | | |
| 13+10 | 6.3461 | 10.39 | Q V | | | | |
| 13+15 | 6.4177 | 10.40 | Q V | | | | |
| 13+20 | 6.4894 | 10.42 | Q V | | | | |
| 13+25 | 6.5616 | 10.47 | Q V | | | | |
| 13+30 | 6.6341 | 10.53 | Q V | | | | |
| 13+35 | 6.7073 | 10.63 | Q V | | | | |
| 13+40 | 6.7812 | 10.73 | Q V | | | | |
| 13+45 | 6.8560 | 10.86 | Q V | | | | |
| 13+50 | 6.9317 | 10.99 | Q V | | | | |
| 13+55 | 7.0084 | 11.14 | Q V | | | | |
| 14+ 0 | 7.0863 | 11.31 | Q V | | | | |
| 14+ 5 | 7.1654 | 11.49 | Q V | | | | |
| 14+10 | 7.2459 | 11.69 | Q V | | | | |
| 14+15 | 7.3279 | 11.91 | Q V | | | | |
| 14+20 | 7.4115 | 12.14 | Q V | | | | |
| 14+25 | 7.4969 | 12.40 | Q V | | | | |
| 14+30 | 7.5842 | 12.68 | Q V | | | | |
| 14+35 | 7.6736 | 12.98 | Q V | | | | |
| 14+40 | 7.7652 | 13.30 | Q V | | | | |
| 14+45 | 7.8593 | 13.67 | Q V | | | | |

| | | | |
|---|---|---|---|
| 14+50 | 7.9562 | 14.07 |  |
| 14+55 | 8.0561 | 14.51 | |
| 15+ 0 | 8.1594 | 14.99 | |
| 15+ 5 | 8.2662 | 15.51 | |
| 15+10 | 8.3769 | 16.07 | |
| 15+15 | 8.4917 | 16.67 | |
| 15+20 | 8.6110 | 17.32 | |
| 15+25 | 8.7359 | 18.13 | |
| 15+30 | 8.8675 | 19.11 | |
| 15+35 | 9.0073 | 20.30 | |
| 15+40 | 9.1569 | 21.73 | |
| 15+45 | 9.3189 | 23.52 | |
| 15+50 | 9.4961 | 25.73 | |
| 15+55 | 9.6941 | 28.74 | |
| 16+ 0 | 9.9209 | 32.93 | |
| 16+ 5 | 10.2196 | 43.38 | |
| 16+10 | 10.5948 | 54.48 | |
| 16+15 | 11.0523 | 66.43 | |
| 16+20 | 11.5888 | 77.91 | |
| 16+25 | 12.2152 | 90.94 | |
| 16+30 | 12.9229 | 102.75 | |
| 16+35 | 13.7376 | 118.30 | |
| 16+40 | 14.6591 | 133.80 | |
| 16+45 | 15.8185 | 168.35 | |
| 16+50 | 17.1376 | 191.53 | |
| 16+55 | 18.7077 | 227.98 | |
| 17+ 0 | 20.3448 | 237.71 | |
| 17+ 5 | 21.8503 | 218.60 | |
| 17+10 | 23.2577 | 204.35 | |
| 17+15 | 24.4799 | 177.47 | |
| 17+20 | 25.6025 | 162.99 | |
| 17+25 | 26.6017 | 145.09 | |
| 17+30 | 27.5218 | 133.59 | |
| 17+35 | 28.3187 | 115.71 | |
| 17+40 | 29.0556 | 107.00 | |
| 17+45 | 29.7193 | 96.37 | |
| 17+50 | 30.3431 | 90.58 | |
| 17+55 | 30.9171 | 83.35 | |
| 18+ 0 | 31.4642 | 79.43 | |
| 18+ 5 | 31.9793 | 74.80 | |
| 18+10 | 32.4672 | 70.85 | |
| 18+15 | 32.9176 | 65.40 | |
| 18+20 | 33.3468 | 62.32 | |
| 18+25 | 33.7513 | 58.73 | |
| 18+30 | 34.1418 | 56.71 | |
| 18+35 | 34.5170 | 54.48 | |
| 18+40 | 34.8695 | 51.18 | |
| 18+45 | 35.1964 | 47.47 | |
| 18+50 | 35.5158 | 46.36 | |
| 18+55 | 35.8279 | 45.33 | |
| 19+ 0 | 36.1238 | 42.96 | |
| 19+ 5 | 36.4049 | 40.82 | |
| 19+10 | 36.6813 | 40.13 | |
| 19+15 | 36.9525 | 39.38 | |
| 19+20 | 37.2131 | 37.83 | |
| 19+25 | 37.4655 | 36.65 | |
| 19+30 | 37.7133 | 35.97 | |
| 19+35 | 37.9552 | 35.13 | |
| 19+40 | 38.1833 | 33.12 | |

```
19+45      38.4029     31.89  |   Q     |         |         |  V      |
19+50      38.6176     31.18  |   Q     |         |         |  V      |
19+55      38.8257     30.22  |   Q     |         |         |   V     |
20+ 0      39.0174     27.83  |  Q      |         |         |   V     |
20+ 5      39.2018     26.77  |  Q      |         |         |   V     |
20+10      39.3828     26.29  |  Q      |         |         |   V     |
20+15      39.5604     25.79  |  Q      |         |         |   V     |
20+20      39.7330     25.05  |  Q      |         |         |   V     |
20+25      39.9025     24.61  |  Q      |         |         |    V    |
20+30      40.0692     24.21  |  Q      |         |         |    V    |
20+35      40.2319     23.62  |  Q      |         |         |    V    |
20+40      40.3870     22.53  |  Q      |         |         |    V    |
20+45      40.5390     22.07  | Q       |         |         |    V    |
20+50      40.6886     21.72  | Q       |         |         |    V    |
20+55      40.8349     21.25  | Q       |         |         |    V    |
21+ 0      40.9766     20.58  | Q       |         |         |    V    |
21+ 5      41.1159     20.22  | Q       |         |         |     V   |
21+10      41.2524     19.82  | Q       |         |         |     V   |
21+15      41.3835     19.03  | Q       |         |         |     V   |
21+20      41.5068     17.91  | Q       |         |         |     V   |
21+25      41.6280     17.60  | Q       |         |         |     V   |
21+30      41.7475     17.35  | Q       |         |         |     V   |
21+35      41.8655     17.13  | Q       |         |         |     V   |
21+40      41.9819     16.90  | Q       |         |         |     V   |
21+45      42.0966     16.65  | Q       |         |         |     V   |
21+50      42.2090     16.33  | Q       |         |         |      V  |
21+55      42.3159     15.52  | Q       |         |         |      V  |
22+ 0      42.4178     14.79  |Q        |         |         |      V  |
22+ 5      42.5181     14.56  |Q        |         |         |      V  |
22+10      42.6169     14.35  |Q        |         |         |      V  |
22+15      42.7144     14.15  |Q        |         |         |      V  |
22+20      42.8105     13.95  |Q        |         |         |      V  |
22+25      42.9049     13.71  |Q        |         |         |      V  |
22+30      42.9970     13.37  |Q        |         |         |      V  |
22+35      43.0827     12.45  |Q        |         |         |      V  |
22+40      43.1649     11.94  |Q        |         |         |      V  |
22+45      43.2458     11.73  |Q        |         |         |      V  |
22+50      43.3253     11.56  |Q        |         |         |       V |
22+55      43.4038     11.38  |Q        |         |         |       V |
23+ 0      43.4809     11.20  |Q        |         |         |       V |
23+ 5      43.5565     10.97  |Q        |         |         |       V |
23+10      43.6294     10.59  |Q        |         |         |       V |
23+15      43.6960      9.66  |Q        |         |         |       V |
23+20      43.7603      9.35  |Q        |         |         |       V |
23+25      43.8238      9.22  |Q        |         |         |       V |
23+30      43.8866      9.11  |Q        |         |         |       V |
23+35      43.9488      9.04  |Q        |         |         |       V |
23+40      44.0107      8.98  |Q        |         |         |       V |
23+45      44.0723      8.94  |Q        |         |         |       V |
23+50      44.1341      8.97  |Q        |         |         |       V |
23+55      44.1967      9.10  |Q        |         |         |       V |
24+ 0      44.2591      9.06  |Q        |         |         |       V |
24+ 5      44.3210      8.99  |Q        |         |         |       V |
24+10      44.3823      8.90  |Q        |         |         |       V |
24+15      44.4429      8.80  |Q        |         |         |        V|
24+20      44.5026      8.68  |Q        |         |         |        V|
24+25      44.5615      8.55  |Q        |         |         |        V|
24+30      44.6194      8.41  |Q        |         |         |        V|
24+35      44.6762      8.24  |Q        |         |         |        V|
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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24+40 | 44.7317 | 8.06 | \|Q | \| | \| | \| | V\| |
| 24+45 | 44.7855 | 7.81 | \|Q | \| | \| | \| | V\| |
| 24+50 | 44.8373 | 7.53 | \|Q | \| | \| | \| | V\| |
| 24+55 | 44.8866 | 7.16 | Q | \| | \| | \| | V\| |
| 25+ 0 | 44.9329 | 6.73 | Q | \| | \| | \| | V\| |
| 25+ 5 | 44.9762 | 6.28 | Q | \| | \| | \| | V\| |
| 25+10 | 45.0138 | 5.46 | Q | \| | \| | \| | V\| |
| 25+15 | 45.0474 | 4.88 | Q | \| | \| | \| | V\| |
| 25+20 | 45.0792 | 4.61 | Q | \| | \| | \| | V\| |
| 25+25 | 45.1093 | 4.38 | Q | \| | \| | \| | V\| |
| 25+30 | 45.1381 | 4.18 | Q | \| | \| | \| | V\| |
| 25+35 | 45.1656 | 4.00 | Q | \| | \| | \| | V\| |
| 25+40 | 45.1920 | 3.83 | Q | \| | \| | \| | V\| |
| 25+45 | 45.2173 | 3.67 | Q | \| | \| | \| | V\| |
| 25+50 | 45.2416 | 3.52 | Q | \| | \| | \| | V\| |
| 25+55 | 45.2647 | 3.36 | Q | \| | \| | \| | V\| |
| 26+ 0 | 45.2866 | 3.18 | Q | \| | \| | \| | V\| |
| 26+ 5 | 45.3071 | 2.97 | Q | \| | \| | \| | V\| |
| 26+10 | 45.3248 | 2.57 | Q | \| | \| | \| | V\| |
| 26+15 | 45.3372 | 1.80 | Q | \| | \| | \| | V\| |
| 26+20 | 45.3486 | 1.65 | Q | \| | \| | \| | V\| |
| 26+25 | 45.3592 | 1.54 | Q | \| | \| | \| | V\| |
| 26+30 | 45.3692 | 1.45 | Q | \| | \| | \| | V\| |
| 26+35 | 45.3786 | 1.37 | Q | \| | \| | \| | V\| |
| 26+40 | 45.3876 | 1.31 | Q | \| | \| | \| | V\| |
| 26+45 | 45.3962 | 1.25 | Q | \| | \| | \| | V\| |
| 26+50 | 45.4044 | 1.19 | Q | \| | \| | \| | V\| |
| 26+55 | 45.4123 | 1.14 | Q | \| | \| | \| | V\| |
| 27+ 0 | 45.4197 | 1.09 | Q | \| | \| | \| | V\| |
| 27+ 5 | 45.4269 | 1.04 | Q | \| | \| | \| | V\| |
| 27+10 | 45.4338 | 1.00 | Q | \| | \| | \| | V\| |
| 27+15 | 45.4403 | 0.95 | Q | \| | \| | \| | V\| |
| 27+20 | 45.4466 | 0.91 | Q | \| | \| | \| | V\| |
| 27+25 | 45.4526 | 0.87 | Q | \| | \| | \| | V\| |
| 27+30 | 45.4584 | 0.83 | Q | \| | \| | \| | V\| |
| 27+35 | 45.4639 | 0.80 | Q | \| | \| | \| | V\| |
| 27+40 | 45.4691 | 0.76 | Q | \| | \| | \| | V\| |
| 27+45 | 45.4742 | 0.73 | Q | \| | \| | \| | V\| |
| 27+50 | 45.4790 | 0.70 | Q | \| | \| | \| | V\| |
| 27+55 | 45.4836 | 0.67 | Q | \| | \| | \| | V\| |
| 28+ 0 | 45.4880 | 0.64 | Q | \| | \| | \| | V\| |
| 28+ 5 | 45.4923 | 0.62 | Q | \| | \| | \| | V\| |
| 28+10 | 45.4964 | 0.60 | Q | \| | \| | \| | V\| |
| 28+15 | 45.5003 | 0.57 | Q | \| | \| | \| | V\| |
| 28+20 | 45.5041 | 0.55 | Q | \| | \| | \| | V\| |
| 28+25 | 45.5077 | 0.53 | Q | \| | \| | \| | V\| |
| 28+30 | 45.5112 | 0.50 | Q | \| | \| | \| | V\| |
| 28+35 | 45.5145 | 0.48 | Q | \| | \| | \| | V\| |
| 28+40 | 45.5177 | 0.46 | Q | \| | \| | \| | V\| |
| 28+45 | 45.5208 | 0.44 | Q | \| | \| | \| | V\| |
| 28+50 | 45.5237 | 0.42 | Q | \| | \| | \| | V\| |
| 28+55 | 45.5265 | 0.40 | Q | \| | \| | \| | V\| |
| 29+ 0 | 45.5291 | 0.39 | Q | \| | \| | \| | V\| |
| 29+ 5 | 45.5317 | 0.37 | Q | \| | \| | \| | V\| |
| 29+10 | 45.5341 | 0.35 | Q | \| | \| | \| | V\| |
| 29+15 | 45.5364 | 0.34 | Q | \| | \| | \| | V\| |
| 29+20 | 45.5387 | 0.32 | Q | \| | \| | \| | V\| |
| 29+25 | 45.5408 | 0.31 | Q | \| | \| | \| | V\| |
| 29+30 | 45.5429 | 0.30 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 29+35 | 45.5448 | 0.28 | Q | \| | \| | \| | V\| |
| 29+40 | 45.5467 | 0.27 | Q | \| | \| | \| | V\| |
| 29+45 | 45.5485 | 0.26 | Q | \| | \| | \| | V\| |
| 29+50 | 45.5502 | 0.25 | Q | \| | \| | \| | V\| |
| 29+55 | 45.5518 | 0.24 | Q | \| | \| | \| | V\| |
| 30+ 0 | 45.5534 | 0.23 | Q | \| | \| | \| | V\| |
| 30+ 5 | 45.5548 | 0.22 | Q | \| | \| | \| | V\| |
| 30+10 | 45.5563 | 0.21 | Q | \| | \| | \| | V\| |
| 30+15 | 45.5576 | 0.20 | Q | \| | \| | \| | V\| |
| 30+20 | 45.5589 | 0.19 | Q | \| | \| | \| | V\| |
| 30+25 | 45.5601 | 0.18 | Q | \| | \| | \| | V\| |
| 30+30 | 45.5613 | 0.17 | Q | \| | \| | \| | V\| |
| 30+35 | 45.5624 | 0.16 | Q | \| | \| | \| | V\| |
| 30+40 | 45.5635 | 0.15 | Q | \| | \| | \| | V\| |
| 30+45 | 45.5645 | 0.15 | Q | \| | \| | \| | V\| |
| 30+50 | 45.5654 | 0.14 | Q | \| | \| | \| | V\| |
| 30+55 | 45.5664 | 0.13 | Q | \| | \| | \| | V\| |
| 31+ 0 | 45.5672 | 0.13 | Q | \| | \| | \| | V\| |
| 31+ 5 | 45.5681 | 0.12 | Q | \| | \| | \| | V\| |
| 31+10 | 45.5689 | 0.11 | Q | \| | \| | \| | V\| |
| 31+15 | 45.5696 | 0.11 | Q | \| | \| | \| | V\| |
| 31+20 | 45.5704 | 0.11 | Q | \| | \| | \| | V\| |
| 31+25 | 45.5711 | 0.10 | Q | \| | \| | \| | V\| |
| 31+30 | 45.5717 | 0.10 | Q | \| | \| | \| | V\| |
| 31+35 | 45.5724 | 0.10 | Q | \| | \| | \| | V\| |
| 31+40 | 45.5730 | 0.09 | Q | \| | \| | \| | V\| |
| 31+45 | 45.5736 | 0.09 | Q | \| | \| | \| | V\| |
| 31+50 | 45.5742 | 0.08 | Q | \| | \| | \| | V\| |
| 31+55 | 45.5748 | 0.08 | Q | \| | \| | \| | V\| |
| 32+ 0 | 45.5753 | 0.08 | Q | \| | \| | \| | V\| |
| 32+ 5 | 45.5758 | 0.07 | Q | \| | \| | \| | V\| |
| 32+10 | 45.5762 | 0.07 | Q | \| | \| | \| | V\| |
| 32+15 | 45.5767 | 0.06 | Q | \| | \| | \| | V\| |
| 32+20 | 45.5771 | 0.06 | Q | \| | \| | \| | V\| |
| 32+25 | 45.5775 | 0.06 | Q | \| | \| | \| | V\| |
| 32+30 | 45.5778 | 0.05 | Q | \| | \| | \| | V\| |
| 32+35 | 45.5781 | 0.05 | Q | \| | \| | \| | V\| |
| 32+40 | 45.5784 | 0.04 | Q | \| | \| | \| | V\| |
| 32+45 | 45.5787 | 0.04 | Q | \| | \| | \| | V\| |
| 32+50 | 45.5790 | 0.04 | Q | \| | \| | \| | V\| |
| 32+55 | 45.5792 | 0.03 | Q | \| | \| | \| | V\| |
| 33+ 0 | 45.5794 | 0.03 | Q | \| | \| | \| | V\| |
| 33+ 5 | 45.5795 | 0.02 | Q | \| | \| | \| | V\| |
| 33+10 | 45.5797 | 0.02 | Q | \| | \| | \| | V\| |
| 33+15 | 45.5798 | 0.02 | Q | \| | \| | \| | V\| |
| 33+20 | 45.5800 | 0.02 | Q | \| | \| | \| | V\| |
| 33+25 | 45.5801 | 0.02 | Q | \| | \| | \| | V\| |
| 33+30 | 45.5802 | 0.01 | Q | \| | \| | \| | V\| |
| 33+35 | 45.5803 | 0.01 | Q | \| | \| | \| | V\| |
| 33+40 | 45.5803 | 0.01 | Q | \| | \| | \| | V\| |
| 33+45 | 45.5804 | 0.01 | Q | \| | \| | \| | V\| |
| 33+50 | 45.5805 | 0.01 | Q | \| | \| | \| | V\| |
| 33+55 | 45.5805 | 0.01 | Q | \| | \| | \| | V\| |
| 34+ 0 | 45.5805 | 0.00 | Q | \| | \| | \| | V\| |
| 34+ 5 | 45.5805 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 26
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 342.06 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 342.06 | 6 | 1.82 |
| Rainfall data for year 100 | | |
| 342.06 | 24 | 2.52 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 77.6 | 92.6 | 342.06 | 1.000 | 0.145 | 0.902 | 0.130 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.130

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 308.54 | 0.902 | 77.6 | 92.6 | 0.80 | 0.698 |
| 33.52 | 0.098 | 98.0 | 98.0 | 0.20 | 0.909 |

Area-averaged catchment yield fraction, Y = 0.719
Area-averaged low loss fraction, Yb = 0.281
User entry of time of concentration = 1.640 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 342.06(Ac.)
Catchment Lag time = 1.312 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 6.3516
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.130(In/Hr)
Average low loss rate fraction (Yb) = 0.281 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.640(In)
Specified peak 6-hour rainfall = 1.820(In)
Specified peak 24-hour rainfall = 2.520(In)

Rainfall depth area reduction factors:
Using a total area of 342.06(Ac.) (Ref: fig. E-4)

5-minute factor = 0.984 Adjusted rainfall = 0.649(In)
30-minute factor = 0.984 Adjusted rainfall = 1.111(In)
1-hour factor = 0.984 Adjusted rainfall = 1.368(In)
3-hour factor = 0.998 Adjusted rainfall = 1.636(In)
6-hour factor = 0.999 Adjusted rainfall = 1.818(In)
24-hour factor = 1.000 Adjusted rainfall = 2.519(In)
---

U n i t H y d r o g r a p h

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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 4136.79 (CFS)) | |
| 1 | 0.279 | 11.561 |
| 2 | 0.839 | 23.133 |
| 3 | 1.668 | 34.294 |
| 4 | 2.736 | 44.186 |
| 5 | 4.088 | 55.955 |
| 6 | 5.666 | 65.269 |
| 7 | 7.572 | 78.837 |
| 8 | 9.722 | 88.939 |
| 9 | 13.053 | 137.794 |
| 10 | 17.149 | 169.454 |
| 11 | 22.793 | 233.463 |
| 12 | 29.277 | 268.246 |
| 13 | 35.062 | 239.326 |

| | | |
|---|---|---|
| 14 | 40.465 | 223.493 |
| 15 | 44.943 | 185.250 |
| 16 | 48.983 | 167.129 |
| 17 | 52.497 | 145.358 |
| 18 | 55.764 | 135.150 |
| 19 | 58.422 | 109.955 |
| 20 | 60.838 | 99.929 |
| 21 | 62.925 | 86.353 |
| 22 | 64.888 | 81.198 |
| 23 | 66.629 | 72.015 |
| 24 | 68.294 | 68.902 |
| 25 | 69.848 | 64.257 |
| 26 | 71.350 | 62.151 |
| 27 | 72.664 | 54.343 |
| 28 | 73.919 | 51.918 |
| 29 | 75.060 | 47.205 |
| 30 | 76.172 | 46.002 |
| 31 | 77.246 | 44.427 |
| 32 | 78.283 | 42.903 |
| 33 | 79.148 | 35.810 |
| 34 | 79.987 | 34.683 |
| 35 | 80.825 | 34.683 |
| 36 | 81.638 | 33.637 |
| 37 | 82.338 | 28.944 |
| 38 | 83.024 | 28.377 |
| 39 | 83.710 | 28.377 |
| 40 | 84.380 | 27.732 |
| 41 | 84.995 | 25.429 |
| 42 | 85.605 | 25.224 |
| 43 | 86.215 | 25.224 |
| 44 | 86.799 | 24.183 |
| 45 | 87.312 | 21.204 |
| 46 | 87.820 | 21.020 |
| 47 | 88.328 | 21.020 |
| 48 | 88.799 | 19.470 |
| 49 | 89.183 | 15.907 |
| 50 | 89.564 | 15.765 |
| 51 | 89.945 | 15.765 |
| 52 | 90.318 | 15.401 |
| 53 | 90.674 | 14.729 |
| 54 | 91.029 | 14.714 |
| 55 | 91.385 | 14.714 |
| 56 | 91.720 | 13.870 |
| 57 | 92.026 | 12.624 |
| 58 | 92.330 | 12.612 |
| 59 | 92.635 | 12.612 |
| 60 | 92.929 | 12.128 |
| 61 | 93.208 | 11.562 |
| 62 | 93.488 | 11.561 |
| 63 | 93.767 | 11.560 |
| 64 | 94.013 | 10.185 |
| 65 | 94.229 | 8.934 |
| 66 | 94.445 | 8.934 |
| 67 | 94.661 | 8.934 |
| 68 | 94.877 | 8.934 |
| 69 | 95.093 | 8.934 |
| 70 | 95.309 | 8.934 |
| 71 | 95.524 | 8.909 |
| 72 | 95.708 | 7.587 |

| | | |
|---|---|---|
| 73 | 95.873 | 6.832 |
| 74 | 96.038 | 6.832 |
| 75 | 96.203 | 6.832 |
| 76 | 96.368 | 6.832 |
| 77 | 96.533 | 6.832 |
| 78 | 96.699 | 6.832 |
| 79 | 96.862 | 6.749 |
| 80 | 96.989 | 5.274 |
| 81 | 97.104 | 4.730 |
| 82 | 97.218 | 4.730 |
| 83 | 97.332 | 4.730 |
| 84 | 97.446 | 4.730 |
| 85 | 97.561 | 4.730 |
| 86 | 97.675 | 4.730 |
| 87 | 97.785 | 4.555 |
| 88 | 97.858 | 2.996 |
| 89 | 97.921 | 2.628 |
| 90 | 97.985 | 2.628 |
| 91 | 98.048 | 2.628 |
| 92 | 98.112 | 2.628 |
| 93 | 98.175 | 2.628 |
| 94 | 98.239 | 2.628 |
| 95 | 98.304 | 2.703 |
| 96 | 98.379 | 3.096 |
| 97 | 98.455 | 3.153 |
| 98 | 98.531 | 3.153 |
| 99 | 98.608 | 3.153 |
| 100 | 98.684 | 3.153 |
| 101 | 98.760 | 3.153 |
| 102 | 98.836 | 3.153 |
| 103 | 98.913 | 3.153 |
| 104 | 98.989 | 3.153 |
| 105 | 99.065 | 3.153 |
| 106 | 99.141 | 3.153 |
| 107 | 99.217 | 3.153 |
| 108 | 99.294 | 3.153 |
| 109 | 99.370 | 3.153 |
| 110 | 99.446 | 3.153 |
| 111 | 99.511 | 2.679 |
| 112 | 99.551 | 1.675 |
| 113 | 99.591 | 1.642 |
| 114 | 99.631 | 1.642 |
| 115 | 99.670 | 1.642 |
| 116 | 99.710 | 1.642 |
| 117 | 99.750 | 1.642 |
| 118 | 99.789 | 1.642 |
| 119 | 99.829 | 1.642 |
| 120 | 99.869 | 1.642 |
| 121 | 99.909 | 1.642 |
| 122 | 99.948 | 1.642 |
| 123 | 100.000 | 0.821 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6490 | 0.6490 |
| 2 | 0.7990 | 0.1500 |
| 3 | 0.9024 | 0.1033 |
| 4 | 0.9837 | 0.0813 |
| 5 | 1.0518 | 0.0681 |

| | | |
|---|---|---|
| 6 | 1.1109 | 0.0591 |
| 7 | 1.1635 | 0.0526 |
| 8 | 1.2111 | 0.0476 |
| 9 | 1.2546 | 0.0436 |
| 10 | 1.2949 | 0.0403 |
| 11 | 1.3325 | 0.0376 |
| 12 | 1.3677 | 0.0352 |
| 13 | 1.3857 | 0.0180 |
| 14 | 1.4026 | 0.0169 |
| 15 | 1.4185 | 0.0159 |
| 16 | 1.4335 | 0.0150 |
| 17 | 1.4478 | 0.0143 |
| 18 | 1.4613 | 0.0136 |
| 19 | 1.4743 | 0.0130 |
| 20 | 1.4867 | 0.0124 |
| 21 | 1.4986 | 0.0119 |
| 22 | 1.5100 | 0.0114 |
| 23 | 1.5210 | 0.0110 |
| 24 | 1.5316 | 0.0106 |
| 25 | 1.5419 | 0.0102 |
| 26 | 1.5518 | 0.0099 |
| 27 | 1.5614 | 0.0096 |
| 28 | 1.5707 | 0.0093 |
| 29 | 1.5797 | 0.0090 |
| 30 | 1.5885 | 0.0088 |
| 31 | 1.5970 | 0.0085 |
| 32 | 1.6053 | 0.0083 |
| 33 | 1.6134 | 0.0081 |
| 34 | 1.6213 | 0.0079 |
| 35 | 1.6289 | 0.0077 |
| 36 | 1.6365 | 0.0075 |
| 37 | 1.6433 | 0.0068 |
| 38 | 1.6499 | 0.0067 |
| 39 | 1.6565 | 0.0065 |
| 40 | 1.6628 | 0.0064 |
| 41 | 1.6691 | 0.0062 |
| 42 | 1.6752 | 0.0061 |
| 43 | 1.6812 | 0.0060 |
| 44 | 1.6871 | 0.0059 |
| 45 | 1.6928 | 0.0058 |
| 46 | 1.6985 | 0.0057 |
| 47 | 1.7041 | 0.0056 |
| 48 | 1.7095 | 0.0055 |
| 49 | 1.7149 | 0.0054 |
| 50 | 1.7201 | 0.0053 |
| 51 | 1.7253 | 0.0052 |
| 52 | 1.7304 | 0.0051 |
| 53 | 1.7354 | 0.0050 |
| 54 | 1.7404 | 0.0049 |
| 55 | 1.7452 | 0.0049 |
| 56 | 1.7500 | 0.0048 |
| 57 | 1.7547 | 0.0047 |
| 58 | 1.7593 | 0.0046 |
| 59 | 1.7639 | 0.0046 |
| 60 | 1.7684 | 0.0045 |
| 61 | 1.7729 | 0.0044 |
| 62 | 1.7772 | 0.0044 |
| 63 | 1.7816 | 0.0043 |
| 64 | 1.7858 | 0.0043 |

| | | |
|---|---|---|
| 65 | 1.7900 | 0.0042 |
| 66 | 1.7942 | 0.0042 |
| 67 | 1.7983 | 0.0041 |
| 68 | 1.8023 | 0.0040 |
| 69 | 1.8063 | 0.0040 |
| 70 | 1.8103 | 0.0040 |
| 71 | 1.8142 | 0.0039 |
| 72 | 1.8181 | 0.0039 |
| 73 | 1.8240 | 0.0059 |
| 74 | 1.8298 | 0.0058 |
| 75 | 1.8356 | 0.0058 |
| 76 | 1.8413 | 0.0057 |
| 77 | 1.8470 | 0.0057 |
| 78 | 1.8526 | 0.0056 |
| 79 | 1.8582 | 0.0056 |
| 80 | 1.8637 | 0.0055 |
| 81 | 1.8691 | 0.0055 |
| 82 | 1.8745 | 0.0054 |
| 83 | 1.8799 | 0.0054 |
| 84 | 1.8852 | 0.0053 |
| 85 | 1.8904 | 0.0053 |
| 86 | 1.8956 | 0.0052 |
| 87 | 1.9008 | 0.0052 |
| 88 | 1.9059 | 0.0051 |
| 89 | 1.9110 | 0.0051 |
| 90 | 1.9160 | 0.0050 |
| 91 | 1.9210 | 0.0050 |
| 92 | 1.9260 | 0.0049 |
| 93 | 1.9309 | 0.0049 |
| 94 | 1.9357 | 0.0049 |
| 95 | 1.9405 | 0.0048 |
| 96 | 1.9453 | 0.0048 |
| 97 | 1.9501 | 0.0047 |
| 98 | 1.9548 | 0.0047 |
| 99 | 1.9595 | 0.0047 |
| 100 | 1.9641 | 0.0046 |
| 101 | 1.9687 | 0.0046 |
| 102 | 1.9733 | 0.0046 |
| 103 | 1.9778 | 0.0045 |
| 104 | 1.9823 | 0.0045 |
| 105 | 1.9868 | 0.0045 |
| 106 | 1.9912 | 0.0044 |
| 107 | 1.9956 | 0.0044 |
| 108 | 2.0000 | 0.0044 |
| 109 | 2.0043 | 0.0043 |
| 110 | 2.0086 | 0.0043 |
| 111 | 2.0129 | 0.0043 |
| 112 | 2.0172 | 0.0043 |
| 113 | 2.0214 | 0.0042 |
| 114 | 2.0256 | 0.0042 |
| 115 | 2.0297 | 0.0042 |
| 116 | 2.0339 | 0.0041 |
| 117 | 2.0380 | 0.0041 |
| 118 | 2.0421 | 0.0041 |
| 119 | 2.0461 | 0.0041 |
| 120 | 2.0502 | 0.0040 |
| 121 | 2.0542 | 0.0040 |
| 122 | 2.0581 | 0.0040 |
| 123 | 2.0621 | 0.0040 |

| | | |
|---|---|---|
| 124 | 2.0660 | 0.0039 |
| 125 | 2.0699 | 0.0039 |
| 126 | 2.0738 | 0.0039 |
| 127 | 2.0777 | 0.0039 |
| 128 | 2.0815 | 0.0038 |
| 129 | 2.0853 | 0.0038 |
| 130 | 2.0891 | 0.0038 |
| 131 | 2.0929 | 0.0038 |
| 132 | 2.0966 | 0.0037 |
| 133 | 2.1004 | 0.0037 |
| 134 | 2.1041 | 0.0037 |
| 135 | 2.1077 | 0.0037 |
| 136 | 2.1114 | 0.0037 |
| 137 | 2.1150 | 0.0036 |
| 138 | 2.1187 | 0.0036 |
| 139 | 2.1223 | 0.0036 |
| 140 | 2.1259 | 0.0036 |
| 141 | 2.1294 | 0.0036 |
| 142 | 2.1330 | 0.0035 |
| 143 | 2.1365 | 0.0035 |
| 144 | 2.1400 | 0.0035 |
| 145 | 2.1435 | 0.0035 |
| 146 | 2.1469 | 0.0035 |
| 147 | 2.1504 | 0.0034 |
| 148 | 2.1538 | 0.0034 |
| 149 | 2.1572 | 0.0034 |
| 150 | 2.1606 | 0.0034 |
| 151 | 2.1640 | 0.0034 |
| 152 | 2.1674 | 0.0034 |
| 153 | 2.1707 | 0.0033 |
| 154 | 2.1740 | 0.0033 |
| 155 | 2.1774 | 0.0033 |
| 156 | 2.1807 | 0.0033 |
| 157 | 2.1839 | 0.0033 |
| 158 | 2.1872 | 0.0033 |
| 159 | 2.1904 | 0.0032 |
| 160 | 2.1937 | 0.0032 |
| 161 | 2.1969 | 0.0032 |
| 162 | 2.2001 | 0.0032 |
| 163 | 2.2033 | 0.0032 |
| 164 | 2.2065 | 0.0032 |
| 165 | 2.2096 | 0.0032 |
| 166 | 2.2128 | 0.0031 |
| 167 | 2.2159 | 0.0031 |
| 168 | 2.2190 | 0.0031 |
| 169 | 2.2221 | 0.0031 |
| 170 | 2.2252 | 0.0031 |
| 171 | 2.2283 | 0.0031 |
| 172 | 2.2313 | 0.0031 |
| 173 | 2.2344 | 0.0030 |
| 174 | 2.2374 | 0.0030 |
| 175 | 2.2404 | 0.0030 |
| 176 | 2.2434 | 0.0030 |
| 177 | 2.2464 | 0.0030 |
| 178 | 2.2494 | 0.0030 |
| 179 | 2.2523 | 0.0030 |
| 180 | 2.2553 | 0.0030 |
| 181 | 2.2582 | 0.0029 |
| 182 | 2.2612 | 0.0029 |

| | | |
|---|---|---|
| 183 | 2.2641 | 0.0029 |
| 184 | 2.2670 | 0.0029 |
| 185 | 2.2699 | 0.0029 |
| 186 | 2.2728 | 0.0029 |
| 187 | 2.2756 | 0.0029 |
| 188 | 2.2785 | 0.0029 |
| 189 | 2.2813 | 0.0028 |
| 190 | 2.2842 | 0.0028 |
| 191 | 2.2870 | 0.0028 |
| 192 | 2.2898 | 0.0028 |
| 193 | 2.2926 | 0.0028 |
| 194 | 2.2954 | 0.0028 |
| 195 | 2.2982 | 0.0028 |
| 196 | 2.3009 | 0.0028 |
| 197 | 2.3037 | 0.0028 |
| 198 | 2.3064 | 0.0027 |
| 199 | 2.3092 | 0.0027 |
| 200 | 2.3119 | 0.0027 |
| 201 | 2.3146 | 0.0027 |
| 202 | 2.3173 | 0.0027 |
| 203 | 2.3200 | 0.0027 |
| 204 | 2.3227 | 0.0027 |
| 205 | 2.3254 | 0.0027 |
| 206 | 2.3280 | 0.0027 |
| 207 | 2.3307 | 0.0027 |
| 208 | 2.3333 | 0.0026 |
| 209 | 2.3359 | 0.0026 |
| 210 | 2.3386 | 0.0026 |
| 211 | 2.3412 | 0.0026 |
| 212 | 2.3438 | 0.0026 |
| 213 | 2.3464 | 0.0026 |
| 214 | 2.3490 | 0.0026 |
| 215 | 2.3516 | 0.0026 |
| 216 | 2.3541 | 0.0026 |
| 217 | 2.3567 | 0.0026 |
| 218 | 2.3592 | 0.0025 |
| 219 | 2.3618 | 0.0025 |
| 220 | 2.3643 | 0.0025 |
| 221 | 2.3668 | 0.0025 |
| 222 | 2.3693 | 0.0025 |
| 223 | 2.3718 | 0.0025 |
| 224 | 2.3743 | 0.0025 |
| 225 | 2.3768 | 0.0025 |
| 226 | 2.3793 | 0.0025 |
| 227 | 2.3818 | 0.0025 |
| 228 | 2.3842 | 0.0025 |
| 229 | 2.3867 | 0.0025 |
| 230 | 2.3892 | 0.0024 |
| 231 | 2.3916 | 0.0024 |
| 232 | 2.3940 | 0.0024 |
| 233 | 2.3964 | 0.0024 |
| 234 | 2.3989 | 0.0024 |
| 235 | 2.4013 | 0.0024 |
| 236 | 2.4037 | 0.0024 |
| 237 | 2.4061 | 0.0024 |
| 238 | 2.4084 | 0.0024 |
| 239 | 2.4108 | 0.0024 |
| 240 | 2.4132 | 0.0024 |
| 241 | 2.4155 | 0.0024 |

| | | |
|---|---|---|
| 242 | 2.4179 | 0.0024 |
| 243 | 2.4202 | 0.0023 |
| 244 | 2.4226 | 0.0023 |
| 245 | 2.4249 | 0.0023 |
| 246 | 2.4272 | 0.0023 |
| 247 | 2.4296 | 0.0023 |
| 248 | 2.4319 | 0.0023 |
| 249 | 2.4342 | 0.0023 |
| 250 | 2.4365 | 0.0023 |
| 251 | 2.4388 | 0.0023 |
| 252 | 2.4410 | 0.0023 |
| 253 | 2.4433 | 0.0023 |
| 254 | 2.4456 | 0.0023 |
| 255 | 2.4478 | 0.0023 |
| 256 | 2.4501 | 0.0023 |
| 257 | 2.4523 | 0.0022 |
| 258 | 2.4546 | 0.0022 |
| 259 | 2.4568 | 0.0022 |
| 260 | 2.4590 | 0.0022 |
| 261 | 2.4613 | 0.0022 |
| 262 | 2.4635 | 0.0022 |
| 263 | 2.4657 | 0.0022 |
| 264 | 2.4679 | 0.0022 |
| 265 | 2.4701 | 0.0022 |
| 266 | 2.4723 | 0.0022 |
| 267 | 2.4745 | 0.0022 |
| 268 | 2.4766 | 0.0022 |
| 269 | 2.4788 | 0.0022 |
| 270 | 2.4810 | 0.0022 |
| 271 | 2.4831 | 0.0022 |
| 272 | 2.4853 | 0.0022 |
| 273 | 2.4874 | 0.0021 |
| 274 | 2.4896 | 0.0021 |
| 275 | 2.4917 | 0.0021 |
| 276 | 2.4938 | 0.0021 |
| 277 | 2.4960 | 0.0021 |
| 278 | 2.4981 | 0.0021 |
| 279 | 2.5002 | 0.0021 |
| 280 | 2.5023 | 0.0021 |
| 281 | 2.5044 | 0.0021 |
| 282 | 2.5065 | 0.0021 |
| 283 | 2.5086 | 0.0021 |
| 284 | 2.5106 | 0.0021 |
| 285 | 2.5127 | 0.0021 |
| 286 | 2.5148 | 0.0021 |
| 287 | 2.5169 | 0.0021 |
| 288 | 2.5189 | 0.0021 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0021 | 0.0006 | 0.0015 |
| 2 | 0.0021 | 0.0006 | 0.0015 |
| 3 | 0.0021 | 0.0006 | 0.0015 |
| 4 | 0.0021 | 0.0006 | 0.0015 |
| 5 | 0.0021 | 0.0006 | 0.0015 |
| 6 | 0.0021 | 0.0006 | 0.0015 |
| 7 | 0.0021 | 0.0006 | 0.0015 |

| | | | |
|---|---|---|---|
| 8 | 0.0021 | 0.0006 | 0.0015 |
| 9 | 0.0021 | 0.0006 | 0.0015 |
| 10 | 0.0021 | 0.0006 | 0.0015 |
| 11 | 0.0021 | 0.0006 | 0.0015 |
| 12 | 0.0022 | 0.0006 | 0.0015 |
| 13 | 0.0022 | 0.0006 | 0.0016 |
| 14 | 0.0022 | 0.0006 | 0.0016 |
| 15 | 0.0022 | 0.0006 | 0.0016 |
| 16 | 0.0022 | 0.0006 | 0.0016 |
| 17 | 0.0022 | 0.0006 | 0.0016 |
| 18 | 0.0022 | 0.0006 | 0.0016 |
| 19 | 0.0022 | 0.0006 | 0.0016 |
| 20 | 0.0022 | 0.0006 | 0.0016 |
| 21 | 0.0022 | 0.0006 | 0.0016 |
| 22 | 0.0022 | 0.0006 | 0.0016 |
| 23 | 0.0023 | 0.0006 | 0.0016 |
| 24 | 0.0023 | 0.0006 | 0.0016 |
| 25 | 0.0023 | 0.0006 | 0.0016 |
| 26 | 0.0023 | 0.0006 | 0.0016 |
| 27 | 0.0023 | 0.0006 | 0.0017 |
| 28 | 0.0023 | 0.0006 | 0.0017 |
| 29 | 0.0023 | 0.0007 | 0.0017 |
| 30 | 0.0023 | 0.0007 | 0.0017 |
| 31 | 0.0023 | 0.0007 | 0.0017 |
| 32 | 0.0024 | 0.0007 | 0.0017 |
| 33 | 0.0024 | 0.0007 | 0.0017 |
| 34 | 0.0024 | 0.0007 | 0.0017 |
| 35 | 0.0024 | 0.0007 | 0.0017 |
| 36 | 0.0024 | 0.0007 | 0.0017 |
| 37 | 0.0024 | 0.0007 | 0.0017 |
| 38 | 0.0024 | 0.0007 | 0.0017 |
| 39 | 0.0024 | 0.0007 | 0.0018 |
| 40 | 0.0024 | 0.0007 | 0.0018 |
| 41 | 0.0025 | 0.0007 | 0.0018 |
| 42 | 0.0025 | 0.0007 | 0.0018 |
| 43 | 0.0025 | 0.0007 | 0.0018 |
| 44 | 0.0025 | 0.0007 | 0.0018 |
| 45 | 0.0025 | 0.0007 | 0.0018 |
| 46 | 0.0025 | 0.0007 | 0.0018 |
| 47 | 0.0025 | 0.0007 | 0.0018 |
| 48 | 0.0025 | 0.0007 | 0.0018 |
| 49 | 0.0026 | 0.0007 | 0.0018 |
| 50 | 0.0026 | 0.0007 | 0.0019 |
| 51 | 0.0026 | 0.0007 | 0.0019 |
| 52 | 0.0026 | 0.0007 | 0.0019 |
| 53 | 0.0026 | 0.0007 | 0.0019 |
| 54 | 0.0026 | 0.0007 | 0.0019 |
| 55 | 0.0027 | 0.0007 | 0.0019 |
| 56 | 0.0027 | 0.0007 | 0.0019 |
| 57 | 0.0027 | 0.0008 | 0.0019 |
| 58 | 0.0027 | 0.0008 | 0.0019 |
| 59 | 0.0027 | 0.0008 | 0.0020 |
| 60 | 0.0027 | 0.0008 | 0.0020 |
| 61 | 0.0027 | 0.0008 | 0.0020 |
| 62 | 0.0028 | 0.0008 | 0.0020 |
| 63 | 0.0028 | 0.0008 | 0.0020 |
| 64 | 0.0028 | 0.0008 | 0.0020 |
| 65 | 0.0028 | 0.0008 | 0.0020 |
| 66 | 0.0028 | 0.0008 | 0.0020 |

| | | | |
|---|---|---|---|
| 67 | 0.0028 | 0.0008 | 0.0020 |
| 68 | 0.0029 | 0.0008 | 0.0021 |
| 69 | 0.0029 | 0.0008 | 0.0021 |
| 70 | 0.0029 | 0.0008 | 0.0021 |
| 71 | 0.0029 | 0.0008 | 0.0021 |
| 72 | 0.0029 | 0.0008 | 0.0021 |
| 73 | 0.0030 | 0.0008 | 0.0021 |
| 74 | 0.0030 | 0.0008 | 0.0021 |
| 75 | 0.0030 | 0.0008 | 0.0022 |
| 76 | 0.0030 | 0.0008 | 0.0022 |
| 77 | 0.0030 | 0.0009 | 0.0022 |
| 78 | 0.0030 | 0.0009 | 0.0022 |
| 79 | 0.0031 | 0.0009 | 0.0022 |
| 80 | 0.0031 | 0.0009 | 0.0022 |
| 81 | 0.0031 | 0.0009 | 0.0022 |
| 82 | 0.0031 | 0.0009 | 0.0022 |
| 83 | 0.0032 | 0.0009 | 0.0023 |
| 84 | 0.0032 | 0.0009 | 0.0023 |
| 85 | 0.0032 | 0.0009 | 0.0023 |
| 86 | 0.0032 | 0.0009 | 0.0023 |
| 87 | 0.0032 | 0.0009 | 0.0023 |
| 88 | 0.0033 | 0.0009 | 0.0023 |
| 89 | 0.0033 | 0.0009 | 0.0024 |
| 90 | 0.0033 | 0.0009 | 0.0024 |
| 91 | 0.0033 | 0.0009 | 0.0024 |
| 92 | 0.0034 | 0.0009 | 0.0024 |
| 93 | 0.0034 | 0.0010 | 0.0024 |
| 94 | 0.0034 | 0.0010 | 0.0025 |
| 95 | 0.0034 | 0.0010 | 0.0025 |
| 96 | 0.0035 | 0.0010 | 0.0025 |
| 97 | 0.0035 | 0.0010 | 0.0025 |
| 98 | 0.0035 | 0.0010 | 0.0025 |
| 99 | 0.0036 | 0.0010 | 0.0026 |
| 100 | 0.0036 | 0.0010 | 0.0026 |
| 101 | 0.0036 | 0.0010 | 0.0026 |
| 102 | 0.0036 | 0.0010 | 0.0026 |
| 103 | 0.0037 | 0.0010 | 0.0026 |
| 104 | 0.0037 | 0.0010 | 0.0027 |
| 105 | 0.0037 | 0.0011 | 0.0027 |
| 106 | 0.0038 | 0.0011 | 0.0027 |
| 107 | 0.0038 | 0.0011 | 0.0027 |
| 108 | 0.0038 | 0.0011 | 0.0028 |
| 109 | 0.0039 | 0.0011 | 0.0028 |
| 110 | 0.0039 | 0.0011 | 0.0028 |
| 111 | 0.0040 | 0.0011 | 0.0028 |
| 112 | 0.0040 | 0.0011 | 0.0029 |
| 113 | 0.0040 | 0.0011 | 0.0029 |
| 114 | 0.0041 | 0.0011 | 0.0029 |
| 115 | 0.0041 | 0.0012 | 0.0030 |
| 116 | 0.0041 | 0.0012 | 0.0030 |
| 117 | 0.0042 | 0.0012 | 0.0030 |
| 118 | 0.0042 | 0.0012 | 0.0030 |
| 119 | 0.0043 | 0.0012 | 0.0031 |
| 120 | 0.0043 | 0.0012 | 0.0031 |
| 121 | 0.0044 | 0.0012 | 0.0031 |
| 122 | 0.0044 | 0.0012 | 0.0032 |
| 123 | 0.0045 | 0.0013 | 0.0032 |
| 124 | 0.0045 | 0.0013 | 0.0032 |
| 125 | 0.0046 | 0.0013 | 0.0033 |

| | | | |
|---|---|---|---|
| 126 | 0.0046 | 0.0013 | 0.0033 |
| 127 | 0.0047 | 0.0013 | 0.0034 |
| 128 | 0.0047 | 0.0013 | 0.0034 |
| 129 | 0.0048 | 0.0013 | 0.0034 |
| 130 | 0.0048 | 0.0014 | 0.0035 |
| 131 | 0.0049 | 0.0014 | 0.0035 |
| 132 | 0.0049 | 0.0014 | 0.0036 |
| 133 | 0.0050 | 0.0014 | 0.0036 |
| 134 | 0.0051 | 0.0014 | 0.0036 |
| 135 | 0.0052 | 0.0015 | 0.0037 |
| 136 | 0.0052 | 0.0015 | 0.0037 |
| 137 | 0.0053 | 0.0015 | 0.0038 |
| 138 | 0.0054 | 0.0015 | 0.0038 |
| 139 | 0.0055 | 0.0015 | 0.0039 |
| 140 | 0.0055 | 0.0015 | 0.0040 |
| 141 | 0.0056 | 0.0016 | 0.0040 |
| 142 | 0.0057 | 0.0016 | 0.0041 |
| 143 | 0.0058 | 0.0016 | 0.0042 |
| 144 | 0.0058 | 0.0016 | 0.0042 |
| 145 | 0.0039 | 0.0011 | 0.0028 |
| 146 | 0.0039 | 0.0011 | 0.0028 |
| 147 | 0.0040 | 0.0011 | 0.0029 |
| 148 | 0.0040 | 0.0011 | 0.0029 |
| 149 | 0.0042 | 0.0012 | 0.0030 |
| 150 | 0.0042 | 0.0012 | 0.0030 |
| 151 | 0.0043 | 0.0012 | 0.0031 |
| 152 | 0.0044 | 0.0012 | 0.0032 |
| 153 | 0.0045 | 0.0013 | 0.0032 |
| 154 | 0.0046 | 0.0013 | 0.0033 |
| 155 | 0.0047 | 0.0013 | 0.0034 |
| 156 | 0.0048 | 0.0013 | 0.0034 |
| 157 | 0.0049 | 0.0014 | 0.0035 |
| 158 | 0.0050 | 0.0014 | 0.0036 |
| 159 | 0.0052 | 0.0015 | 0.0037 |
| 160 | 0.0053 | 0.0015 | 0.0038 |
| 161 | 0.0055 | 0.0015 | 0.0039 |
| 162 | 0.0056 | 0.0016 | 0.0040 |
| 163 | 0.0058 | 0.0016 | 0.0041 |
| 164 | 0.0059 | 0.0017 | 0.0042 |
| 165 | 0.0061 | 0.0017 | 0.0044 |
| 166 | 0.0062 | 0.0018 | 0.0045 |
| 167 | 0.0065 | 0.0018 | 0.0047 |
| 168 | 0.0067 | 0.0019 | 0.0048 |
| 169 | 0.0075 | 0.0021 | 0.0054 |
| 170 | 0.0077 | 0.0022 | 0.0055 |
| 171 | 0.0081 | 0.0023 | 0.0058 |
| 172 | 0.0083 | 0.0023 | 0.0060 |
| 173 | 0.0088 | 0.0025 | 0.0063 |
| 174 | 0.0090 | 0.0025 | 0.0065 |
| 175 | 0.0096 | 0.0027 | 0.0069 |
| 176 | 0.0099 | 0.0028 | 0.0071 |
| 177 | 0.0106 | 0.0030 | 0.0076 |
| 178 | 0.0110 | 0.0031 | 0.0079 |
| 179 | 0.0119 | 0.0033 | 0.0085 |
| 180 | 0.0124 | 0.0035 | 0.0089 |
| 181 | 0.0136 | 0.0038 | 0.0098 |
| 182 | 0.0143 | 0.0040 | 0.0103 |
| 183 | 0.0159 | 0.0045 | 0.0114 |
| 184 | 0.0169 | 0.0047 | 0.0121 |

| | | | |
|---|---|---|---|
| 185 | 0.0352 | 0.0099 | 0.0253 |
| 186 | 0.0376 | 0.0106 | 0.0270 |
| 187 | 0.0436 | 0.0109 | 0.0327 |
| 188 | 0.0476 | 0.0109 | 0.0367 |
| 189 | 0.0591 | 0.0109 | 0.0483 |
| 190 | 0.0681 | 0.0109 | 0.0572 |
| 191 | 0.1033 | 0.0109 | 0.0925 |
| 192 | 0.1500 | 0.0109 | 0.1391 |
| 193 | 0.6490 | 0.0109 | 0.6381 |
| 194 | 0.0813 | 0.0109 | 0.0705 |
| 195 | 0.0526 | 0.0109 | 0.0417 |
| 196 | 0.0403 | 0.0109 | 0.0294 |
| 197 | 0.0180 | 0.0051 | 0.0129 |
| 198 | 0.0150 | 0.0042 | 0.0108 |
| 199 | 0.0130 | 0.0036 | 0.0093 |
| 200 | 0.0114 | 0.0032 | 0.0082 |
| 201 | 0.0102 | 0.0029 | 0.0074 |
| 202 | 0.0093 | 0.0026 | 0.0067 |
| 203 | 0.0085 | 0.0024 | 0.0061 |
| 204 | 0.0079 | 0.0022 | 0.0057 |
| 205 | 0.0068 | 0.0019 | 0.0049 |
| 206 | 0.0064 | 0.0018 | 0.0046 |
| 207 | 0.0060 | 0.0017 | 0.0043 |
| 208 | 0.0057 | 0.0016 | 0.0041 |
| 209 | 0.0054 | 0.0015 | 0.0039 |
| 210 | 0.0051 | 0.0014 | 0.0037 |
| 211 | 0.0049 | 0.0014 | 0.0035 |
| 212 | 0.0046 | 0.0013 | 0.0033 |
| 213 | 0.0044 | 0.0012 | 0.0032 |
| 214 | 0.0043 | 0.0012 | 0.0031 |
| 215 | 0.0041 | 0.0012 | 0.0029 |
| 216 | 0.0040 | 0.0011 | 0.0028 |
| 217 | 0.0059 | 0.0017 | 0.0042 |
| 218 | 0.0057 | 0.0016 | 0.0041 |
| 219 | 0.0056 | 0.0016 | 0.0040 |
| 220 | 0.0054 | 0.0015 | 0.0039 |
| 221 | 0.0053 | 0.0015 | 0.0038 |
| 222 | 0.0051 | 0.0014 | 0.0037 |
| 223 | 0.0050 | 0.0014 | 0.0036 |
| 224 | 0.0049 | 0.0014 | 0.0035 |
| 225 | 0.0047 | 0.0013 | 0.0034 |
| 226 | 0.0046 | 0.0013 | 0.0033 |
| 227 | 0.0045 | 0.0013 | 0.0033 |
| 228 | 0.0044 | 0.0012 | 0.0032 |
| 229 | 0.0043 | 0.0012 | 0.0031 |
| 230 | 0.0043 | 0.0012 | 0.0031 |
| 231 | 0.0042 | 0.0012 | 0.0030 |
| 232 | 0.0041 | 0.0011 | 0.0029 |
| 233 | 0.0040 | 0.0011 | 0.0029 |
| 234 | 0.0039 | 0.0011 | 0.0028 |
| 235 | 0.0039 | 0.0011 | 0.0028 |
| 236 | 0.0038 | 0.0011 | 0.0027 |
| 237 | 0.0037 | 0.0010 | 0.0027 |
| 238 | 0.0037 | 0.0010 | 0.0026 |
| 239 | 0.0036 | 0.0010 | 0.0026 |
| 240 | 0.0035 | 0.0010 | 0.0025 |
| 241 | 0.0035 | 0.0010 | 0.0025 |
| 242 | 0.0034 | 0.0010 | 0.0025 |
| 243 | 0.0034 | 0.0009 | 0.0024 |

| | | | |
|---|---|---|---|
| 244 | 0.0033 | 0.0009 | 0.0024 |
| 245 | 0.0033 | 0.0009 | 0.0024 |
| 246 | 0.0032 | 0.0009 | 0.0023 |
| 247 | 0.0032 | 0.0009 | 0.0023 |
| 248 | 0.0031 | 0.0009 | 0.0023 |
| 249 | 0.0031 | 0.0009 | 0.0022 |
| 250 | 0.0031 | 0.0009 | 0.0022 |
| 251 | 0.0030 | 0.0008 | 0.0022 |
| 252 | 0.0030 | 0.0008 | 0.0021 |
| 253 | 0.0029 | 0.0008 | 0.0021 |
| 254 | 0.0029 | 0.0008 | 0.0021 |
| 255 | 0.0029 | 0.0008 | 0.0021 |
| 256 | 0.0028 | 0.0008 | 0.0020 |
| 257 | 0.0028 | 0.0008 | 0.0020 |
| 258 | 0.0028 | 0.0008 | 0.0020 |
| 259 | 0.0027 | 0.0008 | 0.0020 |
| 260 | 0.0027 | 0.0008 | 0.0019 |
| 261 | 0.0027 | 0.0008 | 0.0019 |
| 262 | 0.0026 | 0.0007 | 0.0019 |
| 263 | 0.0026 | 0.0007 | 0.0019 |
| 264 | 0.0026 | 0.0007 | 0.0019 |
| 265 | 0.0026 | 0.0007 | 0.0018 |
| 266 | 0.0025 | 0.0007 | 0.0018 |
| 267 | 0.0025 | 0.0007 | 0.0018 |
| 268 | 0.0025 | 0.0007 | 0.0018 |
| 269 | 0.0025 | 0.0007 | 0.0018 |
| 270 | 0.0024 | 0.0007 | 0.0017 |
| 271 | 0.0024 | 0.0007 | 0.0017 |
| 272 | 0.0024 | 0.0007 | 0.0017 |
| 273 | 0.0024 | 0.0007 | 0.0017 |
| 274 | 0.0023 | 0.0007 | 0.0017 |
| 275 | 0.0023 | 0.0007 | 0.0017 |
| 276 | 0.0023 | 0.0006 | 0.0017 |
| 277 | 0.0023 | 0.0006 | 0.0016 |
| 278 | 0.0023 | 0.0006 | 0.0016 |
| 279 | 0.0022 | 0.0006 | 0.0016 |
| 280 | 0.0022 | 0.0006 | 0.0016 |
| 281 | 0.0022 | 0.0006 | 0.0016 |
| 282 | 0.0022 | 0.0006 | 0.0016 |
| 283 | 0.0022 | 0.0006 | 0.0016 |
| 284 | 0.0021 | 0.0006 | 0.0015 |
| 285 | 0.0021 | 0.0006 | 0.0015 |
| 286 | 0.0021 | 0.0006 | 0.0015 |
| 287 | 0.0021 | 0.0006 | 0.0015 |
| 288 | 0.0021 | 0.0006 | 0.0015 |

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Total soil rain loss = 0.45(In)
Total effective rainfall = 2.07(In)
Peak flow rate in flood hydrograph = 300.53(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

---

Hydrograph in 5 Minute intervals ((CFS))

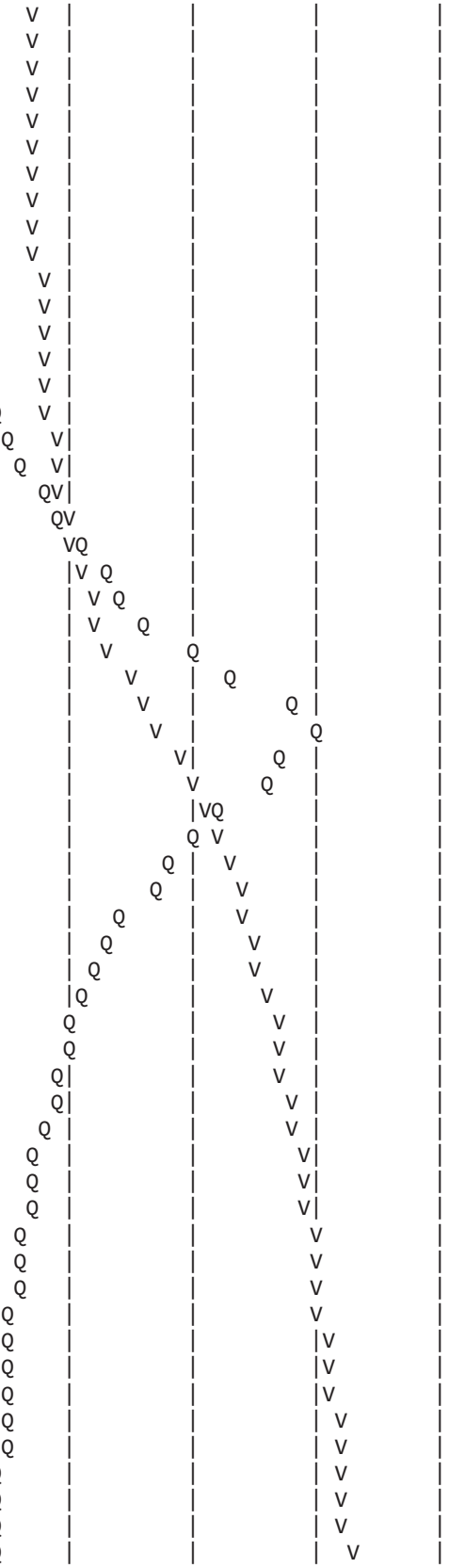
---

Time(h+m) Volume Ac.Ft Q(CFS) 0 100.0 200.0 300.0 400.0

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0001 | 0.02 | Q | | | | |
| 0+10 | 0.0005 | 0.05 | Q | | | | |
| 0+15 | 0.0012 | 0.10 | Q | | | | |
| 0+20 | 0.0023 | 0.17 | Q | | | | |
| 0+25 | 0.0041 | 0.25 | Q | | | | |
| 0+30 | 0.0065 | 0.35 | Q | | | | |
| 0+35 | 0.0097 | 0.47 | Q | | | | |
| 0+40 | 0.0138 | 0.60 | Q | | | | |
| 0+45 | 0.0194 | 0.81 | Q | | | | |
| 0+50 | 0.0267 | 1.06 | Q | | | | |
| 0+55 | 0.0364 | 1.41 | Q | | | | |
| 1+ 0 | 0.0489 | 1.81 | Q | | | | |
| 1+ 5 | 0.0639 | 2.18 | Q | | | | |
| 1+10 | 0.0812 | 2.52 | Q | | | | |
| 1+15 | 0.1005 | 2.80 | Q | | | | |
| 1+20 | 0.1216 | 3.06 | Q | | | | |
| 1+25 | 0.1442 | 3.29 | Q | | | | |
| 1+30 | 0.1683 | 3.50 | Q | | | | |
| 1+35 | 0.1936 | 3.68 | Q | | | | |
| 1+40 | 0.2201 | 3.84 | Q | | | | |
| 1+45 | 0.2475 | 3.98 | Q | | | | |
| 1+50 | 0.2759 | 4.12 | Q | | | | |
| 1+55 | 0.3051 | 4.24 | Q | | | | |
| 2+ 0 | 0.3352 | 4.36 | Q | | | | |
| 2+ 5 | 0.3660 | 4.48 | Q | | | | |
| 2+10 | 0.3976 | 4.59 | Q | | | | |
| 2+15 | 0.4299 | 4.69 | Q | | | | |
| 2+20 | 0.4629 | 4.79 | Q | | | | |
| 2+25 | 0.4965 | 4.88 | Q | | | | |
| 2+30 | 0.5307 | 4.97 | Q | | | | |
| 2+35 | 0.5655 | 5.05 | Q | | | | |
| 2+40 | 0.6009 | 5.14 | Q | | | | |
| 2+45 | 0.6368 | 5.21 | Q | | | | |
| 2+50 | 0.6732 | 5.29 | Q | | | | |
| 2+55 | 0.7101 | 5.36 | Q | | | | |
| 3+ 0 | 0.7476 | 5.44 | Q | | | | |
| 3+ 5 | 0.7855 | 5.50 | Q | | | | |
| 3+10 | 0.8239 | 5.57 | Q | | | | |
| 3+15 | 0.8627 | 5.64 | Q | | | | |
| 3+20 | 0.9020 | 5.71 | Q | | | | |
| 3+25 | 0.9417 | 5.77 | Q | | | | |
| 3+30 | 0.9819 | 5.83 | Q | | | | |
| 3+35 | 1.0225 | 5.90 | Q | | | | |
| 3+40 | 1.0636 | 5.96 | Q | | | | |
| 3+45 | 1.1050 | 6.02 | Q | | | | |
| 3+50 | 1.1469 | 6.08 | Q | | | | |
| 3+55 | 1.1892 | 6.14 | Q | | | | |
| 4+ 0 | 1.2318 | 6.20 | Q | | | | |
| 4+ 5 | 1.2749 | 6.25 | Q | | | | |
| 4+10 | 1.3183 | 6.30 | Q | | | | |
| 4+15 | 1.3621 | 6.36 | Q | | | | |
| 4+20 | 1.4062 | 6.41 | Q | | | | |
| 4+25 | 1.4507 | 6.46 | Q | | | | |
| 4+30 | 1.4956 | 6.52 | QV | | | | |
| 4+35 | 1.5409 | 6.57 | QV | | | | |
| 4+40 | 1.5865 | 6.62 | QV | | | | |
| 4+45 | 1.6325 | 6.68 | QV | | | | |
| 4+50 | 1.6788 | 6.73 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4+55 | 1.7255 | 6.78 | QV | | | | |
| 5+ 0 | 1.7726 | 6.83 | QV | | | | |
| 5+ 5 | 1.8200 | 6.89 | QV | | | | |
| 5+10 | 1.8678 | 6.94 | QV | | | | |
| 5+15 | 1.9159 | 6.99 | QV | | | | |
| 5+20 | 1.9644 | 7.04 | QV | | | | |
| 5+25 | 2.0133 | 7.09 | QV | | | | |
| 5+30 | 2.0625 | 7.14 | QV | | | | |
| 5+35 | 2.1120 | 7.19 | QV | | | | |
| 5+40 | 2.1619 | 7.25 | QV | | | | |
| 5+45 | 2.2122 | 7.30 | QV | | | | |
| 5+50 | 2.2628 | 7.35 | QV | | | | |
| 5+55 | 2.3138 | 7.41 | QV | | | | |
| 6+ 0 | 2.3652 | 7.46 | QV | | | | |
| 6+ 5 | 2.4169 | 7.51 | QV | | | | |
| 6+10 | 2.4690 | 7.56 | QV | | | | |
| 6+15 | 2.5214 | 7.61 | QV | | | | |
| 6+20 | 2.5742 | 7.67 | QV | | | | |
| 6+25 | 2.6274 | 7.72 | QV | | | | |
| 6+30 | 2.6809 | 7.77 | QV | | | | |
| 6+35 | 2.7348 | 7.83 | QV | | | | |
| 6+40 | 2.7891 | 7.88 | QV | | | | |
| 6+45 | 2.8438 | 7.94 | QV | | | | |
| 6+50 | 2.8988 | 7.99 | QV | | | | |
| 6+55 | 2.9542 | 8.04 | Q V | | | | |
| 7+ 0 | 3.0100 | 8.10 | Q V | | | | |
| 7+ 5 | 3.0662 | 8.16 | Q V | | | | |
| 7+10 | 3.1227 | 8.21 | Q V | | | | |
| 7+15 | 3.1797 | 8.27 | Q V | | | | |
| 7+20 | 3.2370 | 8.33 | Q V | | | | |
| 7+25 | 3.2948 | 8.38 | Q V | | | | |
| 7+30 | 3.3529 | 8.44 | Q V | | | | |
| 7+35 | 3.4114 | 8.50 | Q V | | | | |
| 7+40 | 3.4703 | 8.55 | Q V | | | | |
| 7+45 | 3.5296 | 8.61 | Q V | | | | |
| 7+50 | 3.5894 | 8.67 | Q V | | | | |
| 7+55 | 3.6495 | 8.73 | Q V | | | | |
| 8+ 0 | 3.7101 | 8.80 | Q V | | | | |
| 8+ 5 | 3.7711 | 8.86 | Q V | | | | |
| 8+10 | 3.8326 | 8.92 | Q V | | | | |
| 8+15 | 3.8945 | 8.99 | Q V | | | | |
| 8+20 | 3.9569 | 9.06 | Q V | | | | |
| 8+25 | 4.0197 | 9.12 | Q V | | | | |
| 8+30 | 4.0830 | 9.19 | Q V | | | | |
| 8+35 | 4.1468 | 9.26 | Q V | | | | |
| 8+40 | 4.2111 | 9.33 | Q V | | | | |
| 8+45 | 4.2758 | 9.40 | Q V | | | | |
| 8+50 | 4.3411 | 9.48 | Q V | | | | |
| 8+55 | 4.4069 | 9.55 | Q V | | | | |
| 9+ 0 | 4.4732 | 9.63 | Q  V | | | | |
| 9+ 5 | 4.5400 | 9.70 | Q  V | | | | |
| 9+10 | 4.6073 | 9.78 | Q  V | | | | |
| 9+15 | 4.6752 | 9.86 | Q  V | | | | |
| 9+20 | 4.7437 | 9.94 | Q  V | | | | |
| 9+25 | 4.8127 | 10.02 | \|Q V | | | | |
| 9+30 | 4.8822 | 10.10 | \|Q V | | | | |
| 9+35 | 4.9523 | 10.18 | \|Q V | | | | |
| 9+40 | 5.0230 | 10.26 | \|Q V | | | | |
| 9+45 | 5.0943 | 10.35 | \|Q V | | | | |

```
 9+50       5.1662     10.44  |Q V      |          |          |          |
 9+55       5.2387     10.53  |Q V      |          |          |          |
10+ 0       5.3118     10.62  |Q V      |          |          |          |
10+ 5       5.3855     10.71  |Q V      |          |          |          |
10+10       5.4600     10.80  |Q V      |          |          |          |
10+15       5.5350     10.90  |Q V      |          |          |          |
10+20       5.6107     10.99  |Q V      |          |          |          |
10+25       5.6871     11.09  |Q V      |          |          |          |
10+30       5.7642     11.19  |Q V      |          |          |          |
10+35       5.8420     11.29  |Q V      |          |          |          |
10+40       5.9205     11.40  |Q  V     |          |          |          |
10+45       5.9997     11.50  |Q  V     |          |          |          |
10+50       6.0797     11.61  |Q  V     |          |          |          |
10+55       6.1605     11.72  |Q  V     |          |          |          |
11+ 0       6.2420     11.84  |Q  V     |          |          |          |
11+ 5       6.3243     11.95  |Q  V     |          |          |          |
11+10       6.4075     12.07  |Q  V     |          |          |          |
11+15       6.4915     12.20  |Q  V     |          |          |          |
11+20       6.5763     12.32  |Q  V     |          |          |          |
11+25       6.6621     12.45  |Q  V     |          |          |          |
11+30       6.7487     12.58  |Q  V     |          |          |          |
11+35       6.8363     12.72  |Q  V     |          |          |          |
11+40       6.9248     12.85  |Q  V     |          |          |          |
11+45       7.0143     13.00  |Q  V     |          |          |          |
11+50       7.1048     13.14  |Q  V     |          |          |          |
11+55       7.1964     13.29  |Q  V     |          |          |          |
12+ 0       7.2889     13.44  |Q  V     |          |          |          |
12+ 5       7.3825     13.58  |Q   V    |          |          |          |
12+10       7.4769     13.71  |Q   V    |          |          |          |
12+15       7.5722     13.83  |Q   V    |          |          |          |
12+20       7.6681     13.93  |Q   V    |          |          |          |
12+25       7.7646     14.02  |Q   V    |          |          |          |
12+30       7.8617     14.10  |Q   V    |          |          |          |
12+35       7.9593     14.16  |Q   V    |          |          |          |
12+40       8.0572     14.22  |Q   V    |          |          |          |
12+45       8.1550     14.20  |Q   V    |          |          |          |
12+50       8.2524     14.14  |Q   V    |          |          |          |
12+55       8.3486     13.98  |Q   V    |          |          |          |
13+ 0       8.4435     13.78  |Q   V    |          |          |          |
13+ 5       8.5373     13.62  |Q   V    |          |          |          |
13+10       8.6301     13.48  |Q   V    |          |          |          |
13+15       8.7225     13.41  |Q   V    |          |          |          |
13+20       8.8146     13.37  |Q   V    |          |          |          |
13+25       8.9066     13.37  |Q    V   |          |          |          |
13+30       8.9988     13.38  |Q    V   |          |          |          |
13+35       9.0914     13.45  |Q    V   |          |          |          |
13+40       9.1846     13.53  |Q    V   |          |          |          |
13+45       9.2786     13.65  |Q    V   |          |          |          |
13+50       9.3735     13.78  |Q    V   |          |          |          |
13+55       9.4695     13.94  |Q    V   |          |          |          |
14+ 0       9.5666     14.11  |Q    V   |          |          |          |
14+ 5       9.6651     14.30  |Q    V   |          |          |          |
14+10       9.7651     14.52  |Q    V   |          |          |          |
14+15       9.8668     14.77  |Q    V   |          |          |          |
14+20       9.9704     15.04  |Q    V   |          |          |          |
14+25      10.0760     15.34  |Q    V   |          |          |          |
14+30      10.1839     15.66  |Q    V   |          |          |          |
14+35      10.2942     16.02  |Q    V   |          |          |          |
14+40      10.4072     16.41  |Q     V  |          |          |          |
```

| | | | |
|---|---|---|---|
| 14+45 | 10.5233 | 16.85 |  |
| 14+50 | 10.6427 | 17.34 | |
| 14+55 | 10.7660 | 17.89 | |
| 15+ 0 | 10.8934 | 18.50 | |
| 15+ 5 | 11.0253 | 19.15 | |
| 15+10 | 11.1620 | 19.85 | |
| 15+15 | 11.3038 | 20.60 | |
| 15+20 | 11.4513 | 21.41 | |
| 15+25 | 11.6058 | 22.44 | |
| 15+30 | 11.7690 | 23.70 | |
| 15+35 | 11.9429 | 25.25 | |
| 15+40 | 12.1297 | 27.12 | |
| 15+45 | 12.3327 | 29.47 | |
| 15+50 | 12.5556 | 32.36 | |
| 15+55 | 12.8053 | 36.26 | |
| 16+ 0 | 13.0921 | 41.64 | |
| 16+ 5 | 13.4691 | 54.74 | |
| 16+10 | 13.9426 | 68.75 | |
| 16+15 | 14.5187 | 83.65 | |
| 16+20 | 15.1978 | 98.61 | |
| 16+25 | 15.9884 | 114.79 | |
| 16+30 | 16.8850 | 130.19 | |
| 16+35 | 17.9108 | 148.95 | |
| 16+40 | 19.0693 | 168.21 | |
| 16+45 | 20.5045 | 208.39 | |
| 16+50 | 22.1522 | 239.25 | |
| 16+55 | 24.0920 | 281.66 | |
| 17+ 0 | 26.1617 | 300.53 | |
| 17+ 5 | 28.0844 | 279.17 | |
| 17+10 | 29.8809 | 260.84 | |
| 17+15 | 31.4600 | 229.30 | |
| 17+20 | 32.8960 | 208.50 | |
| 17+25 | 34.1827 | 186.83 | |
| 17+30 | 35.3653 | 171.71 | |
| 17+35 | 36.3978 | 149.93 | |
| 17+40 | 37.3433 | 137.28 | |
| 17+45 | 38.1972 | 123.98 | |
| 17+50 | 38.9957 | 115.95 | |
| 17+55 | 39.7307 | 106.72 | |
| 18+ 0 | 40.4280 | 101.25 | |
| 18+ 5 | 41.0846 | 95.33 | |
| 18+10 | 41.7101 | 90.83 | |
| 18+15 | 42.2865 | 83.69 | |
| 18+20 | 42.8353 | 79.68 | |
| 18+25 | 43.3507 | 74.83 | |
| 18+30 | 43.8471 | 72.09 | |
| 18+35 | 44.3240 | 69.24 | |
| 18+40 | 44.7807 | 66.31 | |
| 18+45 | 45.1994 | 60.80 | |
| 18+50 | 45.6046 | 58.84 | |
| 18+55 | 46.0016 | 57.64 | |
| 19+ 0 | 46.3864 | 55.87 | |
| 19+ 5 | 46.7471 | 52.36 | |
| 19+10 | 47.0998 | 51.22 | |
| 19+15 | 47.4468 | 50.38 | |
| 19+20 | 47.7853 | 49.15 | |
| 19+25 | 48.1096 | 47.09 | |
| 19+30 | 48.4278 | 46.20 | |
| 19+35 | 48.7398 | 45.30 | |

```
19+40      49.0410     43.73  |   Q     |         |         |  V      |
19+45      49.3250     41.24  |   Q     |         |         |  V      |
19+50      49.6025     40.30  |   Q     |         |         |  V      |
19+55      49.8735     39.35  |  Q      |         |         |  V      |
20+ 0      50.1318     37.51  |  Q      |         |         |   V     |
20+ 5      50.3714     34.79  |  Q      |         |         |   V     |
20+10      50.6059     34.05  |  Q      |         |         |   V     |
20+15      50.8364     33.47  |  Q      |         |         |   V     |
20+20      51.0618     32.73  |  Q      |         |         |   V     |
20+25      51.2815     31.90  |  Q      |         |         |   V     |
20+30      51.4979     31.42  |  Q      |         |         |    V    |
20+35      51.7107     30.90  |  Q      |         |         |    V    |
20+40      51.9166     29.90  | Q       |         |         |    V    |
20+45      52.1145     28.73  | Q       |         |         |    V    |
20+50      52.3091     28.27  | Q       |         |         |    V    |
20+55      52.5007     27.81  | Q       |         |         |    V    |
21+ 0      52.6873     27.10  | Q       |         |         |    V    |
21+ 5      52.8690     26.38  | Q       |         |         |    V    |
21+10      53.0476     25.94  | Q       |         |         |     V   |
21+15      53.2227     25.42  | Q       |         |         |     V   |
21+20      53.3890     24.16  | Q       |         |         |     V   |
21+25      53.5478     23.05  | Q       |         |         |     V   |
21+30      53.7042     22.70  | Q       |         |         |     V   |
21+35      53.8584     22.39  | Q       |         |         |     V   |
21+40      54.0106     22.11  | Q       |         |         |     V   |
21+45      54.1609     21.82  | Q       |         |         |     V   |
21+50      54.3089     21.49  | Q       |         |         |     V   |
21+55      54.4540     21.07  | Q       |         |         |      V  |
22+ 0      54.5914     19.94  |Q        |         |         |      V  |
22+ 5      54.7235     19.18  |Q        |         |         |      V  |
22+10      54.8535     18.88  |Q        |         |         |      V  |
22+15      54.9817     18.62  |Q        |         |         |      V  |
22+20      55.1082     18.37  |Q        |         |         |      V  |
22+25      55.2330     18.11  |Q        |         |         |      V  |
22+30      55.3556     17.80  |Q        |         |         |      V  |
22+35      55.4752     17.37  |Q        |         |         |      V  |
22+40      55.5867     16.20  |Q        |         |         |      V  |
22+45      55.6941     15.59  |Q        |         |         |      V  |
22+50      55.7996     15.33  |Q        |         |         |      V  |
22+55      55.9036     15.10  |Q        |         |         |      V  |
23+ 0      56.0061     14.88  |Q        |         |         |       V |
23+ 5      56.1069     14.65  |Q        |         |         |       V |
23+10      56.2058     14.36  |Q        |         |         |       V |
23+15      56.3016     13.90  |Q        |         |         |       V |
23+20      56.3895     12.76  |Q        |         |         |       V |
23+25      56.4744     12.33  |Q        |         |         |       V |
23+30      56.5581     12.15  |Q        |         |         |       V |
23+35      56.6409     12.02  |Q        |         |         |       V |
23+40      56.7230     11.92  |Q        |         |         |       V |
23+45      56.8046     11.85  |Q        |         |         |       V |
23+50      56.8858     11.79  |Q        |         |         |       V |
23+55      56.9670     11.80  |Q        |         |         |       V |
24+ 0      57.0494     11.97  |Q        |         |         |       V |
24+ 5      57.1315     11.92  |Q        |         |         |       V |
24+10      57.2129     11.81  |Q        |         |         |       V |
24+15      57.2933     11.68  |Q        |         |         |       V |
24+20      57.3728     11.53  |Q        |         |         |       V |
24+25      57.4511     11.37  |Q        |         |         |        V|
24+30      57.5281     11.19  |Q        |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24+35 | 57.6037 | 10.98 | \|Q | \| | \| | \| | V\| |
| 24+40 | 57.6778 | 10.75 | \|Q | \| | \| | \| | V\| |
| 24+45 | 57.7496 | 10.44 | \|Q | \| | \| | \| | V\| |
| 24+50 | 57.8190 | 10.07 | \|Q | \| | \| | \| | V\| |
| 24+55 | 57.8852 | 9.61 | Q | \| | \| | \| | V\| |
| 25+ 0 | 57.9477 | 9.08 | Q | \| | \| | \| | V\| |
| 25+ 5 | 58.0067 | 8.57 | Q | \| | \| | \| | V\| |
| 25+10 | 58.0621 | 8.03 | Q | \| | \| | \| | V\| |
| 25+15 | 58.1121 | 7.27 | Q | \| | \| | \| | V\| |
| 25+20 | 58.1554 | 6.29 | Q | \| | \| | \| | V\| |
| 25+25 | 58.1962 | 5.92 | Q | \| | \| | \| | V\| |
| 25+30 | 58.2349 | 5.62 | Q | \| | \| | \| | V\| |
| 25+35 | 58.2719 | 5.36 | Q | \| | \| | \| | V\| |
| 25+40 | 58.3072 | 5.13 | Q | \| | \| | \| | V\| |
| 25+45 | 58.3411 | 4.92 | Q | \| | \| | \| | V\| |
| 25+50 | 58.3736 | 4.71 | Q | \| | \| | \| | V\| |
| 25+55 | 58.4046 | 4.51 | Q | \| | \| | \| | V\| |
| 26+ 0 | 58.4342 | 4.29 | Q | \| | \| | \| | V\| |
| 26+ 5 | 58.4621 | 4.05 | Q | \| | \| | \| | V\| |
| 26+10 | 58.4879 | 3.75 | Q | \| | \| | \| | V\| |
| 26+15 | 58.5086 | 3.01 | Q | \| | \| | \| | V\| |
| 26+20 | 58.5247 | 2.33 | Q | \| | \| | \| | V\| |
| 26+25 | 58.5396 | 2.16 | Q | \| | \| | \| | V\| |
| 26+30 | 58.5534 | 2.02 | Q | \| | \| | \| | V\| |
| 26+35 | 58.5665 | 1.90 | Q | \| | \| | \| | V\| |
| 26+40 | 58.5790 | 1.81 | Q | \| | \| | \| | V\| |
| 26+45 | 58.5909 | 1.72 | Q | \| | \| | \| | V\| |
| 26+50 | 58.6022 | 1.65 | Q | \| | \| | \| | V\| |
| 26+55 | 58.6131 | 1.57 | Q | \| | \| | \| | V\| |
| 27+ 0 | 58.6234 | 1.50 | Q | \| | \| | \| | V\| |
| 27+ 5 | 58.6333 | 1.44 | Q | \| | \| | \| | V\| |
| 27+10 | 58.6429 | 1.38 | Q | \| | \| | \| | V\| |
| 27+15 | 58.6520 | 1.33 | Q | \| | \| | \| | V\| |
| 27+20 | 58.6607 | 1.27 | Q | \| | \| | \| | V\| |
| 27+25 | 58.6691 | 1.21 | Q | \| | \| | \| | V\| |
| 27+30 | 58.6771 | 1.16 | Q | \| | \| | \| | V\| |
| 27+35 | 58.6848 | 1.11 | Q | \| | \| | \| | V\| |
| 27+40 | 58.6921 | 1.06 | Q | \| | \| | \| | V\| |
| 27+45 | 58.6991 | 1.02 | Q | \| | \| | \| | V\| |
| 27+50 | 58.7059 | 0.98 | Q | \| | \| | \| | V\| |
| 27+55 | 58.7123 | 0.94 | Q | \| | \| | \| | V\| |
| 28+ 0 | 58.7185 | 0.90 | Q | \| | \| | \| | V\| |
| 28+ 5 | 58.7245 | 0.87 | Q | \| | \| | \| | V\| |
| 28+10 | 58.7302 | 0.83 | Q | \| | \| | \| | V\| |
| 28+15 | 58.7358 | 0.80 | Q | \| | \| | \| | V\| |
| 28+20 | 58.7411 | 0.77 | Q | \| | \| | \| | V\| |
| 28+25 | 58.7462 | 0.74 | Q | \| | \| | \| | V\| |
| 28+30 | 58.7510 | 0.71 | Q | \| | \| | \| | V\| |
| 28+35 | 58.7557 | 0.68 | Q | \| | \| | \| | V\| |
| 28+40 | 58.7602 | 0.65 | Q | \| | \| | \| | V\| |
| 28+45 | 58.7644 | 0.62 | Q | \| | \| | \| | V\| |
| 28+50 | 58.7686 | 0.60 | Q | \| | \| | \| | V\| |
| 28+55 | 58.7725 | 0.57 | Q | \| | \| | \| | V\| |
| 29+ 0 | 58.7762 | 0.55 | Q | \| | \| | \| | V\| |
| 29+ 5 | 58.7798 | 0.52 | Q | \| | \| | \| | V\| |
| 29+10 | 58.7833 | 0.50 | Q | \| | \| | \| | V\| |
| 29+15 | 58.7866 | 0.48 | Q | \| | \| | \| | V\| |
| 29+20 | 58.7897 | 0.46 | Q | \| | \| | \| | V\| |
| 29+25 | 58.7927 | 0.44 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 29+30 | 58.7956 | 0.42 | Q | | | | V |
| 29+35 | 58.7984 | 0.40 | Q | | | | V |
| 29+40 | 58.8010 | 0.38 | Q | | | | V |
| 29+45 | 58.8036 | 0.37 | Q | | | | V |
| 29+50 | 58.8060 | 0.35 | Q | | | | V |
| 29+55 | 58.8083 | 0.33 | Q | | | | V |
| 30+ 0 | 58.8105 | 0.32 | Q | | | | V |
| 30+ 5 | 58.8126 | 0.31 | Q | | | | V |
| 30+10 | 58.8146 | 0.29 | Q | | | | V |
| 30+15 | 58.8165 | 0.28 | Q | | | | V |
| 30+20 | 58.8183 | 0.27 | Q | | | | V |
| 30+25 | 58.8201 | 0.25 | Q | | | | V |
| 30+30 | 58.8217 | 0.24 | Q | | | | V |
| 30+35 | 58.8233 | 0.23 | Q | | | | V |
| 30+40 | 58.8248 | 0.22 | Q | | | | V |
| 30+45 | 58.8262 | 0.21 | Q | | | | V |
| 30+50 | 58.8276 | 0.20 | Q | | | | V |
| 30+55 | 58.8289 | 0.19 | Q | | | | V |
| 31+ 0 | 58.8302 | 0.18 | Q | | | | V |
| 31+ 5 | 58.8313 | 0.17 | Q | | | | V |
| 31+10 | 58.8325 | 0.16 | Q | | | | V |
| 31+15 | 58.8335 | 0.16 | Q | | | | V |
| 31+20 | 58.8346 | 0.15 | Q | | | | V |
| 31+25 | 58.8356 | 0.14 | Q | | | | V |
| 31+30 | 58.8365 | 0.14 | Q | | | | V |
| 31+35 | 58.8374 | 0.13 | Q | | | | V |
| 31+40 | 58.8383 | 0.13 | Q | | | | V |
| 31+45 | 58.8392 | 0.12 | Q | | | | V |
| 31+50 | 58.8400 | 0.12 | Q | | | | V |
| 31+55 | 58.8408 | 0.11 | Q | | | | V |
| 32+ 0 | 58.8415 | 0.11 | Q | | | | V |
| 32+ 5 | 58.8422 | 0.10 | Q | | | | V |
| 32+10 | 58.8429 | 0.10 | Q | | | | V |
| 32+15 | 58.8435 | 0.09 | Q | | | | V |
| 32+20 | 58.8441 | 0.09 | Q | | | | V |
| 32+25 | 58.8447 | 0.08 | Q | | | | V |
| 32+30 | 58.8452 | 0.07 | Q | | | | V |
| 32+35 | 58.8457 | 0.07 | Q | | | | V |
| 32+40 | 58.8461 | 0.06 | Q | | | | V |
| 32+45 | 58.8465 | 0.06 | Q | | | | V |
| 32+50 | 58.8469 | 0.05 | Q | | | | V |
| 32+55 | 58.8472 | 0.05 | Q | | | | V |
| 33+ 0 | 58.8475 | 0.04 | Q | | | | V |
| 33+ 5 | 58.8478 | 0.04 | Q | | | | V |
| 33+10 | 58.8480 | 0.03 | Q | | | | V |
| 33+15 | 58.8482 | 0.03 | Q | | | | V |
| 33+20 | 58.8484 | 0.03 | Q | | | | V |
| 33+25 | 58.8486 | 0.02 | Q | | | | V |
| 33+30 | 58.8487 | 0.02 | Q | | | | V |
| 33+35 | 58.8488 | 0.02 | Q | | | | V |
| 33+40 | 58.8490 | 0.02 | Q | | | | V |
| 33+45 | 58.8490 | 0.01 | Q | | | | V |
| 33+50 | 58.8491 | 0.01 | Q | | | | V |
| 33+55 | 58.8492 | 0.01 | Q | | | | V |
| 34+ 0 | 58.8492 | 0.01 | Q | | | | V |
| 34+ 5 | 58.8493 | 0.00 | Q | | | | V |
| 34+10 | 58.8493 | 0.00 | Q | | | | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 27
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 6.15 | 1 | 1.38 |
| Rainfall data for year 100 | | |
| 6.15 | 6 | 1.82 |
| Rainfall data for year 100 | | |
| 6.15 | 24 | 2.51 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.0 | 92.8 | 6.15 | 1.000 | 0.140 | 0.900 | 0.126 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.126

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 5.54 | 0.900 | 78.0 | 92.8 | 0.78 | 0.706 |
| 0.61 | 0.100 | 98.0 | 98.0 | 0.20 | 0.909 |

Area-averaged catchment yield fraction, Y = 0.726
Area-averaged low loss fraction, Yb = 0.274
User entry of time of concentration = 0.270 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 6.15(Ac.)
Catchment Lag time = 0.216 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 38.5802
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.126(In/Hr)
Average low loss rate fraction (Yb) = 0.274 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.655(In)
Computed peak 30-minute rainfall = 1.121(In)
Specified peak 1-hour rainfall = 1.380(In)
Computed peak 3-hour rainfall = 1.635(In)
Specified peak 6-hour rainfall = 1.820(In)
Specified peak 24-hour rainfall = 2.510(In)

Rainfall depth area reduction factors:
Using a total area of 6.15(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.655(In)
30-minute factor = 1.000 Adjusted rainfall = 1.121(In)
1-hour factor = 1.000 Adjusted rainfall = 1.380(In)
3-hour factor = 1.000 Adjusted rainfall = 1.635(In)
6-hour factor = 1.000 Adjusted rainfall = 1.820(In)
24-hour factor = 1.000 Adjusted rainfall = 2.510(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 74.38 (CFS)) | |
| 1 | 2.595 | 1.930 |
| 2 | 17.110 | 10.796 |
| 3 | 47.025 | 22.250 |
| 4 | 64.168 | 12.750 |
| 5 | 73.585 | 7.004 |
| 6 | 79.873 | 4.677 |
| 7 | 84.321 | 3.308 |
| 8 | 87.824 | 2.605 |
| 9 | 90.350 | 1.879 |
| 10 | 92.386 | 1.514 |
| 11 | 94.047 | 1.236 |
| 12 | 95.367 | 0.982 |
| 13 | 96.438 | 0.796 |

| | | |
|---|---|---|
| 14 | 97.275 | 0.622 |
| 15 | 97.884 | 0.453 |
| 16 | 98.288 | 0.300 |
| 17 | 98.739 | 0.336 |
| 18 | 99.202 | 0.344 |
| 19 | 99.584 | 0.284 |
| 20 | 99.827 | 0.181 |
| 21 | 100.000 | 0.129 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6546 | 0.6546 |
| 2 | 0.8060 | 0.1513 |
| 3 | 0.9102 | 0.1042 |
| 4 | 0.9922 | 0.0820 |
| 5 | 1.0609 | 0.0687 |
| 6 | 1.1206 | 0.0596 |
| 7 | 1.1736 | 0.0530 |
| 8 | 1.2216 | 0.0480 |
| 9 | 1.2655 | 0.0439 |
| 10 | 1.3062 | 0.0406 |
| 11 | 1.3441 | 0.0379 |
| 12 | 1.3796 | 0.0355 |
| 13 | 1.3968 | 0.0172 |
| 14 | 1.4129 | 0.0161 |
| 15 | 1.4281 | 0.0152 |
| 16 | 1.4424 | 0.0143 |
| 17 | 1.4560 | 0.0136 |
| 18 | 1.4689 | 0.0129 |
| 19 | 1.4812 | 0.0123 |
| 20 | 1.4930 | 0.0118 |
| 21 | 1.5044 | 0.0113 |
| 22 | 1.5152 | 0.0109 |
| 23 | 1.5257 | 0.0105 |
| 24 | 1.5357 | 0.0101 |
| 25 | 1.5455 | 0.0097 |
| 26 | 1.5549 | 0.0094 |
| 27 | 1.5640 | 0.0091 |
| 28 | 1.5728 | 0.0088 |
| 29 | 1.5814 | 0.0086 |
| 30 | 1.5897 | 0.0083 |
| 31 | 1.5978 | 0.0081 |
| 32 | 1.6056 | 0.0079 |
| 33 | 1.6133 | 0.0077 |
| 34 | 1.6208 | 0.0075 |
| 35 | 1.6280 | 0.0073 |
| 36 | 1.6352 | 0.0071 |
| 37 | 1.6421 | 0.0069 |
| 38 | 1.6489 | 0.0068 |
| 39 | 1.6555 | 0.0066 |
| 40 | 1.6620 | 0.0065 |
| 41 | 1.6683 | 0.0064 |
| 42 | 1.6746 | 0.0062 |
| 43 | 1.6807 | 0.0061 |
| 44 | 1.6866 | 0.0060 |
| 45 | 1.6925 | 0.0059 |
| 46 | 1.6983 | 0.0058 |
| 47 | 1.7039 | 0.0057 |
| 48 | 1.7095 | 0.0056 |

| | | |
|---|---|---|
| 49 | 1.7149 | 0.0055 |
| 50 | 1.7203 | 0.0054 |
| 51 | 1.7255 | 0.0053 |
| 52 | 1.7307 | 0.0052 |
| 53 | 1.7358 | 0.0051 |
| 54 | 1.7409 | 0.0050 |
| 55 | 1.7458 | 0.0049 |
| 56 | 1.7507 | 0.0049 |
| 57 | 1.7555 | 0.0048 |
| 58 | 1.7602 | 0.0047 |
| 59 | 1.7648 | 0.0047 |
| 60 | 1.7694 | 0.0046 |
| 61 | 1.7739 | 0.0045 |
| 62 | 1.7784 | 0.0045 |
| 63 | 1.7828 | 0.0044 |
| 64 | 1.7871 | 0.0043 |
| 65 | 1.7914 | 0.0043 |
| 66 | 1.7957 | 0.0042 |
| 67 | 1.7998 | 0.0042 |
| 68 | 1.8040 | 0.0041 |
| 69 | 1.8080 | 0.0041 |
| 70 | 1.8121 | 0.0040 |
| 71 | 1.8160 | 0.0040 |
| 72 | 1.8200 | 0.0039 |
| 73 | 1.8258 | 0.0058 |
| 74 | 1.8316 | 0.0058 |
| 75 | 1.8373 | 0.0057 |
| 76 | 1.8429 | 0.0057 |
| 77 | 1.8485 | 0.0056 |
| 78 | 1.8541 | 0.0055 |
| 79 | 1.8595 | 0.0055 |
| 80 | 1.8650 | 0.0054 |
| 81 | 1.8704 | 0.0054 |
| 82 | 1.8757 | 0.0053 |
| 83 | 1.8810 | 0.0053 |
| 84 | 1.8862 | 0.0052 |
| 85 | 1.8914 | 0.0052 |
| 86 | 1.8965 | 0.0051 |
| 87 | 1.9016 | 0.0051 |
| 88 | 1.9067 | 0.0050 |
| 89 | 1.9117 | 0.0050 |
| 90 | 1.9166 | 0.0050 |
| 91 | 1.9215 | 0.0049 |
| 92 | 1.9264 | 0.0049 |
| 93 | 1.9312 | 0.0048 |
| 94 | 1.9360 | 0.0048 |
| 95 | 1.9408 | 0.0048 |
| 96 | 1.9455 | 0.0047 |
| 97 | 1.9502 | 0.0047 |
| 98 | 1.9548 | 0.0046 |
| 99 | 1.9594 | 0.0046 |
| 100 | 1.9640 | 0.0046 |
| 101 | 1.9686 | 0.0045 |
| 102 | 1.9731 | 0.0045 |
| 103 | 1.9775 | 0.0045 |
| 104 | 1.9820 | 0.0044 |
| 105 | 1.9864 | 0.0044 |
| 106 | 1.9907 | 0.0044 |
| 107 | 1.9951 | 0.0043 |

| | | |
|---|---|---|
| 108 | 1.9994 | 0.0043 |
| 109 | 2.0037 | 0.0043 |
| 110 | 2.0079 | 0.0042 |
| 111 | 2.0121 | 0.0042 |
| 112 | 2.0163 | 0.0042 |
| 113 | 2.0205 | 0.0042 |
| 114 | 2.0246 | 0.0041 |
| 115 | 2.0287 | 0.0041 |
| 116 | 2.0328 | 0.0041 |
| 117 | 2.0368 | 0.0041 |
| 118 | 2.0409 | 0.0040 |
| 119 | 2.0449 | 0.0040 |
| 120 | 2.0488 | 0.0040 |
| 121 | 2.0528 | 0.0039 |
| 122 | 2.0567 | 0.0039 |
| 123 | 2.0606 | 0.0039 |
| 124 | 2.0645 | 0.0039 |
| 125 | 2.0683 | 0.0038 |
| 126 | 2.0721 | 0.0038 |
| 127 | 2.0759 | 0.0038 |
| 128 | 2.0797 | 0.0038 |
| 129 | 2.0835 | 0.0038 |
| 130 | 2.0872 | 0.0037 |
| 131 | 2.0909 | 0.0037 |
| 132 | 2.0946 | 0.0037 |
| 133 | 2.0983 | 0.0037 |
| 134 | 2.1019 | 0.0036 |
| 135 | 2.1056 | 0.0036 |
| 136 | 2.1092 | 0.0036 |
| 137 | 2.1128 | 0.0036 |
| 138 | 2.1163 | 0.0036 |
| 139 | 2.1199 | 0.0035 |
| 140 | 2.1234 | 0.0035 |
| 141 | 2.1269 | 0.0035 |
| 142 | 2.1304 | 0.0035 |
| 143 | 2.1339 | 0.0035 |
| 144 | 2.1373 | 0.0035 |
| 145 | 2.1407 | 0.0034 |
| 146 | 2.1442 | 0.0034 |
| 147 | 2.1475 | 0.0034 |
| 148 | 2.1509 | 0.0034 |
| 149 | 2.1543 | 0.0034 |
| 150 | 2.1576 | 0.0033 |
| 151 | 2.1610 | 0.0033 |
| 152 | 2.1643 | 0.0033 |
| 153 | 2.1676 | 0.0033 |
| 154 | 2.1708 | 0.0033 |
| 155 | 2.1741 | 0.0033 |
| 156 | 2.1773 | 0.0032 |
| 157 | 2.1806 | 0.0032 |
| 158 | 2.1838 | 0.0032 |
| 159 | 2.1870 | 0.0032 |
| 160 | 2.1902 | 0.0032 |
| 161 | 2.1933 | 0.0032 |
| 162 | 2.1965 | 0.0032 |
| 163 | 2.1996 | 0.0031 |
| 164 | 2.2027 | 0.0031 |
| 165 | 2.2058 | 0.0031 |
| 166 | 2.2089 | 0.0031 |

| | | |
|---|---|---|
| 167 | 2.2120 | 0.0031 |
| 168 | 2.2151 | 0.0031 |
| 169 | 2.2181 | 0.0031 |
| 170 | 2.2212 | 0.0030 |
| 171 | 2.2242 | 0.0030 |
| 172 | 2.2272 | 0.0030 |
| 173 | 2.2302 | 0.0030 |
| 174 | 2.2332 | 0.0030 |
| 175 | 2.2362 | 0.0030 |
| 176 | 2.2391 | 0.0030 |
| 177 | 2.2421 | 0.0029 |
| 178 | 2.2450 | 0.0029 |
| 179 | 2.2479 | 0.0029 |
| 180 | 2.2508 | 0.0029 |
| 181 | 2.2537 | 0.0029 |
| 182 | 2.2566 | 0.0029 |
| 183 | 2.2595 | 0.0029 |
| 184 | 2.2623 | 0.0029 |
| 185 | 2.2652 | 0.0028 |
| 186 | 2.2680 | 0.0028 |
| 187 | 2.2708 | 0.0028 |
| 188 | 2.2736 | 0.0028 |
| 189 | 2.2764 | 0.0028 |
| 190 | 2.2792 | 0.0028 |
| 191 | 2.2820 | 0.0028 |
| 192 | 2.2847 | 0.0028 |
| 193 | 2.2875 | 0.0028 |
| 194 | 2.2902 | 0.0027 |
| 195 | 2.2930 | 0.0027 |
| 196 | 2.2957 | 0.0027 |
| 197 | 2.2984 | 0.0027 |
| 198 | 2.3011 | 0.0027 |
| 199 | 2.3038 | 0.0027 |
| 200 | 2.3065 | 0.0027 |
| 201 | 2.3091 | 0.0027 |
| 202 | 2.3118 | 0.0027 |
| 203 | 2.3145 | 0.0026 |
| 204 | 2.3171 | 0.0026 |
| 205 | 2.3197 | 0.0026 |
| 206 | 2.3223 | 0.0026 |
| 207 | 2.3249 | 0.0026 |
| 208 | 2.3275 | 0.0026 |
| 209 | 2.3301 | 0.0026 |
| 210 | 2.3327 | 0.0026 |
| 211 | 2.3353 | 0.0026 |
| 212 | 2.3379 | 0.0026 |
| 213 | 2.3404 | 0.0026 |
| 214 | 2.3429 | 0.0025 |
| 215 | 2.3455 | 0.0025 |
| 216 | 2.3480 | 0.0025 |
| 217 | 2.3505 | 0.0025 |
| 218 | 2.3530 | 0.0025 |
| 219 | 2.3555 | 0.0025 |
| 220 | 2.3580 | 0.0025 |
| 221 | 2.3605 | 0.0025 |
| 222 | 2.3630 | 0.0025 |
| 223 | 2.3654 | 0.0025 |
| 224 | 2.3679 | 0.0025 |
| 225 | 2.3703 | 0.0024 |

| | | |
|---|---|---|
| 226 | 2.3728 | 0.0024 |
| 227 | 2.3752 | 0.0024 |
| 228 | 2.3776 | 0.0024 |
| 229 | 2.3800 | 0.0024 |
| 230 | 2.3824 | 0.0024 |
| 231 | 2.3848 | 0.0024 |
| 232 | 2.3872 | 0.0024 |
| 233 | 2.3896 | 0.0024 |
| 234 | 2.3920 | 0.0024 |
| 235 | 2.3944 | 0.0024 |
| 236 | 2.3967 | 0.0024 |
| 237 | 2.3991 | 0.0024 |
| 238 | 2.4014 | 0.0023 |
| 239 | 2.4037 | 0.0023 |
| 240 | 2.4061 | 0.0023 |
| 241 | 2.4084 | 0.0023 |
| 242 | 2.4107 | 0.0023 |
| 243 | 2.4130 | 0.0023 |
| 244 | 2.4153 | 0.0023 |
| 245 | 2.4176 | 0.0023 |
| 246 | 2.4199 | 0.0023 |
| 247 | 2.4222 | 0.0023 |
| 248 | 2.4244 | 0.0023 |
| 249 | 2.4267 | 0.0023 |
| 250 | 2.4290 | 0.0023 |
| 251 | 2.4312 | 0.0022 |
| 252 | 2.4335 | 0.0022 |
| 253 | 2.4357 | 0.0022 |
| 254 | 2.4379 | 0.0022 |
| 255 | 2.4401 | 0.0022 |
| 256 | 2.4424 | 0.0022 |
| 257 | 2.4446 | 0.0022 |
| 258 | 2.4468 | 0.0022 |
| 259 | 2.4490 | 0.0022 |
| 260 | 2.4512 | 0.0022 |
| 261 | 2.4533 | 0.0022 |
| 262 | 2.4555 | 0.0022 |
| 263 | 2.4577 | 0.0022 |
| 264 | 2.4598 | 0.0022 |
| 265 | 2.4620 | 0.0022 |
| 266 | 2.4642 | 0.0022 |
| 267 | 2.4663 | 0.0021 |
| 268 | 2.4684 | 0.0021 |
| 269 | 2.4706 | 0.0021 |
| 270 | 2.4727 | 0.0021 |
| 271 | 2.4748 | 0.0021 |
| 272 | 2.4769 | 0.0021 |
| 273 | 2.4790 | 0.0021 |
| 274 | 2.4811 | 0.0021 |
| 275 | 2.4832 | 0.0021 |
| 276 | 2.4853 | 0.0021 |
| 277 | 2.4874 | 0.0021 |
| 278 | 2.4895 | 0.0021 |
| 279 | 2.4916 | 0.0021 |
| 280 | 2.4936 | 0.0021 |
| 281 | 2.4957 | 0.0021 |
| 282 | 2.4978 | 0.0021 |
| 283 | 2.4998 | 0.0021 |
| 284 | 2.5019 | 0.0020 |

| | | |
|---|---|---|
| 285 | 2.5039 | 0.0020 |
| 286 | 2.5059 | 0.0020 |
| 287 | 2.5080 | 0.0020 |
| 288 | 2.5100 | 0.0020 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0020 | 0.0006 | 0.0015 |
| 2 | 0.0020 | 0.0006 | 0.0015 |
| 3 | 0.0020 | 0.0006 | 0.0015 |
| 4 | 0.0020 | 0.0006 | 0.0015 |
| 5 | 0.0021 | 0.0006 | 0.0015 |
| 6 | 0.0021 | 0.0006 | 0.0015 |
| 7 | 0.0021 | 0.0006 | 0.0015 |
| 8 | 0.0021 | 0.0006 | 0.0015 |
| 9 | 0.0021 | 0.0006 | 0.0015 |
| 10 | 0.0021 | 0.0006 | 0.0015 |
| 11 | 0.0021 | 0.0006 | 0.0015 |
| 12 | 0.0021 | 0.0006 | 0.0015 |
| 13 | 0.0021 | 0.0006 | 0.0015 |
| 14 | 0.0021 | 0.0006 | 0.0015 |
| 15 | 0.0021 | 0.0006 | 0.0016 |
| 16 | 0.0022 | 0.0006 | 0.0016 |
| 17 | 0.0022 | 0.0006 | 0.0016 |
| 18 | 0.0022 | 0.0006 | 0.0016 |
| 19 | 0.0022 | 0.0006 | 0.0016 |
| 20 | 0.0022 | 0.0006 | 0.0016 |
| 21 | 0.0022 | 0.0006 | 0.0016 |
| 22 | 0.0022 | 0.0006 | 0.0016 |
| 23 | 0.0022 | 0.0006 | 0.0016 |
| 24 | 0.0022 | 0.0006 | 0.0016 |
| 25 | 0.0022 | 0.0006 | 0.0016 |
| 26 | 0.0022 | 0.0006 | 0.0016 |
| 27 | 0.0023 | 0.0006 | 0.0016 |
| 28 | 0.0023 | 0.0006 | 0.0016 |
| 29 | 0.0023 | 0.0006 | 0.0017 |
| 30 | 0.0023 | 0.0006 | 0.0017 |
| 31 | 0.0023 | 0.0006 | 0.0017 |
| 32 | 0.0023 | 0.0006 | 0.0017 |
| 33 | 0.0023 | 0.0006 | 0.0017 |
| 34 | 0.0023 | 0.0006 | 0.0017 |
| 35 | 0.0024 | 0.0006 | 0.0017 |
| 36 | 0.0024 | 0.0006 | 0.0017 |
| 37 | 0.0024 | 0.0007 | 0.0017 |
| 38 | 0.0024 | 0.0007 | 0.0017 |
| 39 | 0.0024 | 0.0007 | 0.0017 |
| 40 | 0.0024 | 0.0007 | 0.0017 |
| 41 | 0.0024 | 0.0007 | 0.0018 |
| 42 | 0.0024 | 0.0007 | 0.0018 |
| 43 | 0.0024 | 0.0007 | 0.0018 |
| 44 | 0.0025 | 0.0007 | 0.0018 |
| 45 | 0.0025 | 0.0007 | 0.0018 |
| 46 | 0.0025 | 0.0007 | 0.0018 |
| 47 | 0.0025 | 0.0007 | 0.0018 |
| 48 | 0.0025 | 0.0007 | 0.0018 |
| 49 | 0.0025 | 0.0007 | 0.0018 |
| 50 | 0.0025 | 0.0007 | 0.0018 |

| | | | |
|---|---|---|---|
| 51 | 0.0026 | 0.0007 | 0.0019 |
| 52 | 0.0026 | 0.0007 | 0.0019 |
| 53 | 0.0026 | 0.0007 | 0.0019 |
| 54 | 0.0026 | 0.0007 | 0.0019 |
| 55 | 0.0026 | 0.0007 | 0.0019 |
| 56 | 0.0026 | 0.0007 | 0.0019 |
| 57 | 0.0026 | 0.0007 | 0.0019 |
| 58 | 0.0026 | 0.0007 | 0.0019 |
| 59 | 0.0027 | 0.0007 | 0.0019 |
| 60 | 0.0027 | 0.0007 | 0.0019 |
| 61 | 0.0027 | 0.0007 | 0.0020 |
| 62 | 0.0027 | 0.0007 | 0.0020 |
| 63 | 0.0027 | 0.0007 | 0.0020 |
| 64 | 0.0027 | 0.0008 | 0.0020 |
| 65 | 0.0028 | 0.0008 | 0.0020 |
| 66 | 0.0028 | 0.0008 | 0.0020 |
| 67 | 0.0028 | 0.0008 | 0.0020 |
| 68 | 0.0028 | 0.0008 | 0.0020 |
| 69 | 0.0028 | 0.0008 | 0.0021 |
| 70 | 0.0028 | 0.0008 | 0.0021 |
| 71 | 0.0029 | 0.0008 | 0.0021 |
| 72 | 0.0029 | 0.0008 | 0.0021 |
| 73 | 0.0029 | 0.0008 | 0.0021 |
| 74 | 0.0029 | 0.0008 | 0.0021 |
| 75 | 0.0029 | 0.0008 | 0.0021 |
| 76 | 0.0030 | 0.0008 | 0.0021 |
| 77 | 0.0030 | 0.0008 | 0.0022 |
| 78 | 0.0030 | 0.0008 | 0.0022 |
| 79 | 0.0030 | 0.0008 | 0.0022 |
| 80 | 0.0030 | 0.0008 | 0.0022 |
| 81 | 0.0031 | 0.0008 | 0.0022 |
| 82 | 0.0031 | 0.0008 | 0.0022 |
| 83 | 0.0031 | 0.0009 | 0.0023 |
| 84 | 0.0031 | 0.0009 | 0.0023 |
| 85 | 0.0032 | 0.0009 | 0.0023 |
| 86 | 0.0032 | 0.0009 | 0.0023 |
| 87 | 0.0032 | 0.0009 | 0.0023 |
| 88 | 0.0032 | 0.0009 | 0.0023 |
| 89 | 0.0032 | 0.0009 | 0.0024 |
| 90 | 0.0033 | 0.0009 | 0.0024 |
| 91 | 0.0033 | 0.0009 | 0.0024 |
| 92 | 0.0033 | 0.0009 | 0.0024 |
| 93 | 0.0033 | 0.0009 | 0.0024 |
| 94 | 0.0034 | 0.0009 | 0.0024 |
| 95 | 0.0034 | 0.0009 | 0.0025 |
| 96 | 0.0034 | 0.0009 | 0.0025 |
| 97 | 0.0035 | 0.0009 | 0.0025 |
| 98 | 0.0035 | 0.0010 | 0.0025 |
| 99 | 0.0035 | 0.0010 | 0.0025 |
| 100 | 0.0035 | 0.0010 | 0.0026 |
| 101 | 0.0036 | 0.0010 | 0.0026 |
| 102 | 0.0036 | 0.0010 | 0.0026 |
| 103 | 0.0036 | 0.0010 | 0.0026 |
| 104 | 0.0036 | 0.0010 | 0.0026 |
| 105 | 0.0037 | 0.0010 | 0.0027 |
| 106 | 0.0037 | 0.0010 | 0.0027 |
| 107 | 0.0038 | 0.0010 | 0.0027 |
| 108 | 0.0038 | 0.0010 | 0.0027 |
| 109 | 0.0038 | 0.0010 | 0.0028 |

| | | | |
|---|---|---|---|
| 110 | 0.0038 | 0.0011 | 0.0028 |
| 111 | 0.0039 | 0.0011 | 0.0028 |
| 112 | 0.0039 | 0.0011 | 0.0028 |
| 113 | 0.0040 | 0.0011 | 0.0029 |
| 114 | 0.0040 | 0.0011 | 0.0029 |
| 115 | 0.0041 | 0.0011 | 0.0029 |
| 116 | 0.0041 | 0.0011 | 0.0030 |
| 117 | 0.0041 | 0.0011 | 0.0030 |
| 118 | 0.0042 | 0.0011 | 0.0030 |
| 119 | 0.0042 | 0.0012 | 0.0031 |
| 120 | 0.0042 | 0.0012 | 0.0031 |
| 121 | 0.0043 | 0.0012 | 0.0031 |
| 122 | 0.0043 | 0.0012 | 0.0032 |
| 123 | 0.0044 | 0.0012 | 0.0032 |
| 124 | 0.0044 | 0.0012 | 0.0032 |
| 125 | 0.0045 | 0.0012 | 0.0033 |
| 126 | 0.0045 | 0.0012 | 0.0033 |
| 127 | 0.0046 | 0.0013 | 0.0033 |
| 128 | 0.0046 | 0.0013 | 0.0034 |
| 129 | 0.0047 | 0.0013 | 0.0034 |
| 130 | 0.0048 | 0.0013 | 0.0035 |
| 131 | 0.0048 | 0.0013 | 0.0035 |
| 132 | 0.0049 | 0.0013 | 0.0035 |
| 133 | 0.0050 | 0.0014 | 0.0036 |
| 134 | 0.0050 | 0.0014 | 0.0036 |
| 135 | 0.0051 | 0.0014 | 0.0037 |
| 136 | 0.0051 | 0.0014 | 0.0037 |
| 137 | 0.0052 | 0.0014 | 0.0038 |
| 138 | 0.0053 | 0.0014 | 0.0038 |
| 139 | 0.0054 | 0.0015 | 0.0039 |
| 140 | 0.0054 | 0.0015 | 0.0039 |
| 141 | 0.0055 | 0.0015 | 0.0040 |
| 142 | 0.0056 | 0.0015 | 0.0041 |
| 143 | 0.0057 | 0.0016 | 0.0041 |
| 144 | 0.0058 | 0.0016 | 0.0042 |
| 145 | 0.0039 | 0.0011 | 0.0029 |
| 146 | 0.0040 | 0.0011 | 0.0029 |
| 147 | 0.0041 | 0.0011 | 0.0030 |
| 148 | 0.0041 | 0.0011 | 0.0030 |
| 149 | 0.0042 | 0.0012 | 0.0031 |
| 150 | 0.0043 | 0.0012 | 0.0031 |
| 151 | 0.0044 | 0.0012 | 0.0032 |
| 152 | 0.0045 | 0.0012 | 0.0032 |
| 153 | 0.0046 | 0.0013 | 0.0033 |
| 154 | 0.0047 | 0.0013 | 0.0034 |
| 155 | 0.0048 | 0.0013 | 0.0035 |
| 156 | 0.0049 | 0.0013 | 0.0035 |
| 157 | 0.0050 | 0.0014 | 0.0036 |
| 158 | 0.0051 | 0.0014 | 0.0037 |
| 159 | 0.0053 | 0.0014 | 0.0038 |
| 160 | 0.0054 | 0.0015 | 0.0039 |
| 161 | 0.0056 | 0.0015 | 0.0040 |
| 162 | 0.0057 | 0.0015 | 0.0041 |
| 163 | 0.0059 | 0.0016 | 0.0043 |
| 164 | 0.0060 | 0.0016 | 0.0043 |
| 165 | 0.0062 | 0.0017 | 0.0045 |
| 166 | 0.0064 | 0.0017 | 0.0046 |
| 167 | 0.0066 | 0.0018 | 0.0048 |
| 168 | 0.0068 | 0.0019 | 0.0049 |

| | | | |
|---|---|---|---|
| 169 | 0.0071 | 0.0019 | 0.0052 |
| 170 | 0.0073 | 0.0020 | 0.0053 |
| 171 | 0.0077 | 0.0021 | 0.0056 |
| 172 | 0.0079 | 0.0022 | 0.0057 |
| 173 | 0.0083 | 0.0023 | 0.0060 |
| 174 | 0.0086 | 0.0023 | 0.0062 |
| 175 | 0.0091 | 0.0025 | 0.0066 |
| 176 | 0.0094 | 0.0026 | 0.0068 |
| 177 | 0.0101 | 0.0028 | 0.0073 |
| 178 | 0.0105 | 0.0029 | 0.0076 |
| 179 | 0.0113 | 0.0031 | 0.0082 |
| 180 | 0.0118 | 0.0032 | 0.0086 |
| 181 | 0.0129 | 0.0035 | 0.0094 |
| 182 | 0.0136 | 0.0037 | 0.0099 |
| 183 | 0.0152 | 0.0042 | 0.0110 |
| 184 | 0.0161 | 0.0044 | 0.0117 |
| 185 | 0.0355 | 0.0097 | 0.0258 |
| 186 | 0.0379 | 0.0104 | 0.0275 |
| 187 | 0.0439 | 0.0105 | 0.0334 |
| 188 | 0.0480 | 0.0105 | 0.0375 |
| 189 | 0.0596 | 0.0105 | 0.0491 |
| 190 | 0.0687 | 0.0105 | 0.0582 |
| 191 | 0.1042 | 0.0105 | 0.0937 |
| 192 | 0.1513 | 0.0105 | 0.1408 |
| 193 | 0.6546 | 0.0105 | 0.6441 |
| 194 | 0.0820 | 0.0105 | 0.0715 |
| 195 | 0.0530 | 0.0105 | 0.0425 |
| 196 | 0.0406 | 0.0105 | 0.0301 |
| 197 | 0.0172 | 0.0047 | 0.0125 |
| 198 | 0.0143 | 0.0039 | 0.0104 |
| 199 | 0.0123 | 0.0034 | 0.0090 |
| 200 | 0.0109 | 0.0030 | 0.0079 |
| 201 | 0.0097 | 0.0027 | 0.0071 |
| 202 | 0.0088 | 0.0024 | 0.0064 |
| 203 | 0.0081 | 0.0022 | 0.0059 |
| 204 | 0.0075 | 0.0020 | 0.0054 |
| 205 | 0.0069 | 0.0019 | 0.0050 |
| 206 | 0.0065 | 0.0018 | 0.0047 |
| 207 | 0.0061 | 0.0017 | 0.0044 |
| 208 | 0.0058 | 0.0016 | 0.0042 |
| 209 | 0.0055 | 0.0015 | 0.0040 |
| 210 | 0.0052 | 0.0014 | 0.0038 |
| 211 | 0.0049 | 0.0014 | 0.0036 |
| 212 | 0.0047 | 0.0013 | 0.0034 |
| 213 | 0.0045 | 0.0012 | 0.0033 |
| 214 | 0.0043 | 0.0012 | 0.0032 |
| 215 | 0.0042 | 0.0011 | 0.0030 |
| 216 | 0.0040 | 0.0011 | 0.0029 |
| 217 | 0.0058 | 0.0016 | 0.0042 |
| 218 | 0.0057 | 0.0015 | 0.0041 |
| 219 | 0.0055 | 0.0015 | 0.0040 |
| 220 | 0.0053 | 0.0015 | 0.0039 |
| 221 | 0.0052 | 0.0014 | 0.0038 |
| 222 | 0.0050 | 0.0014 | 0.0037 |
| 223 | 0.0049 | 0.0013 | 0.0036 |
| 224 | 0.0048 | 0.0013 | 0.0035 |
| 225 | 0.0047 | 0.0013 | 0.0034 |
| 226 | 0.0046 | 0.0013 | 0.0033 |
| 227 | 0.0045 | 0.0012 | 0.0032 |

| | | | |
|---|---|---|---|
| 228 | 0.0044 | 0.0012 | 0.0032 |
| 229 | 0.0043 | 0.0012 | 0.0031 |
| 230 | 0.0042 | 0.0011 | 0.0030 |
| 231 | 0.0041 | 0.0011 | 0.0030 |
| 232 | 0.0040 | 0.0011 | 0.0029 |
| 233 | 0.0039 | 0.0011 | 0.0029 |
| 234 | 0.0039 | 0.0011 | 0.0028 |
| 235 | 0.0038 | 0.0010 | 0.0028 |
| 236 | 0.0037 | 0.0010 | 0.0027 |
| 237 | 0.0037 | 0.0010 | 0.0027 |
| 238 | 0.0036 | 0.0010 | 0.0026 |
| 239 | 0.0035 | 0.0010 | 0.0026 |
| 240 | 0.0035 | 0.0010 | 0.0025 |
| 241 | 0.0034 | 0.0009 | 0.0025 |
| 242 | 0.0034 | 0.0009 | 0.0025 |
| 243 | 0.0033 | 0.0009 | 0.0024 |
| 244 | 0.0033 | 0.0009 | 0.0024 |
| 245 | 0.0032 | 0.0009 | 0.0023 |
| 246 | 0.0032 | 0.0009 | 0.0023 |
| 247 | 0.0031 | 0.0009 | 0.0023 |
| 248 | 0.0031 | 0.0008 | 0.0022 |
| 249 | 0.0031 | 0.0008 | 0.0022 |
| 250 | 0.0030 | 0.0008 | 0.0022 |
| 251 | 0.0030 | 0.0008 | 0.0022 |
| 252 | 0.0029 | 0.0008 | 0.0021 |
| 253 | 0.0029 | 0.0008 | 0.0021 |
| 254 | 0.0029 | 0.0008 | 0.0021 |
| 255 | 0.0028 | 0.0008 | 0.0020 |
| 256 | 0.0028 | 0.0008 | 0.0020 |
| 257 | 0.0028 | 0.0008 | 0.0020 |
| 258 | 0.0027 | 0.0007 | 0.0020 |
| 259 | 0.0027 | 0.0007 | 0.0020 |
| 260 | 0.0027 | 0.0007 | 0.0019 |
| 261 | 0.0026 | 0.0007 | 0.0019 |
| 262 | 0.0026 | 0.0007 | 0.0019 |
| 263 | 0.0026 | 0.0007 | 0.0019 |
| 264 | 0.0025 | 0.0007 | 0.0018 |
| 265 | 0.0025 | 0.0007 | 0.0018 |
| 266 | 0.0025 | 0.0007 | 0.0018 |
| 267 | 0.0025 | 0.0007 | 0.0018 |
| 268 | 0.0024 | 0.0007 | 0.0018 |
| 269 | 0.0024 | 0.0007 | 0.0018 |
| 270 | 0.0024 | 0.0007 | 0.0017 |
| 271 | 0.0024 | 0.0006 | 0.0017 |
| 272 | 0.0023 | 0.0006 | 0.0017 |
| 273 | 0.0023 | 0.0006 | 0.0017 |
| 274 | 0.0023 | 0.0006 | 0.0017 |
| 275 | 0.0023 | 0.0006 | 0.0017 |
| 276 | 0.0023 | 0.0006 | 0.0016 |
| 277 | 0.0022 | 0.0006 | 0.0016 |
| 278 | 0.0022 | 0.0006 | 0.0016 |
| 279 | 0.0022 | 0.0006 | 0.0016 |
| 280 | 0.0022 | 0.0006 | 0.0016 |
| 281 | 0.0022 | 0.0006 | 0.0016 |
| 282 | 0.0021 | 0.0006 | 0.0016 |
| 283 | 0.0021 | 0.0006 | 0.0015 |
| 284 | 0.0021 | 0.0006 | 0.0015 |
| 285 | 0.0021 | 0.0006 | 0.0015 |
| 286 | 0.0021 | 0.0006 | 0.0015 |

| | | | |
|---|---|---|---|
| 287 | 0.0021 | 0.0006 | 0.0015 |
| 288 | 0.0020 | 0.0006 | 0.0015 |

Total soil rain loss = 0.43(In)
Total effective rainfall = 2.08(In)
Peak flow rate in flood hydrograph = 18.35(CFS)

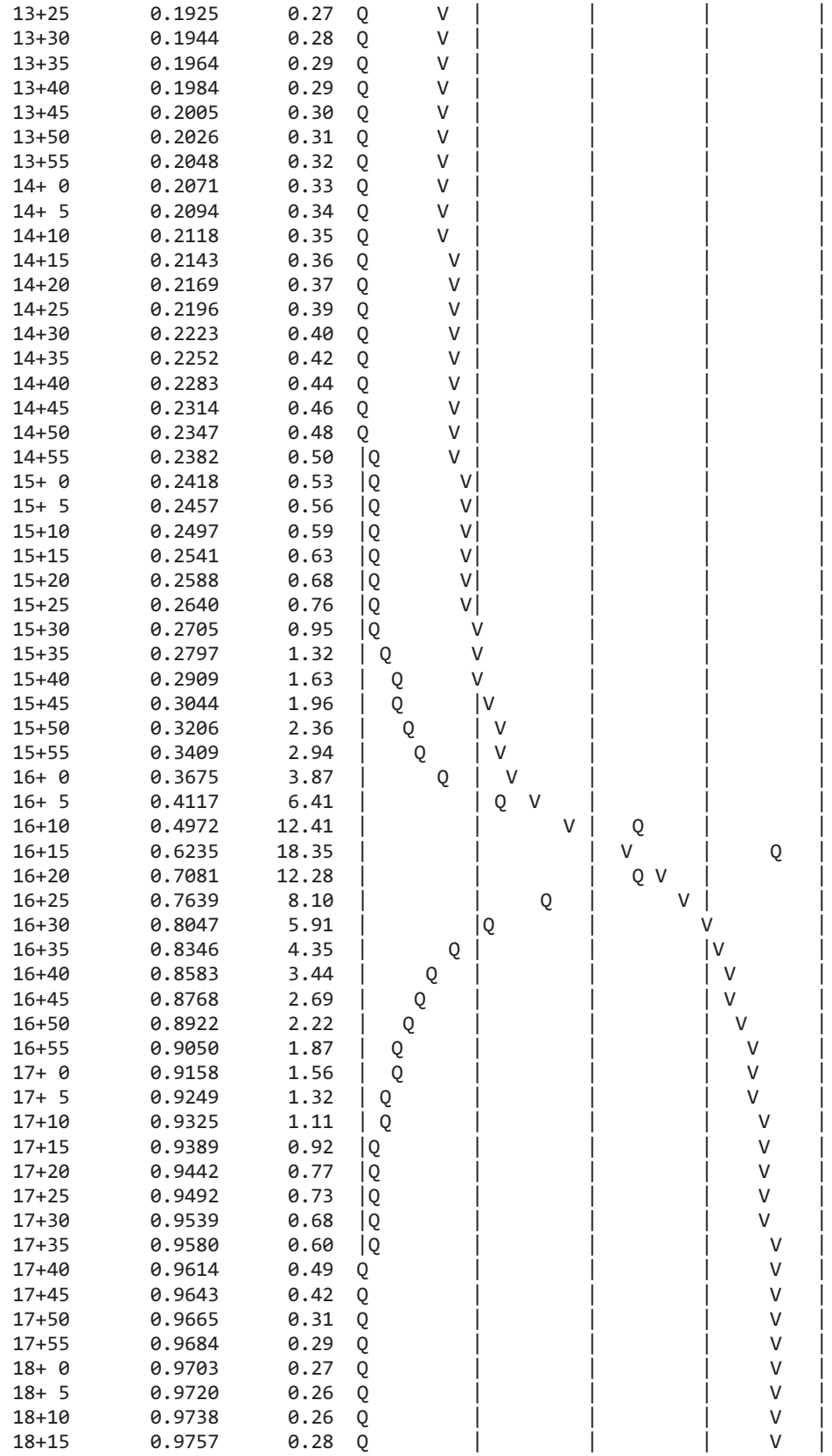
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.02 | Q | | | | |
| 0+15 | 0.0005 | 0.05 | Q | | | | |
| 0+20 | 0.0010 | 0.07 | Q | | | | |
| 0+25 | 0.0015 | 0.08 | Q | | | | |
| 0+30 | 0.0022 | 0.09 | Q | | | | |
| 0+35 | 0.0028 | 0.09 | Q | | | | |
| 0+40 | 0.0035 | 0.10 | Q | | | | |
| 0+45 | 0.0042 | 0.10 | Q | | | | |
| 0+50 | 0.0049 | 0.10 | Q | | | | |
| 0+55 | 0.0056 | 0.11 | Q | | | | |
| 1+ 0 | 0.0063 | 0.11 | Q | | | | |
| 1+ 5 | 0.0071 | 0.11 | Q | | | | |
| 1+10 | 0.0079 | 0.11 | Q | | | | |
| 1+15 | 0.0086 | 0.11 | Q | | | | |
| 1+20 | 0.0094 | 0.11 | Q | | | | |
| 1+25 | 0.0102 | 0.11 | Q | | | | |
| 1+30 | 0.0110 | 0.11 | Q | | | | |
| 1+35 | 0.0118 | 0.12 | Q | | | | |
| 1+40 | 0.0126 | 0.12 | Q | | | | |
| 1+45 | 0.0134 | 0.12 | Q | | | | |
| 1+50 | 0.0142 | 0.12 | Q | | | | |
| 1+55 | 0.0150 | 0.12 | Q | | | | |
| 2+ 0 | 0.0158 | 0.12 | Q | | | | |
| 2+ 5 | 0.0166 | 0.12 | Q | | | | |
| 2+10 | 0.0174 | 0.12 | Q | | | | |
| 2+15 | 0.0183 | 0.12 | Q | | | | |
| 2+20 | 0.0191 | 0.12 | Q | | | | |
| 2+25 | 0.0199 | 0.12 | Q | | | | |
| 2+30 | 0.0208 | 0.12 | Q | | | | |
| 2+35 | 0.0216 | 0.12 | Q | | | | |
| 2+40 | 0.0225 | 0.12 | Q | | | | |
| 2+45 | 0.0233 | 0.12 | Q | | | | |
| 2+50 | 0.0242 | 0.12 | Q | | | | |
| 2+55 | 0.0250 | 0.12 | Q | | | | |
| 3+ 0 | 0.0259 | 0.13 | Q | | | | |
| 3+ 5 | 0.0267 | 0.13 | QV | | | | |
| 3+10 | 0.0276 | 0.13 | QV | | | | |
| 3+15 | 0.0285 | 0.13 | QV | | | | |
| 3+20 | 0.0294 | 0.13 | QV | | | | |
| 3+25 | 0.0303 | 0.13 | QV | | | | |
| 3+30 | 0.0311 | 0.13 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+35 | 0.0320 | 0.13 | QV | | | | |
| 3+40 | 0.0329 | 0.13 | QV | | | | |
| 3+45 | 0.0338 | 0.13 | QV | | | | |
| 3+50 | 0.0347 | 0.13 | QV | | | | |
| 3+55 | 0.0356 | 0.13 | QV | | | | |
| 4+ 0 | 0.0366 | 0.13 | QV | | | | |
| 4+ 5 | 0.0375 | 0.13 | QV | | | | |
| 4+10 | 0.0384 | 0.13 | QV | | | | |
| 4+15 | 0.0393 | 0.13 | QV | | | | |
| 4+20 | 0.0403 | 0.14 | QV | | | | |
| 4+25 | 0.0412 | 0.14 | QV | | | | |
| 4+30 | 0.0422 | 0.14 | QV | | | | |
| 4+35 | 0.0431 | 0.14 | QV | | | | |
| 4+40 | 0.0441 | 0.14 | QV | | | | |
| 4+45 | 0.0450 | 0.14 | QV | | | | |
| 4+50 | 0.0460 | 0.14 | QV | | | | |
| 4+55 | 0.0470 | 0.14 | QV | | | | |
| 5+ 0 | 0.0479 | 0.14 | QV | | | | |
| 5+ 5 | 0.0489 | 0.14 | QV | | | | |
| 5+10 | 0.0499 | 0.14 | QV | | | | |
| 5+15 | 0.0509 | 0.14 | QV | | | | |
| 5+20 | 0.0519 | 0.14 | QV | | | | |
| 5+25 | 0.0529 | 0.15 | QV | | | | |
| 5+30 | 0.0539 | 0.15 | Q V | | | | |
| 5+35 | 0.0549 | 0.15 | Q V | | | | |
| 5+40 | 0.0559 | 0.15 | Q V | | | | |
| 5+45 | 0.0570 | 0.15 | Q V | | | | |
| 5+50 | 0.0580 | 0.15 | Q V | | | | |
| 5+55 | 0.0590 | 0.15 | Q V | | | | |
| 6+ 0 | 0.0601 | 0.15 | Q V | | | | |
| 6+ 5 | 0.0612 | 0.15 | Q V | | | | |
| 6+10 | 0.0622 | 0.15 | Q V | | | | |
| 6+15 | 0.0633 | 0.15 | Q V | | | | |
| 6+20 | 0.0644 | 0.16 | Q V | | | | |
| 6+25 | 0.0654 | 0.16 | Q V | | | | |
| 6+30 | 0.0665 | 0.16 | Q V | | | | |
| 6+35 | 0.0676 | 0.16 | Q V | | | | |
| 6+40 | 0.0687 | 0.16 | Q V | | | | |
| 6+45 | 0.0698 | 0.16 | Q V | | | | |
| 6+50 | 0.0709 | 0.16 | Q V | | | | |
| 6+55 | 0.0721 | 0.16 | Q V | | | | |
| 7+ 0 | 0.0732 | 0.16 | Q V | | | | |
| 7+ 5 | 0.0743 | 0.17 | Q V | | | | |
| 7+10 | 0.0755 | 0.17 | Q V | | | | |
| 7+15 | 0.0766 | 0.17 | Q V | | | | |
| 7+20 | 0.0778 | 0.17 | Q V | | | | |
| 7+25 | 0.0790 | 0.17 | Q V | | | | |
| 7+30 | 0.0802 | 0.17 | Q  V | | | | |
| 7+35 | 0.0814 | 0.17 | Q  V | | | | |
| 7+40 | 0.0826 | 0.17 | Q  V | | | | |
| 7+45 | 0.0838 | 0.18 | Q  V | | | | |
| 7+50 | 0.0850 | 0.18 | Q  V | | | | |
| 7+55 | 0.0862 | 0.18 | Q  V | | | | |
| 8+ 0 | 0.0874 | 0.18 | Q  V | | | | |
| 8+ 5 | 0.0887 | 0.18 | Q  V | | | | |
| 8+10 | 0.0899 | 0.18 | Q  V | | | | |
| 8+15 | 0.0912 | 0.18 | Q  V | | | | |
| 8+20 | 0.0925 | 0.18 | Q  V | | | | |
| 8+25 | 0.0938 | 0.19 | Q  V | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8+30 | 0.0951 | 0.19 | Q | V | | | | |
| 8+35 | 0.0964 | 0.19 | Q | V | | | | |
| 8+40 | 0.0977 | 0.19 | Q | V | | | | |
| 8+45 | 0.0990 | 0.19 | Q | V | | | | |
| 8+50 | 0.1003 | 0.19 | Q | V | | | | |
| 8+55 | 0.1017 | 0.20 | Q | V | | | | |
| 9+ 0 | 0.1031 | 0.20 | Q | V | | | | |
| 9+ 5 | 0.1044 | 0.20 | Q | V | | | | |
| 9+10 | 0.1058 | 0.20 | Q | V | | | | |
| 9+15 | 0.1072 | 0.20 | Q | V | | | | |
| 9+20 | 0.1086 | 0.20 | Q | V | | | | |
| 9+25 | 0.1100 | 0.21 | Q | V | | | | |
| 9+30 | 0.1115 | 0.21 | Q | V | | | | |
| 9+35 | 0.1129 | 0.21 | Q | V | | | | |
| 9+40 | 0.1144 | 0.21 | Q | V | | | | |
| 9+45 | 0.1159 | 0.21 | Q | V | | | | |
| 9+50 | 0.1174 | 0.22 | Q | V | | | | |
| 9+55 | 0.1189 | 0.22 | Q | V | | | | |
| 10+ 0 | 0.1204 | 0.22 | Q | V | | | | |
| 10+ 5 | 0.1219 | 0.22 | Q | V | | | | |
| 10+10 | 0.1235 | 0.23 | Q | V | | | | |
| 10+15 | 0.1251 | 0.23 | Q | V | | | | |
| 10+20 | 0.1266 | 0.23 | Q | V | | | | |
| 10+25 | 0.1283 | 0.23 | Q | V | | | | |
| 10+30 | 0.1299 | 0.24 | Q | V | | | | |
| 10+35 | 0.1315 | 0.24 | Q | V | | | | |
| 10+40 | 0.1332 | 0.24 | Q | V | | | | |
| 10+45 | 0.1348 | 0.24 | Q | V | | | | |
| 10+50 | 0.1365 | 0.25 | Q | V | | | | |
| 10+55 | 0.1383 | 0.25 | Q | V | | | | |
| 11+ 0 | 0.1400 | 0.25 | Q | V | | | | |
| 11+ 5 | 0.1418 | 0.26 | Q | V | | | | |
| 11+10 | 0.1435 | 0.26 | Q | V | | | | |
| 11+15 | 0.1453 | 0.26 | Q | V | | | | |
| 11+20 | 0.1472 | 0.26 | Q | V | | | | |
| 11+25 | 0.1490 | 0.27 | Q | V | | | | |
| 11+30 | 0.1509 | 0.27 | Q | V | | | | |
| 11+35 | 0.1528 | 0.28 | Q | V | | | | |
| 11+40 | 0.1547 | 0.28 | Q | V | | | | |
| 11+45 | 0.1566 | 0.28 | Q | V | | | | |
| 11+50 | 0.1586 | 0.29 | Q | V | | | | |
| 11+55 | 0.1606 | 0.29 | Q | V | | | | |
| 12+ 0 | 0.1627 | 0.30 | Q | V | | | | |
| 12+ 5 | 0.1647 | 0.30 | Q | V | | | | |
| 12+10 | 0.1667 | 0.29 | Q | V | | | | |
| 12+15 | 0.1685 | 0.26 | Q | V | | | | |
| 12+20 | 0.1702 | 0.25 | Q | V | | | | |
| 12+25 | 0.1718 | 0.24 | Q | V | | | | |
| 12+30 | 0.1734 | 0.24 | Q | V | | | | |
| 12+35 | 0.1751 | 0.24 | Q | V | | | | |
| 12+40 | 0.1767 | 0.24 | Q | V | | | | |
| 12+45 | 0.1783 | 0.24 | Q | V | | | | |
| 12+50 | 0.1800 | 0.24 | Q | V | | | | |
| 12+55 | 0.1817 | 0.24 | Q | V | | | | |
| 13+ 0 | 0.1834 | 0.25 | Q | V | | | | |
| 13+ 5 | 0.1851 | 0.25 | Q | V | | | | |
| 13+10 | 0.1869 | 0.26 | Q | V | | | | |
| 13+15 | 0.1887 | 0.26 | Q | V | | | | |
| 13+20 | 0.1906 | 0.27 | Q | V | | | | |



| | | | |
|---|---|---|---|
| 13+25 | 0.1925 | 0.27 | |
| 13+30 | 0.1944 | 0.28 | |
| 13+35 | 0.1964 | 0.29 | |
| 13+40 | 0.1984 | 0.29 | |
| 13+45 | 0.2005 | 0.30 | |
| 13+50 | 0.2026 | 0.31 | |
| 13+55 | 0.2048 | 0.32 | |
| 14+ 0 | 0.2071 | 0.33 | |
| 14+ 5 | 0.2094 | 0.34 | |
| 14+10 | 0.2118 | 0.35 | |
| 14+15 | 0.2143 | 0.36 | |
| 14+20 | 0.2169 | 0.37 | |
| 14+25 | 0.2196 | 0.39 | |
| 14+30 | 0.2223 | 0.40 | |
| 14+35 | 0.2252 | 0.42 | |
| 14+40 | 0.2283 | 0.44 | |
| 14+45 | 0.2314 | 0.46 | |
| 14+50 | 0.2347 | 0.48 | |
| 14+55 | 0.2382 | 0.50 | |
| 15+ 0 | 0.2418 | 0.53 | |
| 15+ 5 | 0.2457 | 0.56 | |
| 15+10 | 0.2497 | 0.59 | |
| 15+15 | 0.2541 | 0.63 | |
| 15+20 | 0.2588 | 0.68 | |
| 15+25 | 0.2640 | 0.76 | |
| 15+30 | 0.2705 | 0.95 | |
| 15+35 | 0.2797 | 1.32 | |
| 15+40 | 0.2909 | 1.63 | |
| 15+45 | 0.3044 | 1.96 | |
| 15+50 | 0.3206 | 2.36 | |
| 15+55 | 0.3409 | 2.94 | |
| 16+ 0 | 0.3675 | 3.87 | |
| 16+ 5 | 0.4117 | 6.41 | |
| 16+10 | 0.4972 | 12.41 | |
| 16+15 | 0.6235 | 18.35 | |
| 16+20 | 0.7081 | 12.28 | |
| 16+25 | 0.7639 | 8.10 | |
| 16+30 | 0.8047 | 5.91 | |
| 16+35 | 0.8346 | 4.35 | |
| 16+40 | 0.8583 | 3.44 | |
| 16+45 | 0.8768 | 2.69 | |
| 16+50 | 0.8922 | 2.22 | |
| 16+55 | 0.9050 | 1.87 | |
| 17+ 0 | 0.9158 | 1.56 | |
| 17+ 5 | 0.9249 | 1.32 | |
| 17+10 | 0.9325 | 1.11 | |
| 17+15 | 0.9389 | 0.92 | |
| 17+20 | 0.9442 | 0.77 | |
| 17+25 | 0.9492 | 0.73 | |
| 17+30 | 0.9539 | 0.68 | |
| 17+35 | 0.9580 | 0.60 | |
| 17+40 | 0.9614 | 0.49 | |
| 17+45 | 0.9643 | 0.42 | |
| 17+50 | 0.9665 | 0.31 | |
| 17+55 | 0.9684 | 0.29 | |
| 18+ 0 | 0.9703 | 0.27 | |
| 18+ 5 | 0.9720 | 0.26 | |
| 18+10 | 0.9738 | 0.26 | |
| 18+15 | 0.9757 | 0.28 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18+20 | 0.9777 | 0.29 | Q | \| | \| | \| | V \| |
| 18+25 | 0.9797 | 0.29 | Q | \| | \| | \| | V \| |
| 18+30 | 0.9816 | 0.28 | Q | \| | \| | \| | V \| |
| 18+35 | 0.9836 | 0.28 | Q | \| | \| | \| | V \| |
| 18+40 | 0.9855 | 0.28 | Q | \| | \| | \| | V \| |
| 18+45 | 0.9873 | 0.27 | Q | \| | \| | \| | V \| |
| 18+50 | 0.9892 | 0.27 | Q | \| | \| | \| | V \| |
| 18+55 | 0.9910 | 0.26 | Q | \| | \| | \| | V \| |
| 19+ 0 | 0.9927 | 0.26 | Q | \| | \| | \| | V \| |
| 19+ 5 | 0.9944 | 0.25 | Q | \| | \| | \| | V \| |
| 19+10 | 0.9961 | 0.25 | Q | \| | \| | \| | V \| |
| 19+15 | 0.9978 | 0.24 | Q | \| | \| | \| | V \| |
| 19+20 | 0.9994 | 0.24 | Q | \| | \| | \| | V \| |
| 19+25 | 1.0010 | 0.23 | Q | \| | \| | \| | V \| |
| 19+30 | 1.0026 | 0.23 | Q | \| | \| | \| | V \| |
| 19+35 | 1.0041 | 0.22 | Q | \| | \| | \| | V \| |
| 19+40 | 1.0056 | 0.22 | Q | \| | \| | \| | V \| |
| 19+45 | 1.0071 | 0.21 | Q | \| | \| | \| | V \| |
| 19+50 | 1.0085 | 0.21 | Q | \| | \| | \| | V \| |
| 19+55 | 1.0099 | 0.21 | Q | \| | \| | \| | V \| |
| 20+ 0 | 1.0113 | 0.20 | Q | \| | \| | \| | V \| |
| 20+ 5 | 1.0127 | 0.20 | Q | \| | \| | \| | V \| |
| 20+10 | 1.0140 | 0.20 | Q | \| | \| | \| | V \| |
| 20+15 | 1.0153 | 0.19 | Q | \| | \| | \| | V \| |
| 20+20 | 1.0166 | 0.19 | Q | \| | \| | \| | V \| |
| 20+25 | 1.0179 | 0.19 | Q | \| | \| | \| | V \| |
| 20+30 | 1.0192 | 0.18 | Q | \| | \| | \| | V \| |
| 20+35 | 1.0204 | 0.18 | Q | \| | \| | \| | V \| |
| 20+40 | 1.0216 | 0.18 | Q | \| | \| | \| | V \| |
| 20+45 | 1.0228 | 0.17 | Q | \| | \| | \| | V \| |
| 20+50 | 1.0240 | 0.17 | Q | \| | \| | \| | V \| |
| 20+55 | 1.0252 | 0.17 | Q | \| | \| | \| | V \| |
| 21+ 0 | 1.0263 | 0.17 | Q | \| | \| | \| | V \| |
| 21+ 5 | 1.0275 | 0.16 | Q | \| | \| | \| | V \| |
| 21+10 | 1.0286 | 0.16 | Q | \| | \| | \| | V \| |
| 21+15 | 1.0297 | 0.16 | Q | \| | \| | \| | V \| |
| 21+20 | 1.0308 | 0.16 | Q | \| | \| | \| | V \| |
| 21+25 | 1.0319 | 0.16 | Q | \| | \| | \| | V \| |
| 21+30 | 1.0329 | 0.15 | Q | \| | \| | \| | V \| |
| 21+35 | 1.0340 | 0.15 | Q | \| | \| | \| | V \| |
| 21+40 | 1.0350 | 0.15 | Q | \| | \| | \| | V \| |
| 21+45 | 1.0360 | 0.15 | Q | \| | \| | \| | V \| |
| 21+50 | 1.0370 | 0.15 | Q | \| | \| | \| | V\| |
| 21+55 | 1.0380 | 0.15 | Q | \| | \| | \| | V\| |
| 22+ 0 | 1.0390 | 0.14 | Q | \| | \| | \| | V\| |
| 22+ 5 | 1.0400 | 0.14 | Q | \| | \| | \| | V\| |
| 22+10 | 1.0410 | 0.14 | Q | \| | \| | \| | V\| |
| 22+15 | 1.0419 | 0.14 | Q | \| | \| | \| | V\| |
| 22+20 | 1.0429 | 0.14 | Q | \| | \| | \| | V\| |
| 22+25 | 1.0438 | 0.14 | Q | \| | \| | \| | V\| |
| 22+30 | 1.0447 | 0.13 | Q | \| | \| | \| | V\| |
| 22+35 | 1.0457 | 0.13 | Q | \| | \| | \| | V\| |
| 22+40 | 1.0466 | 0.13 | Q | \| | \| | \| | V\| |
| 22+45 | 1.0475 | 0.13 | Q | \| | \| | \| | V\| |
| 22+50 | 1.0484 | 0.13 | Q | \| | \| | \| | V\| |
| 22+55 | 1.0492 | 0.13 | Q | \| | \| | \| | V\| |
| 23+ 0 | 1.0501 | 0.13 | Q | \| | \| | \| | V\| |
| 23+ 5 | 1.0510 | 0.13 | Q | \| | \| | \| | V\| |
| 23+10 | 1.0518 | 0.12 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+15 | 1.0527 | 0.12 | Q | \| | \| | \| | V\| |
| 23+20 | 1.0535 | 0.12 | Q | \| | \| | \| | V\| |
| 23+25 | 1.0543 | 0.12 | Q | \| | \| | \| | V\| |
| 23+30 | 1.0552 | 0.12 | Q | \| | \| | \| | V\| |
| 23+35 | 1.0560 | 0.12 | Q | \| | \| | \| | V\| |
| 23+40 | 1.0568 | 0.12 | Q | \| | \| | \| | V\| |
| 23+45 | 1.0576 | 0.12 | Q | \| | \| | \| | V\| |
| 23+50 | 1.0584 | 0.12 | Q | \| | \| | \| | V\| |
| 23+55 | 1.0592 | 0.11 | Q | \| | \| | \| | V\| |
| 24+ 0 | 1.0600 | 0.11 | Q | \| | \| | \| | V\| |
| 24+ 5 | 1.0607 | 0.11 | Q | \| | \| | \| | V\| |
| 24+10 | 1.0614 | 0.09 | Q | \| | \| | \| | V\| |
| 24+15 | 1.0618 | 0.06 | Q | \| | \| | \| | V\| |
| 24+20 | 1.0620 | 0.04 | Q | \| | \| | \| | V\| |
| 24+25 | 1.0622 | 0.03 | Q | \| | \| | \| | V\| |
| 24+30 | 1.0624 | 0.02 | Q | \| | \| | \| | V\| |
| 24+35 | 1.0625 | 0.02 | Q | \| | \| | \| | V\| |
| 24+40 | 1.0626 | 0.01 | Q | \| | \| | \| | V\| |
| 24+45 | 1.0627 | 0.01 | Q | \| | \| | \| | V\| |
| 24+50 | 1.0628 | 0.01 | Q | \| | \| | \| | V\| |
| 24+55 | 1.0628 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 0 | 1.0628 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 5 | 1.0629 | 0.00 | Q | \| | \| | \| | V\| |
| 25+10 | 1.0629 | 0.00 | Q | \| | \| | \| | V\| |
| 25+15 | 1.0629 | 0.00 | Q | \| | \| | \| | V\| |
| 25+20 | 1.0629 | 0.00 | Q | \| | \| | \| | V\| |
| 25+25 | 1.0629 | 0.00 | Q | \| | \| | \| | V\| |
| 25+30 | 1.0629 | 0.00 | Q | \| | \| | \| | V\| |
| 25+35 | 1.0629 | 0.00 | Q | \| | \| | \| | V\| |
| 25+40 | 1.0629 | 0.00 | Q | \| | \| | \| | V\| |

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U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 28
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 61.39 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 61.39 | 6 | 1.81 |
| Rainfall data for year 100 | | |
| 61.39 | 24 | 2.53 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 77.1 | 92.3 | 61.39 | 1.000 | 0.150 | 0.905 | 0.136 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.136

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 55.56 | 0.905 | 77.1 | 92.3 | 0.84 | 0.689 |
| 5.83 | 0.095 | 98.0 | 98.0 | 0.20 | 0.909 |

Area-averaged catchment yield fraction, Y = 0.710
Area-averaged low loss fraction, Yb = 0.290
User entry of time of concentration = 0.820 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 61.39(Ac.)
Catchment Lag time = 0.656 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 12.7033
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.136(In/Hr)
Average low loss rate fraction (Yb) = 0.290 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.634(In)
Specified peak 6-hour rainfall = 1.810(In)
Specified peak 24-hour rainfall = 2.530(In)

Rainfall depth area reduction factors:
Using a total area of 61.39(Ac.) (Ref: fig. E-4)

5-minute factor = 0.997 Adjusted rainfall = 0.658(In)
30-minute factor = 0.997 Adjusted rainfall = 1.126(In)
1-hour factor = 0.997 Adjusted rainfall = 1.386(In)
3-hour factor = 1.000 Adjusted rainfall = 1.634(In)
6-hour factor = 1.000 Adjusted rainfall = 1.810(In)
24-hour factor = 1.000 Adjusted rainfall = 2.530(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 742.44 (CFS)) | |
| 1 | 0.559 | 4.151 |
| 2 | 2.202 | 12.196 |
| 3 | 4.877 | 19.864 |
| 4 | 8.647 | 27.987 |
| 5 | 15.101 | 47.917 |
| 6 | 26.035 | 81.177 |
| 7 | 37.764 | 87.079 |
| 8 | 46.963 | 68.300 |
| 9 | 54.130 | 53.213 |
| 10 | 59.630 | 40.829 |
| 11 | 63.906 | 31.751 |
| 12 | 67.461 | 26.394 |
| 13 | 70.599 | 23.293 |

| | | |
|---|---|---|
| 14 | 73.291 | 19.989 |
| 15 | 75.616 | 17.259 |
| 16 | 77.764 | 15.951 |
| 17 | 79.568 | 13.389 |
| 18 | 81.232 | 12.355 |
| 19 | 82.681 | 10.760 |
| 20 | 84.045 | 10.128 |
| 21 | 85.300 | 9.316 |
| 22 | 86.507 | 8.961 |
| 23 | 87.566 | 7.862 |
| 24 | 88.563 | 7.406 |
| 25 | 89.374 | 6.017 |
| 26 | 90.132 | 5.626 |
| 27 | 90.852 | 5.346 |
| 28 | 91.553 | 5.206 |
| 29 | 92.178 | 4.642 |
| 30 | 92.782 | 4.484 |
| 31 | 93.348 | 4.201 |
| 32 | 93.890 | 4.026 |
| 33 | 94.337 | 3.319 |
| 34 | 94.769 | 3.207 |
| 35 | 95.201 | 3.207 |
| 36 | 95.616 | 3.081 |
| 37 | 95.955 | 2.520 |
| 38 | 96.286 | 2.452 |
| 39 | 96.616 | 2.452 |
| 40 | 96.925 | 2.298 |
| 41 | 97.161 | 1.747 |
| 42 | 97.389 | 1.698 |
| 43 | 97.618 | 1.698 |
| 44 | 97.821 | 1.511 |
| 45 | 97.953 | 0.976 |
| 46 | 98.080 | 0.943 |
| 47 | 98.207 | 0.943 |
| 48 | 98.342 | 0.999 |
| 49 | 98.493 | 1.127 |
| 50 | 98.646 | 1.132 |
| 51 | 98.798 | 1.132 |
| 52 | 98.951 | 1.132 |
| 53 | 99.103 | 1.132 |
| 54 | 99.255 | 1.132 |
| 55 | 99.408 | 1.132 |
| 56 | 99.531 | 0.914 |
| 57 | 99.611 | 0.592 |
| 58 | 99.690 | 0.589 |
| 59 | 99.770 | 0.589 |
| 60 | 99.849 | 0.589 |
| 61 | 99.928 | 0.589 |
| 62 | 100.000 | 0.531 |

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| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6577 | 0.6577 |
| 2 | 0.8097 | 0.1520 |
| 3 | 0.9144 | 0.1047 |
| 4 | 0.9968 | 0.0824 |
| 5 | 1.0659 | 0.0690 |
| 6 | 1.1258 | 0.0599 |
| 7 | 1.1791 | 0.0533 |

| | | |
|---|---|---|
| 8 | 1.2273 | 0.0482 |
| 9 | 1.2714 | 0.0441 |
| 10 | 1.3122 | 0.0408 |
| 11 | 1.3503 | 0.0381 |
| 12 | 1.3860 | 0.0357 |
| 13 | 1.4027 | 0.0167 |
| 14 | 1.4183 | 0.0156 |
| 15 | 1.4331 | 0.0147 |
| 16 | 1.4470 | 0.0139 |
| 17 | 1.4602 | 0.0132 |
| 18 | 1.4727 | 0.0125 |
| 19 | 1.4847 | 0.0120 |
| 20 | 1.4961 | 0.0114 |
| 21 | 1.5071 | 0.0110 |
| 22 | 1.5176 | 0.0105 |
| 23 | 1.5277 | 0.0101 |
| 24 | 1.5375 | 0.0098 |
| 25 | 1.5469 | 0.0094 |
| 26 | 1.5560 | 0.0091 |
| 27 | 1.5648 | 0.0088 |
| 28 | 1.5734 | 0.0085 |
| 29 | 1.5816 | 0.0083 |
| 30 | 1.5897 | 0.0080 |
| 31 | 1.5975 | 0.0078 |
| 32 | 1.6051 | 0.0076 |
| 33 | 1.6125 | 0.0074 |
| 34 | 1.6197 | 0.0072 |
| 35 | 1.6268 | 0.0070 |
| 36 | 1.6337 | 0.0069 |
| 37 | 1.6403 | 0.0066 |
| 38 | 1.6468 | 0.0065 |
| 39 | 1.6531 | 0.0063 |
| 40 | 1.6593 | 0.0062 |
| 41 | 1.6653 | 0.0061 |
| 42 | 1.6713 | 0.0059 |
| 43 | 1.6771 | 0.0058 |
| 44 | 1.6828 | 0.0057 |
| 45 | 1.6884 | 0.0056 |
| 46 | 1.6939 | 0.0055 |
| 47 | 1.6992 | 0.0054 |
| 48 | 1.7045 | 0.0053 |
| 49 | 1.7097 | 0.0052 |
| 50 | 1.7148 | 0.0051 |
| 51 | 1.7198 | 0.0050 |
| 52 | 1.7248 | 0.0049 |
| 53 | 1.7296 | 0.0049 |
| 54 | 1.7344 | 0.0048 |
| 55 | 1.7391 | 0.0047 |
| 56 | 1.7438 | 0.0046 |
| 57 | 1.7483 | 0.0046 |
| 58 | 1.7528 | 0.0045 |
| 59 | 1.7572 | 0.0044 |
| 60 | 1.7616 | 0.0044 |
| 61 | 1.7659 | 0.0043 |
| 62 | 1.7701 | 0.0042 |
| 63 | 1.7743 | 0.0042 |
| 64 | 1.7785 | 0.0041 |
| 65 | 1.7825 | 0.0041 |
| 66 | 1.7866 | 0.0040 |

| | | |
|---|---|---|
| 67 | 1.7905 | 0.0040 |
| 68 | 1.7944 | 0.0039 |
| 69 | 1.7983 | 0.0039 |
| 70 | 1.8021 | 0.0038 |
| 71 | 1.8059 | 0.0038 |
| 72 | 1.8097 | 0.0037 |
| 73 | 1.8157 | 0.0060 |
| 74 | 1.8217 | 0.0060 |
| 75 | 1.8276 | 0.0059 |
| 76 | 1.8335 | 0.0059 |
| 77 | 1.8393 | 0.0058 |
| 78 | 1.8450 | 0.0057 |
| 79 | 1.8507 | 0.0057 |
| 80 | 1.8563 | 0.0056 |
| 81 | 1.8619 | 0.0056 |
| 82 | 1.8674 | 0.0055 |
| 83 | 1.8729 | 0.0055 |
| 84 | 1.8783 | 0.0054 |
| 85 | 1.8837 | 0.0054 |
| 86 | 1.8890 | 0.0053 |
| 87 | 1.8943 | 0.0053 |
| 88 | 1.8996 | 0.0052 |
| 89 | 1.9048 | 0.0052 |
| 90 | 1.9099 | 0.0052 |
| 91 | 1.9150 | 0.0051 |
| 92 | 1.9201 | 0.0051 |
| 93 | 1.9251 | 0.0050 |
| 94 | 1.9301 | 0.0050 |
| 95 | 1.9350 | 0.0049 |
| 96 | 1.9399 | 0.0049 |
| 97 | 1.9448 | 0.0049 |
| 98 | 1.9496 | 0.0048 |
| 99 | 1.9544 | 0.0048 |
| 100 | 1.9592 | 0.0048 |
| 101 | 1.9639 | 0.0047 |
| 102 | 1.9686 | 0.0047 |
| 103 | 1.9732 | 0.0046 |
| 104 | 1.9778 | 0.0046 |
| 105 | 1.9824 | 0.0046 |
| 106 | 1.9870 | 0.0045 |
| 107 | 1.9915 | 0.0045 |
| 108 | 1.9959 | 0.0045 |
| 109 | 2.0004 | 0.0045 |
| 110 | 2.0048 | 0.0044 |
| 111 | 2.0092 | 0.0044 |
| 112 | 2.0136 | 0.0044 |
| 113 | 2.0179 | 0.0043 |
| 114 | 2.0222 | 0.0043 |
| 115 | 2.0265 | 0.0043 |
| 116 | 2.0307 | 0.0042 |
| 117 | 2.0349 | 0.0042 |
| 118 | 2.0391 | 0.0042 |
| 119 | 2.0433 | 0.0042 |
| 120 | 2.0474 | 0.0041 |
| 121 | 2.0515 | 0.0041 |
| 122 | 2.0556 | 0.0041 |
| 123 | 2.0597 | 0.0041 |
| 124 | 2.0637 | 0.0040 |
| 125 | 2.0677 | 0.0040 |

| | | |
|---|---|---|
| 126 | 2.0717 | 0.0040 |
| 127 | 2.0757 | 0.0040 |
| 128 | 2.0796 | 0.0039 |
| 129 | 2.0835 | 0.0039 |
| 130 | 2.0874 | 0.0039 |
| 131 | 2.0913 | 0.0039 |
| 132 | 2.0951 | 0.0038 |
| 133 | 2.0989 | 0.0038 |
| 134 | 2.1027 | 0.0038 |
| 135 | 2.1065 | 0.0038 |
| 136 | 2.1103 | 0.0038 |
| 137 | 2.1140 | 0.0037 |
| 138 | 2.1177 | 0.0037 |
| 139 | 2.1214 | 0.0037 |
| 140 | 2.1251 | 0.0037 |
| 141 | 2.1288 | 0.0037 |
| 142 | 2.1324 | 0.0036 |
| 143 | 2.1360 | 0.0036 |
| 144 | 2.1396 | 0.0036 |
| 145 | 2.1432 | 0.0036 |
| 146 | 2.1468 | 0.0036 |
| 147 | 2.1503 | 0.0035 |
| 148 | 2.1539 | 0.0035 |
| 149 | 2.1574 | 0.0035 |
| 150 | 2.1609 | 0.0035 |
| 151 | 2.1643 | 0.0035 |
| 152 | 2.1678 | 0.0035 |
| 153 | 2.1712 | 0.0034 |
| 154 | 2.1746 | 0.0034 |
| 155 | 2.1780 | 0.0034 |
| 156 | 2.1814 | 0.0034 |
| 157 | 2.1848 | 0.0034 |
| 158 | 2.1882 | 0.0034 |
| 159 | 2.1915 | 0.0033 |
| 160 | 2.1948 | 0.0033 |
| 161 | 2.1981 | 0.0033 |
| 162 | 2.2014 | 0.0033 |
| 163 | 2.2047 | 0.0033 |
| 164 | 2.2080 | 0.0033 |
| 165 | 2.2112 | 0.0032 |
| 166 | 2.2144 | 0.0032 |
| 167 | 2.2176 | 0.0032 |
| 168 | 2.2209 | 0.0032 |
| 169 | 2.2240 | 0.0032 |
| 170 | 2.2272 | 0.0032 |
| 171 | 2.2304 | 0.0032 |
| 172 | 2.2335 | 0.0031 |
| 173 | 2.2366 | 0.0031 |
| 174 | 2.2398 | 0.0031 |
| 175 | 2.2429 | 0.0031 |
| 176 | 2.2460 | 0.0031 |
| 177 | 2.2490 | 0.0031 |
| 178 | 2.2521 | 0.0031 |
| 179 | 2.2552 | 0.0031 |
| 180 | 2.2582 | 0.0030 |
| 181 | 2.2612 | 0.0030 |
| 182 | 2.2642 | 0.0030 |
| 183 | 2.2672 | 0.0030 |
| 184 | 2.2702 | 0.0030 |

| | | |
|---|---|---|
| 185 | 2.2732 | 0.0030 |
| 186 | 2.2762 | 0.0030 |
| 187 | 2.2791 | 0.0030 |
| 188 | 2.2820 | 0.0029 |
| 189 | 2.2850 | 0.0029 |
| 190 | 2.2879 | 0.0029 |
| 191 | 2.2908 | 0.0029 |
| 192 | 2.2937 | 0.0029 |
| 193 | 2.2966 | 0.0029 |
| 194 | 2.2994 | 0.0029 |
| 195 | 2.3023 | 0.0029 |
| 196 | 2.3051 | 0.0028 |
| 197 | 2.3080 | 0.0028 |
| 198 | 2.3108 | 0.0028 |
| 199 | 2.3136 | 0.0028 |
| 200 | 2.3164 | 0.0028 |
| 201 | 2.3192 | 0.0028 |
| 202 | 2.3220 | 0.0028 |
| 203 | 2.3248 | 0.0028 |
| 204 | 2.3275 | 0.0028 |
| 205 | 2.3303 | 0.0028 |
| 206 | 2.3330 | 0.0027 |
| 207 | 2.3358 | 0.0027 |
| 208 | 2.3385 | 0.0027 |
| 209 | 2.3412 | 0.0027 |
| 210 | 2.3439 | 0.0027 |
| 211 | 2.3466 | 0.0027 |
| 212 | 2.3493 | 0.0027 |
| 213 | 2.3519 | 0.0027 |
| 214 | 2.3546 | 0.0027 |
| 215 | 2.3573 | 0.0027 |
| 216 | 2.3599 | 0.0026 |
| 217 | 2.3625 | 0.0026 |
| 218 | 2.3652 | 0.0026 |
| 219 | 2.3678 | 0.0026 |
| 220 | 2.3704 | 0.0026 |
| 221 | 2.3730 | 0.0026 |
| 222 | 2.3756 | 0.0026 |
| 223 | 2.3782 | 0.0026 |
| 224 | 2.3807 | 0.0026 |
| 225 | 2.3833 | 0.0026 |
| 226 | 2.3859 | 0.0026 |
| 227 | 2.3884 | 0.0025 |
| 228 | 2.3909 | 0.0025 |
| 229 | 2.3935 | 0.0025 |
| 230 | 2.3960 | 0.0025 |
| 231 | 2.3985 | 0.0025 |
| 232 | 2.4010 | 0.0025 |
| 233 | 2.4035 | 0.0025 |
| 234 | 2.4060 | 0.0025 |
| 235 | 2.4085 | 0.0025 |
| 236 | 2.4110 | 0.0025 |
| 237 | 2.4134 | 0.0025 |
| 238 | 2.4159 | 0.0025 |
| 239 | 2.4183 | 0.0024 |
| 240 | 2.4208 | 0.0024 |
| 241 | 2.4232 | 0.0024 |
| 242 | 2.4256 | 0.0024 |
| 243 | 2.4280 | 0.0024 |

| | | |
|---|---|---|
| 244 | 2.4305 | 0.0024 |
| 245 | 2.4329 | 0.0024 |
| 246 | 2.4353 | 0.0024 |
| 247 | 2.4376 | 0.0024 |
| 248 | 2.4400 | 0.0024 |
| 249 | 2.4424 | 0.0024 |
| 250 | 2.4448 | 0.0024 |
| 251 | 2.4471 | 0.0024 |
| 252 | 2.4495 | 0.0024 |
| 253 | 2.4518 | 0.0023 |
| 254 | 2.4542 | 0.0023 |
| 255 | 2.4565 | 0.0023 |
| 256 | 2.4588 | 0.0023 |
| 257 | 2.4611 | 0.0023 |
| 258 | 2.4634 | 0.0023 |
| 259 | 2.4657 | 0.0023 |
| 260 | 2.4680 | 0.0023 |
| 261 | 2.4703 | 0.0023 |
| 262 | 2.4726 | 0.0023 |
| 263 | 2.4749 | 0.0023 |
| 264 | 2.4772 | 0.0023 |
| 265 | 2.4794 | 0.0023 |
| 266 | 2.4817 | 0.0023 |
| 267 | 2.4839 | 0.0023 |
| 268 | 2.4862 | 0.0022 |
| 269 | 2.4884 | 0.0022 |
| 270 | 2.4907 | 0.0022 |
| 271 | 2.4929 | 0.0022 |
| 272 | 2.4951 | 0.0022 |
| 273 | 2.4973 | 0.0022 |
| 274 | 2.4995 | 0.0022 |
| 275 | 2.5017 | 0.0022 |
| 276 | 2.5039 | 0.0022 |
| 277 | 2.5061 | 0.0022 |
| 278 | 2.5083 | 0.0022 |
| 279 | 2.5105 | 0.0022 |
| 280 | 2.5126 | 0.0022 |
| 281 | 2.5148 | 0.0022 |
| 282 | 2.5170 | 0.0022 |
| 283 | 2.5191 | 0.0022 |
| 284 | 2.5213 | 0.0021 |
| 285 | 2.5234 | 0.0021 |
| 286 | 2.5255 | 0.0021 |
| 287 | 2.5277 | 0.0021 |
| 288 | 2.5298 | 0.0021 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0021 | 0.0006 | 0.0015 |
| 2 | 0.0021 | 0.0006 | 0.0015 |
| 3 | 0.0021 | 0.0006 | 0.0015 |
| 4 | 0.0021 | 0.0006 | 0.0015 |
| 5 | 0.0022 | 0.0006 | 0.0015 |
| 6 | 0.0022 | 0.0006 | 0.0015 |
| 7 | 0.0022 | 0.0006 | 0.0015 |
| 8 | 0.0022 | 0.0006 | 0.0016 |
| 9 | 0.0022 | 0.0006 | 0.0016 |

| | | | |
|---|---|---|---|
| 10 | 0.0022 | 0.0006 | 0.0016 |
| 11 | 0.0022 | 0.0006 | 0.0016 |
| 12 | 0.0022 | 0.0006 | 0.0016 |
| 13 | 0.0022 | 0.0006 | 0.0016 |
| 14 | 0.0022 | 0.0006 | 0.0016 |
| 15 | 0.0023 | 0.0007 | 0.0016 |
| 16 | 0.0023 | 0.0007 | 0.0016 |
| 17 | 0.0023 | 0.0007 | 0.0016 |
| 18 | 0.0023 | 0.0007 | 0.0016 |
| 19 | 0.0023 | 0.0007 | 0.0016 |
| 20 | 0.0023 | 0.0007 | 0.0016 |
| 21 | 0.0023 | 0.0007 | 0.0016 |
| 22 | 0.0023 | 0.0007 | 0.0016 |
| 23 | 0.0023 | 0.0007 | 0.0017 |
| 24 | 0.0023 | 0.0007 | 0.0017 |
| 25 | 0.0024 | 0.0007 | 0.0017 |
| 26 | 0.0024 | 0.0007 | 0.0017 |
| 27 | 0.0024 | 0.0007 | 0.0017 |
| 28 | 0.0024 | 0.0007 | 0.0017 |
| 29 | 0.0024 | 0.0007 | 0.0017 |
| 30 | 0.0024 | 0.0007 | 0.0017 |
| 31 | 0.0024 | 0.0007 | 0.0017 |
| 32 | 0.0024 | 0.0007 | 0.0017 |
| 33 | 0.0024 | 0.0007 | 0.0017 |
| 34 | 0.0024 | 0.0007 | 0.0017 |
| 35 | 0.0025 | 0.0007 | 0.0017 |
| 36 | 0.0025 | 0.0007 | 0.0018 |
| 37 | 0.0025 | 0.0007 | 0.0018 |
| 38 | 0.0025 | 0.0007 | 0.0018 |
| 39 | 0.0025 | 0.0007 | 0.0018 |
| 40 | 0.0025 | 0.0007 | 0.0018 |
| 41 | 0.0025 | 0.0007 | 0.0018 |
| 42 | 0.0025 | 0.0007 | 0.0018 |
| 43 | 0.0026 | 0.0007 | 0.0018 |
| 44 | 0.0026 | 0.0007 | 0.0018 |
| 45 | 0.0026 | 0.0008 | 0.0018 |
| 46 | 0.0026 | 0.0008 | 0.0018 |
| 47 | 0.0026 | 0.0008 | 0.0019 |
| 48 | 0.0026 | 0.0008 | 0.0019 |
| 49 | 0.0026 | 0.0008 | 0.0019 |
| 50 | 0.0027 | 0.0008 | 0.0019 |
| 51 | 0.0027 | 0.0008 | 0.0019 |
| 52 | 0.0027 | 0.0008 | 0.0019 |
| 53 | 0.0027 | 0.0008 | 0.0019 |
| 54 | 0.0027 | 0.0008 | 0.0019 |
| 55 | 0.0027 | 0.0008 | 0.0019 |
| 56 | 0.0027 | 0.0008 | 0.0019 |
| 57 | 0.0028 | 0.0008 | 0.0020 |
| 58 | 0.0028 | 0.0008 | 0.0020 |
| 59 | 0.0028 | 0.0008 | 0.0020 |
| 60 | 0.0028 | 0.0008 | 0.0020 |
| 61 | 0.0028 | 0.0008 | 0.0020 |
| 62 | 0.0028 | 0.0008 | 0.0020 |
| 63 | 0.0029 | 0.0008 | 0.0020 |
| 64 | 0.0029 | 0.0008 | 0.0020 |
| 65 | 0.0029 | 0.0008 | 0.0021 |
| 66 | 0.0029 | 0.0008 | 0.0021 |
| 67 | 0.0029 | 0.0008 | 0.0021 |
| 68 | 0.0029 | 0.0009 | 0.0021 |

| | | | |
|---|---|---|---|
| 69 | 0.0030 | 0.0009 | 0.0021 |
| 70 | 0.0030 | 0.0009 | 0.0021 |
| 71 | 0.0030 | 0.0009 | 0.0021 |
| 72 | 0.0030 | 0.0009 | 0.0021 |
| 73 | 0.0030 | 0.0009 | 0.0022 |
| 74 | 0.0031 | 0.0009 | 0.0022 |
| 75 | 0.0031 | 0.0009 | 0.0022 |
| 76 | 0.0031 | 0.0009 | 0.0022 |
| 77 | 0.0031 | 0.0009 | 0.0022 |
| 78 | 0.0031 | 0.0009 | 0.0022 |
| 79 | 0.0032 | 0.0009 | 0.0022 |
| 80 | 0.0032 | 0.0009 | 0.0023 |
| 81 | 0.0032 | 0.0009 | 0.0023 |
| 82 | 0.0032 | 0.0009 | 0.0023 |
| 83 | 0.0032 | 0.0009 | 0.0023 |
| 84 | 0.0033 | 0.0009 | 0.0023 |
| 85 | 0.0033 | 0.0010 | 0.0023 |
| 86 | 0.0033 | 0.0010 | 0.0023 |
| 87 | 0.0033 | 0.0010 | 0.0024 |
| 88 | 0.0034 | 0.0010 | 0.0024 |
| 89 | 0.0034 | 0.0010 | 0.0024 |
| 90 | 0.0034 | 0.0010 | 0.0024 |
| 91 | 0.0034 | 0.0010 | 0.0024 |
| 92 | 0.0035 | 0.0010 | 0.0025 |
| 93 | 0.0035 | 0.0010 | 0.0025 |
| 94 | 0.0035 | 0.0010 | 0.0025 |
| 95 | 0.0035 | 0.0010 | 0.0025 |
| 96 | 0.0036 | 0.0010 | 0.0025 |
| 97 | 0.0036 | 0.0010 | 0.0026 |
| 98 | 0.0036 | 0.0010 | 0.0026 |
| 99 | 0.0037 | 0.0011 | 0.0026 |
| 100 | 0.0037 | 0.0011 | 0.0026 |
| 101 | 0.0037 | 0.0011 | 0.0026 |
| 102 | 0.0037 | 0.0011 | 0.0027 |
| 103 | 0.0038 | 0.0011 | 0.0027 |
| 104 | 0.0038 | 0.0011 | 0.0027 |
| 105 | 0.0038 | 0.0011 | 0.0027 |
| 106 | 0.0039 | 0.0011 | 0.0027 |
| 107 | 0.0039 | 0.0011 | 0.0028 |
| 108 | 0.0039 | 0.0011 | 0.0028 |
| 109 | 0.0040 | 0.0012 | 0.0028 |
| 110 | 0.0040 | 0.0012 | 0.0028 |
| 111 | 0.0041 | 0.0012 | 0.0029 |
| 112 | 0.0041 | 0.0012 | 0.0029 |
| 113 | 0.0041 | 0.0012 | 0.0029 |
| 114 | 0.0042 | 0.0012 | 0.0030 |
| 115 | 0.0042 | 0.0012 | 0.0030 |
| 116 | 0.0042 | 0.0012 | 0.0030 |
| 117 | 0.0043 | 0.0012 | 0.0031 |
| 118 | 0.0043 | 0.0013 | 0.0031 |
| 119 | 0.0044 | 0.0013 | 0.0031 |
| 120 | 0.0044 | 0.0013 | 0.0031 |
| 121 | 0.0045 | 0.0013 | 0.0032 |
| 122 | 0.0045 | 0.0013 | 0.0032 |
| 123 | 0.0046 | 0.0013 | 0.0033 |
| 124 | 0.0046 | 0.0013 | 0.0033 |
| 125 | 0.0047 | 0.0014 | 0.0033 |
| 126 | 0.0047 | 0.0014 | 0.0033 |
| 127 | 0.0048 | 0.0014 | 0.0034 |

| | | | |
|---|---|---|---|
| 128 | 0.0048 | 0.0014 | 0.0034 |
| 129 | 0.0049 | 0.0014 | 0.0035 |
| 130 | 0.0049 | 0.0014 | 0.0035 |
| 131 | 0.0050 | 0.0015 | 0.0036 |
| 132 | 0.0051 | 0.0015 | 0.0036 |
| 133 | 0.0052 | 0.0015 | 0.0037 |
| 134 | 0.0052 | 0.0015 | 0.0037 |
| 135 | 0.0053 | 0.0015 | 0.0038 |
| 136 | 0.0053 | 0.0015 | 0.0038 |
| 137 | 0.0054 | 0.0016 | 0.0039 |
| 138 | 0.0055 | 0.0016 | 0.0039 |
| 139 | 0.0056 | 0.0016 | 0.0040 |
| 140 | 0.0056 | 0.0016 | 0.0040 |
| 141 | 0.0057 | 0.0017 | 0.0041 |
| 142 | 0.0058 | 0.0017 | 0.0041 |
| 143 | 0.0059 | 0.0017 | 0.0042 |
| 144 | 0.0060 | 0.0017 | 0.0042 |
| 145 | 0.0037 | 0.0011 | 0.0026 |
| 146 | 0.0038 | 0.0011 | 0.0027 |
| 147 | 0.0039 | 0.0011 | 0.0027 |
| 148 | 0.0039 | 0.0011 | 0.0028 |
| 149 | 0.0040 | 0.0012 | 0.0029 |
| 150 | 0.0041 | 0.0012 | 0.0029 |
| 151 | 0.0042 | 0.0012 | 0.0030 |
| 152 | 0.0042 | 0.0012 | 0.0030 |
| 153 | 0.0044 | 0.0013 | 0.0031 |
| 154 | 0.0044 | 0.0013 | 0.0031 |
| 155 | 0.0046 | 0.0013 | 0.0032 |
| 156 | 0.0046 | 0.0013 | 0.0033 |
| 157 | 0.0048 | 0.0014 | 0.0034 |
| 158 | 0.0049 | 0.0014 | 0.0034 |
| 159 | 0.0050 | 0.0015 | 0.0036 |
| 160 | 0.0051 | 0.0015 | 0.0036 |
| 161 | 0.0053 | 0.0015 | 0.0038 |
| 162 | 0.0054 | 0.0016 | 0.0038 |
| 163 | 0.0056 | 0.0016 | 0.0040 |
| 164 | 0.0057 | 0.0017 | 0.0040 |
| 165 | 0.0059 | 0.0017 | 0.0042 |
| 166 | 0.0061 | 0.0018 | 0.0043 |
| 167 | 0.0063 | 0.0018 | 0.0045 |
| 168 | 0.0065 | 0.0019 | 0.0046 |
| 169 | 0.0069 | 0.0020 | 0.0049 |
| 170 | 0.0070 | 0.0020 | 0.0050 |
| 171 | 0.0074 | 0.0021 | 0.0053 |
| 172 | 0.0076 | 0.0022 | 0.0054 |
| 173 | 0.0080 | 0.0023 | 0.0057 |
| 174 | 0.0083 | 0.0024 | 0.0059 |
| 175 | 0.0088 | 0.0026 | 0.0063 |
| 176 | 0.0091 | 0.0026 | 0.0065 |
| 177 | 0.0098 | 0.0028 | 0.0069 |
| 178 | 0.0101 | 0.0029 | 0.0072 |
| 179 | 0.0110 | 0.0032 | 0.0078 |
| 180 | 0.0114 | 0.0033 | 0.0081 |
| 181 | 0.0125 | 0.0036 | 0.0089 |
| 182 | 0.0132 | 0.0038 | 0.0094 |
| 183 | 0.0147 | 0.0043 | 0.0104 |
| 184 | 0.0156 | 0.0045 | 0.0111 |
| 185 | 0.0357 | 0.0104 | 0.0254 |
| 186 | 0.0381 | 0.0110 | 0.0270 |

| | | | |
|---|---|---|---|
| 187 | 0.0441 | 0.0113 | 0.0328 |
| 188 | 0.0482 | 0.0113 | 0.0369 |
| 189 | 0.0599 | 0.0113 | 0.0486 |
| 190 | 0.0690 | 0.0113 | 0.0577 |
| 191 | 0.1047 | 0.0113 | 0.0934 |
| 192 | 0.1520 | 0.0113 | 0.1407 |
| 193 | 0.6577 | 0.0113 | 0.6463 |
| 194 | 0.0824 | 0.0113 | 0.0711 |
| 195 | 0.0533 | 0.0113 | 0.0420 |
| 196 | 0.0408 | 0.0113 | 0.0295 |
| 197 | 0.0167 | 0.0048 | 0.0119 |
| 198 | 0.0139 | 0.0040 | 0.0099 |
| 199 | 0.0120 | 0.0035 | 0.0085 |
| 200 | 0.0105 | 0.0031 | 0.0075 |
| 201 | 0.0094 | 0.0027 | 0.0067 |
| 202 | 0.0085 | 0.0025 | 0.0061 |
| 203 | 0.0078 | 0.0023 | 0.0056 |
| 204 | 0.0072 | 0.0021 | 0.0051 |
| 205 | 0.0066 | 0.0019 | 0.0047 |
| 206 | 0.0062 | 0.0018 | 0.0044 |
| 207 | 0.0058 | 0.0017 | 0.0041 |
| 208 | 0.0055 | 0.0016 | 0.0039 |
| 209 | 0.0052 | 0.0015 | 0.0037 |
| 210 | 0.0049 | 0.0014 | 0.0035 |
| 211 | 0.0047 | 0.0014 | 0.0033 |
| 212 | 0.0045 | 0.0013 | 0.0032 |
| 213 | 0.0043 | 0.0012 | 0.0031 |
| 214 | 0.0041 | 0.0012 | 0.0029 |
| 215 | 0.0040 | 0.0012 | 0.0028 |
| 216 | 0.0038 | 0.0011 | 0.0027 |
| 217 | 0.0060 | 0.0018 | 0.0043 |
| 218 | 0.0059 | 0.0017 | 0.0042 |
| 219 | 0.0057 | 0.0017 | 0.0040 |
| 220 | 0.0055 | 0.0016 | 0.0039 |
| 221 | 0.0054 | 0.0016 | 0.0038 |
| 222 | 0.0052 | 0.0015 | 0.0037 |
| 223 | 0.0051 | 0.0015 | 0.0036 |
| 224 | 0.0050 | 0.0014 | 0.0035 |
| 225 | 0.0049 | 0.0014 | 0.0035 |
| 226 | 0.0048 | 0.0014 | 0.0034 |
| 227 | 0.0046 | 0.0013 | 0.0033 |
| 228 | 0.0045 | 0.0013 | 0.0032 |
| 229 | 0.0045 | 0.0013 | 0.0032 |
| 230 | 0.0044 | 0.0013 | 0.0031 |
| 231 | 0.0043 | 0.0012 | 0.0030 |
| 232 | 0.0042 | 0.0012 | 0.0030 |
| 233 | 0.0041 | 0.0012 | 0.0029 |
| 234 | 0.0040 | 0.0012 | 0.0029 |
| 235 | 0.0040 | 0.0011 | 0.0028 |
| 236 | 0.0039 | 0.0011 | 0.0028 |
| 237 | 0.0038 | 0.0011 | 0.0027 |
| 238 | 0.0038 | 0.0011 | 0.0027 |
| 239 | 0.0037 | 0.0011 | 0.0026 |
| 240 | 0.0036 | 0.0011 | 0.0026 |
| 241 | 0.0036 | 0.0010 | 0.0025 |
| 242 | 0.0035 | 0.0010 | 0.0025 |
| 243 | 0.0035 | 0.0010 | 0.0025 |
| 244 | 0.0034 | 0.0010 | 0.0024 |
| 245 | 0.0034 | 0.0010 | 0.0024 |

| | | | |
|---|---|---|---|
| 246 | 0.0033 | 0.0010 | 0.0024 |
| 247 | 0.0033 | 0.0010 | 0.0023 |
| 248 | 0.0032 | 0.0009 | 0.0023 |
| 249 | 0.0032 | 0.0009 | 0.0023 |
| 250 | 0.0031 | 0.0009 | 0.0022 |
| 251 | 0.0031 | 0.0009 | 0.0022 |
| 252 | 0.0031 | 0.0009 | 0.0022 |
| 253 | 0.0030 | 0.0009 | 0.0021 |
| 254 | 0.0030 | 0.0009 | 0.0021 |
| 255 | 0.0030 | 0.0009 | 0.0021 |
| 256 | 0.0029 | 0.0008 | 0.0021 |
| 257 | 0.0029 | 0.0008 | 0.0020 |
| 258 | 0.0028 | 0.0008 | 0.0020 |
| 259 | 0.0028 | 0.0008 | 0.0020 |
| 260 | 0.0028 | 0.0008 | 0.0020 |
| 261 | 0.0028 | 0.0008 | 0.0020 |
| 262 | 0.0027 | 0.0008 | 0.0019 |
| 263 | 0.0027 | 0.0008 | 0.0019 |
| 264 | 0.0027 | 0.0008 | 0.0019 |
| 265 | 0.0026 | 0.0008 | 0.0019 |
| 266 | 0.0026 | 0.0008 | 0.0019 |
| 267 | 0.0026 | 0.0007 | 0.0018 |
| 268 | 0.0026 | 0.0007 | 0.0018 |
| 269 | 0.0025 | 0.0007 | 0.0018 |
| 270 | 0.0025 | 0.0007 | 0.0018 |
| 271 | 0.0025 | 0.0007 | 0.0018 |
| 272 | 0.0025 | 0.0007 | 0.0017 |
| 273 | 0.0024 | 0.0007 | 0.0017 |
| 274 | 0.0024 | 0.0007 | 0.0017 |
| 275 | 0.0024 | 0.0007 | 0.0017 |
| 276 | 0.0024 | 0.0007 | 0.0017 |
| 277 | 0.0023 | 0.0007 | 0.0017 |
| 278 | 0.0023 | 0.0007 | 0.0017 |
| 279 | 0.0023 | 0.0007 | 0.0016 |
| 280 | 0.0023 | 0.0007 | 0.0016 |
| 281 | 0.0023 | 0.0007 | 0.0016 |
| 282 | 0.0022 | 0.0007 | 0.0016 |
| 283 | 0.0022 | 0.0006 | 0.0016 |
| 284 | 0.0022 | 0.0006 | 0.0016 |
| 285 | 0.0022 | 0.0006 | 0.0016 |
| 286 | 0.0022 | 0.0006 | 0.0015 |
| 287 | 0.0022 | 0.0006 | 0.0015 |
| 288 | 0.0021 | 0.0006 | 0.0015 |

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Total soil rain loss = 0.47(In)
Total effective rainfall = 2.06(In)
Peak flow rate in flood hydrograph = 87.71(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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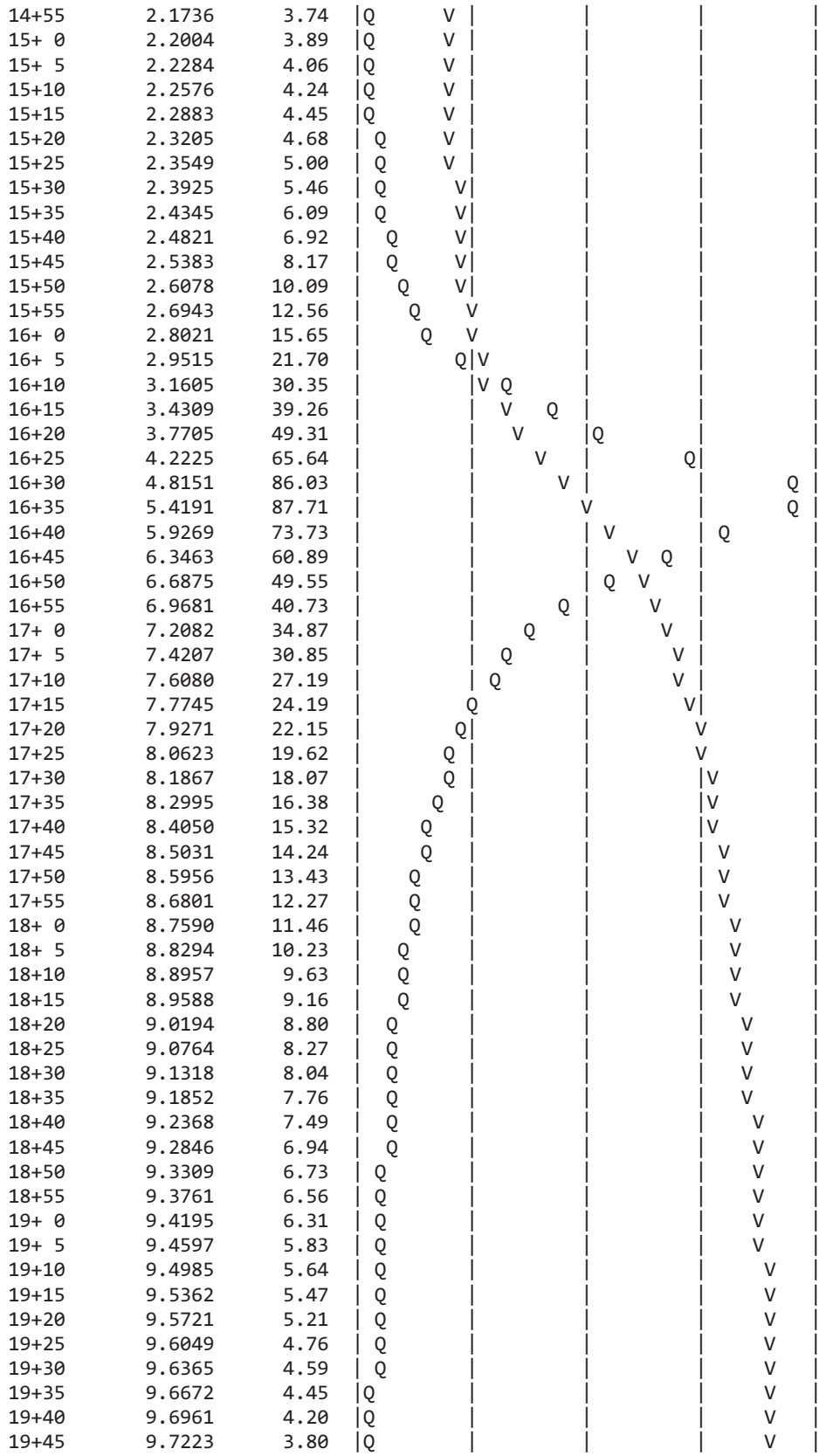
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 22.5 | 45.0 | 67.5 | 90.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.01 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+10 | 0.0002 | 0.02 | Q | | | | |
| 0+15 | 0.0006 | 0.05 | Q | | | | |
| 0+20 | 0.0013 | 0.10 | Q | | | | |
| 0+25 | 0.0024 | 0.17 | Q | | | | |
| 0+30 | 0.0044 | 0.29 | Q | | | | |
| 0+35 | 0.0074 | 0.43 | Q | | | | |
| 0+40 | 0.0110 | 0.53 | Q | | | | |
| 0+45 | 0.0152 | 0.61 | Q | | | | |
| 0+50 | 0.0199 | 0.68 | Q | | | | |
| 0+55 | 0.0249 | 0.73 | Q | | | | |
| 1+ 0 | 0.0302 | 0.77 | Q | | | | |
| 1+ 5 | 0.0358 | 0.81 | Q | | | | |
| 1+10 | 0.0416 | 0.84 | Q | | | | |
| 1+15 | 0.0476 | 0.87 | Q | | | | |
| 1+20 | 0.0538 | 0.90 | Q | | | | |
| 1+25 | 0.0601 | 0.92 | Q | | | | |
| 1+30 | 0.0666 | 0.95 | Q | | | | |
| 1+35 | 0.0733 | 0.97 | Q | | | | |
| 1+40 | 0.0801 | 0.98 | Q | | | | |
| 1+45 | 0.0870 | 1.00 | Q | | | | |
| 1+50 | 0.0940 | 1.02 | Q | | | | |
| 1+55 | 0.1011 | 1.04 | Q | | | | |
| 2+ 0 | 0.1084 | 1.05 | Q | | | | |
| 2+ 5 | 0.1157 | 1.07 | Q | | | | |
| 2+10 | 0.1231 | 1.08 | Q | | | | |
| 2+15 | 0.1307 | 1.09 | Q | | | | |
| 2+20 | 0.1383 | 1.10 | Q | | | | |
| 2+25 | 0.1460 | 1.12 | Q | | | | |
| 2+30 | 0.1537 | 1.13 | Q | | | | |
| 2+35 | 0.1616 | 1.14 | Q | | | | |
| 2+40 | 0.1695 | 1.15 | Q | | | | |
| 2+45 | 0.1775 | 1.16 | Q | | | | |
| 2+50 | 0.1856 | 1.17 | Q | | | | |
| 2+55 | 0.1937 | 1.18 | Q | | | | |
| 3+ 0 | 0.2019 | 1.19 | Q | | | | |
| 3+ 5 | 0.2101 | 1.20 | Q | | | | |
| 3+10 | 0.2185 | 1.21 | Q | | | | |
| 3+15 | 0.2269 | 1.22 | Q | | | | |
| 3+20 | 0.2353 | 1.23 | Q | | | | |
| 3+25 | 0.2438 | 1.24 | Q | | | | |
| 3+30 | 0.2524 | 1.24 | Q | | | | |
| 3+35 | 0.2610 | 1.25 | Q | | | | |
| 3+40 | 0.2697 | 1.26 | QV | | | | |
| 3+45 | 0.2785 | 1.27 | QV | | | | |
| 3+50 | 0.2873 | 1.28 | QV | | | | |
| 3+55 | 0.2961 | 1.28 | QV | | | | |
| 4+ 0 | 0.3050 | 1.29 | QV | | | | |
| 4+ 5 | 0.3139 | 1.30 | QV | | | | |
| 4+10 | 0.3229 | 1.31 | QV | | | | |
| 4+15 | 0.3320 | 1.32 | QV | | | | |
| 4+20 | 0.3411 | 1.32 | QV | | | | |
| 4+25 | 0.3503 | 1.33 | QV | | | | |
| 4+30 | 0.3595 | 1.34 | QV | | | | |
| 4+35 | 0.3688 | 1.35 | QV | | | | |
| 4+40 | 0.3782 | 1.36 | QV | | | | |
| 4+45 | 0.3876 | 1.37 | QV | | | | |
| 4+50 | 0.3971 | 1.37 | QV | | | | |
| 4+55 | 0.4066 | 1.38 | QV | | | | |
| 5+ 0 | 0.4162 | 1.39 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+ 5 | 0.4258 | 1.40 | QV | \| | \| | \| | \| |
| 5+10 | 0.4355 | 1.41 | QV | \| | \| | \| | \| |
| 5+15 | 0.4452 | 1.41 | QV | \| | \| | \| | \| |
| 5+20 | 0.4550 | 1.42 | QV | \| | \| | \| | \| |
| 5+25 | 0.4649 | 1.43 | QV | \| | \| | \| | \| |
| 5+30 | 0.4748 | 1.44 | QV | \| | \| | \| | \| |
| 5+35 | 0.4847 | 1.45 | QV | \| | \| | \| | \| |
| 5+40 | 0.4947 | 1.45 | QV | \| | \| | \| | \| |
| 5+45 | 0.5048 | 1.46 | QV | \| | \| | \| | \| |
| 5+50 | 0.5149 | 1.47 | QV | \| | \| | \| | \| |
| 5+55 | 0.5251 | 1.48 | QV | \| | \| | \| | \| |
| 6+ 0 | 0.5354 | 1.49 | Q V | \| | \| | \| | \| |
| 6+ 5 | 0.5457 | 1.50 | Q V | \| | \| | \| | \| |
| 6+10 | 0.5560 | 1.50 | Q V | \| | \| | \| | \| |
| 6+15 | 0.5665 | 1.51 | Q V | \| | \| | \| | \| |
| 6+20 | 0.5770 | 1.52 | Q V | \| | \| | \| | \| |
| 6+25 | 0.5875 | 1.53 | Q V | \| | \| | \| | \| |
| 6+30 | 0.5981 | 1.54 | Q V | \| | \| | \| | \| |
| 6+35 | 0.6088 | 1.55 | Q V | \| | \| | \| | \| |
| 6+40 | 0.6195 | 1.56 | Q V | \| | \| | \| | \| |
| 6+45 | 0.6304 | 1.57 | Q V | \| | \| | \| | \| |
| 6+50 | 0.6412 | 1.58 | Q V | \| | \| | \| | \| |
| 6+55 | 0.6522 | 1.59 | Q V | \| | \| | \| | \| |
| 7+ 0 | 0.6632 | 1.60 | Q V | \| | \| | \| | \| |
| 7+ 5 | 0.6743 | 1.61 | Q V | \| | \| | \| | \| |
| 7+10 | 0.6854 | 1.62 | Q V | \| | \| | \| | \| |
| 7+15 | 0.6967 | 1.63 | Q V | \| | \| | \| | \| |
| 7+20 | 0.7080 | 1.64 | Q V | \| | \| | \| | \| |
| 7+25 | 0.7194 | 1.65 | Q V | \| | \| | \| | \| |
| 7+30 | 0.7308 | 1.66 | Q V | \| | \| | \| | \| |
| 7+35 | 0.7423 | 1.67 | Q V | \| | \| | \| | \| |
| 7+40 | 0.7540 | 1.69 | Q V | \| | \| | \| | \| |
| 7+45 | 0.7656 | 1.70 | Q V | \| | \| | \| | \| |
| 7+50 | 0.7774 | 1.71 | Q V | \| | \| | \| | \| |
| 7+55 | 0.7893 | 1.72 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.8012 | 1.73 | Q  V | \| | \| | \| | \| |
| 8+ 5 | 0.8132 | 1.75 | Q  V | \| | \| | \| | \| |
| 8+10 | 0.8254 | 1.76 | Q  V | \| | \| | \| | \| |
| 8+15 | 0.8376 | 1.77 | Q  V | \| | \| | \| | \| |
| 8+20 | 0.8498 | 1.78 | Q  V | \| | \| | \| | \| |
| 8+25 | 0.8622 | 1.80 | Q  V | \| | \| | \| | \| |
| 8+30 | 0.8747 | 1.81 | Q  V | \| | \| | \| | \| |
| 8+35 | 0.8873 | 1.82 | Q  V | \| | \| | \| | \| |
| 8+40 | 0.8999 | 1.84 | Q  V | \| | \| | \| | \| |
| 8+45 | 0.9127 | 1.85 | Q  V | \| | \| | \| | \| |
| 8+50 | 0.9255 | 1.87 | Q  V | \| | \| | \| | \| |
| 8+55 | 0.9385 | 1.88 | Q  V | \| | \| | \| | \| |
| 9+ 0 | 0.9516 | 1.90 | Q  V | \| | \| | \| | \| |
| 9+ 5 | 0.9647 | 1.91 | Q  V | \| | \| | \| | \| |
| 9+10 | 0.9780 | 1.93 | Q  V | \| | \| | \| | \| |
| 9+15 | 0.9914 | 1.94 | Q  V | \| | \| | \| | \| |
| 9+20 | 1.0049 | 1.96 | Q  V | \| | \| | \| | \| |
| 9+25 | 1.0185 | 1.98 | Q  V | \| | \| | \| | \| |
| 9+30 | 1.0322 | 1.99 | Q  V | \| | \| | \| | \| |
| 9+35 | 1.0461 | 2.01 | Q  V | \| | \| | \| | \| |
| 9+40 | 1.0601 | 2.03 | Q   V | \| | \| | \| | \| |
| 9+45 | 1.0742 | 2.05 | Q   V | \| | \| | \| | \| |
| 9+50 | 1.0884 | 2.06 | Q   V | \| | \| | \| | \| |
| 9+55 | 1.1027 | 2.08 | Q   V | \| | \| | \| | \| |

```
10+ 0       1.1172      2.10  Q   V     |          |          |          |
10+ 5       1.1318      2.12  Q   V     |          |          |          |
10+10       1.1465      2.14  Q   V     |          |          |          |
10+15       1.1614      2.16  Q   V     |          |          |          |
10+20       1.1765      2.18  Q   V     |          |          |          |
10+25       1.1916      2.20  Q   V     |          |          |          |
10+30       1.2070      2.23  Q   V     |          |          |          |
10+35       1.2224      2.25  Q   V     |          |          |          |
10+40       1.2381      2.27  |Q  V     |          |          |          |
10+45       1.2539      2.29  |Q  V     |          |          |          |
10+50       1.2698      2.32  |Q  V     |          |          |          |
10+55       1.2860      2.34  |Q  V     |          |          |          |
11+ 0       1.3023      2.37  |Q  V     |          |          |          |
11+ 5       1.3187      2.39  |Q  V     |          |          |          |
11+10       1.3354      2.42  |Q   V    |          |          |          |
11+15       1.3522      2.45  |Q   V    |          |          |          |
11+20       1.3693      2.47  |Q   V    |          |          |          |
11+25       1.3865      2.50  |Q   V    |          |          |          |
11+30       1.4040      2.53  |Q   V    |          |          |          |
11+35       1.4216      2.56  |Q   V    |          |          |          |
11+40       1.4395      2.59  |Q   V    |          |          |          |
11+45       1.4575      2.63  |Q   V    |          |          |          |
11+50       1.4759      2.66  |Q   V    |          |          |          |
11+55       1.4944      2.69  |Q   V    |          |          |          |
12+ 0       1.5132      2.73  |Q   V    |          |          |          |
12+ 5       1.5322      2.76  |Q   V    |          |          |          |
12+10       1.5512      2.77  |Q   V    |          |          |          |
12+15       1.5704      2.78  |Q   V    |          |          |          |
12+20       1.5894      2.77  |Q    V   |          |          |          |
12+25       1.6082      2.73  |Q    V   |          |          |          |
12+30       1.6263      2.63  |Q    V   |          |          |          |
12+35       1.6437      2.52  |Q    V   |          |          |          |
12+40       1.6606      2.45  |Q    V   |          |          |          |
12+45       1.6771      2.40  |Q    V   |          |          |          |
12+50       1.6934      2.37  |Q    V   |          |          |          |
12+55       1.7096      2.35  |Q    V   |          |          |          |
13+ 0       1.7258      2.35  |Q    V   |          |          |          |
13+ 5       1.7420      2.35  |Q    V   |          |          |          |
13+10       1.7582      2.36  |Q    V   |          |          |          |
13+15       1.7746      2.38  |Q    V   |          |          |          |
13+20       1.7911      2.40  |Q    V   |          |          |          |
13+25       1.8078      2.42  |Q    V   |          |          |          |
13+30       1.8247      2.45  |Q    V   |          |          |          |
13+35       1.8418      2.48  |Q    V   |          |          |          |
13+40       1.8591      2.52  |Q     V  |          |          |          |
13+45       1.8768      2.56  |Q     V  |          |          |          |
13+50       1.8947      2.61  |Q     V  |          |          |          |
13+55       1.9130      2.65  |Q     V  |          |          |          |
14+ 0       1.9316      2.71  |Q     V  |          |          |          |
14+ 5       1.9507      2.77  |Q     V  |          |          |          |
14+10       1.9702      2.83  |Q     V  |          |          |          |
14+15       1.9902      2.90  |Q     V  |          |          |          |
14+20       2.0107      2.98  |Q     V  |          |          |          |
14+25       2.0318      3.06  |Q     V  |          |          |          |
14+30       2.0535      3.15  |Q     V  |          |          |          |
14+35       2.0759      3.25  |Q     V  |          |          |          |
14+40       2.0991      3.36  |Q     V  |          |          |          |
14+45       2.1230      3.48  |Q      V |          |          |          |
14+50       2.1479      3.61  |Q      V |          |          |          |
```



| | | | |
|---|---|---|---|
| 14+55 | 2.1736 | 3.74 | |
| 15+ 0 | 2.2004 | 3.89 | |
| 15+ 5 | 2.2284 | 4.06 | |
| 15+10 | 2.2576 | 4.24 | |
| 15+15 | 2.2883 | 4.45 | |
| 15+20 | 2.3205 | 4.68 | |
| 15+25 | 2.3549 | 5.00 | |
| 15+30 | 2.3925 | 5.46 | |
| 15+35 | 2.4345 | 6.09 | |
| 15+40 | 2.4821 | 6.92 | |
| 15+45 | 2.5383 | 8.17 | |
| 15+50 | 2.6078 | 10.09 | |
| 15+55 | 2.6943 | 12.56 | |
| 16+ 0 | 2.8021 | 15.65 | |
| 16+ 5 | 2.9515 | 21.70 | |
| 16+10 | 3.1605 | 30.35 | |
| 16+15 | 3.4309 | 39.26 | |
| 16+20 | 3.7705 | 49.31 | |
| 16+25 | 4.2225 | 65.64 | |
| 16+30 | 4.8151 | 86.03 | |
| 16+35 | 5.4191 | 87.71 | |
| 16+40 | 5.9269 | 73.73 | |
| 16+45 | 6.3463 | 60.89 | |
| 16+50 | 6.6875 | 49.55 | |
| 16+55 | 6.9681 | 40.73 | |
| 17+ 0 | 7.2082 | 34.87 | |
| 17+ 5 | 7.4207 | 30.85 | |
| 17+10 | 7.6080 | 27.19 | |
| 17+15 | 7.7745 | 24.19 | |
| 17+20 | 7.9271 | 22.15 | |
| 17+25 | 8.0623 | 19.62 | |
| 17+30 | 8.1867 | 18.07 | |
| 17+35 | 8.2995 | 16.38 | |
| 17+40 | 8.4050 | 15.32 | |
| 17+45 | 8.5031 | 14.24 | |
| 17+50 | 8.5956 | 13.43 | |
| 17+55 | 8.6801 | 12.27 | |
| 18+ 0 | 8.7590 | 11.46 | |
| 18+ 5 | 8.8294 | 10.23 | |
| 18+10 | 8.8957 | 9.63 | |
| 18+15 | 8.9588 | 9.16 | |
| 18+20 | 9.0194 | 8.80 | |
| 18+25 | 9.0764 | 8.27 | |
| 18+30 | 9.1318 | 8.04 | |
| 18+35 | 9.1852 | 7.76 | |
| 18+40 | 9.2368 | 7.49 | |
| 18+45 | 9.2846 | 6.94 | |
| 18+50 | 9.3309 | 6.73 | |
| 18+55 | 9.3761 | 6.56 | |
| 19+ 0 | 9.4195 | 6.31 | |
| 19+ 5 | 9.4597 | 5.83 | |
| 19+10 | 9.4985 | 5.64 | |
| 19+15 | 9.5362 | 5.47 | |
| 19+20 | 9.5721 | 5.21 | |
| 19+25 | 9.6049 | 4.76 | |
| 19+30 | 9.6365 | 4.59 | |
| 19+35 | 9.6672 | 4.45 | |
| 19+40 | 9.6961 | 4.20 | |
| 19+45 | 9.7223 | 3.80 | |

```
19+50       9.7477      3.70  |Q        |         |         |     V   |
19+55       9.7728      3.65  |Q        |         |         |      V  |
20+ 0       9.7979      3.63  |Q        |         |         |      V  |
20+ 5       9.8231      3.66  |Q        |         |         |      V  |
20+10       9.8480      3.62  |Q        |         |         |      V  |
20+15       9.8726      3.57  |Q        |         |         |      V  |
20+20       9.8968      3.51  |Q        |         |         |      V  |
20+25       9.9205      3.45  |Q        |         |         |      V  |
20+30       9.9437      3.37  |Q        |         |         |      V  |
20+35       9.9662      3.27  |Q        |         |         |      V  |
20+40       9.9872      3.04  |Q        |         |         |      V  |
20+45      10.0063      2.77  |Q        |         |         |      V  |
20+50      10.0248      2.69  |Q        |         |         |       V |
20+55      10.0428      2.62  |Q        |         |         |       V |
21+ 0      10.0603      2.55  |Q        |         |         |       V |
21+ 5      10.0773      2.46  |Q        |         |         |       V |
21+10      10.0933      2.32  |Q        |         |         |       V |
21+15      10.1067      1.95  Q        |         |         |       V |
21+20      10.1196      1.88  Q        |         |         |       V |
21+25      10.1323      1.83  Q        |         |         |       V |
21+30      10.1446      1.80  Q        |         |         |       V |
21+35      10.1568      1.77  Q        |         |         |       V |
21+40      10.1688      1.74  Q        |         |         |       V |
21+45      10.1806      1.71  Q        |         |         |       V |
21+50      10.1922      1.69  Q        |         |         |       V |
21+55      10.2037      1.66  Q        |         |         |       V |
22+ 0      10.2150      1.64  Q        |         |         |       V |
22+ 5      10.2261      1.62  Q        |         |         |       V |
22+10      10.2372      1.60  Q        |         |         |       V |
22+15      10.2480      1.58  Q        |         |         |       V |
22+20      10.2588      1.56  Q        |         |         |       V |
22+25      10.2694      1.54  Q        |         |         |       V |
22+30      10.2799      1.53  Q        |         |         |       V |
22+35      10.2903      1.51  Q        |         |         |        V|
22+40      10.3006      1.49  Q        |         |         |        V|
22+45      10.3107      1.47  Q        |         |         |        V|
22+50      10.3208      1.46  Q        |         |         |        V|
22+55      10.3307      1.44  Q        |         |         |        V|
23+ 0      10.3405      1.43  Q        |         |         |        V|
23+ 5      10.3502      1.41  Q        |         |         |        V|
23+10      10.3599      1.40  Q        |         |         |        V|
23+15      10.3694      1.38  Q        |         |         |        V|
23+20      10.3788      1.37  Q        |         |         |        V|
23+25      10.3881      1.35  Q        |         |         |        V|
23+30      10.3973      1.34  Q        |         |         |        V|
23+35      10.4064      1.32  Q        |         |         |        V|
23+40      10.4155      1.31  Q        |         |         |        V|
23+45      10.4244      1.30  Q        |         |         |        V|
23+50      10.4333      1.29  Q        |         |         |        V|
23+55      10.4420      1.27  Q        |         |         |        V|
24+ 0      10.4507      1.26  Q        |         |         |        V|
24+ 5      10.4593      1.24  Q        |         |         |        V|
24+10      10.4676      1.21  Q        |         |         |        V|
24+15      10.4757      1.17  Q        |         |         |        V|
24+20      10.4834      1.12  Q        |         |         |        V|
24+25      10.4906      1.04  Q        |         |         |        V|
24+30      10.4968      0.91  Q        |         |         |        V|
24+35      10.5021      0.77  Q        |         |         |        V|
24+40      10.5066      0.66  Q        |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24+45 | 10.5105 | 0.57 | Q | \| | \| | \| | V\| |
| 24+50 | 10.5140 | 0.50 | Q | \| | \| | \| | V\| |
| 24+55 | 10.5171 | 0.45 | Q | \| | \| | \| | V\| |
| 25+ 0 | 10.5199 | 0.41 | Q | \| | \| | \| | V\| |
| 25+ 5 | 10.5225 | 0.37 | Q | \| | \| | \| | V\| |
| 25+10 | 10.5248 | 0.34 | Q | \| | \| | \| | V\| |
| 25+15 | 10.5269 | 0.31 | Q | \| | \| | \| | V\| |
| 25+20 | 10.5288 | 0.28 | Q | \| | \| | \| | V\| |
| 25+25 | 10.5306 | 0.26 | Q | \| | \| | \| | V\| |
| 25+30 | 10.5322 | 0.24 | Q | \| | \| | \| | V\| |
| 25+35 | 10.5337 | 0.22 | Q | \| | \| | \| | V\| |
| 25+40 | 10.5351 | 0.20 | Q | \| | \| | \| | V\| |
| 25+45 | 10.5363 | 0.18 | Q | \| | \| | \| | V\| |
| 25+50 | 10.5375 | 0.17 | Q | \| | \| | \| | V\| |
| 25+55 | 10.5386 | 0.16 | Q | \| | \| | \| | V\| |
| 26+ 0 | 10.5395 | 0.14 | Q | \| | \| | \| | V\| |
| 26+ 5 | 10.5405 | 0.13 | Q | \| | \| | \| | V\| |
| 26+10 | 10.5413 | 0.12 | Q | \| | \| | \| | V\| |
| 26+15 | 10.5421 | 0.11 | Q | \| | \| | \| | V\| |
| 26+20 | 10.5428 | 0.10 | Q | \| | \| | \| | V\| |
| 26+25 | 10.5435 | 0.10 | Q | \| | \| | \| | V\| |
| 26+30 | 10.5441 | 0.09 | Q | \| | \| | \| | V\| |
| 26+35 | 10.5446 | 0.08 | Q | \| | \| | \| | V\| |
| 26+40 | 10.5452 | 0.08 | Q | \| | \| | \| | V\| |
| 26+45 | 10.5456 | 0.07 | Q | \| | \| | \| | V\| |
| 26+50 | 10.5461 | 0.06 | Q | \| | \| | \| | V\| |
| 26+55 | 10.5465 | 0.06 | Q | \| | \| | \| | V\| |
| 27+ 0 | 10.5469 | 0.05 | Q | \| | \| | \| | V\| |
| 27+ 5 | 10.5472 | 0.05 | Q | \| | \| | \| | V\| |
| 27+10 | 10.5475 | 0.05 | Q | \| | \| | \| | V\| |
| 27+15 | 10.5478 | 0.04 | Q | \| | \| | \| | V\| |
| 27+20 | 10.5481 | 0.04 | Q | \| | \| | \| | V\| |
| 27+25 | 10.5483 | 0.03 | Q | \| | \| | \| | V\| |
| 27+30 | 10.5485 | 0.03 | Q | \| | \| | \| | V\| |
| 27+35 | 10.5487 | 0.03 | Q | \| | \| | \| | V\| |
| 27+40 | 10.5489 | 0.03 | Q | \| | \| | \| | V\| |
| 27+45 | 10.5491 | 0.02 | Q | \| | \| | \| | V\| |
| 27+50 | 10.5492 | 0.02 | Q | \| | \| | \| | V\| |
| 27+55 | 10.5494 | 0.02 | Q | \| | \| | \| | V\| |
| 28+ 0 | 10.5495 | 0.02 | Q | \| | \| | \| | V\| |
| 28+ 5 | 10.5496 | 0.02 | Q | \| | \| | \| | V\| |
| 28+10 | 10.5497 | 0.02 | Q | \| | \| | \| | V\| |
| 28+15 | 10.5498 | 0.01 | Q | \| | \| | \| | V\| |
| 28+20 | 10.5499 | 0.01 | Q | \| | \| | \| | V\| |
| 28+25 | 10.5500 | 0.01 | Q | \| | \| | \| | V\| |
| 28+30 | 10.5500 | 0.01 | Q | \| | \| | \| | V\| |
| 28+35 | 10.5501 | 0.01 | Q | \| | \| | \| | V\| |
| 28+40 | 10.5501 | 0.01 | Q | \| | \| | \| | V\| |
| 28+45 | 10.5501 | 0.00 | Q | \| | \| | \| | V\| |
| 28+50 | 10.5502 | 0.00 | Q | \| | \| | \| | V\| |
| 28+55 | 10.5502 | 0.00 | Q | \| | \| | \| | V\| |
| 29+ 0 | 10.5502 | 0.00 | Q | \| | \| | \| | V\| |
| 29+ 5 | 10.5502 | 0.00 | Q | \| | \| | \| | V\| |

---

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 29
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 15.24 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 15.24 | 6 | 1.81 |
| Rainfall data for year 100 | | |
| 15.24 | 24 | 2.54 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.0 | 92.8 | 15.24 | 1.000 | 0.140 | 0.900 | 0.126 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.126

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 13.72 | 0.900 | 78.0 | 92.8 | 0.78 | 0.708 |
| 1.52 | 0.100 | 98.0 | 98.0 | 0.20 | 0.910 |

Area-averaged catchment yield fraction, Y = 0.729
Area-averaged low loss fraction, Yb = 0.271
User entry of time of concentration = 0.510 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 15.24(Ac.)
Catchment Lag time = 0.408 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 20.4248
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.126(In/Hr)
Average low loss rate fraction (Yb) = 0.271 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.634(In)
Specified peak 6-hour rainfall = 1.810(In)
Specified peak 24-hour rainfall = 2.540(In)

Rainfall depth area reduction factors:
Using a total area of 15.24(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.659(In)
30-minute factor = 0.999 Adjusted rainfall = 1.128(In)
1-hour factor = 0.999 Adjusted rainfall = 1.389(In)
3-hour factor = 1.000 Adjusted rainfall = 1.634(In)
6-hour factor = 1.000 Adjusted rainfall = 1.810(In)
24-hour factor = 1.000 Adjusted rainfall = 2.540(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 184.31 (CFS)) | |
| 1 | 1.022 | 1.883 |
| 2 | 4.663 | 6.712 |
| 3 | 11.803 | 13.159 |
| 4 | 27.532 | 28.990 |
| 5 | 44.632 | 31.517 |
| 6 | 56.079 | 21.097 |
| 7 | 63.676 | 14.002 |
| 8 | 69.235 | 10.246 |
| 9 | 73.676 | 8.186 |
| 10 | 77.279 | 6.641 |
| 11 | 80.209 | 5.399 |
| 12 | 82.668 | 4.532 |
| 13 | 84.803 | 3.935 |

| | | |
|---|---|---|
| 14 | 86.724 | 3.540 |
| 15 | 88.373 | 3.040 |
| 16 | 89.695 | 2.436 |
| 17 | 90.873 | 2.171 |
| 18 | 91.955 | 1.996 |
| 19 | 92.921 | 1.779 |
| 20 | 93.807 | 1.634 |
| 21 | 94.536 | 1.344 |
| 22 | 95.231 | 1.280 |
| 23 | 95.848 | 1.139 |
| 24 | 96.380 | 0.979 |
| 25 | 96.889 | 0.938 |
| 26 | 97.275 | 0.712 |
| 27 | 97.642 | 0.677 |
| 28 | 97.917 | 0.506 |
| 29 | 98.121 | 0.376 |
| 30 | 98.333 | 0.391 |
| 31 | 98.575 | 0.446 |
| 32 | 98.821 | 0.452 |
| 33 | 99.066 | 0.452 |
| 34 | 99.311 | 0.452 |
| 35 | 99.525 | 0.394 |
| 36 | 99.657 | 0.243 |
| 37 | 99.784 | 0.235 |
| 38 | 99.912 | 0.235 |
| 39 | 100.000 | 0.162 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6591 | 0.6591 |
| 2 | 0.8114 | 0.1523 |
| 3 | 0.9164 | 0.1050 |
| 4 | 0.9990 | 0.0826 |
| 5 | 1.0682 | 0.0692 |
| 6 | 1.1282 | 0.0601 |
| 7 | 1.1816 | 0.0534 |
| 8 | 1.2299 | 0.0483 |
| 9 | 1.2742 | 0.0442 |
| 10 | 1.3151 | 0.0409 |
| 11 | 1.3532 | 0.0381 |
| 12 | 1.3890 | 0.0358 |
| 13 | 1.4056 | 0.0165 |
| 14 | 1.4210 | 0.0155 |
| 15 | 1.4356 | 0.0146 |
| 16 | 1.4494 | 0.0138 |
| 17 | 1.4624 | 0.0131 |
| 18 | 1.4749 | 0.0124 |
| 19 | 1.4867 | 0.0118 |
| 20 | 1.4980 | 0.0113 |
| 21 | 1.5089 | 0.0109 |
| 22 | 1.5193 | 0.0104 |
| 23 | 1.5293 | 0.0100 |
| 24 | 1.5390 | 0.0097 |
| 25 | 1.5483 | 0.0093 |
| 26 | 1.5573 | 0.0090 |
| 27 | 1.5660 | 0.0087 |
| 28 | 1.5745 | 0.0084 |
| 29 | 1.5827 | 0.0082 |
| 30 | 1.5906 | 0.0080 |

| | | |
|---|---|---|
| 31 | 1.5984 | 0.0077 |
| 32 | 1.6059 | 0.0075 |
| 33 | 1.6132 | 0.0073 |
| 34 | 1.6204 | 0.0071 |
| 35 | 1.6273 | 0.0070 |
| 36 | 1.6341 | 0.0068 |
| 37 | 1.6407 | 0.0066 |
| 38 | 1.6472 | 0.0065 |
| 39 | 1.6535 | 0.0063 |
| 40 | 1.6597 | 0.0062 |
| 41 | 1.6657 | 0.0061 |
| 42 | 1.6717 | 0.0059 |
| 43 | 1.6775 | 0.0058 |
| 44 | 1.6832 | 0.0057 |
| 45 | 1.6888 | 0.0056 |
| 46 | 1.6942 | 0.0055 |
| 47 | 1.6996 | 0.0054 |
| 48 | 1.7049 | 0.0053 |
| 49 | 1.7101 | 0.0052 |
| 50 | 1.7152 | 0.0051 |
| 51 | 1.7202 | 0.0050 |
| 52 | 1.7251 | 0.0049 |
| 53 | 1.7300 | 0.0049 |
| 54 | 1.7348 | 0.0048 |
| 55 | 1.7395 | 0.0047 |
| 56 | 1.7441 | 0.0046 |
| 57 | 1.7486 | 0.0046 |
| 58 | 1.7531 | 0.0045 |
| 59 | 1.7576 | 0.0044 |
| 60 | 1.7619 | 0.0044 |
| 61 | 1.7662 | 0.0043 |
| 62 | 1.7705 | 0.0042 |
| 63 | 1.7746 | 0.0042 |
| 64 | 1.7788 | 0.0041 |
| 65 | 1.7828 | 0.0041 |
| 66 | 1.7868 | 0.0040 |
| 67 | 1.7908 | 0.0040 |
| 68 | 1.7947 | 0.0039 |
| 69 | 1.7986 | 0.0039 |
| 70 | 1.8024 | 0.0038 |
| 71 | 1.8062 | 0.0038 |
| 72 | 1.8099 | 0.0037 |
| 73 | 1.8160 | 0.0061 |
| 74 | 1.8221 | 0.0060 |
| 75 | 1.8281 | 0.0060 |
| 76 | 1.8340 | 0.0059 |
| 77 | 1.8399 | 0.0059 |
| 78 | 1.8457 | 0.0058 |
| 79 | 1.8514 | 0.0058 |
| 80 | 1.8571 | 0.0057 |
| 81 | 1.8628 | 0.0056 |
| 82 | 1.8684 | 0.0056 |
| 83 | 1.8739 | 0.0055 |
| 84 | 1.8794 | 0.0055 |
| 85 | 1.8849 | 0.0054 |
| 86 | 1.8903 | 0.0054 |
| 87 | 1.8956 | 0.0053 |
| 88 | 1.9009 | 0.0053 |
| 89 | 1.9062 | 0.0053 |

| | | |
|---|---|---|
| 90 | 1.9114 | 0.0052 |
| 91 | 1.9165 | 0.0052 |
| 92 | 1.9217 | 0.0051 |
| 93 | 1.9268 | 0.0051 |
| 94 | 1.9318 | 0.0050 |
| 95 | 1.9368 | 0.0050 |
| 96 | 1.9418 | 0.0050 |
| 97 | 1.9467 | 0.0049 |
| 98 | 1.9516 | 0.0049 |
| 99 | 1.9564 | 0.0048 |
| 100 | 1.9612 | 0.0048 |
| 101 | 1.9660 | 0.0048 |
| 102 | 1.9708 | 0.0047 |
| 103 | 1.9755 | 0.0047 |
| 104 | 1.9801 | 0.0047 |
| 105 | 1.9848 | 0.0046 |
| 106 | 1.9894 | 0.0046 |
| 107 | 1.9939 | 0.0046 |
| 108 | 1.9985 | 0.0045 |
| 109 | 2.0030 | 0.0045 |
| 110 | 2.0075 | 0.0045 |
| 111 | 2.0119 | 0.0044 |
| 112 | 2.0163 | 0.0044 |
| 113 | 2.0207 | 0.0044 |
| 114 | 2.0251 | 0.0044 |
| 115 | 2.0294 | 0.0043 |
| 116 | 2.0337 | 0.0043 |
| 117 | 2.0380 | 0.0043 |
| 118 | 2.0422 | 0.0042 |
| 119 | 2.0464 | 0.0042 |
| 120 | 2.0506 | 0.0042 |
| 121 | 2.0548 | 0.0042 |
| 122 | 2.0589 | 0.0041 |
| 123 | 2.0630 | 0.0041 |
| 124 | 2.0671 | 0.0041 |
| 125 | 2.0712 | 0.0041 |
| 126 | 2.0752 | 0.0040 |
| 127 | 2.0792 | 0.0040 |
| 128 | 2.0832 | 0.0040 |
| 129 | 2.0872 | 0.0040 |
| 130 | 2.0911 | 0.0039 |
| 131 | 2.0951 | 0.0039 |
| 132 | 2.0990 | 0.0039 |
| 133 | 2.1028 | 0.0039 |
| 134 | 2.1067 | 0.0039 |
| 135 | 2.1105 | 0.0038 |
| 136 | 2.1143 | 0.0038 |
| 137 | 2.1181 | 0.0038 |
| 138 | 2.1219 | 0.0038 |
| 139 | 2.1256 | 0.0037 |
| 140 | 2.1294 | 0.0037 |
| 141 | 2.1331 | 0.0037 |
| 142 | 2.1368 | 0.0037 |
| 143 | 2.1404 | 0.0037 |
| 144 | 2.1441 | 0.0036 |
| 145 | 2.1477 | 0.0036 |
| 146 | 2.1513 | 0.0036 |
| 147 | 2.1549 | 0.0036 |
| 148 | 2.1585 | 0.0036 |

| | | |
|---|---|---|
| 149 | 2.1620 | 0.0036 |
| 150 | 2.1656 | 0.0035 |
| 151 | 2.1691 | 0.0035 |
| 152 | 2.1726 | 0.0035 |
| 153 | 2.1761 | 0.0035 |
| 154 | 2.1796 | 0.0035 |
| 155 | 2.1830 | 0.0035 |
| 156 | 2.1864 | 0.0034 |
| 157 | 2.1899 | 0.0034 |
| 158 | 2.1933 | 0.0034 |
| 159 | 2.1967 | 0.0034 |
| 160 | 2.2000 | 0.0034 |
| 161 | 2.2034 | 0.0034 |
| 162 | 2.2067 | 0.0033 |
| 163 | 2.2100 | 0.0033 |
| 164 | 2.2133 | 0.0033 |
| 165 | 2.2166 | 0.0033 |
| 166 | 2.2199 | 0.0033 |
| 167 | 2.2232 | 0.0033 |
| 168 | 2.2264 | 0.0032 |
| 169 | 2.2296 | 0.0032 |
| 170 | 2.2329 | 0.0032 |
| 171 | 2.2361 | 0.0032 |
| 172 | 2.2393 | 0.0032 |
| 173 | 2.2424 | 0.0032 |
| 174 | 2.2456 | 0.0032 |
| 175 | 2.2487 | 0.0031 |
| 176 | 2.2519 | 0.0031 |
| 177 | 2.2550 | 0.0031 |
| 178 | 2.2581 | 0.0031 |
| 179 | 2.2612 | 0.0031 |
| 180 | 2.2643 | 0.0031 |
| 181 | 2.2673 | 0.0031 |
| 182 | 2.2704 | 0.0031 |
| 183 | 2.2734 | 0.0030 |
| 184 | 2.2765 | 0.0030 |
| 185 | 2.2795 | 0.0030 |
| 186 | 2.2825 | 0.0030 |
| 187 | 2.2855 | 0.0030 |
| 188 | 2.2885 | 0.0030 |
| 189 | 2.2914 | 0.0030 |
| 190 | 2.2944 | 0.0030 |
| 191 | 2.2974 | 0.0029 |
| 192 | 2.3003 | 0.0029 |
| 193 | 2.3032 | 0.0029 |
| 194 | 2.3061 | 0.0029 |
| 195 | 2.3090 | 0.0029 |
| 196 | 2.3119 | 0.0029 |
| 197 | 2.3148 | 0.0029 |
| 198 | 2.3177 | 0.0029 |
| 199 | 2.3205 | 0.0029 |
| 200 | 2.3234 | 0.0028 |
| 201 | 2.3262 | 0.0028 |
| 202 | 2.3290 | 0.0028 |
| 203 | 2.3318 | 0.0028 |
| 204 | 2.3346 | 0.0028 |
| 205 | 2.3374 | 0.0028 |
| 206 | 2.3402 | 0.0028 |
| 207 | 2.3430 | 0.0028 |

| | | |
|---|---|---|
| 208 | 2.3457 | 0.0028 |
| 209 | 2.3485 | 0.0028 |
| 210 | 2.3512 | 0.0027 |
| 211 | 2.3540 | 0.0027 |
| 212 | 2.3567 | 0.0027 |
| 213 | 2.3594 | 0.0027 |
| 214 | 2.3621 | 0.0027 |
| 215 | 2.3648 | 0.0027 |
| 216 | 2.3675 | 0.0027 |
| 217 | 2.3701 | 0.0027 |
| 218 | 2.3728 | 0.0027 |
| 219 | 2.3755 | 0.0027 |
| 220 | 2.3781 | 0.0026 |
| 221 | 2.3808 | 0.0026 |
| 222 | 2.3834 | 0.0026 |
| 223 | 2.3860 | 0.0026 |
| 224 | 2.3886 | 0.0026 |
| 225 | 2.3912 | 0.0026 |
| 226 | 2.3938 | 0.0026 |
| 227 | 2.3964 | 0.0026 |
| 228 | 2.3990 | 0.0026 |
| 229 | 2.4015 | 0.0026 |
| 230 | 2.4041 | 0.0026 |
| 231 | 2.4066 | 0.0026 |
| 232 | 2.4092 | 0.0025 |
| 233 | 2.4117 | 0.0025 |
| 234 | 2.4143 | 0.0025 |
| 235 | 2.4168 | 0.0025 |
| 236 | 2.4193 | 0.0025 |
| 237 | 2.4218 | 0.0025 |
| 238 | 2.4243 | 0.0025 |
| 239 | 2.4268 | 0.0025 |
| 240 | 2.4292 | 0.0025 |
| 241 | 2.4317 | 0.0025 |
| 242 | 2.4342 | 0.0025 |
| 243 | 2.4366 | 0.0025 |
| 244 | 2.4391 | 0.0024 |
| 245 | 2.4415 | 0.0024 |
| 246 | 2.4439 | 0.0024 |
| 247 | 2.4464 | 0.0024 |
| 248 | 2.4488 | 0.0024 |
| 249 | 2.4512 | 0.0024 |
| 250 | 2.4536 | 0.0024 |
| 251 | 2.4560 | 0.0024 |
| 252 | 2.4584 | 0.0024 |
| 253 | 2.4608 | 0.0024 |
| 254 | 2.4631 | 0.0024 |
| 255 | 2.4655 | 0.0024 |
| 256 | 2.4679 | 0.0024 |
| 257 | 2.4702 | 0.0024 |
| 258 | 2.4726 | 0.0023 |
| 259 | 2.4749 | 0.0023 |
| 260 | 2.4772 | 0.0023 |
| 261 | 2.4796 | 0.0023 |
| 262 | 2.4819 | 0.0023 |
| 263 | 2.4842 | 0.0023 |
| 264 | 2.4865 | 0.0023 |
| 265 | 2.4888 | 0.0023 |
| 266 | 2.4911 | 0.0023 |

| | | |
|---|---|---|
| 267 | 2.4934 | 0.0023 |
| 268 | 2.4957 | 0.0023 |
| 269 | 2.4979 | 0.0023 |
| 270 | 2.5002 | 0.0023 |
| 271 | 2.5025 | 0.0023 |
| 272 | 2.5047 | 0.0023 |
| 273 | 2.5070 | 0.0022 |
| 274 | 2.5092 | 0.0022 |
| 275 | 2.5114 | 0.0022 |
| 276 | 2.5137 | 0.0022 |
| 277 | 2.5159 | 0.0022 |
| 278 | 2.5181 | 0.0022 |
| 279 | 2.5203 | 0.0022 |
| 280 | 2.5225 | 0.0022 |
| 281 | 2.5247 | 0.0022 |
| 282 | 2.5269 | 0.0022 |
| 283 | 2.5291 | 0.0022 |
| 284 | 2.5313 | 0.0022 |
| 285 | 2.5335 | 0.0022 |
| 286 | 2.5356 | 0.0022 |
| 287 | 2.5378 | 0.0022 |
| 288 | 2.5400 | 0.0022 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0022 | 0.0006 | 0.0016 |
| 2 | 0.0022 | 0.0006 | 0.0016 |
| 3 | 0.0022 | 0.0006 | 0.0016 |
| 4 | 0.0022 | 0.0006 | 0.0016 |
| 5 | 0.0022 | 0.0006 | 0.0016 |
| 6 | 0.0022 | 0.0006 | 0.0016 |
| 7 | 0.0022 | 0.0006 | 0.0016 |
| 8 | 0.0022 | 0.0006 | 0.0016 |
| 9 | 0.0022 | 0.0006 | 0.0016 |
| 10 | 0.0022 | 0.0006 | 0.0016 |
| 11 | 0.0022 | 0.0006 | 0.0016 |
| 12 | 0.0023 | 0.0006 | 0.0016 |
| 13 | 0.0023 | 0.0006 | 0.0017 |
| 14 | 0.0023 | 0.0006 | 0.0017 |
| 15 | 0.0023 | 0.0006 | 0.0017 |
| 16 | 0.0023 | 0.0006 | 0.0017 |
| 17 | 0.0023 | 0.0006 | 0.0017 |
| 18 | 0.0023 | 0.0006 | 0.0017 |
| 19 | 0.0023 | 0.0006 | 0.0017 |
| 20 | 0.0023 | 0.0006 | 0.0017 |
| 21 | 0.0023 | 0.0006 | 0.0017 |
| 22 | 0.0024 | 0.0006 | 0.0017 |
| 23 | 0.0024 | 0.0006 | 0.0017 |
| 24 | 0.0024 | 0.0006 | 0.0017 |
| 25 | 0.0024 | 0.0006 | 0.0017 |
| 26 | 0.0024 | 0.0007 | 0.0017 |
| 27 | 0.0024 | 0.0007 | 0.0018 |
| 28 | 0.0024 | 0.0007 | 0.0018 |
| 29 | 0.0024 | 0.0007 | 0.0018 |
| 30 | 0.0024 | 0.0007 | 0.0018 |
| 31 | 0.0025 | 0.0007 | 0.0018 |
| 32 | 0.0025 | 0.0007 | 0.0018 |

| | | | |
|---|---|---|---|
| 33 | 0.0025 | 0.0007 | 0.0018 |
| 34 | 0.0025 | 0.0007 | 0.0018 |
| 35 | 0.0025 | 0.0007 | 0.0018 |
| 36 | 0.0025 | 0.0007 | 0.0018 |
| 37 | 0.0025 | 0.0007 | 0.0018 |
| 38 | 0.0025 | 0.0007 | 0.0018 |
| 39 | 0.0026 | 0.0007 | 0.0019 |
| 40 | 0.0026 | 0.0007 | 0.0019 |
| 41 | 0.0026 | 0.0007 | 0.0019 |
| 42 | 0.0026 | 0.0007 | 0.0019 |
| 43 | 0.0026 | 0.0007 | 0.0019 |
| 44 | 0.0026 | 0.0007 | 0.0019 |
| 45 | 0.0026 | 0.0007 | 0.0019 |
| 46 | 0.0026 | 0.0007 | 0.0019 |
| 47 | 0.0027 | 0.0007 | 0.0019 |
| 48 | 0.0027 | 0.0007 | 0.0019 |
| 49 | 0.0027 | 0.0007 | 0.0020 |
| 50 | 0.0027 | 0.0007 | 0.0020 |
| 51 | 0.0027 | 0.0007 | 0.0020 |
| 52 | 0.0027 | 0.0007 | 0.0020 |
| 53 | 0.0027 | 0.0007 | 0.0020 |
| 54 | 0.0028 | 0.0007 | 0.0020 |
| 55 | 0.0028 | 0.0008 | 0.0020 |
| 56 | 0.0028 | 0.0008 | 0.0020 |
| 57 | 0.0028 | 0.0008 | 0.0020 |
| 58 | 0.0028 | 0.0008 | 0.0020 |
| 59 | 0.0028 | 0.0008 | 0.0021 |
| 60 | 0.0028 | 0.0008 | 0.0021 |
| 61 | 0.0029 | 0.0008 | 0.0021 |
| 62 | 0.0029 | 0.0008 | 0.0021 |
| 63 | 0.0029 | 0.0008 | 0.0021 |
| 64 | 0.0029 | 0.0008 | 0.0021 |
| 65 | 0.0029 | 0.0008 | 0.0021 |
| 66 | 0.0029 | 0.0008 | 0.0021 |
| 67 | 0.0030 | 0.0008 | 0.0022 |
| 68 | 0.0030 | 0.0008 | 0.0022 |
| 69 | 0.0030 | 0.0008 | 0.0022 |
| 70 | 0.0030 | 0.0008 | 0.0022 |
| 71 | 0.0030 | 0.0008 | 0.0022 |
| 72 | 0.0031 | 0.0008 | 0.0022 |
| 73 | 0.0031 | 0.0008 | 0.0022 |
| 74 | 0.0031 | 0.0008 | 0.0023 |
| 75 | 0.0031 | 0.0008 | 0.0023 |
| 76 | 0.0031 | 0.0009 | 0.0023 |
| 77 | 0.0032 | 0.0009 | 0.0023 |
| 78 | 0.0032 | 0.0009 | 0.0023 |
| 79 | 0.0032 | 0.0009 | 0.0023 |
| 80 | 0.0032 | 0.0009 | 0.0023 |
| 81 | 0.0032 | 0.0009 | 0.0024 |
| 82 | 0.0033 | 0.0009 | 0.0024 |
| 83 | 0.0033 | 0.0009 | 0.0024 |
| 84 | 0.0033 | 0.0009 | 0.0024 |
| 85 | 0.0033 | 0.0009 | 0.0024 |
| 86 | 0.0034 | 0.0009 | 0.0024 |
| 87 | 0.0034 | 0.0009 | 0.0025 |
| 88 | 0.0034 | 0.0009 | 0.0025 |
| 89 | 0.0034 | 0.0009 | 0.0025 |
| 90 | 0.0035 | 0.0009 | 0.0025 |
| 91 | 0.0035 | 0.0009 | 0.0025 |

| | | | |
|---|---|---|---|
| 92 | 0.0035 | 0.0010 | 0.0026 |
| 93 | 0.0035 | 0.0010 | 0.0026 |
| 94 | 0.0036 | 0.0010 | 0.0026 |
| 95 | 0.0036 | 0.0010 | 0.0026 |
| 96 | 0.0036 | 0.0010 | 0.0026 |
| 97 | 0.0036 | 0.0010 | 0.0027 |
| 98 | 0.0037 | 0.0010 | 0.0027 |
| 99 | 0.0037 | 0.0010 | 0.0027 |
| 100 | 0.0037 | 0.0010 | 0.0027 |
| 101 | 0.0038 | 0.0010 | 0.0027 |
| 102 | 0.0038 | 0.0010 | 0.0028 |
| 103 | 0.0038 | 0.0010 | 0.0028 |
| 104 | 0.0039 | 0.0010 | 0.0028 |
| 105 | 0.0039 | 0.0011 | 0.0028 |
| 106 | 0.0039 | 0.0011 | 0.0029 |
| 107 | 0.0040 | 0.0011 | 0.0029 |
| 108 | 0.0040 | 0.0011 | 0.0029 |
| 109 | 0.0040 | 0.0011 | 0.0029 |
| 110 | 0.0041 | 0.0011 | 0.0030 |
| 111 | 0.0041 | 0.0011 | 0.0030 |
| 112 | 0.0041 | 0.0011 | 0.0030 |
| 113 | 0.0042 | 0.0011 | 0.0031 |
| 114 | 0.0042 | 0.0011 | 0.0031 |
| 115 | 0.0043 | 0.0012 | 0.0031 |
| 116 | 0.0043 | 0.0012 | 0.0031 |
| 117 | 0.0044 | 0.0012 | 0.0032 |
| 118 | 0.0044 | 0.0012 | 0.0032 |
| 119 | 0.0044 | 0.0012 | 0.0032 |
| 120 | 0.0045 | 0.0012 | 0.0033 |
| 121 | 0.0045 | 0.0012 | 0.0033 |
| 122 | 0.0046 | 0.0012 | 0.0033 |
| 123 | 0.0046 | 0.0013 | 0.0034 |
| 124 | 0.0047 | 0.0013 | 0.0034 |
| 125 | 0.0047 | 0.0013 | 0.0035 |
| 126 | 0.0048 | 0.0013 | 0.0035 |
| 127 | 0.0048 | 0.0013 | 0.0035 |
| 128 | 0.0049 | 0.0013 | 0.0036 |
| 129 | 0.0050 | 0.0013 | 0.0036 |
| 130 | 0.0050 | 0.0014 | 0.0036 |
| 131 | 0.0051 | 0.0014 | 0.0037 |
| 132 | 0.0051 | 0.0014 | 0.0037 |
| 133 | 0.0052 | 0.0014 | 0.0038 |
| 134 | 0.0053 | 0.0014 | 0.0038 |
| 135 | 0.0053 | 0.0015 | 0.0039 |
| 136 | 0.0054 | 0.0015 | 0.0039 |
| 137 | 0.0055 | 0.0015 | 0.0040 |
| 138 | 0.0055 | 0.0015 | 0.0040 |
| 139 | 0.0056 | 0.0015 | 0.0041 |
| 140 | 0.0057 | 0.0015 | 0.0042 |
| 141 | 0.0058 | 0.0016 | 0.0042 |
| 142 | 0.0059 | 0.0016 | 0.0043 |
| 143 | 0.0060 | 0.0016 | 0.0044 |
| 144 | 0.0060 | 0.0016 | 0.0044 |
| 145 | 0.0037 | 0.0010 | 0.0027 |
| 146 | 0.0038 | 0.0010 | 0.0027 |
| 147 | 0.0039 | 0.0010 | 0.0028 |
| 148 | 0.0039 | 0.0011 | 0.0029 |
| 149 | 0.0040 | 0.0011 | 0.0029 |
| 150 | 0.0041 | 0.0011 | 0.0030 |

| | | | |
|---|---|---|---|
| 151 | 0.0042 | 0.0011 | 0.0030 |
| 152 | 0.0042 | 0.0012 | 0.0031 |
| 153 | 0.0044 | 0.0012 | 0.0032 |
| 154 | 0.0044 | 0.0012 | 0.0032 |
| 155 | 0.0046 | 0.0012 | 0.0033 |
| 156 | 0.0046 | 0.0013 | 0.0034 |
| 157 | 0.0048 | 0.0013 | 0.0035 |
| 158 | 0.0049 | 0.0013 | 0.0035 |
| 159 | 0.0050 | 0.0014 | 0.0037 |
| 160 | 0.0051 | 0.0014 | 0.0037 |
| 161 | 0.0053 | 0.0014 | 0.0038 |
| 162 | 0.0054 | 0.0015 | 0.0039 |
| 163 | 0.0056 | 0.0015 | 0.0041 |
| 164 | 0.0057 | 0.0015 | 0.0041 |
| 165 | 0.0059 | 0.0016 | 0.0043 |
| 166 | 0.0061 | 0.0016 | 0.0044 |
| 167 | 0.0063 | 0.0017 | 0.0046 |
| 168 | 0.0065 | 0.0018 | 0.0047 |
| 169 | 0.0068 | 0.0018 | 0.0050 |
| 170 | 0.0070 | 0.0019 | 0.0051 |
| 171 | 0.0073 | 0.0020 | 0.0053 |
| 172 | 0.0075 | 0.0020 | 0.0055 |
| 173 | 0.0080 | 0.0022 | 0.0058 |
| 174 | 0.0082 | 0.0022 | 0.0060 |
| 175 | 0.0087 | 0.0024 | 0.0064 |
| 176 | 0.0090 | 0.0024 | 0.0066 |
| 177 | 0.0097 | 0.0026 | 0.0070 |
| 178 | 0.0100 | 0.0027 | 0.0073 |
| 179 | 0.0109 | 0.0029 | 0.0079 |
| 180 | 0.0113 | 0.0031 | 0.0082 |
| 181 | 0.0124 | 0.0034 | 0.0090 |
| 182 | 0.0131 | 0.0035 | 0.0095 |
| 183 | 0.0146 | 0.0040 | 0.0106 |
| 184 | 0.0155 | 0.0042 | 0.0113 |
| 185 | 0.0358 | 0.0097 | 0.0261 |
| 186 | 0.0381 | 0.0104 | 0.0278 |
| 187 | 0.0442 | 0.0105 | 0.0337 |
| 188 | 0.0483 | 0.0105 | 0.0378 |
| 189 | 0.0601 | 0.0105 | 0.0496 |
| 190 | 0.0692 | 0.0105 | 0.0587 |
| 191 | 0.1050 | 0.0105 | 0.0945 |
| 192 | 0.1523 | 0.0105 | 0.1418 |
| 193 | 0.6591 | 0.0105 | 0.6486 |
| 194 | 0.0826 | 0.0105 | 0.0721 |
| 195 | 0.0534 | 0.0105 | 0.0429 |
| 196 | 0.0409 | 0.0105 | 0.0304 |
| 197 | 0.0165 | 0.0045 | 0.0121 |
| 198 | 0.0138 | 0.0037 | 0.0100 |
| 199 | 0.0118 | 0.0032 | 0.0086 |
| 200 | 0.0104 | 0.0028 | 0.0076 |
| 201 | 0.0093 | 0.0025 | 0.0068 |
| 202 | 0.0084 | 0.0023 | 0.0062 |
| 203 | 0.0077 | 0.0021 | 0.0056 |
| 204 | 0.0071 | 0.0019 | 0.0052 |
| 205 | 0.0066 | 0.0018 | 0.0048 |
| 206 | 0.0062 | 0.0017 | 0.0045 |
| 207 | 0.0058 | 0.0016 | 0.0042 |
| 208 | 0.0055 | 0.0015 | 0.0040 |
| 209 | 0.0052 | 0.0014 | 0.0038 |

| | | | |
|---|---|---|---|
| 210 | 0.0049 | 0.0013 | 0.0036 |
| 211 | 0.0047 | 0.0013 | 0.0034 |
| 212 | 0.0045 | 0.0012 | 0.0033 |
| 213 | 0.0043 | 0.0012 | 0.0031 |
| 214 | 0.0041 | 0.0011 | 0.0030 |
| 215 | 0.0040 | 0.0011 | 0.0029 |
| 216 | 0.0038 | 0.0010 | 0.0028 |
| 217 | 0.0061 | 0.0017 | 0.0045 |
| 218 | 0.0059 | 0.0016 | 0.0043 |
| 219 | 0.0058 | 0.0016 | 0.0042 |
| 220 | 0.0056 | 0.0015 | 0.0041 |
| 221 | 0.0054 | 0.0015 | 0.0040 |
| 222 | 0.0053 | 0.0014 | 0.0039 |
| 223 | 0.0052 | 0.0014 | 0.0038 |
| 224 | 0.0050 | 0.0014 | 0.0037 |
| 225 | 0.0049 | 0.0013 | 0.0036 |
| 226 | 0.0048 | 0.0013 | 0.0035 |
| 227 | 0.0047 | 0.0013 | 0.0034 |
| 228 | 0.0046 | 0.0012 | 0.0034 |
| 229 | 0.0045 | 0.0012 | 0.0033 |
| 230 | 0.0044 | 0.0012 | 0.0032 |
| 231 | 0.0043 | 0.0012 | 0.0032 |
| 232 | 0.0042 | 0.0012 | 0.0031 |
| 233 | 0.0042 | 0.0011 | 0.0030 |
| 234 | 0.0041 | 0.0011 | 0.0030 |
| 235 | 0.0040 | 0.0011 | 0.0029 |
| 236 | 0.0039 | 0.0011 | 0.0029 |
| 237 | 0.0039 | 0.0011 | 0.0028 |
| 238 | 0.0038 | 0.0010 | 0.0028 |
| 239 | 0.0037 | 0.0010 | 0.0027 |
| 240 | 0.0037 | 0.0010 | 0.0027 |
| 241 | 0.0036 | 0.0010 | 0.0026 |
| 242 | 0.0036 | 0.0010 | 0.0026 |
| 243 | 0.0035 | 0.0010 | 0.0026 |
| 244 | 0.0035 | 0.0009 | 0.0025 |
| 245 | 0.0034 | 0.0009 | 0.0025 |
| 246 | 0.0034 | 0.0009 | 0.0025 |
| 247 | 0.0033 | 0.0009 | 0.0024 |
| 248 | 0.0033 | 0.0009 | 0.0024 |
| 249 | 0.0032 | 0.0009 | 0.0024 |
| 250 | 0.0032 | 0.0009 | 0.0023 |
| 251 | 0.0031 | 0.0009 | 0.0023 |
| 252 | 0.0031 | 0.0008 | 0.0023 |
| 253 | 0.0031 | 0.0008 | 0.0022 |
| 254 | 0.0030 | 0.0008 | 0.0022 |
| 255 | 0.0030 | 0.0008 | 0.0022 |
| 256 | 0.0030 | 0.0008 | 0.0022 |
| 257 | 0.0029 | 0.0008 | 0.0021 |
| 258 | 0.0029 | 0.0008 | 0.0021 |
| 259 | 0.0029 | 0.0008 | 0.0021 |
| 260 | 0.0028 | 0.0008 | 0.0021 |
| 261 | 0.0028 | 0.0008 | 0.0020 |
| 262 | 0.0028 | 0.0007 | 0.0020 |
| 263 | 0.0027 | 0.0007 | 0.0020 |
| 264 | 0.0027 | 0.0007 | 0.0020 |
| 265 | 0.0027 | 0.0007 | 0.0019 |
| 266 | 0.0026 | 0.0007 | 0.0019 |
| 267 | 0.0026 | 0.0007 | 0.0019 |
| 268 | 0.0026 | 0.0007 | 0.0019 |

| | | | |
|---|---|---|---|
| 269 | 0.0026 | 0.0007 | 0.0019 |
| 270 | 0.0025 | 0.0007 | 0.0019 |
| 271 | 0.0025 | 0.0007 | 0.0018 |
| 272 | 0.0025 | 0.0007 | 0.0018 |
| 273 | 0.0025 | 0.0007 | 0.0018 |
| 274 | 0.0024 | 0.0007 | 0.0018 |
| 275 | 0.0024 | 0.0007 | 0.0018 |
| 276 | 0.0024 | 0.0007 | 0.0018 |
| 277 | 0.0024 | 0.0006 | 0.0017 |
| 278 | 0.0024 | 0.0006 | 0.0017 |
| 279 | 0.0023 | 0.0006 | 0.0017 |
| 280 | 0.0023 | 0.0006 | 0.0017 |
| 281 | 0.0023 | 0.0006 | 0.0017 |
| 282 | 0.0023 | 0.0006 | 0.0017 |
| 283 | 0.0023 | 0.0006 | 0.0016 |
| 284 | 0.0022 | 0.0006 | 0.0016 |
| 285 | 0.0022 | 0.0006 | 0.0016 |
| 286 | 0.0022 | 0.0006 | 0.0016 |
| 287 | 0.0022 | 0.0006 | 0.0016 |
| 288 | 0.0022 | 0.0006 | 0.0016 |

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Total soil rain loss = 0.44(In)
Total effective rainfall = 2.10(In)
Peak flow rate in flood hydrograph = 29.53(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 7.5 | 15.0 | 22.5 | 30.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.01 | Q | | | | |
| 0+15 | 0.0003 | 0.03 | Q | | | | |
| 0+20 | 0.0009 | 0.08 | Q | | | | |
| 0+25 | 0.0018 | 0.13 | Q | | | | |
| 0+30 | 0.0029 | 0.16 | Q | | | | |
| 0+35 | 0.0042 | 0.19 | Q | | | | |
| 0+40 | 0.0056 | 0.20 | Q | | | | |
| 0+45 | 0.0071 | 0.22 | Q | | | | |
| 0+50 | 0.0087 | 0.23 | Q | | | | |
| 0+55 | 0.0103 | 0.24 | Q | | | | |
| 1+ 0 | 0.0120 | 0.25 | Q | | | | |
| 1+ 5 | 0.0137 | 0.25 | Q | | | | |
| 1+10 | 0.0155 | 0.26 | Q | | | | |
| 1+15 | 0.0173 | 0.27 | Q | | | | |
| 1+20 | 0.0192 | 0.27 | Q | | | | |
| 1+25 | 0.0211 | 0.27 | Q | | | | |
| 1+30 | 0.0230 | 0.28 | Q | | | | |
| 1+35 | 0.0250 | 0.28 | Q | | | | |
| 1+40 | 0.0269 | 0.29 | Q | | | | |
| 1+45 | 0.0289 | 0.29 | Q | | | | |
| 1+50 | 0.0309 | 0.29 | Q | | | | |
| 1+55 | 0.0330 | 0.30 | Q | | | | |
| 2+ 0 | 0.0350 | 0.30 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+ 5 | 0.0371 | 0.30 | Q | | | | |
| 2+10 | 0.0392 | 0.30 | Q | | | | |
| 2+15 | 0.0413 | 0.31 | Q | | | | |
| 2+20 | 0.0435 | 0.31 | Q | | | | |
| 2+25 | 0.0456 | 0.31 | Q | | | | |
| 2+30 | 0.0478 | 0.31 | Q | | | | |
| 2+35 | 0.0499 | 0.31 | Q | | | | |
| 2+40 | 0.0521 | 0.32 | Q | | | | |
| 2+45 | 0.0543 | 0.32 | Q | | | | |
| 2+50 | 0.0565 | 0.32 | Q | | | | |
| 2+55 | 0.0587 | 0.32 | Q | | | | |
| 3+ 0 | 0.0610 | 0.33 | Q | | | | |
| 3+ 5 | 0.0632 | 0.33 | Q | | | | |
| 3+10 | 0.0655 | 0.33 | Q | | | | |
| 3+15 | 0.0678 | 0.33 | QV | | | | |
| 3+20 | 0.0701 | 0.33 | QV | | | | |
| 3+25 | 0.0724 | 0.33 | QV | | | | |
| 3+30 | 0.0747 | 0.34 | QV | | | | |
| 3+35 | 0.0770 | 0.34 | QV | | | | |
| 3+40 | 0.0793 | 0.34 | QV | | | | |
| 3+45 | 0.0817 | 0.34 | QV | | | | |
| 3+50 | 0.0840 | 0.34 | QV | | | | |
| 3+55 | 0.0864 | 0.34 | QV | | | | |
| 4+ 0 | 0.0888 | 0.35 | QV | | | | |
| 4+ 5 | 0.0912 | 0.35 | QV | | | | |
| 4+10 | 0.0936 | 0.35 | QV | | | | |
| 4+15 | 0.0960 | 0.35 | QV | | | | |
| 4+20 | 0.0984 | 0.35 | QV | | | | |
| 4+25 | 0.1009 | 0.35 | QV | | | | |
| 4+30 | 0.1033 | 0.36 | QV | | | | |
| 4+35 | 0.1058 | 0.36 | QV | | | | |
| 4+40 | 0.1083 | 0.36 | QV | | | | |
| 4+45 | 0.1108 | 0.36 | QV | | | | |
| 4+50 | 0.1133 | 0.36 | QV | | | | |
| 4+55 | 0.1158 | 0.37 | QV | | | | |
| 5+ 0 | 0.1183 | 0.37 | QV | | | | |
| 5+ 5 | 0.1209 | 0.37 | QV | | | | |
| 5+10 | 0.1234 | 0.37 | QV | | | | |
| 5+15 | 0.1260 | 0.37 | QV | | | | |
| 5+20 | 0.1286 | 0.38 | QV | | | | |
| 5+25 | 0.1312 | 0.38 | QV | | | | |
| 5+30 | 0.1338 | 0.38 | Q V | | | | |
| 5+35 | 0.1364 | 0.38 | Q V | | | | |
| 5+40 | 0.1391 | 0.38 | Q V | | | | |
| 5+45 | 0.1418 | 0.39 | Q V | | | | |
| 5+50 | 0.1444 | 0.39 | Q V | | | | |
| 5+55 | 0.1471 | 0.39 | Q V | | | | |
| 6+ 0 | 0.1498 | 0.39 | Q V | | | | |
| 6+ 5 | 0.1526 | 0.40 | Q V | | | | |
| 6+10 | 0.1553 | 0.40 | Q V | | | | |
| 6+15 | 0.1581 | 0.40 | Q V | | | | |
| 6+20 | 0.1609 | 0.40 | Q V | | | | |
| 6+25 | 0.1636 | 0.41 | Q V | | | | |
| 6+30 | 0.1665 | 0.41 | Q V | | | | |
| 6+35 | 0.1693 | 0.41 | Q V | | | | |
| 6+40 | 0.1721 | 0.41 | Q V | | | | |
| 6+45 | 0.1750 | 0.42 | Q V | | | | |
| 6+50 | 0.1779 | 0.42 | Q V | | | | |
| 6+55 | 0.1808 | 0.42 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7+ 0 | 0.1837 | 0.42 | Q V | \| | \| | \| | \| |
| 7+ 5 | 0.1866 | 0.43 | Q V | \| | \| | \| | \| |
| 7+10 | 0.1896 | 0.43 | Q V | \| | \| | \| | \| |
| 7+15 | 0.1926 | 0.43 | Q V | \| | \| | \| | \| |
| 7+20 | 0.1956 | 0.44 | Q V | \| | \| | \| | \| |
| 7+25 | 0.1986 | 0.44 | Q V | \| | \| | \| | \| |
| 7+30 | 0.2016 | 0.44 | Q V | \| | \| | \| | \| |
| 7+35 | 0.2047 | 0.44 | Q V | \| | \| | \| | \| |
| 7+40 | 0.2078 | 0.45 | Q V | \| | \| | \| | \| |
| 7+45 | 0.2109 | 0.45 | Q V | \| | \| | \| | \| |
| 7+50 | 0.2140 | 0.45 | Q V | \| | \| | \| | \| |
| 7+55 | 0.2172 | 0.46 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.2204 | 0.46 | Q V | \| | \| | \| | \| |
| 8+ 5 | 0.2235 | 0.46 | Q V | \| | \| | \| | \| |
| 8+10 | 0.2268 | 0.47 | Q V | \| | \| | \| | \| |
| 8+15 | 0.2300 | 0.47 | Q V | \| | \| | \| | \| |
| 8+20 | 0.2333 | 0.47 | Q V | \| | \| | \| | \| |
| 8+25 | 0.2366 | 0.48 | Q V | \| | \| | \| | \| |
| 8+30 | 0.2399 | 0.48 | Q V | \| | \| | \| | \| |
| 8+35 | 0.2432 | 0.49 | Q V | \| | \| | \| | \| |
| 8+40 | 0.2466 | 0.49 | Q V | \| | \| | \| | \| |
| 8+45 | 0.2500 | 0.49 | Q V | \| | \| | \| | \| |
| 8+50 | 0.2534 | 0.50 | Q V | \| | \| | \| | \| |
| 8+55 | 0.2569 | 0.50 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.2604 | 0.51 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.2639 | 0.51 | Q V | \| | \| | \| | \| |
| 9+10 | 0.2674 | 0.51 | Q V | \| | \| | \| | \| |
| 9+15 | 0.2710 | 0.52 | Q V | \| | \| | \| | \| |
| 9+20 | 0.2746 | 0.52 | Q V | \| | \| | \| | \| |
| 9+25 | 0.2782 | 0.53 | Q V | \| | \| | \| | \| |
| 9+30 | 0.2819 | 0.53 | Q V | \| | \| | \| | \| |
| 9+35 | 0.2856 | 0.54 | Q V | \| | \| | \| | \| |
| 9+40 | 0.2893 | 0.54 | Q V | \| | \| | \| | \| |
| 9+45 | 0.2931 | 0.55 | Q V | \| | \| | \| | \| |
| 9+50 | 0.2969 | 0.55 | Q V | \| | \| | \| | \| |
| 9+55 | 0.3007 | 0.56 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.3046 | 0.56 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.3085 | 0.57 | Q V | \| | \| | \| | \| |
| 10+10 | 0.3125 | 0.57 | Q V | \| | \| | \| | \| |
| 10+15 | 0.3165 | 0.58 | Q V | \| | \| | \| | \| |
| 10+20 | 0.3205 | 0.58 | Q V | \| | \| | \| | \| |
| 10+25 | 0.3246 | 0.59 | Q V | \| | \| | \| | \| |
| 10+30 | 0.3287 | 0.60 | Q V | \| | \| | \| | \| |
| 10+35 | 0.3328 | 0.60 | Q V | \| | \| | \| | \| |
| 10+40 | 0.3370 | 0.61 | Q V | \| | \| | \| | \| |
| 10+45 | 0.3413 | 0.62 | Q V | \| | \| | \| | \| |
| 10+50 | 0.3456 | 0.62 | Q V | \| | \| | \| | \| |
| 10+55 | 0.3499 | 0.63 | Q V | \| | \| | \| | \| |
| 11+ 0 | 0.3543 | 0.64 | Q V | \| | \| | \| | \| |
| 11+ 5 | 0.3587 | 0.64 | Q V | \| | \| | \| | \| |
| 11+10 | 0.3632 | 0.65 | Q V | \| | \| | \| | \| |
| 11+15 | 0.3677 | 0.66 | Q V | \| | \| | \| | \| |
| 11+20 | 0.3723 | 0.67 | Q V | \| | \| | \| | \| |
| 11+25 | 0.3770 | 0.68 | Q V | \| | \| | \| | \| |
| 11+30 | 0.3817 | 0.68 | Q V | \| | \| | \| | \| |
| 11+35 | 0.3865 | 0.69 | Q V | \| | \| | \| | \| |
| 11+40 | 0.3913 | 0.70 | Q V | \| | \| | \| | \| |
| 11+45 | 0.3962 | 0.71 | Q V | \| | \| | \| | \| |
| 11+50 | 0.4011 | 0.72 | Q V | \| | \| | \| | \| |

```
11+55       0.4061      0.73  Q     V   |          |          |          |
12+ 0       0.4112      0.74  Q     V   |          |          |          |
12+ 5       0.4164      0.75  Q     V   |          |          |          |
12+10       0.4215      0.74  Q     V   |          |          |          |
12+15       0.4265      0.73  Q     V   |          |          |          |
12+20       0.4313      0.69  Q     V   |          |          |          |
12+25       0.4357      0.65  Q     V   |          |          |          |
12+30       0.4400      0.62  Q     V   |          |          |          |
12+35       0.4441      0.60  Q     V   |          |          |          |
12+40       0.4482      0.60  Q     V   |          |          |          |
12+45       0.4523      0.59  Q     V   |          |          |          |
12+50       0.4564      0.59  Q     V   |          |          |          |
12+55       0.4605      0.59  Q     V   |          |          |          |
13+ 0       0.4645      0.59  Q     V   |          |          |          |
13+ 5       0.4687      0.60  Q      V  |          |          |          |
13+10       0.4728      0.60  Q      V  |          |          |          |
13+15       0.4770      0.61  Q      V  |          |          |          |
13+20       0.4813      0.62  Q      V  |          |          |          |
13+25       0.4857      0.63  Q      V  |          |          |          |
13+30       0.4901      0.64  Q      V  |          |          |          |
13+35       0.4946      0.65  Q      V  |          |          |          |
13+40       0.4992      0.67  Q      V  |          |          |          |
13+45       0.5038      0.68  Q      V  |          |          |          |
13+50       0.5086      0.70  Q      V  |          |          |          |
13+55       0.5135      0.71  Q      V  |          |          |          |
14+ 0       0.5186      0.73  Q      V  |          |          |          |
14+ 5       0.5237      0.75  Q      V  |          |          |          |
14+10       0.5290      0.77  |Q     V  |          |          |          |
14+15       0.5345      0.79  |Q      V |          |          |          |
14+20       0.5401      0.82  |Q      V |          |          |          |
14+25       0.5459      0.84  |Q      V |          |          |          |
14+30       0.5519      0.87  |Q      V |          |          |          |
14+35       0.5582      0.90  |Q      V |          |          |          |
14+40       0.5646      0.94  |Q      V |          |          |          |
14+45       0.5713      0.98  |Q      V |          |          |          |
14+50       0.5783      1.02  |Q      V |          |          |          |
14+55       0.5856      1.06  |Q      V |          |          |          |
15+ 0       0.5933      1.11  |Q      V |          |          |          |
15+ 5       0.6013      1.17  |Q       V|          |          |          |
15+10       0.6098      1.23  |Q       V|          |          |          |
15+15       0.6187      1.30  |Q       V|          |          |          |
15+20       0.6282      1.38  |Q       V|          |          |          |
15+25       0.6385      1.50  |Q       V|          |          |          |
15+30       0.6502      1.70  | Q      V|          |          |          |
15+35       0.6640      2.01  | Q      V|          |          |          |
15+40       0.6818      2.58  |  Q      V          |          |          |
15+45       0.7044      3.28  |   Q     V          |          |          |
15+50       0.7320      4.01  |    Q    V          |          |          |
15+55       0.7656      4.88  |     Q   |V         |          |          |
16+ 0       0.8077      6.12  |       Q | V        |          |          |
16+ 5       0.8686      8.83  |         |Q V       |          |          |
16+10       0.9622     13.59  |         |   V   Q  |          |          |
16+15       1.0958     19.40  |         |     V    |    Q     |          |
16+20       1.2951     28.94  |         |        V |          |       Q  |
16+25       1.4985     29.53  |         |          | V        |        Q |
16+30       1.6515     22.21  |         |          |   V    Q |          |
16+35       1.7659     16.61  |         |          | Q   V    |          |
16+40       1.8552     12.97  |         |      Q   |      V   |          |
16+45       1.9278     10.55  |         |   Q      |       V  |          |
```

```
16+50       1.9882      8.77  |         |Q        |        V|         |
16+55       2.0392      7.40  |        Q|         |         V         |
17+ 0       2.0832      6.40  |       Q |         |         |V        |
17+ 5       2.1221      5.64  |      Q  |         |         |V        |
17+10       2.1569      5.06  |     Q   |         |         | V       |
17+15       2.1876      4.46  |    Q    |         |         | V       |
17+20       2.2142      3.86  |    Q    |         |         |  V      |
17+25       2.2382      3.49  |   Q     |         |         |  V      |
17+30       2.2603      3.20  |   Q     |         |         |  V      |
17+35       2.2803      2.91  |  Q      |         |         |   V     |
17+40       2.2987      2.67  |  Q      |         |         |   V     |
17+45       2.3150      2.37  |  Q      |         |         |   V     |
17+50       2.3302      2.21  | Q       |         |         |   V     |
17+55       2.3441      2.02  | Q       |         |         |    V    |
18+ 0       2.3567      1.82  | Q       |         |         |    V    |
18+ 5       2.3684      1.70  | Q       |         |         |    V    |
18+10       2.3788      1.50  | Q       |         |         |    V    |
18+15       2.3885      1.42  |Q        |         |         |    V    |
18+20       2.3976      1.31  |Q        |         |         |    V    |
18+25       2.4061      1.24  |Q        |         |         |     V   |
18+30       2.4146      1.24  |Q        |         |         |     V   |
18+35       2.4233      1.26  |Q        |         |         |     V   |
18+40       2.4319      1.24  |Q        |         |         |     V   |
18+45       2.4402      1.22  |Q        |         |         |     V   |
18+50       2.4483      1.18  |Q        |         |         |     V   |
18+55       2.4559      1.10  |Q        |         |         |     V   |
19+ 0       2.4627      0.98  |Q        |         |         |     V   |
19+ 5       2.4691      0.93  |Q        |         |         |      V  |
19+10       2.4752      0.89  |Q        |         |         |      V  |
19+15       2.4807      0.80  |Q        |         |         |      V  |
19+20       2.4854      0.68  Q         |         |         |      V  |
19+25       2.4899      0.66  Q         |         |         |      V  |
19+30       2.4943      0.64  Q         |         |         |      V  |
19+35       2.4986      0.62  Q         |         |         |      V  |
19+40       2.5028      0.61  Q         |         |         |      V  |
19+45       2.5069      0.60  Q         |         |         |      V  |
19+50       2.5109      0.58  Q         |         |         |      V  |
19+55       2.5148      0.57  Q         |         |         |      V  |
20+ 0       2.5187      0.56  Q         |         |         |      V  |
20+ 5       2.5225      0.55  Q         |         |         |      V  |
20+10       2.5263      0.54  Q         |         |         |      V  |
20+15       2.5300      0.54  Q         |         |         |      V  |
20+20       2.5336      0.53  Q         |         |         |      V  |
20+25       2.5372      0.52  Q         |         |         |       V |
20+30       2.5407      0.51  Q         |         |         |       V |
20+35       2.5441      0.50  Q         |         |         |       V |
20+40       2.5475      0.49  Q         |         |         |       V |
20+45       2.5509      0.49  Q         |         |         |       V |
20+50       2.5542      0.48  Q         |         |         |       V |
20+55       2.5574      0.47  Q         |         |         |       V |
21+ 0       2.5606      0.47  Q         |         |         |       V |
21+ 5       2.5638      0.46  Q         |         |         |       V |
21+10       2.5669      0.45  Q         |         |         |       V |
21+15       2.5700      0.45  Q         |         |         |       V |
21+20       2.5730      0.44  Q         |         |         |       V |
21+25       2.5760      0.43  Q         |         |         |       V |
21+30       2.5790      0.43  Q         |         |         |       V |
21+35       2.5819      0.42  Q         |         |         |       V |
21+40       2.5847      0.42  Q         |         |         |       V |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+45 | 2.5876 | 0.41 | Q | \| | \| | \| | V \| |
| 21+50 | 2.5904 | 0.41 | Q | \| | \| | \| | V \| |
| 21+55 | 2.5932 | 0.40 | Q | \| | \| | \| | V \| |
| 22+ 0 | 2.5959 | 0.40 | Q | \| | \| | \| | V \| |
| 22+ 5 | 2.5986 | 0.39 | Q | \| | \| | \| | V \| |
| 22+10 | 2.6013 | 0.39 | Q | \| | \| | \| | V \| |
| 22+15 | 2.6039 | 0.38 | Q | \| | \| | \| | V\| |
| 22+20 | 2.6065 | 0.38 | Q | \| | \| | \| | V\| |
| 22+25 | 2.6091 | 0.37 | Q | \| | \| | \| | V\| |
| 22+30 | 2.6116 | 0.37 | Q | \| | \| | \| | V\| |
| 22+35 | 2.6142 | 0.37 | Q | \| | \| | \| | V\| |
| 22+40 | 2.6167 | 0.36 | Q | \| | \| | \| | V\| |
| 22+45 | 2.6191 | 0.36 | Q | \| | \| | \| | V\| |
| 22+50 | 2.6216 | 0.35 | Q | \| | \| | \| | V\| |
| 22+55 | 2.6240 | 0.35 | Q | \| | \| | \| | V\| |
| 23+ 0 | 2.6264 | 0.35 | Q | \| | \| | \| | V\| |
| 23+ 5 | 2.6288 | 0.34 | Q | \| | \| | \| | V\| |
| 23+10 | 2.6311 | 0.34 | Q | \| | \| | \| | V\| |
| 23+15 | 2.6334 | 0.34 | Q | \| | \| | \| | V\| |
| 23+20 | 2.6357 | 0.33 | Q | \| | \| | \| | V\| |
| 23+25 | 2.6380 | 0.33 | Q | \| | \| | \| | V\| |
| 23+30 | 2.6403 | 0.33 | Q | \| | \| | \| | V\| |
| 23+35 | 2.6425 | 0.32 | Q | \| | \| | \| | V\| |
| 23+40 | 2.6447 | 0.32 | Q | \| | \| | \| | V\| |
| 23+45 | 2.6469 | 0.32 | Q | \| | \| | \| | V\| |
| 23+50 | 2.6491 | 0.32 | Q | \| | \| | \| | V\| |
| 23+55 | 2.6513 | 0.31 | Q | \| | \| | \| | V\| |
| 24+ 0 | 2.6534 | 0.31 | Q | \| | \| | \| | V\| |
| 24+ 5 | 2.6555 | 0.31 | Q | \| | \| | \| | V\| |
| 24+10 | 2.6575 | 0.29 | Q | \| | \| | \| | V\| |
| 24+15 | 2.6594 | 0.27 | Q | \| | \| | \| | V\| |
| 24+20 | 2.6609 | 0.22 | Q | \| | \| | \| | V\| |
| 24+25 | 2.6620 | 0.17 | Q | \| | \| | \| | V\| |
| 24+30 | 2.6630 | 0.14 | Q | \| | \| | \| | V\| |
| 24+35 | 2.6637 | 0.11 | Q | \| | \| | \| | V\| |
| 24+40 | 2.6644 | 0.10 | Q | \| | \| | \| | V\| |
| 24+45 | 2.6650 | 0.08 | Q | \| | \| | \| | V\| |
| 24+50 | 2.6654 | 0.07 | Q | \| | \| | \| | V\| |
| 24+55 | 2.6659 | 0.06 | Q | \| | \| | \| | V\| |
| 25+ 0 | 2.6662 | 0.05 | Q | \| | \| | \| | V\| |
| 25+ 5 | 2.6666 | 0.05 | Q | \| | \| | \| | V\| |
| 25+10 | 2.6668 | 0.04 | Q | \| | \| | \| | V\| |
| 25+15 | 2.6671 | 0.04 | Q | \| | \| | \| | V\| |
| 25+20 | 2.6673 | 0.03 | Q | \| | \| | \| | V\| |
| 25+25 | 2.6675 | 0.03 | Q | \| | \| | \| | V\| |
| 25+30 | 2.6677 | 0.02 | Q | \| | \| | \| | V\| |
| 25+35 | 2.6678 | 0.02 | Q | \| | \| | \| | V\| |
| 25+40 | 2.6680 | 0.02 | Q | \| | \| | \| | V\| |
| 25+45 | 2.6681 | 0.02 | Q | \| | \| | \| | V\| |
| 25+50 | 2.6682 | 0.01 | Q | \| | \| | \| | V\| |
| 25+55 | 2.6683 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 0 | 2.6683 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 5 | 2.6684 | 0.01 | Q | \| | \| | \| | V\| |
| 26+10 | 2.6685 | 0.01 | Q | \| | \| | \| | V\| |
| 26+15 | 2.6685 | 0.01 | Q | \| | \| | \| | V\| |
| 26+20 | 2.6685 | 0.01 | Q | \| | \| | \| | V\| |
| 26+25 | 2.6686 | 0.01 | Q | \| | \| | \| | V\| |
| 26+30 | 2.6686 | 0.00 | Q | \| | \| | \| | V\| |
| 26+35 | 2.6687 | 0.00 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+40 | 2.6687 | 0.00 | Q | \| | \| | \| | V\| |
| 26+45 | 2.6687 | 0.00 | Q | \| | \| | \| | V\| |
| 26+50 | 2.6687 | 0.00 | Q | \| | \| | \| | V\| |
| 26+55 | 2.6687 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 0 | 2.6687 | 0.00 | Q | \| | \| | \| | V\| |
| 27+ 5 | 2.6687 | 0.00 | Q | \| | \| | \| | V\| |
| 27+10 | 2.6687 | 0.00 | Q | \| | \| | \| | V\| |

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U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 30
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 135.00 | 1 | 1.40 |
| Rainfall data for year 100 | | |
| 135.00 | 6 | 1.82 |
| Rainfall data for year 100 | | |
| 135.00 | 24 | 2.57 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 87.7 | 97.5 | 135.00 | 1.000 | 0.049 | 0.895 | 0.044 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.044

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 120.83 | 0.895 | 87.7 | 97.5 | 0.25 | 0.891 |
| 14.17 | 0.105 | 98.0 | 98.0 | 0.20 | 0.911 |

Area-averaged catchment yield fraction, Y = 0.893
Area-averaged low loss fraction, Yb = 0.107
User entry of time of concentration = 1.080 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 135.00(Ac.)
Catchment Lag time = 0.864 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 9.6451
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.044(In/Hr)
Average low loss rate fraction (Yb) = 0.107 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.664(In)
Computed peak 30-minute rainfall = 1.137(In)
Specified peak 1-hour rainfall = 1.400(In)
Computed peak 3-hour rainfall = 1.644(In)
Specified peak 6-hour rainfall = 1.820(In)
Specified peak 24-hour rainfall = 2.570(In)

Rainfall depth area reduction factors:
Using a total area of 135.00(Ac.) (Ref: fig. E-4)

5-minute factor = 0.994 Adjusted rainfall = 0.660(In)
30-minute factor = 0.994 Adjusted rainfall = 1.130(In)
1-hour factor = 0.994 Adjusted rainfall = 1.391(In)
3-hour factor = 0.999 Adjusted rainfall = 1.643(In)
6-hour factor = 1.000 Adjusted rainfall = 1.819(In)
24-hour factor = 1.000 Adjusted rainfall = 2.570(In)
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U n i t H y d r o g r a p h

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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 1632.66 (CFS)) | |
| 1 | 0.424 | 6.929 |
| 2 | 1.464 | 16.979 |
| 3 | 3.115 | 26.952 |
| 4 | 5.377 | 36.932 |
| 5 | 8.283 | 47.447 |
| 6 | 12.500 | 68.848 |
| 7 | 19.124 | 108.146 |
| 8 | 28.533 | 153.620 |
| 9 | 37.277 | 142.760 |
| 10 | 44.637 | 120.149 |
| 11 | 50.584 | 97.096 |
| 12 | 55.603 | 81.955 |
| 13 | 59.596 | 65.181 |

| | | |
|---|---|---|
| 14 | 62.925 | 54.355 |
| 15 | 65.806 | 47.039 |
| 16 | 68.344 | 41.441 |
| 17 | 70.690 | 38.296 |
| 18 | 72.758 | 33.759 |
| 19 | 74.602 | 30.110 |
| 20 | 76.290 | 27.556 |
| 21 | 77.905 | 26.379 |
| 22 | 79.273 | 22.322 |
| 23 | 80.546 | 20.786 |
| 24 | 81.767 | 19.933 |
| 25 | 82.821 | 17.210 |
| 26 | 83.862 | 17.001 |
| 27 | 84.837 | 15.917 |
| 28 | 85.763 | 15.117 |
| 29 | 86.671 | 14.817 |
| 30 | 87.462 | 12.928 |
| 31 | 88.234 | 12.598 |
| 32 | 88.928 | 11.333 |
| 33 | 89.508 | 9.465 |
| 34 | 90.085 | 9.419 |
| 35 | 90.634 | 8.971 |
| 36 | 91.174 | 8.818 |
| 37 | 91.695 | 8.499 |
| 38 | 92.161 | 7.611 |
| 39 | 92.624 | 7.554 |
| 40 | 93.063 | 7.173 |
| 41 | 93.487 | 6.929 |
| 42 | 93.898 | 6.709 |
| 43 | 94.237 | 5.529 |
| 44 | 94.565 | 5.354 |
| 45 | 94.893 | 5.354 |
| 46 | 95.221 | 5.354 |
| 47 | 95.544 | 5.279 |
| 48 | 95.812 | 4.365 |
| 49 | 96.062 | 4.094 |
| 50 | 96.313 | 4.094 |
| 51 | 96.564 | 4.094 |
| 52 | 96.814 | 4.078 |
| 53 | 97.015 | 3.279 |
| 54 | 97.188 | 2.834 |
| 55 | 97.362 | 2.834 |
| 56 | 97.535 | 2.834 |
| 57 | 97.709 | 2.834 |
| 58 | 97.846 | 2.234 |
| 59 | 97.942 | 1.575 |
| 60 | 98.039 | 1.575 |
| 61 | 98.135 | 1.575 |
| 62 | 98.232 | 1.575 |
| 63 | 98.334 | 1.673 |
| 64 | 98.450 | 1.883 |
| 65 | 98.565 | 1.890 |
| 66 | 98.681 | 1.890 |
| 67 | 98.797 | 1.890 |
| 68 | 98.912 | 1.890 |
| 69 | 99.028 | 1.890 |
| 70 | 99.144 | 1.890 |
| 71 | 99.260 | 1.890 |
| 72 | 99.375 | 1.890 |

| | | |
|---|---|---|
| 73 | 99.486 | 1.808 |
| 74 | 99.556 | 1.134 |
| 75 | 99.616 | 0.984 |
| 76 | 99.676 | 0.984 |
| 77 | 99.737 | 0.984 |
| 78 | 99.797 | 0.984 |
| 79 | 99.857 | 0.984 |
| 80 | 99.917 | 0.984 |
| 81 | 100.000 | 0.492 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6601 | 0.6601 |
| 2 | 0.8127 | 0.1526 |
| 3 | 0.9178 | 0.1051 |
| 4 | 1.0005 | 0.0827 |
| 5 | 1.0698 | 0.0693 |
| 6 | 1.1300 | 0.0601 |
| 7 | 1.1834 | 0.0535 |
| 8 | 1.2318 | 0.0484 |
| 9 | 1.2761 | 0.0443 |
| 10 | 1.3171 | 0.0410 |
| 11 | 1.3553 | 0.0382 |
| 12 | 1.3911 | 0.0358 |
| 13 | 1.4081 | 0.0170 |
| 14 | 1.4240 | 0.0159 |
| 15 | 1.4390 | 0.0150 |
| 16 | 1.4531 | 0.0141 |
| 17 | 1.4665 | 0.0134 |
| 18 | 1.4793 | 0.0128 |
| 19 | 1.4914 | 0.0122 |
| 20 | 1.5031 | 0.0116 |
| 21 | 1.5142 | 0.0111 |
| 22 | 1.5249 | 0.0107 |
| 23 | 1.5352 | 0.0103 |
| 24 | 1.5451 | 0.0099 |
| 25 | 1.5547 | 0.0096 |
| 26 | 1.5640 | 0.0093 |
| 27 | 1.5730 | 0.0090 |
| 28 | 1.5817 | 0.0087 |
| 29 | 1.5901 | 0.0084 |
| 30 | 1.5983 | 0.0082 |
| 31 | 1.6062 | 0.0080 |
| 32 | 1.6140 | 0.0077 |
| 33 | 1.6215 | 0.0075 |
| 34 | 1.6289 | 0.0073 |
| 35 | 1.6360 | 0.0072 |
| 36 | 1.6430 | 0.0070 |
| 37 | 1.6497 | 0.0066 |
| 38 | 1.6561 | 0.0065 |
| 39 | 1.6625 | 0.0063 |
| 40 | 1.6687 | 0.0062 |
| 41 | 1.6747 | 0.0061 |
| 42 | 1.6807 | 0.0059 |
| 43 | 1.6865 | 0.0058 |
| 44 | 1.6922 | 0.0057 |
| 45 | 1.6978 | 0.0056 |
| 46 | 1.7033 | 0.0055 |
| 47 | 1.7087 | 0.0054 |

| | | |
|---|---|---|
| 48 | 1.7140 | 0.0053 |
| 49 | 1.7192 | 0.0052 |
| 50 | 1.7243 | 0.0051 |
| 51 | 1.7293 | 0.0050 |
| 52 | 1.7343 | 0.0049 |
| 53 | 1.7391 | 0.0049 |
| 54 | 1.7439 | 0.0048 |
| 55 | 1.7486 | 0.0047 |
| 56 | 1.7533 | 0.0046 |
| 57 | 1.7578 | 0.0046 |
| 58 | 1.7623 | 0.0045 |
| 59 | 1.7668 | 0.0044 |
| 60 | 1.7711 | 0.0044 |
| 61 | 1.7754 | 0.0043 |
| 62 | 1.7797 | 0.0042 |
| 63 | 1.7839 | 0.0042 |
| 64 | 1.7880 | 0.0041 |
| 65 | 1.7921 | 0.0041 |
| 66 | 1.7961 | 0.0040 |
| 67 | 1.8001 | 0.0040 |
| 68 | 1.8040 | 0.0039 |
| 69 | 1.8079 | 0.0039 |
| 70 | 1.8117 | 0.0038 |
| 71 | 1.8155 | 0.0038 |
| 72 | 1.8192 | 0.0037 |
| 73 | 1.8255 | 0.0063 |
| 74 | 1.8317 | 0.0062 |
| 75 | 1.8378 | 0.0061 |
| 76 | 1.8439 | 0.0061 |
| 77 | 1.8499 | 0.0060 |
| 78 | 1.8559 | 0.0060 |
| 79 | 1.8618 | 0.0059 |
| 80 | 1.8676 | 0.0058 |
| 81 | 1.8734 | 0.0058 |
| 82 | 1.8791 | 0.0057 |
| 83 | 1.8848 | 0.0057 |
| 84 | 1.8904 | 0.0056 |
| 85 | 1.8960 | 0.0056 |
| 86 | 1.9016 | 0.0055 |
| 87 | 1.9070 | 0.0055 |
| 88 | 1.9125 | 0.0054 |
| 89 | 1.9179 | 0.0054 |
| 90 | 1.9232 | 0.0053 |
| 91 | 1.9285 | 0.0053 |
| 92 | 1.9338 | 0.0053 |
| 93 | 1.9390 | 0.0052 |
| 94 | 1.9442 | 0.0052 |
| 95 | 1.9493 | 0.0051 |
| 96 | 1.9544 | 0.0051 |
| 97 | 1.9594 | 0.0051 |
| 98 | 1.9644 | 0.0050 |
| 99 | 1.9694 | 0.0050 |
| 100 | 1.9744 | 0.0049 |
| 101 | 1.9793 | 0.0049 |
| 102 | 1.9841 | 0.0049 |
| 103 | 1.9890 | 0.0048 |
| 104 | 1.9937 | 0.0048 |
| 105 | 1.9985 | 0.0048 |
| 106 | 2.0032 | 0.0047 |

| | | |
|---|---|---|
| 107 | 2.0079 | 0.0047 |
| 108 | 2.0126 | 0.0047 |
| 109 | 2.0172 | 0.0046 |
| 110 | 2.0218 | 0.0046 |
| 111 | 2.0264 | 0.0046 |
| 112 | 2.0309 | 0.0045 |
| 113 | 2.0354 | 0.0045 |
| 114 | 2.0399 | 0.0045 |
| 115 | 2.0443 | 0.0044 |
| 116 | 2.0487 | 0.0044 |
| 117 | 2.0531 | 0.0044 |
| 118 | 2.0575 | 0.0044 |
| 119 | 2.0618 | 0.0043 |
| 120 | 2.0661 | 0.0043 |
| 121 | 2.0704 | 0.0043 |
| 122 | 2.0746 | 0.0042 |
| 123 | 2.0788 | 0.0042 |
| 124 | 2.0830 | 0.0042 |
| 125 | 2.0872 | 0.0042 |
| 126 | 2.0914 | 0.0041 |
| 127 | 2.0955 | 0.0041 |
| 128 | 2.0996 | 0.0041 |
| 129 | 2.1037 | 0.0041 |
| 130 | 2.1077 | 0.0041 |
| 131 | 2.1117 | 0.0040 |
| 132 | 2.1157 | 0.0040 |
| 133 | 2.1197 | 0.0040 |
| 134 | 2.1237 | 0.0040 |
| 135 | 2.1276 | 0.0039 |
| 136 | 2.1315 | 0.0039 |
| 137 | 2.1354 | 0.0039 |
| 138 | 2.1393 | 0.0039 |
| 139 | 2.1431 | 0.0039 |
| 140 | 2.1470 | 0.0038 |
| 141 | 2.1508 | 0.0038 |
| 142 | 2.1546 | 0.0038 |
| 143 | 2.1583 | 0.0038 |
| 144 | 2.1621 | 0.0037 |
| 145 | 2.1658 | 0.0037 |
| 146 | 2.1695 | 0.0037 |
| 147 | 2.1732 | 0.0037 |
| 148 | 2.1769 | 0.0037 |
| 149 | 2.1806 | 0.0037 |
| 150 | 2.1842 | 0.0036 |
| 151 | 2.1878 | 0.0036 |
| 152 | 2.1914 | 0.0036 |
| 153 | 2.1950 | 0.0036 |
| 154 | 2.1986 | 0.0036 |
| 155 | 2.2021 | 0.0035 |
| 156 | 2.2056 | 0.0035 |
| 157 | 2.2091 | 0.0035 |
| 158 | 2.2126 | 0.0035 |
| 159 | 2.2161 | 0.0035 |
| 160 | 2.2196 | 0.0035 |
| 161 | 2.2230 | 0.0034 |
| 162 | 2.2265 | 0.0034 |
| 163 | 2.2299 | 0.0034 |
| 164 | 2.2333 | 0.0034 |
| 165 | 2.2367 | 0.0034 |

| | | |
|---|---|---|
| 166 | 2.2400 | 0.0034 |
| 167 | 2.2434 | 0.0034 |
| 168 | 2.2467 | 0.0033 |
| 169 | 2.2501 | 0.0033 |
| 170 | 2.2534 | 0.0033 |
| 171 | 2.2567 | 0.0033 |
| 172 | 2.2599 | 0.0033 |
| 173 | 2.2632 | 0.0033 |
| 174 | 2.2665 | 0.0033 |
| 175 | 2.2697 | 0.0032 |
| 176 | 2.2729 | 0.0032 |
| 177 | 2.2761 | 0.0032 |
| 178 | 2.2793 | 0.0032 |
| 179 | 2.2825 | 0.0032 |
| 180 | 2.2857 | 0.0032 |
| 181 | 2.2888 | 0.0032 |
| 182 | 2.2920 | 0.0031 |
| 183 | 2.2951 | 0.0031 |
| 184 | 2.2982 | 0.0031 |
| 185 | 2.3013 | 0.0031 |
| 186 | 2.3044 | 0.0031 |
| 187 | 2.3075 | 0.0031 |
| 188 | 2.3106 | 0.0031 |
| 189 | 2.3136 | 0.0031 |
| 190 | 2.3167 | 0.0030 |
| 191 | 2.3197 | 0.0030 |
| 192 | 2.3227 | 0.0030 |
| 193 | 2.3257 | 0.0030 |
| 194 | 2.3287 | 0.0030 |
| 195 | 2.3317 | 0.0030 |
| 196 | 2.3347 | 0.0030 |
| 197 | 2.3376 | 0.0030 |
| 198 | 2.3406 | 0.0030 |
| 199 | 2.3435 | 0.0029 |
| 200 | 2.3465 | 0.0029 |
| 201 | 2.3494 | 0.0029 |
| 202 | 2.3523 | 0.0029 |
| 203 | 2.3552 | 0.0029 |
| 204 | 2.3581 | 0.0029 |
| 205 | 2.3609 | 0.0029 |
| 206 | 2.3638 | 0.0029 |
| 207 | 2.3666 | 0.0029 |
| 208 | 2.3695 | 0.0028 |
| 209 | 2.3723 | 0.0028 |
| 210 | 2.3751 | 0.0028 |
| 211 | 2.3780 | 0.0028 |
| 212 | 2.3808 | 0.0028 |
| 213 | 2.3836 | 0.0028 |
| 214 | 2.3863 | 0.0028 |
| 215 | 2.3891 | 0.0028 |
| 216 | 2.3919 | 0.0028 |
| 217 | 2.3946 | 0.0028 |
| 218 | 2.3974 | 0.0027 |
| 219 | 2.4001 | 0.0027 |
| 220 | 2.4028 | 0.0027 |
| 221 | 2.4055 | 0.0027 |
| 222 | 2.4083 | 0.0027 |
| 223 | 2.4109 | 0.0027 |
| 224 | 2.4136 | 0.0027 |

| | | |
|---|---|---|
| 225 | 2.4163 | 0.0027 |
| 226 | 2.4190 | 0.0027 |
| 227 | 2.4217 | 0.0027 |
| 228 | 2.4243 | 0.0027 |
| 229 | 2.4269 | 0.0026 |
| 230 | 2.4296 | 0.0026 |
| 231 | 2.4322 | 0.0026 |
| 232 | 2.4348 | 0.0026 |
| 233 | 2.4374 | 0.0026 |
| 234 | 2.4400 | 0.0026 |
| 235 | 2.4426 | 0.0026 |
| 236 | 2.4452 | 0.0026 |
| 237 | 2.4478 | 0.0026 |
| 238 | 2.4504 | 0.0026 |
| 239 | 2.4529 | 0.0026 |
| 240 | 2.4555 | 0.0026 |
| 241 | 2.4580 | 0.0025 |
| 242 | 2.4606 | 0.0025 |
| 243 | 2.4631 | 0.0025 |
| 244 | 2.4656 | 0.0025 |
| 245 | 2.4681 | 0.0025 |
| 246 | 2.4706 | 0.0025 |
| 247 | 2.4731 | 0.0025 |
| 248 | 2.4756 | 0.0025 |
| 249 | 2.4781 | 0.0025 |
| 250 | 2.4806 | 0.0025 |
| 251 | 2.4830 | 0.0025 |
| 252 | 2.4855 | 0.0025 |
| 253 | 2.4880 | 0.0025 |
| 254 | 2.4904 | 0.0024 |
| 255 | 2.4928 | 0.0024 |
| 256 | 2.4953 | 0.0024 |
| 257 | 2.4977 | 0.0024 |
| 258 | 2.5001 | 0.0024 |
| 259 | 2.5025 | 0.0024 |
| 260 | 2.5049 | 0.0024 |
| 261 | 2.5073 | 0.0024 |
| 262 | 2.5097 | 0.0024 |
| 263 | 2.5121 | 0.0024 |
| 264 | 2.5145 | 0.0024 |
| 265 | 2.5168 | 0.0024 |
| 266 | 2.5192 | 0.0024 |
| 267 | 2.5216 | 0.0024 |
| 268 | 2.5239 | 0.0023 |
| 269 | 2.5263 | 0.0023 |
| 270 | 2.5286 | 0.0023 |
| 271 | 2.5309 | 0.0023 |
| 272 | 2.5332 | 0.0023 |
| 273 | 2.5356 | 0.0023 |
| 274 | 2.5379 | 0.0023 |
| 275 | 2.5402 | 0.0023 |
| 276 | 2.5425 | 0.0023 |
| 277 | 2.5448 | 0.0023 |
| 278 | 2.5470 | 0.0023 |
| 279 | 2.5493 | 0.0023 |
| 280 | 2.5516 | 0.0023 |
| 281 | 2.5539 | 0.0023 |
| 282 | 2.5561 | 0.0023 |
| 283 | 2.5584 | 0.0023 |

| | | |
|---|---|---|
| 284 | 2.5606 | 0.0022 |
| 285 | 2.5629 | 0.0022 |
| 286 | 2.5651 | 0.0022 |
| 287 | 2.5673 | 0.0022 |
| 288 | 2.5696 | 0.0022 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0022 | 0.0002 | 0.0020 |
| 2 | 0.0022 | 0.0002 | 0.0020 |
| 3 | 0.0022 | 0.0002 | 0.0020 |
| 4 | 0.0022 | 0.0002 | 0.0020 |
| 5 | 0.0023 | 0.0002 | 0.0020 |
| 6 | 0.0023 | 0.0002 | 0.0020 |
| 7 | 0.0023 | 0.0002 | 0.0020 |
| 8 | 0.0023 | 0.0002 | 0.0020 |
| 9 | 0.0023 | 0.0002 | 0.0021 |
| 10 | 0.0023 | 0.0002 | 0.0021 |
| 11 | 0.0023 | 0.0002 | 0.0021 |
| 12 | 0.0023 | 0.0002 | 0.0021 |
| 13 | 0.0023 | 0.0002 | 0.0021 |
| 14 | 0.0023 | 0.0003 | 0.0021 |
| 15 | 0.0024 | 0.0003 | 0.0021 |
| 16 | 0.0024 | 0.0003 | 0.0021 |
| 17 | 0.0024 | 0.0003 | 0.0021 |
| 18 | 0.0024 | 0.0003 | 0.0021 |
| 19 | 0.0024 | 0.0003 | 0.0021 |
| 20 | 0.0024 | 0.0003 | 0.0021 |
| 21 | 0.0024 | 0.0003 | 0.0022 |
| 22 | 0.0024 | 0.0003 | 0.0022 |
| 23 | 0.0024 | 0.0003 | 0.0022 |
| 24 | 0.0024 | 0.0003 | 0.0022 |
| 25 | 0.0025 | 0.0003 | 0.0022 |
| 26 | 0.0025 | 0.0003 | 0.0022 |
| 27 | 0.0025 | 0.0003 | 0.0022 |
| 28 | 0.0025 | 0.0003 | 0.0022 |
| 29 | 0.0025 | 0.0003 | 0.0022 |
| 30 | 0.0025 | 0.0003 | 0.0022 |
| 31 | 0.0025 | 0.0003 | 0.0023 |
| 32 | 0.0025 | 0.0003 | 0.0023 |
| 33 | 0.0026 | 0.0003 | 0.0023 |
| 34 | 0.0026 | 0.0003 | 0.0023 |
| 35 | 0.0026 | 0.0003 | 0.0023 |
| 36 | 0.0026 | 0.0003 | 0.0023 |
| 37 | 0.0026 | 0.0003 | 0.0023 |
| 38 | 0.0026 | 0.0003 | 0.0023 |
| 39 | 0.0026 | 0.0003 | 0.0023 |
| 40 | 0.0026 | 0.0003 | 0.0024 |
| 41 | 0.0027 | 0.0003 | 0.0024 |
| 42 | 0.0027 | 0.0003 | 0.0024 |
| 43 | 0.0027 | 0.0003 | 0.0024 |
| 44 | 0.0027 | 0.0003 | 0.0024 |
| 45 | 0.0027 | 0.0003 | 0.0024 |
| 46 | 0.0027 | 0.0003 | 0.0024 |
| 47 | 0.0027 | 0.0003 | 0.0024 |
| 48 | 0.0027 | 0.0003 | 0.0025 |
| 49 | 0.0028 | 0.0003 | 0.0025 |

| | | | |
|---|---|---|---|
| 50 | 0.0028 | 0.0003 | 0.0025 |
| 51 | 0.0028 | 0.0003 | 0.0025 |
| 52 | 0.0028 | 0.0003 | 0.0025 |
| 53 | 0.0028 | 0.0003 | 0.0025 |
| 54 | 0.0028 | 0.0003 | 0.0025 |
| 55 | 0.0029 | 0.0003 | 0.0025 |
| 56 | 0.0029 | 0.0003 | 0.0026 |
| 57 | 0.0029 | 0.0003 | 0.0026 |
| 58 | 0.0029 | 0.0003 | 0.0026 |
| 59 | 0.0029 | 0.0003 | 0.0026 |
| 60 | 0.0029 | 0.0003 | 0.0026 |
| 61 | 0.0030 | 0.0003 | 0.0026 |
| 62 | 0.0030 | 0.0003 | 0.0026 |
| 63 | 0.0030 | 0.0003 | 0.0027 |
| 64 | 0.0030 | 0.0003 | 0.0027 |
| 65 | 0.0030 | 0.0003 | 0.0027 |
| 66 | 0.0030 | 0.0003 | 0.0027 |
| 67 | 0.0031 | 0.0003 | 0.0027 |
| 68 | 0.0031 | 0.0003 | 0.0027 |
| 69 | 0.0031 | 0.0003 | 0.0028 |
| 70 | 0.0031 | 0.0003 | 0.0028 |
| 71 | 0.0031 | 0.0003 | 0.0028 |
| 72 | 0.0031 | 0.0003 | 0.0028 |
| 73 | 0.0032 | 0.0003 | 0.0028 |
| 74 | 0.0032 | 0.0003 | 0.0028 |
| 75 | 0.0032 | 0.0003 | 0.0029 |
| 76 | 0.0032 | 0.0003 | 0.0029 |
| 77 | 0.0033 | 0.0003 | 0.0029 |
| 78 | 0.0033 | 0.0003 | 0.0029 |
| 79 | 0.0033 | 0.0004 | 0.0029 |
| 80 | 0.0033 | 0.0004 | 0.0030 |
| 81 | 0.0033 | 0.0004 | 0.0030 |
| 82 | 0.0034 | 0.0004 | 0.0030 |
| 83 | 0.0034 | 0.0004 | 0.0030 |
| 84 | 0.0034 | 0.0004 | 0.0030 |
| 85 | 0.0034 | 0.0004 | 0.0031 |
| 86 | 0.0034 | 0.0004 | 0.0031 |
| 87 | 0.0035 | 0.0004 | 0.0031 |
| 88 | 0.0035 | 0.0004 | 0.0031 |
| 89 | 0.0035 | 0.0004 | 0.0032 |
| 90 | 0.0035 | 0.0004 | 0.0032 |
| 91 | 0.0036 | 0.0004 | 0.0032 |
| 92 | 0.0036 | 0.0004 | 0.0032 |
| 93 | 0.0036 | 0.0004 | 0.0032 |
| 94 | 0.0037 | 0.0004 | 0.0033 |
| 95 | 0.0037 | 0.0004 | 0.0033 |
| 96 | 0.0037 | 0.0004 | 0.0033 |
| 97 | 0.0037 | 0.0004 | 0.0033 |
| 98 | 0.0038 | 0.0004 | 0.0034 |
| 99 | 0.0038 | 0.0004 | 0.0034 |
| 100 | 0.0038 | 0.0004 | 0.0034 |
| 101 | 0.0039 | 0.0004 | 0.0035 |
| 102 | 0.0039 | 0.0004 | 0.0035 |
| 103 | 0.0039 | 0.0004 | 0.0035 |
| 104 | 0.0040 | 0.0004 | 0.0035 |
| 105 | 0.0040 | 0.0004 | 0.0036 |
| 106 | 0.0040 | 0.0004 | 0.0036 |
| 107 | 0.0041 | 0.0004 | 0.0036 |
| 108 | 0.0041 | 0.0004 | 0.0037 |

| | | | |
|---|---|---|---|
| 109 | 0.0041 | 0.0004 | 0.0037 |
| 110 | 0.0042 | 0.0004 | 0.0037 |
| 111 | 0.0042 | 0.0005 | 0.0038 |
| 112 | 0.0042 | 0.0005 | 0.0038 |
| 113 | 0.0043 | 0.0005 | 0.0038 |
| 114 | 0.0043 | 0.0005 | 0.0039 |
| 115 | 0.0044 | 0.0005 | 0.0039 |
| 116 | 0.0044 | 0.0005 | 0.0039 |
| 117 | 0.0045 | 0.0005 | 0.0040 |
| 118 | 0.0045 | 0.0005 | 0.0040 |
| 119 | 0.0046 | 0.0005 | 0.0041 |
| 120 | 0.0046 | 0.0005 | 0.0041 |
| 121 | 0.0047 | 0.0005 | 0.0042 |
| 122 | 0.0047 | 0.0005 | 0.0042 |
| 123 | 0.0048 | 0.0005 | 0.0043 |
| 124 | 0.0048 | 0.0005 | 0.0043 |
| 125 | 0.0049 | 0.0005 | 0.0043 |
| 126 | 0.0049 | 0.0005 | 0.0044 |
| 127 | 0.0050 | 0.0005 | 0.0044 |
| 128 | 0.0050 | 0.0005 | 0.0045 |
| 129 | 0.0051 | 0.0005 | 0.0045 |
| 130 | 0.0051 | 0.0005 | 0.0046 |
| 131 | 0.0052 | 0.0006 | 0.0047 |
| 132 | 0.0053 | 0.0006 | 0.0047 |
| 133 | 0.0053 | 0.0006 | 0.0048 |
| 134 | 0.0054 | 0.0006 | 0.0048 |
| 135 | 0.0055 | 0.0006 | 0.0049 |
| 136 | 0.0055 | 0.0006 | 0.0049 |
| 137 | 0.0056 | 0.0006 | 0.0050 |
| 138 | 0.0057 | 0.0006 | 0.0051 |
| 139 | 0.0058 | 0.0006 | 0.0052 |
| 140 | 0.0058 | 0.0006 | 0.0052 |
| 141 | 0.0060 | 0.0006 | 0.0053 |
| 142 | 0.0060 | 0.0006 | 0.0054 |
| 143 | 0.0061 | 0.0007 | 0.0055 |
| 144 | 0.0062 | 0.0007 | 0.0055 |
| 145 | 0.0037 | 0.0004 | 0.0033 |
| 146 | 0.0038 | 0.0004 | 0.0034 |
| 147 | 0.0039 | 0.0004 | 0.0035 |
| 148 | 0.0039 | 0.0004 | 0.0035 |
| 149 | 0.0040 | 0.0004 | 0.0036 |
| 150 | 0.0041 | 0.0004 | 0.0036 |
| 151 | 0.0042 | 0.0004 | 0.0037 |
| 152 | 0.0042 | 0.0005 | 0.0038 |
| 153 | 0.0044 | 0.0005 | 0.0039 |
| 154 | 0.0044 | 0.0005 | 0.0040 |
| 155 | 0.0046 | 0.0005 | 0.0041 |
| 156 | 0.0046 | 0.0005 | 0.0041 |
| 157 | 0.0048 | 0.0005 | 0.0043 |
| 158 | 0.0049 | 0.0005 | 0.0043 |
| 159 | 0.0050 | 0.0005 | 0.0045 |
| 160 | 0.0051 | 0.0005 | 0.0046 |
| 161 | 0.0053 | 0.0006 | 0.0047 |
| 162 | 0.0054 | 0.0006 | 0.0048 |
| 163 | 0.0056 | 0.0006 | 0.0050 |
| 164 | 0.0057 | 0.0006 | 0.0051 |
| 165 | 0.0059 | 0.0006 | 0.0053 |
| 166 | 0.0061 | 0.0006 | 0.0054 |
| 167 | 0.0063 | 0.0007 | 0.0057 |

| | | | |
|---|---|---|---|
| 168 | 0.0065 | 0.0007 | 0.0058 |
| 169 | 0.0070 | 0.0007 | 0.0062 |
| 170 | 0.0072 | 0.0008 | 0.0064 |
| 171 | 0.0075 | 0.0008 | 0.0067 |
| 172 | 0.0077 | 0.0008 | 0.0069 |
| 173 | 0.0082 | 0.0009 | 0.0073 |
| 174 | 0.0084 | 0.0009 | 0.0075 |
| 175 | 0.0090 | 0.0010 | 0.0080 |
| 176 | 0.0093 | 0.0010 | 0.0083 |
| 177 | 0.0099 | 0.0011 | 0.0089 |
| 178 | 0.0103 | 0.0011 | 0.0092 |
| 179 | 0.0111 | 0.0012 | 0.0100 |
| 180 | 0.0116 | 0.0012 | 0.0104 |
| 181 | 0.0128 | 0.0014 | 0.0114 |
| 182 | 0.0134 | 0.0014 | 0.0120 |
| 183 | 0.0150 | 0.0016 | 0.0134 |
| 184 | 0.0159 | 0.0017 | 0.0142 |
| 185 | 0.0358 | 0.0036 | 0.0322 |
| 186 | 0.0382 | 0.0036 | 0.0346 |
| 187 | 0.0443 | 0.0036 | 0.0407 |
| 188 | 0.0484 | 0.0036 | 0.0447 |
| 189 | 0.0601 | 0.0036 | 0.0565 |
| 190 | 0.0693 | 0.0036 | 0.0656 |
| 191 | 0.1051 | 0.0036 | 0.1015 |
| 192 | 0.1526 | 0.0036 | 0.1489 |
| 193 | 0.6601 | 0.0036 | 0.6565 |
| 194 | 0.0827 | 0.0036 | 0.0791 |
| 195 | 0.0535 | 0.0036 | 0.0498 |
| 196 | 0.0410 | 0.0036 | 0.0373 |
| 197 | 0.0170 | 0.0018 | 0.0152 |
| 198 | 0.0141 | 0.0015 | 0.0126 |
| 199 | 0.0122 | 0.0013 | 0.0109 |
| 200 | 0.0107 | 0.0011 | 0.0096 |
| 201 | 0.0096 | 0.0010 | 0.0086 |
| 202 | 0.0087 | 0.0009 | 0.0078 |
| 203 | 0.0080 | 0.0008 | 0.0071 |
| 204 | 0.0073 | 0.0008 | 0.0066 |
| 205 | 0.0066 | 0.0007 | 0.0059 |
| 206 | 0.0062 | 0.0007 | 0.0055 |
| 207 | 0.0058 | 0.0006 | 0.0052 |
| 208 | 0.0055 | 0.0006 | 0.0049 |
| 209 | 0.0052 | 0.0006 | 0.0046 |
| 210 | 0.0049 | 0.0005 | 0.0044 |
| 211 | 0.0047 | 0.0005 | 0.0042 |
| 212 | 0.0045 | 0.0005 | 0.0040 |
| 213 | 0.0043 | 0.0005 | 0.0038 |
| 214 | 0.0041 | 0.0004 | 0.0037 |
| 215 | 0.0040 | 0.0004 | 0.0035 |
| 216 | 0.0038 | 0.0004 | 0.0034 |
| 217 | 0.0063 | 0.0007 | 0.0056 |
| 218 | 0.0061 | 0.0006 | 0.0054 |
| 219 | 0.0059 | 0.0006 | 0.0053 |
| 220 | 0.0057 | 0.0006 | 0.0051 |
| 221 | 0.0056 | 0.0006 | 0.0050 |
| 222 | 0.0054 | 0.0006 | 0.0049 |
| 223 | 0.0053 | 0.0006 | 0.0047 |
| 224 | 0.0052 | 0.0006 | 0.0046 |
| 225 | 0.0051 | 0.0005 | 0.0045 |
| 226 | 0.0049 | 0.0005 | 0.0044 |

| | | | |
|---|---|---|---|
| 227 | 0.0048 | 0.0005 | 0.0043 |
| 228 | 0.0047 | 0.0005 | 0.0042 |
| 229 | 0.0046 | 0.0005 | 0.0041 |
| 230 | 0.0045 | 0.0005 | 0.0040 |
| 231 | 0.0044 | 0.0005 | 0.0040 |
| 232 | 0.0044 | 0.0005 | 0.0039 |
| 233 | 0.0043 | 0.0005 | 0.0038 |
| 234 | 0.0042 | 0.0004 | 0.0037 |
| 235 | 0.0041 | 0.0004 | 0.0037 |
| 236 | 0.0041 | 0.0004 | 0.0036 |
| 237 | 0.0040 | 0.0004 | 0.0036 |
| 238 | 0.0039 | 0.0004 | 0.0035 |
| 239 | 0.0039 | 0.0004 | 0.0034 |
| 240 | 0.0038 | 0.0004 | 0.0034 |
| 241 | 0.0037 | 0.0004 | 0.0033 |
| 242 | 0.0037 | 0.0004 | 0.0033 |
| 243 | 0.0036 | 0.0004 | 0.0032 |
| 244 | 0.0036 | 0.0004 | 0.0032 |
| 245 | 0.0035 | 0.0004 | 0.0031 |
| 246 | 0.0035 | 0.0004 | 0.0031 |
| 247 | 0.0034 | 0.0004 | 0.0031 |
| 248 | 0.0034 | 0.0004 | 0.0030 |
| 249 | 0.0033 | 0.0004 | 0.0030 |
| 250 | 0.0033 | 0.0004 | 0.0029 |
| 251 | 0.0032 | 0.0003 | 0.0029 |
| 252 | 0.0032 | 0.0003 | 0.0029 |
| 253 | 0.0032 | 0.0003 | 0.0028 |
| 254 | 0.0031 | 0.0003 | 0.0028 |
| 255 | 0.0031 | 0.0003 | 0.0028 |
| 256 | 0.0030 | 0.0003 | 0.0027 |
| 257 | 0.0030 | 0.0003 | 0.0027 |
| 258 | 0.0030 | 0.0003 | 0.0027 |
| 259 | 0.0029 | 0.0003 | 0.0026 |
| 260 | 0.0029 | 0.0003 | 0.0026 |
| 261 | 0.0029 | 0.0003 | 0.0026 |
| 262 | 0.0028 | 0.0003 | 0.0025 |
| 263 | 0.0028 | 0.0003 | 0.0025 |
| 264 | 0.0028 | 0.0003 | 0.0025 |
| 265 | 0.0028 | 0.0003 | 0.0025 |
| 266 | 0.0027 | 0.0003 | 0.0024 |
| 267 | 0.0027 | 0.0003 | 0.0024 |
| 268 | 0.0027 | 0.0003 | 0.0024 |
| 269 | 0.0026 | 0.0003 | 0.0024 |
| 270 | 0.0026 | 0.0003 | 0.0023 |
| 271 | 0.0026 | 0.0003 | 0.0023 |
| 272 | 0.0026 | 0.0003 | 0.0023 |
| 273 | 0.0025 | 0.0003 | 0.0023 |
| 274 | 0.0025 | 0.0003 | 0.0023 |
| 275 | 0.0025 | 0.0003 | 0.0022 |
| 276 | 0.0025 | 0.0003 | 0.0022 |
| 277 | 0.0025 | 0.0003 | 0.0022 |
| 278 | 0.0024 | 0.0003 | 0.0022 |
| 279 | 0.0024 | 0.0003 | 0.0022 |
| 280 | 0.0024 | 0.0003 | 0.0021 |
| 281 | 0.0024 | 0.0003 | 0.0021 |
| 282 | 0.0023 | 0.0003 | 0.0021 |
| 283 | 0.0023 | 0.0002 | 0.0021 |
| 284 | 0.0023 | 0.0002 | 0.0021 |
| 285 | 0.0023 | 0.0002 | 0.0020 |

| | | | |
|---|---|---|---|
| 286 | 0.0023 | 0.0002 | 0.0020 |
| 287 | 0.0023 | 0.0002 | 0.0020 |
| 288 | 0.0022 | 0.0002 | 0.0020 |

Total soil rain loss = 0.17(In)
Total effective rainfall = 2.40(In)
Peak flow rate in flood hydrograph = 172.53(CFS)

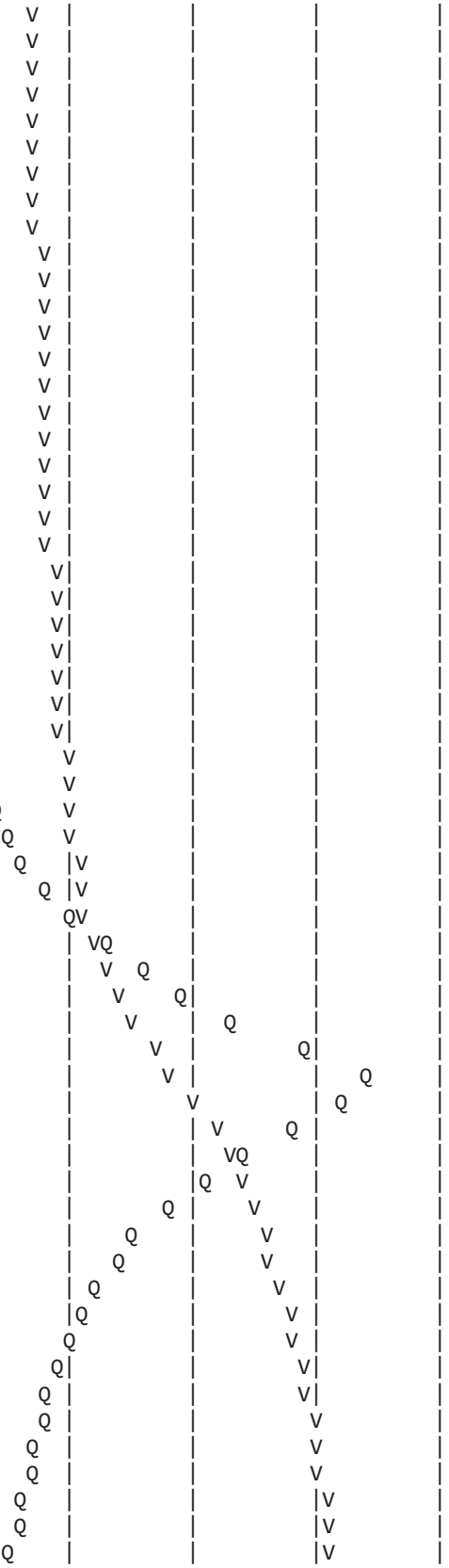
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 50.0 | 100.0 | 150.0 | 200.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0001 | 0.01 | Q | | | | |
| 0+10 | 0.0004 | 0.05 | Q | | | | |
| 0+15 | 0.0011 | 0.10 | Q | | | | |
| 0+20 | 0.0023 | 0.18 | Q | | | | |
| 0+25 | 0.0042 | 0.27 | Q | | | | |
| 0+30 | 0.0070 | 0.41 | Q | | | | |
| 0+35 | 0.0113 | 0.62 | Q | | | | |
| 0+40 | 0.0177 | 0.93 | Q | | | | |
| 0+45 | 0.0261 | 1.22 | Q | | | | |
| 0+50 | 0.0362 | 1.46 | Q | | | | |
| 0+55 | 0.0476 | 1.66 | Q | | | | |
| 1+ 0 | 0.0602 | 1.83 | Q | | | | |
| 1+ 5 | 0.0738 | 1.97 | Q | | | | |
| 1+10 | 0.0881 | 2.08 | Q | | | | |
| 1+15 | 0.1032 | 2.19 | Q | | | | |
| 1+20 | 0.1189 | 2.28 | Q | | | | |
| 1+25 | 0.1351 | 2.36 | Q | | | | |
| 1+30 | 0.1519 | 2.44 | Q | | | | |
| 1+35 | 0.1692 | 2.51 | Q | | | | |
| 1+40 | 0.1869 | 2.57 | Q | | | | |
| 1+45 | 0.2051 | 2.64 | Q | | | | |
| 1+50 | 0.2236 | 2.69 | Q | | | | |
| 1+55 | 0.2425 | 2.74 | Q | | | | |
| 2+ 0 | 0.2618 | 2.80 | Q | | | | |
| 2+ 5 | 0.2814 | 2.84 | Q | | | | |
| 2+10 | 0.3012 | 2.89 | Q | | | | |
| 2+15 | 0.3214 | 2.93 | Q | | | | |
| 2+20 | 0.3419 | 2.97 | Q | | | | |
| 2+25 | 0.3627 | 3.02 | Q | | | | |
| 2+30 | 0.3837 | 3.06 | Q | | | | |
| 2+35 | 0.4050 | 3.09 | Q | | | | |
| 2+40 | 0.4266 | 3.13 | Q | | | | |
| 2+45 | 0.4484 | 3.16 | Q | | | | |
| 2+50 | 0.4704 | 3.19 | Q | | | | |
| 2+55 | 0.4926 | 3.23 | Q | | | | |
| 3+ 0 | 0.5150 | 3.26 | Q | | | | |
| 3+ 5 | 0.5377 | 3.29 | Q | | | | |
| 3+10 | 0.5606 | 3.32 | Q | | | | |
| 3+15 | 0.5836 | 3.35 | Q | | | | |
| 3+20 | 0.6069 | 3.38 | Q | | | | |
| 3+25 | 0.6304 | 3.41 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+30 | 0.6541 | 3.44 | Q | \| | \| | \| | \| |
| 3+35 | 0.6779 | 3.46 | QV | \| | \| | \| | \| |
| 3+40 | 0.7020 | 3.49 | QV | \| | \| | \| | \| |
| 3+45 | 0.7262 | 3.52 | QV | \| | \| | \| | \| |
| 3+50 | 0.7506 | 3.55 | QV | \| | \| | \| | \| |
| 3+55 | 0.7752 | 3.57 | QV | \| | \| | \| | \| |
| 4+ 0 | 0.8000 | 3.60 | QV | \| | \| | \| | \| |
| 4+ 5 | 0.8250 | 3.62 | QV | \| | \| | \| | \| |
| 4+10 | 0.8501 | 3.65 | QV | \| | \| | \| | \| |
| 4+15 | 0.8754 | 3.68 | QV | \| | \| | \| | \| |
| 4+20 | 0.9009 | 3.70 | QV | \| | \| | \| | \| |
| 4+25 | 0.9266 | 3.73 | QV | \| | \| | \| | \| |
| 4+30 | 0.9524 | 3.75 | QV | \| | \| | \| | \| |
| 4+35 | 0.9784 | 3.77 | QV | \| | \| | \| | \| |
| 4+40 | 1.0046 | 3.80 | QV | \| | \| | \| | \| |
| 4+45 | 1.0309 | 3.82 | QV | \| | \| | \| | \| |
| 4+50 | 1.0574 | 3.85 | QV | \| | \| | \| | \| |
| 4+55 | 1.0841 | 3.87 | QV | \| | \| | \| | \| |
| 5+ 0 | 1.1109 | 3.89 | QV | \| | \| | \| | \| |
| 5+ 5 | 1.1379 | 3.92 | QV | \| | \| | \| | \| |
| 5+10 | 1.1650 | 3.94 | QV | \| | \| | \| | \| |
| 5+15 | 1.1923 | 3.96 | QV | \| | \| | \| | \| |
| 5+20 | 1.2198 | 3.99 | QV | \| | \| | \| | \| |
| 5+25 | 1.2474 | 4.01 | QV | \| | \| | \| | \| |
| 5+30 | 1.2753 | 4.04 | QV | \| | \| | \| | \| |
| 5+35 | 1.3033 | 4.07 | QV | \| | \| | \| | \| |
| 5+40 | 1.3314 | 4.09 | QV | \| | \| | \| | \| |
| 5+45 | 1.3598 | 4.12 | Q V | \| | \| | \| | \| |
| 5+50 | 1.3883 | 4.14 | Q V | \| | \| | \| | \| |
| 5+55 | 1.4170 | 4.17 | Q V | \| | \| | \| | \| |
| 6+ 0 | 1.4460 | 4.20 | Q V | \| | \| | \| | \| |
| 6+ 5 | 1.4750 | 4.22 | Q V | \| | \| | \| | \| |
| 6+10 | 1.5043 | 4.25 | Q V | \| | \| | \| | \| |
| 6+15 | 1.5338 | 4.28 | Q V | \| | \| | \| | \| |
| 6+20 | 1.5634 | 4.30 | Q V | \| | \| | \| | \| |
| 6+25 | 1.5933 | 4.33 | Q V | \| | \| | \| | \| |
| 6+30 | 1.6233 | 4.36 | Q V | \| | \| | \| | \| |
| 6+35 | 1.6535 | 4.39 | Q V | \| | \| | \| | \| |
| 6+40 | 1.6839 | 4.41 | Q V | \| | \| | \| | \| |
| 6+45 | 1.7145 | 4.44 | Q V | \| | \| | \| | \| |
| 6+50 | 1.7452 | 4.47 | Q V | \| | \| | \| | \| |
| 6+55 | 1.7762 | 4.50 | Q V | \| | \| | \| | \| |
| 7+ 0 | 1.8073 | 4.52 | Q V | \| | \| | \| | \| |
| 7+ 5 | 1.8387 | 4.55 | Q V | \| | \| | \| | \| |
| 7+10 | 1.8702 | 4.58 | Q V | \| | \| | \| | \| |
| 7+15 | 1.9020 | 4.61 | Q V | \| | \| | \| | \| |
| 7+20 | 1.9339 | 4.64 | Q V | \| | \| | \| | \| |
| 7+25 | 1.9660 | 4.67 | Q V | \| | \| | \| | \| |
| 7+30 | 1.9984 | 4.70 | Q V | \| | \| | \| | \| |
| 7+35 | 2.0309 | 4.73 | Q  V | \| | \| | \| | \| |
| 7+40 | 2.0637 | 4.76 | Q  V | \| | \| | \| | \| |
| 7+45 | 2.0967 | 4.79 | Q  V | \| | \| | \| | \| |
| 7+50 | 2.1299 | 4.82 | Q  V | \| | \| | \| | \| |
| 7+55 | 2.1634 | 4.86 | Q  V | \| | \| | \| | \| |
| 8+ 0 | 2.1970 | 4.89 | Q  V | \| | \| | \| | \| |
| 8+ 5 | 2.2309 | 4.92 | Q  V | \| | \| | \| | \| |
| 8+10 | 2.2651 | 4.96 | Q  V | \| | \| | \| | \| |
| 8+15 | 2.2994 | 4.99 | Q  V | \| | \| | \| | \| |
| 8+20 | 2.3340 | 5.03 | \|Q V | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8+25 | 2.3689 | 5.06 | Q V | \| | \| | \| | \| |
| 8+30 | 2.4040 | 5.10 | Q V | \| | \| | \| | \| |
| 8+35 | 2.4394 | 5.14 | Q V | \| | \| | \| | \| |
| 8+40 | 2.4750 | 5.17 | Q V | \| | \| | \| | \| |
| 8+45 | 2.5109 | 5.21 | Q V | \| | \| | \| | \| |
| 8+50 | 2.5471 | 5.25 | Q V | \| | \| | \| | \| |
| 8+55 | 2.5835 | 5.29 | Q V | \| | \| | \| | \| |
| 9+ 0 | 2.6202 | 5.33 | Q V | \| | \| | \| | \| |
| 9+ 5 | 2.6572 | 5.37 | Q V | \| | \| | \| | \| |
| 9+10 | 2.6945 | 5.41 | Q V | \| | \| | \| | \| |
| 9+15 | 2.7321 | 5.46 | Q V | \| | \| | \| | \| |
| 9+20 | 2.7700 | 5.50 | Q V | \| | \| | \| | \| |
| 9+25 | 2.8082 | 5.55 | Q V | \| | \| | \| | \| |
| 9+30 | 2.8467 | 5.59 | Q V | \| | \| | \| | \| |
| 9+35 | 2.8855 | 5.64 | Q V | \| | \| | \| | \| |
| 9+40 | 2.9247 | 5.68 | Q V | \| | \| | \| | \| |
| 9+45 | 2.9642 | 5.73 | Q V | \| | \| | \| | \| |
| 9+50 | 3.0040 | 5.78 | Q V | \| | \| | \| | \| |
| 9+55 | 3.0441 | 5.83 | Q V | \| | \| | \| | \| |
| 10+ 0 | 3.0846 | 5.88 | Q V | \| | \| | \| | \| |
| 10+ 5 | 3.1255 | 5.93 | Q V | \| | \| | \| | \| |
| 10+10 | 3.1668 | 5.99 | Q V | \| | \| | \| | \| |
| 10+15 | 3.2084 | 6.04 | Q V | \| | \| | \| | \| |
| 10+20 | 3.2504 | 6.10 | Q V | \| | \| | \| | \| |
| 10+25 | 3.2928 | 6.15 | Q V | \| | \| | \| | \| |
| 10+30 | 3.3355 | 6.21 | Q V | \| | \| | \| | \| |
| 10+35 | 3.3787 | 6.27 | Q V | \| | \| | \| | \| |
| 10+40 | 3.4224 | 6.33 | Q V | \| | \| | \| | \| |
| 10+45 | 3.4664 | 6.40 | Q V | \| | \| | \| | \| |
| 10+50 | 3.5109 | 6.46 | Q V | \| | \| | \| | \| |
| 10+55 | 3.5558 | 6.52 | Q V | \| | \| | \| | \| |
| 11+ 0 | 3.6012 | 6.59 | Q V | \| | \| | \| | \| |
| 11+ 5 | 3.6471 | 6.66 | Q V | \| | \| | \| | \| |
| 11+10 | 3.6934 | 6.73 | Q V | \| | \| | \| | \| |
| 11+15 | 3.7402 | 6.80 | Q V | \| | \| | \| | \| |
| 11+20 | 3.7876 | 6.87 | Q V | \| | \| | \| | \| |
| 11+25 | 3.8355 | 6.95 | Q V | \| | \| | \| | \| |
| 11+30 | 3.8839 | 7.03 | Q V | \| | \| | \| | \| |
| 11+35 | 3.9328 | 7.11 | Q V | \| | \| | \| | \| |
| 11+40 | 3.9823 | 7.19 | Q V | \| | \| | \| | \| |
| 11+45 | 4.0324 | 7.27 | Q V | \| | \| | \| | \| |
| 11+50 | 4.0831 | 7.36 | Q V | \| | \| | \| | \| |
| 11+55 | 4.1344 | 7.45 | Q V | \| | \| | \| | \| |
| 12+ 0 | 4.1863 | 7.54 | Q V | \| | \| | \| | \| |
| 12+ 5 | 4.2388 | 7.62 | Q V | \| | \| | \| | \| |
| 12+10 | 4.2917 | 7.68 | Q V | \| | \| | \| | \| |
| 12+15 | 4.3448 | 7.71 | Q V | \| | \| | \| | \| |
| 12+20 | 4.3980 | 7.73 | Q V | \| | \| | \| | \| |
| 12+25 | 4.4512 | 7.72 | Q V | \| | \| | \| | \| |
| 12+30 | 4.5041 | 7.67 | Q V | \| | \| | \| | \| |
| 12+35 | 4.5559 | 7.53 | Q V | \| | \| | \| | \| |
| 12+40 | 4.6061 | 7.28 | Q V | \| | \| | \| | \| |
| 12+45 | 4.6547 | 7.06 | Q V | \| | \| | \| | \| |
| 12+50 | 4.7021 | 6.89 | Q V | \| | \| | \| | \| |
| 12+55 | 4.7488 | 6.77 | Q V | \| | \| | \| | \| |
| 13+ 0 | 4.7948 | 6.69 | Q V | \| | \| | \| | \| |
| 13+ 5 | 4.8406 | 6.65 | Q V | \| | \| | \| | \| |
| 13+10 | 4.8863 | 6.64 | Q V | \| | \| | \| | \| |
| 13+15 | 4.9321 | 6.64 | Q V | \| | \| | \| | \| |

| | | | |
|---|---|---|---|
| 13+20 | 4.9780 | 6.67 |  |
| 13+25 | 5.0241 | 6.70 | |
| 13+30 | 5.0706 | 6.75 | |
| 13+35 | 5.1175 | 6.81 | |
| 13+40 | 5.1649 | 6.88 | |
| 13+45 | 5.2128 | 6.96 | |
| 13+50 | 5.2615 | 7.06 | |
| 13+55 | 5.3108 | 7.17 | |
| 14+ 0 | 5.3610 | 7.29 | |
| 14+ 5 | 5.4121 | 7.42 | |
| 14+10 | 5.4642 | 7.56 | |
| 14+15 | 5.5174 | 7.72 | |
| 14+20 | 5.5718 | 7.90 | |
| 14+25 | 5.6275 | 8.09 | |
| 14+30 | 5.6846 | 8.30 | |
| 14+35 | 5.7434 | 8.53 | |
| 14+40 | 5.8040 | 8.80 | |
| 14+45 | 5.8665 | 9.08 | |
| 14+50 | 5.9312 | 9.39 | |
| 14+55 | 5.9981 | 9.72 | |
| 15+ 0 | 6.0675 | 10.08 | |
| 15+ 5 | 6.1396 | 10.46 | |
| 15+10 | 6.2146 | 10.89 | |
| 15+15 | 6.2928 | 11.36 | |
| 15+20 | 6.3747 | 11.89 | |
| 15+25 | 6.4614 | 12.59 | |
| 15+30 | 6.5546 | 13.54 | |
| 15+35 | 6.6564 | 14.78 | |
| 15+40 | 6.7691 | 16.36 | |
| 15+45 | 6.8956 | 18.37 | |
| 15+50 | 7.0408 | 21.09 | |
| 15+55 | 7.2136 | 25.08 | |
| 16+ 0 | 7.4268 | 30.96 | |
| 16+ 5 | 7.7129 | 41.54 | |
| 16+10 | 8.0871 | 54.33 | |
| 16+15 | 8.5504 | 67.27 | |
| 16+20 | 9.1064 | 80.74 | |
| 16+25 | 9.7629 | 95.31 | |
| 16+30 | 10.5665 | 116.70 | |
| 16+35 | 11.5716 | 145.93 | |
| 16+40 | 12.7598 | 172.53 | |
| 16+45 | 13.8839 | 163.23 | |
| 16+50 | 14.8776 | 144.28 | |
| 16+55 | 15.7303 | 123.81 | |
| 17+ 0 | 16.4683 | 107.15 | |
| 17+ 5 | 17.0931 | 90.73 | |
| 17+10 | 17.6361 | 78.83 | |
| 17+15 | 18.1187 | 70.07 | |
| 17+20 | 18.5534 | 63.12 | |
| 17+25 | 18.9535 | 58.09 | |
| 17+30 | 19.3169 | 52.77 | |
| 17+35 | 19.6497 | 48.32 | |
| 17+40 | 19.9580 | 44.78 | |
| 17+45 | 20.2479 | 42.09 | |
| 17+50 | 20.5103 | 38.11 | |
| 17+55 | 20.7564 | 35.72 | |
| 18+ 0 | 20.9893 | 33.82 | |
| 18+ 5 | 21.2035 | 31.10 | |
| 18+10 | 21.4096 | 29.92 | |

```
18+15      21.6051     28.39  |    Q    |         |         | V       |
18+20      21.7917     27.09  |    Q    |         |         | V       |
18+25      21.9713     26.08  |    Q    |         |         | V       |
18+30      22.1387     24.31  |   Q     |         |         | V       |
18+35      22.3003     23.47  |   Q     |         |         |  V      |
18+40      22.4536     22.26  |   Q     |         |         |  V      |
18+45      22.5970     20.82  |   Q     |         |         |  V      |
18+50      22.7377     20.43  |   Q     |         |         |  V      |
18+55      22.8743     19.83  |  Q      |         |         |  V      |
19+ 0      23.0077     19.37  |  Q      |         |         |   V     |
19+ 5      23.1373     18.81  |  Q      |         |         |   V     |
19+10      23.2609     17.96  |  Q      |         |         |   V     |
19+15      23.3818     17.56  |  Q      |         |         |   V     |
19+20      23.4987     16.98  |  Q      |         |         |   V     |
19+25      23.6121     16.45  |  Q      |         |         |    V    |
19+30      23.7217     15.92  |  Q      |         |         |    V    |
19+35      23.8244     14.91  | Q       |         |         |    V    |
19+40      23.9243     14.51  | Q       |         |         |    V    |
19+45      24.0223     14.22  | Q       |         |         |    V    |
19+50      24.1180     13.91  | Q       |         |         |    V    |
19+55      24.2112     13.53  | Q       |         |         |    V    |
20+ 0      24.2988     12.72  | Q       |         |         |     V   |
20+ 5      24.3835     12.29  | Q       |         |         |     V   |
20+10      24.4664     12.03  | Q       |         |         |     V   |
20+15      24.5473     11.75  | Q       |         |         |     V   |
20+20      24.6260     11.43  | Q       |         |         |     V   |
20+25      24.6997     10.70  | Q       |         |         |     V   |
20+30      24.7698     10.19  | Q       |         |         |     V   |
20+35      24.8384      9.96  |Q        |         |         |     V   |
20+40      24.9055      9.73  |Q        |         |         |     V   |
20+45      24.9707      9.47  |Q        |         |         |      V  |
20+50      25.0320      8.90  |Q        |         |         |      V  |
20+55      25.0894      8.34  |Q        |         |         |      V  |
21+ 0      25.1458      8.19  |Q        |         |         |      V  |
21+ 5      25.2014      8.07  |Q        |         |         |      V  |
21+10      25.2565      7.99  |Q        |         |         |      V  |
21+15      25.3115      7.99  |Q        |         |         |      V  |
21+20      25.3669      8.04  |Q        |         |         |      V  |
21+25      25.4218      7.97  |Q        |         |         |      V  |
21+30      25.4761      7.88  |Q        |         |         |      V  |
21+35      25.5297      7.79  |Q        |         |         |      V  |
21+40      25.5826      7.68  |Q        |         |         |      V  |
21+45      25.6348      7.57  |Q        |         |         |       V |
21+50      25.6861      7.46  |Q        |         |         |       V |
21+55      25.7366      7.33  |Q        |         |         |       V |
22+ 0      25.7860      7.18  |Q        |         |         |       V |
22+ 5      25.8338      6.93  |Q        |         |         |       V |
22+10      25.8777      6.38  |Q        |         |         |       V |
22+15      25.9200      6.14  |Q        |         |         |       V |
22+20      25.9614      6.00  |Q        |         |         |       V |
22+25      26.0019      5.88  |Q        |         |         |       V |
22+30      26.0415      5.75  |Q        |         |         |       V |
22+35      26.0802      5.62  |Q        |         |         |       V |
22+40      26.1176      5.44  |Q        |         |         |       V |
22+45      26.1520      4.99  Q        |         |         |       V |
22+50      26.1836      4.58  Q        |         |         |       V |
22+55      26.2144      4.47  Q        |         |         |       V |
23+ 0      26.2446      4.38  Q        |         |         |       V |
23+ 5      26.2742      4.31  Q        |         |         |       V |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+10 | 26.3035 | 4.25 | Q | \| | \| | \| | V\| |
| 23+15 | 26.3325 | 4.20 | Q | \| | \| | \| | V\| |
| 23+20 | 26.3611 | 4.15 | Q | \| | \| | \| | V\| |
| 23+25 | 26.3893 | 4.10 | Q | \| | \| | \| | V\| |
| 23+30 | 26.4173 | 4.06 | Q | \| | \| | \| | V\| |
| 23+35 | 26.4449 | 4.01 | Q | \| | \| | \| | V\| |
| 23+40 | 26.4723 | 3.97 | Q | \| | \| | \| | V\| |
| 23+45 | 26.4994 | 3.93 | Q | \| | \| | \| | V\| |
| 23+50 | 26.5262 | 3.89 | Q | \| | \| | \| | V\| |
| 23+55 | 26.5527 | 3.86 | Q | \| | \| | \| | V\| |
| 24+ 0 | 26.5790 | 3.82 | Q | \| | \| | \| | V\| |
| 24+ 5 | 26.6050 | 3.77 | Q | \| | \| | \| | V\| |
| 24+10 | 26.6305 | 3.70 | Q | \| | \| | \| | V\| |
| 24+15 | 26.6553 | 3.61 | Q | \| | \| | \| | V\| |
| 24+20 | 26.6795 | 3.50 | Q | \| | \| | \| | V\| |
| 24+25 | 26.7027 | 3.38 | Q | \| | \| | \| | V\| |
| 24+30 | 26.7248 | 3.21 | Q | \| | \| | \| | V\| |
| 24+35 | 26.7453 | 2.97 | Q | \| | \| | \| | V\| |
| 24+40 | 26.7634 | 2.64 | Q | \| | \| | \| | V\| |
| 24+45 | 26.7795 | 2.33 | Q | \| | \| | \| | V\| |
| 24+50 | 26.7937 | 2.07 | Q | \| | \| | \| | V\| |
| 24+55 | 26.8065 | 1.85 | Q | \| | \| | \| | V\| |
| 25+ 0 | 26.8180 | 1.67 | Q | \| | \| | \| | V\| |
| 25+ 5 | 26.8285 | 1.53 | Q | \| | \| | \| | V\| |
| 25+10 | 26.8382 | 1.40 | Q | \| | \| | \| | V\| |
| 25+15 | 26.8471 | 1.30 | Q | \| | \| | \| | V\| |
| 25+20 | 26.8554 | 1.20 | Q | \| | \| | \| | V\| |
| 25+25 | 26.8630 | 1.11 | Q | \| | \| | \| | V\| |
| 25+30 | 26.8702 | 1.03 | Q | \| | \| | \| | V\| |
| 25+35 | 26.8768 | 0.96 | Q | \| | \| | \| | V\| |
| 25+40 | 26.8830 | 0.90 | Q | \| | \| | \| | V\| |
| 25+45 | 26.8888 | 0.84 | Q | \| | \| | \| | V\| |
| 25+50 | 26.8942 | 0.79 | Q | \| | \| | \| | V\| |
| 25+55 | 26.8993 | 0.74 | Q | \| | \| | \| | V\| |
| 26+ 0 | 26.9040 | 0.69 | Q | \| | \| | \| | V\| |
| 26+ 5 | 26.9085 | 0.65 | Q | \| | \| | \| | V\| |
| 26+10 | 26.9127 | 0.61 | Q | \| | \| | \| | V\| |
| 26+15 | 26.9166 | 0.57 | Q | \| | \| | \| | V\| |
| 26+20 | 26.9203 | 0.54 | Q | \| | \| | \| | V\| |
| 26+25 | 26.9238 | 0.50 | Q | \| | \| | \| | V\| |
| 26+30 | 26.9270 | 0.47 | Q | \| | \| | \| | V\| |
| 26+35 | 26.9301 | 0.44 | Q | \| | \| | \| | V\| |
| 26+40 | 26.9329 | 0.41 | Q | \| | \| | \| | V\| |
| 26+45 | 26.9356 | 0.39 | Q | \| | \| | \| | V\| |
| 26+50 | 26.9382 | 0.37 | Q | \| | \| | \| | V\| |
| 26+55 | 26.9406 | 0.35 | Q | \| | \| | \| | V\| |
| 27+ 0 | 26.9428 | 0.33 | Q | \| | \| | \| | V\| |
| 27+ 5 | 26.9449 | 0.31 | Q | \| | \| | \| | V\| |
| 27+10 | 26.9469 | 0.29 | Q | \| | \| | \| | V\| |
| 27+15 | 26.9488 | 0.27 | Q | \| | \| | \| | V\| |
| 27+20 | 26.9505 | 0.25 | Q | \| | \| | \| | V\| |
| 27+25 | 26.9522 | 0.24 | Q | \| | \| | \| | V\| |
| 27+30 | 26.9537 | 0.22 | Q | \| | \| | \| | V\| |
| 27+35 | 26.9552 | 0.21 | Q | \| | \| | \| | V\| |
| 27+40 | 26.9565 | 0.20 | Q | \| | \| | \| | V\| |
| 27+45 | 26.9578 | 0.18 | Q | \| | \| | \| | V\| |
| 27+50 | 26.9590 | 0.17 | Q | \| | \| | \| | V\| |
| 27+55 | 26.9601 | 0.16 | Q | \| | \| | \| | V\| |
| 28+ 0 | 26.9611 | 0.15 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 28+ 5 | 26.9621 | 0.14 | Q | \| | \| | \| | V\| |
| 28+10 | 26.9630 | 0.13 | Q | \| | \| | \| | V\| |
| 28+15 | 26.9639 | 0.12 | Q | \| | \| | \| | V\| |
| 28+20 | 26.9646 | 0.11 | Q | \| | \| | \| | V\| |
| 28+25 | 26.9654 | 0.11 | Q | \| | \| | \| | V\| |
| 28+30 | 26.9660 | 0.10 | Q | \| | \| | \| | V\| |
| 28+35 | 26.9667 | 0.09 | Q | \| | \| | \| | V\| |
| 28+40 | 26.9673 | 0.09 | Q | \| | \| | \| | V\| |
| 28+45 | 26.9678 | 0.08 | Q | \| | \| | \| | V\| |
| 28+50 | 26.9683 | 0.07 | Q | \| | \| | \| | V\| |
| 28+55 | 26.9688 | 0.07 | Q | \| | \| | \| | V\| |
| 29+ 0 | 26.9693 | 0.07 | Q | \| | \| | \| | V\| |
| 29+ 5 | 26.9697 | 0.06 | Q | \| | \| | \| | V\| |
| 29+10 | 26.9701 | 0.06 | Q | \| | \| | \| | V\| |
| 29+15 | 26.9705 | 0.06 | Q | \| | \| | \| | V\| |
| 29+20 | 26.9709 | 0.05 | Q | \| | \| | \| | V\| |
| 29+25 | 26.9712 | 0.05 | Q | \| | \| | \| | V\| |
| 29+30 | 26.9715 | 0.04 | Q | \| | \| | \| | V\| |
| 29+35 | 26.9718 | 0.04 | Q | \| | \| | \| | V\| |
| 29+40 | 26.9720 | 0.04 | Q | \| | \| | \| | V\| |
| 29+45 | 26.9722 | 0.03 | Q | \| | \| | \| | V\| |
| 29+50 | 26.9724 | 0.03 | Q | \| | \| | \| | V\| |
| 29+55 | 26.9726 | 0.02 | Q | \| | \| | \| | V\| |
| 30+ 0 | 26.9727 | 0.02 | Q | \| | \| | \| | V\| |
| 30+ 5 | 26.9728 | 0.02 | Q | \| | \| | \| | V\| |
| 30+10 | 26.9729 | 0.01 | Q | \| | \| | \| | V\| |
| 30+15 | 26.9730 | 0.01 | Q | \| | \| | \| | V\| |
| 30+20 | 26.9730 | 0.01 | Q | \| | \| | \| | V\| |
| 30+25 | 26.9731 | 0.01 | Q | \| | \| | \| | V\| |
| 30+30 | 26.9731 | 0.00 | Q | \| | \| | \| | V\| |
| 30+35 | 26.9731 | 0.00 | Q | \| | \| | \| | V\| |
| 30+40 | 26.9731 | 0.00 | Q | \| | \| | \| | V |

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U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 31
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 634.87 | 1 | 1.40 |
| Rainfall data for year 100 | | |
| 634.87 | 6 | 1.83 |
| Rainfall data for year 100 | | |
| 634.87 | 24 | 2.60 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 73.9 | 90.1 | 634.87 | 1.000 | 0.190 | 0.907 | 0.172 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.172

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 575.83 | 0.907 | 73.9 | 90.1 | 1.10 | 0.627 |
| 59.04 | 0.093 | 98.0 | 98.0 | 0.20 | 0.912 |

Area-averaged catchment yield fraction, Y = 0.653
Area-averaged low loss fraction, Yb = 0.347
User entry of time of concentration = 1.970 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 634.87(Ac.)
Catchment Lag time = 1.576 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 5.2876
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.172(In/Hr)
Average low loss rate fraction (Yb) = 0.347 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.664(In)
Computed peak 30-minute rainfall = 1.137(In)
Specified peak 1-hour rainfall = 1.400(In)
Computed peak 3-hour rainfall = 1.650(In)
Specified peak 6-hour rainfall = 1.830(In)
Specified peak 24-hour rainfall = 2.600(In)

Rainfall depth area reduction factors:
Using a total area of 634.87(Ac.) (Ref: fig. E-4)

5-minute factor = 0.970 Adjusted rainfall = 0.645(In)
30-minute factor = 0.970 Adjusted rainfall = 1.103(In)
1-hour factor = 0.970 Adjusted rainfall = 1.358(In)
3-hour factor = 0.996 Adjusted rainfall = 1.644(In)
6-hour factor = 0.998 Adjusted rainfall = 1.826(In)
24-hour factor = 0.999 Adjusted rainfall = 2.598(In)
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U n i t H y d r o g r a p h

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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 7677.96 (CFS)) | |
| 1 | 0.233 | 17.863 |
| 2 | 0.698 | 35.727 |
| 3 | 1.249 | 42.295 |
| 4 | 2.109 | 66.054 |
| 5 | 3.013 | 69.407 |
| 6 | 4.212 | 92.077 |
| 7 | 5.524 | 100.684 |
| 8 | 7.027 | 115.412 |
| 9 | 8.802 | 136.259 |
| 10 | 10.816 | 154.672 |
| 11 | 14.033 | 246.998 |
| 12 | 17.450 | 262.355 |
| 13 | 22.182 | 363.314 |

| | | |
|---|---|---|
| 14 | 27.596 | 415.727 |
| 15 | 32.715 | 393.020 |
| 16 | 37.257 | 348.676 |
| 17 | 41.666 | 338.564 |
| 18 | 45.222 | 272.997 |
| 19 | 48.603 | 259.641 |
| 20 | 51.617 | 231.372 |
| 21 | 54.366 | 211.111 |
| 22 | 56.927 | 196.641 |
| 23 | 58.985 | 158.001 |
| 24 | 60.991 | 154.003 |
| 25 | 62.719 | 132.653 |
| 26 | 64.369 | 126.667 |
| 27 | 65.892 | 117.001 |
| 28 | 67.288 | 107.180 |
| 29 | 68.659 | 105.234 |
| 30 | 69.937 | 98.096 |
| 31 | 71.198 | 96.853 |
| 32 | 72.312 | 85.547 |
| 33 | 73.370 | 81.197 |
| 34 | 74.375 | 77.215 |
| 35 | 75.307 | 71.498 |
| 36 | 76.231 | 70.980 |
| 37 | 77.124 | 68.549 |
| 38 | 78.009 | 67.979 |
| 39 | 78.772 | 58.552 |
| 40 | 79.470 | 53.590 |
| 41 | 80.168 | 53.590 |
| 42 | 80.866 | 53.590 |
| 43 | 81.551 | 52.612 |
| 44 | 82.141 | 45.331 |
| 45 | 82.712 | 43.846 |
| 46 | 83.284 | 43.846 |
| 47 | 83.855 | 43.846 |
| 48 | 84.409 | 42.583 |
| 49 | 84.919 | 39.165 |
| 50 | 85.427 | 38.974 |
| 51 | 85.935 | 38.974 |
| 52 | 86.442 | 38.974 |
| 53 | 86.908 | 35.778 |
| 54 | 87.331 | 32.479 |
| 55 | 87.754 | 32.479 |
| 56 | 88.177 | 32.479 |
| 57 | 88.596 | 32.196 |
| 58 | 88.942 | 26.558 |
| 59 | 89.260 | 24.359 |
| 60 | 89.577 | 24.359 |
| 61 | 89.894 | 24.359 |
| 62 | 90.208 | 24.126 |
| 63 | 90.507 | 22.910 |
| 64 | 90.803 | 22.735 |
| 65 | 91.099 | 22.735 |
| 66 | 91.395 | 22.735 |
| 67 | 91.677 | 21.675 |
| 68 | 91.932 | 19.547 |
| 69 | 92.186 | 19.487 |
| 70 | 92.440 | 19.487 |
| 71 | 92.693 | 19.482 |
| 72 | 92.935 | 18.551 |

| | | |
|---|---|---|
| 73 | 93.168 | 17.863 |
| 74 | 93.400 | 17.863 |
| 75 | 93.633 | 17.863 |
| 76 | 93.862 | 17.612 |
| 77 | 94.053 | 14.656 |
| 78 | 94.233 | 13.803 |
| 79 | 94.413 | 13.803 |
| 80 | 94.593 | 13.803 |
| 81 | 94.772 | 13.803 |
| 82 | 94.952 | 13.803 |
| 83 | 95.132 | 13.803 |
| 84 | 95.312 | 13.803 |
| 85 | 95.491 | 13.803 |
| 86 | 95.654 | 12.500 |
| 87 | 95.792 | 10.573 |
| 88 | 95.929 | 10.556 |
| 89 | 96.067 | 10.556 |
| 90 | 96.204 | 10.556 |
| 91 | 96.342 | 10.556 |
| 92 | 96.479 | 10.556 |
| 93 | 96.617 | 10.556 |
| 94 | 96.754 | 10.556 |
| 95 | 96.888 | 10.241 |
| 96 | 96.989 | 7.817 |
| 97 | 97.085 | 7.308 |
| 98 | 97.180 | 7.308 |
| 99 | 97.275 | 7.308 |
| 100 | 97.370 | 7.308 |
| 101 | 97.465 | 7.308 |
| 102 | 97.561 | 7.308 |
| 103 | 97.656 | 7.308 |
| 104 | 97.751 | 7.308 |
| 105 | 97.826 | 5.735 |
| 106 | 97.878 | 4.060 |
| 107 | 97.931 | 4.060 |
| 108 | 97.984 | 4.060 |
| 109 | 98.037 | 4.060 |
| 110 | 98.090 | 4.060 |
| 111 | 98.143 | 4.060 |
| 112 | 98.196 | 4.060 |
| 113 | 98.249 | 4.060 |
| 114 | 98.303 | 4.173 |
| 115 | 98.365 | 4.781 |
| 116 | 98.429 | 4.872 |
| 117 | 98.492 | 4.872 |
| 118 | 98.556 | 4.872 |
| 119 | 98.619 | 4.872 |
| 120 | 98.682 | 4.872 |
| 121 | 98.746 | 4.872 |
| 122 | 98.809 | 4.872 |
| 123 | 98.873 | 4.872 |
| 124 | 98.936 | 4.872 |
| 125 | 99.000 | 4.872 |
| 126 | 99.063 | 4.872 |
| 127 | 99.127 | 4.872 |
| 128 | 99.190 | 4.872 |
| 129 | 99.254 | 4.872 |
| 130 | 99.317 | 4.872 |
| 131 | 99.380 | 4.872 |

| | | |
|---|---|---|
| 132 | 99.444 | 4.872 |
| 133 | 99.502 | 4.429 |
| 134 | 99.537 | 2.710 |
| 135 | 99.570 | 2.537 |
| 136 | 99.603 | 2.537 |
| 137 | 99.636 | 2.537 |
| 138 | 99.669 | 2.537 |
| 139 | 99.702 | 2.537 |
| 140 | 99.735 | 2.537 |
| 141 | 99.768 | 2.537 |
| 142 | 99.801 | 2.537 |
| 143 | 99.834 | 2.537 |
| 144 | 99.867 | 2.537 |
| 145 | 99.900 | 2.537 |
| 146 | 99.933 | 2.537 |
| 147 | 99.967 | 2.537 |
| 148 | 100.000 | 1.269 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6445 | 0.6445 |
| 2 | 0.7935 | 0.1490 |
| 3 | 0.8962 | 0.1026 |
| 4 | 0.9769 | 0.0808 |
| 5 | 1.0446 | 0.0676 |
| 6 | 1.1033 | 0.0587 |
| 7 | 1.1555 | 0.0522 |
| 8 | 1.2028 | 0.0472 |
| 9 | 1.2460 | 0.0433 |
| 10 | 1.2860 | 0.0400 |
| 11 | 1.3233 | 0.0373 |
| 12 | 1.3583 | 0.0350 |
| 13 | 1.3773 | 0.0190 |
| 14 | 1.3952 | 0.0178 |
| 15 | 1.4120 | 0.0168 |
| 16 | 1.4279 | 0.0159 |
| 17 | 1.4430 | 0.0151 |
| 18 | 1.4574 | 0.0144 |
| 19 | 1.4711 | 0.0137 |
| 20 | 1.4843 | 0.0132 |
| 21 | 1.4969 | 0.0126 |
| 22 | 1.5090 | 0.0121 |
| 23 | 1.5207 | 0.0117 |
| 24 | 1.5320 | 0.0113 |
| 25 | 1.5429 | 0.0109 |
| 26 | 1.5534 | 0.0105 |
| 27 | 1.5636 | 0.0102 |
| 28 | 1.5735 | 0.0099 |
| 29 | 1.5831 | 0.0096 |
| 30 | 1.5925 | 0.0093 |
| 31 | 1.6016 | 0.0091 |
| 32 | 1.6104 | 0.0088 |
| 33 | 1.6190 | 0.0086 |
| 34 | 1.6274 | 0.0084 |
| 35 | 1.6356 | 0.0082 |
| 36 | 1.6437 | 0.0080 |
| 37 | 1.6505 | 0.0069 |
| 38 | 1.6572 | 0.0067 |
| 39 | 1.6638 | 0.0066 |

| | | |
|---|---|---|
| 40 | 1.6702 | 0.0064 |
| 41 | 1.6765 | 0.0063 |
| 42 | 1.6826 | 0.0062 |
| 43 | 1.6887 | 0.0060 |
| 44 | 1.6946 | 0.0059 |
| 45 | 1.7004 | 0.0058 |
| 46 | 1.7061 | 0.0057 |
| 47 | 1.7117 | 0.0056 |
| 48 | 1.7172 | 0.0055 |
| 49 | 1.7226 | 0.0054 |
| 50 | 1.7279 | 0.0053 |
| 51 | 1.7331 | 0.0052 |
| 52 | 1.7382 | 0.0051 |
| 53 | 1.7432 | 0.0050 |
| 54 | 1.7482 | 0.0050 |
| 55 | 1.7531 | 0.0049 |
| 56 | 1.7579 | 0.0048 |
| 57 | 1.7626 | 0.0047 |
| 58 | 1.7673 | 0.0047 |
| 59 | 1.7719 | 0.0046 |
| 60 | 1.7764 | 0.0045 |
| 61 | 1.7809 | 0.0045 |
| 62 | 1.7853 | 0.0044 |
| 63 | 1.7897 | 0.0043 |
| 64 | 1.7939 | 0.0043 |
| 65 | 1.7982 | 0.0042 |
| 66 | 1.8024 | 0.0042 |
| 67 | 1.8065 | 0.0041 |
| 68 | 1.8106 | 0.0041 |
| 69 | 1.8146 | 0.0040 |
| 70 | 1.8186 | 0.0040 |
| 71 | 1.8225 | 0.0039 |
| 72 | 1.8264 | 0.0039 |
| 73 | 1.8328 | 0.0064 |
| 74 | 1.8391 | 0.0063 |
| 75 | 1.8454 | 0.0063 |
| 76 | 1.8516 | 0.0062 |
| 77 | 1.8578 | 0.0062 |
| 78 | 1.8639 | 0.0061 |
| 79 | 1.8700 | 0.0060 |
| 80 | 1.8759 | 0.0060 |
| 81 | 1.8819 | 0.0059 |
| 82 | 1.8878 | 0.0059 |
| 83 | 1.8936 | 0.0058 |
| 84 | 1.8994 | 0.0058 |
| 85 | 1.9051 | 0.0057 |
| 86 | 1.9107 | 0.0057 |
| 87 | 1.9164 | 0.0056 |
| 88 | 1.9219 | 0.0056 |
| 89 | 1.9275 | 0.0055 |
| 90 | 1.9330 | 0.0055 |
| 91 | 1.9384 | 0.0054 |
| 92 | 1.9438 | 0.0054 |
| 93 | 1.9491 | 0.0053 |
| 94 | 1.9544 | 0.0053 |
| 95 | 1.9597 | 0.0053 |
| 96 | 1.9649 | 0.0052 |
| 97 | 1.9701 | 0.0052 |
| 98 | 1.9753 | 0.0051 |

| | | |
|---|---|---|
| 99 | 1.9804 | 0.0051 |
| 100 | 1.9854 | 0.0051 |
| 101 | 1.9905 | 0.0050 |
| 102 | 1.9954 | 0.0050 |
| 103 | 2.0004 | 0.0050 |
| 104 | 2.0053 | 0.0049 |
| 105 | 2.0102 | 0.0049 |
| 106 | 2.0151 | 0.0048 |
| 107 | 2.0199 | 0.0048 |
| 108 | 2.0246 | 0.0048 |
| 109 | 2.0294 | 0.0047 |
| 110 | 2.0341 | 0.0047 |
| 111 | 2.0388 | 0.0047 |
| 112 | 2.0435 | 0.0047 |
| 113 | 2.0481 | 0.0046 |
| 114 | 2.0527 | 0.0046 |
| 115 | 2.0572 | 0.0046 |
| 116 | 2.0618 | 0.0045 |
| 117 | 2.0663 | 0.0045 |
| 118 | 2.0707 | 0.0045 |
| 119 | 2.0752 | 0.0044 |
| 120 | 2.0796 | 0.0044 |
| 121 | 2.0840 | 0.0044 |
| 122 | 2.0884 | 0.0044 |
| 123 | 2.0927 | 0.0043 |
| 124 | 2.0970 | 0.0043 |
| 125 | 2.1013 | 0.0043 |
| 126 | 2.1056 | 0.0043 |
| 127 | 2.1098 | 0.0042 |
| 128 | 2.1140 | 0.0042 |
| 129 | 2.1182 | 0.0042 |
| 130 | 2.1224 | 0.0042 |
| 131 | 2.1265 | 0.0041 |
| 132 | 2.1306 | 0.0041 |
| 133 | 2.1347 | 0.0041 |
| 134 | 2.1388 | 0.0041 |
| 135 | 2.1428 | 0.0040 |
| 136 | 2.1468 | 0.0040 |
| 137 | 2.1508 | 0.0040 |
| 138 | 2.1548 | 0.0040 |
| 139 | 2.1588 | 0.0040 |
| 140 | 2.1627 | 0.0039 |
| 141 | 2.1666 | 0.0039 |
| 142 | 2.1705 | 0.0039 |
| 143 | 2.1744 | 0.0039 |
| 144 | 2.1783 | 0.0039 |
| 145 | 2.1821 | 0.0038 |
| 146 | 2.1859 | 0.0038 |
| 147 | 2.1897 | 0.0038 |
| 148 | 2.1935 | 0.0038 |
| 149 | 2.1972 | 0.0038 |
| 150 | 2.2010 | 0.0037 |
| 151 | 2.2047 | 0.0037 |
| 152 | 2.2084 | 0.0037 |
| 153 | 2.2121 | 0.0037 |
| 154 | 2.2157 | 0.0037 |
| 155 | 2.2194 | 0.0036 |
| 156 | 2.2230 | 0.0036 |
| 157 | 2.2266 | 0.0036 |

| | | |
|---|---|---|
| 158 | 2.2302 | 0.0036 |
| 159 | 2.2338 | 0.0036 |
| 160 | 2.2374 | 0.0036 |
| 161 | 2.2409 | 0.0035 |
| 162 | 2.2445 | 0.0035 |
| 163 | 2.2480 | 0.0035 |
| 164 | 2.2515 | 0.0035 |
| 165 | 2.2549 | 0.0035 |
| 166 | 2.2584 | 0.0035 |
| 167 | 2.2619 | 0.0035 |
| 168 | 2.2653 | 0.0034 |
| 169 | 2.2687 | 0.0034 |
| 170 | 2.2721 | 0.0034 |
| 171 | 2.2755 | 0.0034 |
| 172 | 2.2789 | 0.0034 |
| 173 | 2.2823 | 0.0034 |
| 174 | 2.2856 | 0.0033 |
| 175 | 2.2889 | 0.0033 |
| 176 | 2.2922 | 0.0033 |
| 177 | 2.2956 | 0.0033 |
| 178 | 2.2988 | 0.0033 |
| 179 | 2.3021 | 0.0033 |
| 180 | 2.3054 | 0.0033 |
| 181 | 2.3086 | 0.0032 |
| 182 | 2.3119 | 0.0032 |
| 183 | 2.3151 | 0.0032 |
| 184 | 2.3183 | 0.0032 |
| 185 | 2.3215 | 0.0032 |
| 186 | 2.3247 | 0.0032 |
| 187 | 2.3278 | 0.0032 |
| 188 | 2.3310 | 0.0032 |
| 189 | 2.3341 | 0.0031 |
| 190 | 2.3373 | 0.0031 |
| 191 | 2.3404 | 0.0031 |
| 192 | 2.3435 | 0.0031 |
| 193 | 2.3466 | 0.0031 |
| 194 | 2.3497 | 0.0031 |
| 195 | 2.3528 | 0.0031 |
| 196 | 2.3558 | 0.0031 |
| 197 | 2.3589 | 0.0030 |
| 198 | 2.3619 | 0.0030 |
| 199 | 2.3649 | 0.0030 |
| 200 | 2.3680 | 0.0030 |
| 201 | 2.3710 | 0.0030 |
| 202 | 2.3740 | 0.0030 |
| 203 | 2.3769 | 0.0030 |
| 204 | 2.3799 | 0.0030 |
| 205 | 2.3829 | 0.0030 |
| 206 | 2.3858 | 0.0029 |
| 207 | 2.3888 | 0.0029 |
| 208 | 2.3917 | 0.0029 |
| 209 | 2.3946 | 0.0029 |
| 210 | 2.3975 | 0.0029 |
| 211 | 2.4004 | 0.0029 |
| 212 | 2.4033 | 0.0029 |
| 213 | 2.4062 | 0.0029 |
| 214 | 2.4090 | 0.0029 |
| 215 | 2.4119 | 0.0029 |
| 216 | 2.4147 | 0.0028 |

| | | |
|---|---|---|
| 217 | 2.4176 | 0.0028 |
| 218 | 2.4204 | 0.0028 |
| 219 | 2.4232 | 0.0028 |
| 220 | 2.4260 | 0.0028 |
| 221 | 2.4288 | 0.0028 |
| 222 | 2.4316 | 0.0028 |
| 223 | 2.4344 | 0.0028 |
| 224 | 2.4372 | 0.0028 |
| 225 | 2.4399 | 0.0028 |
| 226 | 2.4427 | 0.0028 |
| 227 | 2.4454 | 0.0027 |
| 228 | 2.4482 | 0.0027 |
| 229 | 2.4509 | 0.0027 |
| 230 | 2.4536 | 0.0027 |
| 231 | 2.4563 | 0.0027 |
| 232 | 2.4590 | 0.0027 |
| 233 | 2.4617 | 0.0027 |
| 234 | 2.4644 | 0.0027 |
| 235 | 2.4670 | 0.0027 |
| 236 | 2.4697 | 0.0027 |
| 237 | 2.4724 | 0.0027 |
| 238 | 2.4750 | 0.0026 |
| 239 | 2.4777 | 0.0026 |
| 240 | 2.4803 | 0.0026 |
| 241 | 2.4829 | 0.0026 |
| 242 | 2.4855 | 0.0026 |
| 243 | 2.4881 | 0.0026 |
| 244 | 2.4907 | 0.0026 |
| 245 | 2.4933 | 0.0026 |
| 246 | 2.4959 | 0.0026 |
| 247 | 2.4985 | 0.0026 |
| 248 | 2.5010 | 0.0026 |
| 249 | 2.5036 | 0.0026 |
| 250 | 2.5062 | 0.0026 |
| 251 | 2.5087 | 0.0025 |
| 252 | 2.5112 | 0.0025 |
| 253 | 2.5138 | 0.0025 |
| 254 | 2.5163 | 0.0025 |
| 255 | 2.5188 | 0.0025 |
| 256 | 2.5213 | 0.0025 |
| 257 | 2.5238 | 0.0025 |
| 258 | 2.5263 | 0.0025 |
| 259 | 2.5288 | 0.0025 |
| 260 | 2.5313 | 0.0025 |
| 261 | 2.5337 | 0.0025 |
| 262 | 2.5362 | 0.0025 |
| 263 | 2.5387 | 0.0025 |
| 264 | 2.5411 | 0.0025 |
| 265 | 2.5436 | 0.0024 |
| 266 | 2.5460 | 0.0024 |
| 267 | 2.5484 | 0.0024 |
| 268 | 2.5508 | 0.0024 |
| 269 | 2.5533 | 0.0024 |
| 270 | 2.5557 | 0.0024 |
| 271 | 2.5581 | 0.0024 |
| 272 | 2.5605 | 0.0024 |
| 273 | 2.5629 | 0.0024 |
| 274 | 2.5652 | 0.0024 |
| 275 | 2.5676 | 0.0024 |

| | | |
|---|---|---|
| 276 | 2.5700 | 0.0024 |
| 277 | 2.5723 | 0.0024 |
| 278 | 2.5747 | 0.0024 |
| 279 | 2.5771 | 0.0024 |
| 280 | 2.5794 | 0.0023 |
| 281 | 2.5817 | 0.0023 |
| 282 | 2.5841 | 0.0023 |
| 283 | 2.5864 | 0.0023 |
| 284 | 2.5887 | 0.0023 |
| 285 | 2.5910 | 0.0023 |
| 286 | 2.5933 | 0.0023 |
| 287 | 2.5956 | 0.0023 |
| 288 | 2.5979 | 0.0023 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0023 | 0.0008 | 0.0015 |
| 2 | 0.0023 | 0.0008 | 0.0015 |
| 3 | 0.0023 | 0.0008 | 0.0015 |
| 4 | 0.0023 | 0.0008 | 0.0015 |
| 5 | 0.0023 | 0.0008 | 0.0015 |
| 6 | 0.0023 | 0.0008 | 0.0015 |
| 7 | 0.0024 | 0.0008 | 0.0015 |
| 8 | 0.0024 | 0.0008 | 0.0015 |
| 9 | 0.0024 | 0.0008 | 0.0015 |
| 10 | 0.0024 | 0.0008 | 0.0016 |
| 11 | 0.0024 | 0.0008 | 0.0016 |
| 12 | 0.0024 | 0.0008 | 0.0016 |
| 13 | 0.0024 | 0.0008 | 0.0016 |
| 14 | 0.0024 | 0.0008 | 0.0016 |
| 15 | 0.0024 | 0.0008 | 0.0016 |
| 16 | 0.0024 | 0.0008 | 0.0016 |
| 17 | 0.0025 | 0.0008 | 0.0016 |
| 18 | 0.0025 | 0.0009 | 0.0016 |
| 19 | 0.0025 | 0.0009 | 0.0016 |
| 20 | 0.0025 | 0.0009 | 0.0016 |
| 21 | 0.0025 | 0.0009 | 0.0016 |
| 22 | 0.0025 | 0.0009 | 0.0016 |
| 23 | 0.0025 | 0.0009 | 0.0016 |
| 24 | 0.0025 | 0.0009 | 0.0016 |
| 25 | 0.0025 | 0.0009 | 0.0017 |
| 26 | 0.0025 | 0.0009 | 0.0017 |
| 27 | 0.0026 | 0.0009 | 0.0017 |
| 28 | 0.0026 | 0.0009 | 0.0017 |
| 29 | 0.0026 | 0.0009 | 0.0017 |
| 30 | 0.0026 | 0.0009 | 0.0017 |
| 31 | 0.0026 | 0.0009 | 0.0017 |
| 32 | 0.0026 | 0.0009 | 0.0017 |
| 33 | 0.0026 | 0.0009 | 0.0017 |
| 34 | 0.0026 | 0.0009 | 0.0017 |
| 35 | 0.0027 | 0.0009 | 0.0017 |
| 36 | 0.0027 | 0.0009 | 0.0017 |
| 37 | 0.0027 | 0.0009 | 0.0018 |
| 38 | 0.0027 | 0.0009 | 0.0018 |
| 39 | 0.0027 | 0.0009 | 0.0018 |
| 40 | 0.0027 | 0.0009 | 0.0018 |
| 41 | 0.0027 | 0.0009 | 0.0018 |

| | | | |
|---|---|---|---|
| 42 | 0.0027 | 0.0010 | 0.0018 |
| 43 | 0.0028 | 0.0010 | 0.0018 |
| 44 | 0.0028 | 0.0010 | 0.0018 |
| 45 | 0.0028 | 0.0010 | 0.0018 |
| 46 | 0.0028 | 0.0010 | 0.0018 |
| 47 | 0.0028 | 0.0010 | 0.0018 |
| 48 | 0.0028 | 0.0010 | 0.0018 |
| 49 | 0.0028 | 0.0010 | 0.0019 |
| 50 | 0.0029 | 0.0010 | 0.0019 |
| 51 | 0.0029 | 0.0010 | 0.0019 |
| 52 | 0.0029 | 0.0010 | 0.0019 |
| 53 | 0.0029 | 0.0010 | 0.0019 |
| 54 | 0.0029 | 0.0010 | 0.0019 |
| 55 | 0.0029 | 0.0010 | 0.0019 |
| 56 | 0.0029 | 0.0010 | 0.0019 |
| 57 | 0.0030 | 0.0010 | 0.0019 |
| 58 | 0.0030 | 0.0010 | 0.0019 |
| 59 | 0.0030 | 0.0010 | 0.0020 |
| 60 | 0.0030 | 0.0010 | 0.0020 |
| 61 | 0.0030 | 0.0011 | 0.0020 |
| 62 | 0.0030 | 0.0011 | 0.0020 |
| 63 | 0.0031 | 0.0011 | 0.0020 |
| 64 | 0.0031 | 0.0011 | 0.0020 |
| 65 | 0.0031 | 0.0011 | 0.0020 |
| 66 | 0.0031 | 0.0011 | 0.0020 |
| 67 | 0.0031 | 0.0011 | 0.0021 |
| 68 | 0.0032 | 0.0011 | 0.0021 |
| 69 | 0.0032 | 0.0011 | 0.0021 |
| 70 | 0.0032 | 0.0011 | 0.0021 |
| 71 | 0.0032 | 0.0011 | 0.0021 |
| 72 | 0.0032 | 0.0011 | 0.0021 |
| 73 | 0.0033 | 0.0011 | 0.0021 |
| 74 | 0.0033 | 0.0011 | 0.0021 |
| 75 | 0.0033 | 0.0011 | 0.0022 |
| 76 | 0.0033 | 0.0011 | 0.0022 |
| 77 | 0.0033 | 0.0012 | 0.0022 |
| 78 | 0.0034 | 0.0012 | 0.0022 |
| 79 | 0.0034 | 0.0012 | 0.0022 |
| 80 | 0.0034 | 0.0012 | 0.0022 |
| 81 | 0.0034 | 0.0012 | 0.0022 |
| 82 | 0.0035 | 0.0012 | 0.0023 |
| 83 | 0.0035 | 0.0012 | 0.0023 |
| 84 | 0.0035 | 0.0012 | 0.0023 |
| 85 | 0.0035 | 0.0012 | 0.0023 |
| 86 | 0.0035 | 0.0012 | 0.0023 |
| 87 | 0.0036 | 0.0012 | 0.0023 |
| 88 | 0.0036 | 0.0012 | 0.0024 |
| 89 | 0.0036 | 0.0013 | 0.0024 |
| 90 | 0.0036 | 0.0013 | 0.0024 |
| 91 | 0.0037 | 0.0013 | 0.0024 |
| 92 | 0.0037 | 0.0013 | 0.0024 |
| 93 | 0.0037 | 0.0013 | 0.0024 |
| 94 | 0.0038 | 0.0013 | 0.0025 |
| 95 | 0.0038 | 0.0013 | 0.0025 |
| 96 | 0.0038 | 0.0013 | 0.0025 |
| 97 | 0.0039 | 0.0013 | 0.0025 |
| 98 | 0.0039 | 0.0013 | 0.0025 |
| 99 | 0.0039 | 0.0014 | 0.0026 |
| 100 | 0.0039 | 0.0014 | 0.0026 |

| | | | |
|---|---|---|---|
| 101 | 0.0040 | 0.0014 | 0.0026 |
| 102 | 0.0040 | 0.0014 | 0.0026 |
| 103 | 0.0040 | 0.0014 | 0.0026 |
| 104 | 0.0041 | 0.0014 | 0.0027 |
| 105 | 0.0041 | 0.0014 | 0.0027 |
| 106 | 0.0041 | 0.0014 | 0.0027 |
| 107 | 0.0042 | 0.0015 | 0.0027 |
| 108 | 0.0042 | 0.0015 | 0.0028 |
| 109 | 0.0043 | 0.0015 | 0.0028 |
| 110 | 0.0043 | 0.0015 | 0.0028 |
| 111 | 0.0043 | 0.0015 | 0.0028 |
| 112 | 0.0044 | 0.0015 | 0.0029 |
| 113 | 0.0044 | 0.0015 | 0.0029 |
| 114 | 0.0044 | 0.0015 | 0.0029 |
| 115 | 0.0045 | 0.0016 | 0.0029 |
| 116 | 0.0045 | 0.0016 | 0.0030 |
| 117 | 0.0046 | 0.0016 | 0.0030 |
| 118 | 0.0046 | 0.0016 | 0.0030 |
| 119 | 0.0047 | 0.0016 | 0.0031 |
| 120 | 0.0047 | 0.0016 | 0.0031 |
| 121 | 0.0048 | 0.0017 | 0.0031 |
| 122 | 0.0048 | 0.0017 | 0.0031 |
| 123 | 0.0049 | 0.0017 | 0.0032 |
| 124 | 0.0049 | 0.0017 | 0.0032 |
| 125 | 0.0050 | 0.0017 | 0.0033 |
| 126 | 0.0050 | 0.0017 | 0.0033 |
| 127 | 0.0051 | 0.0018 | 0.0033 |
| 128 | 0.0051 | 0.0018 | 0.0034 |
| 129 | 0.0052 | 0.0018 | 0.0034 |
| 130 | 0.0053 | 0.0018 | 0.0034 |
| 131 | 0.0053 | 0.0019 | 0.0035 |
| 132 | 0.0054 | 0.0019 | 0.0035 |
| 133 | 0.0055 | 0.0019 | 0.0036 |
| 134 | 0.0055 | 0.0019 | 0.0036 |
| 135 | 0.0056 | 0.0019 | 0.0037 |
| 136 | 0.0057 | 0.0020 | 0.0037 |
| 137 | 0.0058 | 0.0020 | 0.0038 |
| 138 | 0.0058 | 0.0020 | 0.0038 |
| 139 | 0.0059 | 0.0021 | 0.0039 |
| 140 | 0.0060 | 0.0021 | 0.0039 |
| 141 | 0.0061 | 0.0021 | 0.0040 |
| 142 | 0.0062 | 0.0021 | 0.0040 |
| 143 | 0.0063 | 0.0022 | 0.0041 |
| 144 | 0.0063 | 0.0022 | 0.0041 |
| 145 | 0.0039 | 0.0013 | 0.0025 |
| 146 | 0.0039 | 0.0014 | 0.0026 |
| 147 | 0.0040 | 0.0014 | 0.0026 |
| 148 | 0.0041 | 0.0014 | 0.0027 |
| 149 | 0.0042 | 0.0014 | 0.0027 |
| 150 | 0.0042 | 0.0015 | 0.0028 |
| 151 | 0.0043 | 0.0015 | 0.0028 |
| 152 | 0.0044 | 0.0015 | 0.0029 |
| 153 | 0.0045 | 0.0016 | 0.0030 |
| 154 | 0.0046 | 0.0016 | 0.0030 |
| 155 | 0.0047 | 0.0016 | 0.0031 |
| 156 | 0.0048 | 0.0017 | 0.0031 |
| 157 | 0.0050 | 0.0017 | 0.0032 |
| 158 | 0.0050 | 0.0017 | 0.0033 |
| 159 | 0.0052 | 0.0018 | 0.0034 |

| | | | |
|---|---|---|---|
| 160 | 0.0053 | 0.0018 | 0.0035 |
| 161 | 0.0055 | 0.0019 | 0.0036 |
| 162 | 0.0056 | 0.0019 | 0.0037 |
| 163 | 0.0058 | 0.0020 | 0.0038 |
| 164 | 0.0059 | 0.0020 | 0.0039 |
| 165 | 0.0062 | 0.0021 | 0.0040 |
| 166 | 0.0063 | 0.0022 | 0.0041 |
| 167 | 0.0066 | 0.0023 | 0.0043 |
| 168 | 0.0067 | 0.0023 | 0.0044 |
| 169 | 0.0080 | 0.0028 | 0.0052 |
| 170 | 0.0082 | 0.0028 | 0.0054 |
| 171 | 0.0086 | 0.0030 | 0.0056 |
| 172 | 0.0088 | 0.0031 | 0.0058 |
| 173 | 0.0093 | 0.0032 | 0.0061 |
| 174 | 0.0096 | 0.0033 | 0.0063 |
| 175 | 0.0102 | 0.0035 | 0.0067 |
| 176 | 0.0105 | 0.0037 | 0.0069 |
| 177 | 0.0113 | 0.0039 | 0.0074 |
| 178 | 0.0117 | 0.0041 | 0.0076 |
| 179 | 0.0126 | 0.0044 | 0.0082 |
| 180 | 0.0132 | 0.0046 | 0.0086 |
| 181 | 0.0144 | 0.0050 | 0.0094 |
| 182 | 0.0151 | 0.0052 | 0.0099 |
| 183 | 0.0168 | 0.0058 | 0.0110 |
| 184 | 0.0178 | 0.0062 | 0.0116 |
| 185 | 0.0350 | 0.0121 | 0.0229 |
| 186 | 0.0373 | 0.0129 | 0.0244 |
| 187 | 0.0433 | 0.0144 | 0.0289 |
| 188 | 0.0472 | 0.0144 | 0.0329 |
| 189 | 0.0587 | 0.0144 | 0.0444 |
| 190 | 0.0676 | 0.0144 | 0.0533 |
| 191 | 0.1026 | 0.0144 | 0.0883 |
| 192 | 0.1490 | 0.0144 | 0.1346 |
| 193 | 0.6445 | 0.0144 | 0.6302 |
| 194 | 0.0808 | 0.0144 | 0.0664 |
| 195 | 0.0522 | 0.0144 | 0.0379 |
| 196 | 0.0400 | 0.0139 | 0.0261 |
| 197 | 0.0190 | 0.0066 | 0.0124 |
| 198 | 0.0159 | 0.0055 | 0.0104 |
| 199 | 0.0137 | 0.0048 | 0.0090 |
| 200 | 0.0121 | 0.0042 | 0.0079 |
| 201 | 0.0109 | 0.0038 | 0.0071 |
| 202 | 0.0099 | 0.0034 | 0.0065 |
| 203 | 0.0091 | 0.0031 | 0.0059 |
| 204 | 0.0084 | 0.0029 | 0.0055 |
| 205 | 0.0069 | 0.0024 | 0.0045 |
| 206 | 0.0064 | 0.0022 | 0.0042 |
| 207 | 0.0060 | 0.0021 | 0.0039 |
| 208 | 0.0057 | 0.0020 | 0.0037 |
| 209 | 0.0054 | 0.0019 | 0.0035 |
| 210 | 0.0051 | 0.0018 | 0.0033 |
| 211 | 0.0049 | 0.0017 | 0.0032 |
| 212 | 0.0047 | 0.0016 | 0.0031 |
| 213 | 0.0045 | 0.0015 | 0.0029 |
| 214 | 0.0043 | 0.0015 | 0.0028 |
| 215 | 0.0041 | 0.0014 | 0.0027 |
| 216 | 0.0040 | 0.0014 | 0.0026 |
| 217 | 0.0064 | 0.0022 | 0.0042 |
| 218 | 0.0062 | 0.0022 | 0.0041 |

| | | | |
|---|---|---|---|
| 219 | 0.0060 | 0.0021 | 0.0040 |
| 220 | 0.0059 | 0.0020 | 0.0038 |
| 221 | 0.0057 | 0.0020 | 0.0037 |
| 222 | 0.0056 | 0.0019 | 0.0036 |
| 223 | 0.0054 | 0.0019 | 0.0036 |
| 224 | 0.0053 | 0.0018 | 0.0035 |
| 225 | 0.0052 | 0.0018 | 0.0034 |
| 226 | 0.0051 | 0.0018 | 0.0033 |
| 227 | 0.0050 | 0.0017 | 0.0032 |
| 228 | 0.0048 | 0.0017 | 0.0032 |
| 229 | 0.0047 | 0.0016 | 0.0031 |
| 230 | 0.0047 | 0.0016 | 0.0030 |
| 231 | 0.0046 | 0.0016 | 0.0030 |
| 232 | 0.0045 | 0.0016 | 0.0029 |
| 233 | 0.0044 | 0.0015 | 0.0029 |
| 234 | 0.0043 | 0.0015 | 0.0028 |
| 235 | 0.0042 | 0.0015 | 0.0028 |
| 236 | 0.0042 | 0.0014 | 0.0027 |
| 237 | 0.0041 | 0.0014 | 0.0027 |
| 238 | 0.0040 | 0.0014 | 0.0026 |
| 239 | 0.0040 | 0.0014 | 0.0026 |
| 240 | 0.0039 | 0.0014 | 0.0025 |
| 241 | 0.0038 | 0.0013 | 0.0025 |
| 242 | 0.0038 | 0.0013 | 0.0025 |
| 243 | 0.0037 | 0.0013 | 0.0024 |
| 244 | 0.0037 | 0.0013 | 0.0024 |
| 245 | 0.0036 | 0.0013 | 0.0024 |
| 246 | 0.0036 | 0.0012 | 0.0023 |
| 247 | 0.0035 | 0.0012 | 0.0023 |
| 248 | 0.0035 | 0.0012 | 0.0023 |
| 249 | 0.0034 | 0.0012 | 0.0022 |
| 250 | 0.0034 | 0.0012 | 0.0022 |
| 251 | 0.0033 | 0.0012 | 0.0022 |
| 252 | 0.0033 | 0.0011 | 0.0021 |
| 253 | 0.0032 | 0.0011 | 0.0021 |
| 254 | 0.0032 | 0.0011 | 0.0021 |
| 255 | 0.0032 | 0.0011 | 0.0021 |
| 256 | 0.0031 | 0.0011 | 0.0020 |
| 257 | 0.0031 | 0.0011 | 0.0020 |
| 258 | 0.0031 | 0.0011 | 0.0020 |
| 259 | 0.0030 | 0.0010 | 0.0020 |
| 260 | 0.0030 | 0.0010 | 0.0020 |
| 261 | 0.0030 | 0.0010 | 0.0019 |
| 262 | 0.0029 | 0.0010 | 0.0019 |
| 263 | 0.0029 | 0.0010 | 0.0019 |
| 264 | 0.0029 | 0.0010 | 0.0019 |
| 265 | 0.0028 | 0.0010 | 0.0019 |
| 266 | 0.0028 | 0.0010 | 0.0018 |
| 267 | 0.0028 | 0.0010 | 0.0018 |
| 268 | 0.0028 | 0.0010 | 0.0018 |
| 269 | 0.0027 | 0.0009 | 0.0018 |
| 270 | 0.0027 | 0.0009 | 0.0018 |
| 271 | 0.0027 | 0.0009 | 0.0017 |
| 272 | 0.0026 | 0.0009 | 0.0017 |
| 273 | 0.0026 | 0.0009 | 0.0017 |
| 274 | 0.0026 | 0.0009 | 0.0017 |
| 275 | 0.0026 | 0.0009 | 0.0017 |
| 276 | 0.0026 | 0.0009 | 0.0017 |
| 277 | 0.0025 | 0.0009 | 0.0017 |

| | | | |
|---|---|---|---|
| 278 | 0.0025 | 0.0009 | 0.0016 |
| 279 | 0.0025 | 0.0009 | 0.0016 |
| 280 | 0.0025 | 0.0009 | 0.0016 |
| 281 | 0.0024 | 0.0008 | 0.0016 |
| 282 | 0.0024 | 0.0008 | 0.0016 |
| 283 | 0.0024 | 0.0008 | 0.0016 |
| 284 | 0.0024 | 0.0008 | 0.0016 |
| 285 | 0.0024 | 0.0008 | 0.0015 |
| 286 | 0.0023 | 0.0008 | 0.0015 |
| 287 | 0.0023 | 0.0008 | 0.0015 |
| 288 | 0.0023 | 0.0008 | 0.0015 |

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Total soil rain loss = 0.60(In)
Total effective rainfall = 2.00(In)
Peak flow rate in flood hydrograph = 467.11(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 125.0 | 250.0 | 375.0 | 500.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0002 | 0.03 | Q | | | | |
| 0+10 | 0.0007 | 0.08 | Q | | | | |
| 0+15 | 0.0017 | 0.14 | Q | | | | |
| 0+20 | 0.0034 | 0.24 | Q | | | | |
| 0+25 | 0.0058 | 0.35 | Q | | | | |
| 0+30 | 0.0092 | 0.49 | Q | | | | |
| 0+35 | 0.0136 | 0.64 | Q | | | | |
| 0+40 | 0.0192 | 0.82 | Q | | | | |
| 0+45 | 0.0263 | 1.02 | Q | | | | |
| 0+50 | 0.0349 | 1.26 | Q | | | | |
| 0+55 | 0.0462 | 1.64 | Q | | | | |
| 1+ 0 | 0.0602 | 2.04 | Q | | | | |
| 1+ 5 | 0.0781 | 2.59 | Q | | | | |
| 1+10 | 0.1002 | 3.22 | Q | | | | |
| 1+15 | 0.1266 | 3.82 | Q | | | | |
| 1+20 | 0.1566 | 4.36 | Q | | | | |
| 1+25 | 0.1903 | 4.89 | Q | | | | |
| 1+30 | 0.2269 | 5.32 | Q | | | | |
| 1+35 | 0.2663 | 5.73 | Q | | | | |
| 1+40 | 0.3083 | 6.10 | Q | | | | |
| 1+45 | 0.3527 | 6.44 | Q | | | | |
| 1+50 | 0.3992 | 6.76 | Q | | | | |
| 1+55 | 0.4476 | 7.02 | Q | | | | |
| 2+ 0 | 0.4977 | 7.28 | Q | | | | |
| 2+ 5 | 0.5494 | 7.51 | Q | | | | |
| 2+10 | 0.6027 | 7.73 | Q | | | | |
| 2+15 | 0.6574 | 7.94 | Q | | | | |
| 2+20 | 0.7134 | 8.13 | Q | | | | |
| 2+25 | 0.7707 | 8.33 | Q | | | | |
| 2+30 | 0.8293 | 8.51 | Q | | | | |
| 2+35 | 0.8892 | 8.69 | Q | | | | |
| 2+40 | 0.9501 | 8.85 | Q | | | | |
| 2+45 | 1.0122 | 9.01 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+50 | 1.0753 | 9.17 | Q | | | | |
| 2+55 | 1.1395 | 9.31 | Q | | | | |
| 3+ 0 | 1.2046 | 9.46 | Q | | | | |
| 3+ 5 | 1.2708 | 9.60 | Q | | | | |
| 3+10 | 1.3379 | 9.75 | Q | | | | |
| 3+15 | 1.4059 | 9.88 | Q | | | | |
| 3+20 | 1.4748 | 10.00 | Q | | | | |
| 3+25 | 1.5445 | 10.13 | Q | | | | |
| 3+30 | 1.6151 | 10.25 | Q | | | | |
| 3+35 | 1.6866 | 10.38 | Q | | | | |
| 3+40 | 1.7588 | 10.49 | Q | | | | |
| 3+45 | 1.8318 | 10.60 | Q | | | | |
| 3+50 | 1.9056 | 10.72 | Q | | | | |
| 3+55 | 1.9802 | 10.83 | Q | | | | |
| 4+ 0 | 2.0556 | 10.94 | Q | | | | |
| 4+ 5 | 2.1317 | 11.05 | Q | | | | |
| 4+10 | 2.2086 | 11.16 | Q | | | | |
| 4+15 | 2.2863 | 11.27 | Q | | | | |
| 4+20 | 2.3647 | 11.38 | Q | | | | |
| 4+25 | 2.4438 | 11.49 | Q | | | | |
| 4+30 | 2.5237 | 11.59 | Q | | | | |
| 4+35 | 2.6042 | 11.70 | Q | | | | |
| 4+40 | 2.6855 | 11.80 | QV | | | | |
| 4+45 | 2.7675 | 11.91 | QV | | | | |
| 4+50 | 2.8502 | 12.01 | QV | | | | |
| 4+55 | 2.9336 | 12.10 | QV | | | | |
| 5+ 0 | 3.0176 | 12.20 | QV | | | | |
| 5+ 5 | 3.1022 | 12.29 | QV | | | | |
| 5+10 | 3.1875 | 12.39 | QV | | | | |
| 5+15 | 3.2735 | 12.49 | QV | | | | |
| 5+20 | 3.3602 | 12.58 | \|Q | | | | |
| 5+25 | 3.4475 | 12.68 | \|Q | | | | |
| 5+30 | 3.5355 | 12.78 | \|Q | | | | |
| 5+35 | 3.6242 | 12.88 | \|Q | | | | |
| 5+40 | 3.7136 | 12.97 | \|Q | | | | |
| 5+45 | 3.8036 | 13.07 | \|Q | | | | |
| 5+50 | 3.8942 | 13.17 | \|Q | | | | |
| 5+55 | 3.9856 | 13.26 | \|Q | | | | |
| 6+ 0 | 4.0776 | 13.36 | \|Q | | | | |
| 6+ 5 | 4.1703 | 13.46 | \|Q | | | | |
| 6+10 | 4.2637 | 13.56 | \|Q | | | | |
| 6+15 | 4.3577 | 13.66 | \|Q | | | | |
| 6+20 | 4.4525 | 13.76 | \|Q | | | | |
| 6+25 | 4.5479 | 13.86 | \|Q | | | | |
| 6+30 | 4.6440 | 13.95 | \|Q | | | | |
| 6+35 | 4.7408 | 14.05 | \|Q | | | | |
| 6+40 | 4.8382 | 14.15 | \|Q | | | | |
| 6+45 | 4.9363 | 14.25 | \|Q | | | | |
| 6+50 | 5.0352 | 14.35 | \|Q | | | | |
| 6+55 | 5.1347 | 14.45 | \|Q | | | | |
| 7+ 0 | 5.2350 | 14.56 | \|Q | | | | |
| 7+ 5 | 5.3359 | 14.66 | \|QV | | | | |
| 7+10 | 5.4376 | 14.77 | \|QV | | | | |
| 7+15 | 5.5400 | 14.87 | \|QV | | | | |
| 7+20 | 5.6432 | 14.97 | \|QV | | | | |
| 7+25 | 5.7470 | 15.08 | \|QV | | | | |
| 7+30 | 5.8516 | 15.18 | \|QV | | | | |
| 7+35 | 5.9569 | 15.29 | \|QV | | | | |
| 7+40 | 6.0629 | 15.40 | \|QV | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 7+45 | 6.1698 | 15.51 | QV | | | |
| 7+50 | 6.2774 | 15.62 | QV | | | |
| 7+55 | 6.3857 | 15.74 | QV | | | |
| 8+ 0 | 6.4949 | 15.85 | QV | | | |
| 8+ 5 | 6.6048 | 15.96 | QV | | | |
| 8+10 | 6.7155 | 16.07 | QV | | | |
| 8+15 | 6.8270 | 16.19 | QV | | | |
| 8+20 | 6.9393 | 16.30 | QV | | | |
| 8+25 | 7.0524 | 16.42 | QV | | | |
| 8+30 | 7.1663 | 16.54 | QV | | | |
| 8+35 | 7.2810 | 16.66 | QV | | | |
| 8+40 | 7.3967 | 16.79 | QV | | | |
| 8+45 | 7.5131 | 16.91 | QV | | | |
| 8+50 | 7.6304 | 17.03 | QV | | | |
| 8+55 | 7.7486 | 17.16 | QV | | | |
| 9+ 0 | 7.8676 | 17.28 | QV | | | |
| 9+ 5 | 7.9876 | 17.41 | Q V | | | |
| 9+10 | 8.1084 | 17.54 | Q V | | | |
| 9+15 | 8.2301 | 17.68 | Q V | | | |
| 9+20 | 8.3528 | 17.81 | Q V | | | |
| 9+25 | 8.4764 | 17.95 | Q V | | | |
| 9+30 | 8.6010 | 18.09 | Q V | | | |
| 9+35 | 8.7266 | 18.23 | Q V | | | |
| 9+40 | 8.8532 | 18.38 | Q V | | | |
| 9+45 | 8.9808 | 18.53 | Q V | | | |
| 9+50 | 9.1094 | 18.68 | Q V | | | |
| 9+55 | 9.2391 | 18.83 | Q V | | | |
| 10+ 0 | 9.3699 | 18.99 | Q V | | | |
| 10+ 5 | 9.5017 | 19.15 | Q V | | | |
| 10+10 | 9.6347 | 19.31 | Q V | | | |
| 10+15 | 9.7689 | 19.48 | Q V | | | |
| 10+20 | 9.9042 | 19.65 | Q V | | | |
| 10+25 | 10.0407 | 19.82 | Q V | | | |
| 10+30 | 10.1783 | 19.99 | Q V | | | |
| 10+35 | 10.3173 | 20.17 | Q V | | | |
| 10+40 | 10.4575 | 20.35 | Q V | | | |
| 10+45 | 10.5989 | 20.54 | Q  V | | | |
| 10+50 | 10.7417 | 20.73 | Q  V | | | |
| 10+55 | 10.8858 | 20.93 | Q  V | | | |
| 11+ 0 | 11.0313 | 21.12 | Q  V | | | |
| 11+ 5 | 11.1782 | 21.33 | Q  V | | | |
| 11+10 | 11.3265 | 21.53 | Q  V | | | |
| 11+15 | 11.4762 | 21.74 | Q  V | | | |
| 11+20 | 11.6273 | 21.95 | Q  V | | | |
| 11+25 | 11.7800 | 22.17 | Q  V | | | |
| 11+30 | 11.9342 | 22.39 | Q  V | | | |
| 11+35 | 12.0900 | 22.62 | Q  V | | | |
| 11+40 | 12.2474 | 22.85 | Q  V | | | |
| 11+45 | 12.4065 | 23.10 | Q  V | | | |
| 11+50 | 12.5672 | 23.34 | Q  V | | | |
| 11+55 | 12.7297 | 23.59 | Q  V | | | |
| 12+ 0 | 12.8940 | 23.85 | Q  V | | | |
| 12+ 5 | 13.0599 | 24.09 | Q  V | | | |
| 12+10 | 13.2272 | 24.30 | Q   V | | | |
| 12+15 | 13.3960 | 24.51 | Q   V | | | |
| 12+20 | 13.5659 | 24.68 | Q   V | | | |
| 12+25 | 13.7371 | 24.85 | Q   V | | | |
| 12+30 | 13.9091 | 24.99 | Q   V | | | |
| 12+35 | 14.0821 | 25.12 | Q  V | | | |

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12+40      14.2559     25.23  | Q  V    |          |          |          |
12+45      14.4302     25.32  | Q  V    |          |          |          |
12+50      14.6050     25.38  | Q  V    |          |          |          |
12+55      14.7792     25.29  | Q  V    |          |          |          |
13+ 0      14.9526     25.18  | Q  V    |          |          |          |
13+ 5      15.1241     24.90  |Q   V    |          |          |          |
13+10      15.2931     24.54  |Q   V    |          |          |          |
13+15      15.4599     24.22  |Q   V    |          |          |          |
13+20      15.6251     23.98  |Q   V    |          |          |          |
13+25      15.7887     23.77  |Q   V    |          |          |          |
13+30      15.9517     23.67  |Q    V   |          |          |          |
13+35      16.1142     23.60  |Q    V   |          |          |          |
13+40      16.2767     23.58  |Q    V   |          |          |          |
13+45      16.4393     23.62  |Q    V   |          |          |          |
13+50      16.6025     23.69  |Q    V   |          |          |          |
13+55      16.7666     23.84  |Q    V   |          |          |          |
14+ 0      16.9319     24.00  |Q    V   |          |          |          |
14+ 5      17.0989     24.24  |Q    V   |          |          |          |
14+10      17.2677     24.51  |Q    V   |          |          |          |
14+15      17.4387     24.83  |Q    V   |          |          |          |
14+20      17.6122     25.20  | Q   V   |          |          |          |
14+25      17.7885     25.60  | Q   V   |          |          |          |
14+30      17.9680     26.06  | Q   V   |          |          |          |
14+35      18.1509     26.56  | Q   V   |          |          |          |
14+40      18.3376     27.11  | Q   V   |          |          |          |
14+45      18.5286     27.74  | Q    V  |          |          |          |
14+50      18.7243     28.42  | Q    V  |          |          |          |
14+55      18.9256     29.22  | Q    V  |          |          |          |
15+ 0      19.1329     30.09  | Q    V  |          |          |          |
15+ 5      19.3471     31.11  | Q    V  |          |          |          |
15+10      19.5690     32.22  | Q    V  |          |          |          |
15+15      19.7993     33.43  | Q    V  |          |          |          |
15+20      20.0384     34.72  | Q    V  |          |          |          |
15+25      20.2884     36.30  | Q    V  |          |          |          |
15+30      20.5512     38.15  |  Q   V  |          |          |          |
15+35      20.8286     40.28  |  Q   V  |          |          |          |
15+40      21.1241     42.90  |  Q   V  |          |          |          |
15+45      21.4410     46.01  |  Q    V |          |          |          |
15+50      21.7848     49.93  |  Q    V |          |          |          |
15+55      22.1640     55.05  |   Q   V |          |          |          |
16+ 0      22.5931     62.31  |   Q   V |          |          |          |
16+ 5      23.1457     80.24  |     Q V |          |          |          |
16+10      23.8260     98.78  |      Q V|          |          |          |
16+15      24.6025    112.75  |        Q|          |          |          |
16+20      25.5372    135.72  |        VQ          |          |          |
16+25      26.5674    149.59  |         VQ         |          |          |
16+30      27.7662    174.06  |         V  Q       |          |          |
16+35      29.0908    192.33  |         |V   Q     |          |          |
16+40      30.5682    214.52  |         |V     Q   |          |          |
16+45      32.2434    243.24  |         | V      Q|          |          |
16+50      34.1278    273.62  |         | V       |Q         |          |
16+55      36.4849    342.24  |         |  V      |      Q   |          |
17+ 0      39.0359    370.41  |         |   V     |        Q |          |
17+ 5      42.0465    437.13  |         |    V    |          |   Q      |
17+10      45.2635    467.11  |         |      V  |          |      Q   |
17+15      48.3486    447.96  |         |       V |          |    Q     |
17+20      51.1924    412.93  |         |        V|          |  Q       |
17+25      53.8907    391.79  |         |         V          |Q         |
17+30      56.2461    342.00  |         |          |V     Q  |          |
```

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 17+35 | 58.4529 | 320.43 | \| | \| | \| V Q \| | \| |
| 17+40 | 60.4681 | 292.60 | \| | \| | \| VQ \| | \| |
| 17+45 | 62.3235 | 269.40 | \| | \| | \|Q V \| | \| |
| 17+50 | 64.0441 | 249.84 | \| | \| Q \| | \| V \| | \| |
| 17+55 | 65.5535 | 219.17 | \| | \| Q \| | \| V \| | \| |
| 18+ 0 | 66.9846 | 207.79 | \| | \| Q \| | \| V \| | \| |
| 18+ 5 | 68.2851 | 188.84 | \| | \| Q \| | \| V \| | \| |
| 18+10 | 69.5165 | 178.79 | \| | \| Q \| | \| V \| | \| |
| 18+15 | 70.6727 | 167.88 | \| | \| Q \| | \| V \| | \| |
| 18+20 | 71.7587 | 157.69 | \| | \| Q \| | \| V \| | \| |
| 18+25 | 72.8070 | 152.22 | \| | \| Q \| | \| V \| | \| |
| 18+30 | 73.8014 | 144.38 | \| | \|Q \| | \| V \| | \| |
| 18+35 | 74.7619 | 139.46 | \| | \|Q \| | \| V \| | \| |
| 18+40 | 75.6547 | 129.65 | \| | Q \| | \| V \| | \| |
| 18+45 | 76.5077 | 123.85 | \| | Q\| | \| V \| | \| |
| 18+50 | 77.3251 | 118.68 | \| | Q\| | \| V\| | \| |
| 18+55 | 78.1045 | 113.18 | \| | Q\| | \| V\| | \| |
| 19+ 0 | 78.8667 | 110.67 | \| | Q \| | \| V\| | \| |
| 19+ 5 | 79.6059 | 107.32 | \| | Q \| | \| V | \| |
| 19+10 | 80.3269 | 104.68 | \| | Q \| | \| V | \| |
| 19+15 | 80.9989 | 97.57 | \| | Q \| | \| V | \| |
| 19+20 | 81.6409 | 93.22 | \| | Q \| | \| V | \| |
| 19+25 | 82.2733 | 91.83 | \| | Q \| | \| \|V | \| |
| 19+30 | 82.8951 | 90.29 | \| | Q \| | \| \|V | \| |
| 19+35 | 83.5015 | 88.04 | \| | Q \| | \| \|V | \| |
| 19+40 | 84.0709 | 82.69 | \| | Q \| | \| \|V | \| |
| 19+45 | 84.6264 | 80.65 | \| | Q \| | \| V | \| |
| 19+50 | 85.1744 | 79.56 | \| | Q \| | \| V | \| |
| 19+55 | 85.7141 | 78.37 | \| | Q \| | \| V | \| |
| 20+ 0 | 86.2409 | 76.49 | \| | Q \| | \| V | \| |
| 20+ 5 | 86.7476 | 73.58 | \| | Q \| | \| V | \| |
| 20+10 | 87.2465 | 72.43 | \| | Q \| | \| V | \| |
| 20+15 | 87.7377 | 71.33 | \| | Q \| | \| V | \| |
| 20+20 | 88.2199 | 70.01 | \| | Q \| | \| V | \| |
| 20+25 | 88.6812 | 66.98 | \| | Q \| | \| V | \| |
| 20+30 | 89.1223 | 64.05 | \| | Q \| | \| V | \| |
| 20+35 | 89.5561 | 62.98 | \| | Q \| | \| V | \| |
| 20+40 | 89.9818 | 61.82 | \| | Q \| | \| V | \| |
| 20+45 | 90.3968 | 60.25 | \| | Q \| | \| V | \| |
| 20+50 | 90.7825 | 56.00 | \| | Q \| | \| V | \| |
| 20+55 | 91.1532 | 53.83 | \| | Q \| | \| V | \| |
| 21+ 0 | 91.5184 | 53.03 | \| | Q \| | \| V | \| |
| 21+ 5 | 91.8786 | 52.31 | \| | Q \| | \| V | \| |
| 21+10 | 92.2334 | 51.51 | \| | Q \| | \| V | \| |
| 21+15 | 92.5794 | 50.24 | \| | Q \| | \| V | \| |
| 21+20 | 92.9207 | 49.55 | \| Q | \| | \| V | \| |
| 21+25 | 93.2578 | 48.95 | \| Q | \| | \| V | \| |
| 21+30 | 93.5901 | 48.25 | \| Q | \| | \| V | \| |
| 21+35 | 93.9134 | 46.94 | \| Q | \| | \| V | \| |
| 21+40 | 94.2244 | 45.16 | \| Q | \| | \| V | \| |
| 21+45 | 94.5312 | 44.54 | \| Q | \| | \| V | \| |
| 21+50 | 94.8341 | 43.99 | \| Q | \| | \| V | \| |
| 21+55 | 95.1330 | 43.40 | \| Q | \| | \| V | \| |
| 22+ 0 | 95.4245 | 42.33 | \| Q | \| | \| V | \| |
| 22+ 5 | 95.7098 | 41.42 | \| Q | \| | \| V | \| |
| 22+10 | 95.9914 | 40.89 | \| Q | \| | \| V | \| |
| 22+15 | 96.2687 | 40.27 | \| Q | \| | \| V | \| |
| 22+20 | 96.5399 | 39.38 | \| Q | \| | \| V | \| |
| 22+25 | 96.7957 | 37.15 | \| Q | \| | \| V | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+30 | 97.0447 | 36.15 | Q | | | | V |
| 22+35 | 97.2906 | 35.70 | Q | | | | V |
| 22+40 | 97.5338 | 35.32 | Q | | | | V |
| 22+45 | 97.7746 | 34.97 | Q | | | | V |
| 22+50 | 98.0130 | 34.61 | Q | | | | V |
| 22+55 | 98.2488 | 34.23 | Q | | | | V |
| 23+ 0 | 98.4815 | 33.79 | Q | | | | V |
| 23+ 5 | 98.7103 | 33.23 | Q | | | | V |
| 23+10 | 98.9303 | 31.94 | Q | | | | V |
| 23+15 | 99.1399 | 30.43 | Q | | | | V |
| 23+20 | 99.3465 | 30.01 | Q | | | | V |
| 23+25 | 99.5508 | 29.66 | Q | | | | V |
| 23+30 | 99.7529 | 29.35 | Q | | | | V |
| 23+35 | 99.9530 | 29.05 | Q | | | | V |
| 23+40 | 100.1508 | 28.72 | Q | | | | V |
| 23+45 | 100.3462 | 28.37 | Q | | | | V |
| 23+50 | 100.5384 | 27.91 | Q | | | | V |
| 23+55 | 100.7255 | 27.17 | Q | | | | V |
| 24+ 0 | 100.9003 | 25.38 | Q | | | | V |
| 24+ 5 | 101.0703 | 24.68 | Q | | | | V |
| 24+10 | 101.2376 | 24.29 | Q | | | | V |
| 24+15 | 101.4025 | 23.94 | Q | | | | V |
| 24+20 | 101.5649 | 23.58 | Q | | | | V |
| 24+25 | 101.7247 | 23.21 | Q | | | | V |
| 24+30 | 101.8816 | 22.78 | Q | | | | V |
| 24+35 | 102.0350 | 22.27 | Q | | | | V |
| 24+40 | 102.1838 | 21.62 | Q | | | | V |
| 24+45 | 102.3221 | 20.08 | Q | | | | V |
| 24+50 | 102.4501 | 18.58 | Q | | | | V |
| 24+55 | 102.5737 | 17.94 | Q | | | | V |
| 25+ 0 | 102.6933 | 17.36 | Q | | | | V |
| 25+ 5 | 102.8081 | 16.68 | Q | | | | V |
| 25+10 | 102.9180 | 15.95 | Q | | | | V |
| 25+15 | 103.0232 | 15.27 | Q | | | | V |
| 25+20 | 103.1243 | 14.68 | Q | | | | V |
| 25+25 | 103.2217 | 14.15 | Q | | | | V |
| 25+30 | 103.3168 | 13.80 | Q | | | | V |
| 25+35 | 103.4113 | 13.72 | Q | | | | V |
| 25+40 | 103.5035 | 13.39 | Q | | | | V |
| 25+45 | 103.5932 | 13.02 | Q | | | | V |
| 25+50 | 103.6805 | 12.67 | Q | | | | V |
| 25+55 | 103.7657 | 12.37 | Q | | | | V |
| 26+ 0 | 103.8489 | 12.08 | Q | | | | V |
| 26+ 5 | 103.9302 | 11.81 | Q | | | | V |
| 26+10 | 104.0098 | 11.55 | Q | | | | V |
| 26+15 | 104.0877 | 11.31 | Q | | | | V |
| 26+20 | 104.1640 | 11.08 | Q | | | | V |
| 26+25 | 104.2388 | 10.85 | Q | | | | V |
| 26+30 | 104.3119 | 10.62 | Q | | | | V |
| 26+35 | 104.3833 | 10.37 | Q | | | | V |
| 26+40 | 104.4532 | 10.14 | Q | | | | V |
| 26+45 | 104.5213 | 9.90 | Q | | | | V |
| 26+50 | 104.5877 | 9.64 | Q | | | | V |
| 26+55 | 104.6521 | 9.35 | Q | | | | V |
| 27+ 0 | 104.7140 | 8.99 | Q | | | | V |
| 27+ 5 | 104.7713 | 8.32 | Q | | | | V |
| 27+10 | 104.8198 | 7.04 | Q | | | | V |
| 27+15 | 104.8658 | 6.68 | Q | | | | V |
| 27+20 | 104.9104 | 6.47 | Q | | | | V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 27+25 | 104.9537 | 6.30 | Q | \| | \| | \| | V\| |
| 27+30 | 104.9960 | 6.15 | Q | \| | \| | \| | V\| |
| 27+35 | 105.0374 | 6.00 | Q | \| | \| | \| | V\| |
| 27+40 | 105.0777 | 5.86 | Q | \| | \| | \| | V\| |
| 27+45 | 105.1171 | 5.71 | Q | \| | \| | \| | V\| |
| 27+50 | 105.1553 | 5.55 | Q | \| | \| | \| | V\| |
| 27+55 | 105.1924 | 5.38 | Q | \| | \| | \| | V\| |
| 28+ 0 | 105.2282 | 5.20 | Q | \| | \| | \| | V\| |
| 28+ 5 | 105.2626 | 5.00 | Q | \| | \| | \| | V\| |
| 28+10 | 105.2953 | 4.75 | Q | \| | \| | \| | V\| |
| 28+15 | 105.3256 | 4.39 | Q | \| | \| | \| | V\| |
| 28+20 | 105.3487 | 3.35 | Q | \| | \| | \| | V\| |
| 28+25 | 105.3652 | 2.40 | Q | \| | \| | \| | V\| |
| 28+30 | 105.3804 | 2.21 | Q | \| | \| | \| | V\| |
| 28+35 | 105.3947 | 2.07 | Q | \| | \| | \| | V\| |
| 28+40 | 105.4082 | 1.96 | Q | \| | \| | \| | V\| |
| 28+45 | 105.4212 | 1.88 | Q | \| | \| | \| | V\| |
| 28+50 | 105.4336 | 1.81 | Q | \| | \| | \| | V\| |
| 28+55 | 105.4456 | 1.74 | Q | \| | \| | \| | V\| |
| 29+ 0 | 105.4572 | 1.68 | Q | \| | \| | \| | V\| |
| 29+ 5 | 105.4684 | 1.62 | Q | \| | \| | \| | V\| |
| 29+10 | 105.4791 | 1.56 | Q | \| | \| | \| | V\| |
| 29+15 | 105.4895 | 1.51 | Q | \| | \| | \| | V\| |
| 29+20 | 105.4995 | 1.45 | Q | \| | \| | \| | V\| |
| 29+25 | 105.5092 | 1.40 | Q | \| | \| | \| | V\| |
| 29+30 | 105.5185 | 1.35 | Q | \| | \| | \| | V\| |
| 29+35 | 105.5274 | 1.30 | Q | \| | \| | \| | V\| |
| 29+40 | 105.5361 | 1.26 | Q | \| | \| | \| | V\| |
| 29+45 | 105.5445 | 1.22 | Q | \| | \| | \| | V\| |
| 29+50 | 105.5525 | 1.17 | Q | \| | \| | \| | V\| |
| 29+55 | 105.5603 | 1.13 | Q | \| | \| | \| | V\| |
| 30+ 0 | 105.5679 | 1.09 | Q | \| | \| | \| | V\| |
| 30+ 5 | 105.5751 | 1.06 | Q | \| | \| | \| | V\| |
| 30+10 | 105.5822 | 1.02 | Q | \| | \| | \| | V\| |
| 30+15 | 105.5890 | 0.98 | Q | \| | \| | \| | V\| |
| 30+20 | 105.5955 | 0.95 | Q | \| | \| | \| | V\| |
| 30+25 | 105.6018 | 0.91 | Q | \| | \| | \| | V\| |
| 30+30 | 105.6078 | 0.88 | Q | \| | \| | \| | V\| |
| 30+35 | 105.6137 | 0.85 | Q | \| | \| | \| | V\| |
| 30+40 | 105.6193 | 0.82 | Q | \| | \| | \| | V\| |
| 30+45 | 105.6247 | 0.79 | Q | \| | \| | \| | V\| |
| 30+50 | 105.6300 | 0.76 | Q | \| | \| | \| | V\| |
| 30+55 | 105.6350 | 0.73 | Q | \| | \| | \| | V\| |
| 31+ 0 | 105.6398 | 0.70 | Q | \| | \| | \| | V\| |
| 31+ 5 | 105.6444 | 0.67 | Q | \| | \| | \| | V\| |
| 31+10 | 105.6488 | 0.64 | Q | \| | \| | \| | V\| |
| 31+15 | 105.6531 | 0.62 | Q | \| | \| | \| | V\| |
| 31+20 | 105.6572 | 0.60 | Q | \| | \| | \| | V\| |
| 31+25 | 105.6612 | 0.57 | Q | \| | \| | \| | V\| |
| 31+30 | 105.6650 | 0.55 | Q | \| | \| | \| | V\| |
| 31+35 | 105.6686 | 0.53 | Q | \| | \| | \| | V\| |
| 31+40 | 105.6721 | 0.51 | Q | \| | \| | \| | V\| |
| 31+45 | 105.6755 | 0.49 | Q | \| | \| | \| | V\| |
| 31+50 | 105.6787 | 0.47 | Q | \| | \| | \| | V\| |
| 31+55 | 105.6817 | 0.45 | Q | \| | \| | \| | V\| |
| 32+ 0 | 105.6847 | 0.43 | Q | \| | \| | \| | V\| |
| 32+ 5 | 105.6875 | 0.41 | Q | \| | \| | \| | V\| |
| 32+10 | 105.6903 | 0.40 | Q | \| | \| | \| | V\| |
| 32+15 | 105.6929 | 0.38 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 32+20 | 105.6955 | 0.37 | Q | \| | \| | \| | V\| |
| 32+25 | 105.6979 | 0.35 | Q | \| | \| | \| | V\| |
| 32+30 | 105.7002 | 0.34 | Q | \| | \| | \| | V\| |
| 32+35 | 105.7025 | 0.32 | Q | \| | \| | \| | V\| |
| 32+40 | 105.7046 | 0.31 | Q | \| | \| | \| | V\| |
| 32+45 | 105.7066 | 0.30 | Q | \| | \| | \| | V\| |
| 32+50 | 105.7086 | 0.29 | Q | \| | \| | \| | V\| |
| 32+55 | 105.7106 | 0.28 | Q | \| | \| | \| | V\| |
| 33+ 0 | 105.7124 | 0.27 | Q | \| | \| | \| | V\| |
| 33+ 5 | 105.7142 | 0.26 | Q | \| | \| | \| | V\| |
| 33+10 | 105.7160 | 0.25 | Q | \| | \| | \| | V\| |
| 33+15 | 105.7177 | 0.25 | Q | \| | \| | \| | V\| |
| 33+20 | 105.7193 | 0.24 | Q | \| | \| | \| | V\| |
| 33+25 | 105.7209 | 0.23 | Q | \| | \| | \| | V\| |
| 33+30 | 105.7224 | 0.22 | Q | \| | \| | \| | V\| |
| 33+35 | 105.7239 | 0.21 | Q | \| | \| | \| | V\| |
| 33+40 | 105.7253 | 0.20 | Q | \| | \| | \| | V\| |
| 33+45 | 105.7266 | 0.19 | Q | \| | \| | \| | V\| |
| 33+50 | 105.7279 | 0.18 | Q | \| | \| | \| | V\| |
| 33+55 | 105.7291 | 0.17 | Q | \| | \| | \| | V\| |
| 34+ 0 | 105.7302 | 0.17 | Q | \| | \| | \| | V\| |
| 34+ 5 | 105.7313 | 0.16 | Q | \| | \| | \| | V\| |
| 34+10 | 105.7323 | 0.15 | Q | \| | \| | \| | V\| |
| 34+15 | 105.7333 | 0.14 | Q | \| | \| | \| | V\| |
| 34+20 | 105.7342 | 0.13 | Q | \| | \| | \| | V\| |
| 34+25 | 105.7350 | 0.12 | Q | \| | \| | \| | V\| |
| 34+30 | 105.7358 | 0.11 | Q | \| | \| | \| | V\| |
| 34+35 | 105.7366 | 0.11 | Q | \| | \| | \| | V\| |
| 34+40 | 105.7372 | 0.10 | Q | \| | \| | \| | V\| |
| 34+45 | 105.7379 | 0.09 | Q | \| | \| | \| | V\| |
| 34+50 | 105.7384 | 0.08 | Q | \| | \| | \| | V\| |
| 34+55 | 105.7389 | 0.07 | Q | \| | \| | \| | V\| |
| 35+ 0 | 105.7394 | 0.07 | Q | \| | \| | \| | V\| |
| 35+ 5 | 105.7398 | 0.06 | Q | \| | \| | \| | V\| |
| 35+10 | 105.7402 | 0.05 | Q | \| | \| | \| | V\| |
| 35+15 | 105.7405 | 0.05 | Q | \| | \| | \| | V\| |
| 35+20 | 105.7408 | 0.05 | Q | \| | \| | \| | V\| |
| 35+25 | 105.7411 | 0.04 | Q | \| | \| | \| | V\| |
| 35+30 | 105.7414 | 0.04 | Q | \| | \| | \| | V\| |
| 35+35 | 105.7416 | 0.03 | Q | \| | \| | \| | V\| |
| 35+40 | 105.7418 | 0.03 | Q | \| | \| | \| | V\| |
| 35+45 | 105.7420 | 0.03 | Q | \| | \| | \| | V\| |
| 35+50 | 105.7421 | 0.02 | Q | \| | \| | \| | V\| |
| 35+55 | 105.7422 | 0.02 | Q | \| | \| | \| | V\| |
| 36+ 0 | 105.7423 | 0.01 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 32
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 24.36 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 24.36 | 6 | 1.83 |
| Rainfall data for year 100 | | |
| 24.36 | 24 | 2.60 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 91.0 | 98.2 | 24.36 | 1.000 | 0.036 | 0.900 | 0.032 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.032

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 21.92 | 0.900 | 91.0 | 98.2 | 0.18 | 0.920 |
| 2.44 | 0.100 | 98.0 | 98.0 | 0.20 | 0.912 |

Area-averaged catchment yield fraction, Y = 0.919
Area-averaged low loss fraction, Yb = 0.081
User entry of time of concentration = 0.650 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 24.36(Ac.)
Catchment Lag time = 0.520 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 16.0256
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.032(In/Hr)
Average low loss rate fraction (Yb) = 0.081 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.645(In)
Specified peak 6-hour rainfall = 1.830(In)
Specified peak 24-hour rainfall = 2.600(In)

Rainfall depth area reduction factors:
Using a total area of 24.36(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.659(In)
30-minute factor = 0.999 Adjusted rainfall = 1.128(In)
1-hour factor = 0.999 Adjusted rainfall = 1.388(In)
3-hour factor = 1.000 Adjusted rainfall = 1.645(In)
6-hour factor = 1.000 Adjusted rainfall = 1.830(In)
24-hour factor = 1.000 Adjusted rainfall = 2.600(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 294.60 (CFS)) | |
| 1 | 0.736 | 2.169 |
| 2 | 3.163 | 7.148 |
| 3 | 7.243 | 12.021 |
| 4 | 14.463 | 21.271 |
| 5 | 28.208 | 40.493 |
| 6 | 42.044 | 40.761 |
| 7 | 52.111 | 29.659 |
| 8 | 59.430 | 21.562 |
| 9 | 64.732 | 15.619 |
| 10 | 69.014 | 12.613 |
| 11 | 72.646 | 10.702 |
| 12 | 75.630 | 8.790 |
| 13 | 78.276 | 7.794 |

| | | |
|---|---|---|
| 14 | 80.458 | 6.428 |
| 15 | 82.396 | 5.710 |
| 16 | 84.112 | 5.054 |
| 17 | 85.685 | 4.634 |
| 18 | 87.133 | 4.266 |
| 19 | 88.405 | 3.750 |
| 20 | 89.450 | 3.077 |
| 21 | 90.395 | 2.784 |
| 22 | 91.293 | 2.646 |
| 23 | 92.108 | 2.399 |
| 24 | 92.865 | 2.232 |
| 25 | 93.576 | 2.092 |
| 26 | 94.194 | 1.823 |
| 27 | 94.739 | 1.605 |
| 28 | 95.284 | 1.605 |
| 29 | 95.775 | 1.445 |
| 30 | 96.192 | 1.229 |
| 31 | 96.608 | 1.228 |
| 32 | 96.984 | 1.107 |
| 33 | 97.275 | 0.857 |
| 34 | 97.563 | 0.850 |
| 35 | 97.822 | 0.762 |
| 36 | 97.989 | 0.491 |
| 37 | 98.149 | 0.472 |
| 38 | 98.315 | 0.487 |
| 39 | 98.504 | 0.557 |
| 40 | 98.696 | 0.567 |
| 41 | 98.888 | 0.567 |
| 42 | 99.081 | 0.567 |
| 43 | 99.273 | 0.567 |
| 44 | 99.461 | 0.553 |
| 45 | 99.582 | 0.358 |
| 46 | 99.682 | 0.295 |
| 47 | 99.782 | 0.295 |
| 48 | 99.883 | 0.295 |
| 49 | 100.000 | 0.148 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6588 | 0.6588 |
| 2 | 0.8111 | 0.1523 |
| 3 | 0.9160 | 0.1049 |
| 4 | 0.9986 | 0.0826 |
| 5 | 1.0677 | 0.0691 |
| 6 | 1.1277 | 0.0600 |
| 7 | 1.1811 | 0.0534 |
| 8 | 1.2294 | 0.0483 |
| 9 | 1.2736 | 0.0442 |
| 10 | 1.3145 | 0.0409 |
| 11 | 1.3526 | 0.0381 |
| 12 | 1.3884 | 0.0358 |
| 13 | 1.4057 | 0.0173 |
| 14 | 1.4219 | 0.0162 |
| 15 | 1.4371 | 0.0152 |
| 16 | 1.4515 | 0.0144 |
| 17 | 1.4651 | 0.0136 |
| 18 | 1.4781 | 0.0130 |
| 19 | 1.4905 | 0.0124 |
| 20 | 1.5023 | 0.0119 |

| | | |
|---|---|---|
| 21 | 1.5137 | 0.0114 |
| 22 | 1.5246 | 0.0109 |
| 23 | 1.5351 | 0.0105 |
| 24 | 1.5452 | 0.0101 |
| 25 | 1.5550 | 0.0098 |
| 26 | 1.5645 | 0.0094 |
| 27 | 1.5736 | 0.0091 |
| 28 | 1.5825 | 0.0089 |
| 29 | 1.5911 | 0.0086 |
| 30 | 1.5994 | 0.0083 |
| 31 | 1.6075 | 0.0081 |
| 32 | 1.6154 | 0.0079 |
| 33 | 1.6231 | 0.0077 |
| 34 | 1.6306 | 0.0075 |
| 35 | 1.6379 | 0.0073 |
| 36 | 1.6451 | 0.0071 |
| 37 | 1.6520 | 0.0069 |
| 38 | 1.6588 | 0.0068 |
| 39 | 1.6654 | 0.0066 |
| 40 | 1.6719 | 0.0065 |
| 41 | 1.6783 | 0.0064 |
| 42 | 1.6845 | 0.0062 |
| 43 | 1.6906 | 0.0061 |
| 44 | 1.6966 | 0.0060 |
| 45 | 1.7024 | 0.0059 |
| 46 | 1.7082 | 0.0058 |
| 47 | 1.7138 | 0.0057 |
| 48 | 1.7194 | 0.0056 |
| 49 | 1.7248 | 0.0055 |
| 50 | 1.7302 | 0.0054 |
| 51 | 1.7355 | 0.0053 |
| 52 | 1.7407 | 0.0052 |
| 53 | 1.7458 | 0.0051 |
| 54 | 1.7508 | 0.0050 |
| 55 | 1.7557 | 0.0049 |
| 56 | 1.7606 | 0.0049 |
| 57 | 1.7654 | 0.0048 |
| 58 | 1.7701 | 0.0047 |
| 59 | 1.7747 | 0.0047 |
| 60 | 1.7793 | 0.0046 |
| 61 | 1.7839 | 0.0045 |
| 62 | 1.7883 | 0.0045 |
| 63 | 1.7927 | 0.0044 |
| 64 | 1.7971 | 0.0043 |
| 65 | 1.8013 | 0.0043 |
| 66 | 1.8056 | 0.0042 |
| 67 | 1.8097 | 0.0042 |
| 68 | 1.8139 | 0.0041 |
| 69 | 1.8179 | 0.0041 |
| 70 | 1.8220 | 0.0040 |
| 71 | 1.8259 | 0.0040 |
| 72 | 1.8299 | 0.0039 |
| 73 | 1.8363 | 0.0064 |
| 74 | 1.8426 | 0.0063 |
| 75 | 1.8489 | 0.0063 |
| 76 | 1.8551 | 0.0062 |
| 77 | 1.8613 | 0.0062 |
| 78 | 1.8673 | 0.0061 |
| 79 | 1.8734 | 0.0060 |

| | | |
|---|---|---|
| 80 | 1.8794 | 0.0060 |
| 81 | 1.8853 | 0.0059 |
| 82 | 1.8912 | 0.0059 |
| 83 | 1.8970 | 0.0058 |
| 84 | 1.9027 | 0.0058 |
| 85 | 1.9085 | 0.0057 |
| 86 | 1.9141 | 0.0057 |
| 87 | 1.9197 | 0.0056 |
| 88 | 1.9253 | 0.0056 |
| 89 | 1.9308 | 0.0055 |
| 90 | 1.9363 | 0.0055 |
| 91 | 1.9417 | 0.0054 |
| 92 | 1.9471 | 0.0054 |
| 93 | 1.9524 | 0.0053 |
| 94 | 1.9577 | 0.0053 |
| 95 | 1.9630 | 0.0053 |
| 96 | 1.9682 | 0.0052 |
| 97 | 1.9734 | 0.0052 |
| 98 | 1.9785 | 0.0051 |
| 99 | 1.9836 | 0.0051 |
| 100 | 1.9887 | 0.0051 |
| 101 | 1.9937 | 0.0050 |
| 102 | 1.9987 | 0.0050 |
| 103 | 2.0036 | 0.0049 |
| 104 | 2.0085 | 0.0049 |
| 105 | 2.0134 | 0.0049 |
| 106 | 2.0183 | 0.0048 |
| 107 | 2.0231 | 0.0048 |
| 108 | 2.0278 | 0.0048 |
| 109 | 2.0326 | 0.0047 |
| 110 | 2.0373 | 0.0047 |
| 111 | 2.0420 | 0.0047 |
| 112 | 2.0466 | 0.0046 |
| 113 | 2.0512 | 0.0046 |
| 114 | 2.0558 | 0.0046 |
| 115 | 2.0604 | 0.0046 |
| 116 | 2.0649 | 0.0045 |
| 117 | 2.0694 | 0.0045 |
| 118 | 2.0739 | 0.0045 |
| 119 | 2.0783 | 0.0044 |
| 120 | 2.0827 | 0.0044 |
| 121 | 2.0871 | 0.0044 |
| 122 | 2.0914 | 0.0044 |
| 123 | 2.0958 | 0.0043 |
| 124 | 2.1001 | 0.0043 |
| 125 | 2.1044 | 0.0043 |
| 126 | 2.1086 | 0.0043 |
| 127 | 2.1128 | 0.0042 |
| 128 | 2.1170 | 0.0042 |
| 129 | 2.1212 | 0.0042 |
| 130 | 2.1254 | 0.0042 |
| 131 | 2.1295 | 0.0041 |
| 132 | 2.1336 | 0.0041 |
| 133 | 2.1377 | 0.0041 |
| 134 | 2.1418 | 0.0041 |
| 135 | 2.1458 | 0.0040 |
| 136 | 2.1498 | 0.0040 |
| 137 | 2.1538 | 0.0040 |
| 138 | 2.1578 | 0.0040 |

| | | |
|---|---|---|
| 139 | 2.1617 | 0.0040 |
| 140 | 2.1657 | 0.0039 |
| 141 | 2.1696 | 0.0039 |
| 142 | 2.1735 | 0.0039 |
| 143 | 2.1773 | 0.0039 |
| 144 | 2.1812 | 0.0038 |
| 145 | 2.1850 | 0.0038 |
| 146 | 2.1888 | 0.0038 |
| 147 | 2.1926 | 0.0038 |
| 148 | 2.1964 | 0.0038 |
| 149 | 2.2001 | 0.0038 |
| 150 | 2.2038 | 0.0037 |
| 151 | 2.2076 | 0.0037 |
| 152 | 2.2113 | 0.0037 |
| 153 | 2.2149 | 0.0037 |
| 154 | 2.2186 | 0.0037 |
| 155 | 2.2222 | 0.0036 |
| 156 | 2.2259 | 0.0036 |
| 157 | 2.2295 | 0.0036 |
| 158 | 2.2330 | 0.0036 |
| 159 | 2.2366 | 0.0036 |
| 160 | 2.2402 | 0.0036 |
| 161 | 2.2437 | 0.0035 |
| 162 | 2.2472 | 0.0035 |
| 163 | 2.2507 | 0.0035 |
| 164 | 2.2542 | 0.0035 |
| 165 | 2.2577 | 0.0035 |
| 166 | 2.2612 | 0.0035 |
| 167 | 2.2646 | 0.0034 |
| 168 | 2.2680 | 0.0034 |
| 169 | 2.2715 | 0.0034 |
| 170 | 2.2749 | 0.0034 |
| 171 | 2.2782 | 0.0034 |
| 172 | 2.2816 | 0.0034 |
| 173 | 2.2850 | 0.0034 |
| 174 | 2.2883 | 0.0033 |
| 175 | 2.2916 | 0.0033 |
| 176 | 2.2949 | 0.0033 |
| 177 | 2.2982 | 0.0033 |
| 178 | 2.3015 | 0.0033 |
| 179 | 2.3048 | 0.0033 |
| 180 | 2.3080 | 0.0033 |
| 181 | 2.3113 | 0.0032 |
| 182 | 2.3145 | 0.0032 |
| 183 | 2.3177 | 0.0032 |
| 184 | 2.3209 | 0.0032 |
| 185 | 2.3241 | 0.0032 |
| 186 | 2.3273 | 0.0032 |
| 187 | 2.3305 | 0.0032 |
| 188 | 2.3336 | 0.0032 |
| 189 | 2.3367 | 0.0031 |
| 190 | 2.3399 | 0.0031 |
| 191 | 2.3430 | 0.0031 |
| 192 | 2.3461 | 0.0031 |
| 193 | 2.3492 | 0.0031 |
| 194 | 2.3523 | 0.0031 |
| 195 | 2.3553 | 0.0031 |
| 196 | 2.3584 | 0.0031 |
| 197 | 2.3614 | 0.0030 |

| | | |
|---|---|---|
| 198 | 2.3645 | 0.0030 |
| 199 | 2.3675 | 0.0030 |
| 200 | 2.3705 | 0.0030 |
| 201 | 2.3735 | 0.0030 |
| 202 | 2.3765 | 0.0030 |
| 203 | 2.3794 | 0.0030 |
| 204 | 2.3824 | 0.0030 |
| 205 | 2.3854 | 0.0030 |
| 206 | 2.3883 | 0.0029 |
| 207 | 2.3912 | 0.0029 |
| 208 | 2.3942 | 0.0029 |
| 209 | 2.3971 | 0.0029 |
| 210 | 2.4000 | 0.0029 |
| 211 | 2.4029 | 0.0029 |
| 212 | 2.4057 | 0.0029 |
| 213 | 2.4086 | 0.0029 |
| 214 | 2.4115 | 0.0029 |
| 215 | 2.4143 | 0.0029 |
| 216 | 2.4172 | 0.0028 |
| 217 | 2.4200 | 0.0028 |
| 218 | 2.4228 | 0.0028 |
| 219 | 2.4256 | 0.0028 |
| 220 | 2.4284 | 0.0028 |
| 221 | 2.4312 | 0.0028 |
| 222 | 2.4340 | 0.0028 |
| 223 | 2.4368 | 0.0028 |
| 224 | 2.4395 | 0.0028 |
| 225 | 2.4423 | 0.0028 |
| 226 | 2.4450 | 0.0027 |
| 227 | 2.4478 | 0.0027 |
| 228 | 2.4505 | 0.0027 |
| 229 | 2.4532 | 0.0027 |
| 230 | 2.4559 | 0.0027 |
| 231 | 2.4586 | 0.0027 |
| 232 | 2.4613 | 0.0027 |
| 233 | 2.4640 | 0.0027 |
| 234 | 2.4667 | 0.0027 |
| 235 | 2.4693 | 0.0027 |
| 236 | 2.4720 | 0.0027 |
| 237 | 2.4747 | 0.0026 |
| 238 | 2.4773 | 0.0026 |
| 239 | 2.4799 | 0.0026 |
| 240 | 2.4826 | 0.0026 |
| 241 | 2.4852 | 0.0026 |
| 242 | 2.4878 | 0.0026 |
| 243 | 2.4904 | 0.0026 |
| 244 | 2.4930 | 0.0026 |
| 245 | 2.4956 | 0.0026 |
| 246 | 2.4981 | 0.0026 |
| 247 | 2.5007 | 0.0026 |
| 248 | 2.5033 | 0.0026 |
| 249 | 2.5058 | 0.0026 |
| 250 | 2.5084 | 0.0025 |
| 251 | 2.5109 | 0.0025 |
| 252 | 2.5134 | 0.0025 |
| 253 | 2.5160 | 0.0025 |
| 254 | 2.5185 | 0.0025 |
| 255 | 2.5210 | 0.0025 |
| 256 | 2.5235 | 0.0025 |

| | | |
|---|---|---|
| 257 | 2.5260 | 0.0025 |
| 258 | 2.5285 | 0.0025 |
| 259 | 2.5309 | 0.0025 |
| 260 | 2.5334 | 0.0025 |
| 261 | 2.5359 | 0.0025 |
| 262 | 2.5383 | 0.0025 |
| 263 | 2.5408 | 0.0025 |
| 264 | 2.5432 | 0.0024 |
| 265 | 2.5457 | 0.0024 |
| 266 | 2.5481 | 0.0024 |
| 267 | 2.5505 | 0.0024 |
| 268 | 2.5529 | 0.0024 |
| 269 | 2.5553 | 0.0024 |
| 270 | 2.5578 | 0.0024 |
| 271 | 2.5601 | 0.0024 |
| 272 | 2.5625 | 0.0024 |
| 273 | 2.5649 | 0.0024 |
| 274 | 2.5673 | 0.0024 |
| 275 | 2.5697 | 0.0024 |
| 276 | 2.5720 | 0.0024 |
| 277 | 2.5744 | 0.0024 |
| 278 | 2.5767 | 0.0024 |
| 279 | 2.5791 | 0.0023 |
| 280 | 2.5814 | 0.0023 |
| 281 | 2.5838 | 0.0023 |
| 282 | 2.5861 | 0.0023 |
| 283 | 2.5884 | 0.0023 |
| 284 | 2.5907 | 0.0023 |
| 285 | 2.5930 | 0.0023 |
| 286 | 2.5953 | 0.0023 |
| 287 | 2.5976 | 0.0023 |
| 288 | 2.5999 | 0.0023 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0023 | 0.0002 | 0.0021 |
| 2 | 0.0023 | 0.0002 | 0.0021 |
| 3 | 0.0023 | 0.0002 | 0.0021 |
| 4 | 0.0023 | 0.0002 | 0.0021 |
| 5 | 0.0023 | 0.0002 | 0.0021 |
| 6 | 0.0023 | 0.0002 | 0.0021 |
| 7 | 0.0023 | 0.0002 | 0.0022 |
| 8 | 0.0024 | 0.0002 | 0.0022 |
| 9 | 0.0024 | 0.0002 | 0.0022 |
| 10 | 0.0024 | 0.0002 | 0.0022 |
| 11 | 0.0024 | 0.0002 | 0.0022 |
| 12 | 0.0024 | 0.0002 | 0.0022 |
| 13 | 0.0024 | 0.0002 | 0.0022 |
| 14 | 0.0024 | 0.0002 | 0.0022 |
| 15 | 0.0024 | 0.0002 | 0.0022 |
| 16 | 0.0024 | 0.0002 | 0.0022 |
| 17 | 0.0024 | 0.0002 | 0.0022 |
| 18 | 0.0025 | 0.0002 | 0.0023 |
| 19 | 0.0025 | 0.0002 | 0.0023 |
| 20 | 0.0025 | 0.0002 | 0.0023 |
| 21 | 0.0025 | 0.0002 | 0.0023 |
| 22 | 0.0025 | 0.0002 | 0.0023 |

| | | | |
|---|---|---|---|
| 23 | 0.0025 | 0.0002 | 0.0023 |
| 24 | 0.0025 | 0.0002 | 0.0023 |
| 25 | 0.0025 | 0.0002 | 0.0023 |
| 26 | 0.0025 | 0.0002 | 0.0023 |
| 27 | 0.0026 | 0.0002 | 0.0023 |
| 28 | 0.0026 | 0.0002 | 0.0024 |
| 29 | 0.0026 | 0.0002 | 0.0024 |
| 30 | 0.0026 | 0.0002 | 0.0024 |
| 31 | 0.0026 | 0.0002 | 0.0024 |
| 32 | 0.0026 | 0.0002 | 0.0024 |
| 33 | 0.0026 | 0.0002 | 0.0024 |
| 34 | 0.0026 | 0.0002 | 0.0024 |
| 35 | 0.0026 | 0.0002 | 0.0024 |
| 36 | 0.0027 | 0.0002 | 0.0024 |
| 37 | 0.0027 | 0.0002 | 0.0025 |
| 38 | 0.0027 | 0.0002 | 0.0025 |
| 39 | 0.0027 | 0.0002 | 0.0025 |
| 40 | 0.0027 | 0.0002 | 0.0025 |
| 41 | 0.0027 | 0.0002 | 0.0025 |
| 42 | 0.0027 | 0.0002 | 0.0025 |
| 43 | 0.0028 | 0.0002 | 0.0025 |
| 44 | 0.0028 | 0.0002 | 0.0025 |
| 45 | 0.0028 | 0.0002 | 0.0026 |
| 46 | 0.0028 | 0.0002 | 0.0026 |
| 47 | 0.0028 | 0.0002 | 0.0026 |
| 48 | 0.0028 | 0.0002 | 0.0026 |
| 49 | 0.0028 | 0.0002 | 0.0026 |
| 50 | 0.0029 | 0.0002 | 0.0026 |
| 51 | 0.0029 | 0.0002 | 0.0026 |
| 52 | 0.0029 | 0.0002 | 0.0026 |
| 53 | 0.0029 | 0.0002 | 0.0027 |
| 54 | 0.0029 | 0.0002 | 0.0027 |
| 55 | 0.0029 | 0.0002 | 0.0027 |
| 56 | 0.0029 | 0.0002 | 0.0027 |
| 57 | 0.0030 | 0.0002 | 0.0027 |
| 58 | 0.0030 | 0.0002 | 0.0027 |
| 59 | 0.0030 | 0.0002 | 0.0028 |
| 60 | 0.0030 | 0.0002 | 0.0028 |
| 61 | 0.0030 | 0.0002 | 0.0028 |
| 62 | 0.0030 | 0.0002 | 0.0028 |
| 63 | 0.0031 | 0.0002 | 0.0028 |
| 64 | 0.0031 | 0.0002 | 0.0028 |
| 65 | 0.0031 | 0.0003 | 0.0029 |
| 66 | 0.0031 | 0.0003 | 0.0029 |
| 67 | 0.0031 | 0.0003 | 0.0029 |
| 68 | 0.0032 | 0.0003 | 0.0029 |
| 69 | 0.0032 | 0.0003 | 0.0029 |
| 70 | 0.0032 | 0.0003 | 0.0029 |
| 71 | 0.0032 | 0.0003 | 0.0030 |
| 72 | 0.0032 | 0.0003 | 0.0030 |
| 73 | 0.0033 | 0.0003 | 0.0030 |
| 74 | 0.0033 | 0.0003 | 0.0030 |
| 75 | 0.0033 | 0.0003 | 0.0030 |
| 76 | 0.0033 | 0.0003 | 0.0030 |
| 77 | 0.0033 | 0.0003 | 0.0031 |
| 78 | 0.0034 | 0.0003 | 0.0031 |
| 79 | 0.0034 | 0.0003 | 0.0031 |
| 80 | 0.0034 | 0.0003 | 0.0031 |
| 81 | 0.0034 | 0.0003 | 0.0032 |

| | | | |
|---|---|---|---|
| 82 | 0.0034 | 0.0003 | 0.0032 |
| 83 | 0.0035 | 0.0003 | 0.0032 |
| 84 | 0.0035 | 0.0003 | 0.0032 |
| 85 | 0.0035 | 0.0003 | 0.0032 |
| 86 | 0.0035 | 0.0003 | 0.0033 |
| 87 | 0.0036 | 0.0003 | 0.0033 |
| 88 | 0.0036 | 0.0003 | 0.0033 |
| 89 | 0.0036 | 0.0003 | 0.0033 |
| 90 | 0.0036 | 0.0003 | 0.0033 |
| 91 | 0.0037 | 0.0003 | 0.0034 |
| 92 | 0.0037 | 0.0003 | 0.0034 |
| 93 | 0.0037 | 0.0003 | 0.0034 |
| 94 | 0.0038 | 0.0003 | 0.0034 |
| 95 | 0.0038 | 0.0003 | 0.0035 |
| 96 | 0.0038 | 0.0003 | 0.0035 |
| 97 | 0.0038 | 0.0003 | 0.0035 |
| 98 | 0.0039 | 0.0003 | 0.0036 |
| 99 | 0.0039 | 0.0003 | 0.0036 |
| 100 | 0.0039 | 0.0003 | 0.0036 |
| 101 | 0.0040 | 0.0003 | 0.0037 |
| 102 | 0.0040 | 0.0003 | 0.0037 |
| 103 | 0.0040 | 0.0003 | 0.0037 |
| 104 | 0.0041 | 0.0003 | 0.0037 |
| 105 | 0.0041 | 0.0003 | 0.0038 |
| 106 | 0.0041 | 0.0003 | 0.0038 |
| 107 | 0.0042 | 0.0003 | 0.0038 |
| 108 | 0.0042 | 0.0003 | 0.0039 |
| 109 | 0.0043 | 0.0003 | 0.0039 |
| 110 | 0.0043 | 0.0003 | 0.0039 |
| 111 | 0.0043 | 0.0003 | 0.0040 |
| 112 | 0.0044 | 0.0004 | 0.0040 |
| 113 | 0.0044 | 0.0004 | 0.0041 |
| 114 | 0.0044 | 0.0004 | 0.0041 |
| 115 | 0.0045 | 0.0004 | 0.0041 |
| 116 | 0.0045 | 0.0004 | 0.0042 |
| 117 | 0.0046 | 0.0004 | 0.0042 |
| 118 | 0.0046 | 0.0004 | 0.0042 |
| 119 | 0.0047 | 0.0004 | 0.0043 |
| 120 | 0.0047 | 0.0004 | 0.0043 |
| 121 | 0.0048 | 0.0004 | 0.0044 |
| 122 | 0.0048 | 0.0004 | 0.0044 |
| 123 | 0.0049 | 0.0004 | 0.0045 |
| 124 | 0.0049 | 0.0004 | 0.0045 |
| 125 | 0.0050 | 0.0004 | 0.0046 |
| 126 | 0.0050 | 0.0004 | 0.0046 |
| 127 | 0.0051 | 0.0004 | 0.0047 |
| 128 | 0.0051 | 0.0004 | 0.0047 |
| 129 | 0.0052 | 0.0004 | 0.0048 |
| 130 | 0.0053 | 0.0004 | 0.0048 |
| 131 | 0.0053 | 0.0004 | 0.0049 |
| 132 | 0.0054 | 0.0004 | 0.0049 |
| 133 | 0.0055 | 0.0004 | 0.0050 |
| 134 | 0.0055 | 0.0004 | 0.0051 |
| 135 | 0.0056 | 0.0005 | 0.0052 |
| 136 | 0.0057 | 0.0005 | 0.0052 |
| 137 | 0.0058 | 0.0005 | 0.0053 |
| 138 | 0.0058 | 0.0005 | 0.0053 |
| 139 | 0.0059 | 0.0005 | 0.0054 |
| 140 | 0.0060 | 0.0005 | 0.0055 |

| | | | |
|---|---|---|---|
| 141 | 0.0061 | 0.0005 | 0.0056 |
| 142 | 0.0062 | 0.0005 | 0.0057 |
| 143 | 0.0063 | 0.0005 | 0.0058 |
| 144 | 0.0063 | 0.0005 | 0.0058 |
| 145 | 0.0039 | 0.0003 | 0.0036 |
| 146 | 0.0040 | 0.0003 | 0.0037 |
| 147 | 0.0041 | 0.0003 | 0.0037 |
| 148 | 0.0041 | 0.0003 | 0.0038 |
| 149 | 0.0042 | 0.0003 | 0.0039 |
| 150 | 0.0043 | 0.0003 | 0.0039 |
| 151 | 0.0044 | 0.0004 | 0.0040 |
| 152 | 0.0045 | 0.0004 | 0.0041 |
| 153 | 0.0046 | 0.0004 | 0.0042 |
| 154 | 0.0047 | 0.0004 | 0.0043 |
| 155 | 0.0048 | 0.0004 | 0.0044 |
| 156 | 0.0049 | 0.0004 | 0.0045 |
| 157 | 0.0050 | 0.0004 | 0.0046 |
| 158 | 0.0051 | 0.0004 | 0.0047 |
| 159 | 0.0053 | 0.0004 | 0.0048 |
| 160 | 0.0054 | 0.0004 | 0.0049 |
| 161 | 0.0056 | 0.0004 | 0.0051 |
| 162 | 0.0057 | 0.0005 | 0.0052 |
| 163 | 0.0059 | 0.0005 | 0.0054 |
| 164 | 0.0060 | 0.0005 | 0.0055 |
| 165 | 0.0062 | 0.0005 | 0.0057 |
| 166 | 0.0064 | 0.0005 | 0.0058 |
| 167 | 0.0066 | 0.0005 | 0.0061 |
| 168 | 0.0068 | 0.0005 | 0.0062 |
| 169 | 0.0071 | 0.0006 | 0.0066 |
| 170 | 0.0073 | 0.0006 | 0.0067 |
| 171 | 0.0077 | 0.0006 | 0.0071 |
| 172 | 0.0079 | 0.0006 | 0.0073 |
| 173 | 0.0083 | 0.0007 | 0.0077 |
| 174 | 0.0086 | 0.0007 | 0.0079 |
| 175 | 0.0091 | 0.0007 | 0.0084 |
| 176 | 0.0094 | 0.0008 | 0.0087 |
| 177 | 0.0101 | 0.0008 | 0.0093 |
| 178 | 0.0105 | 0.0008 | 0.0097 |
| 179 | 0.0114 | 0.0009 | 0.0104 |
| 180 | 0.0119 | 0.0010 | 0.0109 |
| 181 | 0.0130 | 0.0010 | 0.0119 |
| 182 | 0.0136 | 0.0011 | 0.0125 |
| 183 | 0.0152 | 0.0012 | 0.0140 |
| 184 | 0.0162 | 0.0013 | 0.0149 |
| 185 | 0.0358 | 0.0027 | 0.0331 |
| 186 | 0.0381 | 0.0027 | 0.0354 |
| 187 | 0.0442 | 0.0027 | 0.0415 |
| 188 | 0.0483 | 0.0027 | 0.0456 |
| 189 | 0.0600 | 0.0027 | 0.0573 |
| 190 | 0.0691 | 0.0027 | 0.0665 |
| 191 | 0.1049 | 0.0027 | 0.1022 |
| 192 | 0.1523 | 0.0027 | 0.1496 |
| 193 | 0.6588 | 0.0027 | 0.6561 |
| 194 | 0.0826 | 0.0027 | 0.0799 |
| 195 | 0.0534 | 0.0027 | 0.0507 |
| 196 | 0.0409 | 0.0027 | 0.0382 |
| 197 | 0.0173 | 0.0014 | 0.0159 |
| 198 | 0.0144 | 0.0012 | 0.0132 |
| 199 | 0.0124 | 0.0010 | 0.0114 |

| | | | |
|---|---|---|---|
| 200 | 0.0109 | 0.0009 | 0.0100 |
| 201 | 0.0098 | 0.0008 | 0.0090 |
| 202 | 0.0089 | 0.0007 | 0.0081 |
| 203 | 0.0081 | 0.0007 | 0.0075 |
| 204 | 0.0075 | 0.0006 | 0.0069 |
| 205 | 0.0069 | 0.0006 | 0.0064 |
| 206 | 0.0065 | 0.0005 | 0.0060 |
| 207 | 0.0061 | 0.0005 | 0.0056 |
| 208 | 0.0058 | 0.0005 | 0.0053 |
| 209 | 0.0055 | 0.0004 | 0.0050 |
| 210 | 0.0052 | 0.0004 | 0.0048 |
| 211 | 0.0049 | 0.0004 | 0.0045 |
| 212 | 0.0047 | 0.0004 | 0.0043 |
| 213 | 0.0045 | 0.0004 | 0.0042 |
| 214 | 0.0043 | 0.0004 | 0.0040 |
| 215 | 0.0042 | 0.0003 | 0.0038 |
| 216 | 0.0040 | 0.0003 | 0.0037 |
| 217 | 0.0064 | 0.0005 | 0.0059 |
| 218 | 0.0062 | 0.0005 | 0.0057 |
| 219 | 0.0060 | 0.0005 | 0.0055 |
| 220 | 0.0059 | 0.0005 | 0.0054 |
| 221 | 0.0057 | 0.0005 | 0.0053 |
| 222 | 0.0056 | 0.0004 | 0.0051 |
| 223 | 0.0054 | 0.0004 | 0.0050 |
| 224 | 0.0053 | 0.0004 | 0.0049 |
| 225 | 0.0052 | 0.0004 | 0.0048 |
| 226 | 0.0051 | 0.0004 | 0.0046 |
| 227 | 0.0049 | 0.0004 | 0.0045 |
| 228 | 0.0048 | 0.0004 | 0.0045 |
| 229 | 0.0047 | 0.0004 | 0.0044 |
| 230 | 0.0046 | 0.0004 | 0.0043 |
| 231 | 0.0046 | 0.0004 | 0.0042 |
| 232 | 0.0045 | 0.0004 | 0.0041 |
| 233 | 0.0044 | 0.0004 | 0.0040 |
| 234 | 0.0043 | 0.0003 | 0.0040 |
| 235 | 0.0042 | 0.0003 | 0.0039 |
| 236 | 0.0042 | 0.0003 | 0.0038 |
| 237 | 0.0041 | 0.0003 | 0.0038 |
| 238 | 0.0040 | 0.0003 | 0.0037 |
| 239 | 0.0040 | 0.0003 | 0.0036 |
| 240 | 0.0039 | 0.0003 | 0.0036 |
| 241 | 0.0038 | 0.0003 | 0.0035 |
| 242 | 0.0038 | 0.0003 | 0.0035 |
| 243 | 0.0037 | 0.0003 | 0.0034 |
| 244 | 0.0037 | 0.0003 | 0.0034 |
| 245 | 0.0036 | 0.0003 | 0.0033 |
| 246 | 0.0036 | 0.0003 | 0.0033 |
| 247 | 0.0035 | 0.0003 | 0.0032 |
| 248 | 0.0035 | 0.0003 | 0.0032 |
| 249 | 0.0034 | 0.0003 | 0.0031 |
| 250 | 0.0034 | 0.0003 | 0.0031 |
| 251 | 0.0033 | 0.0003 | 0.0031 |
| 252 | 0.0033 | 0.0003 | 0.0030 |
| 253 | 0.0032 | 0.0003 | 0.0030 |
| 254 | 0.0032 | 0.0003 | 0.0029 |
| 255 | 0.0032 | 0.0003 | 0.0029 |
| 256 | 0.0031 | 0.0003 | 0.0029 |
| 257 | 0.0031 | 0.0002 | 0.0028 |
| 258 | 0.0031 | 0.0002 | 0.0028 |

| | | | |
|---|---|---|---|
| 259 | 0.0030 | 0.0002 | 0.0028 |
| 260 | 0.0030 | 0.0002 | 0.0027 |
| 261 | 0.0030 | 0.0002 | 0.0027 |
| 262 | 0.0029 | 0.0002 | 0.0027 |
| 263 | 0.0029 | 0.0002 | 0.0027 |
| 264 | 0.0029 | 0.0002 | 0.0026 |
| 265 | 0.0028 | 0.0002 | 0.0026 |
| 266 | 0.0028 | 0.0002 | 0.0026 |
| 267 | 0.0028 | 0.0002 | 0.0025 |
| 268 | 0.0027 | 0.0002 | 0.0025 |
| 269 | 0.0027 | 0.0002 | 0.0025 |
| 270 | 0.0027 | 0.0002 | 0.0025 |
| 271 | 0.0027 | 0.0002 | 0.0025 |
| 272 | 0.0026 | 0.0002 | 0.0024 |
| 273 | 0.0026 | 0.0002 | 0.0024 |
| 274 | 0.0026 | 0.0002 | 0.0024 |
| 275 | 0.0026 | 0.0002 | 0.0024 |
| 276 | 0.0025 | 0.0002 | 0.0023 |
| 277 | 0.0025 | 0.0002 | 0.0023 |
| 278 | 0.0025 | 0.0002 | 0.0023 |
| 279 | 0.0025 | 0.0002 | 0.0023 |
| 280 | 0.0025 | 0.0002 | 0.0023 |
| 281 | 0.0024 | 0.0002 | 0.0022 |
| 282 | 0.0024 | 0.0002 | 0.0022 |
| 283 | 0.0024 | 0.0002 | 0.0022 |
| 284 | 0.0024 | 0.0002 | 0.0022 |
| 285 | 0.0024 | 0.0002 | 0.0022 |
| 286 | 0.0023 | 0.0002 | 0.0022 |
| 287 | 0.0023 | 0.0002 | 0.0021 |
| 288 | 0.0023 | 0.0002 | 0.0021 |

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Total soil rain loss = 0.13(In)
Total effective rainfall = 2.47(In)
Peak flow rate in flood hydrograph = 42.85(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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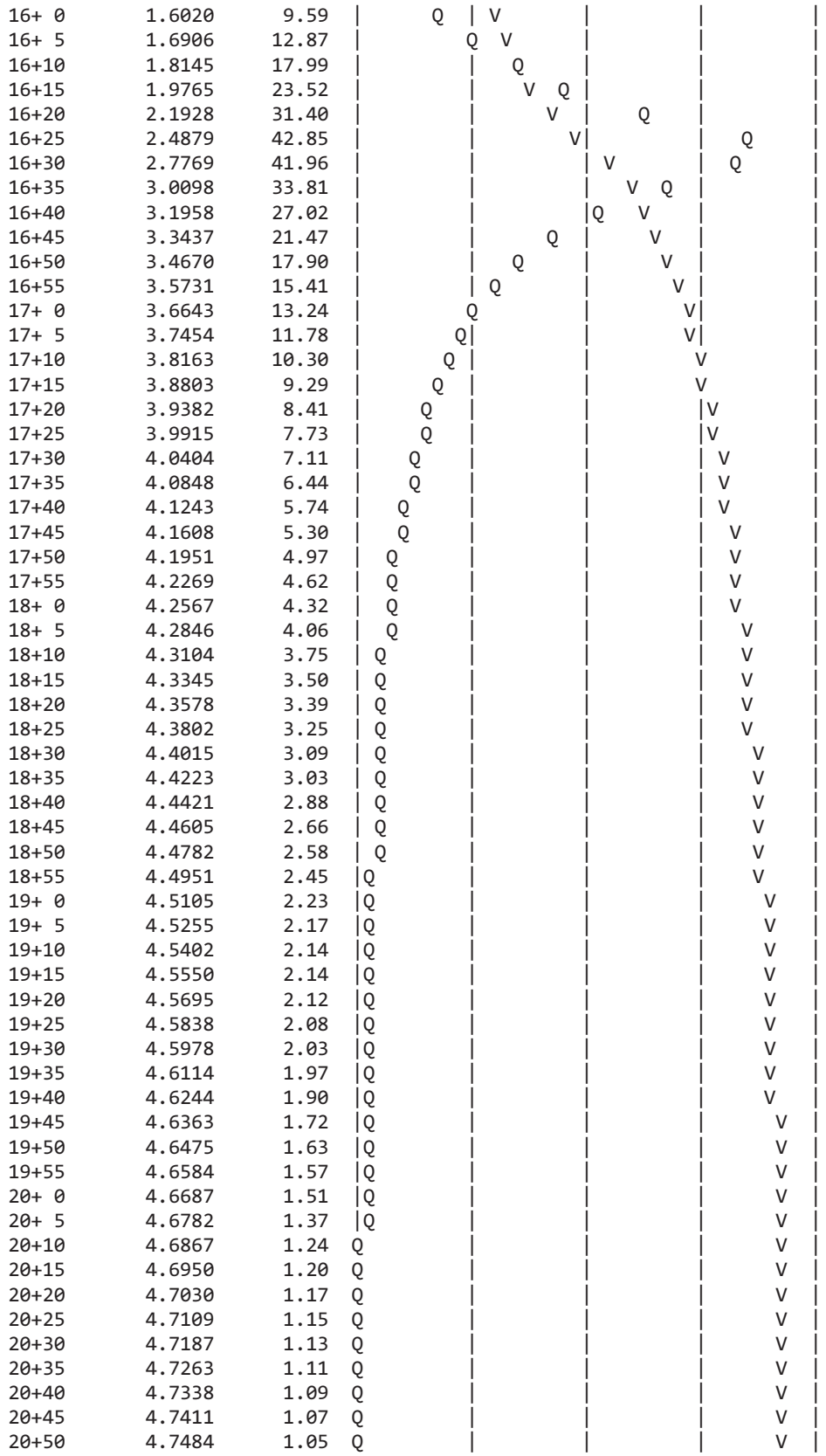
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 12.5 | 25.0 | 37.5 | 50.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0002 | 0.02 | Q | \| | \| | \| | \| |
| 0+15 | 0.0005 | 0.04 | Q | \| | \| | \| | \| |
| 0+20 | 0.0011 | 0.09 | Q | \| | \| | \| | \| |
| 0+25 | 0.0023 | 0.18 | Q | \| | \| | \| | \| |
| 0+30 | 0.0041 | 0.26 | Q | \| | \| | \| | \| |
| 0+35 | 0.0063 | 0.33 | Q | \| | \| | \| | \| |
| 0+40 | 0.0089 | 0.37 | Q | \| | \| | \| | \| |
| 0+45 | 0.0117 | 0.41 | Q | \| | \| | \| | \| |
| 0+50 | 0.0147 | 0.43 | Q | \| | \| | \| | \| |
| 0+55 | 0.0179 | 0.46 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0212 | 0.48 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0246 | 0.50 | Q | \| | \| | \| | \| |
| 1+10 | 0.0281 | 0.51 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+15 | 0.0317 | 0.53 | Q | | | | |
| 1+20 | 0.0355 | 0.54 | Q | | | | |
| 1+25 | 0.0393 | 0.55 | Q | | | | |
| 1+30 | 0.0431 | 0.56 | Q | | | | |
| 1+35 | 0.0471 | 0.57 | Q | | | | |
| 1+40 | 0.0511 | 0.58 | Q | | | | |
| 1+45 | 0.0552 | 0.59 | Q | | | | |
| 1+50 | 0.0593 | 0.60 | Q | | | | |
| 1+55 | 0.0635 | 0.61 | Q | | | | |
| 2+ 0 | 0.0677 | 0.61 | Q | | | | |
| 2+ 5 | 0.0720 | 0.62 | Q | | | | |
| 2+10 | 0.0763 | 0.63 | Q | | | | |
| 2+15 | 0.0806 | 0.63 | Q | | | | |
| 2+20 | 0.0850 | 0.64 | Q | | | | |
| 2+25 | 0.0895 | 0.64 | Q | | | | |
| 2+30 | 0.0940 | 0.65 | Q | | | | |
| 2+35 | 0.0985 | 0.66 | Q | | | | |
| 2+40 | 0.1030 | 0.66 | Q | | | | |
| 2+45 | 0.1076 | 0.67 | Q | | | | |
| 2+50 | 0.1122 | 0.67 | Q | | | | |
| 2+55 | 0.1169 | 0.68 | Q | | | | |
| 3+ 0 | 0.1215 | 0.68 | Q | | | | |
| 3+ 5 | 0.1263 | 0.68 | QV | | | | |
| 3+10 | 0.1310 | 0.69 | QV | | | | |
| 3+15 | 0.1357 | 0.69 | QV | | | | |
| 3+20 | 0.1405 | 0.70 | QV | | | | |
| 3+25 | 0.1454 | 0.70 | QV | | | | |
| 3+30 | 0.1502 | 0.70 | QV | | | | |
| 3+35 | 0.1551 | 0.71 | QV | | | | |
| 3+40 | 0.1600 | 0.71 | QV | | | | |
| 3+45 | 0.1650 | 0.72 | QV | | | | |
| 3+50 | 0.1699 | 0.72 | QV | | | | |
| 3+55 | 0.1749 | 0.73 | QV | | | | |
| 4+ 0 | 0.1800 | 0.73 | QV | | | | |
| 4+ 5 | 0.1850 | 0.73 | QV | | | | |
| 4+10 | 0.1901 | 0.74 | QV | | | | |
| 4+15 | 0.1952 | 0.74 | QV | | | | |
| 4+20 | 0.2004 | 0.75 | QV | | | | |
| 4+25 | 0.2055 | 0.75 | QV | | | | |
| 4+30 | 0.2107 | 0.75 | QV | | | | |
| 4+35 | 0.2159 | 0.76 | QV | | | | |
| 4+40 | 0.2212 | 0.76 | QV | | | | |
| 4+45 | 0.2264 | 0.76 | QV | | | | |
| 4+50 | 0.2317 | 0.77 | QV | | | | |
| 4+55 | 0.2370 | 0.77 | QV | | | | |
| 5+ 0 | 0.2424 | 0.78 | QV | | | | |
| 5+ 5 | 0.2478 | 0.78 | QV | | | | |
| 5+10 | 0.2532 | 0.78 | Q V | | | | |
| 5+15 | 0.2586 | 0.79 | Q V | | | | |
| 5+20 | 0.2641 | 0.79 | Q V | | | | |
| 5+25 | 0.2696 | 0.80 | Q V | | | | |
| 5+30 | 0.2751 | 0.80 | Q V | | | | |
| 5+35 | 0.2806 | 0.81 | Q V | | | | |
| 5+40 | 0.2862 | 0.81 | Q V | | | | |
| 5+45 | 0.2918 | 0.82 | Q V | | | | |
| 5+50 | 0.2975 | 0.82 | Q V | | | | |
| 5+55 | 0.3032 | 0.83 | Q V | | | | |
| 6+ 0 | 0.3089 | 0.83 | Q V | | | | |
| 6+ 5 | 0.3146 | 0.83 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+10 | 0.3204 | 0.84 | Q V | \| | \| | \| | \| |
| 6+15 | 0.3262 | 0.84 | Q V | \| | \| | \| | \| |
| 6+20 | 0.3321 | 0.85 | Q V | \| | \| | \| | \| |
| 6+25 | 0.3380 | 0.85 | Q V | \| | \| | \| | \| |
| 6+30 | 0.3439 | 0.86 | Q V | \| | \| | \| | \| |
| 6+35 | 0.3499 | 0.87 | Q V | \| | \| | \| | \| |
| 6+40 | 0.3558 | 0.87 | Q V | \| | \| | \| | \| |
| 6+45 | 0.3619 | 0.88 | Q V | \| | \| | \| | \| |
| 6+50 | 0.3679 | 0.88 | Q V | \| | \| | \| | \| |
| 6+55 | 0.3741 | 0.89 | Q V | \| | \| | \| | \| |
| 7+ 0 | 0.3802 | 0.89 | Q V | \| | \| | \| | \| |
| 7+ 5 | 0.3864 | 0.90 | Q V | \| | \| | \| | \| |
| 7+10 | 0.3926 | 0.90 | Q V | \| | \| | \| | \| |
| 7+15 | 0.3989 | 0.91 | Q V | \| | \| | \| | \| |
| 7+20 | 0.4052 | 0.92 | Q V | \| | \| | \| | \| |
| 7+25 | 0.4115 | 0.92 | Q V | \| | \| | \| | \| |
| 7+30 | 0.4179 | 0.93 | Q V | \| | \| | \| | \| |
| 7+35 | 0.4244 | 0.93 | Q V | \| | \| | \| | \| |
| 7+40 | 0.4308 | 0.94 | Q V | \| | \| | \| | \| |
| 7+45 | 0.4374 | 0.95 | Q V | \| | \| | \| | \| |
| 7+50 | 0.4439 | 0.95 | Q V | \| | \| | \| | \| |
| 7+55 | 0.4506 | 0.96 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.4572 | 0.97 | Q V | \| | \| | \| | \| |
| 8+ 5 | 0.4639 | 0.97 | Q V | \| | \| | \| | \| |
| 8+10 | 0.4707 | 0.98 | Q V | \| | \| | \| | \| |
| 8+15 | 0.4775 | 0.99 | Q V | \| | \| | \| | \| |
| 8+20 | 0.4844 | 1.00 | Q V | \| | \| | \| | \| |
| 8+25 | 0.4913 | 1.00 | Q V | \| | \| | \| | \| |
| 8+30 | 0.4982 | 1.01 | Q V | \| | \| | \| | \| |
| 8+35 | 0.5052 | 1.02 | Q V | \| | \| | \| | \| |
| 8+40 | 0.5123 | 1.03 | Q V | \| | \| | \| | \| |
| 8+45 | 0.5194 | 1.03 | Q V | \| | \| | \| | \| |
| 8+50 | 0.5266 | 1.04 | Q V | \| | \| | \| | \| |
| 8+55 | 0.5338 | 1.05 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.5411 | 1.06 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.5485 | 1.07 | Q V | \| | \| | \| | \| |
| 9+10 | 0.5559 | 1.08 | Q V | \| | \| | \| | \| |
| 9+15 | 0.5634 | 1.09 | Q V | \| | \| | \| | \| |
| 9+20 | 0.5709 | 1.09 | Q V | \| | \| | \| | \| |
| 9+25 | 0.5785 | 1.10 | Q V | \| | \| | \| | \| |
| 9+30 | 0.5862 | 1.11 | Q V | \| | \| | \| | \| |
| 9+35 | 0.5939 | 1.12 | Q V | \| | \| | \| | \| |
| 9+40 | 0.6017 | 1.13 | Q V | \| | \| | \| | \| |
| 9+45 | 0.6096 | 1.14 | Q V | \| | \| | \| | \| |
| 9+50 | 0.6175 | 1.15 | Q V | \| | \| | \| | \| |
| 9+55 | 0.6255 | 1.16 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.6336 | 1.17 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.6418 | 1.19 | Q V | \| | \| | \| | \| |
| 10+10 | 0.6500 | 1.20 | Q V | \| | \| | \| | \| |
| 10+15 | 0.6583 | 1.21 | Q V | \| | \| | \| | \| |
| 10+20 | 0.6667 | 1.22 | Q V | \| | \| | \| | \| |
| 10+25 | 0.6752 | 1.23 | Q V | \| | \| | \| | \| |
| 10+30 | 0.6838 | 1.24 | Q V | \| | \| | \| | \| |
| 10+35 | 0.6924 | 1.26 | \|Q V | \| | \| | \| | \| |
| 10+40 | 0.7012 | 1.27 | \|Q V | \| | \| | \| | \| |
| 10+45 | 0.7100 | 1.28 | \|Q V | \| | \| | \| | \| |
| 10+50 | 0.7189 | 1.30 | \|Q V | \| | \| | \| | \| |
| 10+55 | 0.7279 | 1.31 | \|Q V | \| | \| | \| | \| |
| 11+ 0 | 0.7371 | 1.32 | \|Q V | \| | \| | \| | \| |

```
11+ 5       0.7463      1.34  |Q   V    |          |          |          |
11+10       0.7556      1.35  |Q    V   |          |          |          |
11+15       0.7650      1.37  |Q    V   |          |          |          |
11+20       0.7745      1.38  |Q    V   |          |          |          |
11+25       0.7842      1.40  |Q    V   |          |          |          |
11+30       0.7939      1.42  |Q    V   |          |          |          |
11+35       0.8038      1.43  |Q    V   |          |          |          |
11+40       0.8138      1.45  |Q    V   |          |          |          |
11+45       0.8239      1.47  |Q    V   |          |          |          |
11+50       0.8342      1.49  |Q    V   |          |          |          |
11+55       0.8446      1.51  |Q    V   |          |          |          |
12+ 0       0.8551      1.53  |Q    V   |          |          |          |
12+ 5       0.8657      1.54  |Q    V   |          |          |          |
12+10       0.8764      1.55  |Q    V   |          |          |          |
12+15       0.8870      1.54  |Q     V  |          |          |          |
12+20       0.8974      1.51  |Q     V  |          |          |          |
12+25       0.9073      1.44  |Q     V  |          |          |          |
12+30       0.9167      1.37  |Q     V  |          |          |          |
12+35       0.9258      1.32  |Q     V  |          |          |          |
12+40       0.9347      1.29  |Q     V  |          |          |          |
12+45       0.9435      1.27  |Q     V  |          |          |          |
12+50       0.9522      1.27  |Q     V  |          |          |          |
12+55       0.9609      1.26  |Q     V  |          |          |          |
13+ 0       0.9696      1.27  |Q     V  |          |          |          |
13+ 5       0.9784      1.27  |Q     V  |          |          |          |
13+10       0.9872      1.28  |Q     V  |          |          |          |
13+15       0.9961      1.29  |Q     V  |          |          |          |
13+20       1.0051      1.31  |Q      V |          |          |          |
13+25       1.0142      1.32  |Q      V |          |          |          |
13+30       1.0234      1.34  |Q      V |          |          |          |
13+35       1.0328      1.36  |Q      V |          |          |          |
13+40       1.0424      1.39  |Q      V |          |          |          |
13+45       1.0521      1.41  |Q      V |          |          |          |
13+50       1.0620      1.44  |Q      V |          |          |          |
13+55       1.0721      1.47  |Q      V |          |          |          |
14+ 0       1.0825      1.50  |Q      V |          |          |          |
14+ 5       1.0931      1.54  |Q      V |          |          |          |
14+10       1.1039      1.58  |Q      V |          |          |          |
14+15       1.1151      1.62  |Q      V |          |          |          |
14+20       1.1266      1.67  |Q      V |          |          |          |
14+25       1.1384      1.72  |Q       V|          |          |          |
14+30       1.1506      1.77  |Q       V|          |          |          |
14+35       1.1632      1.83  |Q       V|          |          |          |
14+40       1.1762      1.89  |Q       V|          |          |          |
14+45       1.1898      1.96  |Q       V|          |          |          |
14+50       1.2038      2.04  |Q       V|          |          |          |
14+55       1.2184      2.12  |Q       V|          |          |          |
15+ 0       1.2336      2.21  |Q       V|          |          |          |
15+ 5       1.2496      2.32  |Q       V|          |          |          |
15+10       1.2663      2.43  |Q        V          |          |          |
15+15       1.2839      2.56  | Q       V          |          |          |
15+20       1.3025      2.70  | Q       V          |          |          |
15+25       1.3225      2.90  | Q       V          |          |          |
15+30       1.3447      3.21  | Q       V          |          |          |
15+35       1.3698      3.64  | Q       V          |          |          |
15+40       1.3993      4.29  |  Q      |V          |          |          |
15+45       1.4361      5.35  |   Q     |V          |          |          |
15+50       1.4815      6.58  |    Q    |V          |          |          |
15+55       1.5360      7.92  |     Q   | V         |          |          |
```



| | | | |
|---|---|---|---|
| 16+ 0 | 1.6020 | 9.59 | |
| 16+ 5 | 1.6906 | 12.87 | |
| 16+10 | 1.8145 | 17.99 | |
| 16+15 | 1.9765 | 23.52 | |
| 16+20 | 2.1928 | 31.40 | |
| 16+25 | 2.4879 | 42.85 | |
| 16+30 | 2.7769 | 41.96 | |
| 16+35 | 3.0098 | 33.81 | |
| 16+40 | 3.1958 | 27.02 | |
| 16+45 | 3.3437 | 21.47 | |
| 16+50 | 3.4670 | 17.90 | |
| 16+55 | 3.5731 | 15.41 | |
| 17+ 0 | 3.6643 | 13.24 | |
| 17+ 5 | 3.7454 | 11.78 | |
| 17+10 | 3.8163 | 10.30 | |
| 17+15 | 3.8803 | 9.29 | |
| 17+20 | 3.9382 | 8.41 | |
| 17+25 | 3.9915 | 7.73 | |
| 17+30 | 4.0404 | 7.11 | |
| 17+35 | 4.0848 | 6.44 | |
| 17+40 | 4.1243 | 5.74 | |
| 17+45 | 4.1608 | 5.30 | |
| 17+50 | 4.1951 | 4.97 | |
| 17+55 | 4.2269 | 4.62 | |
| 18+ 0 | 4.2567 | 4.32 | |
| 18+ 5 | 4.2846 | 4.06 | |
| 18+10 | 4.3104 | 3.75 | |
| 18+15 | 4.3345 | 3.50 | |
| 18+20 | 4.3578 | 3.39 | |
| 18+25 | 4.3802 | 3.25 | |
| 18+30 | 4.4015 | 3.09 | |
| 18+35 | 4.4223 | 3.03 | |
| 18+40 | 4.4421 | 2.88 | |
| 18+45 | 4.4605 | 2.66 | |
| 18+50 | 4.4782 | 2.58 | |
| 18+55 | 4.4951 | 2.45 | |
| 19+ 0 | 4.5105 | 2.23 | |
| 19+ 5 | 4.5255 | 2.17 | |
| 19+10 | 4.5402 | 2.14 | |
| 19+15 | 4.5550 | 2.14 | |
| 19+20 | 4.5695 | 2.12 | |
| 19+25 | 4.5838 | 2.08 | |
| 19+30 | 4.5978 | 2.03 | |
| 19+35 | 4.6114 | 1.97 | |
| 19+40 | 4.6244 | 1.90 | |
| 19+45 | 4.6363 | 1.72 | |
| 19+50 | 4.6475 | 1.63 | |
| 19+55 | 4.6584 | 1.57 | |
| 20+ 0 | 4.6687 | 1.51 | |
| 20+ 5 | 4.6782 | 1.37 | |
| 20+10 | 4.6867 | 1.24 | |
| 20+15 | 4.6950 | 1.20 | |
| 20+20 | 4.7030 | 1.17 | |
| 20+25 | 4.7109 | 1.15 | |
| 20+30 | 4.7187 | 1.13 | |
| 20+35 | 4.7263 | 1.11 | |
| 20+40 | 4.7338 | 1.09 | |
| 20+45 | 4.7411 | 1.07 | |
| 20+50 | 4.7484 | 1.05 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20+55 | 4.7555 | 1.04 | Q | \| | \| | \| | V \| |
| 21+ 0 | 4.7626 | 1.02 | Q | \| | \| | \| | V \| |
| 21+ 5 | 4.7695 | 1.01 | Q | \| | \| | \| | V \| |
| 21+10 | 4.7763 | 0.99 | Q | \| | \| | \| | V \| |
| 21+15 | 4.7831 | 0.98 | Q | \| | \| | \| | V \| |
| 21+20 | 4.7897 | 0.96 | Q | \| | \| | \| | V \| |
| 21+25 | 4.7962 | 0.95 | Q | \| | \| | \| | V \| |
| 21+30 | 4.8027 | 0.94 | Q | \| | \| | \| | V \| |
| 21+35 | 4.8091 | 0.93 | Q | \| | \| | \| | V \| |
| 21+40 | 4.8154 | 0.92 | Q | \| | \| | \| | V \| |
| 21+45 | 4.8216 | 0.90 | Q | \| | \| | \| | V \| |
| 21+50 | 4.8278 | 0.89 | Q | \| | \| | \| | V \| |
| 21+55 | 4.8339 | 0.88 | Q | \| | \| | \| | V \| |
| 22+ 0 | 4.8399 | 0.87 | Q | \| | \| | \| | V \| |
| 22+ 5 | 4.8458 | 0.86 | Q | \| | \| | \| | V \| |
| 22+10 | 4.8517 | 0.85 | Q | \| | \| | \| | V \| |
| 22+15 | 4.8574 | 0.84 | Q | \| | \| | \| | V \| |
| 22+20 | 4.8632 | 0.83 | Q | \| | \| | \| | V \| |
| 22+25 | 4.8688 | 0.82 | Q | \| | \| | \| | V \| |
| 22+30 | 4.8744 | 0.81 | Q | \| | \| | \| | V \| |
| 22+35 | 4.8799 | 0.80 | Q | \| | \| | \| | V \| |
| 22+40 | 4.8854 | 0.79 | Q | \| | \| | \| | V\| |
| 22+45 | 4.8908 | 0.78 | Q | \| | \| | \| | V\| |
| 22+50 | 4.8961 | 0.78 | Q | \| | \| | \| | V\| |
| 22+55 | 4.9014 | 0.77 | Q | \| | \| | \| | V\| |
| 23+ 0 | 4.9067 | 0.76 | Q | \| | \| | \| | V\| |
| 23+ 5 | 4.9118 | 0.75 | Q | \| | \| | \| | V\| |
| 23+10 | 4.9170 | 0.74 | Q | \| | \| | \| | V\| |
| 23+15 | 4.9220 | 0.74 | Q | \| | \| | \| | V\| |
| 23+20 | 4.9271 | 0.73 | Q | \| | \| | \| | V\| |
| 23+25 | 4.9320 | 0.72 | Q | \| | \| | \| | V\| |
| 23+30 | 4.9370 | 0.72 | Q | \| | \| | \| | V\| |
| 23+35 | 4.9419 | 0.71 | Q | \| | \| | \| | V\| |
| 23+40 | 4.9467 | 0.70 | Q | \| | \| | \| | V\| |
| 23+45 | 4.9515 | 0.70 | Q | \| | \| | \| | V\| |
| 23+50 | 4.9562 | 0.69 | Q | \| | \| | \| | V\| |
| 23+55 | 4.9609 | 0.68 | Q | \| | \| | \| | V\| |
| 24+ 0 | 4.9656 | 0.68 | Q | \| | \| | \| | V\| |
| 24+ 5 | 4.9702 | 0.67 | Q | \| | \| | \| | V\| |
| 24+10 | 4.9746 | 0.65 | Q | \| | \| | \| | V\| |
| 24+15 | 4.9789 | 0.62 | Q | \| | \| | \| | V\| |
| 24+20 | 4.9828 | 0.57 | Q | \| | \| | \| | V\| |
| 24+25 | 4.9860 | 0.48 | Q | \| | \| | \| | V\| |
| 24+30 | 4.9887 | 0.39 | Q | \| | \| | \| | V\| |
| 24+35 | 4.9909 | 0.32 | Q | \| | \| | \| | V\| |
| 24+40 | 4.9928 | 0.27 | Q | \| | \| | \| | V\| |
| 24+45 | 4.9944 | 0.24 | Q | \| | \| | \| | V\| |
| 24+50 | 4.9958 | 0.21 | Q | \| | \| | \| | V\| |
| 24+55 | 4.9971 | 0.18 | Q | \| | \| | \| | V\| |
| 25+ 0 | 4.9982 | 0.16 | Q | \| | \| | \| | V\| |
| 25+ 5 | 4.9992 | 0.15 | Q | \| | \| | \| | V\| |
| 25+10 | 5.0001 | 0.13 | Q | \| | \| | \| | V\| |
| 25+15 | 5.0010 | 0.12 | Q | \| | \| | \| | V\| |
| 25+20 | 5.0017 | 0.11 | Q | \| | \| | \| | V\| |
| 25+25 | 5.0024 | 0.10 | Q | \| | \| | \| | V\| |
| 25+30 | 5.0029 | 0.09 | Q | \| | \| | \| | V\| |
| 25+35 | 5.0035 | 0.08 | Q | \| | \| | \| | V\| |
| 25+40 | 5.0040 | 0.07 | Q | \| | \| | \| | V\| |
| 25+45 | 5.0044 | 0.06 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+50 | 5.0048 | 0.06 | Q | \| | \| | \| | V\| |
| 25+55 | 5.0052 | 0.05 | Q | \| | \| | \| | V\| |
| 26+ 0 | 5.0055 | 0.05 | Q | \| | \| | \| | V\| |
| 26+ 5 | 5.0058 | 0.04 | Q | \| | \| | \| | V\| |
| 26+10 | 5.0060 | 0.04 | Q | \| | \| | \| | V\| |
| 26+15 | 5.0063 | 0.03 | Q | \| | \| | \| | V\| |
| 26+20 | 5.0065 | 0.03 | Q | \| | \| | \| | V\| |
| 26+25 | 5.0067 | 0.03 | Q | \| | \| | \| | V\| |
| 26+30 | 5.0069 | 0.02 | Q | \| | \| | \| | V\| |
| 26+35 | 5.0070 | 0.02 | Q | \| | \| | \| | V\| |
| 26+40 | 5.0071 | 0.02 | Q | \| | \| | \| | V\| |
| 26+45 | 5.0073 | 0.02 | Q | \| | \| | \| | V\| |
| 26+50 | 5.0074 | 0.02 | Q | \| | \| | \| | V\| |
| 26+55 | 5.0075 | 0.01 | Q | \| | \| | \| | V\| |
| 27+ 0 | 5.0075 | 0.01 | Q | \| | \| | \| | V\| |
| 27+ 5 | 5.0076 | 0.01 | Q | \| | \| | \| | V\| |
| 27+10 | 5.0077 | 0.01 | Q | \| | \| | \| | V\| |
| 27+15 | 5.0078 | 0.01 | Q | \| | \| | \| | V\| |
| 27+20 | 5.0078 | 0.01 | Q | \| | \| | \| | V\| |
| 27+25 | 5.0079 | 0.01 | Q | \| | \| | \| | V\| |
| 27+30 | 5.0079 | 0.01 | Q | \| | \| | \| | V\| |
| 27+35 | 5.0079 | 0.00 | Q | \| | \| | \| | V\| |
| 27+40 | 5.0079 | 0.00 | Q | \| | \| | \| | V\| |
| 27+45 | 5.0080 | 0.00 | Q | \| | \| | \| | V\| |
| 27+50 | 5.0080 | 0.00 | Q | \| | \| | \| | V\| |
| 27+55 | 5.0080 | 0.00 | Q | \| | \| | \| | V\| |
| 28+ 0 | 5.0080 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 33
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 30.86 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 30.86 | 6 | 1.83 |
| Rainfall data for year 100 | | |
| 30.86 | 24 | 2.60 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 91.0 | 98.2 | 30.86 | 1.000 | 0.036 | 0.900 | 0.032 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.032

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 27.77 | 0.900 | 91.0 | 98.2 | 0.18 | 0.920 |
| 3.09 | 0.100 | 98.0 | 98.0 | 0.20 | 0.912 |

Area-averaged catchment yield fraction, Y = 0.919
Area-averaged low loss fraction, Yb = 0.081
User entry of time of concentration = 0.730 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 30.86(Ac.)
Catchment Lag time = 0.584 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 14.2694
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.032(In/Hr)
Average low loss rate fraction (Yb) = 0.081 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.645(In)
Specified peak 6-hour rainfall = 1.830(In)
Specified peak 24-hour rainfall = 2.600(In)

Rainfall depth area reduction factors:
Using a total area of 30.86(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.659(In)
30-minute factor = 0.999 Adjusted rainfall = 1.127(In)
1-hour factor = 0.999 Adjusted rainfall = 1.388(In)
3-hour factor = 1.000 Adjusted rainfall = 1.645(In)
6-hour factor = 1.000 Adjusted rainfall = 1.830(In)
24-hour factor = 1.000 Adjusted rainfall = 2.600(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 373.21 (CFS)) | |
| 1 | 0.637 | 2.376 |
| 2 | 2.631 | 7.443 |
| 3 | 5.934 | 12.327 |
| 4 | 11.014 | 18.961 |
| 5 | 20.649 | 35.958 |
| 6 | 34.202 | 50.581 |
| 7 | 45.334 | 41.546 |
| 8 | 53.638 | 30.990 |
| 9 | 59.846 | 23.170 |
| 10 | 64.549 | 17.554 |
| 11 | 68.414 | 14.424 |
| 12 | 71.777 | 12.550 |
| 13 | 74.581 | 10.465 |

| | | |
|---|---|---|
| 14 | 77.062 | 9.260 |
| 15 | 79.212 | 8.023 |
| 16 | 81.086 | 6.996 |
| 17 | 82.728 | 6.129 |
| 18 | 84.249 | 5.678 |
| 19 | 85.642 | 5.199 |
| 20 | 86.952 | 4.887 |
| 21 | 88.102 | 4.292 |
| 22 | 89.107 | 3.753 |
| 23 | 89.962 | 3.190 |
| 24 | 90.779 | 3.046 |
| 25 | 91.565 | 2.935 |
| 26 | 92.266 | 2.616 |
| 27 | 92.936 | 2.501 |
| 28 | 93.566 | 2.352 |
| 29 | 94.127 | 2.094 |
| 30 | 94.612 | 1.811 |
| 31 | 95.097 | 1.811 |
| 32 | 95.570 | 1.765 |
| 33 | 95.958 | 1.446 |
| 34 | 96.329 | 1.385 |
| 35 | 96.700 | 1.385 |
| 36 | 97.018 | 1.188 |
| 37 | 97.275 | 0.959 |
| 38 | 97.532 | 0.959 |
| 39 | 97.777 | 0.914 |
| 40 | 97.936 | 0.596 |
| 41 | 98.079 | 0.533 |
| 42 | 98.222 | 0.533 |
| 43 | 98.377 | 0.581 |
| 44 | 98.549 | 0.639 |
| 45 | 98.720 | 0.639 |
| 46 | 98.891 | 0.639 |
| 47 | 99.062 | 0.639 |
| 48 | 99.234 | 0.639 |
| 49 | 99.405 | 0.639 |
| 50 | 99.539 | 0.503 |
| 51 | 99.629 | 0.333 |
| 52 | 99.718 | 0.333 |
| 53 | 99.807 | 0.333 |
| 54 | 99.896 | 0.333 |
| 55 | 100.000 | 0.166 |

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| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6586 | 0.6586 |
| 2 | 0.8109 | 0.1522 |
| 3 | 0.9157 | 0.1049 |
| 4 | 0.9983 | 0.0825 |
| 5 | 1.0674 | 0.0691 |
| 6 | 1.1274 | 0.0600 |
| 7 | 1.1808 | 0.0534 |
| 8 | 1.2290 | 0.0483 |
| 9 | 1.2732 | 0.0442 |
| 10 | 1.3141 | 0.0409 |
| 11 | 1.3522 | 0.0381 |
| 12 | 1.3880 | 0.0358 |
| 13 | 1.4053 | 0.0173 |
| 14 | 1.4215 | 0.0162 |

| | | |
|---|---|---|
| 15 | 1.4367 | 0.0152 |
| 16 | 1.4511 | 0.0144 |
| 17 | 1.4648 | 0.0137 |
| 18 | 1.4778 | 0.0130 |
| 19 | 1.4902 | 0.0124 |
| 20 | 1.5021 | 0.0119 |
| 21 | 1.5135 | 0.0114 |
| 22 | 1.5244 | 0.0109 |
| 23 | 1.5349 | 0.0105 |
| 24 | 1.5450 | 0.0101 |
| 25 | 1.5548 | 0.0098 |
| 26 | 1.5643 | 0.0095 |
| 27 | 1.5734 | 0.0092 |
| 28 | 1.5823 | 0.0089 |
| 29 | 1.5909 | 0.0086 |
| 30 | 1.5993 | 0.0084 |
| 31 | 1.6074 | 0.0081 |
| 32 | 1.6153 | 0.0079 |
| 33 | 1.6230 | 0.0077 |
| 34 | 1.6305 | 0.0075 |
| 35 | 1.6379 | 0.0073 |
| 36 | 1.6450 | 0.0072 |
| 37 | 1.6519 | 0.0069 |
| 38 | 1.6587 | 0.0068 |
| 39 | 1.6654 | 0.0066 |
| 40 | 1.6718 | 0.0065 |
| 41 | 1.6782 | 0.0064 |
| 42 | 1.6844 | 0.0062 |
| 43 | 1.6905 | 0.0061 |
| 44 | 1.6965 | 0.0060 |
| 45 | 1.7024 | 0.0059 |
| 46 | 1.7081 | 0.0058 |
| 47 | 1.7138 | 0.0057 |
| 48 | 1.7193 | 0.0056 |
| 49 | 1.7248 | 0.0055 |
| 50 | 1.7301 | 0.0054 |
| 51 | 1.7354 | 0.0053 |
| 52 | 1.7406 | 0.0052 |
| 53 | 1.7457 | 0.0051 |
| 54 | 1.7507 | 0.0050 |
| 55 | 1.7557 | 0.0049 |
| 56 | 1.7605 | 0.0049 |
| 57 | 1.7653 | 0.0048 |
| 58 | 1.7700 | 0.0047 |
| 59 | 1.7747 | 0.0047 |
| 60 | 1.7793 | 0.0046 |
| 61 | 1.7838 | 0.0045 |
| 62 | 1.7883 | 0.0045 |
| 63 | 1.7927 | 0.0044 |
| 64 | 1.7970 | 0.0043 |
| 65 | 1.8013 | 0.0043 |
| 66 | 1.8055 | 0.0042 |
| 67 | 1.8097 | 0.0042 |
| 68 | 1.8138 | 0.0041 |
| 69 | 1.8179 | 0.0041 |
| 70 | 1.8219 | 0.0040 |
| 71 | 1.8259 | 0.0040 |
| 72 | 1.8298 | 0.0039 |
| 73 | 1.8362 | 0.0064 |

| | | |
|---|---|---|
| 74 | 1.8426 | 0.0063 |
| 75 | 1.8488 | 0.0063 |
| 76 | 1.8551 | 0.0062 |
| 77 | 1.8612 | 0.0062 |
| 78 | 1.8673 | 0.0061 |
| 79 | 1.8733 | 0.0060 |
| 80 | 1.8793 | 0.0060 |
| 81 | 1.8853 | 0.0059 |
| 82 | 1.8911 | 0.0059 |
| 83 | 1.8969 | 0.0058 |
| 84 | 1.9027 | 0.0058 |
| 85 | 1.9084 | 0.0057 |
| 86 | 1.9141 | 0.0057 |
| 87 | 1.9197 | 0.0056 |
| 88 | 1.9253 | 0.0056 |
| 89 | 1.9308 | 0.0055 |
| 90 | 1.9363 | 0.0055 |
| 91 | 1.9417 | 0.0054 |
| 92 | 1.9471 | 0.0054 |
| 93 | 1.9524 | 0.0053 |
| 94 | 1.9577 | 0.0053 |
| 95 | 1.9630 | 0.0053 |
| 96 | 1.9682 | 0.0052 |
| 97 | 1.9734 | 0.0052 |
| 98 | 1.9785 | 0.0051 |
| 99 | 1.9836 | 0.0051 |
| 100 | 1.9886 | 0.0051 |
| 101 | 1.9937 | 0.0050 |
| 102 | 1.9987 | 0.0050 |
| 103 | 2.0036 | 0.0049 |
| 104 | 2.0085 | 0.0049 |
| 105 | 2.0134 | 0.0049 |
| 106 | 2.0182 | 0.0048 |
| 107 | 2.0230 | 0.0048 |
| 108 | 2.0278 | 0.0048 |
| 109 | 2.0325 | 0.0047 |
| 110 | 2.0373 | 0.0047 |
| 111 | 2.0419 | 0.0047 |
| 112 | 2.0466 | 0.0046 |
| 113 | 2.0512 | 0.0046 |
| 114 | 2.0558 | 0.0046 |
| 115 | 2.0603 | 0.0046 |
| 116 | 2.0649 | 0.0045 |
| 117 | 2.0694 | 0.0045 |
| 118 | 2.0738 | 0.0045 |
| 119 | 2.0783 | 0.0044 |
| 120 | 2.0827 | 0.0044 |
| 121 | 2.0871 | 0.0044 |
| 122 | 2.0914 | 0.0044 |
| 123 | 2.0957 | 0.0043 |
| 124 | 2.1000 | 0.0043 |
| 125 | 2.1043 | 0.0043 |
| 126 | 2.1086 | 0.0043 |
| 127 | 2.1128 | 0.0042 |
| 128 | 2.1170 | 0.0042 |
| 129 | 2.1212 | 0.0042 |
| 130 | 2.1253 | 0.0042 |
| 131 | 2.1295 | 0.0041 |
| 132 | 2.1336 | 0.0041 |

| | | |
|---|---|---|
| 133 | 2.1377 | 0.0041 |
| 134 | 2.1417 | 0.0041 |
| 135 | 2.1458 | 0.0040 |
| 136 | 2.1498 | 0.0040 |
| 137 | 2.1538 | 0.0040 |
| 138 | 2.1577 | 0.0040 |
| 139 | 2.1617 | 0.0040 |
| 140 | 2.1656 | 0.0039 |
| 141 | 2.1695 | 0.0039 |
| 142 | 2.1734 | 0.0039 |
| 143 | 2.1773 | 0.0039 |
| 144 | 2.1811 | 0.0038 |
| 145 | 2.1850 | 0.0038 |
| 146 | 2.1888 | 0.0038 |
| 147 | 2.1926 | 0.0038 |
| 148 | 2.1963 | 0.0038 |
| 149 | 2.2001 | 0.0038 |
| 150 | 2.2038 | 0.0037 |
| 151 | 2.2075 | 0.0037 |
| 152 | 2.2112 | 0.0037 |
| 153 | 2.2149 | 0.0037 |
| 154 | 2.2186 | 0.0037 |
| 155 | 2.2222 | 0.0036 |
| 156 | 2.2258 | 0.0036 |
| 157 | 2.2294 | 0.0036 |
| 158 | 2.2330 | 0.0036 |
| 159 | 2.2366 | 0.0036 |
| 160 | 2.2401 | 0.0036 |
| 161 | 2.2437 | 0.0035 |
| 162 | 2.2472 | 0.0035 |
| 163 | 2.2507 | 0.0035 |
| 164 | 2.2542 | 0.0035 |
| 165 | 2.2577 | 0.0035 |
| 166 | 2.2611 | 0.0035 |
| 167 | 2.2646 | 0.0034 |
| 168 | 2.2680 | 0.0034 |
| 169 | 2.2714 | 0.0034 |
| 170 | 2.2748 | 0.0034 |
| 171 | 2.2782 | 0.0034 |
| 172 | 2.2816 | 0.0034 |
| 173 | 2.2849 | 0.0034 |
| 174 | 2.2883 | 0.0033 |
| 175 | 2.2916 | 0.0033 |
| 176 | 2.2949 | 0.0033 |
| 177 | 2.2982 | 0.0033 |
| 178 | 2.3015 | 0.0033 |
| 179 | 2.3048 | 0.0033 |
| 180 | 2.3080 | 0.0033 |
| 181 | 2.3113 | 0.0032 |
| 182 | 2.3145 | 0.0032 |
| 183 | 2.3177 | 0.0032 |
| 184 | 2.3209 | 0.0032 |
| 185 | 2.3241 | 0.0032 |
| 186 | 2.3273 | 0.0032 |
| 187 | 2.3304 | 0.0032 |
| 188 | 2.3336 | 0.0032 |
| 189 | 2.3367 | 0.0031 |
| 190 | 2.3398 | 0.0031 |
| 191 | 2.3430 | 0.0031 |

| | | |
|---|---|---|
| 192 | 2.3461 | 0.0031 |
| 193 | 2.3492 | 0.0031 |
| 194 | 2.3522 | 0.0031 |
| 195 | 2.3553 | 0.0031 |
| 196 | 2.3584 | 0.0031 |
| 197 | 2.3614 | 0.0030 |
| 198 | 2.3644 | 0.0030 |
| 199 | 2.3674 | 0.0030 |
| 200 | 2.3705 | 0.0030 |
| 201 | 2.3735 | 0.0030 |
| 202 | 2.3764 | 0.0030 |
| 203 | 2.3794 | 0.0030 |
| 204 | 2.3824 | 0.0030 |
| 205 | 2.3853 | 0.0030 |
| 206 | 2.3883 | 0.0029 |
| 207 | 2.3912 | 0.0029 |
| 208 | 2.3941 | 0.0029 |
| 209 | 2.3970 | 0.0029 |
| 210 | 2.3999 | 0.0029 |
| 211 | 2.4028 | 0.0029 |
| 212 | 2.4057 | 0.0029 |
| 213 | 2.4086 | 0.0029 |
| 214 | 2.4114 | 0.0029 |
| 215 | 2.4143 | 0.0029 |
| 216 | 2.4171 | 0.0028 |
| 217 | 2.4200 | 0.0028 |
| 218 | 2.4228 | 0.0028 |
| 219 | 2.4256 | 0.0028 |
| 220 | 2.4284 | 0.0028 |
| 221 | 2.4312 | 0.0028 |
| 222 | 2.4340 | 0.0028 |
| 223 | 2.4367 | 0.0028 |
| 224 | 2.4395 | 0.0028 |
| 225 | 2.4423 | 0.0028 |
| 226 | 2.4450 | 0.0027 |
| 227 | 2.4477 | 0.0027 |
| 228 | 2.4505 | 0.0027 |
| 229 | 2.4532 | 0.0027 |
| 230 | 2.4559 | 0.0027 |
| 231 | 2.4586 | 0.0027 |
| 232 | 2.4613 | 0.0027 |
| 233 | 2.4640 | 0.0027 |
| 234 | 2.4667 | 0.0027 |
| 235 | 2.4693 | 0.0027 |
| 236 | 2.4720 | 0.0027 |
| 237 | 2.4746 | 0.0026 |
| 238 | 2.4773 | 0.0026 |
| 239 | 2.4799 | 0.0026 |
| 240 | 2.4825 | 0.0026 |
| 241 | 2.4851 | 0.0026 |
| 242 | 2.4878 | 0.0026 |
| 243 | 2.4904 | 0.0026 |
| 244 | 2.4929 | 0.0026 |
| 245 | 2.4955 | 0.0026 |
| 246 | 2.4981 | 0.0026 |
| 247 | 2.5007 | 0.0026 |
| 248 | 2.5032 | 0.0026 |
| 249 | 2.5058 | 0.0026 |
| 250 | 2.5083 | 0.0025 |

| | | |
|---|---|---|
| 251 | 2.5109 | 0.0025 |
| 252 | 2.5134 | 0.0025 |
| 253 | 2.5159 | 0.0025 |
| 254 | 2.5184 | 0.0025 |
| 255 | 2.5210 | 0.0025 |
| 256 | 2.5235 | 0.0025 |
| 257 | 2.5260 | 0.0025 |
| 258 | 2.5284 | 0.0025 |
| 259 | 2.5309 | 0.0025 |
| 260 | 2.5334 | 0.0025 |
| 261 | 2.5359 | 0.0025 |
| 262 | 2.5383 | 0.0025 |
| 263 | 2.5408 | 0.0025 |
| 264 | 2.5432 | 0.0024 |
| 265 | 2.5456 | 0.0024 |
| 266 | 2.5481 | 0.0024 |
| 267 | 2.5505 | 0.0024 |
| 268 | 2.5529 | 0.0024 |
| 269 | 2.5553 | 0.0024 |
| 270 | 2.5577 | 0.0024 |
| 271 | 2.5601 | 0.0024 |
| 272 | 2.5625 | 0.0024 |
| 273 | 2.5649 | 0.0024 |
| 274 | 2.5673 | 0.0024 |
| 275 | 2.5696 | 0.0024 |
| 276 | 2.5720 | 0.0024 |
| 277 | 2.5744 | 0.0024 |
| 278 | 2.5767 | 0.0024 |
| 279 | 2.5791 | 0.0023 |
| 280 | 2.5814 | 0.0023 |
| 281 | 2.5837 | 0.0023 |
| 282 | 2.5861 | 0.0023 |
| 283 | 2.5884 | 0.0023 |
| 284 | 2.5907 | 0.0023 |
| 285 | 2.5930 | 0.0023 |
| 286 | 2.5953 | 0.0023 |
| 287 | 2.5976 | 0.0023 |
| 288 | 2.5999 | 0.0023 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0023 | 0.0002 | 0.0021 |
| 2 | 0.0023 | 0.0002 | 0.0021 |
| 3 | 0.0023 | 0.0002 | 0.0021 |
| 4 | 0.0023 | 0.0002 | 0.0021 |
| 5 | 0.0023 | 0.0002 | 0.0021 |
| 6 | 0.0023 | 0.0002 | 0.0021 |
| 7 | 0.0023 | 0.0002 | 0.0022 |
| 8 | 0.0024 | 0.0002 | 0.0022 |
| 9 | 0.0024 | 0.0002 | 0.0022 |
| 10 | 0.0024 | 0.0002 | 0.0022 |
| 11 | 0.0024 | 0.0002 | 0.0022 |
| 12 | 0.0024 | 0.0002 | 0.0022 |
| 13 | 0.0024 | 0.0002 | 0.0022 |
| 14 | 0.0024 | 0.0002 | 0.0022 |
| 15 | 0.0024 | 0.0002 | 0.0022 |
| 16 | 0.0024 | 0.0002 | 0.0022 |

| | | | |
|---|---|---|---|
| 17 | 0.0024 | 0.0002 | 0.0022 |
| 18 | 0.0025 | 0.0002 | 0.0023 |
| 19 | 0.0025 | 0.0002 | 0.0023 |
| 20 | 0.0025 | 0.0002 | 0.0023 |
| 21 | 0.0025 | 0.0002 | 0.0023 |
| 22 | 0.0025 | 0.0002 | 0.0023 |
| 23 | 0.0025 | 0.0002 | 0.0023 |
| 24 | 0.0025 | 0.0002 | 0.0023 |
| 25 | 0.0025 | 0.0002 | 0.0023 |
| 26 | 0.0025 | 0.0002 | 0.0023 |
| 27 | 0.0026 | 0.0002 | 0.0023 |
| 28 | 0.0026 | 0.0002 | 0.0024 |
| 29 | 0.0026 | 0.0002 | 0.0024 |
| 30 | 0.0026 | 0.0002 | 0.0024 |
| 31 | 0.0026 | 0.0002 | 0.0024 |
| 32 | 0.0026 | 0.0002 | 0.0024 |
| 33 | 0.0026 | 0.0002 | 0.0024 |
| 34 | 0.0026 | 0.0002 | 0.0024 |
| 35 | 0.0026 | 0.0002 | 0.0024 |
| 36 | 0.0027 | 0.0002 | 0.0024 |
| 37 | 0.0027 | 0.0002 | 0.0025 |
| 38 | 0.0027 | 0.0002 | 0.0025 |
| 39 | 0.0027 | 0.0002 | 0.0025 |
| 40 | 0.0027 | 0.0002 | 0.0025 |
| 41 | 0.0027 | 0.0002 | 0.0025 |
| 42 | 0.0027 | 0.0002 | 0.0025 |
| 43 | 0.0028 | 0.0002 | 0.0025 |
| 44 | 0.0028 | 0.0002 | 0.0025 |
| 45 | 0.0028 | 0.0002 | 0.0026 |
| 46 | 0.0028 | 0.0002 | 0.0026 |
| 47 | 0.0028 | 0.0002 | 0.0026 |
| 48 | 0.0028 | 0.0002 | 0.0026 |
| 49 | 0.0028 | 0.0002 | 0.0026 |
| 50 | 0.0029 | 0.0002 | 0.0026 |
| 51 | 0.0029 | 0.0002 | 0.0026 |
| 52 | 0.0029 | 0.0002 | 0.0026 |
| 53 | 0.0029 | 0.0002 | 0.0027 |
| 54 | 0.0029 | 0.0002 | 0.0027 |
| 55 | 0.0029 | 0.0002 | 0.0027 |
| 56 | 0.0029 | 0.0002 | 0.0027 |
| 57 | 0.0030 | 0.0002 | 0.0027 |
| 58 | 0.0030 | 0.0002 | 0.0027 |
| 59 | 0.0030 | 0.0002 | 0.0028 |
| 60 | 0.0030 | 0.0002 | 0.0028 |
| 61 | 0.0030 | 0.0002 | 0.0028 |
| 62 | 0.0030 | 0.0002 | 0.0028 |
| 63 | 0.0031 | 0.0002 | 0.0028 |
| 64 | 0.0031 | 0.0002 | 0.0028 |
| 65 | 0.0031 | 0.0003 | 0.0029 |
| 66 | 0.0031 | 0.0003 | 0.0029 |
| 67 | 0.0031 | 0.0003 | 0.0029 |
| 68 | 0.0032 | 0.0003 | 0.0029 |
| 69 | 0.0032 | 0.0003 | 0.0029 |
| 70 | 0.0032 | 0.0003 | 0.0029 |
| 71 | 0.0032 | 0.0003 | 0.0030 |
| 72 | 0.0032 | 0.0003 | 0.0030 |
| 73 | 0.0033 | 0.0003 | 0.0030 |
| 74 | 0.0033 | 0.0003 | 0.0030 |
| 75 | 0.0033 | 0.0003 | 0.0030 |

| | | | |
|---|---|---|---|
| 76 | 0.0033 | 0.0003 | 0.0030 |
| 77 | 0.0033 | 0.0003 | 0.0031 |
| 78 | 0.0034 | 0.0003 | 0.0031 |
| 79 | 0.0034 | 0.0003 | 0.0031 |
| 80 | 0.0034 | 0.0003 | 0.0031 |
| 81 | 0.0034 | 0.0003 | 0.0032 |
| 82 | 0.0034 | 0.0003 | 0.0032 |
| 83 | 0.0035 | 0.0003 | 0.0032 |
| 84 | 0.0035 | 0.0003 | 0.0032 |
| 85 | 0.0035 | 0.0003 | 0.0032 |
| 86 | 0.0035 | 0.0003 | 0.0033 |
| 87 | 0.0036 | 0.0003 | 0.0033 |
| 88 | 0.0036 | 0.0003 | 0.0033 |
| 89 | 0.0036 | 0.0003 | 0.0033 |
| 90 | 0.0036 | 0.0003 | 0.0033 |
| 91 | 0.0037 | 0.0003 | 0.0034 |
| 92 | 0.0037 | 0.0003 | 0.0034 |
| 93 | 0.0037 | 0.0003 | 0.0034 |
| 94 | 0.0038 | 0.0003 | 0.0034 |
| 95 | 0.0038 | 0.0003 | 0.0035 |
| 96 | 0.0038 | 0.0003 | 0.0035 |
| 97 | 0.0038 | 0.0003 | 0.0035 |
| 98 | 0.0039 | 0.0003 | 0.0036 |
| 99 | 0.0039 | 0.0003 | 0.0036 |
| 100 | 0.0039 | 0.0003 | 0.0036 |
| 101 | 0.0040 | 0.0003 | 0.0037 |
| 102 | 0.0040 | 0.0003 | 0.0037 |
| 103 | 0.0040 | 0.0003 | 0.0037 |
| 104 | 0.0041 | 0.0003 | 0.0037 |
| 105 | 0.0041 | 0.0003 | 0.0038 |
| 106 | 0.0041 | 0.0003 | 0.0038 |
| 107 | 0.0042 | 0.0003 | 0.0038 |
| 108 | 0.0042 | 0.0003 | 0.0039 |
| 109 | 0.0043 | 0.0003 | 0.0039 |
| 110 | 0.0043 | 0.0003 | 0.0039 |
| 111 | 0.0043 | 0.0003 | 0.0040 |
| 112 | 0.0044 | 0.0004 | 0.0040 |
| 113 | 0.0044 | 0.0004 | 0.0041 |
| 114 | 0.0044 | 0.0004 | 0.0041 |
| 115 | 0.0045 | 0.0004 | 0.0041 |
| 116 | 0.0045 | 0.0004 | 0.0042 |
| 117 | 0.0046 | 0.0004 | 0.0042 |
| 118 | 0.0046 | 0.0004 | 0.0042 |
| 119 | 0.0047 | 0.0004 | 0.0043 |
| 120 | 0.0047 | 0.0004 | 0.0043 |
| 121 | 0.0048 | 0.0004 | 0.0044 |
| 122 | 0.0048 | 0.0004 | 0.0044 |
| 123 | 0.0049 | 0.0004 | 0.0045 |
| 124 | 0.0049 | 0.0004 | 0.0045 |
| 125 | 0.0050 | 0.0004 | 0.0046 |
| 126 | 0.0050 | 0.0004 | 0.0046 |
| 127 | 0.0051 | 0.0004 | 0.0047 |
| 128 | 0.0051 | 0.0004 | 0.0047 |
| 129 | 0.0052 | 0.0004 | 0.0048 |
| 130 | 0.0053 | 0.0004 | 0.0048 |
| 131 | 0.0053 | 0.0004 | 0.0049 |
| 132 | 0.0054 | 0.0004 | 0.0049 |
| 133 | 0.0055 | 0.0004 | 0.0050 |
| 134 | 0.0055 | 0.0004 | 0.0051 |

| | | | |
|---|---|---|---|
| 135 | 0.0056 | 0.0005 | 0.0052 |
| 136 | 0.0057 | 0.0005 | 0.0052 |
| 137 | 0.0058 | 0.0005 | 0.0053 |
| 138 | 0.0058 | 0.0005 | 0.0053 |
| 139 | 0.0059 | 0.0005 | 0.0054 |
| 140 | 0.0060 | 0.0005 | 0.0055 |
| 141 | 0.0061 | 0.0005 | 0.0056 |
| 142 | 0.0062 | 0.0005 | 0.0057 |
| 143 | 0.0063 | 0.0005 | 0.0058 |
| 144 | 0.0063 | 0.0005 | 0.0058 |
| 145 | 0.0039 | 0.0003 | 0.0036 |
| 146 | 0.0040 | 0.0003 | 0.0037 |
| 147 | 0.0041 | 0.0003 | 0.0037 |
| 148 | 0.0041 | 0.0003 | 0.0038 |
| 149 | 0.0042 | 0.0003 | 0.0039 |
| 150 | 0.0043 | 0.0003 | 0.0039 |
| 151 | 0.0044 | 0.0004 | 0.0040 |
| 152 | 0.0045 | 0.0004 | 0.0041 |
| 153 | 0.0046 | 0.0004 | 0.0042 |
| 154 | 0.0047 | 0.0004 | 0.0043 |
| 155 | 0.0048 | 0.0004 | 0.0044 |
| 156 | 0.0049 | 0.0004 | 0.0045 |
| 157 | 0.0050 | 0.0004 | 0.0046 |
| 158 | 0.0051 | 0.0004 | 0.0047 |
| 159 | 0.0053 | 0.0004 | 0.0048 |
| 160 | 0.0054 | 0.0004 | 0.0049 |
| 161 | 0.0056 | 0.0004 | 0.0051 |
| 162 | 0.0057 | 0.0005 | 0.0052 |
| 163 | 0.0059 | 0.0005 | 0.0054 |
| 164 | 0.0060 | 0.0005 | 0.0055 |
| 165 | 0.0062 | 0.0005 | 0.0057 |
| 166 | 0.0064 | 0.0005 | 0.0058 |
| 167 | 0.0066 | 0.0005 | 0.0061 |
| 168 | 0.0068 | 0.0005 | 0.0062 |
| 169 | 0.0072 | 0.0006 | 0.0066 |
| 170 | 0.0073 | 0.0006 | 0.0067 |
| 171 | 0.0077 | 0.0006 | 0.0071 |
| 172 | 0.0079 | 0.0006 | 0.0073 |
| 173 | 0.0084 | 0.0007 | 0.0077 |
| 174 | 0.0086 | 0.0007 | 0.0079 |
| 175 | 0.0092 | 0.0007 | 0.0084 |
| 176 | 0.0095 | 0.0008 | 0.0087 |
| 177 | 0.0101 | 0.0008 | 0.0093 |
| 178 | 0.0105 | 0.0008 | 0.0097 |
| 179 | 0.0114 | 0.0009 | 0.0105 |
| 180 | 0.0119 | 0.0010 | 0.0109 |
| 181 | 0.0130 | 0.0011 | 0.0120 |
| 182 | 0.0137 | 0.0011 | 0.0126 |
| 183 | 0.0152 | 0.0012 | 0.0140 |
| 184 | 0.0162 | 0.0013 | 0.0149 |
| 185 | 0.0358 | 0.0027 | 0.0331 |
| 186 | 0.0381 | 0.0027 | 0.0354 |
| 187 | 0.0442 | 0.0027 | 0.0415 |
| 188 | 0.0483 | 0.0027 | 0.0456 |
| 189 | 0.0600 | 0.0027 | 0.0573 |
| 190 | 0.0691 | 0.0027 | 0.0664 |
| 191 | 0.1049 | 0.0027 | 0.1022 |
| 192 | 0.1522 | 0.0027 | 0.1496 |
| 193 | 0.6586 | 0.0027 | 0.6559 |

| | | | |
|---|---|---|---|
| 194 | 0.0825 | 0.0027 | 0.0799 |
| 195 | 0.0534 | 0.0027 | 0.0507 |
| 196 | 0.0409 | 0.0027 | 0.0382 |
| 197 | 0.0173 | 0.0014 | 0.0159 |
| 198 | 0.0144 | 0.0012 | 0.0132 |
| 199 | 0.0124 | 0.0010 | 0.0114 |
| 200 | 0.0109 | 0.0009 | 0.0100 |
| 201 | 0.0098 | 0.0008 | 0.0090 |
| 202 | 0.0089 | 0.0007 | 0.0082 |
| 203 | 0.0081 | 0.0007 | 0.0075 |
| 204 | 0.0075 | 0.0006 | 0.0069 |
| 205 | 0.0069 | 0.0006 | 0.0064 |
| 206 | 0.0065 | 0.0005 | 0.0060 |
| 207 | 0.0061 | 0.0005 | 0.0056 |
| 208 | 0.0058 | 0.0005 | 0.0053 |
| 209 | 0.0055 | 0.0004 | 0.0050 |
| 210 | 0.0052 | 0.0004 | 0.0048 |
| 211 | 0.0049 | 0.0004 | 0.0045 |
| 212 | 0.0047 | 0.0004 | 0.0043 |
| 213 | 0.0045 | 0.0004 | 0.0042 |
| 214 | 0.0043 | 0.0004 | 0.0040 |
| 215 | 0.0042 | 0.0003 | 0.0038 |
| 216 | 0.0040 | 0.0003 | 0.0037 |
| 217 | 0.0064 | 0.0005 | 0.0059 |
| 218 | 0.0062 | 0.0005 | 0.0057 |
| 219 | 0.0060 | 0.0005 | 0.0055 |
| 220 | 0.0059 | 0.0005 | 0.0054 |
| 221 | 0.0057 | 0.0005 | 0.0053 |
| 222 | 0.0056 | 0.0004 | 0.0051 |
| 223 | 0.0054 | 0.0004 | 0.0050 |
| 224 | 0.0053 | 0.0004 | 0.0049 |
| 225 | 0.0052 | 0.0004 | 0.0048 |
| 226 | 0.0051 | 0.0004 | 0.0046 |
| 227 | 0.0049 | 0.0004 | 0.0045 |
| 228 | 0.0048 | 0.0004 | 0.0045 |
| 229 | 0.0047 | 0.0004 | 0.0044 |
| 230 | 0.0046 | 0.0004 | 0.0043 |
| 231 | 0.0046 | 0.0004 | 0.0042 |
| 232 | 0.0045 | 0.0004 | 0.0041 |
| 233 | 0.0044 | 0.0004 | 0.0040 |
| 234 | 0.0043 | 0.0003 | 0.0040 |
| 235 | 0.0042 | 0.0003 | 0.0039 |
| 236 | 0.0042 | 0.0003 | 0.0038 |
| 237 | 0.0041 | 0.0003 | 0.0038 |
| 238 | 0.0040 | 0.0003 | 0.0037 |
| 239 | 0.0040 | 0.0003 | 0.0036 |
| 240 | 0.0039 | 0.0003 | 0.0036 |
| 241 | 0.0038 | 0.0003 | 0.0035 |
| 242 | 0.0038 | 0.0003 | 0.0035 |
| 243 | 0.0037 | 0.0003 | 0.0034 |
| 244 | 0.0037 | 0.0003 | 0.0034 |
| 245 | 0.0036 | 0.0003 | 0.0033 |
| 246 | 0.0036 | 0.0003 | 0.0033 |
| 247 | 0.0035 | 0.0003 | 0.0032 |
| 248 | 0.0035 | 0.0003 | 0.0032 |
| 249 | 0.0034 | 0.0003 | 0.0031 |
| 250 | 0.0034 | 0.0003 | 0.0031 |
| 251 | 0.0033 | 0.0003 | 0.0031 |
| 252 | 0.0033 | 0.0003 | 0.0030 |

| | | | |
|---|---|---|---|
| 253 | 0.0032 | 0.0003 | 0.0030 |
| 254 | 0.0032 | 0.0003 | 0.0029 |
| 255 | 0.0032 | 0.0003 | 0.0029 |
| 256 | 0.0031 | 0.0003 | 0.0029 |
| 257 | 0.0031 | 0.0002 | 0.0028 |
| 258 | 0.0031 | 0.0002 | 0.0028 |
| 259 | 0.0030 | 0.0002 | 0.0028 |
| 260 | 0.0030 | 0.0002 | 0.0027 |
| 261 | 0.0030 | 0.0002 | 0.0027 |
| 262 | 0.0029 | 0.0002 | 0.0027 |
| 263 | 0.0029 | 0.0002 | 0.0027 |
| 264 | 0.0029 | 0.0002 | 0.0026 |
| 265 | 0.0028 | 0.0002 | 0.0026 |
| 266 | 0.0028 | 0.0002 | 0.0026 |
| 267 | 0.0028 | 0.0002 | 0.0025 |
| 268 | 0.0027 | 0.0002 | 0.0025 |
| 269 | 0.0027 | 0.0002 | 0.0025 |
| 270 | 0.0027 | 0.0002 | 0.0025 |
| 271 | 0.0027 | 0.0002 | 0.0025 |
| 272 | 0.0026 | 0.0002 | 0.0024 |
| 273 | 0.0026 | 0.0002 | 0.0024 |
| 274 | 0.0026 | 0.0002 | 0.0024 |
| 275 | 0.0026 | 0.0002 | 0.0024 |
| 276 | 0.0025 | 0.0002 | 0.0023 |
| 277 | 0.0025 | 0.0002 | 0.0023 |
| 278 | 0.0025 | 0.0002 | 0.0023 |
| 279 | 0.0025 | 0.0002 | 0.0023 |
| 280 | 0.0025 | 0.0002 | 0.0023 |
| 281 | 0.0024 | 0.0002 | 0.0022 |
| 282 | 0.0024 | 0.0002 | 0.0022 |
| 283 | 0.0024 | 0.0002 | 0.0022 |
| 284 | 0.0024 | 0.0002 | 0.0022 |
| 285 | 0.0024 | 0.0002 | 0.0022 |
| 286 | 0.0023 | 0.0002 | 0.0022 |
| 287 | 0.0023 | 0.0002 | 0.0021 |
| 288 | 0.0023 | 0.0002 | 0.0021 |

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Total soil rain loss = 0.13(In)
Total effective rainfall = 2.47(In)
Peak flow rate in flood hydrograph = 52.22(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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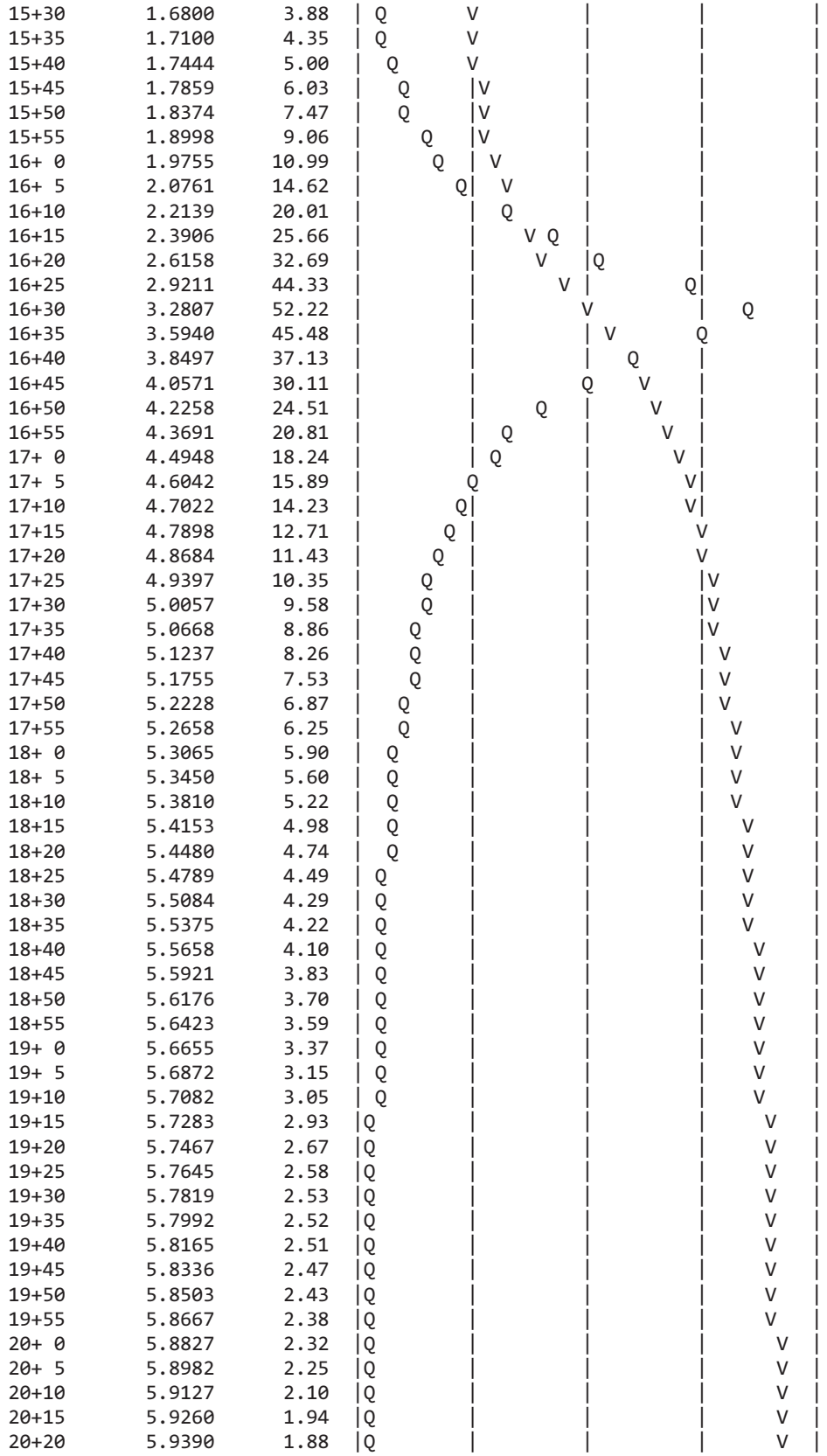
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 15.0 | 30.0 | 45.0 | 60.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.01 | Q | \| | \| | \| | \| |
| 0+10 | 0.0002 | 0.02 | Q | \| | \| | \| | \| |
| 0+15 | 0.0005 | 0.05 | Q | \| | \| | \| | \| |
| 0+20 | 0.0011 | 0.09 | Q | \| | \| | \| | \| |
| 0+25 | 0.0022 | 0.16 | Q | \| | \| | \| | \| |
| 0+30 | 0.0041 | 0.27 | Q | \| | \| | \| | \| |
| 0+35 | 0.0065 | 0.36 | Q | \| | \| | \| | \| |
| 0+40 | 0.0095 | 0.42 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+45 | 0.0127 | 0.48 | Q | | | | |
| 0+50 | 0.0163 | 0.51 | Q | | | | |
| 0+55 | 0.0201 | 0.55 | Q | | | | |
| 1+ 0 | 0.0240 | 0.58 | Q | | | | |
| 1+ 5 | 0.0281 | 0.60 | Q | | | | |
| 1+10 | 0.0324 | 0.62 | Q | | | | |
| 1+15 | 0.0368 | 0.64 | Q | | | | |
| 1+20 | 0.0414 | 0.66 | Q | | | | |
| 1+25 | 0.0460 | 0.67 | Q | | | | |
| 1+30 | 0.0507 | 0.69 | Q | | | | |
| 1+35 | 0.0556 | 0.70 | Q | | | | |
| 1+40 | 0.0605 | 0.72 | Q | | | | |
| 1+45 | 0.0655 | 0.73 | Q | | | | |
| 1+50 | 0.0706 | 0.74 | Q | | | | |
| 1+55 | 0.0758 | 0.75 | Q | | | | |
| 2+ 0 | 0.0810 | 0.76 | Q | | | | |
| 2+ 5 | 0.0863 | 0.77 | Q | | | | |
| 2+10 | 0.0916 | 0.78 | Q | | | | |
| 2+15 | 0.0970 | 0.78 | Q | | | | |
| 2+20 | 0.1025 | 0.79 | Q | | | | |
| 2+25 | 0.1080 | 0.80 | Q | | | | |
| 2+30 | 0.1135 | 0.81 | Q | | | | |
| 2+35 | 0.1192 | 0.82 | Q | | | | |
| 2+40 | 0.1248 | 0.82 | Q | | | | |
| 2+45 | 0.1305 | 0.83 | Q | | | | |
| 2+50 | 0.1363 | 0.84 | Q | | | | |
| 2+55 | 0.1421 | 0.84 | Q | | | | |
| 3+ 0 | 0.1479 | 0.85 | Q | | | | |
| 3+ 5 | 0.1538 | 0.85 | Q | | | | |
| 3+10 | 0.1598 | 0.86 | QV | | | | |
| 3+15 | 0.1657 | 0.87 | QV | | | | |
| 3+20 | 0.1717 | 0.87 | QV | | | | |
| 3+25 | 0.1778 | 0.88 | QV | | | | |
| 3+30 | 0.1838 | 0.88 | QV | | | | |
| 3+35 | 0.1900 | 0.89 | QV | | | | |
| 3+40 | 0.1961 | 0.89 | QV | | | | |
| 3+45 | 0.2023 | 0.90 | QV | | | | |
| 3+50 | 0.2085 | 0.90 | QV | | | | |
| 3+55 | 0.2148 | 0.91 | QV | | | | |
| 4+ 0 | 0.2211 | 0.92 | QV | | | | |
| 4+ 5 | 0.2274 | 0.92 | QV | | | | |
| 4+10 | 0.2338 | 0.93 | QV | | | | |
| 4+15 | 0.2402 | 0.93 | QV | | | | |
| 4+20 | 0.2467 | 0.94 | QV | | | | |
| 4+25 | 0.2532 | 0.94 | QV | | | | |
| 4+30 | 0.2597 | 0.95 | QV | | | | |
| 4+35 | 0.2663 | 0.95 | QV | | | | |
| 4+40 | 0.2729 | 0.96 | QV | | | | |
| 4+45 | 0.2795 | 0.96 | QV | | | | |
| 4+50 | 0.2862 | 0.97 | QV | | | | |
| 4+55 | 0.2929 | 0.97 | QV | | | | |
| 5+ 0 | 0.2997 | 0.98 | QV | | | | |
| 5+ 5 | 0.3064 | 0.98 | QV | | | | |
| 5+10 | 0.3132 | 0.99 | QV | | | | |
| 5+15 | 0.3201 | 0.99 | Q V | | | | |
| 5+20 | 0.3270 | 1.00 | Q V | | | | |
| 5+25 | 0.3339 | 1.01 | Q V | | | | |
| 5+30 | 0.3408 | 1.01 | Q V | | | | |
| 5+35 | 0.3478 | 1.02 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+40 | 0.3549 | 1.02 | Q V | \| | \| | \| | \| |
| 5+45 | 0.3620 | 1.03 | Q V | \| | \| | \| | \| |
| 5+50 | 0.3691 | 1.03 | Q V | \| | \| | \| | \| |
| 5+55 | 0.3762 | 1.04 | Q V | \| | \| | \| | \| |
| 6+ 0 | 0.3834 | 1.05 | Q V | \| | \| | \| | \| |
| 6+ 5 | 0.3907 | 1.05 | Q V | \| | \| | \| | \| |
| 6+10 | 0.3980 | 1.06 | Q V | \| | \| | \| | \| |
| 6+15 | 0.4053 | 1.06 | Q V | \| | \| | \| | \| |
| 6+20 | 0.4126 | 1.07 | Q V | \| | \| | \| | \| |
| 6+25 | 0.4201 | 1.08 | Q V | \| | \| | \| | \| |
| 6+30 | 0.4275 | 1.08 | Q V | \| | \| | \| | \| |
| 6+35 | 0.4350 | 1.09 | Q V | \| | \| | \| | \| |
| 6+40 | 0.4426 | 1.10 | Q V | \| | \| | \| | \| |
| 6+45 | 0.4501 | 1.10 | Q V | \| | \| | \| | \| |
| 6+50 | 0.4578 | 1.11 | Q V | \| | \| | \| | \| |
| 6+55 | 0.4655 | 1.12 | Q V | \| | \| | \| | \| |
| 7+ 0 | 0.4732 | 1.12 | Q V | \| | \| | \| | \| |
| 7+ 5 | 0.4810 | 1.13 | Q  V | \| | \| | \| | \| |
| 7+10 | 0.4888 | 1.14 | Q  V | \| | \| | \| | \| |
| 7+15 | 0.4967 | 1.15 | Q  V | \| | \| | \| | \| |
| 7+20 | 0.5047 | 1.15 | Q  V | \| | \| | \| | \| |
| 7+25 | 0.5126 | 1.16 | Q  V | \| | \| | \| | \| |
| 7+30 | 0.5207 | 1.17 | Q  V | \| | \| | \| | \| |
| 7+35 | 0.5288 | 1.18 | Q  V | \| | \| | \| | \| |
| 7+40 | 0.5369 | 1.18 | Q  V | \| | \| | \| | \| |
| 7+45 | 0.5451 | 1.19 | Q  V | \| | \| | \| | \| |
| 7+50 | 0.5534 | 1.20 | Q  V | \| | \| | \| | \| |
| 7+55 | 0.5617 | 1.21 | Q  V | \| | \| | \| | \| |
| 8+ 0 | 0.5701 | 1.22 | Q  V | \| | \| | \| | \| |
| 8+ 5 | 0.5786 | 1.23 | Q  V | \| | \| | \| | \| |
| 8+10 | 0.5871 | 1.23 | Q  V | \| | \| | \| | \| |
| 8+15 | 0.5956 | 1.24 | Q  V | \| | \| | \| | \| |
| 8+20 | 0.6042 | 1.25 | Q  V | \| | \| | \| | \| |
| 8+25 | 0.6129 | 1.26 | Q  V | \| | \| | \| | \| |
| 8+30 | 0.6217 | 1.27 | Q  V | \| | \| | \| | \| |
| 8+35 | 0.6305 | 1.28 | Q  V | \| | \| | \| | \| |
| 8+40 | 0.6394 | 1.29 | Q   V | \| | \| | \| | \| |
| 8+45 | 0.6483 | 1.30 | Q   V | \| | \| | \| | \| |
| 8+50 | 0.6574 | 1.31 | Q   V | \| | \| | \| | \| |
| 8+55 | 0.6665 | 1.32 | Q   V | \| | \| | \| | \| |
| 9+ 0 | 0.6756 | 1.33 | Q   V | \| | \| | \| | \| |
| 9+ 5 | 0.6849 | 1.34 | Q   V | \| | \| | \| | \| |
| 9+10 | 0.6942 | 1.35 | Q   V | \| | \| | \| | \| |
| 9+15 | 0.7036 | 1.36 | Q   V | \| | \| | \| | \| |
| 9+20 | 0.7130 | 1.37 | Q   V | \| | \| | \| | \| |
| 9+25 | 0.7226 | 1.39 | Q   V | \| | \| | \| | \| |
| 9+30 | 0.7322 | 1.40 | Q   V | \| | \| | \| | \| |
| 9+35 | 0.7419 | 1.41 | Q   V | \| | \| | \| | \| |
| 9+40 | 0.7517 | 1.42 | Q   V | \| | \| | \| | \| |
| 9+45 | 0.7616 | 1.43 | Q   V | \| | \| | \| | \| |
| 9+50 | 0.7716 | 1.45 | Q   V | \| | \| | \| | \| |
| 9+55 | 0.7816 | 1.46 | Q   V | \| | \| | \| | \| |
| 10+ 0 | 0.7918 | 1.47 | Q   V | \| | \| | \| | \| |
| 10+ 5 | 0.8020 | 1.49 | Q    V | \| | \| | \| | \| |
| 10+10 | 0.8124 | 1.50 | \|Q   V | \| | \| | \| | \| |
| 10+15 | 0.8228 | 1.52 | \|Q   V | \| | \| | \| | \| |
| 10+20 | 0.8333 | 1.53 | \|Q   V | \| | \| | \| | \| |
| 10+25 | 0.8440 | 1.54 | \|Q   V | \| | \| | \| | \| |
| 10+30 | 0.8547 | 1.56 | \|Q   V | \| | \| | \| | \| |

```
10+35       0.8656      1.58  |Q   V    |          |          |          |
10+40       0.8765      1.59  |Q   V    |          |          |          |
10+45       0.8876      1.61  |Q   V    |          |          |          |
10+50       0.8988      1.62  |Q   V    |          |          |          |
10+55       0.9101      1.64  |Q   V    |          |          |          |
11+ 0       0.9215      1.66  |Q   V    |          |          |          |
11+ 5       0.9331      1.68  |Q   V    |          |          |          |
11+10       0.9448      1.70  |Q   V    |          |          |          |
11+15       0.9566      1.71  |Q    V   |          |          |          |
11+20       0.9685      1.73  |Q    V   |          |          |          |
11+25       0.9806      1.75  |Q    V   |          |          |          |
11+30       0.9928      1.77  |Q    V   |          |          |          |
11+35       1.0052      1.80  |Q    V   |          |          |          |
11+40       1.0177      1.82  |Q    V   |          |          |          |
11+45       1.0304      1.84  |Q    V   |          |          |          |
11+50       1.0432      1.86  |Q    V   |          |          |          |
11+55       1.0562      1.89  |Q    V   |          |          |          |
12+ 0       1.0694      1.91  |Q    V   |          |          |          |
12+ 5       1.0827      1.93  |Q    V   |          |          |          |
12+10       1.0960      1.94  |Q    V   |          |          |          |
12+15       1.1094      1.94  |Q    V   |          |          |          |
12+20       1.1226      1.92  |Q     V  |          |          |          |
12+25       1.1354      1.86  |Q     V  |          |          |          |
12+30       1.1477      1.77  |Q     V  |          |          |          |
12+35       1.1594      1.70  |Q     V  |          |          |          |
12+40       1.1708      1.66  |Q     V  |          |          |          |
12+45       1.1820      1.63  |Q     V  |          |          |          |
12+50       1.1931      1.62  |Q     V  |          |          |          |
12+55       1.2042      1.61  |Q     V  |          |          |          |
13+ 0       1.2153      1.61  |Q     V  |          |          |          |
13+ 5       1.2264      1.61  |Q     V  |          |          |          |
13+10       1.2376      1.62  |Q     V  |          |          |          |
13+15       1.2488      1.63  |Q     V  |          |          |          |
13+20       1.2602      1.65  |Q     V  |          |          |          |
13+25       1.2717      1.67  |Q      V |          |          |          |
13+30       1.2833      1.69  |Q      V |          |          |          |
13+35       1.2951      1.71  |Q      V |          |          |          |
13+40       1.3071      1.74  |Q      V |          |          |          |
13+45       1.3193      1.77  |Q      V |          |          |          |
13+50       1.3317      1.80  |Q      V |          |          |          |
13+55       1.3444      1.84  |Q      V |          |          |          |
14+ 0       1.3573      1.88  |Q      V |          |          |          |
14+ 5       1.3706      1.92  |Q      V |          |          |          |
14+10       1.3841      1.97  |Q      V |          |          |          |
14+15       1.3980      2.02  |Q      V |          |          |          |
14+20       1.4123      2.07  |Q      V |          |          |          |
14+25       1.4270      2.13  |Q      V |          |          |          |
14+30       1.4421      2.20  |Q       V|          |          |          |
14+35       1.4577      2.27  |Q       V|          |          |          |
14+40       1.4739      2.34  |Q       V|          |          |          |
14+45       1.4906      2.43  |Q       V|          |          |          |
14+50       1.5079      2.52  |Q       V|          |          |          |
14+55       1.5259      2.61  |Q       V|          |          |          |
15+ 0       1.5447      2.72  |Q       V|          |          |          |
15+ 5       1.5643      2.84  |Q       V|          |          |          |
15+10       1.5848      2.98  |Q       V|          |          |          |
15+15       1.6063      3.13  | Q       V          |          |          |
15+20       1.6290      3.30  | Q       V          |          |          |
15+25       1.6533      3.53  | Q       V          |          |          |
```



| | | | |
|---|---|---|---|
| 15+30 | 1.6800 | 3.88 | |
| 15+35 | 1.7100 | 4.35 | |
| 15+40 | 1.7444 | 5.00 | |
| 15+45 | 1.7859 | 6.03 | |
| 15+50 | 1.8374 | 7.47 | |
| 15+55 | 1.8998 | 9.06 | |
| 16+ 0 | 1.9755 | 10.99 | |
| 16+ 5 | 2.0761 | 14.62 | |
| 16+10 | 2.2139 | 20.01 | |
| 16+15 | 2.3906 | 25.66 | |
| 16+20 | 2.6158 | 32.69 | |
| 16+25 | 2.9211 | 44.33 | |
| 16+30 | 3.2807 | 52.22 | |
| 16+35 | 3.5940 | 45.48 | |
| 16+40 | 3.8497 | 37.13 | |
| 16+45 | 4.0571 | 30.11 | |
| 16+50 | 4.2258 | 24.51 | |
| 16+55 | 4.3691 | 20.81 | |
| 17+ 0 | 4.4948 | 18.24 | |
| 17+ 5 | 4.6042 | 15.89 | |
| 17+10 | 4.7022 | 14.23 | |
| 17+15 | 4.7898 | 12.71 | |
| 17+20 | 4.8684 | 11.43 | |
| 17+25 | 4.9397 | 10.35 | |
| 17+30 | 5.0057 | 9.58 | |
| 17+35 | 5.0668 | 8.86 | |
| 17+40 | 5.1237 | 8.26 | |
| 17+45 | 5.1755 | 7.53 | |
| 17+50 | 5.2228 | 6.87 | |
| 17+55 | 5.2658 | 6.25 | |
| 18+ 0 | 5.3065 | 5.90 | |
| 18+ 5 | 5.3450 | 5.60 | |
| 18+10 | 5.3810 | 5.22 | |
| 18+15 | 5.4153 | 4.98 | |
| 18+20 | 5.4480 | 4.74 | |
| 18+25 | 5.4789 | 4.49 | |
| 18+30 | 5.5084 | 4.29 | |
| 18+35 | 5.5375 | 4.22 | |
| 18+40 | 5.5658 | 4.10 | |
| 18+45 | 5.5921 | 3.83 | |
| 18+50 | 5.6176 | 3.70 | |
| 18+55 | 5.6423 | 3.59 | |
| 19+ 0 | 5.6655 | 3.37 | |
| 19+ 5 | 5.6872 | 3.15 | |
| 19+10 | 5.7082 | 3.05 | |
| 19+15 | 5.7283 | 2.93 | |
| 19+20 | 5.7467 | 2.67 | |
| 19+25 | 5.7645 | 2.58 | |
| 19+30 | 5.7819 | 2.53 | |
| 19+35 | 5.7992 | 2.52 | |
| 19+40 | 5.8165 | 2.51 | |
| 19+45 | 5.8336 | 2.47 | |
| 19+50 | 5.8503 | 2.43 | |
| 19+55 | 5.8667 | 2.38 | |
| 20+ 0 | 5.8827 | 2.32 | |
| 20+ 5 | 5.8982 | 2.25 | |
| 20+10 | 5.9127 | 2.10 | |
| 20+15 | 5.9260 | 1.94 | |
| 20+20 | 5.9390 | 1.88 | |

```
20+25       5.9515      1.82  |Q        |          |          |      V  |
20+30       5.9636      1.75  |Q        |          |          |      V  |
20+35       5.9746      1.59  |Q        |          |          |      V  |
20+40       5.9846      1.45  Q         |          |          |      V  |
20+45       5.9943      1.41  Q         |          |          |      V  |
20+50       6.0038      1.38  Q         |          |          |      V  |
20+55       6.0131      1.35  Q         |          |          |      V  |
21+ 0       6.0222      1.33  Q         |          |          |      V  |
21+ 5       6.0312      1.30  Q         |          |          |       V |
21+10       6.0400      1.28  Q         |          |          |       V |
21+15       6.0487      1.27  Q         |          |          |       V |
21+20       6.0573      1.25  Q         |          |          |       V |
21+25       6.0658      1.23  Q         |          |          |       V |
21+30       6.0741      1.21  Q         |          |          |       V |
21+35       6.0824      1.19  Q         |          |          |       V |
21+40       6.0905      1.18  Q         |          |          |       V |
21+45       6.0985      1.16  Q         |          |          |       V |
21+50       6.1064      1.15  Q         |          |          |       V |
21+55       6.1142      1.13  Q         |          |          |       V |
22+ 0       6.1219      1.12  Q         |          |          |       V |
22+ 5       6.1296      1.11  Q         |          |          |       V |
22+10       6.1371      1.10  Q         |          |          |       V |
22+15       6.1446      1.08  Q         |          |          |       V |
22+20       6.1519      1.07  Q         |          |          |       V |
22+25       6.1592      1.06  Q         |          |          |       V |
22+30       6.1664      1.05  Q         |          |          |       V |
22+35       6.1735      1.03  Q         |          |          |       V |
22+40       6.1806      1.02  Q         |          |          |       V |
22+45       6.1875      1.01  Q         |          |          |        V|
22+50       6.1944      1.00  Q         |          |          |        V|
22+55       6.2012      0.99  Q         |          |          |        V|
23+ 0       6.2080      0.98  Q         |          |          |        V|
23+ 5       6.2146      0.97  Q         |          |          |        V|
23+10       6.2212      0.96  Q         |          |          |        V|
23+15       6.2277      0.95  Q         |          |          |        V|
23+20       6.2342      0.94  Q         |          |          |        V|
23+25       6.2406      0.93  Q         |          |          |        V|
23+30       6.2469      0.92  Q         |          |          |        V|
23+35       6.2532      0.91  Q         |          |          |        V|
23+40       6.2594      0.90  Q         |          |          |        V|
23+45       6.2656      0.89  Q         |          |          |        V|
23+50       6.2716      0.88  Q         |          |          |        V|
23+55       6.2777      0.88  Q         |          |          |        V|
24+ 0       6.2837      0.87  Q         |          |          |        V|
24+ 5       6.2896      0.86  Q         |          |          |        V|
24+10       6.2953      0.83  Q         |          |          |        V|
24+15       6.3008      0.80  Q         |          |          |        V|
24+20       6.3060      0.75  Q         |          |          |        V|
24+25       6.3106      0.67  Q         |          |          |        V|
24+30       6.3145      0.56  Q         |          |          |        V|
24+35       6.3177      0.47  Q         |          |          |        V|
24+40       6.3204      0.40  Q         |          |          |        V|
24+45       6.3228      0.35  Q         |          |          |        V|
24+50       6.3249      0.31  Q         |          |          |        V|
24+55       6.3268      0.27  Q         |          |          |        V|
25+ 0       6.3284      0.24  Q         |          |          |        V|
25+ 5       6.3299      0.22  Q         |          |          |        V|
25+10       6.3313      0.20  Q         |          |          |        V|
25+15       6.3325      0.18  Q         |          |          |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+20 | 6.3337 | 0.16 | Q | \| | \| | \| | V\| |
| 25+25 | 6.3347 | 0.15 | Q | \| | \| | \| | V\| |
| 25+30 | 6.3356 | 0.14 | Q | \| | \| | \| | V\| |
| 25+35 | 6.3365 | 0.12 | Q | \| | \| | \| | V\| |
| 25+40 | 6.3372 | 0.11 | Q | \| | \| | \| | V\| |
| 25+45 | 6.3380 | 0.10 | Q | \| | \| | \| | V\| |
| 25+50 | 6.3386 | 0.09 | Q | \| | \| | \| | V\| |
| 25+55 | 6.3392 | 0.09 | Q | \| | \| | \| | V\| |
| 26+ 0 | 6.3397 | 0.08 | Q | \| | \| | \| | V\| |
| 26+ 5 | 6.3402 | 0.07 | Q | \| | \| | \| | V\| |
| 26+10 | 6.3407 | 0.07 | Q | \| | \| | \| | V\| |
| 26+15 | 6.3411 | 0.06 | Q | \| | \| | \| | V\| |
| 26+20 | 6.3415 | 0.05 | Q | \| | \| | \| | V\| |
| 26+25 | 6.3418 | 0.05 | Q | \| | \| | \| | V\| |
| 26+30 | 6.3421 | 0.05 | Q | \| | \| | \| | V\| |
| 26+35 | 6.3424 | 0.04 | Q | \| | \| | \| | V\| |
| 26+40 | 6.3426 | 0.04 | Q | \| | \| | \| | V\| |
| 26+45 | 6.3429 | 0.03 | Q | \| | \| | \| | V\| |
| 26+50 | 6.3431 | 0.03 | Q | \| | \| | \| | V\| |
| 26+55 | 6.3433 | 0.03 | Q | \| | \| | \| | V\| |
| 27+ 0 | 6.3434 | 0.02 | Q | \| | \| | \| | V\| |
| 27+ 5 | 6.3436 | 0.02 | Q | \| | \| | \| | V\| |
| 27+10 | 6.3437 | 0.02 | Q | \| | \| | \| | V\| |
| 27+15 | 6.3439 | 0.02 | Q | \| | \| | \| | V\| |
| 27+20 | 6.3440 | 0.02 | Q | \| | \| | \| | V\| |
| 27+25 | 6.3441 | 0.02 | Q | \| | \| | \| | V\| |
| 27+30 | 6.3442 | 0.01 | Q | \| | \| | \| | V\| |
| 27+35 | 6.3443 | 0.01 | Q | \| | \| | \| | V\| |
| 27+40 | 6.3443 | 0.01 | Q | \| | \| | \| | V\| |
| 27+45 | 6.3444 | 0.01 | Q | \| | \| | \| | V\| |
| 27+50 | 6.3445 | 0.01 | Q | \| | \| | \| | V\| |
| 27+55 | 6.3445 | 0.01 | Q | \| | \| | \| | V\| |
| 28+ 0 | 6.3446 | 0.01 | Q | \| | \| | \| | V\| |
| 28+ 5 | 6.3446 | 0.00 | Q | \| | \| | \| | V\| |
| 28+10 | 6.3446 | 0.00 | Q | \| | \| | \| | V\| |
| 28+15 | 6.3446 | 0.00 | Q | \| | \| | \| | V\| |
| 28+20 | 6.3446 | 0.00 | Q | \| | \| | \| | V\| |
| 28+25 | 6.3446 | 0.00 | Q | \| | \| | \| | V\| |
| 28+30 | 6.3447 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 34
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 107.23 | 1 | 1.40 |
| Rainfall data for year 100 | | |
| 107.23 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 107.23 | 24 | 2.61 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 88.0 | 97.6 | 107.23 | 1.000 | 0.048 | 0.900 | 0.043 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.043

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 96.51 | 0.900 | 88.0 | 97.6 | 0.25 | 0.895 |
| 10.72 | 0.100 | 98.0 | 98.0 | 0.20 | 0.912 |

Area-averaged catchment yield fraction, Y = 0.897
Area-averaged low loss fraction, Yb = 0.103
User entry of time of concentration = 1.210 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 107.23(Ac.)
Catchment Lag time = 0.968 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 8.6088
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.043(In/Hr)
Average low loss rate fraction (Yb) = 0.103 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.664(In)
Computed peak 30-minute rainfall = 1.137(In)
Specified peak 1-hour rainfall = 1.400(In)
Computed peak 3-hour rainfall = 1.655(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.610(In)

Rainfall depth area reduction factors:
Using a total area of 107.23(Ac.) (Ref: fig. E-4)

5-minute factor = 0.995 Adjusted rainfall = 0.661(In)
30-minute factor = 0.995 Adjusted rainfall = 1.131(In)
1-hour factor = 0.995 Adjusted rainfall = 1.393(In)
3-hour factor = 0.999 Adjusted rainfall = 1.654(In)
6-hour factor = 1.000 Adjusted rainfall = 1.839(In)
24-hour factor = 1.000 Adjusted rainfall = 2.610(In)
---

U n i t H y d r o g r a p h

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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 1296.81 (CFS)) | |
| 1 | 0.379 | 4.912 |
| 2 | 1.240 | 11.165 |
| 3 | 2.619 | 17.884 |
| 4 | 4.472 | 24.037 |
| 5 | 6.765 | 29.724 |
| 6 | 9.657 | 37.514 |
| 7 | 14.313 | 60.371 |
| 8 | 20.727 | 83.188 |
| 9 | 29.371 | 112.093 |
| 10 | 37.107 | 100.318 |
| 11 | 43.826 | 87.137 |
| 12 | 49.285 | 70.786 |
| 13 | 53.957 | 60.595 |

| | | |
|---|---|---|
| 14 | 57.925 | 51.459 |
| 15 | 61.162 | 41.979 |
| 16 | 63.932 | 35.916 |
| 17 | 66.400 | 32.004 |
| 18 | 68.638 | 29.029 |
| 19 | 70.720 | 27.000 |
| 20 | 72.574 | 24.041 |
| 21 | 74.249 | 21.723 |
| 22 | 75.774 | 19.771 |
| 23 | 77.241 | 19.027 |
| 24 | 78.596 | 17.570 |
| 25 | 79.741 | 14.845 |
| 26 | 80.877 | 14.737 |
| 27 | 81.937 | 13.736 |
| 28 | 82.868 | 12.082 |
| 29 | 83.798 | 12.057 |
| 30 | 84.680 | 11.440 |
| 31 | 85.507 | 10.719 |
| 32 | 86.333 | 10.715 |
| 33 | 87.083 | 9.727 |
| 34 | 87.772 | 8.931 |
| 35 | 88.458 | 8.905 |
| 36 | 89.037 | 7.501 |
| 37 | 89.553 | 6.698 |
| 38 | 90.069 | 6.685 |
| 39 | 90.561 | 6.378 |
| 40 | 91.043 | 6.252 |
| 41 | 91.521 | 6.199 |
| 42 | 91.949 | 5.551 |
| 43 | 92.362 | 5.359 |
| 44 | 92.772 | 5.316 |
| 45 | 93.156 | 4.982 |
| 46 | 93.535 | 4.912 |
| 47 | 93.901 | 4.752 |
| 48 | 94.203 | 3.916 |
| 49 | 94.496 | 3.796 |
| 50 | 94.789 | 3.796 |
| 51 | 95.081 | 3.796 |
| 52 | 95.374 | 3.796 |
| 53 | 95.648 | 3.559 |
| 54 | 95.875 | 2.936 |
| 55 | 96.099 | 2.903 |
| 56 | 96.323 | 2.903 |
| 57 | 96.546 | 2.903 |
| 58 | 96.770 | 2.903 |
| 59 | 96.965 | 2.525 |
| 60 | 97.120 | 2.012 |
| 61 | 97.275 | 2.010 |
| 62 | 97.430 | 2.010 |
| 63 | 97.585 | 2.010 |
| 64 | 97.739 | 2.004 |
| 65 | 97.853 | 1.469 |
| 66 | 97.939 | 1.116 |
| 67 | 98.025 | 1.116 |
| 68 | 98.111 | 1.116 |
| 69 | 98.197 | 1.116 |
| 70 | 98.284 | 1.127 |
| 71 | 98.383 | 1.286 |
| 72 | 98.486 | 1.340 |

| | | |
|---|---|---|
| 73 | 98.590 | 1.340 |
| 74 | 98.693 | 1.340 |
| 75 | 98.796 | 1.340 |
| 76 | 98.900 | 1.340 |
| 77 | 99.003 | 1.340 |
| 78 | 99.106 | 1.340 |
| 79 | 99.210 | 1.340 |
| 80 | 99.313 | 1.340 |
| 81 | 99.416 | 1.340 |
| 82 | 99.508 | 1.188 |
| 83 | 99.564 | 0.729 |
| 84 | 99.618 | 0.698 |
| 85 | 99.672 | 0.698 |
| 86 | 99.725 | 0.698 |
| 87 | 99.779 | 0.698 |
| 88 | 99.833 | 0.698 |
| 89 | 99.887 | 0.698 |
| 90 | 99.941 | 0.698 |
| 91 | 100.000 | 0.349 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6610 | 0.6610 |
| 2 | 0.8138 | 0.1528 |
| 3 | 0.9190 | 0.1053 |
| 4 | 1.0019 | 0.0828 |
| 5 | 1.0712 | 0.0694 |
| 6 | 1.1314 | 0.0602 |
| 7 | 1.1850 | 0.0536 |
| 8 | 1.2334 | 0.0484 |
| 9 | 1.2778 | 0.0444 |
| 10 | 1.3188 | 0.0410 |
| 11 | 1.3571 | 0.0383 |
| 12 | 1.3930 | 0.0359 |
| 13 | 1.4105 | 0.0176 |
| 14 | 1.4270 | 0.0165 |
| 15 | 1.4425 | 0.0155 |
| 16 | 1.4571 | 0.0146 |
| 17 | 1.4710 | 0.0139 |
| 18 | 1.4842 | 0.0132 |
| 19 | 1.4969 | 0.0126 |
| 20 | 1.5089 | 0.0121 |
| 21 | 1.5205 | 0.0116 |
| 22 | 1.5316 | 0.0111 |
| 23 | 1.5423 | 0.0107 |
| 24 | 1.5526 | 0.0103 |
| 25 | 1.5626 | 0.0100 |
| 26 | 1.5722 | 0.0096 |
| 27 | 1.5815 | 0.0093 |
| 28 | 1.5905 | 0.0090 |
| 29 | 1.5993 | 0.0088 |
| 30 | 1.6078 | 0.0085 |
| 31 | 1.6161 | 0.0083 |
| 32 | 1.6241 | 0.0081 |
| 33 | 1.6320 | 0.0078 |
| 34 | 1.6396 | 0.0076 |
| 35 | 1.6471 | 0.0075 |
| 36 | 1.6543 | 0.0073 |
| 37 | 1.6613 | 0.0069 |

| | | |
|---|---|---|
| 38 | 1.6681 | 0.0068 |
| 39 | 1.6747 | 0.0066 |
| 40 | 1.6812 | 0.0065 |
| 41 | 1.6876 | 0.0064 |
| 42 | 1.6938 | 0.0062 |
| 43 | 1.6999 | 0.0061 |
| 44 | 1.7059 | 0.0060 |
| 45 | 1.7118 | 0.0059 |
| 46 | 1.7176 | 0.0058 |
| 47 | 1.7232 | 0.0057 |
| 48 | 1.7288 | 0.0056 |
| 49 | 1.7342 | 0.0055 |
| 50 | 1.7396 | 0.0054 |
| 51 | 1.7449 | 0.0053 |
| 52 | 1.7501 | 0.0052 |
| 53 | 1.7552 | 0.0051 |
| 54 | 1.7602 | 0.0050 |
| 55 | 1.7651 | 0.0049 |
| 56 | 1.7700 | 0.0049 |
| 57 | 1.7748 | 0.0048 |
| 58 | 1.7795 | 0.0047 |
| 59 | 1.7842 | 0.0047 |
| 60 | 1.7888 | 0.0046 |
| 61 | 1.7933 | 0.0045 |
| 62 | 1.7978 | 0.0045 |
| 63 | 1.8022 | 0.0044 |
| 64 | 1.8065 | 0.0043 |
| 65 | 1.8108 | 0.0043 |
| 66 | 1.8151 | 0.0042 |
| 67 | 1.8192 | 0.0042 |
| 68 | 1.8234 | 0.0041 |
| 69 | 1.8274 | 0.0041 |
| 70 | 1.8315 | 0.0040 |
| 71 | 1.8355 | 0.0040 |
| 72 | 1.8394 | 0.0039 |
| 73 | 1.8458 | 0.0064 |
| 74 | 1.8521 | 0.0063 |
| 75 | 1.8584 | 0.0063 |
| 76 | 1.8646 | 0.0062 |
| 77 | 1.8708 | 0.0062 |
| 78 | 1.8769 | 0.0061 |
| 79 | 1.8830 | 0.0060 |
| 80 | 1.8889 | 0.0060 |
| 81 | 1.8949 | 0.0059 |
| 82 | 1.9007 | 0.0059 |
| 83 | 1.9066 | 0.0058 |
| 84 | 1.9123 | 0.0058 |
| 85 | 1.9181 | 0.0057 |
| 86 | 1.9237 | 0.0057 |
| 87 | 1.9293 | 0.0056 |
| 88 | 1.9349 | 0.0056 |
| 89 | 1.9404 | 0.0055 |
| 90 | 1.9459 | 0.0055 |
| 91 | 1.9513 | 0.0054 |
| 92 | 1.9567 | 0.0054 |
| 93 | 1.9621 | 0.0053 |
| 94 | 1.9674 | 0.0053 |
| 95 | 1.9726 | 0.0053 |
| 96 | 1.9779 | 0.0052 |

| | | |
|---|---|---|
| 97 | 1.9830 | 0.0052 |
| 98 | 1.9882 | 0.0051 |
| 99 | 1.9933 | 0.0051 |
| 100 | 1.9983 | 0.0051 |
| 101 | 2.0034 | 0.0050 |
| 102 | 2.0084 | 0.0050 |
| 103 | 2.0133 | 0.0049 |
| 104 | 2.0182 | 0.0049 |
| 105 | 2.0231 | 0.0049 |
| 106 | 2.0279 | 0.0048 |
| 107 | 2.0327 | 0.0048 |
| 108 | 2.0375 | 0.0048 |
| 109 | 2.0423 | 0.0047 |
| 110 | 2.0470 | 0.0047 |
| 111 | 2.0517 | 0.0047 |
| 112 | 2.0563 | 0.0046 |
| 113 | 2.0609 | 0.0046 |
| 114 | 2.0655 | 0.0046 |
| 115 | 2.0701 | 0.0046 |
| 116 | 2.0746 | 0.0045 |
| 117 | 2.0791 | 0.0045 |
| 118 | 2.0836 | 0.0045 |
| 119 | 2.0880 | 0.0044 |
| 120 | 2.0924 | 0.0044 |
| 121 | 2.0968 | 0.0044 |
| 122 | 2.1012 | 0.0044 |
| 123 | 2.1055 | 0.0043 |
| 124 | 2.1098 | 0.0043 |
| 125 | 2.1141 | 0.0043 |
| 126 | 2.1183 | 0.0043 |
| 127 | 2.1226 | 0.0042 |
| 128 | 2.1268 | 0.0042 |
| 129 | 2.1310 | 0.0042 |
| 130 | 2.1351 | 0.0042 |
| 131 | 2.1392 | 0.0041 |
| 132 | 2.1433 | 0.0041 |
| 133 | 2.1474 | 0.0041 |
| 134 | 2.1515 | 0.0041 |
| 135 | 2.1555 | 0.0040 |
| 136 | 2.1596 | 0.0040 |
| 137 | 2.1635 | 0.0040 |
| 138 | 2.1675 | 0.0040 |
| 139 | 2.1715 | 0.0040 |
| 140 | 2.1754 | 0.0039 |
| 141 | 2.1793 | 0.0039 |
| 142 | 2.1832 | 0.0039 |
| 143 | 2.1871 | 0.0039 |
| 144 | 2.1909 | 0.0038 |
| 145 | 2.1948 | 0.0038 |
| 146 | 2.1986 | 0.0038 |
| 147 | 2.2024 | 0.0038 |
| 148 | 2.2061 | 0.0038 |
| 149 | 2.2099 | 0.0038 |
| 150 | 2.2136 | 0.0037 |
| 151 | 2.2173 | 0.0037 |
| 152 | 2.2210 | 0.0037 |
| 153 | 2.2247 | 0.0037 |
| 154 | 2.2284 | 0.0037 |
| 155 | 2.2320 | 0.0036 |

| | | |
|---|---|---|
| 156 | 2.2356 | 0.0036 |
| 157 | 2.2392 | 0.0036 |
| 158 | 2.2428 | 0.0036 |
| 159 | 2.2464 | 0.0036 |
| 160 | 2.2499 | 0.0036 |
| 161 | 2.2535 | 0.0035 |
| 162 | 2.2570 | 0.0035 |
| 163 | 2.2605 | 0.0035 |
| 164 | 2.2640 | 0.0035 |
| 165 | 2.2675 | 0.0035 |
| 166 | 2.2709 | 0.0035 |
| 167 | 2.2744 | 0.0034 |
| 168 | 2.2778 | 0.0034 |
| 169 | 2.2812 | 0.0034 |
| 170 | 2.2846 | 0.0034 |
| 171 | 2.2880 | 0.0034 |
| 172 | 2.2914 | 0.0034 |
| 173 | 2.2947 | 0.0034 |
| 174 | 2.2981 | 0.0033 |
| 175 | 2.3014 | 0.0033 |
| 176 | 2.3047 | 0.0033 |
| 177 | 2.3080 | 0.0033 |
| 178 | 2.3113 | 0.0033 |
| 179 | 2.3146 | 0.0033 |
| 180 | 2.3178 | 0.0033 |
| 181 | 2.3211 | 0.0032 |
| 182 | 2.3243 | 0.0032 |
| 183 | 2.3275 | 0.0032 |
| 184 | 2.3307 | 0.0032 |
| 185 | 2.3339 | 0.0032 |
| 186 | 2.3371 | 0.0032 |
| 187 | 2.3402 | 0.0032 |
| 188 | 2.3434 | 0.0032 |
| 189 | 2.3465 | 0.0031 |
| 190 | 2.3497 | 0.0031 |
| 191 | 2.3528 | 0.0031 |
| 192 | 2.3559 | 0.0031 |
| 193 | 2.3590 | 0.0031 |
| 194 | 2.3620 | 0.0031 |
| 195 | 2.3651 | 0.0031 |
| 196 | 2.3682 | 0.0031 |
| 197 | 2.3712 | 0.0030 |
| 198 | 2.3742 | 0.0030 |
| 199 | 2.3773 | 0.0030 |
| 200 | 2.3803 | 0.0030 |
| 201 | 2.3833 | 0.0030 |
| 202 | 2.3862 | 0.0030 |
| 203 | 2.3892 | 0.0030 |
| 204 | 2.3922 | 0.0030 |
| 205 | 2.3951 | 0.0030 |
| 206 | 2.3981 | 0.0029 |
| 207 | 2.4010 | 0.0029 |
| 208 | 2.4039 | 0.0029 |
| 209 | 2.4068 | 0.0029 |
| 210 | 2.4097 | 0.0029 |
| 211 | 2.4126 | 0.0029 |
| 212 | 2.4155 | 0.0029 |
| 213 | 2.4184 | 0.0029 |
| 214 | 2.4212 | 0.0029 |

| | | |
|---|---|---|
| 215 | 2.4241 | 0.0028 |
| 216 | 2.4269 | 0.0028 |
| 217 | 2.4298 | 0.0028 |
| 218 | 2.4326 | 0.0028 |
| 219 | 2.4354 | 0.0028 |
| 220 | 2.4382 | 0.0028 |
| 221 | 2.4410 | 0.0028 |
| 222 | 2.4438 | 0.0028 |
| 223 | 2.4465 | 0.0028 |
| 224 | 2.4493 | 0.0028 |
| 225 | 2.4521 | 0.0028 |
| 226 | 2.4548 | 0.0027 |
| 227 | 2.4575 | 0.0027 |
| 228 | 2.4603 | 0.0027 |
| 229 | 2.4630 | 0.0027 |
| 230 | 2.4657 | 0.0027 |
| 231 | 2.4684 | 0.0027 |
| 232 | 2.4711 | 0.0027 |
| 233 | 2.4738 | 0.0027 |
| 234 | 2.4764 | 0.0027 |
| 235 | 2.4791 | 0.0027 |
| 236 | 2.4818 | 0.0027 |
| 237 | 2.4844 | 0.0026 |
| 238 | 2.4871 | 0.0026 |
| 239 | 2.4897 | 0.0026 |
| 240 | 2.4923 | 0.0026 |
| 241 | 2.4949 | 0.0026 |
| 242 | 2.4975 | 0.0026 |
| 243 | 2.5001 | 0.0026 |
| 244 | 2.5027 | 0.0026 |
| 245 | 2.5053 | 0.0026 |
| 246 | 2.5079 | 0.0026 |
| 247 | 2.5105 | 0.0026 |
| 248 | 2.5130 | 0.0026 |
| 249 | 2.5156 | 0.0026 |
| 250 | 2.5181 | 0.0025 |
| 251 | 2.5207 | 0.0025 |
| 252 | 2.5232 | 0.0025 |
| 253 | 2.5257 | 0.0025 |
| 254 | 2.5282 | 0.0025 |
| 255 | 2.5307 | 0.0025 |
| 256 | 2.5332 | 0.0025 |
| 257 | 2.5357 | 0.0025 |
| 258 | 2.5382 | 0.0025 |
| 259 | 2.5407 | 0.0025 |
| 260 | 2.5432 | 0.0025 |
| 261 | 2.5456 | 0.0025 |
| 262 | 2.5481 | 0.0025 |
| 263 | 2.5505 | 0.0025 |
| 264 | 2.5530 | 0.0024 |
| 265 | 2.5554 | 0.0024 |
| 266 | 2.5578 | 0.0024 |
| 267 | 2.5603 | 0.0024 |
| 268 | 2.5627 | 0.0024 |
| 269 | 2.5651 | 0.0024 |
| 270 | 2.5675 | 0.0024 |
| 271 | 2.5699 | 0.0024 |
| 272 | 2.5723 | 0.0024 |
| 273 | 2.5747 | 0.0024 |

| | | |
|---|---|---|
| 274 | 2.5770 | 0.0024 |
| 275 | 2.5794 | 0.0024 |
| 276 | 2.5818 | 0.0024 |
| 277 | 2.5841 | 0.0024 |
| 278 | 2.5865 | 0.0024 |
| 279 | 2.5888 | 0.0023 |
| 280 | 2.5912 | 0.0023 |
| 281 | 2.5935 | 0.0023 |
| 282 | 2.5958 | 0.0023 |
| 283 | 2.5981 | 0.0023 |
| 284 | 2.6005 | 0.0023 |
| 285 | 2.6028 | 0.0023 |
| 286 | 2.6051 | 0.0023 |
| 287 | 2.6074 | 0.0023 |
| 288 | 2.6097 | 0.0023 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0023 | 0.0002 | 0.0021 |
| 2 | 0.0023 | 0.0002 | 0.0021 |
| 3 | 0.0023 | 0.0002 | 0.0021 |
| 4 | 0.0023 | 0.0002 | 0.0021 |
| 5 | 0.0023 | 0.0002 | 0.0021 |
| 6 | 0.0023 | 0.0002 | 0.0021 |
| 7 | 0.0023 | 0.0002 | 0.0021 |
| 8 | 0.0024 | 0.0002 | 0.0021 |
| 9 | 0.0024 | 0.0002 | 0.0021 |
| 10 | 0.0024 | 0.0002 | 0.0021 |
| 11 | 0.0024 | 0.0002 | 0.0021 |
| 12 | 0.0024 | 0.0002 | 0.0021 |
| 13 | 0.0024 | 0.0002 | 0.0022 |
| 14 | 0.0024 | 0.0002 | 0.0022 |
| 15 | 0.0024 | 0.0002 | 0.0022 |
| 16 | 0.0024 | 0.0003 | 0.0022 |
| 17 | 0.0024 | 0.0003 | 0.0022 |
| 18 | 0.0025 | 0.0003 | 0.0022 |
| 19 | 0.0025 | 0.0003 | 0.0022 |
| 20 | 0.0025 | 0.0003 | 0.0022 |
| 21 | 0.0025 | 0.0003 | 0.0022 |
| 22 | 0.0025 | 0.0003 | 0.0022 |
| 23 | 0.0025 | 0.0003 | 0.0022 |
| 24 | 0.0025 | 0.0003 | 0.0023 |
| 25 | 0.0025 | 0.0003 | 0.0023 |
| 26 | 0.0025 | 0.0003 | 0.0023 |
| 27 | 0.0026 | 0.0003 | 0.0023 |
| 28 | 0.0026 | 0.0003 | 0.0023 |
| 29 | 0.0026 | 0.0003 | 0.0023 |
| 30 | 0.0026 | 0.0003 | 0.0023 |
| 31 | 0.0026 | 0.0003 | 0.0023 |
| 32 | 0.0026 | 0.0003 | 0.0023 |
| 33 | 0.0026 | 0.0003 | 0.0024 |
| 34 | 0.0026 | 0.0003 | 0.0024 |
| 35 | 0.0026 | 0.0003 | 0.0024 |
| 36 | 0.0027 | 0.0003 | 0.0024 |
| 37 | 0.0027 | 0.0003 | 0.0024 |
| 38 | 0.0027 | 0.0003 | 0.0024 |
| 39 | 0.0027 | 0.0003 | 0.0024 |

| | | | |
|---|---|---|---|
| 40 | 0.0027 | 0.0003 | 0.0024 |
| 41 | 0.0027 | 0.0003 | 0.0024 |
| 42 | 0.0027 | 0.0003 | 0.0025 |
| 43 | 0.0028 | 0.0003 | 0.0025 |
| 44 | 0.0028 | 0.0003 | 0.0025 |
| 45 | 0.0028 | 0.0003 | 0.0025 |
| 46 | 0.0028 | 0.0003 | 0.0025 |
| 47 | 0.0028 | 0.0003 | 0.0025 |
| 48 | 0.0028 | 0.0003 | 0.0025 |
| 49 | 0.0028 | 0.0003 | 0.0025 |
| 50 | 0.0028 | 0.0003 | 0.0026 |
| 51 | 0.0029 | 0.0003 | 0.0026 |
| 52 | 0.0029 | 0.0003 | 0.0026 |
| 53 | 0.0029 | 0.0003 | 0.0026 |
| 54 | 0.0029 | 0.0003 | 0.0026 |
| 55 | 0.0029 | 0.0003 | 0.0026 |
| 56 | 0.0029 | 0.0003 | 0.0026 |
| 57 | 0.0030 | 0.0003 | 0.0027 |
| 58 | 0.0030 | 0.0003 | 0.0027 |
| 59 | 0.0030 | 0.0003 | 0.0027 |
| 60 | 0.0030 | 0.0003 | 0.0027 |
| 61 | 0.0030 | 0.0003 | 0.0027 |
| 62 | 0.0030 | 0.0003 | 0.0027 |
| 63 | 0.0031 | 0.0003 | 0.0027 |
| 64 | 0.0031 | 0.0003 | 0.0028 |
| 65 | 0.0031 | 0.0003 | 0.0028 |
| 66 | 0.0031 | 0.0003 | 0.0028 |
| 67 | 0.0031 | 0.0003 | 0.0028 |
| 68 | 0.0032 | 0.0003 | 0.0028 |
| 69 | 0.0032 | 0.0003 | 0.0028 |
| 70 | 0.0032 | 0.0003 | 0.0029 |
| 71 | 0.0032 | 0.0003 | 0.0029 |
| 72 | 0.0032 | 0.0003 | 0.0029 |
| 73 | 0.0033 | 0.0003 | 0.0029 |
| 74 | 0.0033 | 0.0003 | 0.0029 |
| 75 | 0.0033 | 0.0003 | 0.0030 |
| 76 | 0.0033 | 0.0003 | 0.0030 |
| 77 | 0.0033 | 0.0003 | 0.0030 |
| 78 | 0.0034 | 0.0003 | 0.0030 |
| 79 | 0.0034 | 0.0003 | 0.0030 |
| 80 | 0.0034 | 0.0004 | 0.0030 |
| 81 | 0.0034 | 0.0004 | 0.0031 |
| 82 | 0.0034 | 0.0004 | 0.0031 |
| 83 | 0.0035 | 0.0004 | 0.0031 |
| 84 | 0.0035 | 0.0004 | 0.0031 |
| 85 | 0.0035 | 0.0004 | 0.0032 |
| 86 | 0.0035 | 0.0004 | 0.0032 |
| 87 | 0.0036 | 0.0004 | 0.0032 |
| 88 | 0.0036 | 0.0004 | 0.0032 |
| 89 | 0.0036 | 0.0004 | 0.0033 |
| 90 | 0.0036 | 0.0004 | 0.0033 |
| 91 | 0.0037 | 0.0004 | 0.0033 |
| 92 | 0.0037 | 0.0004 | 0.0033 |
| 93 | 0.0037 | 0.0004 | 0.0033 |
| 94 | 0.0038 | 0.0004 | 0.0034 |
| 95 | 0.0038 | 0.0004 | 0.0034 |
| 96 | 0.0038 | 0.0004 | 0.0034 |
| 97 | 0.0038 | 0.0004 | 0.0035 |
| 98 | 0.0039 | 0.0004 | 0.0035 |

| | | | |
|---|---|---|---|
| 99 | 0.0039 | 0.0004 | 0.0035 |
| 100 | 0.0039 | 0.0004 | 0.0035 |
| 101 | 0.0040 | 0.0004 | 0.0036 |
| 102 | 0.0040 | 0.0004 | 0.0036 |
| 103 | 0.0040 | 0.0004 | 0.0036 |
| 104 | 0.0041 | 0.0004 | 0.0036 |
| 105 | 0.0041 | 0.0004 | 0.0037 |
| 106 | 0.0041 | 0.0004 | 0.0037 |
| 107 | 0.0042 | 0.0004 | 0.0037 |
| 108 | 0.0042 | 0.0004 | 0.0038 |
| 109 | 0.0043 | 0.0004 | 0.0038 |
| 110 | 0.0043 | 0.0004 | 0.0038 |
| 111 | 0.0043 | 0.0004 | 0.0039 |
| 112 | 0.0044 | 0.0004 | 0.0039 |
| 113 | 0.0044 | 0.0005 | 0.0040 |
| 114 | 0.0044 | 0.0005 | 0.0040 |
| 115 | 0.0045 | 0.0005 | 0.0040 |
| 116 | 0.0045 | 0.0005 | 0.0041 |
| 117 | 0.0046 | 0.0005 | 0.0041 |
| 118 | 0.0046 | 0.0005 | 0.0041 |
| 119 | 0.0047 | 0.0005 | 0.0042 |
| 120 | 0.0047 | 0.0005 | 0.0042 |
| 121 | 0.0048 | 0.0005 | 0.0043 |
| 122 | 0.0048 | 0.0005 | 0.0043 |
| 123 | 0.0049 | 0.0005 | 0.0044 |
| 124 | 0.0049 | 0.0005 | 0.0044 |
| 125 | 0.0050 | 0.0005 | 0.0045 |
| 126 | 0.0050 | 0.0005 | 0.0045 |
| 127 | 0.0051 | 0.0005 | 0.0046 |
| 128 | 0.0051 | 0.0005 | 0.0046 |
| 129 | 0.0052 | 0.0005 | 0.0047 |
| 130 | 0.0053 | 0.0005 | 0.0047 |
| 131 | 0.0053 | 0.0006 | 0.0048 |
| 132 | 0.0054 | 0.0006 | 0.0048 |
| 133 | 0.0055 | 0.0006 | 0.0049 |
| 134 | 0.0055 | 0.0006 | 0.0050 |
| 135 | 0.0056 | 0.0006 | 0.0050 |
| 136 | 0.0057 | 0.0006 | 0.0051 |
| 137 | 0.0058 | 0.0006 | 0.0052 |
| 138 | 0.0058 | 0.0006 | 0.0052 |
| 139 | 0.0059 | 0.0006 | 0.0053 |
| 140 | 0.0060 | 0.0006 | 0.0054 |
| 141 | 0.0061 | 0.0006 | 0.0055 |
| 142 | 0.0062 | 0.0006 | 0.0055 |
| 143 | 0.0063 | 0.0006 | 0.0056 |
| 144 | 0.0063 | 0.0007 | 0.0057 |
| 145 | 0.0039 | 0.0004 | 0.0035 |
| 146 | 0.0040 | 0.0004 | 0.0036 |
| 147 | 0.0041 | 0.0004 | 0.0037 |
| 148 | 0.0041 | 0.0004 | 0.0037 |
| 149 | 0.0042 | 0.0004 | 0.0038 |
| 150 | 0.0043 | 0.0004 | 0.0038 |
| 151 | 0.0044 | 0.0005 | 0.0040 |
| 152 | 0.0045 | 0.0005 | 0.0040 |
| 153 | 0.0046 | 0.0005 | 0.0041 |
| 154 | 0.0047 | 0.0005 | 0.0042 |
| 155 | 0.0048 | 0.0005 | 0.0043 |
| 156 | 0.0049 | 0.0005 | 0.0044 |
| 157 | 0.0050 | 0.0005 | 0.0045 |

| | | | |
|---|---|---|---|
| 158 | 0.0051 | 0.0005 | 0.0046 |
| 159 | 0.0053 | 0.0005 | 0.0047 |
| 160 | 0.0054 | 0.0006 | 0.0048 |
| 161 | 0.0056 | 0.0006 | 0.0050 |
| 162 | 0.0057 | 0.0006 | 0.0051 |
| 163 | 0.0059 | 0.0006 | 0.0053 |
| 164 | 0.0060 | 0.0006 | 0.0054 |
| 165 | 0.0062 | 0.0006 | 0.0056 |
| 166 | 0.0064 | 0.0007 | 0.0057 |
| 167 | 0.0066 | 0.0007 | 0.0060 |
| 168 | 0.0068 | 0.0007 | 0.0061 |
| 169 | 0.0073 | 0.0008 | 0.0065 |
| 170 | 0.0075 | 0.0008 | 0.0067 |
| 171 | 0.0078 | 0.0008 | 0.0070 |
| 172 | 0.0081 | 0.0008 | 0.0072 |
| 173 | 0.0085 | 0.0009 | 0.0076 |
| 174 | 0.0088 | 0.0009 | 0.0079 |
| 175 | 0.0093 | 0.0010 | 0.0084 |
| 176 | 0.0096 | 0.0010 | 0.0086 |
| 177 | 0.0103 | 0.0011 | 0.0092 |
| 178 | 0.0107 | 0.0011 | 0.0096 |
| 179 | 0.0116 | 0.0012 | 0.0104 |
| 180 | 0.0121 | 0.0012 | 0.0108 |
| 181 | 0.0132 | 0.0014 | 0.0119 |
| 182 | 0.0139 | 0.0014 | 0.0125 |
| 183 | 0.0155 | 0.0016 | 0.0139 |
| 184 | 0.0165 | 0.0017 | 0.0148 |
| 185 | 0.0359 | 0.0036 | 0.0323 |
| 186 | 0.0383 | 0.0036 | 0.0347 |
| 187 | 0.0444 | 0.0036 | 0.0408 |
| 188 | 0.0484 | 0.0036 | 0.0449 |
| 189 | 0.0602 | 0.0036 | 0.0567 |
| 190 | 0.0694 | 0.0036 | 0.0658 |
| 191 | 0.1053 | 0.0036 | 0.1017 |
| 192 | 0.1528 | 0.0036 | 0.1492 |
| 193 | 0.6610 | 0.0036 | 0.6574 |
| 194 | 0.0828 | 0.0036 | 0.0793 |
| 195 | 0.0536 | 0.0036 | 0.0500 |
| 196 | 0.0410 | 0.0036 | 0.0375 |
| 197 | 0.0176 | 0.0018 | 0.0158 |
| 198 | 0.0146 | 0.0015 | 0.0131 |
| 199 | 0.0126 | 0.0013 | 0.0113 |
| 200 | 0.0111 | 0.0011 | 0.0100 |
| 201 | 0.0100 | 0.0010 | 0.0089 |
| 202 | 0.0090 | 0.0009 | 0.0081 |
| 203 | 0.0083 | 0.0009 | 0.0074 |
| 204 | 0.0076 | 0.0008 | 0.0069 |
| 205 | 0.0069 | 0.0007 | 0.0062 |
| 206 | 0.0065 | 0.0007 | 0.0058 |
| 207 | 0.0061 | 0.0006 | 0.0055 |
| 208 | 0.0058 | 0.0006 | 0.0052 |
| 209 | 0.0055 | 0.0006 | 0.0049 |
| 210 | 0.0052 | 0.0005 | 0.0047 |
| 211 | 0.0049 | 0.0005 | 0.0044 |
| 212 | 0.0047 | 0.0005 | 0.0042 |
| 213 | 0.0045 | 0.0005 | 0.0041 |
| 214 | 0.0043 | 0.0004 | 0.0039 |
| 215 | 0.0042 | 0.0004 | 0.0037 |
| 216 | 0.0040 | 0.0004 | 0.0036 |

| | | | |
|---|---|---|---|
| 217 | 0.0064 | 0.0007 | 0.0058 |
| 218 | 0.0062 | 0.0006 | 0.0056 |
| 219 | 0.0060 | 0.0006 | 0.0054 |
| 220 | 0.0059 | 0.0006 | 0.0053 |
| 221 | 0.0057 | 0.0006 | 0.0051 |
| 222 | 0.0056 | 0.0006 | 0.0050 |
| 223 | 0.0054 | 0.0006 | 0.0049 |
| 224 | 0.0053 | 0.0005 | 0.0048 |
| 225 | 0.0052 | 0.0005 | 0.0046 |
| 226 | 0.0051 | 0.0005 | 0.0045 |
| 227 | 0.0049 | 0.0005 | 0.0044 |
| 228 | 0.0048 | 0.0005 | 0.0043 |
| 229 | 0.0047 | 0.0005 | 0.0043 |
| 230 | 0.0046 | 0.0005 | 0.0042 |
| 231 | 0.0046 | 0.0005 | 0.0041 |
| 232 | 0.0045 | 0.0005 | 0.0040 |
| 233 | 0.0044 | 0.0005 | 0.0039 |
| 234 | 0.0043 | 0.0004 | 0.0039 |
| 235 | 0.0042 | 0.0004 | 0.0038 |
| 236 | 0.0042 | 0.0004 | 0.0037 |
| 237 | 0.0041 | 0.0004 | 0.0037 |
| 238 | 0.0040 | 0.0004 | 0.0036 |
| 239 | 0.0040 | 0.0004 | 0.0035 |
| 240 | 0.0039 | 0.0004 | 0.0035 |
| 241 | 0.0038 | 0.0004 | 0.0034 |
| 242 | 0.0038 | 0.0004 | 0.0034 |
| 243 | 0.0037 | 0.0004 | 0.0033 |
| 244 | 0.0037 | 0.0004 | 0.0033 |
| 245 | 0.0036 | 0.0004 | 0.0032 |
| 246 | 0.0036 | 0.0004 | 0.0032 |
| 247 | 0.0035 | 0.0004 | 0.0031 |
| 248 | 0.0035 | 0.0004 | 0.0031 |
| 249 | 0.0034 | 0.0004 | 0.0031 |
| 250 | 0.0034 | 0.0003 | 0.0030 |
| 251 | 0.0033 | 0.0003 | 0.0030 |
| 252 | 0.0033 | 0.0003 | 0.0029 |
| 253 | 0.0032 | 0.0003 | 0.0029 |
| 254 | 0.0032 | 0.0003 | 0.0029 |
| 255 | 0.0032 | 0.0003 | 0.0028 |
| 256 | 0.0031 | 0.0003 | 0.0028 |
| 257 | 0.0031 | 0.0003 | 0.0028 |
| 258 | 0.0031 | 0.0003 | 0.0027 |
| 259 | 0.0030 | 0.0003 | 0.0027 |
| 260 | 0.0030 | 0.0003 | 0.0027 |
| 261 | 0.0030 | 0.0003 | 0.0026 |
| 262 | 0.0029 | 0.0003 | 0.0026 |
| 263 | 0.0029 | 0.0003 | 0.0026 |
| 264 | 0.0029 | 0.0003 | 0.0026 |
| 265 | 0.0028 | 0.0003 | 0.0025 |
| 266 | 0.0028 | 0.0003 | 0.0025 |
| 267 | 0.0028 | 0.0003 | 0.0025 |
| 268 | 0.0027 | 0.0003 | 0.0025 |
| 269 | 0.0027 | 0.0003 | 0.0024 |
| 270 | 0.0027 | 0.0003 | 0.0024 |
| 271 | 0.0027 | 0.0003 | 0.0024 |
| 272 | 0.0026 | 0.0003 | 0.0024 |
| 273 | 0.0026 | 0.0003 | 0.0023 |
| 274 | 0.0026 | 0.0003 | 0.0023 |
| 275 | 0.0026 | 0.0003 | 0.0023 |

| | | | |
|---|---|---|---|
| 276 | 0.0025 | 0.0003 | 0.0023 |
| 277 | 0.0025 | 0.0003 | 0.0023 |
| 278 | 0.0025 | 0.0003 | 0.0022 |
| 279 | 0.0025 | 0.0003 | 0.0022 |
| 280 | 0.0025 | 0.0003 | 0.0022 |
| 281 | 0.0024 | 0.0003 | 0.0022 |
| 282 | 0.0024 | 0.0002 | 0.0022 |
| 283 | 0.0024 | 0.0002 | 0.0021 |
| 284 | 0.0024 | 0.0002 | 0.0021 |
| 285 | 0.0024 | 0.0002 | 0.0021 |
| 286 | 0.0023 | 0.0002 | 0.0021 |
| 287 | 0.0023 | 0.0002 | 0.0021 |
| 288 | 0.0023 | 0.0002 | 0.0021 |

Total soil rain loss = 0.17(In)
Total effective rainfall = 2.44(In)
Peak flow rate in flood hydrograph = 127.68(CFS)

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 50.0 | 100.0 | 150.0 | 200.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0001 | 0.01 | Q | | | | |
| 0+10 | 0.0003 | 0.03 | Q | | | | |
| 0+15 | 0.0008 | 0.07 | Q | | | | |
| 0+20 | 0.0016 | 0.12 | Q | | | | |
| 0+25 | 0.0028 | 0.18 | Q | | | | |
| 0+30 | 0.0046 | 0.26 | Q | | | | |
| 0+35 | 0.0073 | 0.38 | Q | | | | |
| 0+40 | 0.0111 | 0.56 | Q | | | | |
| 0+45 | 0.0165 | 0.79 | Q | | | | |
| 0+50 | 0.0234 | 1.00 | Q | | | | |
| 0+55 | 0.0315 | 1.18 | Q | | | | |
| 1+ 0 | 0.0407 | 1.33 | Q | | | | |
| 1+ 5 | 0.0507 | 1.46 | Q | | | | |
| 1+10 | 0.0615 | 1.57 | Q | | | | |
| 1+15 | 0.0730 | 1.66 | Q | | | | |
| 1+20 | 0.0850 | 1.74 | Q | | | | |
| 1+25 | 0.0975 | 1.82 | Q | | | | |
| 1+30 | 0.1105 | 1.88 | Q | | | | |
| 1+35 | 0.1239 | 1.95 | Q | | | | |
| 1+40 | 0.1377 | 2.00 | Q | | | | |
| 1+45 | 0.1518 | 2.06 | Q | | | | |
| 1+50 | 0.1663 | 2.11 | Q | | | | |
| 1+55 | 0.1812 | 2.15 | Q | | | | |
| 2+ 0 | 0.1963 | 2.20 | Q | | | | |
| 2+ 5 | 0.2117 | 2.24 | Q | | | | |
| 2+10 | 0.2274 | 2.28 | Q | | | | |
| 2+15 | 0.2434 | 2.32 | Q | | | | |
| 2+20 | 0.2595 | 2.35 | Q | | | | |
| 2+25 | 0.2760 | 2.38 | Q | | | | |
| 2+30 | 0.2926 | 2.42 | Q | | | | |
| 2+35 | 0.3095 | 2.45 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+40 | 0.3266 | 2.48 | Q | | | | |
| 2+45 | 0.3439 | 2.51 | Q | | | | |
| 2+50 | 0.3614 | 2.54 | Q | | | | |
| 2+55 | 0.3792 | 2.57 | Q | | | | |
| 3+ 0 | 0.3971 | 2.60 | Q | | | | |
| 3+ 5 | 0.4151 | 2.63 | Q | | | | |
| 3+10 | 0.4334 | 2.65 | Q | | | | |
| 3+15 | 0.4518 | 2.68 | Q | | | | |
| 3+20 | 0.4704 | 2.70 | Q | | | | |
| 3+25 | 0.4892 | 2.73 | Q | | | | |
| 3+30 | 0.5081 | 2.75 | Q | | | | |
| 3+35 | 0.5272 | 2.77 | Q | | | | |
| 3+40 | 0.5465 | 2.80 | QV | | | | |
| 3+45 | 0.5659 | 2.82 | QV | | | | |
| 3+50 | 0.5855 | 2.84 | QV | | | | |
| 3+55 | 0.6052 | 2.87 | QV | | | | |
| 4+ 0 | 0.6251 | 2.89 | QV | | | | |
| 4+ 5 | 0.6451 | 2.91 | QV | | | | |
| 4+10 | 0.6653 | 2.93 | QV | | | | |
| 4+15 | 0.6857 | 2.95 | QV | | | | |
| 4+20 | 0.7061 | 2.97 | QV | | | | |
| 4+25 | 0.7268 | 3.00 | QV | | | | |
| 4+30 | 0.7476 | 3.02 | QV | | | | |
| 4+35 | 0.7685 | 3.04 | QV | | | | |
| 4+40 | 0.7896 | 3.06 | QV | | | | |
| 4+45 | 0.8108 | 3.08 | QV | | | | |
| 4+50 | 0.8321 | 3.10 | QV | | | | |
| 4+55 | 0.8536 | 3.12 | QV | | | | |
| 5+ 0 | 0.8753 | 3.14 | QV | | | | |
| 5+ 5 | 0.8971 | 3.16 | QV | | | | |
| 5+10 | 0.9190 | 3.18 | QV | | | | |
| 5+15 | 0.9410 | 3.20 | QV | | | | |
| 5+20 | 0.9633 | 3.22 | QV | | | | |
| 5+25 | 0.9856 | 3.24 | QV | | | | |
| 5+30 | 1.0081 | 3.26 | QV | | | | |
| 5+35 | 1.0307 | 3.28 | QV | | | | |
| 5+40 | 1.0535 | 3.30 | QV | | | | |
| 5+45 | 1.0763 | 3.32 | QV | | | | |
| 5+50 | 1.0994 | 3.34 | Q V | | | | |
| 5+55 | 1.1225 | 3.37 | Q V | | | | |
| 6+ 0 | 1.1459 | 3.39 | Q V | | | | |
| 6+ 5 | 1.1693 | 3.41 | Q V | | | | |
| 6+10 | 1.1930 | 3.43 | Q V | | | | |
| 6+15 | 1.2167 | 3.45 | Q V | | | | |
| 6+20 | 1.2407 | 3.47 | Q V | | | | |
| 6+25 | 1.2648 | 3.50 | Q V | | | | |
| 6+30 | 1.2890 | 3.52 | Q V | | | | |
| 6+35 | 1.3134 | 3.54 | Q V | | | | |
| 6+40 | 1.3380 | 3.57 | Q V | | | | |
| 6+45 | 1.3627 | 3.59 | Q V | | | | |
| 6+50 | 1.3876 | 3.61 | Q V | | | | |
| 6+55 | 1.4126 | 3.64 | Q V | | | | |
| 7+ 0 | 1.4378 | 3.66 | Q V | | | | |
| 7+ 5 | 1.4632 | 3.68 | Q V | | | | |
| 7+10 | 1.4888 | 3.71 | Q V | | | | |
| 7+15 | 1.5145 | 3.73 | Q V | | | | |
| 7+20 | 1.5404 | 3.76 | Q V | | | | |
| 7+25 | 1.5664 | 3.78 | Q V | | | | |
| 7+30 | 1.5926 | 3.81 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7+35 | 1.6190 | 3.83 | Q V | \| | \| | \| | \| |
| 7+40 | 1.6456 | 3.86 | Q V | \| | \| | \| | \| |
| 7+45 | 1.6724 | 3.88 | Q V | \| | \| | \| | \| |
| 7+50 | 1.6993 | 3.91 | Q V | \| | \| | \| | \| |
| 7+55 | 1.7264 | 3.94 | Q V | \| | \| | \| | \| |
| 8+ 0 | 1.7537 | 3.96 | Q V | \| | \| | \| | \| |
| 8+ 5 | 1.7811 | 3.99 | Q V | \| | \| | \| | \| |
| 8+10 | 1.8088 | 4.02 | Q V | \| | \| | \| | \| |
| 8+15 | 1.8366 | 4.04 | Q V | \| | \| | \| | \| |
| 8+20 | 1.8647 | 4.07 | Q V | \| | \| | \| | \| |
| 8+25 | 1.8929 | 4.10 | Q V | \| | \| | \| | \| |
| 8+30 | 1.9214 | 4.13 | Q V | \| | \| | \| | \| |
| 8+35 | 1.9500 | 4.16 | Q V | \| | \| | \| | \| |
| 8+40 | 1.9788 | 4.19 | Q V | \| | \| | \| | \| |
| 8+45 | 2.0079 | 4.22 | Q V | \| | \| | \| | \| |
| 8+50 | 2.0372 | 4.25 | Q V | \| | \| | \| | \| |
| 8+55 | 2.0667 | 4.28 | Q V | \| | \| | \| | \| |
| 9+ 0 | 2.0964 | 4.31 | Q V | \| | \| | \| | \| |
| 9+ 5 | 2.1263 | 4.35 | Q V | \| | \| | \| | \| |
| 9+10 | 2.1565 | 4.38 | Q V | \| | \| | \| | \| |
| 9+15 | 2.1869 | 4.41 | Q V | \| | \| | \| | \| |
| 9+20 | 2.2175 | 4.45 | Q V | \| | \| | \| | \| |
| 9+25 | 2.2484 | 4.48 | Q V | \| | \| | \| | \| |
| 9+30 | 2.2795 | 4.52 | Q V | \| | \| | \| | \| |
| 9+35 | 2.3109 | 4.56 | Q V | \| | \| | \| | \| |
| 9+40 | 2.3426 | 4.59 | Q V | \| | \| | \| | \| |
| 9+45 | 2.3745 | 4.63 | Q V | \| | \| | \| | \| |
| 9+50 | 2.4066 | 4.67 | Q V | \| | \| | \| | \| |
| 9+55 | 2.4391 | 4.71 | Q V | \| | \| | \| | \| |
| 10+ 0 | 2.4718 | 4.75 | Q V | \| | \| | \| | \| |
| 10+ 5 | 2.5048 | 4.79 | Q V | \| | \| | \| | \| |
| 10+10 | 2.5381 | 4.83 | Q V | \| | \| | \| | \| |
| 10+15 | 2.5717 | 4.88 | Q V | \| | \| | \| | \| |
| 10+20 | 2.6056 | 4.92 | Q V | \| | \| | \| | \| |
| 10+25 | 2.6398 | 4.97 | Q V | \| | \| | \| | \| |
| 10+30 | 2.6743 | 5.01 | \|Q V | \| | \| | \| | \| |
| 10+35 | 2.7092 | 5.06 | \|Q V | \| | \| | \| | \| |
| 10+40 | 2.7443 | 5.11 | \|Q V | \| | \| | \| | \| |
| 10+45 | 2.7799 | 5.16 | \|Q V | \| | \| | \| | \| |
| 10+50 | 2.8157 | 5.21 | \|Q V | \| | \| | \| | \| |
| 10+55 | 2.8519 | 5.26 | \|Q V | \| | \| | \| | \| |
| 11+ 0 | 2.8885 | 5.31 | \|Q V | \| | \| | \| | \| |
| 11+ 5 | 2.9255 | 5.36 | \|Q V | \| | \| | \| | \| |
| 11+10 | 2.9628 | 5.42 | \|Q V | \| | \| | \| | \| |
| 11+15 | 3.0005 | 5.48 | \|Q V | \| | \| | \| | \| |
| 11+20 | 3.0386 | 5.53 | \|Q V | \| | \| | \| | \| |
| 11+25 | 3.0771 | 5.59 | \|Q V | \| | \| | \| | \| |
| 11+30 | 3.1161 | 5.65 | \|Q V | \| | \| | \| | \| |
| 11+35 | 3.1555 | 5.72 | \|Q V | \| | \| | \| | \| |
| 11+40 | 3.1953 | 5.78 | \|Q V | \| | \| | \| | \| |
| 11+45 | 3.2356 | 5.85 | \|Q V | \| | \| | \| | \| |
| 11+50 | 3.2763 | 5.92 | \|Q V | \| | \| | \| | \| |
| 11+55 | 3.3175 | 5.99 | \|Q V | \| | \| | \| | \| |
| 12+ 0 | 3.3592 | 6.06 | \|Q V | \| | \| | \| | \| |
| 12+ 5 | 3.4014 | 6.12 | \|Q V | \| | \| | \| | \| |
| 12+10 | 3.4439 | 6.17 | \|Q V | \| | \| | \| | \| |
| 12+15 | 3.4866 | 6.21 | \|Q V | \| | \| | \| | \| |
| 12+20 | 3.5296 | 6.23 | \|Q V | \| | \| | \| | \| |
| 12+25 | 3.5726 | 6.25 | \|Q V | \| | \| | \| | \| |

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12+30      3.6156     6.24  |Q    V   |          |          |          |
12+35      3.6582     6.19  |Q    V   |          |          |          |
12+40      3.7002     6.09  |Q    V   |          |          |          |
12+45      3.7409     5.92  |Q    V   |          |          |          |
12+50      3.7807     5.78  |Q    V   |          |          |          |
12+55      3.8197     5.66  |Q     V  |          |          |          |
13+ 0      3.8582     5.59  |Q     V  |          |          |          |
13+ 5      3.8964     5.54  |Q     V  |          |          |          |
13+10      3.9343     5.51  |Q     V  |          |          |          |
13+15      3.9723     5.51  |Q     V  |          |          |          |
13+20      4.0103     5.52  |Q     V  |          |          |          |
13+25      4.0485     5.55  |Q     V  |          |          |          |
13+30      4.0870     5.58  |Q     V  |          |          |          |
13+35      4.1257     5.62  |Q     V  |          |          |          |
13+40      4.1648     5.68  |Q     V  |          |          |          |
13+45      4.2044     5.74  |Q     V  |          |          |          |
13+50      4.2444     5.81  |Q     V  |          |          |          |
13+55      4.2850     5.89  |Q     V  |          |          |          |
14+ 0      4.3262     5.98  |Q     V  |          |          |          |
14+ 5      4.3681     6.08  |Q      V |          |          |          |
14+10      4.4107     6.19  |Q      V |          |          |          |
14+15      4.4542     6.32  |Q      V |          |          |          |
14+20      4.4986     6.45  |Q      V |          |          |          |
14+25      4.5441     6.59  |Q      V |          |          |          |
14+30      4.5905     6.75  |Q      V |          |          |          |
14+35      4.6382     6.93  |Q      V |          |          |          |
14+40      4.6872     7.12  |Q      V |          |          |          |
14+45      4.7377     7.33  |Q      V |          |          |          |
14+50      4.7898     7.56  |Q      V |          |          |          |
14+55      4.8435     7.80  |Q      V |          |          |          |
15+ 0      4.8991     8.07  |Q      V |          |          |          |
15+ 5      4.9567     8.37  |Q       V|          |          |          |
15+10      5.0165     8.69  |Q       V|          |          |          |
15+15      5.0788     9.04  |Q       V|          |          |          |
15+20      5.1438     9.43  |Q       V|          |          |          |
15+25      5.2123     9.95  |Q       V|          |          |          |
15+30      5.2854    10.62  | Q      V|          |          |          |
15+35      5.3646    11.50  | Q      V|          |          |          |
15+40      5.4512    12.58  | Q       V          |          |          |
15+45      5.5472    13.94  | Q       V          |          |          |
15+50      5.6550    15.65  |  Q      V          |          |          |
15+55      5.7801    18.16  |  Q      V          |          |          |
16+ 0      5.9298    21.75  |   Q     V          |          |          |
16+ 5      6.1306    29.15  |    Q    |V         |          |          |
16+10      6.3896    37.61  |      Q  |V         |          |          |
16+15      6.7099    46.51  |        Q| V        |          |          |
16+20      7.0895    55.11  |         |Q V       |          |          |
16+25      7.5304    64.02  |         | QV       |          |          |
16+30      8.0459    74.86  |         |   Q      |          |          |
16+35      8.6927    93.90  |         |    V  Q  |          |          |
16+40      9.4589   111.26  |         |      V   | Q        |          |
16+45     10.3382   127.68  |         |       V  |    Q     |          |
16+50     11.1556   118.67  |         |         V  Q        |          |
16+55     11.8901   106.65  |         |          |Q         |          |
17+ 0     12.5254    92.25  |         |       Q  | V        |          |
17+ 5     13.0829    80.94  |         |     Q    |   V      |          |
17+10     13.5704    70.79  |         |   Q      |   V      |          |
17+15     13.9924    61.26  |         | Q        |    V     |          |
17+20     14.3673    54.44  |         Q          |     V    |          |
```

| | | | | | | |
|---|---|---|---|---|---|---|
| 17+25 | 14.7076 | 49.41 | Q | | V | |
| 17+30 | 15.0200 | 45.37 | Q | | V | |
| 17+35 | 15.3103 | 42.15 | Q | | V | |
| 17+40 | 15.5766 | 38.66 | Q | | V | |
| 17+45 | 15.8227 | 35.74 | Q | | V | |
| 17+50 | 16.0517 | 33.24 | Q | | V | |
| 17+55 | 16.2685 | 31.48 | Q | | V | |
| 18+ 0 | 16.4711 | 29.42 | Q | | V | |
| 18+ 5 | 16.6562 | 26.88 | Q | | V | |
| 18+10 | 16.8343 | 25.85 | Q | | V | |
| 18+15 | 17.0025 | 24.43 | Q | | V | |
| 18+20 | 17.1595 | 22.79 | Q | | V | |
| 18+25 | 17.3119 | 22.12 | Q | | V | |
| 18+30 | 17.4579 | 21.20 | Q | | V | |
| 18+35 | 17.5977 | 20.31 | Q | | V | |
| 18+40 | 17.7345 | 19.86 | Q | | V | |
| 18+45 | 17.8651 | 18.96 | Q | | V | |
| 18+50 | 17.9901 | 18.15 | Q | | V | |
| 18+55 | 18.1120 | 17.70 | Q | | V | |
| 19+ 0 | 18.2257 | 16.52 | Q | | V | |
| 19+ 5 | 18.3340 | 15.73 | Q | | V | |
| 19+10 | 18.4401 | 15.41 | Q | | V | |
| 19+15 | 18.5431 | 14.95 | Q | | V | |
| 19+20 | 18.6436 | 14.60 | Q | | V | |
| 19+25 | 18.7419 | 14.27 | Q | | V | |
| 19+30 | 18.8357 | 13.63 | Q | | V | |
| 19+35 | 18.9271 | 13.26 | Q | | V | |
| 19+40 | 19.0164 | 12.98 | Q | | V | |
| 19+45 | 19.1028 | 12.54 | Q | | V | |
| 19+50 | 19.1870 | 12.23 | Q | | V | |
| 19+55 | 19.2686 | 11.85 | Q | | V | |
| 20+ 0 | 19.3453 | 11.13 | Q | | V | |
| 20+ 5 | 19.4200 | 10.85 | Q | | V | |
| 20+10 | 19.4934 | 10.65 | Q | | V | |
| 20+15 | 19.5654 | 10.46 | Q | | V | |
| 20+20 | 19.6359 | 10.24 | Q | | V | |
| 20+25 | 19.7039 | 9.88 | Q | | V | |
| 20+30 | 19.7682 | 9.33 | Q | | V | |
| 20+35 | 19.8310 | 9.13 | Q | | V | |
| 20+40 | 19.8927 | 8.96 | Q | | V | |
| 20+45 | 19.9532 | 8.78 | Q | | V | |
| 20+50 | 20.0122 | 8.57 | Q | | V | |
| 20+55 | 20.0684 | 8.15 | Q | | V | |
| 21+ 0 | 20.1213 | 7.68 | Q | | V | |
| 21+ 5 | 20.1730 | 7.51 | Q | | V | |
| 21+10 | 20.2237 | 7.36 | Q | | V | |
| 21+15 | 20.2733 | 7.21 | Q | | V | |
| 21+20 | 20.3217 | 7.02 | Q | | V | |
| 21+25 | 20.3669 | 6.56 | Q | | V | |
| 21+30 | 20.4099 | 6.24 | Q | | V | |
| 21+35 | 20.4521 | 6.13 | Q | | V | |
| 21+40 | 20.4937 | 6.05 | Q | | V | |
| 21+45 | 20.5350 | 5.99 | Q | | V | |
| 21+50 | 20.5760 | 5.96 | Q | | V | |
| 21+55 | 20.6174 | 6.01 | Q | | V | |
| 22+ 0 | 20.6586 | 5.99 | Q | | V | |
| 22+ 5 | 20.6995 | 5.94 | Q | | V | |
| 22+10 | 20.7400 | 5.88 | Q | | V | |
| 22+15 | 20.7801 | 5.82 | Q | | V | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+20 | 20.8197 | 5.75 | \|Q | \| | \| | \| | V \| |
| 22+25 | 20.8588 | 5.67 | \|Q | \| | \| | \| | V \| |
| 22+30 | 20.8973 | 5.60 | \|Q | \| | \| | \| | V \| |
| 22+35 | 20.9353 | 5.52 | \|Q | \| | \| | \| | V \| |
| 22+40 | 20.9726 | 5.42 | \|Q | \| | \| | \| | V \| |
| 22+45 | 21.0092 | 5.31 | \|Q | \| | \| | \| | V \| |
| 22+50 | 21.0443 | 5.09 | \|Q | \| | \| | \| | V \| |
| 22+55 | 21.0768 | 4.73 | Q | \| | \| | \| | V \| |
| 23+ 0 | 21.1085 | 4.60 | Q | \| | \| | \| | V \| |
| 23+ 5 | 21.1396 | 4.51 | Q | \| | \| | \| | V \| |
| 23+10 | 21.1701 | 4.43 | Q | \| | \| | \| | V \| |
| 23+15 | 21.2001 | 4.36 | Q | \| | \| | \| | V \| |
| 23+20 | 21.2296 | 4.27 | Q | \| | \| | \| | V \| |
| 23+25 | 21.2584 | 4.18 | Q | \| | \| | \| | V\| |
| 23+30 | 21.2863 | 4.06 | Q | \| | \| | \| | V\| |
| 23+35 | 21.3120 | 3.74 | Q | \| | \| | \| | V\| |
| 23+40 | 21.3358 | 3.45 | Q | \| | \| | \| | V\| |
| 23+45 | 21.3590 | 3.37 | Q | \| | \| | \| | V\| |
| 23+50 | 21.3818 | 3.31 | Q | \| | \| | \| | V\| |
| 23+55 | 21.4043 | 3.26 | Q | \| | \| | \| | V\| |
| 24+ 0 | 21.4265 | 3.22 | Q | \| | \| | \| | V\| |
| 24+ 5 | 21.4484 | 3.18 | Q | \| | \| | \| | V\| |
| 24+10 | 21.4699 | 3.12 | Q | \| | \| | \| | V\| |
| 24+15 | 21.4909 | 3.05 | Q | \| | \| | \| | V\| |
| 24+20 | 21.5113 | 2.97 | Q | \| | \| | \| | V\| |
| 24+25 | 21.5312 | 2.88 | Q | \| | \| | \| | V\| |
| 24+30 | 21.5503 | 2.78 | Q | \| | \| | \| | V\| |
| 24+35 | 21.5684 | 2.63 | Q | \| | \| | \| | V\| |
| 24+40 | 21.5851 | 2.43 | Q | \| | \| | \| | V\| |
| 24+45 | 21.6001 | 2.18 | Q | \| | \| | \| | V\| |
| 24+50 | 21.6136 | 1.95 | Q | \| | \| | \| | V\| |
| 24+55 | 21.6257 | 1.76 | Q | \| | \| | \| | V\| |
| 25+ 0 | 21.6366 | 1.59 | Q | \| | \| | \| | V\| |
| 25+ 5 | 21.6467 | 1.45 | Q | \| | \| | \| | V\| |
| 25+10 | 21.6559 | 1.34 | Q | \| | \| | \| | V\| |
| 25+15 | 21.6644 | 1.24 | Q | \| | \| | \| | V\| |
| 25+20 | 21.6723 | 1.15 | Q | \| | \| | \| | V\| |
| 25+25 | 21.6797 | 1.07 | Q | \| | \| | \| | V\| |
| 25+30 | 21.6866 | 1.01 | Q | \| | \| | \| | V\| |
| 25+35 | 21.6931 | 0.94 | Q | \| | \| | \| | V\| |
| 25+40 | 21.6992 | 0.88 | Q | \| | \| | \| | V\| |
| 25+45 | 21.7049 | 0.83 | Q | \| | \| | \| | V\| |
| 25+50 | 21.7102 | 0.78 | Q | \| | \| | \| | V\| |
| 25+55 | 21.7152 | 0.73 | Q | \| | \| | \| | V\| |
| 26+ 0 | 21.7200 | 0.69 | Q | \| | \| | \| | V\| |
| 26+ 5 | 21.7244 | 0.65 | Q | \| | \| | \| | V\| |
| 26+10 | 21.7286 | 0.61 | Q | \| | \| | \| | V\| |
| 26+15 | 21.7326 | 0.58 | Q | \| | \| | \| | V\| |
| 26+20 | 21.7364 | 0.55 | Q | \| | \| | \| | V\| |
| 26+25 | 21.7399 | 0.52 | Q | \| | \| | \| | V\| |
| 26+30 | 21.7433 | 0.49 | Q | \| | \| | \| | V\| |
| 26+35 | 21.7465 | 0.46 | Q | \| | \| | \| | V\| |
| 26+40 | 21.7494 | 0.43 | Q | \| | \| | \| | V\| |
| 26+45 | 21.7523 | 0.41 | Q | \| | \| | \| | V\| |
| 26+50 | 21.7549 | 0.39 | Q | \| | \| | \| | V\| |
| 26+55 | 21.7574 | 0.36 | Q | \| | \| | \| | V\| |
| 27+ 0 | 21.7598 | 0.35 | Q | \| | \| | \| | V\| |
| 27+ 5 | 21.7621 | 0.33 | Q | \| | \| | \| | V\| |
| 27+10 | 21.7642 | 0.31 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 27+15 | 21.7663 | 0.30 | Q | \| | \| | \| | V\| |
| 27+20 | 21.7682 | 0.28 | Q | \| | \| | \| | V\| |
| 27+25 | 21.7700 | 0.26 | Q | \| | \| | \| | V\| |
| 27+30 | 21.7717 | 0.25 | Q | \| | \| | \| | V\| |
| 27+35 | 21.7733 | 0.24 | Q | \| | \| | \| | V\| |
| 27+40 | 21.7749 | 0.22 | Q | \| | \| | \| | V\| |
| 27+45 | 21.7763 | 0.21 | Q | \| | \| | \| | V\| |
| 27+50 | 21.7777 | 0.20 | Q | \| | \| | \| | V\| |
| 27+55 | 21.7790 | 0.19 | Q | \| | \| | \| | V\| |
| 28+ 0 | 21.7802 | 0.18 | Q | \| | \| | \| | V\| |
| 28+ 5 | 21.7814 | 0.17 | Q | \| | \| | \| | V\| |
| 28+10 | 21.7825 | 0.16 | Q | \| | \| | \| | V\| |
| 28+15 | 21.7835 | 0.15 | Q | \| | \| | \| | V\| |
| 28+20 | 21.7845 | 0.14 | Q | \| | \| | \| | V\| |
| 28+25 | 21.7854 | 0.13 | Q | \| | \| | \| | V\| |
| 28+30 | 21.7862 | 0.12 | Q | \| | \| | \| | V\| |
| 28+35 | 21.7870 | 0.12 | Q | \| | \| | \| | V\| |
| 28+40 | 21.7878 | 0.11 | Q | \| | \| | \| | V\| |
| 28+45 | 21.7885 | 0.10 | Q | \| | \| | \| | V\| |
| 28+50 | 21.7891 | 0.10 | Q | \| | \| | \| | V\| |
| 28+55 | 21.7898 | 0.09 | Q | \| | \| | \| | V\| |
| 29+ 0 | 21.7904 | 0.09 | Q | \| | \| | \| | V\| |
| 29+ 5 | 21.7909 | 0.08 | Q | \| | \| | \| | V\| |
| 29+10 | 21.7914 | 0.08 | Q | \| | \| | \| | V\| |
| 29+15 | 21.7919 | 0.07 | Q | \| | \| | \| | V\| |
| 29+20 | 21.7924 | 0.07 | Q | \| | \| | \| | V\| |
| 29+25 | 21.7928 | 0.06 | Q | \| | \| | \| | V\| |
| 29+30 | 21.7932 | 0.06 | Q | \| | \| | \| | V\| |
| 29+35 | 21.7936 | 0.06 | Q | \| | \| | \| | V\| |
| 29+40 | 21.7940 | 0.05 | Q | \| | \| | \| | V\| |
| 29+45 | 21.7943 | 0.05 | Q | \| | \| | \| | V\| |
| 29+50 | 21.7947 | 0.05 | Q | \| | \| | \| | V\| |
| 29+55 | 21.7950 | 0.05 | Q | \| | \| | \| | V\| |
| 30+ 0 | 21.7953 | 0.04 | Q | \| | \| | \| | V\| |
| 30+ 5 | 21.7955 | 0.04 | Q | \| | \| | \| | V\| |
| 30+10 | 21.7958 | 0.04 | Q | \| | \| | \| | V\| |
| 30+15 | 21.7960 | 0.03 | Q | \| | \| | \| | V\| |
| 30+20 | 21.7962 | 0.03 | Q | \| | \| | \| | V\| |
| 30+25 | 21.7964 | 0.03 | Q | \| | \| | \| | V\| |
| 30+30 | 21.7966 | 0.02 | Q | \| | \| | \| | V\| |
| 30+35 | 21.7967 | 0.02 | Q | \| | \| | \| | V\| |
| 30+40 | 21.7968 | 0.02 | Q | \| | \| | \| | V\| |
| 30+45 | 21.7969 | 0.02 | Q | \| | \| | \| | V\| |
| 30+50 | 21.7970 | 0.01 | Q | \| | \| | \| | V\| |
| 30+55 | 21.7971 | 0.01 | Q | \| | \| | \| | V\| |
| 31+ 0 | 21.7972 | 0.01 | Q | \| | \| | \| | V\| |
| 31+ 5 | 21.7972 | 0.01 | Q | \| | \| | \| | V\| |
| 31+10 | 21.7973 | 0.01 | Q | \| | \| | \| | V\| |
| 31+15 | 21.7973 | 0.01 | Q | \| | \| | \| | V\| |
| 31+20 | 21.7973 | 0.00 | Q | \| | \| | \| | V\| |
| 31+25 | 21.7973 | 0.00 | Q | \| | \| | \| | V\| |
| 31+30 | 21.7973 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 35
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 33.10 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 33.10 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 33.10 | 24 | 2.62 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 91.0 | 98.2 | 33.10 | 1.000 | 0.036 | 0.900 | 0.032 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.032

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 29.79 | 0.900 | 91.0 | 98.2 | 0.18 | 0.921 |
| 3.31 | 0.100 | 98.0 | 98.0 | 0.20 | 0.912 |

Area-averaged catchment yield fraction, Y = 0.920
Area-averaged low loss fraction, Yb = 0.080
User entry of time of concentration = 0.580 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 33.10(Ac.)
Catchment Lag time = 0.464 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 17.9598
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.032(In/Hr)
Average low loss rate fraction (Yb) = 0.080 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.651(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.620(In)

Rainfall depth area reduction factors:
Using a total area of 33.10(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.659(In)
30-minute factor = 0.998 Adjusted rainfall = 1.127(In)
1-hour factor = 0.998 Adjusted rainfall = 1.388(In)
3-hour factor = 1.000 Adjusted rainfall = 1.650(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.620(In)
---------------------------------------------------------------------

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 400.30 (CFS)) | |
| 1 | 0.857 | 3.429 |
| 2 | 3.791 | 11.748 |
| 3 | 8.920 | 20.529 |
| 4 | 19.662 | 43.003 |
| 5 | 36.203 | 66.211 |
| 6 | 49.017 | 51.298 |
| 7 | 58.041 | 36.124 |
| 8 | 64.275 | 24.953 |
| 9 | 69.111 | 19.360 |
| 10 | 73.109 | 16.002 |
| 11 | 76.367 | 13.044 |
| 12 | 79.157 | 11.168 |
| 13 | 81.486 | 9.322 |

| | | |
|---|---|---|
| 14 | 83.485 | 8.002 |
| 15 | 85.300 | 7.267 |
| 16 | 86.956 | 6.630 |
| 17 | 88.391 | 5.744 |
| 18 | 89.558 | 4.670 |
| 19 | 90.606 | 4.196 |
| 20 | 91.593 | 3.952 |
| 21 | 92.472 | 3.517 |
| 22 | 93.290 | 3.275 |
| 23 | 94.033 | 2.973 |
| 24 | 94.650 | 2.471 |
| 25 | 95.260 | 2.444 |
| 26 | 95.807 | 2.188 |
| 27 | 96.274 | 1.870 |
| 28 | 96.739 | 1.862 |
| 29 | 97.113 | 1.497 |
| 30 | 97.437 | 1.294 |
| 31 | 97.750 | 1.253 |
| 32 | 97.957 | 0.831 |
| 33 | 98.137 | 0.719 |
| 34 | 98.323 | 0.744 |
| 35 | 98.535 | 0.851 |
| 36 | 98.751 | 0.863 |
| 37 | 98.966 | 0.863 |
| 38 | 99.182 | 0.863 |
| 39 | 99.397 | 0.863 |
| 40 | 99.559 | 0.646 |
| 41 | 99.671 | 0.449 |
| 42 | 99.783 | 0.449 |
| 43 | 99.896 | 0.449 |
| 44 | 100.000 | 0.418 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6585 | 0.6585 |
| 2 | 0.8108 | 0.1522 |
| 3 | 0.9156 | 0.1049 |
| 4 | 0.9982 | 0.0825 |
| 5 | 1.0673 | 0.0691 |
| 6 | 1.1273 | 0.0600 |
| 7 | 1.1806 | 0.0534 |
| 8 | 1.2289 | 0.0483 |
| 9 | 1.2731 | 0.0442 |
| 10 | 1.3140 | 0.0409 |
| 11 | 1.3521 | 0.0381 |
| 12 | 1.3878 | 0.0358 |
| 13 | 1.4055 | 0.0176 |
| 14 | 1.4220 | 0.0165 |
| 15 | 1.4376 | 0.0156 |
| 16 | 1.4523 | 0.0147 |
| 17 | 1.4662 | 0.0140 |
| 18 | 1.4795 | 0.0133 |
| 19 | 1.4922 | 0.0127 |
| 20 | 1.5043 | 0.0121 |
| 21 | 1.5159 | 0.0116 |
| 22 | 1.5271 | 0.0112 |
| 23 | 1.5379 | 0.0107 |
| 24 | 1.5482 | 0.0104 |
| 25 | 1.5582 | 0.0100 |

| | | |
|---|---|---|
| 26 | 1.5679 | 0.0097 |
| 27 | 1.5773 | 0.0094 |
| 28 | 1.5863 | 0.0091 |
| 29 | 1.5951 | 0.0088 |
| 30 | 1.6037 | 0.0086 |
| 31 | 1.6120 | 0.0083 |
| 32 | 1.6201 | 0.0081 |
| 33 | 1.6280 | 0.0079 |
| 34 | 1.6357 | 0.0077 |
| 35 | 1.6432 | 0.0075 |
| 36 | 1.6505 | 0.0073 |
| 37 | 1.6576 | 0.0071 |
| 38 | 1.6645 | 0.0069 |
| 39 | 1.6713 | 0.0068 |
| 40 | 1.6780 | 0.0066 |
| 41 | 1.6845 | 0.0065 |
| 42 | 1.6908 | 0.0064 |
| 43 | 1.6971 | 0.0062 |
| 44 | 1.7032 | 0.0061 |
| 45 | 1.7092 | 0.0060 |
| 46 | 1.7151 | 0.0059 |
| 47 | 1.7209 | 0.0058 |
| 48 | 1.7266 | 0.0057 |
| 49 | 1.7322 | 0.0056 |
| 50 | 1.7377 | 0.0055 |
| 51 | 1.7431 | 0.0054 |
| 52 | 1.7484 | 0.0053 |
| 53 | 1.7536 | 0.0052 |
| 54 | 1.7587 | 0.0051 |
| 55 | 1.7638 | 0.0051 |
| 56 | 1.7688 | 0.0050 |
| 57 | 1.7737 | 0.0049 |
| 58 | 1.7785 | 0.0048 |
| 59 | 1.7833 | 0.0048 |
| 60 | 1.7880 | 0.0047 |
| 61 | 1.7926 | 0.0046 |
| 62 | 1.7972 | 0.0046 |
| 63 | 1.8017 | 0.0045 |
| 64 | 1.8062 | 0.0045 |
| 65 | 1.8106 | 0.0044 |
| 66 | 1.8149 | 0.0043 |
| 67 | 1.8192 | 0.0043 |
| 68 | 1.8234 | 0.0042 |
| 69 | 1.8276 | 0.0042 |
| 70 | 1.8317 | 0.0041 |
| 71 | 1.8358 | 0.0041 |
| 72 | 1.8398 | 0.0040 |
| 73 | 1.8463 | 0.0065 |
| 74 | 1.8527 | 0.0064 |
| 75 | 1.8591 | 0.0064 |
| 76 | 1.8653 | 0.0063 |
| 77 | 1.8716 | 0.0062 |
| 78 | 1.8777 | 0.0062 |
| 79 | 1.8839 | 0.0061 |
| 80 | 1.8899 | 0.0061 |
| 81 | 1.8959 | 0.0060 |
| 82 | 1.9018 | 0.0059 |
| 83 | 1.9077 | 0.0059 |
| 84 | 1.9136 | 0.0058 |

| | | |
|---|---|---|
| 85 | 1.9193 | 0.0058 |
| 86 | 1.9251 | 0.0057 |
| 87 | 1.9308 | 0.0057 |
| 88 | 1.9364 | 0.0056 |
| 89 | 1.9420 | 0.0056 |
| 90 | 1.9475 | 0.0055 |
| 91 | 1.9530 | 0.0055 |
| 92 | 1.9585 | 0.0054 |
| 93 | 1.9639 | 0.0054 |
| 94 | 1.9692 | 0.0054 |
| 95 | 1.9746 | 0.0053 |
| 96 | 1.9798 | 0.0053 |
| 97 | 1.9851 | 0.0052 |
| 98 | 1.9903 | 0.0052 |
| 99 | 1.9954 | 0.0052 |
| 100 | 2.0006 | 0.0051 |
| 101 | 2.0056 | 0.0051 |
| 102 | 2.0107 | 0.0050 |
| 103 | 2.0157 | 0.0050 |
| 104 | 2.0207 | 0.0050 |
| 105 | 2.0256 | 0.0049 |
| 106 | 2.0305 | 0.0049 |
| 107 | 2.0354 | 0.0049 |
| 108 | 2.0402 | 0.0048 |
| 109 | 2.0450 | 0.0048 |
| 110 | 2.0498 | 0.0048 |
| 111 | 2.0545 | 0.0047 |
| 112 | 2.0592 | 0.0047 |
| 113 | 2.0639 | 0.0047 |
| 114 | 2.0685 | 0.0046 |
| 115 | 2.0731 | 0.0046 |
| 116 | 2.0777 | 0.0046 |
| 117 | 2.0823 | 0.0046 |
| 118 | 2.0868 | 0.0045 |
| 119 | 2.0913 | 0.0045 |
| 120 | 2.0957 | 0.0045 |
| 121 | 2.1002 | 0.0044 |
| 122 | 2.1046 | 0.0044 |
| 123 | 2.1090 | 0.0044 |
| 124 | 2.1133 | 0.0044 |
| 125 | 2.1177 | 0.0043 |
| 126 | 2.1220 | 0.0043 |
| 127 | 2.1263 | 0.0043 |
| 128 | 2.1305 | 0.0043 |
| 129 | 2.1348 | 0.0042 |
| 130 | 2.1390 | 0.0042 |
| 131 | 2.1431 | 0.0042 |
| 132 | 2.1473 | 0.0042 |
| 133 | 2.1514 | 0.0041 |
| 134 | 2.1556 | 0.0041 |
| 135 | 2.1596 | 0.0041 |
| 136 | 2.1637 | 0.0041 |
| 137 | 2.1678 | 0.0040 |
| 138 | 2.1718 | 0.0040 |
| 139 | 2.1758 | 0.0040 |
| 140 | 2.1798 | 0.0040 |
| 141 | 2.1837 | 0.0040 |
| 142 | 2.1877 | 0.0039 |
| 143 | 2.1916 | 0.0039 |

| | | |
|---|---|---|
| 144 | 2.1955 | 0.0039 |
| 145 | 2.1994 | 0.0039 |
| 146 | 2.2032 | 0.0039 |
| 147 | 2.2070 | 0.0038 |
| 148 | 2.2109 | 0.0038 |
| 149 | 2.2147 | 0.0038 |
| 150 | 2.2184 | 0.0038 |
| 151 | 2.2222 | 0.0038 |
| 152 | 2.2259 | 0.0037 |
| 153 | 2.2297 | 0.0037 |
| 154 | 2.2334 | 0.0037 |
| 155 | 2.2371 | 0.0037 |
| 156 | 2.2407 | 0.0037 |
| 157 | 2.2444 | 0.0037 |
| 158 | 2.2480 | 0.0036 |
| 159 | 2.2516 | 0.0036 |
| 160 | 2.2553 | 0.0036 |
| 161 | 2.2588 | 0.0036 |
| 162 | 2.2624 | 0.0036 |
| 163 | 2.2660 | 0.0036 |
| 164 | 2.2695 | 0.0035 |
| 165 | 2.2730 | 0.0035 |
| 166 | 2.2765 | 0.0035 |
| 167 | 2.2800 | 0.0035 |
| 168 | 2.2835 | 0.0035 |
| 169 | 2.2869 | 0.0035 |
| 170 | 2.2904 | 0.0034 |
| 171 | 2.2938 | 0.0034 |
| 172 | 2.2972 | 0.0034 |
| 173 | 2.3006 | 0.0034 |
| 174 | 2.3040 | 0.0034 |
| 175 | 2.3074 | 0.0034 |
| 176 | 2.3107 | 0.0034 |
| 177 | 2.3141 | 0.0033 |
| 178 | 2.3174 | 0.0033 |
| 179 | 2.3207 | 0.0033 |
| 180 | 2.3240 | 0.0033 |
| 181 | 2.3273 | 0.0033 |
| 182 | 2.3306 | 0.0033 |
| 183 | 2.3338 | 0.0033 |
| 184 | 2.3371 | 0.0032 |
| 185 | 2.3403 | 0.0032 |
| 186 | 2.3435 | 0.0032 |
| 187 | 2.3467 | 0.0032 |
| 188 | 2.3499 | 0.0032 |
| 189 | 2.3531 | 0.0032 |
| 190 | 2.3563 | 0.0032 |
| 191 | 2.3594 | 0.0032 |
| 192 | 2.3626 | 0.0031 |
| 193 | 2.3657 | 0.0031 |
| 194 | 2.3688 | 0.0031 |
| 195 | 2.3719 | 0.0031 |
| 196 | 2.3750 | 0.0031 |
| 197 | 2.3781 | 0.0031 |
| 198 | 2.3812 | 0.0031 |
| 199 | 2.3842 | 0.0031 |
| 200 | 2.3873 | 0.0030 |
| 201 | 2.3903 | 0.0030 |
| 202 | 2.3934 | 0.0030 |

| | | |
|---|---|---|
| 203 | 2.3964 | 0.0030 |
| 204 | 2.3994 | 0.0030 |
| 205 | 2.4024 | 0.0030 |
| 206 | 2.4053 | 0.0030 |
| 207 | 2.4083 | 0.0030 |
| 208 | 2.4113 | 0.0030 |
| 209 | 2.4142 | 0.0030 |
| 210 | 2.4172 | 0.0029 |
| 211 | 2.4201 | 0.0029 |
| 212 | 2.4230 | 0.0029 |
| 213 | 2.4259 | 0.0029 |
| 214 | 2.4288 | 0.0029 |
| 215 | 2.4317 | 0.0029 |
| 216 | 2.4346 | 0.0029 |
| 217 | 2.4375 | 0.0029 |
| 218 | 2.4403 | 0.0029 |
| 219 | 2.4432 | 0.0028 |
| 220 | 2.4460 | 0.0028 |
| 221 | 2.4488 | 0.0028 |
| 222 | 2.4517 | 0.0028 |
| 223 | 2.4545 | 0.0028 |
| 224 | 2.4573 | 0.0028 |
| 225 | 2.4601 | 0.0028 |
| 226 | 2.4629 | 0.0028 |
| 227 | 2.4656 | 0.0028 |
| 228 | 2.4684 | 0.0028 |
| 229 | 2.4711 | 0.0028 |
| 230 | 2.4739 | 0.0027 |
| 231 | 2.4766 | 0.0027 |
| 232 | 2.4794 | 0.0027 |
| 233 | 2.4821 | 0.0027 |
| 234 | 2.4848 | 0.0027 |
| 235 | 2.4875 | 0.0027 |
| 236 | 2.4902 | 0.0027 |
| 237 | 2.4929 | 0.0027 |
| 238 | 2.4956 | 0.0027 |
| 239 | 2.4982 | 0.0027 |
| 240 | 2.5009 | 0.0027 |
| 241 | 2.5035 | 0.0027 |
| 242 | 2.5062 | 0.0026 |
| 243 | 2.5088 | 0.0026 |
| 244 | 2.5114 | 0.0026 |
| 245 | 2.5141 | 0.0026 |
| 246 | 2.5167 | 0.0026 |
| 247 | 2.5193 | 0.0026 |
| 248 | 2.5219 | 0.0026 |
| 249 | 2.5245 | 0.0026 |
| 250 | 2.5271 | 0.0026 |
| 251 | 2.5296 | 0.0026 |
| 252 | 2.5322 | 0.0026 |
| 253 | 2.5348 | 0.0026 |
| 254 | 2.5373 | 0.0026 |
| 255 | 2.5398 | 0.0025 |
| 256 | 2.5424 | 0.0025 |
| 257 | 2.5449 | 0.0025 |
| 258 | 2.5474 | 0.0025 |
| 259 | 2.5499 | 0.0025 |
| 260 | 2.5525 | 0.0025 |
| 261 | 2.5550 | 0.0025 |

| | | |
|---|---|---|
| 262 | 2.5574 | 0.0025 |
| 263 | 2.5599 | 0.0025 |
| 264 | 2.5624 | 0.0025 |
| 265 | 2.5649 | 0.0025 |
| 266 | 2.5673 | 0.0025 |
| 267 | 2.5698 | 0.0025 |
| 268 | 2.5723 | 0.0025 |
| 269 | 2.5747 | 0.0024 |
| 270 | 2.5771 | 0.0024 |
| 271 | 2.5796 | 0.0024 |
| 272 | 2.5820 | 0.0024 |
| 273 | 2.5844 | 0.0024 |
| 274 | 2.5868 | 0.0024 |
| 275 | 2.5892 | 0.0024 |
| 276 | 2.5916 | 0.0024 |
| 277 | 2.5940 | 0.0024 |
| 278 | 2.5964 | 0.0024 |
| 279 | 2.5988 | 0.0024 |
| 280 | 2.6011 | 0.0024 |
| 281 | 2.6035 | 0.0024 |
| 282 | 2.6059 | 0.0024 |
| 283 | 2.6082 | 0.0024 |
| 284 | 2.6106 | 0.0023 |
| 285 | 2.6129 | 0.0023 |
| 286 | 2.6152 | 0.0023 |
| 287 | 2.6176 | 0.0023 |
| 288 | 2.6199 | 0.0023 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0023 | 0.0002 | 0.0021 |
| 2 | 0.0023 | 0.0002 | 0.0021 |
| 3 | 0.0023 | 0.0002 | 0.0022 |
| 4 | 0.0023 | 0.0002 | 0.0022 |
| 5 | 0.0024 | 0.0002 | 0.0022 |
| 6 | 0.0024 | 0.0002 | 0.0022 |
| 7 | 0.0024 | 0.0002 | 0.0022 |
| 8 | 0.0024 | 0.0002 | 0.0022 |
| 9 | 0.0024 | 0.0002 | 0.0022 |
| 10 | 0.0024 | 0.0002 | 0.0022 |
| 11 | 0.0024 | 0.0002 | 0.0022 |
| 12 | 0.0024 | 0.0002 | 0.0022 |
| 13 | 0.0024 | 0.0002 | 0.0022 |
| 14 | 0.0024 | 0.0002 | 0.0022 |
| 15 | 0.0025 | 0.0002 | 0.0023 |
| 16 | 0.0025 | 0.0002 | 0.0023 |
| 17 | 0.0025 | 0.0002 | 0.0023 |
| 18 | 0.0025 | 0.0002 | 0.0023 |
| 19 | 0.0025 | 0.0002 | 0.0023 |
| 20 | 0.0025 | 0.0002 | 0.0023 |
| 21 | 0.0025 | 0.0002 | 0.0023 |
| 22 | 0.0025 | 0.0002 | 0.0023 |
| 23 | 0.0025 | 0.0002 | 0.0023 |
| 24 | 0.0026 | 0.0002 | 0.0023 |
| 25 | 0.0026 | 0.0002 | 0.0024 |
| 26 | 0.0026 | 0.0002 | 0.0024 |
| 27 | 0.0026 | 0.0002 | 0.0024 |

| | | | |
|---|---|---|---|
| 28 | 0.0026 | 0.0002 | 0.0024 |
| 29 | 0.0026 | 0.0002 | 0.0024 |
| 30 | 0.0026 | 0.0002 | 0.0024 |
| 31 | 0.0026 | 0.0002 | 0.0024 |
| 32 | 0.0026 | 0.0002 | 0.0024 |
| 33 | 0.0027 | 0.0002 | 0.0024 |
| 34 | 0.0027 | 0.0002 | 0.0025 |
| 35 | 0.0027 | 0.0002 | 0.0025 |
| 36 | 0.0027 | 0.0002 | 0.0025 |
| 37 | 0.0027 | 0.0002 | 0.0025 |
| 38 | 0.0027 | 0.0002 | 0.0025 |
| 39 | 0.0027 | 0.0002 | 0.0025 |
| 40 | 0.0027 | 0.0002 | 0.0025 |
| 41 | 0.0028 | 0.0002 | 0.0025 |
| 42 | 0.0028 | 0.0002 | 0.0026 |
| 43 | 0.0028 | 0.0002 | 0.0026 |
| 44 | 0.0028 | 0.0002 | 0.0026 |
| 45 | 0.0028 | 0.0002 | 0.0026 |
| 46 | 0.0028 | 0.0002 | 0.0026 |
| 47 | 0.0028 | 0.0002 | 0.0026 |
| 48 | 0.0029 | 0.0002 | 0.0026 |
| 49 | 0.0029 | 0.0002 | 0.0026 |
| 50 | 0.0029 | 0.0002 | 0.0027 |
| 51 | 0.0029 | 0.0002 | 0.0027 |
| 52 | 0.0029 | 0.0002 | 0.0027 |
| 53 | 0.0029 | 0.0002 | 0.0027 |
| 54 | 0.0030 | 0.0002 | 0.0027 |
| 55 | 0.0030 | 0.0002 | 0.0027 |
| 56 | 0.0030 | 0.0002 | 0.0027 |
| 57 | 0.0030 | 0.0002 | 0.0028 |
| 58 | 0.0030 | 0.0002 | 0.0028 |
| 59 | 0.0030 | 0.0002 | 0.0028 |
| 60 | 0.0030 | 0.0002 | 0.0028 |
| 61 | 0.0031 | 0.0002 | 0.0028 |
| 62 | 0.0031 | 0.0002 | 0.0028 |
| 63 | 0.0031 | 0.0002 | 0.0029 |
| 64 | 0.0031 | 0.0003 | 0.0029 |
| 65 | 0.0031 | 0.0003 | 0.0029 |
| 66 | 0.0032 | 0.0003 | 0.0029 |
| 67 | 0.0032 | 0.0003 | 0.0029 |
| 68 | 0.0032 | 0.0003 | 0.0029 |
| 69 | 0.0032 | 0.0003 | 0.0030 |
| 70 | 0.0032 | 0.0003 | 0.0030 |
| 71 | 0.0033 | 0.0003 | 0.0030 |
| 72 | 0.0033 | 0.0003 | 0.0030 |
| 73 | 0.0033 | 0.0003 | 0.0030 |
| 74 | 0.0033 | 0.0003 | 0.0030 |
| 75 | 0.0033 | 0.0003 | 0.0031 |
| 76 | 0.0034 | 0.0003 | 0.0031 |
| 77 | 0.0034 | 0.0003 | 0.0031 |
| 78 | 0.0034 | 0.0003 | 0.0031 |
| 79 | 0.0034 | 0.0003 | 0.0032 |
| 80 | 0.0034 | 0.0003 | 0.0032 |
| 81 | 0.0035 | 0.0003 | 0.0032 |
| 82 | 0.0035 | 0.0003 | 0.0032 |
| 83 | 0.0035 | 0.0003 | 0.0032 |
| 84 | 0.0035 | 0.0003 | 0.0033 |
| 85 | 0.0036 | 0.0003 | 0.0033 |
| 86 | 0.0036 | 0.0003 | 0.0033 |

| | | | |
|---|---|---|---|
| 87 | 0.0036 | 0.0003 | 0.0033 |
| 88 | 0.0036 | 0.0003 | 0.0033 |
| 89 | 0.0037 | 0.0003 | 0.0034 |
| 90 | 0.0037 | 0.0003 | 0.0034 |
| 91 | 0.0037 | 0.0003 | 0.0034 |
| 92 | 0.0037 | 0.0003 | 0.0034 |
| 93 | 0.0038 | 0.0003 | 0.0035 |
| 94 | 0.0038 | 0.0003 | 0.0035 |
| 95 | 0.0038 | 0.0003 | 0.0035 |
| 96 | 0.0039 | 0.0003 | 0.0035 |
| 97 | 0.0039 | 0.0003 | 0.0036 |
| 98 | 0.0039 | 0.0003 | 0.0036 |
| 99 | 0.0040 | 0.0003 | 0.0036 |
| 100 | 0.0040 | 0.0003 | 0.0037 |
| 101 | 0.0040 | 0.0003 | 0.0037 |
| 102 | 0.0040 | 0.0003 | 0.0037 |
| 103 | 0.0041 | 0.0003 | 0.0038 |
| 104 | 0.0041 | 0.0003 | 0.0038 |
| 105 | 0.0042 | 0.0003 | 0.0038 |
| 106 | 0.0042 | 0.0003 | 0.0038 |
| 107 | 0.0042 | 0.0003 | 0.0039 |
| 108 | 0.0043 | 0.0003 | 0.0039 |
| 109 | 0.0043 | 0.0003 | 0.0040 |
| 110 | 0.0043 | 0.0003 | 0.0040 |
| 111 | 0.0044 | 0.0004 | 0.0040 |
| 112 | 0.0044 | 0.0004 | 0.0041 |
| 113 | 0.0045 | 0.0004 | 0.0041 |
| 114 | 0.0045 | 0.0004 | 0.0041 |
| 115 | 0.0046 | 0.0004 | 0.0042 |
| 116 | 0.0046 | 0.0004 | 0.0042 |
| 117 | 0.0046 | 0.0004 | 0.0043 |
| 118 | 0.0047 | 0.0004 | 0.0043 |
| 119 | 0.0047 | 0.0004 | 0.0044 |
| 120 | 0.0048 | 0.0004 | 0.0044 |
| 121 | 0.0048 | 0.0004 | 0.0044 |
| 122 | 0.0049 | 0.0004 | 0.0045 |
| 123 | 0.0049 | 0.0004 | 0.0045 |
| 124 | 0.0050 | 0.0004 | 0.0046 |
| 125 | 0.0050 | 0.0004 | 0.0046 |
| 126 | 0.0051 | 0.0004 | 0.0047 |
| 127 | 0.0052 | 0.0004 | 0.0047 |
| 128 | 0.0052 | 0.0004 | 0.0048 |
| 129 | 0.0053 | 0.0004 | 0.0049 |
| 130 | 0.0053 | 0.0004 | 0.0049 |
| 131 | 0.0054 | 0.0004 | 0.0050 |
| 132 | 0.0054 | 0.0004 | 0.0050 |
| 133 | 0.0055 | 0.0004 | 0.0051 |
| 134 | 0.0056 | 0.0004 | 0.0051 |
| 135 | 0.0057 | 0.0005 | 0.0052 |
| 136 | 0.0057 | 0.0005 | 0.0053 |
| 137 | 0.0058 | 0.0005 | 0.0054 |
| 138 | 0.0059 | 0.0005 | 0.0054 |
| 139 | 0.0060 | 0.0005 | 0.0055 |
| 140 | 0.0061 | 0.0005 | 0.0056 |
| 141 | 0.0062 | 0.0005 | 0.0057 |
| 142 | 0.0062 | 0.0005 | 0.0057 |
| 143 | 0.0064 | 0.0005 | 0.0058 |
| 144 | 0.0064 | 0.0005 | 0.0059 |
| 145 | 0.0040 | 0.0003 | 0.0037 |

| | | | |
|---|---|---|---|
| 146 | 0.0041 | 0.0003 | 0.0037 |
| 147 | 0.0042 | 0.0003 | 0.0038 |
| 148 | 0.0042 | 0.0003 | 0.0039 |
| 149 | 0.0043 | 0.0003 | 0.0040 |
| 150 | 0.0044 | 0.0004 | 0.0040 |
| 151 | 0.0045 | 0.0004 | 0.0041 |
| 152 | 0.0046 | 0.0004 | 0.0042 |
| 153 | 0.0047 | 0.0004 | 0.0043 |
| 154 | 0.0048 | 0.0004 | 0.0044 |
| 155 | 0.0049 | 0.0004 | 0.0045 |
| 156 | 0.0050 | 0.0004 | 0.0046 |
| 157 | 0.0051 | 0.0004 | 0.0047 |
| 158 | 0.0052 | 0.0004 | 0.0048 |
| 159 | 0.0054 | 0.0004 | 0.0050 |
| 160 | 0.0055 | 0.0004 | 0.0051 |
| 161 | 0.0057 | 0.0005 | 0.0052 |
| 162 | 0.0058 | 0.0005 | 0.0053 |
| 163 | 0.0060 | 0.0005 | 0.0055 |
| 164 | 0.0061 | 0.0005 | 0.0056 |
| 165 | 0.0064 | 0.0005 | 0.0059 |
| 166 | 0.0065 | 0.0005 | 0.0060 |
| 167 | 0.0068 | 0.0005 | 0.0062 |
| 168 | 0.0069 | 0.0006 | 0.0064 |
| 169 | 0.0073 | 0.0006 | 0.0067 |
| 170 | 0.0075 | 0.0006 | 0.0069 |
| 171 | 0.0079 | 0.0006 | 0.0073 |
| 172 | 0.0081 | 0.0006 | 0.0074 |
| 173 | 0.0086 | 0.0007 | 0.0079 |
| 174 | 0.0088 | 0.0007 | 0.0081 |
| 175 | 0.0094 | 0.0008 | 0.0086 |
| 176 | 0.0097 | 0.0008 | 0.0089 |
| 177 | 0.0104 | 0.0008 | 0.0095 |
| 178 | 0.0107 | 0.0009 | 0.0099 |
| 179 | 0.0116 | 0.0009 | 0.0107 |
| 180 | 0.0121 | 0.0010 | 0.0112 |
| 181 | 0.0133 | 0.0011 | 0.0122 |
| 182 | 0.0140 | 0.0011 | 0.0128 |
| 183 | 0.0156 | 0.0012 | 0.0143 |
| 184 | 0.0165 | 0.0013 | 0.0152 |
| 185 | 0.0358 | 0.0027 | 0.0331 |
| 186 | 0.0381 | 0.0027 | 0.0354 |
| 187 | 0.0442 | 0.0027 | 0.0415 |
| 188 | 0.0483 | 0.0027 | 0.0456 |
| 189 | 0.0600 | 0.0027 | 0.0573 |
| 190 | 0.0691 | 0.0027 | 0.0664 |
| 191 | 0.1049 | 0.0027 | 0.1022 |
| 192 | 0.1522 | 0.0027 | 0.1495 |
| 193 | 0.6585 | 0.0027 | 0.6559 |
| 194 | 0.0825 | 0.0027 | 0.0799 |
| 195 | 0.0534 | 0.0027 | 0.0507 |
| 196 | 0.0409 | 0.0027 | 0.0382 |
| 197 | 0.0176 | 0.0014 | 0.0162 |
| 198 | 0.0147 | 0.0012 | 0.0135 |
| 199 | 0.0127 | 0.0010 | 0.0117 |
| 200 | 0.0112 | 0.0009 | 0.0103 |
| 201 | 0.0100 | 0.0008 | 0.0092 |
| 202 | 0.0091 | 0.0007 | 0.0083 |
| 203 | 0.0083 | 0.0007 | 0.0077 |
| 204 | 0.0077 | 0.0006 | 0.0071 |

| | | | |
|---|---|---|---|
| 205 | 0.0071 | 0.0006 | 0.0065 |
| 206 | 0.0066 | 0.0005 | 0.0061 |
| 207 | 0.0062 | 0.0005 | 0.0057 |
| 208 | 0.0059 | 0.0005 | 0.0054 |
| 209 | 0.0056 | 0.0004 | 0.0051 |
| 210 | 0.0053 | 0.0004 | 0.0049 |
| 211 | 0.0051 | 0.0004 | 0.0047 |
| 212 | 0.0048 | 0.0004 | 0.0045 |
| 213 | 0.0046 | 0.0004 | 0.0043 |
| 214 | 0.0045 | 0.0004 | 0.0041 |
| 215 | 0.0043 | 0.0003 | 0.0039 |
| 216 | 0.0041 | 0.0003 | 0.0038 |
| 217 | 0.0065 | 0.0005 | 0.0060 |
| 218 | 0.0063 | 0.0005 | 0.0058 |
| 219 | 0.0061 | 0.0005 | 0.0056 |
| 220 | 0.0059 | 0.0005 | 0.0055 |
| 221 | 0.0058 | 0.0005 | 0.0053 |
| 222 | 0.0056 | 0.0005 | 0.0052 |
| 223 | 0.0055 | 0.0004 | 0.0051 |
| 224 | 0.0054 | 0.0004 | 0.0049 |
| 225 | 0.0052 | 0.0004 | 0.0048 |
| 226 | 0.0051 | 0.0004 | 0.0047 |
| 227 | 0.0050 | 0.0004 | 0.0046 |
| 228 | 0.0049 | 0.0004 | 0.0045 |
| 229 | 0.0048 | 0.0004 | 0.0044 |
| 230 | 0.0047 | 0.0004 | 0.0043 |
| 231 | 0.0046 | 0.0004 | 0.0042 |
| 232 | 0.0045 | 0.0004 | 0.0042 |
| 233 | 0.0044 | 0.0004 | 0.0041 |
| 234 | 0.0044 | 0.0003 | 0.0040 |
| 235 | 0.0043 | 0.0003 | 0.0039 |
| 236 | 0.0042 | 0.0003 | 0.0039 |
| 237 | 0.0041 | 0.0003 | 0.0038 |
| 238 | 0.0041 | 0.0003 | 0.0037 |
| 239 | 0.0040 | 0.0003 | 0.0037 |
| 240 | 0.0039 | 0.0003 | 0.0036 |
| 241 | 0.0039 | 0.0003 | 0.0036 |
| 242 | 0.0038 | 0.0003 | 0.0035 |
| 243 | 0.0038 | 0.0003 | 0.0035 |
| 244 | 0.0037 | 0.0003 | 0.0034 |
| 245 | 0.0037 | 0.0003 | 0.0034 |
| 246 | 0.0036 | 0.0003 | 0.0033 |
| 247 | 0.0036 | 0.0003 | 0.0033 |
| 248 | 0.0035 | 0.0003 | 0.0032 |
| 249 | 0.0035 | 0.0003 | 0.0032 |
| 250 | 0.0034 | 0.0003 | 0.0031 |
| 251 | 0.0034 | 0.0003 | 0.0031 |
| 252 | 0.0033 | 0.0003 | 0.0031 |
| 253 | 0.0033 | 0.0003 | 0.0030 |
| 254 | 0.0032 | 0.0003 | 0.0030 |
| 255 | 0.0032 | 0.0003 | 0.0029 |
| 256 | 0.0032 | 0.0003 | 0.0029 |
| 257 | 0.0031 | 0.0003 | 0.0029 |
| 258 | 0.0031 | 0.0002 | 0.0028 |
| 259 | 0.0031 | 0.0002 | 0.0028 |
| 260 | 0.0030 | 0.0002 | 0.0028 |
| 261 | 0.0030 | 0.0002 | 0.0028 |
| 262 | 0.0030 | 0.0002 | 0.0027 |
| 263 | 0.0029 | 0.0002 | 0.0027 |

| | | | |
|---|---|---|---|
| 264 | 0.0029 | 0.0002 | 0.0027 |
| 265 | 0.0029 | 0.0002 | 0.0026 |
| 266 | 0.0028 | 0.0002 | 0.0026 |
| 267 | 0.0028 | 0.0002 | 0.0026 |
| 268 | 0.0028 | 0.0002 | 0.0026 |
| 269 | 0.0028 | 0.0002 | 0.0025 |
| 270 | 0.0027 | 0.0002 | 0.0025 |
| 271 | 0.0027 | 0.0002 | 0.0025 |
| 272 | 0.0027 | 0.0002 | 0.0025 |
| 273 | 0.0027 | 0.0002 | 0.0024 |
| 274 | 0.0026 | 0.0002 | 0.0024 |
| 275 | 0.0026 | 0.0002 | 0.0024 |
| 276 | 0.0026 | 0.0002 | 0.0024 |
| 277 | 0.0026 | 0.0002 | 0.0024 |
| 278 | 0.0025 | 0.0002 | 0.0023 |
| 279 | 0.0025 | 0.0002 | 0.0023 |
| 280 | 0.0025 | 0.0002 | 0.0023 |
| 281 | 0.0025 | 0.0002 | 0.0023 |
| 282 | 0.0025 | 0.0002 | 0.0023 |
| 283 | 0.0024 | 0.0002 | 0.0022 |
| 284 | 0.0024 | 0.0002 | 0.0022 |
| 285 | 0.0024 | 0.0002 | 0.0022 |
| 286 | 0.0024 | 0.0002 | 0.0022 |
| 287 | 0.0024 | 0.0002 | 0.0022 |
| 288 | 0.0023 | 0.0002 | 0.0021 |

Total soil rain loss = 0.13(In)
Total effective rainfall = 2.49(In)
Peak flow rate in flood hydrograph = 65.27(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

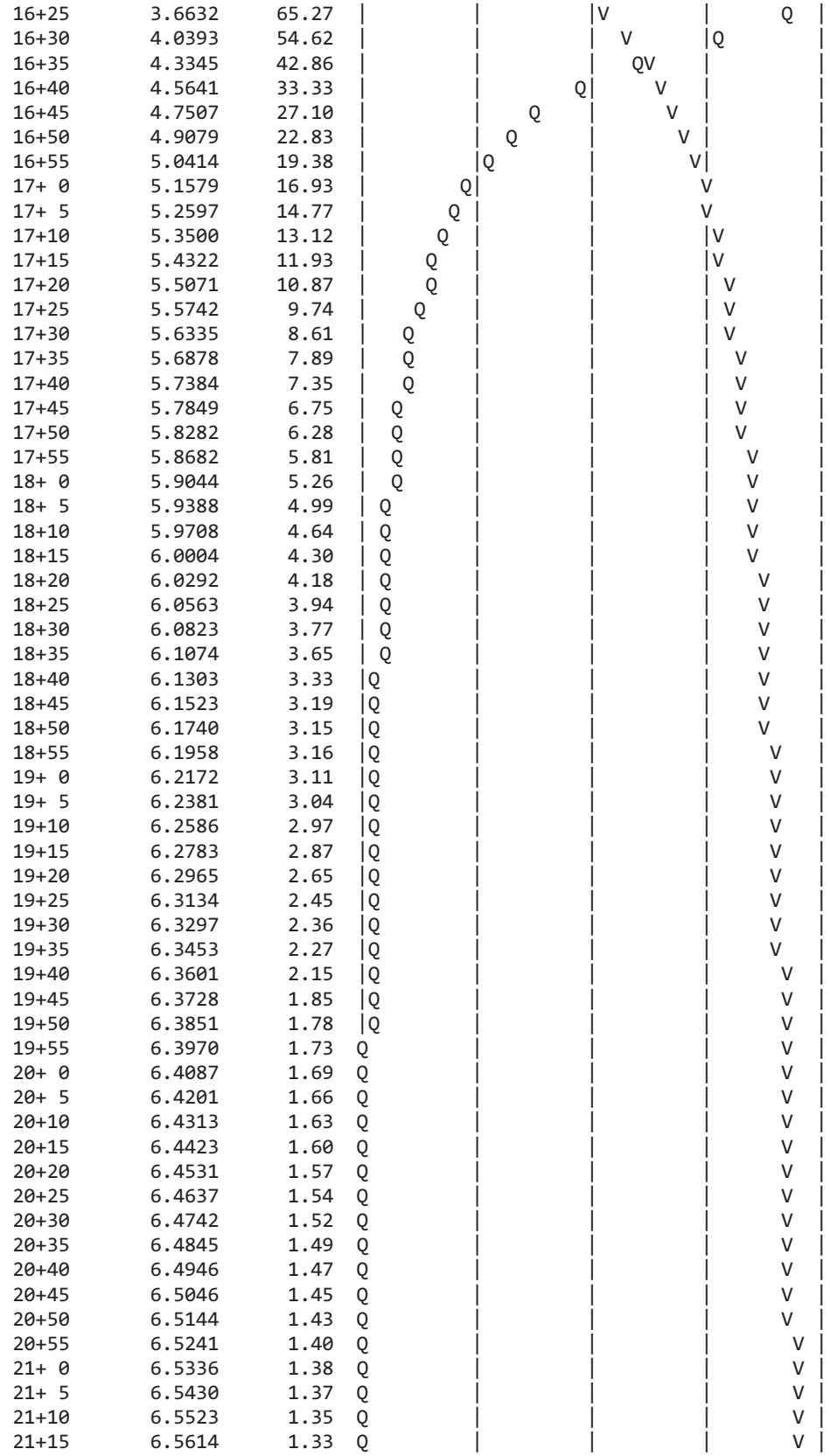
Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 17.5 | 35.0 | 52.5 | 70.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0001 | 0.01 | Q | | | | |
| 0+10 | 0.0003 | 0.03 | Q | | | | |
| 0+15 | 0.0008 | 0.08 | Q | | | | |
| 0+20 | 0.0020 | 0.17 | Q | | | | |
| 0+25 | 0.0041 | 0.31 | Q | | | | |
| 0+30 | 0.0070 | 0.42 | Q | | | | |
| 0+35 | 0.0104 | 0.50 | Q | | | | |
| 0+40 | 0.0143 | 0.56 | Q | | | | |
| 0+45 | 0.0184 | 0.60 | Q | | | | |
| 0+50 | 0.0228 | 0.64 | Q | | | | |
| 0+55 | 0.0274 | 0.67 | Q | | | | |
| 1+ 0 | 0.0321 | 0.69 | Q | | | | |
| 1+ 5 | 0.0370 | 0.71 | Q | | | | |
| 1+10 | 0.0421 | 0.73 | Q | | | | |
| 1+15 | 0.0473 | 0.75 | Q | | | | |
| 1+20 | 0.0526 | 0.77 | Q | | | | |
| 1+25 | 0.0580 | 0.79 | Q | | | | |
| 1+30 | 0.0635 | 0.80 | Q | | | | |
| 1+35 | 0.0691 | 0.81 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+40 | 0.0748 | 0.82 | Q | \| | \| | \| | \| |
| 1+45 | 0.0805 | 0.83 | Q | \| | \| | \| | \| |
| 1+50 | 0.0863 | 0.84 | Q | \| | \| | \| | \| |
| 1+55 | 0.0922 | 0.85 | Q | \| | \| | \| | \| |
| 2+ 0 | 0.0982 | 0.86 | Q | \| | \| | \| | \| |
| 2+ 5 | 0.1042 | 0.87 | Q | \| | \| | \| | \| |
| 2+10 | 0.1103 | 0.88 | Q | \| | \| | \| | \| |
| 2+15 | 0.1164 | 0.89 | Q | \| | \| | \| | \| |
| 2+20 | 0.1225 | 0.90 | Q | \| | \| | \| | \| |
| 2+25 | 0.1288 | 0.90 | Q | \| | \| | \| | \| |
| 2+30 | 0.1350 | 0.91 | Q | \| | \| | \| | \| |
| 2+35 | 0.1414 | 0.92 | Q | \| | \| | \| | \| |
| 2+40 | 0.1477 | 0.92 | Q | \| | \| | \| | \| |
| 2+45 | 0.1541 | 0.93 | Q | \| | \| | \| | \| |
| 2+50 | 0.1605 | 0.93 | Q | \| | \| | \| | \| |
| 2+55 | 0.1670 | 0.94 | Q | \| | \| | \| | \| |
| 3+ 0 | 0.1735 | 0.95 | QV | \| | \| | \| | \| |
| 3+ 5 | 0.1801 | 0.95 | QV | \| | \| | \| | \| |
| 3+10 | 0.1867 | 0.96 | QV | \| | \| | \| | \| |
| 3+15 | 0.1933 | 0.97 | QV | \| | \| | \| | \| |
| 3+20 | 0.2000 | 0.97 | QV | \| | \| | \| | \| |
| 3+25 | 0.2068 | 0.98 | QV | \| | \| | \| | \| |
| 3+30 | 0.2135 | 0.98 | QV | \| | \| | \| | \| |
| 3+35 | 0.2203 | 0.99 | QV | \| | \| | \| | \| |
| 3+40 | 0.2272 | 0.99 | QV | \| | \| | \| | \| |
| 3+45 | 0.2340 | 1.00 | QV | \| | \| | \| | \| |
| 3+50 | 0.2409 | 1.00 | QV | \| | \| | \| | \| |
| 3+55 | 0.2479 | 1.01 | QV | \| | \| | \| | \| |
| 4+ 0 | 0.2548 | 1.01 | QV | \| | \| | \| | \| |
| 4+ 5 | 0.2618 | 1.02 | QV | \| | \| | \| | \| |
| 4+10 | 0.2689 | 1.02 | QV | \| | \| | \| | \| |
| 4+15 | 0.2760 | 1.03 | QV | \| | \| | \| | \| |
| 4+20 | 0.2831 | 1.03 | QV | \| | \| | \| | \| |
| 4+25 | 0.2902 | 1.04 | QV | \| | \| | \| | \| |
| 4+30 | 0.2974 | 1.04 | QV | \| | \| | \| | \| |
| 4+35 | 0.3046 | 1.05 | QV | \| | \| | \| | \| |
| 4+40 | 0.3119 | 1.05 | QV | \| | \| | \| | \| |
| 4+45 | 0.3192 | 1.06 | QV | \| | \| | \| | \| |
| 4+50 | 0.3265 | 1.06 | QV | \| | \| | \| | \| |
| 4+55 | 0.3339 | 1.07 | QV | \| | \| | \| | \| |
| 5+ 0 | 0.3413 | 1.08 | QV | \| | \| | \| | \| |
| 5+ 5 | 0.3488 | 1.08 | Q V | \| | \| | \| | \| |
| 5+10 | 0.3562 | 1.09 | Q V | \| | \| | \| | \| |
| 5+15 | 0.3638 | 1.09 | Q V | \| | \| | \| | \| |
| 5+20 | 0.3713 | 1.10 | Q V | \| | \| | \| | \| |
| 5+25 | 0.3790 | 1.11 | Q V | \| | \| | \| | \| |
| 5+30 | 0.3866 | 1.11 | Q V | \| | \| | \| | \| |
| 5+35 | 0.3943 | 1.12 | Q V | \| | \| | \| | \| |
| 5+40 | 0.4021 | 1.12 | Q V | \| | \| | \| | \| |
| 5+45 | 0.4098 | 1.13 | Q V | \| | \| | \| | \| |
| 5+50 | 0.4177 | 1.14 | Q V | \| | \| | \| | \| |
| 5+55 | 0.4256 | 1.14 | Q V | \| | \| | \| | \| |
| 6+ 0 | 0.4335 | 1.15 | Q V | \| | \| | \| | \| |
| 6+ 5 | 0.4414 | 1.16 | Q V | \| | \| | \| | \| |
| 6+10 | 0.4495 | 1.16 | Q V | \| | \| | \| | \| |
| 6+15 | 0.4575 | 1.17 | Q V | \| | \| | \| | \| |
| 6+20 | 0.4656 | 1.18 | Q V | \| | \| | \| | \| |
| 6+25 | 0.4738 | 1.18 | Q V | \| | \| | \| | \| |
| 6+30 | 0.4820 | 1.19 | Q V | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+35 | 0.4903 | 1.20 | Q V | \| | \| | \| | \| |
| 6+40 | 0.4986 | 1.21 | Q V | \| | \| | \| | \| |
| 6+45 | 0.5069 | 1.21 | Q V | \| | \| | \| | \| |
| 6+50 | 0.5153 | 1.22 | Q V | \| | \| | \| | \| |
| 6+55 | 0.5238 | 1.23 | Q V | \| | \| | \| | \| |
| 7+ 0 | 0.5323 | 1.24 | Q V | \| | \| | \| | \| |
| 7+ 5 | 0.5409 | 1.25 | Q V | \| | \| | \| | \| |
| 7+10 | 0.5495 | 1.25 | Q V | \| | \| | \| | \| |
| 7+15 | 0.5582 | 1.26 | Q V | \| | \| | \| | \| |
| 7+20 | 0.5670 | 1.27 | Q V | \| | \| | \| | \| |
| 7+25 | 0.5758 | 1.28 | Q V | \| | \| | \| | \| |
| 7+30 | 0.5846 | 1.29 | Q V | \| | \| | \| | \| |
| 7+35 | 0.5936 | 1.30 | Q V | \| | \| | \| | \| |
| 7+40 | 0.6026 | 1.30 | Q V | \| | \| | \| | \| |
| 7+45 | 0.6116 | 1.31 | Q V | \| | \| | \| | \| |
| 7+50 | 0.6207 | 1.32 | Q V | \| | \| | \| | \| |
| 7+55 | 0.6299 | 1.33 | Q V | \| | \| | \| | \| |
| 8+ 0 | 0.6391 | 1.34 | Q V | \| | \| | \| | \| |
| 8+ 5 | 0.6484 | 1.35 | Q V | \| | \| | \| | \| |
| 8+10 | 0.6578 | 1.36 | Q V | \| | \| | \| | \| |
| 8+15 | 0.6673 | 1.37 | Q V | \| | \| | \| | \| |
| 8+20 | 0.6768 | 1.38 | Q V | \| | \| | \| | \| |
| 8+25 | 0.6864 | 1.39 | Q V | \| | \| | \| | \| |
| 8+30 | 0.6960 | 1.40 | Q V | \| | \| | \| | \| |
| 8+35 | 0.7057 | 1.41 | Q V | \| | \| | \| | \| |
| 8+40 | 0.7156 | 1.42 | Q V | \| | \| | \| | \| |
| 8+45 | 0.7254 | 1.44 | Q V | \| | \| | \| | \| |
| 8+50 | 0.7354 | 1.45 | Q V | \| | \| | \| | \| |
| 8+55 | 0.7454 | 1.46 | Q V | \| | \| | \| | \| |
| 9+ 0 | 0.7556 | 1.47 | Q V | \| | \| | \| | \| |
| 9+ 5 | 0.7658 | 1.48 | Q V | \| | \| | \| | \| |
| 9+10 | 0.7761 | 1.49 | Q V | \| | \| | \| | \| |
| 9+15 | 0.7864 | 1.51 | Q V | \| | \| | \| | \| |
| 9+20 | 0.7969 | 1.52 | Q V | \| | \| | \| | \| |
| 9+25 | 0.8074 | 1.53 | Q V | \| | \| | \| | \| |
| 9+30 | 0.8181 | 1.55 | Q V | \| | \| | \| | \| |
| 9+35 | 0.8288 | 1.56 | Q V | \| | \| | \| | \| |
| 9+40 | 0.8397 | 1.57 | Q V | \| | \| | \| | \| |
| 9+45 | 0.8506 | 1.59 | Q V | \| | \| | \| | \| |
| 9+50 | 0.8616 | 1.60 | Q V | \| | \| | \| | \| |
| 9+55 | 0.8727 | 1.62 | Q V | \| | \| | \| | \| |
| 10+ 0 | 0.8840 | 1.63 | Q V | \| | \| | \| | \| |
| 10+ 5 | 0.8953 | 1.65 | Q V | \| | \| | \| | \| |
| 10+10 | 0.9067 | 1.66 | Q V | \| | \| | \| | \| |
| 10+15 | 0.9183 | 1.68 | Q V | \| | \| | \| | \| |
| 10+20 | 0.9300 | 1.69 | Q V | \| | \| | \| | \| |
| 10+25 | 0.9417 | 1.71 | Q V | \| | \| | \| | \| |
| 10+30 | 0.9536 | 1.73 | Q V | \| | \| | \| | \| |
| 10+35 | 0.9657 | 1.75 | Q V | \| | \| | \| | \| |
| 10+40 | 0.9778 | 1.76 | \|Q V | \| | \| | \| | \| |
| 10+45 | 0.9901 | 1.78 | \|Q V | \| | \| | \| | \| |
| 10+50 | 1.0025 | 1.80 | \|Q V | \| | \| | \| | \| |
| 10+55 | 1.0150 | 1.82 | \|Q V | \| | \| | \| | \| |
| 11+ 0 | 1.0277 | 1.84 | \|Q V | \| | \| | \| | \| |
| 11+ 5 | 1.0405 | 1.86 | \|Q V | \| | \| | \| | \| |
| 11+10 | 1.0535 | 1.88 | \|Q V | \| | \| | \| | \| |
| 11+15 | 1.0666 | 1.90 | \|Q V | \| | \| | \| | \| |
| 11+20 | 1.0798 | 1.93 | \|Q V | \| | \| | \| | \| |
| 11+25 | 1.0932 | 1.95 | \|Q V | \| | \| | \| | \| |

```
11+30       1.1068      1.97  |Q    V   |          |          |          |
11+35       1.1206      2.00  |Q    V   |          |          |          |
11+40       1.1345      2.02  |Q    V   |          |          |          |
11+45       1.1486      2.05  |Q    V   |          |          |          |
11+50       1.1628      2.07  |Q    V   |          |          |          |
11+55       1.1773      2.10  |Q    V   |          |          |          |
12+ 0       1.1919      2.13  |Q    V   |          |          |          |
12+ 5       1.2067      2.15  |Q     V  |          |          |          |
12+10       1.2215      2.15  |Q     V  |          |          |          |
12+15       1.2362      2.13  |Q     V  |          |          |          |
12+20       1.2504      2.06  |Q     V  |          |          |          |
12+25       1.2638      1.94  |Q     V  |          |          |          |
12+30       1.2766      1.85  |Q     V  |          |          |          |
12+35       1.2889      1.80  |Q     V  |          |          |          |
12+40       1.3011      1.77  |Q     V  |          |          |          |
12+45       1.3132      1.75  |Q     V  |          |          |          |
12+50       1.3252      1.75  Q      V  |          |          |          |
12+55       1.3373      1.75  Q      V  |          |          |          |
13+ 0       1.3494      1.75  |Q     V  |          |          |          |
13+ 5       1.3615      1.77  |Q     V  |          |          |          |
13+10       1.3738      1.78  |Q      V |          |          |          |
13+15       1.3862      1.80  |Q      V |          |          |          |
13+20       1.3988      1.82  |Q      V |          |          |          |
13+25       1.4115      1.85  |Q      V |          |          |          |
13+30       1.4244      1.88  |Q      V |          |          |          |
13+35       1.4376      1.91  |Q      V |          |          |          |
13+40       1.4510      1.95  |Q      V |          |          |          |
13+45       1.4647      1.98  |Q      V |          |          |          |
13+50       1.4786      2.03  |Q      V |          |          |          |
13+55       1.4929      2.07  |Q      V |          |          |          |
14+ 0       1.5075      2.12  |Q      V |          |          |          |
14+ 5       1.5224      2.17  |Q      V |          |          |          |
14+10       1.5378      2.23  |Q      V |          |          |          |
14+15       1.5536      2.29  |Q       V|          |          |          |
14+20       1.5699      2.36  |Q       V|          |          |          |
14+25       1.5867      2.44  |Q       V|          |          |          |
14+30       1.6040      2.52  |Q       V|          |          |          |
14+35       1.6219      2.61  |Q       V|          |          |          |
14+40       1.6405      2.70  |Q       V|          |          |          |
14+45       1.6598      2.80  |Q       V|          |          |          |
14+50       1.6799      2.91  |Q       V|          |          |          |
14+55       1.7008      3.04  |Q       V|          |          |          |
15+ 0       1.7227      3.17  |Q        V          |          |          |
15+ 5       1.7456      3.32  |Q        V          |          |          |
15+10       1.7696      3.49  |Q        V          |          |          |
15+15       1.7950      3.68  | Q       V          |          |          |
15+20       1.8218      3.90  | Q       V          |          |          |
15+25       1.8507      4.20  | Q       V          |          |          |
15+30       1.8829      4.67  | Q       V          |          |          |
15+35       1.9198      5.36  |  Q      |V          |          |          |
15+40       1.9646      6.50  |  Q      |V          |          |          |
15+45       2.0209      8.18  |   Q     |V          |          |          |
15+50       2.0891      9.90  |    Q    | V         |          |          |
15+55       2.1706     11.83  |     Q   | V         |          |          |
16+ 0       2.2691     14.30  |       Q |  V        |          |          |
16+ 5       2.4028     19.41  |         |Q  V       |          |          |
16+10       2.5942     27.80  |         |    Q      |          |          |
16+15       2.8502     37.17  |         |     V     |Q         |          |
16+20       3.2137     52.78  |         |       V   |          Q          |
```



| | | | |
|---|---|---|---|
| 16+25 | 3.6632 | 65.27 | |
| 16+30 | 4.0393 | 54.62 | |
| 16+35 | 4.3345 | 42.86 | |
| 16+40 | 4.5641 | 33.33 | |
| 16+45 | 4.7507 | 27.10 | |
| 16+50 | 4.9079 | 22.83 | |
| 16+55 | 5.0414 | 19.38 | |
| 17+ 0 | 5.1579 | 16.93 | |
| 17+ 5 | 5.2597 | 14.77 | |
| 17+10 | 5.3500 | 13.12 | |
| 17+15 | 5.4322 | 11.93 | |
| 17+20 | 5.5071 | 10.87 | |
| 17+25 | 5.5742 | 9.74 | |
| 17+30 | 5.6335 | 8.61 | |
| 17+35 | 5.6878 | 7.89 | |
| 17+40 | 5.7384 | 7.35 | |
| 17+45 | 5.7849 | 6.75 | |
| 17+50 | 5.8282 | 6.28 | |
| 17+55 | 5.8682 | 5.81 | |
| 18+ 0 | 5.9044 | 5.26 | |
| 18+ 5 | 5.9388 | 4.99 | |
| 18+10 | 5.9708 | 4.64 | |
| 18+15 | 6.0004 | 4.30 | |
| 18+20 | 6.0292 | 4.18 | |
| 18+25 | 6.0563 | 3.94 | |
| 18+30 | 6.0823 | 3.77 | |
| 18+35 | 6.1074 | 3.65 | |
| 18+40 | 6.1303 | 3.33 | |
| 18+45 | 6.1523 | 3.19 | |
| 18+50 | 6.1740 | 3.15 | |
| 18+55 | 6.1958 | 3.16 | |
| 19+ 0 | 6.2172 | 3.11 | |
| 19+ 5 | 6.2381 | 3.04 | |
| 19+10 | 6.2586 | 2.97 | |
| 19+15 | 6.2783 | 2.87 | |
| 19+20 | 6.2965 | 2.65 | |
| 19+25 | 6.3134 | 2.45 | |
| 19+30 | 6.3297 | 2.36 | |
| 19+35 | 6.3453 | 2.27 | |
| 19+40 | 6.3601 | 2.15 | |
| 19+45 | 6.3728 | 1.85 | |
| 19+50 | 6.3851 | 1.78 | |
| 19+55 | 6.3970 | 1.73 | |
| 20+ 0 | 6.4087 | 1.69 | |
| 20+ 5 | 6.4201 | 1.66 | |
| 20+10 | 6.4313 | 1.63 | |
| 20+15 | 6.4423 | 1.60 | |
| 20+20 | 6.4531 | 1.57 | |
| 20+25 | 6.4637 | 1.54 | |
| 20+30 | 6.4742 | 1.52 | |
| 20+35 | 6.4845 | 1.49 | |
| 20+40 | 6.4946 | 1.47 | |
| 20+45 | 6.5046 | 1.45 | |
| 20+50 | 6.5144 | 1.43 | |
| 20+55 | 6.5241 | 1.40 | |
| 21+ 0 | 6.5336 | 1.38 | |
| 21+ 5 | 6.5430 | 1.37 | |
| 21+10 | 6.5523 | 1.35 | |
| 21+15 | 6.5614 | 1.33 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+20 | 6.5705 | 1.31 | Q | \| | \| | \| | V \| |
| 21+25 | 6.5794 | 1.29 | Q | \| | \| | \| | V \| |
| 21+30 | 6.5882 | 1.28 | Q | \| | \| | \| | V \| |
| 21+35 | 6.5969 | 1.26 | Q | \| | \| | \| | V \| |
| 21+40 | 6.6054 | 1.25 | Q | \| | \| | \| | V \| |
| 21+45 | 6.6139 | 1.23 | Q | \| | \| | \| | V \| |
| 21+50 | 6.6223 | 1.21 | Q | \| | \| | \| | V \| |
| 21+55 | 6.6305 | 1.20 | Q | \| | \| | \| | V \| |
| 22+ 0 | 6.6387 | 1.18 | Q | \| | \| | \| | V \| |
| 22+ 5 | 6.6467 | 1.17 | Q | \| | \| | \| | V \| |
| 22+10 | 6.6547 | 1.16 | Q | \| | \| | \| | V \| |
| 22+15 | 6.6625 | 1.14 | Q | \| | \| | \| | V \| |
| 22+20 | 6.6703 | 1.13 | Q | \| | \| | \| | V \| |
| 22+25 | 6.6780 | 1.12 | Q | \| | \| | \| | V \| |
| 22+30 | 6.6856 | 1.10 | Q | \| | \| | \| | V \| |
| 22+35 | 6.6931 | 1.09 | Q | \| | \| | \| | V\| |
| 22+40 | 6.7006 | 1.08 | Q | \| | \| | \| | V\| |
| 22+45 | 6.7079 | 1.07 | Q | \| | \| | \| | V\| |
| 22+50 | 6.7152 | 1.06 | Q | \| | \| | \| | V\| |
| 22+55 | 6.7224 | 1.05 | Q | \| | \| | \| | V\| |
| 23+ 0 | 6.7295 | 1.04 | Q | \| | \| | \| | V\| |
| 23+ 5 | 6.7366 | 1.02 | Q | \| | \| | \| | V\| |
| 23+10 | 6.7436 | 1.01 | Q | \| | \| | \| | V\| |
| 23+15 | 6.7505 | 1.00 | Q | \| | \| | \| | V\| |
| 23+20 | 6.7573 | 1.00 | Q | \| | \| | \| | V\| |
| 23+25 | 6.7641 | 0.99 | Q | \| | \| | \| | V\| |
| 23+30 | 6.7709 | 0.98 | Q | \| | \| | \| | V\| |
| 23+35 | 6.7775 | 0.97 | Q | \| | \| | \| | V\| |
| 23+40 | 6.7841 | 0.96 | Q | \| | \| | \| | V\| |
| 23+45 | 6.7907 | 0.95 | Q | \| | \| | \| | V\| |
| 23+50 | 6.7971 | 0.94 | Q | \| | \| | \| | V\| |
| 23+55 | 6.8036 | 0.93 | Q | \| | \| | \| | V\| |
| 24+ 0 | 6.8099 | 0.92 | Q | \| | \| | \| | V\| |
| 24+ 5 | 6.8162 | 0.91 | Q | \| | \| | \| | V\| |
| 24+10 | 6.8222 | 0.88 | Q | \| | \| | \| | V\| |
| 24+15 | 6.8279 | 0.83 | Q | \| | \| | \| | V\| |
| 24+20 | 6.8329 | 0.73 | Q | \| | \| | \| | V\| |
| 24+25 | 6.8369 | 0.58 | Q | \| | \| | \| | V\| |
| 24+30 | 6.8401 | 0.47 | Q | \| | \| | \| | V\| |
| 24+35 | 6.8428 | 0.38 | Q | \| | \| | \| | V\| |
| 24+40 | 6.8450 | 0.33 | Q | \| | \| | \| | V\| |
| 24+45 | 6.8470 | 0.28 | Q | \| | \| | \| | V\| |
| 24+50 | 6.8487 | 0.25 | Q | \| | \| | \| | V\| |
| 24+55 | 6.8502 | 0.22 | Q | \| | \| | \| | V\| |
| 25+ 0 | 6.8515 | 0.19 | Q | \| | \| | \| | V\| |
| 25+ 5 | 6.8527 | 0.17 | Q | \| | \| | \| | V\| |
| 25+10 | 6.8537 | 0.15 | Q | \| | \| | \| | V\| |
| 25+15 | 6.8547 | 0.14 | Q | \| | \| | \| | V\| |
| 25+20 | 6.8555 | 0.12 | Q | \| | \| | \| | V\| |
| 25+25 | 6.8562 | 0.11 | Q | \| | \| | \| | V\| |
| 25+30 | 6.8569 | 0.10 | Q | \| | \| | \| | V\| |
| 25+35 | 6.8575 | 0.09 | Q | \| | \| | \| | V\| |
| 25+40 | 6.8580 | 0.08 | Q | \| | \| | \| | V\| |
| 25+45 | 6.8585 | 0.07 | Q | \| | \| | \| | V\| |
| 25+50 | 6.8589 | 0.06 | Q | \| | \| | \| | V\| |
| 25+55 | 6.8593 | 0.05 | Q | \| | \| | \| | V\| |
| 26+ 0 | 6.8596 | 0.05 | Q | \| | \| | \| | V\| |
| 26+ 5 | 6.8599 | 0.04 | Q | \| | \| | \| | V\| |
| 26+10 | 6.8602 | 0.04 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+15 | 6.8604 | 0.03 | Q | \| | \| | \| | V\| |
| 26+20 | 6.8606 | 0.03 | Q | \| | \| | \| | V\| |
| 26+25 | 6.8608 | 0.03 | Q | \| | \| | \| | V\| |
| 26+30 | 6.8610 | 0.02 | Q | \| | \| | \| | V\| |
| 26+35 | 6.8611 | 0.02 | Q | \| | \| | \| | V\| |
| 26+40 | 6.8612 | 0.02 | Q | \| | \| | \| | V\| |
| 26+45 | 6.8613 | 0.02 | Q | \| | \| | \| | V\| |
| 26+50 | 6.8614 | 0.01 | Q | \| | \| | \| | V\| |
| 26+55 | 6.8615 | 0.01 | Q | \| | \| | \| | V\| |
| 27+ 0 | 6.8616 | 0.01 | Q | \| | \| | \| | V\| |
| 27+ 5 | 6.8617 | 0.01 | Q | \| | \| | \| | V\| |
| 27+10 | 6.8617 | 0.01 | Q | \| | \| | \| | V\| |
| 27+15 | 6.8618 | 0.01 | Q | \| | \| | \| | V\| |
| 27+20 | 6.8618 | 0.00 | Q | \| | \| | \| | V\| |
| 27+25 | 6.8618 | 0.00 | Q | \| | \| | \| | V\| |
| 27+30 | 6.8618 | 0.00 | Q | \| | \| | \| | V\| |
| 27+35 | 6.8618 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 36
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 3.57 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 3.57 | 6 | 1.84 |
| Rainfall data for year 100 | | |
| 3.57 | 24 | 2.62 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 91.0 | 98.2 | 3.57 | 1.000 | 0.036 | 0.900 | 0.032 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.032

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 3.21 | 0.900 | 91.0 | 98.2 | 0.18 | 0.921 |
| 0.36 | 0.100 | 98.0 | 98.0 | 0.20 | 0.912 |

Area-averaged catchment yield fraction, Y = 0.920
Area-averaged low loss fraction, Yb = 0.080
User entry of time of concentration = 0.270 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 3.57(Ac.)
Catchment Lag time = 0.216 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 38.5802
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.032(In/Hr)
Average low loss rate fraction (Yb) = 0.080 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.651(In)
Specified peak 6-hour rainfall = 1.840(In)
Specified peak 24-hour rainfall = 2.620(In)

Rainfall depth area reduction factors:
Using a total area of 3.57(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.659(In)
30-minute factor = 1.000 Adjusted rainfall = 1.129(In)
1-hour factor = 1.000 Adjusted rainfall = 1.390(In)
3-hour factor = 1.000 Adjusted rainfall = 1.651(In)
6-hour factor = 1.000 Adjusted rainfall = 1.840(In)
24-hour factor = 1.000 Adjusted rainfall = 2.620(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 43.17 (CFS)) | |
| 1 | 2.595 | 1.121 |
| 2 | 17.110 | 6.267 |
| 3 | 47.025 | 12.916 |
| 4 | 64.168 | 7.401 |
| 5 | 73.585 | 4.066 |
| 6 | 79.873 | 2.715 |
| 7 | 84.321 | 1.920 |
| 8 | 87.824 | 1.512 |
| 9 | 90.350 | 1.091 |
| 10 | 92.386 | 0.879 |
| 11 | 94.047 | 0.717 |
| 12 | 95.367 | 0.570 |
| 13 | 96.438 | 0.462 |

| | | |
|---|---|---|
| 14 | 97.275 | 0.361 |
| 15 | 97.884 | 0.263 |
| 16 | 98.288 | 0.174 |
| 17 | 98.739 | 0.195 |
| 18 | 99.202 | 0.200 |
| 19 | 99.584 | 0.165 |
| 20 | 99.827 | 0.105 |
| 21 | 100.000 | 0.075 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6595 | 0.6595 |
| 2 | 0.8119 | 0.1524 |
| 3 | 0.9169 | 0.1050 |
| 4 | 0.9996 | 0.0826 |
| 5 | 1.0688 | 0.0692 |
| 6 | 1.1288 | 0.0601 |
| 7 | 1.1823 | 0.0534 |
| 8 | 1.2306 | 0.0483 |
| 9 | 1.2749 | 0.0443 |
| 10 | 1.3158 | 0.0409 |
| 11 | 1.3540 | 0.0382 |
| 12 | 1.3898 | 0.0358 |
| 13 | 1.4073 | 0.0175 |
| 14 | 1.4237 | 0.0164 |
| 15 | 1.4392 | 0.0155 |
| 16 | 1.4538 | 0.0146 |
| 17 | 1.4677 | 0.0139 |
| 18 | 1.4809 | 0.0132 |
| 19 | 1.4935 | 0.0126 |
| 20 | 1.5056 | 0.0120 |
| 21 | 1.5171 | 0.0116 |
| 22 | 1.5282 | 0.0111 |
| 23 | 1.5389 | 0.0107 |
| 24 | 1.5492 | 0.0103 |
| 25 | 1.5591 | 0.0099 |
| 26 | 1.5687 | 0.0096 |
| 27 | 1.5780 | 0.0093 |
| 28 | 1.5870 | 0.0090 |
| 29 | 1.5958 | 0.0087 |
| 30 | 1.6043 | 0.0085 |
| 31 | 1.6126 | 0.0083 |
| 32 | 1.6206 | 0.0080 |
| 33 | 1.6284 | 0.0078 |
| 34 | 1.6361 | 0.0076 |
| 35 | 1.6435 | 0.0074 |
| 36 | 1.6508 | 0.0073 |
| 37 | 1.6579 | 0.0071 |
| 38 | 1.6648 | 0.0069 |
| 39 | 1.6716 | 0.0068 |
| 40 | 1.6782 | 0.0066 |
| 41 | 1.6847 | 0.0065 |
| 42 | 1.6911 | 0.0064 |
| 43 | 1.6973 | 0.0062 |
| 44 | 1.7035 | 0.0061 |
| 45 | 1.7095 | 0.0060 |
| 46 | 1.7154 | 0.0059 |
| 47 | 1.7211 | 0.0058 |
| 48 | 1.7268 | 0.0057 |

| | | |
|---|---|---|
| 49 | 1.7324 | 0.0056 |
| 50 | 1.7379 | 0.0055 |
| 51 | 1.7433 | 0.0054 |
| 52 | 1.7486 | 0.0053 |
| 53 | 1.7538 | 0.0052 |
| 54 | 1.7590 | 0.0051 |
| 55 | 1.7640 | 0.0051 |
| 56 | 1.7690 | 0.0050 |
| 57 | 1.7739 | 0.0049 |
| 58 | 1.7787 | 0.0048 |
| 59 | 1.7835 | 0.0048 |
| 60 | 1.7882 | 0.0047 |
| 61 | 1.7928 | 0.0046 |
| 62 | 1.7974 | 0.0046 |
| 63 | 1.8019 | 0.0045 |
| 64 | 1.8064 | 0.0044 |
| 65 | 1.8108 | 0.0044 |
| 66 | 1.8151 | 0.0043 |
| 67 | 1.8194 | 0.0043 |
| 68 | 1.8236 | 0.0042 |
| 69 | 1.8278 | 0.0042 |
| 70 | 1.8319 | 0.0041 |
| 71 | 1.8360 | 0.0041 |
| 72 | 1.8400 | 0.0040 |
| 73 | 1.8465 | 0.0065 |
| 74 | 1.8529 | 0.0064 |
| 75 | 1.8592 | 0.0064 |
| 76 | 1.8655 | 0.0063 |
| 77 | 1.8717 | 0.0062 |
| 78 | 1.8779 | 0.0062 |
| 79 | 1.8840 | 0.0061 |
| 80 | 1.8901 | 0.0061 |
| 81 | 1.8961 | 0.0060 |
| 82 | 1.9020 | 0.0059 |
| 83 | 1.9079 | 0.0059 |
| 84 | 1.9137 | 0.0058 |
| 85 | 1.9195 | 0.0058 |
| 86 | 1.9252 | 0.0057 |
| 87 | 1.9309 | 0.0057 |
| 88 | 1.9366 | 0.0056 |
| 89 | 1.9421 | 0.0056 |
| 90 | 1.9477 | 0.0055 |
| 91 | 1.9532 | 0.0055 |
| 92 | 1.9586 | 0.0054 |
| 93 | 1.9640 | 0.0054 |
| 94 | 1.9694 | 0.0054 |
| 95 | 1.9747 | 0.0053 |
| 96 | 1.9800 | 0.0053 |
| 97 | 1.9852 | 0.0052 |
| 98 | 1.9904 | 0.0052 |
| 99 | 1.9956 | 0.0052 |
| 100 | 2.0007 | 0.0051 |
| 101 | 2.0058 | 0.0051 |
| 102 | 2.0108 | 0.0050 |
| 103 | 2.0158 | 0.0050 |
| 104 | 2.0208 | 0.0050 |
| 105 | 2.0258 | 0.0049 |
| 106 | 2.0307 | 0.0049 |
| 107 | 2.0355 | 0.0049 |

| | | |
|---|---|---|
| 108 | 2.0404 | 0.0048 |
| 109 | 2.0452 | 0.0048 |
| 110 | 2.0499 | 0.0048 |
| 111 | 2.0547 | 0.0047 |
| 112 | 2.0594 | 0.0047 |
| 113 | 2.0640 | 0.0047 |
| 114 | 2.0687 | 0.0046 |
| 115 | 2.0733 | 0.0046 |
| 116 | 2.0779 | 0.0046 |
| 117 | 2.0824 | 0.0046 |
| 118 | 2.0869 | 0.0045 |
| 119 | 2.0914 | 0.0045 |
| 120 | 2.0959 | 0.0045 |
| 121 | 2.1003 | 0.0044 |
| 122 | 2.1047 | 0.0044 |
| 123 | 2.1091 | 0.0044 |
| 124 | 2.1135 | 0.0044 |
| 125 | 2.1178 | 0.0043 |
| 126 | 2.1221 | 0.0043 |
| 127 | 2.1264 | 0.0043 |
| 128 | 2.1307 | 0.0043 |
| 129 | 2.1349 | 0.0042 |
| 130 | 2.1391 | 0.0042 |
| 131 | 2.1433 | 0.0042 |
| 132 | 2.1474 | 0.0042 |
| 133 | 2.1516 | 0.0041 |
| 134 | 2.1557 | 0.0041 |
| 135 | 2.1598 | 0.0041 |
| 136 | 2.1639 | 0.0041 |
| 137 | 2.1679 | 0.0040 |
| 138 | 2.1719 | 0.0040 |
| 139 | 2.1759 | 0.0040 |
| 140 | 2.1799 | 0.0040 |
| 141 | 2.1839 | 0.0040 |
| 142 | 2.1878 | 0.0039 |
| 143 | 2.1917 | 0.0039 |
| 144 | 2.1956 | 0.0039 |
| 145 | 2.1995 | 0.0039 |
| 146 | 2.2033 | 0.0039 |
| 147 | 2.2072 | 0.0038 |
| 148 | 2.2110 | 0.0038 |
| 149 | 2.2148 | 0.0038 |
| 150 | 2.2186 | 0.0038 |
| 151 | 2.2223 | 0.0038 |
| 152 | 2.2261 | 0.0037 |
| 153 | 2.2298 | 0.0037 |
| 154 | 2.2335 | 0.0037 |
| 155 | 2.2372 | 0.0037 |
| 156 | 2.2409 | 0.0037 |
| 157 | 2.2445 | 0.0037 |
| 158 | 2.2482 | 0.0036 |
| 159 | 2.2518 | 0.0036 |
| 160 | 2.2554 | 0.0036 |
| 161 | 2.2590 | 0.0036 |
| 162 | 2.2625 | 0.0036 |
| 163 | 2.2661 | 0.0036 |
| 164 | 2.2696 | 0.0035 |
| 165 | 2.2732 | 0.0035 |
| 166 | 2.2767 | 0.0035 |

| | | |
|---|---|---|
| 167 | 2.2801 | 0.0035 |
| 168 | 2.2836 | 0.0035 |
| 169 | 2.2871 | 0.0035 |
| 170 | 2.2905 | 0.0034 |
| 171 | 2.2939 | 0.0034 |
| 172 | 2.2974 | 0.0034 |
| 173 | 2.3008 | 0.0034 |
| 174 | 2.3041 | 0.0034 |
| 175 | 2.3075 | 0.0034 |
| 176 | 2.3109 | 0.0034 |
| 177 | 2.3142 | 0.0033 |
| 178 | 2.3175 | 0.0033 |
| 179 | 2.3208 | 0.0033 |
| 180 | 2.3241 | 0.0033 |
| 181 | 2.3274 | 0.0033 |
| 182 | 2.3307 | 0.0033 |
| 183 | 2.3340 | 0.0033 |
| 184 | 2.3372 | 0.0032 |
| 185 | 2.3404 | 0.0032 |
| 186 | 2.3436 | 0.0032 |
| 187 | 2.3469 | 0.0032 |
| 188 | 2.3500 | 0.0032 |
| 189 | 2.3532 | 0.0032 |
| 190 | 2.3564 | 0.0032 |
| 191 | 2.3596 | 0.0032 |
| 192 | 2.3627 | 0.0031 |
| 193 | 2.3658 | 0.0031 |
| 194 | 2.3689 | 0.0031 |
| 195 | 2.3721 | 0.0031 |
| 196 | 2.3751 | 0.0031 |
| 197 | 2.3782 | 0.0031 |
| 198 | 2.3813 | 0.0031 |
| 199 | 2.3844 | 0.0031 |
| 200 | 2.3874 | 0.0030 |
| 201 | 2.3904 | 0.0030 |
| 202 | 2.3935 | 0.0030 |
| 203 | 2.3965 | 0.0030 |
| 204 | 2.3995 | 0.0030 |
| 205 | 2.4025 | 0.0030 |
| 206 | 2.4055 | 0.0030 |
| 207 | 2.4084 | 0.0030 |
| 208 | 2.4114 | 0.0030 |
| 209 | 2.4144 | 0.0030 |
| 210 | 2.4173 | 0.0029 |
| 211 | 2.4202 | 0.0029 |
| 212 | 2.4231 | 0.0029 |
| 213 | 2.4260 | 0.0029 |
| 214 | 2.4289 | 0.0029 |
| 215 | 2.4318 | 0.0029 |
| 216 | 2.4347 | 0.0029 |
| 217 | 2.4376 | 0.0029 |
| 218 | 2.4404 | 0.0029 |
| 219 | 2.4433 | 0.0028 |
| 220 | 2.4461 | 0.0028 |
| 221 | 2.4490 | 0.0028 |
| 222 | 2.4518 | 0.0028 |
| 223 | 2.4546 | 0.0028 |
| 224 | 2.4574 | 0.0028 |
| 225 | 2.4602 | 0.0028 |

| | | |
|---|---|---|
| 226 | 2.4630 | 0.0028 |
| 227 | 2.4657 | 0.0028 |
| 228 | 2.4685 | 0.0028 |
| 229 | 2.4713 | 0.0028 |
| 230 | 2.4740 | 0.0027 |
| 231 | 2.4767 | 0.0027 |
| 232 | 2.4795 | 0.0027 |
| 233 | 2.4822 | 0.0027 |
| 234 | 2.4849 | 0.0027 |
| 235 | 2.4876 | 0.0027 |
| 236 | 2.4903 | 0.0027 |
| 237 | 2.4930 | 0.0027 |
| 238 | 2.4957 | 0.0027 |
| 239 | 2.4983 | 0.0027 |
| 240 | 2.5010 | 0.0027 |
| 241 | 2.5037 | 0.0027 |
| 242 | 2.5063 | 0.0026 |
| 243 | 2.5089 | 0.0026 |
| 244 | 2.5116 | 0.0026 |
| 245 | 2.5142 | 0.0026 |
| 246 | 2.5168 | 0.0026 |
| 247 | 2.5194 | 0.0026 |
| 248 | 2.5220 | 0.0026 |
| 249 | 2.5246 | 0.0026 |
| 250 | 2.5272 | 0.0026 |
| 251 | 2.5297 | 0.0026 |
| 252 | 2.5323 | 0.0026 |
| 253 | 2.5349 | 0.0026 |
| 254 | 2.5374 | 0.0026 |
| 255 | 2.5400 | 0.0025 |
| 256 | 2.5425 | 0.0025 |
| 257 | 2.5450 | 0.0025 |
| 258 | 2.5475 | 0.0025 |
| 259 | 2.5500 | 0.0025 |
| 260 | 2.5526 | 0.0025 |
| 261 | 2.5551 | 0.0025 |
| 262 | 2.5575 | 0.0025 |
| 263 | 2.5600 | 0.0025 |
| 264 | 2.5625 | 0.0025 |
| 265 | 2.5650 | 0.0025 |
| 266 | 2.5674 | 0.0025 |
| 267 | 2.5699 | 0.0025 |
| 268 | 2.5724 | 0.0025 |
| 269 | 2.5748 | 0.0024 |
| 270 | 2.5772 | 0.0024 |
| 271 | 2.5797 | 0.0024 |
| 272 | 2.5821 | 0.0024 |
| 273 | 2.5845 | 0.0024 |
| 274 | 2.5869 | 0.0024 |
| 275 | 2.5893 | 0.0024 |
| 276 | 2.5917 | 0.0024 |
| 277 | 2.5941 | 0.0024 |
| 278 | 2.5965 | 0.0024 |
| 279 | 2.5989 | 0.0024 |
| 280 | 2.6012 | 0.0024 |
| 281 | 2.6036 | 0.0024 |
| 282 | 2.6060 | 0.0024 |
| 283 | 2.6083 | 0.0024 |
| 284 | 2.6107 | 0.0023 |

| | | |
|---|---|---|
| 285 | 2.6130 | 0.0023 |
| 286 | 2.6153 | 0.0023 |
| 287 | 2.6177 | 0.0023 |
| 288 | 2.6200 | 0.0023 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0023 | 0.0002 | 0.0021 |
| 2 | 0.0023 | 0.0002 | 0.0021 |
| 3 | 0.0023 | 0.0002 | 0.0022 |
| 4 | 0.0023 | 0.0002 | 0.0022 |
| 5 | 0.0024 | 0.0002 | 0.0022 |
| 6 | 0.0024 | 0.0002 | 0.0022 |
| 7 | 0.0024 | 0.0002 | 0.0022 |
| 8 | 0.0024 | 0.0002 | 0.0022 |
| 9 | 0.0024 | 0.0002 | 0.0022 |
| 10 | 0.0024 | 0.0002 | 0.0022 |
| 11 | 0.0024 | 0.0002 | 0.0022 |
| 12 | 0.0024 | 0.0002 | 0.0022 |
| 13 | 0.0024 | 0.0002 | 0.0022 |
| 14 | 0.0024 | 0.0002 | 0.0022 |
| 15 | 0.0025 | 0.0002 | 0.0023 |
| 16 | 0.0025 | 0.0002 | 0.0023 |
| 17 | 0.0025 | 0.0002 | 0.0023 |
| 18 | 0.0025 | 0.0002 | 0.0023 |
| 19 | 0.0025 | 0.0002 | 0.0023 |
| 20 | 0.0025 | 0.0002 | 0.0023 |
| 21 | 0.0025 | 0.0002 | 0.0023 |
| 22 | 0.0025 | 0.0002 | 0.0023 |
| 23 | 0.0025 | 0.0002 | 0.0023 |
| 24 | 0.0026 | 0.0002 | 0.0023 |
| 25 | 0.0026 | 0.0002 | 0.0024 |
| 26 | 0.0026 | 0.0002 | 0.0024 |
| 27 | 0.0026 | 0.0002 | 0.0024 |
| 28 | 0.0026 | 0.0002 | 0.0024 |
| 29 | 0.0026 | 0.0002 | 0.0024 |
| 30 | 0.0026 | 0.0002 | 0.0024 |
| 31 | 0.0026 | 0.0002 | 0.0024 |
| 32 | 0.0026 | 0.0002 | 0.0024 |
| 33 | 0.0027 | 0.0002 | 0.0024 |
| 34 | 0.0027 | 0.0002 | 0.0025 |
| 35 | 0.0027 | 0.0002 | 0.0025 |
| 36 | 0.0027 | 0.0002 | 0.0025 |
| 37 | 0.0027 | 0.0002 | 0.0025 |
| 38 | 0.0027 | 0.0002 | 0.0025 |
| 39 | 0.0027 | 0.0002 | 0.0025 |
| 40 | 0.0027 | 0.0002 | 0.0025 |
| 41 | 0.0028 | 0.0002 | 0.0025 |
| 42 | 0.0028 | 0.0002 | 0.0026 |
| 43 | 0.0028 | 0.0002 | 0.0026 |
| 44 | 0.0028 | 0.0002 | 0.0026 |
| 45 | 0.0028 | 0.0002 | 0.0026 |
| 46 | 0.0028 | 0.0002 | 0.0026 |
| 47 | 0.0028 | 0.0002 | 0.0026 |
| 48 | 0.0029 | 0.0002 | 0.0026 |
| 49 | 0.0029 | 0.0002 | 0.0026 |
| 50 | 0.0029 | 0.0002 | 0.0027 |

| | | | |
|---|---|---|---|
| 51 | 0.0029 | 0.0002 | 0.0027 |
| 52 | 0.0029 | 0.0002 | 0.0027 |
| 53 | 0.0029 | 0.0002 | 0.0027 |
| 54 | 0.0030 | 0.0002 | 0.0027 |
| 55 | 0.0030 | 0.0002 | 0.0027 |
| 56 | 0.0030 | 0.0002 | 0.0027 |
| 57 | 0.0030 | 0.0002 | 0.0028 |
| 58 | 0.0030 | 0.0002 | 0.0028 |
| 59 | 0.0030 | 0.0002 | 0.0028 |
| 60 | 0.0030 | 0.0002 | 0.0028 |
| 61 | 0.0031 | 0.0002 | 0.0028 |
| 62 | 0.0031 | 0.0002 | 0.0028 |
| 63 | 0.0031 | 0.0002 | 0.0029 |
| 64 | 0.0031 | 0.0003 | 0.0029 |
| 65 | 0.0031 | 0.0003 | 0.0029 |
| 66 | 0.0032 | 0.0003 | 0.0029 |
| 67 | 0.0032 | 0.0003 | 0.0029 |
| 68 | 0.0032 | 0.0003 | 0.0029 |
| 69 | 0.0032 | 0.0003 | 0.0030 |
| 70 | 0.0032 | 0.0003 | 0.0030 |
| 71 | 0.0033 | 0.0003 | 0.0030 |
| 72 | 0.0033 | 0.0003 | 0.0030 |
| 73 | 0.0033 | 0.0003 | 0.0030 |
| 74 | 0.0033 | 0.0003 | 0.0030 |
| 75 | 0.0033 | 0.0003 | 0.0031 |
| 76 | 0.0034 | 0.0003 | 0.0031 |
| 77 | 0.0034 | 0.0003 | 0.0031 |
| 78 | 0.0034 | 0.0003 | 0.0031 |
| 79 | 0.0034 | 0.0003 | 0.0032 |
| 80 | 0.0034 | 0.0003 | 0.0032 |
| 81 | 0.0035 | 0.0003 | 0.0032 |
| 82 | 0.0035 | 0.0003 | 0.0032 |
| 83 | 0.0035 | 0.0003 | 0.0032 |
| 84 | 0.0035 | 0.0003 | 0.0033 |
| 85 | 0.0036 | 0.0003 | 0.0033 |
| 86 | 0.0036 | 0.0003 | 0.0033 |
| 87 | 0.0036 | 0.0003 | 0.0033 |
| 88 | 0.0036 | 0.0003 | 0.0033 |
| 89 | 0.0037 | 0.0003 | 0.0034 |
| 90 | 0.0037 | 0.0003 | 0.0034 |
| 91 | 0.0037 | 0.0003 | 0.0034 |
| 92 | 0.0037 | 0.0003 | 0.0034 |
| 93 | 0.0038 | 0.0003 | 0.0035 |
| 94 | 0.0038 | 0.0003 | 0.0035 |
| 95 | 0.0038 | 0.0003 | 0.0035 |
| 96 | 0.0039 | 0.0003 | 0.0035 |
| 97 | 0.0039 | 0.0003 | 0.0036 |
| 98 | 0.0039 | 0.0003 | 0.0036 |
| 99 | 0.0040 | 0.0003 | 0.0036 |
| 100 | 0.0040 | 0.0003 | 0.0037 |
| 101 | 0.0040 | 0.0003 | 0.0037 |
| 102 | 0.0040 | 0.0003 | 0.0037 |
| 103 | 0.0041 | 0.0003 | 0.0038 |
| 104 | 0.0041 | 0.0003 | 0.0038 |
| 105 | 0.0042 | 0.0003 | 0.0038 |
| 106 | 0.0042 | 0.0003 | 0.0038 |
| 107 | 0.0042 | 0.0003 | 0.0039 |
| 108 | 0.0043 | 0.0003 | 0.0039 |
| 109 | 0.0043 | 0.0003 | 0.0040 |

| | | | |
|---|---|---|---|
| 110 | 0.0043 | 0.0003 | 0.0040 |
| 111 | 0.0044 | 0.0004 | 0.0040 |
| 112 | 0.0044 | 0.0004 | 0.0041 |
| 113 | 0.0045 | 0.0004 | 0.0041 |
| 114 | 0.0045 | 0.0004 | 0.0041 |
| 115 | 0.0046 | 0.0004 | 0.0042 |
| 116 | 0.0046 | 0.0004 | 0.0042 |
| 117 | 0.0046 | 0.0004 | 0.0043 |
| 118 | 0.0047 | 0.0004 | 0.0043 |
| 119 | 0.0047 | 0.0004 | 0.0044 |
| 120 | 0.0048 | 0.0004 | 0.0044 |
| 121 | 0.0048 | 0.0004 | 0.0044 |
| 122 | 0.0049 | 0.0004 | 0.0045 |
| 123 | 0.0049 | 0.0004 | 0.0045 |
| 124 | 0.0050 | 0.0004 | 0.0046 |
| 125 | 0.0050 | 0.0004 | 0.0046 |
| 126 | 0.0051 | 0.0004 | 0.0047 |
| 127 | 0.0052 | 0.0004 | 0.0047 |
| 128 | 0.0052 | 0.0004 | 0.0048 |
| 129 | 0.0053 | 0.0004 | 0.0049 |
| 130 | 0.0053 | 0.0004 | 0.0049 |
| 131 | 0.0054 | 0.0004 | 0.0050 |
| 132 | 0.0054 | 0.0004 | 0.0050 |
| 133 | 0.0055 | 0.0004 | 0.0051 |
| 134 | 0.0056 | 0.0004 | 0.0051 |
| 135 | 0.0057 | 0.0005 | 0.0052 |
| 136 | 0.0057 | 0.0005 | 0.0053 |
| 137 | 0.0058 | 0.0005 | 0.0054 |
| 138 | 0.0059 | 0.0005 | 0.0054 |
| 139 | 0.0060 | 0.0005 | 0.0055 |
| 140 | 0.0061 | 0.0005 | 0.0056 |
| 141 | 0.0062 | 0.0005 | 0.0057 |
| 142 | 0.0062 | 0.0005 | 0.0057 |
| 143 | 0.0064 | 0.0005 | 0.0058 |
| 144 | 0.0064 | 0.0005 | 0.0059 |
| 145 | 0.0040 | 0.0003 | 0.0037 |
| 146 | 0.0041 | 0.0003 | 0.0037 |
| 147 | 0.0042 | 0.0003 | 0.0038 |
| 148 | 0.0042 | 0.0003 | 0.0039 |
| 149 | 0.0043 | 0.0003 | 0.0040 |
| 150 | 0.0044 | 0.0004 | 0.0040 |
| 151 | 0.0045 | 0.0004 | 0.0041 |
| 152 | 0.0046 | 0.0004 | 0.0042 |
| 153 | 0.0047 | 0.0004 | 0.0043 |
| 154 | 0.0048 | 0.0004 | 0.0044 |
| 155 | 0.0049 | 0.0004 | 0.0045 |
| 156 | 0.0050 | 0.0004 | 0.0046 |
| 157 | 0.0051 | 0.0004 | 0.0047 |
| 158 | 0.0052 | 0.0004 | 0.0048 |
| 159 | 0.0054 | 0.0004 | 0.0050 |
| 160 | 0.0055 | 0.0004 | 0.0050 |
| 161 | 0.0057 | 0.0005 | 0.0052 |
| 162 | 0.0058 | 0.0005 | 0.0053 |
| 163 | 0.0060 | 0.0005 | 0.0055 |
| 164 | 0.0061 | 0.0005 | 0.0056 |
| 165 | 0.0064 | 0.0005 | 0.0059 |
| 166 | 0.0065 | 0.0005 | 0.0060 |
| 167 | 0.0068 | 0.0005 | 0.0062 |
| 168 | 0.0069 | 0.0006 | 0.0064 |

| | | | |
|---|---|---|---|
| 169 | 0.0073 | 0.0006 | 0.0067 |
| 170 | 0.0074 | 0.0006 | 0.0068 |
| 171 | 0.0078 | 0.0006 | 0.0072 |
| 172 | 0.0080 | 0.0006 | 0.0074 |
| 173 | 0.0085 | 0.0007 | 0.0078 |
| 174 | 0.0087 | 0.0007 | 0.0080 |
| 175 | 0.0093 | 0.0007 | 0.0086 |
| 176 | 0.0096 | 0.0008 | 0.0088 |
| 177 | 0.0103 | 0.0008 | 0.0095 |
| 178 | 0.0107 | 0.0009 | 0.0098 |
| 179 | 0.0116 | 0.0009 | 0.0106 |
| 180 | 0.0120 | 0.0010 | 0.0111 |
| 181 | 0.0132 | 0.0011 | 0.0121 |
| 182 | 0.0139 | 0.0011 | 0.0128 |
| 183 | 0.0155 | 0.0012 | 0.0142 |
| 184 | 0.0164 | 0.0013 | 0.0151 |
| 185 | 0.0358 | 0.0027 | 0.0331 |
| 186 | 0.0382 | 0.0027 | 0.0355 |
| 187 | 0.0443 | 0.0027 | 0.0416 |
| 188 | 0.0483 | 0.0027 | 0.0456 |
| 189 | 0.0601 | 0.0027 | 0.0574 |
| 190 | 0.0692 | 0.0027 | 0.0665 |
| 191 | 0.1050 | 0.0027 | 0.1023 |
| 192 | 0.1524 | 0.0027 | 0.1497 |
| 193 | 0.6595 | 0.0027 | 0.6568 |
| 194 | 0.0826 | 0.0027 | 0.0800 |
| 195 | 0.0534 | 0.0027 | 0.0507 |
| 196 | 0.0409 | 0.0027 | 0.0383 |
| 197 | 0.0175 | 0.0014 | 0.0161 |
| 198 | 0.0146 | 0.0012 | 0.0135 |
| 199 | 0.0126 | 0.0010 | 0.0116 |
| 200 | 0.0111 | 0.0009 | 0.0102 |
| 201 | 0.0099 | 0.0008 | 0.0091 |
| 202 | 0.0090 | 0.0007 | 0.0083 |
| 203 | 0.0083 | 0.0007 | 0.0076 |
| 204 | 0.0076 | 0.0006 | 0.0070 |
| 205 | 0.0071 | 0.0006 | 0.0065 |
| 206 | 0.0066 | 0.0005 | 0.0061 |
| 207 | 0.0062 | 0.0005 | 0.0057 |
| 208 | 0.0059 | 0.0005 | 0.0054 |
| 209 | 0.0056 | 0.0004 | 0.0051 |
| 210 | 0.0053 | 0.0004 | 0.0049 |
| 211 | 0.0051 | 0.0004 | 0.0047 |
| 212 | 0.0048 | 0.0004 | 0.0044 |
| 213 | 0.0046 | 0.0004 | 0.0043 |
| 214 | 0.0044 | 0.0004 | 0.0041 |
| 215 | 0.0043 | 0.0003 | 0.0039 |
| 216 | 0.0041 | 0.0003 | 0.0038 |
| 217 | 0.0065 | 0.0005 | 0.0060 |
| 218 | 0.0063 | 0.0005 | 0.0058 |
| 219 | 0.0061 | 0.0005 | 0.0056 |
| 220 | 0.0059 | 0.0005 | 0.0055 |
| 221 | 0.0058 | 0.0005 | 0.0053 |
| 222 | 0.0056 | 0.0005 | 0.0052 |
| 223 | 0.0055 | 0.0004 | 0.0051 |
| 224 | 0.0054 | 0.0004 | 0.0049 |
| 225 | 0.0052 | 0.0004 | 0.0048 |
| 226 | 0.0051 | 0.0004 | 0.0047 |
| 227 | 0.0050 | 0.0004 | 0.0046 |

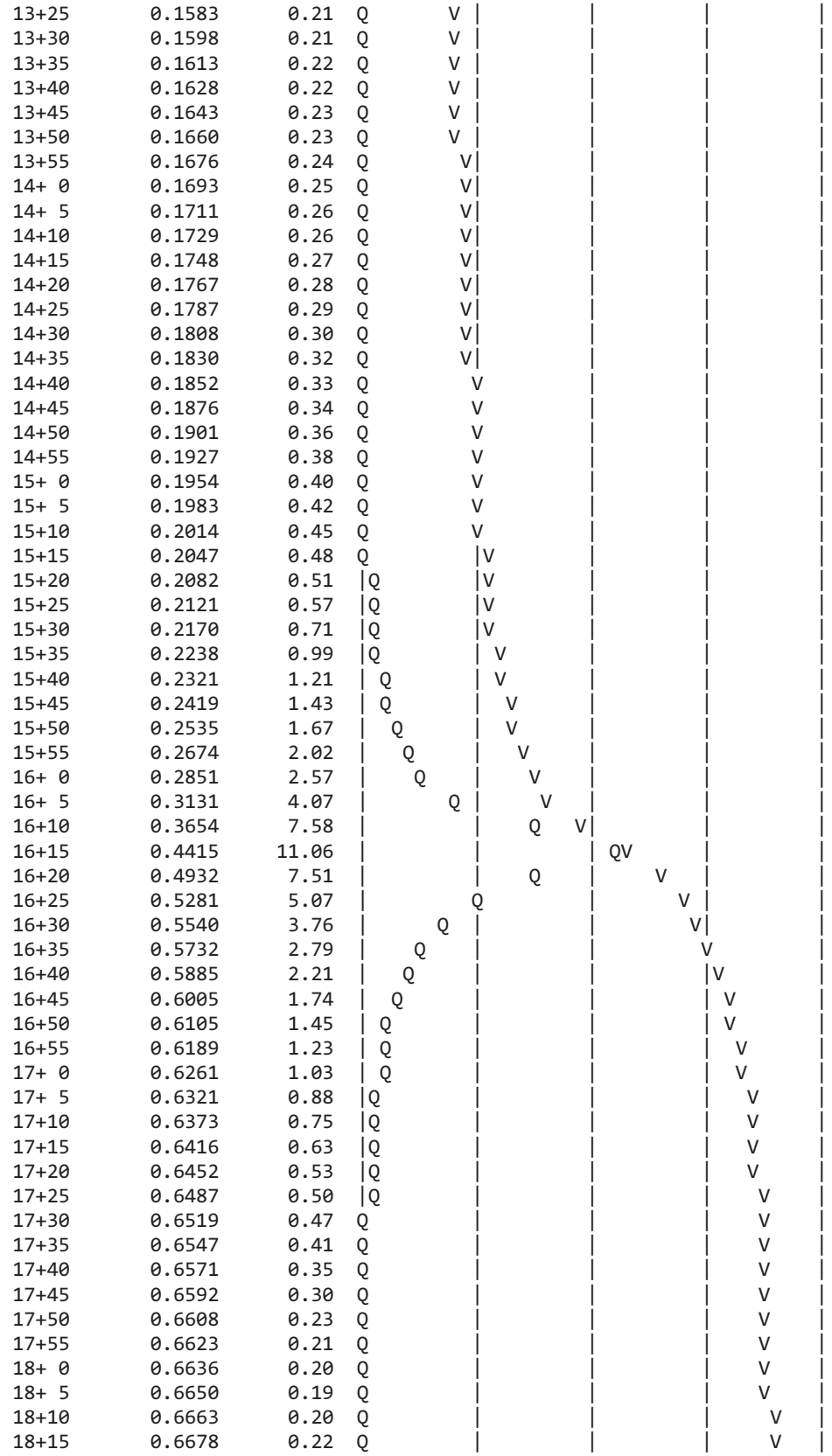
| | | | |
|---|---|---|---|
| 228 | 0.0049 | 0.0004 | 0.0045 |
| 229 | 0.0048 | 0.0004 | 0.0044 |
| 230 | 0.0047 | 0.0004 | 0.0043 |
| 231 | 0.0046 | 0.0004 | 0.0042 |
| 232 | 0.0045 | 0.0004 | 0.0042 |
| 233 | 0.0044 | 0.0004 | 0.0041 |
| 234 | 0.0044 | 0.0003 | 0.0040 |
| 235 | 0.0043 | 0.0003 | 0.0039 |
| 236 | 0.0042 | 0.0003 | 0.0039 |
| 237 | 0.0041 | 0.0003 | 0.0038 |
| 238 | 0.0041 | 0.0003 | 0.0037 |
| 239 | 0.0040 | 0.0003 | 0.0037 |
| 240 | 0.0039 | 0.0003 | 0.0036 |
| 241 | 0.0039 | 0.0003 | 0.0036 |
| 242 | 0.0038 | 0.0003 | 0.0035 |
| 243 | 0.0038 | 0.0003 | 0.0035 |
| 244 | 0.0037 | 0.0003 | 0.0034 |
| 245 | 0.0037 | 0.0003 | 0.0034 |
| 246 | 0.0036 | 0.0003 | 0.0033 |
| 247 | 0.0036 | 0.0003 | 0.0033 |
| 248 | 0.0035 | 0.0003 | 0.0032 |
| 249 | 0.0035 | 0.0003 | 0.0032 |
| 250 | 0.0034 | 0.0003 | 0.0031 |
| 251 | 0.0034 | 0.0003 | 0.0031 |
| 252 | 0.0033 | 0.0003 | 0.0031 |
| 253 | 0.0033 | 0.0003 | 0.0030 |
| 254 | 0.0032 | 0.0003 | 0.0030 |
| 255 | 0.0032 | 0.0003 | 0.0029 |
| 256 | 0.0032 | 0.0003 | 0.0029 |
| 257 | 0.0031 | 0.0003 | 0.0029 |
| 258 | 0.0031 | 0.0002 | 0.0028 |
| 259 | 0.0031 | 0.0002 | 0.0028 |
| 260 | 0.0030 | 0.0002 | 0.0028 |
| 261 | 0.0030 | 0.0002 | 0.0028 |
| 262 | 0.0030 | 0.0002 | 0.0027 |
| 263 | 0.0029 | 0.0002 | 0.0027 |
| 264 | 0.0029 | 0.0002 | 0.0027 |
| 265 | 0.0029 | 0.0002 | 0.0026 |
| 266 | 0.0028 | 0.0002 | 0.0026 |
| 267 | 0.0028 | 0.0002 | 0.0026 |
| 268 | 0.0028 | 0.0002 | 0.0026 |
| 269 | 0.0028 | 0.0002 | 0.0025 |
| 270 | 0.0027 | 0.0002 | 0.0025 |
| 271 | 0.0027 | 0.0002 | 0.0025 |
| 272 | 0.0027 | 0.0002 | 0.0025 |
| 273 | 0.0027 | 0.0002 | 0.0024 |
| 274 | 0.0026 | 0.0002 | 0.0024 |
| 275 | 0.0026 | 0.0002 | 0.0024 |
| 276 | 0.0026 | 0.0002 | 0.0024 |
| 277 | 0.0026 | 0.0002 | 0.0024 |
| 278 | 0.0025 | 0.0002 | 0.0023 |
| 279 | 0.0025 | 0.0002 | 0.0023 |
| 280 | 0.0025 | 0.0002 | 0.0023 |
| 281 | 0.0025 | 0.0002 | 0.0023 |
| 282 | 0.0025 | 0.0002 | 0.0023 |
| 283 | 0.0024 | 0.0002 | 0.0022 |
| 284 | 0.0024 | 0.0002 | 0.0022 |
| 285 | 0.0024 | 0.0002 | 0.0022 |
| 286 | 0.0024 | 0.0002 | 0.0022 |

```
     287             0.0024          0.0002             0.0022
     288             0.0023          0.0002             0.0021
     ---------------------------------------------------------------------
     ---------------------------------------------------------------------
     Total soil rain loss =      0.13(In)
     Total effective rainfall =      2.49(In)
     Peak flow rate in flood hydrograph =     11.06(CFS)
     ---------------------------------------------------------------------
     +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                       24 - H O U R    S T O R M
                  R u n o f f      H y d r o g r a p h
     ---------------------------------------------------------------------
                Hydrograph in   5   Minute intervals ((CFS))

     ---------------------------------------------------------------------
Time(h+m) Volume Ac.Ft   Q(CFS)  0        5.0      10.0      15.0      20.0
-------------------------------------------------------------------------
  0+ 5       0.0000      0.00  Q         |          |         |         |
  0+10       0.0001      0.02  Q         |          |         |         |
  0+15       0.0004      0.04  Q         |          |         |         |
  0+20       0.0008      0.06  Q         |          |         |         |
  0+25       0.0013      0.07  Q         |          |         |         |
  0+30       0.0018      0.07  Q         |          |         |         |
  0+35       0.0024      0.08  Q         |          |         |         |
  0+40       0.0029      0.08  Q         |          |         |         |
  0+45       0.0035      0.08  Q         |          |         |         |
  0+50       0.0041      0.09  Q         |          |         |         |
  0+55       0.0047      0.09  Q         |          |         |         |
  1+ 0       0.0053      0.09  Q         |          |         |         |
  1+ 5       0.0060      0.09  Q         |          |         |         |
  1+10       0.0066      0.09  Q         |          |         |         |
  1+15       0.0073      0.09  Q         |          |         |         |
  1+20       0.0079      0.09  Q         |          |         |         |
  1+25       0.0086      0.10  Q         |          |         |         |
  1+30       0.0092      0.10  Q         |          |         |         |
  1+35       0.0099      0.10  Q         |          |         |         |
  1+40       0.0106      0.10  Q         |          |         |         |
  1+45       0.0113      0.10  Q         |          |         |         |
  1+50       0.0119      0.10  Q         |          |         |         |
  1+55       0.0126      0.10  Q         |          |         |         |
  2+ 0       0.0133      0.10  Q         |          |         |         |
  2+ 5       0.0140      0.10  Q         |          |         |         |
  2+10       0.0147      0.10  Q         |          |         |         |
  2+15       0.0154      0.10  Q         |          |         |         |
  2+20       0.0161      0.10  Q         |          |         |         |
  2+25       0.0168      0.10  Q         |          |         |         |
  2+30       0.0175      0.10  Q         |          |         |         |
  2+35       0.0182      0.10  Q         |          |         |         |
  2+40       0.0189      0.10  QV        |          |         |         |
  2+45       0.0196      0.10  QV        |          |         |         |
  2+50       0.0204      0.10  QV        |          |         |         |
  2+55       0.0211      0.10  QV        |          |         |         |
  3+ 0       0.0218      0.11  QV        |          |         |         |
  3+ 5       0.0225      0.11  QV        |          |         |         |
  3+10       0.0233      0.11  QV        |          |         |         |
  3+15       0.0240      0.11  QV        |          |         |         |
  3+20       0.0247      0.11  QV        |          |         |         |
  3+25       0.0255      0.11  QV        |          |         |         |
  3+30       0.0262      0.11  QV        |          |         |         |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+35 | 0.0270 | 0.11 | QV | \| | \| | \| | \| |
| 3+40 | 0.0277 | 0.11 | QV | \| | \| | \| | \| |
| 3+45 | 0.0285 | 0.11 | QV | \| | \| | \| | \| |
| 3+50 | 0.0292 | 0.11 | QV | \| | \| | \| | \| |
| 3+55 | 0.0300 | 0.11 | QV | \| | \| | \| | \| |
| 4+ 0 | 0.0308 | 0.11 | QV | \| | \| | \| | \| |
| 4+ 5 | 0.0315 | 0.11 | QV | \| | \| | \| | \| |
| 4+10 | 0.0323 | 0.11 | QV | \| | \| | \| | \| |
| 4+15 | 0.0331 | 0.11 | QV | \| | \| | \| | \| |
| 4+20 | 0.0339 | 0.11 | QV | \| | \| | \| | \| |
| 4+25 | 0.0347 | 0.11 | QV | \| | \| | \| | \| |
| 4+30 | 0.0355 | 0.11 | QV | \| | \| | \| | \| |
| 4+35 | 0.0363 | 0.12 | QV | \| | \| | \| | \| |
| 4+40 | 0.0371 | 0.12 | Q V | \| | \| | \| | \| |
| 4+45 | 0.0379 | 0.12 | Q V | \| | \| | \| | \| |
| 4+50 | 0.0387 | 0.12 | Q V | \| | \| | \| | \| |
| 4+55 | 0.0395 | 0.12 | Q V | \| | \| | \| | \| |
| 5+ 0 | 0.0403 | 0.12 | Q V | \| | \| | \| | \| |
| 5+ 5 | 0.0411 | 0.12 | Q V | \| | \| | \| | \| |
| 5+10 | 0.0419 | 0.12 | Q V | \| | \| | \| | \| |
| 5+15 | 0.0428 | 0.12 | Q V | \| | \| | \| | \| |
| 5+20 | 0.0436 | 0.12 | Q V | \| | \| | \| | \| |
| 5+25 | 0.0445 | 0.12 | Q V | \| | \| | \| | \| |
| 5+30 | 0.0453 | 0.12 | Q V | \| | \| | \| | \| |
| 5+35 | 0.0461 | 0.12 | Q V | \| | \| | \| | \| |
| 5+40 | 0.0470 | 0.12 | Q V | \| | \| | \| | \| |
| 5+45 | 0.0479 | 0.12 | Q V | \| | \| | \| | \| |
| 5+50 | 0.0487 | 0.13 | Q V | \| | \| | \| | \| |
| 5+55 | 0.0496 | 0.13 | Q V | \| | \| | \| | \| |
| 6+ 0 | 0.0505 | 0.13 | Q V | \| | \| | \| | \| |
| 6+ 5 | 0.0514 | 0.13 | Q V | \| | \| | \| | \| |
| 6+10 | 0.0522 | 0.13 | Q V | \| | \| | \| | \| |
| 6+15 | 0.0531 | 0.13 | Q V | \| | \| | \| | \| |
| 6+20 | 0.0540 | 0.13 | Q V | \| | \| | \| | \| |
| 6+25 | 0.0549 | 0.13 | Q V | \| | \| | \| | \| |
| 6+30 | 0.0558 | 0.13 | Q  V | \| | \| | \| | \| |
| 6+35 | 0.0568 | 0.13 | Q  V | \| | \| | \| | \| |
| 6+40 | 0.0577 | 0.13 | Q  V | \| | \| | \| | \| |
| 6+45 | 0.0586 | 0.13 | Q  V | \| | \| | \| | \| |
| 6+50 | 0.0595 | 0.14 | Q  V | \| | \| | \| | \| |
| 6+55 | 0.0605 | 0.14 | Q  V | \| | \| | \| | \| |
| 7+ 0 | 0.0614 | 0.14 | Q  V | \| | \| | \| | \| |
| 7+ 5 | 0.0624 | 0.14 | Q  V | \| | \| | \| | \| |
| 7+10 | 0.0633 | 0.14 | Q  V | \| | \| | \| | \| |
| 7+15 | 0.0643 | 0.14 | Q  V | \| | \| | \| | \| |
| 7+20 | 0.0653 | 0.14 | Q  V | \| | \| | \| | \| |
| 7+25 | 0.0662 | 0.14 | Q  V | \| | \| | \| | \| |
| 7+30 | 0.0672 | 0.14 | Q  V | \| | \| | \| | \| |
| 7+35 | 0.0682 | 0.14 | Q  V | \| | \| | \| | \| |
| 7+40 | 0.0692 | 0.14 | Q  V | \| | \| | \| | \| |
| 7+45 | 0.0702 | 0.15 | Q  V | \| | \| | \| | \| |
| 7+50 | 0.0712 | 0.15 | Q  V | \| | \| | \| | \| |
| 7+55 | 0.0722 | 0.15 | Q  V | \| | \| | \| | \| |
| 8+ 0 | 0.0733 | 0.15 | Q  V | \| | \| | \| | \| |
| 8+ 5 | 0.0743 | 0.15 | Q   V | \| | \| | \| | \| |
| 8+10 | 0.0753 | 0.15 | Q   V | \| | \| | \| | \| |
| 8+15 | 0.0764 | 0.15 | Q   V | \| | \| | \| | \| |
| 8+20 | 0.0775 | 0.15 | Q   V | \| | \| | \| | \| |
| 8+25 | 0.0785 | 0.15 | Q   V | \| | \| | \| | \| |

```
 8+30       0.0796      0.16  Q   V     |          |          |          |
 8+35       0.0807      0.16  Q   V     |          |          |          |
 8+40       0.0818      0.16  Q   V     |          |          |          |
 8+45       0.0829      0.16  Q   V     |          |          |          |
 8+50       0.0840      0.16  Q   V     |          |          |          |
 8+55       0.0851      0.16  Q   V     |          |          |          |
 9+ 0       0.0862      0.16  Q   V     |          |          |          |
 9+ 5       0.0874      0.17  Q   V     |          |          |          |
 9+10       0.0885      0.17  Q   V     |          |          |          |
 9+15       0.0897      0.17  Q   V     |          |          |          |
 9+20       0.0908      0.17  Q   V     |          |          |          |
 9+25       0.0920      0.17  Q   V     |          |          |          |
 9+30       0.0932      0.17  Q    V    |          |          |          |
 9+35       0.0944      0.17  Q    V    |          |          |          |
 9+40       0.0956      0.18  Q    V    |          |          |          |
 9+45       0.0968      0.18  Q    V    |          |          |          |
 9+50       0.0981      0.18  Q    V    |          |          |          |
 9+55       0.0993      0.18  Q    V    |          |          |          |
10+ 0       0.1006      0.18  Q    V    |          |          |          |
10+ 5       0.1019      0.18  Q    V    |          |          |          |
10+10       0.1031      0.19  Q    V    |          |          |          |
10+15       0.1044      0.19  Q    V    |          |          |          |
10+20       0.1057      0.19  Q    V    |          |          |          |
10+25       0.1071      0.19  Q    V    |          |          |          |
10+30       0.1084      0.19  Q    V    |          |          |          |
10+35       0.1098      0.20  Q    V    |          |          |          |
10+40       0.1111      0.20  Q     V   |          |          |          |
10+45       0.1125      0.20  Q     V   |          |          |          |
10+50       0.1139      0.20  Q     V   |          |          |          |
10+55       0.1153      0.21  Q     V   |          |          |          |
11+ 0       0.1167      0.21  Q     V   |          |          |          |
11+ 5       0.1182      0.21  Q     V   |          |          |          |
11+10       0.1197      0.21  Q     V   |          |          |          |
11+15       0.1211      0.22  Q     V   |          |          |          |
11+20       0.1226      0.22  Q     V   |          |          |          |
11+25       0.1242      0.22  Q     V   |          |          |          |
11+30       0.1257      0.22  Q     V   |          |          |          |
11+35       0.1272      0.23  Q     V   |          |          |          |
11+40       0.1288      0.23  Q     V   |          |          |          |
11+45       0.1304      0.23  Q      V  |          |          |          |
11+50       0.1320      0.24  Q      V  |          |          |          |
11+55       0.1337      0.24  Q      V  |          |          |          |
12+ 0       0.1354      0.24  Q      V  |          |          |          |
12+ 5       0.1370      0.24  Q      V  |          |          |          |
12+10       0.1386      0.23  Q      V  |          |          |          |
12+15       0.1400      0.21  Q      V  |          |          |          |
12+20       0.1414      0.19  Q      V  |          |          |          |
12+25       0.1426      0.19  Q      V  |          |          |          |
12+30       0.1439      0.18  Q      V  |          |          |          |
12+35       0.1451      0.18  Q      V  |          |          |          |
12+40       0.1464      0.18  Q      V  |          |          |          |
12+45       0.1476      0.18  Q      V  |          |          |          |
12+50       0.1489      0.18  Q       V |          |          |          |
12+55       0.1502      0.19  Q       V |          |          |          |
13+ 0       0.1515      0.19  Q       V |          |          |          |
13+ 5       0.1528      0.19  Q       V |          |          |          |
13+10       0.1541      0.19  Q       V |          |          |          |
13+15       0.1555      0.20  Q       V |          |          |          |
13+20       0.1569      0.20  Q       V |          |          |          |
```



| | | | |
|---|---|---|---|
| 13+25 | 0.1583 | 0.21 | |
| 13+30 | 0.1598 | 0.21 | |
| 13+35 | 0.1613 | 0.22 | |
| 13+40 | 0.1628 | 0.22 | |
| 13+45 | 0.1643 | 0.23 | |
| 13+50 | 0.1660 | 0.23 | |
| 13+55 | 0.1676 | 0.24 | |
| 14+ 0 | 0.1693 | 0.25 | |
| 14+ 5 | 0.1711 | 0.26 | |
| 14+10 | 0.1729 | 0.26 | |
| 14+15 | 0.1748 | 0.27 | |
| 14+20 | 0.1767 | 0.28 | |
| 14+25 | 0.1787 | 0.29 | |
| 14+30 | 0.1808 | 0.30 | |
| 14+35 | 0.1830 | 0.32 | |
| 14+40 | 0.1852 | 0.33 | |
| 14+45 | 0.1876 | 0.34 | |
| 14+50 | 0.1901 | 0.36 | |
| 14+55 | 0.1927 | 0.38 | |
| 15+ 0 | 0.1954 | 0.40 | |
| 15+ 5 | 0.1983 | 0.42 | |
| 15+10 | 0.2014 | 0.45 | |
| 15+15 | 0.2047 | 0.48 | |
| 15+20 | 0.2082 | 0.51 | |
| 15+25 | 0.2121 | 0.57 | |
| 15+30 | 0.2170 | 0.71 | |
| 15+35 | 0.2238 | 0.99 | |
| 15+40 | 0.2321 | 1.21 | |
| 15+45 | 0.2419 | 1.43 | |
| 15+50 | 0.2535 | 1.67 | |
| 15+55 | 0.2674 | 2.02 | |
| 16+ 0 | 0.2851 | 2.57 | |
| 16+ 5 | 0.3131 | 4.07 | |
| 16+10 | 0.3654 | 7.58 | |
| 16+15 | 0.4415 | 11.06 | |
| 16+20 | 0.4932 | 7.51 | |
| 16+25 | 0.5281 | 5.07 | |
| 16+30 | 0.5540 | 3.76 | |
| 16+35 | 0.5732 | 2.79 | |
| 16+40 | 0.5885 | 2.21 | |
| 16+45 | 0.6005 | 1.74 | |
| 16+50 | 0.6105 | 1.45 | |
| 16+55 | 0.6189 | 1.23 | |
| 17+ 0 | 0.6261 | 1.03 | |
| 17+ 5 | 0.6321 | 0.88 | |
| 17+10 | 0.6373 | 0.75 | |
| 17+15 | 0.6416 | 0.63 | |
| 17+20 | 0.6452 | 0.53 | |
| 17+25 | 0.6487 | 0.50 | |
| 17+30 | 0.6519 | 0.47 | |
| 17+35 | 0.6547 | 0.41 | |
| 17+40 | 0.6571 | 0.35 | |
| 17+45 | 0.6592 | 0.30 | |
| 17+50 | 0.6608 | 0.23 | |
| 17+55 | 0.6623 | 0.21 | |
| 18+ 0 | 0.6636 | 0.20 | |
| 18+ 5 | 0.6650 | 0.19 | |
| 18+10 | 0.6663 | 0.20 | |
| 18+15 | 0.6678 | 0.22 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18+20 | 0.6694 | 0.23 | Q | \| | \| | \| | V \| |
| 18+25 | 0.6710 | 0.23 | Q | \| | \| | \| | V \| |
| 18+30 | 0.6726 | 0.23 | Q | \| | \| | \| | V \| |
| 18+35 | 0.6742 | 0.23 | Q | \| | \| | \| | V \| |
| 18+40 | 0.6757 | 0.22 | Q | \| | \| | \| | V \| |
| 18+45 | 0.6772 | 0.22 | Q | \| | \| | \| | V \| |
| 18+50 | 0.6787 | 0.22 | Q | \| | \| | \| | V \| |
| 18+55 | 0.6802 | 0.21 | Q | \| | \| | \| | V \| |
| 19+ 0 | 0.6816 | 0.21 | Q | \| | \| | \| | V \| |
| 19+ 5 | 0.6830 | 0.21 | Q | \| | \| | \| | V \| |
| 19+10 | 0.6844 | 0.20 | Q | \| | \| | \| | V \| |
| 19+15 | 0.6858 | 0.20 | Q | \| | \| | \| | V \| |
| 19+20 | 0.6871 | 0.19 | Q | \| | \| | \| | V \| |
| 19+25 | 0.6884 | 0.19 | Q | \| | \| | \| | V \| |
| 19+30 | 0.6897 | 0.19 | Q | \| | \| | \| | V \| |
| 19+35 | 0.6910 | 0.18 | Q | \| | \| | \| | V \| |
| 19+40 | 0.6922 | 0.18 | Q | \| | \| | \| | V \| |
| 19+45 | 0.6934 | 0.18 | Q | \| | \| | \| | V \| |
| 19+50 | 0.6946 | 0.17 | Q | \| | \| | \| | V \| |
| 19+55 | 0.6958 | 0.17 | Q | \| | \| | \| | V \| |
| 20+ 0 | 0.6970 | 0.17 | Q | \| | \| | \| | V \| |
| 20+ 5 | 0.6981 | 0.16 | Q | \| | \| | \| | V \| |
| 20+10 | 0.6992 | 0.16 | Q | \| | \| | \| | V \| |
| 20+15 | 0.7003 | 0.16 | Q | \| | \| | \| | V \| |
| 20+20 | 0.7014 | 0.16 | Q | \| | \| | \| | V \| |
| 20+25 | 0.7024 | 0.15 | Q | \| | \| | \| | V \| |
| 20+30 | 0.7035 | 0.15 | Q | \| | \| | \| | V \| |
| 20+35 | 0.7045 | 0.15 | Q | \| | \| | \| | V \| |
| 20+40 | 0.7055 | 0.15 | Q | \| | \| | \| | V \| |
| 20+45 | 0.7065 | 0.15 | Q | \| | \| | \| | V \| |
| 20+50 | 0.7075 | 0.14 | Q | \| | \| | \| | V \| |
| 20+55 | 0.7085 | 0.14 | Q | \| | \| | \| | V \| |
| 21+ 0 | 0.7095 | 0.14 | Q | \| | \| | \| | V \| |
| 21+ 5 | 0.7104 | 0.14 | Q | \| | \| | \| | V \| |
| 21+10 | 0.7113 | 0.14 | Q | \| | \| | \| | V \| |
| 21+15 | 0.7123 | 0.13 | Q | \| | \| | \| | V \| |
| 21+20 | 0.7132 | 0.13 | Q | \| | \| | \| | V \| |
| 21+25 | 0.7141 | 0.13 | Q | \| | \| | \| | V \| |
| 21+30 | 0.7150 | 0.13 | Q | \| | \| | \| | V \| |
| 21+35 | 0.7158 | 0.13 | Q | \| | \| | \| | V \| |
| 21+40 | 0.7167 | 0.13 | Q | \| | \| | \| | V \| |
| 21+45 | 0.7176 | 0.12 | Q | \| | \| | \| | V \| |
| 21+50 | 0.7184 | 0.12 | Q | \| | \| | \| | V \| |
| 21+55 | 0.7192 | 0.12 | Q | \| | \| | \| | V \| |
| 22+ 0 | 0.7201 | 0.12 | Q | \| | \| | \| | V \| |
| 22+ 5 | 0.7209 | 0.12 | Q | \| | \| | \| | V \| |
| 22+10 | 0.7217 | 0.12 | Q | \| | \| | \| | V\| |
| 22+15 | 0.7225 | 0.12 | Q | \| | \| | \| | V\| |
| 22+20 | 0.7233 | 0.12 | Q | \| | \| | \| | V\| |
| 22+25 | 0.7241 | 0.11 | Q | \| | \| | \| | V\| |
| 22+30 | 0.7248 | 0.11 | Q | \| | \| | \| | V\| |
| 22+35 | 0.7256 | 0.11 | Q | \| | \| | \| | V\| |
| 22+40 | 0.7264 | 0.11 | Q | \| | \| | \| | V\| |
| 22+45 | 0.7271 | 0.11 | Q | \| | \| | \| | V\| |
| 22+50 | 0.7279 | 0.11 | Q | \| | \| | \| | V\| |
| 22+55 | 0.7286 | 0.11 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.7293 | 0.11 | Q | \| | \| | \| | V\| |
| 23+ 5 | 0.7301 | 0.11 | Q | \| | \| | \| | V\| |
| 23+10 | 0.7308 | 0.10 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+15 | 0.7315 | 0.10 | Q | \| | \| | \| | V\| |
| 23+20 | 0.7322 | 0.10 | Q | \| | \| | \| | V\| |
| 23+25 | 0.7329 | 0.10 | Q | \| | \| | \| | V\| |
| 23+30 | 0.7336 | 0.10 | Q | \| | \| | \| | V\| |
| 23+35 | 0.7343 | 0.10 | Q | \| | \| | \| | V\| |
| 23+40 | 0.7350 | 0.10 | Q | \| | \| | \| | V\| |
| 23+45 | 0.7356 | 0.10 | Q | \| | \| | \| | V\| |
| 23+50 | 0.7363 | 0.10 | Q | \| | \| | \| | V\| |
| 23+55 | 0.7370 | 0.10 | Q | \| | \| | \| | V\| |
| 24+ 0 | 0.7376 | 0.10 | Q | \| | \| | \| | V\| |
| 24+ 5 | 0.7383 | 0.09 | Q | \| | \| | \| | V\| |
| 24+10 | 0.7388 | 0.08 | Q | \| | \| | \| | V\| |
| 24+15 | 0.7392 | 0.05 | Q | \| | \| | \| | V\| |
| 24+20 | 0.7394 | 0.03 | Q | \| | \| | \| | V\| |
| 24+25 | 0.7396 | 0.03 | Q | \| | \| | \| | V\| |
| 24+30 | 0.7397 | 0.02 | Q | \| | \| | \| | V\| |
| 24+35 | 0.7398 | 0.01 | Q | \| | \| | \| | V\| |
| 24+40 | 0.7399 | 0.01 | Q | \| | \| | \| | V\| |
| 24+45 | 0.7400 | 0.01 | Q | \| | \| | \| | V\| |
| 24+50 | 0.7400 | 0.01 | Q | \| | \| | \| | V\| |
| 24+55 | 0.7400 | 0.01 | Q | \| | \| | \| | V\| |
| 25+ 0 | 0.7401 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 5 | 0.7401 | 0.00 | Q | \| | \| | \| | V\| |
| 25+10 | 0.7401 | 0.00 | Q | \| | \| | \| | V\| |
| 25+15 | 0.7401 | 0.00 | Q | \| | \| | \| | V\| |
| 25+20 | 0.7401 | 0.00 | Q | \| | \| | \| | V\| |
| 25+25 | 0.7401 | 0.00 | Q | \| | \| | \| | V\| |
| 25+30 | 0.7401 | 0.00 | Q | \| | \| | \| | V\| |
| 25+35 | 0.7402 | 0.00 | Q | \| | \| | \| | V\| |
| 25+40 | 0.7402 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 37
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 10.24 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 10.24 | 6 | 1.85 |
| Rainfall data for year 100 | | |
| 10.24 | 24 | 2.63 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 91.0 | 98.2 | 10.42 | 1.000 | 0.036 | 0.900 | 0.032 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.032

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 9.38 | 0.900 | 91.0 | 98.2 | 0.18 | 0.921 |
| 1.04 | 0.100 | 98.0 | 98.0 | 0.20 | 0.913 |

Area-averaged catchment yield fraction, Y = 0.920
Area-averaged low loss fraction, Yb = 0.080
User entry of time of concentration = 0.420 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 10.42(Ac.)
Catchment Lag time = 0.336 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 24.8016
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.032(In/Hr)
Average low loss rate fraction (Yb) = 0.080 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.656(In)
Specified peak 6-hour rainfall = 1.850(In)
Specified peak 24-hour rainfall = 2.630(In)

Rainfall depth area reduction factors:
Using a total area of 10.24(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.659(In)
30-minute factor = 1.000 Adjusted rainfall = 1.128(In)
1-hour factor = 1.000 Adjusted rainfall = 1.389(In)
3-hour factor = 1.000 Adjusted rainfall = 1.656(In)
6-hour factor = 1.000 Adjusted rainfall = 1.850(In)
24-hour factor = 1.000 Adjusted rainfall = 2.630(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 126.02 (CFS)) | |
| 1 | 1.335 | 1.683 |
| 2 | 6.486 | 6.491 |
| 3 | 19.281 | 16.123 |
| 4 | 40.808 | 27.128 |
| 5 | 55.671 | 18.730 |
| 6 | 64.734 | 11.421 |
| 7 | 71.090 | 8.010 |
| 8 | 75.918 | 6.084 |
| 9 | 79.726 | 4.798 |
| 10 | 82.745 | 3.805 |
| 11 | 85.299 | 3.219 |
| 12 | 87.516 | 2.794 |
| 13 | 89.299 | 2.247 |

| | | |
|---|---|---|
| 14 | 90.749 | 1.828 |
| 15 | 92.061 | 1.652 |
| 16 | 93.214 | 1.453 |
| 17 | 94.212 | 1.257 |
| 18 | 95.057 | 1.065 |
| 19 | 95.828 | 0.971 |
| 20 | 96.474 | 0.815 |
| 21 | 97.049 | 0.724 |
| 22 | 97.498 | 0.566 |
| 23 | 97.877 | 0.478 |
| 24 | 98.128 | 0.316 |
| 25 | 98.393 | 0.333 |
| 26 | 98.689 | 0.374 |
| 27 | 98.987 | 0.375 |
| 28 | 99.285 | 0.375 |
| 29 | 99.539 | 0.321 |
| 30 | 99.698 | 0.200 |
| 31 | 99.853 | 0.195 |
| 32 | 100.000 | 0.185 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6593 | 0.6593 |
| 2 | 0.8116 | 0.1524 |
| 3 | 0.9166 | 0.1050 |
| 4 | 0.9992 | 0.0826 |
| 5 | 1.0684 | 0.0692 |
| 6 | 1.1285 | 0.0601 |
| 7 | 1.1819 | 0.0534 |
| 8 | 1.2302 | 0.0483 |
| 9 | 1.2745 | 0.0442 |
| 10 | 1.3154 | 0.0409 |
| 11 | 1.3535 | 0.0382 |
| 12 | 1.3893 | 0.0358 |
| 13 | 1.4072 | 0.0179 |
| 14 | 1.4240 | 0.0168 |
| 15 | 1.4398 | 0.0158 |
| 16 | 1.4548 | 0.0149 |
| 17 | 1.4689 | 0.0142 |
| 18 | 1.4824 | 0.0135 |
| 19 | 1.4953 | 0.0129 |
| 20 | 1.5076 | 0.0123 |
| 21 | 1.5194 | 0.0118 |
| 22 | 1.5308 | 0.0113 |
| 23 | 1.5417 | 0.0109 |
| 24 | 1.5522 | 0.0105 |
| 25 | 1.5624 | 0.0102 |
| 26 | 1.5722 | 0.0098 |
| 27 | 1.5817 | 0.0095 |
| 28 | 1.5910 | 0.0092 |
| 29 | 1.5999 | 0.0090 |
| 30 | 1.6086 | 0.0087 |
| 31 | 1.6171 | 0.0085 |
| 32 | 1.6253 | 0.0082 |
| 33 | 1.6333 | 0.0080 |
| 34 | 1.6411 | 0.0078 |
| 35 | 1.6488 | 0.0076 |
| 36 | 1.6562 | 0.0074 |
| 37 | 1.6635 | 0.0073 |

| | | |
|---|---|---|
| 38 | 1.6706 | 0.0071 |
| 39 | 1.6775 | 0.0069 |
| 40 | 1.6843 | 0.0068 |
| 41 | 1.6909 | 0.0067 |
| 42 | 1.6975 | 0.0065 |
| 43 | 1.7038 | 0.0064 |
| 44 | 1.7101 | 0.0063 |
| 45 | 1.7163 | 0.0061 |
| 46 | 1.7223 | 0.0060 |
| 47 | 1.7282 | 0.0059 |
| 48 | 1.7340 | 0.0058 |
| 49 | 1.7397 | 0.0057 |
| 50 | 1.7454 | 0.0056 |
| 51 | 1.7509 | 0.0055 |
| 52 | 1.7563 | 0.0054 |
| 53 | 1.7617 | 0.0053 |
| 54 | 1.7669 | 0.0053 |
| 55 | 1.7721 | 0.0052 |
| 56 | 1.7772 | 0.0051 |
| 57 | 1.7822 | 0.0050 |
| 58 | 1.7872 | 0.0050 |
| 59 | 1.7921 | 0.0049 |
| 60 | 1.7969 | 0.0048 |
| 61 | 1.8016 | 0.0047 |
| 62 | 1.8063 | 0.0047 |
| 63 | 1.8109 | 0.0046 |
| 64 | 1.8155 | 0.0046 |
| 65 | 1.8200 | 0.0045 |
| 66 | 1.8244 | 0.0044 |
| 67 | 1.8288 | 0.0044 |
| 68 | 1.8331 | 0.0043 |
| 69 | 1.8374 | 0.0043 |
| 70 | 1.8416 | 0.0042 |
| 71 | 1.8458 | 0.0042 |
| 72 | 1.8499 | 0.0041 |
| 73 | 1.8564 | 0.0065 |
| 74 | 1.8628 | 0.0064 |
| 75 | 1.8692 | 0.0064 |
| 76 | 1.8755 | 0.0063 |
| 77 | 1.8817 | 0.0062 |
| 78 | 1.8879 | 0.0062 |
| 79 | 1.8940 | 0.0061 |
| 80 | 1.9001 | 0.0061 |
| 81 | 1.9061 | 0.0060 |
| 82 | 1.9120 | 0.0059 |
| 83 | 1.9179 | 0.0059 |
| 84 | 1.9237 | 0.0058 |
| 85 | 1.9295 | 0.0058 |
| 86 | 1.9353 | 0.0057 |
| 87 | 1.9410 | 0.0057 |
| 88 | 1.9466 | 0.0056 |
| 89 | 1.9522 | 0.0056 |
| 90 | 1.9577 | 0.0055 |
| 91 | 1.9632 | 0.0055 |
| 92 | 1.9687 | 0.0055 |
| 93 | 1.9741 | 0.0054 |
| 94 | 1.9795 | 0.0054 |
| 95 | 1.9848 | 0.0053 |
| 96 | 1.9901 | 0.0053 |

| | | |
|---|---|---|
| 97 | 1.9953 | 0.0052 |
| 98 | 2.0005 | 0.0052 |
| 99 | 2.0057 | 0.0052 |
| 100 | 2.0108 | 0.0051 |
| 101 | 2.0159 | 0.0051 |
| 102 | 2.0209 | 0.0050 |
| 103 | 2.0259 | 0.0050 |
| 104 | 2.0309 | 0.0050 |
| 105 | 2.0358 | 0.0049 |
| 106 | 2.0407 | 0.0049 |
| 107 | 2.0456 | 0.0049 |
| 108 | 2.0504 | 0.0048 |
| 109 | 2.0552 | 0.0048 |
| 110 | 2.0600 | 0.0048 |
| 111 | 2.0647 | 0.0047 |
| 112 | 2.0695 | 0.0047 |
| 113 | 2.0741 | 0.0047 |
| 114 | 2.0788 | 0.0046 |
| 115 | 2.0834 | 0.0046 |
| 116 | 2.0880 | 0.0046 |
| 117 | 2.0925 | 0.0046 |
| 118 | 2.0970 | 0.0045 |
| 119 | 2.1015 | 0.0045 |
| 120 | 2.1060 | 0.0045 |
| 121 | 2.1104 | 0.0044 |
| 122 | 2.1149 | 0.0044 |
| 123 | 2.1192 | 0.0044 |
| 124 | 2.1236 | 0.0044 |
| 125 | 2.1279 | 0.0043 |
| 126 | 2.1322 | 0.0043 |
| 127 | 2.1365 | 0.0043 |
| 128 | 2.1408 | 0.0043 |
| 129 | 2.1450 | 0.0042 |
| 130 | 2.1492 | 0.0042 |
| 131 | 2.1534 | 0.0042 |
| 132 | 2.1576 | 0.0042 |
| 133 | 2.1617 | 0.0041 |
| 134 | 2.1658 | 0.0041 |
| 135 | 2.1699 | 0.0041 |
| 136 | 2.1740 | 0.0041 |
| 137 | 2.1780 | 0.0040 |
| 138 | 2.1820 | 0.0040 |
| 139 | 2.1860 | 0.0040 |
| 140 | 2.1900 | 0.0040 |
| 141 | 2.1940 | 0.0040 |
| 142 | 2.1979 | 0.0039 |
| 143 | 2.2018 | 0.0039 |
| 144 | 2.2057 | 0.0039 |
| 145 | 2.2096 | 0.0039 |
| 146 | 2.2135 | 0.0039 |
| 147 | 2.2173 | 0.0038 |
| 148 | 2.2211 | 0.0038 |
| 149 | 2.2249 | 0.0038 |
| 150 | 2.2287 | 0.0038 |
| 151 | 2.2325 | 0.0038 |
| 152 | 2.2362 | 0.0037 |
| 153 | 2.2399 | 0.0037 |
| 154 | 2.2436 | 0.0037 |
| 155 | 2.2473 | 0.0037 |

| | | |
|---|---|---|
| 156 | 2.2510 | 0.0037 |
| 157 | 2.2547 | 0.0037 |
| 158 | 2.2583 | 0.0036 |
| 159 | 2.2619 | 0.0036 |
| 160 | 2.2655 | 0.0036 |
| 161 | 2.2691 | 0.0036 |
| 162 | 2.2727 | 0.0036 |
| 163 | 2.2762 | 0.0036 |
| 164 | 2.2798 | 0.0035 |
| 165 | 2.2833 | 0.0035 |
| 166 | 2.2868 | 0.0035 |
| 167 | 2.2903 | 0.0035 |
| 168 | 2.2937 | 0.0035 |
| 169 | 2.2972 | 0.0035 |
| 170 | 2.3006 | 0.0034 |
| 171 | 2.3041 | 0.0034 |
| 172 | 2.3075 | 0.0034 |
| 173 | 2.3109 | 0.0034 |
| 174 | 2.3143 | 0.0034 |
| 175 | 2.3176 | 0.0034 |
| 176 | 2.3210 | 0.0034 |
| 177 | 2.3243 | 0.0033 |
| 178 | 2.3276 | 0.0033 |
| 179 | 2.3310 | 0.0033 |
| 180 | 2.3343 | 0.0033 |
| 181 | 2.3375 | 0.0033 |
| 182 | 2.3408 | 0.0033 |
| 183 | 2.3441 | 0.0033 |
| 184 | 2.3473 | 0.0032 |
| 185 | 2.3505 | 0.0032 |
| 186 | 2.3538 | 0.0032 |
| 187 | 2.3570 | 0.0032 |
| 188 | 2.3602 | 0.0032 |
| 189 | 2.3633 | 0.0032 |
| 190 | 2.3665 | 0.0032 |
| 191 | 2.3697 | 0.0032 |
| 192 | 2.3728 | 0.0031 |
| 193 | 2.3759 | 0.0031 |
| 194 | 2.3790 | 0.0031 |
| 195 | 2.3822 | 0.0031 |
| 196 | 2.3852 | 0.0031 |
| 197 | 2.3883 | 0.0031 |
| 198 | 2.3914 | 0.0031 |
| 199 | 2.3945 | 0.0031 |
| 200 | 2.3975 | 0.0030 |
| 201 | 2.4005 | 0.0030 |
| 202 | 2.4036 | 0.0030 |
| 203 | 2.4066 | 0.0030 |
| 204 | 2.4096 | 0.0030 |
| 205 | 2.4126 | 0.0030 |
| 206 | 2.4156 | 0.0030 |
| 207 | 2.4185 | 0.0030 |
| 208 | 2.4215 | 0.0030 |
| 209 | 2.4244 | 0.0029 |
| 210 | 2.4274 | 0.0029 |
| 211 | 2.4303 | 0.0029 |
| 212 | 2.4332 | 0.0029 |
| 213 | 2.4361 | 0.0029 |
| 214 | 2.4390 | 0.0029 |

| | | |
|---|---|---|
| 215 | 2.4419 | 0.0029 |
| 216 | 2.4448 | 0.0029 |
| 217 | 2.4477 | 0.0029 |
| 218 | 2.4505 | 0.0029 |
| 219 | 2.4534 | 0.0028 |
| 220 | 2.4562 | 0.0028 |
| 221 | 2.4590 | 0.0028 |
| 222 | 2.4619 | 0.0028 |
| 223 | 2.4647 | 0.0028 |
| 224 | 2.4675 | 0.0028 |
| 225 | 2.4703 | 0.0028 |
| 226 | 2.4730 | 0.0028 |
| 227 | 2.4758 | 0.0028 |
| 228 | 2.4786 | 0.0028 |
| 229 | 2.4813 | 0.0028 |
| 230 | 2.4841 | 0.0027 |
| 231 | 2.4868 | 0.0027 |
| 232 | 2.4895 | 0.0027 |
| 233 | 2.4923 | 0.0027 |
| 234 | 2.4950 | 0.0027 |
| 235 | 2.4977 | 0.0027 |
| 236 | 2.5004 | 0.0027 |
| 237 | 2.5030 | 0.0027 |
| 238 | 2.5057 | 0.0027 |
| 239 | 2.5084 | 0.0027 |
| 240 | 2.5111 | 0.0027 |
| 241 | 2.5137 | 0.0027 |
| 242 | 2.5163 | 0.0026 |
| 243 | 2.5190 | 0.0026 |
| 244 | 2.5216 | 0.0026 |
| 245 | 2.5242 | 0.0026 |
| 246 | 2.5268 | 0.0026 |
| 247 | 2.5294 | 0.0026 |
| 248 | 2.5320 | 0.0026 |
| 249 | 2.5346 | 0.0026 |
| 250 | 2.5372 | 0.0026 |
| 251 | 2.5398 | 0.0026 |
| 252 | 2.5423 | 0.0026 |
| 253 | 2.5449 | 0.0026 |
| 254 | 2.5474 | 0.0025 |
| 255 | 2.5500 | 0.0025 |
| 256 | 2.5525 | 0.0025 |
| 257 | 2.5550 | 0.0025 |
| 258 | 2.5576 | 0.0025 |
| 259 | 2.5601 | 0.0025 |
| 260 | 2.5626 | 0.0025 |
| 261 | 2.5651 | 0.0025 |
| 262 | 2.5676 | 0.0025 |
| 263 | 2.5701 | 0.0025 |
| 264 | 2.5725 | 0.0025 |
| 265 | 2.5750 | 0.0025 |
| 266 | 2.5775 | 0.0025 |
| 267 | 2.5799 | 0.0025 |
| 268 | 2.5824 | 0.0024 |
| 269 | 2.5848 | 0.0024 |
| 270 | 2.5872 | 0.0024 |
| 271 | 2.5897 | 0.0024 |
| 272 | 2.5921 | 0.0024 |
| 273 | 2.5945 | 0.0024 |

| | | |
|---|---|---|
| 274 | 2.5969 | 0.0024 |
| 275 | 2.5993 | 0.0024 |
| 276 | 2.6017 | 0.0024 |
| 277 | 2.6041 | 0.0024 |
| 278 | 2.6065 | 0.0024 |
| 279 | 2.6089 | 0.0024 |
| 280 | 2.6112 | 0.0024 |
| 281 | 2.6136 | 0.0024 |
| 282 | 2.6160 | 0.0024 |
| 283 | 2.6183 | 0.0024 |
| 284 | 2.6206 | 0.0023 |
| 285 | 2.6230 | 0.0023 |
| 286 | 2.6253 | 0.0023 |
| 287 | 2.6276 | 0.0023 |
| 288 | 2.6300 | 0.0023 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0023 | 0.0002 | 0.0021 |
| 2 | 0.0023 | 0.0002 | 0.0021 |
| 3 | 0.0023 | 0.0002 | 0.0022 |
| 4 | 0.0023 | 0.0002 | 0.0022 |
| 5 | 0.0024 | 0.0002 | 0.0022 |
| 6 | 0.0024 | 0.0002 | 0.0022 |
| 7 | 0.0024 | 0.0002 | 0.0022 |
| 8 | 0.0024 | 0.0002 | 0.0022 |
| 9 | 0.0024 | 0.0002 | 0.0022 |
| 10 | 0.0024 | 0.0002 | 0.0022 |
| 11 | 0.0024 | 0.0002 | 0.0022 |
| 12 | 0.0024 | 0.0002 | 0.0022 |
| 13 | 0.0024 | 0.0002 | 0.0022 |
| 14 | 0.0024 | 0.0002 | 0.0022 |
| 15 | 0.0025 | 0.0002 | 0.0023 |
| 16 | 0.0025 | 0.0002 | 0.0023 |
| 17 | 0.0025 | 0.0002 | 0.0023 |
| 18 | 0.0025 | 0.0002 | 0.0023 |
| 19 | 0.0025 | 0.0002 | 0.0023 |
| 20 | 0.0025 | 0.0002 | 0.0023 |
| 21 | 0.0025 | 0.0002 | 0.0023 |
| 22 | 0.0025 | 0.0002 | 0.0023 |
| 23 | 0.0025 | 0.0002 | 0.0023 |
| 24 | 0.0025 | 0.0002 | 0.0023 |
| 25 | 0.0026 | 0.0002 | 0.0024 |
| 26 | 0.0026 | 0.0002 | 0.0024 |
| 27 | 0.0026 | 0.0002 | 0.0024 |
| 28 | 0.0026 | 0.0002 | 0.0024 |
| 29 | 0.0026 | 0.0002 | 0.0024 |
| 30 | 0.0026 | 0.0002 | 0.0024 |
| 31 | 0.0026 | 0.0002 | 0.0024 |
| 32 | 0.0026 | 0.0002 | 0.0024 |
| 33 | 0.0027 | 0.0002 | 0.0024 |
| 34 | 0.0027 | 0.0002 | 0.0025 |
| 35 | 0.0027 | 0.0002 | 0.0025 |
| 36 | 0.0027 | 0.0002 | 0.0025 |
| 37 | 0.0027 | 0.0002 | 0.0025 |
| 38 | 0.0027 | 0.0002 | 0.0025 |
| 39 | 0.0027 | 0.0002 | 0.0025 |

| | | | |
|---|---|---|---|
| 40 | 0.0027 | 0.0002 | 0.0025 |
| 41 | 0.0028 | 0.0002 | 0.0025 |
| 42 | 0.0028 | 0.0002 | 0.0026 |
| 43 | 0.0028 | 0.0002 | 0.0026 |
| 44 | 0.0028 | 0.0002 | 0.0026 |
| 45 | 0.0028 | 0.0002 | 0.0026 |
| 46 | 0.0028 | 0.0002 | 0.0026 |
| 47 | 0.0028 | 0.0002 | 0.0026 |
| 48 | 0.0029 | 0.0002 | 0.0026 |
| 49 | 0.0029 | 0.0002 | 0.0026 |
| 50 | 0.0029 | 0.0002 | 0.0027 |
| 51 | 0.0029 | 0.0002 | 0.0027 |
| 52 | 0.0029 | 0.0002 | 0.0027 |
| 53 | 0.0029 | 0.0002 | 0.0027 |
| 54 | 0.0029 | 0.0002 | 0.0027 |
| 55 | 0.0030 | 0.0002 | 0.0027 |
| 56 | 0.0030 | 0.0002 | 0.0027 |
| 57 | 0.0030 | 0.0002 | 0.0028 |
| 58 | 0.0030 | 0.0002 | 0.0028 |
| 59 | 0.0030 | 0.0002 | 0.0028 |
| 60 | 0.0030 | 0.0002 | 0.0028 |
| 61 | 0.0031 | 0.0002 | 0.0028 |
| 62 | 0.0031 | 0.0002 | 0.0028 |
| 63 | 0.0031 | 0.0002 | 0.0029 |
| 64 | 0.0031 | 0.0002 | 0.0029 |
| 65 | 0.0031 | 0.0003 | 0.0029 |
| 66 | 0.0032 | 0.0003 | 0.0029 |
| 67 | 0.0032 | 0.0003 | 0.0029 |
| 68 | 0.0032 | 0.0003 | 0.0029 |
| 69 | 0.0032 | 0.0003 | 0.0030 |
| 70 | 0.0032 | 0.0003 | 0.0030 |
| 71 | 0.0033 | 0.0003 | 0.0030 |
| 72 | 0.0033 | 0.0003 | 0.0030 |
| 73 | 0.0033 | 0.0003 | 0.0030 |
| 74 | 0.0033 | 0.0003 | 0.0030 |
| 75 | 0.0033 | 0.0003 | 0.0031 |
| 76 | 0.0034 | 0.0003 | 0.0031 |
| 77 | 0.0034 | 0.0003 | 0.0031 |
| 78 | 0.0034 | 0.0003 | 0.0031 |
| 79 | 0.0034 | 0.0003 | 0.0032 |
| 80 | 0.0034 | 0.0003 | 0.0032 |
| 81 | 0.0035 | 0.0003 | 0.0032 |
| 82 | 0.0035 | 0.0003 | 0.0032 |
| 83 | 0.0035 | 0.0003 | 0.0032 |
| 84 | 0.0035 | 0.0003 | 0.0033 |
| 85 | 0.0036 | 0.0003 | 0.0033 |
| 86 | 0.0036 | 0.0003 | 0.0033 |
| 87 | 0.0036 | 0.0003 | 0.0033 |
| 88 | 0.0036 | 0.0003 | 0.0033 |
| 89 | 0.0037 | 0.0003 | 0.0034 |
| 90 | 0.0037 | 0.0003 | 0.0034 |
| 91 | 0.0037 | 0.0003 | 0.0034 |
| 92 | 0.0037 | 0.0003 | 0.0034 |
| 93 | 0.0038 | 0.0003 | 0.0035 |
| 94 | 0.0038 | 0.0003 | 0.0035 |
| 95 | 0.0038 | 0.0003 | 0.0035 |
| 96 | 0.0039 | 0.0003 | 0.0035 |
| 97 | 0.0039 | 0.0003 | 0.0036 |
| 98 | 0.0039 | 0.0003 | 0.0036 |

| | | | |
|---|---|---|---|
| 99 | 0.0040 | 0.0003 | 0.0036 |
| 100 | 0.0040 | 0.0003 | 0.0037 |
| 101 | 0.0040 | 0.0003 | 0.0037 |
| 102 | 0.0040 | 0.0003 | 0.0037 |
| 103 | 0.0041 | 0.0003 | 0.0038 |
| 104 | 0.0041 | 0.0003 | 0.0038 |
| 105 | 0.0042 | 0.0003 | 0.0038 |
| 106 | 0.0042 | 0.0003 | 0.0038 |
| 107 | 0.0042 | 0.0003 | 0.0039 |
| 108 | 0.0043 | 0.0003 | 0.0039 |
| 109 | 0.0043 | 0.0003 | 0.0040 |
| 110 | 0.0043 | 0.0003 | 0.0040 |
| 111 | 0.0044 | 0.0004 | 0.0040 |
| 112 | 0.0044 | 0.0004 | 0.0041 |
| 113 | 0.0045 | 0.0004 | 0.0041 |
| 114 | 0.0045 | 0.0004 | 0.0041 |
| 115 | 0.0046 | 0.0004 | 0.0042 |
| 116 | 0.0046 | 0.0004 | 0.0042 |
| 117 | 0.0046 | 0.0004 | 0.0043 |
| 118 | 0.0047 | 0.0004 | 0.0043 |
| 119 | 0.0047 | 0.0004 | 0.0044 |
| 120 | 0.0048 | 0.0004 | 0.0044 |
| 121 | 0.0048 | 0.0004 | 0.0044 |
| 122 | 0.0049 | 0.0004 | 0.0045 |
| 123 | 0.0049 | 0.0004 | 0.0045 |
| 124 | 0.0050 | 0.0004 | 0.0046 |
| 125 | 0.0050 | 0.0004 | 0.0046 |
| 126 | 0.0051 | 0.0004 | 0.0047 |
| 127 | 0.0052 | 0.0004 | 0.0047 |
| 128 | 0.0052 | 0.0004 | 0.0048 |
| 129 | 0.0053 | 0.0004 | 0.0049 |
| 130 | 0.0053 | 0.0004 | 0.0049 |
| 131 | 0.0054 | 0.0004 | 0.0050 |
| 132 | 0.0055 | 0.0004 | 0.0050 |
| 133 | 0.0055 | 0.0004 | 0.0051 |
| 134 | 0.0056 | 0.0004 | 0.0051 |
| 135 | 0.0057 | 0.0005 | 0.0052 |
| 136 | 0.0057 | 0.0005 | 0.0053 |
| 137 | 0.0058 | 0.0005 | 0.0054 |
| 138 | 0.0059 | 0.0005 | 0.0054 |
| 139 | 0.0060 | 0.0005 | 0.0055 |
| 140 | 0.0061 | 0.0005 | 0.0056 |
| 141 | 0.0062 | 0.0005 | 0.0057 |
| 142 | 0.0062 | 0.0005 | 0.0057 |
| 143 | 0.0064 | 0.0005 | 0.0058 |
| 144 | 0.0064 | 0.0005 | 0.0059 |
| 145 | 0.0041 | 0.0003 | 0.0038 |
| 146 | 0.0042 | 0.0003 | 0.0038 |
| 147 | 0.0043 | 0.0003 | 0.0039 |
| 148 | 0.0043 | 0.0003 | 0.0040 |
| 149 | 0.0044 | 0.0004 | 0.0041 |
| 150 | 0.0045 | 0.0004 | 0.0041 |
| 151 | 0.0046 | 0.0004 | 0.0042 |
| 152 | 0.0047 | 0.0004 | 0.0043 |
| 153 | 0.0048 | 0.0004 | 0.0044 |
| 154 | 0.0049 | 0.0004 | 0.0045 |
| 155 | 0.0050 | 0.0004 | 0.0046 |
| 156 | 0.0051 | 0.0004 | 0.0047 |
| 157 | 0.0053 | 0.0004 | 0.0048 |

| | | | |
|---|---|---|---|
| 158 | 0.0053 | 0.0004 | 0.0049 |
| 159 | 0.0055 | 0.0004 | 0.0051 |
| 160 | 0.0056 | 0.0004 | 0.0052 |
| 161 | 0.0058 | 0.0005 | 0.0054 |
| 162 | 0.0059 | 0.0005 | 0.0054 |
| 163 | 0.0061 | 0.0005 | 0.0057 |
| 164 | 0.0063 | 0.0005 | 0.0058 |
| 165 | 0.0065 | 0.0005 | 0.0060 |
| 166 | 0.0067 | 0.0005 | 0.0061 |
| 167 | 0.0069 | 0.0006 | 0.0064 |
| 168 | 0.0071 | 0.0006 | 0.0065 |
| 169 | 0.0074 | 0.0006 | 0.0069 |
| 170 | 0.0076 | 0.0006 | 0.0070 |
| 171 | 0.0080 | 0.0006 | 0.0074 |
| 172 | 0.0082 | 0.0007 | 0.0076 |
| 173 | 0.0087 | 0.0007 | 0.0080 |
| 174 | 0.0090 | 0.0007 | 0.0082 |
| 175 | 0.0095 | 0.0008 | 0.0088 |
| 176 | 0.0098 | 0.0008 | 0.0090 |
| 177 | 0.0105 | 0.0008 | 0.0097 |
| 178 | 0.0109 | 0.0009 | 0.0100 |
| 179 | 0.0118 | 0.0009 | 0.0109 |
| 180 | 0.0123 | 0.0010 | 0.0113 |
| 181 | 0.0135 | 0.0011 | 0.0124 |
| 182 | 0.0142 | 0.0011 | 0.0130 |
| 183 | 0.0158 | 0.0013 | 0.0145 |
| 184 | 0.0168 | 0.0013 | 0.0154 |
| 185 | 0.0358 | 0.0027 | 0.0331 |
| 186 | 0.0382 | 0.0027 | 0.0355 |
| 187 | 0.0442 | 0.0027 | 0.0416 |
| 188 | 0.0483 | 0.0027 | 0.0456 |
| 189 | 0.0601 | 0.0027 | 0.0574 |
| 190 | 0.0692 | 0.0027 | 0.0665 |
| 191 | 0.1050 | 0.0027 | 0.1023 |
| 192 | 0.1524 | 0.0027 | 0.1497 |
| 193 | 0.6593 | 0.0027 | 0.6566 |
| 194 | 0.0826 | 0.0027 | 0.0799 |
| 195 | 0.0534 | 0.0027 | 0.0507 |
| 196 | 0.0409 | 0.0027 | 0.0382 |
| 197 | 0.0179 | 0.0014 | 0.0165 |
| 198 | 0.0149 | 0.0012 | 0.0137 |
| 199 | 0.0129 | 0.0010 | 0.0118 |
| 200 | 0.0113 | 0.0009 | 0.0104 |
| 201 | 0.0102 | 0.0008 | 0.0094 |
| 202 | 0.0092 | 0.0007 | 0.0085 |
| 203 | 0.0085 | 0.0007 | 0.0078 |
| 204 | 0.0078 | 0.0006 | 0.0072 |
| 205 | 0.0073 | 0.0006 | 0.0067 |
| 206 | 0.0068 | 0.0005 | 0.0062 |
| 207 | 0.0064 | 0.0005 | 0.0059 |
| 208 | 0.0060 | 0.0005 | 0.0055 |
| 209 | 0.0057 | 0.0005 | 0.0053 |
| 210 | 0.0054 | 0.0004 | 0.0050 |
| 211 | 0.0052 | 0.0004 | 0.0048 |
| 212 | 0.0050 | 0.0004 | 0.0046 |
| 213 | 0.0047 | 0.0004 | 0.0044 |
| 214 | 0.0046 | 0.0004 | 0.0042 |
| 215 | 0.0044 | 0.0004 | 0.0040 |
| 216 | 0.0042 | 0.0003 | 0.0039 |

| | | | |
|---|---|---|---|
| 217 | 0.0065 | 0.0005 | 0.0060 |
| 218 | 0.0063 | 0.0005 | 0.0058 |
| 219 | 0.0061 | 0.0005 | 0.0056 |
| 220 | 0.0059 | 0.0005 | 0.0055 |
| 221 | 0.0058 | 0.0005 | 0.0053 |
| 222 | 0.0056 | 0.0005 | 0.0052 |
| 223 | 0.0055 | 0.0004 | 0.0051 |
| 224 | 0.0054 | 0.0004 | 0.0049 |
| 225 | 0.0052 | 0.0004 | 0.0048 |
| 226 | 0.0051 | 0.0004 | 0.0047 |
| 227 | 0.0050 | 0.0004 | 0.0046 |
| 228 | 0.0049 | 0.0004 | 0.0045 |
| 229 | 0.0048 | 0.0004 | 0.0044 |
| 230 | 0.0047 | 0.0004 | 0.0043 |
| 231 | 0.0046 | 0.0004 | 0.0042 |
| 232 | 0.0045 | 0.0004 | 0.0042 |
| 233 | 0.0044 | 0.0004 | 0.0041 |
| 234 | 0.0044 | 0.0003 | 0.0040 |
| 235 | 0.0043 | 0.0003 | 0.0039 |
| 236 | 0.0042 | 0.0003 | 0.0039 |
| 237 | 0.0041 | 0.0003 | 0.0038 |
| 238 | 0.0041 | 0.0003 | 0.0037 |
| 239 | 0.0040 | 0.0003 | 0.0037 |
| 240 | 0.0039 | 0.0003 | 0.0036 |
| 241 | 0.0039 | 0.0003 | 0.0036 |
| 242 | 0.0038 | 0.0003 | 0.0035 |
| 243 | 0.0038 | 0.0003 | 0.0035 |
| 244 | 0.0037 | 0.0003 | 0.0034 |
| 245 | 0.0037 | 0.0003 | 0.0034 |
| 246 | 0.0036 | 0.0003 | 0.0033 |
| 247 | 0.0036 | 0.0003 | 0.0033 |
| 248 | 0.0035 | 0.0003 | 0.0032 |
| 249 | 0.0035 | 0.0003 | 0.0032 |
| 250 | 0.0034 | 0.0003 | 0.0031 |
| 251 | 0.0034 | 0.0003 | 0.0031 |
| 252 | 0.0033 | 0.0003 | 0.0031 |
| 253 | 0.0033 | 0.0003 | 0.0030 |
| 254 | 0.0032 | 0.0003 | 0.0030 |
| 255 | 0.0032 | 0.0003 | 0.0029 |
| 256 | 0.0032 | 0.0003 | 0.0029 |
| 257 | 0.0031 | 0.0003 | 0.0029 |
| 258 | 0.0031 | 0.0002 | 0.0028 |
| 259 | 0.0031 | 0.0002 | 0.0028 |
| 260 | 0.0030 | 0.0002 | 0.0028 |
| 261 | 0.0030 | 0.0002 | 0.0028 |
| 262 | 0.0030 | 0.0002 | 0.0027 |
| 263 | 0.0029 | 0.0002 | 0.0027 |
| 264 | 0.0029 | 0.0002 | 0.0027 |
| 265 | 0.0029 | 0.0002 | 0.0026 |
| 266 | 0.0028 | 0.0002 | 0.0026 |
| 267 | 0.0028 | 0.0002 | 0.0026 |
| 268 | 0.0028 | 0.0002 | 0.0026 |
| 269 | 0.0028 | 0.0002 | 0.0025 |
| 270 | 0.0027 | 0.0002 | 0.0025 |
| 271 | 0.0027 | 0.0002 | 0.0025 |
| 272 | 0.0027 | 0.0002 | 0.0025 |
| 273 | 0.0027 | 0.0002 | 0.0024 |
| 274 | 0.0026 | 0.0002 | 0.0024 |
| 275 | 0.0026 | 0.0002 | 0.0024 |

| | | | |
|---|---|---|---|
| 276 | 0.0026 | 0.0002 | 0.0024 |
| 277 | 0.0026 | 0.0002 | 0.0024 |
| 278 | 0.0025 | 0.0002 | 0.0023 |
| 279 | 0.0025 | 0.0002 | 0.0023 |
| 280 | 0.0025 | 0.0002 | 0.0023 |
| 281 | 0.0025 | 0.0002 | 0.0023 |
| 282 | 0.0024 | 0.0002 | 0.0023 |
| 283 | 0.0024 | 0.0002 | 0.0022 |
| 284 | 0.0024 | 0.0002 | 0.0022 |
| 285 | 0.0024 | 0.0002 | 0.0022 |
| 286 | 0.0024 | 0.0002 | 0.0022 |
| 287 | 0.0024 | 0.0002 | 0.0022 |
| 288 | 0.0023 | 0.0002 | 0.0021 |

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Total soil rain loss = 0.13(In)
Total effective rainfall = 2.50(In)
Peak flow rate in flood hydrograph = 25.11(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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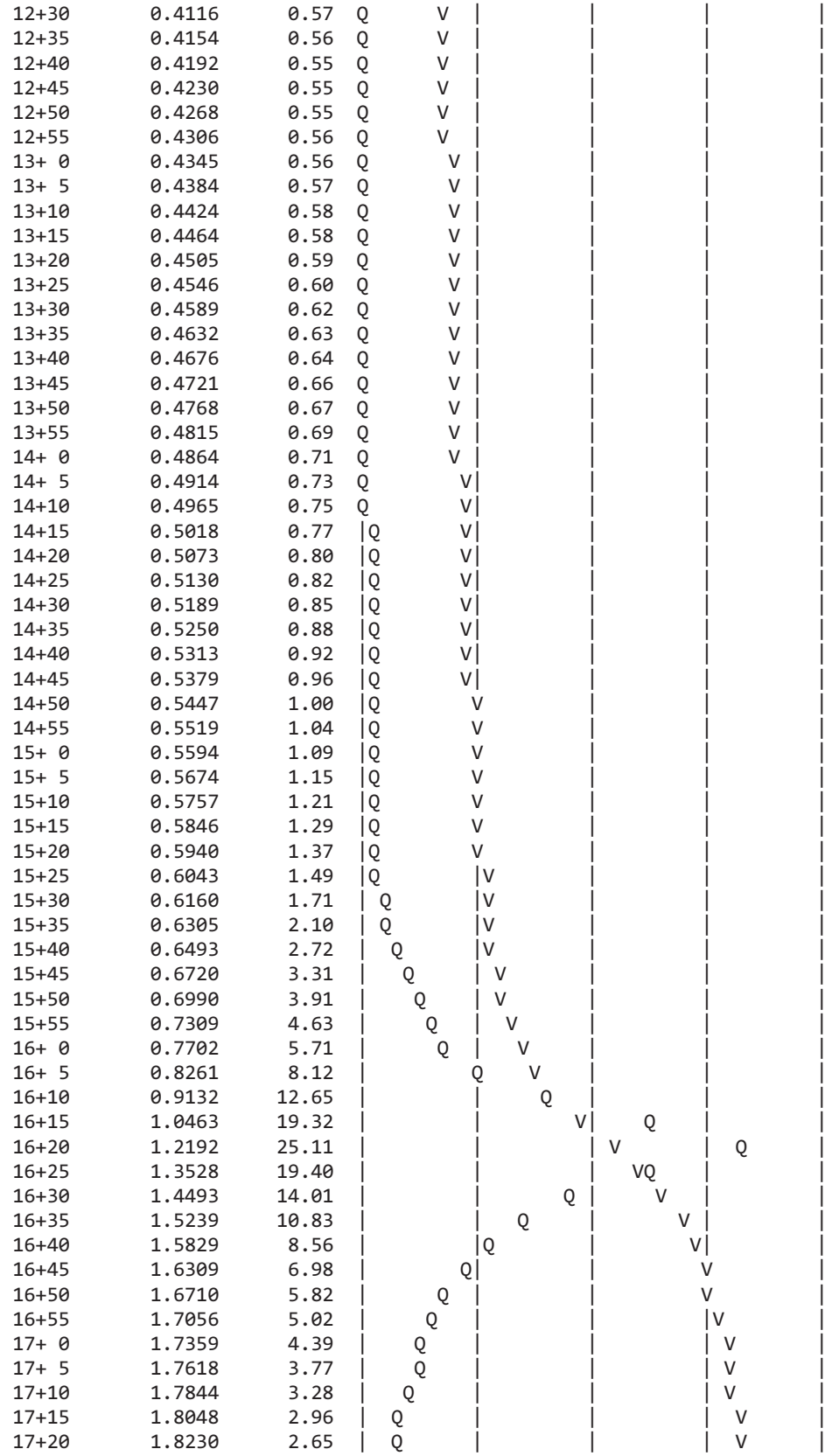
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 7.5 | 15.0 | 22.5 | 30.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0001 | 0.02 | Q | \| | \| | \| | \| |
| 0+15 | 0.0005 | 0.05 | Q | \| | \| | \| | \| |
| 0+20 | 0.0013 | 0.11 | Q | \| | \| | \| | \| |
| 0+25 | 0.0023 | 0.15 | Q | \| | \| | \| | \| |
| 0+30 | 0.0035 | 0.18 | Q | \| | \| | \| | \| |
| 0+35 | 0.0048 | 0.19 | Q | \| | \| | \| | \| |
| 0+40 | 0.0063 | 0.21 | Q | \| | \| | \| | \| |
| 0+45 | 0.0078 | 0.22 | Q | \| | \| | \| | \| |
| 0+50 | 0.0093 | 0.23 | Q | \| | \| | \| | \| |
| 0+55 | 0.0109 | 0.23 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0126 | 0.24 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0143 | 0.25 | Q | \| | \| | \| | \| |
| 1+10 | 0.0160 | 0.25 | Q | \| | \| | \| | \| |
| 1+15 | 0.0178 | 0.26 | Q | \| | \| | \| | \| |
| 1+20 | 0.0196 | 0.26 | Q | \| | \| | \| | \| |
| 1+25 | 0.0214 | 0.26 | Q | \| | \| | \| | \| |
| 1+30 | 0.0233 | 0.27 | Q | \| | \| | \| | \| |
| 1+35 | 0.0252 | 0.27 | Q | \| | \| | \| | \| |
| 1+40 | 0.0270 | 0.27 | Q | \| | \| | \| | \| |
| 1+45 | 0.0289 | 0.28 | Q | \| | \| | \| | \| |
| 1+50 | 0.0309 | 0.28 | Q | \| | \| | \| | \| |
| 1+55 | 0.0328 | 0.28 | Q | \| | \| | \| | \| |
| 2+ 0 | 0.0348 | 0.28 | Q | \| | \| | \| | \| |
| 2+ 5 | 0.0367 | 0.29 | Q | \| | \| | \| | \| |
| 2+10 | 0.0387 | 0.29 | Q | \| | \| | \| | \| |
| 2+15 | 0.0407 | 0.29 | Q | \| | \| | \| | \| |
| 2+20 | 0.0427 | 0.29 | Q | \| | \| | \| | \| |
| 2+25 | 0.0447 | 0.29 | Q | \| | \| | \| | \| |
| 2+30 | 0.0468 | 0.30 | Q | \| | \| | \| | \| |
| 2+35 | 0.0488 | 0.30 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+40 | 0.0509 | 0.30 | Q | \| | \| | \| | \| |
| 2+45 | 0.0529 | 0.30 | Q | \| | \| | \| | \| |
| 2+50 | 0.0550 | 0.30 | QV | \| | \| | \| | \| |
| 2+55 | 0.0571 | 0.30 | QV | \| | \| | \| | \| |
| 3+ 0 | 0.0592 | 0.30 | QV | \| | \| | \| | \| |
| 3+ 5 | 0.0613 | 0.31 | QV | \| | \| | \| | \| |
| 3+10 | 0.0634 | 0.31 | QV | \| | \| | \| | \| |
| 3+15 | 0.0655 | 0.31 | QV | \| | \| | \| | \| |
| 3+20 | 0.0677 | 0.31 | QV | \| | \| | \| | \| |
| 3+25 | 0.0698 | 0.31 | QV | \| | \| | \| | \| |
| 3+30 | 0.0720 | 0.31 | QV | \| | \| | \| | \| |
| 3+35 | 0.0741 | 0.31 | QV | \| | \| | \| | \| |
| 3+40 | 0.0763 | 0.32 | QV | \| | \| | \| | \| |
| 3+45 | 0.0785 | 0.32 | QV | \| | \| | \| | \| |
| 3+50 | 0.0807 | 0.32 | QV | \| | \| | \| | \| |
| 3+55 | 0.0829 | 0.32 | QV | \| | \| | \| | \| |
| 4+ 0 | 0.0851 | 0.32 | QV | \| | \| | \| | \| |
| 4+ 5 | 0.0873 | 0.32 | QV | \| | \| | \| | \| |
| 4+10 | 0.0896 | 0.33 | QV | \| | \| | \| | \| |
| 4+15 | 0.0918 | 0.33 | QV | \| | \| | \| | \| |
| 4+20 | 0.0941 | 0.33 | QV | \| | \| | \| | \| |
| 4+25 | 0.0964 | 0.33 | QV | \| | \| | \| | \| |
| 4+30 | 0.0986 | 0.33 | QV | \| | \| | \| | \| |
| 4+35 | 0.1009 | 0.33 | QV | \| | \| | \| | \| |
| 4+40 | 0.1033 | 0.34 | QV | \| | \| | \| | \| |
| 4+45 | 0.1056 | 0.34 | QV | \| | \| | \| | \| |
| 4+50 | 0.1079 | 0.34 | QV | \| | \| | \| | \| |
| 4+55 | 0.1103 | 0.34 | Q V | \| | \| | \| | \| |
| 5+ 0 | 0.1126 | 0.34 | Q V | \| | \| | \| | \| |
| 5+ 5 | 0.1150 | 0.34 | Q V | \| | \| | \| | \| |
| 5+10 | 0.1174 | 0.35 | Q V | \| | \| | \| | \| |
| 5+15 | 0.1198 | 0.35 | Q V | \| | \| | \| | \| |
| 5+20 | 0.1222 | 0.35 | Q V | \| | \| | \| | \| |
| 5+25 | 0.1246 | 0.35 | Q V | \| | \| | \| | \| |
| 5+30 | 0.1270 | 0.35 | Q V | \| | \| | \| | \| |
| 5+35 | 0.1295 | 0.36 | Q V | \| | \| | \| | \| |
| 5+40 | 0.1320 | 0.36 | Q V | \| | \| | \| | \| |
| 5+45 | 0.1344 | 0.36 | Q V | \| | \| | \| | \| |
| 5+50 | 0.1369 | 0.36 | Q V | \| | \| | \| | \| |
| 5+55 | 0.1395 | 0.36 | Q V | \| | \| | \| | \| |
| 6+ 0 | 0.1420 | 0.37 | Q V | \| | \| | \| | \| |
| 6+ 5 | 0.1445 | 0.37 | Q V | \| | \| | \| | \| |
| 6+10 | 0.1471 | 0.37 | Q V | \| | \| | \| | \| |
| 6+15 | 0.1496 | 0.37 | Q V | \| | \| | \| | \| |
| 6+20 | 0.1522 | 0.38 | Q V | \| | \| | \| | \| |
| 6+25 | 0.1548 | 0.38 | Q V | \| | \| | \| | \| |
| 6+30 | 0.1574 | 0.38 | Q V | \| | \| | \| | \| |
| 6+35 | 0.1601 | 0.38 | Q V | \| | \| | \| | \| |
| 6+40 | 0.1627 | 0.38 | Q  V | \| | \| | \| | \| |
| 6+45 | 0.1654 | 0.39 | Q  V | \| | \| | \| | \| |
| 6+50 | 0.1681 | 0.39 | Q  V | \| | \| | \| | \| |
| 6+55 | 0.1708 | 0.39 | Q  V | \| | \| | \| | \| |
| 7+ 0 | 0.1735 | 0.39 | Q  V | \| | \| | \| | \| |
| 7+ 5 | 0.1762 | 0.40 | Q  V | \| | \| | \| | \| |
| 7+10 | 0.1790 | 0.40 | Q  V | \| | \| | \| | \| |
| 7+15 | 0.1818 | 0.40 | Q  V | \| | \| | \| | \| |
| 7+20 | 0.1846 | 0.41 | Q  V | \| | \| | \| | \| |
| 7+25 | 0.1874 | 0.41 | Q  V | \| | \| | \| | \| |
| 7+30 | 0.1902 | 0.41 | Q  V | \| | \| | \| | \| |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 7+35 | 0.1931 | 0.41 | Q | V | | | | |
| 7+40 | 0.1959 | 0.42 | Q | V | | | | |
| 7+45 | 0.1988 | 0.42 | Q | V | | | | |
| 7+50 | 0.2017 | 0.42 | Q | V | | | | |
| 7+55 | 0.2047 | 0.43 | Q | V | | | | |
| 8+ 0 | 0.2076 | 0.43 | Q | V | | | | |
| 8+ 5 | 0.2106 | 0.43 | Q | V | | | | |
| 8+10 | 0.2136 | 0.44 | Q | V | | | | |
| 8+15 | 0.2166 | 0.44 | Q | V | | | | |
| 8+20 | 0.2197 | 0.44 | Q | V | | | | |
| 8+25 | 0.2227 | 0.45 | Q | V | | | | |
| 8+30 | 0.2258 | 0.45 | Q | V | | | | |
| 8+35 | 0.2289 | 0.45 | Q | V | | | | |
| 8+40 | 0.2321 | 0.46 | Q | V | | | | |
| 8+45 | 0.2352 | 0.46 | Q | V | | | | |
| 8+50 | 0.2384 | 0.46 | Q | V | | | | |
| 8+55 | 0.2416 | 0.47 | Q | V | | | | |
| 9+ 0 | 0.2449 | 0.47 | Q | V | | | | |
| 9+ 5 | 0.2482 | 0.47 | Q | V | | | | |
| 9+10 | 0.2515 | 0.48 | Q | V | | | | |
| 9+15 | 0.2548 | 0.48 | Q | V | | | | |
| 9+20 | 0.2581 | 0.49 | Q | V | | | | |
| 9+25 | 0.2615 | 0.49 | Q | V | | | | |
| 9+30 | 0.2649 | 0.50 | Q | V | | | | |
| 9+35 | 0.2684 | 0.50 | Q | V | | | | |
| 9+40 | 0.2718 | 0.50 | Q | V | | | | |
| 9+45 | 0.2753 | 0.51 | Q | V | | | | |
| 9+50 | 0.2789 | 0.51 | Q | V | | | | |
| 9+55 | 0.2825 | 0.52 | Q | V | | | | |
| 10+ 0 | 0.2861 | 0.52 | Q | V | | | | |
| 10+ 5 | 0.2897 | 0.53 | Q | V | | | | |
| 10+10 | 0.2934 | 0.53 | Q | V | | | | |
| 10+15 | 0.2971 | 0.54 | Q | V | | | | |
| 10+20 | 0.3008 | 0.54 | Q | V | | | | |
| 10+25 | 0.3046 | 0.55 | Q | V | | | | |
| 10+30 | 0.3085 | 0.56 | Q | V | | | | |
| 10+35 | 0.3123 | 0.56 | Q | V | | | | |
| 10+40 | 0.3162 | 0.57 | Q | V | | | | |
| 10+45 | 0.3202 | 0.57 | Q | V | | | | |
| 10+50 | 0.3242 | 0.58 | Q | V | | | | |
| 10+55 | 0.3282 | 0.59 | Q | V | | | | |
| 11+ 0 | 0.3323 | 0.59 | Q | V | | | | |
| 11+ 5 | 0.3364 | 0.60 | Q | V | | | | |
| 11+10 | 0.3406 | 0.61 | Q | V | | | | |
| 11+15 | 0.3448 | 0.61 | Q | V | | | | |
| 11+20 | 0.3491 | 0.62 | Q | V | | | | |
| 11+25 | 0.3534 | 0.63 | Q | V | | | | |
| 11+30 | 0.3578 | 0.64 | Q | V | | | | |
| 11+35 | 0.3623 | 0.64 | Q | V | | | | |
| 11+40 | 0.3668 | 0.65 | Q | V | | | | |
| 11+45 | 0.3713 | 0.66 | Q | V | | | | |
| 11+50 | 0.3759 | 0.67 | Q | V | | | | |
| 11+55 | 0.3806 | 0.68 | Q | V | | | | |
| 12+ 0 | 0.3853 | 0.69 | Q | V | | | | |
| 12+ 5 | 0.3901 | 0.69 | Q | V | | | | |
| 12+10 | 0.3949 | 0.69 | Q | V | | | | |
| 12+15 | 0.3994 | 0.66 | Q | V | | | | |
| 12+20 | 0.4037 | 0.61 | Q | V | | | | |
| 12+25 | 0.4077 | 0.58 | Q | V | | | | |



| | | | |
|---|---|---|---|
| 12+30 | 0.4116 | 0.57 | Q V \| \| \| \| |
| 12+35 | 0.4154 | 0.56 | Q V \| \| \| \| |
| 12+40 | 0.4192 | 0.55 | Q V \| \| \| \| |
| 12+45 | 0.4230 | 0.55 | Q V \| \| \| \| |
| 12+50 | 0.4268 | 0.55 | Q V \| \| \| \| |
| 12+55 | 0.4306 | 0.56 | Q V \| \| \| \| |
| 13+ 0 | 0.4345 | 0.56 | Q V \| \| \| \| |
| 13+ 5 | 0.4384 | 0.57 | Q V \| \| \| \| |
| 13+10 | 0.4424 | 0.58 | Q V \| \| \| \| |
| 13+15 | 0.4464 | 0.58 | Q V \| \| \| \| |
| 13+20 | 0.4505 | 0.59 | Q V \| \| \| \| |
| 13+25 | 0.4546 | 0.60 | Q V \| \| \| \| |
| 13+30 | 0.4589 | 0.62 | Q V \| \| \| \| |
| 13+35 | 0.4632 | 0.63 | Q V \| \| \| \| |
| 13+40 | 0.4676 | 0.64 | Q V \| \| \| \| |
| 13+45 | 0.4721 | 0.66 | Q V \| \| \| \| |
| 13+50 | 0.4768 | 0.67 | Q V \| \| \| \| |
| 13+55 | 0.4815 | 0.69 | Q V \| \| \| \| |
| 14+ 0 | 0.4864 | 0.71 | Q V \| \| \| \| |
| 14+ 5 | 0.4914 | 0.73 | Q V\| \| \| \| |
| 14+10 | 0.4965 | 0.75 | Q V\| \| \| \| |
| 14+15 | 0.5018 | 0.77 | \|Q V\| \| \| \| |
| 14+20 | 0.5073 | 0.80 | \|Q V\| \| \| \| |
| 14+25 | 0.5130 | 0.82 | \|Q V\| \| \| \| |
| 14+30 | 0.5189 | 0.85 | \|Q V\| \| \| \| |
| 14+35 | 0.5250 | 0.88 | \|Q V\| \| \| \| |
| 14+40 | 0.5313 | 0.92 | \|Q V\| \| \| \| |
| 14+45 | 0.5379 | 0.96 | \|Q V\| \| \| \| |
| 14+50 | 0.5447 | 1.00 | \|Q V \| \| \| |
| 14+55 | 0.5519 | 1.04 | \|Q V \| \| \| |
| 15+ 0 | 0.5594 | 1.09 | \|Q V \| \| \| |
| 15+ 5 | 0.5674 | 1.15 | \|Q V \| \| \| |
| 15+10 | 0.5757 | 1.21 | \|Q V \| \| \| |
| 15+15 | 0.5846 | 1.29 | \|Q V \| \| \| |
| 15+20 | 0.5940 | 1.37 | \|Q V \| \| \| |
| 15+25 | 0.6043 | 1.49 | \|Q \|V \| \| \| |
| 15+30 | 0.6160 | 1.71 | \| Q \|V \| \| \| |
| 15+35 | 0.6305 | 2.10 | \| Q \|V \| \| \| |
| 15+40 | 0.6493 | 2.72 | \| Q \|V \| \| \| |
| 15+45 | 0.6720 | 3.31 | \| Q \| V \| \| \| |
| 15+50 | 0.6990 | 3.91 | \| Q \| V \| \| \| |
| 15+55 | 0.7309 | 4.63 | \| Q \| V \| \| \| |
| 16+ 0 | 0.7702 | 5.71 | \| Q \| V \| \| \| |
| 16+ 5 | 0.8261 | 8.12 | \| Q V \| \| \| |
| 16+10 | 0.9132 | 12.65 | \| \| Q \| \| \| |
| 16+15 | 1.0463 | 19.32 | \| \| V\| Q \| \| |
| 16+20 | 1.2192 | 25.11 | \| \| \| V \| Q \| |
| 16+25 | 1.3528 | 19.40 | \| \| \| VQ \| \| |
| 16+30 | 1.4493 | 14.01 | \| \| Q \| V \| \| |
| 16+35 | 1.5239 | 10.83 | \| \| Q \| V \| \| |
| 16+40 | 1.5829 | 8.56 | \| \|Q \| V\| \| |
| 16+45 | 1.6309 | 6.98 | \| Q\| \| V \| |
| 16+50 | 1.6710 | 5.82 | \| Q \| \| V \| |
| 16+55 | 1.7056 | 5.02 | \| Q \| \| \|V \| |
| 17+ 0 | 1.7359 | 4.39 | \| Q \| \| \| V \| |
| 17+ 5 | 1.7618 | 3.77 | \| Q \| \| \| V \| |
| 17+10 | 1.7844 | 3.28 | \| Q \| \| \| V \| |
| 17+15 | 1.8048 | 2.96 | \| Q \| \| \| V \| |
| 17+20 | 1.8230 | 2.65 | \| Q \| \| \| V \| |

```
17+25       1.8394      2.37  |  Q      |         |         |  V      |
17+30       1.8540      2.12  | Q       |         |         |   V     |
17+35       1.8673      1.94  | Q       |         |         |   V     |
17+40       1.8792      1.73  | Q       |         |         |   V     |
17+45       1.8901      1.57  | Q       |         |         |   V     |
17+50       1.8997      1.39  |Q        |         |         |    V    |
17+55       1.9083      1.25  |Q        |         |         |    V    |
18+ 0       1.9159      1.10  |Q        |         |         |    V    |
18+ 5       1.9232      1.06  |Q        |         |         |    V    |
18+10       1.9304      1.05  |Q        |         |         |    V    |
18+15       1.9376      1.04  |Q        |         |         |    V    |
18+20       1.9449      1.05  |Q        |         |         |    V    |
18+25       1.9518      1.01  |Q        |         |         |     V   |
18+30       1.9582      0.92  |Q        |         |         |     V   |
18+35       1.9642      0.88  |Q        |         |         |     V   |
18+40       1.9700      0.83  |Q        |         |         |     V   |
18+45       1.9748      0.70  Q        |         |         |     V   |
18+50       1.9794      0.67  Q        |         |         |     V   |
18+55       1.9839      0.65  Q        |         |         |     V   |
19+ 0       1.9883      0.64  Q        |         |         |     V   |
19+ 5       1.9926      0.62  Q        |         |         |     V   |
19+10       1.9968      0.61  Q        |         |         |     V   |
19+15       2.0009      0.60  Q        |         |         |     V   |
19+20       2.0050      0.59  Q        |         |         |     V   |
19+25       2.0089      0.58  Q        |         |         |      V  |
19+30       2.0128      0.56  Q        |         |         |      V  |
19+35       2.0166      0.55  Q        |         |         |      V  |
19+40       2.0204      0.54  Q        |         |         |      V  |
19+45       2.0241      0.53  Q        |         |         |      V  |
19+50       2.0277      0.53  Q        |         |         |      V  |
19+55       2.0312      0.52  Q        |         |         |      V  |
20+ 0       2.0347      0.51  Q        |         |         |      V  |
20+ 5       2.0382      0.50  Q        |         |         |      V  |
20+10       2.0415      0.49  Q        |         |         |      V  |
20+15       2.0449      0.48  Q        |         |         |      V  |
20+20       2.0481      0.47  Q        |         |         |      V  |
20+25       2.0514      0.47  Q        |         |         |      V  |
20+30       2.0545      0.46  Q        |         |         |      V  |
20+35       2.0577      0.45  Q        |         |         |      V  |
20+40       2.0607      0.45  Q        |         |         |       V |
20+45       2.0638      0.44  Q        |         |         |       V |
20+50       2.0667      0.43  Q        |         |         |       V |
20+55       2.0697      0.43  Q        |         |         |       V |
21+ 0       2.0726      0.42  Q        |         |         |       V |
21+ 5       2.0754      0.41  Q        |         |         |       V |
21+10       2.0783      0.41  Q        |         |         |       V |
21+15       2.0810      0.40  Q        |         |         |       V |
21+20       2.0838      0.40  Q        |         |         |       V |
21+25       2.0865      0.39  Q        |         |         |       V |
21+30       2.0892      0.39  Q        |         |         |       V |
21+35       2.0918      0.38  Q        |         |         |       V |
21+40       2.0944      0.38  Q        |         |         |       V |
21+45       2.0970      0.37  Q        |         |         |       V |
21+50       2.0995      0.37  Q        |         |         |       V |
21+55       2.1020      0.36  Q        |         |         |       V |
22+ 0       2.1045      0.36  Q        |         |         |       V |
22+ 5       2.1070      0.36  Q        |         |         |       V |
22+10       2.1094      0.35  Q        |         |         |       V |
22+15       2.1118      0.35  Q        |         |         |       V |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+20 | 2.1142 | 0.34 | Q | \| | \| | \| | V \| |
| 22+25 | 2.1165 | 0.34 | Q | \| | \| | \| | V\| |
| 22+30 | 2.1188 | 0.34 | Q | \| | \| | \| | V\| |
| 22+35 | 2.1211 | 0.33 | Q | \| | \| | \| | V\| |
| 22+40 | 2.1234 | 0.33 | Q | \| | \| | \| | V\| |
| 22+45 | 2.1257 | 0.33 | Q | \| | \| | \| | V\| |
| 22+50 | 2.1279 | 0.32 | Q | \| | \| | \| | V\| |
| 22+55 | 2.1301 | 0.32 | Q | \| | \| | \| | V\| |
| 23+ 0 | 2.1323 | 0.32 | Q | \| | \| | \| | V\| |
| 23+ 5 | 2.1344 | 0.31 | Q | \| | \| | \| | V\| |
| 23+10 | 2.1366 | 0.31 | Q | \| | \| | \| | V\| |
| 23+15 | 2.1387 | 0.31 | Q | \| | \| | \| | V\| |
| 23+20 | 2.1408 | 0.31 | Q | \| | \| | \| | V\| |
| 23+25 | 2.1429 | 0.30 | Q | \| | \| | \| | V\| |
| 23+30 | 2.1450 | 0.30 | Q | \| | \| | \| | V\| |
| 23+35 | 2.1470 | 0.30 | Q | \| | \| | \| | V\| |
| 23+40 | 2.1490 | 0.29 | Q | \| | \| | \| | V\| |
| 23+45 | 2.1511 | 0.29 | Q | \| | \| | \| | V\| |
| 23+50 | 2.1530 | 0.29 | Q | \| | \| | \| | V\| |
| 23+55 | 2.1550 | 0.29 | Q | \| | \| | \| | V\| |
| 24+ 0 | 2.1570 | 0.28 | Q | \| | \| | \| | V\| |
| 24+ 5 | 2.1589 | 0.28 | Q | \| | \| | \| | V\| |
| 24+10 | 2.1607 | 0.26 | Q | \| | \| | \| | V\| |
| 24+15 | 2.1623 | 0.23 | Q | \| | \| | \| | V\| |
| 24+20 | 2.1634 | 0.17 | Q | \| | \| | \| | V\| |
| 24+25 | 2.1643 | 0.13 | Q | \| | \| | \| | V\| |
| 24+30 | 2.1650 | 0.10 | Q | \| | \| | \| | V\| |
| 24+35 | 2.1655 | 0.08 | Q | \| | \| | \| | V\| |
| 24+40 | 2.1660 | 0.07 | Q | \| | \| | \| | V\| |
| 24+45 | 2.1664 | 0.06 | Q | \| | \| | \| | V\| |
| 24+50 | 2.1667 | 0.05 | Q | \| | \| | \| | V\| |
| 24+55 | 2.1670 | 0.04 | Q | \| | \| | \| | V\| |
| 25+ 0 | 2.1673 | 0.04 | Q | \| | \| | \| | V\| |
| 25+ 5 | 2.1675 | 0.03 | Q | \| | \| | \| | V\| |
| 25+10 | 2.1677 | 0.03 | Q | \| | \| | \| | V\| |
| 25+15 | 2.1678 | 0.02 | Q | \| | \| | \| | V\| |
| 25+20 | 2.1679 | 0.02 | Q | \| | \| | \| | V\| |
| 25+25 | 2.1681 | 0.02 | Q | \| | \| | \| | V\| |
| 25+30 | 2.1681 | 0.01 | Q | \| | \| | \| | V\| |
| 25+35 | 2.1682 | 0.01 | Q | \| | \| | \| | V\| |
| 25+40 | 2.1683 | 0.01 | Q | \| | \| | \| | V\| |
| 25+45 | 2.1684 | 0.01 | Q | \| | \| | \| | V\| |
| 25+50 | 2.1684 | 0.01 | Q | \| | \| | \| | V\| |
| 25+55 | 2.1684 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 0 | 2.1685 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 5 | 2.1685 | 0.00 | Q | \| | \| | \| | V\| |
| 26+10 | 2.1685 | 0.00 | Q | \| | \| | \| | V\| |
| 26+15 | 2.1686 | 0.00 | Q | \| | \| | \| | V\| |
| 26+20 | 2.1686 | 0.00 | Q | \| | \| | \| | V\| |
| 26+25 | 2.1686 | 0.00 | Q | \| | \| | \| | V\| |
| 26+30 | 2.1686 | 0.00 | Q | \| | \| | \| | V\| |
| 26+35 | 2.1686 | 0.00 | Q | \| | \| | \| | V\| |

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U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 38
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DAT: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 12.30 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 12.30 | 6 | 1.85 |
| Rainfall data for year 100 | | |
| 12.30 | 24 | 2.64 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 91.0 | 98.2 | 12.30 | 1.000 | 0.036 | 0.900 | 0.032 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.032

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 11.07 | 0.900 | 91.0 | 98.2 | 0.18 | 0.921 |
| 1.23 | 0.100 | 98.0 | 98.0 | 0.20 | 0.913 |

Area-averaged catchment yield fraction, Y = 0.920
Area-averaged low loss fraction, Yb = 0.080
User entry of time of concentration = 0.480 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 12.30(Ac.)
Catchment Lag time = 0.384 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 21.7014
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.032(In/Hr)
Average low loss rate fraction (Yb) = 0.080 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.656(In)
Specified peak 6-hour rainfall = 1.850(In)
Specified peak 24-hour rainfall = 2.640(In)

Rainfall depth area reduction factors:
Using a total area of 12.30(Ac.) (Ref: fig. E-4)

5-minute factor = 0.999 Adjusted rainfall = 0.659(In)
30-minute factor = 0.999 Adjusted rainfall = 1.128(In)
1-hour factor = 0.999 Adjusted rainfall = 1.389(In)
3-hour factor = 1.000 Adjusted rainfall = 1.656(In)
6-hour factor = 1.000 Adjusted rainfall = 1.850(In)
24-hour factor = 1.000 Adjusted rainfall = 2.640(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 148.75 (CFS)) | |
| 1 | 1.111 | 1.653 |
| 2 | 5.164 | 6.029 |
| 3 | 13.587 | 12.530 |
| 4 | 31.738 | 27.001 |
| 5 | 48.298 | 24.632 |
| 6 | 59.038 | 15.977 |
| 7 | 66.079 | 10.473 |
| 8 | 71.449 | 7.988 |
| 9 | 75.653 | 6.254 |
| 10 | 79.095 | 5.121 |
| 11 | 81.874 | 4.134 |
| 12 | 84.223 | 3.494 |
| 13 | 86.323 | 3.124 |

| | | |
|---|---|---|
| 14 | 88.131 | 2.689 |
| 15 | 89.580 | 2.156 |
| 16 | 90.837 | 1.869 |
| 17 | 91.986 | 1.710 |
| 18 | 93.007 | 1.518 |
| 19 | 93.930 | 1.373 |
| 20 | 94.688 | 1.128 |
| 21 | 95.420 | 1.089 |
| 22 | 96.031 | 0.909 |
| 23 | 96.595 | 0.839 |
| 24 | 97.080 | 0.720 |
| 25 | 97.470 | 0.581 |
| 26 | 97.824 | 0.525 |
| 27 | 98.051 | 0.338 |
| 28 | 98.271 | 0.327 |
| 29 | 98.522 | 0.374 |
| 30 | 98.782 | 0.387 |
| 31 | 99.043 | 0.387 |
| 32 | 99.303 | 0.387 |
| 33 | 99.529 | 0.336 |
| 34 | 99.669 | 0.208 |
| 35 | 99.804 | 0.202 |
| 36 | 100.000 | 0.101 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6592 | 0.6592 |
| 2 | 0.8116 | 0.1524 |
| 3 | 0.9165 | 0.1050 |
| 4 | 0.9991 | 0.0826 |
| 5 | 1.0683 | 0.0692 |
| 6 | 1.1284 | 0.0601 |
| 7 | 1.1818 | 0.0534 |
| 8 | 1.2301 | 0.0483 |
| 9 | 1.2743 | 0.0442 |
| 10 | 1.3153 | 0.0409 |
| 11 | 1.3534 | 0.0381 |
| 12 | 1.3892 | 0.0358 |
| 13 | 1.4071 | 0.0179 |
| 14 | 1.4239 | 0.0168 |
| 15 | 1.4397 | 0.0158 |
| 16 | 1.4546 | 0.0149 |
| 17 | 1.4688 | 0.0142 |
| 18 | 1.4823 | 0.0135 |
| 19 | 1.4952 | 0.0129 |
| 20 | 1.5075 | 0.0123 |
| 21 | 1.5193 | 0.0118 |
| 22 | 1.5307 | 0.0114 |
| 23 | 1.5416 | 0.0109 |
| 24 | 1.5521 | 0.0105 |
| 25 | 1.5623 | 0.0102 |
| 26 | 1.5722 | 0.0098 |
| 27 | 1.5817 | 0.0095 |
| 28 | 1.5909 | 0.0092 |
| 29 | 1.5999 | 0.0090 |
| 30 | 1.6086 | 0.0087 |
| 31 | 1.6170 | 0.0085 |
| 32 | 1.6253 | 0.0082 |
| 33 | 1.6333 | 0.0080 |

| | | |
|---|---|---|
| 34 | 1.6411 | 0.0078 |
| 35 | 1.6487 | 0.0076 |
| 36 | 1.6562 | 0.0074 |
| 37 | 1.6634 | 0.0073 |
| 38 | 1.6705 | 0.0071 |
| 39 | 1.6775 | 0.0069 |
| 40 | 1.6843 | 0.0068 |
| 41 | 1.6909 | 0.0067 |
| 42 | 1.6974 | 0.0065 |
| 43 | 1.7038 | 0.0064 |
| 44 | 1.7101 | 0.0063 |
| 45 | 1.7162 | 0.0061 |
| 46 | 1.7223 | 0.0060 |
| 47 | 1.7282 | 0.0059 |
| 48 | 1.7340 | 0.0058 |
| 49 | 1.7397 | 0.0057 |
| 50 | 1.7453 | 0.0056 |
| 51 | 1.7509 | 0.0055 |
| 52 | 1.7563 | 0.0054 |
| 53 | 1.7616 | 0.0053 |
| 54 | 1.7669 | 0.0053 |
| 55 | 1.7721 | 0.0052 |
| 56 | 1.7772 | 0.0051 |
| 57 | 1.7822 | 0.0050 |
| 58 | 1.7872 | 0.0050 |
| 59 | 1.7921 | 0.0049 |
| 60 | 1.7969 | 0.0048 |
| 61 | 1.8016 | 0.0047 |
| 62 | 1.8063 | 0.0047 |
| 63 | 1.8109 | 0.0046 |
| 64 | 1.8155 | 0.0046 |
| 65 | 1.8200 | 0.0045 |
| 66 | 1.8244 | 0.0044 |
| 67 | 1.8288 | 0.0044 |
| 68 | 1.8331 | 0.0043 |
| 69 | 1.8374 | 0.0043 |
| 70 | 1.8416 | 0.0042 |
| 71 | 1.8458 | 0.0042 |
| 72 | 1.8499 | 0.0041 |
| 73 | 1.8565 | 0.0066 |
| 74 | 1.8630 | 0.0065 |
| 75 | 1.8694 | 0.0064 |
| 76 | 1.8758 | 0.0064 |
| 77 | 1.8821 | 0.0063 |
| 78 | 1.8883 | 0.0062 |
| 79 | 1.8945 | 0.0062 |
| 80 | 1.9006 | 0.0061 |
| 81 | 1.9067 | 0.0061 |
| 82 | 1.9127 | 0.0060 |
| 83 | 1.9186 | 0.0060 |
| 84 | 1.9245 | 0.0059 |
| 85 | 1.9304 | 0.0059 |
| 86 | 1.9362 | 0.0058 |
| 87 | 1.9419 | 0.0058 |
| 88 | 1.9477 | 0.0057 |
| 89 | 1.9533 | 0.0057 |
| 90 | 1.9589 | 0.0056 |
| 91 | 1.9645 | 0.0056 |
| 92 | 1.9700 | 0.0055 |

| | | |
|---|---|---|
| 93 | 1.9755 | 0.0055 |
| 94 | 1.9809 | 0.0054 |
| 95 | 1.9863 | 0.0054 |
| 96 | 1.9916 | 0.0053 |
| 97 | 1.9969 | 0.0053 |
| 98 | 2.0022 | 0.0053 |
| 99 | 2.0074 | 0.0052 |
| 100 | 2.0126 | 0.0052 |
| 101 | 2.0177 | 0.0051 |
| 102 | 2.0228 | 0.0051 |
| 103 | 2.0279 | 0.0051 |
| 104 | 2.0329 | 0.0050 |
| 105 | 2.0379 | 0.0050 |
| 106 | 2.0429 | 0.0050 |
| 107 | 2.0478 | 0.0049 |
| 108 | 2.0527 | 0.0049 |
| 109 | 2.0576 | 0.0049 |
| 110 | 2.0624 | 0.0048 |
| 111 | 2.0672 | 0.0048 |
| 112 | 2.0719 | 0.0048 |
| 113 | 2.0767 | 0.0047 |
| 114 | 2.0814 | 0.0047 |
| 115 | 2.0860 | 0.0047 |
| 116 | 2.0907 | 0.0046 |
| 117 | 2.0953 | 0.0046 |
| 118 | 2.0999 | 0.0046 |
| 119 | 2.1044 | 0.0046 |
| 120 | 2.1089 | 0.0045 |
| 121 | 2.1134 | 0.0045 |
| 122 | 2.1179 | 0.0045 |
| 123 | 2.1223 | 0.0044 |
| 124 | 2.1268 | 0.0044 |
| 125 | 2.1311 | 0.0044 |
| 126 | 2.1355 | 0.0044 |
| 127 | 2.1398 | 0.0043 |
| 128 | 2.1441 | 0.0043 |
| 129 | 2.1484 | 0.0043 |
| 130 | 2.1527 | 0.0043 |
| 131 | 2.1569 | 0.0042 |
| 132 | 2.1611 | 0.0042 |
| 133 | 2.1653 | 0.0042 |
| 134 | 2.1695 | 0.0042 |
| 135 | 2.1736 | 0.0041 |
| 136 | 2.1778 | 0.0041 |
| 137 | 2.1818 | 0.0041 |
| 138 | 2.1859 | 0.0041 |
| 139 | 2.1900 | 0.0041 |
| 140 | 2.1940 | 0.0040 |
| 141 | 2.1980 | 0.0040 |
| 142 | 2.2020 | 0.0040 |
| 143 | 2.2060 | 0.0040 |
| 144 | 2.2099 | 0.0039 |
| 145 | 2.2138 | 0.0039 |
| 146 | 2.2178 | 0.0039 |
| 147 | 2.2216 | 0.0039 |
| 148 | 2.2255 | 0.0039 |
| 149 | 2.2294 | 0.0038 |
| 150 | 2.2332 | 0.0038 |
| 151 | 2.2370 | 0.0038 |

| | | |
|---|---|---|
| 152 | 2.2408 | 0.0038 |
| 153 | 2.2446 | 0.0038 |
| 154 | 2.2483 | 0.0038 |
| 155 | 2.2520 | 0.0037 |
| 156 | 2.2558 | 0.0037 |
| 157 | 2.2595 | 0.0037 |
| 158 | 2.2631 | 0.0037 |
| 159 | 2.2668 | 0.0037 |
| 160 | 2.2705 | 0.0036 |
| 161 | 2.2741 | 0.0036 |
| 162 | 2.2777 | 0.0036 |
| 163 | 2.2813 | 0.0036 |
| 164 | 2.2849 | 0.0036 |
| 165 | 2.2885 | 0.0036 |
| 166 | 2.2920 | 0.0035 |
| 167 | 2.2955 | 0.0035 |
| 168 | 2.2991 | 0.0035 |
| 169 | 2.3026 | 0.0035 |
| 170 | 2.3060 | 0.0035 |
| 171 | 2.3095 | 0.0035 |
| 172 | 2.3130 | 0.0035 |
| 173 | 2.3164 | 0.0034 |
| 174 | 2.3198 | 0.0034 |
| 175 | 2.3233 | 0.0034 |
| 176 | 2.3267 | 0.0034 |
| 177 | 2.3300 | 0.0034 |
| 178 | 2.3334 | 0.0034 |
| 179 | 2.3368 | 0.0034 |
| 180 | 2.3401 | 0.0033 |
| 181 | 2.3434 | 0.0033 |
| 182 | 2.3467 | 0.0033 |
| 183 | 2.3501 | 0.0033 |
| 184 | 2.3533 | 0.0033 |
| 185 | 2.3566 | 0.0033 |
| 186 | 2.3599 | 0.0033 |
| 187 | 2.3631 | 0.0032 |
| 188 | 2.3664 | 0.0032 |
| 189 | 2.3696 | 0.0032 |
| 190 | 2.3728 | 0.0032 |
| 191 | 2.3760 | 0.0032 |
| 192 | 2.3792 | 0.0032 |
| 193 | 2.3823 | 0.0032 |
| 194 | 2.3855 | 0.0032 |
| 195 | 2.3887 | 0.0031 |
| 196 | 2.3918 | 0.0031 |
| 197 | 2.3949 | 0.0031 |
| 198 | 2.3980 | 0.0031 |
| 199 | 2.4011 | 0.0031 |
| 200 | 2.4042 | 0.0031 |
| 201 | 2.4073 | 0.0031 |
| 202 | 2.4104 | 0.0031 |
| 203 | 2.4134 | 0.0031 |
| 204 | 2.4165 | 0.0030 |
| 205 | 2.4195 | 0.0030 |
| 206 | 2.4225 | 0.0030 |
| 207 | 2.4255 | 0.0030 |
| 208 | 2.4285 | 0.0030 |
| 209 | 2.4315 | 0.0030 |
| 210 | 2.4345 | 0.0030 |

| | | |
|---|---|---|
| 211 | 2.4375 | 0.0030 |
| 212 | 2.4404 | 0.0030 |
| 213 | 2.4434 | 0.0029 |
| 214 | 2.4463 | 0.0029 |
| 215 | 2.4492 | 0.0029 |
| 216 | 2.4522 | 0.0029 |
| 217 | 2.4551 | 0.0029 |
| 218 | 2.4580 | 0.0029 |
| 219 | 2.4608 | 0.0029 |
| 220 | 2.4637 | 0.0029 |
| 221 | 2.4666 | 0.0029 |
| 222 | 2.4694 | 0.0029 |
| 223 | 2.4723 | 0.0028 |
| 224 | 2.4751 | 0.0028 |
| 225 | 2.4780 | 0.0028 |
| 226 | 2.4808 | 0.0028 |
| 227 | 2.4836 | 0.0028 |
| 228 | 2.4864 | 0.0028 |
| 229 | 2.4892 | 0.0028 |
| 230 | 2.4920 | 0.0028 |
| 231 | 2.4948 | 0.0028 |
| 232 | 2.4975 | 0.0028 |
| 233 | 2.5003 | 0.0028 |
| 234 | 2.5030 | 0.0027 |
| 235 | 2.5058 | 0.0027 |
| 236 | 2.5085 | 0.0027 |
| 237 | 2.5112 | 0.0027 |
| 238 | 2.5139 | 0.0027 |
| 239 | 2.5166 | 0.0027 |
| 240 | 2.5193 | 0.0027 |
| 241 | 2.5220 | 0.0027 |
| 242 | 2.5247 | 0.0027 |
| 243 | 2.5274 | 0.0027 |
| 244 | 2.5300 | 0.0027 |
| 245 | 2.5327 | 0.0027 |
| 246 | 2.5353 | 0.0026 |
| 247 | 2.5380 | 0.0026 |
| 248 | 2.5406 | 0.0026 |
| 249 | 2.5432 | 0.0026 |
| 250 | 2.5459 | 0.0026 |
| 251 | 2.5485 | 0.0026 |
| 252 | 2.5511 | 0.0026 |
| 253 | 2.5537 | 0.0026 |
| 254 | 2.5562 | 0.0026 |
| 255 | 2.5588 | 0.0026 |
| 256 | 2.5614 | 0.0026 |
| 257 | 2.5640 | 0.0026 |
| 258 | 2.5665 | 0.0026 |
| 259 | 2.5691 | 0.0025 |
| 260 | 2.5716 | 0.0025 |
| 261 | 2.5741 | 0.0025 |
| 262 | 2.5767 | 0.0025 |
| 263 | 2.5792 | 0.0025 |
| 264 | 2.5817 | 0.0025 |
| 265 | 2.5842 | 0.0025 |
| 266 | 2.5867 | 0.0025 |
| 267 | 2.5892 | 0.0025 |
| 268 | 2.5917 | 0.0025 |
| 269 | 2.5941 | 0.0025 |

| | | |
|---|---|---|
| 270 | 2.5966 | 0.0025 |
| 271 | 2.5991 | 0.0025 |
| 272 | 2.6015 | 0.0025 |
| 273 | 2.6040 | 0.0025 |
| 274 | 2.6064 | 0.0024 |
| 275 | 2.6089 | 0.0024 |
| 276 | 2.6113 | 0.0024 |
| 277 | 2.6137 | 0.0024 |
| 278 | 2.6161 | 0.0024 |
| 279 | 2.6185 | 0.0024 |
| 280 | 2.6210 | 0.0024 |
| 281 | 2.6233 | 0.0024 |
| 282 | 2.6257 | 0.0024 |
| 283 | 2.6281 | 0.0024 |
| 284 | 2.6305 | 0.0024 |
| 285 | 2.6329 | 0.0024 |
| 286 | 2.6352 | 0.0024 |
| 287 | 2.6376 | 0.0024 |
| 288 | 2.6400 | 0.0024 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0024 | 0.0002 | 0.0022 |
| 2 | 0.0024 | 0.0002 | 0.0022 |
| 3 | 0.0024 | 0.0002 | 0.0022 |
| 4 | 0.0024 | 0.0002 | 0.0022 |
| 5 | 0.0024 | 0.0002 | 0.0022 |
| 6 | 0.0024 | 0.0002 | 0.0022 |
| 7 | 0.0024 | 0.0002 | 0.0022 |
| 8 | 0.0024 | 0.0002 | 0.0022 |
| 9 | 0.0024 | 0.0002 | 0.0022 |
| 10 | 0.0024 | 0.0002 | 0.0022 |
| 11 | 0.0025 | 0.0002 | 0.0023 |
| 12 | 0.0025 | 0.0002 | 0.0023 |
| 13 | 0.0025 | 0.0002 | 0.0023 |
| 14 | 0.0025 | 0.0002 | 0.0023 |
| 15 | 0.0025 | 0.0002 | 0.0023 |
| 16 | 0.0025 | 0.0002 | 0.0023 |
| 17 | 0.0025 | 0.0002 | 0.0023 |
| 18 | 0.0025 | 0.0002 | 0.0023 |
| 19 | 0.0025 | 0.0002 | 0.0023 |
| 20 | 0.0025 | 0.0002 | 0.0023 |
| 21 | 0.0026 | 0.0002 | 0.0024 |
| 22 | 0.0026 | 0.0002 | 0.0024 |
| 23 | 0.0026 | 0.0002 | 0.0024 |
| 24 | 0.0026 | 0.0002 | 0.0024 |
| 25 | 0.0026 | 0.0002 | 0.0024 |
| 26 | 0.0026 | 0.0002 | 0.0024 |
| 27 | 0.0026 | 0.0002 | 0.0024 |
| 28 | 0.0026 | 0.0002 | 0.0024 |
| 29 | 0.0026 | 0.0002 | 0.0024 |
| 30 | 0.0027 | 0.0002 | 0.0024 |
| 31 | 0.0027 | 0.0002 | 0.0025 |
| 32 | 0.0027 | 0.0002 | 0.0025 |
| 33 | 0.0027 | 0.0002 | 0.0025 |
| 34 | 0.0027 | 0.0002 | 0.0025 |
| 35 | 0.0027 | 0.0002 | 0.0025 |

| | | | |
|---|---|---|---|
| 36 | 0.0027 | 0.0002 | 0.0025 |
| 37 | 0.0027 | 0.0002 | 0.0025 |
| 38 | 0.0028 | 0.0002 | 0.0025 |
| 39 | 0.0028 | 0.0002 | 0.0026 |
| 40 | 0.0028 | 0.0002 | 0.0026 |
| 41 | 0.0028 | 0.0002 | 0.0026 |
| 42 | 0.0028 | 0.0002 | 0.0026 |
| 43 | 0.0028 | 0.0002 | 0.0026 |
| 44 | 0.0028 | 0.0002 | 0.0026 |
| 45 | 0.0029 | 0.0002 | 0.0026 |
| 46 | 0.0029 | 0.0002 | 0.0026 |
| 47 | 0.0029 | 0.0002 | 0.0027 |
| 48 | 0.0029 | 0.0002 | 0.0027 |
| 49 | 0.0029 | 0.0002 | 0.0027 |
| 50 | 0.0029 | 0.0002 | 0.0027 |
| 51 | 0.0029 | 0.0002 | 0.0027 |
| 52 | 0.0030 | 0.0002 | 0.0027 |
| 53 | 0.0030 | 0.0002 | 0.0027 |
| 54 | 0.0030 | 0.0002 | 0.0028 |
| 55 | 0.0030 | 0.0002 | 0.0028 |
| 56 | 0.0030 | 0.0002 | 0.0028 |
| 57 | 0.0030 | 0.0002 | 0.0028 |
| 58 | 0.0031 | 0.0002 | 0.0028 |
| 59 | 0.0031 | 0.0002 | 0.0028 |
| 60 | 0.0031 | 0.0002 | 0.0028 |
| 61 | 0.0031 | 0.0002 | 0.0029 |
| 62 | 0.0031 | 0.0002 | 0.0029 |
| 63 | 0.0031 | 0.0003 | 0.0029 |
| 64 | 0.0032 | 0.0003 | 0.0029 |
| 65 | 0.0032 | 0.0003 | 0.0029 |
| 66 | 0.0032 | 0.0003 | 0.0029 |
| 67 | 0.0032 | 0.0003 | 0.0030 |
| 68 | 0.0032 | 0.0003 | 0.0030 |
| 69 | 0.0033 | 0.0003 | 0.0030 |
| 70 | 0.0033 | 0.0003 | 0.0030 |
| 71 | 0.0033 | 0.0003 | 0.0030 |
| 72 | 0.0033 | 0.0003 | 0.0031 |
| 73 | 0.0033 | 0.0003 | 0.0031 |
| 74 | 0.0034 | 0.0003 | 0.0031 |
| 75 | 0.0034 | 0.0003 | 0.0031 |
| 76 | 0.0034 | 0.0003 | 0.0031 |
| 77 | 0.0034 | 0.0003 | 0.0032 |
| 78 | 0.0034 | 0.0003 | 0.0032 |
| 79 | 0.0035 | 0.0003 | 0.0032 |
| 80 | 0.0035 | 0.0003 | 0.0032 |
| 81 | 0.0035 | 0.0003 | 0.0032 |
| 82 | 0.0035 | 0.0003 | 0.0033 |
| 83 | 0.0036 | 0.0003 | 0.0033 |
| 84 | 0.0036 | 0.0003 | 0.0033 |
| 85 | 0.0036 | 0.0003 | 0.0033 |
| 86 | 0.0036 | 0.0003 | 0.0033 |
| 87 | 0.0037 | 0.0003 | 0.0034 |
| 88 | 0.0037 | 0.0003 | 0.0034 |
| 89 | 0.0037 | 0.0003 | 0.0034 |
| 90 | 0.0037 | 0.0003 | 0.0034 |
| 91 | 0.0038 | 0.0003 | 0.0035 |
| 92 | 0.0038 | 0.0003 | 0.0035 |
| 93 | 0.0038 | 0.0003 | 0.0035 |
| 94 | 0.0038 | 0.0003 | 0.0035 |

| | | | |
|---|---|---|---|
| 95 | 0.0039 | 0.0003 | 0.0036 |
| 96 | 0.0039 | 0.0003 | 0.0036 |
| 97 | 0.0039 | 0.0003 | 0.0036 |
| 98 | 0.0040 | 0.0003 | 0.0037 |
| 99 | 0.0040 | 0.0003 | 0.0037 |
| 100 | 0.0040 | 0.0003 | 0.0037 |
| 101 | 0.0041 | 0.0003 | 0.0038 |
| 102 | 0.0041 | 0.0003 | 0.0038 |
| 103 | 0.0041 | 0.0003 | 0.0038 |
| 104 | 0.0042 | 0.0003 | 0.0038 |
| 105 | 0.0042 | 0.0003 | 0.0039 |
| 106 | 0.0042 | 0.0003 | 0.0039 |
| 107 | 0.0043 | 0.0003 | 0.0039 |
| 108 | 0.0043 | 0.0003 | 0.0040 |
| 109 | 0.0044 | 0.0003 | 0.0040 |
| 110 | 0.0044 | 0.0003 | 0.0040 |
| 111 | 0.0044 | 0.0004 | 0.0041 |
| 112 | 0.0045 | 0.0004 | 0.0041 |
| 113 | 0.0045 | 0.0004 | 0.0042 |
| 114 | 0.0046 | 0.0004 | 0.0042 |
| 115 | 0.0046 | 0.0004 | 0.0042 |
| 116 | 0.0046 | 0.0004 | 0.0043 |
| 117 | 0.0047 | 0.0004 | 0.0043 |
| 118 | 0.0047 | 0.0004 | 0.0044 |
| 119 | 0.0048 | 0.0004 | 0.0044 |
| 120 | 0.0048 | 0.0004 | 0.0044 |
| 121 | 0.0049 | 0.0004 | 0.0045 |
| 122 | 0.0049 | 0.0004 | 0.0045 |
| 123 | 0.0050 | 0.0004 | 0.0046 |
| 124 | 0.0050 | 0.0004 | 0.0046 |
| 125 | 0.0051 | 0.0004 | 0.0047 |
| 126 | 0.0051 | 0.0004 | 0.0047 |
| 127 | 0.0052 | 0.0004 | 0.0048 |
| 128 | 0.0053 | 0.0004 | 0.0048 |
| 129 | 0.0053 | 0.0004 | 0.0049 |
| 130 | 0.0054 | 0.0004 | 0.0050 |
| 131 | 0.0055 | 0.0004 | 0.0050 |
| 132 | 0.0055 | 0.0004 | 0.0051 |
| 133 | 0.0056 | 0.0004 | 0.0052 |
| 134 | 0.0057 | 0.0004 | 0.0052 |
| 135 | 0.0058 | 0.0005 | 0.0053 |
| 136 | 0.0058 | 0.0005 | 0.0053 |
| 137 | 0.0059 | 0.0005 | 0.0054 |
| 138 | 0.0060 | 0.0005 | 0.0055 |
| 139 | 0.0061 | 0.0005 | 0.0056 |
| 140 | 0.0061 | 0.0005 | 0.0056 |
| 141 | 0.0062 | 0.0005 | 0.0057 |
| 142 | 0.0063 | 0.0005 | 0.0058 |
| 143 | 0.0064 | 0.0005 | 0.0059 |
| 144 | 0.0065 | 0.0005 | 0.0060 |
| 145 | 0.0041 | 0.0003 | 0.0038 |
| 146 | 0.0042 | 0.0003 | 0.0038 |
| 147 | 0.0043 | 0.0003 | 0.0039 |
| 148 | 0.0043 | 0.0003 | 0.0040 |
| 149 | 0.0044 | 0.0004 | 0.0041 |
| 150 | 0.0045 | 0.0004 | 0.0041 |
| 151 | 0.0046 | 0.0004 | 0.0043 |
| 152 | 0.0047 | 0.0004 | 0.0043 |
| 153 | 0.0048 | 0.0004 | 0.0044 |

| | | | |
|---|---|---|---|
| 154 | 0.0049 | 0.0004 | 0.0045 |
| 155 | 0.0050 | 0.0004 | 0.0046 |
| 156 | 0.0051 | 0.0004 | 0.0047 |
| 157 | 0.0053 | 0.0004 | 0.0048 |
| 158 | 0.0053 | 0.0004 | 0.0049 |
| 159 | 0.0055 | 0.0004 | 0.0051 |
| 160 | 0.0056 | 0.0004 | 0.0052 |
| 161 | 0.0058 | 0.0005 | 0.0054 |
| 162 | 0.0059 | 0.0005 | 0.0055 |
| 163 | 0.0061 | 0.0005 | 0.0057 |
| 164 | 0.0063 | 0.0005 | 0.0058 |
| 165 | 0.0065 | 0.0005 | 0.0060 |
| 166 | 0.0067 | 0.0005 | 0.0061 |
| 167 | 0.0069 | 0.0006 | 0.0064 |
| 168 | 0.0071 | 0.0006 | 0.0065 |
| 169 | 0.0074 | 0.0006 | 0.0069 |
| 170 | 0.0076 | 0.0006 | 0.0070 |
| 171 | 0.0080 | 0.0006 | 0.0074 |
| 172 | 0.0082 | 0.0007 | 0.0076 |
| 173 | 0.0087 | 0.0007 | 0.0080 |
| 174 | 0.0090 | 0.0007 | 0.0082 |
| 175 | 0.0095 | 0.0008 | 0.0088 |
| 176 | 0.0098 | 0.0008 | 0.0091 |
| 177 | 0.0105 | 0.0008 | 0.0097 |
| 178 | 0.0109 | 0.0009 | 0.0101 |
| 179 | 0.0118 | 0.0009 | 0.0109 |
| 180 | 0.0123 | 0.0010 | 0.0113 |
| 181 | 0.0135 | 0.0011 | 0.0124 |
| 182 | 0.0142 | 0.0011 | 0.0131 |
| 183 | 0.0158 | 0.0013 | 0.0145 |
| 184 | 0.0168 | 0.0013 | 0.0154 |
| 185 | 0.0358 | 0.0027 | 0.0331 |
| 186 | 0.0381 | 0.0027 | 0.0355 |
| 187 | 0.0442 | 0.0027 | 0.0416 |
| 188 | 0.0483 | 0.0027 | 0.0456 |
| 189 | 0.0601 | 0.0027 | 0.0574 |
| 190 | 0.0692 | 0.0027 | 0.0665 |
| 191 | 0.1050 | 0.0027 | 0.1023 |
| 192 | 0.1524 | 0.0027 | 0.1497 |
| 193 | 0.6592 | 0.0027 | 0.6565 |
| 194 | 0.0826 | 0.0027 | 0.0799 |
| 195 | 0.0534 | 0.0027 | 0.0507 |
| 196 | 0.0409 | 0.0027 | 0.0382 |
| 197 | 0.0179 | 0.0014 | 0.0165 |
| 198 | 0.0149 | 0.0012 | 0.0138 |
| 199 | 0.0129 | 0.0010 | 0.0119 |
| 200 | 0.0114 | 0.0009 | 0.0104 |
| 201 | 0.0102 | 0.0008 | 0.0094 |
| 202 | 0.0092 | 0.0007 | 0.0085 |
| 203 | 0.0085 | 0.0007 | 0.0078 |
| 204 | 0.0078 | 0.0006 | 0.0072 |
| 205 | 0.0073 | 0.0006 | 0.0067 |
| 206 | 0.0068 | 0.0005 | 0.0063 |
| 207 | 0.0064 | 0.0005 | 0.0059 |
| 208 | 0.0060 | 0.0005 | 0.0056 |
| 209 | 0.0057 | 0.0005 | 0.0053 |
| 210 | 0.0054 | 0.0004 | 0.0050 |
| 211 | 0.0052 | 0.0004 | 0.0048 |
| 212 | 0.0050 | 0.0004 | 0.0046 |

| | | | |
|---|---|---|---|
| 213 | 0.0047 | 0.0004 | 0.0044 |
| 214 | 0.0046 | 0.0004 | 0.0042 |
| 215 | 0.0044 | 0.0003 | 0.0040 |
| 216 | 0.0042 | 0.0003 | 0.0039 |
| 217 | 0.0066 | 0.0005 | 0.0060 |
| 218 | 0.0064 | 0.0005 | 0.0059 |
| 219 | 0.0062 | 0.0005 | 0.0057 |
| 220 | 0.0060 | 0.0005 | 0.0055 |
| 221 | 0.0059 | 0.0005 | 0.0054 |
| 222 | 0.0057 | 0.0005 | 0.0052 |
| 223 | 0.0056 | 0.0004 | 0.0051 |
| 224 | 0.0054 | 0.0004 | 0.0050 |
| 225 | 0.0053 | 0.0004 | 0.0049 |
| 226 | 0.0052 | 0.0004 | 0.0048 |
| 227 | 0.0051 | 0.0004 | 0.0047 |
| 228 | 0.0050 | 0.0004 | 0.0046 |
| 229 | 0.0049 | 0.0004 | 0.0045 |
| 230 | 0.0048 | 0.0004 | 0.0044 |
| 231 | 0.0047 | 0.0004 | 0.0043 |
| 232 | 0.0046 | 0.0004 | 0.0042 |
| 233 | 0.0045 | 0.0004 | 0.0041 |
| 234 | 0.0044 | 0.0004 | 0.0041 |
| 235 | 0.0043 | 0.0003 | 0.0040 |
| 236 | 0.0043 | 0.0003 | 0.0039 |
| 237 | 0.0042 | 0.0003 | 0.0039 |
| 238 | 0.0041 | 0.0003 | 0.0038 |
| 239 | 0.0041 | 0.0003 | 0.0037 |
| 240 | 0.0040 | 0.0003 | 0.0037 |
| 241 | 0.0039 | 0.0003 | 0.0036 |
| 242 | 0.0039 | 0.0003 | 0.0036 |
| 243 | 0.0038 | 0.0003 | 0.0035 |
| 244 | 0.0038 | 0.0003 | 0.0035 |
| 245 | 0.0037 | 0.0003 | 0.0034 |
| 246 | 0.0036 | 0.0003 | 0.0034 |
| 247 | 0.0036 | 0.0003 | 0.0033 |
| 248 | 0.0035 | 0.0003 | 0.0033 |
| 249 | 0.0035 | 0.0003 | 0.0032 |
| 250 | 0.0035 | 0.0003 | 0.0032 |
| 251 | 0.0034 | 0.0003 | 0.0031 |
| 252 | 0.0034 | 0.0003 | 0.0031 |
| 253 | 0.0033 | 0.0003 | 0.0031 |
| 254 | 0.0033 | 0.0003 | 0.0030 |
| 255 | 0.0032 | 0.0003 | 0.0030 |
| 256 | 0.0032 | 0.0003 | 0.0030 |
| 257 | 0.0032 | 0.0003 | 0.0029 |
| 258 | 0.0031 | 0.0002 | 0.0029 |
| 259 | 0.0031 | 0.0002 | 0.0029 |
| 260 | 0.0031 | 0.0002 | 0.0028 |
| 261 | 0.0030 | 0.0002 | 0.0028 |
| 262 | 0.0030 | 0.0002 | 0.0028 |
| 263 | 0.0030 | 0.0002 | 0.0027 |
| 264 | 0.0029 | 0.0002 | 0.0027 |
| 265 | 0.0029 | 0.0002 | 0.0027 |
| 266 | 0.0029 | 0.0002 | 0.0026 |
| 267 | 0.0028 | 0.0002 | 0.0026 |
| 268 | 0.0028 | 0.0002 | 0.0026 |
| 269 | 0.0028 | 0.0002 | 0.0026 |
| 270 | 0.0028 | 0.0002 | 0.0025 |
| 271 | 0.0027 | 0.0002 | 0.0025 |

| | | | |
|---|---|---|---|
| 272 | 0.0027 | 0.0002 | 0.0025 |
| 273 | 0.0027 | 0.0002 | 0.0025 |
| 274 | 0.0027 | 0.0002 | 0.0025 |
| 275 | 0.0026 | 0.0002 | 0.0024 |
| 276 | 0.0026 | 0.0002 | 0.0024 |
| 277 | 0.0026 | 0.0002 | 0.0024 |
| 278 | 0.0026 | 0.0002 | 0.0024 |
| 279 | 0.0025 | 0.0002 | 0.0023 |
| 280 | 0.0025 | 0.0002 | 0.0023 |
| 281 | 0.0025 | 0.0002 | 0.0023 |
| 282 | 0.0025 | 0.0002 | 0.0023 |
| 283 | 0.0025 | 0.0002 | 0.0023 |
| 284 | 0.0024 | 0.0002 | 0.0022 |
| 285 | 0.0024 | 0.0002 | 0.0022 |
| 286 | 0.0024 | 0.0002 | 0.0022 |
| 287 | 0.0024 | 0.0002 | 0.0022 |
| 288 | 0.0024 | 0.0002 | 0.0022 |

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Total soil rain loss = 0.13(In)
Total effective rainfall = 2.51(In)
Peak flow rate in flood hydrograph = 26.59(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 7.5 | 15.0 | 22.5 | 30.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | \| | \| | \| | \| |
| 0+10 | 0.0001 | 0.02 | Q | \| | \| | \| | \| |
| 0+15 | 0.0004 | 0.04 | Q | \| | \| | \| | \| |
| 0+20 | 0.0011 | 0.10 | Q | \| | \| | \| | \| |
| 0+25 | 0.0022 | 0.16 | Q | \| | \| | \| | \| |
| 0+30 | 0.0035 | 0.19 | Q | \| | \| | \| | \| |
| 0+35 | 0.0050 | 0.21 | Q | \| | \| | \| | \| |
| 0+40 | 0.0066 | 0.23 | Q | \| | \| | \| | \| |
| 0+45 | 0.0083 | 0.25 | Q | \| | \| | \| | \| |
| 0+50 | 0.0101 | 0.26 | Q | \| | \| | \| | \| |
| 0+55 | 0.0120 | 0.27 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0139 | 0.28 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0159 | 0.29 | Q | \| | \| | \| | \| |
| 1+10 | 0.0179 | 0.29 | Q | \| | \| | \| | \| |
| 1+15 | 0.0199 | 0.30 | Q | \| | \| | \| | \| |
| 1+20 | 0.0220 | 0.30 | Q | \| | \| | \| | \| |
| 1+25 | 0.0242 | 0.31 | Q | \| | \| | \| | \| |
| 1+30 | 0.0263 | 0.31 | Q | \| | \| | \| | \| |
| 1+35 | 0.0285 | 0.32 | Q | \| | \| | \| | \| |
| 1+40 | 0.0307 | 0.32 | Q | \| | \| | \| | \| |
| 1+45 | 0.0330 | 0.33 | Q | \| | \| | \| | \| |
| 1+50 | 0.0352 | 0.33 | Q | \| | \| | \| | \| |
| 1+55 | 0.0375 | 0.33 | Q | \| | \| | \| | \| |
| 2+ 0 | 0.0398 | 0.33 | Q | \| | \| | \| | \| |
| 2+ 5 | 0.0422 | 0.34 | Q | \| | \| | \| | \| |
| 2+10 | 0.0445 | 0.34 | Q | \| | \| | \| | \| |
| 2+15 | 0.0469 | 0.34 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+20 | 0.0492 | 0.34 | Q | \| | \| | \| | \| |
| 2+25 | 0.0516 | 0.35 | Q | \| | \| | \| | \| |
| 2+30 | 0.0540 | 0.35 | Q | \| | \| | \| | \| |
| 2+35 | 0.0564 | 0.35 | Q | \| | \| | \| | \| |
| 2+40 | 0.0589 | 0.35 | Q | \| | \| | \| | \| |
| 2+45 | 0.0613 | 0.36 | Q | \| | \| | \| | \| |
| 2+50 | 0.0638 | 0.36 | Q | \| | \| | \| | \| |
| 2+55 | 0.0663 | 0.36 | QV | \| | \| | \| | \| |
| 3+ 0 | 0.0688 | 0.36 | QV | \| | \| | \| | \| |
| 3+ 5 | 0.0713 | 0.36 | QV | \| | \| | \| | \| |
| 3+10 | 0.0738 | 0.37 | QV | \| | \| | \| | \| |
| 3+15 | 0.0763 | 0.37 | QV | \| | \| | \| | \| |
| 3+20 | 0.0789 | 0.37 | QV | \| | \| | \| | \| |
| 3+25 | 0.0814 | 0.37 | QV | \| | \| | \| | \| |
| 3+30 | 0.0840 | 0.37 | QV | \| | \| | \| | \| |
| 3+35 | 0.0866 | 0.37 | QV | \| | \| | \| | \| |
| 3+40 | 0.0892 | 0.38 | QV | \| | \| | \| | \| |
| 3+45 | 0.0918 | 0.38 | QV | \| | \| | \| | \| |
| 3+50 | 0.0944 | 0.38 | QV | \| | \| | \| | \| |
| 3+55 | 0.0970 | 0.38 | QV | \| | \| | \| | \| |
| 4+ 0 | 0.0997 | 0.38 | QV | \| | \| | \| | \| |
| 4+ 5 | 0.1023 | 0.39 | QV | \| | \| | \| | \| |
| 4+10 | 0.1050 | 0.39 | QV | \| | \| | \| | \| |
| 4+15 | 0.1077 | 0.39 | QV | \| | \| | \| | \| |
| 4+20 | 0.1104 | 0.39 | QV | \| | \| | \| | \| |
| 4+25 | 0.1131 | 0.39 | QV | \| | \| | \| | \| |
| 4+30 | 0.1158 | 0.40 | QV | \| | \| | \| | \| |
| 4+35 | 0.1185 | 0.40 | QV | \| | \| | \| | \| |
| 4+40 | 0.1213 | 0.40 | QV | \| | \| | \| | \| |
| 4+45 | 0.1241 | 0.40 | QV | \| | \| | \| | \| |
| 4+50 | 0.1268 | 0.40 | QV | \| | \| | \| | \| |
| 4+55 | 0.1296 | 0.41 | Q V | \| | \| | \| | \| |
| 5+ 0 | 0.1324 | 0.41 | Q V | \| | \| | \| | \| |
| 5+ 5 | 0.1353 | 0.41 | Q V | \| | \| | \| | \| |
| 5+10 | 0.1381 | 0.41 | Q V | \| | \| | \| | \| |
| 5+15 | 0.1410 | 0.41 | Q V | \| | \| | \| | \| |
| 5+20 | 0.1438 | 0.42 | Q V | \| | \| | \| | \| |
| 5+25 | 0.1467 | 0.42 | Q V | \| | \| | \| | \| |
| 5+30 | 0.1496 | 0.42 | Q V | \| | \| | \| | \| |
| 5+35 | 0.1525 | 0.42 | Q V | \| | \| | \| | \| |
| 5+40 | 0.1555 | 0.43 | Q V | \| | \| | \| | \| |
| 5+45 | 0.1584 | 0.43 | Q V | \| | \| | \| | \| |
| 5+50 | 0.1614 | 0.43 | Q V | \| | \| | \| | \| |
| 5+55 | 0.1644 | 0.43 | Q V | \| | \| | \| | \| |
| 6+ 0 | 0.1674 | 0.44 | Q V | \| | \| | \| | \| |
| 6+ 5 | 0.1704 | 0.44 | Q V | \| | \| | \| | \| |
| 6+10 | 0.1734 | 0.44 | Q V | \| | \| | \| | \| |
| 6+15 | 0.1765 | 0.44 | Q V | \| | \| | \| | \| |
| 6+20 | 0.1796 | 0.45 | Q V | \| | \| | \| | \| |
| 6+25 | 0.1827 | 0.45 | Q V | \| | \| | \| | \| |
| 6+30 | 0.1858 | 0.45 | Q V | \| | \| | \| | \| |
| 6+35 | 0.1889 | 0.45 | Q V | \| | \| | \| | \| |
| 6+40 | 0.1921 | 0.46 | Q V | \| | \| | \| | \| |
| 6+45 | 0.1952 | 0.46 | Q  V | \| | \| | \| | \| |
| 6+50 | 0.1984 | 0.46 | Q  V | \| | \| | \| | \| |
| 6+55 | 0.2016 | 0.47 | Q  V | \| | \| | \| | \| |
| 7+ 0 | 0.2049 | 0.47 | Q  V | \| | \| | \| | \| |
| 7+ 5 | 0.2081 | 0.47 | Q  V | \| | \| | \| | \| |
| 7+10 | 0.2114 | 0.48 | Q  V | \| | \| | \| | \| |

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 7+15       0.2147      0.48  Q  V      |          |          |          |
 7+20       0.2180      0.48  Q  V      |          |          |          |
 7+25       0.2214      0.49  Q  V      |          |          |          |
 7+30       0.2247      0.49  Q  V      |          |          |          |
 7+35       0.2281      0.49  Q  V      |          |          |          |
 7+40       0.2315      0.50  Q  V      |          |          |          |
 7+45       0.2350      0.50  Q  V      |          |          |          |
 7+50       0.2384      0.50  Q  V      |          |          |          |
 7+55       0.2419      0.51  Q  V      |          |          |          |
 8+ 0       0.2454      0.51  Q  V      |          |          |          |
 8+ 5       0.2490      0.51  Q  V      |          |          |          |
 8+10       0.2525      0.52  Q  V      |          |          |          |
 8+15       0.2561      0.52  Q  V      |          |          |          |
 8+20       0.2597      0.52  Q   V      |          |          |          |
 8+25       0.2634      0.53  Q   V      |          |          |          |
 8+30       0.2670      0.53  Q   V      |          |          |          |
 8+35       0.2707      0.54  Q   V      |          |          |          |
 8+40       0.2745      0.54  Q   V      |          |          |          |
 8+45       0.2782      0.55  Q   V      |          |          |          |
 8+50       0.2820      0.55  Q   V      |          |          |          |
 8+55       0.2858      0.55  Q   V      |          |          |          |
 9+ 0       0.2897      0.56  Q   V      |          |          |          |
 9+ 5       0.2935      0.56  Q   V      |          |          |          |
 9+10       0.2975      0.57  Q   V      |          |          |          |
 9+15       0.3014      0.57  Q   V      |          |          |          |
 9+20       0.3054      0.58  Q   V      |          |          |          |
 9+25       0.3094      0.58  Q   V      |          |          |          |
 9+30       0.3134      0.59  Q   V      |          |          |          |
 9+35       0.3175      0.59  Q   V      |          |          |          |
 9+40       0.3216      0.60  Q    V     |          |          |          |
 9+45       0.3258      0.60  Q    V     |          |          |          |
 9+50       0.3300      0.61  Q    V     |          |          |          |
 9+55       0.3342      0.61  Q    V     |          |          |          |
10+ 0       0.3385      0.62  Q    V     |          |          |          |
10+ 5       0.3428      0.63  Q    V     |          |          |          |
10+10       0.3472      0.63  Q    V     |          |          |          |
10+15       0.3516      0.64  Q    V     |          |          |          |
10+20       0.3560      0.65  Q    V     |          |          |          |
10+25       0.3605      0.65  Q    V     |          |          |          |
10+30       0.3650      0.66  Q    V     |          |          |          |
10+35       0.3696      0.66  Q    V     |          |          |          |
10+40       0.3742      0.67  Q    V     |          |          |          |
10+45       0.3789      0.68  Q    V     |          |          |          |
10+50       0.3836      0.69  Q    V     |          |          |          |
10+55       0.3884      0.69  Q     V    |          |          |          |
11+ 0       0.3932      0.70  Q     V    |          |          |          |
11+ 5       0.3981      0.71  Q     V    |          |          |          |
11+10       0.4031      0.72  Q     V    |          |          |          |
11+15       0.4081      0.73  Q     V    |          |          |          |
11+20       0.4131      0.73  Q     V    |          |          |          |
11+25       0.4182      0.74  Q     V    |          |          |          |
11+30       0.4234      0.75  |Q    V    |          |          |          |
11+35       0.4287      0.76  |Q    V    |          |          |          |
11+40       0.4340      0.77  |Q    V    |          |          |          |
11+45       0.4394      0.78  |Q    V    |          |          |          |
11+50       0.4448      0.79  |Q    V    |          |          |          |
11+55       0.4503      0.80  |Q     V   |          |          |          |
12+ 0       0.4559      0.81  |Q     V   |          |          |          |
12+ 5       0.4616      0.82  |Q     V   |          |          |          |
```

```
12+10       0.4672      0.82  |Q     V  |          |          |          |
12+15       0.4727      0.80  |Q     V  |          |          |          |
12+20       0.4779      0.75  |Q     V  |          |          |          |
12+25       0.4828      0.71  Q      V  |          |          |          |
12+30       0.4874      0.68  Q      V  |          |          |          |
12+35       0.4920      0.67  Q      V  |          |          |          |
12+40       0.4966      0.66  Q      V  |          |          |          |
12+45       0.5011      0.66  Q      V  |          |          |          |
12+50       0.5056      0.66  Q      V  |          |          |          |
12+55       0.5102      0.66  Q      V  |          |          |          |
13+ 0       0.5148      0.66  Q       V |          |          |          |
13+ 5       0.5194      0.67  Q       V |          |          |          |
13+10       0.5240      0.68  Q       V |          |          |          |
13+15       0.5288      0.69  Q       V |          |          |          |
13+20       0.5336      0.70  Q       V |          |          |          |
13+25       0.5384      0.71  Q       V |          |          |          |
13+30       0.5434      0.72  Q       V |          |          |          |
13+35       0.5484      0.73  Q       V |          |          |          |
13+40       0.5536      0.75  Q       V |          |          |          |
13+45       0.5589      0.77  |Q      V |          |          |          |
13+50       0.5643      0.78  |Q      V |          |          |          |
13+55       0.5698      0.80  |Q      V |          |          |          |
14+ 0       0.5755      0.82  |Q      V |          |          |          |
14+ 5       0.5813      0.84  |Q       V|          |          |          |
14+10       0.5872      0.87  |Q       V|          |          |          |
14+15       0.5934      0.89  |Q       V|          |          |          |
14+20       0.5998      0.92  |Q       V|          |          |          |
14+25       0.6063      0.95  |Q       V|          |          |          |
14+30       0.6131      0.99  |Q       V|          |          |          |
14+35       0.6201      1.02  |Q       V|          |          |          |
14+40       0.6274      1.06  |Q       V|          |          |          |
14+45       0.6350      1.10  |Q       V|          |          |          |
14+50       0.6429      1.15  |Q        V          |          |          |
14+55       0.6511      1.20  |Q        V          |          |          |
15+ 0       0.6598      1.25  |Q        V          |          |          |
15+ 5       0.6688      1.32  |Q        V          |          |          |
15+10       0.6784      1.39  |Q        V          |          |          |
15+15       0.6885      1.47  |Q        V          |          |          |
15+20       0.6992      1.56  | Q       V          |          |          |
15+25       0.7108      1.69  | Q       |V         |          |          |
15+30       0.7240      1.91  | Q       |V         |          |          |
15+35       0.7395      2.26  |  Q      |V         |          |          |
15+40       0.7594      2.89  |  Q      |V         |          |          |
15+45       0.7839      3.56  |   Q     | V        |          |          |
15+50       0.8132      4.25  |    Q    | V        |          |          |
15+55       0.8478      5.02  |     Q   |  V       |          |          |
16+ 0       0.8901      6.14  |       Q |  V       |          |          |
16+ 5       0.9488      8.53  |         |Q  V      |          |          |
16+10       1.0371     12.82  |         |     VQ   |          |          |
16+15       1.1629     18.25  |         |       V  |   Q      |          |
16+20       1.3460     26.59  |         |         V|          |    Q     |
16+25       1.5142     24.43  |         |          |  V       | Q        |
16+30       1.6399     18.25  |         |          |   QV     |          |
16+35       1.7349     13.78  |         |        Q |      V   |          |
16+40       1.8107     11.02  |         |   Q      |       V  |          |
16+45       1.8724      8.96  |         |Q         |        V |          |
16+50       1.9243      7.53  |         Q          |        V |          |
16+55       1.9683      6.39  |       Q  |         |         V|          |
17+ 0       2.0067      5.57  |      Q   |         |          |V         |
```

```
17+ 5       2.0410      4.98  |     Q   |         |         |V        |
17+10       2.0712      4.39  |    Q    |         |         | V       |
17+15       2.0975      3.82  |    Q    |         |         | V       |
17+20       2.1211      3.42  |   Q     |         |         |  V      |
17+25       2.1426      3.13  |   Q     |         |         |  V      |
17+30       2.1622      2.84  |  Q      |         |         |  V      |
17+35       2.1800      2.59  |  Q      |         |         |  V      |
17+40       2.1960      2.32  |  Q      |         |         |   V     |
17+45       2.2109      2.16  | Q       |         |         |   V     |
17+50       2.2243      1.95  | Q       |         |         |   V     |
17+55       2.2366      1.80  | Q       |         |         |   V     |
18+ 0       2.2479      1.63  | Q       |         |         |    V    |
18+ 5       2.2580      1.47  |Q        |         |         |    V    |
18+10       2.2674      1.37  |Q        |         |         |    V    |
18+15       2.2759      1.23  |Q        |         |         |    V    |
18+20       2.2843      1.23  |Q        |         |         |    V    |
18+25       2.2931      1.27  |Q        |         |         |    V    |
18+30       2.3018      1.26  |Q        |         |         |    V    |
18+35       2.3103      1.24  |Q        |         |         |     V   |
18+40       2.3186      1.21  |Q        |         |         |     V   |
18+45       2.3265      1.14  |Q        |         |         |     V   |
18+50       2.3335      1.02  |Q        |         |         |     V   |
18+55       2.3402      0.97  |Q        |         |         |     V   |
19+ 0       2.3461      0.87  |Q        |         |         |     V   |
19+ 5       2.3515      0.78  |Q        |         |         |     V   |
19+10       2.3567      0.75  |Q        |         |         |     V   |
19+15       2.3617      0.73  Q         |         |         |     V   |
19+20       2.3666      0.71  Q         |         |         |     V   |
19+25       2.3714      0.70  Q         |         |         |     V   |
19+30       2.3762      0.68  Q         |         |         |      V  |
19+35       2.3808      0.67  Q         |         |         |      V  |
19+40       2.3853      0.66  Q         |         |         |      V  |
19+45       2.3898      0.65  Q         |         |         |      V  |
19+50       2.3942      0.64  Q         |         |         |      V  |
19+55       2.3985      0.62  Q         |         |         |      V  |
20+ 0       2.4027      0.61  Q         |         |         |      V  |
20+ 5       2.4069      0.60  Q         |         |         |      V  |
20+10       2.4110      0.59  Q         |         |         |      V  |
20+15       2.4150      0.58  Q         |         |         |      V  |
20+20       2.4189      0.57  Q         |         |         |      V  |
20+25       2.4228      0.57  Q         |         |         |      V  |
20+30       2.4267      0.56  Q         |         |         |      V  |
20+35       2.4304      0.55  Q         |         |         |      V  |
20+40       2.4341      0.54  Q         |         |         |      V  |
20+45       2.4378      0.53  Q         |         |         |      V  |
20+50       2.4414      0.52  Q         |         |         |       V |
20+55       2.4450      0.52  Q         |         |         |       V |
21+ 0       2.4485      0.51  Q         |         |         |       V |
21+ 5       2.4520      0.50  Q         |         |         |       V |
21+10       2.4554      0.50  Q         |         |         |       V |
21+15       2.4587      0.49  Q         |         |         |       V |
21+20       2.4621      0.48  Q         |         |         |       V |
21+25       2.4653      0.48  Q         |         |         |       V |
21+30       2.4686      0.47  Q         |         |         |       V |
21+35       2.4718      0.46  Q         |         |         |       V |
21+40       2.4749      0.46  Q         |         |         |       V |
21+45       2.4780      0.45  Q         |         |         |       V |
21+50       2.4811      0.45  Q         |         |         |       V |
21+55       2.4841      0.44  Q         |         |         |       V |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+ 0 | 2.4871 | 0.44 | Q | \| | \| | \| | V \| |
| 22+ 5 | 2.4901 | 0.43 | Q | \| | \| | \| | V \| |
| 22+10 | 2.4930 | 0.43 | Q | \| | \| | \| | V \| |
| 22+15 | 2.4959 | 0.42 | Q | \| | \| | \| | V \| |
| 22+20 | 2.4988 | 0.42 | Q | \| | \| | \| | V \| |
| 22+25 | 2.5016 | 0.41 | Q | \| | \| | \| | V \| |
| 22+30 | 2.5044 | 0.41 | Q | \| | \| | \| | V\| |
| 22+35 | 2.5072 | 0.40 | Q | \| | \| | \| | V\| |
| 22+40 | 2.5100 | 0.40 | Q | \| | \| | \| | V\| |
| 22+45 | 2.5127 | 0.39 | Q | \| | \| | \| | V\| |
| 22+50 | 2.5154 | 0.39 | Q | \| | \| | \| | V\| |
| 22+55 | 2.5180 | 0.39 | Q | \| | \| | \| | V\| |
| 23+ 0 | 2.5207 | 0.38 | Q | \| | \| | \| | V\| |
| 23+ 5 | 2.5233 | 0.38 | Q | \| | \| | \| | V\| |
| 23+10 | 2.5259 | 0.38 | Q | \| | \| | \| | V\| |
| 23+15 | 2.5284 | 0.37 | Q | \| | \| | \| | V\| |
| 23+20 | 2.5310 | 0.37 | Q | \| | \| | \| | V\| |
| 23+25 | 2.5335 | 0.37 | Q | \| | \| | \| | V\| |
| 23+30 | 2.5360 | 0.36 | Q | \| | \| | \| | V\| |
| 23+35 | 2.5384 | 0.36 | Q | \| | \| | \| | V\| |
| 23+40 | 2.5409 | 0.36 | Q | \| | \| | \| | V\| |
| 23+45 | 2.5433 | 0.35 | Q | \| | \| | \| | V\| |
| 23+50 | 2.5457 | 0.35 | Q | \| | \| | \| | V\| |
| 23+55 | 2.5481 | 0.35 | Q | \| | \| | \| | V\| |
| 24+ 0 | 2.5505 | 0.34 | Q | \| | \| | \| | V\| |
| 24+ 5 | 2.5528 | 0.34 | Q | \| | \| | \| | V\| |
| 24+10 | 2.5550 | 0.32 | Q | \| | \| | \| | V\| |
| 24+15 | 2.5570 | 0.29 | Q | \| | \| | \| | V\| |
| 24+20 | 2.5586 | 0.23 | Q | \| | \| | \| | V\| |
| 24+25 | 2.5598 | 0.18 | Q | \| | \| | \| | V\| |
| 24+30 | 2.5607 | 0.14 | Q | \| | \| | \| | V\| |
| 24+35 | 2.5615 | 0.12 | Q | \| | \| | \| | V\| |
| 24+40 | 2.5622 | 0.10 | Q | \| | \| | \| | V\| |
| 24+45 | 2.5628 | 0.08 | Q | \| | \| | \| | V\| |
| 24+50 | 2.5633 | 0.07 | Q | \| | \| | \| | V\| |
| 24+55 | 2.5637 | 0.06 | Q | \| | \| | \| | V\| |
| 25+ 0 | 2.5641 | 0.05 | Q | \| | \| | \| | V\| |
| 25+ 5 | 2.5644 | 0.05 | Q | \| | \| | \| | V\| |
| 25+10 | 2.5647 | 0.04 | Q | \| | \| | \| | V\| |
| 25+15 | 2.5649 | 0.04 | Q | \| | \| | \| | V\| |
| 25+20 | 2.5651 | 0.03 | Q | \| | \| | \| | V\| |
| 25+25 | 2.5653 | 0.03 | Q | \| | \| | \| | V\| |
| 25+30 | 2.5655 | 0.02 | Q | \| | \| | \| | V\| |
| 25+35 | 2.5656 | 0.02 | Q | \| | \| | \| | V\| |
| 25+40 | 2.5657 | 0.02 | Q | \| | \| | \| | V\| |
| 25+45 | 2.5658 | 0.02 | Q | \| | \| | \| | V\| |
| 25+50 | 2.5659 | 0.01 | Q | \| | \| | \| | V\| |
| 25+55 | 2.5660 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 0 | 2.5661 | 0.01 | Q | \| | \| | \| | V\| |
| 26+ 5 | 2.5661 | 0.01 | Q | \| | \| | \| | V\| |
| 26+10 | 2.5662 | 0.01 | Q | \| | \| | \| | V\| |
| 26+15 | 2.5662 | 0.01 | Q | \| | \| | \| | V\| |
| 26+20 | 2.5662 | 0.01 | Q | \| | \| | \| | V\| |
| 26+25 | 2.5663 | 0.00 | Q | \| | \| | \| | V\| |
| 26+30 | 2.5663 | 0.00 | Q | \| | \| | \| | V\| |
| 26+35 | 2.5663 | 0.00 | Q | \| | \| | \| | V\| |
| 26+40 | 2.5663 | 0.00 | Q | \| | \| | \| | V\| |
| 26+45 | 2.5663 | 0.00 | Q | \| | \| | \| | V\| |
| 26+50 | 2.5663 | 0.00 | Q | \| | \| | \| | V\| |

```
   26+55       2.5663      0.00  Q         |         |         |         V
-----------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 39
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 277.99 | 1 | 1.40 |
| Rainfall data for year 100 | | |
| 277.99 | 6 | 1.86 |
| Rainfall data for year 100 | | |
| 277.99 | 24 | 2.65 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 85.1 | 97.0 | 277.99 | 1.000 | 0.059 | 0.900 | 0.053 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.053

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 250.19 | 0.900 | 85.1 | 97.0 | 0.31 | 0.873 |
| 27.80 | 0.100 | 98.0 | 98.0 | 0.20 | 0.913 |

Area-averaged catchment yield fraction, Y = 0.877
Area-averaged low loss fraction, Yb = 0.123
User entry of time of concentration = 1.440 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 277.99(Ac.)
Catchment Lag time = 1.152 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 7.2338
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.053(In/Hr)
Average low loss rate fraction (Yb) = 0.123 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.664(In)
Computed peak 30-minute rainfall = 1.137(In)
Specified peak 1-hour rainfall = 1.400(In)
Computed peak 3-hour rainfall = 1.666(In)
Specified peak 6-hour rainfall = 1.860(In)
Specified peak 24-hour rainfall = 2.650(In)

Rainfall depth area reduction factors:
Using a total area of 277.99(Ac.) (Ref: fig. E-4)

5-minute factor = 0.987 Adjusted rainfall = 0.656(In)
30-minute factor = 0.987 Adjusted rainfall = 1.122(In)
1-hour factor = 0.987 Adjusted rainfall = 1.382(In)
3-hour factor = 0.998 Adjusted rainfall = 1.664(In)
6-hour factor = 0.999 Adjusted rainfall = 1.858(In)
24-hour factor = 1.000 Adjusted rainfall = 2.649(In)
---

U n i t H y d r o g r a p h

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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 3361.94 (CFS)) | |
| 1 | 0.318 | 10.701 |
| 2 | 0.976 | 22.121 |
| 3 | 2.038 | 35.701 |
| 4 | 3.339 | 43.736 |
| 5 | 5.073 | 58.290 |
| 6 | 7.079 | 67.438 |
| 7 | 9.507 | 81.638 |
| 8 | 13.222 | 124.899 |
| 9 | 18.032 | 161.697 |
| 10 | 24.870 | 229.907 |
| 11 | 32.035 | 240.873 |
| 12 | 38.309 | 210.942 |
| 13 | 43.863 | 186.711 |

| | | |
|---|---|---|
| 14 | 48.487 | 155.436 |
| 15 | 52.543 | 136.369 |
| 16 | 56.206 | 123.143 |
| 17 | 59.133 | 98.426 |
| 18 | 61.776 | 88.849 |
| 19 | 64.053 | 76.564 |
| 20 | 66.140 | 70.133 |
| 21 | 68.043 | 64.001 |
| 22 | 69.826 | 59.948 |
| 23 | 71.521 | 56.970 |
| 24 | 72.999 | 49.686 |
| 25 | 74.389 | 46.734 |
| 26 | 75.665 | 42.904 |
| 27 | 76.905 | 41.680 |
| 28 | 78.104 | 40.315 |
| 29 | 79.114 | 33.940 |
| 30 | 80.068 | 32.102 |
| 31 | 81.023 | 32.102 |
| 32 | 81.908 | 29.759 |
| 33 | 82.691 | 26.297 |
| 34 | 83.472 | 26.265 |
| 35 | 84.245 | 25.983 |
| 36 | 84.953 | 23.804 |
| 37 | 85.647 | 23.347 |
| 38 | 86.342 | 23.347 |
| 39 | 86.980 | 21.463 |
| 40 | 87.559 | 19.456 |
| 41 | 88.138 | 19.456 |
| 42 | 88.696 | 18.778 |
| 43 | 89.146 | 15.134 |
| 44 | 89.580 | 14.592 |
| 45 | 90.014 | 14.589 |
| 46 | 90.432 | 14.038 |
| 47 | 90.837 | 13.619 |
| 48 | 91.242 | 13.619 |
| 49 | 91.636 | 13.250 |
| 50 | 91.987 | 11.817 |
| 51 | 92.335 | 11.673 |
| 52 | 92.682 | 11.661 |
| 53 | 93.010 | 11.044 |
| 54 | 93.328 | 10.701 |
| 55 | 93.647 | 10.701 |
| 56 | 93.947 | 10.098 |
| 57 | 94.196 | 8.375 |
| 58 | 94.442 | 8.269 |
| 59 | 94.688 | 8.269 |
| 60 | 94.934 | 8.269 |
| 61 | 95.180 | 8.269 |
| 62 | 95.426 | 8.269 |
| 63 | 95.654 | 7.658 |
| 64 | 95.843 | 6.365 |
| 65 | 96.031 | 6.323 |
| 66 | 96.219 | 6.323 |
| 67 | 96.407 | 6.323 |
| 68 | 96.595 | 6.323 |
| 69 | 96.783 | 6.323 |
| 70 | 96.949 | 5.570 |
| 71 | 97.080 | 4.392 |
| 72 | 97.210 | 4.378 |

| | | |
|---|---|---|
| 73 | 97.340 | 4.378 |
| 74 | 97.470 | 4.378 |
| 75 | 97.601 | 4.378 |
| 76 | 97.731 | 4.378 |
| 77 | 97.834 | 3.466 |
| 78 | 97.906 | 2.433 |
| 79 | 97.979 | 2.432 |
| 80 | 98.051 | 2.432 |
| 81 | 98.123 | 2.432 |
| 82 | 98.196 | 2.432 |
| 83 | 98.268 | 2.433 |
| 84 | 98.348 | 2.702 |
| 85 | 98.435 | 2.918 |
| 86 | 98.522 | 2.918 |
| 87 | 98.609 | 2.918 |
| 88 | 98.695 | 2.918 |
| 89 | 98.782 | 2.918 |
| 90 | 98.869 | 2.918 |
| 91 | 98.956 | 2.918 |
| 92 | 99.043 | 2.918 |
| 93 | 99.130 | 2.918 |
| 94 | 99.216 | 2.918 |
| 95 | 99.303 | 2.918 |
| 96 | 99.390 | 2.918 |
| 97 | 99.476 | 2.881 |
| 98 | 99.533 | 1.932 |
| 99 | 99.578 | 1.520 |
| 100 | 99.624 | 1.520 |
| 101 | 99.669 | 1.520 |
| 102 | 99.714 | 1.520 |
| 103 | 99.759 | 1.520 |
| 104 | 99.804 | 1.520 |
| 105 | 99.850 | 1.520 |
| 106 | 99.895 | 1.520 |
| 107 | 99.940 | 1.520 |
| 108 | 100.000 | 0.760 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6557 | 0.6557 |
| 2 | 0.8072 | 0.1516 |
| 3 | 0.9116 | 0.1044 |
| 4 | 0.9938 | 0.0822 |
| 5 | 1.0626 | 0.0688 |
| 6 | 1.1223 | 0.0597 |
| 7 | 1.1755 | 0.0531 |
| 8 | 1.2235 | 0.0480 |
| 9 | 1.2675 | 0.0440 |
| 10 | 1.3082 | 0.0407 |
| 11 | 1.3462 | 0.0379 |
| 12 | 1.3818 | 0.0356 |
| 13 | 1.4006 | 0.0188 |
| 14 | 1.4182 | 0.0177 |
| 15 | 1.4349 | 0.0166 |
| 16 | 1.4506 | 0.0157 |
| 17 | 1.4655 | 0.0149 |
| 18 | 1.4798 | 0.0142 |
| 19 | 1.4933 | 0.0136 |
| 20 | 1.5063 | 0.0130 |

| | | |
|---|---|---|
| 21 | 1.5188 | 0.0125 |
| 22 | 1.5308 | 0.0120 |
| 23 | 1.5423 | 0.0115 |
| 24 | 1.5535 | 0.0111 |
| 25 | 1.5642 | 0.0108 |
| 26 | 1.5746 | 0.0104 |
| 27 | 1.5847 | 0.0101 |
| 28 | 1.5945 | 0.0098 |
| 29 | 1.6040 | 0.0095 |
| 30 | 1.6132 | 0.0092 |
| 31 | 1.6221 | 0.0090 |
| 32 | 1.6309 | 0.0087 |
| 33 | 1.6394 | 0.0085 |
| 34 | 1.6477 | 0.0083 |
| 35 | 1.6558 | 0.0081 |
| 36 | 1.6637 | 0.0079 |
| 37 | 1.6710 | 0.0073 |
| 38 | 1.6781 | 0.0071 |
| 39 | 1.6851 | 0.0070 |
| 40 | 1.6919 | 0.0068 |
| 41 | 1.6986 | 0.0067 |
| 42 | 1.7051 | 0.0065 |
| 43 | 1.7115 | 0.0064 |
| 44 | 1.7178 | 0.0063 |
| 45 | 1.7240 | 0.0062 |
| 46 | 1.7301 | 0.0061 |
| 47 | 1.7360 | 0.0060 |
| 48 | 1.7419 | 0.0058 |
| 49 | 1.7476 | 0.0057 |
| 50 | 1.7533 | 0.0056 |
| 51 | 1.7588 | 0.0056 |
| 52 | 1.7643 | 0.0055 |
| 53 | 1.7697 | 0.0054 |
| 54 | 1.7749 | 0.0053 |
| 55 | 1.7801 | 0.0052 |
| 56 | 1.7853 | 0.0051 |
| 57 | 1.7903 | 0.0051 |
| 58 | 1.7953 | 0.0050 |
| 59 | 1.8002 | 0.0049 |
| 60 | 1.8051 | 0.0048 |
| 61 | 1.8098 | 0.0048 |
| 62 | 1.8145 | 0.0047 |
| 63 | 1.8192 | 0.0046 |
| 64 | 1.8238 | 0.0046 |
| 65 | 1.8283 | 0.0045 |
| 66 | 1.8327 | 0.0045 |
| 67 | 1.8371 | 0.0044 |
| 68 | 1.8415 | 0.0044 |
| 69 | 1.8458 | 0.0043 |
| 70 | 1.8500 | 0.0042 |
| 71 | 1.8542 | 0.0042 |
| 72 | 1.8584 | 0.0041 |
| 73 | 1.8650 | 0.0066 |
| 74 | 1.8715 | 0.0065 |
| 75 | 1.8779 | 0.0064 |
| 76 | 1.8843 | 0.0064 |
| 77 | 1.8906 | 0.0063 |
| 78 | 1.8968 | 0.0062 |
| 79 | 1.9030 | 0.0062 |

| | | |
|---|---|---|
| 80 | 1.9091 | 0.0061 |
| 81 | 1.9152 | 0.0061 |
| 82 | 1.9212 | 0.0060 |
| 83 | 1.9272 | 0.0060 |
| 84 | 1.9331 | 0.0059 |
| 85 | 1.9390 | 0.0059 |
| 86 | 1.9448 | 0.0058 |
| 87 | 1.9505 | 0.0058 |
| 88 | 1.9562 | 0.0057 |
| 89 | 1.9619 | 0.0057 |
| 90 | 1.9675 | 0.0056 |
| 91 | 1.9731 | 0.0056 |
| 92 | 1.9786 | 0.0055 |
| 93 | 1.9841 | 0.0055 |
| 94 | 1.9895 | 0.0054 |
| 95 | 1.9949 | 0.0054 |
| 96 | 2.0003 | 0.0053 |
| 97 | 2.0056 | 0.0053 |
| 98 | 2.0108 | 0.0053 |
| 99 | 2.0161 | 0.0052 |
| 100 | 2.0212 | 0.0052 |
| 101 | 2.0264 | 0.0051 |
| 102 | 2.0315 | 0.0051 |
| 103 | 2.0366 | 0.0051 |
| 104 | 2.0416 | 0.0050 |
| 105 | 2.0466 | 0.0050 |
| 106 | 2.0516 | 0.0050 |
| 107 | 2.0565 | 0.0049 |
| 108 | 2.0614 | 0.0049 |
| 109 | 2.0663 | 0.0049 |
| 110 | 2.0711 | 0.0048 |
| 111 | 2.0759 | 0.0048 |
| 112 | 2.0807 | 0.0048 |
| 113 | 2.0854 | 0.0047 |
| 114 | 2.0901 | 0.0047 |
| 115 | 2.0948 | 0.0047 |
| 116 | 2.0994 | 0.0046 |
| 117 | 2.1040 | 0.0046 |
| 118 | 2.1086 | 0.0046 |
| 119 | 2.1132 | 0.0046 |
| 120 | 2.1177 | 0.0045 |
| 121 | 2.1222 | 0.0045 |
| 122 | 2.1267 | 0.0045 |
| 123 | 2.1311 | 0.0044 |
| 124 | 2.1355 | 0.0044 |
| 125 | 2.1399 | 0.0044 |
| 126 | 2.1443 | 0.0044 |
| 127 | 2.1486 | 0.0043 |
| 128 | 2.1530 | 0.0043 |
| 129 | 2.1572 | 0.0043 |
| 130 | 2.1615 | 0.0043 |
| 131 | 2.1657 | 0.0042 |
| 132 | 2.1700 | 0.0042 |
| 133 | 2.1742 | 0.0042 |
| 134 | 2.1783 | 0.0042 |
| 135 | 2.1825 | 0.0041 |
| 136 | 2.1866 | 0.0041 |
| 137 | 2.1907 | 0.0041 |
| 138 | 2.1948 | 0.0041 |

| | | |
|---|---|---|
| 139 | 2.1988 | 0.0041 |
| 140 | 2.2029 | 0.0040 |
| 141 | 2.2069 | 0.0040 |
| 142 | 2.2109 | 0.0040 |
| 143 | 2.2148 | 0.0040 |
| 144 | 2.2188 | 0.0040 |
| 145 | 2.2227 | 0.0039 |
| 146 | 2.2266 | 0.0039 |
| 147 | 2.2305 | 0.0039 |
| 148 | 2.2344 | 0.0039 |
| 149 | 2.2382 | 0.0039 |
| 150 | 2.2421 | 0.0038 |
| 151 | 2.2459 | 0.0038 |
| 152 | 2.2497 | 0.0038 |
| 153 | 2.2535 | 0.0038 |
| 154 | 2.2572 | 0.0038 |
| 155 | 2.2609 | 0.0037 |
| 156 | 2.2647 | 0.0037 |
| 157 | 2.2684 | 0.0037 |
| 158 | 2.2721 | 0.0037 |
| 159 | 2.2757 | 0.0037 |
| 160 | 2.2794 | 0.0037 |
| 161 | 2.2830 | 0.0036 |
| 162 | 2.2866 | 0.0036 |
| 163 | 2.2902 | 0.0036 |
| 164 | 2.2938 | 0.0036 |
| 165 | 2.2974 | 0.0036 |
| 166 | 2.3009 | 0.0036 |
| 167 | 2.3045 | 0.0035 |
| 168 | 2.3080 | 0.0035 |
| 169 | 2.3115 | 0.0035 |
| 170 | 2.3150 | 0.0035 |
| 171 | 2.3185 | 0.0035 |
| 172 | 2.3219 | 0.0035 |
| 173 | 2.3254 | 0.0034 |
| 174 | 2.3288 | 0.0034 |
| 175 | 2.3322 | 0.0034 |
| 176 | 2.3356 | 0.0034 |
| 177 | 2.3390 | 0.0034 |
| 178 | 2.3424 | 0.0034 |
| 179 | 2.3457 | 0.0034 |
| 180 | 2.3491 | 0.0033 |
| 181 | 2.3524 | 0.0033 |
| 182 | 2.3557 | 0.0033 |
| 183 | 2.3590 | 0.0033 |
| 184 | 2.3623 | 0.0033 |
| 185 | 2.3656 | 0.0033 |
| 186 | 2.3689 | 0.0033 |
| 187 | 2.3721 | 0.0033 |
| 188 | 2.3753 | 0.0032 |
| 189 | 2.3786 | 0.0032 |
| 190 | 2.3818 | 0.0032 |
| 191 | 2.3850 | 0.0032 |
| 192 | 2.3882 | 0.0032 |
| 193 | 2.3913 | 0.0032 |
| 194 | 2.3945 | 0.0032 |
| 195 | 2.3977 | 0.0032 |
| 196 | 2.4008 | 0.0031 |
| 197 | 2.4039 | 0.0031 |

| | | |
|---|---|---|
| 198 | 2.4070 | 0.0031 |
| 199 | 2.4101 | 0.0031 |
| 200 | 2.4132 | 0.0031 |
| 201 | 2.4163 | 0.0031 |
| 202 | 2.4194 | 0.0031 |
| 203 | 2.4224 | 0.0031 |
| 204 | 2.4255 | 0.0030 |
| 205 | 2.4285 | 0.0030 |
| 206 | 2.4315 | 0.0030 |
| 207 | 2.4346 | 0.0030 |
| 208 | 2.4376 | 0.0030 |
| 209 | 2.4405 | 0.0030 |
| 210 | 2.4435 | 0.0030 |
| 211 | 2.4465 | 0.0030 |
| 212 | 2.4495 | 0.0030 |
| 213 | 2.4524 | 0.0029 |
| 214 | 2.4553 | 0.0029 |
| 215 | 2.4583 | 0.0029 |
| 216 | 2.4612 | 0.0029 |
| 217 | 2.4641 | 0.0029 |
| 218 | 2.4670 | 0.0029 |
| 219 | 2.4699 | 0.0029 |
| 220 | 2.4728 | 0.0029 |
| 221 | 2.4756 | 0.0029 |
| 222 | 2.4785 | 0.0029 |
| 223 | 2.4813 | 0.0029 |
| 224 | 2.4842 | 0.0028 |
| 225 | 2.4870 | 0.0028 |
| 226 | 2.4898 | 0.0028 |
| 227 | 2.4927 | 0.0028 |
| 228 | 2.4955 | 0.0028 |
| 229 | 2.4983 | 0.0028 |
| 230 | 2.5010 | 0.0028 |
| 231 | 2.5038 | 0.0028 |
| 232 | 2.5066 | 0.0028 |
| 233 | 2.5093 | 0.0028 |
| 234 | 2.5121 | 0.0027 |
| 235 | 2.5148 | 0.0027 |
| 236 | 2.5176 | 0.0027 |
| 237 | 2.5203 | 0.0027 |
| 238 | 2.5230 | 0.0027 |
| 239 | 2.5257 | 0.0027 |
| 240 | 2.5284 | 0.0027 |
| 241 | 2.5311 | 0.0027 |
| 242 | 2.5338 | 0.0027 |
| 243 | 2.5364 | 0.0027 |
| 244 | 2.5391 | 0.0027 |
| 245 | 2.5418 | 0.0027 |
| 246 | 2.5444 | 0.0026 |
| 247 | 2.5471 | 0.0026 |
| 248 | 2.5497 | 0.0026 |
| 249 | 2.5523 | 0.0026 |
| 250 | 2.5549 | 0.0026 |
| 251 | 2.5575 | 0.0026 |
| 252 | 2.5601 | 0.0026 |
| 253 | 2.5627 | 0.0026 |
| 254 | 2.5653 | 0.0026 |
| 255 | 2.5679 | 0.0026 |
| 256 | 2.5705 | 0.0026 |

| | | |
|---|---|---|
| 257 | 2.5730 | 0.0026 |
| 258 | 2.5756 | 0.0026 |
| 259 | 2.5781 | 0.0025 |
| 260 | 2.5807 | 0.0025 |
| 261 | 2.5832 | 0.0025 |
| 262 | 2.5858 | 0.0025 |
| 263 | 2.5883 | 0.0025 |
| 264 | 2.5908 | 0.0025 |
| 265 | 2.5933 | 0.0025 |
| 266 | 2.5958 | 0.0025 |
| 267 | 2.5983 | 0.0025 |
| 268 | 2.6008 | 0.0025 |
| 269 | 2.6032 | 0.0025 |
| 270 | 2.6057 | 0.0025 |
| 271 | 2.6082 | 0.0025 |
| 272 | 2.6106 | 0.0025 |
| 273 | 2.6131 | 0.0025 |
| 274 | 2.6155 | 0.0024 |
| 275 | 2.6180 | 0.0024 |
| 276 | 2.6204 | 0.0024 |
| 277 | 2.6228 | 0.0024 |
| 278 | 2.6252 | 0.0024 |
| 279 | 2.6277 | 0.0024 |
| 280 | 2.6301 | 0.0024 |
| 281 | 2.6325 | 0.0024 |
| 282 | 2.6349 | 0.0024 |
| 283 | 2.6372 | 0.0024 |
| 284 | 2.6396 | 0.0024 |
| 285 | 2.6420 | 0.0024 |
| 286 | 2.6444 | 0.0024 |
| 287 | 2.6467 | 0.0024 |
| 288 | 2.6491 | 0.0024 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0024 | 0.0003 | 0.0021 |
| 2 | 0.0024 | 0.0003 | 0.0021 |
| 3 | 0.0024 | 0.0003 | 0.0021 |
| 4 | 0.0024 | 0.0003 | 0.0021 |
| 5 | 0.0024 | 0.0003 | 0.0021 |
| 6 | 0.0024 | 0.0003 | 0.0021 |
| 7 | 0.0024 | 0.0003 | 0.0021 |
| 8 | 0.0024 | 0.0003 | 0.0021 |
| 9 | 0.0024 | 0.0003 | 0.0021 |
| 10 | 0.0024 | 0.0003 | 0.0021 |
| 11 | 0.0025 | 0.0003 | 0.0022 |
| 12 | 0.0025 | 0.0003 | 0.0022 |
| 13 | 0.0025 | 0.0003 | 0.0022 |
| 14 | 0.0025 | 0.0003 | 0.0022 |
| 15 | 0.0025 | 0.0003 | 0.0022 |
| 16 | 0.0025 | 0.0003 | 0.0022 |
| 17 | 0.0025 | 0.0003 | 0.0022 |
| 18 | 0.0025 | 0.0003 | 0.0022 |
| 19 | 0.0025 | 0.0003 | 0.0022 |
| 20 | 0.0025 | 0.0003 | 0.0022 |
| 21 | 0.0026 | 0.0003 | 0.0022 |
| 22 | 0.0026 | 0.0003 | 0.0022 |

| | | | |
|---|---|---|---|
| 23 | 0.0026 | 0.0003 | 0.0023 |
| 24 | 0.0026 | 0.0003 | 0.0023 |
| 25 | 0.0026 | 0.0003 | 0.0023 |
| 26 | 0.0026 | 0.0003 | 0.0023 |
| 27 | 0.0026 | 0.0003 | 0.0023 |
| 28 | 0.0026 | 0.0003 | 0.0023 |
| 29 | 0.0026 | 0.0003 | 0.0023 |
| 30 | 0.0027 | 0.0003 | 0.0023 |
| 31 | 0.0027 | 0.0003 | 0.0023 |
| 32 | 0.0027 | 0.0003 | 0.0024 |
| 33 | 0.0027 | 0.0003 | 0.0024 |
| 34 | 0.0027 | 0.0003 | 0.0024 |
| 35 | 0.0027 | 0.0003 | 0.0024 |
| 36 | 0.0027 | 0.0003 | 0.0024 |
| 37 | 0.0027 | 0.0003 | 0.0024 |
| 38 | 0.0028 | 0.0003 | 0.0024 |
| 39 | 0.0028 | 0.0003 | 0.0024 |
| 40 | 0.0028 | 0.0003 | 0.0024 |
| 41 | 0.0028 | 0.0003 | 0.0025 |
| 42 | 0.0028 | 0.0003 | 0.0025 |
| 43 | 0.0028 | 0.0003 | 0.0025 |
| 44 | 0.0028 | 0.0003 | 0.0025 |
| 45 | 0.0029 | 0.0004 | 0.0025 |
| 46 | 0.0029 | 0.0004 | 0.0025 |
| 47 | 0.0029 | 0.0004 | 0.0025 |
| 48 | 0.0029 | 0.0004 | 0.0025 |
| 49 | 0.0029 | 0.0004 | 0.0026 |
| 50 | 0.0029 | 0.0004 | 0.0026 |
| 51 | 0.0029 | 0.0004 | 0.0026 |
| 52 | 0.0030 | 0.0004 | 0.0026 |
| 53 | 0.0030 | 0.0004 | 0.0026 |
| 54 | 0.0030 | 0.0004 | 0.0026 |
| 55 | 0.0030 | 0.0004 | 0.0026 |
| 56 | 0.0030 | 0.0004 | 0.0027 |
| 57 | 0.0030 | 0.0004 | 0.0027 |
| 58 | 0.0031 | 0.0004 | 0.0027 |
| 59 | 0.0031 | 0.0004 | 0.0027 |
| 60 | 0.0031 | 0.0004 | 0.0027 |
| 61 | 0.0031 | 0.0004 | 0.0027 |
| 62 | 0.0031 | 0.0004 | 0.0027 |
| 63 | 0.0032 | 0.0004 | 0.0028 |
| 64 | 0.0032 | 0.0004 | 0.0028 |
| 65 | 0.0032 | 0.0004 | 0.0028 |
| 66 | 0.0032 | 0.0004 | 0.0028 |
| 67 | 0.0032 | 0.0004 | 0.0028 |
| 68 | 0.0032 | 0.0004 | 0.0028 |
| 69 | 0.0033 | 0.0004 | 0.0029 |
| 70 | 0.0033 | 0.0004 | 0.0029 |
| 71 | 0.0033 | 0.0004 | 0.0029 |
| 72 | 0.0033 | 0.0004 | 0.0029 |
| 73 | 0.0033 | 0.0004 | 0.0029 |
| 74 | 0.0034 | 0.0004 | 0.0029 |
| 75 | 0.0034 | 0.0004 | 0.0030 |
| 76 | 0.0034 | 0.0004 | 0.0030 |
| 77 | 0.0034 | 0.0004 | 0.0030 |
| 78 | 0.0034 | 0.0004 | 0.0030 |
| 79 | 0.0035 | 0.0004 | 0.0030 |
| 80 | 0.0035 | 0.0004 | 0.0031 |
| 81 | 0.0035 | 0.0004 | 0.0031 |

| | | | |
|---|---|---|---|
| 82 | 0.0035 | 0.0004 | 0.0031 |
| 83 | 0.0036 | 0.0004 | 0.0031 |
| 84 | 0.0036 | 0.0004 | 0.0031 |
| 85 | 0.0036 | 0.0004 | 0.0032 |
| 86 | 0.0036 | 0.0004 | 0.0032 |
| 87 | 0.0037 | 0.0005 | 0.0032 |
| 88 | 0.0037 | 0.0005 | 0.0032 |
| 89 | 0.0037 | 0.0005 | 0.0033 |
| 90 | 0.0037 | 0.0005 | 0.0033 |
| 91 | 0.0038 | 0.0005 | 0.0033 |
| 92 | 0.0038 | 0.0005 | 0.0033 |
| 93 | 0.0038 | 0.0005 | 0.0034 |
| 94 | 0.0039 | 0.0005 | 0.0034 |
| 95 | 0.0039 | 0.0005 | 0.0034 |
| 96 | 0.0039 | 0.0005 | 0.0034 |
| 97 | 0.0040 | 0.0005 | 0.0035 |
| 98 | 0.0040 | 0.0005 | 0.0035 |
| 99 | 0.0040 | 0.0005 | 0.0035 |
| 100 | 0.0040 | 0.0005 | 0.0035 |
| 101 | 0.0041 | 0.0005 | 0.0036 |
| 102 | 0.0041 | 0.0005 | 0.0036 |
| 103 | 0.0041 | 0.0005 | 0.0036 |
| 104 | 0.0042 | 0.0005 | 0.0037 |
| 105 | 0.0042 | 0.0005 | 0.0037 |
| 106 | 0.0042 | 0.0005 | 0.0037 |
| 107 | 0.0043 | 0.0005 | 0.0038 |
| 108 | 0.0043 | 0.0005 | 0.0038 |
| 109 | 0.0044 | 0.0005 | 0.0038 |
| 110 | 0.0044 | 0.0005 | 0.0039 |
| 111 | 0.0044 | 0.0005 | 0.0039 |
| 112 | 0.0045 | 0.0005 | 0.0039 |
| 113 | 0.0045 | 0.0006 | 0.0040 |
| 114 | 0.0046 | 0.0006 | 0.0040 |
| 115 | 0.0046 | 0.0006 | 0.0040 |
| 116 | 0.0046 | 0.0006 | 0.0041 |
| 117 | 0.0047 | 0.0006 | 0.0041 |
| 118 | 0.0047 | 0.0006 | 0.0042 |
| 119 | 0.0048 | 0.0006 | 0.0042 |
| 120 | 0.0048 | 0.0006 | 0.0042 |
| 121 | 0.0049 | 0.0006 | 0.0043 |
| 122 | 0.0049 | 0.0006 | 0.0043 |
| 123 | 0.0050 | 0.0006 | 0.0044 |
| 124 | 0.0050 | 0.0006 | 0.0044 |
| 125 | 0.0051 | 0.0006 | 0.0045 |
| 126 | 0.0051 | 0.0006 | 0.0045 |
| 127 | 0.0052 | 0.0006 | 0.0046 |
| 128 | 0.0053 | 0.0006 | 0.0046 |
| 129 | 0.0053 | 0.0007 | 0.0047 |
| 130 | 0.0054 | 0.0007 | 0.0047 |
| 131 | 0.0055 | 0.0007 | 0.0048 |
| 132 | 0.0055 | 0.0007 | 0.0048 |
| 133 | 0.0056 | 0.0007 | 0.0049 |
| 134 | 0.0057 | 0.0007 | 0.0050 |
| 135 | 0.0058 | 0.0007 | 0.0051 |
| 136 | 0.0058 | 0.0007 | 0.0051 |
| 137 | 0.0059 | 0.0007 | 0.0052 |
| 138 | 0.0060 | 0.0007 | 0.0052 |
| 139 | 0.0061 | 0.0007 | 0.0053 |
| 140 | 0.0061 | 0.0008 | 0.0054 |

| | | | |
|---|---|---|---|
| 141 | 0.0062 | 0.0008 | 0.0055 |
| 142 | 0.0063 | 0.0008 | 0.0055 |
| 143 | 0.0064 | 0.0008 | 0.0056 |
| 144 | 0.0065 | 0.0008 | 0.0057 |
| 145 | 0.0041 | 0.0005 | 0.0036 |
| 146 | 0.0042 | 0.0005 | 0.0037 |
| 147 | 0.0043 | 0.0005 | 0.0038 |
| 148 | 0.0044 | 0.0005 | 0.0038 |
| 149 | 0.0045 | 0.0005 | 0.0039 |
| 150 | 0.0045 | 0.0006 | 0.0040 |
| 151 | 0.0046 | 0.0006 | 0.0041 |
| 152 | 0.0047 | 0.0006 | 0.0041 |
| 153 | 0.0048 | 0.0006 | 0.0042 |
| 154 | 0.0049 | 0.0006 | 0.0043 |
| 155 | 0.0051 | 0.0006 | 0.0044 |
| 156 | 0.0051 | 0.0006 | 0.0045 |
| 157 | 0.0053 | 0.0006 | 0.0046 |
| 158 | 0.0054 | 0.0007 | 0.0047 |
| 159 | 0.0056 | 0.0007 | 0.0049 |
| 160 | 0.0056 | 0.0007 | 0.0050 |
| 161 | 0.0058 | 0.0007 | 0.0051 |
| 162 | 0.0060 | 0.0007 | 0.0052 |
| 163 | 0.0062 | 0.0008 | 0.0054 |
| 164 | 0.0063 | 0.0008 | 0.0055 |
| 165 | 0.0065 | 0.0008 | 0.0057 |
| 166 | 0.0067 | 0.0008 | 0.0059 |
| 167 | 0.0070 | 0.0009 | 0.0061 |
| 168 | 0.0071 | 0.0009 | 0.0063 |
| 169 | 0.0079 | 0.0010 | 0.0069 |
| 170 | 0.0081 | 0.0010 | 0.0071 |
| 171 | 0.0085 | 0.0010 | 0.0075 |
| 172 | 0.0087 | 0.0011 | 0.0077 |
| 173 | 0.0092 | 0.0011 | 0.0081 |
| 174 | 0.0095 | 0.0012 | 0.0083 |
| 175 | 0.0101 | 0.0012 | 0.0088 |
| 176 | 0.0104 | 0.0013 | 0.0091 |
| 177 | 0.0111 | 0.0014 | 0.0098 |
| 178 | 0.0115 | 0.0014 | 0.0101 |
| 179 | 0.0125 | 0.0015 | 0.0109 |
| 180 | 0.0130 | 0.0016 | 0.0114 |
| 181 | 0.0142 | 0.0017 | 0.0125 |
| 182 | 0.0149 | 0.0018 | 0.0131 |
| 183 | 0.0166 | 0.0020 | 0.0146 |
| 184 | 0.0177 | 0.0022 | 0.0155 |
| 185 | 0.0356 | 0.0044 | 0.0312 |
| 186 | 0.0379 | 0.0044 | 0.0335 |
| 187 | 0.0440 | 0.0044 | 0.0396 |
| 188 | 0.0480 | 0.0044 | 0.0436 |
| 189 | 0.0597 | 0.0044 | 0.0553 |
| 190 | 0.0688 | 0.0044 | 0.0644 |
| 191 | 0.1044 | 0.0044 | 0.1000 |
| 192 | 0.1516 | 0.0044 | 0.1471 |
| 193 | 0.6557 | 0.0044 | 0.6512 |
| 194 | 0.0822 | 0.0044 | 0.0778 |
| 195 | 0.0531 | 0.0044 | 0.0487 |
| 196 | 0.0407 | 0.0044 | 0.0363 |
| 197 | 0.0188 | 0.0023 | 0.0165 |
| 198 | 0.0157 | 0.0019 | 0.0138 |
| 199 | 0.0136 | 0.0017 | 0.0119 |

| | | | |
|---|---|---|---|
| 200 | 0.0120 | 0.0015 | 0.0105 |
| 201 | 0.0108 | 0.0013 | 0.0094 |
| 202 | 0.0098 | 0.0012 | 0.0086 |
| 203 | 0.0090 | 0.0011 | 0.0079 |
| 204 | 0.0083 | 0.0010 | 0.0073 |
| 205 | 0.0073 | 0.0009 | 0.0064 |
| 206 | 0.0068 | 0.0008 | 0.0060 |
| 207 | 0.0064 | 0.0008 | 0.0056 |
| 208 | 0.0061 | 0.0007 | 0.0053 |
| 209 | 0.0057 | 0.0007 | 0.0050 |
| 210 | 0.0055 | 0.0007 | 0.0048 |
| 211 | 0.0052 | 0.0006 | 0.0046 |
| 212 | 0.0050 | 0.0006 | 0.0044 |
| 213 | 0.0048 | 0.0006 | 0.0042 |
| 214 | 0.0046 | 0.0006 | 0.0040 |
| 215 | 0.0044 | 0.0005 | 0.0039 |
| 216 | 0.0042 | 0.0005 | 0.0037 |
| 217 | 0.0066 | 0.0008 | 0.0058 |
| 218 | 0.0064 | 0.0008 | 0.0056 |
| 219 | 0.0062 | 0.0008 | 0.0054 |
| 220 | 0.0060 | 0.0007 | 0.0053 |
| 221 | 0.0059 | 0.0007 | 0.0051 |
| 222 | 0.0057 | 0.0007 | 0.0050 |
| 223 | 0.0056 | 0.0007 | 0.0049 |
| 224 | 0.0054 | 0.0007 | 0.0048 |
| 225 | 0.0053 | 0.0007 | 0.0047 |
| 226 | 0.0052 | 0.0006 | 0.0046 |
| 227 | 0.0051 | 0.0006 | 0.0045 |
| 228 | 0.0050 | 0.0006 | 0.0044 |
| 229 | 0.0049 | 0.0006 | 0.0043 |
| 230 | 0.0048 | 0.0006 | 0.0042 |
| 231 | 0.0047 | 0.0006 | 0.0041 |
| 232 | 0.0046 | 0.0006 | 0.0040 |
| 233 | 0.0045 | 0.0006 | 0.0039 |
| 234 | 0.0044 | 0.0005 | 0.0039 |
| 235 | 0.0043 | 0.0005 | 0.0038 |
| 236 | 0.0043 | 0.0005 | 0.0037 |
| 237 | 0.0042 | 0.0005 | 0.0037 |
| 238 | 0.0041 | 0.0005 | 0.0036 |
| 239 | 0.0041 | 0.0005 | 0.0036 |
| 240 | 0.0040 | 0.0005 | 0.0035 |
| 241 | 0.0039 | 0.0005 | 0.0034 |
| 242 | 0.0039 | 0.0005 | 0.0034 |
| 243 | 0.0038 | 0.0005 | 0.0033 |
| 244 | 0.0038 | 0.0005 | 0.0033 |
| 245 | 0.0037 | 0.0005 | 0.0032 |
| 246 | 0.0037 | 0.0004 | 0.0032 |
| 247 | 0.0036 | 0.0004 | 0.0032 |
| 248 | 0.0036 | 0.0004 | 0.0031 |
| 249 | 0.0035 | 0.0004 | 0.0031 |
| 250 | 0.0035 | 0.0004 | 0.0030 |
| 251 | 0.0034 | 0.0004 | 0.0030 |
| 252 | 0.0034 | 0.0004 | 0.0030 |
| 253 | 0.0033 | 0.0004 | 0.0029 |
| 254 | 0.0033 | 0.0004 | 0.0029 |
| 255 | 0.0033 | 0.0004 | 0.0029 |
| 256 | 0.0032 | 0.0004 | 0.0028 |
| 257 | 0.0032 | 0.0004 | 0.0028 |
| 258 | 0.0031 | 0.0004 | 0.0028 |

| | | | |
|---|---|---|---|
| 259 | 0.0031 | 0.0004 | 0.0027 |
| 260 | 0.0031 | 0.0004 | 0.0027 |
| 261 | 0.0030 | 0.0004 | 0.0027 |
| 262 | 0.0030 | 0.0004 | 0.0026 |
| 263 | 0.0030 | 0.0004 | 0.0026 |
| 264 | 0.0029 | 0.0004 | 0.0026 |
| 265 | 0.0029 | 0.0004 | 0.0026 |
| 266 | 0.0029 | 0.0004 | 0.0025 |
| 267 | 0.0029 | 0.0003 | 0.0025 |
| 268 | 0.0028 | 0.0003 | 0.0025 |
| 269 | 0.0028 | 0.0003 | 0.0025 |
| 270 | 0.0028 | 0.0003 | 0.0024 |
| 271 | 0.0027 | 0.0003 | 0.0024 |
| 272 | 0.0027 | 0.0003 | 0.0024 |
| 273 | 0.0027 | 0.0003 | 0.0024 |
| 274 | 0.0027 | 0.0003 | 0.0023 |
| 275 | 0.0026 | 0.0003 | 0.0023 |
| 276 | 0.0026 | 0.0003 | 0.0023 |
| 277 | 0.0026 | 0.0003 | 0.0023 |
| 278 | 0.0026 | 0.0003 | 0.0023 |
| 279 | 0.0025 | 0.0003 | 0.0022 |
| 280 | 0.0025 | 0.0003 | 0.0022 |
| 281 | 0.0025 | 0.0003 | 0.0022 |
| 282 | 0.0025 | 0.0003 | 0.0022 |
| 283 | 0.0025 | 0.0003 | 0.0022 |
| 284 | 0.0024 | 0.0003 | 0.0021 |
| 285 | 0.0024 | 0.0003 | 0.0021 |
| 286 | 0.0024 | 0.0003 | 0.0021 |
| 287 | 0.0024 | 0.0003 | 0.0021 |
| 288 | 0.0024 | 0.0003 | 0.0021 |

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Total soil rain loss = 0.21(In)
Total effective rainfall = 2.44(In)
Peak flow rate in flood hydrograph = 283.08(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

---

Hydrograph in 5 Minute intervals ((CFS))

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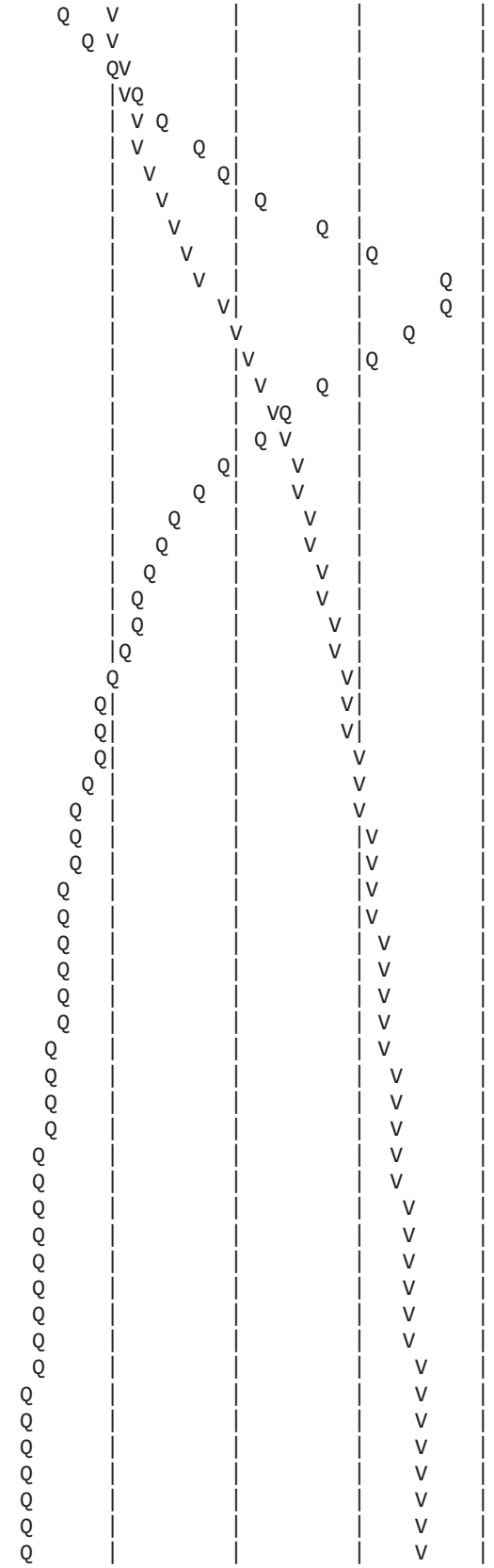
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 75.0 | 150.0 | 225.0 | 300.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0002 | 0.02 | Q | \| | \| | \| | \| |
| 0+10 | 0.0006 | 0.07 | Q | \| | \| | \| | \| |
| 0+15 | 0.0016 | 0.14 | Q | \| | \| | \| | \| |
| 0+20 | 0.0032 | 0.23 | Q | \| | \| | \| | \| |
| 0+25 | 0.0056 | 0.35 | Q | \| | \| | \| | \| |
| 0+30 | 0.0090 | 0.49 | Q | \| | \| | \| | \| |
| 0+35 | 0.0136 | 0.67 | Q | \| | \| | \| | \| |
| 0+40 | 0.0200 | 0.93 | Q | \| | \| | \| | \| |
| 0+45 | 0.0287 | 1.26 | Q | \| | \| | \| | \| |
| 0+50 | 0.0407 | 1.74 | Q | \| | \| | \| | \| |
| 0+55 | 0.0562 | 2.25 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.0747 | 2.69 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.0960 | 3.09 | Q | \| | \| | \| | \| |
| 1+10 | 0.1195 | 3.42 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+15 | 0.1451 | 3.72 | Q | \| | \| | \| | \| |
| 1+20 | 0.1726 | 3.99 | Q | \| | \| | \| | \| |
| 1+25 | 0.2015 | 4.20 | Q | \| | \| | \| | \| |
| 1+30 | 0.2319 | 4.40 | Q | \| | \| | \| | \| |
| 1+35 | 0.2634 | 4.58 | Q | \| | \| | \| | \| |
| 1+40 | 0.2961 | 4.74 | Q | \| | \| | \| | \| |
| 1+45 | 0.3298 | 4.90 | Q | \| | \| | \| | \| |
| 1+50 | 0.3645 | 5.04 | Q | \| | \| | \| | \| |
| 1+55 | 0.4002 | 5.18 | Q | \| | \| | \| | \| |
| 2+ 0 | 0.4367 | 5.30 | Q | \| | \| | \| | \| |
| 2+ 5 | 0.4740 | 5.42 | Q | \| | \| | \| | \| |
| 2+10 | 0.5121 | 5.53 | Q | \| | \| | \| | \| |
| 2+15 | 0.5509 | 5.64 | Q | \| | \| | \| | \| |
| 2+20 | 0.5905 | 5.75 | Q | \| | \| | \| | \| |
| 2+25 | 0.6307 | 5.84 | Q | \| | \| | \| | \| |
| 2+30 | 0.6716 | 5.93 | Q | \| | \| | \| | \| |
| 2+35 | 0.7131 | 6.02 | Q | \| | \| | \| | \| |
| 2+40 | 0.7552 | 6.11 | Q | \| | \| | \| | \| |
| 2+45 | 0.7978 | 6.19 | Q | \| | \| | \| | \| |
| 2+50 | 0.8410 | 6.27 | Q | \| | \| | \| | \| |
| 2+55 | 0.8848 | 6.35 | Q | \| | \| | \| | \| |
| 3+ 0 | 0.9291 | 6.43 | Q | \| | \| | \| | \| |
| 3+ 5 | 0.9739 | 6.51 | Q | \| | \| | \| | \| |
| 3+10 | 1.0192 | 6.58 | Q | \| | \| | \| | \| |
| 3+15 | 1.0651 | 6.66 | Q | \| | \| | \| | \| |
| 3+20 | 1.1114 | 6.73 | Q | \| | \| | \| | \| |
| 3+25 | 1.1582 | 6.80 | Q | \| | \| | \| | \| |
| 3+30 | 1.2055 | 6.87 | Q | \| | \| | \| | \| |
| 3+35 | 1.2533 | 6.93 | Q | \| | \| | \| | \| |
| 3+40 | 1.3014 | 6.99 | Q | \| | \| | \| | \| |
| 3+45 | 1.3500 | 7.05 | Q | \| | \| | \| | \| |
| 3+50 | 1.3990 | 7.11 | Q | \| | \| | \| | \| |
| 3+55 | 1.4484 | 7.18 | QV | \| | \| | \| | \| |
| 4+ 0 | 1.4982 | 7.24 | QV | \| | \| | \| | \| |
| 4+ 5 | 1.5485 | 7.30 | QV | \| | \| | \| | \| |
| 4+10 | 1.5992 | 7.36 | QV | \| | \| | \| | \| |
| 4+15 | 1.6503 | 7.42 | QV | \| | \| | \| | \| |
| 4+20 | 1.7017 | 7.48 | QV | \| | \| | \| | \| |
| 4+25 | 1.7536 | 7.53 | \|Q | \| | \| | \| | \| |
| 4+30 | 1.8059 | 7.59 | \|Q | \| | \| | \| | \| |
| 4+35 | 1.8586 | 7.65 | \|Q | \| | \| | \| | \| |
| 4+40 | 1.9117 | 7.71 | \|Q | \| | \| | \| | \| |
| 4+45 | 1.9652 | 7.76 | \|Q | \| | \| | \| | \| |
| 4+50 | 2.0190 | 7.82 | \|Q | \| | \| | \| | \| |
| 4+55 | 2.0733 | 7.88 | \|Q | \| | \| | \| | \| |
| 5+ 0 | 2.1279 | 7.93 | \|Q | \| | \| | \| | \| |
| 5+ 5 | 2.1829 | 7.99 | \|Q | \| | \| | \| | \| |
| 5+10 | 2.2384 | 8.05 | \|Q | \| | \| | \| | \| |
| 5+15 | 2.2942 | 8.10 | \|Q | \| | \| | \| | \| |
| 5+20 | 2.3504 | 8.16 | \|Q | \| | \| | \| | \| |
| 5+25 | 2.4069 | 8.21 | \|Q | \| | \| | \| | \| |
| 5+30 | 2.4639 | 8.27 | \|Q | \| | \| | \| | \| |
| 5+35 | 2.5212 | 8.33 | \|Q | \| | \| | \| | \| |
| 5+40 | 2.5790 | 8.38 | \|Q | \| | \| | \| | \| |
| 5+45 | 2.6371 | 8.44 | \|Q | \| | \| | \| | \| |
| 5+50 | 2.6956 | 8.50 | \|Q | \| | \| | \| | \| |
| 5+55 | 2.7545 | 8.55 | \|Q | \| | \| | \| | \| |
| 6+ 0 | 2.8138 | 8.61 | \|Q | \| | \| | \| | \| |
| 6+ 5 | 2.8734 | 8.66 | \|QV | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+10 | 2.9335 | 8.72 | \|QV | \| | \| | \| | \| |
| 6+15 | 2.9939 | 8.78 | \|QV | \| | \| | \| | \| |
| 6+20 | 3.0548 | 8.83 | \|QV | \| | \| | \| | \| |
| 6+25 | 3.1160 | 8.89 | \|QV | \| | \| | \| | \| |
| 6+30 | 3.1776 | 8.95 | \|QV | \| | \| | \| | \| |
| 6+35 | 3.2396 | 9.00 | \|QV | \| | \| | \| | \| |
| 6+40 | 3.3020 | 9.06 | \|QV | \| | \| | \| | \| |
| 6+45 | 3.3648 | 9.12 | \|QV | \| | \| | \| | \| |
| 6+50 | 3.4280 | 9.18 | \|QV | \| | \| | \| | \| |
| 6+55 | 3.4916 | 9.23 | \|QV | \| | \| | \| | \| |
| 7+ 0 | 3.5556 | 9.29 | \|QV | \| | \| | \| | \| |
| 7+ 5 | 3.6201 | 9.36 | \|QV | \| | \| | \| | \| |
| 7+10 | 3.6849 | 9.42 | \|QV | \| | \| | \| | \| |
| 7+15 | 3.7502 | 9.48 | \|QV | \| | \| | \| | \| |
| 7+20 | 3.8160 | 9.55 | \|QV | \| | \| | \| | \| |
| 7+25 | 3.8821 | 9.61 | \|QV | \| | \| | \| | \| |
| 7+30 | 3.9488 | 9.68 | \|QV | \| | \| | \| | \| |
| 7+35 | 4.0159 | 9.74 | \|QV | \| | \| | \| | \| |
| 7+40 | 4.0834 | 9.81 | \|QV | \| | \| | \| | \| |
| 7+45 | 4.1515 | 9.88 | \|QV | \| | \| | \| | \| |
| 7+50 | 4.2200 | 9.95 | \|QV | \| | \| | \| | \| |
| 7+55 | 4.2890 | 10.02 | \|Q V | \| | \| | \| | \| |
| 8+ 0 | 4.3585 | 10.09 | \|Q V | \| | \| | \| | \| |
| 8+ 5 | 4.4285 | 10.16 | \|Q V | \| | \| | \| | \| |
| 8+10 | 4.4990 | 10.23 | \|Q V | \| | \| | \| | \| |
| 8+15 | 4.5699 | 10.31 | \|Q V | \| | \| | \| | \| |
| 8+20 | 4.6414 | 10.38 | \|Q V | \| | \| | \| | \| |
| 8+25 | 4.7134 | 10.45 | \|Q V | \| | \| | \| | \| |
| 8+30 | 4.7859 | 10.53 | \|Q V | \| | \| | \| | \| |
| 8+35 | 4.8590 | 10.61 | \|Q V | \| | \| | \| | \| |
| 8+40 | 4.9326 | 10.68 | \|Q V | \| | \| | \| | \| |
| 8+45 | 5.0067 | 10.76 | \|Q V | \| | \| | \| | \| |
| 8+50 | 5.0813 | 10.84 | \|Q V | \| | \| | \| | \| |
| 8+55 | 5.1566 | 10.92 | \|Q V | \| | \| | \| | \| |
| 9+ 0 | 5.2324 | 11.01 | \|Q V | \| | \| | \| | \| |
| 9+ 5 | 5.3087 | 11.09 | \|Q V | \| | \| | \| | \| |
| 9+10 | 5.3857 | 11.17 | \|Q V | \| | \| | \| | \| |
| 9+15 | 5.4632 | 11.25 | \|Q V | \| | \| | \| | \| |
| 9+20 | 5.5413 | 11.34 | \|Q V | \| | \| | \| | \| |
| 9+25 | 5.6200 | 11.43 | \|Q V | \| | \| | \| | \| |
| 9+30 | 5.6993 | 11.52 | \|Q  V | \| | \| | \| | \| |
| 9+35 | 5.7792 | 11.61 | \|Q  V | \| | \| | \| | \| |
| 9+40 | 5.8598 | 11.70 | \|Q  V | \| | \| | \| | \| |
| 9+45 | 5.9410 | 11.79 | \|Q  V | \| | \| | \| | \| |
| 9+50 | 6.0229 | 11.89 | \|Q  V | \| | \| | \| | \| |
| 9+55 | 6.1055 | 11.99 | \|Q  V | \| | \| | \| | \| |
| 10+ 0 | 6.1887 | 12.09 | \|Q  V | \| | \| | \| | \| |
| 10+ 5 | 6.2727 | 12.19 | \|Q  V | \| | \| | \| | \| |
| 10+10 | 6.3573 | 12.29 | \|Q  V | \| | \| | \| | \| |
| 10+15 | 6.4427 | 12.40 | \|Q  V | \| | \| | \| | \| |
| 10+20 | 6.5289 | 12.51 | \|Q  V | \| | \| | \| | \| |
| 10+25 | 6.6158 | 12.62 | \|Q  V | \| | \| | \| | \| |
| 10+30 | 6.7035 | 12.73 | \|Q  V | \| | \| | \| | \| |
| 10+35 | 6.7919 | 12.85 | \|Q  V | \| | \| | \| | \| |
| 10+40 | 6.8812 | 12.96 | \|Q  V | \| | \| | \| | \| |
| 10+45 | 6.9713 | 13.08 | \|Q  V | \| | \| | \| | \| |
| 10+50 | 7.0623 | 13.21 | \|Q   V | \| | \| | \| | \| |
| 10+55 | 7.1541 | 13.33 | \|Q   V | \| | \| | \| | \| |
| 11+ 0 | 7.2468 | 13.46 | \|Q   V | \| | \| | \| | \| |

```
11+ 5       7.3405     13.59  |Q   V    |          |          |          |
11+10       7.4350     13.73  |Q   V    |          |          |          |
11+15       7.5305     13.87  |Q   V    |          |          |          |
11+20       7.6270     14.01  |Q   V    |          |          |          |
11+25       7.7245     14.16  |Q   V    |          |          |          |
11+30       7.8230     14.30  |Q   V    |          |          |          |
11+35       7.9226     14.46  |Q   V    |          |          |          |
11+40       8.0233     14.61  |Q   V    |          |          |          |
11+45       8.1250     14.77  |Q   V    |          |          |          |
11+50       8.2279     14.94  |Q   V    |          |          |          |
11+55       8.3320     15.11  | Q  V    |          |          |          |
12+ 0       8.4372     15.28  | Q  V    |          |          |          |
12+ 5       8.5436     15.44  | Q   V   |          |          |          |
12+10       8.6509     15.58  | Q   V   |          |          |          |
12+15       8.7589     15.69  | Q   V   |          |          |          |
12+20       8.8676     15.79  | Q   V   |          |          |          |
12+25       8.9769     15.86  | Q   V   |          |          |          |
12+30       9.0865     15.91  | Q   V   |          |          |          |
12+35       9.1963     15.94  | Q   V   |          |          |          |
12+40       9.3057     15.88  | Q   V   |          |          |          |
12+45       9.4141     15.75  | Q   V   |          |          |          |
12+50       9.5206     15.47  | Q   V   |          |          |          |
12+55       9.6250     15.16  | Q   V   |          |          |          |
13+ 0       9.7278     14.92  |Q    V   |          |          |          |
13+ 5       9.8293     14.74  |Q    V   |          |          |          |
13+10       9.9300     14.63  |Q     V  |          |          |          |
13+15      10.0303     14.56  |Q     V  |          |          |          |
13+20      10.1303     14.53  |Q     V  |          |          |          |
13+25      10.2306     14.55  |Q     V  |          |          |          |
13+30      10.3312     14.61  |Q     V  |          |          |          |
13+35      10.4325     14.70  |Q     V  |          |          |          |
13+40      10.5345     14.81  |Q     V  |          |          |          |
13+45      10.6374     14.95  |Q     V  |          |          |          |
13+50      10.7415     15.11  | Q    V  |          |          |          |
13+55      10.8467     15.28  | Q    V  |          |          |          |
14+ 0      10.9534     15.49  | Q    V  |          |          |          |
14+ 5      11.0616     15.72  | Q    V  |          |          |          |
14+10      11.1716     15.97  | Q    V  |          |          |          |
14+15      11.2836     16.26  | Q    V  |          |          |          |
14+20      11.3977     16.56  | Q     V |          |          |          |
14+25      11.5142     16.91  | Q     V |          |          |          |
14+30      11.6333     17.29  | Q     V |          |          |          |
14+35      11.7552     17.71  | Q     V |          |          |          |
14+40      11.8804     18.17  | Q     V |          |          |          |
14+45      12.0091     18.69  | Q     V |          |          |          |
14+50      12.1419     19.28  | Q     V |          |          |          |
14+55      12.2790     19.91  | Q     V |          |          |          |
15+ 0      12.4207     20.58  | Q     V |          |          |          |
15+ 5      12.5674     21.30  | Q     V |          |          |          |
15+10      12.7195     22.08  | Q      V|          |          |          |
15+15      12.8774     22.93  |  Q     V|          |          |          |
15+20      13.0417     23.86  |  Q     V|          |          |          |
15+25      13.2141     25.03  |  Q     V|          |          |          |
15+30      13.3965     26.49  |  Q     V|          |          |          |
15+35      13.5916     28.32  |  Q     V|          |          |          |
15+40      13.8017     30.51  |   Q    V|          |          |          |
15+45      14.0308     33.26  |   Q    V|          |          |          |
15+50      14.2829     36.61  |   Q     V          |          |          |
15+55      14.5654     41.02  |    Q    V          |          |          |
```

| | | | |
|---|---|---|---|
| 16+ 0 | 14.8920 | 47.42 |  |
| 16+ 5 | 15.3137 | 61.23 | |
| 16+10 | 15.8452 | 77.17 | |
| 16+15 | 16.4982 | 94.82 | |
| 16+20 | 17.2550 | 109.88 | |
| 16+25 | 18.1397 | 128.46 | |
| 16+30 | 19.1397 | 145.21 | |
| 16+35 | 20.2857 | 166.39 | |
| 16+40 | 21.6897 | 203.86 | |
| 16+45 | 23.3186 | 236.52 | |
| 16+50 | 25.2415 | 279.21 | |
| 16+55 | 27.1911 | 283.08 | |
| 17+ 0 | 28.9768 | 259.27 | |
| 17+ 5 | 30.5987 | 235.50 | |
| 17+10 | 32.0249 | 207.09 | |
| 17+15 | 33.3031 | 185.60 | |
| 17+20 | 34.4602 | 168.00 | |
| 17+25 | 35.4633 | 145.65 | |
| 17+30 | 36.3777 | 132.77 | |
| 17+35 | 37.2026 | 119.78 | |
| 17+40 | 37.9661 | 110.85 | |
| 17+45 | 38.6754 | 102.99 | |
| 17+50 | 39.3412 | 96.68 | |
| 17+55 | 39.9695 | 91.22 | |
| 18+ 0 | 40.5470 | 83.85 | |
| 18+ 5 | 41.0921 | 79.16 | |
| 18+10 | 41.6049 | 74.45 | |
| 18+15 | 42.0960 | 71.31 | |
| 18+20 | 42.5651 | 68.11 | |
| 18+25 | 42.9959 | 62.55 | |
| 18+30 | 43.4077 | 59.80 | |
| 18+35 | 43.8080 | 58.12 | |
| 18+40 | 44.1890 | 55.32 | |
| 18+45 | 44.5494 | 52.33 | |
| 18+50 | 44.9038 | 51.46 | |
| 18+55 | 45.2512 | 50.45 | |
| 19+ 0 | 45.5850 | 48.46 | |
| 19+ 5 | 45.9116 | 47.43 | |
| 19+10 | 46.2318 | 46.49 | |
| 19+15 | 46.5381 | 44.47 | |
| 19+20 | 46.8308 | 42.49 | |
| 19+25 | 47.1167 | 41.52 | |
| 19+30 | 47.3926 | 40.06 | |
| 19+35 | 47.6486 | 37.16 | |
| 19+40 | 47.8972 | 36.11 | |
| 19+45 | 48.1411 | 35.42 | |
| 19+50 | 48.3787 | 34.49 | |
| 19+55 | 48.6109 | 33.72 | |
| 20+ 0 | 48.8391 | 33.13 | |
| 20+ 5 | 49.0614 | 32.28 | |
| 20+10 | 49.2744 | 30.93 | |
| 20+15 | 49.4831 | 30.31 | |
| 20+20 | 49.6881 | 29.77 | |
| 20+25 | 49.8872 | 28.91 | |
| 20+30 | 50.0816 | 28.22 | |
| 20+35 | 50.2721 | 27.67 | |
| 20+40 | 50.4562 | 26.73 | |
| 20+45 | 50.6302 | 25.27 | |
| 20+50 | 50.8008 | 24.77 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 20+55 | 50.9687 | 24.38 | Q | | | V |
| 21+ 0 | 51.1341 | 24.02 | Q | | | V |
| 21+ 5 | 51.2971 | 23.66 | Q | | | V |
| 21+10 | 51.4570 | 23.22 | Q | | | V |
| 21+15 | 51.6113 | 22.41 | Q | | | V |
| 21+20 | 51.7579 | 21.28 | Q | | | V |
| 21+25 | 51.9018 | 20.89 | Q | | | V |
| 21+30 | 52.0434 | 20.56 | Q | | | V |
| 21+35 | 52.1828 | 20.24 | Q | | | V |
| 21+40 | 52.3199 | 19.91 | Q | | | V |
| 21+45 | 52.4541 | 19.49 | Q | | | V |
| 21+50 | 52.5825 | 18.63 | Q | | | V |
| 21+55 | 52.7037 | 17.61 | Q | | | V |
| 22+ 0 | 52.8227 | 17.27 | Q | | | V |
| 22+ 5 | 52.9396 | 16.97 | Q | | | V |
| 22+10 | 53.0545 | 16.69 | Q | | | V |
| 22+15 | 53.1674 | 16.39 | Q | | | V |
| 22+20 | 53.2778 | 16.03 | Q | | | V |
| 22+25 | 53.3822 | 15.17 | Q | | | V |
| 22+30 | 53.4808 | 14.32 | Q | | | V |
| 22+35 | 53.5779 | 14.09 | Q | | | V |
| 22+40 | 53.6737 | 13.91 | Q | | | V |
| 22+45 | 53.7685 | 13.77 | Q | | | V |
| 22+50 | 53.8626 | 13.66 | Q | | | V |
| 22+55 | 53.9561 | 13.59 | Q | | | V |
| 23+ 0 | 54.0502 | 13.66 | Q | | | V |
| 23+ 5 | 54.1445 | 13.69 | Q | | | V |
| 23+10 | 54.2382 | 13.60 | Q | | | V |
| 23+15 | 54.3311 | 13.49 | Q | | | V |
| 23+20 | 54.4233 | 13.38 | Q | | | V |
| 23+25 | 54.5146 | 13.26 | Q | | | V |
| 23+30 | 54.6051 | 13.13 | Q | | | V |
| 23+35 | 54.6946 | 13.00 | Q | | | V |
| 23+40 | 54.7831 | 12.86 | Q | | | V |
| 23+45 | 54.8706 | 12.71 | Q | | | V |
| 23+50 | 54.9570 | 12.55 | Q | | | V |
| 23+55 | 55.0422 | 12.37 | Q | | | V |
| 24+ 0 | 55.1259 | 12.15 | Q | | | V |
| 24+ 5 | 55.2074 | 11.84 | Q | | | V |
| 24+10 | 55.2834 | 11.02 | Q | | | V |
| 24+15 | 55.3558 | 10.52 | Q | | | V |
| 24+20 | 55.4264 | 10.25 | Q | | | V |
| 24+25 | 55.4950 | 9.96 | Q | | | V |
| 24+30 | 55.5616 | 9.68 | Q | | | V |
| 24+35 | 55.6261 | 9.36 | Q | | | V |
| 24+40 | 55.6878 | 8.96 | Q | | | V |
| 24+45 | 55.7461 | 8.47 | Q | | | V |
| 24+50 | 55.7999 | 7.80 | Q | | | V |
| 24+55 | 55.8485 | 7.06 | Q | | | V |
| 25+ 0 | 55.8897 | 5.97 | Q | | | V |
| 25+ 5 | 55.9240 | 4.99 | Q | | | V |
| 25+10 | 55.9552 | 4.53 | Q | | | V |
| 25+15 | 55.9838 | 4.15 | Q | | | V |
| 25+20 | 56.0102 | 3.83 | Q | | | V |
| 25+25 | 56.0348 | 3.57 | Q | | | V |
| 25+30 | 56.0578 | 3.34 | Q | | | V |
| 25+35 | 56.0794 | 3.14 | Q | | | V |
| 25+40 | 56.0998 | 2.96 | Q | | | V |
| 25+45 | 56.1191 | 2.80 | Q | | | V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+50 | 56.1373 | 2.64 | Q | \| | \| | \| | V\| |
| 25+55 | 56.1545 | 2.49 | Q | \| | \| | \| | V\| |
| 26+ 0 | 56.1708 | 2.37 | Q | \| | \| | \| | V\| |
| 26+ 5 | 56.1862 | 2.25 | Q | \| | \| | \| | V\| |
| 26+10 | 56.2009 | 2.13 | Q | \| | \| | \| | V\| |
| 26+15 | 56.2149 | 2.02 | Q | \| | \| | \| | V\| |
| 26+20 | 56.2281 | 1.92 | Q | \| | \| | \| | V\| |
| 26+25 | 56.2407 | 1.83 | Q | \| | \| | \| | V\| |
| 26+30 | 56.2527 | 1.74 | Q | \| | \| | \| | V\| |
| 26+35 | 56.2641 | 1.66 | Q | \| | \| | \| | V\| |
| 26+40 | 56.2750 | 1.58 | Q | \| | \| | \| | V\| |
| 26+45 | 56.2855 | 1.51 | Q | \| | \| | \| | V\| |
| 26+50 | 56.2954 | 1.44 | Q | \| | \| | \| | V\| |
| 26+55 | 56.3049 | 1.38 | Q | \| | \| | \| | V\| |
| 27+ 0 | 56.3140 | 1.31 | Q | \| | \| | \| | V\| |
| 27+ 5 | 56.3226 | 1.25 | Q | \| | \| | \| | V\| |
| 27+10 | 56.3308 | 1.19 | Q | \| | \| | \| | V\| |
| 27+15 | 56.3385 | 1.13 | Q | \| | \| | \| | V\| |
| 27+20 | 56.3460 | 1.08 | Q | \| | \| | \| | V\| |
| 27+25 | 56.3530 | 1.03 | Q | \| | \| | \| | V\| |
| 27+30 | 56.3597 | 0.98 | Q | \| | \| | \| | V\| |
| 27+35 | 56.3662 | 0.93 | Q | \| | \| | \| | V\| |
| 27+40 | 56.3723 | 0.89 | Q | \| | \| | \| | V\| |
| 27+45 | 56.3782 | 0.85 | Q | \| | \| | \| | V\| |
| 27+50 | 56.3838 | 0.81 | Q | \| | \| | \| | V\| |
| 27+55 | 56.3892 | 0.78 | Q | \| | \| | \| | V\| |
| 28+ 0 | 56.3943 | 0.74 | Q | \| | \| | \| | V\| |
| 28+ 5 | 56.3991 | 0.71 | Q | \| | \| | \| | V\| |
| 28+10 | 56.4038 | 0.67 | Q | \| | \| | \| | V\| |
| 28+15 | 56.4082 | 0.64 | Q | \| | \| | \| | V\| |
| 28+20 | 56.4124 | 0.61 | Q | \| | \| | \| | V\| |
| 28+25 | 56.4165 | 0.58 | Q | \| | \| | \| | V\| |
| 28+30 | 56.4203 | 0.56 | Q | \| | \| | \| | V\| |
| 28+35 | 56.4239 | 0.53 | Q | \| | \| | \| | V\| |
| 28+40 | 56.4274 | 0.50 | Q | \| | \| | \| | V\| |
| 28+45 | 56.4307 | 0.48 | Q | \| | \| | \| | V\| |
| 28+50 | 56.4338 | 0.46 | Q | \| | \| | \| | V\| |
| 28+55 | 56.4368 | 0.44 | Q | \| | \| | \| | V\| |
| 29+ 0 | 56.4397 | 0.41 | Q | \| | \| | \| | V\| |
| 29+ 5 | 56.4424 | 0.39 | Q | \| | \| | \| | V\| |
| 29+10 | 56.4449 | 0.37 | Q | \| | \| | \| | V\| |
| 29+15 | 56.4474 | 0.35 | Q | \| | \| | \| | V\| |
| 29+20 | 56.4497 | 0.34 | Q | \| | \| | \| | V\| |
| 29+25 | 56.4519 | 0.32 | Q | \| | \| | \| | V\| |
| 29+30 | 56.4540 | 0.30 | Q | \| | \| | \| | V\| |
| 29+35 | 56.4560 | 0.29 | Q | \| | \| | \| | V\| |
| 29+40 | 56.4578 | 0.27 | Q | \| | \| | \| | V\| |
| 29+45 | 56.4596 | 0.26 | Q | \| | \| | \| | V\| |
| 29+50 | 56.4613 | 0.24 | Q | \| | \| | \| | V\| |
| 29+55 | 56.4628 | 0.23 | Q | \| | \| | \| | V\| |
| 30+ 0 | 56.4644 | 0.22 | Q | \| | \| | \| | V\| |
| 30+ 5 | 56.4658 | 0.21 | Q | \| | \| | \| | V\| |
| 30+10 | 56.4672 | 0.20 | Q | \| | \| | \| | V\| |
| 30+15 | 56.4684 | 0.19 | Q | \| | \| | \| | V\| |
| 30+20 | 56.4697 | 0.18 | Q | \| | \| | \| | V\| |
| 30+25 | 56.4708 | 0.17 | Q | \| | \| | \| | V\| |
| 30+30 | 56.4719 | 0.16 | Q | \| | \| | \| | V\| |
| 30+35 | 56.4730 | 0.15 | Q | \| | \| | \| | V\| |
| 30+40 | 56.4740 | 0.15 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 30+45 | 56.4750 | 0.14 | Q | \| | \| | \| | V\| |
| 30+50 | 56.4759 | 0.14 | Q | \| | \| | \| | V\| |
| 30+55 | 56.4768 | 0.13 | Q | \| | \| | \| | V\| |
| 31+ 0 | 56.4776 | 0.12 | Q | \| | \| | \| | V\| |
| 31+ 5 | 56.4784 | 0.12 | Q | \| | \| | \| | V\| |
| 31+10 | 56.4792 | 0.11 | Q | \| | \| | \| | V\| |
| 31+15 | 56.4799 | 0.10 | Q | \| | \| | \| | V\| |
| 31+20 | 56.4805 | 0.09 | Q | \| | \| | \| | V\| |
| 31+25 | 56.4811 | 0.09 | Q | \| | \| | \| | V\| |
| 31+30 | 56.4817 | 0.08 | Q | \| | \| | \| | V\| |
| 31+35 | 56.4822 | 0.07 | Q | \| | \| | \| | V\| |
| 31+40 | 56.4827 | 0.07 | Q | \| | \| | \| | V\| |
| 31+45 | 56.4831 | 0.06 | Q | \| | \| | \| | V\| |
| 31+50 | 56.4835 | 0.05 | Q | \| | \| | \| | V\| |
| 31+55 | 56.4838 | 0.05 | Q | \| | \| | \| | V\| |
| 32+ 0 | 56.4841 | 0.04 | Q | \| | \| | \| | V\| |
| 32+ 5 | 56.4843 | 0.04 | Q | \| | \| | \| | V\| |
| 32+10 | 56.4845 | 0.03 | Q | \| | \| | \| | V\| |
| 32+15 | 56.4847 | 0.03 | Q | \| | \| | \| | V\| |
| 32+20 | 56.4849 | 0.02 | Q | \| | \| | \| | V\| |
| 32+25 | 56.4850 | 0.02 | Q | \| | \| | \| | V\| |
| 32+30 | 56.4852 | 0.02 | Q | \| | \| | \| | V\| |
| 32+35 | 56.4853 | 0.01 | Q | \| | \| | \| | V\| |
| 32+40 | 56.4853 | 0.01 | Q | \| | \| | \| | V\| |
| 32+45 | 56.4854 | 0.01 | Q | \| | \| | \| | V\| |
| 32+50 | 56.4854 | 0.00 | Q | \| | \| | \| | V\| |
| 32+55 | 56.4854 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 40
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 3.40 | 1 | 1.40 |
| Rainfall data for year 100 | | |
| 3.40 | 6 | 1.86 |
| Rainfall data for year 100 | | |
| 3.40 | 24 | 2.65 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 91.0 | 98.2 | 3.40 | 1.000 | 0.036 | 0.900 | 0.032 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.032

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 3.06 | 0.900 | 91.0 | 98.2 | 0.18 | 0.922 |
| 0.34 | 0.100 | 98.0 | 98.0 | 0.20 | 0.913 |

Area-averaged catchment yield fraction, Y = 0.921
Area-averaged low loss fraction, Yb = 0.079
User entry of time of concentration = 0.260 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 3.40(Ac.)
Catchment Lag time = 0.208 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 40.0641
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.032(In/Hr)
Average low loss rate fraction (Yb) = 0.079 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.664(In)
Computed peak 30-minute rainfall = 1.137(In)
Specified peak 1-hour rainfall = 1.400(In)
Computed peak 3-hour rainfall = 1.666(In)
Specified peak 6-hour rainfall = 1.860(In)
Specified peak 24-hour rainfall = 2.650(In)

Rainfall depth area reduction factors:
Using a total area of 3.40(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.664(In)
30-minute factor = 1.000 Adjusted rainfall = 1.137(In)
1-hour factor = 1.000 Adjusted rainfall = 1.400(In)
3-hour factor = 1.000 Adjusted rainfall = 1.666(In)
6-hour factor = 1.000 Adjusted rainfall = 1.860(In)
24-hour factor = 1.000 Adjusted rainfall = 2.650(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 41.12 (CFS)) | |
| 1 | 2.755 | 1.133 |
| 2 | 18.770 | 6.585 |
| 3 | 49.245 | 12.531 |
| 4 | 65.688 | 6.761 |
| 5 | 74.847 | 3.766 |
| 6 | 80.916 | 2.495 |
| 7 | 85.280 | 1.795 |
| 8 | 88.633 | 1.379 |
| 9 | 91.058 | 0.997 |
| 10 | 93.036 | 0.813 |
| 11 | 94.603 | 0.644 |
| 12 | 95.871 | 0.521 |
| 13 | 96.878 | 0.414 |

| | | |
|---|---|---|
| 14 | 97.624 | 0.307 |
| 15 | 98.109 | 0.200 |
| 16 | 98.552 | 0.182 |
| 17 | 99.033 | 0.198 |
| 18 | 99.481 | 0.184 |
| 19 | 99.757 | 0.114 |
| 20 | 100.000 | 0.100 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6642 | 0.6642 |
| 2 | 0.8177 | 0.1535 |
| 3 | 0.9235 | 0.1058 |
| 4 | 1.0068 | 0.0832 |
| 5 | 1.0765 | 0.0697 |
| 6 | 1.1370 | 0.0605 |
| 7 | 1.1908 | 0.0538 |
| 8 | 1.2395 | 0.0487 |
| 9 | 1.2840 | 0.0446 |
| 10 | 1.3253 | 0.0412 |
| 11 | 1.3637 | 0.0384 |
| 12 | 1.3998 | 0.0361 |
| 13 | 1.4177 | 0.0179 |
| 14 | 1.4344 | 0.0168 |
| 15 | 1.4502 | 0.0158 |
| 16 | 1.4652 | 0.0149 |
| 17 | 1.4793 | 0.0142 |
| 18 | 1.4928 | 0.0135 |
| 19 | 1.5057 | 0.0129 |
| 20 | 1.5180 | 0.0123 |
| 21 | 1.5298 | 0.0118 |
| 22 | 1.5411 | 0.0113 |
| 23 | 1.5520 | 0.0109 |
| 24 | 1.5625 | 0.0105 |
| 25 | 1.5727 | 0.0102 |
| 26 | 1.5825 | 0.0098 |
| 27 | 1.5920 | 0.0095 |
| 28 | 1.6012 | 0.0092 |
| 29 | 1.6102 | 0.0089 |
| 30 | 1.6189 | 0.0087 |
| 31 | 1.6273 | 0.0084 |
| 32 | 1.6355 | 0.0082 |
| 33 | 1.6435 | 0.0080 |
| 34 | 1.6513 | 0.0078 |
| 35 | 1.6589 | 0.0076 |
| 36 | 1.6664 | 0.0074 |
| 37 | 1.6736 | 0.0073 |
| 38 | 1.6807 | 0.0071 |
| 39 | 1.6877 | 0.0069 |
| 40 | 1.6944 | 0.0068 |
| 41 | 1.7011 | 0.0066 |
| 42 | 1.7076 | 0.0065 |
| 43 | 1.7140 | 0.0064 |
| 44 | 1.7203 | 0.0063 |
| 45 | 1.7264 | 0.0061 |
| 46 | 1.7324 | 0.0060 |
| 47 | 1.7383 | 0.0059 |
| 48 | 1.7442 | 0.0058 |
| 49 | 1.7499 | 0.0057 |

| | | |
|---|---|---|
| 50 | 1.7555 | 0.0056 |
| 51 | 1.7610 | 0.0055 |
| 52 | 1.7664 | 0.0054 |
| 53 | 1.7718 | 0.0053 |
| 54 | 1.7770 | 0.0053 |
| 55 | 1.7822 | 0.0052 |
| 56 | 1.7873 | 0.0051 |
| 57 | 1.7923 | 0.0050 |
| 58 | 1.7973 | 0.0049 |
| 59 | 1.8022 | 0.0049 |
| 60 | 1.8070 | 0.0048 |
| 61 | 1.8117 | 0.0047 |
| 62 | 1.8164 | 0.0047 |
| 63 | 1.8210 | 0.0046 |
| 64 | 1.8256 | 0.0046 |
| 65 | 1.8301 | 0.0045 |
| 66 | 1.8345 | 0.0044 |
| 67 | 1.8389 | 0.0044 |
| 68 | 1.8432 | 0.0043 |
| 69 | 1.8475 | 0.0043 |
| 70 | 1.8517 | 0.0042 |
| 71 | 1.8559 | 0.0042 |
| 72 | 1.8600 | 0.0041 |
| 73 | 1.8665 | 0.0066 |
| 74 | 1.8730 | 0.0065 |
| 75 | 1.8795 | 0.0064 |
| 76 | 1.8858 | 0.0064 |
| 77 | 1.8921 | 0.0063 |
| 78 | 1.8984 | 0.0062 |
| 79 | 1.9046 | 0.0062 |
| 80 | 1.9107 | 0.0061 |
| 81 | 1.9168 | 0.0061 |
| 82 | 1.9228 | 0.0060 |
| 83 | 1.9287 | 0.0060 |
| 84 | 1.9347 | 0.0059 |
| 85 | 1.9405 | 0.0059 |
| 86 | 1.9463 | 0.0058 |
| 87 | 1.9521 | 0.0058 |
| 88 | 1.9578 | 0.0057 |
| 89 | 1.9634 | 0.0057 |
| 90 | 1.9690 | 0.0056 |
| 91 | 1.9746 | 0.0056 |
| 92 | 1.9801 | 0.0055 |
| 93 | 1.9856 | 0.0055 |
| 94 | 1.9910 | 0.0054 |
| 95 | 1.9964 | 0.0054 |
| 96 | 2.0018 | 0.0053 |
| 97 | 2.0071 | 0.0053 |
| 98 | 2.0123 | 0.0053 |
| 99 | 2.0175 | 0.0052 |
| 100 | 2.0227 | 0.0052 |
| 101 | 2.0279 | 0.0051 |
| 102 | 2.0330 | 0.0051 |
| 103 | 2.0381 | 0.0051 |
| 104 | 2.0431 | 0.0050 |
| 105 | 2.0481 | 0.0050 |
| 106 | 2.0531 | 0.0050 |
| 107 | 2.0580 | 0.0049 |
| 108 | 2.0629 | 0.0049 |

| | | |
|---|---|---|
| 109 | 2.0677 | 0.0049 |
| 110 | 2.0726 | 0.0048 |
| 111 | 2.0774 | 0.0048 |
| 112 | 2.0821 | 0.0048 |
| 113 | 2.0869 | 0.0047 |
| 114 | 2.0916 | 0.0047 |
| 115 | 2.0962 | 0.0047 |
| 116 | 2.1009 | 0.0046 |
| 117 | 2.1055 | 0.0046 |
| 118 | 2.1101 | 0.0046 |
| 119 | 2.1146 | 0.0046 |
| 120 | 2.1191 | 0.0045 |
| 121 | 2.1236 | 0.0045 |
| 122 | 2.1281 | 0.0045 |
| 123 | 2.1325 | 0.0044 |
| 124 | 2.1369 | 0.0044 |
| 125 | 2.1413 | 0.0044 |
| 126 | 2.1457 | 0.0044 |
| 127 | 2.1500 | 0.0043 |
| 128 | 2.1543 | 0.0043 |
| 129 | 2.1586 | 0.0043 |
| 130 | 2.1629 | 0.0043 |
| 131 | 2.1671 | 0.0042 |
| 132 | 2.1713 | 0.0042 |
| 133 | 2.1755 | 0.0042 |
| 134 | 2.1797 | 0.0042 |
| 135 | 2.1838 | 0.0041 |
| 136 | 2.1880 | 0.0041 |
| 137 | 2.1920 | 0.0041 |
| 138 | 2.1961 | 0.0041 |
| 139 | 2.2002 | 0.0041 |
| 140 | 2.2042 | 0.0040 |
| 141 | 2.2082 | 0.0040 |
| 142 | 2.2122 | 0.0040 |
| 143 | 2.2162 | 0.0040 |
| 144 | 2.2201 | 0.0039 |
| 145 | 2.2240 | 0.0039 |
| 146 | 2.2280 | 0.0039 |
| 147 | 2.2318 | 0.0039 |
| 148 | 2.2357 | 0.0039 |
| 149 | 2.2396 | 0.0038 |
| 150 | 2.2434 | 0.0038 |
| 151 | 2.2472 | 0.0038 |
| 152 | 2.2510 | 0.0038 |
| 153 | 2.2548 | 0.0038 |
| 154 | 2.2585 | 0.0038 |
| 155 | 2.2622 | 0.0037 |
| 156 | 2.2660 | 0.0037 |
| 157 | 2.2697 | 0.0037 |
| 158 | 2.2733 | 0.0037 |
| 159 | 2.2770 | 0.0037 |
| 160 | 2.2807 | 0.0036 |
| 161 | 2.2843 | 0.0036 |
| 162 | 2.2879 | 0.0036 |
| 163 | 2.2915 | 0.0036 |
| 164 | 2.2951 | 0.0036 |
| 165 | 2.2986 | 0.0036 |
| 166 | 2.3022 | 0.0035 |
| 167 | 2.3057 | 0.0035 |

| | | |
|---|---|---|
| 168 | 2.3093 | 0.0035 |
| 169 | 2.3128 | 0.0035 |
| 170 | 2.3162 | 0.0035 |
| 171 | 2.3197 | 0.0035 |
| 172 | 2.3232 | 0.0035 |
| 173 | 2.3266 | 0.0034 |
| 174 | 2.3300 | 0.0034 |
| 175 | 2.3334 | 0.0034 |
| 176 | 2.3368 | 0.0034 |
| 177 | 2.3402 | 0.0034 |
| 178 | 2.3436 | 0.0034 |
| 179 | 2.3470 | 0.0034 |
| 180 | 2.3503 | 0.0033 |
| 181 | 2.3536 | 0.0033 |
| 182 | 2.3569 | 0.0033 |
| 183 | 2.3602 | 0.0033 |
| 184 | 2.3635 | 0.0033 |
| 185 | 2.3668 | 0.0033 |
| 186 | 2.3701 | 0.0033 |
| 187 | 2.3733 | 0.0032 |
| 188 | 2.3765 | 0.0032 |
| 189 | 2.3798 | 0.0032 |
| 190 | 2.3830 | 0.0032 |
| 191 | 2.3862 | 0.0032 |
| 192 | 2.3893 | 0.0032 |
| 193 | 2.3925 | 0.0032 |
| 194 | 2.3957 | 0.0032 |
| 195 | 2.3988 | 0.0031 |
| 196 | 2.4020 | 0.0031 |
| 197 | 2.4051 | 0.0031 |
| 198 | 2.4082 | 0.0031 |
| 199 | 2.4113 | 0.0031 |
| 200 | 2.4144 | 0.0031 |
| 201 | 2.4175 | 0.0031 |
| 202 | 2.4205 | 0.0031 |
| 203 | 2.4236 | 0.0031 |
| 204 | 2.4266 | 0.0030 |
| 205 | 2.4297 | 0.0030 |
| 206 | 2.4327 | 0.0030 |
| 207 | 2.4357 | 0.0030 |
| 208 | 2.4387 | 0.0030 |
| 209 | 2.4417 | 0.0030 |
| 210 | 2.4447 | 0.0030 |
| 211 | 2.4476 | 0.0030 |
| 212 | 2.4506 | 0.0030 |
| 213 | 2.4535 | 0.0029 |
| 214 | 2.4565 | 0.0029 |
| 215 | 2.4594 | 0.0029 |
| 216 | 2.4623 | 0.0029 |
| 217 | 2.4652 | 0.0029 |
| 218 | 2.4681 | 0.0029 |
| 219 | 2.4710 | 0.0029 |
| 220 | 2.4739 | 0.0029 |
| 221 | 2.4767 | 0.0029 |
| 222 | 2.4796 | 0.0029 |
| 223 | 2.4824 | 0.0028 |
| 224 | 2.4853 | 0.0028 |
| 225 | 2.4881 | 0.0028 |
| 226 | 2.4909 | 0.0028 |

| | | |
|---|---|---|
| 227 | 2.4937 | 0.0028 |
| 228 | 2.4965 | 0.0028 |
| 229 | 2.4993 | 0.0028 |
| 230 | 2.5021 | 0.0028 |
| 231 | 2.5049 | 0.0028 |
| 232 | 2.5076 | 0.0028 |
| 233 | 2.5104 | 0.0028 |
| 234 | 2.5131 | 0.0027 |
| 235 | 2.5159 | 0.0027 |
| 236 | 2.5186 | 0.0027 |
| 237 | 2.5213 | 0.0027 |
| 238 | 2.5240 | 0.0027 |
| 239 | 2.5267 | 0.0027 |
| 240 | 2.5294 | 0.0027 |
| 241 | 2.5321 | 0.0027 |
| 242 | 2.5348 | 0.0027 |
| 243 | 2.5375 | 0.0027 |
| 244 | 2.5401 | 0.0027 |
| 245 | 2.5428 | 0.0027 |
| 246 | 2.5454 | 0.0026 |
| 247 | 2.5481 | 0.0026 |
| 248 | 2.5507 | 0.0026 |
| 249 | 2.5533 | 0.0026 |
| 250 | 2.5559 | 0.0026 |
| 251 | 2.5586 | 0.0026 |
| 252 | 2.5612 | 0.0026 |
| 253 | 2.5637 | 0.0026 |
| 254 | 2.5663 | 0.0026 |
| 255 | 2.5689 | 0.0026 |
| 256 | 2.5715 | 0.0026 |
| 257 | 2.5740 | 0.0026 |
| 258 | 2.5766 | 0.0026 |
| 259 | 2.5791 | 0.0025 |
| 260 | 2.5817 | 0.0025 |
| 261 | 2.5842 | 0.0025 |
| 262 | 2.5867 | 0.0025 |
| 263 | 2.5892 | 0.0025 |
| 264 | 2.5918 | 0.0025 |
| 265 | 2.5943 | 0.0025 |
| 266 | 2.5968 | 0.0025 |
| 267 | 2.5992 | 0.0025 |
| 268 | 2.6017 | 0.0025 |
| 269 | 2.6042 | 0.0025 |
| 270 | 2.6067 | 0.0025 |
| 271 | 2.6091 | 0.0025 |
| 272 | 2.6116 | 0.0025 |
| 273 | 2.6140 | 0.0024 |
| 274 | 2.6165 | 0.0024 |
| 275 | 2.6189 | 0.0024 |
| 276 | 2.6213 | 0.0024 |
| 277 | 2.6238 | 0.0024 |
| 278 | 2.6262 | 0.0024 |
| 279 | 2.6286 | 0.0024 |
| 280 | 2.6310 | 0.0024 |
| 281 | 2.6334 | 0.0024 |
| 282 | 2.6358 | 0.0024 |
| 283 | 2.6382 | 0.0024 |
| 284 | 2.6405 | 0.0024 |
| 285 | 2.6429 | 0.0024 |

| | | | |
|---|---|---|---|
| 286 | 2.6453 | 0.0024 | |
| 287 | 2.6476 | 0.0024 | |
| 288 | 2.6500 | 0.0024 | |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0024 | 0.0002 | 0.0022 |
| 2 | 0.0024 | 0.0002 | 0.0022 |
| 3 | 0.0024 | 0.0002 | 0.0022 |
| 4 | 0.0024 | 0.0002 | 0.0022 |
| 5 | 0.0024 | 0.0002 | 0.0022 |
| 6 | 0.0024 | 0.0002 | 0.0022 |
| 7 | 0.0024 | 0.0002 | 0.0022 |
| 8 | 0.0024 | 0.0002 | 0.0022 |
| 9 | 0.0024 | 0.0002 | 0.0022 |
| 10 | 0.0024 | 0.0002 | 0.0022 |
| 11 | 0.0024 | 0.0002 | 0.0023 |
| 12 | 0.0025 | 0.0002 | 0.0023 |
| 13 | 0.0025 | 0.0002 | 0.0023 |
| 14 | 0.0025 | 0.0002 | 0.0023 |
| 15 | 0.0025 | 0.0002 | 0.0023 |
| 16 | 0.0025 | 0.0002 | 0.0023 |
| 17 | 0.0025 | 0.0002 | 0.0023 |
| 18 | 0.0025 | 0.0002 | 0.0023 |
| 19 | 0.0025 | 0.0002 | 0.0023 |
| 20 | 0.0025 | 0.0002 | 0.0023 |
| 21 | 0.0026 | 0.0002 | 0.0024 |
| 22 | 0.0026 | 0.0002 | 0.0024 |
| 23 | 0.0026 | 0.0002 | 0.0024 |
| 24 | 0.0026 | 0.0002 | 0.0024 |
| 25 | 0.0026 | 0.0002 | 0.0024 |
| 26 | 0.0026 | 0.0002 | 0.0024 |
| 27 | 0.0026 | 0.0002 | 0.0024 |
| 28 | 0.0026 | 0.0002 | 0.0024 |
| 29 | 0.0026 | 0.0002 | 0.0024 |
| 30 | 0.0027 | 0.0002 | 0.0024 |
| 31 | 0.0027 | 0.0002 | 0.0025 |
| 32 | 0.0027 | 0.0002 | 0.0025 |
| 33 | 0.0027 | 0.0002 | 0.0025 |
| 34 | 0.0027 | 0.0002 | 0.0025 |
| 35 | 0.0027 | 0.0002 | 0.0025 |
| 36 | 0.0027 | 0.0002 | 0.0025 |
| 37 | 0.0027 | 0.0002 | 0.0025 |
| 38 | 0.0028 | 0.0002 | 0.0025 |
| 39 | 0.0028 | 0.0002 | 0.0026 |
| 40 | 0.0028 | 0.0002 | 0.0026 |
| 41 | 0.0028 | 0.0002 | 0.0026 |
| 42 | 0.0028 | 0.0002 | 0.0026 |
| 43 | 0.0028 | 0.0002 | 0.0026 |
| 44 | 0.0028 | 0.0002 | 0.0026 |
| 45 | 0.0029 | 0.0002 | 0.0026 |
| 46 | 0.0029 | 0.0002 | 0.0026 |
| 47 | 0.0029 | 0.0002 | 0.0027 |
| 48 | 0.0029 | 0.0002 | 0.0027 |
| 49 | 0.0029 | 0.0002 | 0.0027 |
| 50 | 0.0029 | 0.0002 | 0.0027 |
| 51 | 0.0029 | 0.0002 | 0.0027 |

| | | | |
|---|---|---|---|
| 52 | 0.0030 | 0.0002 | 0.0027 |
| 53 | 0.0030 | 0.0002 | 0.0027 |
| 54 | 0.0030 | 0.0002 | 0.0028 |
| 55 | 0.0030 | 0.0002 | 0.0028 |
| 56 | 0.0030 | 0.0002 | 0.0028 |
| 57 | 0.0030 | 0.0002 | 0.0028 |
| 58 | 0.0031 | 0.0002 | 0.0028 |
| 59 | 0.0031 | 0.0002 | 0.0028 |
| 60 | 0.0031 | 0.0002 | 0.0028 |
| 61 | 0.0031 | 0.0002 | 0.0029 |
| 62 | 0.0031 | 0.0002 | 0.0029 |
| 63 | 0.0031 | 0.0002 | 0.0029 |
| 64 | 0.0032 | 0.0003 | 0.0029 |
| 65 | 0.0032 | 0.0003 | 0.0029 |
| 66 | 0.0032 | 0.0003 | 0.0029 |
| 67 | 0.0032 | 0.0003 | 0.0030 |
| 68 | 0.0032 | 0.0003 | 0.0030 |
| 69 | 0.0033 | 0.0003 | 0.0030 |
| 70 | 0.0033 | 0.0003 | 0.0030 |
| 71 | 0.0033 | 0.0003 | 0.0030 |
| 72 | 0.0033 | 0.0003 | 0.0031 |
| 73 | 0.0033 | 0.0003 | 0.0031 |
| 74 | 0.0034 | 0.0003 | 0.0031 |
| 75 | 0.0034 | 0.0003 | 0.0031 |
| 76 | 0.0034 | 0.0003 | 0.0031 |
| 77 | 0.0034 | 0.0003 | 0.0032 |
| 78 | 0.0034 | 0.0003 | 0.0032 |
| 79 | 0.0035 | 0.0003 | 0.0032 |
| 80 | 0.0035 | 0.0003 | 0.0032 |
| 81 | 0.0035 | 0.0003 | 0.0032 |
| 82 | 0.0035 | 0.0003 | 0.0033 |
| 83 | 0.0036 | 0.0003 | 0.0033 |
| 84 | 0.0036 | 0.0003 | 0.0033 |
| 85 | 0.0036 | 0.0003 | 0.0033 |
| 86 | 0.0036 | 0.0003 | 0.0033 |
| 87 | 0.0037 | 0.0003 | 0.0034 |
| 88 | 0.0037 | 0.0003 | 0.0034 |
| 89 | 0.0037 | 0.0003 | 0.0034 |
| 90 | 0.0037 | 0.0003 | 0.0034 |
| 91 | 0.0038 | 0.0003 | 0.0035 |
| 92 | 0.0038 | 0.0003 | 0.0035 |
| 93 | 0.0038 | 0.0003 | 0.0035 |
| 94 | 0.0038 | 0.0003 | 0.0035 |
| 95 | 0.0039 | 0.0003 | 0.0036 |
| 96 | 0.0039 | 0.0003 | 0.0036 |
| 97 | 0.0039 | 0.0003 | 0.0036 |
| 98 | 0.0040 | 0.0003 | 0.0037 |
| 99 | 0.0040 | 0.0003 | 0.0037 |
| 100 | 0.0040 | 0.0003 | 0.0037 |
| 101 | 0.0041 | 0.0003 | 0.0038 |
| 102 | 0.0041 | 0.0003 | 0.0038 |
| 103 | 0.0041 | 0.0003 | 0.0038 |
| 104 | 0.0042 | 0.0003 | 0.0038 |
| 105 | 0.0042 | 0.0003 | 0.0039 |
| 106 | 0.0042 | 0.0003 | 0.0039 |
| 107 | 0.0043 | 0.0003 | 0.0039 |
| 108 | 0.0043 | 0.0003 | 0.0040 |
| 109 | 0.0044 | 0.0003 | 0.0040 |
| 110 | 0.0044 | 0.0003 | 0.0040 |

| | | | |
|---|---|---|---|
| 111 | 0.0044 | 0.0004 | 0.0041 |
| 112 | 0.0045 | 0.0004 | 0.0041 |
| 113 | 0.0045 | 0.0004 | 0.0042 |
| 114 | 0.0046 | 0.0004 | 0.0042 |
| 115 | 0.0046 | 0.0004 | 0.0042 |
| 116 | 0.0046 | 0.0004 | 0.0043 |
| 117 | 0.0047 | 0.0004 | 0.0043 |
| 118 | 0.0047 | 0.0004 | 0.0044 |
| 119 | 0.0048 | 0.0004 | 0.0044 |
| 120 | 0.0048 | 0.0004 | 0.0044 |
| 121 | 0.0049 | 0.0004 | 0.0045 |
| 122 | 0.0049 | 0.0004 | 0.0045 |
| 123 | 0.0050 | 0.0004 | 0.0046 |
| 124 | 0.0050 | 0.0004 | 0.0046 |
| 125 | 0.0051 | 0.0004 | 0.0047 |
| 126 | 0.0051 | 0.0004 | 0.0047 |
| 127 | 0.0052 | 0.0004 | 0.0048 |
| 128 | 0.0053 | 0.0004 | 0.0048 |
| 129 | 0.0053 | 0.0004 | 0.0049 |
| 130 | 0.0054 | 0.0004 | 0.0050 |
| 131 | 0.0055 | 0.0004 | 0.0050 |
| 132 | 0.0055 | 0.0004 | 0.0051 |
| 133 | 0.0056 | 0.0004 | 0.0052 |
| 134 | 0.0057 | 0.0004 | 0.0052 |
| 135 | 0.0058 | 0.0005 | 0.0053 |
| 136 | 0.0058 | 0.0005 | 0.0053 |
| 137 | 0.0059 | 0.0005 | 0.0054 |
| 138 | 0.0060 | 0.0005 | 0.0055 |
| 139 | 0.0061 | 0.0005 | 0.0056 |
| 140 | 0.0061 | 0.0005 | 0.0056 |
| 141 | 0.0062 | 0.0005 | 0.0057 |
| 142 | 0.0063 | 0.0005 | 0.0058 |
| 143 | 0.0064 | 0.0005 | 0.0059 |
| 144 | 0.0065 | 0.0005 | 0.0060 |
| 145 | 0.0041 | 0.0003 | 0.0038 |
| 146 | 0.0042 | 0.0003 | 0.0038 |
| 147 | 0.0043 | 0.0003 | 0.0039 |
| 148 | 0.0043 | 0.0003 | 0.0040 |
| 149 | 0.0044 | 0.0004 | 0.0041 |
| 150 | 0.0045 | 0.0004 | 0.0041 |
| 151 | 0.0046 | 0.0004 | 0.0042 |
| 152 | 0.0047 | 0.0004 | 0.0043 |
| 153 | 0.0048 | 0.0004 | 0.0044 |
| 154 | 0.0049 | 0.0004 | 0.0045 |
| 155 | 0.0050 | 0.0004 | 0.0046 |
| 156 | 0.0051 | 0.0004 | 0.0047 |
| 157 | 0.0053 | 0.0004 | 0.0048 |
| 158 | 0.0053 | 0.0004 | 0.0049 |
| 159 | 0.0055 | 0.0004 | 0.0051 |
| 160 | 0.0056 | 0.0004 | 0.0052 |
| 161 | 0.0058 | 0.0005 | 0.0054 |
| 162 | 0.0059 | 0.0005 | 0.0054 |
| 163 | 0.0061 | 0.0005 | 0.0057 |
| 164 | 0.0063 | 0.0005 | 0.0058 |
| 165 | 0.0065 | 0.0005 | 0.0060 |
| 166 | 0.0066 | 0.0005 | 0.0061 |
| 167 | 0.0069 | 0.0006 | 0.0064 |
| 168 | 0.0071 | 0.0006 | 0.0065 |
| 169 | 0.0074 | 0.0006 | 0.0068 |

| | | | |
|---|---|---|---|
| 170 | 0.0076 | 0.0006 | 0.0070 |
| 171 | 0.0080 | 0.0006 | 0.0074 |
| 172 | 0.0082 | 0.0007 | 0.0076 |
| 173 | 0.0087 | 0.0007 | 0.0080 |
| 174 | 0.0089 | 0.0007 | 0.0082 |
| 175 | 0.0095 | 0.0008 | 0.0088 |
| 176 | 0.0098 | 0.0008 | 0.0090 |
| 177 | 0.0105 | 0.0008 | 0.0097 |
| 178 | 0.0109 | 0.0009 | 0.0100 |
| 179 | 0.0118 | 0.0009 | 0.0109 |
| 180 | 0.0123 | 0.0010 | 0.0113 |
| 181 | 0.0135 | 0.0011 | 0.0124 |
| 182 | 0.0142 | 0.0011 | 0.0130 |
| 183 | 0.0158 | 0.0013 | 0.0145 |
| 184 | 0.0168 | 0.0013 | 0.0154 |
| 185 | 0.0361 | 0.0027 | 0.0334 |
| 186 | 0.0384 | 0.0027 | 0.0358 |
| 187 | 0.0446 | 0.0027 | 0.0419 |
| 188 | 0.0487 | 0.0027 | 0.0460 |
| 189 | 0.0605 | 0.0027 | 0.0578 |
| 190 | 0.0697 | 0.0027 | 0.0670 |
| 191 | 0.1058 | 0.0027 | 0.1031 |
| 192 | 0.1535 | 0.0027 | 0.1508 |
| 193 | 0.6642 | 0.0027 | 0.6615 |
| 194 | 0.0832 | 0.0027 | 0.0806 |
| 195 | 0.0538 | 0.0027 | 0.0511 |
| 196 | 0.0412 | 0.0027 | 0.0386 |
| 197 | 0.0179 | 0.0014 | 0.0165 |
| 198 | 0.0149 | 0.0012 | 0.0137 |
| 199 | 0.0129 | 0.0010 | 0.0118 |
| 200 | 0.0113 | 0.0009 | 0.0104 |
| 201 | 0.0102 | 0.0008 | 0.0093 |
| 202 | 0.0092 | 0.0007 | 0.0085 |
| 203 | 0.0084 | 0.0007 | 0.0078 |
| 204 | 0.0078 | 0.0006 | 0.0072 |
| 205 | 0.0073 | 0.0006 | 0.0067 |
| 206 | 0.0068 | 0.0005 | 0.0063 |
| 207 | 0.0064 | 0.0005 | 0.0059 |
| 208 | 0.0060 | 0.0005 | 0.0055 |
| 209 | 0.0057 | 0.0005 | 0.0053 |
| 210 | 0.0054 | 0.0004 | 0.0050 |
| 211 | 0.0052 | 0.0004 | 0.0048 |
| 212 | 0.0049 | 0.0004 | 0.0046 |
| 213 | 0.0047 | 0.0004 | 0.0044 |
| 214 | 0.0046 | 0.0004 | 0.0042 |
| 215 | 0.0044 | 0.0003 | 0.0040 |
| 216 | 0.0042 | 0.0003 | 0.0039 |
| 217 | 0.0066 | 0.0005 | 0.0060 |
| 218 | 0.0064 | 0.0005 | 0.0059 |
| 219 | 0.0062 | 0.0005 | 0.0057 |
| 220 | 0.0060 | 0.0005 | 0.0055 |
| 221 | 0.0059 | 0.0005 | 0.0054 |
| 222 | 0.0057 | 0.0005 | 0.0053 |
| 223 | 0.0056 | 0.0004 | 0.0051 |
| 224 | 0.0054 | 0.0004 | 0.0050 |
| 225 | 0.0053 | 0.0004 | 0.0049 |
| 226 | 0.0052 | 0.0004 | 0.0048 |
| 227 | 0.0051 | 0.0004 | 0.0047 |
| 228 | 0.0050 | 0.0004 | 0.0046 |

| | | | |
|---|---|---|---|
| 229 | 0.0049 | 0.0004 | 0.0045 |
| 230 | 0.0048 | 0.0004 | 0.0044 |
| 231 | 0.0047 | 0.0004 | 0.0043 |
| 232 | 0.0046 | 0.0004 | 0.0042 |
| 233 | 0.0045 | 0.0004 | 0.0041 |
| 234 | 0.0044 | 0.0004 | 0.0041 |
| 235 | 0.0043 | 0.0003 | 0.0040 |
| 236 | 0.0043 | 0.0003 | 0.0039 |
| 237 | 0.0042 | 0.0003 | 0.0039 |
| 238 | 0.0041 | 0.0003 | 0.0038 |
| 239 | 0.0041 | 0.0003 | 0.0037 |
| 240 | 0.0040 | 0.0003 | 0.0037 |
| 241 | 0.0039 | 0.0003 | 0.0036 |
| 242 | 0.0039 | 0.0003 | 0.0036 |
| 243 | 0.0038 | 0.0003 | 0.0035 |
| 244 | 0.0038 | 0.0003 | 0.0035 |
| 245 | 0.0037 | 0.0003 | 0.0034 |
| 246 | 0.0036 | 0.0003 | 0.0034 |
| 247 | 0.0036 | 0.0003 | 0.0033 |
| 248 | 0.0035 | 0.0003 | 0.0033 |
| 249 | 0.0035 | 0.0003 | 0.0032 |
| 250 | 0.0035 | 0.0003 | 0.0032 |
| 251 | 0.0034 | 0.0003 | 0.0031 |
| 252 | 0.0034 | 0.0003 | 0.0031 |
| 253 | 0.0033 | 0.0003 | 0.0031 |
| 254 | 0.0033 | 0.0003 | 0.0030 |
| 255 | 0.0032 | 0.0003 | 0.0030 |
| 256 | 0.0032 | 0.0003 | 0.0030 |
| 257 | 0.0032 | 0.0003 | 0.0029 |
| 258 | 0.0031 | 0.0002 | 0.0029 |
| 259 | 0.0031 | 0.0002 | 0.0029 |
| 260 | 0.0031 | 0.0002 | 0.0028 |
| 261 | 0.0030 | 0.0002 | 0.0028 |
| 262 | 0.0030 | 0.0002 | 0.0028 |
| 263 | 0.0030 | 0.0002 | 0.0027 |
| 264 | 0.0029 | 0.0002 | 0.0027 |
| 265 | 0.0029 | 0.0002 | 0.0027 |
| 266 | 0.0029 | 0.0002 | 0.0026 |
| 267 | 0.0028 | 0.0002 | 0.0026 |
| 268 | 0.0028 | 0.0002 | 0.0026 |
| 269 | 0.0028 | 0.0002 | 0.0026 |
| 270 | 0.0028 | 0.0002 | 0.0025 |
| 271 | 0.0027 | 0.0002 | 0.0025 |
| 272 | 0.0027 | 0.0002 | 0.0025 |
| 273 | 0.0027 | 0.0002 | 0.0025 |
| 274 | 0.0027 | 0.0002 | 0.0025 |
| 275 | 0.0026 | 0.0002 | 0.0024 |
| 276 | 0.0026 | 0.0002 | 0.0024 |
| 277 | 0.0026 | 0.0002 | 0.0024 |
| 278 | 0.0026 | 0.0002 | 0.0024 |
| 279 | 0.0025 | 0.0002 | 0.0023 |
| 280 | 0.0025 | 0.0002 | 0.0023 |
| 281 | 0.0025 | 0.0002 | 0.0023 |
| 282 | 0.0025 | 0.0002 | 0.0023 |
| 283 | 0.0025 | 0.0002 | 0.0023 |
| 284 | 0.0024 | 0.0002 | 0.0022 |
| 285 | 0.0024 | 0.0002 | 0.0022 |
| 286 | 0.0024 | 0.0002 | 0.0022 |
| 287 | 0.0024 | 0.0002 | 0.0022 |

288 0.0024 0.0002 0.0022

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Total soil rain loss = 0.13(In)
Total effective rainfall = 2.52(In)
Peak flow rate in flood hydrograph = 10.74(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.02 | Q | | | | |
| 0+15 | 0.0004 | 0.04 | Q | | | | |
| 0+20 | 0.0008 | 0.06 | Q | | | | |
| 0+25 | 0.0013 | 0.07 | Q | | | | |
| 0+30 | 0.0018 | 0.07 | Q | | | | |
| 0+35 | 0.0023 | 0.08 | Q | | | | |
| 0+40 | 0.0029 | 0.08 | Q | | | | |
| 0+45 | 0.0035 | 0.08 | Q | | | | |
| 0+50 | 0.0040 | 0.08 | Q | | | | |
| 0+55 | 0.0046 | 0.09 | Q | | | | |
| 1+ 0 | 0.0052 | 0.09 | Q | | | | |
| 1+ 5 | 0.0059 | 0.09 | Q | | | | |
| 1+10 | 0.0065 | 0.09 | Q | | | | |
| 1+15 | 0.0071 | 0.09 | Q | | | | |
| 1+20 | 0.0077 | 0.09 | Q | | | | |
| 1+25 | 0.0084 | 0.09 | Q | | | | |
| 1+30 | 0.0090 | 0.09 | Q | | | | |
| 1+35 | 0.0097 | 0.09 | Q | | | | |
| 1+40 | 0.0103 | 0.09 | Q | | | | |
| 1+45 | 0.0110 | 0.10 | Q | | | | |
| 1+50 | 0.0116 | 0.10 | Q | | | | |
| 1+55 | 0.0123 | 0.10 | Q | | | | |
| 2+ 0 | 0.0130 | 0.10 | Q | | | | |
| 2+ 5 | 0.0136 | 0.10 | Q | | | | |
| 2+10 | 0.0143 | 0.10 | Q | | | | |
| 2+15 | 0.0150 | 0.10 | Q | | | | |
| 2+20 | 0.0156 | 0.10 | Q | | | | |
| 2+25 | 0.0163 | 0.10 | Q | | | | |
| 2+30 | 0.0170 | 0.10 | Q | | | | |
| 2+35 | 0.0177 | 0.10 | Q | | | | |
| 2+40 | 0.0184 | 0.10 | QV | | | | |
| 2+45 | 0.0191 | 0.10 | QV | | | | |
| 2+50 | 0.0198 | 0.10 | QV | | | | |
| 2+55 | 0.0205 | 0.10 | QV | | | | |
| 3+ 0 | 0.0212 | 0.10 | QV | | | | |
| 3+ 5 | 0.0219 | 0.10 | QV | | | | |
| 3+10 | 0.0226 | 0.10 | QV | | | | |
| 3+15 | 0.0233 | 0.10 | QV | | | | |
| 3+20 | 0.0240 | 0.10 | QV | | | | |
| 3+25 | 0.0247 | 0.10 | QV | | | | |
| 3+30 | 0.0254 | 0.10 | QV | | | | |
| 3+35 | 0.0261 | 0.11 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+40 | 0.0269 | 0.11 | QV | | | | |
| 3+45 | 0.0276 | 0.11 | QV | | | | |
| 3+50 | 0.0283 | 0.11 | QV | | | | |
| 3+55 | 0.0291 | 0.11 | QV | | | | |
| 4+ 0 | 0.0298 | 0.11 | QV | | | | |
| 4+ 5 | 0.0306 | 0.11 | QV | | | | |
| 4+10 | 0.0313 | 0.11 | QV | | | | |
| 4+15 | 0.0321 | 0.11 | QV | | | | |
| 4+20 | 0.0328 | 0.11 | QV | | | | |
| 4+25 | 0.0336 | 0.11 | QV | | | | |
| 4+30 | 0.0344 | 0.11 | QV | | | | |
| 4+35 | 0.0351 | 0.11 | QV | | | | |
| 4+40 | 0.0359 | 0.11 | Q V | | | | |
| 4+45 | 0.0367 | 0.11 | Q V | | | | |
| 4+50 | 0.0375 | 0.11 | Q V | | | | |
| 4+55 | 0.0382 | 0.11 | Q V | | | | |
| 5+ 0 | 0.0390 | 0.11 | Q V | | | | |
| 5+ 5 | 0.0398 | 0.12 | Q V | | | | |
| 5+10 | 0.0406 | 0.12 | Q V | | | | |
| 5+15 | 0.0414 | 0.12 | Q V | | | | |
| 5+20 | 0.0422 | 0.12 | Q V | | | | |
| 5+25 | 0.0430 | 0.12 | Q V | | | | |
| 5+30 | 0.0439 | 0.12 | Q V | | | | |
| 5+35 | 0.0447 | 0.12 | Q V | | | | |
| 5+40 | 0.0455 | 0.12 | Q V | | | | |
| 5+45 | 0.0463 | 0.12 | Q V | | | | |
| 5+50 | 0.0472 | 0.12 | Q V | | | | |
| 5+55 | 0.0480 | 0.12 | Q V | | | | |
| 6+ 0 | 0.0489 | 0.12 | Q V | | | | |
| 6+ 5 | 0.0497 | 0.12 | Q V | | | | |
| 6+10 | 0.0506 | 0.12 | Q V | | | | |
| 6+15 | 0.0514 | 0.13 | Q V | | | | |
| 6+20 | 0.0523 | 0.13 | Q V | | | | |
| 6+25 | 0.0532 | 0.13 | Q V | | | | |
| 6+30 | 0.0540 | 0.13 | Q  V | | | | |
| 6+35 | 0.0549 | 0.13 | Q  V | | | | |
| 6+40 | 0.0558 | 0.13 | Q  V | | | | |
| 6+45 | 0.0567 | 0.13 | Q  V | | | | |
| 6+50 | 0.0576 | 0.13 | Q  V | | | | |
| 6+55 | 0.0585 | 0.13 | Q  V | | | | |
| 7+ 0 | 0.0594 | 0.13 | Q  V | | | | |
| 7+ 5 | 0.0604 | 0.13 | Q  V | | | | |
| 7+10 | 0.0613 | 0.13 | Q  V | | | | |
| 7+15 | 0.0622 | 0.14 | Q  V | | | | |
| 7+20 | 0.0631 | 0.14 | Q  V | | | | |
| 7+25 | 0.0641 | 0.14 | Q  V | | | | |
| 7+30 | 0.0650 | 0.14 | Q  V | | | | |
| 7+35 | 0.0660 | 0.14 | Q  V | | | | |
| 7+40 | 0.0670 | 0.14 | Q  V | | | | |
| 7+45 | 0.0679 | 0.14 | Q  V | | | | |
| 7+50 | 0.0689 | 0.14 | Q  V | | | | |
| 7+55 | 0.0699 | 0.14 | Q  V | | | | |
| 8+ 0 | 0.0709 | 0.14 | Q  V | | | | |
| 8+ 5 | 0.0719 | 0.15 | Q   V | | | | |
| 8+10 | 0.0729 | 0.15 | Q   V | | | | |
| 8+15 | 0.0739 | 0.15 | Q   V | | | | |
| 8+20 | 0.0749 | 0.15 | Q   V | | | | |
| 8+25 | 0.0760 | 0.15 | Q   V | | | | |
| 8+30 | 0.0770 | 0.15 | Q   V | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8+35 | 0.0780 | 0.15 | Q | V | | | | |
| 8+40 | 0.0791 | 0.15 | Q | V | | | | |
| 8+45 | 0.0802 | 0.15 | Q | V | | | | |
| 8+50 | 0.0812 | 0.16 | Q | V | | | | |
| 8+55 | 0.0823 | 0.16 | Q | V | | | | |
| 9+ 0 | 0.0834 | 0.16 | Q | V | | | | |
| 9+ 5 | 0.0845 | 0.16 | Q | V | | | | |
| 9+10 | 0.0856 | 0.16 | Q | V | | | | |
| 9+15 | 0.0867 | 0.16 | Q | V | | | | |
| 9+20 | 0.0879 | 0.16 | Q | V | | | | |
| 9+25 | 0.0890 | 0.17 | Q | V | | | | |
| 9+30 | 0.0902 | 0.17 | Q | V | | | | |
| 9+35 | 0.0913 | 0.17 | Q | V | | | | |
| 9+40 | 0.0925 | 0.17 | Q | V | | | | |
| 9+45 | 0.0937 | 0.17 | Q | V | | | | |
| 9+50 | 0.0949 | 0.17 | Q | V | | | | |
| 9+55 | 0.0961 | 0.17 | Q | V | | | | |
| 10+ 0 | 0.0973 | 0.18 | Q | V | | | | |
| 10+ 5 | 0.0985 | 0.18 | Q | V | | | | |
| 10+10 | 0.0998 | 0.18 | Q | V | | | | |
| 10+15 | 0.1010 | 0.18 | Q | V | | | | |
| 10+20 | 0.1023 | 0.18 | Q | V | | | | |
| 10+25 | 0.1036 | 0.19 | Q | V | | | | |
| 10+30 | 0.1049 | 0.19 | Q | V | | | | |
| 10+35 | 0.1062 | 0.19 | Q | V | | | | |
| 10+40 | 0.1075 | 0.19 | Q | V | | | | |
| 10+45 | 0.1088 | 0.19 | Q | V | | | | |
| 10+50 | 0.1102 | 0.20 | Q | V | | | | |
| 10+55 | 0.1115 | 0.20 | Q | V | | | | |
| 11+ 0 | 0.1129 | 0.20 | Q | V | | | | |
| 11+ 5 | 0.1143 | 0.20 | Q | V | | | | |
| 11+10 | 0.1157 | 0.21 | Q | V | | | | |
| 11+15 | 0.1172 | 0.21 | Q | V | | | | |
| 11+20 | 0.1186 | 0.21 | Q | V | | | | |
| 11+25 | 0.1201 | 0.21 | Q | V | | | | |
| 11+30 | 0.1216 | 0.22 | Q | V | | | | |
| 11+35 | 0.1231 | 0.22 | Q | V | | | | |
| 11+40 | 0.1246 | 0.22 | Q | V | | | | |
| 11+45 | 0.1261 | 0.22 | Q | V | | | | |
| 11+50 | 0.1277 | 0.23 | Q | V | | | | |
| 11+55 | 0.1293 | 0.23 | Q | V | | | | |
| 12+ 0 | 0.1309 | 0.23 | Q | V | | | | |
| 12+ 5 | 0.1325 | 0.23 | Q | V | | | | |
| 12+10 | 0.1341 | 0.22 | Q | V | | | | |
| 12+15 | 0.1354 | 0.20 | Q | V | | | | |
| 12+20 | 0.1367 | 0.19 | Q | V | | | | |
| 12+25 | 0.1379 | 0.18 | Q | V | | | | |
| 12+30 | 0.1392 | 0.18 | Q | V | | | | |
| 12+35 | 0.1404 | 0.18 | Q | V | | | | |
| 12+40 | 0.1416 | 0.18 | Q | V | | | | |
| 12+45 | 0.1428 | 0.18 | Q | V | | | | |
| 12+50 | 0.1440 | 0.18 | Q | V | | | | |
| 12+55 | 0.1453 | 0.18 | Q | V | | | | |
| 13+ 0 | 0.1465 | 0.18 | Q | V | | | | |
| 13+ 5 | 0.1478 | 0.19 | Q | V | | | | |
| 13+10 | 0.1491 | 0.19 | Q | V | | | | |
| 13+15 | 0.1505 | 0.19 | Q | V | | | | |
| 13+20 | 0.1518 | 0.20 | Q | V | | | | |
| 13+25 | 0.1532 | 0.20 | Q | V | | | | |

```
13+30       0.1546      0.21  Q       V |          |          |          |
13+35       0.1561      0.21  Q       V |          |          |          |
13+40       0.1576      0.22  Q       V |          |          |          |
13+45       0.1591      0.22  Q       V |          |          |          |
13+50       0.1607      0.23  Q        V|          |          |          |
13+55       0.1623      0.24  Q        V|          |          |          |
14+ 0       0.1640      0.24  Q        V|          |          |          |
14+ 5       0.1657      0.25  Q        V|          |          |          |
14+10       0.1675      0.26  Q        V|          |          |          |
14+15       0.1693      0.27  Q        V|          |          |          |
14+20       0.1712      0.28  Q        V|          |          |          |
14+25       0.1732      0.29  Q        V|          |          |          |
14+30       0.1752      0.30  Q        V|          |          |          |
14+35       0.1774      0.31  Q        V|          |          |          |
14+40       0.1796      0.32  Q         V          |          |          |
14+45       0.1819      0.34  Q         V          |          |          |
14+50       0.1843      0.35  Q         V          |          |          |
14+55       0.1869      0.37  Q         V          |          |          |
15+ 0       0.1895      0.39  Q         V          |          |          |
15+ 5       0.1924      0.41  Q         V          |          |          |
15+10       0.1954      0.44  Q         V          |          |          |
15+15       0.1986      0.47  Q         |V         |          |          |
15+20       0.2020      0.50  Q         |V         |          |          |
15+25       0.2059      0.56  |Q        |V         |          |          |
15+30       0.2108      0.71  |Q        |V         |          |          |
15+35       0.2175      0.97  |Q        | V        |          |          |
15+40       0.2256      1.18  | Q       | V        |          |          |
15+45       0.2352      1.39  | Q       |  V       |          |          |
15+50       0.2464      1.63  |  Q      |  V       |          |          |
15+55       0.2601      1.98  |  Q      |   V      |          |          |
16+ 0       0.2775      2.53  |    Q    |    V     |          |          |
16+ 5       0.3052      4.02  |       Q |      V   |          |          |
16+10       0.3580      7.67  |         |    Q    V|          |          |
16+15       0.4320     10.74  |         |         |Q  V       |          |
16+20       0.4804      7.03  |         |   Q     |     V    |          |
16+25       0.5133      4.77  |        Q|         |       V  |          |
16+30       0.5376      3.52  |      Q  |         |         V|          |
16+35       0.5556      2.62  |    Q    |         |         |V          |
16+40       0.5698      2.06  |   Q     |         |         |V          |
16+45       0.5811      1.63  |  Q      |         |         | V         |
16+50       0.5905      1.36  | Q       |         |         |  V        |
16+55       0.5983      1.14  | Q       |         |         |  V        |
17+ 0       0.6049      0.96  |Q        |         |         |  V        |
17+ 5       0.6106      0.82  |Q        |         |         |   V       |
17+10       0.6152      0.68  |Q        |         |         |   V       |
17+15       0.6191      0.56  |Q        |         |         |   V       |
17+20       0.6227      0.51  |Q        |         |         |   V       |
17+25       0.6260      0.48  Q         |         |         |    V      |
17+30       0.6290      0.44  Q         |         |         |    V      |
17+35       0.6315      0.36  Q         |         |         |    V      |
17+40       0.6337      0.32  Q         |         |         |    V      |
17+45       0.6353      0.24  Q         |         |         |    V      |
17+50       0.6368      0.22  Q         |         |         |    V      |
17+55       0.6382      0.20  Q         |         |         |    V      |
18+ 0       0.6396      0.19  Q         |         |         |    V      |
18+ 5       0.6408      0.19  Q         |         |         |    V      |
18+10       0.6422      0.19  Q         |         |         |     V     |
18+15       0.6436      0.21  Q         |         |         |     V     |
18+20       0.6452      0.22  Q         |         |         |     V     |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18+25 | 0.6467 | 0.22 | Q | \| | \| | \| | V \| |
| 18+30 | 0.6482 | 0.22 | Q | \| | \| | \| | V \| |
| 18+35 | 0.6497 | 0.22 | Q | \| | \| | \| | V \| |
| 18+40 | 0.6512 | 0.22 | Q | \| | \| | \| | V \| |
| 18+45 | 0.6527 | 0.21 | Q | \| | \| | \| | V \| |
| 18+50 | 0.6541 | 0.21 | Q | \| | \| | \| | V \| |
| 18+55 | 0.6556 | 0.21 | Q | \| | \| | \| | V \| |
| 19+ 0 | 0.6570 | 0.20 | Q | \| | \| | \| | V \| |
| 19+ 5 | 0.6583 | 0.20 | Q | \| | \| | \| | V \| |
| 19+10 | 0.6597 | 0.19 | Q | \| | \| | \| | V \| |
| 19+15 | 0.6610 | 0.19 | Q | \| | \| | \| | V \| |
| 19+20 | 0.6622 | 0.19 | Q | \| | \| | \| | V \| |
| 19+25 | 0.6635 | 0.18 | Q | \| | \| | \| | V \| |
| 19+30 | 0.6647 | 0.18 | Q | \| | \| | \| | V \| |
| 19+35 | 0.6660 | 0.18 | Q | \| | \| | \| | V \| |
| 19+40 | 0.6672 | 0.17 | Q | \| | \| | \| | V \| |
| 19+45 | 0.6683 | 0.17 | Q | \| | \| | \| | V \| |
| 19+50 | 0.6695 | 0.17 | Q | \| | \| | \| | V \| |
| 19+55 | 0.6706 | 0.16 | Q | \| | \| | \| | V \| |
| 20+ 0 | 0.6717 | 0.16 | Q | \| | \| | \| | V \| |
| 20+ 5 | 0.6728 | 0.16 | Q | \| | \| | \| | V \| |
| 20+10 | 0.6739 | 0.16 | Q | \| | \| | \| | V \| |
| 20+15 | 0.6749 | 0.15 | Q | \| | \| | \| | V \| |
| 20+20 | 0.6760 | 0.15 | Q | \| | \| | \| | V \| |
| 20+25 | 0.6770 | 0.15 | Q | \| | \| | \| | V \| |
| 20+30 | 0.6780 | 0.15 | Q | \| | \| | \| | V \| |
| 20+35 | 0.6790 | 0.14 | Q | \| | \| | \| | V \| |
| 20+40 | 0.6800 | 0.14 | Q | \| | \| | \| | V \| |
| 20+45 | 0.6809 | 0.14 | Q | \| | \| | \| | V \| |
| 20+50 | 0.6819 | 0.14 | Q | \| | \| | \| | V \| |
| 20+55 | 0.6828 | 0.14 | Q | \| | \| | \| | V \| |
| 21+ 0 | 0.6837 | 0.13 | Q | \| | \| | \| | V \| |
| 21+ 5 | 0.6847 | 0.13 | Q | \| | \| | \| | V \| |
| 21+10 | 0.6856 | 0.13 | Q | \| | \| | \| | V \| |
| 21+15 | 0.6864 | 0.13 | Q | \| | \| | \| | V \| |
| 21+20 | 0.6873 | 0.13 | Q | \| | \| | \| | V \| |
| 21+25 | 0.6882 | 0.13 | Q | \| | \| | \| | V \| |
| 21+30 | 0.6890 | 0.12 | Q | \| | \| | \| | V \| |
| 21+35 | 0.6899 | 0.12 | Q | \| | \| | \| | V \| |
| 21+40 | 0.6907 | 0.12 | Q | \| | \| | \| | V \| |
| 21+45 | 0.6916 | 0.12 | Q | \| | \| | \| | V \| |
| 21+50 | 0.6924 | 0.12 | Q | \| | \| | \| | V \| |
| 21+55 | 0.6932 | 0.12 | Q | \| | \| | \| | V \| |
| 22+ 0 | 0.6940 | 0.12 | Q | \| | \| | \| | V \| |
| 22+ 5 | 0.6948 | 0.11 | Q | \| | \| | \| | V \| |
| 22+10 | 0.6955 | 0.11 | Q | \| | \| | \| | V\| |
| 22+15 | 0.6963 | 0.11 | Q | \| | \| | \| | V\| |
| 22+20 | 0.6971 | 0.11 | Q | \| | \| | \| | V\| |
| 22+25 | 0.6978 | 0.11 | Q | \| | \| | \| | V\| |
| 22+30 | 0.6986 | 0.11 | Q | \| | \| | \| | V\| |
| 22+35 | 0.6993 | 0.11 | Q | \| | \| | \| | V\| |
| 22+40 | 0.7001 | 0.11 | Q | \| | \| | \| | V\| |
| 22+45 | 0.7008 | 0.11 | Q | \| | \| | \| | V\| |
| 22+50 | 0.7015 | 0.10 | Q | \| | \| | \| | V\| |
| 22+55 | 0.7022 | 0.10 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.7029 | 0.10 | Q | \| | \| | \| | V\| |
| 23+ 5 | 0.7036 | 0.10 | Q | \| | \| | \| | V\| |
| 23+10 | 0.7043 | 0.10 | Q | \| | \| | \| | V\| |
| 23+15 | 0.7050 | 0.10 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+20 | 0.7057 | 0.10 | Q | \| | \| | \| | V\| |
| 23+25 | 0.7064 | 0.10 | Q | \| | \| | \| | V\| |
| 23+30 | 0.7070 | 0.10 | Q | \| | \| | \| | V\| |
| 23+35 | 0.7077 | 0.10 | Q | \| | \| | \| | V\| |
| 23+40 | 0.7083 | 0.10 | Q | \| | \| | \| | V\| |
| 23+45 | 0.7090 | 0.09 | Q | \| | \| | \| | V\| |
| 23+50 | 0.7096 | 0.09 | Q | \| | \| | \| | V\| |
| 23+55 | 0.7103 | 0.09 | Q | \| | \| | \| | V\| |
| 24+ 0 | 0.7109 | 0.09 | Q | \| | \| | \| | V\| |
| 24+ 5 | 0.7115 | 0.09 | Q | \| | \| | \| | V\| |
| 24+10 | 0.7120 | 0.07 | Q | \| | \| | \| | V\| |
| 24+15 | 0.7124 | 0.05 | Q | \| | \| | \| | V\| |
| 24+20 | 0.7126 | 0.03 | Q | \| | \| | \| | V\| |
| 24+25 | 0.7127 | 0.02 | Q | \| | \| | \| | V\| |
| 24+30 | 0.7129 | 0.02 | Q | \| | \| | \| | V\| |
| 24+35 | 0.7130 | 0.01 | Q | \| | \| | \| | V\| |
| 24+40 | 0.7130 | 0.01 | Q | \| | \| | \| | V\| |
| 24+45 | 0.7131 | 0.01 | Q | \| | \| | \| | V\| |
| 24+50 | 0.7131 | 0.01 | Q | \| | \| | \| | V\| |
| 24+55 | 0.7132 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 0 | 0.7132 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 5 | 0.7132 | 0.00 | Q | \| | \| | \| | V\| |
| 25+10 | 0.7132 | 0.00 | Q | \| | \| | \| | V\| |
| 25+15 | 0.7132 | 0.00 | Q | \| | \| | \| | V\| |
| 25+20 | 0.7132 | 0.00 | Q | \| | \| | \| | V\| |
| 25+25 | 0.7132 | 0.00 | Q | \| | \| | \| | V\| |
| 25+30 | 0.7133 | 0.00 | Q | \| | \| | \| | V\| |
| 25+35 | 0.7133 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 41
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 2.26 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 2.26 | 6 | 1.86 |
| Rainfall data for year 100 | | |
| 2.26 | 24 | 2.65 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 91.0 | 98.2 | 2.26 | 1.000 | 0.036 | 0.900 | 0.032 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.032

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 2.03 | 0.900 | 91.0 | 98.2 | 0.18 | 0.922 |
| 0.23 | 0.100 | 98.0 | 98.0 | 0.20 | 0.913 |

Area-averaged catchment yield fraction, Y = 0.921
Area-averaged low loss fraction, Yb = 0.079
User entry of time of concentration = 0.240 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 2.26(Ac.)
Catchment Lag time = 0.192 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 43.4028
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.032(In/Hr)
Average low loss rate fraction (Yb) = 0.079 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.662(In)
Specified peak 6-hour rainfall = 1.860(In)
Specified peak 24-hour rainfall = 2.650(In)

Rainfall depth area reduction factors:
Using a total area of 2.26(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.659(In)
30-minute factor = 1.000 Adjusted rainfall = 1.129(In)
1-hour factor = 1.000 Adjusted rainfall = 1.390(In)
3-hour factor = 1.000 Adjusted rainfall = 1.662(In)
6-hour factor = 1.000 Adjusted rainfall = 1.860(In)
24-hour factor = 1.000 Adjusted rainfall = 2.650(In)
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U n i t H y d r o g r a p h
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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 27.33 (CFS)) | |
| 1 | 3.137 | 0.857 |
| 2 | 22.663 | 5.337 |
| 3 | 53.668 | 8.474 |
| 4 | 68.764 | 4.126 |
| 5 | 77.374 | 2.353 |
| 6 | 83.049 | 1.551 |
| 7 | 87.227 | 1.142 |
| 8 | 90.208 | 0.815 |
| 9 | 92.496 | 0.625 |
| 10 | 94.309 | 0.495 |
| 11 | 95.725 | 0.387 |
| 12 | 96.837 | 0.304 |
| 13 | 97.647 | 0.221 |

| | | |
|---|---|---|
| 14 | 98.161 | 0.140 |
| 15 | 98.652 | 0.134 |
| 16 | 99.173 | 0.142 |
| 17 | 99.599 | 0.116 |
| 18 | 100.000 | 0.110 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6595 | 0.6595 |
| 2 | 0.8119 | 0.1524 |
| 3 | 0.9170 | 0.1050 |
| 4 | 0.9996 | 0.0827 |
| 5 | 1.0688 | 0.0692 |
| 6 | 1.1289 | 0.0601 |
| 7 | 1.1823 | 0.0534 |
| 8 | 1.2307 | 0.0483 |
| 9 | 1.2749 | 0.0443 |
| 10 | 1.3159 | 0.0409 |
| 11 | 1.3540 | 0.0382 |
| 12 | 1.3899 | 0.0358 |
| 13 | 1.4081 | 0.0182 |
| 14 | 1.4251 | 0.0171 |
| 15 | 1.4412 | 0.0161 |
| 16 | 1.4564 | 0.0152 |
| 17 | 1.4709 | 0.0144 |
| 18 | 1.4846 | 0.0137 |
| 19 | 1.4977 | 0.0131 |
| 20 | 1.5103 | 0.0125 |
| 21 | 1.5223 | 0.0120 |
| 22 | 1.5339 | 0.0116 |
| 23 | 1.5450 | 0.0111 |
| 24 | 1.5557 | 0.0107 |
| 25 | 1.5661 | 0.0104 |
| 26 | 1.5761 | 0.0100 |
| 27 | 1.5858 | 0.0097 |
| 28 | 1.5952 | 0.0094 |
| 29 | 1.6043 | 0.0091 |
| 30 | 1.6132 | 0.0089 |
| 31 | 1.6218 | 0.0086 |
| 32 | 1.6302 | 0.0084 |
| 33 | 1.6384 | 0.0082 |
| 34 | 1.6464 | 0.0080 |
| 35 | 1.6542 | 0.0078 |
| 36 | 1.6618 | 0.0076 |
| 37 | 1.6692 | 0.0074 |
| 38 | 1.6764 | 0.0073 |
| 39 | 1.6835 | 0.0071 |
| 40 | 1.6905 | 0.0069 |
| 41 | 1.6973 | 0.0068 |
| 42 | 1.7039 | 0.0067 |
| 43 | 1.7105 | 0.0065 |
| 44 | 1.7169 | 0.0064 |
| 45 | 1.7232 | 0.0063 |
| 46 | 1.7293 | 0.0062 |
| 47 | 1.7354 | 0.0061 |
| 48 | 1.7413 | 0.0059 |
| 49 | 1.7472 | 0.0058 |
| 50 | 1.7529 | 0.0057 |
| 51 | 1.7586 | 0.0057 |

| | | |
|---|---|---|
| 52 | 1.7641 | 0.0056 |
| 53 | 1.7696 | 0.0055 |
| 54 | 1.7750 | 0.0054 |
| 55 | 1.7803 | 0.0053 |
| 56 | 1.7855 | 0.0052 |
| 57 | 1.7907 | 0.0051 |
| 58 | 1.7957 | 0.0051 |
| 59 | 1.8007 | 0.0050 |
| 60 | 1.8057 | 0.0049 |
| 61 | 1.8105 | 0.0049 |
| 62 | 1.8153 | 0.0048 |
| 63 | 1.8200 | 0.0047 |
| 64 | 1.8247 | 0.0047 |
| 65 | 1.8293 | 0.0046 |
| 66 | 1.8339 | 0.0045 |
| 67 | 1.8384 | 0.0045 |
| 68 | 1.8428 | 0.0044 |
| 69 | 1.8472 | 0.0044 |
| 70 | 1.8515 | 0.0043 |
| 71 | 1.8558 | 0.0043 |
| 72 | 1.8600 | 0.0042 |
| 73 | 1.8665 | 0.0066 |
| 74 | 1.8730 | 0.0065 |
| 75 | 1.8795 | 0.0064 |
| 76 | 1.8858 | 0.0064 |
| 77 | 1.8921 | 0.0063 |
| 78 | 1.8984 | 0.0062 |
| 79 | 1.9046 | 0.0062 |
| 80 | 1.9107 | 0.0061 |
| 81 | 1.9168 | 0.0061 |
| 82 | 1.9228 | 0.0060 |
| 83 | 1.9288 | 0.0060 |
| 84 | 1.9347 | 0.0059 |
| 85 | 1.9405 | 0.0059 |
| 86 | 1.9463 | 0.0058 |
| 87 | 1.9521 | 0.0058 |
| 88 | 1.9578 | 0.0057 |
| 89 | 1.9634 | 0.0057 |
| 90 | 1.9690 | 0.0056 |
| 91 | 1.9746 | 0.0056 |
| 92 | 1.9801 | 0.0055 |
| 93 | 1.9856 | 0.0055 |
| 94 | 1.9910 | 0.0054 |
| 95 | 1.9964 | 0.0054 |
| 96 | 2.0018 | 0.0053 |
| 97 | 2.0071 | 0.0053 |
| 98 | 2.0123 | 0.0053 |
| 99 | 2.0176 | 0.0052 |
| 100 | 2.0227 | 0.0052 |
| 101 | 2.0279 | 0.0051 |
| 102 | 2.0330 | 0.0051 |
| 103 | 2.0381 | 0.0051 |
| 104 | 2.0431 | 0.0050 |
| 105 | 2.0481 | 0.0050 |
| 106 | 2.0531 | 0.0050 |
| 107 | 2.0580 | 0.0049 |
| 108 | 2.0629 | 0.0049 |
| 109 | 2.0677 | 0.0049 |
| 110 | 2.0726 | 0.0048 |

| | | |
|---|---|---|
| 111 | 2.0774 | 0.0048 |
| 112 | 2.0821 | 0.0048 |
| 113 | 2.0869 | 0.0047 |
| 114 | 2.0916 | 0.0047 |
| 115 | 2.0962 | 0.0047 |
| 116 | 2.1009 | 0.0046 |
| 117 | 2.1055 | 0.0046 |
| 118 | 2.1101 | 0.0046 |
| 119 | 2.1146 | 0.0046 |
| 120 | 2.1191 | 0.0045 |
| 121 | 2.1236 | 0.0045 |
| 122 | 2.1281 | 0.0045 |
| 123 | 2.1325 | 0.0044 |
| 124 | 2.1370 | 0.0044 |
| 125 | 2.1413 | 0.0044 |
| 126 | 2.1457 | 0.0044 |
| 127 | 2.1500 | 0.0043 |
| 128 | 2.1543 | 0.0043 |
| 129 | 2.1586 | 0.0043 |
| 130 | 2.1629 | 0.0043 |
| 131 | 2.1671 | 0.0042 |
| 132 | 2.1713 | 0.0042 |
| 133 | 2.1755 | 0.0042 |
| 134 | 2.1797 | 0.0042 |
| 135 | 2.1838 | 0.0041 |
| 136 | 2.1880 | 0.0041 |
| 137 | 2.1921 | 0.0041 |
| 138 | 2.1961 | 0.0041 |
| 139 | 2.2002 | 0.0041 |
| 140 | 2.2042 | 0.0040 |
| 141 | 2.2082 | 0.0040 |
| 142 | 2.2122 | 0.0040 |
| 143 | 2.2162 | 0.0040 |
| 144 | 2.2201 | 0.0039 |
| 145 | 2.2241 | 0.0039 |
| 146 | 2.2280 | 0.0039 |
| 147 | 2.2318 | 0.0039 |
| 148 | 2.2357 | 0.0039 |
| 149 | 2.2396 | 0.0038 |
| 150 | 2.2434 | 0.0038 |
| 151 | 2.2472 | 0.0038 |
| 152 | 2.2510 | 0.0038 |
| 153 | 2.2548 | 0.0038 |
| 154 | 2.2585 | 0.0038 |
| 155 | 2.2622 | 0.0037 |
| 156 | 2.2660 | 0.0037 |
| 157 | 2.2697 | 0.0037 |
| 158 | 2.2734 | 0.0037 |
| 159 | 2.2770 | 0.0037 |
| 160 | 2.2807 | 0.0036 |
| 161 | 2.2843 | 0.0036 |
| 162 | 2.2879 | 0.0036 |
| 163 | 2.2915 | 0.0036 |
| 164 | 2.2951 | 0.0036 |
| 165 | 2.2987 | 0.0036 |
| 166 | 2.3022 | 0.0035 |
| 167 | 2.3057 | 0.0035 |
| 168 | 2.3093 | 0.0035 |
| 169 | 2.3128 | 0.0035 |

| | | |
|---|---|---|
| 170 | 2.3162 | 0.0035 |
| 171 | 2.3197 | 0.0035 |
| 172 | 2.3232 | 0.0035 |
| 173 | 2.3266 | 0.0034 |
| 174 | 2.3300 | 0.0034 |
| 175 | 2.3335 | 0.0034 |
| 176 | 2.3369 | 0.0034 |
| 177 | 2.3402 | 0.0034 |
| 178 | 2.3436 | 0.0034 |
| 179 | 2.3470 | 0.0034 |
| 180 | 2.3503 | 0.0033 |
| 181 | 2.3536 | 0.0033 |
| 182 | 2.3569 | 0.0033 |
| 183 | 2.3602 | 0.0033 |
| 184 | 2.3635 | 0.0033 |
| 185 | 2.3668 | 0.0033 |
| 186 | 2.3701 | 0.0033 |
| 187 | 2.3733 | 0.0032 |
| 188 | 2.3765 | 0.0032 |
| 189 | 2.3798 | 0.0032 |
| 190 | 2.3830 | 0.0032 |
| 191 | 2.3862 | 0.0032 |
| 192 | 2.3894 | 0.0032 |
| 193 | 2.3925 | 0.0032 |
| 194 | 2.3957 | 0.0032 |
| 195 | 2.3988 | 0.0031 |
| 196 | 2.4020 | 0.0031 |
| 197 | 2.4051 | 0.0031 |
| 198 | 2.4082 | 0.0031 |
| 199 | 2.4113 | 0.0031 |
| 200 | 2.4144 | 0.0031 |
| 201 | 2.4175 | 0.0031 |
| 202 | 2.4205 | 0.0031 |
| 203 | 2.4236 | 0.0031 |
| 204 | 2.4266 | 0.0030 |
| 205 | 2.4297 | 0.0030 |
| 206 | 2.4327 | 0.0030 |
| 207 | 2.4357 | 0.0030 |
| 208 | 2.4387 | 0.0030 |
| 209 | 2.4417 | 0.0030 |
| 210 | 2.4447 | 0.0030 |
| 211 | 2.4476 | 0.0030 |
| 212 | 2.4506 | 0.0030 |
| 213 | 2.4535 | 0.0029 |
| 214 | 2.4565 | 0.0029 |
| 215 | 2.4594 | 0.0029 |
| 216 | 2.4623 | 0.0029 |
| 217 | 2.4652 | 0.0029 |
| 218 | 2.4681 | 0.0029 |
| 219 | 2.4710 | 0.0029 |
| 220 | 2.4739 | 0.0029 |
| 221 | 2.4767 | 0.0029 |
| 222 | 2.4796 | 0.0029 |
| 223 | 2.4824 | 0.0028 |
| 224 | 2.4853 | 0.0028 |
| 225 | 2.4881 | 0.0028 |
| 226 | 2.4909 | 0.0028 |
| 227 | 2.4937 | 0.0028 |
| 228 | 2.4965 | 0.0028 |

| | | |
|---|---|---|
| 229 | 2.4993 | 0.0028 |
| 230 | 2.5021 | 0.0028 |
| 231 | 2.5049 | 0.0028 |
| 232 | 2.5076 | 0.0028 |
| 233 | 2.5104 | 0.0028 |
| 234 | 2.5131 | 0.0027 |
| 235 | 2.5159 | 0.0027 |
| 236 | 2.5186 | 0.0027 |
| 237 | 2.5213 | 0.0027 |
| 238 | 2.5240 | 0.0027 |
| 239 | 2.5268 | 0.0027 |
| 240 | 2.5294 | 0.0027 |
| 241 | 2.5321 | 0.0027 |
| 242 | 2.5348 | 0.0027 |
| 243 | 2.5375 | 0.0027 |
| 244 | 2.5401 | 0.0027 |
| 245 | 2.5428 | 0.0027 |
| 246 | 2.5454 | 0.0026 |
| 247 | 2.5481 | 0.0026 |
| 248 | 2.5507 | 0.0026 |
| 249 | 2.5533 | 0.0026 |
| 250 | 2.5560 | 0.0026 |
| 251 | 2.5586 | 0.0026 |
| 252 | 2.5612 | 0.0026 |
| 253 | 2.5638 | 0.0026 |
| 254 | 2.5663 | 0.0026 |
| 255 | 2.5689 | 0.0026 |
| 256 | 2.5715 | 0.0026 |
| 257 | 2.5740 | 0.0026 |
| 258 | 2.5766 | 0.0026 |
| 259 | 2.5791 | 0.0025 |
| 260 | 2.5817 | 0.0025 |
| 261 | 2.5842 | 0.0025 |
| 262 | 2.5867 | 0.0025 |
| 263 | 2.5893 | 0.0025 |
| 264 | 2.5918 | 0.0025 |
| 265 | 2.5943 | 0.0025 |
| 266 | 2.5968 | 0.0025 |
| 267 | 2.5993 | 0.0025 |
| 268 | 2.6017 | 0.0025 |
| 269 | 2.6042 | 0.0025 |
| 270 | 2.6067 | 0.0025 |
| 271 | 2.6091 | 0.0025 |
| 272 | 2.6116 | 0.0025 |
| 273 | 2.6140 | 0.0024 |
| 274 | 2.6165 | 0.0024 |
| 275 | 2.6189 | 0.0024 |
| 276 | 2.6213 | 0.0024 |
| 277 | 2.6238 | 0.0024 |
| 278 | 2.6262 | 0.0024 |
| 279 | 2.6286 | 0.0024 |
| 280 | 2.6310 | 0.0024 |
| 281 | 2.6334 | 0.0024 |
| 282 | 2.6358 | 0.0024 |
| 283 | 2.6382 | 0.0024 |
| 284 | 2.6405 | 0.0024 |
| 285 | 2.6429 | 0.0024 |
| 286 | 2.6453 | 0.0024 |
| 287 | 2.6476 | 0.0024 |

288 2.6500 0.0024

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0024 | 0.0002 | 0.0022 |
| 2 | 0.0024 | 0.0002 | 0.0022 |
| 3 | 0.0024 | 0.0002 | 0.0022 |
| 4 | 0.0024 | 0.0002 | 0.0022 |
| 5 | 0.0024 | 0.0002 | 0.0022 |
| 6 | 0.0024 | 0.0002 | 0.0022 |
| 7 | 0.0024 | 0.0002 | 0.0022 |
| 8 | 0.0024 | 0.0002 | 0.0022 |
| 9 | 0.0024 | 0.0002 | 0.0022 |
| 10 | 0.0024 | 0.0002 | 0.0022 |
| 11 | 0.0024 | 0.0002 | 0.0023 |
| 12 | 0.0025 | 0.0002 | 0.0023 |
| 13 | 0.0025 | 0.0002 | 0.0023 |
| 14 | 0.0025 | 0.0002 | 0.0023 |
| 15 | 0.0025 | 0.0002 | 0.0023 |
| 16 | 0.0025 | 0.0002 | 0.0023 |
| 17 | 0.0025 | 0.0002 | 0.0023 |
| 18 | 0.0025 | 0.0002 | 0.0023 |
| 19 | 0.0025 | 0.0002 | 0.0023 |
| 20 | 0.0025 | 0.0002 | 0.0023 |
| 21 | 0.0026 | 0.0002 | 0.0024 |
| 22 | 0.0026 | 0.0002 | 0.0024 |
| 23 | 0.0026 | 0.0002 | 0.0024 |
| 24 | 0.0026 | 0.0002 | 0.0024 |
| 25 | 0.0026 | 0.0002 | 0.0024 |
| 26 | 0.0026 | 0.0002 | 0.0024 |
| 27 | 0.0026 | 0.0002 | 0.0024 |
| 28 | 0.0026 | 0.0002 | 0.0024 |
| 29 | 0.0026 | 0.0002 | 0.0024 |
| 30 | 0.0027 | 0.0002 | 0.0024 |
| 31 | 0.0027 | 0.0002 | 0.0025 |
| 32 | 0.0027 | 0.0002 | 0.0025 |
| 33 | 0.0027 | 0.0002 | 0.0025 |
| 34 | 0.0027 | 0.0002 | 0.0025 |
| 35 | 0.0027 | 0.0002 | 0.0025 |
| 36 | 0.0027 | 0.0002 | 0.0025 |
| 37 | 0.0027 | 0.0002 | 0.0025 |
| 38 | 0.0028 | 0.0002 | 0.0025 |
| 39 | 0.0028 | 0.0002 | 0.0026 |
| 40 | 0.0028 | 0.0002 | 0.0026 |
| 41 | 0.0028 | 0.0002 | 0.0026 |
| 42 | 0.0028 | 0.0002 | 0.0026 |
| 43 | 0.0028 | 0.0002 | 0.0026 |
| 44 | 0.0028 | 0.0002 | 0.0026 |
| 45 | 0.0029 | 0.0002 | 0.0026 |
| 46 | 0.0029 | 0.0002 | 0.0026 |
| 47 | 0.0029 | 0.0002 | 0.0027 |
| 48 | 0.0029 | 0.0002 | 0.0027 |
| 49 | 0.0029 | 0.0002 | 0.0027 |
| 50 | 0.0029 | 0.0002 | 0.0027 |
| 51 | 0.0029 | 0.0002 | 0.0027 |
| 52 | 0.0030 | 0.0002 | 0.0027 |
| 53 | 0.0030 | 0.0002 | 0.0027 |

| | | | |
|---|---|---|---|
| 54 | 0.0030 | 0.0002 | 0.0028 |
| 55 | 0.0030 | 0.0002 | 0.0028 |
| 56 | 0.0030 | 0.0002 | 0.0028 |
| 57 | 0.0030 | 0.0002 | 0.0028 |
| 58 | 0.0031 | 0.0002 | 0.0028 |
| 59 | 0.0031 | 0.0002 | 0.0028 |
| 60 | 0.0031 | 0.0002 | 0.0028 |
| 61 | 0.0031 | 0.0002 | 0.0029 |
| 62 | 0.0031 | 0.0002 | 0.0029 |
| 63 | 0.0031 | 0.0002 | 0.0029 |
| 64 | 0.0032 | 0.0003 | 0.0029 |
| 65 | 0.0032 | 0.0003 | 0.0029 |
| 66 | 0.0032 | 0.0003 | 0.0029 |
| 67 | 0.0032 | 0.0003 | 0.0030 |
| 68 | 0.0032 | 0.0003 | 0.0030 |
| 69 | 0.0033 | 0.0003 | 0.0030 |
| 70 | 0.0033 | 0.0003 | 0.0030 |
| 71 | 0.0033 | 0.0003 | 0.0030 |
| 72 | 0.0033 | 0.0003 | 0.0031 |
| 73 | 0.0033 | 0.0003 | 0.0031 |
| 74 | 0.0034 | 0.0003 | 0.0031 |
| 75 | 0.0034 | 0.0003 | 0.0031 |
| 76 | 0.0034 | 0.0003 | 0.0031 |
| 77 | 0.0034 | 0.0003 | 0.0032 |
| 78 | 0.0034 | 0.0003 | 0.0032 |
| 79 | 0.0035 | 0.0003 | 0.0032 |
| 80 | 0.0035 | 0.0003 | 0.0032 |
| 81 | 0.0035 | 0.0003 | 0.0032 |
| 82 | 0.0035 | 0.0003 | 0.0033 |
| 83 | 0.0036 | 0.0003 | 0.0033 |
| 84 | 0.0036 | 0.0003 | 0.0033 |
| 85 | 0.0036 | 0.0003 | 0.0033 |
| 86 | 0.0036 | 0.0003 | 0.0033 |
| 87 | 0.0037 | 0.0003 | 0.0034 |
| 88 | 0.0037 | 0.0003 | 0.0034 |
| 89 | 0.0037 | 0.0003 | 0.0034 |
| 90 | 0.0037 | 0.0003 | 0.0034 |
| 91 | 0.0038 | 0.0003 | 0.0035 |
| 92 | 0.0038 | 0.0003 | 0.0035 |
| 93 | 0.0038 | 0.0003 | 0.0035 |
| 94 | 0.0038 | 0.0003 | 0.0035 |
| 95 | 0.0039 | 0.0003 | 0.0036 |
| 96 | 0.0039 | 0.0003 | 0.0036 |
| 97 | 0.0039 | 0.0003 | 0.0036 |
| 98 | 0.0040 | 0.0003 | 0.0037 |
| 99 | 0.0040 | 0.0003 | 0.0037 |
| 100 | 0.0040 | 0.0003 | 0.0037 |
| 101 | 0.0041 | 0.0003 | 0.0038 |
| 102 | 0.0041 | 0.0003 | 0.0038 |
| 103 | 0.0041 | 0.0003 | 0.0038 |
| 104 | 0.0042 | 0.0003 | 0.0038 |
| 105 | 0.0042 | 0.0003 | 0.0039 |
| 106 | 0.0042 | 0.0003 | 0.0039 |
| 107 | 0.0043 | 0.0003 | 0.0039 |
| 108 | 0.0043 | 0.0003 | 0.0040 |
| 109 | 0.0044 | 0.0003 | 0.0040 |
| 110 | 0.0044 | 0.0003 | 0.0040 |
| 111 | 0.0044 | 0.0004 | 0.0041 |
| 112 | 0.0045 | 0.0004 | 0.0041 |

| | | | |
|---|---|---|---|
| 113 | 0.0045 | 0.0004 | 0.0042 |
| 114 | 0.0046 | 0.0004 | 0.0042 |
| 115 | 0.0046 | 0.0004 | 0.0042 |
| 116 | 0.0046 | 0.0004 | 0.0043 |
| 117 | 0.0047 | 0.0004 | 0.0043 |
| 118 | 0.0047 | 0.0004 | 0.0044 |
| 119 | 0.0048 | 0.0004 | 0.0044 |
| 120 | 0.0048 | 0.0004 | 0.0044 |
| 121 | 0.0049 | 0.0004 | 0.0045 |
| 122 | 0.0049 | 0.0004 | 0.0045 |
| 123 | 0.0050 | 0.0004 | 0.0046 |
| 124 | 0.0050 | 0.0004 | 0.0046 |
| 125 | 0.0051 | 0.0004 | 0.0047 |
| 126 | 0.0051 | 0.0004 | 0.0047 |
| 127 | 0.0052 | 0.0004 | 0.0048 |
| 128 | 0.0053 | 0.0004 | 0.0048 |
| 129 | 0.0053 | 0.0004 | 0.0049 |
| 130 | 0.0054 | 0.0004 | 0.0050 |
| 131 | 0.0055 | 0.0004 | 0.0050 |
| 132 | 0.0055 | 0.0004 | 0.0051 |
| 133 | 0.0056 | 0.0004 | 0.0052 |
| 134 | 0.0057 | 0.0004 | 0.0052 |
| 135 | 0.0058 | 0.0005 | 0.0053 |
| 136 | 0.0058 | 0.0005 | 0.0053 |
| 137 | 0.0059 | 0.0005 | 0.0054 |
| 138 | 0.0060 | 0.0005 | 0.0055 |
| 139 | 0.0061 | 0.0005 | 0.0056 |
| 140 | 0.0061 | 0.0005 | 0.0056 |
| 141 | 0.0062 | 0.0005 | 0.0057 |
| 142 | 0.0063 | 0.0005 | 0.0058 |
| 143 | 0.0064 | 0.0005 | 0.0059 |
| 144 | 0.0065 | 0.0005 | 0.0060 |
| 145 | 0.0042 | 0.0003 | 0.0039 |
| 146 | 0.0043 | 0.0003 | 0.0039 |
| 147 | 0.0044 | 0.0003 | 0.0040 |
| 148 | 0.0044 | 0.0004 | 0.0041 |
| 149 | 0.0045 | 0.0004 | 0.0042 |
| 150 | 0.0046 | 0.0004 | 0.0042 |
| 151 | 0.0047 | 0.0004 | 0.0044 |
| 152 | 0.0048 | 0.0004 | 0.0044 |
| 153 | 0.0049 | 0.0004 | 0.0045 |
| 154 | 0.0050 | 0.0004 | 0.0046 |
| 155 | 0.0051 | 0.0004 | 0.0047 |
| 156 | 0.0052 | 0.0004 | 0.0048 |
| 157 | 0.0054 | 0.0004 | 0.0050 |
| 158 | 0.0055 | 0.0004 | 0.0050 |
| 159 | 0.0057 | 0.0004 | 0.0052 |
| 160 | 0.0057 | 0.0005 | 0.0053 |
| 161 | 0.0059 | 0.0005 | 0.0055 |
| 162 | 0.0061 | 0.0005 | 0.0056 |
| 163 | 0.0063 | 0.0005 | 0.0058 |
| 164 | 0.0064 | 0.0005 | 0.0059 |
| 165 | 0.0067 | 0.0005 | 0.0061 |
| 166 | 0.0068 | 0.0005 | 0.0063 |
| 167 | 0.0071 | 0.0006 | 0.0065 |
| 168 | 0.0073 | 0.0006 | 0.0067 |
| 169 | 0.0076 | 0.0006 | 0.0070 |
| 170 | 0.0078 | 0.0006 | 0.0072 |
| 171 | 0.0082 | 0.0006 | 0.0075 |

| | | | |
|---|---|---|---|
| 172 | 0.0084 | 0.0007 | 0.0077 |
| 173 | 0.0089 | 0.0007 | 0.0082 |
| 174 | 0.0091 | 0.0007 | 0.0084 |
| 175 | 0.0097 | 0.0008 | 0.0089 |
| 176 | 0.0100 | 0.0008 | 0.0092 |
| 177 | 0.0107 | 0.0009 | 0.0099 |
| 178 | 0.0111 | 0.0009 | 0.0102 |
| 179 | 0.0120 | 0.0010 | 0.0111 |
| 180 | 0.0125 | 0.0010 | 0.0116 |
| 181 | 0.0137 | 0.0011 | 0.0126 |
| 182 | 0.0144 | 0.0011 | 0.0133 |
| 183 | 0.0161 | 0.0013 | 0.0148 |
| 184 | 0.0171 | 0.0014 | 0.0157 |
| 185 | 0.0358 | 0.0027 | 0.0331 |
| 186 | 0.0382 | 0.0027 | 0.0355 |
| 187 | 0.0443 | 0.0027 | 0.0416 |
| 188 | 0.0483 | 0.0027 | 0.0456 |
| 189 | 0.0601 | 0.0027 | 0.0574 |
| 190 | 0.0692 | 0.0027 | 0.0665 |
| 191 | 0.1050 | 0.0027 | 0.1023 |
| 192 | 0.1524 | 0.0027 | 0.1498 |
| 193 | 0.6595 | 0.0027 | 0.6568 |
| 194 | 0.0827 | 0.0027 | 0.0800 |
| 195 | 0.0534 | 0.0027 | 0.0508 |
| 196 | 0.0409 | 0.0027 | 0.0383 |
| 197 | 0.0182 | 0.0014 | 0.0168 |
| 198 | 0.0152 | 0.0012 | 0.0140 |
| 199 | 0.0131 | 0.0010 | 0.0121 |
| 200 | 0.0116 | 0.0009 | 0.0106 |
| 201 | 0.0104 | 0.0008 | 0.0095 |
| 202 | 0.0094 | 0.0007 | 0.0087 |
| 203 | 0.0086 | 0.0007 | 0.0079 |
| 204 | 0.0080 | 0.0006 | 0.0073 |
| 205 | 0.0074 | 0.0006 | 0.0068 |
| 206 | 0.0069 | 0.0006 | 0.0064 |
| 207 | 0.0065 | 0.0005 | 0.0060 |
| 208 | 0.0062 | 0.0005 | 0.0057 |
| 209 | 0.0058 | 0.0005 | 0.0054 |
| 210 | 0.0056 | 0.0004 | 0.0051 |
| 211 | 0.0053 | 0.0004 | 0.0049 |
| 212 | 0.0051 | 0.0004 | 0.0047 |
| 213 | 0.0049 | 0.0004 | 0.0045 |
| 214 | 0.0047 | 0.0004 | 0.0043 |
| 215 | 0.0045 | 0.0004 | 0.0041 |
| 216 | 0.0043 | 0.0003 | 0.0040 |
| 217 | 0.0066 | 0.0005 | 0.0060 |
| 218 | 0.0064 | 0.0005 | 0.0059 |
| 219 | 0.0062 | 0.0005 | 0.0057 |
| 220 | 0.0060 | 0.0005 | 0.0055 |
| 221 | 0.0059 | 0.0005 | 0.0054 |
| 222 | 0.0057 | 0.0005 | 0.0053 |
| 223 | 0.0056 | 0.0004 | 0.0051 |
| 224 | 0.0054 | 0.0004 | 0.0050 |
| 225 | 0.0053 | 0.0004 | 0.0049 |
| 226 | 0.0052 | 0.0004 | 0.0048 |
| 227 | 0.0051 | 0.0004 | 0.0047 |
| 228 | 0.0050 | 0.0004 | 0.0046 |
| 229 | 0.0049 | 0.0004 | 0.0045 |
| 230 | 0.0048 | 0.0004 | 0.0044 |

| | | | |
|---|---|---|---|
| 231 | 0.0047 | 0.0004 | 0.0043 |
| 232 | 0.0046 | 0.0004 | 0.0042 |
| 233 | 0.0045 | 0.0004 | 0.0041 |
| 234 | 0.0044 | 0.0004 | 0.0041 |
| 235 | 0.0043 | 0.0003 | 0.0040 |
| 236 | 0.0043 | 0.0003 | 0.0039 |
| 237 | 0.0042 | 0.0003 | 0.0039 |
| 238 | 0.0041 | 0.0003 | 0.0038 |
| 239 | 0.0041 | 0.0003 | 0.0037 |
| 240 | 0.0040 | 0.0003 | 0.0037 |
| 241 | 0.0039 | 0.0003 | 0.0036 |
| 242 | 0.0039 | 0.0003 | 0.0036 |
| 243 | 0.0038 | 0.0003 | 0.0035 |
| 244 | 0.0038 | 0.0003 | 0.0035 |
| 245 | 0.0037 | 0.0003 | 0.0034 |
| 246 | 0.0036 | 0.0003 | 0.0034 |
| 247 | 0.0036 | 0.0003 | 0.0033 |
| 248 | 0.0035 | 0.0003 | 0.0033 |
| 249 | 0.0035 | 0.0003 | 0.0032 |
| 250 | 0.0035 | 0.0003 | 0.0032 |
| 251 | 0.0034 | 0.0003 | 0.0031 |
| 252 | 0.0034 | 0.0003 | 0.0031 |
| 253 | 0.0033 | 0.0003 | 0.0031 |
| 254 | 0.0033 | 0.0003 | 0.0030 |
| 255 | 0.0032 | 0.0003 | 0.0030 |
| 256 | 0.0032 | 0.0003 | 0.0030 |
| 257 | 0.0032 | 0.0003 | 0.0029 |
| 258 | 0.0031 | 0.0002 | 0.0029 |
| 259 | 0.0031 | 0.0002 | 0.0029 |
| 260 | 0.0031 | 0.0002 | 0.0028 |
| 261 | 0.0030 | 0.0002 | 0.0028 |
| 262 | 0.0030 | 0.0002 | 0.0028 |
| 263 | 0.0030 | 0.0002 | 0.0027 |
| 264 | 0.0029 | 0.0002 | 0.0027 |
| 265 | 0.0029 | 0.0002 | 0.0027 |
| 266 | 0.0029 | 0.0002 | 0.0026 |
| 267 | 0.0028 | 0.0002 | 0.0026 |
| 268 | 0.0028 | 0.0002 | 0.0026 |
| 269 | 0.0028 | 0.0002 | 0.0026 |
| 270 | 0.0028 | 0.0002 | 0.0025 |
| 271 | 0.0027 | 0.0002 | 0.0025 |
| 272 | 0.0027 | 0.0002 | 0.0025 |
| 273 | 0.0027 | 0.0002 | 0.0025 |
| 274 | 0.0027 | 0.0002 | 0.0025 |
| 275 | 0.0026 | 0.0002 | 0.0024 |
| 276 | 0.0026 | 0.0002 | 0.0024 |
| 277 | 0.0026 | 0.0002 | 0.0024 |
| 278 | 0.0026 | 0.0002 | 0.0024 |
| 279 | 0.0025 | 0.0002 | 0.0023 |
| 280 | 0.0025 | 0.0002 | 0.0023 |
| 281 | 0.0025 | 0.0002 | 0.0023 |
| 282 | 0.0025 | 0.0002 | 0.0023 |
| 283 | 0.0025 | 0.0002 | 0.0023 |
| 284 | 0.0024 | 0.0002 | 0.0022 |
| 285 | 0.0024 | 0.0002 | 0.0022 |
| 286 | 0.0024 | 0.0002 | 0.0022 |
| 287 | 0.0024 | 0.0002 | 0.0022 |
| 288 | 0.0024 | 0.0002 | 0.0022 |

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Total soil rain loss = 0.13(In)
Total effective rainfall = 2.52(In)
Peak flow rate in flood hydrograph = 7.17(CFS)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 2.5 | 5.0 | 7.5 | 10.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.01 | Q | | | | |
| 0+15 | 0.0003 | 0.03 | Q | | | | |
| 0+20 | 0.0006 | 0.04 | Q | | | | |
| 0+25 | 0.0009 | 0.05 | Q | | | | |
| 0+30 | 0.0013 | 0.05 | Q | | | | |
| 0+35 | 0.0016 | 0.05 | Q | | | | |
| 0+40 | 0.0020 | 0.05 | Q | | | | |
| 0+45 | 0.0024 | 0.06 | Q | | | | |
| 0+50 | 0.0028 | 0.06 | Q | | | | |
| 0+55 | 0.0032 | 0.06 | Q | | | | |
| 1+ 0 | 0.0036 | 0.06 | Q | | | | |
| 1+ 5 | 0.0040 | 0.06 | Q | | | | |
| 1+10 | 0.0044 | 0.06 | Q | | | | |
| 1+15 | 0.0048 | 0.06 | Q | | | | |
| 1+20 | 0.0053 | 0.06 | Q | | | | |
| 1+25 | 0.0057 | 0.06 | Q | | | | |
| 1+30 | 0.0061 | 0.06 | Q | | | | |
| 1+35 | 0.0065 | 0.06 | Q | | | | |
| 1+40 | 0.0070 | 0.06 | Q | | | | |
| 1+45 | 0.0074 | 0.06 | Q | | | | |
| 1+50 | 0.0079 | 0.06 | Q | | | | |
| 1+55 | 0.0083 | 0.06 | Q | | | | |
| 2+ 0 | 0.0087 | 0.06 | Q | | | | |
| 2+ 5 | 0.0092 | 0.06 | Q | | | | |
| 2+10 | 0.0096 | 0.06 | Q | | | | |
| 2+15 | 0.0101 | 0.06 | Q | | | | |
| 2+20 | 0.0105 | 0.07 | Q | | | | |
| 2+25 | 0.0110 | 0.07 | Q | | | | |
| 2+30 | 0.0114 | 0.07 | Q | | | | |
| 2+35 | 0.0119 | 0.07 | QV | | | | |
| 2+40 | 0.0123 | 0.07 | QV | | | | |
| 2+45 | 0.0128 | 0.07 | QV | | | | |
| 2+50 | 0.0133 | 0.07 | QV | | | | |
| 2+55 | 0.0137 | 0.07 | QV | | | | |
| 3+ 0 | 0.0142 | 0.07 | QV | | | | |
| 3+ 5 | 0.0147 | 0.07 | QV | | | | |
| 3+10 | 0.0151 | 0.07 | QV | | | | |
| 3+15 | 0.0156 | 0.07 | QV | | | | |
| 3+20 | 0.0161 | 0.07 | QV | | | | |
| 3+25 | 0.0166 | 0.07 | QV | | | | |
| 3+30 | 0.0170 | 0.07 | QV | | | | |
| 3+35 | 0.0175 | 0.07 | QV | | | | |
| 3+40 | 0.0180 | 0.07 | QV | | | | |
| 3+45 | 0.0185 | 0.07 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+50 | 0.0190 | 0.07 | QV | | | | |
| 3+55 | 0.0195 | 0.07 | QV | | | | |
| 4+ 0 | 0.0200 | 0.07 | QV | | | | |
| 4+ 5 | 0.0205 | 0.07 | QV | | | | |
| 4+10 | 0.0210 | 0.07 | QV | | | | |
| 4+15 | 0.0215 | 0.07 | QV | | | | |
| 4+20 | 0.0220 | 0.07 | QV | | | | |
| 4+25 | 0.0225 | 0.07 | QV | | | | |
| 4+30 | 0.0230 | 0.07 | QV | | | | |
| 4+35 | 0.0235 | 0.07 | QV | | | | |
| 4+40 | 0.0240 | 0.07 | Q V | | | | |
| 4+45 | 0.0245 | 0.08 | Q V | | | | |
| 4+50 | 0.0250 | 0.08 | Q V | | | | |
| 4+55 | 0.0256 | 0.08 | Q V | | | | |
| 5+ 0 | 0.0261 | 0.08 | Q V | | | | |
| 5+ 5 | 0.0266 | 0.08 | Q V | | | | |
| 5+10 | 0.0271 | 0.08 | Q V | | | | |
| 5+15 | 0.0277 | 0.08 | Q V | | | | |
| 5+20 | 0.0282 | 0.08 | Q V | | | | |
| 5+25 | 0.0288 | 0.08 | Q V | | | | |
| 5+30 | 0.0293 | 0.08 | Q V | | | | |
| 5+35 | 0.0299 | 0.08 | Q V | | | | |
| 5+40 | 0.0304 | 0.08 | Q V | | | | |
| 5+45 | 0.0310 | 0.08 | Q V | | | | |
| 5+50 | 0.0315 | 0.08 | Q V | | | | |
| 5+55 | 0.0321 | 0.08 | Q V | | | | |
| 6+ 0 | 0.0326 | 0.08 | Q V | | | | |
| 6+ 5 | 0.0332 | 0.08 | Q V | | | | |
| 6+10 | 0.0338 | 0.08 | Q V | | | | |
| 6+15 | 0.0343 | 0.08 | Q V | | | | |
| 6+20 | 0.0349 | 0.08 | Q V | | | | |
| 6+25 | 0.0355 | 0.08 | Q V | | | | |
| 6+30 | 0.0361 | 0.08 | Q  V | | | | |
| 6+35 | 0.0367 | 0.09 | Q  V | | | | |
| 6+40 | 0.0373 | 0.09 | Q  V | | | | |
| 6+45 | 0.0379 | 0.09 | Q  V | | | | |
| 6+50 | 0.0385 | 0.09 | Q  V | | | | |
| 6+55 | 0.0391 | 0.09 | Q  V | | | | |
| 7+ 0 | 0.0397 | 0.09 | Q  V | | | | |
| 7+ 5 | 0.0403 | 0.09 | Q  V | | | | |
| 7+10 | 0.0409 | 0.09 | Q  V | | | | |
| 7+15 | 0.0415 | 0.09 | Q  V | | | | |
| 7+20 | 0.0421 | 0.09 | Q  V | | | | |
| 7+25 | 0.0428 | 0.09 | Q  V | | | | |
| 7+30 | 0.0434 | 0.09 | Q  V | | | | |
| 7+35 | 0.0440 | 0.09 | Q  V | | | | |
| 7+40 | 0.0447 | 0.09 | Q  V | | | | |
| 7+45 | 0.0453 | 0.09 | Q  V | | | | |
| 7+50 | 0.0460 | 0.09 | Q  V | | | | |
| 7+55 | 0.0466 | 0.10 | Q  V | | | | |
| 8+ 0 | 0.0473 | 0.10 | Q  V | | | | |
| 8+ 5 | 0.0480 | 0.10 | Q   V | | | | |
| 8+10 | 0.0486 | 0.10 | Q   V | | | | |
| 8+15 | 0.0493 | 0.10 | Q   V | | | | |
| 8+20 | 0.0500 | 0.10 | Q   V | | | | |
| 8+25 | 0.0507 | 0.10 | Q   V | | | | |
| 8+30 | 0.0514 | 0.10 | Q   V | | | | |
| 8+35 | 0.0521 | 0.10 | Q   V | | | | |
| 8+40 | 0.0528 | 0.10 | Q   V | | | | |

```
 8+45      0.0535     0.10  Q   V    |         |         |         |
 8+50      0.0542     0.10  Q   V    |         |         |         |
 8+55      0.0549     0.10  Q   V    |         |         |         |
 9+ 0      0.0557     0.11  Q   V    |         |         |         |
 9+ 5      0.0564     0.11  Q   V    |         |         |         |
 9+10      0.0571     0.11  Q   V    |         |         |         |
 9+15      0.0579     0.11  Q   V    |         |         |         |
 9+20      0.0586     0.11  Q   V    |         |         |         |
 9+25      0.0594     0.11  Q    V   |         |         |         |
 9+30      0.0601     0.11  Q    V   |         |         |         |
 9+35      0.0609     0.11  Q    V   |         |         |         |
 9+40      0.0617     0.11  Q    V   |         |         |         |
 9+45      0.0625     0.11  Q    V   |         |         |         |
 9+50      0.0633     0.12  Q    V   |         |         |         |
 9+55      0.0641     0.12  Q    V   |         |         |         |
10+ 0      0.0649     0.12  Q    V   |         |         |         |
10+ 5      0.0657     0.12  Q    V   |         |         |         |
10+10      0.0665     0.12  Q    V   |         |         |         |
10+15      0.0674     0.12  Q    V   |         |         |         |
10+20      0.0682     0.12  Q    V   |         |         |         |
10+25      0.0691     0.12  Q    V   |         |         |         |
10+30      0.0699     0.13  Q    V   |         |         |         |
10+35      0.0708     0.13  Q    V   |         |         |         |
10+40      0.0717     0.13  Q     V  |         |         |         |
10+45      0.0726     0.13  Q     V  |         |         |         |
10+50      0.0735     0.13  Q     V  |         |         |         |
10+55      0.0744     0.13  Q     V  |         |         |         |
11+ 0      0.0753     0.13  Q     V  |         |         |         |
11+ 5      0.0762     0.14  Q     V  |         |         |         |
11+10      0.0772     0.14  Q     V  |         |         |         |
11+15      0.0781     0.14  Q     V  |         |         |         |
11+20      0.0791     0.14  Q     V  |         |         |         |
11+25      0.0801     0.14  Q     V  |         |         |         |
11+30      0.0811     0.14  Q     V  |         |         |         |
11+35      0.0821     0.15  Q     V  |         |         |         |
11+40      0.0831     0.15  Q      V |         |         |         |
11+45      0.0841     0.15  Q      V |         |         |         |
11+50      0.0852     0.15  Q      V |         |         |         |
11+55      0.0862     0.15  Q      V |         |         |         |
12+ 0      0.0873     0.16  Q      V |         |         |         |
12+ 5      0.0884     0.16  Q      V |         |         |         |
12+10      0.0894     0.15  Q      V |         |         |         |
12+15      0.0903     0.13  Q      V |         |         |         |
12+20      0.0912     0.12  Q      V |         |         |         |
12+25      0.0920     0.12  Q      V |         |         |         |
12+30      0.0928     0.12  Q      V |         |         |         |
12+35      0.0936     0.12  Q      V |         |         |         |
12+40      0.0944     0.12  Q      V |         |         |         |
12+45      0.0953     0.12  Q       V|         |         |         |
12+50      0.0961     0.12  Q       V|         |         |         |
12+55      0.0970     0.12  Q       V|         |         |         |
13+ 0      0.0978     0.12  Q       V|         |         |         |
13+ 5      0.0987     0.13  Q       V|         |         |         |
13+10      0.0996     0.13  Q       V|         |         |         |
13+15      0.1005     0.13  Q       V|         |         |         |
13+20      0.1014     0.13  Q       V|         |         |         |
13+25      0.1024     0.14  Q       V|         |         |         |
13+30      0.1033     0.14  Q       V|         |         |         |
13+35      0.1043     0.14  Q       V|         |         |         |
```

```
13+40       0.1054      0.15  Q       V |          |          |          |
13+45       0.1064      0.15  Q       V |          |          |          |
13+50       0.1075      0.16  Q        V|          |          |          |
13+55       0.1086      0.16  Q        V|          |          |          |
14+ 0       0.1097      0.17  Q        V|          |          |          |
14+ 5       0.1109      0.17  Q        V|          |          |          |
14+10       0.1121      0.18  Q        V|          |          |          |
14+15       0.1134      0.18  Q        V|          |          |          |
14+20       0.1147      0.19  Q        V|          |          |          |
14+25       0.1160      0.20  Q        V|          |          |          |
14+30       0.1174      0.20  Q        V|          |          |          |
14+35       0.1189      0.21  Q         V          |          |          |
14+40       0.1204      0.22  Q         V          |          |          |
14+45       0.1220      0.23  Q         V          |          |          |
14+50       0.1237      0.24  Q         V          |          |          |
14+55       0.1254      0.25  |Q        V          |          |          |
15+ 0       0.1273      0.27  |Q        V          |          |          |
15+ 5       0.1292      0.28  |Q        V          |          |          |
15+10       0.1313      0.30  |Q        |V         |          |          |
15+15       0.1335      0.32  |Q        |V         |          |          |
15+20       0.1359      0.34  |Q        |V         |          |          |
15+25       0.1385      0.38  |Q        |V         |          |          |
15+30       0.1419      0.50  |Q        |V         |          |          |
15+35       0.1466      0.68  | Q       | V        |          |          |
15+40       0.1522      0.81  |  Q      | V        |          |          |
15+45       0.1587      0.95  |  Q      |  V       |          |          |
15+50       0.1664      1.12  |   Q     |   V      |          |          |
15+55       0.1757      1.35  |    Q    |   V      |          |          |
16+ 0       0.1878      1.75  |     Q   |    V     |          |          |
16+ 5       0.2073      2.83  |         |Q     V   |          |          |
16+10       0.2463      5.66  |         |          V Q        |          |
16+15       0.2957      7.17  |         |          |   V   Q  |          |
16+20       0.3260      4.41  |         |      Q   |       V  |          |
16+25       0.3469      3.03  |         | Q        |         V|          |
16+30       0.3622      2.22  |       Q |          |          V          |
16+35       0.3736      1.66  |     Q   |          |          |V         |
16+40       0.3824      1.27  |    Q    |          |          | V        |
16+45       0.3894      1.03  |   Q     |          |          | V        |
16+50       0.3953      0.85  |  Q      |          |          |  V       |
16+55       0.4001      0.70  | Q       |          |          |  V       |
17+ 0       0.4042      0.59  | Q       |          |          |   V      |
17+ 5       0.4075      0.49  |Q        |          |          |   V      |
17+10       0.4103      0.40  |Q        |          |          |   V      |
17+15       0.4128      0.36  |Q        |          |          |   V      |
17+20       0.4151      0.34  |Q        |          |          |    V     |
17+25       0.4172      0.30  |Q        |          |          |    V     |
17+30       0.4190      0.26  |Q        |          |          |    V     |
17+35       0.4202      0.18  Q         |          |          |    V     |
17+40       0.4214      0.16  Q         |          |          |    V     |
17+45       0.4224      0.15  Q         |          |          |    V     |
17+50       0.4234      0.14  Q         |          |          |    V     |
17+55       0.4243      0.13  Q         |          |          |    V     |
18+ 0       0.4252      0.13  Q         |          |          |    V     |
18+ 5       0.4260      0.12  Q         |          |          |    V     |
18+10       0.4269      0.13  Q         |          |          |     V    |
18+15       0.4279      0.14  Q         |          |          |     V    |
18+20       0.4290      0.15  Q         |          |          |     V    |
18+25       0.4300      0.15  Q         |          |          |     V    |
18+30       0.4310      0.15  Q         |          |          |     V    |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18+35 | 0.4320 | 0.15 | Q | \| | \| | \| | V \| |
| 18+40 | 0.4330 | 0.14 | Q | \| | \| | \| | V \| |
| 18+45 | 0.4340 | 0.14 | Q | \| | \| | \| | V \| |
| 18+50 | 0.4349 | 0.14 | Q | \| | \| | \| | V \| |
| 18+55 | 0.4359 | 0.14 | Q | \| | \| | \| | V \| |
| 19+ 0 | 0.4368 | 0.13 | Q | \| | \| | \| | V \| |
| 19+ 5 | 0.4377 | 0.13 | Q | \| | \| | \| | V \| |
| 19+10 | 0.4386 | 0.13 | Q | \| | \| | \| | V \| |
| 19+15 | 0.4395 | 0.13 | Q | \| | \| | \| | V \| |
| 19+20 | 0.4403 | 0.12 | Q | \| | \| | \| | V \| |
| 19+25 | 0.4411 | 0.12 | Q | \| | \| | \| | V \| |
| 19+30 | 0.4420 | 0.12 | Q | \| | \| | \| | V \| |
| 19+35 | 0.4428 | 0.12 | Q | \| | \| | \| | V \| |
| 19+40 | 0.4436 | 0.11 | Q | \| | \| | \| | V \| |
| 19+45 | 0.4443 | 0.11 | Q | \| | \| | \| | V \| |
| 19+50 | 0.4451 | 0.11 | Q | \| | \| | \| | V \| |
| 19+55 | 0.4458 | 0.11 | Q | \| | \| | \| | V \| |
| 20+ 0 | 0.4466 | 0.11 | Q | \| | \| | \| | V \| |
| 20+ 5 | 0.4473 | 0.10 | Q | \| | \| | \| | V \| |
| 20+10 | 0.4480 | 0.10 | Q | \| | \| | \| | V \| |
| 20+15 | 0.4487 | 0.10 | Q | \| | \| | \| | V \| |
| 20+20 | 0.4494 | 0.10 | Q | \| | \| | \| | V \| |
| 20+25 | 0.4501 | 0.10 | Q | \| | \| | \| | V \| |
| 20+30 | 0.4507 | 0.10 | Q | \| | \| | \| | V \| |
| 20+35 | 0.4514 | 0.10 | Q | \| | \| | \| | V \| |
| 20+40 | 0.4520 | 0.09 | Q | \| | \| | \| | V \| |
| 20+45 | 0.4527 | 0.09 | Q | \| | \| | \| | V \| |
| 20+50 | 0.4533 | 0.09 | Q | \| | \| | \| | V \| |
| 20+55 | 0.4539 | 0.09 | Q | \| | \| | \| | V \| |
| 21+ 0 | 0.4545 | 0.09 | Q | \| | \| | \| | V \| |
| 21+ 5 | 0.4551 | 0.09 | Q | \| | \| | \| | V \| |
| 21+10 | 0.4557 | 0.09 | Q | \| | \| | \| | V \| |
| 21+15 | 0.4563 | 0.09 | Q | \| | \| | \| | V \| |
| 21+20 | 0.4569 | 0.08 | Q | \| | \| | \| | V \| |
| 21+25 | 0.4575 | 0.08 | Q | \| | \| | \| | V \| |
| 21+30 | 0.4580 | 0.08 | Q | \| | \| | \| | V \| |
| 21+35 | 0.4586 | 0.08 | Q | \| | \| | \| | V \| |
| 21+40 | 0.4591 | 0.08 | Q | \| | \| | \| | V \| |
| 21+45 | 0.4597 | 0.08 | Q | \| | \| | \| | V \| |
| 21+50 | 0.4602 | 0.08 | Q | \| | \| | \| | V \| |
| 21+55 | 0.4608 | 0.08 | Q | \| | \| | \| | V \| |
| 22+ 0 | 0.4613 | 0.08 | Q | \| | \| | \| | V \| |
| 22+ 5 | 0.4618 | 0.08 | Q | \| | \| | \| | V \| |
| 22+10 | 0.4623 | 0.08 | Q | \| | \| | \| | V\| |
| 22+15 | 0.4628 | 0.07 | Q | \| | \| | \| | V\| |
| 22+20 | 0.4634 | 0.07 | Q | \| | \| | \| | V\| |
| 22+25 | 0.4639 | 0.07 | Q | \| | \| | \| | V\| |
| 22+30 | 0.4643 | 0.07 | Q | \| | \| | \| | V\| |
| 22+35 | 0.4648 | 0.07 | Q | \| | \| | \| | V\| |
| 22+40 | 0.4653 | 0.07 | Q | \| | \| | \| | V\| |
| 22+45 | 0.4658 | 0.07 | Q | \| | \| | \| | V\| |
| 22+50 | 0.4663 | 0.07 | Q | \| | \| | \| | V\| |
| 22+55 | 0.4668 | 0.07 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.4672 | 0.07 | Q | \| | \| | \| | V\| |
| 23+ 5 | 0.4677 | 0.07 | Q | \| | \| | \| | V\| |
| 23+10 | 0.4681 | 0.07 | Q | \| | \| | \| | V\| |
| 23+15 | 0.4686 | 0.07 | Q | \| | \| | \| | V\| |
| 23+20 | 0.4691 | 0.07 | Q | \| | \| | \| | V\| |
| 23+25 | 0.4695 | 0.06 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+30 | 0.4699 | 0.06 | Q | \| | \| | \| | V\| |
| 23+35 | 0.4704 | 0.06 | Q | \| | \| | \| | V\| |
| 23+40 | 0.4708 | 0.06 | Q | \| | \| | \| | V\| |
| 23+45 | 0.4713 | 0.06 | Q | \| | \| | \| | V\| |
| 23+50 | 0.4717 | 0.06 | Q | \| | \| | \| | V\| |
| 23+55 | 0.4721 | 0.06 | Q | \| | \| | \| | V\| |
| 24+ 0 | 0.4725 | 0.06 | Q | \| | \| | \| | V\| |
| 24+ 5 | 0.4729 | 0.06 | Q | \| | \| | \| | V\| |
| 24+10 | 0.4733 | 0.05 | Q | \| | \| | \| | V\| |
| 24+15 | 0.4735 | 0.03 | Q | \| | \| | \| | V\| |
| 24+20 | 0.4736 | 0.02 | Q | \| | \| | \| | V\| |
| 24+25 | 0.4737 | 0.01 | Q | \| | \| | \| | V\| |
| 24+30 | 0.4737 | 0.01 | Q | \| | \| | \| | V\| |
| 24+35 | 0.4738 | 0.01 | Q | \| | \| | \| | V\| |
| 24+40 | 0.4738 | 0.01 | Q | \| | \| | \| | V\| |
| 24+45 | 0.4739 | 0.00 | Q | \| | \| | \| | V\| |
| 24+50 | 0.4739 | 0.00 | Q | \| | \| | \| | V\| |
| 24+55 | 0.4739 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 0 | 0.4739 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 5 | 0.4739 | 0.00 | Q | \| | \| | \| | V\| |
| 25+10 | 0.4739 | 0.00 | Q | \| | \| | \| | V\| |
| 25+15 | 0.4740 | 0.00 | Q | \| | \| | \| | V\| |
| 25+20 | 0.4740 | 0.00 | Q | \| | \| | \| | V\| |
| 25+25 | 0.4740 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 42
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 124.33 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 124.33 | 6 | 1.87 |
| Rainfall data for year 100 | | |
| 124.33 | 24 | 2.67 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 89.6 | 97.9 | 124.33 | 1.000 | 0.041 | 0.900 | 0.037 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.037

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 111.90 | 0.900 | 89.6 | 97.9 | 0.21 | 0.910 |
| 12.43 | 0.100 | 98.0 | 98.0 | 0.20 | 0.914 |

Area-averaged catchment yield fraction, Y = 0.911
Area-averaged low loss fraction, Yb = 0.089
User entry of time of concentration = 0.930 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 124.33(Ac.)
Catchment Lag time = 0.744 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 11.2007
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.037(In/Hr)
Average low loss rate fraction (Yb) = 0.089 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.667(In)
Specified peak 6-hour rainfall = 1.870(In)
Specified peak 24-hour rainfall = 2.670(In)

Rainfall depth area reduction factors:
Using a total area of 124.33(Ac.) (Ref: fig. E-4)

5-minute factor = 0.994 Adjusted rainfall = 0.656(In)
30-minute factor = 0.994 Adjusted rainfall = 1.122(In)
1-hour factor = 0.994 Adjusted rainfall = 1.382(In)
3-hour factor = 0.999 Adjusted rainfall = 1.666(In)
6-hour factor = 1.000 Adjusted rainfall = 1.869(In)
24-hour factor = 1.000 Adjusted rainfall = 2.670(In)
---

U n i t H y d r o g r a p h

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 1503.62 (CFS)) | |
| 1 | 0.493 | 7.410 |
| 2 | 1.829 | 20.085 |
| 3 | 3.969 | 32.177 |
| 4 | 6.932 | 44.555 |
| 5 | 11.125 | 63.045 |
| 6 | 18.306 | 107.979 |
| 7 | 28.965 | 160.273 |
| 8 | 38.966 | 150.374 |
| 9 | 46.928 | 119.726 |
| 10 | 53.332 | 96.278 |
| 11 | 58.460 | 77.110 |
| 12 | 62.478 | 60.416 |
| 13 | 65.842 | 50.582 |

| | | |
|---|---|---|
| 14 | 68.770 | 44.023 |
| 15 | 71.424 | 39.915 |
| 16 | 73.703 | 34.267 |
| 17 | 75.724 | 30.383 |
| 18 | 77.626 | 28.600 |
| 19 | 79.252 | 24.452 |
| 20 | 80.731 | 22.231 |
| 21 | 82.097 | 20.550 |
| 22 | 83.308 | 18.205 |
| 23 | 84.487 | 17.722 |
| 24 | 85.569 | 16.271 |
| 25 | 86.626 | 15.897 |
| 26 | 87.549 | 13.884 |
| 27 | 88.440 | 13.395 |
| 28 | 89.181 | 11.140 |
| 29 | 89.853 | 10.105 |
| 30 | 90.504 | 9.779 |
| 31 | 91.131 | 9.431 |
| 32 | 91.733 | 9.050 |
| 33 | 92.273 | 8.125 |
| 34 | 92.805 | 7.993 |
| 35 | 93.303 | 7.488 |
| 36 | 93.791 | 7.340 |
| 37 | 94.200 | 6.153 |
| 38 | 94.581 | 5.726 |
| 39 | 94.962 | 5.726 |
| 40 | 95.343 | 5.726 |
| 41 | 95.693 | 5.269 |
| 42 | 95.986 | 4.400 |
| 43 | 96.277 | 4.379 |
| 44 | 96.568 | 4.379 |
| 45 | 96.853 | 4.292 |
| 46 | 97.073 | 3.307 |
| 47 | 97.275 | 3.031 |
| 48 | 97.477 | 3.031 |
| 49 | 97.678 | 3.031 |
| 50 | 97.844 | 2.491 |
| 51 | 97.956 | 1.691 |
| 52 | 98.068 | 1.684 |
| 53 | 98.180 | 1.684 |
| 54 | 98.294 | 1.716 |
| 55 | 98.425 | 1.967 |
| 56 | 98.560 | 2.021 |
| 57 | 98.694 | 2.021 |
| 58 | 98.828 | 2.021 |
| 59 | 98.963 | 2.021 |
| 60 | 99.097 | 2.021 |
| 61 | 99.232 | 2.021 |
| 62 | 99.366 | 2.021 |
| 63 | 99.492 | 1.898 |
| 64 | 99.570 | 1.172 |
| 65 | 99.640 | 1.053 |
| 66 | 99.710 | 1.053 |
| 67 | 99.780 | 1.053 |
| 68 | 99.850 | 1.053 |
| 69 | 99.920 | 1.053 |
| 70 | 100.000 | 0.526 |

---

Peak Unit  Adjusted mass rainfall  Unit rainfall

| Number | (In) | (In) |
|---|---|---|
| 1 | 0.6557 | 0.6557 |
| 2 | 0.8073 | 0.1516 |
| 3 | 0.9117 | 0.1044 |
| 4 | 0.9939 | 0.0822 |
| 5 | 1.0627 | 0.0688 |
| 6 | 1.1225 | 0.0597 |
| 7 | 1.1756 | 0.0531 |
| 8 | 1.2236 | 0.0480 |
| 9 | 1.2676 | 0.0440 |
| 10 | 1.3083 | 0.0407 |
| 11 | 1.3463 | 0.0379 |
| 12 | 1.3819 | 0.0356 |
| 13 | 1.4009 | 0.0190 |
| 14 | 1.4186 | 0.0178 |
| 15 | 1.4354 | 0.0168 |
| 16 | 1.4512 | 0.0159 |
| 17 | 1.4663 | 0.0151 |
| 18 | 1.4806 | 0.0143 |
| 19 | 1.4943 | 0.0137 |
| 20 | 1.5074 | 0.0131 |
| 21 | 1.5200 | 0.0126 |
| 22 | 1.5321 | 0.0121 |
| 23 | 1.5437 | 0.0116 |
| 24 | 1.5549 | 0.0112 |
| 25 | 1.5658 | 0.0108 |
| 26 | 1.5763 | 0.0105 |
| 27 | 1.5864 | 0.0102 |
| 28 | 1.5963 | 0.0099 |
| 29 | 1.6058 | 0.0096 |
| 30 | 1.6151 | 0.0093 |
| 31 | 1.6242 | 0.0090 |
| 32 | 1.6330 | 0.0088 |
| 33 | 1.6415 | 0.0086 |
| 34 | 1.6499 | 0.0084 |
| 35 | 1.6581 | 0.0082 |
| 36 | 1.6660 | 0.0080 |
| 37 | 1.6736 | 0.0076 |
| 38 | 1.6811 | 0.0074 |
| 39 | 1.6883 | 0.0073 |
| 40 | 1.6954 | 0.0071 |
| 41 | 1.7024 | 0.0070 |
| 42 | 1.7092 | 0.0068 |
| 43 | 1.7159 | 0.0067 |
| 44 | 1.7225 | 0.0066 |
| 45 | 1.7289 | 0.0064 |
| 46 | 1.7352 | 0.0063 |
| 47 | 1.7415 | 0.0062 |
| 48 | 1.7476 | 0.0061 |
| 49 | 1.7536 | 0.0060 |
| 50 | 1.7594 | 0.0059 |
| 51 | 1.7652 | 0.0058 |
| 52 | 1.7709 | 0.0057 |
| 53 | 1.7766 | 0.0056 |
| 54 | 1.7821 | 0.0055 |
| 55 | 1.7875 | 0.0054 |
| 56 | 1.7929 | 0.0054 |
| 57 | 1.7981 | 0.0053 |
| 58 | 1.8033 | 0.0052 |

| | | |
|---|---|---|
| 59 | 1.8085 | 0.0051 |
| 60 | 1.8135 | 0.0051 |
| 61 | 1.8185 | 0.0050 |
| 62 | 1.8234 | 0.0049 |
| 63 | 1.8283 | 0.0049 |
| 64 | 1.8331 | 0.0048 |
| 65 | 1.8378 | 0.0047 |
| 66 | 1.8425 | 0.0047 |
| 67 | 1.8471 | 0.0046 |
| 68 | 1.8516 | 0.0045 |
| 69 | 1.8561 | 0.0045 |
| 70 | 1.8605 | 0.0044 |
| 71 | 1.8649 | 0.0044 |
| 72 | 1.8693 | 0.0043 |
| 73 | 1.8759 | 0.0066 |
| 74 | 1.8825 | 0.0066 |
| 75 | 1.8890 | 0.0065 |
| 76 | 1.8954 | 0.0064 |
| 77 | 1.9018 | 0.0064 |
| 78 | 1.9081 | 0.0063 |
| 79 | 1.9144 | 0.0063 |
| 80 | 1.9206 | 0.0062 |
| 81 | 1.9267 | 0.0061 |
| 82 | 1.9328 | 0.0061 |
| 83 | 1.9389 | 0.0060 |
| 84 | 1.9448 | 0.0060 |
| 85 | 1.9508 | 0.0059 |
| 86 | 1.9566 | 0.0059 |
| 87 | 1.9625 | 0.0058 |
| 88 | 1.9682 | 0.0058 |
| 89 | 1.9740 | 0.0057 |
| 90 | 1.9796 | 0.0057 |
| 91 | 1.9853 | 0.0056 |
| 92 | 1.9909 | 0.0056 |
| 93 | 1.9964 | 0.0055 |
| 94 | 2.0019 | 0.0055 |
| 95 | 2.0073 | 0.0055 |
| 96 | 2.0128 | 0.0054 |
| 97 | 2.0181 | 0.0054 |
| 98 | 2.0235 | 0.0053 |
| 99 | 2.0287 | 0.0053 |
| 100 | 2.0340 | 0.0052 |
| 101 | 2.0392 | 0.0052 |
| 102 | 2.0444 | 0.0052 |
| 103 | 2.0495 | 0.0051 |
| 104 | 2.0546 | 0.0051 |
| 105 | 2.0597 | 0.0051 |
| 106 | 2.0647 | 0.0050 |
| 107 | 2.0697 | 0.0050 |
| 108 | 2.0746 | 0.0050 |
| 109 | 2.0796 | 0.0049 |
| 110 | 2.0844 | 0.0049 |
| 111 | 2.0893 | 0.0049 |
| 112 | 2.0941 | 0.0048 |
| 113 | 2.0989 | 0.0048 |
| 114 | 2.1037 | 0.0048 |
| 115 | 2.1084 | 0.0047 |
| 116 | 2.1131 | 0.0047 |
| 117 | 2.1178 | 0.0047 |

| | | |
|---|---|---|
| 118 | 2.1224 | 0.0046 |
| 119 | 2.1270 | 0.0046 |
| 120 | 2.1316 | 0.0046 |
| 121 | 2.1361 | 0.0046 |
| 122 | 2.1407 | 0.0045 |
| 123 | 2.1452 | 0.0045 |
| 124 | 2.1496 | 0.0045 |
| 125 | 2.1541 | 0.0044 |
| 126 | 2.1585 | 0.0044 |
| 127 | 2.1629 | 0.0044 |
| 128 | 2.1672 | 0.0044 |
| 129 | 2.1716 | 0.0043 |
| 130 | 2.1759 | 0.0043 |
| 131 | 2.1802 | 0.0043 |
| 132 | 2.1845 | 0.0043 |
| 133 | 2.1887 | 0.0042 |
| 134 | 2.1929 | 0.0042 |
| 135 | 2.1971 | 0.0042 |
| 136 | 2.2013 | 0.0042 |
| 137 | 2.2054 | 0.0041 |
| 138 | 2.2096 | 0.0041 |
| 139 | 2.2137 | 0.0041 |
| 140 | 2.2178 | 0.0041 |
| 141 | 2.2218 | 0.0041 |
| 142 | 2.2259 | 0.0040 |
| 143 | 2.2299 | 0.0040 |
| 144 | 2.2339 | 0.0040 |
| 145 | 2.2378 | 0.0040 |
| 146 | 2.2418 | 0.0040 |
| 147 | 2.2457 | 0.0039 |
| 148 | 2.2497 | 0.0039 |
| 149 | 2.2536 | 0.0039 |
| 150 | 2.2574 | 0.0039 |
| 151 | 2.2613 | 0.0039 |
| 152 | 2.2651 | 0.0038 |
| 153 | 2.2690 | 0.0038 |
| 154 | 2.2728 | 0.0038 |
| 155 | 2.2765 | 0.0038 |
| 156 | 2.2803 | 0.0038 |
| 157 | 2.2841 | 0.0037 |
| 158 | 2.2878 | 0.0037 |
| 159 | 2.2915 | 0.0037 |
| 160 | 2.2952 | 0.0037 |
| 161 | 2.2989 | 0.0037 |
| 162 | 2.3025 | 0.0037 |
| 163 | 2.3062 | 0.0036 |
| 164 | 2.3098 | 0.0036 |
| 165 | 2.3134 | 0.0036 |
| 166 | 2.3170 | 0.0036 |
| 167 | 2.3206 | 0.0036 |
| 168 | 2.3242 | 0.0036 |
| 169 | 2.3277 | 0.0035 |
| 170 | 2.3313 | 0.0035 |
| 171 | 2.3348 | 0.0035 |
| 172 | 2.3383 | 0.0035 |
| 173 | 2.3418 | 0.0035 |
| 174 | 2.3452 | 0.0035 |
| 175 | 2.3487 | 0.0035 |
| 176 | 2.3521 | 0.0034 |

| | | |
|---|---|---|
| 177 | 2.3556 | 0.0034 |
| 178 | 2.3590 | 0.0034 |
| 179 | 2.3624 | 0.0034 |
| 180 | 2.3658 | 0.0034 |
| 181 | 2.3691 | 0.0034 |
| 182 | 2.3725 | 0.0034 |
| 183 | 2.3758 | 0.0033 |
| 184 | 2.3792 | 0.0033 |
| 185 | 2.3825 | 0.0033 |
| 186 | 2.3858 | 0.0033 |
| 187 | 2.3891 | 0.0033 |
| 188 | 2.3924 | 0.0033 |
| 189 | 2.3956 | 0.0033 |
| 190 | 2.3989 | 0.0033 |
| 191 | 2.4021 | 0.0032 |
| 192 | 2.4053 | 0.0032 |
| 193 | 2.4086 | 0.0032 |
| 194 | 2.4118 | 0.0032 |
| 195 | 2.4149 | 0.0032 |
| 196 | 2.4181 | 0.0032 |
| 197 | 2.4213 | 0.0032 |
| 198 | 2.4244 | 0.0032 |
| 199 | 2.4276 | 0.0031 |
| 200 | 2.4307 | 0.0031 |
| 201 | 2.4338 | 0.0031 |
| 202 | 2.4369 | 0.0031 |
| 203 | 2.4400 | 0.0031 |
| 204 | 2.4431 | 0.0031 |
| 205 | 2.4462 | 0.0031 |
| 206 | 2.4493 | 0.0031 |
| 207 | 2.4523 | 0.0031 |
| 208 | 2.4553 | 0.0030 |
| 209 | 2.4584 | 0.0030 |
| 210 | 2.4614 | 0.0030 |
| 211 | 2.4644 | 0.0030 |
| 212 | 2.4674 | 0.0030 |
| 213 | 2.4704 | 0.0030 |
| 214 | 2.4734 | 0.0030 |
| 215 | 2.4763 | 0.0030 |
| 216 | 2.4793 | 0.0030 |
| 217 | 2.4822 | 0.0029 |
| 218 | 2.4852 | 0.0029 |
| 219 | 2.4881 | 0.0029 |
| 220 | 2.4910 | 0.0029 |
| 221 | 2.4939 | 0.0029 |
| 222 | 2.4968 | 0.0029 |
| 223 | 2.4997 | 0.0029 |
| 224 | 2.5026 | 0.0029 |
| 225 | 2.5054 | 0.0029 |
| 226 | 2.5083 | 0.0029 |
| 227 | 2.5111 | 0.0028 |
| 228 | 2.5140 | 0.0028 |
| 229 | 2.5168 | 0.0028 |
| 230 | 2.5196 | 0.0028 |
| 231 | 2.5224 | 0.0028 |
| 232 | 2.5252 | 0.0028 |
| 233 | 2.5280 | 0.0028 |
| 234 | 2.5308 | 0.0028 |
| 235 | 2.5336 | 0.0028 |

| | | |
|---|---|---|
| 236 | 2.5364 | 0.0028 |
| 237 | 2.5391 | 0.0028 |
| 238 | 2.5419 | 0.0027 |
| 239 | 2.5446 | 0.0027 |
| 240 | 2.5474 | 0.0027 |
| 241 | 2.5501 | 0.0027 |
| 242 | 2.5528 | 0.0027 |
| 243 | 2.5555 | 0.0027 |
| 244 | 2.5582 | 0.0027 |
| 245 | 2.5609 | 0.0027 |
| 246 | 2.5636 | 0.0027 |
| 247 | 2.5662 | 0.0027 |
| 248 | 2.5689 | 0.0027 |
| 249 | 2.5716 | 0.0027 |
| 250 | 2.5742 | 0.0027 |
| 251 | 2.5769 | 0.0026 |
| 252 | 2.5795 | 0.0026 |
| 253 | 2.5821 | 0.0026 |
| 254 | 2.5847 | 0.0026 |
| 255 | 2.5874 | 0.0026 |
| 256 | 2.5900 | 0.0026 |
| 257 | 2.5926 | 0.0026 |
| 258 | 2.5952 | 0.0026 |
| 259 | 2.5977 | 0.0026 |
| 260 | 2.6003 | 0.0026 |
| 261 | 2.6029 | 0.0026 |
| 262 | 2.6054 | 0.0026 |
| 263 | 2.6080 | 0.0026 |
| 264 | 2.6105 | 0.0025 |
| 265 | 2.6131 | 0.0025 |
| 266 | 2.6156 | 0.0025 |
| 267 | 2.6181 | 0.0025 |
| 268 | 2.6206 | 0.0025 |
| 269 | 2.6232 | 0.0025 |
| 270 | 2.6257 | 0.0025 |
| 271 | 2.6282 | 0.0025 |
| 272 | 2.6306 | 0.0025 |
| 273 | 2.6331 | 0.0025 |
| 274 | 2.6356 | 0.0025 |
| 275 | 2.6381 | 0.0025 |
| 276 | 2.6405 | 0.0025 |
| 277 | 2.6430 | 0.0025 |
| 278 | 2.6454 | 0.0024 |
| 279 | 2.6479 | 0.0024 |
| 280 | 2.6503 | 0.0024 |
| 281 | 2.6528 | 0.0024 |
| 282 | 2.6552 | 0.0024 |
| 283 | 2.6576 | 0.0024 |
| 284 | 2.6600 | 0.0024 |
| 285 | 2.6624 | 0.0024 |
| 286 | 2.6648 | 0.0024 |
| 287 | 2.6672 | 0.0024 |
| 288 | 2.6696 | 0.0024 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0024 | 0.0002 | 0.0022 |

| | | | |
|---|---|---|---|
| 2 | 0.0024 | 0.0002 | 0.0022 |
| 3 | 0.0024 | 0.0002 | 0.0022 |
| 4 | 0.0024 | 0.0002 | 0.0022 |
| 5 | 0.0024 | 0.0002 | 0.0022 |
| 6 | 0.0024 | 0.0002 | 0.0022 |
| 7 | 0.0024 | 0.0002 | 0.0022 |
| 8 | 0.0024 | 0.0002 | 0.0022 |
| 9 | 0.0025 | 0.0002 | 0.0022 |
| 10 | 0.0025 | 0.0002 | 0.0022 |
| 11 | 0.0025 | 0.0002 | 0.0023 |
| 12 | 0.0025 | 0.0002 | 0.0023 |
| 13 | 0.0025 | 0.0002 | 0.0023 |
| 14 | 0.0025 | 0.0002 | 0.0023 |
| 15 | 0.0025 | 0.0002 | 0.0023 |
| 16 | 0.0025 | 0.0002 | 0.0023 |
| 17 | 0.0025 | 0.0002 | 0.0023 |
| 18 | 0.0026 | 0.0002 | 0.0023 |
| 19 | 0.0026 | 0.0002 | 0.0023 |
| 20 | 0.0026 | 0.0002 | 0.0023 |
| 21 | 0.0026 | 0.0002 | 0.0024 |
| 22 | 0.0026 | 0.0002 | 0.0024 |
| 23 | 0.0026 | 0.0002 | 0.0024 |
| 24 | 0.0026 | 0.0002 | 0.0024 |
| 25 | 0.0026 | 0.0002 | 0.0024 |
| 26 | 0.0026 | 0.0002 | 0.0024 |
| 27 | 0.0027 | 0.0002 | 0.0024 |
| 28 | 0.0027 | 0.0002 | 0.0024 |
| 29 | 0.0027 | 0.0002 | 0.0024 |
| 30 | 0.0027 | 0.0002 | 0.0025 |
| 31 | 0.0027 | 0.0002 | 0.0025 |
| 32 | 0.0027 | 0.0002 | 0.0025 |
| 33 | 0.0027 | 0.0002 | 0.0025 |
| 34 | 0.0027 | 0.0002 | 0.0025 |
| 35 | 0.0028 | 0.0002 | 0.0025 |
| 36 | 0.0028 | 0.0002 | 0.0025 |
| 37 | 0.0028 | 0.0002 | 0.0025 |
| 38 | 0.0028 | 0.0002 | 0.0025 |
| 39 | 0.0028 | 0.0003 | 0.0026 |
| 40 | 0.0028 | 0.0003 | 0.0026 |
| 41 | 0.0028 | 0.0003 | 0.0026 |
| 42 | 0.0028 | 0.0003 | 0.0026 |
| 43 | 0.0029 | 0.0003 | 0.0026 |
| 44 | 0.0029 | 0.0003 | 0.0026 |
| 45 | 0.0029 | 0.0003 | 0.0026 |
| 46 | 0.0029 | 0.0003 | 0.0026 |
| 47 | 0.0029 | 0.0003 | 0.0027 |
| 48 | 0.0029 | 0.0003 | 0.0027 |
| 49 | 0.0030 | 0.0003 | 0.0027 |
| 50 | 0.0030 | 0.0003 | 0.0027 |
| 51 | 0.0030 | 0.0003 | 0.0027 |
| 52 | 0.0030 | 0.0003 | 0.0027 |
| 53 | 0.0030 | 0.0003 | 0.0027 |
| 54 | 0.0030 | 0.0003 | 0.0028 |
| 55 | 0.0031 | 0.0003 | 0.0028 |
| 56 | 0.0031 | 0.0003 | 0.0028 |
| 57 | 0.0031 | 0.0003 | 0.0028 |
| 58 | 0.0031 | 0.0003 | 0.0028 |
| 59 | 0.0031 | 0.0003 | 0.0028 |
| 60 | 0.0031 | 0.0003 | 0.0029 |

| | | | |
|---|---|---|---|
| 61 | 0.0032 | 0.0003 | 0.0029 |
| 62 | 0.0032 | 0.0003 | 0.0029 |
| 63 | 0.0032 | 0.0003 | 0.0029 |
| 64 | 0.0032 | 0.0003 | 0.0029 |
| 65 | 0.0032 | 0.0003 | 0.0029 |
| 66 | 0.0032 | 0.0003 | 0.0030 |
| 67 | 0.0033 | 0.0003 | 0.0030 |
| 68 | 0.0033 | 0.0003 | 0.0030 |
| 69 | 0.0033 | 0.0003 | 0.0030 |
| 70 | 0.0033 | 0.0003 | 0.0030 |
| 71 | 0.0033 | 0.0003 | 0.0030 |
| 72 | 0.0034 | 0.0003 | 0.0031 |
| 73 | 0.0034 | 0.0003 | 0.0031 |
| 74 | 0.0034 | 0.0003 | 0.0031 |
| 75 | 0.0034 | 0.0003 | 0.0031 |
| 76 | 0.0034 | 0.0003 | 0.0031 |
| 77 | 0.0035 | 0.0003 | 0.0032 |
| 78 | 0.0035 | 0.0003 | 0.0032 |
| 79 | 0.0035 | 0.0003 | 0.0032 |
| 80 | 0.0035 | 0.0003 | 0.0032 |
| 81 | 0.0036 | 0.0003 | 0.0032 |
| 82 | 0.0036 | 0.0003 | 0.0033 |
| 83 | 0.0036 | 0.0003 | 0.0033 |
| 84 | 0.0036 | 0.0003 | 0.0033 |
| 85 | 0.0037 | 0.0003 | 0.0033 |
| 86 | 0.0037 | 0.0003 | 0.0034 |
| 87 | 0.0037 | 0.0003 | 0.0034 |
| 88 | 0.0037 | 0.0003 | 0.0034 |
| 89 | 0.0038 | 0.0003 | 0.0034 |
| 90 | 0.0038 | 0.0003 | 0.0034 |
| 91 | 0.0038 | 0.0003 | 0.0035 |
| 92 | 0.0038 | 0.0003 | 0.0035 |
| 93 | 0.0039 | 0.0003 | 0.0035 |
| 94 | 0.0039 | 0.0003 | 0.0036 |
| 95 | 0.0039 | 0.0004 | 0.0036 |
| 96 | 0.0040 | 0.0004 | 0.0036 |
| 97 | 0.0040 | 0.0004 | 0.0036 |
| 98 | 0.0040 | 0.0004 | 0.0037 |
| 99 | 0.0041 | 0.0004 | 0.0037 |
| 100 | 0.0041 | 0.0004 | 0.0037 |
| 101 | 0.0041 | 0.0004 | 0.0038 |
| 102 | 0.0041 | 0.0004 | 0.0038 |
| 103 | 0.0042 | 0.0004 | 0.0038 |
| 104 | 0.0042 | 0.0004 | 0.0038 |
| 105 | 0.0043 | 0.0004 | 0.0039 |
| 106 | 0.0043 | 0.0004 | 0.0039 |
| 107 | 0.0043 | 0.0004 | 0.0040 |
| 108 | 0.0044 | 0.0004 | 0.0040 |
| 109 | 0.0044 | 0.0004 | 0.0040 |
| 110 | 0.0044 | 0.0004 | 0.0040 |
| 111 | 0.0045 | 0.0004 | 0.0041 |
| 112 | 0.0045 | 0.0004 | 0.0041 |
| 113 | 0.0046 | 0.0004 | 0.0042 |
| 114 | 0.0046 | 0.0004 | 0.0042 |
| 115 | 0.0047 | 0.0004 | 0.0043 |
| 116 | 0.0047 | 0.0004 | 0.0043 |
| 117 | 0.0048 | 0.0004 | 0.0043 |
| 118 | 0.0048 | 0.0004 | 0.0044 |
| 119 | 0.0049 | 0.0004 | 0.0044 |

| | | | |
|---|---|---|---|
| 120 | 0.0049 | 0.0004 | 0.0045 |
| 121 | 0.0050 | 0.0004 | 0.0045 |
| 122 | 0.0050 | 0.0004 | 0.0045 |
| 123 | 0.0051 | 0.0005 | 0.0046 |
| 124 | 0.0051 | 0.0005 | 0.0046 |
| 125 | 0.0052 | 0.0005 | 0.0047 |
| 126 | 0.0052 | 0.0005 | 0.0047 |
| 127 | 0.0053 | 0.0005 | 0.0048 |
| 128 | 0.0053 | 0.0005 | 0.0049 |
| 129 | 0.0054 | 0.0005 | 0.0049 |
| 130 | 0.0055 | 0.0005 | 0.0050 |
| 131 | 0.0055 | 0.0005 | 0.0050 |
| 132 | 0.0056 | 0.0005 | 0.0051 |
| 133 | 0.0057 | 0.0005 | 0.0052 |
| 134 | 0.0057 | 0.0005 | 0.0052 |
| 135 | 0.0058 | 0.0005 | 0.0053 |
| 136 | 0.0059 | 0.0005 | 0.0054 |
| 137 | 0.0060 | 0.0005 | 0.0054 |
| 138 | 0.0060 | 0.0005 | 0.0055 |
| 139 | 0.0061 | 0.0005 | 0.0056 |
| 140 | 0.0062 | 0.0006 | 0.0056 |
| 141 | 0.0063 | 0.0006 | 0.0058 |
| 142 | 0.0064 | 0.0006 | 0.0058 |
| 143 | 0.0065 | 0.0006 | 0.0059 |
| 144 | 0.0066 | 0.0006 | 0.0060 |
| 145 | 0.0043 | 0.0004 | 0.0039 |
| 146 | 0.0044 | 0.0004 | 0.0040 |
| 147 | 0.0045 | 0.0004 | 0.0041 |
| 148 | 0.0045 | 0.0004 | 0.0041 |
| 149 | 0.0047 | 0.0004 | 0.0042 |
| 150 | 0.0047 | 0.0004 | 0.0043 |
| 151 | 0.0049 | 0.0004 | 0.0044 |
| 152 | 0.0049 | 0.0004 | 0.0045 |
| 153 | 0.0051 | 0.0005 | 0.0046 |
| 154 | 0.0051 | 0.0005 | 0.0047 |
| 155 | 0.0053 | 0.0005 | 0.0048 |
| 156 | 0.0054 | 0.0005 | 0.0049 |
| 157 | 0.0055 | 0.0005 | 0.0050 |
| 158 | 0.0056 | 0.0005 | 0.0051 |
| 159 | 0.0058 | 0.0005 | 0.0053 |
| 160 | 0.0059 | 0.0005 | 0.0054 |
| 161 | 0.0061 | 0.0005 | 0.0056 |
| 162 | 0.0062 | 0.0006 | 0.0057 |
| 163 | 0.0064 | 0.0006 | 0.0059 |
| 164 | 0.0066 | 0.0006 | 0.0060 |
| 165 | 0.0068 | 0.0006 | 0.0062 |
| 166 | 0.0070 | 0.0006 | 0.0063 |
| 167 | 0.0073 | 0.0006 | 0.0066 |
| 168 | 0.0074 | 0.0007 | 0.0068 |
| 169 | 0.0080 | 0.0007 | 0.0073 |
| 170 | 0.0082 | 0.0007 | 0.0074 |
| 171 | 0.0086 | 0.0008 | 0.0078 |
| 172 | 0.0088 | 0.0008 | 0.0080 |
| 173 | 0.0093 | 0.0008 | 0.0085 |
| 174 | 0.0096 | 0.0009 | 0.0087 |
| 175 | 0.0102 | 0.0009 | 0.0093 |
| 176 | 0.0105 | 0.0009 | 0.0096 |
| 177 | 0.0112 | 0.0010 | 0.0102 |
| 178 | 0.0116 | 0.0010 | 0.0106 |

| | | | |
|---|---|---|---|
| 179 | 0.0126 | 0.0011 | 0.0114 |
| 180 | 0.0131 | 0.0012 | 0.0119 |
| 181 | 0.0143 | 0.0013 | 0.0131 |
| 182 | 0.0151 | 0.0013 | 0.0137 |
| 183 | 0.0168 | 0.0015 | 0.0153 |
| 184 | 0.0178 | 0.0016 | 0.0162 |
| 185 | 0.0356 | 0.0031 | 0.0325 |
| 186 | 0.0379 | 0.0031 | 0.0349 |
| 187 | 0.0440 | 0.0031 | 0.0409 |
| 188 | 0.0480 | 0.0031 | 0.0450 |
| 189 | 0.0597 | 0.0031 | 0.0567 |
| 190 | 0.0688 | 0.0031 | 0.0657 |
| 191 | 0.1044 | 0.0031 | 0.1013 |
| 192 | 0.1516 | 0.0031 | 0.1485 |
| 193 | 0.6557 | 0.0031 | 0.6526 |
| 194 | 0.0822 | 0.0031 | 0.0791 |
| 195 | 0.0531 | 0.0031 | 0.0500 |
| 196 | 0.0407 | 0.0031 | 0.0376 |
| 197 | 0.0190 | 0.0017 | 0.0173 |
| 198 | 0.0159 | 0.0014 | 0.0144 |
| 199 | 0.0137 | 0.0012 | 0.0125 |
| 200 | 0.0121 | 0.0011 | 0.0110 |
| 201 | 0.0108 | 0.0010 | 0.0099 |
| 202 | 0.0099 | 0.0009 | 0.0090 |
| 203 | 0.0090 | 0.0008 | 0.0082 |
| 204 | 0.0084 | 0.0007 | 0.0076 |
| 205 | 0.0076 | 0.0007 | 0.0069 |
| 206 | 0.0071 | 0.0006 | 0.0065 |
| 207 | 0.0067 | 0.0006 | 0.0061 |
| 208 | 0.0063 | 0.0006 | 0.0058 |
| 209 | 0.0060 | 0.0005 | 0.0055 |
| 210 | 0.0057 | 0.0005 | 0.0052 |
| 211 | 0.0054 | 0.0005 | 0.0050 |
| 212 | 0.0052 | 0.0005 | 0.0047 |
| 213 | 0.0050 | 0.0004 | 0.0045 |
| 214 | 0.0048 | 0.0004 | 0.0044 |
| 215 | 0.0046 | 0.0004 | 0.0042 |
| 216 | 0.0044 | 0.0004 | 0.0040 |
| 217 | 0.0066 | 0.0006 | 0.0060 |
| 218 | 0.0064 | 0.0006 | 0.0059 |
| 219 | 0.0063 | 0.0006 | 0.0057 |
| 220 | 0.0061 | 0.0005 | 0.0055 |
| 221 | 0.0059 | 0.0005 | 0.0054 |
| 222 | 0.0058 | 0.0005 | 0.0053 |
| 223 | 0.0056 | 0.0005 | 0.0051 |
| 224 | 0.0055 | 0.0005 | 0.0050 |
| 225 | 0.0054 | 0.0005 | 0.0049 |
| 226 | 0.0052 | 0.0005 | 0.0048 |
| 227 | 0.0051 | 0.0005 | 0.0047 |
| 228 | 0.0050 | 0.0004 | 0.0046 |
| 229 | 0.0049 | 0.0004 | 0.0045 |
| 230 | 0.0048 | 0.0004 | 0.0044 |
| 231 | 0.0047 | 0.0004 | 0.0043 |
| 232 | 0.0046 | 0.0004 | 0.0042 |
| 233 | 0.0046 | 0.0004 | 0.0041 |
| 234 | 0.0045 | 0.0004 | 0.0041 |
| 235 | 0.0044 | 0.0004 | 0.0040 |
| 236 | 0.0043 | 0.0004 | 0.0039 |
| 237 | 0.0042 | 0.0004 | 0.0039 |

| | | | |
|---|---|---|---|
| 238 | 0.0042 | 0.0004 | 0.0038 |
| 239 | 0.0041 | 0.0004 | 0.0037 |
| 240 | 0.0040 | 0.0004 | 0.0037 |
| 241 | 0.0040 | 0.0004 | 0.0036 |
| 242 | 0.0039 | 0.0003 | 0.0036 |
| 243 | 0.0039 | 0.0003 | 0.0035 |
| 244 | 0.0038 | 0.0003 | 0.0035 |
| 245 | 0.0037 | 0.0003 | 0.0034 |
| 246 | 0.0037 | 0.0003 | 0.0034 |
| 247 | 0.0036 | 0.0003 | 0.0033 |
| 248 | 0.0036 | 0.0003 | 0.0033 |
| 249 | 0.0035 | 0.0003 | 0.0032 |
| 250 | 0.0035 | 0.0003 | 0.0032 |
| 251 | 0.0035 | 0.0003 | 0.0031 |
| 252 | 0.0034 | 0.0003 | 0.0031 |
| 253 | 0.0034 | 0.0003 | 0.0031 |
| 254 | 0.0033 | 0.0003 | 0.0030 |
| 255 | 0.0033 | 0.0003 | 0.0030 |
| 256 | 0.0033 | 0.0003 | 0.0030 |
| 257 | 0.0032 | 0.0003 | 0.0029 |
| 258 | 0.0032 | 0.0003 | 0.0029 |
| 259 | 0.0031 | 0.0003 | 0.0029 |
| 260 | 0.0031 | 0.0003 | 0.0028 |
| 261 | 0.0031 | 0.0003 | 0.0028 |
| 262 | 0.0030 | 0.0003 | 0.0028 |
| 263 | 0.0030 | 0.0003 | 0.0027 |
| 264 | 0.0030 | 0.0003 | 0.0027 |
| 265 | 0.0029 | 0.0003 | 0.0027 |
| 266 | 0.0029 | 0.0003 | 0.0027 |
| 267 | 0.0029 | 0.0003 | 0.0026 |
| 268 | 0.0029 | 0.0003 | 0.0026 |
| 269 | 0.0028 | 0.0003 | 0.0026 |
| 270 | 0.0028 | 0.0002 | 0.0026 |
| 271 | 0.0028 | 0.0002 | 0.0025 |
| 272 | 0.0027 | 0.0002 | 0.0025 |
| 273 | 0.0027 | 0.0002 | 0.0025 |
| 274 | 0.0027 | 0.0002 | 0.0025 |
| 275 | 0.0027 | 0.0002 | 0.0024 |
| 276 | 0.0027 | 0.0002 | 0.0024 |
| 277 | 0.0026 | 0.0002 | 0.0024 |
| 278 | 0.0026 | 0.0002 | 0.0024 |
| 279 | 0.0026 | 0.0002 | 0.0024 |
| 280 | 0.0026 | 0.0002 | 0.0023 |
| 281 | 0.0025 | 0.0002 | 0.0023 |
| 282 | 0.0025 | 0.0002 | 0.0023 |
| 283 | 0.0025 | 0.0002 | 0.0023 |
| 284 | 0.0025 | 0.0002 | 0.0023 |
| 285 | 0.0025 | 0.0002 | 0.0022 |
| 286 | 0.0024 | 0.0002 | 0.0022 |
| 287 | 0.0024 | 0.0002 | 0.0022 |
| 288 | 0.0024 | 0.0002 | 0.0022 |

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Total soil rain loss = 0.15(In)
Total effective rainfall = 2.52(In)
Peak flow rate in flood hydrograph = 175.86(CFS)

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24 - H O U R S T O R M

R u n o f f  H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 50.0 | 100.0 | 150.0 | 200.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0001 | 0.02 | Q | | | | |
| 0+10 | 0.0005 | 0.06 | Q | | | | |
| 0+15 | 0.0014 | 0.13 | Q | | | | |
| 0+20 | 0.0030 | 0.23 | Q | | | | |
| 0+25 | 0.0055 | 0.37 | Q | | | | |
| 0+30 | 0.0096 | 0.60 | Q | | | | |
| 0+35 | 0.0162 | 0.95 | Q | | | | |
| 0+40 | 0.0250 | 1.28 | Q | | | | |
| 0+45 | 0.0357 | 1.55 | Q | | | | |
| 0+50 | 0.0478 | 1.76 | Q | | | | |
| 0+55 | 0.0611 | 1.94 | Q | | | | |
| 1+ 0 | 0.0754 | 2.08 | Q | | | | |
| 1+ 5 | 0.0905 | 2.19 | Q | | | | |
| 1+10 | 0.1064 | 2.30 | Q | | | | |
| 1+15 | 0.1228 | 2.39 | Q | | | | |
| 1+20 | 0.1399 | 2.48 | Q | | | | |
| 1+25 | 0.1575 | 2.55 | Q | | | | |
| 1+30 | 0.1756 | 2.63 | Q | | | | |
| 1+35 | 0.1941 | 2.69 | Q | | | | |
| 1+40 | 0.2130 | 2.75 | Q | | | | |
| 1+45 | 0.2324 | 2.81 | Q | | | | |
| 1+50 | 0.2520 | 2.86 | Q | | | | |
| 1+55 | 0.2721 | 2.91 | Q | | | | |
| 2+ 0 | 0.2924 | 2.95 | Q | | | | |
| 2+ 5 | 0.3131 | 3.00 | Q | | | | |
| 2+10 | 0.3340 | 3.04 | Q | | | | |
| 2+15 | 0.3553 | 3.09 | Q | | | | |
| 2+20 | 0.3768 | 3.12 | Q | | | | |
| 2+25 | 0.3986 | 3.16 | Q | | | | |
| 2+30 | 0.4205 | 3.19 | Q | | | | |
| 2+35 | 0.4428 | 3.23 | Q | | | | |
| 2+40 | 0.4652 | 3.26 | Q | | | | |
| 2+45 | 0.4879 | 3.29 | Q | | | | |
| 2+50 | 0.5108 | 3.33 | Q | | | | |
| 2+55 | 0.5339 | 3.36 | Q | | | | |
| 3+ 0 | 0.5573 | 3.39 | Q | | | | |
| 3+ 5 | 0.5808 | 3.42 | Q | | | | |
| 3+10 | 0.6045 | 3.44 | Q | | | | |
| 3+15 | 0.6284 | 3.47 | Q | | | | |
| 3+20 | 0.6525 | 3.50 | QV | | | | |
| 3+25 | 0.6768 | 3.53 | QV | | | | |
| 3+30 | 0.7013 | 3.55 | QV | | | | |
| 3+35 | 0.7259 | 3.58 | QV | | | | |
| 3+40 | 0.7507 | 3.60 | QV | | | | |
| 3+45 | 0.7757 | 3.63 | QV | | | | |
| 3+50 | 0.8009 | 3.65 | QV | | | | |
| 3+55 | 0.8262 | 3.68 | QV | | | | |
| 4+ 0 | 0.8517 | 3.70 | QV | | | | |
| 4+ 5 | 0.8774 | 3.73 | QV | | | | |
| 4+10 | 0.9032 | 3.75 | QV | | | | |
| 4+15 | 0.9292 | 3.77 | QV | | | | |
| 4+20 | 0.9554 | 3.79 | QV | | | | |

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|---|---|---|---|---|---|---|---|
| 4+25 | 0.9816 | 3.82 | QV | | | | |
| 4+30 | 1.0081 | 3.84 | QV | | | | |
| 4+35 | 1.0347 | 3.86 | QV | | | | |
| 4+40 | 1.0615 | 3.89 | QV | | | | |
| 4+45 | 1.0884 | 3.91 | QV | | | | |
| 4+50 | 1.1155 | 3.93 | QV | | | | |
| 4+55 | 1.1427 | 3.96 | QV | | | | |
| 5+ 0 | 1.1702 | 3.98 | QV | | | | |
| 5+ 5 | 1.1978 | 4.01 | QV | | | | |
| 5+10 | 1.2256 | 4.03 | QV | | | | |
| 5+15 | 1.2535 | 4.06 | QV | | | | |
| 5+20 | 1.2817 | 4.08 | QV | | | | |
| 5+25 | 1.3099 | 4.11 | Q V | | | | |
| 5+30 | 1.3384 | 4.13 | Q V | | | | |
| 5+35 | 1.3670 | 4.16 | Q V | | | | |
| 5+40 | 1.3958 | 4.18 | Q V | | | | |
| 5+45 | 1.4248 | 4.21 | Q V | | | | |
| 5+50 | 1.4539 | 4.23 | Q V | | | | |
| 5+55 | 1.4832 | 4.25 | Q V | | | | |
| 6+ 0 | 1.5127 | 4.28 | Q V | | | | |
| 6+ 5 | 1.5423 | 4.30 | Q V | | | | |
| 6+10 | 1.5721 | 4.33 | Q V | | | | |
| 6+15 | 1.6021 | 4.35 | Q V | | | | |
| 6+20 | 1.6322 | 4.38 | Q V | | | | |
| 6+25 | 1.6625 | 4.40 | Q V | | | | |
| 6+30 | 1.6930 | 4.43 | Q V | | | | |
| 6+35 | 1.7237 | 4.45 | Q V | | | | |
| 6+40 | 1.7546 | 4.48 | Q V | | | | |
| 6+45 | 1.7856 | 4.51 | Q V | | | | |
| 6+50 | 1.8168 | 4.53 | Q V | | | | |
| 6+55 | 1.8483 | 4.56 | Q V | | | | |
| 7+ 0 | 1.8799 | 4.59 | Q V | | | | |
| 7+ 5 | 1.9117 | 4.62 | Q V | | | | |
| 7+10 | 1.9437 | 4.65 | Q V | | | | |
| 7+15 | 1.9759 | 4.68 | Q  V | | | | |
| 7+20 | 2.0083 | 4.71 | Q  V | | | | |
| 7+25 | 2.0409 | 4.74 | Q  V | | | | |
| 7+30 | 2.0738 | 4.77 | Q  V | | | | |
| 7+35 | 2.1068 | 4.80 | Q  V | | | | |
| 7+40 | 2.1401 | 4.83 | Q  V | | | | |
| 7+45 | 2.1736 | 4.86 | Q  V | | | | |
| 7+50 | 2.2073 | 4.90 | Q  V | | | | |
| 7+55 | 2.2412 | 4.93 | Q  V | | | | |
| 8+ 0 | 2.2754 | 4.96 | Q  V | | | | |
| 8+ 5 | 2.3098 | 5.00 | Q  V | | | | |
| 8+10 | 2.3445 | 5.03 | \|Q V | | | | |
| 8+15 | 2.3794 | 5.07 | \|Q V | | | | |
| 8+20 | 2.4145 | 5.10 | \|Q V | | | | |
| 8+25 | 2.4499 | 5.14 | \|Q V | | | | |
| 8+30 | 2.4856 | 5.18 | \|Q V | | | | |
| 8+35 | 2.5215 | 5.22 | \|Q V | | | | |
| 8+40 | 2.5577 | 5.25 | \|Q V | | | | |
| 8+45 | 2.5941 | 5.29 | \|Q V | | | | |
| 8+50 | 2.6309 | 5.33 | \|Q  V | | | | |
| 8+55 | 2.6679 | 5.37 | \|Q  V | | | | |
| 9+ 0 | 2.7052 | 5.41 | \|Q  V | | | | |
| 9+ 5 | 2.7427 | 5.46 | \|Q  V | | | | |
| 9+10 | 2.7806 | 5.50 | \|Q  V | | | | |
| 9+15 | 2.8188 | 5.54 | \|Q  V | | | | |

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|---|---|---|---|---|---|---|---|
| 9+20 | 2.8573 | 5.59 | Q V | | | | |
| 9+25 | 2.8961 | 5.63 | Q V | | | | |
| 9+30 | 2.9352 | 5.68 | Q V | | | | |
| 9+35 | 2.9747 | 5.73 | Q V | | | | |
| 9+40 | 3.0144 | 5.78 | Q V | | | | |
| 9+45 | 3.0546 | 5.83 | Q V | | | | |
| 9+50 | 3.0950 | 5.88 | Q V | | | | |
| 9+55 | 3.1358 | 5.93 | Q V | | | | |
| 10+ 0 | 3.1770 | 5.98 | Q V | | | | |
| 10+ 5 | 3.2186 | 6.03 | Q V | | | | |
| 10+10 | 3.2605 | 6.09 | Q V | | | | |
| 10+15 | 3.3028 | 6.14 | Q V | | | | |
| 10+20 | 3.3455 | 6.20 | Q V | | | | |
| 10+25 | 3.3886 | 6.26 | Q V | | | | |
| 10+30 | 3.4321 | 6.32 | Q V | | | | |
| 10+35 | 3.4760 | 6.38 | Q V | | | | |
| 10+40 | 3.5204 | 6.44 | Q V | | | | |
| 10+45 | 3.5652 | 6.50 | Q V | | | | |
| 10+50 | 3.6104 | 6.57 | Q V | | | | |
| 10+55 | 3.6561 | 6.64 | Q V | | | | |
| 11+ 0 | 3.7023 | 6.71 | Q V | | | | |
| 11+ 5 | 3.7490 | 6.78 | Q V | | | | |
| 11+10 | 3.7961 | 6.85 | Q V | | | | |
| 11+15 | 3.8438 | 6.92 | Q V | | | | |
| 11+20 | 3.8920 | 7.00 | Q V | | | | |
| 11+25 | 3.9407 | 7.08 | Q V | | | | |
| 11+30 | 3.9900 | 7.15 | Q V | | | | |
| 11+35 | 4.0398 | 7.24 | Q V | | | | |
| 11+40 | 4.0902 | 7.32 | Q V | | | | |
| 11+45 | 4.1413 | 7.41 | Q V | | | | |
| 11+50 | 4.1929 | 7.50 | Q V | | | | |
| 11+55 | 4.2452 | 7.59 | Q V | | | | |
| 12+ 0 | 4.2981 | 7.68 | Q V | | | | |
| 12+ 5 | 4.3516 | 7.77 | Q V | | | | |
| 12+10 | 4.4054 | 7.82 | Q V | | | | |
| 12+15 | 4.4595 | 7.86 | Q V | | | | |
| 12+20 | 4.5137 | 7.86 | Q V | | | | |
| 12+25 | 4.5677 | 7.84 | Q V | | | | |
| 12+30 | 4.6208 | 7.71 | Q V | | | | |
| 12+35 | 4.6723 | 7.48 | Q V | | | | |
| 12+40 | 4.7223 | 7.26 | Q V | | | | |
| 12+45 | 4.7713 | 7.11 | Q V | | | | |
| 12+50 | 4.8196 | 7.02 | Q V | | | | |
| 12+55 | 4.8676 | 6.96 | Q V | | | | |
| 13+ 0 | 4.9154 | 6.95 | Q V | | | | |
| 13+ 5 | 4.9634 | 6.96 | Q V | | | | |
| 13+10 | 5.0114 | 6.98 | Q V | | | | |
| 13+15 | 5.0598 | 7.02 | Q V | | | | |
| 13+20 | 5.1085 | 7.08 | Q V | | | | |
| 13+25 | 5.1578 | 7.15 | Q V | | | | |
| 13+30 | 5.2075 | 7.22 | Q V | | | | |
| 13+35 | 5.2579 | 7.31 | Q V | | | | |
| 13+40 | 5.3090 | 7.42 | Q V | | | | |
| 13+45 | 5.3608 | 7.53 | Q V | | | | |
| 13+50 | 5.4136 | 7.66 | Q V | | | | |
| 13+55 | 5.4672 | 7.79 | Q V | | | | |
| 14+ 0 | 5.5219 | 7.94 | Q V | | | | |
| 14+ 5 | 5.5777 | 8.10 | Q V | | | | |
| 14+10 | 5.6347 | 8.28 | Q V | | | | |

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|---|---|---|---|
| 14+15 | 5.6930 | 8.47 | |
| 14+20 | 5.7528 | 8.68 | |
| 14+25 | 5.8142 | 8.91 | |
| 14+30 | 5.8774 | 9.17 | |
| 14+35 | 5.9425 | 9.46 | |
| 14+40 | 6.0098 | 9.77 | |
| 14+45 | 6.0793 | 10.09 | |
| 14+50 | 6.1512 | 10.44 | |
| 14+55 | 6.2258 | 10.82 | |
| 15+ 0 | 6.3031 | 11.23 | |
| 15+ 5 | 6.3836 | 11.69 | |
| 15+10 | 6.4675 | 12.18 | |
| 15+15 | 6.5552 | 12.74 | |
| 15+20 | 6.6472 | 13.35 | |
| 15+25 | 6.7447 | 14.16 | |
| 15+30 | 6.8497 | 15.24 | |
| 15+35 | 6.9643 | 16.65 | |
| 15+40 | 7.0913 | 18.44 | |
| 15+45 | 7.2345 | 20.80 | |
| 15+50 | 7.4013 | 24.22 | |
| 15+55 | 7.6021 | 29.15 | |
| 16+ 0 | 7.8454 | 35.33 | |
| 16+ 5 | 8.1656 | 46.48 | |
| 16+10 | 8.5864 | 61.11 | |
| 16+15 | 9.1095 | 75.95 | |
| 16+20 | 9.7421 | 91.85 | |
| 16+25 | 10.5163 | 112.41 | |
| 16+30 | 11.5180 | 145.45 | |
| 16+35 | 12.7291 | 175.86 | |
| 16+40 | 13.8764 | 166.58 | |
| 16+45 | 14.8598 | 142.79 | |
| 16+50 | 15.6973 | 121.60 | |
| 16+55 | 16.4036 | 102.55 | |
| 17+ 0 | 16.9969 | 86.16 | |
| 17+ 5 | 17.5137 | 75.03 | |
| 17+10 | 17.9740 | 66.84 | |
| 17+15 | 18.3921 | 60.71 | |
| 17+20 | 18.7669 | 54.42 | |
| 17+25 | 19.1084 | 49.58 | |
| 17+30 | 19.4260 | 46.12 | |
| 17+35 | 19.7131 | 41.69 | |
| 17+40 | 19.9786 | 38.55 | |
| 17+45 | 20.2261 | 35.94 | |
| 17+50 | 20.4547 | 33.20 | |
| 17+55 | 20.6726 | 31.63 | |
| 18+ 0 | 20.8768 | 29.65 | |
| 18+ 5 | 21.0716 | 28.29 | |
| 18+10 | 21.2517 | 26.15 | |
| 18+15 | 21.4228 | 24.85 | |
| 18+20 | 21.5796 | 22.76 | |
| 18+25 | 21.7276 | 21.49 | |
| 18+30 | 21.8710 | 20.82 | |
| 18+35 | 22.0107 | 20.29 | |
| 18+40 | 22.1468 | 19.76 | |
| 18+45 | 22.2771 | 18.92 | |
| 18+50 | 22.4043 | 18.47 | |
| 18+55 | 22.5269 | 17.80 | |
| 19+ 0 | 22.6458 | 17.26 | |
| 19+ 5 | 22.7573 | 16.20 | |

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19+10      22.8646     15.58  |  Q      |         |         |    V    |
19+15      22.9695     15.23  |  Q      |         |         |    V    |
19+20      23.0718     14.85  | Q       |         |         |    V    |
19+25      23.1697     14.21  | Q       |         |         |    V    |
19+30      23.2620     13.40  | Q       |         |         |    V    |
19+35      23.3519     13.06  | Q       |         |         |    V    |
19+40      23.4395     12.72  | Q       |         |         |    V    |
19+45      23.5241     12.29  | Q       |         |         |     V   |
19+50      23.6028     11.42  | Q       |         |         |     V   |
19+55      23.6784     10.98  | Q       |         |         |     V   |
20+ 0      23.7521     10.70  | Q       |         |         |     V   |
20+ 5      23.8237     10.40  | Q       |         |         |     V   |
20+10      23.8913      9.82  |Q        |         |         |     V   |
20+15      23.9544      9.15  |Q        |         |         |     V   |
20+20      24.0161      8.97  |Q        |         |         |     V   |
20+25      24.0769      8.83  |Q        |         |         |     V   |
20+30      24.1371      8.74  |Q        |         |         |      V  |
20+35      24.1977      8.79  |Q        |         |         |      V  |
20+40      24.2577      8.71  |Q        |         |         |      V  |
20+45      24.3169      8.60  |Q        |         |         |      V  |
20+50      24.3752      8.47  |Q        |         |         |      V  |
20+55      24.4327      8.34  |Q        |         |         |      V  |
21+ 0      24.4892      8.20  |Q        |         |         |      V  |
21+ 5      24.5447      8.05  |Q        |         |         |      V  |
21+10      24.5988      7.86  |Q        |         |         |      V  |
21+15      24.6509      7.56  |Q        |         |         |      V  |
21+20      24.6988      6.96  |Q        |         |         |      V  |
21+25      24.7450      6.71  |Q        |         |         |      V  |
21+30      24.7902      6.55  |Q        |         |         |       V |
21+35      24.8342      6.40  |Q        |         |         |       V |
21+40      24.8771      6.23  |Q        |         |         |       V |
21+45      24.9187      6.04  |Q        |         |         |       V |
21+50      24.9569      5.55  |Q        |         |         |       V |
21+55      24.9921      5.10  |Q        |         |         |       V |
22+ 0      25.0264      4.98  Q        |         |         |       V |
22+ 5      25.0599      4.87  Q        |         |         |       V |
22+10      25.0929      4.79  Q        |         |         |       V |
22+15      25.1254      4.72  Q        |         |         |       V |
22+20      25.1574      4.65  Q        |         |         |       V |
22+25      25.1891      4.59  Q        |         |         |       V |
22+30      25.2202      4.53  Q        |         |         |       V |
22+35      25.2510      4.47  Q        |         |         |       V |
22+40      25.2815      4.42  Q        |         |         |       V |
22+45      25.3115      4.37  Q        |         |         |       V |
22+50      25.3413      4.32  Q        |         |         |       V |
22+55      25.3707      4.27  Q        |         |         |       V |
23+ 0      25.3997      4.22  Q        |         |         |       V |
23+ 5      25.4285      4.18  Q        |         |         |        V|
23+10      25.4570      4.13  Q        |         |         |        V|
23+15      25.4852      4.09  Q        |         |         |        V|
23+20      25.5130      4.05  Q        |         |         |        V|
23+25      25.5406      4.01  Q        |         |         |        V|
23+30      25.5680      3.97  Q        |         |         |        V|
23+35      25.5950      3.93  Q        |         |         |        V|
23+40      25.6218      3.89  Q        |         |         |        V|
23+45      25.6483      3.85  Q        |         |         |        V|
23+50      25.6746      3.81  Q        |         |         |        V|
23+55      25.7006      3.78  Q        |         |         |        V|
24+ 0      25.7263      3.74  Q        |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 24+ 5 | 25.7517 | 3.69 | Q | \| | \| | \| | V\| |
| 24+10 | 25.7766 | 3.61 | Q | \| | \| | \| | V\| |
| 24+15 | 25.8007 | 3.51 | Q | \| | \| | \| | V\| |
| 24+20 | 25.8240 | 3.38 | Q | \| | \| | \| | V\| |
| 24+25 | 25.8461 | 3.21 | Q | \| | \| | \| | V\| |
| 24+30 | 25.8664 | 2.95 | Q | \| | \| | \| | V\| |
| 24+35 | 25.8841 | 2.57 | Q | \| | \| | \| | V\| |
| 24+40 | 25.8994 | 2.22 | Q | \| | \| | \| | V\| |
| 24+45 | 25.9128 | 1.94 | Q | \| | \| | \| | V\| |
| 24+50 | 25.9246 | 1.72 | Q | \| | \| | \| | V\| |
| 24+55 | 25.9352 | 1.53 | Q | \| | \| | \| | V\| |
| 25+ 0 | 25.9447 | 1.39 | Q | \| | \| | \| | V\| |
| 25+ 5 | 25.9534 | 1.26 | Q | \| | \| | \| | V\| |
| 25+10 | 25.9614 | 1.16 | Q | \| | \| | \| | V\| |
| 25+15 | 25.9687 | 1.06 | Q | \| | \| | \| | V\| |
| 25+20 | 25.9754 | 0.98 | Q | \| | \| | \| | V\| |
| 25+25 | 25.9816 | 0.90 | Q | \| | \| | \| | V\| |
| 25+30 | 25.9874 | 0.83 | Q | \| | \| | \| | V\| |
| 25+35 | 25.9927 | 0.77 | Q | \| | \| | \| | V\| |
| 25+40 | 25.9976 | 0.71 | Q | \| | \| | \| | V\| |
| 25+45 | 26.0022 | 0.66 | Q | \| | \| | \| | V\| |
| 25+50 | 26.0064 | 0.62 | Q | \| | \| | \| | V\| |
| 25+55 | 26.0104 | 0.57 | Q | \| | \| | \| | V\| |
| 26+ 0 | 26.0140 | 0.53 | Q | \| | \| | \| | V\| |
| 26+ 5 | 26.0174 | 0.49 | Q | \| | \| | \| | V\| |
| 26+10 | 26.0206 | 0.46 | Q | \| | \| | \| | V\| |
| 26+15 | 26.0235 | 0.43 | Q | \| | \| | \| | V\| |
| 26+20 | 26.0262 | 0.40 | Q | \| | \| | \| | V\| |
| 26+25 | 26.0288 | 0.37 | Q | \| | \| | \| | V\| |
| 26+30 | 26.0312 | 0.35 | Q | \| | \| | \| | V\| |
| 26+35 | 26.0334 | 0.32 | Q | \| | \| | \| | V\| |
| 26+40 | 26.0355 | 0.30 | Q | \| | \| | \| | V\| |
| 26+45 | 26.0374 | 0.28 | Q | \| | \| | \| | V\| |
| 26+50 | 26.0392 | 0.26 | Q | \| | \| | \| | V\| |
| 26+55 | 26.0409 | 0.24 | Q | \| | \| | \| | V\| |
| 27+ 0 | 26.0424 | 0.22 | Q | \| | \| | \| | V\| |
| 27+ 5 | 26.0439 | 0.21 | Q | \| | \| | \| | V\| |
| 27+10 | 26.0452 | 0.19 | Q | \| | \| | \| | V\| |
| 27+15 | 26.0465 | 0.18 | Q | \| | \| | \| | V\| |
| 27+20 | 26.0476 | 0.17 | Q | \| | \| | \| | V\| |
| 27+25 | 26.0487 | 0.15 | Q | \| | \| | \| | V\| |
| 27+30 | 26.0496 | 0.14 | Q | \| | \| | \| | V\| |
| 27+35 | 26.0505 | 0.13 | Q | \| | \| | \| | V\| |
| 27+40 | 26.0514 | 0.12 | Q | \| | \| | \| | V\| |
| 27+45 | 26.0521 | 0.11 | Q | \| | \| | \| | V\| |
| 27+50 | 26.0528 | 0.10 | Q | \| | \| | \| | V\| |
| 27+55 | 26.0535 | 0.10 | Q | \| | \| | \| | V\| |
| 28+ 0 | 26.0541 | 0.09 | Q | \| | \| | \| | V\| |
| 28+ 5 | 26.0547 | 0.08 | Q | \| | \| | \| | V\| |
| 28+10 | 26.0552 | 0.07 | Q | \| | \| | \| | V\| |
| 28+15 | 26.0557 | 0.07 | Q | \| | \| | \| | V\| |
| 28+20 | 26.0561 | 0.07 | Q | \| | \| | \| | V\| |
| 28+25 | 26.0565 | 0.06 | Q | \| | \| | \| | V\| |
| 28+30 | 26.0569 | 0.06 | Q | \| | \| | \| | V\| |
| 28+35 | 26.0573 | 0.05 | Q | \| | \| | \| | V\| |
| 28+40 | 26.0576 | 0.05 | Q | \| | \| | \| | V\| |
| 28+45 | 26.0579 | 0.04 | Q | \| | \| | \| | V\| |
| 28+50 | 26.0582 | 0.04 | Q | \| | \| | \| | V\| |
| 28+55 | 26.0584 | 0.03 | Q | \| | \| | \| | V\| |

```
   29+ 0      26.0586      0.03  Q         |          |         |        V|
   29+ 5      26.0588      0.02  Q         |          |         |        V|
   29+10      26.0589      0.02  Q         |          |         |        V|
   29+15      26.0590      0.02  Q         |          |         |        V|
   29+20      26.0591      0.01  Q         |          |         |        V|
   29+25      26.0592      0.01  Q         |          |         |        V|
   29+30      26.0592      0.01  Q         |          |         |        V|
   29+35      26.0593      0.01  Q         |          |         |        V|
   29+40      26.0593      0.00  Q         |          |         |        V|
   29+45      26.0593      0.00  Q         |          |         |         V
-------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 43
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 6.95 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 6.95 | 6 | 1.87 |
| Rainfall data for year 100 | | |
| 6.95 | 24 | 2.67 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 91.0 | 98.2 | 6.95 | 1.000 | 0.036 | 0.900 | 0.032 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.032

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 6.25 | 0.900 | 91.0 | 98.2 | 0.18 | 0.922 |
| 0.69 | 0.100 | 98.0 | 98.0 | 0.20 | 0.914 |

Area-averaged catchment yield fraction, Y = 0.921
Area-averaged low loss fraction, Yb = 0.079
User entry of time of concentration = 0.430 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 6.95(Ac.)
Catchment Lag time = 0.344 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 24.2248
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.032(In/Hr)
Average low loss rate fraction (Yb) = 0.079 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.667(In)
Specified peak 6-hour rainfall = 1.870(In)
Specified peak 24-hour rainfall = 2.670(In)

Rainfall depth area reduction factors:
Using a total area of 6.95(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.659(In)
30-minute factor = 1.000 Adjusted rainfall = 1.129(In)
1-hour factor = 1.000 Adjusted rainfall = 1.390(In)
3-hour factor = 1.000 Adjusted rainfall = 1.667(In)
6-hour factor = 1.000 Adjusted rainfall = 1.870(In)
24-hour factor = 1.000 Adjusted rainfall = 2.670(In)
---

U n i t H y d r o g r a p h

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| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 84.05 (CFS)) | |
| 1 | 1.293 | 1.087 |
| 2 | 6.230 | 4.150 |
| 3 | 18.095 | 9.973 |
| 4 | 39.265 | 17.793 |
| 5 | 54.453 | 12.766 |
| 6 | 63.786 | 7.844 |
| 7 | 70.239 | 5.423 |
| 8 | 75.156 | 4.133 |
| 9 | 79.052 | 3.275 |
| 10 | 82.131 | 2.588 |
| 11 | 84.704 | 2.163 |
| 12 | 86.963 | 1.899 |
| 13 | 88.833 | 1.572 |

| | | |
|---|---|---|
| 14 | 90.306 | 1.238 |
| 15 | 91.641 | 1.122 |
| 16 | 92.810 | 0.983 |
| 17 | 93.858 | 0.881 |
| 18 | 94.714 | 0.719 |
| 19 | 95.520 | 0.678 |
| 20 | 96.182 | 0.556 |
| 21 | 96.799 | 0.519 |
| 22 | 97.275 | 0.400 |
| 23 | 97.703 | 0.359 |
| 24 | 97.993 | 0.244 |
| 25 | 98.236 | 0.205 |
| 26 | 98.513 | 0.232 |
| 27 | 98.803 | 0.244 |
| 28 | 99.094 | 0.244 |
| 29 | 99.384 | 0.244 |
| 30 | 99.591 | 0.174 |
| 31 | 99.743 | 0.127 |
| 32 | 99.894 | 0.127 |
| 33 | 100.000 | 0.089 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6594 | 0.6594 |
| 2 | 0.8118 | 0.1524 |
| 3 | 0.9168 | 0.1050 |
| 4 | 0.9994 | 0.0826 |
| 5 | 1.0686 | 0.0692 |
| 6 | 1.1287 | 0.0601 |
| 7 | 1.1821 | 0.0534 |
| 8 | 1.2304 | 0.0483 |
| 9 | 1.2747 | 0.0443 |
| 10 | 1.3156 | 0.0409 |
| 11 | 1.3537 | 0.0382 |
| 12 | 1.3895 | 0.0358 |
| 13 | 1.4081 | 0.0186 |
| 14 | 1.4255 | 0.0174 |
| 15 | 1.4419 | 0.0164 |
| 16 | 1.4574 | 0.0155 |
| 17 | 1.4722 | 0.0147 |
| 18 | 1.4862 | 0.0140 |
| 19 | 1.4996 | 0.0134 |
| 20 | 1.5124 | 0.0128 |
| 21 | 1.5247 | 0.0123 |
| 22 | 1.5365 | 0.0118 |
| 23 | 1.5478 | 0.0114 |
| 24 | 1.5588 | 0.0110 |
| 25 | 1.5694 | 0.0106 |
| 26 | 1.5796 | 0.0102 |
| 27 | 1.5895 | 0.0099 |
| 28 | 1.5991 | 0.0096 |
| 29 | 1.6085 | 0.0093 |
| 30 | 1.6175 | 0.0091 |
| 31 | 1.6264 | 0.0088 |
| 32 | 1.6350 | 0.0086 |
| 33 | 1.6433 | 0.0084 |
| 34 | 1.6515 | 0.0082 |
| 35 | 1.6594 | 0.0080 |
| 36 | 1.6672 | 0.0078 |

| | | |
|---|---|---|
| 37 | 1.6748 | 0.0076 |
| 38 | 1.6822 | 0.0074 |
| 39 | 1.6894 | 0.0073 |
| 40 | 1.6965 | 0.0071 |
| 41 | 1.7035 | 0.0070 |
| 42 | 1.7103 | 0.0068 |
| 43 | 1.7170 | 0.0067 |
| 44 | 1.7235 | 0.0065 |
| 45 | 1.7299 | 0.0064 |
| 46 | 1.7363 | 0.0063 |
| 47 | 1.7425 | 0.0062 |
| 48 | 1.7485 | 0.0061 |
| 49 | 1.7545 | 0.0060 |
| 50 | 1.7604 | 0.0059 |
| 51 | 1.7662 | 0.0058 |
| 52 | 1.7719 | 0.0057 |
| 53 | 1.7775 | 0.0056 |
| 54 | 1.7830 | 0.0055 |
| 55 | 1.7884 | 0.0054 |
| 56 | 1.7937 | 0.0053 |
| 57 | 1.7990 | 0.0053 |
| 58 | 1.8042 | 0.0052 |
| 59 | 1.8093 | 0.0051 |
| 60 | 1.8144 | 0.0050 |
| 61 | 1.8193 | 0.0050 |
| 62 | 1.8242 | 0.0049 |
| 63 | 1.8291 | 0.0048 |
| 64 | 1.8338 | 0.0048 |
| 65 | 1.8386 | 0.0047 |
| 66 | 1.8432 | 0.0047 |
| 67 | 1.8478 | 0.0046 |
| 68 | 1.8523 | 0.0045 |
| 69 | 1.8568 | 0.0045 |
| 70 | 1.8613 | 0.0044 |
| 71 | 1.8656 | 0.0044 |
| 72 | 1.8700 | 0.0043 |
| 73 | 1.8766 | 0.0066 |
| 74 | 1.8832 | 0.0066 |
| 75 | 1.8897 | 0.0065 |
| 76 | 1.8961 | 0.0064 |
| 77 | 1.9025 | 0.0064 |
| 78 | 1.9088 | 0.0063 |
| 79 | 1.9151 | 0.0063 |
| 80 | 1.9213 | 0.0062 |
| 81 | 1.9274 | 0.0061 |
| 82 | 1.9335 | 0.0061 |
| 83 | 1.9395 | 0.0060 |
| 84 | 1.9455 | 0.0060 |
| 85 | 1.9514 | 0.0059 |
| 86 | 1.9573 | 0.0059 |
| 87 | 1.9631 | 0.0058 |
| 88 | 1.9689 | 0.0058 |
| 89 | 1.9746 | 0.0057 |
| 90 | 1.9803 | 0.0057 |
| 91 | 1.9859 | 0.0056 |
| 92 | 1.9915 | 0.0056 |
| 93 | 1.9970 | 0.0055 |
| 94 | 2.0025 | 0.0055 |
| 95 | 2.0080 | 0.0055 |

| | | |
|---|---|---|
| 96 | 2.0134 | 0.0054 |
| 97 | 2.0188 | 0.0054 |
| 98 | 2.0241 | 0.0053 |
| 99 | 2.0294 | 0.0053 |
| 100 | 2.0346 | 0.0052 |
| 101 | 2.0398 | 0.0052 |
| 102 | 2.0450 | 0.0052 |
| 103 | 2.0501 | 0.0051 |
| 104 | 2.0552 | 0.0051 |
| 105 | 2.0603 | 0.0051 |
| 106 | 2.0653 | 0.0050 |
| 107 | 2.0703 | 0.0050 |
| 108 | 2.0753 | 0.0050 |
| 109 | 2.0802 | 0.0049 |
| 110 | 2.0851 | 0.0049 |
| 111 | 2.0899 | 0.0049 |
| 112 | 2.0947 | 0.0048 |
| 113 | 2.0995 | 0.0048 |
| 114 | 2.1043 | 0.0048 |
| 115 | 2.1090 | 0.0047 |
| 116 | 2.1137 | 0.0047 |
| 117 | 2.1184 | 0.0047 |
| 118 | 2.1230 | 0.0046 |
| 119 | 2.1276 | 0.0046 |
| 120 | 2.1322 | 0.0046 |
| 121 | 2.1367 | 0.0046 |
| 122 | 2.1413 | 0.0045 |
| 123 | 2.1458 | 0.0045 |
| 124 | 2.1502 | 0.0045 |
| 125 | 2.1547 | 0.0044 |
| 126 | 2.1591 | 0.0044 |
| 127 | 2.1635 | 0.0044 |
| 128 | 2.1678 | 0.0044 |
| 129 | 2.1722 | 0.0043 |
| 130 | 2.1765 | 0.0043 |
| 131 | 2.1808 | 0.0043 |
| 132 | 2.1851 | 0.0043 |
| 133 | 2.1893 | 0.0042 |
| 134 | 2.1935 | 0.0042 |
| 135 | 2.1977 | 0.0042 |
| 136 | 2.2019 | 0.0042 |
| 137 | 2.2060 | 0.0041 |
| 138 | 2.2101 | 0.0041 |
| 139 | 2.2143 | 0.0041 |
| 140 | 2.2183 | 0.0041 |
| 141 | 2.2224 | 0.0041 |
| 142 | 2.2264 | 0.0040 |
| 143 | 2.2304 | 0.0040 |
| 144 | 2.2344 | 0.0040 |
| 145 | 2.2384 | 0.0040 |
| 146 | 2.2424 | 0.0040 |
| 147 | 2.2463 | 0.0039 |
| 148 | 2.2502 | 0.0039 |
| 149 | 2.2541 | 0.0039 |
| 150 | 2.2580 | 0.0039 |
| 151 | 2.2619 | 0.0039 |
| 152 | 2.2657 | 0.0038 |
| 153 | 2.2695 | 0.0038 |
| 154 | 2.2733 | 0.0038 |

| | | |
|---|---|---|
| 155 | 2.2771 | 0.0038 |
| 156 | 2.2809 | 0.0038 |
| 157 | 2.2846 | 0.0037 |
| 158 | 2.2883 | 0.0037 |
| 159 | 2.2921 | 0.0037 |
| 160 | 2.2958 | 0.0037 |
| 161 | 2.2994 | 0.0037 |
| 162 | 2.3031 | 0.0037 |
| 163 | 2.3067 | 0.0036 |
| 164 | 2.3104 | 0.0036 |
| 165 | 2.3140 | 0.0036 |
| 166 | 2.3176 | 0.0036 |
| 167 | 2.3211 | 0.0036 |
| 168 | 2.3247 | 0.0036 |
| 169 | 2.3283 | 0.0035 |
| 170 | 2.3318 | 0.0035 |
| 171 | 2.3353 | 0.0035 |
| 172 | 2.3388 | 0.0035 |
| 173 | 2.3423 | 0.0035 |
| 174 | 2.3458 | 0.0035 |
| 175 | 2.3492 | 0.0035 |
| 176 | 2.3527 | 0.0034 |
| 177 | 2.3561 | 0.0034 |
| 178 | 2.3595 | 0.0034 |
| 179 | 2.3629 | 0.0034 |
| 180 | 2.3663 | 0.0034 |
| 181 | 2.3697 | 0.0034 |
| 182 | 2.3730 | 0.0034 |
| 183 | 2.3764 | 0.0033 |
| 184 | 2.3797 | 0.0033 |
| 185 | 2.3830 | 0.0033 |
| 186 | 2.3863 | 0.0033 |
| 187 | 2.3896 | 0.0033 |
| 188 | 2.3929 | 0.0033 |
| 189 | 2.3961 | 0.0033 |
| 190 | 2.3994 | 0.0033 |
| 191 | 2.4026 | 0.0032 |
| 192 | 2.4058 | 0.0032 |
| 193 | 2.4091 | 0.0032 |
| 194 | 2.4123 | 0.0032 |
| 195 | 2.4154 | 0.0032 |
| 196 | 2.4186 | 0.0032 |
| 197 | 2.4218 | 0.0032 |
| 198 | 2.4249 | 0.0032 |
| 199 | 2.4281 | 0.0031 |
| 200 | 2.4312 | 0.0031 |
| 201 | 2.4343 | 0.0031 |
| 202 | 2.4374 | 0.0031 |
| 203 | 2.4405 | 0.0031 |
| 204 | 2.4436 | 0.0031 |
| 205 | 2.4467 | 0.0031 |
| 206 | 2.4497 | 0.0031 |
| 207 | 2.4528 | 0.0030 |
| 208 | 2.4558 | 0.0030 |
| 209 | 2.4589 | 0.0030 |
| 210 | 2.4619 | 0.0030 |
| 211 | 2.4649 | 0.0030 |
| 212 | 2.4679 | 0.0030 |
| 213 | 2.4709 | 0.0030 |

| | | |
|---|---|---|
| 214 | 2.4738 | 0.0030 |
| 215 | 2.4768 | 0.0030 |
| 216 | 2.4798 | 0.0030 |
| 217 | 2.4827 | 0.0029 |
| 218 | 2.4856 | 0.0029 |
| 219 | 2.4886 | 0.0029 |
| 220 | 2.4915 | 0.0029 |
| 221 | 2.4944 | 0.0029 |
| 222 | 2.4973 | 0.0029 |
| 223 | 2.5002 | 0.0029 |
| 224 | 2.5030 | 0.0029 |
| 225 | 2.5059 | 0.0029 |
| 226 | 2.5088 | 0.0029 |
| 227 | 2.5116 | 0.0028 |
| 228 | 2.5144 | 0.0028 |
| 229 | 2.5173 | 0.0028 |
| 230 | 2.5201 | 0.0028 |
| 231 | 2.5229 | 0.0028 |
| 232 | 2.5257 | 0.0028 |
| 233 | 2.5285 | 0.0028 |
| 234 | 2.5313 | 0.0028 |
| 235 | 2.5341 | 0.0028 |
| 236 | 2.5368 | 0.0028 |
| 237 | 2.5396 | 0.0028 |
| 238 | 2.5423 | 0.0027 |
| 239 | 2.5451 | 0.0027 |
| 240 | 2.5478 | 0.0027 |
| 241 | 2.5505 | 0.0027 |
| 242 | 2.5532 | 0.0027 |
| 243 | 2.5559 | 0.0027 |
| 244 | 2.5586 | 0.0027 |
| 245 | 2.5613 | 0.0027 |
| 246 | 2.5640 | 0.0027 |
| 247 | 2.5667 | 0.0027 |
| 248 | 2.5694 | 0.0027 |
| 249 | 2.5720 | 0.0027 |
| 250 | 2.5747 | 0.0026 |
| 251 | 2.5773 | 0.0026 |
| 252 | 2.5799 | 0.0026 |
| 253 | 2.5826 | 0.0026 |
| 254 | 2.5852 | 0.0026 |
| 255 | 2.5878 | 0.0026 |
| 256 | 2.5904 | 0.0026 |
| 257 | 2.5930 | 0.0026 |
| 258 | 2.5956 | 0.0026 |
| 259 | 2.5982 | 0.0026 |
| 260 | 2.6007 | 0.0026 |
| 261 | 2.6033 | 0.0026 |
| 262 | 2.6059 | 0.0026 |
| 263 | 2.6084 | 0.0026 |
| 264 | 2.6110 | 0.0025 |
| 265 | 2.6135 | 0.0025 |
| 266 | 2.6160 | 0.0025 |
| 267 | 2.6185 | 0.0025 |
| 268 | 2.6211 | 0.0025 |
| 269 | 2.6236 | 0.0025 |
| 270 | 2.6261 | 0.0025 |
| 271 | 2.6286 | 0.0025 |
| 272 | 2.6311 | 0.0025 |

| | | |
|---|---|---|
| 273 | 2.6335 | 0.0025 |
| 274 | 2.6360 | 0.0025 |
| 275 | 2.6385 | 0.0025 |
| 276 | 2.6409 | 0.0025 |
| 277 | 2.6434 | 0.0025 |
| 278 | 2.6458 | 0.0024 |
| 279 | 2.6483 | 0.0024 |
| 280 | 2.6507 | 0.0024 |
| 281 | 2.6532 | 0.0024 |
| 282 | 2.6556 | 0.0024 |
| 283 | 2.6580 | 0.0024 |
| 284 | 2.6604 | 0.0024 |
| 285 | 2.6628 | 0.0024 |
| 286 | 2.6652 | 0.0024 |
| 287 | 2.6676 | 0.0024 |
| 288 | 2.6700 | 0.0024 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0024 | 0.0002 | 0.0022 |
| 2 | 0.0024 | 0.0002 | 0.0022 |
| 3 | 0.0024 | 0.0002 | 0.0022 |
| 4 | 0.0024 | 0.0002 | 0.0022 |
| 5 | 0.0024 | 0.0002 | 0.0022 |
| 6 | 0.0024 | 0.0002 | 0.0022 |
| 7 | 0.0024 | 0.0002 | 0.0022 |
| 8 | 0.0024 | 0.0002 | 0.0023 |
| 9 | 0.0025 | 0.0002 | 0.0023 |
| 10 | 0.0025 | 0.0002 | 0.0023 |
| 11 | 0.0025 | 0.0002 | 0.0023 |
| 12 | 0.0025 | 0.0002 | 0.0023 |
| 13 | 0.0025 | 0.0002 | 0.0023 |
| 14 | 0.0025 | 0.0002 | 0.0023 |
| 15 | 0.0025 | 0.0002 | 0.0023 |
| 16 | 0.0025 | 0.0002 | 0.0023 |
| 17 | 0.0025 | 0.0002 | 0.0023 |
| 18 | 0.0026 | 0.0002 | 0.0024 |
| 19 | 0.0026 | 0.0002 | 0.0024 |
| 20 | 0.0026 | 0.0002 | 0.0024 |
| 21 | 0.0026 | 0.0002 | 0.0024 |
| 22 | 0.0026 | 0.0002 | 0.0024 |
| 23 | 0.0026 | 0.0002 | 0.0024 |
| 24 | 0.0026 | 0.0002 | 0.0024 |
| 25 | 0.0026 | 0.0002 | 0.0024 |
| 26 | 0.0026 | 0.0002 | 0.0024 |
| 27 | 0.0027 | 0.0002 | 0.0024 |
| 28 | 0.0027 | 0.0002 | 0.0025 |
| 29 | 0.0027 | 0.0002 | 0.0025 |
| 30 | 0.0027 | 0.0002 | 0.0025 |
| 31 | 0.0027 | 0.0002 | 0.0025 |
| 32 | 0.0027 | 0.0002 | 0.0025 |
| 33 | 0.0027 | 0.0002 | 0.0025 |
| 34 | 0.0027 | 0.0002 | 0.0025 |
| 35 | 0.0028 | 0.0002 | 0.0025 |
| 36 | 0.0028 | 0.0002 | 0.0025 |
| 37 | 0.0028 | 0.0002 | 0.0026 |
| 38 | 0.0028 | 0.0002 | 0.0026 |

| | | | |
|---|---|---|---|
| 39 | 0.0028 | 0.0002 | 0.0026 |
| 40 | 0.0028 | 0.0002 | 0.0026 |
| 41 | 0.0028 | 0.0002 | 0.0026 |
| 42 | 0.0028 | 0.0002 | 0.0026 |
| 43 | 0.0029 | 0.0002 | 0.0026 |
| 44 | 0.0029 | 0.0002 | 0.0026 |
| 45 | 0.0029 | 0.0002 | 0.0027 |
| 46 | 0.0029 | 0.0002 | 0.0027 |
| 47 | 0.0029 | 0.0002 | 0.0027 |
| 48 | 0.0029 | 0.0002 | 0.0027 |
| 49 | 0.0030 | 0.0002 | 0.0027 |
| 50 | 0.0030 | 0.0002 | 0.0027 |
| 51 | 0.0030 | 0.0002 | 0.0028 |
| 52 | 0.0030 | 0.0002 | 0.0028 |
| 53 | 0.0030 | 0.0002 | 0.0028 |
| 54 | 0.0030 | 0.0002 | 0.0028 |
| 55 | 0.0030 | 0.0002 | 0.0028 |
| 56 | 0.0031 | 0.0002 | 0.0028 |
| 57 | 0.0031 | 0.0002 | 0.0028 |
| 58 | 0.0031 | 0.0002 | 0.0029 |
| 59 | 0.0031 | 0.0002 | 0.0029 |
| 60 | 0.0031 | 0.0002 | 0.0029 |
| 61 | 0.0032 | 0.0002 | 0.0029 |
| 62 | 0.0032 | 0.0002 | 0.0029 |
| 63 | 0.0032 | 0.0003 | 0.0029 |
| 64 | 0.0032 | 0.0003 | 0.0029 |
| 65 | 0.0032 | 0.0003 | 0.0030 |
| 66 | 0.0032 | 0.0003 | 0.0030 |
| 67 | 0.0033 | 0.0003 | 0.0030 |
| 68 | 0.0033 | 0.0003 | 0.0030 |
| 69 | 0.0033 | 0.0003 | 0.0030 |
| 70 | 0.0033 | 0.0003 | 0.0031 |
| 71 | 0.0033 | 0.0003 | 0.0031 |
| 72 | 0.0034 | 0.0003 | 0.0031 |
| 73 | 0.0034 | 0.0003 | 0.0031 |
| 74 | 0.0034 | 0.0003 | 0.0031 |
| 75 | 0.0034 | 0.0003 | 0.0032 |
| 76 | 0.0034 | 0.0003 | 0.0032 |
| 77 | 0.0035 | 0.0003 | 0.0032 |
| 78 | 0.0035 | 0.0003 | 0.0032 |
| 79 | 0.0035 | 0.0003 | 0.0032 |
| 80 | 0.0035 | 0.0003 | 0.0033 |
| 81 | 0.0036 | 0.0003 | 0.0033 |
| 82 | 0.0036 | 0.0003 | 0.0033 |
| 83 | 0.0036 | 0.0003 | 0.0033 |
| 84 | 0.0036 | 0.0003 | 0.0033 |
| 85 | 0.0037 | 0.0003 | 0.0034 |
| 86 | 0.0037 | 0.0003 | 0.0034 |
| 87 | 0.0037 | 0.0003 | 0.0034 |
| 88 | 0.0037 | 0.0003 | 0.0034 |
| 89 | 0.0038 | 0.0003 | 0.0035 |
| 90 | 0.0038 | 0.0003 | 0.0035 |
| 91 | 0.0038 | 0.0003 | 0.0035 |
| 92 | 0.0038 | 0.0003 | 0.0035 |
| 93 | 0.0039 | 0.0003 | 0.0036 |
| 94 | 0.0039 | 0.0003 | 0.0036 |
| 95 | 0.0039 | 0.0003 | 0.0036 |
| 96 | 0.0040 | 0.0003 | 0.0036 |
| 97 | 0.0040 | 0.0003 | 0.0037 |

| | | | |
|---|---|---|---|
| 98 | 0.0040 | 0.0003 | 0.0037 |
| 99 | 0.0041 | 0.0003 | 0.0037 |
| 100 | 0.0041 | 0.0003 | 0.0038 |
| 101 | 0.0041 | 0.0003 | 0.0038 |
| 102 | 0.0041 | 0.0003 | 0.0038 |
| 103 | 0.0042 | 0.0003 | 0.0039 |
| 104 | 0.0042 | 0.0003 | 0.0039 |
| 105 | 0.0043 | 0.0003 | 0.0039 |
| 106 | 0.0043 | 0.0003 | 0.0040 |
| 107 | 0.0043 | 0.0003 | 0.0040 |
| 108 | 0.0044 | 0.0003 | 0.0040 |
| 109 | 0.0044 | 0.0003 | 0.0041 |
| 110 | 0.0044 | 0.0003 | 0.0041 |
| 111 | 0.0045 | 0.0004 | 0.0041 |
| 112 | 0.0045 | 0.0004 | 0.0042 |
| 113 | 0.0046 | 0.0004 | 0.0042 |
| 114 | 0.0046 | 0.0004 | 0.0042 |
| 115 | 0.0047 | 0.0004 | 0.0043 |
| 116 | 0.0047 | 0.0004 | 0.0043 |
| 117 | 0.0048 | 0.0004 | 0.0044 |
| 118 | 0.0048 | 0.0004 | 0.0044 |
| 119 | 0.0049 | 0.0004 | 0.0045 |
| 120 | 0.0049 | 0.0004 | 0.0045 |
| 121 | 0.0050 | 0.0004 | 0.0046 |
| 122 | 0.0050 | 0.0004 | 0.0046 |
| 123 | 0.0051 | 0.0004 | 0.0047 |
| 124 | 0.0051 | 0.0004 | 0.0047 |
| 125 | 0.0052 | 0.0004 | 0.0048 |
| 126 | 0.0052 | 0.0004 | 0.0048 |
| 127 | 0.0053 | 0.0004 | 0.0049 |
| 128 | 0.0053 | 0.0004 | 0.0049 |
| 129 | 0.0054 | 0.0004 | 0.0050 |
| 130 | 0.0055 | 0.0004 | 0.0050 |
| 131 | 0.0055 | 0.0004 | 0.0051 |
| 132 | 0.0056 | 0.0004 | 0.0051 |
| 133 | 0.0057 | 0.0004 | 0.0052 |
| 134 | 0.0057 | 0.0005 | 0.0053 |
| 135 | 0.0058 | 0.0005 | 0.0054 |
| 136 | 0.0059 | 0.0005 | 0.0054 |
| 137 | 0.0060 | 0.0005 | 0.0055 |
| 138 | 0.0060 | 0.0005 | 0.0056 |
| 139 | 0.0061 | 0.0005 | 0.0057 |
| 140 | 0.0062 | 0.0005 | 0.0057 |
| 141 | 0.0063 | 0.0005 | 0.0058 |
| 142 | 0.0064 | 0.0005 | 0.0059 |
| 143 | 0.0065 | 0.0005 | 0.0060 |
| 144 | 0.0066 | 0.0005 | 0.0061 |
| 145 | 0.0043 | 0.0003 | 0.0040 |
| 146 | 0.0044 | 0.0003 | 0.0040 |
| 147 | 0.0045 | 0.0004 | 0.0041 |
| 148 | 0.0045 | 0.0004 | 0.0042 |
| 149 | 0.0047 | 0.0004 | 0.0043 |
| 150 | 0.0047 | 0.0004 | 0.0043 |
| 151 | 0.0048 | 0.0004 | 0.0045 |
| 152 | 0.0049 | 0.0004 | 0.0045 |
| 153 | 0.0050 | 0.0004 | 0.0046 |
| 154 | 0.0051 | 0.0004 | 0.0047 |
| 155 | 0.0053 | 0.0004 | 0.0049 |
| 156 | 0.0053 | 0.0004 | 0.0049 |

| | | | |
|---|---|---|---|
| 157 | 0.0055 | 0.0004 | 0.0051 |
| 158 | 0.0056 | 0.0004 | 0.0052 |
| 159 | 0.0058 | 0.0005 | 0.0053 |
| 160 | 0.0059 | 0.0005 | 0.0054 |
| 161 | 0.0061 | 0.0005 | 0.0056 |
| 162 | 0.0062 | 0.0005 | 0.0057 |
| 163 | 0.0064 | 0.0005 | 0.0059 |
| 164 | 0.0065 | 0.0005 | 0.0060 |
| 165 | 0.0068 | 0.0005 | 0.0063 |
| 166 | 0.0070 | 0.0005 | 0.0064 |
| 167 | 0.0073 | 0.0006 | 0.0067 |
| 168 | 0.0074 | 0.0006 | 0.0068 |
| 169 | 0.0078 | 0.0006 | 0.0072 |
| 170 | 0.0080 | 0.0006 | 0.0073 |
| 171 | 0.0084 | 0.0007 | 0.0077 |
| 172 | 0.0086 | 0.0007 | 0.0079 |
| 173 | 0.0091 | 0.0007 | 0.0084 |
| 174 | 0.0093 | 0.0007 | 0.0086 |
| 175 | 0.0099 | 0.0008 | 0.0091 |
| 176 | 0.0102 | 0.0008 | 0.0094 |
| 177 | 0.0110 | 0.0009 | 0.0101 |
| 178 | 0.0114 | 0.0009 | 0.0105 |
| 179 | 0.0123 | 0.0010 | 0.0113 |
| 180 | 0.0128 | 0.0010 | 0.0118 |
| 181 | 0.0140 | 0.0011 | 0.0129 |
| 182 | 0.0147 | 0.0012 | 0.0136 |
| 183 | 0.0164 | 0.0013 | 0.0151 |
| 184 | 0.0174 | 0.0014 | 0.0160 |
| 185 | 0.0358 | 0.0027 | 0.0331 |
| 186 | 0.0382 | 0.0027 | 0.0355 |
| 187 | 0.0443 | 0.0027 | 0.0416 |
| 188 | 0.0483 | 0.0027 | 0.0456 |
| 189 | 0.0601 | 0.0027 | 0.0574 |
| 190 | 0.0692 | 0.0027 | 0.0665 |
| 191 | 0.1050 | 0.0027 | 0.1023 |
| 192 | 0.1524 | 0.0027 | 0.1497 |
| 193 | 0.6594 | 0.0027 | 0.6567 |
| 194 | 0.0826 | 0.0027 | 0.0800 |
| 195 | 0.0534 | 0.0027 | 0.0507 |
| 196 | 0.0409 | 0.0027 | 0.0383 |
| 197 | 0.0186 | 0.0015 | 0.0171 |
| 198 | 0.0155 | 0.0012 | 0.0143 |
| 199 | 0.0134 | 0.0011 | 0.0123 |
| 200 | 0.0118 | 0.0009 | 0.0109 |
| 201 | 0.0106 | 0.0008 | 0.0098 |
| 202 | 0.0096 | 0.0008 | 0.0089 |
| 203 | 0.0088 | 0.0007 | 0.0081 |
| 204 | 0.0082 | 0.0006 | 0.0075 |
| 205 | 0.0076 | 0.0006 | 0.0070 |
| 206 | 0.0071 | 0.0006 | 0.0065 |
| 207 | 0.0067 | 0.0005 | 0.0062 |
| 208 | 0.0063 | 0.0005 | 0.0058 |
| 209 | 0.0060 | 0.0005 | 0.0055 |
| 210 | 0.0057 | 0.0004 | 0.0052 |
| 211 | 0.0054 | 0.0004 | 0.0050 |
| 212 | 0.0052 | 0.0004 | 0.0048 |
| 213 | 0.0050 | 0.0004 | 0.0046 |
| 214 | 0.0048 | 0.0004 | 0.0044 |
| 215 | 0.0046 | 0.0004 | 0.0042 |

| | | | |
|---|---|---|---|
| 216 | 0.0044 | 0.0003 | 0.0041 |
| 217 | 0.0066 | 0.0005 | 0.0061 |
| 218 | 0.0064 | 0.0005 | 0.0059 |
| 219 | 0.0063 | 0.0005 | 0.0058 |
| 220 | 0.0061 | 0.0005 | 0.0056 |
| 221 | 0.0059 | 0.0005 | 0.0055 |
| 222 | 0.0058 | 0.0005 | 0.0053 |
| 223 | 0.0056 | 0.0004 | 0.0052 |
| 224 | 0.0055 | 0.0004 | 0.0051 |
| 225 | 0.0054 | 0.0004 | 0.0049 |
| 226 | 0.0052 | 0.0004 | 0.0048 |
| 227 | 0.0051 | 0.0004 | 0.0047 |
| 228 | 0.0050 | 0.0004 | 0.0046 |
| 229 | 0.0049 | 0.0004 | 0.0045 |
| 230 | 0.0048 | 0.0004 | 0.0044 |
| 231 | 0.0047 | 0.0004 | 0.0044 |
| 232 | 0.0046 | 0.0004 | 0.0043 |
| 233 | 0.0046 | 0.0004 | 0.0042 |
| 234 | 0.0045 | 0.0004 | 0.0041 |
| 235 | 0.0044 | 0.0003 | 0.0040 |
| 236 | 0.0043 | 0.0003 | 0.0040 |
| 237 | 0.0042 | 0.0003 | 0.0039 |
| 238 | 0.0042 | 0.0003 | 0.0038 |
| 239 | 0.0041 | 0.0003 | 0.0038 |
| 240 | 0.0040 | 0.0003 | 0.0037 |
| 241 | 0.0040 | 0.0003 | 0.0037 |
| 242 | 0.0039 | 0.0003 | 0.0036 |
| 243 | 0.0039 | 0.0003 | 0.0036 |
| 244 | 0.0038 | 0.0003 | 0.0035 |
| 245 | 0.0037 | 0.0003 | 0.0035 |
| 246 | 0.0037 | 0.0003 | 0.0034 |
| 247 | 0.0036 | 0.0003 | 0.0034 |
| 248 | 0.0036 | 0.0003 | 0.0033 |
| 249 | 0.0035 | 0.0003 | 0.0033 |
| 250 | 0.0035 | 0.0003 | 0.0032 |
| 251 | 0.0035 | 0.0003 | 0.0032 |
| 252 | 0.0034 | 0.0003 | 0.0031 |
| 253 | 0.0034 | 0.0003 | 0.0031 |
| 254 | 0.0033 | 0.0003 | 0.0031 |
| 255 | 0.0033 | 0.0003 | 0.0030 |
| 256 | 0.0033 | 0.0003 | 0.0030 |
| 257 | 0.0032 | 0.0003 | 0.0030 |
| 258 | 0.0032 | 0.0003 | 0.0029 |
| 259 | 0.0031 | 0.0002 | 0.0029 |
| 260 | 0.0031 | 0.0002 | 0.0029 |
| 261 | 0.0031 | 0.0002 | 0.0028 |
| 262 | 0.0030 | 0.0002 | 0.0028 |
| 263 | 0.0030 | 0.0002 | 0.0028 |
| 264 | 0.0030 | 0.0002 | 0.0027 |
| 265 | 0.0029 | 0.0002 | 0.0027 |
| 266 | 0.0029 | 0.0002 | 0.0027 |
| 267 | 0.0029 | 0.0002 | 0.0027 |
| 268 | 0.0029 | 0.0002 | 0.0026 |
| 269 | 0.0028 | 0.0002 | 0.0026 |
| 270 | 0.0028 | 0.0002 | 0.0026 |
| 271 | 0.0028 | 0.0002 | 0.0026 |
| 272 | 0.0027 | 0.0002 | 0.0025 |
| 273 | 0.0027 | 0.0002 | 0.0025 |
| 274 | 0.0027 | 0.0002 | 0.0025 |

| | | | |
|---|---|---|---|
| 275 | 0.0027 | 0.0002 | 0.0025 |
| 276 | 0.0026 | 0.0002 | 0.0024 |
| 277 | 0.0026 | 0.0002 | 0.0024 |
| 278 | 0.0026 | 0.0002 | 0.0024 |
| 279 | 0.0026 | 0.0002 | 0.0024 |
| 280 | 0.0026 | 0.0002 | 0.0024 |
| 281 | 0.0025 | 0.0002 | 0.0023 |
| 282 | 0.0025 | 0.0002 | 0.0023 |
| 283 | 0.0025 | 0.0002 | 0.0023 |
| 284 | 0.0025 | 0.0002 | 0.0023 |
| 285 | 0.0025 | 0.0002 | 0.0023 |
| 286 | 0.0024 | 0.0002 | 0.0022 |
| 287 | 0.0024 | 0.0002 | 0.0022 |
| 288 | 0.0024 | 0.0002 | 0.0022 |

Total soil rain loss = 0.13(In)
Total effective rainfall = 2.54(In)
Peak flow rate in flood hydrograph = 16.57(CFS)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

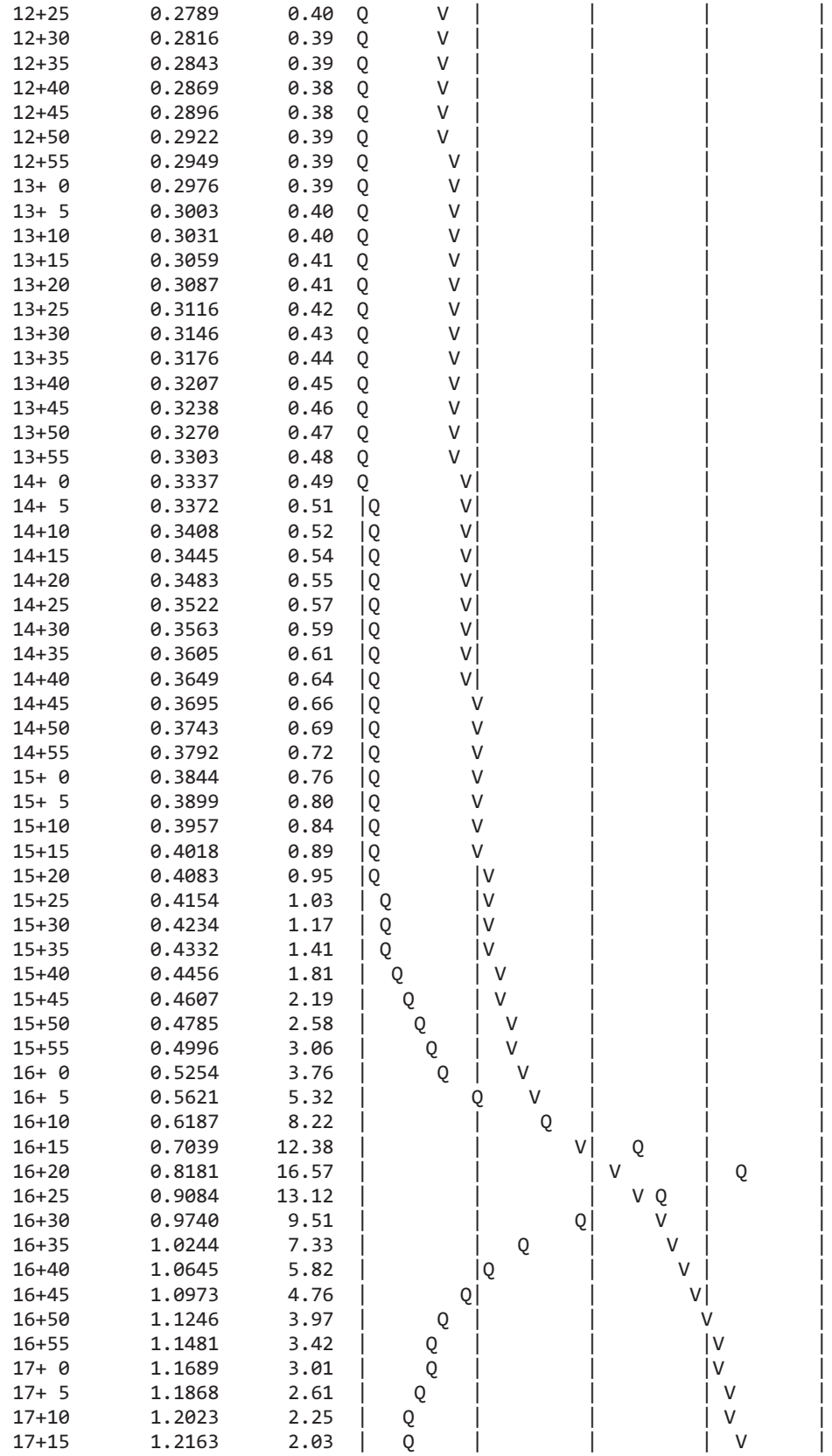
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.01 | Q | | | | |
| 0+15 | 0.0003 | 0.03 | Q | | | | |
| 0+20 | 0.0008 | 0.07 | Q | | | | |
| 0+25 | 0.0015 | 0.10 | Q | | | | |
| 0+30 | 0.0023 | 0.12 | Q | | | | |
| 0+35 | 0.0032 | 0.13 | Q | | | | |
| 0+40 | 0.0042 | 0.14 | Q | | | | |
| 0+45 | 0.0052 | 0.15 | Q | | | | |
| 0+50 | 0.0063 | 0.15 | Q | | | | |
| 0+55 | 0.0074 | 0.16 | Q | | | | |
| 1+ 0 | 0.0085 | 0.16 | Q | | | | |
| 1+ 5 | 0.0097 | 0.17 | Q | | | | |
| 1+10 | 0.0109 | 0.17 | Q | | | | |
| 1+15 | 0.0121 | 0.18 | Q | | | | |
| 1+20 | 0.0133 | 0.18 | Q | | | | |
| 1+25 | 0.0146 | 0.18 | Q | | | | |
| 1+30 | 0.0158 | 0.18 | Q | | | | |
| 1+35 | 0.0171 | 0.19 | Q | | | | |
| 1+40 | 0.0184 | 0.19 | Q | | | | |
| 1+45 | 0.0197 | 0.19 | Q | | | | |
| 1+50 | 0.0210 | 0.19 | Q | | | | |
| 1+55 | 0.0223 | 0.19 | Q | | | | |
| 2+ 0 | 0.0237 | 0.19 | Q | | | | |
| 2+ 5 | 0.0250 | 0.20 | Q | | | | |
| 2+10 | 0.0264 | 0.20 | Q | | | | |
| 2+15 | 0.0277 | 0.20 | Q | | | | |
| 2+20 | 0.0291 | 0.20 | Q | | | | |
| 2+25 | 0.0305 | 0.20 | Q | | | | |
| 2+30 | 0.0319 | 0.20 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+35 | 0.0333 | 0.20 | Q | \| | \| | \| | \| |
| 2+40 | 0.0347 | 0.20 | Q | \| | \| | \| | \| |
| 2+45 | 0.0361 | 0.21 | Q | \| | \| | \| | \| |
| 2+50 | 0.0375 | 0.21 | QV | \| | \| | \| | \| |
| 2+55 | 0.0390 | 0.21 | QV | \| | \| | \| | \| |
| 3+ 0 | 0.0404 | 0.21 | QV | \| | \| | \| | \| |
| 3+ 5 | 0.0418 | 0.21 | QV | \| | \| | \| | \| |
| 3+10 | 0.0433 | 0.21 | QV | \| | \| | \| | \| |
| 3+15 | 0.0448 | 0.21 | QV | \| | \| | \| | \| |
| 3+20 | 0.0462 | 0.21 | QV | \| | \| | \| | \| |
| 3+25 | 0.0477 | 0.21 | QV | \| | \| | \| | \| |
| 3+30 | 0.0492 | 0.21 | QV | \| | \| | \| | \| |
| 3+35 | 0.0506 | 0.22 | QV | \| | \| | \| | \| |
| 3+40 | 0.0521 | 0.22 | QV | \| | \| | \| | \| |
| 3+45 | 0.0536 | 0.22 | QV | \| | \| | \| | \| |
| 3+50 | 0.0551 | 0.22 | QV | \| | \| | \| | \| |
| 3+55 | 0.0567 | 0.22 | QV | \| | \| | \| | \| |
| 4+ 0 | 0.0582 | 0.22 | QV | \| | \| | \| | \| |
| 4+ 5 | 0.0597 | 0.22 | QV | \| | \| | \| | \| |
| 4+10 | 0.0612 | 0.22 | QV | \| | \| | \| | \| |
| 4+15 | 0.0628 | 0.22 | QV | \| | \| | \| | \| |
| 4+20 | 0.0643 | 0.23 | QV | \| | \| | \| | \| |
| 4+25 | 0.0659 | 0.23 | QV | \| | \| | \| | \| |
| 4+30 | 0.0675 | 0.23 | QV | \| | \| | \| | \| |
| 4+35 | 0.0690 | 0.23 | QV | \| | \| | \| | \| |
| 4+40 | 0.0706 | 0.23 | QV | \| | \| | \| | \| |
| 4+45 | 0.0722 | 0.23 | QV | \| | \| | \| | \| |
| 4+50 | 0.0738 | 0.23 | Q V | \| | \| | \| | \| |
| 4+55 | 0.0754 | 0.23 | Q V | \| | \| | \| | \| |
| 5+ 0 | 0.0770 | 0.23 | Q V | \| | \| | \| | \| |
| 5+ 5 | 0.0787 | 0.24 | Q V | \| | \| | \| | \| |
| 5+10 | 0.0803 | 0.24 | Q V | \| | \| | \| | \| |
| 5+15 | 0.0819 | 0.24 | Q V | \| | \| | \| | \| |
| 5+20 | 0.0836 | 0.24 | Q V | \| | \| | \| | \| |
| 5+25 | 0.0852 | 0.24 | Q V | \| | \| | \| | \| |
| 5+30 | 0.0869 | 0.24 | Q V | \| | \| | \| | \| |
| 5+35 | 0.0886 | 0.24 | Q V | \| | \| | \| | \| |
| 5+40 | 0.0903 | 0.25 | Q V | \| | \| | \| | \| |
| 5+45 | 0.0920 | 0.25 | Q V | \| | \| | \| | \| |
| 5+50 | 0.0937 | 0.25 | Q V | \| | \| | \| | \| |
| 5+55 | 0.0954 | 0.25 | Q V | \| | \| | \| | \| |
| 6+ 0 | 0.0971 | 0.25 | Q V | \| | \| | \| | \| |
| 6+ 5 | 0.0989 | 0.25 | Q V | \| | \| | \| | \| |
| 6+10 | 0.1006 | 0.25 | Q V | \| | \| | \| | \| |
| 6+15 | 0.1024 | 0.26 | Q V | \| | \| | \| | \| |
| 6+20 | 0.1042 | 0.26 | Q V | \| | \| | \| | \| |
| 6+25 | 0.1059 | 0.26 | Q V | \| | \| | \| | \| |
| 6+30 | 0.1077 | 0.26 | Q V | \| | \| | \| | \| |
| 6+35 | 0.1095 | 0.26 | Q V | \| | \| | \| | \| |
| 6+40 | 0.1114 | 0.26 | Q  V | \| | \| | \| | \| |
| 6+45 | 0.1132 | 0.27 | Q  V | \| | \| | \| | \| |
| 6+50 | 0.1150 | 0.27 | Q  V | \| | \| | \| | \| |
| 6+55 | 0.1169 | 0.27 | Q  V | \| | \| | \| | \| |
| 7+ 0 | 0.1187 | 0.27 | Q  V | \| | \| | \| | \| |
| 7+ 5 | 0.1206 | 0.27 | Q  V | \| | \| | \| | \| |
| 7+10 | 0.1225 | 0.27 | Q  V | \| | \| | \| | \| |
| 7+15 | 0.1244 | 0.28 | Q  V | \| | \| | \| | \| |
| 7+20 | 0.1263 | 0.28 | Q  V | \| | \| | \| | \| |
| 7+25 | 0.1282 | 0.28 | Q  V | \| | \| | \| | \| |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 7+30 | 0.1302 | 0.28 | Q | V | | | | |
| 7+35 | 0.1321 | 0.28 | Q | V | | | | |
| 7+40 | 0.1341 | 0.29 | Q | V | | | | |
| 7+45 | 0.1361 | 0.29 | Q | V | | | | |
| 7+50 | 0.1381 | 0.29 | Q | V | | | | |
| 7+55 | 0.1401 | 0.29 | Q | V | | | | |
| 8+ 0 | 0.1421 | 0.29 | Q | V | | | | |
| 8+ 5 | 0.1441 | 0.30 | Q | V | | | | |
| 8+10 | 0.1462 | 0.30 | Q | V | | | | |
| 8+15 | 0.1482 | 0.30 | Q | V | | | | |
| 8+20 | 0.1503 | 0.30 | Q | V | | | | |
| 8+25 | 0.1524 | 0.30 | Q | V | | | | |
| 8+30 | 0.1545 | 0.31 | Q | V | | | | |
| 8+35 | 0.1567 | 0.31 | Q | V | | | | |
| 8+40 | 0.1588 | 0.31 | Q | V | | | | |
| 8+45 | 0.1610 | 0.31 | Q | V | | | | |
| 8+50 | 0.1632 | 0.32 | Q | V | | | | |
| 8+55 | 0.1654 | 0.32 | Q | V | | | | |
| 9+ 0 | 0.1676 | 0.32 | Q | V | | | | |
| 9+ 5 | 0.1698 | 0.32 | Q | V | | | | |
| 9+10 | 0.1721 | 0.33 | Q | V | | | | |
| 9+15 | 0.1743 | 0.33 | Q | V | | | | |
| 9+20 | 0.1766 | 0.33 | Q | V | | | | |
| 9+25 | 0.1789 | 0.34 | Q | V | | | | |
| 9+30 | 0.1813 | 0.34 | Q | V | | | | |
| 9+35 | 0.1836 | 0.34 | Q | V | | | | |
| 9+40 | 0.1860 | 0.34 | Q | V | | | | |
| 9+45 | 0.1884 | 0.35 | Q | V | | | | |
| 9+50 | 0.1908 | 0.35 | Q | V | | | | |
| 9+55 | 0.1933 | 0.35 | Q | V | | | | |
| 10+ 0 | 0.1957 | 0.36 | Q | V | | | | |
| 10+ 5 | 0.1982 | 0.36 | Q | V | | | | |
| 10+10 | 0.2007 | 0.36 | Q | V | | | | |
| 10+15 | 0.2033 | 0.37 | Q | V | | | | |
| 10+20 | 0.2058 | 0.37 | Q | V | | | | |
| 10+25 | 0.2084 | 0.38 | Q | V | | | | |
| 10+30 | 0.2110 | 0.38 | Q | V | | | | |
| 10+35 | 0.2137 | 0.38 | Q | V | | | | |
| 10+40 | 0.2163 | 0.39 | Q | V | | | | |
| 10+45 | 0.2190 | 0.39 | Q | V | | | | |
| 10+50 | 0.2218 | 0.40 | Q | V | | | | |
| 10+55 | 0.2245 | 0.40 | Q | V | | | | |
| 11+ 0 | 0.2273 | 0.40 | Q | V | | | | |
| 11+ 5 | 0.2301 | 0.41 | Q | V | | | | |
| 11+10 | 0.2330 | 0.41 | Q | V | | | | |
| 11+15 | 0.2359 | 0.42 | Q | V | | | | |
| 11+20 | 0.2388 | 0.42 | Q | V | | | | |
| 11+25 | 0.2418 | 0.43 | Q | V | | | | |
| 11+30 | 0.2448 | 0.43 | Q | V | | | | |
| 11+35 | 0.2478 | 0.44 | Q | V | | | | |
| 11+40 | 0.2508 | 0.45 | Q | V | | | | |
| 11+45 | 0.2540 | 0.45 | Q | V | | | | |
| 11+50 | 0.2571 | 0.46 | Q | V | | | | |
| 11+55 | 0.2603 | 0.46 | Q | V | | | | |
| 12+ 0 | 0.2635 | 0.47 | Q | V | | | | |
| 12+ 5 | 0.2668 | 0.47 | Q | V | | | | |
| 12+10 | 0.2700 | 0.47 | Q | V | | | | |
| 12+15 | 0.2732 | 0.46 | Q | V | | | | |
| 12+20 | 0.2761 | 0.42 | Q | V | | | | |



| | | | |
|---|---|---|---|
| 12+25 | 0.2789 | 0.40 | Q V |
| 12+30 | 0.2816 | 0.39 | Q V |
| 12+35 | 0.2843 | 0.39 | Q V |
| 12+40 | 0.2869 | 0.38 | Q V |
| 12+45 | 0.2896 | 0.38 | Q V |
| 12+50 | 0.2922 | 0.39 | Q V |
| 12+55 | 0.2949 | 0.39 | Q V |
| 13+ 0 | 0.2976 | 0.39 | Q V |
| 13+ 5 | 0.3003 | 0.40 | Q V |
| 13+10 | 0.3031 | 0.40 | Q V |
| 13+15 | 0.3059 | 0.41 | Q V |
| 13+20 | 0.3087 | 0.41 | Q V |
| 13+25 | 0.3116 | 0.42 | Q V |
| 13+30 | 0.3146 | 0.43 | Q V |
| 13+35 | 0.3176 | 0.44 | Q V |
| 13+40 | 0.3207 | 0.45 | Q V |
| 13+45 | 0.3238 | 0.46 | Q V |
| 13+50 | 0.3270 | 0.47 | Q V |
| 13+55 | 0.3303 | 0.48 | Q V |
| 14+ 0 | 0.3337 | 0.49 | Q V |
| 14+ 5 | 0.3372 | 0.51 | Q V |
| 14+10 | 0.3408 | 0.52 | Q V |
| 14+15 | 0.3445 | 0.54 | Q V |
| 14+20 | 0.3483 | 0.55 | Q V |
| 14+25 | 0.3522 | 0.57 | Q V |
| 14+30 | 0.3563 | 0.59 | Q V |
| 14+35 | 0.3605 | 0.61 | Q V |
| 14+40 | 0.3649 | 0.64 | Q V |
| 14+45 | 0.3695 | 0.66 | Q V |
| 14+50 | 0.3743 | 0.69 | Q V |
| 14+55 | 0.3792 | 0.72 | Q V |
| 15+ 0 | 0.3844 | 0.76 | Q V |
| 15+ 5 | 0.3899 | 0.80 | Q V |
| 15+10 | 0.3957 | 0.84 | Q V |
| 15+15 | 0.4018 | 0.89 | Q V |
| 15+20 | 0.4083 | 0.95 | Q V |
| 15+25 | 0.4154 | 1.03 | Q V |
| 15+30 | 0.4234 | 1.17 | Q V |
| 15+35 | 0.4332 | 1.41 | Q V |
| 15+40 | 0.4456 | 1.81 | Q V |
| 15+45 | 0.4607 | 2.19 | Q V |
| 15+50 | 0.4785 | 2.58 | Q V |
| 15+55 | 0.4996 | 3.06 | Q V |
| 16+ 0 | 0.5254 | 3.76 | Q V |
| 16+ 5 | 0.5621 | 5.32 | Q V |
| 16+10 | 0.6187 | 8.22 | Q |
| 16+15 | 0.7039 | 12.38 | V Q |
| 16+20 | 0.8181 | 16.57 | V Q |
| 16+25 | 0.9084 | 13.12 | V Q |
| 16+30 | 0.9740 | 9.51 | Q V |
| 16+35 | 1.0244 | 7.33 | Q V |
| 16+40 | 1.0645 | 5.82 | Q V |
| 16+45 | 1.0973 | 4.76 | Q V |
| 16+50 | 1.1246 | 3.97 | Q V |
| 16+55 | 1.1481 | 3.42 | Q V |
| 17+ 0 | 1.1689 | 3.01 | Q V |
| 17+ 5 | 1.1868 | 2.61 | Q V |
| 17+10 | 1.2023 | 2.25 | Q V |
| 17+15 | 1.2163 | 2.03 | Q V |

```
17+20       1.2289      1.82  |  Q      |         |         |  V      |
17+25       1.2402      1.65  |  Q      |         |         |  V      |
17+30       1.2503      1.46  | Q       |         |         |   V     |
17+35       1.2596      1.35  | Q       |         |         |   V     |
17+40       1.2679      1.20  | Q       |         |         |   V     |
17+45       1.2755      1.11  | Q       |         |         |   V     |
17+50       1.2823      0.98  |Q        |         |         |   V     |
17+55       1.2884      0.89  |Q        |         |         |    V    |
18+ 0       1.2938      0.78  |Q        |         |         |    V    |
18+ 5       1.2988      0.73  |Q        |         |         |    V    |
18+10       1.3038      0.72  |Q        |         |         |    V    |
18+15       1.3087      0.72  |Q        |         |         |    V    |
18+20       1.3137      0.72  |Q        |         |         |    V    |
18+25       1.3186      0.72  |Q        |         |         |    V    |
18+30       1.3232      0.66  |Q        |         |         |     V   |
18+35       1.3274      0.61  |Q        |         |         |     V   |
18+40       1.3314      0.59  |Q        |         |         |     V   |
18+45       1.3352      0.54  |Q        |         |         |     V   |
18+50       1.3384      0.47  Q         |         |         |     V   |
18+55       1.3415      0.45  Q         |         |         |     V   |
19+ 0       1.3446      0.44  Q         |         |         |     V   |
19+ 5       1.3475      0.43  Q         |         |         |     V   |
19+10       1.3504      0.42  Q         |         |         |     V   |
19+15       1.3532      0.41  Q         |         |         |     V   |
19+20       1.3560      0.40  Q         |         |         |     V   |
19+25       1.3587      0.40  Q         |         |         |      V  |
19+30       1.3614      0.39  Q         |         |         |      V  |
19+35       1.3640      0.38  Q         |         |         |      V  |
19+40       1.3666      0.37  Q         |         |         |      V  |
19+45       1.3691      0.37  Q         |         |         |      V  |
19+50       1.3716      0.36  Q         |         |         |      V  |
19+55       1.3741      0.35  Q         |         |         |      V  |
20+ 0       1.3765      0.35  Q         |         |         |      V  |
20+ 5       1.3788      0.34  Q         |         |         |      V  |
20+10       1.3811      0.34  Q         |         |         |      V  |
20+15       1.3834      0.33  Q         |         |         |      V  |
20+20       1.3857      0.33  Q         |         |         |      V  |
20+25       1.3879      0.32  Q         |         |         |      V  |
20+30       1.3900      0.32  Q         |         |         |      V  |
20+35       1.3922      0.31  Q         |         |         |      V  |
20+40       1.3943      0.31  Q         |         |         |      V  |
20+45       1.3964      0.30  Q         |         |         |       V |
20+50       1.3984      0.30  Q         |         |         |       V |
20+55       1.4005      0.29  Q         |         |         |       V |
21+ 0       1.4024      0.29  Q         |         |         |       V |
21+ 5       1.4044      0.28  Q         |         |         |       V |
21+10       1.4063      0.28  Q         |         |         |       V |
21+15       1.4083      0.28  Q         |         |         |       V |
21+20       1.4101      0.27  Q         |         |         |       V |
21+25       1.4120      0.27  Q         |         |         |       V |
21+30       1.4138      0.27  Q         |         |         |       V |
21+35       1.4156      0.26  Q         |         |         |       V |
21+40       1.4174      0.26  Q         |         |         |       V |
21+45       1.4192      0.26  Q         |         |         |       V |
21+50       1.4209      0.25  Q         |         |         |       V |
21+55       1.4227      0.25  Q         |         |         |       V |
22+ 0       1.4244      0.25  Q         |         |         |       V |
22+ 5       1.4261      0.24  Q         |         |         |       V |
22+10       1.4277      0.24  Q         |         |         |       V |
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+15 | 1.4294 | 0.24 | Q | \| | \| | \| | V \| |
| 22+20 | 1.4310 | 0.24 | Q | \| | \| | \| | V \| |
| 22+25 | 1.4326 | 0.23 | Q | \| | \| | \| | V\| |
| 22+30 | 1.4342 | 0.23 | Q | \| | \| | \| | V\| |
| 22+35 | 1.4358 | 0.23 | Q | \| | \| | \| | V\| |
| 22+40 | 1.4374 | 0.23 | Q | \| | \| | \| | V\| |
| 22+45 | 1.4389 | 0.22 | Q | \| | \| | \| | V\| |
| 22+50 | 1.4404 | 0.22 | Q | \| | \| | \| | V\| |
| 22+55 | 1.4419 | 0.22 | Q | \| | \| | \| | V\| |
| 23+ 0 | 1.4434 | 0.22 | Q | \| | \| | \| | V\| |
| 23+ 5 | 1.4449 | 0.22 | Q | \| | \| | \| | V\| |
| 23+10 | 1.4464 | 0.21 | Q | \| | \| | \| | V\| |
| 23+15 | 1.4479 | 0.21 | Q | \| | \| | \| | V\| |
| 23+20 | 1.4493 | 0.21 | Q | \| | \| | \| | V\| |
| 23+25 | 1.4507 | 0.21 | Q | \| | \| | \| | V\| |
| 23+30 | 1.4522 | 0.21 | Q | \| | \| | \| | V\| |
| 23+35 | 1.4536 | 0.20 | Q | \| | \| | \| | V\| |
| 23+40 | 1.4550 | 0.20 | Q | \| | \| | \| | V\| |
| 23+45 | 1.4563 | 0.20 | Q | \| | \| | \| | V\| |
| 23+50 | 1.4577 | 0.20 | Q | \| | \| | \| | V\| |
| 23+55 | 1.4591 | 0.20 | Q | \| | \| | \| | V\| |
| 24+ 0 | 1.4604 | 0.20 | Q | \| | \| | \| | V\| |
| 24+ 5 | 1.4617 | 0.19 | Q | \| | \| | \| | V\| |
| 24+10 | 1.4630 | 0.18 | Q | \| | \| | \| | V\| |
| 24+15 | 1.4641 | 0.16 | Q | \| | \| | \| | V\| |
| 24+20 | 1.4649 | 0.12 | Q | \| | \| | \| | V\| |
| 24+25 | 1.4655 | 0.09 | Q | \| | \| | \| | V\| |
| 24+30 | 1.4660 | 0.07 | Q | \| | \| | \| | V\| |
| 24+35 | 1.4664 | 0.06 | Q | \| | \| | \| | V\| |
| 24+40 | 1.4667 | 0.05 | Q | \| | \| | \| | V\| |
| 24+45 | 1.4670 | 0.04 | Q | \| | \| | \| | V\| |
| 24+50 | 1.4672 | 0.03 | Q | \| | \| | \| | V\| |
| 24+55 | 1.4674 | 0.03 | Q | \| | \| | \| | V\| |
| 25+ 0 | 1.4676 | 0.03 | Q | \| | \| | \| | V\| |
| 25+ 5 | 1.4678 | 0.02 | Q | \| | \| | \| | V\| |
| 25+10 | 1.4679 | 0.02 | Q | \| | \| | \| | V\| |
| 25+15 | 1.4680 | 0.02 | Q | \| | \| | \| | V\| |
| 25+20 | 1.4681 | 0.01 | Q | \| | \| | \| | V\| |
| 25+25 | 1.4682 | 0.01 | Q | \| | \| | \| | V\| |
| 25+30 | 1.4682 | 0.01 | Q | \| | \| | \| | V\| |
| 25+35 | 1.4683 | 0.01 | Q | \| | \| | \| | V\| |
| 25+40 | 1.4684 | 0.01 | Q | \| | \| | \| | V\| |
| 25+45 | 1.4684 | 0.01 | Q | \| | \| | \| | V\| |
| 25+50 | 1.4684 | 0.01 | Q | \| | \| | \| | V\| |
| 25+55 | 1.4685 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 0 | 1.4685 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 1.4685 | 0.00 | Q | \| | \| | \| | V\| |
| 26+10 | 1.4685 | 0.00 | Q | \| | \| | \| | V\| |
| 26+15 | 1.4685 | 0.00 | Q | \| | \| | \| | V\| |
| 26+20 | 1.4686 | 0.00 | Q | \| | \| | \| | V\| |
| 26+25 | 1.4686 | 0.00 | Q | \| | \| | \| | V\| |
| 26+30 | 1.4686 | 0.00 | Q | \| | \| | \| | V\| |
| 26+35 | 1.4686 | 0.00 | Q | \| | \| | \| | V\| |
| 26+40 | 1.4686 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 44
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 6.47 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 6.47 | 6 | 1.87 |
| Rainfall data for year 100 | | |
| 6.47 | 24 | 2.68 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 91.0 | 98.2 | 6.47 | 1.000 | 0.036 | 0.900 | 0.032 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.032

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 5.82 | 0.900 | 91.0 | 98.2 | 0.18 | 0.922 |
| 0.65 | 0.100 | 98.0 | 98.0 | 0.20 | 0.914 |

Area-averaged catchment yield fraction, Y = 0.922
Area-averaged low loss fraction, Yb = 0.078
User entry of time of concentration = 0.380 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 6.47(Ac.)
Catchment Lag time = 0.304 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 27.4123
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.032(In/Hr)
Average low loss rate fraction (Yb) = 0.078 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.667(In)
Specified peak 6-hour rainfall = 1.870(In)
Specified peak 24-hour rainfall = 2.680(In)

Rainfall depth area reduction factors:
Using a total area of 6.47(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.659(In)
30-minute factor = 1.000 Adjusted rainfall = 1.129(In)
1-hour factor = 1.000 Adjusted rainfall = 1.390(In)
3-hour factor = 1.000 Adjusted rainfall = 1.667(In)
6-hour factor = 1.000 Adjusted rainfall = 1.870(In)
24-hour factor = 1.000 Adjusted rainfall = 2.680(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 78.25 (CFS)) | |
| 1 | 1.539 | 1.204 |
| 2 | 7.808 | 4.905 |
| 3 | 24.928 | 13.395 |
| 4 | 47.091 | 17.342 |
| 5 | 60.457 | 10.459 |
| 6 | 68.608 | 6.378 |
| 7 | 74.508 | 4.617 |
| 8 | 78.995 | 3.511 |
| 9 | 82.450 | 2.704 |
| 10 | 85.298 | 2.228 |
| 11 | 87.725 | 1.900 |
| 12 | 89.613 | 1.477 |
| 13 | 91.183 | 1.228 |

| | | |
|---|---|---|
| 14 | 92.558 | 1.076 |
| 15 | 93.766 | 0.946 |
| 16 | 94.746 | 0.767 |
| 17 | 95.641 | 0.700 |
| 18 | 96.373 | 0.573 |
| 19 | 97.022 | 0.508 |
| 20 | 97.522 | 0.391 |
| 21 | 97.919 | 0.311 |
| 22 | 98.194 | 0.215 |
| 23 | 98.501 | 0.240 |
| 24 | 98.830 | 0.257 |
| 25 | 99.159 | 0.257 |
| 26 | 99.471 | 0.244 |
| 27 | 99.665 | 0.152 |
| 28 | 99.836 | 0.134 |
| 29 | 100.000 | 0.128 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6594 | 0.6594 |
| 2 | 0.8118 | 0.1524 |
| 3 | 0.9168 | 0.1050 |
| 4 | 0.9994 | 0.0826 |
| 5 | 1.0686 | 0.0692 |
| 6 | 1.1287 | 0.0601 |
| 7 | 1.1821 | 0.0534 |
| 8 | 1.2304 | 0.0483 |
| 9 | 1.2747 | 0.0443 |
| 10 | 1.3156 | 0.0409 |
| 11 | 1.3538 | 0.0382 |
| 12 | 1.3896 | 0.0358 |
| 13 | 1.4081 | 0.0186 |
| 14 | 1.4256 | 0.0174 |
| 15 | 1.4420 | 0.0164 |
| 16 | 1.4575 | 0.0155 |
| 17 | 1.4722 | 0.0147 |
| 18 | 1.4862 | 0.0140 |
| 19 | 1.4996 | 0.0134 |
| 20 | 1.5124 | 0.0128 |
| 21 | 1.5247 | 0.0123 |
| 22 | 1.5365 | 0.0118 |
| 23 | 1.5478 | 0.0114 |
| 24 | 1.5588 | 0.0110 |
| 25 | 1.5694 | 0.0106 |
| 26 | 1.5796 | 0.0102 |
| 27 | 1.5895 | 0.0099 |
| 28 | 1.5992 | 0.0096 |
| 29 | 1.6085 | 0.0093 |
| 30 | 1.6176 | 0.0091 |
| 31 | 1.6264 | 0.0088 |
| 32 | 1.6350 | 0.0086 |
| 33 | 1.6433 | 0.0084 |
| 34 | 1.6515 | 0.0082 |
| 35 | 1.6594 | 0.0080 |
| 36 | 1.6672 | 0.0078 |
| 37 | 1.6748 | 0.0076 |
| 38 | 1.6822 | 0.0074 |
| 39 | 1.6894 | 0.0073 |
| 40 | 1.6965 | 0.0071 |

| | | |
|---|---|---|
| 41 | 1.7035 | 0.0070 |
| 42 | 1.7103 | 0.0068 |
| 43 | 1.7170 | 0.0067 |
| 44 | 1.7235 | 0.0065 |
| 45 | 1.7300 | 0.0064 |
| 46 | 1.7363 | 0.0063 |
| 47 | 1.7425 | 0.0062 |
| 48 | 1.7485 | 0.0061 |
| 49 | 1.7545 | 0.0060 |
| 50 | 1.7604 | 0.0059 |
| 51 | 1.7662 | 0.0058 |
| 52 | 1.7719 | 0.0057 |
| 53 | 1.7775 | 0.0056 |
| 54 | 1.7830 | 0.0055 |
| 55 | 1.7884 | 0.0054 |
| 56 | 1.7937 | 0.0053 |
| 57 | 1.7990 | 0.0053 |
| 58 | 1.8042 | 0.0052 |
| 59 | 1.8093 | 0.0051 |
| 60 | 1.8144 | 0.0050 |
| 61 | 1.8193 | 0.0050 |
| 62 | 1.8242 | 0.0049 |
| 63 | 1.8291 | 0.0048 |
| 64 | 1.8338 | 0.0048 |
| 65 | 1.8386 | 0.0047 |
| 66 | 1.8432 | 0.0047 |
| 67 | 1.8478 | 0.0046 |
| 68 | 1.8523 | 0.0045 |
| 69 | 1.8568 | 0.0045 |
| 70 | 1.8613 | 0.0044 |
| 71 | 1.8656 | 0.0044 |
| 72 | 1.8700 | 0.0043 |
| 73 | 1.8767 | 0.0067 |
| 74 | 1.8833 | 0.0066 |
| 75 | 1.8899 | 0.0066 |
| 76 | 1.8964 | 0.0065 |
| 77 | 1.9028 | 0.0064 |
| 78 | 1.9092 | 0.0064 |
| 79 | 1.9156 | 0.0063 |
| 80 | 1.9218 | 0.0063 |
| 81 | 1.9280 | 0.0062 |
| 82 | 1.9342 | 0.0062 |
| 83 | 1.9403 | 0.0061 |
| 84 | 1.9463 | 0.0060 |
| 85 | 1.9523 | 0.0060 |
| 86 | 1.9582 | 0.0059 |
| 87 | 1.9641 | 0.0059 |
| 88 | 1.9700 | 0.0058 |
| 89 | 1.9757 | 0.0058 |
| 90 | 1.9815 | 0.0057 |
| 91 | 1.9872 | 0.0057 |
| 92 | 1.9928 | 0.0056 |
| 93 | 1.9984 | 0.0056 |
| 94 | 2.0040 | 0.0056 |
| 95 | 2.0095 | 0.0055 |
| 96 | 2.0150 | 0.0055 |
| 97 | 2.0204 | 0.0054 |
| 98 | 2.0258 | 0.0054 |
| 99 | 2.0311 | 0.0053 |

| | | |
|---|---|---|
| 100 | 2.0364 | 0.0053 |
| 101 | 2.0417 | 0.0053 |
| 102 | 2.0469 | 0.0052 |
| 103 | 2.0521 | 0.0052 |
| 104 | 2.0573 | 0.0052 |
| 105 | 2.0624 | 0.0051 |
| 106 | 2.0675 | 0.0051 |
| 107 | 2.0725 | 0.0050 |
| 108 | 2.0775 | 0.0050 |
| 109 | 2.0825 | 0.0050 |
| 110 | 2.0874 | 0.0049 |
| 111 | 2.0924 | 0.0049 |
| 112 | 2.0972 | 0.0049 |
| 113 | 2.1021 | 0.0048 |
| 114 | 2.1069 | 0.0048 |
| 115 | 2.1117 | 0.0048 |
| 116 | 2.1164 | 0.0048 |
| 117 | 2.1212 | 0.0047 |
| 118 | 2.1258 | 0.0047 |
| 119 | 2.1305 | 0.0047 |
| 120 | 2.1351 | 0.0046 |
| 121 | 2.1397 | 0.0046 |
| 122 | 2.1443 | 0.0046 |
| 123 | 2.1489 | 0.0045 |
| 124 | 2.1534 | 0.0045 |
| 125 | 2.1579 | 0.0045 |
| 126 | 2.1624 | 0.0045 |
| 127 | 2.1668 | 0.0044 |
| 128 | 2.1712 | 0.0044 |
| 129 | 2.1756 | 0.0044 |
| 130 | 2.1800 | 0.0044 |
| 131 | 2.1843 | 0.0043 |
| 132 | 2.1886 | 0.0043 |
| 133 | 2.1929 | 0.0043 |
| 134 | 2.1972 | 0.0043 |
| 135 | 2.2014 | 0.0042 |
| 136 | 2.2057 | 0.0042 |
| 137 | 2.2099 | 0.0042 |
| 138 | 2.2140 | 0.0042 |
| 139 | 2.2182 | 0.0042 |
| 140 | 2.2223 | 0.0041 |
| 141 | 2.2264 | 0.0041 |
| 142 | 2.2305 | 0.0041 |
| 143 | 2.2346 | 0.0041 |
| 144 | 2.2386 | 0.0040 |
| 145 | 2.2427 | 0.0040 |
| 146 | 2.2467 | 0.0040 |
| 147 | 2.2506 | 0.0040 |
| 148 | 2.2546 | 0.0040 |
| 149 | 2.2586 | 0.0039 |
| 150 | 2.2625 | 0.0039 |
| 151 | 2.2664 | 0.0039 |
| 152 | 2.2703 | 0.0039 |
| 153 | 2.2741 | 0.0039 |
| 154 | 2.2780 | 0.0038 |
| 155 | 2.2818 | 0.0038 |
| 156 | 2.2856 | 0.0038 |
| 157 | 2.2894 | 0.0038 |
| 158 | 2.2932 | 0.0038 |

| | | |
|---|---|---|
| 159 | 2.2970 | 0.0038 |
| 160 | 2.3007 | 0.0037 |
| 161 | 2.3044 | 0.0037 |
| 162 | 2.3081 | 0.0037 |
| 163 | 2.3118 | 0.0037 |
| 164 | 2.3155 | 0.0037 |
| 165 | 2.3192 | 0.0037 |
| 166 | 2.3228 | 0.0036 |
| 167 | 2.3264 | 0.0036 |
| 168 | 2.3300 | 0.0036 |
| 169 | 2.3336 | 0.0036 |
| 170 | 2.3372 | 0.0036 |
| 171 | 2.3408 | 0.0036 |
| 172 | 2.3443 | 0.0035 |
| 173 | 2.3478 | 0.0035 |
| 174 | 2.3514 | 0.0035 |
| 175 | 2.3549 | 0.0035 |
| 176 | 2.3583 | 0.0035 |
| 177 | 2.3618 | 0.0035 |
| 178 | 2.3653 | 0.0035 |
| 179 | 2.3687 | 0.0034 |
| 180 | 2.3721 | 0.0034 |
| 181 | 2.3756 | 0.0034 |
| 182 | 2.3790 | 0.0034 |
| 183 | 2.3823 | 0.0034 |
| 184 | 2.3857 | 0.0034 |
| 185 | 2.3891 | 0.0034 |
| 186 | 2.3924 | 0.0033 |
| 187 | 2.3958 | 0.0033 |
| 188 | 2.3991 | 0.0033 |
| 189 | 2.4024 | 0.0033 |
| 190 | 2.4057 | 0.0033 |
| 191 | 2.4090 | 0.0033 |
| 192 | 2.4122 | 0.0033 |
| 193 | 2.4155 | 0.0033 |
| 194 | 2.4187 | 0.0032 |
| 195 | 2.4219 | 0.0032 |
| 196 | 2.4252 | 0.0032 |
| 197 | 2.4284 | 0.0032 |
| 198 | 2.4316 | 0.0032 |
| 199 | 2.4347 | 0.0032 |
| 200 | 2.4379 | 0.0032 |
| 201 | 2.4411 | 0.0032 |
| 202 | 2.4442 | 0.0031 |
| 203 | 2.4474 | 0.0031 |
| 204 | 2.4505 | 0.0031 |
| 205 | 2.4536 | 0.0031 |
| 206 | 2.4567 | 0.0031 |
| 207 | 2.4598 | 0.0031 |
| 208 | 2.4629 | 0.0031 |
| 209 | 2.4659 | 0.0031 |
| 210 | 2.4690 | 0.0031 |
| 211 | 2.4720 | 0.0030 |
| 212 | 2.4751 | 0.0030 |
| 213 | 2.4781 | 0.0030 |
| 214 | 2.4811 | 0.0030 |
| 215 | 2.4841 | 0.0030 |
| 216 | 2.4871 | 0.0030 |
| 217 | 2.4901 | 0.0030 |

| | | |
|---|---|---|
| 218 | 2.4931 | 0.0030 |
| 219 | 2.4960 | 0.0030 |
| 220 | 2.4990 | 0.0030 |
| 221 | 2.5019 | 0.0029 |
| 222 | 2.5049 | 0.0029 |
| 223 | 2.5078 | 0.0029 |
| 224 | 2.5107 | 0.0029 |
| 225 | 2.5136 | 0.0029 |
| 226 | 2.5165 | 0.0029 |
| 227 | 2.5194 | 0.0029 |
| 228 | 2.5223 | 0.0029 |
| 229 | 2.5251 | 0.0029 |
| 230 | 2.5280 | 0.0029 |
| 231 | 2.5308 | 0.0028 |
| 232 | 2.5337 | 0.0028 |
| 233 | 2.5365 | 0.0028 |
| 234 | 2.5393 | 0.0028 |
| 235 | 2.5422 | 0.0028 |
| 236 | 2.5450 | 0.0028 |
| 237 | 2.5478 | 0.0028 |
| 238 | 2.5505 | 0.0028 |
| 239 | 2.5533 | 0.0028 |
| 240 | 2.5561 | 0.0028 |
| 241 | 2.5588 | 0.0028 |
| 242 | 2.5616 | 0.0028 |
| 243 | 2.5643 | 0.0027 |
| 244 | 2.5671 | 0.0027 |
| 245 | 2.5698 | 0.0027 |
| 246 | 2.5725 | 0.0027 |
| 247 | 2.5752 | 0.0027 |
| 248 | 2.5779 | 0.0027 |
| 249 | 2.5806 | 0.0027 |
| 250 | 2.5833 | 0.0027 |
| 251 | 2.5860 | 0.0027 |
| 252 | 2.5887 | 0.0027 |
| 253 | 2.5913 | 0.0027 |
| 254 | 2.5940 | 0.0027 |
| 255 | 2.5966 | 0.0026 |
| 256 | 2.5993 | 0.0026 |
| 257 | 2.6019 | 0.0026 |
| 258 | 2.6045 | 0.0026 |
| 259 | 2.6071 | 0.0026 |
| 260 | 2.6098 | 0.0026 |
| 261 | 2.6124 | 0.0026 |
| 262 | 2.6150 | 0.0026 |
| 263 | 2.6175 | 0.0026 |
| 264 | 2.6201 | 0.0026 |
| 265 | 2.6227 | 0.0026 |
| 266 | 2.6253 | 0.0026 |
| 267 | 2.6278 | 0.0026 |
| 268 | 2.6304 | 0.0026 |
| 269 | 2.6329 | 0.0025 |
| 270 | 2.6355 | 0.0025 |
| 271 | 2.6380 | 0.0025 |
| 272 | 2.6405 | 0.0025 |
| 273 | 2.6430 | 0.0025 |
| 274 | 2.6455 | 0.0025 |
| 275 | 2.6480 | 0.0025 |
| 276 | 2.6505 | 0.0025 |

| | | |
|---|---|---|
| 277 | 2.6530 | 0.0025 |
| 278 | 2.6555 | 0.0025 |
| 279 | 2.6580 | 0.0025 |
| 280 | 2.6605 | 0.0025 |
| 281 | 2.6629 | 0.0025 |
| 282 | 2.6654 | 0.0025 |
| 283 | 2.6678 | 0.0025 |
| 284 | 2.6703 | 0.0024 |
| 285 | 2.6727 | 0.0024 |
| 286 | 2.6751 | 0.0024 |
| 287 | 2.6776 | 0.0024 |
| 288 | 2.6800 | 0.0024 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0024 | 0.0002 | 0.0022 |
| 2 | 0.0024 | 0.0002 | 0.0022 |
| 3 | 0.0024 | 0.0002 | 0.0022 |
| 4 | 0.0024 | 0.0002 | 0.0023 |
| 5 | 0.0025 | 0.0002 | 0.0023 |
| 6 | 0.0025 | 0.0002 | 0.0023 |
| 7 | 0.0025 | 0.0002 | 0.0023 |
| 8 | 0.0025 | 0.0002 | 0.0023 |
| 9 | 0.0025 | 0.0002 | 0.0023 |
| 10 | 0.0025 | 0.0002 | 0.0023 |
| 11 | 0.0025 | 0.0002 | 0.0023 |
| 12 | 0.0025 | 0.0002 | 0.0023 |
| 13 | 0.0025 | 0.0002 | 0.0023 |
| 14 | 0.0025 | 0.0002 | 0.0023 |
| 15 | 0.0026 | 0.0002 | 0.0024 |
| 16 | 0.0026 | 0.0002 | 0.0024 |
| 17 | 0.0026 | 0.0002 | 0.0024 |
| 18 | 0.0026 | 0.0002 | 0.0024 |
| 19 | 0.0026 | 0.0002 | 0.0024 |
| 20 | 0.0026 | 0.0002 | 0.0024 |
| 21 | 0.0026 | 0.0002 | 0.0024 |
| 22 | 0.0026 | 0.0002 | 0.0024 |
| 23 | 0.0026 | 0.0002 | 0.0024 |
| 24 | 0.0027 | 0.0002 | 0.0024 |
| 25 | 0.0027 | 0.0002 | 0.0025 |
| 26 | 0.0027 | 0.0002 | 0.0025 |
| 27 | 0.0027 | 0.0002 | 0.0025 |
| 28 | 0.0027 | 0.0002 | 0.0025 |
| 29 | 0.0027 | 0.0002 | 0.0025 |
| 30 | 0.0027 | 0.0002 | 0.0025 |
| 31 | 0.0027 | 0.0002 | 0.0025 |
| 32 | 0.0028 | 0.0002 | 0.0025 |
| 33 | 0.0028 | 0.0002 | 0.0026 |
| 34 | 0.0028 | 0.0002 | 0.0026 |
| 35 | 0.0028 | 0.0002 | 0.0026 |
| 36 | 0.0028 | 0.0002 | 0.0026 |
| 37 | 0.0028 | 0.0002 | 0.0026 |
| 38 | 0.0028 | 0.0002 | 0.0026 |
| 39 | 0.0028 | 0.0002 | 0.0026 |
| 40 | 0.0029 | 0.0002 | 0.0026 |
| 41 | 0.0029 | 0.0002 | 0.0027 |
| 42 | 0.0029 | 0.0002 | 0.0027 |

| | | | |
|---|---|---|---|
| 43 | 0.0029 | 0.0002 | 0.0027 |
| 44 | 0.0029 | 0.0002 | 0.0027 |
| 45 | 0.0029 | 0.0002 | 0.0027 |
| 46 | 0.0029 | 0.0002 | 0.0027 |
| 47 | 0.0030 | 0.0002 | 0.0027 |
| 48 | 0.0030 | 0.0002 | 0.0027 |
| 49 | 0.0030 | 0.0002 | 0.0028 |
| 50 | 0.0030 | 0.0002 | 0.0028 |
| 51 | 0.0030 | 0.0002 | 0.0028 |
| 52 | 0.0030 | 0.0002 | 0.0028 |
| 53 | 0.0031 | 0.0002 | 0.0028 |
| 54 | 0.0031 | 0.0002 | 0.0028 |
| 55 | 0.0031 | 0.0002 | 0.0028 |
| 56 | 0.0031 | 0.0002 | 0.0029 |
| 57 | 0.0031 | 0.0002 | 0.0029 |
| 58 | 0.0031 | 0.0002 | 0.0029 |
| 59 | 0.0032 | 0.0002 | 0.0029 |
| 60 | 0.0032 | 0.0002 | 0.0029 |
| 61 | 0.0032 | 0.0003 | 0.0029 |
| 62 | 0.0032 | 0.0003 | 0.0030 |
| 63 | 0.0032 | 0.0003 | 0.0030 |
| 64 | 0.0032 | 0.0003 | 0.0030 |
| 65 | 0.0033 | 0.0003 | 0.0030 |
| 66 | 0.0033 | 0.0003 | 0.0030 |
| 67 | 0.0033 | 0.0003 | 0.0030 |
| 68 | 0.0033 | 0.0003 | 0.0031 |
| 69 | 0.0033 | 0.0003 | 0.0031 |
| 70 | 0.0034 | 0.0003 | 0.0031 |
| 71 | 0.0034 | 0.0003 | 0.0031 |
| 72 | 0.0034 | 0.0003 | 0.0031 |
| 73 | 0.0034 | 0.0003 | 0.0032 |
| 74 | 0.0034 | 0.0003 | 0.0032 |
| 75 | 0.0035 | 0.0003 | 0.0032 |
| 76 | 0.0035 | 0.0003 | 0.0032 |
| 77 | 0.0035 | 0.0003 | 0.0032 |
| 78 | 0.0035 | 0.0003 | 0.0033 |
| 79 | 0.0036 | 0.0003 | 0.0033 |
| 80 | 0.0036 | 0.0003 | 0.0033 |
| 81 | 0.0036 | 0.0003 | 0.0033 |
| 82 | 0.0036 | 0.0003 | 0.0033 |
| 83 | 0.0037 | 0.0003 | 0.0034 |
| 84 | 0.0037 | 0.0003 | 0.0034 |
| 85 | 0.0037 | 0.0003 | 0.0034 |
| 86 | 0.0037 | 0.0003 | 0.0034 |
| 87 | 0.0038 | 0.0003 | 0.0035 |
| 88 | 0.0038 | 0.0003 | 0.0035 |
| 89 | 0.0038 | 0.0003 | 0.0035 |
| 90 | 0.0038 | 0.0003 | 0.0035 |
| 91 | 0.0039 | 0.0003 | 0.0036 |
| 92 | 0.0039 | 0.0003 | 0.0036 |
| 93 | 0.0039 | 0.0003 | 0.0036 |
| 94 | 0.0039 | 0.0003 | 0.0036 |
| 95 | 0.0040 | 0.0003 | 0.0037 |
| 96 | 0.0040 | 0.0003 | 0.0037 |
| 97 | 0.0040 | 0.0003 | 0.0037 |
| 98 | 0.0041 | 0.0003 | 0.0037 |
| 99 | 0.0041 | 0.0003 | 0.0038 |
| 100 | 0.0041 | 0.0003 | 0.0038 |
| 101 | 0.0042 | 0.0003 | 0.0038 |

| | | | |
|---|---|---|---|
| 102 | 0.0042 | 0.0003 | 0.0039 |
| 103 | 0.0042 | 0.0003 | 0.0039 |
| 104 | 0.0043 | 0.0003 | 0.0039 |
| 105 | 0.0043 | 0.0003 | 0.0040 |
| 106 | 0.0043 | 0.0003 | 0.0040 |
| 107 | 0.0044 | 0.0003 | 0.0040 |
| 108 | 0.0044 | 0.0003 | 0.0041 |
| 109 | 0.0045 | 0.0004 | 0.0041 |
| 110 | 0.0045 | 0.0004 | 0.0041 |
| 111 | 0.0045 | 0.0004 | 0.0042 |
| 112 | 0.0046 | 0.0004 | 0.0042 |
| 113 | 0.0046 | 0.0004 | 0.0043 |
| 114 | 0.0047 | 0.0004 | 0.0043 |
| 115 | 0.0047 | 0.0004 | 0.0044 |
| 116 | 0.0048 | 0.0004 | 0.0044 |
| 117 | 0.0048 | 0.0004 | 0.0044 |
| 118 | 0.0048 | 0.0004 | 0.0045 |
| 119 | 0.0049 | 0.0004 | 0.0045 |
| 120 | 0.0049 | 0.0004 | 0.0046 |
| 121 | 0.0050 | 0.0004 | 0.0046 |
| 122 | 0.0050 | 0.0004 | 0.0046 |
| 123 | 0.0051 | 0.0004 | 0.0047 |
| 124 | 0.0052 | 0.0004 | 0.0047 |
| 125 | 0.0052 | 0.0004 | 0.0048 |
| 126 | 0.0053 | 0.0004 | 0.0049 |
| 127 | 0.0053 | 0.0004 | 0.0049 |
| 128 | 0.0054 | 0.0004 | 0.0050 |
| 129 | 0.0055 | 0.0004 | 0.0050 |
| 130 | 0.0055 | 0.0004 | 0.0051 |
| 131 | 0.0056 | 0.0004 | 0.0052 |
| 132 | 0.0056 | 0.0004 | 0.0052 |
| 133 | 0.0057 | 0.0005 | 0.0053 |
| 134 | 0.0058 | 0.0005 | 0.0053 |
| 135 | 0.0059 | 0.0005 | 0.0054 |
| 136 | 0.0059 | 0.0005 | 0.0055 |
| 137 | 0.0060 | 0.0005 | 0.0056 |
| 138 | 0.0061 | 0.0005 | 0.0056 |
| 139 | 0.0062 | 0.0005 | 0.0057 |
| 140 | 0.0063 | 0.0005 | 0.0058 |
| 141 | 0.0064 | 0.0005 | 0.0059 |
| 142 | 0.0064 | 0.0005 | 0.0059 |
| 143 | 0.0066 | 0.0005 | 0.0061 |
| 144 | 0.0066 | 0.0005 | 0.0061 |
| 145 | 0.0043 | 0.0003 | 0.0040 |
| 146 | 0.0044 | 0.0003 | 0.0040 |
| 147 | 0.0045 | 0.0004 | 0.0041 |
| 148 | 0.0045 | 0.0004 | 0.0042 |
| 149 | 0.0047 | 0.0004 | 0.0043 |
| 150 | 0.0047 | 0.0004 | 0.0043 |
| 151 | 0.0048 | 0.0004 | 0.0045 |
| 152 | 0.0049 | 0.0004 | 0.0045 |
| 153 | 0.0050 | 0.0004 | 0.0046 |
| 154 | 0.0051 | 0.0004 | 0.0047 |
| 155 | 0.0053 | 0.0004 | 0.0049 |
| 156 | 0.0053 | 0.0004 | 0.0049 |
| 157 | 0.0055 | 0.0004 | 0.0051 |
| 158 | 0.0056 | 0.0004 | 0.0052 |
| 159 | 0.0058 | 0.0005 | 0.0053 |
| 160 | 0.0059 | 0.0005 | 0.0054 |

| | | | |
|---|---|---|---|
| 161 | 0.0061 | 0.0005 | 0.0056 |
| 162 | 0.0062 | 0.0005 | 0.0057 |
| 163 | 0.0064 | 0.0005 | 0.0059 |
| 164 | 0.0065 | 0.0005 | 0.0060 |
| 165 | 0.0068 | 0.0005 | 0.0063 |
| 166 | 0.0070 | 0.0005 | 0.0064 |
| 167 | 0.0073 | 0.0006 | 0.0067 |
| 168 | 0.0074 | 0.0006 | 0.0068 |
| 169 | 0.0078 | 0.0006 | 0.0072 |
| 170 | 0.0080 | 0.0006 | 0.0073 |
| 171 | 0.0084 | 0.0007 | 0.0077 |
| 172 | 0.0086 | 0.0007 | 0.0079 |
| 173 | 0.0091 | 0.0007 | 0.0084 |
| 174 | 0.0093 | 0.0007 | 0.0086 |
| 175 | 0.0099 | 0.0008 | 0.0091 |
| 176 | 0.0102 | 0.0008 | 0.0094 |
| 177 | 0.0110 | 0.0009 | 0.0101 |
| 178 | 0.0114 | 0.0009 | 0.0105 |
| 179 | 0.0123 | 0.0010 | 0.0113 |
| 180 | 0.0128 | 0.0010 | 0.0118 |
| 181 | 0.0140 | 0.0011 | 0.0129 |
| 182 | 0.0147 | 0.0012 | 0.0136 |
| 183 | 0.0164 | 0.0013 | 0.0151 |
| 184 | 0.0174 | 0.0014 | 0.0160 |
| 185 | 0.0358 | 0.0027 | 0.0331 |
| 186 | 0.0382 | 0.0027 | 0.0355 |
| 187 | 0.0443 | 0.0027 | 0.0416 |
| 188 | 0.0483 | 0.0027 | 0.0456 |
| 189 | 0.0601 | 0.0027 | 0.0574 |
| 190 | 0.0692 | 0.0027 | 0.0665 |
| 191 | 0.1050 | 0.0027 | 0.1023 |
| 192 | 0.1524 | 0.0027 | 0.1497 |
| 193 | 0.6594 | 0.0027 | 0.6567 |
| 194 | 0.0826 | 0.0027 | 0.0800 |
| 195 | 0.0534 | 0.0027 | 0.0507 |
| 196 | 0.0409 | 0.0027 | 0.0383 |
| 197 | 0.0186 | 0.0015 | 0.0171 |
| 198 | 0.0155 | 0.0012 | 0.0143 |
| 199 | 0.0134 | 0.0011 | 0.0123 |
| 200 | 0.0118 | 0.0009 | 0.0109 |
| 201 | 0.0106 | 0.0008 | 0.0098 |
| 202 | 0.0096 | 0.0008 | 0.0089 |
| 203 | 0.0088 | 0.0007 | 0.0081 |
| 204 | 0.0082 | 0.0006 | 0.0075 |
| 205 | 0.0076 | 0.0006 | 0.0070 |
| 206 | 0.0071 | 0.0006 | 0.0065 |
| 207 | 0.0067 | 0.0005 | 0.0062 |
| 208 | 0.0063 | 0.0005 | 0.0058 |
| 209 | 0.0060 | 0.0005 | 0.0055 |
| 210 | 0.0057 | 0.0004 | 0.0052 |
| 211 | 0.0054 | 0.0004 | 0.0050 |
| 212 | 0.0052 | 0.0004 | 0.0048 |
| 213 | 0.0050 | 0.0004 | 0.0046 |
| 214 | 0.0048 | 0.0004 | 0.0044 |
| 215 | 0.0046 | 0.0004 | 0.0042 |
| 216 | 0.0044 | 0.0003 | 0.0041 |
| 217 | 0.0067 | 0.0005 | 0.0062 |
| 218 | 0.0065 | 0.0005 | 0.0060 |
| 219 | 0.0063 | 0.0005 | 0.0058 |

| | | | |
|---|---|---|---|
| 220 | 0.0062 | 0.0005 | 0.0057 |
| 221 | 0.0060 | 0.0005 | 0.0055 |
| 222 | 0.0058 | 0.0005 | 0.0054 |
| 223 | 0.0057 | 0.0004 | 0.0052 |
| 224 | 0.0056 | 0.0004 | 0.0051 |
| 225 | 0.0054 | 0.0004 | 0.0050 |
| 226 | 0.0053 | 0.0004 | 0.0049 |
| 227 | 0.0052 | 0.0004 | 0.0048 |
| 228 | 0.0051 | 0.0004 | 0.0047 |
| 229 | 0.0050 | 0.0004 | 0.0046 |
| 230 | 0.0049 | 0.0004 | 0.0045 |
| 231 | 0.0048 | 0.0004 | 0.0044 |
| 232 | 0.0047 | 0.0004 | 0.0043 |
| 233 | 0.0046 | 0.0004 | 0.0042 |
| 234 | 0.0045 | 0.0004 | 0.0042 |
| 235 | 0.0044 | 0.0003 | 0.0041 |
| 236 | 0.0044 | 0.0003 | 0.0040 |
| 237 | 0.0043 | 0.0003 | 0.0040 |
| 238 | 0.0042 | 0.0003 | 0.0039 |
| 239 | 0.0042 | 0.0003 | 0.0038 |
| 240 | 0.0041 | 0.0003 | 0.0038 |
| 241 | 0.0040 | 0.0003 | 0.0037 |
| 242 | 0.0040 | 0.0003 | 0.0037 |
| 243 | 0.0039 | 0.0003 | 0.0036 |
| 244 | 0.0038 | 0.0003 | 0.0035 |
| 245 | 0.0038 | 0.0003 | 0.0035 |
| 246 | 0.0037 | 0.0003 | 0.0034 |
| 247 | 0.0037 | 0.0003 | 0.0034 |
| 248 | 0.0036 | 0.0003 | 0.0034 |
| 249 | 0.0036 | 0.0003 | 0.0033 |
| 250 | 0.0035 | 0.0003 | 0.0033 |
| 251 | 0.0035 | 0.0003 | 0.0032 |
| 252 | 0.0035 | 0.0003 | 0.0032 |
| 253 | 0.0034 | 0.0003 | 0.0031 |
| 254 | 0.0034 | 0.0003 | 0.0031 |
| 255 | 0.0033 | 0.0003 | 0.0031 |
| 256 | 0.0033 | 0.0003 | 0.0030 |
| 257 | 0.0033 | 0.0003 | 0.0030 |
| 258 | 0.0032 | 0.0003 | 0.0030 |
| 259 | 0.0032 | 0.0002 | 0.0029 |
| 260 | 0.0031 | 0.0002 | 0.0029 |
| 261 | 0.0031 | 0.0002 | 0.0029 |
| 262 | 0.0031 | 0.0002 | 0.0028 |
| 263 | 0.0030 | 0.0002 | 0.0028 |
| 264 | 0.0030 | 0.0002 | 0.0028 |
| 265 | 0.0030 | 0.0002 | 0.0027 |
| 266 | 0.0030 | 0.0002 | 0.0027 |
| 267 | 0.0029 | 0.0002 | 0.0027 |
| 268 | 0.0029 | 0.0002 | 0.0027 |
| 269 | 0.0029 | 0.0002 | 0.0026 |
| 270 | 0.0028 | 0.0002 | 0.0026 |
| 271 | 0.0028 | 0.0002 | 0.0026 |
| 272 | 0.0028 | 0.0002 | 0.0026 |
| 273 | 0.0028 | 0.0002 | 0.0025 |
| 274 | 0.0027 | 0.0002 | 0.0025 |
| 275 | 0.0027 | 0.0002 | 0.0025 |
| 276 | 0.0027 | 0.0002 | 0.0025 |
| 277 | 0.0027 | 0.0002 | 0.0025 |
| 278 | 0.0026 | 0.0002 | 0.0024 |

| | | | |
|---|---|---|---|
| 279 | 0.0026 | 0.0002 | 0.0024 |
| 280 | 0.0026 | 0.0002 | 0.0024 |
| 281 | 0.0026 | 0.0002 | 0.0024 |
| 282 | 0.0026 | 0.0002 | 0.0024 |
| 283 | 0.0025 | 0.0002 | 0.0023 |
| 284 | 0.0025 | 0.0002 | 0.0023 |
| 285 | 0.0025 | 0.0002 | 0.0023 |
| 286 | 0.0025 | 0.0002 | 0.0023 |
| 287 | 0.0025 | 0.0002 | 0.0023 |
| 288 | 0.0024 | 0.0002 | 0.0022 |

Total soil rain loss = 0.13(In)
Total effective rainfall = 2.55(In)
Peak flow rate in flood hydrograph = 15.91(CFS)

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0001 | 0.01 | Q | | | | |
| 0+15 | 0.0004 | 0.04 | Q | | | | |
| 0+20 | 0.0010 | 0.08 | Q | | | | |
| 0+25 | 0.0017 | 0.11 | Q | | | | |
| 0+30 | 0.0025 | 0.12 | Q | | | | |
| 0+35 | 0.0034 | 0.13 | Q | | | | |
| 0+40 | 0.0044 | 0.14 | Q | | | | |
| 0+45 | 0.0054 | 0.15 | Q | | | | |
| 0+50 | 0.0065 | 0.15 | Q | | | | |
| 0+55 | 0.0075 | 0.16 | Q | | | | |
| 1+ 0 | 0.0086 | 0.16 | Q | | | | |
| 1+ 5 | 0.0098 | 0.16 | Q | | | | |
| 1+10 | 0.0109 | 0.17 | Q | | | | |
| 1+15 | 0.0121 | 0.17 | Q | | | | |
| 1+20 | 0.0133 | 0.17 | Q | | | | |
| 1+25 | 0.0145 | 0.17 | Q | | | | |
| 1+30 | 0.0157 | 0.18 | Q | | | | |
| 1+35 | 0.0169 | 0.18 | Q | | | | |
| 1+40 | 0.0182 | 0.18 | Q | | | | |
| 1+45 | 0.0194 | 0.18 | Q | | | | |
| 1+50 | 0.0207 | 0.18 | Q | | | | |
| 1+55 | 0.0219 | 0.18 | Q | | | | |
| 2+ 0 | 0.0232 | 0.19 | Q | | | | |
| 2+ 5 | 0.0245 | 0.19 | Q | | | | |
| 2+10 | 0.0258 | 0.19 | Q | | | | |
| 2+15 | 0.0271 | 0.19 | Q | | | | |
| 2+20 | 0.0284 | 0.19 | Q | | | | |
| 2+25 | 0.0297 | 0.19 | Q | | | | |
| 2+30 | 0.0310 | 0.19 | Q | | | | |
| 2+35 | 0.0324 | 0.19 | Q | | | | |
| 2+40 | 0.0337 | 0.19 | Q | | | | |
| 2+45 | 0.0350 | 0.19 | QV | | | | |
| 2+50 | 0.0364 | 0.20 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2+55 | 0.0377 | 0.20 | QV | | | | |
| 3+ 0 | 0.0391 | 0.20 | QV | | | | |
| 3+ 5 | 0.0405 | 0.20 | QV | | | | |
| 3+10 | 0.0418 | 0.20 | QV | | | | |
| 3+15 | 0.0432 | 0.20 | QV | | | | |
| 3+20 | 0.0446 | 0.20 | QV | | | | |
| 3+25 | 0.0460 | 0.20 | QV | | | | |
| 3+30 | 0.0474 | 0.20 | QV | | | | |
| 3+35 | 0.0488 | 0.20 | QV | | | | |
| 3+40 | 0.0502 | 0.20 | QV | | | | |
| 3+45 | 0.0516 | 0.21 | QV | | | | |
| 3+50 | 0.0531 | 0.21 | QV | | | | |
| 3+55 | 0.0545 | 0.21 | QV | | | | |
| 4+ 0 | 0.0559 | 0.21 | QV | | | | |
| 4+ 5 | 0.0574 | 0.21 | QV | | | | |
| 4+10 | 0.0588 | 0.21 | QV | | | | |
| 4+15 | 0.0603 | 0.21 | QV | | | | |
| 4+20 | 0.0618 | 0.21 | QV | | | | |
| 4+25 | 0.0632 | 0.21 | QV | | | | |
| 4+30 | 0.0647 | 0.22 | QV | | | | |
| 4+35 | 0.0662 | 0.22 | QV | | | | |
| 4+40 | 0.0677 | 0.22 | QV | | | | |
| 4+45 | 0.0692 | 0.22 | Q V | | | | |
| 4+50 | 0.0707 | 0.22 | Q V | | | | |
| 4+55 | 0.0723 | 0.22 | Q V | | | | |
| 5+ 0 | 0.0738 | 0.22 | Q V | | | | |
| 5+ 5 | 0.0753 | 0.22 | Q V | | | | |
| 5+10 | 0.0769 | 0.22 | Q V | | | | |
| 5+15 | 0.0784 | 0.23 | Q V | | | | |
| 5+20 | 0.0800 | 0.23 | Q V | | | | |
| 5+25 | 0.0816 | 0.23 | Q V | | | | |
| 5+30 | 0.0832 | 0.23 | Q V | | | | |
| 5+35 | 0.0847 | 0.23 | Q V | | | | |
| 5+40 | 0.0863 | 0.23 | Q V | | | | |
| 5+45 | 0.0880 | 0.23 | Q V | | | | |
| 5+50 | 0.0896 | 0.24 | Q V | | | | |
| 5+55 | 0.0912 | 0.24 | Q V | | | | |
| 6+ 0 | 0.0928 | 0.24 | Q V | | | | |
| 6+ 5 | 0.0945 | 0.24 | Q V | | | | |
| 6+10 | 0.0961 | 0.24 | Q V | | | | |
| 6+15 | 0.0978 | 0.24 | Q V | | | | |
| 6+20 | 0.0995 | 0.24 | Q V | | | | |
| 6+25 | 0.1012 | 0.25 | Q V | | | | |
| 6+30 | 0.1029 | 0.25 | Q V | | | | |
| 6+35 | 0.1046 | 0.25 | Q  V | | | | |
| 6+40 | 0.1063 | 0.25 | Q  V | | | | |
| 6+45 | 0.1080 | 0.25 | Q  V | | | | |
| 6+50 | 0.1098 | 0.25 | Q  V | | | | |
| 6+55 | 0.1115 | 0.25 | Q  V | | | | |
| 7+ 0 | 0.1133 | 0.26 | Q  V | | | | |
| 7+ 5 | 0.1151 | 0.26 | Q  V | | | | |
| 7+10 | 0.1169 | 0.26 | Q  V | | | | |
| 7+15 | 0.1186 | 0.26 | Q  V | | | | |
| 7+20 | 0.1205 | 0.26 | Q  V | | | | |
| 7+25 | 0.1223 | 0.26 | Q  V | | | | |
| 7+30 | 0.1241 | 0.27 | Q  V | | | | |
| 7+35 | 0.1260 | 0.27 | Q  V | | | | |
| 7+40 | 0.1278 | 0.27 | Q  V | | | | |
| 7+45 | 0.1297 | 0.27 | Q  V | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 7+50 | 0.1316 | 0.27 | Q | V | | | | |
| 7+55 | 0.1335 | 0.28 | Q | V | | | | |
| 8+ 0 | 0.1354 | 0.28 | Q | V | | | | |
| 8+ 5 | 0.1373 | 0.28 | Q | V | | | | |
| 8+10 | 0.1393 | 0.28 | Q | V | | | | |
| 8+15 | 0.1412 | 0.28 | Q | V | | | | |
| 8+20 | 0.1432 | 0.29 | Q | V | | | | |
| 8+25 | 0.1452 | 0.29 | Q | V | | | | |
| 8+30 | 0.1472 | 0.29 | Q | V | | | | |
| 8+35 | 0.1492 | 0.29 | Q | V | | | | |
| 8+40 | 0.1513 | 0.30 | Q | V | | | | |
| 8+45 | 0.1533 | 0.30 | Q | V | | | | |
| 8+50 | 0.1554 | 0.30 | Q | V | | | | |
| 8+55 | 0.1575 | 0.30 | Q | V | | | | |
| 9+ 0 | 0.1596 | 0.31 | Q | V | | | | |
| 9+ 5 | 0.1617 | 0.31 | Q | V | | | | |
| 9+10 | 0.1638 | 0.31 | Q | V | | | | |
| 9+15 | 0.1660 | 0.31 | Q | V | | | | |
| 9+20 | 0.1681 | 0.32 | Q | V | | | | |
| 9+25 | 0.1703 | 0.32 | Q | V | | | | |
| 9+30 | 0.1726 | 0.32 | Q | V | | | | |
| 9+35 | 0.1748 | 0.32 | Q | V | | | | |
| 9+40 | 0.1770 | 0.33 | Q | V | | | | |
| 9+45 | 0.1793 | 0.33 | Q | V | | | | |
| 9+50 | 0.1816 | 0.33 | Q | V | | | | |
| 9+55 | 0.1839 | 0.34 | Q | V | | | | |
| 10+ 0 | 0.1863 | 0.34 | Q | V | | | | |
| 10+ 5 | 0.1886 | 0.34 | Q | V | | | | |
| 10+10 | 0.1910 | 0.35 | Q | V | | | | |
| 10+15 | 0.1934 | 0.35 | Q | V | | | | |
| 10+20 | 0.1958 | 0.35 | Q | V | | | | |
| 10+25 | 0.1983 | 0.36 | Q | V | | | | |
| 10+30 | 0.2008 | 0.36 | Q | V | | | | |
| 10+35 | 0.2033 | 0.36 | Q | V | | | | |
| 10+40 | 0.2058 | 0.37 | Q | V | | | | |
| 10+45 | 0.2084 | 0.37 | Q | V | | | | |
| 10+50 | 0.2110 | 0.38 | Q | V | | | | |
| 10+55 | 0.2136 | 0.38 | Q | V | | | | |
| 11+ 0 | 0.2162 | 0.38 | Q | V | | | | |
| 11+ 5 | 0.2189 | 0.39 | Q | V | | | | |
| 11+10 | 0.2216 | 0.39 | Q | V | | | | |
| 11+15 | 0.2243 | 0.40 | Q | V | | | | |
| 11+20 | 0.2271 | 0.40 | Q | V | | | | |
| 11+25 | 0.2299 | 0.41 | Q | V | | | | |
| 11+30 | 0.2328 | 0.41 | Q | V | | | | |
| 11+35 | 0.2356 | 0.42 | Q | V | | | | |
| 11+40 | 0.2385 | 0.42 | Q | V | | | | |
| 11+45 | 0.2415 | 0.43 | Q | V | | | | |
| 11+50 | 0.2445 | 0.43 | Q | V | | | | |
| 11+55 | 0.2475 | 0.44 | Q | V | | | | |
| 12+ 0 | 0.2506 | 0.45 | Q | V | | | | |
| 12+ 5 | 0.2537 | 0.45 | Q | V | | | | |
| 12+10 | 0.2567 | 0.44 | Q | V | | | | |
| 12+15 | 0.2596 | 0.42 | Q | V | | | | |
| 12+20 | 0.2623 | 0.39 | Q | V | | | | |
| 12+25 | 0.2649 | 0.37 | Q | V | | | | |
| 12+30 | 0.2674 | 0.36 | Q | V | | | | |
| 12+35 | 0.2698 | 0.36 | Q | V | | | | |
| 12+40 | 0.2723 | 0.36 | Q | V | | | | |

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12+45       0.2748      0.36  Q       V |         |         |         |
12+50       0.2772      0.36  Q       V |         |         |         |
12+55       0.2797      0.36  Q       V |         |         |         |
13+ 0       0.2822      0.37  Q       V |         |         |         |
13+ 5       0.2848      0.37  Q       V |         |         |         |
13+10       0.2874      0.37  Q       V |         |         |         |
13+15       0.2900      0.38  Q       V |         |         |         |
13+20       0.2927      0.39  Q       V |         |         |         |
13+25       0.2954      0.39  Q       V |         |         |         |
13+30       0.2981      0.40  Q       V |         |         |         |
13+35       0.3010      0.41  Q       V |         |         |         |
13+40       0.3039      0.42  Q       V |         |         |         |
13+45       0.3068      0.43  Q       V |         |         |         |
13+50       0.3099      0.44  Q        V|         |         |         |
13+55       0.3130      0.45  Q        V|         |         |         |
14+ 0       0.3162      0.46  Q        V|         |         |         |
14+ 5       0.3195      0.48  Q        V|         |         |         |
14+10       0.3229      0.49  Q        V|         |         |         |
14+15       0.3264      0.51  |Q       V|         |         |         |
14+20       0.3300      0.52  |Q       V|         |         |         |
14+25       0.3337      0.54  |Q       V|         |         |         |
14+30       0.3376      0.56  |Q       V|         |         |         |
14+35       0.3416      0.58  |Q       V|         |         |         |
14+40       0.3458      0.61  |Q        V         |         |         |
14+45       0.3501      0.63  |Q        V         |         |         |
14+50       0.3546      0.66  |Q        V         |         |         |
14+55       0.3594      0.69  |Q        V         |         |         |
15+ 0       0.3644      0.72  |Q        V         |         |         |
15+ 5       0.3696      0.76  |Q        V         |         |         |
15+10       0.3751      0.80  |Q        V         |         |         |
15+15       0.3810      0.85  |Q        |V        |         |         |
15+20       0.3873      0.91  |Q        |V        |         |         |
15+25       0.3941      0.99  |Q        |V        |         |         |
15+30       0.4020      1.14  | Q       |V        |         |         |
15+35       0.4119      1.44  | Q       | V       |         |         |
15+40       0.4245      1.84  |  Q      | V       |         |         |
15+45       0.4397      2.20  |   Q     | V       |         |         |
15+50       0.4574      2.58  |    Q    |  V      |         |         |
15+55       0.4786      3.07  |     Q   |  V      |         |         |
16+ 0       0.5047      3.79  |      Q  |   V     |         |         |
16+ 5       0.5426      5.51  |         |Q   V    |         |         |
16+10       0.6034      8.83  |         |      Q  |         |         |
16+15       0.7008     14.14  |         |         V       Q |         |
16+20       0.8104     15.91  |         |         |  V      |Q        |
16+25       0.8883     11.32  |         |         | Q  V    |         |
16+30       0.9446      8.17  |         |     Q   |      V  |         |
16+35       0.9884      6.36  |         | Q       |       V |         |
16+40       1.0229      5.01  |         Q         |        V|         |
16+45       1.0509      4.07  |       Q |         |         V         |
16+50       1.0747      3.44  |     Q   |         |         |V        |
16+55       1.0951      2.97  |    Q    |         |         |V        |
17+ 0       1.1124      2.51  |    Q    |         |         | V       |
17+ 5       1.1274      2.18  |   Q     |         |         | V       |
17+10       1.1408      1.94  |  Q      |         |         |  V      |
17+15       1.1527      1.73  |  Q      |         |         |  V      |
17+20       1.1631      1.51  |  Q      |         |         |  V      |
17+25       1.1726      1.38  | Q       |         |         |   V     |
17+30       1.1809      1.22  | Q       |         |         |   V     |
17+35       1.1885      1.10  | Q       |         |         |   V     |
```

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17+40       1.1951      0.96  |Q        |         |         |   V     |
17+45       1.2010      0.85  |Q        |         |         |    V    |
17+50       1.2062      0.75  |Q        |         |         |    V    |
17+55       1.2112      0.73  |Q        |         |         |    V    |
18+ 0       1.2160      0.70  |Q        |         |         |    V    |
18+ 5       1.2206      0.67  |Q        |         |         |    V    |
18+10       1.2250      0.63  |Q        |         |         |    V    |
18+15       1.2290      0.58  |Q        |         |         |    V    |
18+20       1.2329      0.57  |Q        |         |         |    V    |
18+25       1.2367      0.55  |Q        |         |         |     V   |
18+30       1.2399      0.46  Q         |         |         |     V   |
18+35       1.2430      0.45  Q         |         |         |     V   |
18+40       1.2460      0.44  Q         |         |         |     V   |
18+45       1.2490      0.43  Q         |         |         |     V   |
18+50       1.2519      0.42  Q         |         |         |     V   |
18+55       1.2547      0.41  Q         |         |         |     V   |
19+ 0       1.2575      0.40  Q         |         |         |     V   |
19+ 5       1.2602      0.40  Q         |         |         |     V   |
19+10       1.2629      0.39  Q         |         |         |     V   |
19+15       1.2655      0.38  Q         |         |         |     V   |
19+20       1.2681      0.37  Q         |         |         |     V   |
19+25       1.2706      0.37  Q         |         |         |      V  |
19+30       1.2731      0.36  Q         |         |         |      V  |
19+35       1.2756      0.35  Q         |         |         |      V  |
19+40       1.2779      0.35  Q         |         |         |      V  |
19+45       1.2803      0.34  Q         |         |         |      V  |
19+50       1.2826      0.34  Q         |         |         |      V  |
19+55       1.2849      0.33  Q         |         |         |      V  |
20+ 0       1.2871      0.32  Q         |         |         |      V  |
20+ 5       1.2893      0.32  Q         |         |         |      V  |
20+10       1.2915      0.31  Q         |         |         |      V  |
20+15       1.2936      0.31  Q         |         |         |      V  |
20+20       1.2957      0.30  Q         |         |         |      V  |
20+25       1.2977      0.30  Q         |         |         |      V  |
20+30       1.2998      0.29  Q         |         |         |      V  |
20+35       1.3018      0.29  Q         |         |         |      V  |
20+40       1.3037      0.29  Q         |         |         |       V |
20+45       1.3057      0.28  Q         |         |         |       V |
20+50       1.3076      0.28  Q         |         |         |       V |
20+55       1.3095      0.27  Q         |         |         |       V |
21+ 0       1.3113      0.27  Q         |         |         |       V |
21+ 5       1.3131      0.27  Q         |         |         |       V |
21+10       1.3149      0.26  Q         |         |         |       V |
21+15       1.3167      0.26  Q         |         |         |       V |
21+20       1.3185      0.26  Q         |         |         |       V |
21+25       1.3202      0.25  Q         |         |         |       V |
21+30       1.3219      0.25  Q         |         |         |       V |
21+35       1.3236      0.25  Q         |         |         |       V |
21+40       1.3253      0.24  Q         |         |         |       V |
21+45       1.3269      0.24  Q         |         |         |       V |
21+50       1.3286      0.24  Q         |         |         |       V |
21+55       1.3302      0.23  Q         |         |         |       V |
22+ 0       1.3318      0.23  Q         |         |         |       V |
22+ 5       1.3334      0.23  Q         |         |         |       V |
22+10       1.3349      0.23  Q         |         |         |       V |
22+15       1.3365      0.22  Q         |         |         |       V |
22+20       1.3380      0.22  Q         |         |         |       V |
22+25       1.3395      0.22  Q         |         |         |        V|
22+30       1.3410      0.22  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22+35 | 1.3425 | 0.21 | Q | \| | \| | \| | V\| |
| 22+40 | 1.3439 | 0.21 | Q | \| | \| | \| | V\| |
| 22+45 | 1.3454 | 0.21 | Q | \| | \| | \| | V\| |
| 22+50 | 1.3468 | 0.21 | Q | \| | \| | \| | V\| |
| 22+55 | 1.3482 | 0.21 | Q | \| | \| | \| | V\| |
| 23+ 0 | 1.3496 | 0.20 | Q | \| | \| | \| | V\| |
| 23+ 5 | 1.3510 | 0.20 | Q | \| | \| | \| | V\| |
| 23+10 | 1.3524 | 0.20 | Q | \| | \| | \| | V\| |
| 23+15 | 1.3538 | 0.20 | Q | \| | \| | \| | V\| |
| 23+20 | 1.3551 | 0.20 | Q | \| | \| | \| | V\| |
| 23+25 | 1.3565 | 0.19 | Q | \| | \| | \| | V\| |
| 23+30 | 1.3578 | 0.19 | Q | \| | \| | \| | V\| |
| 23+35 | 1.3591 | 0.19 | Q | \| | \| | \| | V\| |
| 23+40 | 1.3604 | 0.19 | Q | \| | \| | \| | V\| |
| 23+45 | 1.3617 | 0.19 | Q | \| | \| | \| | V\| |
| 23+50 | 1.3630 | 0.19 | Q | \| | \| | \| | V\| |
| 23+55 | 1.3643 | 0.18 | Q | \| | \| | \| | V\| |
| 24+ 0 | 1.3655 | 0.18 | Q | \| | \| | \| | V\| |
| 24+ 5 | 1.3668 | 0.18 | Q | \| | \| | \| | V\| |
| 24+10 | 1.3679 | 0.17 | Q | \| | \| | \| | V\| |
| 24+15 | 1.3689 | 0.14 | Q | \| | \| | \| | V\| |
| 24+20 | 1.3695 | 0.10 | Q | \| | \| | \| | V\| |
| 24+25 | 1.3700 | 0.07 | Q | \| | \| | \| | V\| |
| 24+30 | 1.3704 | 0.06 | Q | \| | \| | \| | V\| |
| 24+35 | 1.3707 | 0.05 | Q | \| | \| | \| | V\| |
| 24+40 | 1.3710 | 0.04 | Q | \| | \| | \| | V\| |
| 24+45 | 1.3712 | 0.03 | Q | \| | \| | \| | V\| |
| 24+50 | 1.3714 | 0.03 | Q | \| | \| | \| | V\| |
| 24+55 | 1.3716 | 0.02 | Q | \| | \| | \| | V\| |
| 25+ 0 | 1.3717 | 0.02 | Q | \| | \| | \| | V\| |
| 25+ 5 | 1.3718 | 0.02 | Q | \| | \| | \| | V\| |
| 25+10 | 1.3719 | 0.01 | Q | \| | \| | \| | V\| |
| 25+15 | 1.3720 | 0.01 | Q | \| | \| | \| | V\| |
| 25+20 | 1.3720 | 0.01 | Q | \| | \| | \| | V\| |
| 25+25 | 1.3721 | 0.01 | Q | \| | \| | \| | V\| |
| 25+30 | 1.3721 | 0.01 | Q | \| | \| | \| | V\| |
| 25+35 | 1.3722 | 0.01 | Q | \| | \| | \| | V\| |
| 25+40 | 1.3722 | 0.00 | Q | \| | \| | \| | V\| |
| 25+45 | 1.3722 | 0.00 | Q | \| | \| | \| | V\| |
| 25+50 | 1.3723 | 0.00 | Q | \| | \| | \| | V\| |
| 25+55 | 1.3723 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 0 | 1.3723 | 0.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 1.3723 | 0.00 | Q | \| | \| | \| | V\| |
| 26+10 | 1.3723 | 0.00 | Q | \| | \| | \| | V\| |
| 26+15 | 1.3723 | 0.00 | Q | \| | \| | \| | V\| |
| 26+20 | 1.3723 | 0.00 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 45
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 3.49 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 3.49 | 6 | 1.87 |
| Rainfall data for year 100 | | |
| 3.49 | 24 | 2.68 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 91.0 | 98.2 | 3.49 | 1.000 | 0.036 | 0.900 | 0.032 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.032

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 3.14 | 0.900 | 91.0 | 98.2 | 0.18 | 0.922 |
| 0.35 | 0.100 | 98.0 | 98.0 | 0.20 | 0.914 |

Area-averaged catchment yield fraction, Y = 0.922
Area-averaged low loss fraction, Yb = 0.078
User entry of time of concentration = 0.250 (hours)
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watershed area = 3.49(Ac.)
Catchment Lag time = 0.200 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 41.6667
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.032(In/Hr)
Average low loss rate fraction (Yb) = 0.078 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.667(In)
Specified peak 6-hour rainfall = 1.870(In)
Specified peak 24-hour rainfall = 2.680(In)

Rainfall depth area reduction factors:
Using a total area of 3.49(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.659(In)
30-minute factor = 1.000 Adjusted rainfall = 1.129(In)
1-hour factor = 1.000 Adjusted rainfall = 1.390(In)
3-hour factor = 1.000 Adjusted rainfall = 1.667(In)
6-hour factor = 1.000 Adjusted rainfall = 1.870(In)
24-hour factor = 1.000 Adjusted rainfall = 2.680(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 42.21 (CFS)) | |
| 1 | 2.935 | 1.239 |
| 2 | 20.613 | 7.462 |
| 3 | 51.467 | 13.022 |
| 4 | 67.222 | 6.650 |
| 5 | 76.108 | 3.751 |
| 6 | 81.970 | 2.474 |
| 7 | 86.247 | 1.805 |
| 8 | 89.430 | 1.344 |
| 9 | 91.773 | 0.989 |
| 10 | 93.683 | 0.806 |
| 11 | 95.168 | 0.627 |
| 12 | 96.358 | 0.502 |
| 13 | 97.275 | 0.387 |

| | | |
|---|---|---|
| 14 | 97.918 | 0.272 |
| 15 | 98.357 | 0.185 |
| 16 | 98.850 | 0.208 |
| 17 | 99.345 | 0.209 |
| 18 | 99.682 | 0.142 |
| 19 | 100.000 | 0.134 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6595 | 0.6595 |
| 2 | 0.8119 | 0.1524 |
| 3 | 0.9169 | 0.1050 |
| 4 | 0.9996 | 0.0826 |
| 5 | 1.0688 | 0.0692 |
| 6 | 1.1288 | 0.0601 |
| 7 | 1.1823 | 0.0534 |
| 8 | 1.2306 | 0.0483 |
| 9 | 1.2749 | 0.0443 |
| 10 | 1.3158 | 0.0409 |
| 11 | 1.3540 | 0.0382 |
| 12 | 1.3898 | 0.0358 |
| 13 | 1.4083 | 0.0186 |
| 14 | 1.4257 | 0.0174 |
| 15 | 1.4421 | 0.0164 |
| 16 | 1.4576 | 0.0155 |
| 17 | 1.4723 | 0.0147 |
| 18 | 1.4863 | 0.0140 |
| 19 | 1.4997 | 0.0134 |
| 20 | 1.5125 | 0.0128 |
| 21 | 1.5248 | 0.0123 |
| 22 | 1.5366 | 0.0118 |
| 23 | 1.5480 | 0.0114 |
| 24 | 1.5589 | 0.0110 |
| 25 | 1.5695 | 0.0106 |
| 26 | 1.5797 | 0.0102 |
| 27 | 1.5896 | 0.0099 |
| 28 | 1.5992 | 0.0096 |
| 29 | 1.6086 | 0.0093 |
| 30 | 1.6176 | 0.0091 |
| 31 | 1.6264 | 0.0088 |
| 32 | 1.6350 | 0.0086 |
| 33 | 1.6434 | 0.0084 |
| 34 | 1.6515 | 0.0081 |
| 35 | 1.6595 | 0.0080 |
| 36 | 1.6672 | 0.0078 |
| 37 | 1.6748 | 0.0076 |
| 38 | 1.6822 | 0.0074 |
| 39 | 1.6895 | 0.0073 |
| 40 | 1.6966 | 0.0071 |
| 41 | 1.7035 | 0.0070 |
| 42 | 1.7103 | 0.0068 |
| 43 | 1.7170 | 0.0067 |
| 44 | 1.7236 | 0.0065 |
| 45 | 1.7300 | 0.0064 |
| 46 | 1.7363 | 0.0063 |
| 47 | 1.7425 | 0.0062 |
| 48 | 1.7486 | 0.0061 |
| 49 | 1.7545 | 0.0060 |
| 50 | 1.7604 | 0.0059 |

| | | |
|---|---|---|
| 51 | 1.7662 | 0.0058 |
| 52 | 1.7719 | 0.0057 |
| 53 | 1.7775 | 0.0056 |
| 54 | 1.7830 | 0.0055 |
| 55 | 1.7884 | 0.0054 |
| 56 | 1.7938 | 0.0053 |
| 57 | 1.7990 | 0.0053 |
| 58 | 1.8042 | 0.0052 |
| 59 | 1.8093 | 0.0051 |
| 60 | 1.8144 | 0.0050 |
| 61 | 1.8193 | 0.0050 |
| 62 | 1.8243 | 0.0049 |
| 63 | 1.8291 | 0.0048 |
| 64 | 1.8339 | 0.0048 |
| 65 | 1.8386 | 0.0047 |
| 66 | 1.8432 | 0.0047 |
| 67 | 1.8478 | 0.0046 |
| 68 | 1.8524 | 0.0045 |
| 69 | 1.8568 | 0.0045 |
| 70 | 1.8613 | 0.0044 |
| 71 | 1.8657 | 0.0044 |
| 72 | 1.8700 | 0.0043 |
| 73 | 1.8767 | 0.0067 |
| 74 | 1.8833 | 0.0066 |
| 75 | 1.8899 | 0.0066 |
| 76 | 1.8964 | 0.0065 |
| 77 | 1.9029 | 0.0064 |
| 78 | 1.9092 | 0.0064 |
| 79 | 1.9156 | 0.0063 |
| 80 | 1.9218 | 0.0063 |
| 81 | 1.9280 | 0.0062 |
| 82 | 1.9342 | 0.0062 |
| 83 | 1.9403 | 0.0061 |
| 84 | 1.9463 | 0.0060 |
| 85 | 1.9523 | 0.0060 |
| 86 | 1.9583 | 0.0059 |
| 87 | 1.9641 | 0.0059 |
| 88 | 1.9700 | 0.0058 |
| 89 | 1.9758 | 0.0058 |
| 90 | 1.9815 | 0.0057 |
| 91 | 1.9872 | 0.0057 |
| 92 | 1.9928 | 0.0056 |
| 93 | 1.9984 | 0.0056 |
| 94 | 2.0040 | 0.0056 |
| 95 | 2.0095 | 0.0055 |
| 96 | 2.0150 | 0.0055 |
| 97 | 2.0204 | 0.0054 |
| 98 | 2.0258 | 0.0054 |
| 99 | 2.0311 | 0.0053 |
| 100 | 2.0364 | 0.0053 |
| 101 | 2.0417 | 0.0053 |
| 102 | 2.0469 | 0.0052 |
| 103 | 2.0521 | 0.0052 |
| 104 | 2.0573 | 0.0052 |
| 105 | 2.0624 | 0.0051 |
| 106 | 2.0675 | 0.0051 |
| 107 | 2.0725 | 0.0050 |
| 108 | 2.0775 | 0.0050 |
| 109 | 2.0825 | 0.0050 |

| | | |
|---|---|---|
| 110 | 2.0875 | 0.0049 |
| 111 | 2.0924 | 0.0049 |
| 112 | 2.0973 | 0.0049 |
| 113 | 2.1021 | 0.0048 |
| 114 | 2.1069 | 0.0048 |
| 115 | 2.1117 | 0.0048 |
| 116 | 2.1164 | 0.0048 |
| 117 | 2.1212 | 0.0047 |
| 118 | 2.1259 | 0.0047 |
| 119 | 2.1305 | 0.0047 |
| 120 | 2.1352 | 0.0046 |
| 121 | 2.1398 | 0.0046 |
| 122 | 2.1443 | 0.0046 |
| 123 | 2.1489 | 0.0045 |
| 124 | 2.1534 | 0.0045 |
| 125 | 2.1579 | 0.0045 |
| 126 | 2.1624 | 0.0045 |
| 127 | 2.1668 | 0.0044 |
| 128 | 2.1712 | 0.0044 |
| 129 | 2.1756 | 0.0044 |
| 130 | 2.1800 | 0.0044 |
| 131 | 2.1843 | 0.0043 |
| 132 | 2.1886 | 0.0043 |
| 133 | 2.1929 | 0.0043 |
| 134 | 2.1972 | 0.0043 |
| 135 | 2.2014 | 0.0042 |
| 136 | 2.2057 | 0.0042 |
| 137 | 2.2099 | 0.0042 |
| 138 | 2.2140 | 0.0042 |
| 139 | 2.2182 | 0.0042 |
| 140 | 2.2223 | 0.0041 |
| 141 | 2.2264 | 0.0041 |
| 142 | 2.2305 | 0.0041 |
| 143 | 2.2346 | 0.0041 |
| 144 | 2.2386 | 0.0040 |
| 145 | 2.2427 | 0.0040 |
| 146 | 2.2467 | 0.0040 |
| 147 | 2.2507 | 0.0040 |
| 148 | 2.2546 | 0.0040 |
| 149 | 2.2586 | 0.0039 |
| 150 | 2.2625 | 0.0039 |
| 151 | 2.2664 | 0.0039 |
| 152 | 2.2703 | 0.0039 |
| 153 | 2.2742 | 0.0039 |
| 154 | 2.2780 | 0.0038 |
| 155 | 2.2818 | 0.0038 |
| 156 | 2.2856 | 0.0038 |
| 157 | 2.2894 | 0.0038 |
| 158 | 2.2932 | 0.0038 |
| 159 | 2.2970 | 0.0038 |
| 160 | 2.3007 | 0.0037 |
| 161 | 2.3044 | 0.0037 |
| 162 | 2.3082 | 0.0037 |
| 163 | 2.3118 | 0.0037 |
| 164 | 2.3155 | 0.0037 |
| 165 | 2.3192 | 0.0037 |
| 166 | 2.3228 | 0.0036 |
| 167 | 2.3264 | 0.0036 |
| 168 | 2.3300 | 0.0036 |

| | | |
|---|---|---|
| 169 | 2.3336 | 0.0036 |
| 170 | 2.3372 | 0.0036 |
| 171 | 2.3408 | 0.0036 |
| 172 | 2.3443 | 0.0035 |
| 173 | 2.3479 | 0.0035 |
| 174 | 2.3514 | 0.0035 |
| 175 | 2.3549 | 0.0035 |
| 176 | 2.3584 | 0.0035 |
| 177 | 2.3618 | 0.0035 |
| 178 | 2.3653 | 0.0035 |
| 179 | 2.3687 | 0.0034 |
| 180 | 2.3722 | 0.0034 |
| 181 | 2.3756 | 0.0034 |
| 182 | 2.3790 | 0.0034 |
| 183 | 2.3824 | 0.0034 |
| 184 | 2.3857 | 0.0034 |
| 185 | 2.3891 | 0.0034 |
| 186 | 2.3924 | 0.0033 |
| 187 | 2.3958 | 0.0033 |
| 188 | 2.3991 | 0.0033 |
| 189 | 2.4024 | 0.0033 |
| 190 | 2.4057 | 0.0033 |
| 191 | 2.4090 | 0.0033 |
| 192 | 2.4122 | 0.0033 |
| 193 | 2.4155 | 0.0033 |
| 194 | 2.4187 | 0.0032 |
| 195 | 2.4220 | 0.0032 |
| 196 | 2.4252 | 0.0032 |
| 197 | 2.4284 | 0.0032 |
| 198 | 2.4316 | 0.0032 |
| 199 | 2.4348 | 0.0032 |
| 200 | 2.4379 | 0.0032 |
| 201 | 2.4411 | 0.0032 |
| 202 | 2.4442 | 0.0031 |
| 203 | 2.4474 | 0.0031 |
| 204 | 2.4505 | 0.0031 |
| 205 | 2.4536 | 0.0031 |
| 206 | 2.4567 | 0.0031 |
| 207 | 2.4598 | 0.0031 |
| 208 | 2.4629 | 0.0031 |
| 209 | 2.4660 | 0.0031 |
| 210 | 2.4690 | 0.0031 |
| 211 | 2.4721 | 0.0030 |
| 212 | 2.4751 | 0.0030 |
| 213 | 2.4781 | 0.0030 |
| 214 | 2.4811 | 0.0030 |
| 215 | 2.4841 | 0.0030 |
| 216 | 2.4871 | 0.0030 |
| 217 | 2.4901 | 0.0030 |
| 218 | 2.4931 | 0.0030 |
| 219 | 2.4961 | 0.0030 |
| 220 | 2.4990 | 0.0030 |
| 221 | 2.5019 | 0.0029 |
| 222 | 2.5049 | 0.0029 |
| 223 | 2.5078 | 0.0029 |
| 224 | 2.5107 | 0.0029 |
| 225 | 2.5136 | 0.0029 |
| 226 | 2.5165 | 0.0029 |
| 227 | 2.5194 | 0.0029 |

| | | |
|---|---|---|
| 228 | 2.5223 | 0.0029 |
| 229 | 2.5252 | 0.0029 |
| 230 | 2.5280 | 0.0029 |
| 231 | 2.5309 | 0.0028 |
| 232 | 2.5337 | 0.0028 |
| 233 | 2.5365 | 0.0028 |
| 234 | 2.5394 | 0.0028 |
| 235 | 2.5422 | 0.0028 |
| 236 | 2.5450 | 0.0028 |
| 237 | 2.5478 | 0.0028 |
| 238 | 2.5505 | 0.0028 |
| 239 | 2.5533 | 0.0028 |
| 240 | 2.5561 | 0.0028 |
| 241 | 2.5589 | 0.0028 |
| 242 | 2.5616 | 0.0028 |
| 243 | 2.5644 | 0.0027 |
| 244 | 2.5671 | 0.0027 |
| 245 | 2.5698 | 0.0027 |
| 246 | 2.5725 | 0.0027 |
| 247 | 2.5752 | 0.0027 |
| 248 | 2.5779 | 0.0027 |
| 249 | 2.5806 | 0.0027 |
| 250 | 2.5833 | 0.0027 |
| 251 | 2.5860 | 0.0027 |
| 252 | 2.5887 | 0.0027 |
| 253 | 2.5913 | 0.0027 |
| 254 | 2.5940 | 0.0027 |
| 255 | 2.5966 | 0.0026 |
| 256 | 2.5993 | 0.0026 |
| 257 | 2.6019 | 0.0026 |
| 258 | 2.6045 | 0.0026 |
| 259 | 2.6072 | 0.0026 |
| 260 | 2.6098 | 0.0026 |
| 261 | 2.6124 | 0.0026 |
| 262 | 2.6150 | 0.0026 |
| 263 | 2.6176 | 0.0026 |
| 264 | 2.6201 | 0.0026 |
| 265 | 2.6227 | 0.0026 |
| 266 | 2.6253 | 0.0026 |
| 267 | 2.6278 | 0.0026 |
| 268 | 2.6304 | 0.0026 |
| 269 | 2.6329 | 0.0025 |
| 270 | 2.6355 | 0.0025 |
| 271 | 2.6380 | 0.0025 |
| 272 | 2.6405 | 0.0025 |
| 273 | 2.6430 | 0.0025 |
| 274 | 2.6455 | 0.0025 |
| 275 | 2.6480 | 0.0025 |
| 276 | 2.6505 | 0.0025 |
| 277 | 2.6530 | 0.0025 |
| 278 | 2.6555 | 0.0025 |
| 279 | 2.6580 | 0.0025 |
| 280 | 2.6605 | 0.0025 |
| 281 | 2.6629 | 0.0025 |
| 282 | 2.6654 | 0.0025 |
| 283 | 2.6678 | 0.0025 |
| 284 | 2.6703 | 0.0024 |
| 285 | 2.6727 | 0.0024 |
| 286 | 2.6751 | 0.0024 |

| | | |
|---|---|---|
| 287 | 2.6776 | 0.0024 |
| 288 | 2.6800 | 0.0024 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0024 | 0.0002 | 0.0022 |
| 2 | 0.0024 | 0.0002 | 0.0022 |
| 3 | 0.0024 | 0.0002 | 0.0022 |
| 4 | 0.0024 | 0.0002 | 0.0023 |
| 5 | 0.0025 | 0.0002 | 0.0023 |
| 6 | 0.0025 | 0.0002 | 0.0023 |
| 7 | 0.0025 | 0.0002 | 0.0023 |
| 8 | 0.0025 | 0.0002 | 0.0023 |
| 9 | 0.0025 | 0.0002 | 0.0023 |
| 10 | 0.0025 | 0.0002 | 0.0023 |
| 11 | 0.0025 | 0.0002 | 0.0023 |
| 12 | 0.0025 | 0.0002 | 0.0023 |
| 13 | 0.0025 | 0.0002 | 0.0023 |
| 14 | 0.0025 | 0.0002 | 0.0023 |
| 15 | 0.0026 | 0.0002 | 0.0024 |
| 16 | 0.0026 | 0.0002 | 0.0024 |
| 17 | 0.0026 | 0.0002 | 0.0024 |
| 18 | 0.0026 | 0.0002 | 0.0024 |
| 19 | 0.0026 | 0.0002 | 0.0024 |
| 20 | 0.0026 | 0.0002 | 0.0024 |
| 21 | 0.0026 | 0.0002 | 0.0024 |
| 22 | 0.0026 | 0.0002 | 0.0024 |
| 23 | 0.0026 | 0.0002 | 0.0024 |
| 24 | 0.0027 | 0.0002 | 0.0024 |
| 25 | 0.0027 | 0.0002 | 0.0025 |
| 26 | 0.0027 | 0.0002 | 0.0025 |
| 27 | 0.0027 | 0.0002 | 0.0025 |
| 28 | 0.0027 | 0.0002 | 0.0025 |
| 29 | 0.0027 | 0.0002 | 0.0025 |
| 30 | 0.0027 | 0.0002 | 0.0025 |
| 31 | 0.0027 | 0.0002 | 0.0025 |
| 32 | 0.0028 | 0.0002 | 0.0025 |
| 33 | 0.0028 | 0.0002 | 0.0026 |
| 34 | 0.0028 | 0.0002 | 0.0026 |
| 35 | 0.0028 | 0.0002 | 0.0026 |
| 36 | 0.0028 | 0.0002 | 0.0026 |
| 37 | 0.0028 | 0.0002 | 0.0026 |
| 38 | 0.0028 | 0.0002 | 0.0026 |
| 39 | 0.0028 | 0.0002 | 0.0026 |
| 40 | 0.0029 | 0.0002 | 0.0026 |
| 41 | 0.0029 | 0.0002 | 0.0027 |
| 42 | 0.0029 | 0.0002 | 0.0027 |
| 43 | 0.0029 | 0.0002 | 0.0027 |
| 44 | 0.0029 | 0.0002 | 0.0027 |
| 45 | 0.0029 | 0.0002 | 0.0027 |
| 46 | 0.0029 | 0.0002 | 0.0027 |
| 47 | 0.0030 | 0.0002 | 0.0027 |
| 48 | 0.0030 | 0.0002 | 0.0027 |
| 49 | 0.0030 | 0.0002 | 0.0028 |
| 50 | 0.0030 | 0.0002 | 0.0028 |
| 51 | 0.0030 | 0.0002 | 0.0028 |
| 52 | 0.0030 | 0.0002 | 0.0028 |

| | | | |
|---|---|---|---|
| 53 | 0.0031 | 0.0002 | 0.0028 |
| 54 | 0.0031 | 0.0002 | 0.0028 |
| 55 | 0.0031 | 0.0002 | 0.0028 |
| 56 | 0.0031 | 0.0002 | 0.0029 |
| 57 | 0.0031 | 0.0002 | 0.0029 |
| 58 | 0.0031 | 0.0002 | 0.0029 |
| 59 | 0.0032 | 0.0002 | 0.0029 |
| 60 | 0.0032 | 0.0002 | 0.0029 |
| 61 | 0.0032 | 0.0003 | 0.0029 |
| 62 | 0.0032 | 0.0003 | 0.0030 |
| 63 | 0.0032 | 0.0003 | 0.0030 |
| 64 | 0.0032 | 0.0003 | 0.0030 |
| 65 | 0.0033 | 0.0003 | 0.0030 |
| 66 | 0.0033 | 0.0003 | 0.0030 |
| 67 | 0.0033 | 0.0003 | 0.0030 |
| 68 | 0.0033 | 0.0003 | 0.0031 |
| 69 | 0.0033 | 0.0003 | 0.0031 |
| 70 | 0.0034 | 0.0003 | 0.0031 |
| 71 | 0.0034 | 0.0003 | 0.0031 |
| 72 | 0.0034 | 0.0003 | 0.0031 |
| 73 | 0.0034 | 0.0003 | 0.0032 |
| 74 | 0.0034 | 0.0003 | 0.0032 |
| 75 | 0.0035 | 0.0003 | 0.0032 |
| 76 | 0.0035 | 0.0003 | 0.0032 |
| 77 | 0.0035 | 0.0003 | 0.0032 |
| 78 | 0.0035 | 0.0003 | 0.0033 |
| 79 | 0.0036 | 0.0003 | 0.0033 |
| 80 | 0.0036 | 0.0003 | 0.0033 |
| 81 | 0.0036 | 0.0003 | 0.0033 |
| 82 | 0.0036 | 0.0003 | 0.0033 |
| 83 | 0.0037 | 0.0003 | 0.0034 |
| 84 | 0.0037 | 0.0003 | 0.0034 |
| 85 | 0.0037 | 0.0003 | 0.0034 |
| 86 | 0.0037 | 0.0003 | 0.0034 |
| 87 | 0.0038 | 0.0003 | 0.0035 |
| 88 | 0.0038 | 0.0003 | 0.0035 |
| 89 | 0.0038 | 0.0003 | 0.0035 |
| 90 | 0.0038 | 0.0003 | 0.0035 |
| 91 | 0.0039 | 0.0003 | 0.0036 |
| 92 | 0.0039 | 0.0003 | 0.0036 |
| 93 | 0.0039 | 0.0003 | 0.0036 |
| 94 | 0.0039 | 0.0003 | 0.0036 |
| 95 | 0.0040 | 0.0003 | 0.0037 |
| 96 | 0.0040 | 0.0003 | 0.0037 |
| 97 | 0.0040 | 0.0003 | 0.0037 |
| 98 | 0.0041 | 0.0003 | 0.0037 |
| 99 | 0.0041 | 0.0003 | 0.0038 |
| 100 | 0.0041 | 0.0003 | 0.0038 |
| 101 | 0.0042 | 0.0003 | 0.0038 |
| 102 | 0.0042 | 0.0003 | 0.0039 |
| 103 | 0.0042 | 0.0003 | 0.0039 |
| 104 | 0.0043 | 0.0003 | 0.0039 |
| 105 | 0.0043 | 0.0003 | 0.0040 |
| 106 | 0.0043 | 0.0003 | 0.0040 |
| 107 | 0.0044 | 0.0003 | 0.0040 |
| 108 | 0.0044 | 0.0003 | 0.0041 |
| 109 | 0.0045 | 0.0004 | 0.0041 |
| 110 | 0.0045 | 0.0004 | 0.0041 |
| 111 | 0.0045 | 0.0004 | 0.0042 |

| | | | |
|---|---|---|---|
| 112 | 0.0046 | 0.0004 | 0.0042 |
| 113 | 0.0046 | 0.0004 | 0.0043 |
| 114 | 0.0047 | 0.0004 | 0.0043 |
| 115 | 0.0047 | 0.0004 | 0.0044 |
| 116 | 0.0048 | 0.0004 | 0.0044 |
| 117 | 0.0048 | 0.0004 | 0.0044 |
| 118 | 0.0048 | 0.0004 | 0.0045 |
| 119 | 0.0049 | 0.0004 | 0.0045 |
| 120 | 0.0049 | 0.0004 | 0.0046 |
| 121 | 0.0050 | 0.0004 | 0.0046 |
| 122 | 0.0050 | 0.0004 | 0.0046 |
| 123 | 0.0051 | 0.0004 | 0.0047 |
| 124 | 0.0052 | 0.0004 | 0.0047 |
| 125 | 0.0052 | 0.0004 | 0.0048 |
| 126 | 0.0053 | 0.0004 | 0.0049 |
| 127 | 0.0053 | 0.0004 | 0.0049 |
| 128 | 0.0054 | 0.0004 | 0.0050 |
| 129 | 0.0055 | 0.0004 | 0.0050 |
| 130 | 0.0055 | 0.0004 | 0.0051 |
| 131 | 0.0056 | 0.0004 | 0.0052 |
| 132 | 0.0056 | 0.0004 | 0.0052 |
| 133 | 0.0057 | 0.0005 | 0.0053 |
| 134 | 0.0058 | 0.0005 | 0.0053 |
| 135 | 0.0059 | 0.0005 | 0.0054 |
| 136 | 0.0059 | 0.0005 | 0.0055 |
| 137 | 0.0060 | 0.0005 | 0.0056 |
| 138 | 0.0061 | 0.0005 | 0.0056 |
| 139 | 0.0062 | 0.0005 | 0.0057 |
| 140 | 0.0063 | 0.0005 | 0.0058 |
| 141 | 0.0064 | 0.0005 | 0.0059 |
| 142 | 0.0064 | 0.0005 | 0.0059 |
| 143 | 0.0066 | 0.0005 | 0.0061 |
| 144 | 0.0066 | 0.0005 | 0.0061 |
| 145 | 0.0043 | 0.0003 | 0.0040 |
| 146 | 0.0044 | 0.0003 | 0.0040 |
| 147 | 0.0045 | 0.0004 | 0.0041 |
| 148 | 0.0045 | 0.0004 | 0.0042 |
| 149 | 0.0047 | 0.0004 | 0.0043 |
| 150 | 0.0047 | 0.0004 | 0.0043 |
| 151 | 0.0048 | 0.0004 | 0.0045 |
| 152 | 0.0049 | 0.0004 | 0.0045 |
| 153 | 0.0050 | 0.0004 | 0.0046 |
| 154 | 0.0051 | 0.0004 | 0.0047 |
| 155 | 0.0053 | 0.0004 | 0.0049 |
| 156 | 0.0053 | 0.0004 | 0.0049 |
| 157 | 0.0055 | 0.0004 | 0.0051 |
| 158 | 0.0056 | 0.0004 | 0.0052 |
| 159 | 0.0058 | 0.0005 | 0.0053 |
| 160 | 0.0059 | 0.0005 | 0.0054 |
| 161 | 0.0061 | 0.0005 | 0.0056 |
| 162 | 0.0062 | 0.0005 | 0.0057 |
| 163 | 0.0064 | 0.0005 | 0.0059 |
| 164 | 0.0065 | 0.0005 | 0.0060 |
| 165 | 0.0068 | 0.0005 | 0.0063 |
| 166 | 0.0070 | 0.0005 | 0.0064 |
| 167 | 0.0073 | 0.0006 | 0.0067 |
| 168 | 0.0074 | 0.0006 | 0.0068 |
| 169 | 0.0078 | 0.0006 | 0.0072 |
| 170 | 0.0080 | 0.0006 | 0.0073 |

| | | | |
|---|---|---|---|
| 171 | 0.0084 | 0.0007 | 0.0077 |
| 172 | 0.0086 | 0.0007 | 0.0079 |
| 173 | 0.0091 | 0.0007 | 0.0083 |
| 174 | 0.0093 | 0.0007 | 0.0086 |
| 175 | 0.0099 | 0.0008 | 0.0091 |
| 176 | 0.0102 | 0.0008 | 0.0094 |
| 177 | 0.0110 | 0.0009 | 0.0101 |
| 178 | 0.0114 | 0.0009 | 0.0105 |
| 179 | 0.0123 | 0.0010 | 0.0113 |
| 180 | 0.0128 | 0.0010 | 0.0118 |
| 181 | 0.0140 | 0.0011 | 0.0129 |
| 182 | 0.0147 | 0.0012 | 0.0136 |
| 183 | 0.0164 | 0.0013 | 0.0151 |
| 184 | 0.0174 | 0.0014 | 0.0160 |
| 185 | 0.0358 | 0.0027 | 0.0331 |
| 186 | 0.0382 | 0.0027 | 0.0355 |
| 187 | 0.0443 | 0.0027 | 0.0416 |
| 188 | 0.0483 | 0.0027 | 0.0456 |
| 189 | 0.0601 | 0.0027 | 0.0574 |
| 190 | 0.0692 | 0.0027 | 0.0665 |
| 191 | 0.1050 | 0.0027 | 0.1023 |
| 192 | 0.1524 | 0.0027 | 0.1497 |
| 193 | 0.6595 | 0.0027 | 0.6568 |
| 194 | 0.0826 | 0.0027 | 0.0800 |
| 195 | 0.0534 | 0.0027 | 0.0507 |
| 196 | 0.0409 | 0.0027 | 0.0383 |
| 197 | 0.0186 | 0.0015 | 0.0171 |
| 198 | 0.0155 | 0.0012 | 0.0143 |
| 199 | 0.0134 | 0.0010 | 0.0123 |
| 200 | 0.0118 | 0.0009 | 0.0109 |
| 201 | 0.0106 | 0.0008 | 0.0097 |
| 202 | 0.0096 | 0.0008 | 0.0089 |
| 203 | 0.0088 | 0.0007 | 0.0081 |
| 204 | 0.0081 | 0.0006 | 0.0075 |
| 205 | 0.0076 | 0.0006 | 0.0070 |
| 206 | 0.0071 | 0.0006 | 0.0065 |
| 207 | 0.0067 | 0.0005 | 0.0062 |
| 208 | 0.0063 | 0.0005 | 0.0058 |
| 209 | 0.0060 | 0.0005 | 0.0055 |
| 210 | 0.0057 | 0.0004 | 0.0052 |
| 211 | 0.0054 | 0.0004 | 0.0050 |
| 212 | 0.0052 | 0.0004 | 0.0048 |
| 213 | 0.0050 | 0.0004 | 0.0046 |
| 214 | 0.0048 | 0.0004 | 0.0044 |
| 215 | 0.0046 | 0.0004 | 0.0042 |
| 216 | 0.0044 | 0.0003 | 0.0041 |
| 217 | 0.0067 | 0.0005 | 0.0062 |
| 218 | 0.0065 | 0.0005 | 0.0060 |
| 219 | 0.0063 | 0.0005 | 0.0058 |
| 220 | 0.0062 | 0.0005 | 0.0057 |
| 221 | 0.0060 | 0.0005 | 0.0055 |
| 222 | 0.0058 | 0.0005 | 0.0054 |
| 223 | 0.0057 | 0.0004 | 0.0052 |
| 224 | 0.0056 | 0.0004 | 0.0051 |
| 225 | 0.0054 | 0.0004 | 0.0050 |
| 226 | 0.0053 | 0.0004 | 0.0049 |
| 227 | 0.0052 | 0.0004 | 0.0048 |
| 228 | 0.0051 | 0.0004 | 0.0047 |
| 229 | 0.0050 | 0.0004 | 0.0046 |

| | | | |
|---|---|---|---|
| 230 | 0.0049 | 0.0004 | 0.0045 |
| 231 | 0.0048 | 0.0004 | 0.0044 |
| 232 | 0.0047 | 0.0004 | 0.0043 |
| 233 | 0.0046 | 0.0004 | 0.0042 |
| 234 | 0.0045 | 0.0004 | 0.0042 |
| 235 | 0.0044 | 0.0003 | 0.0041 |
| 236 | 0.0044 | 0.0003 | 0.0040 |
| 237 | 0.0043 | 0.0003 | 0.0040 |
| 238 | 0.0042 | 0.0003 | 0.0039 |
| 239 | 0.0042 | 0.0003 | 0.0038 |
| 240 | 0.0041 | 0.0003 | 0.0038 |
| 241 | 0.0040 | 0.0003 | 0.0037 |
| 242 | 0.0040 | 0.0003 | 0.0037 |
| 243 | 0.0039 | 0.0003 | 0.0036 |
| 244 | 0.0038 | 0.0003 | 0.0035 |
| 245 | 0.0038 | 0.0003 | 0.0035 |
| 246 | 0.0037 | 0.0003 | 0.0034 |
| 247 | 0.0037 | 0.0003 | 0.0034 |
| 248 | 0.0036 | 0.0003 | 0.0034 |
| 249 | 0.0036 | 0.0003 | 0.0033 |
| 250 | 0.0035 | 0.0003 | 0.0033 |
| 251 | 0.0035 | 0.0003 | 0.0032 |
| 252 | 0.0035 | 0.0003 | 0.0032 |
| 253 | 0.0034 | 0.0003 | 0.0031 |
| 254 | 0.0034 | 0.0003 | 0.0031 |
| 255 | 0.0033 | 0.0003 | 0.0031 |
| 256 | 0.0033 | 0.0003 | 0.0030 |
| 257 | 0.0033 | 0.0003 | 0.0030 |
| 258 | 0.0032 | 0.0003 | 0.0030 |
| 259 | 0.0032 | 0.0002 | 0.0029 |
| 260 | 0.0031 | 0.0002 | 0.0029 |
| 261 | 0.0031 | 0.0002 | 0.0029 |
| 262 | 0.0031 | 0.0002 | 0.0028 |
| 263 | 0.0030 | 0.0002 | 0.0028 |
| 264 | 0.0030 | 0.0002 | 0.0028 |
| 265 | 0.0030 | 0.0002 | 0.0027 |
| 266 | 0.0030 | 0.0002 | 0.0027 |
| 267 | 0.0029 | 0.0002 | 0.0027 |
| 268 | 0.0029 | 0.0002 | 0.0027 |
| 269 | 0.0029 | 0.0002 | 0.0026 |
| 270 | 0.0028 | 0.0002 | 0.0026 |
| 271 | 0.0028 | 0.0002 | 0.0026 |
| 272 | 0.0028 | 0.0002 | 0.0026 |
| 273 | 0.0028 | 0.0002 | 0.0025 |
| 274 | 0.0027 | 0.0002 | 0.0025 |
| 275 | 0.0027 | 0.0002 | 0.0025 |
| 276 | 0.0027 | 0.0002 | 0.0025 |
| 277 | 0.0027 | 0.0002 | 0.0025 |
| 278 | 0.0026 | 0.0002 | 0.0024 |
| 279 | 0.0026 | 0.0002 | 0.0024 |
| 280 | 0.0026 | 0.0002 | 0.0024 |
| 281 | 0.0026 | 0.0002 | 0.0024 |
| 282 | 0.0026 | 0.0002 | 0.0024 |
| 283 | 0.0025 | 0.0002 | 0.0023 |
| 284 | 0.0025 | 0.0002 | 0.0023 |
| 285 | 0.0025 | 0.0002 | 0.0023 |
| 286 | 0.0025 | 0.0002 | 0.0023 |
| 287 | 0.0025 | 0.0002 | 0.0023 |
| 288 | 0.0024 | 0.0002 | 0.0022 |

Total soil rain loss = 0.13(In)
Total effective rainfall = 2.55(In)
Peak flow rate in flood hydrograph = 11.04(CFS)

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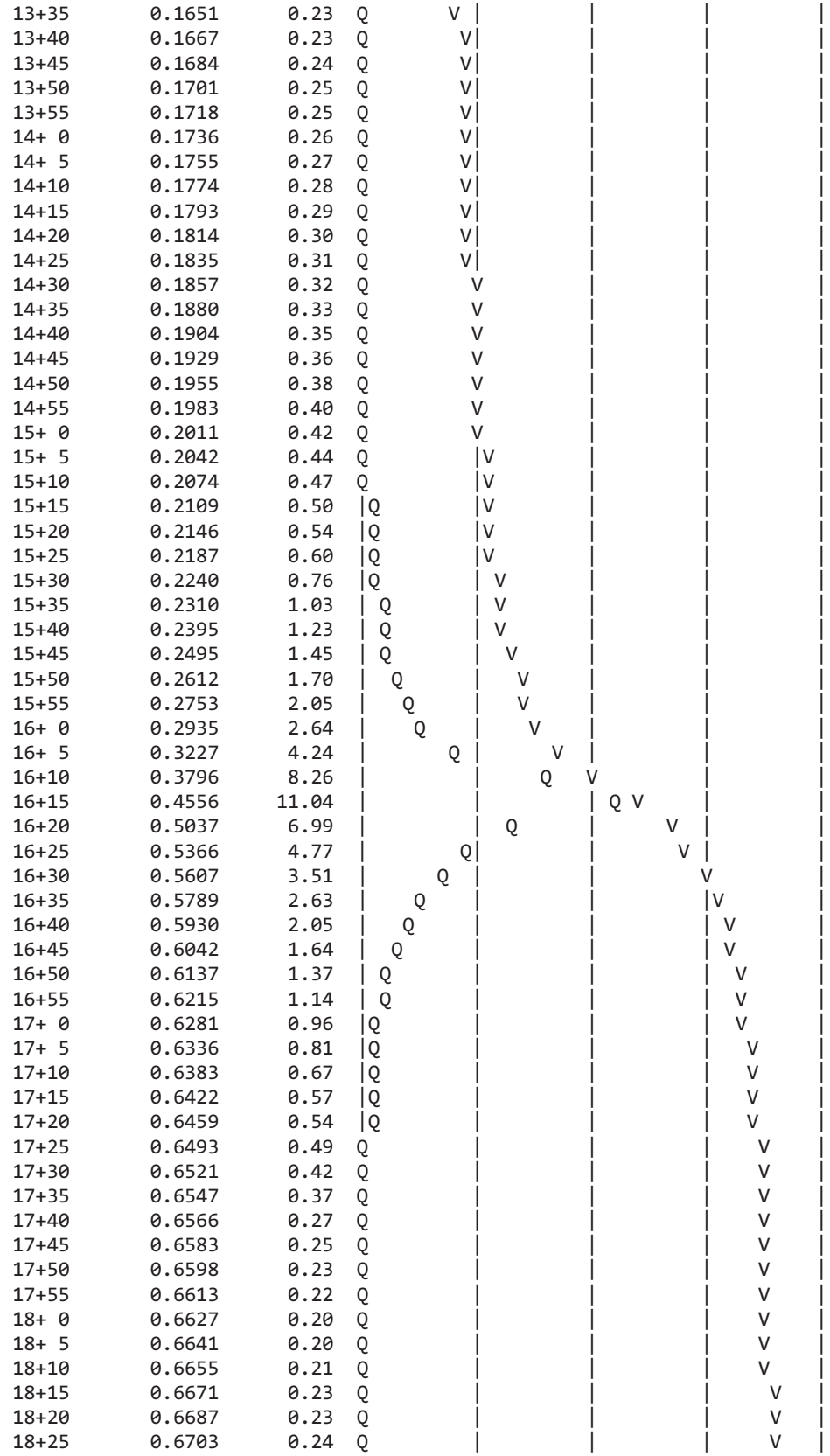
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 5.0 | 10.0 | 15.0 | 20.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0000 | 0.00 | Q | | | | |
| 0+10 | 0.0002 | 0.02 | Q | | | | |
| 0+15 | 0.0005 | 0.05 | Q | | | | |
| 0+20 | 0.0009 | 0.06 | Q | | | | |
| 0+25 | 0.0014 | 0.07 | Q | | | | |
| 0+30 | 0.0020 | 0.08 | Q | | | | |
| 0+35 | 0.0025 | 0.08 | Q | | | | |
| 0+40 | 0.0031 | 0.09 | Q | | | | |
| 0+45 | 0.0037 | 0.09 | Q | | | | |
| 0+50 | 0.0043 | 0.09 | Q | | | | |
| 0+55 | 0.0050 | 0.09 | Q | | | | |
| 1+ 0 | 0.0056 | 0.09 | Q | | | | |
| 1+ 5 | 0.0063 | 0.09 | Q | | | | |
| 1+10 | 0.0069 | 0.10 | Q | | | | |
| 1+15 | 0.0076 | 0.10 | Q | | | | |
| 1+20 | 0.0083 | 0.10 | Q | | | | |
| 1+25 | 0.0089 | 0.10 | Q | | | | |
| 1+30 | 0.0096 | 0.10 | Q | | | | |
| 1+35 | 0.0103 | 0.10 | Q | | | | |
| 1+40 | 0.0110 | 0.10 | Q | | | | |
| 1+45 | 0.0117 | 0.10 | Q | | | | |
| 1+50 | 0.0124 | 0.10 | Q | | | | |
| 1+55 | 0.0131 | 0.10 | Q | | | | |
| 2+ 0 | 0.0138 | 0.10 | Q | | | | |
| 2+ 5 | 0.0145 | 0.10 | Q | | | | |
| 2+10 | 0.0152 | 0.10 | Q | | | | |
| 2+15 | 0.0159 | 0.10 | Q | | | | |
| 2+20 | 0.0166 | 0.10 | Q | | | | |
| 2+25 | 0.0173 | 0.10 | Q | | | | |
| 2+30 | 0.0181 | 0.10 | Q | | | | |
| 2+35 | 0.0188 | 0.10 | QV | | | | |
| 2+40 | 0.0195 | 0.11 | QV | | | | |
| 2+45 | 0.0202 | 0.11 | QV | | | | |
| 2+50 | 0.0210 | 0.11 | QV | | | | |
| 2+55 | 0.0217 | 0.11 | QV | | | | |
| 3+ 0 | 0.0224 | 0.11 | QV | | | | |
| 3+ 5 | 0.0232 | 0.11 | QV | | | | |
| 3+10 | 0.0239 | 0.11 | QV | | | | |
| 3+15 | 0.0247 | 0.11 | QV | | | | |
| 3+20 | 0.0254 | 0.11 | QV | | | | |
| 3+25 | 0.0262 | 0.11 | QV | | | | |
| 3+30 | 0.0269 | 0.11 | QV | | | | |
| 3+35 | 0.0277 | 0.11 | QV | | | | |
| 3+40 | 0.0285 | 0.11 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+45 | 0.0293 | 0.11 | QV | | | | |
| 3+50 | 0.0300 | 0.11 | QV | | | | |
| 3+55 | 0.0308 | 0.11 | QV | | | | |
| 4+ 0 | 0.0316 | 0.11 | QV | | | | |
| 4+ 5 | 0.0324 | 0.11 | QV | | | | |
| 4+10 | 0.0332 | 0.11 | QV | | | | |
| 4+15 | 0.0340 | 0.12 | QV | | | | |
| 4+20 | 0.0348 | 0.12 | QV | | | | |
| 4+25 | 0.0356 | 0.12 | QV | | | | |
| 4+30 | 0.0364 | 0.12 | QV | | | | |
| 4+35 | 0.0372 | 0.12 | Q V | | | | |
| 4+40 | 0.0380 | 0.12 | Q V | | | | |
| 4+45 | 0.0388 | 0.12 | Q V | | | | |
| 4+50 | 0.0396 | 0.12 | Q V | | | | |
| 4+55 | 0.0405 | 0.12 | Q V | | | | |
| 5+ 0 | 0.0413 | 0.12 | Q V | | | | |
| 5+ 5 | 0.0422 | 0.12 | Q V | | | | |
| 5+10 | 0.0430 | 0.12 | Q V | | | | |
| 5+15 | 0.0438 | 0.12 | Q V | | | | |
| 5+20 | 0.0447 | 0.12 | Q V | | | | |
| 5+25 | 0.0456 | 0.12 | Q V | | | | |
| 5+30 | 0.0464 | 0.13 | Q V | | | | |
| 5+35 | 0.0473 | 0.13 | Q V | | | | |
| 5+40 | 0.0482 | 0.13 | Q V | | | | |
| 5+45 | 0.0490 | 0.13 | Q V | | | | |
| 5+50 | 0.0499 | 0.13 | Q V | | | | |
| 5+55 | 0.0508 | 0.13 | Q V | | | | |
| 6+ 0 | 0.0517 | 0.13 | Q V | | | | |
| 6+ 5 | 0.0526 | 0.13 | Q V | | | | |
| 6+10 | 0.0535 | 0.13 | Q V | | | | |
| 6+15 | 0.0544 | 0.13 | Q V | | | | |
| 6+20 | 0.0553 | 0.13 | Q V | | | | |
| 6+25 | 0.0562 | 0.13 | Q  V | | | | |
| 6+30 | 0.0572 | 0.13 | Q  V | | | | |
| 6+35 | 0.0581 | 0.14 | Q  V | | | | |
| 6+40 | 0.0590 | 0.14 | Q  V | | | | |
| 6+45 | 0.0600 | 0.14 | Q  V | | | | |
| 6+50 | 0.0609 | 0.14 | Q  V | | | | |
| 6+55 | 0.0619 | 0.14 | Q  V | | | | |
| 7+ 0 | 0.0628 | 0.14 | Q  V | | | | |
| 7+ 5 | 0.0638 | 0.14 | Q  V | | | | |
| 7+10 | 0.0648 | 0.14 | Q  V | | | | |
| 7+15 | 0.0658 | 0.14 | Q  V | | | | |
| 7+20 | 0.0668 | 0.14 | Q  V | | | | |
| 7+25 | 0.0678 | 0.14 | Q  V | | | | |
| 7+30 | 0.0688 | 0.15 | Q  V | | | | |
| 7+35 | 0.0698 | 0.15 | Q  V | | | | |
| 7+40 | 0.0708 | 0.15 | Q  V | | | | |
| 7+45 | 0.0718 | 0.15 | Q  V | | | | |
| 7+50 | 0.0728 | 0.15 | Q  V | | | | |
| 7+55 | 0.0739 | 0.15 | Q  V | | | | |
| 8+ 0 | 0.0749 | 0.15 | Q   V | | | | |
| 8+ 5 | 0.0760 | 0.15 | Q   V | | | | |
| 8+10 | 0.0770 | 0.15 | Q   V | | | | |
| 8+15 | 0.0781 | 0.16 | Q   V | | | | |
| 8+20 | 0.0792 | 0.16 | Q   V | | | | |
| 8+25 | 0.0803 | 0.16 | Q   V | | | | |
| 8+30 | 0.0814 | 0.16 | Q   V | | | | |
| 8+35 | 0.0825 | 0.16 | Q   V | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8+40 | 0.0836 | 0.16 | Q | V | \| | \| | \| | \| |
| 8+45 | 0.0847 | 0.16 | Q | V | \| | \| | \| | \| |
| 8+50 | 0.0858 | 0.16 | Q | V | \| | \| | \| | \| |
| 8+55 | 0.0870 | 0.17 | Q | V | \| | \| | \| | \| |
| 9+ 0 | 0.0881 | 0.17 | Q | V | \| | \| | \| | \| |
| 9+ 5 | 0.0893 | 0.17 | Q | V | \| | \| | \| | \| |
| 9+10 | 0.0905 | 0.17 | Q | V | \| | \| | \| | \| |
| 9+15 | 0.0916 | 0.17 | Q | V | \| | \| | \| | \| |
| 9+20 | 0.0928 | 0.17 | Q | V | \| | \| | \| | \| |
| 9+25 | 0.0940 | 0.17 | Q | V | \| | \| | \| | \| |
| 9+30 | 0.0952 | 0.18 | Q | V | \| | \| | \| | \| |
| 9+35 | 0.0965 | 0.18 | Q | V | \| | \| | \| | \| |
| 9+40 | 0.0977 | 0.18 | Q | V | \| | \| | \| | \| |
| 9+45 | 0.0990 | 0.18 | Q | V | \| | \| | \| | \| |
| 9+50 | 0.1002 | 0.18 | Q | V | \| | \| | \| | \| |
| 9+55 | 0.1015 | 0.18 | Q | V | \| | \| | \| | \| |
| 10+ 0 | 0.1028 | 0.19 | Q | V | \| | \| | \| | \| |
| 10+ 5 | 0.1041 | 0.19 | Q | V | \| | \| | \| | \| |
| 10+10 | 0.1054 | 0.19 | Q | V | \| | \| | \| | \| |
| 10+15 | 0.1067 | 0.19 | Q | V | \| | \| | \| | \| |
| 10+20 | 0.1080 | 0.19 | Q | V | \| | \| | \| | \| |
| 10+25 | 0.1094 | 0.20 | Q | V | \| | \| | \| | \| |
| 10+30 | 0.1107 | 0.20 | Q | V | \| | \| | \| | \| |
| 10+35 | 0.1121 | 0.20 | Q | V | \| | \| | \| | \| |
| 10+40 | 0.1135 | 0.20 | Q | V | \| | \| | \| | \| |
| 10+45 | 0.1149 | 0.20 | Q | V | \| | \| | \| | \| |
| 10+50 | 0.1163 | 0.21 | Q | V | \| | \| | \| | \| |
| 10+55 | 0.1178 | 0.21 | Q | V | \| | \| | \| | \| |
| 11+ 0 | 0.1192 | 0.21 | Q | V | \| | \| | \| | \| |
| 11+ 5 | 0.1207 | 0.21 | Q | V | \| | \| | \| | \| |
| 11+10 | 0.1222 | 0.22 | Q | V | \| | \| | \| | \| |
| 11+15 | 0.1237 | 0.22 | Q | V | \| | \| | \| | \| |
| 11+20 | 0.1252 | 0.22 | Q | V | \| | \| | \| | \| |
| 11+25 | 0.1268 | 0.22 | Q | V | \| | \| | \| | \| |
| 11+30 | 0.1283 | 0.23 | Q | V | \| | \| | \| | \| |
| 11+35 | 0.1299 | 0.23 | Q | V | \| | \| | \| | \| |
| 11+40 | 0.1315 | 0.23 | Q | V | \| | \| | \| | \| |
| 11+45 | 0.1331 | 0.24 | Q | V | \| | \| | \| | \| |
| 11+50 | 0.1348 | 0.24 | Q | V | \| | \| | \| | \| |
| 11+55 | 0.1365 | 0.24 | Q | V | \| | \| | \| | \| |
| 12+ 0 | 0.1382 | 0.25 | Q | V | \| | \| | \| | \| |
| 12+ 5 | 0.1399 | 0.25 | Q | V | \| | \| | \| | \| |
| 12+10 | 0.1415 | 0.23 | Q | V | \| | \| | \| | \| |
| 12+15 | 0.1429 | 0.21 | Q | V | \| | \| | \| | \| |
| 12+20 | 0.1443 | 0.20 | Q | V | \| | \| | \| | \| |
| 12+25 | 0.1456 | 0.19 | Q | V | \| | \| | \| | \| |
| 12+30 | 0.1469 | 0.19 | Q | V | \| | \| | \| | \| |
| 12+35 | 0.1482 | 0.19 | Q | V | \| | \| | \| | \| |
| 12+40 | 0.1495 | 0.19 | Q | V | \| | \| | \| | \| |
| 12+45 | 0.1508 | 0.19 | Q | V | \| | \| | \| | \| |
| 12+50 | 0.1521 | 0.19 | Q | V | \| | \| | \| | \| |
| 12+55 | 0.1534 | 0.19 | Q | V | \| | \| | \| | \| |
| 13+ 0 | 0.1548 | 0.20 | Q | V | \| | \| | \| | \| |
| 13+ 5 | 0.1562 | 0.20 | Q | V | \| | \| | \| | \| |
| 13+10 | 0.1576 | 0.20 | Q | V | \| | \| | \| | \| |
| 13+15 | 0.1590 | 0.21 | Q | V | \| | \| | \| | \| |
| 13+20 | 0.1605 | 0.21 | Q | V | \| | \| | \| | \| |
| 13+25 | 0.1620 | 0.22 | Q | V | \| | \| | \| | \| |
| 13+30 | 0.1635 | 0.22 | Q | V | \| | \| | \| | \| |



| | | | |
|---|---|---|---|
| 13+35 | 0.1651 | 0.23 | |
| 13+40 | 0.1667 | 0.23 | |
| 13+45 | 0.1684 | 0.24 | |
| 13+50 | 0.1701 | 0.25 | |
| 13+55 | 0.1718 | 0.25 | |
| 14+ 0 | 0.1736 | 0.26 | |
| 14+ 5 | 0.1755 | 0.27 | |
| 14+10 | 0.1774 | 0.28 | |
| 14+15 | 0.1793 | 0.29 | |
| 14+20 | 0.1814 | 0.30 | |
| 14+25 | 0.1835 | 0.31 | |
| 14+30 | 0.1857 | 0.32 | |
| 14+35 | 0.1880 | 0.33 | |
| 14+40 | 0.1904 | 0.35 | |
| 14+45 | 0.1929 | 0.36 | |
| 14+50 | 0.1955 | 0.38 | |
| 14+55 | 0.1983 | 0.40 | |
| 15+ 0 | 0.2011 | 0.42 | |
| 15+ 5 | 0.2042 | 0.44 | |
| 15+10 | 0.2074 | 0.47 | |
| 15+15 | 0.2109 | 0.50 | |
| 15+20 | 0.2146 | 0.54 | |
| 15+25 | 0.2187 | 0.60 | |
| 15+30 | 0.2240 | 0.76 | |
| 15+35 | 0.2310 | 1.03 | |
| 15+40 | 0.2395 | 1.23 | |
| 15+45 | 0.2495 | 1.45 | |
| 15+50 | 0.2612 | 1.70 | |
| 15+55 | 0.2753 | 2.05 | |
| 16+ 0 | 0.2935 | 2.64 | |
| 16+ 5 | 0.3227 | 4.24 | |
| 16+10 | 0.3796 | 8.26 | |
| 16+15 | 0.4556 | 11.04 | |
| 16+20 | 0.5037 | 6.99 | |
| 16+25 | 0.5366 | 4.77 | |
| 16+30 | 0.5607 | 3.51 | |
| 16+35 | 0.5789 | 2.63 | |
| 16+40 | 0.5930 | 2.05 | |
| 16+45 | 0.6042 | 1.64 | |
| 16+50 | 0.6137 | 1.37 | |
| 16+55 | 0.6215 | 1.14 | |
| 17+ 0 | 0.6281 | 0.96 | |
| 17+ 5 | 0.6336 | 0.81 | |
| 17+10 | 0.6383 | 0.67 | |
| 17+15 | 0.6422 | 0.57 | |
| 17+20 | 0.6459 | 0.54 | |
| 17+25 | 0.6493 | 0.49 | |
| 17+30 | 0.6521 | 0.42 | |
| 17+35 | 0.6547 | 0.37 | |
| 17+40 | 0.6566 | 0.27 | |
| 17+45 | 0.6583 | 0.25 | |
| 17+50 | 0.6598 | 0.23 | |
| 17+55 | 0.6613 | 0.22 | |
| 18+ 0 | 0.6627 | 0.20 | |
| 18+ 5 | 0.6641 | 0.20 | |
| 18+10 | 0.6655 | 0.21 | |
| 18+15 | 0.6671 | 0.23 | |
| 18+20 | 0.6687 | 0.23 | |
| 18+25 | 0.6703 | 0.24 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18+30 | 0.6720 | 0.23 | Q | \| | \| | \| | V \| |
| 18+35 | 0.6735 | 0.23 | Q | \| | \| | \| | V \| |
| 18+40 | 0.6751 | 0.23 | Q | \| | \| | \| | V \| |
| 18+45 | 0.6767 | 0.22 | Q | \| | \| | \| | V \| |
| 18+50 | 0.6782 | 0.22 | Q | \| | \| | \| | V \| |
| 18+55 | 0.6797 | 0.22 | Q | \| | \| | \| | V \| |
| 19+ 0 | 0.6811 | 0.21 | Q | \| | \| | \| | V \| |
| 19+ 5 | 0.6825 | 0.21 | Q | \| | \| | \| | V \| |
| 19+10 | 0.6839 | 0.20 | Q | \| | \| | \| | V \| |
| 19+15 | 0.6853 | 0.20 | Q | \| | \| | \| | V \| |
| 19+20 | 0.6867 | 0.20 | Q | \| | \| | \| | V \| |
| 19+25 | 0.6880 | 0.19 | Q | \| | \| | \| | V \| |
| 19+30 | 0.6893 | 0.19 | Q | \| | \| | \| | V \| |
| 19+35 | 0.6906 | 0.19 | Q | \| | \| | \| | V \| |
| 19+40 | 0.6918 | 0.18 | Q | \| | \| | \| | V \| |
| 19+45 | 0.6931 | 0.18 | Q | \| | \| | \| | V \| |
| 19+50 | 0.6943 | 0.18 | Q | \| | \| | \| | V \| |
| 19+55 | 0.6954 | 0.17 | Q | \| | \| | \| | V \| |
| 20+ 0 | 0.6966 | 0.17 | Q | \| | \| | \| | V \| |
| 20+ 5 | 0.6978 | 0.17 | Q | \| | \| | \| | V \| |
| 20+10 | 0.6989 | 0.16 | Q | \| | \| | \| | V \| |
| 20+15 | 0.7000 | 0.16 | Q | \| | \| | \| | V \| |
| 20+20 | 0.7011 | 0.16 | Q | \| | \| | \| | V \| |
| 20+25 | 0.7022 | 0.16 | Q | \| | \| | \| | V \| |
| 20+30 | 0.7032 | 0.15 | Q | \| | \| | \| | V \| |
| 20+35 | 0.7043 | 0.15 | Q | \| | \| | \| | V \| |
| 20+40 | 0.7053 | 0.15 | Q | \| | \| | \| | V \| |
| 20+45 | 0.7063 | 0.15 | Q | \| | \| | \| | V \| |
| 20+50 | 0.7073 | 0.14 | Q | \| | \| | \| | V \| |
| 20+55 | 0.7083 | 0.14 | Q | \| | \| | \| | V \| |
| 21+ 0 | 0.7093 | 0.14 | Q | \| | \| | \| | V \| |
| 21+ 5 | 0.7102 | 0.14 | Q | \| | \| | \| | V \| |
| 21+10 | 0.7112 | 0.14 | Q | \| | \| | \| | V \| |
| 21+15 | 0.7121 | 0.14 | Q | \| | \| | \| | V \| |
| 21+20 | 0.7130 | 0.13 | Q | \| | \| | \| | V \| |
| 21+25 | 0.7139 | 0.13 | Q | \| | \| | \| | V \| |
| 21+30 | 0.7148 | 0.13 | Q | \| | \| | \| | V \| |
| 21+35 | 0.7157 | 0.13 | Q | \| | \| | \| | V \| |
| 21+40 | 0.7166 | 0.13 | Q | \| | \| | \| | V \| |
| 21+45 | 0.7175 | 0.13 | Q | \| | \| | \| | V \| |
| 21+50 | 0.7183 | 0.12 | Q | \| | \| | \| | V \| |
| 21+55 | 0.7192 | 0.12 | Q | \| | \| | \| | V \| |
| 22+ 0 | 0.7200 | 0.12 | Q | \| | \| | \| | V \| |
| 22+ 5 | 0.7208 | 0.12 | Q | \| | \| | \| | V \| |
| 22+10 | 0.7217 | 0.12 | Q | \| | \| | \| | V \| |
| 22+15 | 0.7225 | 0.12 | Q | \| | \| | \| | V\| |
| 22+20 | 0.7233 | 0.12 | Q | \| | \| | \| | V\| |
| 22+25 | 0.7241 | 0.12 | Q | \| | \| | \| | V\| |
| 22+30 | 0.7249 | 0.11 | Q | \| | \| | \| | V\| |
| 22+35 | 0.7257 | 0.11 | Q | \| | \| | \| | V\| |
| 22+40 | 0.7264 | 0.11 | Q | \| | \| | \| | V\| |
| 22+45 | 0.7272 | 0.11 | Q | \| | \| | \| | V\| |
| 22+50 | 0.7280 | 0.11 | Q | \| | \| | \| | V\| |
| 22+55 | 0.7287 | 0.11 | Q | \| | \| | \| | V\| |
| 23+ 0 | 0.7294 | 0.11 | Q | \| | \| | \| | V\| |
| 23+ 5 | 0.7302 | 0.11 | Q | \| | \| | \| | V\| |
| 23+10 | 0.7309 | 0.11 | Q | \| | \| | \| | V\| |
| 23+15 | 0.7316 | 0.11 | Q | \| | \| | \| | V\| |
| 23+20 | 0.7324 | 0.10 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+25 | 0.7331 | 0.10 | Q | \| | \| | \| | V\| |
| 23+30 | 0.7338 | 0.10 | Q | \| | \| | \| | V\| |
| 23+35 | 0.7345 | 0.10 | Q | \| | \| | \| | V\| |
| 23+40 | 0.7352 | 0.10 | Q | \| | \| | \| | V\| |
| 23+45 | 0.7359 | 0.10 | Q | \| | \| | \| | V\| |
| 23+50 | 0.7365 | 0.10 | Q | \| | \| | \| | V\| |
| 23+55 | 0.7372 | 0.10 | Q | \| | \| | \| | V\| |
| 24+ 0 | 0.7379 | 0.10 | Q | \| | \| | \| | V\| |
| 24+ 5 | 0.7385 | 0.09 | Q | \| | \| | \| | V\| |
| 24+10 | 0.7391 | 0.08 | Q | \| | \| | \| | V\| |
| 24+15 | 0.7394 | 0.05 | Q | \| | \| | \| | V\| |
| 24+20 | 0.7396 | 0.03 | Q | \| | \| | \| | V\| |
| 24+25 | 0.7398 | 0.02 | Q | \| | \| | \| | V\| |
| 24+30 | 0.7399 | 0.02 | Q | \| | \| | \| | V\| |
| 24+35 | 0.7400 | 0.01 | Q | \| | \| | \| | V\| |
| 24+40 | 0.7400 | 0.01 | Q | \| | \| | \| | V\| |
| 24+45 | 0.7401 | 0.01 | Q | \| | \| | \| | V\| |
| 24+50 | 0.7401 | 0.01 | Q | \| | \| | \| | V\| |
| 24+55 | 0.7402 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 0 | 0.7402 | 0.00 | Q | \| | \| | \| | V\| |
| 25+ 5 | 0.7402 | 0.00 | Q | \| | \| | \| | V\| |
| 25+10 | 0.7402 | 0.00 | Q | \| | \| | \| | V\| |
| 25+15 | 0.7402 | 0.00 | Q | \| | \| | \| | V\| |
| 25+20 | 0.7402 | 0.00 | Q | \| | \| | \| | V\| |
| 25+25 | 0.7402 | 0.00 | Q | \| | \| | \| | V\| |
| 25+30 | 0.7402 | 0.00 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 46
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 3782.66 | 1 | 1.29 |
| Rainfall data for year 100 | | |
| 3782.66 | 6 | 2.16 |
| Rainfall data for year 100 | | |
| 3782.66 | 24 | 3.27 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 87.0 | 97.4 | 3782.66 | 1.000 | 0.051 | 0.981 | 0.050 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.050

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 3710.03 | 0.981 | 87.0 | 97.4 | 0.27 | 0.909 |
| 72.63 | 0.019 | 98.0 | 98.0 | 0.20 | 0.929 |

Area-averaged catchment yield fraction, Y = 0.909
Area-averaged low loss fraction, Yb = 0.091
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 35115.00(Ft.)
Length from concentration point to centroid = 20362.00(Ft.)
Elevation difference along watercourse = 2044.90(Ft.)
Mannings friction factor along watercourse = 0.030
Watershed area = 3782.66(Ac.)
Catchment Lag time = 0.832 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 10.0169
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.050(In/Hr)
Average low loss rate fraction (Yb) = 0.091 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.170
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.830

Computed peak 5-minute rainfall = 0.612(In)
Computed peak 30-minute rainfall = 1.048(In)
Specified peak 1-hour rainfall = 1.290(In)
Computed peak 3-hour rainfall = 1.770(In)
Specified peak 6-hour rainfall = 2.160(In)
Specified peak 24-hour rainfall = 3.270(In)

Rainfall depth area reduction factors:
Using a total area of 3782.66(Ac.) (Ref: fig. E-4)

5-minute factor = 0.831 Adjusted rainfall = 0.509(In)
30-minute factor = 0.831 Adjusted rainfall = 0.871(In)
1-hour factor = 0.831 Adjusted rainfall = 1.072(In)
3-hour factor = 0.978 Adjusted rainfall = 1.730(In)
6-hour factor = 0.989 Adjusted rainfall = 2.135(In)
24-hour factor = 0.995 Adjusted rainfall = 3.254(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 45746.54 (CFS)) | |
| 1 | 0.474 | 216.686 |
| 2 | 1.623 | 525.660 |
| 3 | 3.400 | 813.175 |
| 4 | 5.787 | 1091.995 |
| 5 | 8.853 | 1402.404 |

| | | |
|---|---|---|
| 6 | 13.492 | 2122.091 |
| 7 | 20.491 | 3201.751 |
| 8 | 29.652 | 4190.896 |
| 9 | 38.141 | 3883.423 |
| 10 | 46.231 | 3700.946 |
| 11 | 52.842 | 3024.301 |
| 12 | 57.803 | 2269.453 |
| 13 | 61.701 | 1783.477 |
| 14 | 64.962 | 1491.412 |
| 15 | 67.802 | 1299.220 |
| 16 | 70.337 | 1159.998 |
| 17 | 72.634 | 1050.683 |
| 18 | 74.667 | 929.813 |
| 19 | 76.472 | 826.111 |
| 20 | 78.199 | 790.060 |
| 21 | 79.714 | 692.687 |
| 22 | 81.056 | 614.223 |
| 23 | 82.364 | 598.309 |
| 24 | 83.492 | 515.984 |
| 25 | 84.594 | 504.189 |
| 26 | 85.620 | 469.420 |
| 27 | 86.582 | 439.909 |
| 28 | 87.520 | 428.964 |
| 29 | 88.338 | 374.133 |
| 30 | 89.139 | 366.478 |
| 31 | 89.834 | 317.956 |
| 32 | 90.442 | 278.059 |
| 33 | 91.040 | 273.799 |
| 34 | 91.593 | 253.124 |
| 35 | 92.141 | 250.318 |
| 36 | 92.643 | 229.951 |
| 37 | 93.110 | 213.723 |
| 38 | 93.569 | 209.826 |
| 39 | 93.988 | 191.503 |
| 40 | 94.401 | 189.046 |
| 41 | 94.752 | 160.618 |
| 42 | 95.055 | 138.663 |
| 43 | 95.358 | 138.663 |
| 44 | 95.661 | 138.663 |
| 45 | 95.964 | 138.571 |
| 46 | 96.227 | 120.334 |
| 47 | 96.461 | 106.678 |
| 48 | 96.694 | 106.678 |
| 49 | 96.927 | 106.678 |
| 50 | 97.160 | 106.559 |
| 51 | 97.350 | 87.195 |
| 52 | 97.510 | 73.135 |
| 53 | 97.670 | 73.135 |
| 54 | 97.830 | 73.135 |
| 55 | 97.990 | 73.011 |
| 56 | 98.112 | 56.145 |
| 57 | 98.209 | 44.266 |
| 58 | 98.306 | 44.266 |
| 59 | 98.403 | 44.266 |
| 60 | 98.499 | 44.289 |
| 61 | 98.602 | 46.943 |
| 62 | 98.709 | 48.757 |
| 63 | 98.815 | 48.757 |
| 64 | 98.922 | 48.757 |

| | | |
|---|---|---|
| 65 | 99.028 | 48.747 |
| 66 | 99.133 | 47.816 |
| 67 | 99.236 | 47.199 |
| 68 | 99.339 | 47.199 |
| 69 | 99.442 | 47.199 |
| 70 | 99.547 | 47.641 |
| 71 | 99.617 | 32.275 |
| 72 | 99.669 | 23.771 |
| 73 | 99.721 | 23.771 |
| 74 | 99.773 | 23.771 |
| 75 | 99.825 | 23.771 |
| 76 | 99.877 | 23.771 |
| 77 | 99.929 | 23.771 |
| 78 | 100.000 | 11.886 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5086 | 0.5086 |
| 2 | 0.6262 | 0.1176 |
| 3 | 0.7071 | 0.0810 |
| 4 | 0.7709 | 0.0637 |
| 5 | 0.8243 | 0.0534 |
| 6 | 0.8706 | 0.0463 |
| 7 | 0.9118 | 0.0412 |
| 8 | 0.9491 | 0.0373 |
| 9 | 0.9832 | 0.0341 |
| 10 | 1.0148 | 0.0316 |
| 11 | 1.0442 | 0.0294 |
| 12 | 1.0718 | 0.0276 |
| 13 | 1.1099 | 0.0381 |
| 14 | 1.1463 | 0.0364 |
| 15 | 1.1814 | 0.0350 |
| 16 | 1.2151 | 0.0337 |
| 17 | 1.2476 | 0.0325 |
| 18 | 1.2791 | 0.0315 |
| 19 | 1.3096 | 0.0305 |
| 20 | 1.3392 | 0.0296 |
| 21 | 1.3680 | 0.0288 |
| 22 | 1.3960 | 0.0280 |
| 23 | 1.4234 | 0.0273 |
| 24 | 1.4500 | 0.0267 |
| 25 | 1.4761 | 0.0260 |
| 26 | 1.5015 | 0.0255 |
| 27 | 1.5264 | 0.0249 |
| 28 | 1.5508 | 0.0244 |
| 29 | 1.5747 | 0.0239 |
| 30 | 1.5982 | 0.0234 |
| 31 | 1.6212 | 0.0230 |
| 32 | 1.6438 | 0.0226 |
| 33 | 1.6660 | 0.0222 |
| 34 | 1.6878 | 0.0218 |
| 35 | 1.7093 | 0.0215 |
| 36 | 1.7304 | 0.0211 |
| 37 | 1.7448 | 0.0144 |
| 38 | 1.7590 | 0.0142 |
| 39 | 1.7729 | 0.0139 |
| 40 | 1.7866 | 0.0137 |
| 41 | 1.8000 | 0.0134 |
| 42 | 1.8132 | 0.0132 |

| | | |
|---|---|---|
| 43 | 1.8262 | 0.0130 |
| 44 | 1.8390 | 0.0128 |
| 45 | 1.8516 | 0.0126 |
| 46 | 1.8640 | 0.0124 |
| 47 | 1.8762 | 0.0122 |
| 48 | 1.8882 | 0.0120 |
| 49 | 1.9000 | 0.0118 |
| 50 | 1.9117 | 0.0117 |
| 51 | 1.9232 | 0.0115 |
| 52 | 1.9346 | 0.0114 |
| 53 | 1.9458 | 0.0112 |
| 54 | 1.9568 | 0.0111 |
| 55 | 1.9678 | 0.0109 |
| 56 | 1.9785 | 0.0108 |
| 57 | 1.9892 | 0.0106 |
| 58 | 1.9997 | 0.0105 |
| 59 | 2.0101 | 0.0104 |
| 60 | 2.0204 | 0.0103 |
| 61 | 2.0305 | 0.0102 |
| 62 | 2.0406 | 0.0100 |
| 63 | 2.0505 | 0.0099 |
| 64 | 2.0603 | 0.0098 |
| 65 | 2.0700 | 0.0097 |
| 66 | 2.0796 | 0.0096 |
| 67 | 2.0891 | 0.0095 |
| 68 | 2.0986 | 0.0094 |
| 69 | 2.1079 | 0.0093 |
| 70 | 2.1171 | 0.0092 |
| 71 | 2.1262 | 0.0091 |
| 72 | 2.1353 | 0.0090 |
| 73 | 2.1442 | 0.0090 |
| 74 | 2.1531 | 0.0089 |
| 75 | 2.1619 | 0.0088 |
| 76 | 2.1706 | 0.0087 |
| 77 | 2.1793 | 0.0086 |
| 78 | 2.1878 | 0.0086 |
| 79 | 2.1963 | 0.0085 |
| 80 | 2.2047 | 0.0084 |
| 81 | 2.2131 | 0.0083 |
| 82 | 2.2213 | 0.0083 |
| 83 | 2.2295 | 0.0082 |
| 84 | 2.2377 | 0.0081 |
| 85 | 2.2457 | 0.0081 |
| 86 | 2.2537 | 0.0080 |
| 87 | 2.2616 | 0.0079 |
| 88 | 2.2695 | 0.0079 |
| 89 | 2.2773 | 0.0078 |
| 90 | 2.2851 | 0.0077 |
| 91 | 2.2928 | 0.0077 |
| 92 | 2.3004 | 0.0076 |
| 93 | 2.3080 | 0.0076 |
| 94 | 2.3155 | 0.0075 |
| 95 | 2.3229 | 0.0075 |
| 96 | 2.3303 | 0.0074 |
| 97 | 2.3377 | 0.0074 |
| 98 | 2.3450 | 0.0073 |
| 99 | 2.3522 | 0.0072 |
| 100 | 2.3594 | 0.0072 |
| 101 | 2.3666 | 0.0071 |

| | | |
|---|---|---|
| 102 | 2.3737 | 0.0071 |
| 103 | 2.3807 | 0.0070 |
| 104 | 2.3877 | 0.0070 |
| 105 | 2.3947 | 0.0070 |
| 106 | 2.4016 | 0.0069 |
| 107 | 2.4084 | 0.0069 |
| 108 | 2.4152 | 0.0068 |
| 109 | 2.4220 | 0.0068 |
| 110 | 2.4288 | 0.0067 |
| 111 | 2.4354 | 0.0067 |
| 112 | 2.4421 | 0.0066 |
| 113 | 2.4487 | 0.0066 |
| 114 | 2.4553 | 0.0066 |
| 115 | 2.4618 | 0.0065 |
| 116 | 2.4683 | 0.0065 |
| 117 | 2.4747 | 0.0064 |
| 118 | 2.4811 | 0.0064 |
| 119 | 2.4875 | 0.0064 |
| 120 | 2.4938 | 0.0063 |
| 121 | 2.5001 | 0.0063 |
| 122 | 2.5064 | 0.0063 |
| 123 | 2.5126 | 0.0062 |
| 124 | 2.5188 | 0.0062 |
| 125 | 2.5250 | 0.0062 |
| 126 | 2.5311 | 0.0061 |
| 127 | 2.5372 | 0.0061 |
| 128 | 2.5432 | 0.0061 |
| 129 | 2.5492 | 0.0060 |
| 130 | 2.5552 | 0.0060 |
| 131 | 2.5612 | 0.0060 |
| 132 | 2.5671 | 0.0059 |
| 133 | 2.5730 | 0.0059 |
| 134 | 2.5789 | 0.0059 |
| 135 | 2.5847 | 0.0058 |
| 136 | 2.5905 | 0.0058 |
| 137 | 2.5963 | 0.0058 |
| 138 | 2.6020 | 0.0057 |
| 139 | 2.6077 | 0.0057 |
| 140 | 2.6134 | 0.0057 |
| 141 | 2.6191 | 0.0057 |
| 142 | 2.6247 | 0.0056 |
| 143 | 2.6303 | 0.0056 |
| 144 | 2.6359 | 0.0056 |
| 145 | 2.6415 | 0.0055 |
| 146 | 2.6470 | 0.0055 |
| 147 | 2.6525 | 0.0055 |
| 148 | 2.6579 | 0.0055 |
| 149 | 2.6634 | 0.0054 |
| 150 | 2.6688 | 0.0054 |
| 151 | 2.6742 | 0.0054 |
| 152 | 2.6796 | 0.0054 |
| 153 | 2.6849 | 0.0053 |
| 154 | 2.6902 | 0.0053 |
| 155 | 2.6955 | 0.0053 |
| 156 | 2.7008 | 0.0053 |
| 157 | 2.7061 | 0.0052 |
| 158 | 2.7113 | 0.0052 |
| 159 | 2.7165 | 0.0052 |
| 160 | 2.7217 | 0.0052 |

| | | |
|---|---|---|
| 161 | 2.7268 | 0.0052 |
| 162 | 2.7320 | 0.0051 |
| 163 | 2.7371 | 0.0051 |
| 164 | 2.7422 | 0.0051 |
| 165 | 2.7472 | 0.0051 |
| 166 | 2.7523 | 0.0050 |
| 167 | 2.7573 | 0.0050 |
| 168 | 2.7623 | 0.0050 |
| 169 | 2.7673 | 0.0050 |
| 170 | 2.7723 | 0.0050 |
| 171 | 2.7772 | 0.0049 |
| 172 | 2.7821 | 0.0049 |
| 173 | 2.7871 | 0.0049 |
| 174 | 2.7919 | 0.0049 |
| 175 | 2.7968 | 0.0049 |
| 176 | 2.8016 | 0.0048 |
| 177 | 2.8065 | 0.0048 |
| 178 | 2.8113 | 0.0048 |
| 179 | 2.8161 | 0.0048 |
| 180 | 2.8208 | 0.0048 |
| 181 | 2.8256 | 0.0048 |
| 182 | 2.8303 | 0.0047 |
| 183 | 2.8351 | 0.0047 |
| 184 | 2.8398 | 0.0047 |
| 185 | 2.8444 | 0.0047 |
| 186 | 2.8491 | 0.0047 |
| 187 | 2.8537 | 0.0046 |
| 188 | 2.8584 | 0.0046 |
| 189 | 2.8630 | 0.0046 |
| 190 | 2.8676 | 0.0046 |
| 191 | 2.8722 | 0.0046 |
| 192 | 2.8767 | 0.0046 |
| 193 | 2.8813 | 0.0045 |
| 194 | 2.8858 | 0.0045 |
| 195 | 2.8903 | 0.0045 |
| 196 | 2.8948 | 0.0045 |
| 197 | 2.8993 | 0.0045 |
| 198 | 2.9037 | 0.0045 |
| 199 | 2.9082 | 0.0044 |
| 200 | 2.9126 | 0.0044 |
| 201 | 2.9170 | 0.0044 |
| 202 | 2.9214 | 0.0044 |
| 203 | 2.9258 | 0.0044 |
| 204 | 2.9302 | 0.0044 |
| 205 | 2.9346 | 0.0044 |
| 206 | 2.9389 | 0.0043 |
| 207 | 2.9432 | 0.0043 |
| 208 | 2.9476 | 0.0043 |
| 209 | 2.9519 | 0.0043 |
| 210 | 2.9561 | 0.0043 |
| 211 | 2.9604 | 0.0043 |
| 212 | 2.9647 | 0.0043 |
| 213 | 2.9689 | 0.0042 |
| 214 | 2.9731 | 0.0042 |
| 215 | 2.9773 | 0.0042 |
| 216 | 2.9816 | 0.0042 |
| 217 | 2.9857 | 0.0042 |
| 218 | 2.9899 | 0.0042 |
| 219 | 2.9941 | 0.0042 |

| | | |
|---|---|---|
| 220 | 2.9982 | 0.0041 |
| 221 | 3.0024 | 0.0041 |
| 222 | 3.0065 | 0.0041 |
| 223 | 3.0106 | 0.0041 |
| 224 | 3.0147 | 0.0041 |
| 225 | 3.0188 | 0.0041 |
| 226 | 3.0228 | 0.0041 |
| 227 | 3.0269 | 0.0041 |
| 228 | 3.0309 | 0.0040 |
| 229 | 3.0350 | 0.0040 |
| 230 | 3.0390 | 0.0040 |
| 231 | 3.0430 | 0.0040 |
| 232 | 3.0470 | 0.0040 |
| 233 | 3.0510 | 0.0040 |
| 234 | 3.0550 | 0.0040 |
| 235 | 3.0589 | 0.0040 |
| 236 | 3.0629 | 0.0039 |
| 237 | 3.0668 | 0.0039 |
| 238 | 3.0707 | 0.0039 |
| 239 | 3.0747 | 0.0039 |
| 240 | 3.0786 | 0.0039 |
| 241 | 3.0825 | 0.0039 |
| 242 | 3.0863 | 0.0039 |
| 243 | 3.0902 | 0.0039 |
| 244 | 3.0941 | 0.0039 |
| 245 | 3.0979 | 0.0038 |
| 246 | 3.1017 | 0.0038 |
| 247 | 3.1056 | 0.0038 |
| 248 | 3.1094 | 0.0038 |
| 249 | 3.1132 | 0.0038 |
| 250 | 3.1170 | 0.0038 |
| 251 | 3.1208 | 0.0038 |
| 252 | 3.1245 | 0.0038 |
| 253 | 3.1283 | 0.0038 |
| 254 | 3.1321 | 0.0038 |
| 255 | 3.1358 | 0.0037 |
| 256 | 3.1395 | 0.0037 |
| 257 | 3.1433 | 0.0037 |
| 258 | 3.1470 | 0.0037 |
| 259 | 3.1507 | 0.0037 |
| 260 | 3.1544 | 0.0037 |
| 261 | 3.1580 | 0.0037 |
| 262 | 3.1617 | 0.0037 |
| 263 | 3.1654 | 0.0037 |
| 264 | 3.1690 | 0.0037 |
| 265 | 3.1727 | 0.0036 |
| 266 | 3.1763 | 0.0036 |
| 267 | 3.1799 | 0.0036 |
| 268 | 3.1835 | 0.0036 |
| 269 | 3.1872 | 0.0036 |
| 270 | 3.1907 | 0.0036 |
| 271 | 3.1943 | 0.0036 |
| 272 | 3.1979 | 0.0036 |
| 273 | 3.2015 | 0.0036 |
| 274 | 3.2050 | 0.0036 |
| 275 | 3.2086 | 0.0036 |
| 276 | 3.2121 | 0.0035 |
| 277 | 3.2157 | 0.0035 |
| 278 | 3.2192 | 0.0035 |

| | | |
|---|---|---|
| 279 | 3.2227 | 0.0035 |
| 280 | 3.2262 | 0.0035 |
| 281 | 3.2297 | 0.0035 |
| 282 | 3.2332 | 0.0035 |
| 283 | 3.2367 | 0.0035 |
| 284 | 3.2401 | 0.0035 |
| 285 | 3.2436 | 0.0035 |
| 286 | 3.2471 | 0.0035 |
| 287 | 3.2505 | 0.0034 |
| 288 | 3.2539 | 0.0034 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0034 | 0.0003 | 0.0031 |
| 2 | 0.0034 | 0.0003 | 0.0031 |
| 3 | 0.0035 | 0.0003 | 0.0031 |
| 4 | 0.0035 | 0.0003 | 0.0032 |
| 5 | 0.0035 | 0.0003 | 0.0032 |
| 6 | 0.0035 | 0.0003 | 0.0032 |
| 7 | 0.0035 | 0.0003 | 0.0032 |
| 8 | 0.0035 | 0.0003 | 0.0032 |
| 9 | 0.0035 | 0.0003 | 0.0032 |
| 10 | 0.0036 | 0.0003 | 0.0032 |
| 11 | 0.0036 | 0.0003 | 0.0032 |
| 12 | 0.0036 | 0.0003 | 0.0033 |
| 13 | 0.0036 | 0.0003 | 0.0033 |
| 14 | 0.0036 | 0.0003 | 0.0033 |
| 15 | 0.0036 | 0.0003 | 0.0033 |
| 16 | 0.0036 | 0.0003 | 0.0033 |
| 17 | 0.0037 | 0.0003 | 0.0033 |
| 18 | 0.0037 | 0.0003 | 0.0033 |
| 19 | 0.0037 | 0.0003 | 0.0033 |
| 20 | 0.0037 | 0.0003 | 0.0034 |
| 21 | 0.0037 | 0.0003 | 0.0034 |
| 22 | 0.0037 | 0.0003 | 0.0034 |
| 23 | 0.0037 | 0.0003 | 0.0034 |
| 24 | 0.0038 | 0.0003 | 0.0034 |
| 25 | 0.0038 | 0.0003 | 0.0034 |
| 26 | 0.0038 | 0.0003 | 0.0034 |
| 27 | 0.0038 | 0.0003 | 0.0035 |
| 28 | 0.0038 | 0.0003 | 0.0035 |
| 29 | 0.0038 | 0.0003 | 0.0035 |
| 30 | 0.0038 | 0.0004 | 0.0035 |
| 31 | 0.0039 | 0.0004 | 0.0035 |
| 32 | 0.0039 | 0.0004 | 0.0035 |
| 33 | 0.0039 | 0.0004 | 0.0035 |
| 34 | 0.0039 | 0.0004 | 0.0036 |
| 35 | 0.0039 | 0.0004 | 0.0036 |
| 36 | 0.0039 | 0.0004 | 0.0036 |
| 37 | 0.0040 | 0.0004 | 0.0036 |
| 38 | 0.0040 | 0.0004 | 0.0036 |
| 39 | 0.0040 | 0.0004 | 0.0036 |
| 40 | 0.0040 | 0.0004 | 0.0037 |
| 41 | 0.0040 | 0.0004 | 0.0037 |
| 42 | 0.0041 | 0.0004 | 0.0037 |
| 43 | 0.0041 | 0.0004 | 0.0037 |
| 44 | 0.0041 | 0.0004 | 0.0037 |

| | | | |
|---|---|---|---|
| 45 | 0.0041 | 0.0004 | 0.0037 |
| 46 | 0.0041 | 0.0004 | 0.0038 |
| 47 | 0.0042 | 0.0004 | 0.0038 |
| 48 | 0.0042 | 0.0004 | 0.0038 |
| 49 | 0.0042 | 0.0004 | 0.0038 |
| 50 | 0.0042 | 0.0004 | 0.0038 |
| 51 | 0.0042 | 0.0004 | 0.0039 |
| 52 | 0.0043 | 0.0004 | 0.0039 |
| 53 | 0.0043 | 0.0004 | 0.0039 |
| 54 | 0.0043 | 0.0004 | 0.0039 |
| 55 | 0.0043 | 0.0004 | 0.0039 |
| 56 | 0.0043 | 0.0004 | 0.0039 |
| 57 | 0.0044 | 0.0004 | 0.0040 |
| 58 | 0.0044 | 0.0004 | 0.0040 |
| 59 | 0.0044 | 0.0004 | 0.0040 |
| 60 | 0.0044 | 0.0004 | 0.0040 |
| 61 | 0.0045 | 0.0004 | 0.0041 |
| 62 | 0.0045 | 0.0004 | 0.0041 |
| 63 | 0.0045 | 0.0004 | 0.0041 |
| 64 | 0.0045 | 0.0004 | 0.0041 |
| 65 | 0.0046 | 0.0004 | 0.0041 |
| 66 | 0.0046 | 0.0004 | 0.0042 |
| 67 | 0.0046 | 0.0004 | 0.0042 |
| 68 | 0.0046 | 0.0004 | 0.0042 |
| 69 | 0.0047 | 0.0004 | 0.0042 |
| 70 | 0.0047 | 0.0004 | 0.0043 |
| 71 | 0.0047 | 0.0004 | 0.0043 |
| 72 | 0.0047 | 0.0004 | 0.0043 |
| 73 | 0.0048 | 0.0004 | 0.0043 |
| 74 | 0.0048 | 0.0004 | 0.0044 |
| 75 | 0.0048 | 0.0004 | 0.0044 |
| 76 | 0.0048 | 0.0004 | 0.0044 |
| 77 | 0.0049 | 0.0004 | 0.0044 |
| 78 | 0.0049 | 0.0004 | 0.0045 |
| 79 | 0.0049 | 0.0004 | 0.0045 |
| 80 | 0.0050 | 0.0005 | 0.0045 |
| 81 | 0.0050 | 0.0005 | 0.0046 |
| 82 | 0.0050 | 0.0005 | 0.0046 |
| 83 | 0.0051 | 0.0005 | 0.0046 |
| 84 | 0.0051 | 0.0005 | 0.0046 |
| 85 | 0.0051 | 0.0005 | 0.0047 |
| 86 | 0.0052 | 0.0005 | 0.0047 |
| 87 | 0.0052 | 0.0005 | 0.0047 |
| 88 | 0.0052 | 0.0005 | 0.0048 |
| 89 | 0.0053 | 0.0005 | 0.0048 |
| 90 | 0.0053 | 0.0005 | 0.0048 |
| 91 | 0.0053 | 0.0005 | 0.0049 |
| 92 | 0.0054 | 0.0005 | 0.0049 |
| 93 | 0.0054 | 0.0005 | 0.0049 |
| 94 | 0.0054 | 0.0005 | 0.0049 |
| 95 | 0.0055 | 0.0005 | 0.0050 |
| 96 | 0.0055 | 0.0005 | 0.0050 |
| 97 | 0.0056 | 0.0005 | 0.0051 |
| 98 | 0.0056 | 0.0005 | 0.0051 |
| 99 | 0.0057 | 0.0005 | 0.0051 |
| 100 | 0.0057 | 0.0005 | 0.0052 |
| 101 | 0.0057 | 0.0005 | 0.0052 |
| 102 | 0.0058 | 0.0005 | 0.0052 |
| 103 | 0.0058 | 0.0005 | 0.0053 |

| | | | |
|---|---|---|---|
| 104 | 0.0059 | 0.0005 | 0.0053 |
| 105 | 0.0059 | 0.0005 | 0.0054 |
| 106 | 0.0060 | 0.0005 | 0.0054 |
| 107 | 0.0060 | 0.0005 | 0.0055 |
| 108 | 0.0061 | 0.0006 | 0.0055 |
| 109 | 0.0061 | 0.0006 | 0.0056 |
| 110 | 0.0062 | 0.0006 | 0.0056 |
| 111 | 0.0062 | 0.0006 | 0.0057 |
| 112 | 0.0063 | 0.0006 | 0.0057 |
| 113 | 0.0063 | 0.0006 | 0.0058 |
| 114 | 0.0064 | 0.0006 | 0.0058 |
| 115 | 0.0064 | 0.0006 | 0.0059 |
| 116 | 0.0065 | 0.0006 | 0.0059 |
| 117 | 0.0066 | 0.0006 | 0.0060 |
| 118 | 0.0066 | 0.0006 | 0.0060 |
| 119 | 0.0067 | 0.0006 | 0.0061 |
| 120 | 0.0067 | 0.0006 | 0.0061 |
| 121 | 0.0068 | 0.0006 | 0.0062 |
| 122 | 0.0069 | 0.0006 | 0.0062 |
| 123 | 0.0070 | 0.0006 | 0.0063 |
| 124 | 0.0070 | 0.0006 | 0.0064 |
| 125 | 0.0071 | 0.0006 | 0.0065 |
| 126 | 0.0071 | 0.0007 | 0.0065 |
| 127 | 0.0072 | 0.0007 | 0.0066 |
| 128 | 0.0073 | 0.0007 | 0.0066 |
| 129 | 0.0074 | 0.0007 | 0.0067 |
| 130 | 0.0075 | 0.0007 | 0.0068 |
| 131 | 0.0076 | 0.0007 | 0.0069 |
| 132 | 0.0076 | 0.0007 | 0.0069 |
| 133 | 0.0077 | 0.0007 | 0.0070 |
| 134 | 0.0078 | 0.0007 | 0.0071 |
| 135 | 0.0079 | 0.0007 | 0.0072 |
| 136 | 0.0080 | 0.0007 | 0.0073 |
| 137 | 0.0081 | 0.0007 | 0.0074 |
| 138 | 0.0082 | 0.0007 | 0.0075 |
| 139 | 0.0083 | 0.0008 | 0.0076 |
| 140 | 0.0084 | 0.0008 | 0.0076 |
| 141 | 0.0086 | 0.0008 | 0.0078 |
| 142 | 0.0086 | 0.0008 | 0.0079 |
| 143 | 0.0088 | 0.0008 | 0.0080 |
| 144 | 0.0089 | 0.0008 | 0.0081 |
| 145 | 0.0090 | 0.0008 | 0.0082 |
| 146 | 0.0091 | 0.0008 | 0.0083 |
| 147 | 0.0093 | 0.0008 | 0.0085 |
| 148 | 0.0094 | 0.0009 | 0.0086 |
| 149 | 0.0096 | 0.0009 | 0.0087 |
| 150 | 0.0097 | 0.0009 | 0.0088 |
| 151 | 0.0099 | 0.0009 | 0.0090 |
| 152 | 0.0100 | 0.0009 | 0.0091 |
| 153 | 0.0103 | 0.0009 | 0.0093 |
| 154 | 0.0104 | 0.0009 | 0.0094 |
| 155 | 0.0106 | 0.0010 | 0.0097 |
| 156 | 0.0108 | 0.0010 | 0.0098 |
| 157 | 0.0111 | 0.0010 | 0.0101 |
| 158 | 0.0112 | 0.0010 | 0.0102 |
| 159 | 0.0115 | 0.0010 | 0.0105 |
| 160 | 0.0117 | 0.0011 | 0.0106 |
| 161 | 0.0120 | 0.0011 | 0.0109 |
| 162 | 0.0122 | 0.0011 | 0.0111 |

| | | | |
|---|---|---|---|
| 163 | 0.0126 | 0.0011 | 0.0114 |
| 164 | 0.0128 | 0.0012 | 0.0116 |
| 165 | 0.0132 | 0.0012 | 0.0120 |
| 166 | 0.0134 | 0.0012 | 0.0122 |
| 167 | 0.0139 | 0.0013 | 0.0126 |
| 168 | 0.0142 | 0.0013 | 0.0129 |
| 169 | 0.0211 | 0.0019 | 0.0192 |
| 170 | 0.0215 | 0.0020 | 0.0195 |
| 171 | 0.0222 | 0.0020 | 0.0202 |
| 172 | 0.0226 | 0.0021 | 0.0205 |
| 173 | 0.0234 | 0.0021 | 0.0213 |
| 174 | 0.0239 | 0.0022 | 0.0217 |
| 175 | 0.0249 | 0.0023 | 0.0226 |
| 176 | 0.0255 | 0.0023 | 0.0231 |
| 177 | 0.0267 | 0.0024 | 0.0242 |
| 178 | 0.0273 | 0.0025 | 0.0248 |
| 179 | 0.0288 | 0.0026 | 0.0262 |
| 180 | 0.0296 | 0.0027 | 0.0269 |
| 181 | 0.0315 | 0.0029 | 0.0286 |
| 182 | 0.0325 | 0.0030 | 0.0296 |
| 183 | 0.0350 | 0.0032 | 0.0318 |
| 184 | 0.0364 | 0.0033 | 0.0331 |
| 185 | 0.0276 | 0.0025 | 0.0251 |
| 186 | 0.0294 | 0.0027 | 0.0268 |
| 187 | 0.0341 | 0.0031 | 0.0310 |
| 188 | 0.0373 | 0.0034 | 0.0339 |
| 189 | 0.0463 | 0.0042 | 0.0421 |
| 190 | 0.0534 | 0.0042 | 0.0492 |
| 191 | 0.0810 | 0.0042 | 0.0768 |
| 192 | 0.1176 | 0.0042 | 0.1134 |
| 193 | 0.5086 | 0.0042 | 0.5044 |
| 194 | 0.0637 | 0.0042 | 0.0595 |
| 195 | 0.0412 | 0.0037 | 0.0375 |
| 196 | 0.0316 | 0.0029 | 0.0287 |
| 197 | 0.0381 | 0.0035 | 0.0346 |
| 198 | 0.0337 | 0.0031 | 0.0306 |
| 199 | 0.0305 | 0.0028 | 0.0277 |
| 200 | 0.0280 | 0.0026 | 0.0255 |
| 201 | 0.0260 | 0.0024 | 0.0237 |
| 202 | 0.0244 | 0.0022 | 0.0222 |
| 203 | 0.0230 | 0.0021 | 0.0209 |
| 204 | 0.0218 | 0.0020 | 0.0198 |
| 205 | 0.0144 | 0.0013 | 0.0131 |
| 206 | 0.0137 | 0.0012 | 0.0124 |
| 207 | 0.0130 | 0.0012 | 0.0118 |
| 208 | 0.0124 | 0.0011 | 0.0113 |
| 209 | 0.0118 | 0.0011 | 0.0108 |
| 210 | 0.0114 | 0.0010 | 0.0103 |
| 211 | 0.0109 | 0.0010 | 0.0099 |
| 212 | 0.0105 | 0.0010 | 0.0096 |
| 213 | 0.0102 | 0.0009 | 0.0092 |
| 214 | 0.0098 | 0.0009 | 0.0089 |
| 215 | 0.0095 | 0.0009 | 0.0086 |
| 216 | 0.0092 | 0.0008 | 0.0084 |
| 217 | 0.0090 | 0.0008 | 0.0082 |
| 218 | 0.0087 | 0.0008 | 0.0079 |
| 219 | 0.0085 | 0.0008 | 0.0077 |
| 220 | 0.0083 | 0.0008 | 0.0075 |
| 221 | 0.0081 | 0.0007 | 0.0073 |

| | | | |
|---|---|---|---|
| 222 | 0.0079 | 0.0007 | 0.0072 |
| 223 | 0.0077 | 0.0007 | 0.0070 |
| 224 | 0.0075 | 0.0007 | 0.0068 |
| 225 | 0.0074 | 0.0007 | 0.0067 |
| 226 | 0.0072 | 0.0007 | 0.0065 |
| 227 | 0.0070 | 0.0006 | 0.0064 |
| 228 | 0.0069 | 0.0006 | 0.0063 |
| 229 | 0.0068 | 0.0006 | 0.0062 |
| 230 | 0.0066 | 0.0006 | 0.0060 |
| 231 | 0.0065 | 0.0006 | 0.0059 |
| 232 | 0.0064 | 0.0006 | 0.0058 |
| 233 | 0.0063 | 0.0006 | 0.0057 |
| 234 | 0.0062 | 0.0006 | 0.0056 |
| 235 | 0.0061 | 0.0006 | 0.0055 |
| 236 | 0.0060 | 0.0005 | 0.0054 |
| 237 | 0.0059 | 0.0005 | 0.0054 |
| 238 | 0.0058 | 0.0005 | 0.0053 |
| 239 | 0.0057 | 0.0005 | 0.0052 |
| 240 | 0.0056 | 0.0005 | 0.0051 |
| 241 | 0.0055 | 0.0005 | 0.0050 |
| 242 | 0.0055 | 0.0005 | 0.0050 |
| 243 | 0.0054 | 0.0005 | 0.0049 |
| 244 | 0.0053 | 0.0005 | 0.0048 |
| 245 | 0.0052 | 0.0005 | 0.0048 |
| 246 | 0.0052 | 0.0005 | 0.0047 |
| 247 | 0.0051 | 0.0005 | 0.0046 |
| 248 | 0.0050 | 0.0005 | 0.0046 |
| 249 | 0.0050 | 0.0005 | 0.0045 |
| 250 | 0.0049 | 0.0004 | 0.0045 |
| 251 | 0.0049 | 0.0004 | 0.0044 |
| 252 | 0.0048 | 0.0004 | 0.0044 |
| 253 | 0.0048 | 0.0004 | 0.0043 |
| 254 | 0.0047 | 0.0004 | 0.0043 |
| 255 | 0.0046 | 0.0004 | 0.0042 |
| 256 | 0.0046 | 0.0004 | 0.0042 |
| 257 | 0.0045 | 0.0004 | 0.0041 |
| 258 | 0.0045 | 0.0004 | 0.0041 |
| 259 | 0.0044 | 0.0004 | 0.0040 |
| 260 | 0.0044 | 0.0004 | 0.0040 |
| 261 | 0.0044 | 0.0004 | 0.0040 |
| 262 | 0.0043 | 0.0004 | 0.0039 |
| 263 | 0.0043 | 0.0004 | 0.0039 |
| 264 | 0.0042 | 0.0004 | 0.0038 |
| 265 | 0.0042 | 0.0004 | 0.0038 |
| 266 | 0.0041 | 0.0004 | 0.0038 |
| 267 | 0.0041 | 0.0004 | 0.0037 |
| 268 | 0.0041 | 0.0004 | 0.0037 |
| 269 | 0.0040 | 0.0004 | 0.0037 |
| 270 | 0.0040 | 0.0004 | 0.0036 |
| 271 | 0.0040 | 0.0004 | 0.0036 |
| 272 | 0.0039 | 0.0004 | 0.0036 |
| 273 | 0.0039 | 0.0004 | 0.0035 |
| 274 | 0.0039 | 0.0004 | 0.0035 |
| 275 | 0.0038 | 0.0003 | 0.0035 |
| 276 | 0.0038 | 0.0003 | 0.0034 |
| 277 | 0.0038 | 0.0003 | 0.0034 |
| 278 | 0.0037 | 0.0003 | 0.0034 |
| 279 | 0.0037 | 0.0003 | 0.0034 |
| 280 | 0.0037 | 0.0003 | 0.0033 |

| | | | |
|---|---|---|---|
| 281 | 0.0036 | 0.0003 | 0.0033 |
| 282 | 0.0036 | 0.0003 | 0.0033 |
| 283 | 0.0036 | 0.0003 | 0.0033 |
| 284 | 0.0036 | 0.0003 | 0.0032 |
| 285 | 0.0035 | 0.0003 | 0.0032 |
| 286 | 0.0035 | 0.0003 | 0.0032 |
| 287 | 0.0035 | 0.0003 | 0.0032 |
| 288 | 0.0035 | 0.0003 | 0.0031 |

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Total soil rain loss = 0.24(In)
Total effective rainfall = 3.01(In)
Peak flow rate in flood hydrograph = 3931.61(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 1000.0 | 2000.0 | 3000.0 | 4000.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0047 | 0.68 | Q | | | | |
| 0+10 | 0.0207 | 2.32 | Q | | | | |
| 0+15 | 0.0542 | 4.87 | Q | | | | |
| 0+20 | 0.1113 | 8.30 | Q | | | | |
| 0+25 | 0.1989 | 12.71 | Q | | | | |
| 0+30 | 0.3324 | 19.38 | Q | | | | |
| 0+35 | 0.5352 | 29.45 | Q | | | | |
| 0+40 | 0.8290 | 42.65 | Q | | | | |
| 0+45 | 1.2073 | 54.94 | Q | | | | |
| 0+50 | 1.6667 | 66.70 | Q | | | | |
| 0+55 | 2.1927 | 76.39 | Q | | | | |
| 1+ 0 | 2.7696 | 83.76 | Q | | | | |
| 1+ 5 | 3.3869 | 89.64 | Q | | | | |
| 1+10 | 4.0386 | 94.63 | Q | | | | |
| 1+15 | 4.7208 | 99.04 | Q | | | | |
| 1+20 | 5.4304 | 103.04 | VQ | | | | |
| 1+25 | 6.1653 | 106.71 | VQ | | | | |
| 1+30 | 6.9230 | 110.02 | VQ | | | | |
| 1+35 | 7.7013 | 113.02 | VQ | | | | |
| 1+40 | 8.4997 | 115.92 | VQ | | | | |
| 1+45 | 9.3160 | 118.52 | VQ | | | | |
| 1+50 | 10.1486 | 120.90 | VQ | | | | |
| 1+55 | 10.9974 | 123.24 | VQ | | | | |
| 2+ 0 | 11.8605 | 125.33 | VQ | | | | |
| 2+ 5 | 12.7379 | 127.40 | VQ | | | | |
| 2+10 | 13.6289 | 129.37 | VQ | | | | |
| 2+15 | 14.5328 | 131.25 | VQ | | | | |
| 2+20 | 15.4495 | 133.11 | VQ | | | | |
| 2+25 | 16.3780 | 134.81 | VQ | | | | |
| 2+30 | 17.3180 | 136.50 | VQ | | | | |
| 2+35 | 18.2687 | 138.04 | VQ | | | | |
| 2+40 | 19.2292 | 139.47 | VQ | | | | |
| 2+45 | 20.1996 | 140.89 | VQ | | | | |
| 2+50 | 21.1793 | 142.26 | VQ | | | | |
| 2+55 | 22.1685 | 143.62 | VQ | | | | |
| 3+ 0 | 23.1667 | 144.94 | VQ | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3+ 5 | 24.1736 | 146.21 | Q | | | | |
| 3+10 | 25.1893 | 147.48 | Q | | | | |
| 3+15 | 26.2134 | 148.69 | Q | | | | |
| 3+20 | 27.2458 | 149.92 | Q | | | | |
| 3+25 | 28.2861 | 151.05 | Q | | | | |
| 3+30 | 29.3339 | 152.13 | Q | | | | |
| 3+35 | 30.3891 | 153.22 | Q | | | | |
| 3+40 | 31.4519 | 154.32 | Q | | | | |
| 3+45 | 32.5223 | 155.42 | Q | | | | |
| 3+50 | 33.6000 | 156.48 | Q | | | | |
| 3+55 | 34.6847 | 157.50 | Q | | | | |
| 4+ 0 | 35.7765 | 158.53 | Q | | | | |
| 4+ 5 | 36.8755 | 159.57 | Q | | | | |
| 4+10 | 37.9817 | 160.62 | Q | | | | |
| 4+15 | 39.0947 | 161.61 | Q | | | | |
| 4+20 | 40.2144 | 162.58 | Q | | | | |
| 4+25 | 41.3408 | 163.55 | Q | | | | |
| 4+30 | 42.4739 | 164.53 | Q | | | | |
| 4+35 | 43.6138 | 165.52 | Q | | | | |
| 4+40 | 44.7603 | 166.47 | Q | | | | |
| 4+45 | 45.9131 | 167.38 | Q | | | | |
| 4+50 | 47.0722 | 168.31 | Q | | | | |
| 4+55 | 48.2379 | 169.25 | QV | | | | |
| 5+ 0 | 49.4100 | 170.20 | QV | | | | |
| 5+ 5 | 50.5888 | 171.16 | QV | | | | |
| 5+10 | 51.7744 | 172.15 | QV | | | | |
| 5+15 | 52.9668 | 173.14 | QV | | | | |
| 5+20 | 54.1662 | 174.14 | QV | | | | |
| 5+25 | 55.3724 | 175.15 | QV | | | | |
| 5+30 | 56.5858 | 176.18 | QV | | | | |
| 5+35 | 57.8062 | 177.21 | QV | | | | |
| 5+40 | 59.0339 | 178.25 | QV | | | | |
| 5+45 | 60.2687 | 179.30 | QV | | | | |
| 5+50 | 61.5110 | 180.37 | QV | | | | |
| 5+55 | 62.7603 | 181.40 | QV | | | | |
| 6+ 0 | 64.0167 | 182.42 | QV | | | | |
| 6+ 5 | 65.2801 | 183.45 | QV | | | | |
| 6+10 | 66.5508 | 184.50 | QV | | | | |
| 6+15 | 67.8287 | 185.55 | QV | | | | |
| 6+20 | 69.1140 | 186.62 | QV | | | | |
| 6+25 | 70.4067 | 187.70 | QV | | | | |
| 6+30 | 71.7067 | 188.76 | Q V | | | | |
| 6+35 | 73.0138 | 189.80 | Q V | | | | |
| 6+40 | 74.3282 | 190.85 | Q V | | | | |
| 6+45 | 75.6499 | 191.91 | Q V | | | | |
| 6+50 | 76.9790 | 192.99 | Q V | | | | |
| 6+55 | 78.3157 | 194.08 | Q V | | | | |
| 7+ 0 | 79.6600 | 195.19 | Q V | | | | |
| 7+ 5 | 81.0120 | 196.31 | Q V | | | | |
| 7+10 | 82.3719 | 197.46 | Q V | | | | |
| 7+15 | 83.7398 | 198.61 | Q V | | | | |
| 7+20 | 85.1157 | 199.79 | Q V | | | | |
| 7+25 | 86.4999 | 200.98 | QV | | | | |
| 7+30 | 87.8924 | 202.19 | QV | | | | |
| 7+35 | 89.2933 | 203.41 | QV | | | | |
| 7+40 | 90.7028 | 204.66 | QV | | | | |
| 7+45 | 92.1210 | 205.92 | QV | | | | |
| 7+50 | 93.5480 | 207.21 | QV | | | | |
| 7+55 | 94.9840 | 208.51 | Q V | | | | |

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 8+ 0      96.4292    209.83  | Q V     |         |         |         |
 8+ 5      97.8835    211.17  | Q V     |         |         |         |
 8+10      99.3473    212.54  | Q V     |         |         |         |
 8+15     100.8207    213.93  | Q V     |         |         |         |
 8+20     102.3037    215.34  | Q V     |         |         |         |
 8+25     103.7966    216.77  | Q V     |         |         |         |
 8+30     105.2996    218.23  | Q V     |         |         |         |
 8+35     106.8127    219.71  | Q V     |         |         |         |
 8+40     108.3362    221.22  | Q V     |         |         |         |
 8+45     109.8703    222.74  | Q V     |         |         |         |
 8+50     111.4151    224.31  | Q V     |         |         |         |
 8+55     112.9708    225.89  | Q V     |         |         |         |
 9+ 0     114.5376    227.50  | Q V     |         |         |         |
 9+ 5     116.1157    229.14  | Q V     |         |         |         |
 9+10     117.7053    230.81  | Q V     |         |         |         |
 9+15     119.3066    232.51  | Q  V    |         |         |         |
 9+20     120.9199    234.25  | Q  V    |         |         |         |
 9+25     122.5453    236.01  | Q  V    |         |         |         |
 9+30     124.1831    237.81  | Q  V    |         |         |         |
 9+35     125.8334    239.63  | Q  V    |         |         |         |
 9+40     127.4967    241.51  | Q  V    |         |         |         |
 9+45     129.1730    243.40  | Q  V    |         |         |         |
 9+50     130.8628    245.35  | Q  V    |         |         |         |
 9+55     132.5661    247.32  | Q  V    |         |         |         |
10+ 0     134.2833    249.34  | Q  V    |         |         |         |
10+ 5     136.0147    251.40  | Q  V    |         |         |         |
10+10     137.7606    253.51  | Q  V    |         |         |         |
10+15     139.5213    255.64  | Q  V    |         |         |         |
10+20     141.2970    257.84  | Q  V    |         |         |         |
10+25     143.0882    260.07  | Q   V   |         |         |         |
10+30     144.8951    262.37  | Q   V   |         |         |         |
10+35     146.7181    264.70  | Q   V   |         |         |         |
10+40     148.5575    267.09  | Q   V   |         |         |         |
10+45     150.4138    269.53  | Q   V   |         |         |         |
10+50     152.2873    272.03  | Q   V   |         |         |         |
10+55     154.1783    274.58  | Q   V   |         |         |         |
11+ 0     156.0874    277.21  | Q   V   |         |         |         |
11+ 5     158.0150    279.88  | Q   V   |         |         |         |
11+10     159.9614    282.63  | Q   V   |         |         |         |
11+15     161.9272    285.43  | Q   V   |         |         |         |
11+20     163.9129    288.32  | Q   V   |         |         |         |
11+25     165.9189    291.27  | Q   V   |         |         |         |
11+30     167.9458    294.31  | Q    V  |         |         |         |
11+35     169.9941    297.41  | Q    V  |         |         |         |
11+40     172.0644    300.61  |  Q   V  |         |         |         |
11+45     174.1572    303.88  |  Q   V  |         |         |         |
11+50     176.2733    307.26  |  Q   V  |         |         |         |
11+55     178.4132    310.71  |  Q   V  |         |         |         |
12+ 0     180.5777    314.29  |  Q   V  |         |         |         |
12+ 5     182.7674    317.94  |  Q   V  |         |         |         |
12+10     184.9830    321.71  |  Q   V  |         |         |         |
12+15     187.2253    325.57  |  Q   V  |         |         |         |
12+20     189.4951    329.58  |  Q   V  |         |         |         |
12+25     191.7931    333.67  |  Q    V |         |         |         |
12+30     194.1203    337.91  |  Q    V |         |         |         |
12+35     196.4774    342.24  |  Q    V |         |         |         |
12+40     198.8654    346.74  |  Q    V |         |         |         |
12+45     201.2852    351.36  |  Q    V |         |         |         |
12+50     203.7381    356.17  |  Q    V |         |         |         |
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12+55     206.2253    361.14  |  Q    V |          |          |          |
13+ 0     208.7482    366.33  |  Q    V |          |          |          |
13+ 5     211.3080    371.68  |  Q    V |          |          |          |
13+10     213.9064    377.28  |  Q     V|          |          |          |
13+15     216.5446    383.07  |  Q     V|          |          |          |
13+20     219.2244    389.12  |  Q     V|          |          |          |
13+25     221.9474    395.38  |  Q     V|          |          |          |
13+30     224.7157    401.95  |   Q    V|          |          |          |
13+35     227.5308    408.75  |   Q    V|          |          |          |
13+40     230.3951    415.90  |   Q    V|          |          |          |
13+45     233.3106    423.33  |   Q    V|          |          |          |
13+50     236.2801    431.16  |   Q    V|          |          |          |
13+55     239.3056    439.31  |   Q     V          |          |          |
14+ 0     242.3905    447.92  |   Q     V          |          |          |
14+ 5     245.5460    458.18  |   Q     V          |          |          |
14+10     248.7882    470.77  |   Q     V          |          |          |
14+15     252.1321    485.54  |   Q     V          |          |          |
14+20     255.5936    502.60  |    Q    V          |          |          |
14+25     259.1893    522.10  |    Q    V          |          |          |
14+30     262.9540    546.64  |    Q    |V          |          |          |
14+35     266.9366    578.27  |    Q    |V          |          |          |
14+40     271.1845    616.79  |     Q   |V          |          |          |
14+45     275.6931    654.65  |     Q   |V          |          |          |
14+50     280.4651    692.89  |     Q   |V          |          |          |
14+55     285.4826    728.54  |      Q  | V         |          |          |
15+ 0     290.7271    761.50  |      Q  | V         |          |          |
15+ 5     296.1902    793.25  |      Q  | V         |          |          |
15+10     301.8746    825.37  |       Q | V         |          |          |
15+15     307.7866    858.42  |       Q | V         |          |          |
15+20     313.9393    893.37  |       Q |  V        |          |          |
15+25     320.3310    928.08  |        Q|  V        |          |          |
15+30     326.9585    962.32  |        Q|  V        |          |          |
15+35     333.8227    996.68  |        Q|   V       |          |          |
15+40     340.9370   1033.00  |         Q   V       |          |          |
15+45     348.3173   1071.61  |         Q   V       |          |          |
15+50     355.9679   1110.87  |         |Q   V      |          |          |
15+55     363.9043   1152.36  |         |Q   V      |          |          |
16+ 0     372.2220   1207.73  |         | Q  V      |          |          |
16+ 5     381.7116   1377.89  |         |  Q  V     |          |          |
16+10     392.7477   1602.45  |         |     Q     |          |          |
16+15     405.3717   1833.00  |         |      VQ   |          |          |
16+20     419.7230   2083.81  |         |      V  Q |          |          |
16+25     436.1275   2381.92  |         |       V |  Q       |          |
16+30     455.9192   2873.76  |         |        V|        Q |          |
16+35     479.8474   3474.37  |         |         V          |   Q      |
16+40     506.9246   3931.61  |         |         |V         |        Q |
16+45     532.8240   3760.59  |         |         | V        |      Q   |
16+50     557.4225   3571.70  |         |         |  V       |    Q     |
16+55     579.1352   3152.67  |         |         |   V      |Q         |
17+ 0     597.8236   2713.55  |         |         |    V Q   |          |
17+ 5     614.3840   2404.58  |         |         |   QV     |          |
17+10     629.5164   2197.23  |         |         |Q    V    |          |
17+15     643.5693   2040.48  |         |         Q      V   |          |
17+20     656.7181   1909.20  |         |        Q|      V   |          |
17+25     669.0554   1791.38  |         |      Q  |       V  |          |
17+30     680.5544   1669.65  |         |     Q   |       V  |          |
17+35     691.2644   1555.09  |         |    Q    |        V |          |
17+40     701.3576   1465.55  |         |   Q     |        V |          |
17+45     710.7043   1357.14  |         |  Q      |        V |          |
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| | | | | | | |
|---|---|---|---|---|---|---|
| 17+50 | 719.3967 | 1262.13 | \| | Q \| | V | \| |
| 17+55 | 727.6610 | 1199.97 | \| | Q \| | V | \| |
| 18+ 0 | 735.3732 | 1119.81 | \| | Q \| | \| V | \| |
| 18+ 5 | 742.7676 | 1073.68 | \| | Q \| | \| V | \| |
| 18+10 | 749.8062 | 1021.99 | \| | Q \| | \| V | \| |
| 18+15 | 756.5217 | 975.09 | \| | Q \| | \| V | \| |
| 18+20 | 762.9718 | 936.56 | \| | Q \| | \| V | \| |
| 18+25 | 769.0484 | 882.33 | \| | Q \| | \| V | \| |
| 18+30 | 774.8912 | 848.37 | \| | Q \| | \| V | \| |
| 18+35 | 780.3995 | 799.81 | \| | Q \| | \| V | \| |
| 18+40 | 785.6185 | 757.81 | \| | Q \| | \| V | \| |
| 18+45 | 790.6667 | 733.00 | \| | Q \| | \| V | \| |
| 18+50 | 795.5140 | 703.82 | \| | Q \| | \| V | \| |
| 18+55 | 800.2119 | 682.14 | \| | Q \| | \| V | \| |
| 19+ 0 | 804.7174 | 654.20 | \| | Q \| | \| V | \| |
| 19+ 5 | 809.0498 | 629.06 | \| | Q \| | \| V | \| |
| 19+10 | 813.2497 | 609.83 | \| | Q \| | \| V | \| |
| 19+15 | 817.2824 | 585.54 | \| | Q \| | \| V | \| |
| 19+20 | 821.1898 | 567.37 | \| | Q \| | \| V | \| |
| 19+25 | 824.9048 | 539.41 | \| | Q \| | \| V | \| |
| 19+30 | 828.4587 | 516.02 | \| | Q \| | \| V | \| |
| 19+35 | 831.9267 | 503.56 | \| | Q \| | \| V | \| |
| 19+40 | 835.3149 | 491.96 | \| | Q \| | \| V | \| |
| 19+45 | 838.6179 | 479.60 | \| | Q \| | \| V | \| |
| 19+50 | 841.7855 | 459.94 | \| | Q \| | \| V | \| |
| 19+55 | 844.8379 | 443.21 | \| | Q \| | \| V | \| |
| 20+ 0 | 847.8221 | 433.30 | \| | Q \| | \| V | \| |
| 20+ 5 | 850.7401 | 423.70 | \| | Q \| | \| V | \| |
| 20+10 | 853.5858 | 413.20 | \| | Q \| | \| V | \| |
| 20+15 | 856.3057 | 394.92 | \| | Q \| | \| V | \| |
| 20+20 | 858.9224 | 379.94 | \| | Q \| | \| V | \| |
| 20+25 | 861.4832 | 371.83 | \| | Q \| | \| V | \| |
| 20+30 | 863.9896 | 363.94 | \| | Q \| | \| V | \| |
| 20+35 | 866.4359 | 355.19 | \| | Q \| | \| V | \| |
| 20+40 | 868.7751 | 339.66 | \| | Q \| | \| V | \| |
| 20+45 | 871.0291 | 327.27 | \| | Q \| | \| V | \| |
| 20+50 | 873.2392 | 320.91 | \| | Q \| | \| V | \| |
| 20+55 | 875.4106 | 315.29 | \| | Q \| | \| V | \| |
| 21+ 0 | 877.5454 | 309.98 | \| | Q \| | \| V | \| |
| 21+ 5 | 879.6520 | 305.87 | \| | Q \| | \| V | \| |
| 21+10 | 881.7283 | 301.48 | \| | Q \| | \| V | \| |
| 21+15 | 883.7711 | 296.62 | \| Q | \| | \| V | \| |
| 21+20 | 885.7819 | 291.97 | \| Q | \| | \| V | \| |
| 21+25 | 887.7607 | 287.32 | \| Q | \| | \| V | \| |
| 21+30 | 889.7051 | 282.33 | \| Q | \| | \| V | \| |
| 21+35 | 891.6159 | 277.45 | \| Q | \| | \| V | \| |
| 21+40 | 893.4953 | 272.88 | \| Q | \| | \| V | \| |
| 21+45 | 895.3410 | 267.99 | \| Q | \| | \| V | \| |
| 21+50 | 897.1499 | 262.66 | \| Q | \| | \| V | \| |
| 21+55 | 898.8783 | 250.97 | \| Q | \| | \| V | \| |
| 22+ 0 | 900.5505 | 242.80 | \| Q | \| | \| V | \| |
| 22+ 5 | 902.1947 | 238.73 | \| Q | \| | \| V | \| |
| 22+10 | 903.8126 | 234.92 | \| Q | \| | \| V | \| |
| 22+15 | 905.4035 | 230.99 | \| Q | \| | \| V | \| |
| 22+20 | 906.9649 | 226.72 | \| Q | \| | \| V | \| |
| 22+25 | 908.4927 | 221.84 | \| Q | \| | \| V | \| |
| 22+30 | 909.9527 | 211.99 | \| Q | \| | \| V | \| |
| 22+35 | 911.3501 | 202.90 | \| Q | \| | \| V | \| |
| 22+40 | 912.7236 | 199.44 | \| Q | \| | \| V | \| |

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22+45     914.0765    196.44  |Q        |         |         |       V |
22+50     915.4095    193.55  |Q        |         |         |       V |
22+55     916.7235    190.79  |Q        |         |         |       V |
23+ 0     918.0198    188.23  |Q        |         |         |       V |
23+ 5     919.2993    185.78  |Q        |         |         |       V |
23+10     920.5627    183.45  |Q        |         |         |       V |
23+15     921.8106    181.20  |Q        |         |         |       V |
23+20     923.0436    179.03  |Q        |         |         |       V |
23+25     924.2622    176.94  |Q        |         |         |       V |
23+30     925.4674    174.99  |Q        |         |         |        V|
23+35     926.6599    173.16  |Q        |         |         |        V|
23+40     927.8403    171.39  |Q        |         |         |        V|
23+45     929.0089    169.68  |Q        |         |         |        V|
23+50     930.1660    168.01  |Q        |         |         |        V|
23+55     931.3119    166.38  |Q        |         |         |        V|
24+ 0     932.4469    164.80  |Q        |         |         |        V|
24+ 5     933.5666    162.59  |Q        |         |         |        V|
24+10     934.6648    159.46  |Q        |         |         |        V|
24+15     935.7356    155.47  |Q        |         |         |        V|
24+20     936.7733    150.68  |Q        |         |         |        V|
24+25     937.7717    144.97  |Q        |         |         |        V|
24+30     938.7158    137.08  |Q        |         |         |        V|
24+35     939.5829    125.90  |Q        |         |         |        V|
24+40     940.3525    111.74  |Q        |         |         |        V|
24+45     941.0319     98.66  Q        |         |         |        V|
24+50     941.6260     86.25  Q        |         |         |        V|
24+55     942.1498     76.06  Q        |         |         |        V|
25+ 0     942.6202     68.30  Q        |         |         |        V|
25+ 5     943.0481     62.13  Q        |         |         |        V|
25+10     943.4400     56.92  Q        |         |         |        V|
25+15     943.8006     52.35  Q        |         |         |        V|
25+20     944.1330     48.26  Q        |         |         |        V|
25+25     944.4399     44.55  Q        |         |         |        V|
25+30     944.7240     41.25  Q        |         |         |        V|
25+35     944.9878     38.30  Q        |         |         |        V|
25+40     945.2322     35.50  Q        |         |         |        V|
25+45     945.4596     33.02  Q        |         |         |        V|
25+50     945.6718     30.81  Q        |         |         |        V|
25+55     945.8692     28.66  Q        |         |         |        V|
26+ 0     946.0537     26.80  Q        |         |         |        V|
26+ 5     946.2258     24.99  Q        |         |         |        V|
26+10     946.3863     23.30  Q        |         |         |        V|
26+15     946.5359     21.72  Q        |         |         |        V|
26+20     946.6750     20.19  Q        |         |         |        V|
26+25     946.8048     18.85  Q        |         |         |        V|
26+30     946.9256     17.54  Q        |         |         |        V|
26+35     947.0385     16.39  Q        |         |         |        V|
26+40     947.1444     15.38  Q        |         |         |        V|
26+45     947.2435     14.39  Q        |         |         |        V|
26+50     947.3363     13.48  Q        |         |         |        V|
26+55     947.4230     12.58  Q        |         |         |        V|
27+ 0     947.5039     11.75  Q        |         |         |        V|
27+ 5     947.5796     10.99  Q        |         |         |        V|
27+10     947.6501     10.24  Q        |         |         |        V|
27+15     947.7158      9.55  Q        |         |         |        V|
27+20     947.7770      8.88  Q        |         |         |        V|
27+25     947.8342      8.30  Q        |         |         |        V|
27+30     947.8879      7.80  Q        |         |         |        V|
27+35     947.9382      7.30  Q        |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 27+40 | 947.9851 | 6.81 | Q | \| | \| | \| | V\| |
| 27+45 | 948.0286 | 6.32 | Q | \| | \| | \| | V\| |
| 27+50 | 948.0691 | 5.89 | Q | \| | \| | \| | V\| |
| 27+55 | 948.1071 | 5.51 | Q | \| | \| | \| | V\| |
| 28+ 0 | 948.1424 | 5.13 | Q | \| | \| | \| | V\| |
| 28+ 5 | 948.1751 | 4.75 | Q | \| | \| | \| | V\| |
| 28+10 | 948.2053 | 4.38 | Q | \| | \| | \| | V\| |
| 28+15 | 948.2334 | 4.07 | Q | \| | \| | \| | V\| |
| 28+20 | 948.2596 | 3.81 | Q | \| | \| | \| | V\| |
| 28+25 | 948.2841 | 3.55 | Q | \| | \| | \| | V\| |
| 28+30 | 948.3068 | 3.30 | Q | \| | \| | \| | V\| |
| 28+35 | 948.3277 | 3.04 | Q | \| | \| | \| | V\| |
| 28+40 | 948.3473 | 2.84 | Q | \| | \| | \| | V\| |
| 28+45 | 948.3658 | 2.68 | Q | \| | \| | \| | V\| |
| 28+50 | 948.3831 | 2.52 | Q | \| | \| | \| | V\| |
| 28+55 | 948.3994 | 2.36 | Q | \| | \| | \| | V\| |
| 29+ 0 | 948.4146 | 2.21 | Q | \| | \| | \| | V\| |
| 29+ 5 | 948.4287 | 2.04 | Q | \| | \| | \| | V\| |
| 29+10 | 948.4416 | 1.88 | Q | \| | \| | \| | V\| |
| 29+15 | 948.4534 | 1.71 | Q | \| | \| | \| | V\| |
| 29+20 | 948.4640 | 1.54 | Q | \| | \| | \| | V\| |
| 29+25 | 948.4735 | 1.38 | Q | \| | \| | \| | V\| |
| 29+30 | 948.4819 | 1.22 | Q | \| | \| | \| | V\| |
| 29+35 | 948.4893 | 1.06 | Q | \| | \| | \| | V\| |
| 29+40 | 948.4955 | 0.91 | Q | \| | \| | \| | V\| |
| 29+45 | 948.5007 | 0.75 | Q | \| | \| | \| | V\| |
| 29+50 | 948.5048 | 0.60 | Q | \| | \| | \| | V\| |
| 29+55 | 948.5083 | 0.50 | Q | \| | \| | \| | V\| |
| 30+ 0 | 948.5111 | 0.42 | Q | \| | \| | \| | V\| |
| 30+ 5 | 948.5135 | 0.34 | Q | \| | \| | \| | V\| |
| 30+10 | 948.5153 | 0.26 | Q | \| | \| | \| | V\| |
| 30+15 | 948.5166 | 0.19 | Q | \| | \| | \| | V\| |
| 30+20 | 948.5174 | 0.11 | Q | \| | \| | \| | V\| |
| 30+25 | 948.5176 | 0.04 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 47
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 3500.82 | 1 | 1.29 |
| Rainfall data for year 100 | | |
| 3500.82 | 6 | 2.07 |
| Rainfall data for year 100 | | |
| 3500.82 | 24 | 3.03 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 68.9 | 86.1 | 3500.82 | 1.000 | 0.263 | 0.977 | 0.257 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.257

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 3421.35 | 0.977 | 68.9 | 86.1 | 1.61 | 0.561 |
| 79.47 | 0.023 | 98.0 | 98.0 | 0.20 | 0.923 |

Area-averaged catchment yield fraction, Y = 0.569
Area-averaged low loss fraction, Yb = 0.431
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 38102.00(Ft.)
Length from concentration point to centroid = 19862.00(Ft.)
Elevation difference along watercourse = 2190.20(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 3500.82(Ac.)
Catchment Lag time = 0.994 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 8.3819
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.257(In/Hr)
Average low loss rate fraction (Yb) = 0.431 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.070
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.930

Computed peak 5-minute rainfall = 0.612(In)
Computed peak 30-minute rainfall = 1.048(In)
Specified peak 1-hour rainfall = 1.290(In)
Computed peak 3-hour rainfall = 1.724(In)
Specified peak 6-hour rainfall = 2.070(In)
Specified peak 24-hour rainfall = 3.030(In)

Rainfall depth area reduction factors:
Using a total area of 3500.82(Ac.) (Ref: fig. E-4)

5-minute factor = 0.840 Adjusted rainfall = 0.514(In)
30-minute factor = 0.840 Adjusted rainfall = 0.880(In)
1-hour factor = 0.840 Adjusted rainfall = 1.084(In)
3-hour factor = 0.979 Adjusted rainfall = 1.688(In)
6-hour factor = 0.989 Adjusted rainfall = 2.048(In)
24-hour factor = 0.996 Adjusted rainfall = 3.016(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 42338.04 (CFS)) | |
| 1 | 0.380 | 160.948 |
| 2 | 1.222 | 356.405 |
| 3 | 2.556 | 564.927 |
| 4 | 4.309 | 742.077 |
| 5 | 6.480 | 918.954 |

| | | |
|---|---|---|
| 6 | 9.191 | 1147.876 |
| 7 | 13.270 | 1727.137 |
| 8 | 18.948 | 2403.919 |
| 9 | 26.917 | 3373.882 |
| 10 | 34.549 | 3231.299 |
| 11 | 41.468 | 2929.399 |
| 12 | 47.495 | 2551.811 |
| 13 | 52.539 | 2135.534 |
| 14 | 56.769 | 1790.580 |
| 15 | 60.125 | 1420.941 |
| 16 | 63.022 | 1226.597 |
| 17 | 65.590 | 1087.093 |
| 18 | 67.855 | 959.246 |
| 19 | 69.952 | 887.854 |
| 20 | 71.903 | 825.896 |
| 21 | 73.622 | 727.891 |
| 22 | 75.186 | 662.094 |
| 23 | 76.654 | 621.320 |
| 24 | 78.073 | 600.720 |
| 25 | 79.299 | 519.118 |
| 26 | 80.412 | 471.416 |
| 27 | 81.523 | 470.372 |
| 28 | 82.507 | 416.539 |
| 29 | 83.419 | 386.246 |
| 30 | 84.330 | 385.556 |
| 31 | 85.171 | 356.225 |
| 32 | 85.976 | 340.680 |
| 33 | 86.778 | 339.640 |
| 34 | 87.493 | 302.464 |
| 35 | 88.163 | 283.900 |
| 36 | 88.830 | 282.375 |
| 37 | 89.387 | 235.824 |
| 38 | 89.892 | 213.919 |
| 39 | 90.397 | 213.479 |
| 40 | 90.873 | 201.885 |
| 41 | 91.338 | 196.743 |
| 42 | 91.801 | 195.901 |
| 43 | 92.218 | 176.475 |
| 44 | 92.615 | 168.353 |
| 45 | 93.012 | 167.802 |
| 46 | 93.382 | 156.590 |
| 47 | 93.741 | 152.170 |
| 48 | 94.097 | 150.738 |
| 49 | 94.392 | 124.821 |
| 50 | 94.664 | 115.192 |
| 51 | 94.936 | 115.192 |
| 52 | 95.208 | 115.192 |
| 53 | 95.480 | 115.192 |
| 54 | 95.749 | 113.873 |
| 55 | 95.973 | 94.638 |
| 56 | 96.181 | 88.293 |
| 57 | 96.390 | 88.293 |
| 58 | 96.598 | 88.293 |
| 59 | 96.807 | 88.293 |
| 60 | 97.011 | 86.634 |
| 61 | 97.169 | 66.721 |
| 62 | 97.313 | 60.897 |
| 63 | 97.457 | 60.897 |
| 64 | 97.600 | 60.897 |

| | | |
|---|---|---|
| 65 | 97.744 | 60.897 |
| 66 | 97.884 | 58.999 |
| 67 | 97.978 | 39.926 |
| 68 | 98.061 | 34.991 |
| 69 | 98.143 | 34.991 |
| 70 | 98.226 | 34.991 |
| 71 | 98.309 | 34.991 |
| 72 | 98.392 | 35.479 |
| 73 | 98.486 | 39.647 |
| 74 | 98.582 | 40.598 |
| 75 | 98.678 | 40.598 |
| 76 | 98.774 | 40.598 |
| 77 | 98.870 | 40.598 |
| 78 | 98.965 | 40.547 |
| 79 | 99.060 | 40.175 |
| 80 | 99.155 | 40.101 |
| 81 | 99.250 | 40.101 |
| 82 | 99.344 | 40.101 |
| 83 | 99.439 | 40.101 |
| 84 | 99.528 | 37.856 |
| 85 | 99.583 | 23.123 |
| 86 | 99.632 | 20.627 |
| 87 | 99.681 | 20.627 |
| 88 | 99.729 | 20.627 |
| 89 | 99.778 | 20.627 |
| 90 | 99.827 | 20.627 |
| 91 | 99.875 | 20.627 |
| 92 | 99.924 | 20.627 |
| 93 | 99.973 | 20.627 |
| 94 | 100.000 | 11.493 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5143 | 0.5143 |
| 2 | 0.6331 | 0.1189 |
| 3 | 0.7150 | 0.0819 |
| 4 | 0.7795 | 0.0645 |
| 5 | 0.8334 | 0.0540 |
| 6 | 0.8803 | 0.0469 |
| 7 | 0.9220 | 0.0417 |
| 8 | 0.9596 | 0.0377 |
| 9 | 0.9942 | 0.0345 |
| 10 | 1.0261 | 0.0319 |
| 11 | 1.0558 | 0.0298 |
| 12 | 1.0838 | 0.0279 |
| 13 | 1.1193 | 0.0356 |
| 14 | 1.1533 | 0.0340 |
| 15 | 1.1859 | 0.0326 |
| 16 | 1.2172 | 0.0313 |
| 17 | 1.2473 | 0.0301 |
| 18 | 1.2764 | 0.0291 |
| 19 | 1.3046 | 0.0282 |
| 20 | 1.3319 | 0.0273 |
| 21 | 1.3584 | 0.0265 |
| 22 | 1.3841 | 0.0257 |
| 23 | 1.4092 | 0.0251 |
| 24 | 1.4336 | 0.0244 |
| 25 | 1.4574 | 0.0238 |
| 26 | 1.4806 | 0.0233 |

| | | |
|---|---|---|
| 27 | 1.5033 | 0.0227 |
| 28 | 1.5256 | 0.0222 |
| 29 | 1.5473 | 0.0218 |
| 30 | 1.5686 | 0.0213 |
| 31 | 1.5895 | 0.0209 |
| 32 | 1.6100 | 0.0205 |
| 33 | 1.6302 | 0.0201 |
| 34 | 1.6499 | 0.0198 |
| 35 | 1.6693 | 0.0194 |
| 36 | 1.6884 | 0.0191 |
| 37 | 1.7013 | 0.0129 |
| 38 | 1.7140 | 0.0127 |
| 39 | 1.7265 | 0.0124 |
| 40 | 1.7387 | 0.0122 |
| 41 | 1.7507 | 0.0120 |
| 42 | 1.7624 | 0.0118 |
| 43 | 1.7740 | 0.0116 |
| 44 | 1.7854 | 0.0114 |
| 45 | 1.7966 | 0.0112 |
| 46 | 1.8076 | 0.0110 |
| 47 | 1.8185 | 0.0109 |
| 48 | 1.8292 | 0.0107 |
| 49 | 1.8397 | 0.0105 |
| 50 | 1.8501 | 0.0104 |
| 51 | 1.8603 | 0.0102 |
| 52 | 1.8704 | 0.0101 |
| 53 | 1.8803 | 0.0099 |
| 54 | 1.8902 | 0.0098 |
| 55 | 1.8998 | 0.0097 |
| 56 | 1.9094 | 0.0096 |
| 57 | 1.9188 | 0.0094 |
| 58 | 1.9281 | 0.0093 |
| 59 | 1.9373 | 0.0092 |
| 60 | 1.9464 | 0.0091 |
| 61 | 1.9554 | 0.0090 |
| 62 | 1.9643 | 0.0089 |
| 63 | 1.9730 | 0.0088 |
| 64 | 1.9817 | 0.0087 |
| 65 | 1.9903 | 0.0086 |
| 66 | 1.9987 | 0.0085 |
| 67 | 2.0071 | 0.0084 |
| 68 | 2.0154 | 0.0083 |
| 69 | 2.0236 | 0.0082 |
| 70 | 2.0317 | 0.0081 |
| 71 | 2.0398 | 0.0080 |
| 72 | 2.0477 | 0.0080 |
| 73 | 2.0557 | 0.0079 |
| 74 | 2.0635 | 0.0078 |
| 75 | 2.0712 | 0.0078 |
| 76 | 2.0789 | 0.0077 |
| 77 | 2.0865 | 0.0076 |
| 78 | 2.0941 | 0.0075 |
| 79 | 2.1015 | 0.0075 |
| 80 | 2.1089 | 0.0074 |
| 81 | 2.1163 | 0.0073 |
| 82 | 2.1235 | 0.0073 |
| 83 | 2.1307 | 0.0072 |
| 84 | 2.1379 | 0.0071 |
| 85 | 2.1449 | 0.0071 |

| | | |
|---|---|---|
| 86 | 2.1520 | 0.0070 |
| 87 | 2.1589 | 0.0070 |
| 88 | 2.1658 | 0.0069 |
| 89 | 2.1727 | 0.0068 |
| 90 | 2.1795 | 0.0068 |
| 91 | 2.1862 | 0.0067 |
| 92 | 2.1929 | 0.0067 |
| 93 | 2.1995 | 0.0066 |
| 94 | 2.2061 | 0.0066 |
| 95 | 2.2127 | 0.0065 |
| 96 | 2.2191 | 0.0065 |
| 97 | 2.2256 | 0.0064 |
| 98 | 2.2320 | 0.0064 |
| 99 | 2.2383 | 0.0063 |
| 100 | 2.2446 | 0.0063 |
| 101 | 2.2508 | 0.0062 |
| 102 | 2.2570 | 0.0062 |
| 103 | 2.2632 | 0.0062 |
| 104 | 2.2693 | 0.0061 |
| 105 | 2.2754 | 0.0061 |
| 106 | 2.2814 | 0.0060 |
| 107 | 2.2874 | 0.0060 |
| 108 | 2.2934 | 0.0060 |
| 109 | 2.2993 | 0.0059 |
| 110 | 2.3052 | 0.0059 |
| 111 | 2.3110 | 0.0058 |
| 112 | 2.3168 | 0.0058 |
| 113 | 2.3226 | 0.0058 |
| 114 | 2.3283 | 0.0057 |
| 115 | 2.3340 | 0.0057 |
| 116 | 2.3396 | 0.0057 |
| 117 | 2.3453 | 0.0056 |
| 118 | 2.3508 | 0.0056 |
| 119 | 2.3564 | 0.0055 |
| 120 | 2.3619 | 0.0055 |
| 121 | 2.3674 | 0.0055 |
| 122 | 2.3728 | 0.0055 |
| 123 | 2.3783 | 0.0054 |
| 124 | 2.3836 | 0.0054 |
| 125 | 2.3890 | 0.0054 |
| 126 | 2.3943 | 0.0053 |
| 127 | 2.3996 | 0.0053 |
| 128 | 2.4049 | 0.0053 |
| 129 | 2.4101 | 0.0052 |
| 130 | 2.4153 | 0.0052 |
| 131 | 2.4205 | 0.0052 |
| 132 | 2.4256 | 0.0051 |
| 133 | 2.4308 | 0.0051 |
| 134 | 2.4359 | 0.0051 |
| 135 | 2.4409 | 0.0051 |
| 136 | 2.4460 | 0.0050 |
| 137 | 2.4510 | 0.0050 |
| 138 | 2.4560 | 0.0050 |
| 139 | 2.4609 | 0.0050 |
| 140 | 2.4659 | 0.0049 |
| 141 | 2.4708 | 0.0049 |
| 142 | 2.4756 | 0.0049 |
| 143 | 2.4805 | 0.0049 |
| 144 | 2.4853 | 0.0048 |

| | | |
|---|---|---|
| 145 | 2.4902 | 0.0048 |
| 146 | 2.4949 | 0.0048 |
| 147 | 2.4997 | 0.0048 |
| 148 | 2.5044 | 0.0047 |
| 149 | 2.5092 | 0.0047 |
| 150 | 2.5139 | 0.0047 |
| 151 | 2.5185 | 0.0047 |
| 152 | 2.5232 | 0.0046 |
| 153 | 2.5278 | 0.0046 |
| 154 | 2.5324 | 0.0046 |
| 155 | 2.5370 | 0.0046 |
| 156 | 2.5416 | 0.0046 |
| 157 | 2.5461 | 0.0045 |
| 158 | 2.5506 | 0.0045 |
| 159 | 2.5551 | 0.0045 |
| 160 | 2.5596 | 0.0045 |
| 161 | 2.5641 | 0.0045 |
| 162 | 2.5685 | 0.0044 |
| 163 | 2.5729 | 0.0044 |
| 164 | 2.5773 | 0.0044 |
| 165 | 2.5817 | 0.0044 |
| 166 | 2.5861 | 0.0044 |
| 167 | 2.5904 | 0.0043 |
| 168 | 2.5947 | 0.0043 |
| 169 | 2.5990 | 0.0043 |
| 170 | 2.6033 | 0.0043 |
| 171 | 2.6076 | 0.0043 |
| 172 | 2.6118 | 0.0043 |
| 173 | 2.6161 | 0.0042 |
| 174 | 2.6203 | 0.0042 |
| 175 | 2.6245 | 0.0042 |
| 176 | 2.6287 | 0.0042 |
| 177 | 2.6328 | 0.0042 |
| 178 | 2.6370 | 0.0041 |
| 179 | 2.6411 | 0.0041 |
| 180 | 2.6452 | 0.0041 |
| 181 | 2.6493 | 0.0041 |
| 182 | 2.6534 | 0.0041 |
| 183 | 2.6575 | 0.0041 |
| 184 | 2.6615 | 0.0040 |
| 185 | 2.6656 | 0.0040 |
| 186 | 2.6696 | 0.0040 |
| 187 | 2.6736 | 0.0040 |
| 188 | 2.6776 | 0.0040 |
| 189 | 2.6815 | 0.0040 |
| 190 | 2.6855 | 0.0040 |
| 191 | 2.6894 | 0.0039 |
| 192 | 2.6934 | 0.0039 |
| 193 | 2.6973 | 0.0039 |
| 194 | 2.7012 | 0.0039 |
| 195 | 2.7051 | 0.0039 |
| 196 | 2.7089 | 0.0039 |
| 197 | 2.7128 | 0.0039 |
| 198 | 2.7166 | 0.0038 |
| 199 | 2.7204 | 0.0038 |
| 200 | 2.7243 | 0.0038 |
| 201 | 2.7281 | 0.0038 |
| 202 | 2.7318 | 0.0038 |
| 203 | 2.7356 | 0.0038 |

| | | |
|---|---|---|
| 204 | 2.7394 | 0.0038 |
| 205 | 2.7431 | 0.0037 |
| 206 | 2.7469 | 0.0037 |
| 207 | 2.7506 | 0.0037 |
| 208 | 2.7543 | 0.0037 |
| 209 | 2.7580 | 0.0037 |
| 210 | 2.7617 | 0.0037 |
| 211 | 2.7653 | 0.0037 |
| 212 | 2.7690 | 0.0037 |
| 213 | 2.7726 | 0.0036 |
| 214 | 2.7763 | 0.0036 |
| 215 | 2.7799 | 0.0036 |
| 216 | 2.7835 | 0.0036 |
| 217 | 2.7871 | 0.0036 |
| 218 | 2.7907 | 0.0036 |
| 219 | 2.7942 | 0.0036 |
| 220 | 2.7978 | 0.0036 |
| 221 | 2.8013 | 0.0035 |
| 222 | 2.8049 | 0.0035 |
| 223 | 2.8084 | 0.0035 |
| 224 | 2.8119 | 0.0035 |
| 225 | 2.8154 | 0.0035 |
| 226 | 2.8189 | 0.0035 |
| 227 | 2.8224 | 0.0035 |
| 228 | 2.8258 | 0.0035 |
| 229 | 2.8293 | 0.0035 |
| 230 | 2.8328 | 0.0034 |
| 231 | 2.8362 | 0.0034 |
| 232 | 2.8396 | 0.0034 |
| 233 | 2.8430 | 0.0034 |
| 234 | 2.8464 | 0.0034 |
| 235 | 2.8498 | 0.0034 |
| 236 | 2.8532 | 0.0034 |
| 237 | 2.8566 | 0.0034 |
| 238 | 2.8599 | 0.0034 |
| 239 | 2.8633 | 0.0034 |
| 240 | 2.8666 | 0.0033 |
| 241 | 2.8700 | 0.0033 |
| 242 | 2.8733 | 0.0033 |
| 243 | 2.8766 | 0.0033 |
| 244 | 2.8799 | 0.0033 |
| 245 | 2.8832 | 0.0033 |
| 246 | 2.8865 | 0.0033 |
| 247 | 2.8898 | 0.0033 |
| 248 | 2.8930 | 0.0033 |
| 249 | 2.8963 | 0.0033 |
| 250 | 2.8995 | 0.0032 |
| 251 | 2.9028 | 0.0032 |
| 252 | 2.9060 | 0.0032 |
| 253 | 2.9092 | 0.0032 |
| 254 | 2.9124 | 0.0032 |
| 255 | 2.9156 | 0.0032 |
| 256 | 2.9188 | 0.0032 |
| 257 | 2.9220 | 0.0032 |
| 258 | 2.9252 | 0.0032 |
| 259 | 2.9283 | 0.0032 |
| 260 | 2.9315 | 0.0032 |
| 261 | 2.9346 | 0.0031 |
| 262 | 2.9378 | 0.0031 |

| | | |
|---|---|---|
| 263 | 2.9409 | 0.0031 |
| 264 | 2.9440 | 0.0031 |
| 265 | 2.9471 | 0.0031 |
| 266 | 2.9502 | 0.0031 |
| 267 | 2.9533 | 0.0031 |
| 268 | 2.9564 | 0.0031 |
| 269 | 2.9595 | 0.0031 |
| 270 | 2.9625 | 0.0031 |
| 271 | 2.9656 | 0.0031 |
| 272 | 2.9687 | 0.0031 |
| 273 | 2.9717 | 0.0030 |
| 274 | 2.9747 | 0.0030 |
| 275 | 2.9778 | 0.0030 |
| 276 | 2.9808 | 0.0030 |
| 277 | 2.9838 | 0.0030 |
| 278 | 2.9868 | 0.0030 |
| 279 | 2.9898 | 0.0030 |
| 280 | 2.9928 | 0.0030 |
| 281 | 2.9958 | 0.0030 |
| 282 | 2.9988 | 0.0030 |
| 283 | 3.0017 | 0.0030 |
| 284 | 3.0047 | 0.0030 |
| 285 | 3.0076 | 0.0030 |
| 286 | 3.0106 | 0.0029 |
| 287 | 3.0135 | 0.0029 |
| 288 | 3.0165 | 0.0029 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0029 | 0.0013 | 0.0017 |
| 2 | 0.0029 | 0.0013 | 0.0017 |
| 3 | 0.0030 | 0.0013 | 0.0017 |
| 4 | 0.0030 | 0.0013 | 0.0017 |
| 5 | 0.0030 | 0.0013 | 0.0017 |
| 6 | 0.0030 | 0.0013 | 0.0017 |
| 7 | 0.0030 | 0.0013 | 0.0017 |
| 8 | 0.0030 | 0.0013 | 0.0017 |
| 9 | 0.0030 | 0.0013 | 0.0017 |
| 10 | 0.0030 | 0.0013 | 0.0017 |
| 11 | 0.0030 | 0.0013 | 0.0017 |
| 12 | 0.0031 | 0.0013 | 0.0017 |
| 13 | 0.0031 | 0.0013 | 0.0017 |
| 14 | 0.0031 | 0.0013 | 0.0018 |
| 15 | 0.0031 | 0.0013 | 0.0018 |
| 16 | 0.0031 | 0.0013 | 0.0018 |
| 17 | 0.0031 | 0.0013 | 0.0018 |
| 18 | 0.0031 | 0.0013 | 0.0018 |
| 19 | 0.0031 | 0.0014 | 0.0018 |
| 20 | 0.0032 | 0.0014 | 0.0018 |
| 21 | 0.0032 | 0.0014 | 0.0018 |
| 22 | 0.0032 | 0.0014 | 0.0018 |
| 23 | 0.0032 | 0.0014 | 0.0018 |
| 24 | 0.0032 | 0.0014 | 0.0018 |
| 25 | 0.0032 | 0.0014 | 0.0018 |
| 26 | 0.0032 | 0.0014 | 0.0018 |
| 27 | 0.0033 | 0.0014 | 0.0019 |
| 28 | 0.0033 | 0.0014 | 0.0019 |

| | | | |
|---|---|---|---|
| 29 | 0.0033 | 0.0014 | 0.0019 |
| 30 | 0.0033 | 0.0014 | 0.0019 |
| 31 | 0.0033 | 0.0014 | 0.0019 |
| 32 | 0.0033 | 0.0014 | 0.0019 |
| 33 | 0.0033 | 0.0014 | 0.0019 |
| 34 | 0.0034 | 0.0014 | 0.0019 |
| 35 | 0.0034 | 0.0015 | 0.0019 |
| 36 | 0.0034 | 0.0015 | 0.0019 |
| 37 | 0.0034 | 0.0015 | 0.0019 |
| 38 | 0.0034 | 0.0015 | 0.0019 |
| 39 | 0.0034 | 0.0015 | 0.0020 |
| 40 | 0.0034 | 0.0015 | 0.0020 |
| 41 | 0.0035 | 0.0015 | 0.0020 |
| 42 | 0.0035 | 0.0015 | 0.0020 |
| 43 | 0.0035 | 0.0015 | 0.0020 |
| 44 | 0.0035 | 0.0015 | 0.0020 |
| 45 | 0.0035 | 0.0015 | 0.0020 |
| 46 | 0.0035 | 0.0015 | 0.0020 |
| 47 | 0.0036 | 0.0015 | 0.0020 |
| 48 | 0.0036 | 0.0015 | 0.0020 |
| 49 | 0.0036 | 0.0016 | 0.0021 |
| 50 | 0.0036 | 0.0016 | 0.0021 |
| 51 | 0.0036 | 0.0016 | 0.0021 |
| 52 | 0.0037 | 0.0016 | 0.0021 |
| 53 | 0.0037 | 0.0016 | 0.0021 |
| 54 | 0.0037 | 0.0016 | 0.0021 |
| 55 | 0.0037 | 0.0016 | 0.0021 |
| 56 | 0.0037 | 0.0016 | 0.0021 |
| 57 | 0.0038 | 0.0016 | 0.0021 |
| 58 | 0.0038 | 0.0016 | 0.0021 |
| 59 | 0.0038 | 0.0016 | 0.0022 |
| 60 | 0.0038 | 0.0016 | 0.0022 |
| 61 | 0.0038 | 0.0017 | 0.0022 |
| 62 | 0.0039 | 0.0017 | 0.0022 |
| 63 | 0.0039 | 0.0017 | 0.0022 |
| 64 | 0.0039 | 0.0017 | 0.0022 |
| 65 | 0.0039 | 0.0017 | 0.0022 |
| 66 | 0.0039 | 0.0017 | 0.0022 |
| 67 | 0.0040 | 0.0017 | 0.0023 |
| 68 | 0.0040 | 0.0017 | 0.0023 |
| 69 | 0.0040 | 0.0017 | 0.0023 |
| 70 | 0.0040 | 0.0017 | 0.0023 |
| 71 | 0.0041 | 0.0018 | 0.0023 |
| 72 | 0.0041 | 0.0018 | 0.0023 |
| 73 | 0.0041 | 0.0018 | 0.0023 |
| 74 | 0.0041 | 0.0018 | 0.0024 |
| 75 | 0.0042 | 0.0018 | 0.0024 |
| 76 | 0.0042 | 0.0018 | 0.0024 |
| 77 | 0.0042 | 0.0018 | 0.0024 |
| 78 | 0.0042 | 0.0018 | 0.0024 |
| 79 | 0.0043 | 0.0018 | 0.0024 |
| 80 | 0.0043 | 0.0018 | 0.0024 |
| 81 | 0.0043 | 0.0019 | 0.0025 |
| 82 | 0.0043 | 0.0019 | 0.0025 |
| 83 | 0.0044 | 0.0019 | 0.0025 |
| 84 | 0.0044 | 0.0019 | 0.0025 |
| 85 | 0.0044 | 0.0019 | 0.0025 |
| 86 | 0.0045 | 0.0019 | 0.0025 |
| 87 | 0.0045 | 0.0019 | 0.0026 |

| | | | |
|---|---|---|---|
| 88 | 0.0045 | 0.0019 | 0.0026 |
| 89 | 0.0046 | 0.0020 | 0.0026 |
| 90 | 0.0046 | 0.0020 | 0.0026 |
| 91 | 0.0046 | 0.0020 | 0.0026 |
| 92 | 0.0046 | 0.0020 | 0.0026 |
| 93 | 0.0047 | 0.0020 | 0.0027 |
| 94 | 0.0047 | 0.0020 | 0.0027 |
| 95 | 0.0048 | 0.0021 | 0.0027 |
| 96 | 0.0048 | 0.0021 | 0.0027 |
| 97 | 0.0048 | 0.0021 | 0.0028 |
| 98 | 0.0049 | 0.0021 | 0.0028 |
| 99 | 0.0049 | 0.0021 | 0.0028 |
| 100 | 0.0049 | 0.0021 | 0.0028 |
| 101 | 0.0050 | 0.0021 | 0.0028 |
| 102 | 0.0050 | 0.0022 | 0.0029 |
| 103 | 0.0051 | 0.0022 | 0.0029 |
| 104 | 0.0051 | 0.0022 | 0.0029 |
| 105 | 0.0051 | 0.0022 | 0.0029 |
| 106 | 0.0052 | 0.0022 | 0.0029 |
| 107 | 0.0052 | 0.0023 | 0.0030 |
| 108 | 0.0053 | 0.0023 | 0.0030 |
| 109 | 0.0053 | 0.0023 | 0.0030 |
| 110 | 0.0054 | 0.0023 | 0.0030 |
| 111 | 0.0054 | 0.0023 | 0.0031 |
| 112 | 0.0055 | 0.0023 | 0.0031 |
| 113 | 0.0055 | 0.0024 | 0.0031 |
| 114 | 0.0055 | 0.0024 | 0.0032 |
| 115 | 0.0056 | 0.0024 | 0.0032 |
| 116 | 0.0057 | 0.0024 | 0.0032 |
| 117 | 0.0057 | 0.0025 | 0.0033 |
| 118 | 0.0058 | 0.0025 | 0.0033 |
| 119 | 0.0058 | 0.0025 | 0.0033 |
| 120 | 0.0059 | 0.0025 | 0.0033 |
| 121 | 0.0060 | 0.0026 | 0.0034 |
| 122 | 0.0060 | 0.0026 | 0.0034 |
| 123 | 0.0061 | 0.0026 | 0.0035 |
| 124 | 0.0061 | 0.0026 | 0.0035 |
| 125 | 0.0062 | 0.0027 | 0.0035 |
| 126 | 0.0062 | 0.0027 | 0.0036 |
| 127 | 0.0063 | 0.0027 | 0.0036 |
| 128 | 0.0064 | 0.0028 | 0.0036 |
| 129 | 0.0065 | 0.0028 | 0.0037 |
| 130 | 0.0065 | 0.0028 | 0.0037 |
| 131 | 0.0066 | 0.0029 | 0.0038 |
| 132 | 0.0067 | 0.0029 | 0.0038 |
| 133 | 0.0068 | 0.0029 | 0.0039 |
| 134 | 0.0068 | 0.0030 | 0.0039 |
| 135 | 0.0070 | 0.0030 | 0.0040 |
| 136 | 0.0070 | 0.0030 | 0.0040 |
| 137 | 0.0071 | 0.0031 | 0.0041 |
| 138 | 0.0072 | 0.0031 | 0.0041 |
| 139 | 0.0073 | 0.0032 | 0.0042 |
| 140 | 0.0074 | 0.0032 | 0.0042 |
| 141 | 0.0075 | 0.0032 | 0.0043 |
| 142 | 0.0076 | 0.0033 | 0.0043 |
| 143 | 0.0078 | 0.0033 | 0.0044 |
| 144 | 0.0078 | 0.0034 | 0.0045 |
| 145 | 0.0080 | 0.0034 | 0.0045 |
| 146 | 0.0080 | 0.0035 | 0.0046 |

| | | | |
|---|---|---|---|
| 147 | 0.0082 | 0.0035 | 0.0047 |
| 148 | 0.0083 | 0.0036 | 0.0047 |
| 149 | 0.0085 | 0.0037 | 0.0048 |
| 150 | 0.0086 | 0.0037 | 0.0049 |
| 151 | 0.0088 | 0.0038 | 0.0050 |
| 152 | 0.0089 | 0.0038 | 0.0050 |
| 153 | 0.0091 | 0.0039 | 0.0052 |
| 154 | 0.0092 | 0.0040 | 0.0052 |
| 155 | 0.0094 | 0.0041 | 0.0054 |
| 156 | 0.0096 | 0.0041 | 0.0054 |
| 157 | 0.0098 | 0.0042 | 0.0056 |
| 158 | 0.0099 | 0.0043 | 0.0057 |
| 159 | 0.0102 | 0.0044 | 0.0058 |
| 160 | 0.0104 | 0.0045 | 0.0059 |
| 161 | 0.0107 | 0.0046 | 0.0061 |
| 162 | 0.0109 | 0.0047 | 0.0062 |
| 163 | 0.0112 | 0.0048 | 0.0064 |
| 164 | 0.0114 | 0.0049 | 0.0065 |
| 165 | 0.0118 | 0.0051 | 0.0067 |
| 166 | 0.0120 | 0.0052 | 0.0068 |
| 167 | 0.0124 | 0.0054 | 0.0071 |
| 168 | 0.0127 | 0.0055 | 0.0072 |
| 169 | 0.0191 | 0.0082 | 0.0109 |
| 170 | 0.0194 | 0.0084 | 0.0110 |
| 171 | 0.0201 | 0.0087 | 0.0114 |
| 172 | 0.0205 | 0.0088 | 0.0117 |
| 173 | 0.0213 | 0.0092 | 0.0121 |
| 174 | 0.0218 | 0.0094 | 0.0124 |
| 175 | 0.0227 | 0.0098 | 0.0129 |
| 176 | 0.0233 | 0.0100 | 0.0132 |
| 177 | 0.0244 | 0.0105 | 0.0139 |
| 178 | 0.0251 | 0.0108 | 0.0143 |
| 179 | 0.0265 | 0.0114 | 0.0151 |
| 180 | 0.0273 | 0.0118 | 0.0155 |
| 181 | 0.0291 | 0.0125 | 0.0166 |
| 182 | 0.0301 | 0.0130 | 0.0172 |
| 183 | 0.0326 | 0.0140 | 0.0185 |
| 184 | 0.0340 | 0.0146 | 0.0193 |
| 185 | 0.0279 | 0.0120 | 0.0159 |
| 186 | 0.0298 | 0.0128 | 0.0169 |
| 187 | 0.0345 | 0.0149 | 0.0196 |
| 188 | 0.0377 | 0.0162 | 0.0214 |
| 189 | 0.0469 | 0.0202 | 0.0267 |
| 190 | 0.0540 | 0.0214 | 0.0326 |
| 191 | 0.0819 | 0.0214 | 0.0605 |
| 192 | 0.1189 | 0.0214 | 0.0975 |
| 193 | 0.5143 | 0.0214 | 0.4929 |
| 194 | 0.0645 | 0.0214 | 0.0431 |
| 195 | 0.0417 | 0.0180 | 0.0237 |
| 196 | 0.0319 | 0.0138 | 0.0182 |
| 197 | 0.0356 | 0.0153 | 0.0202 |
| 198 | 0.0313 | 0.0135 | 0.0178 |
| 199 | 0.0282 | 0.0121 | 0.0160 |
| 200 | 0.0257 | 0.0111 | 0.0146 |
| 201 | 0.0238 | 0.0103 | 0.0135 |
| 202 | 0.0222 | 0.0096 | 0.0126 |
| 203 | 0.0209 | 0.0090 | 0.0119 |
| 204 | 0.0198 | 0.0085 | 0.0112 |
| 205 | 0.0129 | 0.0056 | 0.0074 |

| | | | |
|---|---|---|---|
| 206 | 0.0122 | 0.0053 | 0.0069 |
| 207 | 0.0116 | 0.0050 | 0.0066 |
| 208 | 0.0110 | 0.0048 | 0.0063 |
| 209 | 0.0105 | 0.0045 | 0.0060 |
| 210 | 0.0101 | 0.0043 | 0.0057 |
| 211 | 0.0097 | 0.0042 | 0.0055 |
| 212 | 0.0093 | 0.0040 | 0.0053 |
| 213 | 0.0090 | 0.0039 | 0.0051 |
| 214 | 0.0087 | 0.0037 | 0.0049 |
| 215 | 0.0084 | 0.0036 | 0.0048 |
| 216 | 0.0081 | 0.0035 | 0.0046 |
| 217 | 0.0079 | 0.0034 | 0.0045 |
| 218 | 0.0077 | 0.0033 | 0.0044 |
| 219 | 0.0075 | 0.0032 | 0.0042 |
| 220 | 0.0073 | 0.0031 | 0.0041 |
| 221 | 0.0071 | 0.0031 | 0.0040 |
| 222 | 0.0069 | 0.0030 | 0.0039 |
| 223 | 0.0067 | 0.0029 | 0.0038 |
| 224 | 0.0066 | 0.0028 | 0.0037 |
| 225 | 0.0064 | 0.0028 | 0.0037 |
| 226 | 0.0063 | 0.0027 | 0.0036 |
| 227 | 0.0062 | 0.0027 | 0.0035 |
| 228 | 0.0060 | 0.0026 | 0.0034 |
| 229 | 0.0059 | 0.0025 | 0.0034 |
| 230 | 0.0058 | 0.0025 | 0.0033 |
| 231 | 0.0057 | 0.0025 | 0.0032 |
| 232 | 0.0056 | 0.0024 | 0.0032 |
| 233 | 0.0055 | 0.0024 | 0.0031 |
| 234 | 0.0054 | 0.0023 | 0.0031 |
| 235 | 0.0053 | 0.0023 | 0.0030 |
| 236 | 0.0052 | 0.0022 | 0.0030 |
| 237 | 0.0051 | 0.0022 | 0.0029 |
| 238 | 0.0050 | 0.0022 | 0.0029 |
| 239 | 0.0050 | 0.0021 | 0.0028 |
| 240 | 0.0049 | 0.0021 | 0.0028 |
| 241 | 0.0048 | 0.0021 | 0.0027 |
| 242 | 0.0047 | 0.0020 | 0.0027 |
| 243 | 0.0047 | 0.0020 | 0.0027 |
| 244 | 0.0046 | 0.0020 | 0.0026 |
| 245 | 0.0045 | 0.0020 | 0.0026 |
| 246 | 0.0045 | 0.0019 | 0.0025 |
| 247 | 0.0044 | 0.0019 | 0.0025 |
| 248 | 0.0044 | 0.0019 | 0.0025 |
| 249 | 0.0043 | 0.0019 | 0.0025 |
| 250 | 0.0043 | 0.0018 | 0.0024 |
| 251 | 0.0042 | 0.0018 | 0.0024 |
| 252 | 0.0041 | 0.0018 | 0.0024 |
| 253 | 0.0041 | 0.0018 | 0.0023 |
| 254 | 0.0040 | 0.0017 | 0.0023 |
| 255 | 0.0040 | 0.0017 | 0.0023 |
| 256 | 0.0040 | 0.0017 | 0.0023 |
| 257 | 0.0039 | 0.0017 | 0.0022 |
| 258 | 0.0039 | 0.0017 | 0.0022 |
| 259 | 0.0038 | 0.0016 | 0.0022 |
| 260 | 0.0038 | 0.0016 | 0.0022 |
| 261 | 0.0037 | 0.0016 | 0.0021 |
| 262 | 0.0037 | 0.0016 | 0.0021 |
| 263 | 0.0037 | 0.0016 | 0.0021 |
| 264 | 0.0036 | 0.0016 | 0.0021 |

| | | | |
|---|---|---|---|
| 265 | 0.0036 | 0.0015 | 0.0020 |
| 266 | 0.0036 | 0.0015 | 0.0020 |
| 267 | 0.0035 | 0.0015 | 0.0020 |
| 268 | 0.0035 | 0.0015 | 0.0020 |
| 269 | 0.0035 | 0.0015 | 0.0020 |
| 270 | 0.0034 | 0.0015 | 0.0019 |
| 271 | 0.0034 | 0.0015 | 0.0019 |
| 272 | 0.0034 | 0.0014 | 0.0019 |
| 273 | 0.0033 | 0.0014 | 0.0019 |
| 274 | 0.0033 | 0.0014 | 0.0019 |
| 275 | 0.0033 | 0.0014 | 0.0019 |
| 276 | 0.0032 | 0.0014 | 0.0018 |
| 277 | 0.0032 | 0.0014 | 0.0018 |
| 278 | 0.0032 | 0.0014 | 0.0018 |
| 279 | 0.0032 | 0.0014 | 0.0018 |
| 280 | 0.0031 | 0.0014 | 0.0018 |
| 281 | 0.0031 | 0.0013 | 0.0018 |
| 282 | 0.0031 | 0.0013 | 0.0018 |
| 283 | 0.0031 | 0.0013 | 0.0017 |
| 284 | 0.0030 | 0.0013 | 0.0017 |
| 285 | 0.0030 | 0.0013 | 0.0017 |
| 286 | 0.0030 | 0.0013 | 0.0017 |
| 287 | 0.0030 | 0.0013 | 0.0017 |
| 288 | 0.0029 | 0.0013 | 0.0017 |

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Total soil rain loss = 1.05(In)
Total effective rainfall = 1.97(In)
Peak flow rate in flood hydrograph = 2777.99(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 700.0 | 1400.0 | 2100.0 | 2800.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0018 | 0.27 | Q | \| | \| | \| | \| |
| 0+10 | 0.0078 | 0.86 | Q | \| | \| | \| | \| |
| 0+15 | 0.0202 | 1.81 | Q | \| | \| | \| | \| |
| 0+20 | 0.0413 | 3.05 | Q | \| | \| | \| | \| |
| 0+25 | 0.0729 | 4.59 | Q | \| | \| | \| | \| |
| 0+30 | 0.1178 | 6.52 | Q | \| | \| | \| | \| |
| 0+35 | 0.1828 | 9.43 | Q | \| | \| | \| | \| |
| 0+40 | 0.2755 | 13.47 | Q | \| | \| | \| | \| |
| 0+45 | 0.4074 | 19.14 | Q | \| | \| | \| | \| |
| 0+50 | 0.5768 | 24.60 | Q | \| | \| | \| | \| |
| 0+55 | 0.7805 | 29.58 | Q | \| | \| | \| | \| |
| 1+ 0 | 1.0142 | 33.94 | Q | \| | \| | \| | \| |
| 1+ 5 | 1.2734 | 37.63 | Q | \| | \| | \| | \| |
| 1+10 | 1.5541 | 40.76 | Q | \| | \| | \| | \| |
| 1+15 | 1.8522 | 43.28 | Q | \| | \| | \| | \| |
| 1+20 | 2.1655 | 45.49 | Q | \| | \| | \| | \| |
| 1+25 | 2.4925 | 47.48 | Q | \| | \| | \| | \| |
| 1+30 | 2.8318 | 49.27 | Q | \| | \| | \| | \| |
| 1+35 | 3.1826 | 50.94 | Q | \| | \| | \| | \| |
| 1+40 | 3.5443 | 52.52 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+45 | 3.9158 | 53.94 | Q | | | | |
| 1+50 | 4.2963 | 55.25 | Q | | | | |
| 1+55 | 4.6855 | 56.51 | Q | | | | |
| 2+ 0 | 5.0832 | 57.74 | Q | | | | |
| 2+ 5 | 5.4884 | 58.84 | Q | | | | |
| 2+10 | 5.9006 | 59.86 | Q | | | | |
| 2+15 | 6.3200 | 60.89 | Q | | | | |
| 2+20 | 6.7458 | 61.83 | Q | | | | |
| 2+25 | 7.1778 | 62.73 | Q | | | | |
| 2+30 | 7.6160 | 63.63 | Q | | | | |
| 2+35 | 8.0602 | 64.49 | Q | | | | |
| 2+40 | 8.5101 | 65.32 | Q | | | | |
| 2+45 | 8.9657 | 66.16 | Q | | | | |
| 2+50 | 9.4268 | 66.95 | Q | | | | |
| 2+55 | 9.8931 | 67.70 | Q | | | | |
| 3+ 0 | 10.3646 | 68.46 | Q | | | | |
| 3+ 5 | 10.8408 | 69.15 | Q | | | | |
| 3+10 | 11.3215 | 69.80 | Q | | | | |
| 3+15 | 11.8068 | 70.46 | VQ | | | | |
| 3+20 | 12.2964 | 71.10 | VQ | | | | |
| 3+25 | 12.7905 | 71.74 | VQ | | | | |
| 3+30 | 13.2890 | 72.38 | VQ | | | | |
| 3+35 | 13.7917 | 72.99 | VQ | | | | |
| 3+40 | 14.2986 | 73.60 | VQ | | | | |
| 3+45 | 14.8096 | 74.21 | \|Q | | | | |
| 3+50 | 15.3248 | 74.80 | \|Q | | | | |
| 3+55 | 15.8440 | 75.39 | \|Q | | | | |
| 4+ 0 | 16.3673 | 75.99 | \|Q | | | | |
| 4+ 5 | 16.8945 | 76.54 | \|Q | | | | |
| 4+10 | 17.4254 | 77.08 | \|Q | | | | |
| 4+15 | 17.9600 | 77.63 | \|Q | | | | |
| 4+20 | 18.4985 | 78.19 | \|Q | | | | |
| 4+25 | 19.0408 | 78.74 | \|Q | | | | |
| 4+30 | 19.5870 | 79.30 | \|Q | | | | |
| 4+35 | 20.1369 | 79.84 | \|Q | | | | |
| 4+40 | 20.6903 | 80.37 | \|Q | | | | |
| 4+45 | 21.2475 | 80.90 | \|Q | | | | |
| 4+50 | 21.8083 | 81.44 | \|Q | | | | |
| 4+55 | 22.3729 | 81.98 | \|Q | | | | |
| 5+ 0 | 22.9413 | 82.52 | \|Q | | | | |
| 5+ 5 | 23.5132 | 83.04 | \|Q | | | | |
| 5+10 | 24.0886 | 83.55 | \|Q | | | | |
| 5+15 | 24.6676 | 84.07 | \|Q | | | | |
| 5+20 | 25.2503 | 84.59 | \|Q | | | | |
| 5+25 | 25.8365 | 85.13 | \|Q | | | | |
| 5+30 | 26.4264 | 85.66 | \|Q | | | | |
| 5+35 | 27.0198 | 86.16 | \|Q | | | | |
| 5+40 | 27.6167 | 86.66 | \|Q | | | | |
| 5+45 | 28.2171 | 87.17 | \|Q | | | | |
| 5+50 | 28.8210 | 87.69 | \|QV | | | | |
| 5+55 | 29.4285 | 88.21 | \|QV | | | | |
| 6+ 0 | 30.0396 | 88.73 | \|QV | | | | |
| 6+ 5 | 30.6544 | 89.28 | \|QV | | | | |
| 6+10 | 31.2731 | 89.82 | \|QV | | | | |
| 6+15 | 31.8955 | 90.38 | \|QV | | | | |
| 6+20 | 32.5218 | 90.94 | \|QV | | | | |
| 6+25 | 33.1521 | 91.51 | \|QV | | | | |
| 6+30 | 33.7863 | 92.08 | \|QV | | | | |
| 6+35 | 34.4245 | 92.67 | \|QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+40 | 35.0667 | 93.26 | QV | | | | |
| 6+45 | 35.7131 | 93.85 | QV | | | | |
| 6+50 | 36.3636 | 94.46 | QV | | | | |
| 6+55 | 37.0184 | 95.07 | QV | | | | |
| 7+ 0 | 37.6773 | 95.68 | QV | | | | |
| 7+ 5 | 38.3405 | 96.28 | QV | | | | |
| 7+10 | 39.0077 | 96.89 | QV | | | | |
| 7+15 | 39.6792 | 97.50 | QV | | | | |
| 7+20 | 40.3549 | 98.12 | QV | | | | |
| 7+25 | 41.0350 | 98.75 | QV | | | | |
| 7+30 | 41.7195 | 99.38 | QV | | | | |
| 7+35 | 42.4084 | 100.03 | QV | | | | |
| 7+40 | 43.1018 | 100.69 | Q V | | | | |
| 7+45 | 43.7999 | 101.35 | Q V | | | | |
| 7+50 | 44.5024 | 102.01 | Q V | | | | |
| 7+55 | 45.2095 | 102.66 | Q V | | | | |
| 8+ 0 | 45.9211 | 103.32 | Q V | | | | |
| 8+ 5 | 46.6373 | 104.00 | Q V | | | | |
| 8+10 | 47.3582 | 104.68 | Q V | | | | |
| 8+15 | 48.0839 | 105.37 | Q V | | | | |
| 8+20 | 48.8145 | 106.07 | Q V | | | | |
| 8+25 | 49.5499 | 106.79 | Q V | | | | |
| 8+30 | 50.2904 | 107.52 | Q V | | | | |
| 8+35 | 51.0360 | 108.26 | Q V | | | | |
| 8+40 | 51.7867 | 109.01 | Q V | | | | |
| 8+45 | 52.5427 | 109.77 | Q V | | | | |
| 8+50 | 53.3041 | 110.55 | Q V | | | | |
| 8+55 | 54.0709 | 111.34 | Q V | | | | |
| 9+ 0 | 54.8432 | 112.14 | Q V | | | | |
| 9+ 5 | 55.6212 | 112.97 | Q V | | | | |
| 9+10 | 56.4049 | 113.80 | Q V | | | | |
| 9+15 | 57.1945 | 114.65 | Q V | | | | |
| 9+20 | 57.9900 | 115.51 | Q  V | | | | |
| 9+25 | 58.7916 | 116.39 | Q  V | | | | |
| 9+30 | 59.5994 | 117.28 | Q  V | | | | |
| 9+35 | 60.4134 | 118.20 | Q  V | | | | |
| 9+40 | 61.2339 | 119.13 | Q  V | | | | |
| 9+45 | 62.0609 | 120.08 | Q  V | | | | |
| 9+50 | 62.8945 | 121.04 | Q  V | | | | |
| 9+55 | 63.7350 | 122.03 | Q  V | | | | |
| 10+ 0 | 64.5823 | 123.04 | Q  V | | | | |
| 10+ 5 | 65.4368 | 124.07 | Q  V | | | | |
| 10+10 | 66.2984 | 125.11 | Q  V | | | | |
| 10+15 | 67.1674 | 126.18 | Q  V | | | | |
| 10+20 | 68.0439 | 127.27 | Q  V | | | | |
| 10+25 | 68.9281 | 128.39 | Q  V | | | | |
| 10+30 | 69.8201 | 129.52 | Q  V | | | | |
| 10+35 | 70.7202 | 130.69 | Q  V | | | | |
| 10+40 | 71.6284 | 131.87 | Q  V | | | | |
| 10+45 | 72.5450 | 133.09 | Q   V | | | | |
| 10+50 | 73.4702 | 134.33 | Q   V | | | | |
| 10+55 | 74.4041 | 135.61 | Q   V | | | | |
| 11+ 0 | 75.3470 | 136.90 | Q   V | | | | |
| 11+ 5 | 76.2991 | 138.24 | Q   V | | | | |
| 11+10 | 77.2605 | 139.60 | Q   V | | | | |
| 11+15 | 78.2316 | 141.00 | Q  V | | | | |
| 11+20 | 79.2125 | 142.43 | Q  V | | | | |
| 11+25 | 80.2036 | 143.90 | Q  V | | | | |
| 11+30 | 81.2050 | 145.40 | Q  V | | | | |

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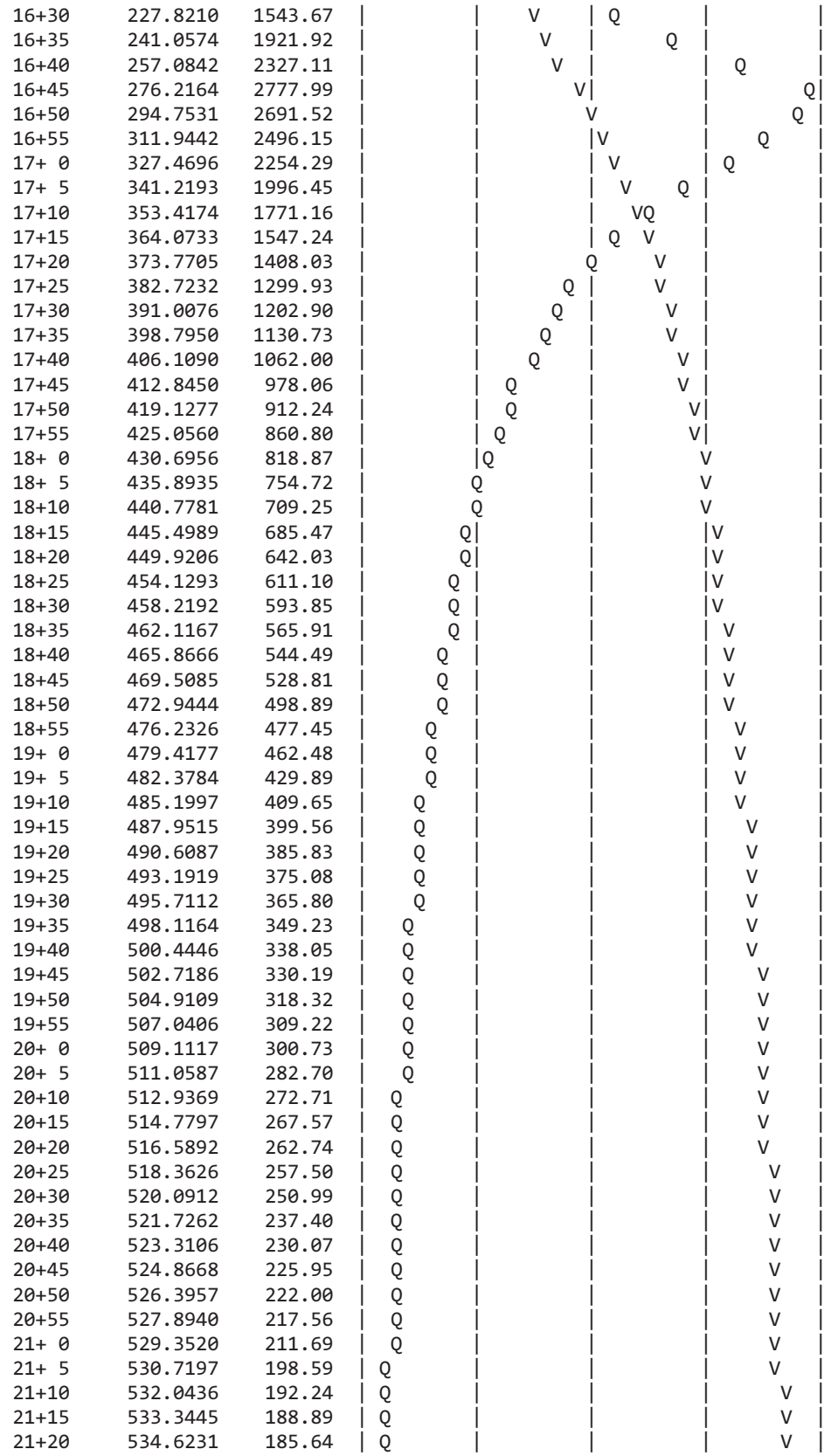
11+35      82.2170    146.95  | Q  V    |          |          |          |
11+40      83.2400    148.53  | Q  V    |          |          |          |
11+45      84.2742    150.16  | Q  V    |          |          |          |
11+50      85.3198    151.83  | Q  V    |          |          |          |
11+55      86.3774    153.55  | Q   V   |          |          |          |
12+ 0      87.4470    155.31  | Q   V   |          |          |          |
12+ 5      88.5292    157.13  | Q   V   |          |          |          |
12+10      89.6242    158.99  | Q   V   |          |          |          |
12+15      90.7324    160.91  | Q   V   |          |          |          |
12+20      91.8541    162.87  | Q   V   |          |          |          |
12+25      92.9898    164.91  | Q   V   |          |          |          |
12+30      94.1399    166.99  | Q   V   |          |          |          |
12+35      95.3048    169.14  | Q   V   |          |          |          |
12+40      96.4848    171.34  | Q   V   |          |          |          |
12+45      97.6805    173.61  | Q   V   |          |          |          |
12+50      98.8922    175.94  | Q   V   |          |          |          |
12+55     100.1207    178.38  | Q   V   |          |          |          |
13+ 0     101.3666    180.90  | Q    V  |          |          |          |
13+ 5     102.6306    183.53  | Q    V  |          |          |          |
13+10     103.9133    186.25  | Q    V  |          |          |          |
13+15     105.2156    189.10  | Q    V  |          |          |          |
13+20     106.5382    192.04  | Q    V  |          |          |          |
13+25     107.8821    195.13  | Q    V  |          |          |          |
13+30     109.2479    198.32  | Q    V  |          |          |          |
13+35     110.6368    201.67  | Q    V  |          |          |          |
13+40     112.0496    205.14  | Q    V  |          |          |          |
13+45     113.4876    208.79  | Q    V  |          |          |          |
13+50     114.9516    212.59  |  Q    V |          |          |          |
13+55     116.4433    216.59  |  Q    V |          |          |          |
14+ 0     117.9636    220.75  |  Q    V |          |          |          |
14+ 5     119.5180    225.70  |  Q    V |          |          |          |
14+10     121.1124    231.50  |  Q    V |          |          |          |
14+15     122.7536    238.30  |  Q    V |          |          |          |
14+20     124.4475    245.95  |  Q    V |          |          |          |
14+25     126.2007    254.57  |  Q    V |          |          |          |
14+30     128.0207    264.27  |  Q    V |          |          |          |
14+35     129.9242    276.38  |  Q     V|          |          |          |
14+40     131.9296    291.18  |   Q    V|          |          |          |
14+45     134.0636    309.86  |   Q    V|          |          |          |
14+50     136.3269    328.63  |   Q    V|          |          |          |
14+55     138.7182    347.21  |   Q    V|          |          |          |
15+ 0     141.2334    365.21  |    Q   V|          |          |          |
15+ 5     143.8697    382.79  |    Q    V          |          |          |
15+10     146.6248    400.05  |    Q    V          |          |          |
15+15     149.4987    417.28  |    Q    V          |          |          |
15+20     152.4941    434.94  |     Q   V          |          |          |
15+25     155.6128    452.84  |     Q   V          |          |          |
15+30     158.8549    470.74  |     Q   |V         |          |          |
15+35     162.2257    489.44  |     Q   |V         |          |          |
15+40     165.7321    509.12  |      Q  |V         |          |          |
15+45     169.3882    530.87  |      Q  |V         |          |          |
15+50     173.2115    555.15  |      Q  | V        |          |          |
15+55     177.2427    585.33  |       Q | V        |          |          |
16+ 0     181.5624    627.22  |       Q | V        |          |          |
16+ 5     186.6917    744.78  |         Q  V       |          |          |
16+10     192.7820    884.31  |         | QV       |          |          |
16+15     199.9024   1033.88  |         |  VQ      |          |          |
16+20     207.9978   1175.45  |         |   V Q    |          |          |
16+25     217.1896   1334.66  |         |    V   Q|          |          |
```



| | | | |
|---|---|---|---|
| 16+30 | 227.8210 | 1543.67 | |
| 16+35 | 241.0574 | 1921.92 | |
| 16+40 | 257.0842 | 2327.11 | |
| 16+45 | 276.2164 | 2777.99 | |
| 16+50 | 294.7531 | 2691.52 | |
| 16+55 | 311.9442 | 2496.15 | |
| 17+ 0 | 327.4696 | 2254.29 | |
| 17+ 5 | 341.2193 | 1996.45 | |
| 17+10 | 353.4174 | 1771.16 | |
| 17+15 | 364.0733 | 1547.24 | |
| 17+20 | 373.7705 | 1408.03 | |
| 17+25 | 382.7232 | 1299.93 | |
| 17+30 | 391.0076 | 1202.90 | |
| 17+35 | 398.7950 | 1130.73 | |
| 17+40 | 406.1090 | 1062.00 | |
| 17+45 | 412.8450 | 978.06 | |
| 17+50 | 419.1277 | 912.24 | |
| 17+55 | 425.0560 | 860.80 | |
| 18+ 0 | 430.6956 | 818.87 | |
| 18+ 5 | 435.8935 | 754.72 | |
| 18+10 | 440.7781 | 709.25 | |
| 18+15 | 445.4989 | 685.47 | |
| 18+20 | 449.9206 | 642.03 | |
| 18+25 | 454.1293 | 611.10 | |
| 18+30 | 458.2192 | 593.85 | |
| 18+35 | 462.1167 | 565.91 | |
| 18+40 | 465.8666 | 544.49 | |
| 18+45 | 469.5085 | 528.81 | |
| 18+50 | 472.9444 | 498.89 | |
| 18+55 | 476.2326 | 477.45 | |
| 19+ 0 | 479.4177 | 462.48 | |
| 19+ 5 | 482.3784 | 429.89 | |
| 19+10 | 485.1997 | 409.65 | |
| 19+15 | 487.9515 | 399.56 | |
| 19+20 | 490.6087 | 385.83 | |
| 19+25 | 493.1919 | 375.08 | |
| 19+30 | 495.7112 | 365.80 | |
| 19+35 | 498.1164 | 349.23 | |
| 19+40 | 500.4446 | 338.05 | |
| 19+45 | 502.7186 | 330.19 | |
| 19+50 | 504.9109 | 318.32 | |
| 19+55 | 507.0406 | 309.22 | |
| 20+ 0 | 509.1117 | 300.73 | |
| 20+ 5 | 511.0587 | 282.70 | |
| 20+10 | 512.9369 | 272.71 | |
| 20+15 | 514.7797 | 267.57 | |
| 20+20 | 516.5892 | 262.74 | |
| 20+25 | 518.3626 | 257.50 | |
| 20+30 | 520.0912 | 250.99 | |
| 20+35 | 521.7262 | 237.40 | |
| 20+40 | 523.3106 | 230.07 | |
| 20+45 | 524.8668 | 225.95 | |
| 20+50 | 526.3957 | 222.00 | |
| 20+55 | 527.8940 | 217.56 | |
| 21+ 0 | 529.3520 | 211.69 | |
| 21+ 5 | 530.7197 | 198.59 | |
| 21+10 | 532.0436 | 192.24 | |
| 21+15 | 533.3445 | 188.89 | |
| 21+20 | 534.6231 | 185.64 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21+25 | 535.8752 | 181.81 | Q | | | | V |
| 21+30 | 537.0908 | 176.50 | Q | | | | V |
| 21+35 | 538.2237 | 164.50 | Q | | | | V |
| 21+40 | 539.3206 | 159.28 | Q | | | | V |
| 21+45 | 540.4002 | 156.75 | Q | | | | V |
| 21+50 | 541.4642 | 154.50 | Q | | | | V |
| 21+55 | 542.5137 | 152.39 | Q | | | | V |
| 22+ 0 | 543.5518 | 150.74 | Q | | | | V |
| 22+ 5 | 544.5897 | 150.70 | Q | | | | V |
| 22+10 | 545.6175 | 149.23 | Q | | | | V |
| 22+15 | 546.6319 | 147.30 | Q | | | | V |
| 22+20 | 547.6331 | 145.37 | Q | | | | V |
| 22+25 | 548.6216 | 143.53 | Q | | | | V |
| 22+30 | 549.5974 | 141.68 | Q | | | | V |
| 22+35 | 550.5598 | 139.75 | Q | | | | V |
| 22+40 | 551.5099 | 137.95 | Q | | | | V |
| 22+45 | 552.4474 | 136.12 | Q | | | | V |
| 22+50 | 553.3713 | 134.15 | Q | | | | V |
| 22+55 | 554.2782 | 131.68 | Q | | | | V |
| 23+ 0 | 555.1579 | 127.72 | Q | | | | V |
| 23+ 5 | 555.9764 | 118.84 | Q | | | | V |
| 23+10 | 556.7732 | 115.70 | Q | | | | V |
| 23+15 | 557.5585 | 114.03 | Q | | | | V |
| 23+20 | 558.3330 | 112.47 | Q | | | | V |
| 23+25 | 559.0966 | 110.87 | Q | | | | V |
| 23+30 | 559.8492 | 109.27 | Q | | | | V |
| 23+35 | 560.5903 | 107.61 | Q | | | | V |
| 23+40 | 561.3180 | 105.67 | Q | | | | V |
| 23+45 | 562.0282 | 103.12 | Q | | | | V |
| 23+50 | 562.6932 | 96.56 | Q | | | | V |
| 23+55 | 563.3103 | 89.60 | Q | | | | V |
| 24+ 0 | 563.9166 | 88.03 | Q | | | | V |
| 24+ 5 | 564.5126 | 86.54 | Q | | | | V |
| 24+10 | 565.0966 | 84.80 | Q | | | | V |
| 24+15 | 565.6665 | 82.74 | Q | | | | V |
| 24+20 | 566.2206 | 80.46 | Q | | | | V |
| 24+25 | 566.7574 | 77.94 | Q | | | | V |
| 24+30 | 567.2746 | 75.10 | Q | | | | V |
| 24+35 | 567.7660 | 71.35 | Q | | | | V |
| 24+40 | 568.2241 | 66.52 | Q | | | | V |
| 24+45 | 568.6384 | 60.15 | Q | | | | V |
| 24+50 | 569.0110 | 54.10 | Q | | | | V |
| 24+55 | 569.3461 | 48.66 | Q | | | | V |
| 25+ 0 | 569.6485 | 43.91 | Q | | | | V |
| 25+ 5 | 569.9232 | 39.89 | Q | | | | V |
| 25+10 | 570.1745 | 36.49 | Q | | | | V |
| 25+15 | 570.4069 | 33.73 | Q | | | | V |
| 25+20 | 570.6227 | 31.34 | Q | | | | V |
| 25+25 | 570.8237 | 29.19 | Q | | | | V |
| 25+30 | 571.0117 | 27.29 | Q | | | | V |
| 25+35 | 571.1875 | 25.53 | Q | | | | V |
| 25+40 | 571.3520 | 23.88 | Q | | | | V |
| 25+45 | 571.5064 | 22.42 | Q | | | | V |
| 25+50 | 571.6516 | 21.09 | Q | | | | V |
| 25+55 | 571.7882 | 19.83 | Q | | | | V |
| 26+ 0 | 571.9165 | 18.63 | Q | | | | V |
| 26+ 5 | 572.0375 | 17.57 | Q | | | | V |
| 26+10 | 572.1518 | 16.60 | Q | | | | V |
| 26+15 | 572.2596 | 15.65 | Q | | | | V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+20 | 572.3615 | 14.80 | Q | \| | \| | \| | V\| |
| 26+25 | 572.4580 | 14.01 | Q | \| | \| | \| | V\| |
| 26+30 | 572.5491 | 13.22 | Q | \| | \| | \| | V\| |
| 26+35 | 572.6351 | 12.50 | Q | \| | \| | \| | V\| |
| 26+40 | 572.7164 | 11.80 | Q | \| | \| | \| | V\| |
| 26+45 | 572.7930 | 11.12 | Q | \| | \| | \| | V\| |
| 26+50 | 572.8654 | 10.51 | Q | \| | \| | \| | V\| |
| 26+55 | 572.9338 | 9.93 | Q | \| | \| | \| | V\| |
| 27+ 0 | 572.9982 | 9.36 | Q | \| | \| | \| | V\| |
| 27+ 5 | 573.0594 | 8.88 | Q | \| | \| | \| | V\| |
| 27+10 | 573.1174 | 8.43 | Q | \| | \| | \| | V\| |
| 27+15 | 573.1725 | 8.00 | Q | \| | \| | \| | V\| |
| 27+20 | 573.2247 | 7.58 | Q | \| | \| | \| | V\| |
| 27+25 | 573.2742 | 7.18 | Q | \| | \| | \| | V\| |
| 27+30 | 573.3210 | 6.79 | Q | \| | \| | \| | V\| |
| 27+35 | 573.3652 | 6.43 | Q | \| | \| | \| | V\| |
| 27+40 | 573.4072 | 6.09 | Q | \| | \| | \| | V\| |
| 27+45 | 573.4468 | 5.75 | Q | \| | \| | \| | V\| |
| 27+50 | 573.4842 | 5.44 | Q | \| | \| | \| | V\| |
| 27+55 | 573.5195 | 5.13 | Q | \| | \| | \| | V\| |
| 28+ 0 | 573.5528 | 4.83 | Q | \| | \| | \| | V\| |
| 28+ 5 | 573.5843 | 4.58 | Q | \| | \| | \| | V\| |
| 28+10 | 573.6143 | 4.34 | Q | \| | \| | \| | V\| |
| 28+15 | 573.6426 | 4.11 | Q | \| | \| | \| | V\| |
| 28+20 | 573.6693 | 3.88 | Q | \| | \| | \| | V\| |
| 28+25 | 573.6945 | 3.66 | Q | \| | \| | \| | V\| |
| 28+30 | 573.7181 | 3.43 | Q | \| | \| | \| | V\| |
| 28+35 | 573.7405 | 3.24 | Q | \| | \| | \| | V\| |
| 28+40 | 573.7616 | 3.07 | Q | \| | \| | \| | V\| |
| 28+45 | 573.7815 | 2.89 | Q | \| | \| | \| | V\| |
| 28+50 | 573.8003 | 2.72 | Q | \| | \| | \| | V\| |
| 28+55 | 573.8178 | 2.55 | Q | \| | \| | \| | V\| |
| 29+ 0 | 573.8342 | 2.38 | Q | \| | \| | \| | V\| |
| 29+ 5 | 573.8497 | 2.25 | Q | \| | \| | \| | V\| |
| 29+10 | 573.8644 | 2.13 | Q | \| | \| | \| | V\| |
| 29+15 | 573.8782 | 2.01 | Q | \| | \| | \| | V\| |
| 29+20 | 573.8913 | 1.89 | Q | \| | \| | \| | V\| |
| 29+25 | 573.9035 | 1.77 | Q | \| | \| | \| | V\| |
| 29+30 | 573.9149 | 1.66 | Q | \| | \| | \| | V\| |
| 29+35 | 573.9257 | 1.58 | Q | \| | \| | \| | V\| |
| 29+40 | 573.9361 | 1.51 | Q | \| | \| | \| | V\| |
| 29+45 | 573.9460 | 1.43 | Q | \| | \| | \| | V\| |
| 29+50 | 573.9554 | 1.36 | Q | \| | \| | \| | V\| |
| 29+55 | 573.9643 | 1.29 | Q | \| | \| | \| | V\| |
| 30+ 0 | 573.9728 | 1.23 | Q | \| | \| | \| | V\| |
| 30+ 5 | 573.9807 | 1.15 | Q | \| | \| | \| | V\| |
| 30+10 | 573.9880 | 1.07 | Q | \| | \| | \| | V\| |
| 30+15 | 573.9949 | 1.00 | Q | \| | \| | \| | V\| |
| 30+20 | 574.0012 | 0.92 | Q | \| | \| | \| | V\| |
| 30+25 | 574.0071 | 0.84 | Q | \| | \| | \| | V\| |
| 30+30 | 574.0124 | 0.77 | Q | \| | \| | \| | V\| |
| 30+35 | 574.0172 | 0.70 | Q | \| | \| | \| | V\| |
| 30+40 | 574.0215 | 0.63 | Q | \| | \| | \| | V\| |
| 30+45 | 574.0253 | 0.55 | Q | \| | \| | \| | V\| |
| 30+50 | 574.0286 | 0.48 | Q | \| | \| | \| | V\| |
| 30+55 | 574.0315 | 0.41 | Q | \| | \| | \| | V\| |
| 31+ 0 | 574.0338 | 0.35 | Q | \| | \| | \| | V\| |
| 31+ 5 | 574.0359 | 0.30 | Q | \| | \| | \| | V\| |
| 31+10 | 574.0378 | 0.27 | Q | \| | \| | \| | V\| |

```
   31+15     574.0394      0.23  Q         |         |         |        V|
   31+20     574.0407      0.20  Q         |         |         |        V|
   31+25     574.0418      0.16  Q         |         |         |        V|
   31+30     574.0427      0.12  Q         |         |         |        V|
   31+35     574.0433      0.09  Q         |         |         |        V|
   31+40     574.0437      0.05  Q         |         |         |        V|
   31+45     574.0438      0.02  Q         |         |         |         V
-------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 48
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) | |
|---|---|---|---|
| Rainfall data for year 100 | | | |
| 764.55 | 1 | 1.40 | |
| Rainfall data for year 100 | | | |
| 764.55 | 6 | 1.85 | |
| Rainfall data for year 100 | | | |
| 764.55 | 24 | 2.62 | |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 73.7 | 90.0 | 764.55 | 1.000 | 0.193 | 0.883 | 0.170 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.170

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 675.02 | 0.883 | 73.7 | 90.0 | 1.11 | 0.625 |
| 89.53 | 0.117 | 98.0 | 98.0 | 0.20 | 0.912 |

Area-averaged catchment yield fraction, Y = 0.659
Area-averaged low loss fraction, Yb = 0.341
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 20795.00(Ft.)
Length from concentration point to centroid = 10119.00(Ft.)
Elevation difference along watercourse = 58.10(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 764.55(Ac.)
Catchment Lag time = 1.086 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 7.6744
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.170(In/Hr)
Average low loss rate fraction (Yb) = 0.341 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.664(In)
Computed peak 30-minute rainfall = 1.137(In)
Specified peak 1-hour rainfall = 1.400(In)
Computed peak 3-hour rainfall = 1.661(In)
Specified peak 6-hour rainfall = 1.850(In)
Specified peak 24-hour rainfall = 2.620(In)

Rainfall depth area reduction factors:
Using a total area of 764.55(Ac.) (Ref: fig. E-4)

5-minute factor = 0.964 Adjusted rainfall = 0.641(In)
30-minute factor = 0.964 Adjusted rainfall = 1.096(In)
1-hour factor = 0.964 Adjusted rainfall = 1.350(In)
3-hour factor = 0.995 Adjusted rainfall = 1.653(In)
6-hour factor = 0.998 Adjusted rainfall = 1.846(In)
24-hour factor = 0.999 Adjusted rainfall = 2.617(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 9246.28 (CFS)) | |
| 1 | 0.338 | 31.222 |
| 2 | 1.055 | 66.356 |
| 3 | 2.223 | 107.990 |
| 4 | 3.682 | 134.858 |
| 5 | 5.569 | 174.501 |
| 6 | 7.882 | 213.896 |
| 7 | 10.735 | 263.782 |
| 8 | 15.337 | 425.521 |
| 9 | 21.329 | 553.991 |
| 10 | 29.124 | 720.728 |

| | | |
|---|---|---|
| 11 | 36.078 | 643.007 |
| 12 | 42.350 | 579.965 |
| 13 | 47.395 | 466.497 |
| 14 | 51.874 | 414.107 |
| 15 | 55.805 | 363.422 |
| 16 | 58.978 | 293.445 |
| 17 | 61.785 | 259.530 |
| 18 | 64.201 | 223.393 |
| 19 | 66.382 | 201.643 |
| 20 | 68.389 | 185.575 |
| 21 | 70.258 | 172.837 |
| 22 | 71.995 | 160.626 |
| 23 | 73.531 | 142.020 |
| 24 | 74.941 | 130.380 |
| 25 | 76.282 | 123.973 |
| 26 | 77.577 | 119.742 |
| 27 | 78.745 | 107.940 |
| 28 | 79.758 | 93.714 |
| 29 | 80.771 | 93.667 |
| 30 | 81.741 | 89.708 |
| 31 | 82.580 | 77.499 |
| 32 | 83.408 | 76.637 |
| 33 | 84.229 | 75.870 |
| 34 | 84.981 | 69.533 |
| 35 | 85.718 | 68.122 |
| 36 | 86.453 | 67.964 |
| 37 | 87.109 | 60.710 |
| 38 | 87.723 | 56.768 |
| 39 | 88.337 | 56.768 |
| 40 | 88.888 | 50.903 |
| 41 | 89.349 | 42.635 |
| 42 | 89.809 | 42.576 |
| 43 | 90.263 | 41.973 |
| 44 | 90.695 | 39.910 |
| 45 | 91.125 | 39.738 |
| 46 | 91.550 | 39.297 |
| 47 | 91.929 | 35.103 |
| 48 | 92.298 | 34.061 |
| 49 | 92.666 | 34.034 |
| 50 | 93.015 | 32.281 |
| 51 | 93.353 | 31.222 |
| 52 | 93.690 | 31.222 |
| 53 | 93.998 | 28.482 |
| 54 | 94.260 | 24.178 |
| 55 | 94.521 | 24.126 |
| 56 | 94.782 | 24.126 |
| 57 | 95.043 | 24.126 |
| 58 | 95.304 | 24.126 |
| 59 | 95.560 | 23.751 |
| 60 | 95.772 | 19.599 |
| 61 | 95.972 | 18.450 |
| 62 | 96.171 | 18.450 |
| 63 | 96.371 | 18.450 |
| 64 | 96.570 | 18.450 |
| 65 | 96.770 | 18.450 |
| 66 | 96.947 | 16.406 |
| 67 | 97.086 | 12.838 |
| 68 | 97.224 | 12.773 |
| 69 | 97.363 | 12.773 |

| | | |
|---|---|---|
| 70 | 97.501 | 12.773 |
| 71 | 97.639 | 12.773 |
| 72 | 97.774 | 12.457 |
| 73 | 97.864 | 8.357 |
| 74 | 97.941 | 7.096 |
| 75 | 98.017 | 7.096 |
| 76 | 98.094 | 7.096 |
| 77 | 98.171 | 7.096 |
| 78 | 98.248 | 7.096 |
| 79 | 98.330 | 7.571 |
| 80 | 98.421 | 8.492 |
| 81 | 98.514 | 8.515 |
| 82 | 98.606 | 8.515 |
| 83 | 98.698 | 8.515 |
| 84 | 98.790 | 8.515 |
| 85 | 98.882 | 8.515 |
| 86 | 98.974 | 8.515 |
| 87 | 99.066 | 8.515 |
| 88 | 99.158 | 8.515 |
| 89 | 99.250 | 8.515 |
| 90 | 99.342 | 8.515 |
| 91 | 99.434 | 8.515 |
| 92 | 99.513 | 7.248 |
| 93 | 99.562 | 4.527 |
| 94 | 99.610 | 4.435 |
| 95 | 99.658 | 4.435 |
| 96 | 99.706 | 4.435 |
| 97 | 99.754 | 4.435 |
| 98 | 99.802 | 4.435 |
| 99 | 99.850 | 4.435 |
| 100 | 99.898 | 4.435 |
| 101 | 99.946 | 4.435 |
| 102 | 100.000 | 2.217 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.6405 | 0.6405 |
| 2 | 0.7886 | 0.1480 |
| 3 | 0.8906 | 0.1020 |
| 4 | 0.9708 | 0.0803 |
| 5 | 1.0380 | 0.0672 |
| 6 | 1.0964 | 0.0584 |
| 7 | 1.1483 | 0.0519 |
| 8 | 1.1952 | 0.0469 |
| 9 | 1.2382 | 0.0430 |
| 10 | 1.2780 | 0.0398 |
| 11 | 1.3150 | 0.0371 |
| 12 | 1.3498 | 0.0348 |
| 13 | 1.3699 | 0.0201 |
| 14 | 1.3888 | 0.0189 |
| 15 | 1.4066 | 0.0178 |
| 16 | 1.4235 | 0.0169 |
| 17 | 1.4395 | 0.0160 |
| 18 | 1.4548 | 0.0153 |
| 19 | 1.4694 | 0.0146 |
| 20 | 1.4833 | 0.0140 |
| 21 | 1.4968 | 0.0134 |
| 22 | 1.5097 | 0.0129 |
| 23 | 1.5221 | 0.0124 |

| | | |
|---|---|---|
| 24 | 1.5341 | 0.0120 |
| 25 | 1.5457 | 0.0116 |
| 26 | 1.5570 | 0.0112 |
| 27 | 1.5678 | 0.0109 |
| 28 | 1.5784 | 0.0106 |
| 29 | 1.5887 | 0.0103 |
| 30 | 1.5986 | 0.0100 |
| 31 | 1.6083 | 0.0097 |
| 32 | 1.6178 | 0.0095 |
| 33 | 1.6270 | 0.0092 |
| 34 | 1.6360 | 0.0090 |
| 35 | 1.6448 | 0.0088 |
| 36 | 1.6534 | 0.0086 |
| 37 | 1.6606 | 0.0072 |
| 38 | 1.6676 | 0.0070 |
| 39 | 1.6745 | 0.0069 |
| 40 | 1.6812 | 0.0067 |
| 41 | 1.6878 | 0.0066 |
| 42 | 1.6943 | 0.0065 |
| 43 | 1.7006 | 0.0063 |
| 44 | 1.7069 | 0.0062 |
| 45 | 1.7130 | 0.0061 |
| 46 | 1.7189 | 0.0060 |
| 47 | 1.7248 | 0.0059 |
| 48 | 1.7306 | 0.0058 |
| 49 | 1.7363 | 0.0057 |
| 50 | 1.7418 | 0.0056 |
| 51 | 1.7473 | 0.0055 |
| 52 | 1.7527 | 0.0054 |
| 53 | 1.7580 | 0.0053 |
| 54 | 1.7632 | 0.0052 |
| 55 | 1.7684 | 0.0051 |
| 56 | 1.7734 | 0.0051 |
| 57 | 1.7784 | 0.0050 |
| 58 | 1.7833 | 0.0049 |
| 59 | 1.7882 | 0.0048 |
| 60 | 1.7930 | 0.0048 |
| 61 | 1.7977 | 0.0047 |
| 62 | 1.8023 | 0.0046 |
| 63 | 1.8069 | 0.0046 |
| 64 | 1.8114 | 0.0045 |
| 65 | 1.8159 | 0.0045 |
| 66 | 1.8203 | 0.0044 |
| 67 | 1.8246 | 0.0043 |
| 68 | 1.8289 | 0.0043 |
| 69 | 1.8332 | 0.0042 |
| 70 | 1.8373 | 0.0042 |
| 71 | 1.8415 | 0.0041 |
| 72 | 1.8456 | 0.0041 |
| 73 | 1.8520 | 0.0064 |
| 74 | 1.8584 | 0.0064 |
| 75 | 1.8647 | 0.0063 |
| 76 | 1.8709 | 0.0062 |
| 77 | 1.8771 | 0.0062 |
| 78 | 1.8832 | 0.0061 |
| 79 | 1.8892 | 0.0061 |
| 80 | 1.8952 | 0.0060 |
| 81 | 1.9012 | 0.0059 |
| 82 | 1.9071 | 0.0059 |

| | | |
|---|---|---|
| 83 | 1.9129 | 0.0058 |
| 84 | 1.9187 | 0.0058 |
| 85 | 1.9244 | 0.0057 |
| 86 | 1.9301 | 0.0057 |
| 87 | 1.9357 | 0.0056 |
| 88 | 1.9413 | 0.0056 |
| 89 | 1.9469 | 0.0055 |
| 90 | 1.9524 | 0.0055 |
| 91 | 1.9578 | 0.0054 |
| 92 | 1.9632 | 0.0054 |
| 93 | 1.9686 | 0.0054 |
| 94 | 1.9739 | 0.0053 |
| 95 | 1.9791 | 0.0053 |
| 96 | 1.9844 | 0.0052 |
| 97 | 1.9896 | 0.0052 |
| 98 | 1.9947 | 0.0052 |
| 99 | 1.9998 | 0.0051 |
| 100 | 2.0049 | 0.0051 |
| 101 | 2.0099 | 0.0050 |
| 102 | 2.0149 | 0.0050 |
| 103 | 2.0199 | 0.0050 |
| 104 | 2.0248 | 0.0049 |
| 105 | 2.0297 | 0.0049 |
| 106 | 2.0346 | 0.0049 |
| 107 | 2.0394 | 0.0048 |
| 108 | 2.0442 | 0.0048 |
| 109 | 2.0489 | 0.0048 |
| 110 | 2.0537 | 0.0047 |
| 111 | 2.0583 | 0.0047 |
| 112 | 2.0630 | 0.0047 |
| 113 | 2.0676 | 0.0046 |
| 114 | 2.0722 | 0.0046 |
| 115 | 2.0768 | 0.0046 |
| 116 | 2.0813 | 0.0045 |
| 117 | 2.0858 | 0.0045 |
| 118 | 2.0903 | 0.0045 |
| 119 | 2.0948 | 0.0045 |
| 120 | 2.0992 | 0.0044 |
| 121 | 2.1036 | 0.0044 |
| 122 | 2.1080 | 0.0044 |
| 123 | 2.1123 | 0.0043 |
| 124 | 2.1166 | 0.0043 |
| 125 | 2.1209 | 0.0043 |
| 126 | 2.1252 | 0.0043 |
| 127 | 2.1294 | 0.0042 |
| 128 | 2.1336 | 0.0042 |
| 129 | 2.1378 | 0.0042 |
| 130 | 2.1420 | 0.0042 |
| 131 | 2.1461 | 0.0041 |
| 132 | 2.1502 | 0.0041 |
| 133 | 2.1543 | 0.0041 |
| 134 | 2.1584 | 0.0041 |
| 135 | 2.1624 | 0.0040 |
| 136 | 2.1665 | 0.0040 |
| 137 | 2.1705 | 0.0040 |
| 138 | 2.1745 | 0.0040 |
| 139 | 2.1784 | 0.0040 |
| 140 | 2.1824 | 0.0039 |
| 141 | 2.1863 | 0.0039 |

| | | |
|---|---|---|
| 142 | 2.1902 | 0.0039 |
| 143 | 2.1941 | 0.0039 |
| 144 | 2.1979 | 0.0039 |
| 145 | 2.2017 | 0.0038 |
| 146 | 2.2056 | 0.0038 |
| 147 | 2.2094 | 0.0038 |
| 148 | 2.2131 | 0.0038 |
| 149 | 2.2169 | 0.0038 |
| 150 | 2.2206 | 0.0037 |
| 151 | 2.2244 | 0.0037 |
| 152 | 2.2281 | 0.0037 |
| 153 | 2.2318 | 0.0037 |
| 154 | 2.2354 | 0.0037 |
| 155 | 2.2391 | 0.0036 |
| 156 | 2.2427 | 0.0036 |
| 157 | 2.2463 | 0.0036 |
| 158 | 2.2499 | 0.0036 |
| 159 | 2.2535 | 0.0036 |
| 160 | 2.2571 | 0.0036 |
| 161 | 2.2606 | 0.0035 |
| 162 | 2.2641 | 0.0035 |
| 163 | 2.2677 | 0.0035 |
| 164 | 2.2712 | 0.0035 |
| 165 | 2.2746 | 0.0035 |
| 166 | 2.2781 | 0.0035 |
| 167 | 2.2816 | 0.0035 |
| 168 | 2.2850 | 0.0034 |
| 169 | 2.2884 | 0.0034 |
| 170 | 2.2918 | 0.0034 |
| 171 | 2.2952 | 0.0034 |
| 172 | 2.2986 | 0.0034 |
| 173 | 2.3019 | 0.0034 |
| 174 | 2.3053 | 0.0033 |
| 175 | 2.3086 | 0.0033 |
| 176 | 2.3119 | 0.0033 |
| 177 | 2.3152 | 0.0033 |
| 178 | 2.3185 | 0.0033 |
| 179 | 2.3218 | 0.0033 |
| 180 | 2.3251 | 0.0033 |
| 181 | 2.3283 | 0.0032 |
| 182 | 2.3316 | 0.0032 |
| 183 | 2.3348 | 0.0032 |
| 184 | 2.3380 | 0.0032 |
| 185 | 2.3412 | 0.0032 |
| 186 | 2.3444 | 0.0032 |
| 187 | 2.3475 | 0.0032 |
| 188 | 2.3507 | 0.0032 |
| 189 | 2.3538 | 0.0031 |
| 190 | 2.3570 | 0.0031 |
| 191 | 2.3601 | 0.0031 |
| 192 | 2.3632 | 0.0031 |
| 193 | 2.3663 | 0.0031 |
| 194 | 2.3694 | 0.0031 |
| 195 | 2.3725 | 0.0031 |
| 196 | 2.3755 | 0.0031 |
| 197 | 2.3786 | 0.0030 |
| 198 | 2.3816 | 0.0030 |
| 199 | 2.3846 | 0.0030 |
| 200 | 2.3876 | 0.0030 |

| | | |
|---|---|---|
| 201 | 2.3906 | 0.0030 |
| 202 | 2.3936 | 0.0030 |
| 203 | 2.3966 | 0.0030 |
| 204 | 2.3996 | 0.0030 |
| 205 | 2.4026 | 0.0030 |
| 206 | 2.4055 | 0.0029 |
| 207 | 2.4084 | 0.0029 |
| 208 | 2.4114 | 0.0029 |
| 209 | 2.4143 | 0.0029 |
| 210 | 2.4172 | 0.0029 |
| 211 | 2.4201 | 0.0029 |
| 212 | 2.4230 | 0.0029 |
| 213 | 2.4258 | 0.0029 |
| 214 | 2.4287 | 0.0029 |
| 215 | 2.4316 | 0.0029 |
| 216 | 2.4344 | 0.0028 |
| 217 | 2.4372 | 0.0028 |
| 218 | 2.4401 | 0.0028 |
| 219 | 2.4429 | 0.0028 |
| 220 | 2.4457 | 0.0028 |
| 221 | 2.4485 | 0.0028 |
| 222 | 2.4513 | 0.0028 |
| 223 | 2.4541 | 0.0028 |
| 224 | 2.4568 | 0.0028 |
| 225 | 2.4596 | 0.0028 |
| 226 | 2.4623 | 0.0028 |
| 227 | 2.4651 | 0.0027 |
| 228 | 2.4678 | 0.0027 |
| 229 | 2.4705 | 0.0027 |
| 230 | 2.4733 | 0.0027 |
| 231 | 2.4760 | 0.0027 |
| 232 | 2.4787 | 0.0027 |
| 233 | 2.4813 | 0.0027 |
| 234 | 2.4840 | 0.0027 |
| 235 | 2.4867 | 0.0027 |
| 236 | 2.4894 | 0.0027 |
| 237 | 2.4920 | 0.0027 |
| 238 | 2.4947 | 0.0026 |
| 239 | 2.4973 | 0.0026 |
| 240 | 2.4999 | 0.0026 |
| 241 | 2.5026 | 0.0026 |
| 242 | 2.5052 | 0.0026 |
| 243 | 2.5078 | 0.0026 |
| 244 | 2.5104 | 0.0026 |
| 245 | 2.5130 | 0.0026 |
| 246 | 2.5155 | 0.0026 |
| 247 | 2.5181 | 0.0026 |
| 248 | 2.5207 | 0.0026 |
| 249 | 2.5232 | 0.0026 |
| 250 | 2.5258 | 0.0026 |
| 251 | 2.5283 | 0.0025 |
| 252 | 2.5309 | 0.0025 |
| 253 | 2.5334 | 0.0025 |
| 254 | 2.5359 | 0.0025 |
| 255 | 2.5384 | 0.0025 |
| 256 | 2.5409 | 0.0025 |
| 257 | 2.5434 | 0.0025 |
| 258 | 2.5459 | 0.0025 |
| 259 | 2.5484 | 0.0025 |

| | | |
|---|---|---|
| 260 | 2.5509 | 0.0025 |
| 261 | 2.5533 | 0.0025 |
| 262 | 2.5558 | 0.0025 |
| 263 | 2.5583 | 0.0025 |
| 264 | 2.5607 | 0.0024 |
| 265 | 2.5632 | 0.0024 |
| 266 | 2.5656 | 0.0024 |
| 267 | 2.5680 | 0.0024 |
| 268 | 2.5704 | 0.0024 |
| 269 | 2.5729 | 0.0024 |
| 270 | 2.5753 | 0.0024 |
| 271 | 2.5777 | 0.0024 |
| 272 | 2.5801 | 0.0024 |
| 273 | 2.5824 | 0.0024 |
| 274 | 2.5848 | 0.0024 |
| 275 | 2.5872 | 0.0024 |
| 276 | 2.5896 | 0.0024 |
| 277 | 2.5919 | 0.0024 |
| 278 | 2.5943 | 0.0024 |
| 279 | 2.5966 | 0.0023 |
| 280 | 2.5990 | 0.0023 |
| 281 | 2.6013 | 0.0023 |
| 282 | 2.6036 | 0.0023 |
| 283 | 2.6060 | 0.0023 |
| 284 | 2.6083 | 0.0023 |
| 285 | 2.6106 | 0.0023 |
| 286 | 2.6129 | 0.0023 |
| 287 | 2.6152 | 0.0023 |
| 288 | 2.6175 | 0.0023 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0023 | 0.0008 | 0.0015 |
| 2 | 0.0023 | 0.0008 | 0.0015 |
| 3 | 0.0023 | 0.0008 | 0.0015 |
| 4 | 0.0023 | 0.0008 | 0.0015 |
| 5 | 0.0023 | 0.0008 | 0.0015 |
| 6 | 0.0023 | 0.0008 | 0.0015 |
| 7 | 0.0023 | 0.0008 | 0.0015 |
| 8 | 0.0024 | 0.0008 | 0.0016 |
| 9 | 0.0024 | 0.0008 | 0.0016 |
| 10 | 0.0024 | 0.0008 | 0.0016 |
| 11 | 0.0024 | 0.0008 | 0.0016 |
| 12 | 0.0024 | 0.0008 | 0.0016 |
| 13 | 0.0024 | 0.0008 | 0.0016 |
| 14 | 0.0024 | 0.0008 | 0.0016 |
| 15 | 0.0024 | 0.0008 | 0.0016 |
| 16 | 0.0024 | 0.0008 | 0.0016 |
| 17 | 0.0024 | 0.0008 | 0.0016 |
| 18 | 0.0025 | 0.0008 | 0.0016 |
| 19 | 0.0025 | 0.0008 | 0.0016 |
| 20 | 0.0025 | 0.0008 | 0.0016 |
| 21 | 0.0025 | 0.0009 | 0.0016 |
| 22 | 0.0025 | 0.0009 | 0.0016 |
| 23 | 0.0025 | 0.0009 | 0.0017 |
| 24 | 0.0025 | 0.0009 | 0.0017 |
| 25 | 0.0025 | 0.0009 | 0.0017 |

| | | | |
|---|---|---|---|
| 26 | 0.0025 | 0.0009 | 0.0017 |
| 27 | 0.0026 | 0.0009 | 0.0017 |
| 28 | 0.0026 | 0.0009 | 0.0017 |
| 29 | 0.0026 | 0.0009 | 0.0017 |
| 30 | 0.0026 | 0.0009 | 0.0017 |
| 31 | 0.0026 | 0.0009 | 0.0017 |
| 32 | 0.0026 | 0.0009 | 0.0017 |
| 33 | 0.0026 | 0.0009 | 0.0017 |
| 34 | 0.0026 | 0.0009 | 0.0017 |
| 35 | 0.0027 | 0.0009 | 0.0017 |
| 36 | 0.0027 | 0.0009 | 0.0018 |
| 37 | 0.0027 | 0.0009 | 0.0018 |
| 38 | 0.0027 | 0.0009 | 0.0018 |
| 39 | 0.0027 | 0.0009 | 0.0018 |
| 40 | 0.0027 | 0.0009 | 0.0018 |
| 41 | 0.0027 | 0.0009 | 0.0018 |
| 42 | 0.0027 | 0.0009 | 0.0018 |
| 43 | 0.0028 | 0.0009 | 0.0018 |
| 44 | 0.0028 | 0.0009 | 0.0018 |
| 45 | 0.0028 | 0.0010 | 0.0018 |
| 46 | 0.0028 | 0.0010 | 0.0018 |
| 47 | 0.0028 | 0.0010 | 0.0019 |
| 48 | 0.0028 | 0.0010 | 0.0019 |
| 49 | 0.0028 | 0.0010 | 0.0019 |
| 50 | 0.0029 | 0.0010 | 0.0019 |
| 51 | 0.0029 | 0.0010 | 0.0019 |
| 52 | 0.0029 | 0.0010 | 0.0019 |
| 53 | 0.0029 | 0.0010 | 0.0019 |
| 54 | 0.0029 | 0.0010 | 0.0019 |
| 55 | 0.0029 | 0.0010 | 0.0019 |
| 56 | 0.0029 | 0.0010 | 0.0019 |
| 57 | 0.0030 | 0.0010 | 0.0020 |
| 58 | 0.0030 | 0.0010 | 0.0020 |
| 59 | 0.0030 | 0.0010 | 0.0020 |
| 60 | 0.0030 | 0.0010 | 0.0020 |
| 61 | 0.0030 | 0.0010 | 0.0020 |
| 62 | 0.0030 | 0.0010 | 0.0020 |
| 63 | 0.0031 | 0.0010 | 0.0020 |
| 64 | 0.0031 | 0.0011 | 0.0020 |
| 65 | 0.0031 | 0.0011 | 0.0020 |
| 66 | 0.0031 | 0.0011 | 0.0021 |
| 67 | 0.0031 | 0.0011 | 0.0021 |
| 68 | 0.0032 | 0.0011 | 0.0021 |
| 69 | 0.0032 | 0.0011 | 0.0021 |
| 70 | 0.0032 | 0.0011 | 0.0021 |
| 71 | 0.0032 | 0.0011 | 0.0021 |
| 72 | 0.0032 | 0.0011 | 0.0021 |
| 73 | 0.0033 | 0.0011 | 0.0021 |
| 74 | 0.0033 | 0.0011 | 0.0022 |
| 75 | 0.0033 | 0.0011 | 0.0022 |
| 76 | 0.0033 | 0.0011 | 0.0022 |
| 77 | 0.0033 | 0.0011 | 0.0022 |
| 78 | 0.0034 | 0.0011 | 0.0022 |
| 79 | 0.0034 | 0.0012 | 0.0022 |
| 80 | 0.0034 | 0.0012 | 0.0022 |
| 81 | 0.0034 | 0.0012 | 0.0023 |
| 82 | 0.0035 | 0.0012 | 0.0023 |
| 83 | 0.0035 | 0.0012 | 0.0023 |
| 84 | 0.0035 | 0.0012 | 0.0023 |

| | | | |
|---|---|---|---|
| 85 | 0.0035 | 0.0012 | 0.0023 |
| 86 | 0.0035 | 0.0012 | 0.0023 |
| 87 | 0.0036 | 0.0012 | 0.0024 |
| 88 | 0.0036 | 0.0012 | 0.0024 |
| 89 | 0.0036 | 0.0012 | 0.0024 |
| 90 | 0.0036 | 0.0012 | 0.0024 |
| 91 | 0.0037 | 0.0013 | 0.0024 |
| 92 | 0.0037 | 0.0013 | 0.0024 |
| 93 | 0.0037 | 0.0013 | 0.0025 |
| 94 | 0.0038 | 0.0013 | 0.0025 |
| 95 | 0.0038 | 0.0013 | 0.0025 |
| 96 | 0.0038 | 0.0013 | 0.0025 |
| 97 | 0.0039 | 0.0013 | 0.0025 |
| 98 | 0.0039 | 0.0013 | 0.0026 |
| 99 | 0.0039 | 0.0013 | 0.0026 |
| 100 | 0.0039 | 0.0013 | 0.0026 |
| 101 | 0.0040 | 0.0014 | 0.0026 |
| 102 | 0.0040 | 0.0014 | 0.0026 |
| 103 | 0.0040 | 0.0014 | 0.0027 |
| 104 | 0.0041 | 0.0014 | 0.0027 |
| 105 | 0.0041 | 0.0014 | 0.0027 |
| 106 | 0.0041 | 0.0014 | 0.0027 |
| 107 | 0.0042 | 0.0014 | 0.0028 |
| 108 | 0.0042 | 0.0014 | 0.0028 |
| 109 | 0.0043 | 0.0015 | 0.0028 |
| 110 | 0.0043 | 0.0015 | 0.0028 |
| 111 | 0.0043 | 0.0015 | 0.0029 |
| 112 | 0.0044 | 0.0015 | 0.0029 |
| 113 | 0.0044 | 0.0015 | 0.0029 |
| 114 | 0.0045 | 0.0015 | 0.0029 |
| 115 | 0.0045 | 0.0015 | 0.0030 |
| 116 | 0.0045 | 0.0015 | 0.0030 |
| 117 | 0.0046 | 0.0016 | 0.0030 |
| 118 | 0.0046 | 0.0016 | 0.0030 |
| 119 | 0.0047 | 0.0016 | 0.0031 |
| 120 | 0.0047 | 0.0016 | 0.0031 |
| 121 | 0.0048 | 0.0016 | 0.0032 |
| 122 | 0.0048 | 0.0016 | 0.0032 |
| 123 | 0.0049 | 0.0017 | 0.0032 |
| 124 | 0.0049 | 0.0017 | 0.0032 |
| 125 | 0.0050 | 0.0017 | 0.0033 |
| 126 | 0.0050 | 0.0017 | 0.0033 |
| 127 | 0.0051 | 0.0017 | 0.0034 |
| 128 | 0.0052 | 0.0018 | 0.0034 |
| 129 | 0.0052 | 0.0018 | 0.0034 |
| 130 | 0.0053 | 0.0018 | 0.0035 |
| 131 | 0.0054 | 0.0018 | 0.0035 |
| 132 | 0.0054 | 0.0018 | 0.0036 |
| 133 | 0.0055 | 0.0019 | 0.0036 |
| 134 | 0.0055 | 0.0019 | 0.0036 |
| 135 | 0.0056 | 0.0019 | 0.0037 |
| 136 | 0.0057 | 0.0019 | 0.0037 |
| 137 | 0.0058 | 0.0020 | 0.0038 |
| 138 | 0.0058 | 0.0020 | 0.0038 |
| 139 | 0.0059 | 0.0020 | 0.0039 |
| 140 | 0.0060 | 0.0020 | 0.0040 |
| 141 | 0.0061 | 0.0021 | 0.0040 |
| 142 | 0.0062 | 0.0021 | 0.0041 |
| 143 | 0.0063 | 0.0022 | 0.0041 |

| | | | |
|---|---|---|---|
| 144 | 0.0064 | 0.0022 | 0.0042 |
| 145 | 0.0041 | 0.0014 | 0.0027 |
| 146 | 0.0041 | 0.0014 | 0.0027 |
| 147 | 0.0042 | 0.0014 | 0.0028 |
| 148 | 0.0043 | 0.0015 | 0.0028 |
| 149 | 0.0044 | 0.0015 | 0.0029 |
| 150 | 0.0045 | 0.0015 | 0.0029 |
| 151 | 0.0046 | 0.0016 | 0.0030 |
| 152 | 0.0046 | 0.0016 | 0.0031 |
| 153 | 0.0048 | 0.0016 | 0.0031 |
| 154 | 0.0048 | 0.0017 | 0.0032 |
| 155 | 0.0050 | 0.0017 | 0.0033 |
| 156 | 0.0051 | 0.0017 | 0.0033 |
| 157 | 0.0052 | 0.0018 | 0.0034 |
| 158 | 0.0053 | 0.0018 | 0.0035 |
| 159 | 0.0055 | 0.0019 | 0.0036 |
| 160 | 0.0056 | 0.0019 | 0.0037 |
| 161 | 0.0058 | 0.0020 | 0.0038 |
| 162 | 0.0059 | 0.0020 | 0.0039 |
| 163 | 0.0061 | 0.0021 | 0.0040 |
| 164 | 0.0062 | 0.0021 | 0.0041 |
| 165 | 0.0065 | 0.0022 | 0.0043 |
| 166 | 0.0066 | 0.0023 | 0.0043 |
| 167 | 0.0069 | 0.0024 | 0.0045 |
| 168 | 0.0070 | 0.0024 | 0.0046 |
| 169 | 0.0086 | 0.0029 | 0.0056 |
| 170 | 0.0088 | 0.0030 | 0.0058 |
| 171 | 0.0092 | 0.0031 | 0.0061 |
| 172 | 0.0095 | 0.0032 | 0.0062 |
| 173 | 0.0100 | 0.0034 | 0.0066 |
| 174 | 0.0103 | 0.0035 | 0.0068 |
| 175 | 0.0109 | 0.0037 | 0.0072 |
| 176 | 0.0112 | 0.0038 | 0.0074 |
| 177 | 0.0120 | 0.0041 | 0.0079 |
| 178 | 0.0124 | 0.0042 | 0.0082 |
| 179 | 0.0134 | 0.0046 | 0.0088 |
| 180 | 0.0140 | 0.0048 | 0.0092 |
| 181 | 0.0153 | 0.0052 | 0.0101 |
| 182 | 0.0160 | 0.0055 | 0.0106 |
| 183 | 0.0178 | 0.0061 | 0.0117 |
| 184 | 0.0189 | 0.0064 | 0.0124 |
| 185 | 0.0348 | 0.0119 | 0.0229 |
| 186 | 0.0371 | 0.0127 | 0.0244 |
| 187 | 0.0430 | 0.0142 | 0.0288 |
| 188 | 0.0469 | 0.0142 | 0.0328 |
| 189 | 0.0584 | 0.0142 | 0.0442 |
| 190 | 0.0672 | 0.0142 | 0.0530 |
| 191 | 0.1020 | 0.0142 | 0.0878 |
| 192 | 0.1480 | 0.0142 | 0.1339 |
| 193 | 0.6405 | 0.0142 | 0.6263 |
| 194 | 0.0803 | 0.0142 | 0.0661 |
| 195 | 0.0519 | 0.0142 | 0.0377 |
| 196 | 0.0398 | 0.0136 | 0.0262 |
| 197 | 0.0201 | 0.0069 | 0.0132 |
| 198 | 0.0169 | 0.0058 | 0.0111 |
| 199 | 0.0146 | 0.0050 | 0.0096 |
| 200 | 0.0129 | 0.0044 | 0.0085 |
| 201 | 0.0116 | 0.0040 | 0.0076 |
| 202 | 0.0106 | 0.0036 | 0.0070 |

| | | | |
|---|---|---|---|
| 203 | 0.0097 | 0.0033 | 0.0064 |
| 204 | 0.0090 | 0.0031 | 0.0059 |
| 205 | 0.0072 | 0.0025 | 0.0047 |
| 206 | 0.0067 | 0.0023 | 0.0044 |
| 207 | 0.0063 | 0.0022 | 0.0042 |
| 208 | 0.0060 | 0.0020 | 0.0039 |
| 209 | 0.0057 | 0.0019 | 0.0037 |
| 210 | 0.0054 | 0.0018 | 0.0036 |
| 211 | 0.0051 | 0.0018 | 0.0034 |
| 212 | 0.0049 | 0.0017 | 0.0032 |
| 213 | 0.0047 | 0.0016 | 0.0031 |
| 214 | 0.0045 | 0.0015 | 0.0030 |
| 215 | 0.0043 | 0.0015 | 0.0029 |
| 216 | 0.0042 | 0.0014 | 0.0028 |
| 217 | 0.0064 | 0.0022 | 0.0042 |
| 218 | 0.0062 | 0.0021 | 0.0041 |
| 219 | 0.0061 | 0.0021 | 0.0040 |
| 220 | 0.0059 | 0.0020 | 0.0039 |
| 221 | 0.0057 | 0.0020 | 0.0038 |
| 222 | 0.0056 | 0.0019 | 0.0037 |
| 223 | 0.0054 | 0.0019 | 0.0036 |
| 224 | 0.0053 | 0.0018 | 0.0035 |
| 225 | 0.0052 | 0.0018 | 0.0034 |
| 226 | 0.0051 | 0.0017 | 0.0033 |
| 227 | 0.0050 | 0.0017 | 0.0033 |
| 228 | 0.0049 | 0.0017 | 0.0032 |
| 229 | 0.0048 | 0.0016 | 0.0031 |
| 230 | 0.0047 | 0.0016 | 0.0031 |
| 231 | 0.0046 | 0.0016 | 0.0030 |
| 232 | 0.0045 | 0.0015 | 0.0029 |
| 233 | 0.0044 | 0.0015 | 0.0029 |
| 234 | 0.0043 | 0.0015 | 0.0028 |
| 235 | 0.0042 | 0.0014 | 0.0028 |
| 236 | 0.0042 | 0.0014 | 0.0027 |
| 237 | 0.0041 | 0.0014 | 0.0027 |
| 238 | 0.0040 | 0.0014 | 0.0027 |
| 239 | 0.0040 | 0.0014 | 0.0026 |
| 240 | 0.0039 | 0.0013 | 0.0026 |
| 241 | 0.0038 | 0.0013 | 0.0025 |
| 242 | 0.0038 | 0.0013 | 0.0025 |
| 243 | 0.0037 | 0.0013 | 0.0025 |
| 244 | 0.0037 | 0.0013 | 0.0024 |
| 245 | 0.0036 | 0.0012 | 0.0024 |
| 246 | 0.0036 | 0.0012 | 0.0023 |
| 247 | 0.0035 | 0.0012 | 0.0023 |
| 248 | 0.0035 | 0.0012 | 0.0023 |
| 249 | 0.0034 | 0.0012 | 0.0023 |
| 250 | 0.0034 | 0.0012 | 0.0022 |
| 251 | 0.0033 | 0.0011 | 0.0022 |
| 252 | 0.0033 | 0.0011 | 0.0022 |
| 253 | 0.0032 | 0.0011 | 0.0021 |
| 254 | 0.0032 | 0.0011 | 0.0021 |
| 255 | 0.0032 | 0.0011 | 0.0021 |
| 256 | 0.0031 | 0.0011 | 0.0021 |
| 257 | 0.0031 | 0.0011 | 0.0020 |
| 258 | 0.0031 | 0.0010 | 0.0020 |
| 259 | 0.0030 | 0.0010 | 0.0020 |
| 260 | 0.0030 | 0.0010 | 0.0020 |
| 261 | 0.0030 | 0.0010 | 0.0019 |

| | | | |
|---|---|---|---|
| 262 | 0.0029 | 0.0010 | 0.0019 |
| 263 | 0.0029 | 0.0010 | 0.0019 |
| 264 | 0.0029 | 0.0010 | 0.0019 |
| 265 | 0.0028 | 0.0010 | 0.0019 |
| 266 | 0.0028 | 0.0010 | 0.0018 |
| 267 | 0.0028 | 0.0009 | 0.0018 |
| 268 | 0.0028 | 0.0009 | 0.0018 |
| 269 | 0.0027 | 0.0009 | 0.0018 |
| 270 | 0.0027 | 0.0009 | 0.0018 |
| 271 | 0.0027 | 0.0009 | 0.0018 |
| 272 | 0.0026 | 0.0009 | 0.0017 |
| 273 | 0.0026 | 0.0009 | 0.0017 |
| 274 | 0.0026 | 0.0009 | 0.0017 |
| 275 | 0.0026 | 0.0009 | 0.0017 |
| 276 | 0.0026 | 0.0009 | 0.0017 |
| 277 | 0.0025 | 0.0009 | 0.0017 |
| 278 | 0.0025 | 0.0009 | 0.0016 |
| 279 | 0.0025 | 0.0008 | 0.0016 |
| 280 | 0.0025 | 0.0008 | 0.0016 |
| 281 | 0.0024 | 0.0008 | 0.0016 |
| 282 | 0.0024 | 0.0008 | 0.0016 |
| 283 | 0.0024 | 0.0008 | 0.0016 |
| 284 | 0.0024 | 0.0008 | 0.0016 |
| 285 | 0.0024 | 0.0008 | 0.0016 |
| 286 | 0.0023 | 0.0008 | 0.0015 |
| 287 | 0.0023 | 0.0008 | 0.0015 |
| 288 | 0.0023 | 0.0008 | 0.0015 |

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Total soil rain loss = 0.60(In)
Total effective rainfall = 2.02(In)
Peak flow rate in flood hydrograph = 752.60(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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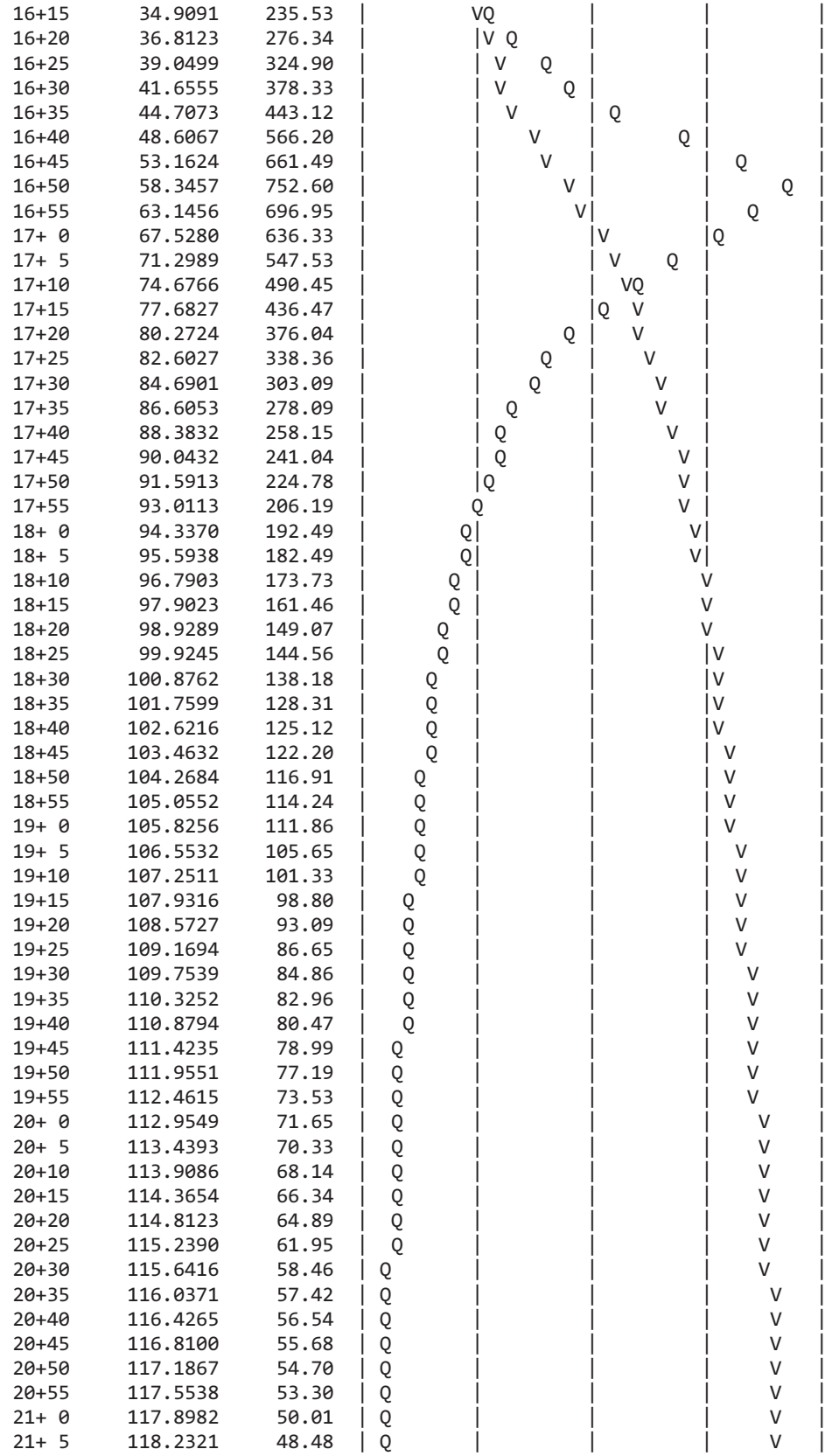
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 200.0 | 400.0 | 600.0 | 800.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0003 | 0.05 | Q | \| | \| | \| | \| |
| 0+10 | 0.0013 | 0.15 | Q | \| | \| | \| | \| |
| 0+15 | 0.0035 | 0.31 | Q | \| | \| | \| | \| |
| 0+20 | 0.0070 | 0.52 | Q | \| | \| | \| | \| |
| 0+25 | 0.0124 | 0.78 | Q | \| | \| | \| | \| |
| 0+30 | 0.0200 | 1.11 | Q | \| | \| | \| | \| |
| 0+35 | 0.0304 | 1.51 | Q | \| | \| | \| | \| |
| 0+40 | 0.0453 | 2.16 | Q | \| | \| | \| | \| |
| 0+45 | 0.0660 | 3.00 | Q | \| | \| | \| | \| |
| 0+50 | 0.0943 | 4.10 | Q | \| | \| | \| | \| |
| 0+55 | 0.1293 | 5.09 | Q | \| | \| | \| | \| |
| 1+ 0 | 0.1705 | 5.99 | Q | \| | \| | \| | \| |
| 1+ 5 | 0.2168 | 6.71 | Q | \| | \| | \| | \| |
| 1+10 | 0.2675 | 7.37 | Q | \| | \| | \| | \| |
| 1+15 | 0.3222 | 7.94 | Q | \| | \| | \| | \| |
| 1+20 | 0.3802 | 8.42 | Q | \| | \| | \| | \| |
| 1+25 | 0.4411 | 8.84 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1+30 | 0.5046 | 9.22 | Q | | | | |
| 1+35 | 0.5704 | 9.56 | Q | | | | |
| 1+40 | 0.6385 | 9.88 | Q | | | | |
| 1+45 | 0.7086 | 10.18 | Q | | | | |
| 1+50 | 0.7807 | 10.46 | Q | | | | |
| 1+55 | 0.8545 | 10.72 | Q | | | | |
| 2+ 0 | 0.9300 | 10.96 | Q | | | | |
| 2+ 5 | 1.0071 | 11.20 | Q | | | | |
| 2+10 | 1.0858 | 11.42 | Q | | | | |
| 2+15 | 1.1659 | 11.64 | Q | | | | |
| 2+20 | 1.2474 | 11.83 | Q | | | | |
| 2+25 | 1.3301 | 12.02 | Q | | | | |
| 2+30 | 1.4142 | 12.20 | Q | | | | |
| 2+35 | 1.4994 | 12.37 | Q | | | | |
| 2+40 | 1.5858 | 12.54 | Q | | | | |
| 2+45 | 1.6734 | 12.71 | Q | | | | |
| 2+50 | 1.7620 | 12.87 | Q | | | | |
| 2+55 | 1.8518 | 13.03 | Q | | | | |
| 3+ 0 | 1.9426 | 13.19 | Q | | | | |
| 3+ 5 | 2.0345 | 13.34 | Q | | | | |
| 3+10 | 2.1274 | 13.49 | Q | | | | |
| 3+15 | 2.2213 | 13.63 | Q | | | | |
| 3+20 | 2.3161 | 13.77 | Q | | | | |
| 3+25 | 2.4118 | 13.90 | Q | | | | |
| 3+30 | 2.5084 | 14.02 | Q | | | | |
| 3+35 | 2.6059 | 14.15 | Q | | | | |
| 3+40 | 2.7042 | 14.28 | Q | | | | |
| 3+45 | 2.8034 | 14.40 | Q | | | | |
| 3+50 | 2.9034 | 14.53 | Q | | | | |
| 3+55 | 3.0043 | 14.65 | Q | | | | |
| 4+ 0 | 3.1061 | 14.77 | Q | | | | |
| 4+ 5 | 3.2086 | 14.89 | Q | | | | |
| 4+10 | 3.3120 | 15.01 | QV | | | | |
| 4+15 | 3.4162 | 15.13 | QV | | | | |
| 4+20 | 3.5212 | 15.25 | QV | | | | |
| 4+25 | 3.6270 | 15.37 | QV | | | | |
| 4+30 | 3.7336 | 15.48 | QV | | | | |
| 4+35 | 3.8410 | 15.59 | QV | | | | |
| 4+40 | 3.9491 | 15.70 | QV | | | | |
| 4+45 | 4.0581 | 15.82 | QV | | | | |
| 4+50 | 4.1678 | 15.93 | QV | | | | |
| 4+55 | 4.2783 | 16.05 | QV | | | | |
| 5+ 0 | 4.3896 | 16.16 | QV | | | | |
| 5+ 5 | 4.5016 | 16.27 | QV | | | | |
| 5+10 | 4.6144 | 16.38 | QV | | | | |
| 5+15 | 4.7280 | 16.49 | QV | | | | |
| 5+20 | 4.8423 | 16.60 | QV | | | | |
| 5+25 | 4.9575 | 16.72 | QV | | | | |
| 5+30 | 5.0734 | 16.83 | QV | | | | |
| 5+35 | 5.1901 | 16.94 | QV | | | | |
| 5+40 | 5.3075 | 17.05 | QV | | | | |
| 5+45 | 5.4256 | 17.16 | QV | | | | |
| 5+50 | 5.5446 | 17.27 | QV | | | | |
| 5+55 | 5.6643 | 17.38 | QV | | | | |
| 6+ 0 | 5.7848 | 17.50 | QV | | | | |
| 6+ 5 | 5.9061 | 17.61 | QV | | | | |
| 6+10 | 6.0281 | 17.72 | QV | | | | |
| 6+15 | 6.1509 | 17.82 | QV | | | | |
| 6+20 | 6.2744 | 17.94 | QV | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6+25 | 6.3987 | 18.05 | QV | | | | |
| 6+30 | 6.5238 | 18.16 | Q V | | | | |
| 6+35 | 6.6497 | 18.28 | Q V | | | | |
| 6+40 | 6.7764 | 18.40 | Q V | | | | |
| 6+45 | 6.9039 | 18.52 | Q V | | | | |
| 6+50 | 7.0323 | 18.64 | Q V | | | | |
| 6+55 | 7.1615 | 18.76 | Q V | | | | |
| 7+ 0 | 7.2916 | 18.89 | Q V | | | | |
| 7+ 5 | 7.4225 | 19.02 | Q V | | | | |
| 7+10 | 7.5544 | 19.14 | Q V | | | | |
| 7+15 | 7.6871 | 19.27 | Q V | | | | |
| 7+20 | 7.8208 | 19.41 | Q V | | | | |
| 7+25 | 7.9554 | 19.54 | Q V | | | | |
| 7+30 | 8.0909 | 19.68 | Q V | | | | |
| 7+35 | 8.2273 | 19.81 | Q V | | | | |
| 7+40 | 8.3647 | 19.95 | Q V | | | | |
| 7+45 | 8.5031 | 20.09 | QV | | | | |
| 7+50 | 8.6423 | 20.22 | QV | | | | |
| 7+55 | 8.7826 | 20.36 | QV | | | | |
| 8+ 0 | 8.9238 | 20.50 | QV | | | | |
| 8+ 5 | 9.0660 | 20.65 | QV | | | | |
| 8+10 | 9.2092 | 20.79 | QV | | | | |
| 8+15 | 9.3534 | 20.94 | QV | | | | |
| 8+20 | 9.4987 | 21.09 | QV | | | | |
| 8+25 | 9.6450 | 21.24 | Q V | | | | |
| 8+30 | 9.7924 | 21.40 | Q V | | | | |
| 8+35 | 9.9408 | 21.55 | Q V | | | | |
| 8+40 | 10.0902 | 21.70 | Q V | | | | |
| 8+45 | 10.2407 | 21.86 | Q V | | | | |
| 8+50 | 10.3924 | 22.02 | Q V | | | | |
| 8+55 | 10.5451 | 22.18 | Q V | | | | |
| 9+ 0 | 10.6990 | 22.34 | Q V | | | | |
| 9+ 5 | 10.8540 | 22.51 | Q V | | | | |
| 9+10 | 11.0102 | 22.68 | Q V | | | | |
| 9+15 | 11.1676 | 22.85 | Q V | | | | |
| 9+20 | 11.3262 | 23.03 | Q V | | | | |
| 9+25 | 11.4861 | 23.21 | Q V | | | | |
| 9+30 | 11.6472 | 23.39 | Q V | | | | |
| 9+35 | 11.8096 | 23.58 | Q V | | | | |
| 9+40 | 11.9733 | 23.77 | Q V | | | | |
| 9+45 | 12.1383 | 23.96 | Q V | | | | |
| 9+50 | 12.3047 | 24.16 | Q V | | | | |
| 9+55 | 12.4725 | 24.36 | Q V | | | | |
| 10+ 0 | 12.6417 | 24.57 | Q V | | | | |
| 10+ 5 | 12.8124 | 24.78 | Q V | | | | |
| 10+10 | 12.9845 | 24.99 | Q  V | | | | |
| 10+15 | 13.1582 | 25.21 | Q  V | | | | |
| 10+20 | 13.3333 | 25.44 | Q  V | | | | |
| 10+25 | 13.5101 | 25.66 | Q  V | | | | |
| 10+30 | 13.6885 | 25.90 | Q  V | | | | |
| 10+35 | 13.8684 | 26.13 | Q  V | | | | |
| 10+40 | 14.0501 | 26.38 | Q  V | | | | |
| 10+45 | 14.2335 | 26.63 | Q  V | | | | |
| 10+50 | 14.4186 | 26.88 | Q  V | | | | |
| 10+55 | 14.6056 | 27.14 | Q  V | | | | |
| 11+ 0 | 14.7943 | 27.41 | Q  V | | | | |
| 11+ 5 | 14.9850 | 27.68 | Q  V | | | | |
| 11+10 | 15.1776 | 27.96 | Q  V | | | | |
| 11+15 | 15.3721 | 28.25 | Q  V | | | | |

```
11+20      15.5687     28.54  |Q  V     |          |          |          |
11+25      15.7673     28.84  |Q  V     |          |          |          |
11+30      15.9681     29.15  |Q  V     |          |          |          |
11+35      16.1710     29.47  |Q   V    |          |          |          |
11+40      16.3762     29.79  |Q   V    |          |          |          |
11+45      16.5837     30.12  |Q   V    |          |          |          |
11+50      16.7935     30.47  |Q   V    |          |          |          |
11+55      17.0057     30.82  |Q   V    |          |          |          |
12+ 0      17.2205     31.18  |Q   V    |          |          |          |
12+ 5      17.4375     31.50  |Q   V    |          |          |          |
12+10      17.6564     31.78  |Q   V    |          |          |          |
12+15      17.8768     32.00  |Q   V    |          |          |          |
12+20      18.0985     32.20  |Q   V    |          |          |          |
12+25      18.3212     32.33  |Q   V    |          |          |          |
12+30      18.5444     32.42  |Q   V    |          |          |          |
12+35      18.7677     32.43  |Q   V    |          |          |          |
12+40      18.9895     32.20  |Q   V    |          |          |          |
12+45      19.2082     31.76  |Q   V    |          |          |          |
12+50      19.4223     31.08  |Q    V   |          |          |          |
12+55      19.6324     30.51  |Q    V   |          |          |          |
13+ 0      19.8394     30.05  |Q    V   |          |          |          |
13+ 5      20.0444     29.77  |Q    V   |          |          |          |
13+10      20.2482     29.59  |Q    V   |          |          |          |
13+15      20.4513     29.49  |Q    V   |          |          |          |
13+20      20.6546     29.52  |Q    V   |          |          |          |
13+25      20.8585     29.61  |Q    V   |          |          |          |
13+30      21.0636     29.78  |Q    V   |          |          |          |
13+35      21.2702     29.99  |Q    V   |          |          |          |
13+40      21.4786     30.26  |Q    V   |          |          |          |
13+45      21.6890     30.56  |Q    V   |          |          |          |
13+50      21.9019     30.91  |Q    V   |          |          |          |
13+55      22.1175     31.31  |Q    V   |          |          |          |
14+ 0      22.3363     31.76  |Q    V   |          |          |          |
14+ 5      22.5586     32.28  |Q     V  |          |          |          |
14+10      22.7849     32.86  |Q     V  |          |          |          |
14+15      23.0159     33.53  |Q     V  |          |          |          |
14+20      23.2521     34.30  |Q     V  |          |          |          |
14+25      23.4941     35.14  |Q     V  |          |          |          |
14+30      23.7426     36.08  |Q     V  |          |          |          |
14+35      23.9983     37.13  |Q     V  |          |          |          |
14+40      24.2626     38.39  |Q     V  |          |          |          |
14+45      24.5369     39.82  |Q     V  |          |          |          |
14+50      24.8226     41.50  | Q    V  |          |          |          |
14+55      25.1202     43.21  | Q    V  |          |          |          |
15+ 0      25.4302     45.01  | Q    V  |          |          |          |
15+ 5      25.7529     46.85  | Q     V |          |          |          |
15+10      26.0892     48.83  | Q     V |          |          |          |
15+15      26.4399     50.93  | Q     V |          |          |          |
15+20      26.8063     53.20  | Q     V |          |          |          |
15+25      27.1917     55.96  | Q     V |          |          |          |
15+30      27.6002     59.32  | Q     V |          |          |          |
15+35      28.0370     63.43  |  Q    V |          |          |          |
15+40      28.5079     68.37  |  Q    V |          |          |          |
15+45      29.0213     74.55  |  Q     V|          |          |          |
15+50      29.5887     82.38  |   Q    V|          |          |          |
15+55      30.2293     93.01  |   Q    V|          |          |          |
16+ 0      30.9805    109.08  |    Q   V|          |          |          |
16+ 5      31.9861    146.01  |      Q V|          |          |          |
16+10      33.2870    188.89  |        QV          |          |          |
```



| | | | |
|---|---|---|---|
| 16+15 | 34.9091 | 235.53 | |
| 16+20 | 36.8123 | 276.34 | |
| 16+25 | 39.0499 | 324.90 | |
| 16+30 | 41.6555 | 378.33 | |
| 16+35 | 44.7073 | 443.12 | |
| 16+40 | 48.6067 | 566.20 | |
| 16+45 | 53.1624 | 661.49 | |
| 16+50 | 58.3457 | 752.60 | |
| 16+55 | 63.1456 | 696.95 | |
| 17+ 0 | 67.5280 | 636.33 | |
| 17+ 5 | 71.2989 | 547.53 | |
| 17+10 | 74.6766 | 490.45 | |
| 17+15 | 77.6827 | 436.47 | |
| 17+20 | 80.2724 | 376.04 | |
| 17+25 | 82.6027 | 338.36 | |
| 17+30 | 84.6901 | 303.09 | |
| 17+35 | 86.6053 | 278.09 | |
| 17+40 | 88.3832 | 258.15 | |
| 17+45 | 90.0432 | 241.04 | |
| 17+50 | 91.5913 | 224.78 | |
| 17+55 | 93.0113 | 206.19 | |
| 18+ 0 | 94.3370 | 192.49 | |
| 18+ 5 | 95.5938 | 182.49 | |
| 18+10 | 96.7903 | 173.73 | |
| 18+15 | 97.9023 | 161.46 | |
| 18+20 | 98.9289 | 149.07 | |
| 18+25 | 99.9245 | 144.56 | |
| 18+30 | 100.8762 | 138.18 | |
| 18+35 | 101.7599 | 128.31 | |
| 18+40 | 102.6216 | 125.12 | |
| 18+45 | 103.4632 | 122.20 | |
| 18+50 | 104.2684 | 116.91 | |
| 18+55 | 105.0552 | 114.24 | |
| 19+ 0 | 105.8256 | 111.86 | |
| 19+ 5 | 106.5532 | 105.65 | |
| 19+10 | 107.2511 | 101.33 | |
| 19+15 | 107.9316 | 98.80 | |
| 19+20 | 108.5727 | 93.09 | |
| 19+25 | 109.1694 | 86.65 | |
| 19+30 | 109.7539 | 84.86 | |
| 19+35 | 110.3252 | 82.96 | |
| 19+40 | 110.8794 | 80.47 | |
| 19+45 | 111.4235 | 78.99 | |
| 19+50 | 111.9551 | 77.19 | |
| 19+55 | 112.4615 | 73.53 | |
| 20+ 0 | 112.9549 | 71.65 | |
| 20+ 5 | 113.4393 | 70.33 | |
| 20+10 | 113.9086 | 68.14 | |
| 20+15 | 114.3654 | 66.34 | |
| 20+20 | 114.8123 | 64.89 | |
| 20+25 | 115.2390 | 61.95 | |
| 20+30 | 115.6416 | 58.46 | |
| 20+35 | 116.0371 | 57.42 | |
| 20+40 | 116.4265 | 56.54 | |
| 20+45 | 116.8100 | 55.68 | |
| 20+50 | 117.1867 | 54.70 | |
| 20+55 | 117.5538 | 53.30 | |
| 21+ 0 | 117.8982 | 50.01 | |
| 21+ 5 | 118.2321 | 48.48 | |

```
21+10     118.5604     47.68  | Q       |         |         |     V   |
21+15     118.8836     46.92  | Q       |         |         |     V   |
21+20     119.2013     46.12  | Q       |         |         |      V  |
21+25     119.5118     45.09  | Q       |         |         |      V  |
21+30     119.8072     42.89  | Q       |         |         |      V  |
21+35     120.0831     40.07  | Q       |         |         |      V  |
21+40     120.3535     39.26  |Q        |         |         |      V  |
21+45     120.6191     38.56  |Q        |         |         |      V  |
21+50     120.8800     37.89  |Q        |         |         |      V  |
21+55     121.1356     37.11  |Q        |         |         |      V  |
22+ 0     121.3833     35.97  |Q        |         |         |      V  |
22+ 5     121.6102     32.95  |Q        |         |         |      V  |
22+10     121.8281     31.64  |Q        |         |         |      V  |
22+15     122.0427     31.16  |Q        |         |         |      V  |
22+20     122.2549     30.80  |Q        |         |         |       V |
22+25     122.4652     30.54  |Q        |         |         |       V |
22+30     122.6743     30.36  |Q        |         |         |       V |
22+35     122.8841     30.46  |Q        |         |         |       V |
22+40     123.0960     30.77  |Q        |         |         |       V |
22+45     123.3066     30.57  |Q        |         |         |       V |
22+50     123.5155     30.33  |Q        |         |         |       V |
22+55     123.7227     30.08  |Q        |         |         |       V |
23+ 0     123.9279     29.80  |Q        |         |         |       V |
23+ 5     124.1311     29.50  |Q        |         |         |       V |
23+10     124.3321     29.19  |Q        |         |         |       V |
23+15     124.5309     28.86  |Q        |         |         |       V |
23+20     124.7272     28.51  |Q        |         |         |       V |
23+25     124.9210     28.13  |Q        |         |         |       V |
23+30     125.1115     27.67  |Q        |         |         |       V |
23+35     125.2978     27.05  |Q        |         |         |       V |
23+40     125.4747     25.69  |Q        |         |         |        V|
23+45     125.6379     23.68  |Q        |         |         |        V|
23+50     125.7975     23.18  |Q        |         |         |        V|
23+55     125.9544     22.79  |Q        |         |         |        V|
24+ 0     126.1090     22.44  |Q        |         |         |        V|
24+ 5     126.2610     22.07  |Q        |         |         |        V|
24+10     126.4098     21.62  |Q        |         |         |        V|
24+15     126.5549     21.07  |Q        |         |         |        V|
24+20     126.6953     20.39  |Q        |         |         |        V|
24+25     126.8295     19.48  Q        |         |         |        V|
24+30     126.9488     17.33  Q        |         |         |        V|
24+35     127.0539     15.25  Q        |         |         |        V|
24+40     127.1521     14.26  Q        |         |         |        V|
24+45     127.2427     13.16  Q        |         |         |        V|
24+50     127.3245     11.88  Q        |         |         |        V|
24+55     127.3987     10.77  Q        |         |         |        V|
25+ 0     127.4659      9.76  Q        |         |         |        V|
25+ 5     127.5275      8.94  Q        |         |         |        V|
25+10     127.5841      8.21  Q        |         |         |        V|
25+15     127.6362      7.57  Q        |         |         |        V|
25+20     127.6848      7.05  Q        |         |         |        V|
25+25     127.7301      6.58  Q        |         |         |        V|
25+30     127.7726      6.17  Q        |         |         |        V|
25+35     127.8126      5.81  Q        |         |         |        V|
25+40     127.8503      5.47  Q        |         |         |        V|
25+45     127.8858      5.15  Q        |         |         |        V|
25+50     127.9192      4.86  Q        |         |         |        V|
25+55     127.9508      4.59  Q        |         |         |        V|
26+ 0     127.9808      4.35  Q        |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26+ 5 | 128.0091 | 4.12 | Q | \| | \| | \| | V\| |
| 26+10 | 128.0359 | 3.89 | Q | \| | \| | \| | V\| |
| 26+15 | 128.0614 | 3.69 | Q | \| | \| | \| | V\| |
| 26+20 | 128.0856 | 3.52 | Q | \| | \| | \| | V\| |
| 26+25 | 128.1086 | 3.34 | Q | \| | \| | \| | V\| |
| 26+30 | 128.1305 | 3.17 | Q | \| | \| | \| | V\| |
| 26+35 | 128.1513 | 3.02 | Q | \| | \| | \| | V\| |
| 26+40 | 128.1710 | 2.87 | Q | \| | \| | \| | V\| |
| 26+45 | 128.1898 | 2.72 | Q | \| | \| | \| | V\| |
| 26+50 | 128.2076 | 2.59 | Q | \| | \| | \| | V\| |
| 26+55 | 128.2246 | 2.46 | Q | \| | \| | \| | V\| |
| 27+ 0 | 128.2406 | 2.33 | Q | \| | \| | \| | V\| |
| 27+ 5 | 128.2558 | 2.21 | Q | \| | \| | \| | V\| |
| 27+10 | 128.2703 | 2.10 | Q | \| | \| | \| | V\| |
| 27+15 | 128.2840 | 1.99 | Q | \| | \| | \| | V\| |
| 27+20 | 128.2971 | 1.89 | Q | \| | \| | \| | V\| |
| 27+25 | 128.3095 | 1.81 | Q | \| | \| | \| | V\| |
| 27+30 | 128.3214 | 1.73 | Q | \| | \| | \| | V\| |
| 27+35 | 128.3327 | 1.65 | Q | \| | \| | \| | V\| |
| 27+40 | 128.3435 | 1.57 | Q | \| | \| | \| | V\| |
| 27+45 | 128.3538 | 1.49 | Q | \| | \| | \| | V\| |
| 27+50 | 128.3636 | 1.42 | Q | \| | \| | \| | V\| |
| 27+55 | 128.3729 | 1.35 | Q | \| | \| | \| | V\| |
| 28+ 0 | 128.3817 | 1.28 | Q | \| | \| | \| | V\| |
| 28+ 5 | 128.3901 | 1.22 | Q | \| | \| | \| | V\| |
| 28+10 | 128.3981 | 1.16 | Q | \| | \| | \| | V\| |
| 28+15 | 128.4057 | 1.10 | Q | \| | \| | \| | V\| |
| 28+20 | 128.4128 | 1.04 | Q | \| | \| | \| | V\| |
| 28+25 | 128.4196 | 0.99 | Q | \| | \| | \| | V\| |
| 28+30 | 128.4261 | 0.94 | Q | \| | \| | \| | V\| |
| 28+35 | 128.4323 | 0.90 | Q | \| | \| | \| | V\| |
| 28+40 | 128.4382 | 0.85 | Q | \| | \| | \| | V\| |
| 28+45 | 128.4437 | 0.81 | Q | \| | \| | \| | V\| |
| 28+50 | 128.4490 | 0.76 | Q | \| | \| | \| | V\| |
| 28+55 | 128.4539 | 0.72 | Q | \| | \| | \| | V\| |
| 29+ 0 | 128.4586 | 0.68 | Q | \| | \| | \| | V\| |
| 29+ 5 | 128.4631 | 0.65 | Q | \| | \| | \| | V\| |
| 29+10 | 128.4673 | 0.61 | Q | \| | \| | \| | V\| |
| 29+15 | 128.4713 | 0.58 | Q | \| | \| | \| | V\| |
| 29+20 | 128.4751 | 0.55 | Q | \| | \| | \| | V\| |
| 29+25 | 128.4786 | 0.51 | Q | \| | \| | \| | V\| |
| 29+30 | 128.4819 | 0.48 | Q | \| | \| | \| | V\| |
| 29+35 | 128.4851 | 0.46 | Q | \| | \| | \| | V\| |
| 29+40 | 128.4881 | 0.44 | Q | \| | \| | \| | V\| |
| 29+45 | 128.4910 | 0.41 | Q | \| | \| | \| | V\| |
| 29+50 | 128.4936 | 0.39 | Q | \| | \| | \| | V\| |
| 29+55 | 128.4962 | 0.37 | Q | \| | \| | \| | V\| |
| 30+ 0 | 128.4986 | 0.35 | Q | \| | \| | \| | V\| |
| 30+ 5 | 128.5008 | 0.33 | Q | \| | \| | \| | V\| |
| 30+10 | 128.5030 | 0.32 | Q | \| | \| | \| | V\| |
| 30+15 | 128.5051 | 0.30 | Q | \| | \| | \| | V\| |
| 30+20 | 128.5071 | 0.29 | Q | \| | \| | \| | V\| |
| 30+25 | 128.5090 | 0.28 | Q | \| | \| | \| | V\| |
| 30+30 | 128.5108 | 0.26 | Q | \| | \| | \| | V\| |
| 30+35 | 128.5125 | 0.25 | Q | \| | \| | \| | V\| |
| 30+40 | 128.5141 | 0.23 | Q | \| | \| | \| | V\| |
| 30+45 | 128.5156 | 0.22 | Q | \| | \| | \| | V\| |
| 30+50 | 128.5170 | 0.20 | Q | \| | \| | \| | V\| |
| 30+55 | 128.5183 | 0.19 | Q | \| | \| | \| | V\| |

```
   31+ 0     128.5195      0.18  Q         |         |         |        V|
   31+ 5     128.5207      0.16  Q         |         |         |        V|
   31+10     128.5217      0.15  Q         |         |         |        V|
   31+15     128.5226      0.13  Q         |         |         |        V|
   31+20     128.5234      0.12  Q         |         |         |        V|
   31+25     128.5241      0.11  Q         |         |         |        V|
   31+30     128.5248      0.09  Q         |         |         |        V|
   31+35     128.5253      0.08  Q         |         |         |        V|
   31+40     128.5258      0.07  Q         |         |         |        V|
   31+45     128.5262      0.06  Q         |         |         |        V|
   31+50     128.5265      0.05  Q         |         |         |        V|
   31+55     128.5268      0.04  Q         |         |         |        V|
   32+ 0     128.5271      0.04  Q         |         |         |        V|
   32+ 5     128.5273      0.03  Q         |         |         |        V|
   32+10     128.5275      0.02  Q         |         |         |        V|
   32+15     128.5276      0.02  Q         |         |         |        V|
   32+20     128.5276      0.01  Q         |         |         |        V|
   32+25     128.5277      0.00  Q         |         |         |         V
-------------------------------------------------------------------------
```

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 49
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 17446.64 | 1 | 1.36 |
| Rainfall data for year 100 | | |
| 17446.64 | 6 | 2.15 |
| Rainfall data for year 100 | | |
| 17446.64 | 24 | 3.24 |

---

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 73.7 | 90.0 | 17446.64 | 1.000 | 0.193 | 0.976 | 0.188 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.188

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 17020.94 | 0.976 | 73.7 | 90.0 | 1.11 | 0.681 |
| 425.70 | 0.024 | 98.0 | 98.0 | 0.20 | 0.928 |

Area-averaged catchment yield fraction, Y = 0.687
Area-averaged low loss fraction, Yb = 0.313
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 81047.00(Ft.)
Length from concentration point to centroid = 39563.00(Ft.)
Elevation difference along watercourse = 2612.40(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 17446.64(Ac.)
Catchment Lag time = 1.921 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 4.3384
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.188(In/Hr)
Average low loss rate fraction (Yb) = 0.313 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.180
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.820

Computed peak 5-minute rainfall = 0.645(In)
Computed peak 30-minute rainfall = 1.105(In)
Specified peak 1-hour rainfall = 1.360(In)
Computed peak 3-hour rainfall = 1.801(In)
Specified peak 6-hour rainfall = 2.150(In)
Specified peak 24-hour rainfall = 3.240(In)

Rainfall depth area reduction factors:
Using a total area of 17446.64(Ac.) (Ref: fig. E-4)

5-minute factor = 0.568 Adjusted rainfall = 0.367(In)
30-minute factor = 0.594 Adjusted rainfall = 0.656(In)
1-hour factor = 0.605 Adjusted rainfall = 0.823(In)
3-hour factor = 0.908 Adjusted rainfall = 1.635(In)
6-hour factor = 0.957 Adjusted rainfall = 2.057(In)
24-hour factor = 0.974 Adjusted rainfall = 3.155(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 210995.30 (CFS)) | |
| 1 | 0.206 | 434.623 |
| 2 | 0.618 | 869.246 |
| 3 | 1.032 | 873.480 |
| 4 | 1.625 | 1251.922 |
| 5 | 2.366 | 1563.169 |

| | | |
|---|---|---|
| 6 | 3.121 | 1592.420 |
| 7 | 4.085 | 2035.078 |
| 8 | 5.139 | 2224.011 |
| 9 | 6.236 | 2313.686 |
| 10 | 7.590 | 2857.279 |
| 11 | 9.009 | 2994.395 |
| 12 | 10.558 | 3267.314 |
| 13 | 12.966 | 5080.180 |
| 14 | 15.533 | 5416.978 |
| 15 | 18.413 | 6076.469 |
| 16 | 22.344 | 8294.244 |
| 17 | 26.388 | 8532.086 |
| 18 | 30.323 | 8302.613 |
| 19 | 33.956 | 7665.416 |
| 20 | 37.591 | 7670.467 |
| 21 | 41.160 | 7530.812 |
| 22 | 44.698 | 7464.989 |
| 23 | 48.172 | 7330.347 |
| 24 | 51.074 | 6122.057 |
| 25 | 53.464 | 5042.553 |
| 26 | 55.814 | 4958.843 |
| 27 | 57.760 | 4106.802 |
| 28 | 59.486 | 3640.289 |
| 29 | 61.205 | 3627.504 |
| 30 | 62.699 | 3153.128 |
| 31 | 64.080 | 2913.110 |
| 32 | 65.453 | 2896.212 |
| 33 | 66.692 | 2614.635 |
| 34 | 67.859 | 2462.850 |
| 35 | 69.013 | 2435.140 |
| 36 | 70.072 | 2234.811 |
| 37 | 71.110 | 2190.324 |
| 38 | 72.127 | 2145.936 |
| 39 | 73.038 | 1921.327 |
| 40 | 73.934 | 1890.079 |
| 41 | 74.802 | 1831.740 |
| 42 | 75.579 | 1639.391 |
| 43 | 76.349 | 1624.253 |
| 44 | 77.110 | 1605.926 |
| 45 | 77.852 | 1565.640 |
| 46 | 78.593 | 1564.204 |
| 47 | 79.270 | 1428.065 |
| 48 | 79.853 | 1229.756 |
| 49 | 80.435 | 1228.076 |
| 50 | 81.017 | 1228.076 |
| 51 | 81.599 | 1228.076 |
| 52 | 82.180 | 1225.998 |
| 53 | 82.697 | 1090.094 |
| 54 | 83.175 | 1008.384 |
| 55 | 83.653 | 1008.384 |
| 56 | 84.130 | 1008.384 |
| 57 | 84.608 | 1008.384 |
| 58 | 85.082 | 999.269 |
| 59 | 85.510 | 904.080 |
| 60 | 85.927 | 878.766 |
| 61 | 86.343 | 878.766 |
| 62 | 86.760 | 878.766 |
| 63 | 87.176 | 878.766 |
| 64 | 87.580 | 851.291 |

| | | |
|---|---|---|
| 65 | 87.932 | 743.299 |
| 66 | 88.279 | 732.305 |
| 67 | 88.626 | 732.305 |
| 68 | 88.973 | 732.305 |
| 69 | 89.320 | 732.305 |
| 70 | 89.637 | 668.545 |
| 71 | 89.902 | 557.804 |
| 72 | 90.165 | 555.820 |
| 73 | 90.428 | 555.820 |
| 74 | 90.692 | 555.820 |
| 75 | 90.955 | 555.604 |
| 76 | 91.203 | 522.906 |
| 77 | 91.440 | 499.432 |
| 78 | 91.676 | 499.432 |
| 79 | 91.913 | 499.432 |
| 80 | 92.150 | 499.432 |
| 81 | 92.385 | 495.564 |
| 82 | 92.595 | 442.883 |
| 83 | 92.797 | 426.202 |
| 84 | 92.999 | 426.202 |
| 85 | 93.201 | 426.202 |
| 86 | 93.403 | 426.202 |
| 87 | 93.601 | 418.322 |
| 88 | 93.782 | 381.170 |
| 89 | 93.960 | 376.405 |
| 90 | 94.138 | 376.405 |
| 91 | 94.317 | 376.405 |
| 92 | 94.495 | 376.405 |
| 93 | 94.658 | 343.946 |
| 94 | 94.789 | 277.008 |
| 95 | 94.920 | 274.981 |
| 96 | 95.050 | 274.981 |
| 97 | 95.180 | 274.981 |
| 98 | 95.311 | 274.981 |
| 99 | 95.441 | 274.981 |
| 100 | 95.571 | 274.981 |
| 101 | 95.702 | 274.981 |
| 102 | 95.832 | 274.981 |
| 103 | 95.962 | 274.981 |
| 104 | 96.092 | 272.585 |
| 105 | 96.200 | 228.282 |
| 106 | 96.300 | 211.636 |
| 107 | 96.400 | 211.636 |
| 108 | 96.501 | 211.636 |
| 109 | 96.601 | 211.636 |
| 110 | 96.701 | 211.636 |
| 111 | 96.802 | 211.636 |
| 112 | 96.902 | 211.636 |
| 113 | 97.002 | 211.636 |
| 114 | 97.102 | 211.636 |
| 115 | 97.203 | 211.636 |
| 116 | 97.294 | 192.891 |
| 117 | 97.364 | 147.078 |
| 118 | 97.433 | 144.996 |
| 119 | 97.501 | 144.996 |
| 120 | 97.570 | 144.996 |
| 121 | 97.639 | 144.996 |
| 122 | 97.708 | 144.996 |
| 123 | 97.776 | 144.996 |

| | | |
|---|---|---|
| 124 | 97.845 | 144.996 |
| 125 | 97.914 | 144.996 |
| 126 | 97.982 | 144.996 |
| 127 | 98.050 | 143.559 |
| 128 | 98.100 | 105.284 |
| 129 | 98.142 | 88.243 |
| 130 | 98.184 | 88.243 |
| 131 | 98.226 | 88.243 |
| 132 | 98.268 | 88.243 |
| 133 | 98.309 | 88.243 |
| 134 | 98.351 | 88.243 |
| 135 | 98.393 | 88.243 |
| 136 | 98.435 | 88.243 |
| 137 | 98.477 | 88.243 |
| 138 | 98.519 | 88.243 |
| 139 | 98.561 | 90.306 |
| 140 | 98.607 | 96.285 |
| 141 | 98.653 | 96.664 |
| 142 | 98.699 | 96.664 |
| 143 | 98.744 | 96.664 |
| 144 | 98.790 | 96.664 |
| 145 | 98.836 | 96.664 |
| 146 | 98.882 | 96.664 |
| 147 | 98.928 | 96.664 |
| 148 | 98.973 | 96.664 |
| 149 | 99.019 | 96.664 |
| 150 | 99.065 | 96.614 |
| 151 | 99.110 | 94.490 |
| 152 | 99.154 | 93.369 |
| 153 | 99.198 | 93.369 |
| 154 | 99.243 | 93.369 |
| 155 | 99.287 | 93.369 |
| 156 | 99.331 | 93.369 |
| 157 | 99.375 | 93.369 |
| 158 | 99.420 | 93.369 |
| 159 | 99.464 | 93.369 |
| 160 | 99.508 | 93.369 |
| 161 | 99.552 | 93.369 |
| 162 | 99.592 | 83.755 |
| 163 | 99.616 | 49.556 |
| 164 | 99.638 | 46.913 |
| 165 | 99.660 | 46.913 |
| 166 | 99.682 | 46.913 |
| 167 | 99.705 | 46.913 |
| 168 | 99.727 | 46.913 |
| 169 | 99.749 | 46.913 |
| 170 | 99.771 | 46.913 |
| 171 | 99.793 | 46.913 |
| 172 | 99.816 | 46.913 |
| 173 | 99.838 | 46.913 |
| 174 | 99.860 | 46.913 |
| 175 | 99.882 | 46.913 |
| 176 | 99.905 | 46.913 |
| 177 | 99.927 | 46.913 |
| 178 | 99.949 | 46.913 |
| 179 | 99.971 | 46.913 |
| 180 | 100.000 | 23.457 |

| Peak Unit | Adjusted mass rainfall | Unit rainfall |
|---|---|---|

| Number | (In) | (In) |
|---|---|---|
| 1 | 0.3668 | 0.3668 |
| 2 | 0.4592 | 0.0924 |
| 3 | 0.5237 | 0.0645 |
| 4 | 0.5749 | 0.0512 |
| 5 | 0.6180 | 0.0431 |
| 6 | 0.6557 | 0.0376 |
| 7 | 0.6896 | 0.0340 |
| 8 | 0.7205 | 0.0309 |
| 9 | 0.7488 | 0.0284 |
| 10 | 0.7752 | 0.0263 |
| 11 | 0.7998 | 0.0246 |
| 12 | 0.8229 | 0.0231 |
| 13 | 0.8651 | 0.0422 |
| 14 | 0.9061 | 0.0410 |
| 15 | 0.9460 | 0.0399 |
| 16 | 0.9850 | 0.0389 |
| 17 | 1.0230 | 0.0380 |
| 18 | 1.0602 | 0.0372 |
| 19 | 1.0966 | 0.0364 |
| 20 | 1.1324 | 0.0357 |
| 21 | 1.1674 | 0.0351 |
| 22 | 1.2019 | 0.0344 |
| 23 | 1.2357 | 0.0339 |
| 24 | 1.2690 | 0.0333 |
| 25 | 1.3018 | 0.0328 |
| 26 | 1.3341 | 0.0323 |
| 27 | 1.3659 | 0.0318 |
| 28 | 1.3973 | 0.0314 |
| 29 | 1.4283 | 0.0310 |
| 30 | 1.4589 | 0.0306 |
| 31 | 1.4891 | 0.0302 |
| 32 | 1.5190 | 0.0298 |
| 33 | 1.5484 | 0.0295 |
| 34 | 1.5776 | 0.0292 |
| 35 | 1.6064 | 0.0288 |
| 36 | 1.6350 | 0.0285 |
| 37 | 1.6499 | 0.0149 |
| 38 | 1.6645 | 0.0146 |
| 39 | 1.6789 | 0.0144 |
| 40 | 1.6930 | 0.0141 |
| 41 | 1.7069 | 0.0139 |
| 42 | 1.7206 | 0.0137 |
| 43 | 1.7340 | 0.0135 |
| 44 | 1.7473 | 0.0132 |
| 45 | 1.7603 | 0.0130 |
| 46 | 1.7732 | 0.0129 |
| 47 | 1.7858 | 0.0127 |
| 48 | 1.7983 | 0.0125 |
| 49 | 1.8106 | 0.0123 |
| 50 | 1.8228 | 0.0121 |
| 51 | 1.8348 | 0.0120 |
| 52 | 1.8466 | 0.0118 |
| 53 | 1.8583 | 0.0117 |
| 54 | 1.8698 | 0.0115 |
| 55 | 1.8812 | 0.0114 |
| 56 | 1.8925 | 0.0113 |
| 57 | 1.9036 | 0.0111 |
| 58 | 1.9146 | 0.0110 |

| | | |
|---|---|---|
| 59 | 1.9254 | 0.0109 |
| 60 | 1.9362 | 0.0107 |
| 61 | 1.9468 | 0.0106 |
| 62 | 1.9573 | 0.0105 |
| 63 | 1.9677 | 0.0104 |
| 64 | 1.9780 | 0.0103 |
| 65 | 1.9881 | 0.0102 |
| 66 | 1.9982 | 0.0101 |
| 67 | 2.0082 | 0.0100 |
| 68 | 2.0181 | 0.0099 |
| 69 | 2.0278 | 0.0098 |
| 70 | 2.0375 | 0.0097 |
| 71 | 2.0471 | 0.0096 |
| 72 | 2.0566 | 0.0095 |
| 73 | 2.0654 | 0.0088 |
| 74 | 2.0741 | 0.0087 |
| 75 | 2.0827 | 0.0086 |
| 76 | 2.0912 | 0.0085 |
| 77 | 2.0997 | 0.0085 |
| 78 | 2.1081 | 0.0084 |
| 79 | 2.1164 | 0.0083 |
| 80 | 2.1246 | 0.0082 |
| 81 | 2.1328 | 0.0082 |
| 82 | 2.1409 | 0.0081 |
| 83 | 2.1489 | 0.0080 |
| 84 | 2.1569 | 0.0080 |
| 85 | 2.1647 | 0.0079 |
| 86 | 2.1726 | 0.0078 |
| 87 | 2.1803 | 0.0078 |
| 88 | 2.1881 | 0.0077 |
| 89 | 2.1957 | 0.0076 |
| 90 | 2.2033 | 0.0076 |
| 91 | 2.2108 | 0.0075 |
| 92 | 2.2183 | 0.0075 |
| 93 | 2.2257 | 0.0074 |
| 94 | 2.2331 | 0.0074 |
| 95 | 2.2404 | 0.0073 |
| 96 | 2.2476 | 0.0073 |
| 97 | 2.2548 | 0.0072 |
| 98 | 2.2620 | 0.0072 |
| 99 | 2.2691 | 0.0071 |
| 100 | 2.2761 | 0.0071 |
| 101 | 2.2831 | 0.0070 |
| 102 | 2.2901 | 0.0070 |
| 103 | 2.2970 | 0.0069 |
| 104 | 2.3039 | 0.0069 |
| 105 | 2.3107 | 0.0068 |
| 106 | 2.3175 | 0.0068 |
| 107 | 2.3242 | 0.0067 |
| 108 | 2.3309 | 0.0067 |
| 109 | 2.3375 | 0.0066 |
| 110 | 2.3441 | 0.0066 |
| 111 | 2.3507 | 0.0066 |
| 112 | 2.3572 | 0.0065 |
| 113 | 2.3637 | 0.0065 |
| 114 | 2.3701 | 0.0064 |
| 115 | 2.3765 | 0.0064 |
| 116 | 2.3829 | 0.0064 |
| 117 | 2.3892 | 0.0063 |

| | | |
|---|---|---|
| 118 | 2.3955 | 0.0063 |
| 119 | 2.4017 | 0.0062 |
| 120 | 2.4079 | 0.0062 |
| 121 | 2.4141 | 0.0062 |
| 122 | 2.4202 | 0.0061 |
| 123 | 2.4264 | 0.0061 |
| 124 | 2.4324 | 0.0061 |
| 125 | 2.4385 | 0.0060 |
| 126 | 2.4445 | 0.0060 |
| 127 | 2.4504 | 0.0060 |
| 128 | 2.4564 | 0.0059 |
| 129 | 2.4623 | 0.0059 |
| 130 | 2.4682 | 0.0059 |
| 131 | 2.4740 | 0.0058 |
| 132 | 2.4798 | 0.0058 |
| 133 | 2.4856 | 0.0058 |
| 134 | 2.4914 | 0.0058 |
| 135 | 2.4971 | 0.0057 |
| 136 | 2.5028 | 0.0057 |
| 137 | 2.5085 | 0.0057 |
| 138 | 2.5141 | 0.0056 |
| 139 | 2.5197 | 0.0056 |
| 140 | 2.5253 | 0.0056 |
| 141 | 2.5309 | 0.0056 |
| 142 | 2.5364 | 0.0055 |
| 143 | 2.5419 | 0.0055 |
| 144 | 2.5474 | 0.0055 |
| 145 | 2.5528 | 0.0054 |
| 146 | 2.5582 | 0.0054 |
| 147 | 2.5636 | 0.0054 |
| 148 | 2.5690 | 0.0054 |
| 149 | 2.5743 | 0.0053 |
| 150 | 2.5797 | 0.0053 |
| 151 | 2.5850 | 0.0053 |
| 152 | 2.5902 | 0.0053 |
| 153 | 2.5955 | 0.0052 |
| 154 | 2.6007 | 0.0052 |
| 155 | 2.6059 | 0.0052 |
| 156 | 2.6111 | 0.0052 |
| 157 | 2.6162 | 0.0052 |
| 158 | 2.6214 | 0.0051 |
| 159 | 2.6265 | 0.0051 |
| 160 | 2.6316 | 0.0051 |
| 161 | 2.6366 | 0.0051 |
| 162 | 2.6417 | 0.0050 |
| 163 | 2.6467 | 0.0050 |
| 164 | 2.6517 | 0.0050 |
| 165 | 2.6567 | 0.0050 |
| 166 | 2.6617 | 0.0050 |
| 167 | 2.6666 | 0.0049 |
| 168 | 2.6715 | 0.0049 |
| 169 | 2.6764 | 0.0049 |
| 170 | 2.6813 | 0.0049 |
| 171 | 2.6862 | 0.0049 |
| 172 | 2.6910 | 0.0048 |
| 173 | 2.6958 | 0.0048 |
| 174 | 2.7006 | 0.0048 |
| 175 | 2.7054 | 0.0048 |
| 176 | 2.7102 | 0.0048 |

| | | |
|---|---|---|
| 177 | 2.7149 | 0.0047 |
| 178 | 2.7196 | 0.0047 |
| 179 | 2.7243 | 0.0047 |
| 180 | 2.7290 | 0.0047 |
| 181 | 2.7337 | 0.0047 |
| 182 | 2.7384 | 0.0047 |
| 183 | 2.7430 | 0.0046 |
| 184 | 2.7476 | 0.0046 |
| 185 | 2.7522 | 0.0046 |
| 186 | 2.7568 | 0.0046 |
| 187 | 2.7614 | 0.0046 |
| 188 | 2.7659 | 0.0046 |
| 189 | 2.7705 | 0.0045 |
| 190 | 2.7750 | 0.0045 |
| 191 | 2.7795 | 0.0045 |
| 192 | 2.7840 | 0.0045 |
| 193 | 2.7884 | 0.0045 |
| 194 | 2.7929 | 0.0045 |
| 195 | 2.7973 | 0.0044 |
| 196 | 2.8017 | 0.0044 |
| 197 | 2.8061 | 0.0044 |
| 198 | 2.8105 | 0.0044 |
| 199 | 2.8149 | 0.0044 |
| 200 | 2.8193 | 0.0044 |
| 201 | 2.8236 | 0.0043 |
| 202 | 2.8279 | 0.0043 |
| 203 | 2.8323 | 0.0043 |
| 204 | 2.8366 | 0.0043 |
| 205 | 2.8408 | 0.0043 |
| 206 | 2.8451 | 0.0043 |
| 207 | 2.8494 | 0.0043 |
| 208 | 2.8536 | 0.0042 |
| 209 | 2.8578 | 0.0042 |
| 210 | 2.8621 | 0.0042 |
| 211 | 2.8663 | 0.0042 |
| 212 | 2.8704 | 0.0042 |
| 213 | 2.8746 | 0.0042 |
| 214 | 2.8788 | 0.0042 |
| 215 | 2.8829 | 0.0041 |
| 216 | 2.8871 | 0.0041 |
| 217 | 2.8912 | 0.0041 |
| 218 | 2.8953 | 0.0041 |
| 219 | 2.8994 | 0.0041 |
| 220 | 2.9035 | 0.0041 |
| 221 | 2.9075 | 0.0041 |
| 222 | 2.9116 | 0.0041 |
| 223 | 2.9156 | 0.0040 |
| 224 | 2.9197 | 0.0040 |
| 225 | 2.9237 | 0.0040 |
| 226 | 2.9277 | 0.0040 |
| 227 | 2.9317 | 0.0040 |
| 228 | 2.9356 | 0.0040 |
| 229 | 2.9396 | 0.0040 |
| 230 | 2.9436 | 0.0040 |
| 231 | 2.9475 | 0.0039 |
| 232 | 2.9515 | 0.0039 |
| 233 | 2.9554 | 0.0039 |
| 234 | 2.9593 | 0.0039 |
| 235 | 2.9632 | 0.0039 |

| | | |
|---|---|---|
| 236 | 2.9671 | 0.0039 |
| 237 | 2.9709 | 0.0039 |
| 238 | 2.9748 | 0.0039 |
| 239 | 2.9787 | 0.0039 |
| 240 | 2.9825 | 0.0038 |
| 241 | 2.9863 | 0.0038 |
| 242 | 2.9902 | 0.0038 |
| 243 | 2.9940 | 0.0038 |
| 244 | 2.9978 | 0.0038 |
| 245 | 3.0016 | 0.0038 |
| 246 | 3.0053 | 0.0038 |
| 247 | 3.0091 | 0.0038 |
| 248 | 3.0129 | 0.0038 |
| 249 | 3.0166 | 0.0037 |
| 250 | 3.0203 | 0.0037 |
| 251 | 3.0241 | 0.0037 |
| 252 | 3.0278 | 0.0037 |
| 253 | 3.0315 | 0.0037 |
| 254 | 3.0352 | 0.0037 |
| 255 | 3.0389 | 0.0037 |
| 256 | 3.0425 | 0.0037 |
| 257 | 3.0462 | 0.0037 |
| 258 | 3.0499 | 0.0037 |
| 259 | 3.0535 | 0.0036 |
| 260 | 3.0571 | 0.0036 |
| 261 | 3.0608 | 0.0036 |
| 262 | 3.0644 | 0.0036 |
| 263 | 3.0680 | 0.0036 |
| 264 | 3.0716 | 0.0036 |
| 265 | 3.0752 | 0.0036 |
| 266 | 3.0787 | 0.0036 |
| 267 | 3.0823 | 0.0036 |
| 268 | 3.0859 | 0.0036 |
| 269 | 3.0894 | 0.0036 |
| 270 | 3.0930 | 0.0035 |
| 271 | 3.0965 | 0.0035 |
| 272 | 3.1000 | 0.0035 |
| 273 | 3.1035 | 0.0035 |
| 274 | 3.1070 | 0.0035 |
| 275 | 3.1105 | 0.0035 |
| 276 | 3.1140 | 0.0035 |
| 277 | 3.1175 | 0.0035 |
| 278 | 3.1210 | 0.0035 |
| 279 | 3.1244 | 0.0035 |
| 280 | 3.1279 | 0.0035 |
| 281 | 3.1313 | 0.0034 |
| 282 | 3.1348 | 0.0034 |
| 283 | 3.1382 | 0.0034 |
| 284 | 3.1416 | 0.0034 |
| 285 | 3.1450 | 0.0034 |
| 286 | 3.1484 | 0.0034 |
| 287 | 3.1518 | 0.0034 |
| 288 | 3.1552 | 0.0034 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0034 | 0.0011 | 0.0023 |

| | | | |
|---|---|---|---|
| 2 | 0.0034 | 0.0011 | 0.0023 |
| 3 | 0.0034 | 0.0011 | 0.0023 |
| 4 | 0.0034 | 0.0011 | 0.0023 |
| 5 | 0.0034 | 0.0011 | 0.0024 |
| 6 | 0.0034 | 0.0011 | 0.0024 |
| 7 | 0.0035 | 0.0011 | 0.0024 |
| 8 | 0.0035 | 0.0011 | 0.0024 |
| 9 | 0.0035 | 0.0011 | 0.0024 |
| 10 | 0.0035 | 0.0011 | 0.0024 |
| 11 | 0.0035 | 0.0011 | 0.0024 |
| 12 | 0.0035 | 0.0011 | 0.0024 |
| 13 | 0.0035 | 0.0011 | 0.0024 |
| 14 | 0.0036 | 0.0011 | 0.0024 |
| 15 | 0.0036 | 0.0011 | 0.0025 |
| 16 | 0.0036 | 0.0011 | 0.0025 |
| 17 | 0.0036 | 0.0011 | 0.0025 |
| 18 | 0.0036 | 0.0011 | 0.0025 |
| 19 | 0.0036 | 0.0011 | 0.0025 |
| 20 | 0.0036 | 0.0011 | 0.0025 |
| 21 | 0.0037 | 0.0011 | 0.0025 |
| 22 | 0.0037 | 0.0011 | 0.0025 |
| 23 | 0.0037 | 0.0012 | 0.0025 |
| 24 | 0.0037 | 0.0012 | 0.0025 |
| 25 | 0.0037 | 0.0012 | 0.0026 |
| 26 | 0.0037 | 0.0012 | 0.0026 |
| 27 | 0.0037 | 0.0012 | 0.0026 |
| 28 | 0.0038 | 0.0012 | 0.0026 |
| 29 | 0.0038 | 0.0012 | 0.0026 |
| 30 | 0.0038 | 0.0012 | 0.0026 |
| 31 | 0.0038 | 0.0012 | 0.0026 |
| 32 | 0.0038 | 0.0012 | 0.0026 |
| 33 | 0.0038 | 0.0012 | 0.0026 |
| 34 | 0.0039 | 0.0012 | 0.0026 |
| 35 | 0.0039 | 0.0012 | 0.0027 |
| 36 | 0.0039 | 0.0012 | 0.0027 |
| 37 | 0.0039 | 0.0012 | 0.0027 |
| 38 | 0.0039 | 0.0012 | 0.0027 |
| 39 | 0.0039 | 0.0012 | 0.0027 |
| 40 | 0.0040 | 0.0012 | 0.0027 |
| 41 | 0.0040 | 0.0012 | 0.0027 |
| 42 | 0.0040 | 0.0013 | 0.0027 |
| 43 | 0.0040 | 0.0013 | 0.0028 |
| 44 | 0.0040 | 0.0013 | 0.0028 |
| 45 | 0.0041 | 0.0013 | 0.0028 |
| 46 | 0.0041 | 0.0013 | 0.0028 |
| 47 | 0.0041 | 0.0013 | 0.0028 |
| 48 | 0.0041 | 0.0013 | 0.0028 |
| 49 | 0.0041 | 0.0013 | 0.0028 |
| 50 | 0.0041 | 0.0013 | 0.0028 |
| 51 | 0.0042 | 0.0013 | 0.0029 |
| 52 | 0.0042 | 0.0013 | 0.0029 |
| 53 | 0.0042 | 0.0013 | 0.0029 |
| 54 | 0.0042 | 0.0013 | 0.0029 |
| 55 | 0.0043 | 0.0013 | 0.0029 |
| 56 | 0.0043 | 0.0013 | 0.0029 |
| 57 | 0.0043 | 0.0013 | 0.0030 |
| 58 | 0.0043 | 0.0014 | 0.0030 |
| 59 | 0.0043 | 0.0014 | 0.0030 |
| 60 | 0.0044 | 0.0014 | 0.0030 |

| | | | |
|---|---|---|---|
| 61 | 0.0044 | 0.0014 | 0.0030 |
| 62 | 0.0044 | 0.0014 | 0.0030 |
| 63 | 0.0044 | 0.0014 | 0.0030 |
| 64 | 0.0045 | 0.0014 | 0.0031 |
| 65 | 0.0045 | 0.0014 | 0.0031 |
| 66 | 0.0045 | 0.0014 | 0.0031 |
| 67 | 0.0045 | 0.0014 | 0.0031 |
| 68 | 0.0046 | 0.0014 | 0.0031 |
| 69 | 0.0046 | 0.0014 | 0.0031 |
| 70 | 0.0046 | 0.0014 | 0.0032 |
| 71 | 0.0046 | 0.0015 | 0.0032 |
| 72 | 0.0047 | 0.0015 | 0.0032 |
| 73 | 0.0047 | 0.0015 | 0.0032 |
| 74 | 0.0047 | 0.0015 | 0.0032 |
| 75 | 0.0047 | 0.0015 | 0.0033 |
| 76 | 0.0048 | 0.0015 | 0.0033 |
| 77 | 0.0048 | 0.0015 | 0.0033 |
| 78 | 0.0048 | 0.0015 | 0.0033 |
| 79 | 0.0049 | 0.0015 | 0.0033 |
| 80 | 0.0049 | 0.0015 | 0.0034 |
| 81 | 0.0049 | 0.0015 | 0.0034 |
| 82 | 0.0049 | 0.0015 | 0.0034 |
| 83 | 0.0050 | 0.0016 | 0.0034 |
| 84 | 0.0050 | 0.0016 | 0.0034 |
| 85 | 0.0050 | 0.0016 | 0.0035 |
| 86 | 0.0051 | 0.0016 | 0.0035 |
| 87 | 0.0051 | 0.0016 | 0.0035 |
| 88 | 0.0051 | 0.0016 | 0.0035 |
| 89 | 0.0052 | 0.0016 | 0.0036 |
| 90 | 0.0052 | 0.0016 | 0.0036 |
| 91 | 0.0052 | 0.0016 | 0.0036 |
| 92 | 0.0053 | 0.0017 | 0.0036 |
| 93 | 0.0053 | 0.0017 | 0.0037 |
| 94 | 0.0053 | 0.0017 | 0.0037 |
| 95 | 0.0054 | 0.0017 | 0.0037 |
| 96 | 0.0054 | 0.0017 | 0.0037 |
| 97 | 0.0055 | 0.0017 | 0.0038 |
| 98 | 0.0055 | 0.0017 | 0.0038 |
| 99 | 0.0056 | 0.0017 | 0.0038 |
| 100 | 0.0056 | 0.0017 | 0.0038 |
| 101 | 0.0056 | 0.0018 | 0.0039 |
| 102 | 0.0057 | 0.0018 | 0.0039 |
| 103 | 0.0057 | 0.0018 | 0.0039 |
| 104 | 0.0058 | 0.0018 | 0.0040 |
| 105 | 0.0058 | 0.0018 | 0.0040 |
| 106 | 0.0058 | 0.0018 | 0.0040 |
| 107 | 0.0059 | 0.0019 | 0.0041 |
| 108 | 0.0059 | 0.0019 | 0.0041 |
| 109 | 0.0060 | 0.0019 | 0.0041 |
| 110 | 0.0060 | 0.0019 | 0.0041 |
| 111 | 0.0061 | 0.0019 | 0.0042 |
| 112 | 0.0061 | 0.0019 | 0.0042 |
| 113 | 0.0062 | 0.0019 | 0.0043 |
| 114 | 0.0062 | 0.0020 | 0.0043 |
| 115 | 0.0063 | 0.0020 | 0.0043 |
| 116 | 0.0064 | 0.0020 | 0.0044 |
| 117 | 0.0064 | 0.0020 | 0.0044 |
| 118 | 0.0065 | 0.0020 | 0.0044 |
| 119 | 0.0066 | 0.0021 | 0.0045 |

| | | | |
|---|---|---|---|
| 120 | 0.0066 | 0.0021 | 0.0045 |
| 121 | 0.0067 | 0.0021 | 0.0046 |
| 122 | 0.0067 | 0.0021 | 0.0046 |
| 123 | 0.0068 | 0.0021 | 0.0047 |
| 124 | 0.0069 | 0.0022 | 0.0047 |
| 125 | 0.0070 | 0.0022 | 0.0048 |
| 126 | 0.0070 | 0.0022 | 0.0048 |
| 127 | 0.0071 | 0.0022 | 0.0049 |
| 128 | 0.0072 | 0.0022 | 0.0049 |
| 129 | 0.0073 | 0.0023 | 0.0050 |
| 130 | 0.0073 | 0.0023 | 0.0050 |
| 131 | 0.0074 | 0.0023 | 0.0051 |
| 132 | 0.0075 | 0.0023 | 0.0051 |
| 133 | 0.0076 | 0.0024 | 0.0052 |
| 134 | 0.0076 | 0.0024 | 0.0052 |
| 135 | 0.0078 | 0.0024 | 0.0053 |
| 136 | 0.0078 | 0.0025 | 0.0054 |
| 137 | 0.0080 | 0.0025 | 0.0055 |
| 138 | 0.0080 | 0.0025 | 0.0055 |
| 139 | 0.0082 | 0.0026 | 0.0056 |
| 140 | 0.0082 | 0.0026 | 0.0057 |
| 141 | 0.0084 | 0.0026 | 0.0058 |
| 142 | 0.0085 | 0.0027 | 0.0058 |
| 143 | 0.0086 | 0.0027 | 0.0059 |
| 144 | 0.0087 | 0.0027 | 0.0060 |
| 145 | 0.0095 | 0.0030 | 0.0065 |
| 146 | 0.0096 | 0.0030 | 0.0066 |
| 147 | 0.0098 | 0.0031 | 0.0067 |
| 148 | 0.0099 | 0.0031 | 0.0068 |
| 149 | 0.0101 | 0.0032 | 0.0069 |
| 150 | 0.0102 | 0.0032 | 0.0070 |
| 151 | 0.0104 | 0.0033 | 0.0071 |
| 152 | 0.0105 | 0.0033 | 0.0072 |
| 153 | 0.0107 | 0.0034 | 0.0074 |
| 154 | 0.0109 | 0.0034 | 0.0075 |
| 155 | 0.0111 | 0.0035 | 0.0076 |
| 156 | 0.0113 | 0.0035 | 0.0077 |
| 157 | 0.0115 | 0.0036 | 0.0079 |
| 158 | 0.0117 | 0.0037 | 0.0080 |
| 159 | 0.0120 | 0.0038 | 0.0082 |
| 160 | 0.0121 | 0.0038 | 0.0083 |
| 161 | 0.0125 | 0.0039 | 0.0086 |
| 162 | 0.0127 | 0.0040 | 0.0087 |
| 163 | 0.0130 | 0.0041 | 0.0090 |
| 164 | 0.0132 | 0.0042 | 0.0091 |
| 165 | 0.0137 | 0.0043 | 0.0094 |
| 166 | 0.0139 | 0.0044 | 0.0095 |
| 167 | 0.0144 | 0.0045 | 0.0099 |
| 168 | 0.0146 | 0.0046 | 0.0100 |
| 169 | 0.0285 | 0.0089 | 0.0196 |
| 170 | 0.0288 | 0.0090 | 0.0198 |
| 171 | 0.0295 | 0.0092 | 0.0202 |
| 172 | 0.0298 | 0.0094 | 0.0205 |
| 173 | 0.0306 | 0.0096 | 0.0210 |
| 174 | 0.0310 | 0.0097 | 0.0213 |
| 175 | 0.0318 | 0.0100 | 0.0219 |
| 176 | 0.0323 | 0.0101 | 0.0222 |
| 177 | 0.0333 | 0.0104 | 0.0229 |
| 178 | 0.0339 | 0.0106 | 0.0232 |

| | | | |
|---|---|---|---|
| 179 | 0.0351 | 0.0110 | 0.0241 |
| 180 | 0.0357 | 0.0112 | 0.0245 |
| 181 | 0.0372 | 0.0117 | 0.0255 |
| 182 | 0.0380 | 0.0119 | 0.0261 |
| 183 | 0.0399 | 0.0125 | 0.0274 |
| 184 | 0.0410 | 0.0129 | 0.0282 |
| 185 | 0.0231 | 0.0073 | 0.0159 |
| 186 | 0.0246 | 0.0077 | 0.0169 |
| 187 | 0.0284 | 0.0089 | 0.0195 |
| 188 | 0.0309 | 0.0097 | 0.0212 |
| 189 | 0.0376 | 0.0118 | 0.0258 |
| 190 | 0.0431 | 0.0135 | 0.0296 |
| 191 | 0.0645 | 0.0157 | 0.0488 |
| 192 | 0.0924 | 0.0157 | 0.0768 |
| 193 | 0.3668 | 0.0157 | 0.3512 |
| 194 | 0.0512 | 0.0157 | 0.0355 |
| 195 | 0.0340 | 0.0106 | 0.0233 |
| 196 | 0.0263 | 0.0082 | 0.0181 |
| 197 | 0.0422 | 0.0132 | 0.0290 |
| 198 | 0.0389 | 0.0122 | 0.0267 |
| 199 | 0.0364 | 0.0114 | 0.0250 |
| 200 | 0.0344 | 0.0108 | 0.0236 |
| 201 | 0.0328 | 0.0103 | 0.0225 |
| 202 | 0.0314 | 0.0098 | 0.0216 |
| 203 | 0.0302 | 0.0095 | 0.0207 |
| 204 | 0.0292 | 0.0091 | 0.0200 |
| 205 | 0.0149 | 0.0047 | 0.0102 |
| 206 | 0.0141 | 0.0044 | 0.0097 |
| 207 | 0.0135 | 0.0042 | 0.0092 |
| 208 | 0.0129 | 0.0040 | 0.0088 |
| 209 | 0.0123 | 0.0039 | 0.0085 |
| 210 | 0.0118 | 0.0037 | 0.0081 |
| 211 | 0.0114 | 0.0036 | 0.0078 |
| 212 | 0.0110 | 0.0034 | 0.0075 |
| 213 | 0.0106 | 0.0033 | 0.0073 |
| 214 | 0.0103 | 0.0032 | 0.0071 |
| 215 | 0.0100 | 0.0031 | 0.0068 |
| 216 | 0.0097 | 0.0030 | 0.0066 |
| 217 | 0.0088 | 0.0028 | 0.0060 |
| 218 | 0.0085 | 0.0027 | 0.0059 |
| 219 | 0.0083 | 0.0026 | 0.0057 |
| 220 | 0.0081 | 0.0025 | 0.0056 |
| 221 | 0.0079 | 0.0025 | 0.0054 |
| 222 | 0.0077 | 0.0024 | 0.0053 |
| 223 | 0.0075 | 0.0024 | 0.0052 |
| 224 | 0.0074 | 0.0023 | 0.0051 |
| 225 | 0.0072 | 0.0023 | 0.0049 |
| 226 | 0.0071 | 0.0022 | 0.0048 |
| 227 | 0.0069 | 0.0022 | 0.0047 |
| 228 | 0.0068 | 0.0021 | 0.0046 |
| 229 | 0.0066 | 0.0021 | 0.0046 |
| 230 | 0.0065 | 0.0020 | 0.0045 |
| 231 | 0.0064 | 0.0020 | 0.0044 |
| 232 | 0.0063 | 0.0020 | 0.0043 |
| 233 | 0.0062 | 0.0019 | 0.0042 |
| 234 | 0.0061 | 0.0019 | 0.0042 |
| 235 | 0.0060 | 0.0019 | 0.0041 |
| 236 | 0.0059 | 0.0018 | 0.0040 |
| 237 | 0.0058 | 0.0018 | 0.0040 |

| | | | |
|---|---|---|---|
| 238 | 0.0057 | 0.0018 | 0.0039 |
| 239 | 0.0056 | 0.0018 | 0.0039 |
| 240 | 0.0055 | 0.0017 | 0.0038 |
| 241 | 0.0054 | 0.0017 | 0.0037 |
| 242 | 0.0054 | 0.0017 | 0.0037 |
| 243 | 0.0053 | 0.0017 | 0.0036 |
| 244 | 0.0052 | 0.0016 | 0.0036 |
| 245 | 0.0052 | 0.0016 | 0.0035 |
| 246 | 0.0051 | 0.0016 | 0.0035 |
| 247 | 0.0050 | 0.0016 | 0.0034 |
| 248 | 0.0050 | 0.0016 | 0.0034 |
| 249 | 0.0049 | 0.0015 | 0.0034 |
| 250 | 0.0048 | 0.0015 | 0.0033 |
| 251 | 0.0048 | 0.0015 | 0.0033 |
| 252 | 0.0047 | 0.0015 | 0.0032 |
| 253 | 0.0047 | 0.0015 | 0.0032 |
| 254 | 0.0046 | 0.0014 | 0.0032 |
| 255 | 0.0046 | 0.0014 | 0.0031 |
| 256 | 0.0045 | 0.0014 | 0.0031 |
| 257 | 0.0045 | 0.0014 | 0.0031 |
| 258 | 0.0044 | 0.0014 | 0.0030 |
| 259 | 0.0044 | 0.0014 | 0.0030 |
| 260 | 0.0043 | 0.0014 | 0.0030 |
| 261 | 0.0043 | 0.0013 | 0.0029 |
| 262 | 0.0042 | 0.0013 | 0.0029 |
| 263 | 0.0042 | 0.0013 | 0.0029 |
| 264 | 0.0042 | 0.0013 | 0.0029 |
| 265 | 0.0041 | 0.0013 | 0.0028 |
| 266 | 0.0041 | 0.0013 | 0.0028 |
| 267 | 0.0040 | 0.0013 | 0.0028 |
| 268 | 0.0040 | 0.0013 | 0.0028 |
| 269 | 0.0040 | 0.0012 | 0.0027 |
| 270 | 0.0039 | 0.0012 | 0.0027 |
| 271 | 0.0039 | 0.0012 | 0.0027 |
| 272 | 0.0039 | 0.0012 | 0.0027 |
| 273 | 0.0038 | 0.0012 | 0.0026 |
| 274 | 0.0038 | 0.0012 | 0.0026 |
| 275 | 0.0038 | 0.0012 | 0.0026 |
| 276 | 0.0037 | 0.0012 | 0.0026 |
| 277 | 0.0037 | 0.0012 | 0.0025 |
| 278 | 0.0037 | 0.0012 | 0.0025 |
| 279 | 0.0036 | 0.0011 | 0.0025 |
| 280 | 0.0036 | 0.0011 | 0.0025 |
| 281 | 0.0036 | 0.0011 | 0.0025 |
| 282 | 0.0036 | 0.0011 | 0.0024 |
| 283 | 0.0035 | 0.0011 | 0.0024 |
| 284 | 0.0035 | 0.0011 | 0.0024 |
| 285 | 0.0035 | 0.0011 | 0.0024 |
| 286 | 0.0035 | 0.0011 | 0.0024 |
| 287 | 0.0034 | 0.0011 | 0.0024 |
| 288 | 0.0034 | 0.0011 | 0.0023 |

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Total soil rain loss = 0.87(In)
Total effective rainfall = 2.28(In)
Peak flow rate in flood hydrograph = 7461.43(CFS)

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24 - H O U R S T O R M

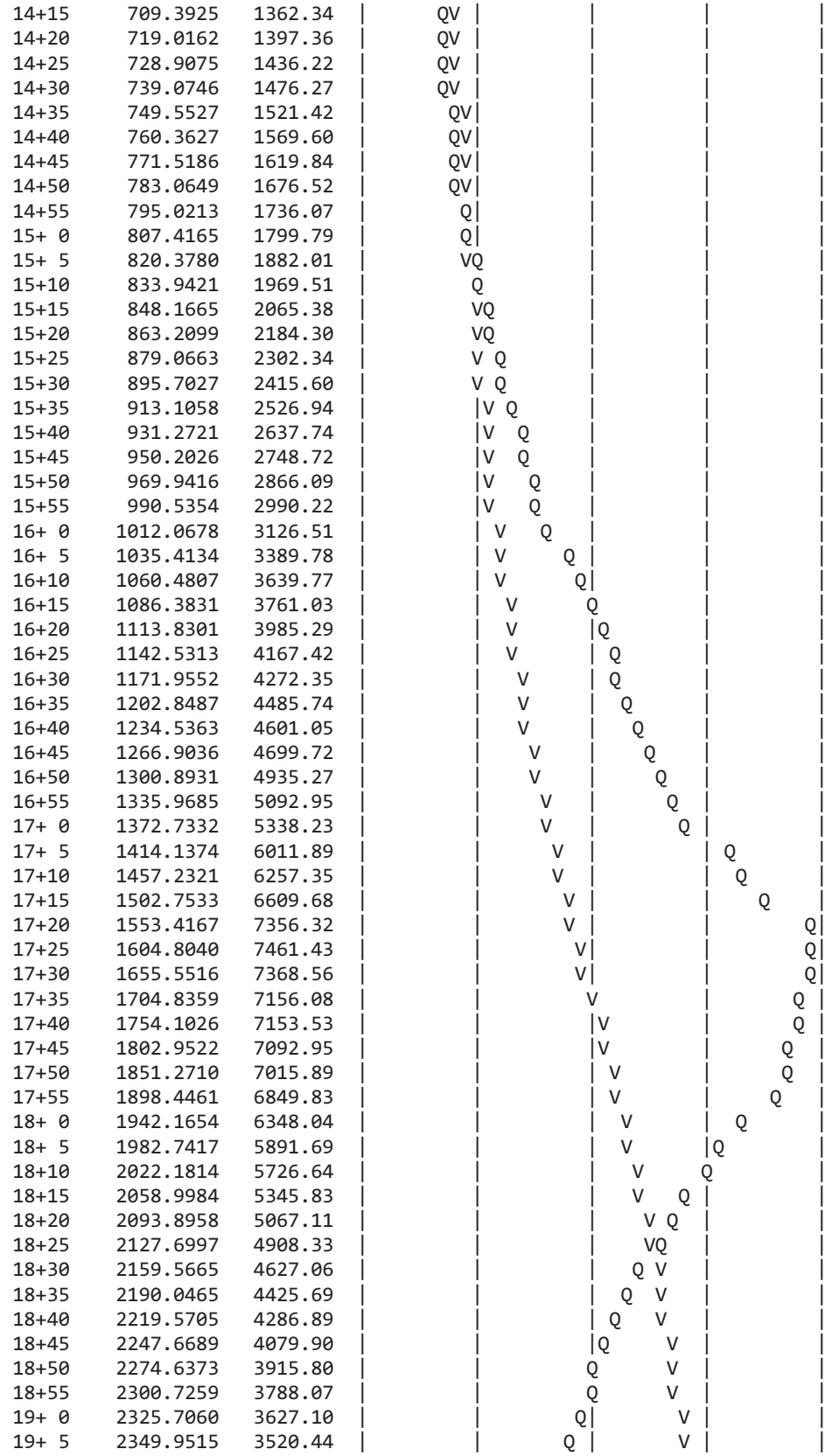
R u n o f f  H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 1875.0 | 3750.0 | 5625.0 | 7500.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0070 | 1.01 | Q | | | | |
| 0+10 | 0.0279 | 3.03 | Q | | | | |
| 0+15 | 0.0628 | 5.07 | Q | | | | |
| 0+20 | 0.1179 | 8.00 | Q | | | | |
| 0+25 | 0.1983 | 11.66 | Q | | | | |
| 0+30 | 0.3044 | 15.41 | Q | | | | |
| 0+35 | 0.4434 | 20.19 | Q | | | | |
| 0+40 | 0.6186 | 25.43 | Q | | | | |
| 0+45 | 0.8314 | 30.90 | Q | | | | |
| 0+50 | 1.0908 | 37.66 | Q | | | | |
| 0+55 | 1.3990 | 44.75 | Q | | | | |
| 1+ 0 | 1.7607 | 52.51 | Q | | | | |
| 1+ 5 | 2.2050 | 64.51 | Q | | | | |
| 1+10 | 2.7376 | 77.34 | Q | | | | |
| 1+15 | 3.3694 | 91.75 | Q | | | | |
| 1+20 | 4.1364 | 111.36 | Q | | | | |
| 1+25 | 5.0427 | 131.60 | Q | | | | |
| 1+30 | 6.0853 | 151.38 | Q | | | | |
| 1+35 | 7.2544 | 169.75 | Q | | | | |
| 1+40 | 8.5506 | 188.21 | VQ | | | | |
| 1+45 | 9.9721 | 206.41 | VQ | | | | |
| 1+50 | 11.5185 | 224.53 | VQ | | | | |
| 1+55 | 13.1879 | 242.40 | VQ | | | | |
| 2+ 0 | 14.9616 | 257.54 | VQ | | | | |
| 2+ 5 | 16.8227 | 270.23 | VQ | | | | |
| 2+10 | 18.7702 | 282.78 | VQ | | | | |
| 2+15 | 20.7908 | 293.39 | VQ | | | | |
| 2+20 | 22.8774 | 302.97 | VQ | | | | |
| 2+25 | 25.0300 | 312.56 | VQ | | | | |
| 2+30 | 27.2413 | 321.09 | VQ | | | | |
| 2+35 | 29.5078 | 329.09 | VQ | | | | |
| 2+40 | 31.8294 | 337.10 | VQ | | | | |
| 2+45 | 34.2020 | 344.49 | VQ | | | | |
| 2+50 | 36.6232 | 351.56 | VQ | | | | |
| 2+55 | 39.0928 | 358.60 | VQ | | | | |
| 3+ 0 | 41.6080 | 365.21 | VQ | | | | |
| 3+ 5 | 44.1682 | 371.74 | VQ | | | | |
| 3+10 | 46.7729 | 378.21 | V Q | | | | |
| 3+15 | 49.4188 | 384.18 | V Q | | | | |
| 3+20 | 52.1056 | 390.12 | V Q | | | | |
| 3+25 | 54.8325 | 395.95 | V Q | | | | |
| 3+30 | 57.5967 | 401.36 | V Q | | | | |
| 3+35 | 60.3982 | 406.77 | V Q | | | | |
| 3+40 | 63.2368 | 412.17 | V Q | | | | |
| 3+45 | 66.1122 | 417.50 | V Q | | | | |
| 3+50 | 69.0245 | 422.87 | V Q | | | | |
| 3+55 | 71.9717 | 427.94 | V Q | | | | |
| 4+ 0 | 74.9510 | 432.58 | V Q | | | | |
| 4+ 5 | 77.9624 | 437.25 | V Q | | | | |
| 4+10 | 81.0061 | 441.95 | V Q | | | | |
| 4+15 | 84.0824 | 446.68 | \|VQ | | | | |
| 4+20 | 87.1914 | 451.43 | \|VQ | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4+25 | 90.3313 | 455.90 | VQ | | | |
| 4+30 | 93.5007 | 460.21 | VQ | | | |
| 4+35 | 96.7001 | 464.54 | VQ | | | |
| 4+40 | 99.9295 | 468.91 | VQ | | | |
| 4+45 | 103.1892 | 473.31 | VQ | | | |
| 4+50 | 106.4792 | 477.72 | VQ | | | |
| 4+55 | 109.7983 | 481.93 | VQ | | | |
| 5+ 0 | 113.1463 | 486.12 | VQ | | | |
| 5+ 5 | 116.5233 | 490.34 | VQ | | | |
| 5+10 | 119.9296 | 494.59 | VQ | | | |
| 5+15 | 123.3653 | 498.87 | VQ | | | |
| 5+20 | 126.8304 | 503.13 | VQ | | | |
| 5+25 | 130.3232 | 507.16 | VQ | | | |
| 5+30 | 133.8439 | 511.20 | VQ | | | |
| 5+35 | 137.3926 | 515.27 | VQ | | | |
| 5+40 | 140.9696 | 519.38 | VQ | | | |
| 5+45 | 144.5752 | 523.52 | VQ | | | |
| 5+50 | 148.2084 | 527.55 | VQ | | | |
| 5+55 | 151.8679 | 531.35 | VQ | | | |
| 6+ 0 | 155.5538 | 535.19 | VQ | | | |
| 6+ 5 | 159.2663 | 539.06 | VQ | | | |
| 6+10 | 163.0058 | 542.97 | VQ | | | |
| 6+15 | 166.7723 | 546.91 | Q | | | |
| 6+20 | 170.5658 | 550.81 | Q | | | |
| 6+25 | 174.3860 | 554.69 | Q | | | |
| 6+30 | 178.2332 | 558.62 | Q | | | |
| 6+35 | 182.1077 | 562.57 | VQ | | | |
| 6+40 | 186.0097 | 566.58 | VQ | | | |
| 6+45 | 189.9395 | 570.60 | VQ | | | |
| 6+50 | 193.8965 | 574.56 | VQ | | | |
| 6+55 | 197.8807 | 578.50 | VQ | | | |
| 7+ 0 | 201.8924 | 582.50 | VQ | | | |
| 7+ 5 | 205.9319 | 586.53 | VQ | | | |
| 7+10 | 209.9995 | 590.61 | VQ | | | |
| 7+15 | 214.0953 | 594.72 | VQ | | | |
| 7+20 | 218.2191 | 598.78 | VQ | | | |
| 7+25 | 222.3712 | 602.88 | VQ | | | |
| 7+30 | 226.5518 | 607.02 | VQ | | | |
| 7+35 | 230.7612 | 611.21 | VQ | | | |
| 7+40 | 234.9999 | 615.45 | VQ | | | |
| 7+45 | 239.2676 | 619.67 | VQ | | | |
| 7+50 | 243.5635 | 623.78 | VQ | | | |
| 7+55 | 247.8881 | 627.93 | VQ | | | |
| 8+ 0 | 252.2417 | 632.14 | Q | | | |
| 8+ 5 | 256.6246 | 636.40 | Q | | | |
| 8+10 | 261.0372 | 640.71 | Q | | | |
| 8+15 | 265.4799 | 645.08 | Q | | | |
| 8+20 | 269.9532 | 649.51 | Q | | | |
| 8+25 | 274.4573 | 653.99 | Q | | | |
| 8+30 | 278.9927 | 658.54 | Q | | | |
| 8+35 | 283.5598 | 663.14 | Q | | | |
| 8+40 | 288.1590 | 667.81 | Q | | | |
| 8+45 | 292.7901 | 672.43 | Q | | | |
| 8+50 | 297.4532 | 677.08 | Q | | | |
| 8+55 | 302.1488 | 681.80 | Q | | | |
| 9+ 0 | 306.8773 | 686.58 | Q | | | |
| 9+ 5 | 311.6393 | 691.44 | Q | | | |
| 9+10 | 316.4352 | 696.37 | Q | | | |
| 9+15 | 321.2655 | 701.36 | Q | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 9+20 | 326.1308 | 706.44 | Q | | | |
| 9+25 | 331.0315 | 711.59 | Q | | | |
| 9+30 | 335.9683 | 716.83 | QV | | | |
| 9+35 | 340.9417 | 722.14 | QV | | | |
| 9+40 | 345.9520 | 727.49 | QV | | | |
| 9+45 | 350.9990 | 732.82 | QV | | | |
| 9+50 | 356.0833 | 738.24 | QV | | | |
| 9+55 | 361.2056 | 743.75 | QV | | | |
| 10+ 0 | 366.3664 | 749.35 | QV | | | |
| 10+ 5 | 371.5664 | 755.05 | Q | | | |
| 10+10 | 376.8064 | 760.84 | Q | | | |
| 10+15 | 382.0870 | 766.74 | Q | | | |
| 10+20 | 387.4089 | 772.74 | Q | | | |
| 10+25 | 392.7728 | 778.85 | Q | | | |
| 10+30 | 398.1797 | 785.07 | Q | | | |
| 10+35 | 403.6301 | 791.40 | Q | | | |
| 10+40 | 409.1243 | 797.76 | Q | | | |
| 10+45 | 414.6629 | 804.20 | Q | | | |
| 10+50 | 420.2467 | 810.77 | QV | | | |
| 10+55 | 425.8766 | 817.47 | QV | | | |
| 11+ 0 | 431.5537 | 824.30 | QV | | | |
| 11+ 5 | 437.2786 | 831.27 | QV | | | |
| 11+10 | 443.0526 | 838.38 | QV | | | |
| 11+15 | 448.8766 | 845.64 | QV | | | |
| 11+20 | 454.7517 | 853.06 | QV | | | |
| 11+25 | 460.6788 | 860.63 | QV | | | |
| 11+30 | 466.6593 | 868.37 | QV | | | |
| 11+35 | 472.6943 | 876.28 | QV | | | |
| 11+40 | 478.7851 | 884.38 | QV | | | |
| 11+45 | 484.9329 | 892.67 | QV | | | |
| 11+50 | 491.1392 | 901.15 | QV | | | |
| 11+55 | 497.4052 | 909.82 | QV | | | |
| 12+ 0 | 503.7324 | 918.71 | Q V | | | |
| 12+ 5 | 510.1236 | 927.99 | Q V | | | |
| 12+10 | 516.5816 | 937.70 | QV | | | |
| 12+15 | 523.1080 | 947.64 | QV | | | |
| 12+20 | 529.7058 | 957.99 | QV | | | |
| 12+25 | 536.3775 | 968.73 | QV | | | |
| 12+30 | 543.1252 | 979.77 | QV | | | |
| 12+35 | 549.9520 | 991.26 | QV | | | |
| 12+40 | 556.8607 | 1003.14 | QV | | | |
| 12+45 | 563.8535 | 1015.35 | QV | | | |
| 12+50 | 570.9344 | 1028.15 | QV | | | |
| 12+55 | 578.1061 | 1041.33 | QV | | | |
| 13+ 0 | 585.3720 | 1055.01 | Q V | | | |
| 13+ 5 | 592.7401 | 1069.84 | Q V | | | |
| 13+10 | 600.2142 | 1085.24 | Q V | | | |
| 13+15 | 607.7992 | 1101.34 | Q V | | | |
| 13+20 | 615.5050 | 1118.88 | Q V | | | |
| 13+25 | 623.3354 | 1136.98 | QV | | | |
| 13+30 | 631.2934 | 1155.50 | QV | | | |
| 13+35 | 639.3800 | 1174.17 | QV | | | |
| 13+40 | 647.5992 | 1193.43 | QV | | | |
| 13+45 | 655.9545 | 1213.20 | QV | | | |
| 13+50 | 664.4504 | 1233.60 | Q V | | | |
| 13+55 | 673.0909 | 1254.60 | Q V | | | |
| 14+ 0 | 681.8775 | 1275.82 | Q V | | | |
| 14+ 5 | 690.8396 | 1301.29 | Q V | | | |
| 14+10 | 700.0100 | 1331.55 | QV | | | |



| | | | |
|---|---|---|---|
| 14+15 | 709.3925 | 1362.34 | QV |
| 14+20 | 719.0162 | 1397.36 | QV |
| 14+25 | 728.9075 | 1436.22 | QV |
| 14+30 | 739.0746 | 1476.27 | QV |
| 14+35 | 749.5527 | 1521.42 | QV |
| 14+40 | 760.3627 | 1569.60 | QV |
| 14+45 | 771.5186 | 1619.84 | QV |
| 14+50 | 783.0649 | 1676.52 | QV |
| 14+55 | 795.0213 | 1736.07 | Q |
| 15+ 0 | 807.4165 | 1799.79 | Q |
| 15+ 5 | 820.3780 | 1882.01 | VQ |
| 15+10 | 833.9421 | 1969.51 | Q |
| 15+15 | 848.1665 | 2065.38 | VQ |
| 15+20 | 863.2099 | 2184.30 | VQ |
| 15+25 | 879.0663 | 2302.34 | V Q |
| 15+30 | 895.7027 | 2415.60 | V Q |
| 15+35 | 913.1058 | 2526.94 | V Q |
| 15+40 | 931.2721 | 2637.74 | V Q |
| 15+45 | 950.2026 | 2748.72 | V Q |
| 15+50 | 969.9416 | 2866.09 | V Q |
| 15+55 | 990.5354 | 2990.22 | V Q |
| 16+ 0 | 1012.0678 | 3126.51 | V Q |
| 16+ 5 | 1035.4134 | 3389.78 | V Q |
| 16+10 | 1060.4807 | 3639.77 | V Q |
| 16+15 | 1086.3831 | 3761.03 | V Q |
| 16+20 | 1113.8301 | 3985.29 | V Q |
| 16+25 | 1142.5313 | 4167.42 | V Q |
| 16+30 | 1171.9552 | 4272.35 | V Q |
| 16+35 | 1202.8487 | 4485.74 | V Q |
| 16+40 | 1234.5363 | 4601.05 | V Q |
| 16+45 | 1266.9036 | 4699.72 | V Q |
| 16+50 | 1300.8931 | 4935.27 | V Q |
| 16+55 | 1335.9685 | 5092.95 | V Q |
| 17+ 0 | 1372.7332 | 5338.23 | V Q |
| 17+ 5 | 1414.1374 | 6011.89 | V Q |
| 17+10 | 1457.2321 | 6257.35 | V Q |
| 17+15 | 1502.7533 | 6609.68 | V Q |
| 17+20 | 1553.4167 | 7356.32 | V Q |
| 17+25 | 1604.8040 | 7461.43 | V Q |
| 17+30 | 1655.5516 | 7368.56 | V Q |
| 17+35 | 1704.8359 | 7156.08 | V Q |
| 17+40 | 1754.1026 | 7153.53 | V Q |
| 17+45 | 1802.9522 | 7092.95 | V Q |
| 17+50 | 1851.2710 | 7015.89 | V Q |
| 17+55 | 1898.4461 | 6849.83 | V Q |
| 18+ 0 | 1942.1654 | 6348.04 | V Q |
| 18+ 5 | 1982.7417 | 5891.69 | V Q |
| 18+10 | 2022.1814 | 5726.64 | V Q |
| 18+15 | 2058.9984 | 5345.83 | V Q |
| 18+20 | 2093.8958 | 5067.11 | V Q |
| 18+25 | 2127.6997 | 4908.33 | V Q |
| 18+30 | 2159.5665 | 4627.06 | V Q |
| 18+35 | 2190.0465 | 4425.69 | V Q |
| 18+40 | 2219.5705 | 4286.89 | V Q |
| 18+45 | 2247.6689 | 4079.90 | V Q |
| 18+50 | 2274.6373 | 3915.80 | V Q |
| 18+55 | 2300.7259 | 3788.07 | V Q |
| 19+ 0 | 2325.7060 | 3627.10 | V Q |
| 19+ 5 | 2349.9515 | 3520.44 | V Q |

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19+10    2373.4445   3411.19  |         |       Q |       V |         |
19+15    2395.9234   3263.93  |         |      Q  |       V |         |
19+20    2417.8186   3179.19  |         |     Q   |        V|         |
19+25    2439.0667   3085.22  |         |     Q   |        V|         |
19+30    2459.4676   2962.21  |         |    Q    |        V|         |
19+35    2479.4102   2895.66  |         |    Q    |        V|         |
19+40    2498.9026   2830.30  |         |    Q    |         V         |
19+45    2517.9280   2762.48  |         |   Q     |         V         |
19+50    2536.5268   2700.55  |         |   Q     |         V         |
19+55    2554.4116   2596.87  |         |  Q      |         V         |
20+ 0    2571.5249   2484.85  |         |  Q      |         V         |
20+ 5    2588.3103   2437.24  |         | Q       |         |V        |
20+10    2604.7966   2393.81  |         | Q       |         |V        |
20+15    2620.9904   2351.35  |         | Q       |         |V        |
20+20    2636.8455   2302.16  |         | Q       |         |V        |
20+25    2652.1020   2215.25  |         |Q        |         |V        |
20+30    2666.9195   2151.50  |         |Q        |         | V       |
20+35    2681.4901   2115.65  |         |Q        |         | V       |
20+40    2695.8287   2081.97  |         |Q        |         | V       |
20+45    2709.9292   2047.38  |         Q         |         | V       |
20+50    2723.7488   2006.60  |         Q         |         | V       |
20+55    2737.1334   1943.45  |         Q         |         | V       |
21+ 0    2750.2582   1905.71  |         Q         |         |  V      |
21+ 5    2763.1856   1877.06  |         Q         |         |  V      |
21+10    2775.9225   1849.40  |        Q|         |         |  V      |
21+15    2788.4554   1819.78  |        Q|         |         |  V      |
21+20    2800.7088   1779.19  |        Q|         |         |  V      |
21+25    2812.5459   1718.74  |        Q|         |         |  V      |
21+30    2824.1885   1690.51  |        Q|         |         |   V     |
21+35    2835.6681   1666.85  |       Q |         |         |   V     |
21+40    2846.9814   1642.68  |       Q |         |         |   V     |
21+45    2858.0959   1613.83  |       Q |         |         |   V     |
21+50    2868.8681   1564.13  |       Q |         |         |   V     |
21+55    2879.2358   1505.39  |       Q |         |         |   V     |
22+ 0    2889.4447   1482.32  |      Q  |         |         |   V     |
22+ 5    2899.5114   1461.70  |      Q  |         |         |   V     |
22+10    2909.4370   1441.20  |      Q  |         |         |    V    |
22+15    2919.2073   1418.64  |      Q  |         |         |    V    |
22+20    2928.7608   1387.17  |      Q  |         |         |    V    |
22+25    2938.1338   1360.96  |      Q  |         |         |    V    |
22+30    2947.3816   1342.78  |      Q  |         |         |    V    |
22+35    2956.5078   1325.12  |      Q  |         |         |    V    |
22+40    2965.5075   1306.75  |     Q   |         |         |    V    |
22+45    2974.3586   1285.19  |     Q   |         |         |    V    |
22+50    2982.9713   1250.56  |     Q   |         |         |    V    |
22+55    2991.4370   1229.23  |     Q   |         |         |     V   |
23+ 0    2999.7967   1213.83  |     Q   |         |         |     V   |
23+ 5    3008.0554   1199.16  |     Q   |         |         |     V   |
23+10    3016.2103   1184.09  |     Q   |         |         |     V   |
23+15    3024.2388   1165.74  |     Q   |         |         |     V   |
23+20    3032.0897   1139.95  |     Q   |         |         |     V   |
23+25    3039.8371   1124.92  |    Q    |         |         |     V   |
23+30    3047.4934   1111.70  |    Q    |         |         |     V   |
23+35    3055.0550   1097.94  |    Q    |         |         |     V   |
23+40    3062.5042   1081.62  |    Q    |         |         |     V   |
23+45    3069.7651   1054.28  |    Q    |         |         |      V  |
23+50    3076.7861   1019.46  |    Q    |         |         |      V  |
23+55    3083.7142   1005.96  |    Q    |         |         |      V  |
24+ 0    3090.5616    994.25  |    Q    |         |         |      V  |
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|---|---|---|---|---|---|---|
| 24+ 5 | 3097.3264 | 982.24 | Q | | | V |
| 24+10 | 3103.9992 | 968.90 | Q | | | V |
| 24+15 | 3110.5819 | 955.81 | Q | | | V |
| 24+20 | 3117.0720 | 942.36 | Q | | | V |
| 24+25 | 3123.4649 | 928.25 | Q | | | V |
| 24+30 | 3129.7597 | 914.00 | Q | | | V |
| 24+35 | 3135.9437 | 897.92 | Q | | | V |
| 24+40 | 3141.9975 | 879.01 | Q | | | V |
| 24+45 | 3147.8398 | 848.31 | Q | | | V |
| 24+50 | 3153.5323 | 826.56 | Q | | | V |
| 24+55 | 3159.1138 | 810.43 | Q | | | V |
| 25+ 0 | 3164.5851 | 794.43 | Q | | | V |
| 25+ 5 | 3169.9195 | 774.55 | Q | | | V |
| 25+10 | 3175.1116 | 753.91 | Q | | | V |
| 25+15 | 3180.1521 | 731.88 | Q | | | V |
| 25+20 | 3185.0062 | 704.81 | Q | | | V |
| 25+25 | 3189.6700 | 677.18 | Q | | | V |
| 25+30 | 3194.1451 | 649.79 | Q | | | V |
| 25+35 | 3198.4337 | 622.70 | Q | | | V |
| 25+40 | 3202.4930 | 589.41 | Q | | | V |
| 25+45 | 3206.2832 | 550.34 | Q | | | V |
| 25+50 | 3209.9050 | 525.89 | Q | | | V |
| 25+55 | 3213.3708 | 503.23 | Q | | | V |
| 26+ 0 | 3216.7048 | 484.10 | Q | | | V |
| 26+ 5 | 3219.9235 | 467.35 | Q | | | V |
| 26+10 | 3223.0291 | 450.94 | Q | | | V |
| 26+15 | 3226.0362 | 436.63 | Q | | | V |
| 26+20 | 3228.9521 | 423.39 | Q | | | V |
| 26+25 | 3231.7766 | 410.11 | Q | | | V |
| 26+30 | 3234.5125 | 397.26 | Q | | | V |
| 26+35 | 3237.1522 | 383.29 | Q | | | V |
| 26+40 | 3239.6256 | 359.13 | Q | | | V |
| 26+45 | 3241.9920 | 343.60 | Q | | | V |
| 26+50 | 3244.2951 | 334.42 | Q | | | V |
| 26+55 | 3246.5386 | 325.75 | Q | | | V |
| 27+ 0 | 3248.7234 | 317.23 | Q | | | V |
| 27+ 5 | 3250.8500 | 308.79 | Q | | | V |
| 27+10 | 3252.9205 | 300.64 | Q | | | V |
| 27+15 | 3254.9396 | 293.17 | Q | | | V |
| 27+20 | 3256.9089 | 285.94 | Q | | | V |
| 27+25 | 3258.8305 | 279.01 | Q | | | V |
| 27+30 | 3260.7087 | 272.71 | Q | | | V |
| 27+35 | 3262.5472 | 266.96 | Q | | | V |
| 27+40 | 3264.3562 | 262.66 | Q | | | V |
| 27+45 | 3266.1253 | 256.87 | Q | | | V |
| 27+50 | 3267.8536 | 250.95 | Q | | | V |
| 27+55 | 3269.5436 | 245.39 | Q | | | V |
| 28+ 0 | 3271.1993 | 240.41 | Q | | | V |
| 28+ 5 | 3272.8208 | 235.44 | Q | | | V |
| 28+10 | 3274.4081 | 230.48 | Q | | | V |
| 28+15 | 3275.9613 | 225.51 | Q | | | V |
| 28+20 | 3277.4802 | 220.55 | Q | | | V |
| 28+25 | 3278.9668 | 215.85 | Q | | | V |
| 28+30 | 3280.4216 | 211.25 | Q | | | V |
| 28+35 | 3281.8405 | 206.01 | Q | | | V |
| 28+40 | 3283.2254 | 201.09 | Q | | | V |
| 28+45 | 3284.5789 | 196.52 | Q | | | V |
| 28+50 | 3285.9019 | 192.11 | Q | | | V |
| 28+55 | 3287.1990 | 188.33 | Q | | | V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 29+ 0 | 3288.4687 | 184.37 | Q | \| | \| | \| | V\| |
| 29+ 5 | 3289.7091 | 180.11 | Q | \| | \| | \| | V\| |
| 29+10 | 3290.9196 | 175.75 | Q | \| | \| | \| | V\| |
| 29+15 | 3292.0987 | 171.21 | Q | \| | \| | \| | V\| |
| 29+20 | 3293.2448 | 166.42 | Q | \| | \| | \| | V\| |
| 29+25 | 3294.3533 | 160.95 | Q | \| | \| | \| | V\| |
| 29+30 | 3295.3991 | 151.86 | Q | \| | \| | \| | V\| |
| 29+35 | 3296.3383 | 136.37 | Q | \| | \| | \| | V\| |
| 29+40 | 3297.2410 | 131.07 | Q | \| | \| | \| | V\| |
| 29+45 | 3298.1161 | 127.07 | Q | \| | \| | \| | V\| |
| 29+50 | 3298.9654 | 123.32 | Q | \| | \| | \| | V\| |
| 29+55 | 3299.7882 | 119.47 | Q | \| | \| | \| | V\| |
| 30+ 0 | 3300.5849 | 115.68 | Q | \| | \| | \| | V\| |
| 30+ 5 | 3301.3558 | 111.94 | Q | \| | \| | \| | V\| |
| 30+10 | 3302.1012 | 108.23 | Q | \| | \| | \| | V\| |
| 30+15 | 3302.8213 | 104.55 | Q | \| | \| | \| | V\| |
| 30+20 | 3303.5187 | 101.26 | Q | \| | \| | \| | V\| |
| 30+25 | 3304.1960 | 98.35 | Q | \| | \| | \| | V\| |
| 30+30 | 3304.8536 | 95.49 | Q | \| | \| | \| | V\| |
| 30+35 | 3305.4933 | 92.88 | Q | \| | \| | \| | V\| |
| 30+40 | 3306.1143 | 90.18 | Q | \| | \| | \| | V\| |
| 30+45 | 3306.7157 | 87.32 | Q | \| | \| | \| | V\| |
| 30+50 | 3307.2948 | 84.08 | Q | \| | \| | \| | V\| |
| 30+55 | 3307.8444 | 79.80 | Q | \| | \| | \| | V\| |
| 31+ 0 | 3308.3158 | 68.45 | Q | \| | \| | \| | V\| |
| 31+ 5 | 3308.7159 | 58.09 | Q | \| | \| | \| | V\| |
| 31+10 | 3309.0977 | 55.44 | Q | \| | \| | \| | V\| |
| 31+15 | 3309.4644 | 53.24 | Q | \| | \| | \| | V\| |
| 31+20 | 3309.8157 | 51.02 | Q | \| | \| | \| | V\| |
| 31+25 | 3310.1505 | 48.61 | Q | \| | \| | \| | V\| |
| 31+30 | 3310.4696 | 46.33 | Q | \| | \| | \| | V\| |
| 31+35 | 3310.7736 | 44.14 | Q | \| | \| | \| | V\| |
| 31+40 | 3311.0630 | 42.03 | Q | \| | \| | \| | V\| |
| 31+45 | 3311.3389 | 40.06 | Q | \| | \| | \| | V\| |
| 31+50 | 3311.6026 | 38.29 | Q | \| | \| | \| | V\| |
| 31+55 | 3311.8546 | 36.58 | Q | \| | \| | \| | V\| |
| 32+ 0 | 3312.0965 | 35.13 | Q | \| | \| | \| | V\| |
| 32+ 5 | 3312.3302 | 33.93 | Q | \| | \| | \| | V\| |
| 32+10 | 3312.5558 | 32.76 | Q | \| | \| | \| | V\| |
| 32+15 | 3312.7736 | 31.62 | Q | \| | \| | \| | V\| |
| 32+20 | 3312.9837 | 30.51 | Q | \| | \| | \| | V\| |
| 32+25 | 3313.1864 | 29.43 | Q | \| | \| | \| | V\| |
| 32+30 | 3313.3817 | 28.36 | Q | \| | \| | \| | V\| |
| 32+35 | 3313.5699 | 27.32 | Q | \| | \| | \| | V\| |
| 32+40 | 3313.7511 | 26.31 | Q | \| | \| | \| | V\| |
| 32+45 | 3313.9261 | 25.41 | Q | \| | \| | \| | V\| |
| 32+50 | 3314.0954 | 24.58 | Q | \| | \| | \| | V\| |
| 32+55 | 3314.2590 | 23.76 | Q | \| | \| | \| | V\| |
| 33+ 0 | 3314.4171 | 22.96 | Q | \| | \| | \| | V\| |
| 33+ 5 | 3314.5699 | 22.19 | Q | \| | \| | \| | V\| |
| 33+10 | 3314.7175 | 21.43 | Q | \| | \| | \| | V\| |
| 33+15 | 3314.8599 | 20.68 | Q | \| | \| | \| | V\| |
| 33+20 | 3314.9973 | 19.95 | Q | \| | \| | \| | V\| |
| 33+25 | 3315.1296 | 19.22 | Q | \| | \| | \| | V\| |
| 33+30 | 3315.2571 | 18.51 | Q | \| | \| | \| | V\| |
| 33+35 | 3315.3798 | 17.81 | Q | \| | \| | \| | V\| |
| 33+40 | 3315.4979 | 17.16 | Q | \| | \| | \| | V\| |
| 33+45 | 3315.6124 | 16.63 | Q | \| | \| | \| | V\| |
| 33+50 | 3315.7234 | 16.11 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 33+55 | 3315.8307 | 15.59 | Q | \| | \| | \| | V\| |
| 34+ 0 | 3315.9347 | 15.09 | Q | \| | \| | \| | V\| |
| 34+ 5 | 3316.0351 | 14.59 | Q | \| | \| | \| | V\| |
| 34+10 | 3316.1322 | 14.10 | Q | \| | \| | \| | V\| |
| 34+15 | 3316.2260 | 13.61 | Q | \| | \| | \| | V\| |
| 34+20 | 3316.3164 | 13.14 | Q | \| | \| | \| | V\| |
| 34+25 | 3316.4036 | 12.66 | Q | \| | \| | \| | V\| |
| 34+30 | 3316.4876 | 12.20 | Q | \| | \| | \| | V\| |
| 34+35 | 3316.5685 | 11.74 | Q | \| | \| | \| | V\| |
| 34+40 | 3316.6469 | 11.38 | Q | \| | \| | \| | V\| |
| 34+45 | 3316.7230 | 11.06 | Q | \| | \| | \| | V\| |
| 34+50 | 3316.7970 | 10.75 | Q | \| | \| | \| | V\| |
| 34+55 | 3316.8689 | 10.44 | Q | \| | \| | \| | V\| |
| 35+ 0 | 3316.9387 | 10.13 | Q | \| | \| | \| | V\| |
| 35+ 5 | 3317.0063 | 9.83 | Q | \| | \| | \| | V\| |
| 35+10 | 3317.0720 | 9.53 | Q | \| | \| | \| | V\| |
| 35+15 | 3317.1356 | 9.24 | Q | \| | \| | \| | V\| |
| 35+20 | 3317.1972 | 8.94 | Q | \| | \| | \| | V\| |
| 35+25 | 3317.2568 | 8.66 | Q | \| | \| | \| | V\| |
| 35+30 | 3317.3145 | 8.37 | Q | \| | \| | \| | V\| |
| 35+35 | 3317.3702 | 8.09 | Q | \| | \| | \| | V\| |
| 35+40 | 3317.4238 | 7.79 | Q | \| | \| | \| | V\| |
| 35+45 | 3317.4755 | 7.50 | Q | \| | \| | \| | V\| |
| 35+50 | 3317.5251 | 7.21 | Q | \| | \| | \| | V\| |
| 35+55 | 3317.5727 | 6.92 | Q | \| | \| | \| | V\| |
| 36+ 0 | 3317.6184 | 6.63 | Q | \| | \| | \| | V\| |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 50
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 3444.14 | 1 | 1.45 |
| Rainfall data for year 100 | | |
| 3444.14 | 6 | 2.64 |
| Rainfall data for year 100 | | |
| 3444.14 | 24 | 4.24 |

---

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 88.0 | 97.6 | 3444.14 | 1.000 | 0.048 | 1.000 | 0.048 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.048

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 3444.14 | 1.000 | 88.0 | 97.6 | 0.25 | 0.934 |

Area-averaged catchment yield fraction, Y = 0.934
Area-averaged low loss fraction, Yb = 0.066
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 24414.00(Ft.)
Length from concentration point to centroid = 13905.00(Ft.)
Elevation difference along watercourse = 1760.00(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 3444.14(Ac.)
Catchment Lag time = 0.702 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 11.8667
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.048(In/Hr)
Average low loss rate fraction (Yb) = 0.066 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.950
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.050

Computed peak 5-minute rainfall = 0.689(In)
Computed peak 30-minute rainfall = 1.179(In)
Specified peak 1-hour rainfall = 1.451(In)
Computed peak 3-hour rainfall = 2.092(In)
Specified peak 6-hour rainfall = 2.636(In)
Specified peak 24-hour rainfall = 4.235(In)

Rainfall depth area reduction factors:
Using a total area of 3444.14(Ac.) (Ref: fig. E-4)

5-minute factor = 0.842 Adjusted rainfall = 0.580(In)
30-minute factor = 0.842 Adjusted rainfall = 0.992(In)
1-hour factor = 0.842 Adjusted rainfall = 1.222(In)
3-hour factor = 0.980 Adjusted rainfall = 2.050(In)
6-hour factor = 0.989 Adjusted rainfall = 2.608(In)
24-hour factor = 0.996 Adjusted rainfall = 4.216(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 41652.57 (CFS)) | |
| 1 | 0.740 | 308.265 |
| 2 | 2.435 | 705.927 |
| 3 | 4.806 | 987.787 |
| 4 | 7.863 | 1273.040 |
| 5 | 11.639 | 1573.119 |
| 6 | 16.946 | 2210.217 |

| | | |
|---|---|---|
| 7 | 23.871 | 2884.545 |
| 8 | 34.448 | 4405.419 |
| 9 | 49.916 | 6443.142 |
| 10 | 57.976 | 3356.832 |
| 11 | 63.349 | 2238.239 |
| 12 | 67.615 | 1776.795 |
| 13 | 71.209 | 1496.913 |
| 14 | 74.138 | 1220.236 |
| 15 | 76.904 | 1151.984 |
| 16 | 79.250 | 977.265 |
| 17 | 81.421 | 904.052 |
| 18 | 83.294 | 780.513 |
| 19 | 84.996 | 708.703 |
| 20 | 86.544 | 644.903 |
| 21 | 87.961 | 590.169 |
| 22 | 89.257 | 539.866 |
| 23 | 90.397 | 474.770 |
| 24 | 91.472 | 447.535 |
| 25 | 92.424 | 396.621 |
| 26 | 93.323 | 374.716 |
| 27 | 94.088 | 318.507 |
| 28 | 94.811 | 301.075 |
| 29 | 95.399 | 244.948 |
| 30 | 95.961 | 234.175 |
| 31 | 96.452 | 204.519 |
| 32 | 96.921 | 195.125 |
| 33 | 97.287 | 152.708 |
| 34 | 97.621 | 139.039 |
| 35 | 97.823 | 84.187 |
| 36 | 97.979 | 64.750 |
| 37 | 98.134 | 64.750 |
| 38 | 98.289 | 64.715 |
| 39 | 98.429 | 58.206 |
| 40 | 98.557 | 53.382 |
| 41 | 98.685 | 53.382 |
| 42 | 98.814 | 53.382 |
| 43 | 98.923 | 45.611 |
| 44 | 99.002 | 32.811 |
| 45 | 99.080 | 32.622 |
| 46 | 99.159 | 32.622 |
| 47 | 99.241 | 34.197 |
| 48 | 99.336 | 39.587 |
| 49 | 99.432 | 40.037 |
| 50 | 99.528 | 40.037 |
| 51 | 99.620 | 38.280 |
| 52 | 99.679 | 24.633 |
| 53 | 99.731 | 21.748 |
| 54 | 99.783 | 21.748 |
| 55 | 99.835 | 21.511 |
| 56 | 99.872 | 15.178 |
| 57 | 99.901 | 12.357 |
| 58 | 99.931 | 12.357 |
| 59 | 99.972 | 16.945 |
| 60 | 99.977 | 2.239 |
| 61 | 99.981 | 1.545 |
| 62 | 99.984 | 1.545 |
| 63 | 99.988 | 1.545 |
| 64 | 99.992 | 1.545 |
| 65 | 99.995 | 1.545 |

| | | |
|---|---|---|
| 66 | 100.000 | 0.772 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5797 | 0.5797 |
| 2 | 0.7137 | 0.1340 |
| 3 | 0.8060 | 0.0923 |
| 4 | 0.8787 | 0.0727 |
| 5 | 0.9395 | 0.0608 |
| 6 | 0.9924 | 0.0528 |
| 7 | 1.0393 | 0.0470 |
| 8 | 1.0818 | 0.0425 |
| 9 | 1.1207 | 0.0389 |
| 10 | 1.1567 | 0.0360 |
| 11 | 1.1902 | 0.0336 |
| 12 | 1.2217 | 0.0315 |
| 13 | 1.2687 | 0.0469 |
| 14 | 1.3137 | 0.0451 |
| 15 | 1.3571 | 0.0434 |
| 16 | 1.3990 | 0.0419 |
| 17 | 1.4396 | 0.0405 |
| 18 | 1.4789 | 0.0393 |
| 19 | 1.5170 | 0.0382 |
| 20 | 1.5541 | 0.0371 |
| 21 | 1.5902 | 0.0361 |
| 22 | 1.6255 | 0.0352 |
| 23 | 1.6599 | 0.0344 |
| 24 | 1.6935 | 0.0336 |
| 25 | 1.7264 | 0.0329 |
| 26 | 1.7586 | 0.0322 |
| 27 | 1.7901 | 0.0315 |
| 28 | 1.8210 | 0.0309 |
| 29 | 1.8514 | 0.0304 |
| 30 | 1.8812 | 0.0298 |
| 31 | 1.9105 | 0.0293 |
| 32 | 1.9393 | 0.0288 |
| 33 | 1.9676 | 0.0283 |
| 34 | 1.9955 | 0.0279 |
| 35 | 2.0229 | 0.0274 |
| 36 | 2.0499 | 0.0270 |
| 37 | 2.0695 | 0.0196 |
| 38 | 2.0888 | 0.0193 |
| 39 | 2.1077 | 0.0189 |
| 40 | 2.1263 | 0.0186 |
| 41 | 2.1447 | 0.0183 |
| 42 | 2.1627 | 0.0180 |
| 43 | 2.1804 | 0.0178 |
| 44 | 2.1979 | 0.0175 |
| 45 | 2.2152 | 0.0172 |
| 46 | 2.2321 | 0.0170 |
| 47 | 2.2489 | 0.0167 |
| 48 | 2.2654 | 0.0165 |
| 49 | 2.2817 | 0.0163 |
| 50 | 2.2977 | 0.0161 |
| 51 | 2.3136 | 0.0159 |
| 52 | 2.3293 | 0.0157 |
| 53 | 2.3447 | 0.0155 |
| 54 | 2.3600 | 0.0153 |
| 55 | 2.3751 | 0.0151 |

| | | |
|---|---|---|
| 56 | 2.3900 | 0.0149 |
| 57 | 2.4047 | 0.0147 |
| 58 | 2.4193 | 0.0146 |
| 59 | 2.4337 | 0.0144 |
| 60 | 2.4480 | 0.0143 |
| 61 | 2.4621 | 0.0141 |
| 62 | 2.4760 | 0.0139 |
| 63 | 2.4898 | 0.0138 |
| 64 | 2.5035 | 0.0137 |
| 65 | 2.5170 | 0.0135 |
| 66 | 2.5304 | 0.0134 |
| 67 | 2.5436 | 0.0133 |
| 68 | 2.5568 | 0.0131 |
| 69 | 2.5698 | 0.0130 |
| 70 | 2.5826 | 0.0129 |
| 71 | 2.5954 | 0.0128 |
| 72 | 2.6080 | 0.0126 |
| 73 | 2.6205 | 0.0125 |
| 74 | 2.6329 | 0.0124 |
| 75 | 2.6452 | 0.0123 |
| 76 | 2.6574 | 0.0122 |
| 77 | 2.6694 | 0.0121 |
| 78 | 2.6814 | 0.0120 |
| 79 | 2.6932 | 0.0119 |
| 80 | 2.7050 | 0.0118 |
| 81 | 2.7167 | 0.0117 |
| 82 | 2.7283 | 0.0116 |
| 83 | 2.7397 | 0.0115 |
| 84 | 2.7511 | 0.0114 |
| 85 | 2.7624 | 0.0113 |
| 86 | 2.7737 | 0.0112 |
| 87 | 2.7848 | 0.0111 |
| 88 | 2.7958 | 0.0111 |
| 89 | 2.8068 | 0.0110 |
| 90 | 2.8177 | 0.0109 |
| 91 | 2.8285 | 0.0108 |
| 92 | 2.8392 | 0.0107 |
| 93 | 2.8499 | 0.0107 |
| 94 | 2.8605 | 0.0106 |
| 95 | 2.8710 | 0.0105 |
| 96 | 2.8814 | 0.0104 |
| 97 | 2.8918 | 0.0104 |
| 98 | 2.9021 | 0.0103 |
| 99 | 2.9123 | 0.0102 |
| 100 | 2.9225 | 0.0102 |
| 101 | 2.9326 | 0.0101 |
| 102 | 2.9426 | 0.0100 |
| 103 | 2.9526 | 0.0100 |
| 104 | 2.9625 | 0.0099 |
| 105 | 2.9723 | 0.0098 |
| 106 | 2.9821 | 0.0098 |
| 107 | 2.9918 | 0.0097 |
| 108 | 3.0015 | 0.0097 |
| 109 | 3.0111 | 0.0096 |
| 110 | 3.0206 | 0.0095 |
| 111 | 3.0301 | 0.0095 |
| 112 | 3.0395 | 0.0094 |
| 113 | 3.0489 | 0.0094 |
| 114 | 3.0582 | 0.0093 |

| | | |
|---|---|---|
| 115 | 3.0675 | 0.0093 |
| 116 | 3.0767 | 0.0092 |
| 117 | 3.0859 | 0.0092 |
| 118 | 3.0950 | 0.0091 |
| 119 | 3.1041 | 0.0091 |
| 120 | 3.1131 | 0.0090 |
| 121 | 3.1220 | 0.0090 |
| 122 | 3.1310 | 0.0089 |
| 123 | 3.1398 | 0.0089 |
| 124 | 3.1487 | 0.0088 |
| 125 | 3.1574 | 0.0088 |
| 126 | 3.1662 | 0.0087 |
| 127 | 3.1748 | 0.0087 |
| 128 | 3.1835 | 0.0086 |
| 129 | 3.1921 | 0.0086 |
| 130 | 3.2006 | 0.0086 |
| 131 | 3.2092 | 0.0085 |
| 132 | 3.2176 | 0.0085 |
| 133 | 3.2260 | 0.0084 |
| 134 | 3.2344 | 0.0084 |
| 135 | 3.2428 | 0.0083 |
| 136 | 3.2511 | 0.0083 |
| 137 | 3.2593 | 0.0083 |
| 138 | 3.2676 | 0.0082 |
| 139 | 3.2758 | 0.0082 |
| 140 | 3.2839 | 0.0081 |
| 141 | 3.2920 | 0.0081 |
| 142 | 3.3001 | 0.0081 |
| 143 | 3.3081 | 0.0080 |
| 144 | 3.3161 | 0.0080 |
| 145 | 3.3241 | 0.0080 |
| 146 | 3.3320 | 0.0079 |
| 147 | 3.3399 | 0.0079 |
| 148 | 3.3478 | 0.0079 |
| 149 | 3.3556 | 0.0078 |
| 150 | 3.3634 | 0.0078 |
| 151 | 3.3711 | 0.0078 |
| 152 | 3.3788 | 0.0077 |
| 153 | 3.3865 | 0.0077 |
| 154 | 3.3942 | 0.0077 |
| 155 | 3.4018 | 0.0076 |
| 156 | 3.4094 | 0.0076 |
| 157 | 3.4169 | 0.0076 |
| 158 | 3.4245 | 0.0075 |
| 159 | 3.4320 | 0.0075 |
| 160 | 3.4394 | 0.0075 |
| 161 | 3.4469 | 0.0074 |
| 162 | 3.4543 | 0.0074 |
| 163 | 3.4616 | 0.0074 |
| 164 | 3.4690 | 0.0073 |
| 165 | 3.4763 | 0.0073 |
| 166 | 3.4836 | 0.0073 |
| 167 | 3.4908 | 0.0073 |
| 168 | 3.4981 | 0.0072 |
| 169 | 3.5053 | 0.0072 |
| 170 | 3.5124 | 0.0072 |
| 171 | 3.5196 | 0.0071 |
| 172 | 3.5267 | 0.0071 |
| 173 | 3.5338 | 0.0071 |

| | | |
|---|---|---|
| 174 | 3.5409 | 0.0071 |
| 175 | 3.5479 | 0.0070 |
| 176 | 3.5549 | 0.0070 |
| 177 | 3.5619 | 0.0070 |
| 178 | 3.5689 | 0.0070 |
| 179 | 3.5758 | 0.0069 |
| 180 | 3.5827 | 0.0069 |
| 181 | 3.5896 | 0.0069 |
| 182 | 3.5965 | 0.0069 |
| 183 | 3.6033 | 0.0068 |
| 184 | 3.6101 | 0.0068 |
| 185 | 3.6169 | 0.0068 |
| 186 | 3.6237 | 0.0068 |
| 187 | 3.6304 | 0.0067 |
| 188 | 3.6371 | 0.0067 |
| 189 | 3.6438 | 0.0067 |
| 190 | 3.6505 | 0.0067 |
| 191 | 3.6571 | 0.0066 |
| 192 | 3.6637 | 0.0066 |
| 193 | 3.6703 | 0.0066 |
| 194 | 3.6769 | 0.0066 |
| 195 | 3.6835 | 0.0066 |
| 196 | 3.6900 | 0.0065 |
| 197 | 3.6965 | 0.0065 |
| 198 | 3.7030 | 0.0065 |
| 199 | 3.7095 | 0.0065 |
| 200 | 3.7159 | 0.0064 |
| 201 | 3.7224 | 0.0064 |
| 202 | 3.7288 | 0.0064 |
| 203 | 3.7352 | 0.0064 |
| 204 | 3.7415 | 0.0064 |
| 205 | 3.7479 | 0.0063 |
| 206 | 3.7542 | 0.0063 |
| 207 | 3.7605 | 0.0063 |
| 208 | 3.7668 | 0.0063 |
| 209 | 3.7731 | 0.0063 |
| 210 | 3.7793 | 0.0062 |
| 211 | 3.7855 | 0.0062 |
| 212 | 3.7917 | 0.0062 |
| 213 | 3.7979 | 0.0062 |
| 214 | 3.8041 | 0.0062 |
| 215 | 3.8102 | 0.0062 |
| 216 | 3.8164 | 0.0061 |
| 217 | 3.8225 | 0.0061 |
| 218 | 3.8286 | 0.0061 |
| 219 | 3.8347 | 0.0061 |
| 220 | 3.8407 | 0.0061 |
| 221 | 3.8468 | 0.0060 |
| 222 | 3.8528 | 0.0060 |
| 223 | 3.8588 | 0.0060 |
| 224 | 3.8648 | 0.0060 |
| 225 | 3.8707 | 0.0060 |
| 226 | 3.8767 | 0.0060 |
| 227 | 3.8826 | 0.0059 |
| 228 | 3.8886 | 0.0059 |
| 229 | 3.8945 | 0.0059 |
| 230 | 3.9003 | 0.0059 |
| 231 | 3.9062 | 0.0059 |
| 232 | 3.9121 | 0.0059 |

| | | | |
|---|---|---|---|
| 233 | 3.9179 | 0.0058 | |
| 234 | 3.9237 | 0.0058 | |
| 235 | 3.9295 | 0.0058 | |
| 236 | 3.9353 | 0.0058 | |
| 237 | 3.9411 | 0.0058 | |
| 238 | 3.9468 | 0.0058 | |
| 239 | 3.9526 | 0.0057 | |
| 240 | 3.9583 | 0.0057 | |
| 241 | 3.9640 | 0.0057 | |
| 242 | 3.9697 | 0.0057 | |
| 243 | 3.9754 | 0.0057 | |
| 244 | 3.9810 | 0.0057 | |
| 245 | 3.9867 | 0.0056 | |
| 246 | 3.9923 | 0.0056 | |
| 247 | 3.9979 | 0.0056 | |
| 248 | 4.0035 | 0.0056 | |
| 249 | 4.0091 | 0.0056 | |
| 250 | 4.0147 | 0.0056 | |
| 251 | 4.0202 | 0.0056 | |
| 252 | 4.0258 | 0.0055 | |
| 253 | 4.0313 | 0.0055 | |
| 254 | 4.0368 | 0.0055 | |
| 255 | 4.0423 | 0.0055 | |
| 256 | 4.0478 | 0.0055 | |
| 257 | 4.0533 | 0.0055 | |
| 258 | 4.0587 | 0.0055 | |
| 259 | 4.0642 | 0.0054 | |
| 260 | 4.0696 | 0.0054 | |
| 261 | 4.0750 | 0.0054 | |
| 262 | 4.0804 | 0.0054 | |
| 263 | 4.0858 | 0.0054 | |
| 264 | 4.0912 | 0.0054 | |
| 265 | 4.0966 | 0.0054 | |
| 266 | 4.1019 | 0.0054 | |
| 267 | 4.1073 | 0.0053 | |
| 268 | 4.1126 | 0.0053 | |
| 269 | 4.1179 | 0.0053 | |
| 270 | 4.1232 | 0.0053 | |
| 271 | 4.1285 | 0.0053 | |
| 272 | 4.1337 | 0.0053 | |
| 273 | 4.1390 | 0.0053 | |
| 274 | 4.1443 | 0.0052 | |
| 275 | 4.1495 | 0.0052 | |
| 276 | 4.1547 | 0.0052 | |
| 277 | 4.1599 | 0.0052 | |
| 278 | 4.1651 | 0.0052 | |
| 279 | 4.1703 | 0.0052 | |
| 280 | 4.1755 | 0.0052 | |
| 281 | 4.1806 | 0.0052 | |
| 282 | 4.1858 | 0.0051 | |
| 283 | 4.1909 | 0.0051 | |
| 284 | 4.1961 | 0.0051 | |
| 285 | 4.2012 | 0.0051 | |
| 286 | 4.2063 | 0.0051 | |
| 287 | 4.2114 | 0.0051 | |
| 288 | 4.2164 | 0.0051 | |

| Unit Period | Unit Rainfall | Unit Soil-Loss | Effective Rainfall |
|---|---|---|---|

| (number) | (In) | (In) | (In) |
|---|---|---|---|
| 1 | 0.0051 | 0.0003 | 0.0047 |
| 2 | 0.0051 | 0.0003 | 0.0048 |
| 3 | 0.0051 | 0.0003 | 0.0048 |
| 4 | 0.0051 | 0.0003 | 0.0048 |
| 5 | 0.0051 | 0.0003 | 0.0048 |
| 6 | 0.0052 | 0.0003 | 0.0048 |
| 7 | 0.0052 | 0.0003 | 0.0048 |
| 8 | 0.0052 | 0.0003 | 0.0049 |
| 9 | 0.0052 | 0.0003 | 0.0049 |
| 10 | 0.0052 | 0.0003 | 0.0049 |
| 11 | 0.0053 | 0.0003 | 0.0049 |
| 12 | 0.0053 | 0.0004 | 0.0049 |
| 13 | 0.0053 | 0.0004 | 0.0049 |
| 14 | 0.0053 | 0.0004 | 0.0050 |
| 15 | 0.0053 | 0.0004 | 0.0050 |
| 16 | 0.0054 | 0.0004 | 0.0050 |
| 17 | 0.0054 | 0.0004 | 0.0050 |
| 18 | 0.0054 | 0.0004 | 0.0050 |
| 19 | 0.0054 | 0.0004 | 0.0051 |
| 20 | 0.0054 | 0.0004 | 0.0051 |
| 21 | 0.0055 | 0.0004 | 0.0051 |
| 22 | 0.0055 | 0.0004 | 0.0051 |
| 23 | 0.0055 | 0.0004 | 0.0051 |
| 24 | 0.0055 | 0.0004 | 0.0051 |
| 25 | 0.0055 | 0.0004 | 0.0052 |
| 26 | 0.0056 | 0.0004 | 0.0052 |
| 27 | 0.0056 | 0.0004 | 0.0052 |
| 28 | 0.0056 | 0.0004 | 0.0052 |
| 29 | 0.0056 | 0.0004 | 0.0053 |
| 30 | 0.0056 | 0.0004 | 0.0053 |
| 31 | 0.0057 | 0.0004 | 0.0053 |
| 32 | 0.0057 | 0.0004 | 0.0053 |
| 33 | 0.0057 | 0.0004 | 0.0053 |
| 34 | 0.0057 | 0.0004 | 0.0054 |
| 35 | 0.0058 | 0.0004 | 0.0054 |
| 36 | 0.0058 | 0.0004 | 0.0054 |
| 37 | 0.0058 | 0.0004 | 0.0054 |
| 38 | 0.0058 | 0.0004 | 0.0054 |
| 39 | 0.0059 | 0.0004 | 0.0055 |
| 40 | 0.0059 | 0.0004 | 0.0055 |
| 41 | 0.0059 | 0.0004 | 0.0055 |
| 42 | 0.0059 | 0.0004 | 0.0055 |
| 43 | 0.0060 | 0.0004 | 0.0056 |
| 44 | 0.0060 | 0.0004 | 0.0056 |
| 45 | 0.0060 | 0.0004 | 0.0056 |
| 46 | 0.0060 | 0.0004 | 0.0056 |
| 47 | 0.0061 | 0.0004 | 0.0057 |
| 48 | 0.0061 | 0.0004 | 0.0057 |
| 49 | 0.0061 | 0.0004 | 0.0057 |
| 50 | 0.0062 | 0.0004 | 0.0057 |
| 51 | 0.0062 | 0.0004 | 0.0058 |
| 52 | 0.0062 | 0.0004 | 0.0058 |
| 53 | 0.0062 | 0.0004 | 0.0058 |
| 54 | 0.0063 | 0.0004 | 0.0058 |
| 55 | 0.0063 | 0.0004 | 0.0059 |
| 56 | 0.0063 | 0.0004 | 0.0059 |
| 57 | 0.0064 | 0.0004 | 0.0059 |

| | | | |
|---|---|---|---|
| 58 | 0.0064 | 0.0004 | 0.0060 |
| 59 | 0.0064 | 0.0004 | 0.0060 |
| 60 | 0.0064 | 0.0004 | 0.0060 |
| 61 | 0.0065 | 0.0004 | 0.0061 |
| 62 | 0.0065 | 0.0004 | 0.0061 |
| 63 | 0.0066 | 0.0004 | 0.0061 |
| 64 | 0.0066 | 0.0004 | 0.0061 |
| 65 | 0.0066 | 0.0004 | 0.0062 |
| 66 | 0.0066 | 0.0004 | 0.0062 |
| 67 | 0.0067 | 0.0004 | 0.0062 |
| 68 | 0.0067 | 0.0004 | 0.0063 |
| 69 | 0.0068 | 0.0004 | 0.0063 |
| 70 | 0.0068 | 0.0005 | 0.0063 |
| 71 | 0.0068 | 0.0005 | 0.0064 |
| 72 | 0.0069 | 0.0005 | 0.0064 |
| 73 | 0.0069 | 0.0005 | 0.0065 |
| 74 | 0.0069 | 0.0005 | 0.0065 |
| 75 | 0.0070 | 0.0005 | 0.0065 |
| 76 | 0.0070 | 0.0005 | 0.0065 |
| 77 | 0.0071 | 0.0005 | 0.0066 |
| 78 | 0.0071 | 0.0005 | 0.0066 |
| 79 | 0.0071 | 0.0005 | 0.0067 |
| 80 | 0.0072 | 0.0005 | 0.0067 |
| 81 | 0.0072 | 0.0005 | 0.0067 |
| 82 | 0.0073 | 0.0005 | 0.0068 |
| 83 | 0.0073 | 0.0005 | 0.0068 |
| 84 | 0.0073 | 0.0005 | 0.0069 |
| 85 | 0.0074 | 0.0005 | 0.0069 |
| 86 | 0.0074 | 0.0005 | 0.0069 |
| 87 | 0.0075 | 0.0005 | 0.0070 |
| 88 | 0.0075 | 0.0005 | 0.0070 |
| 89 | 0.0076 | 0.0005 | 0.0071 |
| 90 | 0.0076 | 0.0005 | 0.0071 |
| 91 | 0.0077 | 0.0005 | 0.0072 |
| 92 | 0.0077 | 0.0005 | 0.0072 |
| 93 | 0.0078 | 0.0005 | 0.0073 |
| 94 | 0.0078 | 0.0005 | 0.0073 |
| 95 | 0.0079 | 0.0005 | 0.0074 |
| 96 | 0.0079 | 0.0005 | 0.0074 |
| 97 | 0.0080 | 0.0005 | 0.0075 |
| 98 | 0.0080 | 0.0005 | 0.0075 |
| 99 | 0.0081 | 0.0005 | 0.0076 |
| 100 | 0.0081 | 0.0005 | 0.0076 |
| 101 | 0.0082 | 0.0005 | 0.0077 |
| 102 | 0.0083 | 0.0005 | 0.0077 |
| 103 | 0.0083 | 0.0006 | 0.0078 |
| 104 | 0.0084 | 0.0006 | 0.0078 |
| 105 | 0.0085 | 0.0006 | 0.0079 |
| 106 | 0.0085 | 0.0006 | 0.0079 |
| 107 | 0.0086 | 0.0006 | 0.0080 |
| 108 | 0.0086 | 0.0006 | 0.0081 |
| 109 | 0.0087 | 0.0006 | 0.0082 |
| 110 | 0.0088 | 0.0006 | 0.0082 |
| 111 | 0.0089 | 0.0006 | 0.0083 |
| 112 | 0.0089 | 0.0006 | 0.0083 |
| 113 | 0.0090 | 0.0006 | 0.0084 |
| 114 | 0.0091 | 0.0006 | 0.0085 |
| 115 | 0.0092 | 0.0006 | 0.0086 |
| 116 | 0.0092 | 0.0006 | 0.0086 |

| | | | |
|---|---|---|---|
| 117 | 0.0093 | 0.0006 | 0.0087 |
| 118 | 0.0094 | 0.0006 | 0.0088 |
| 119 | 0.0095 | 0.0006 | 0.0089 |
| 120 | 0.0095 | 0.0006 | 0.0089 |
| 121 | 0.0097 | 0.0006 | 0.0090 |
| 122 | 0.0097 | 0.0006 | 0.0091 |
| 123 | 0.0098 | 0.0007 | 0.0092 |
| 124 | 0.0099 | 0.0007 | 0.0092 |
| 125 | 0.0100 | 0.0007 | 0.0094 |
| 126 | 0.0101 | 0.0007 | 0.0094 |
| 127 | 0.0102 | 0.0007 | 0.0095 |
| 128 | 0.0103 | 0.0007 | 0.0096 |
| 129 | 0.0104 | 0.0007 | 0.0097 |
| 130 | 0.0105 | 0.0007 | 0.0098 |
| 131 | 0.0107 | 0.0007 | 0.0099 |
| 132 | 0.0107 | 0.0007 | 0.0100 |
| 133 | 0.0109 | 0.0007 | 0.0102 |
| 134 | 0.0110 | 0.0007 | 0.0102 |
| 135 | 0.0111 | 0.0007 | 0.0104 |
| 136 | 0.0112 | 0.0007 | 0.0105 |
| 137 | 0.0114 | 0.0008 | 0.0106 |
| 138 | 0.0115 | 0.0008 | 0.0107 |
| 139 | 0.0117 | 0.0008 | 0.0109 |
| 140 | 0.0118 | 0.0008 | 0.0110 |
| 141 | 0.0120 | 0.0008 | 0.0112 |
| 142 | 0.0121 | 0.0008 | 0.0113 |
| 143 | 0.0123 | 0.0008 | 0.0115 |
| 144 | 0.0124 | 0.0008 | 0.0116 |
| 145 | 0.0126 | 0.0008 | 0.0118 |
| 146 | 0.0128 | 0.0008 | 0.0119 |
| 147 | 0.0130 | 0.0009 | 0.0121 |
| 148 | 0.0131 | 0.0009 | 0.0123 |
| 149 | 0.0134 | 0.0009 | 0.0125 |
| 150 | 0.0135 | 0.0009 | 0.0126 |
| 151 | 0.0138 | 0.0009 | 0.0129 |
| 152 | 0.0139 | 0.0009 | 0.0130 |
| 153 | 0.0143 | 0.0009 | 0.0133 |
| 154 | 0.0144 | 0.0010 | 0.0135 |
| 155 | 0.0147 | 0.0010 | 0.0138 |
| 156 | 0.0149 | 0.0010 | 0.0139 |
| 157 | 0.0153 | 0.0010 | 0.0143 |
| 158 | 0.0155 | 0.0010 | 0.0144 |
| 159 | 0.0159 | 0.0011 | 0.0148 |
| 160 | 0.0161 | 0.0011 | 0.0150 |
| 161 | 0.0165 | 0.0011 | 0.0154 |
| 162 | 0.0167 | 0.0011 | 0.0156 |
| 163 | 0.0172 | 0.0011 | 0.0161 |
| 164 | 0.0175 | 0.0012 | 0.0163 |
| 165 | 0.0180 | 0.0012 | 0.0168 |
| 166 | 0.0183 | 0.0012 | 0.0171 |
| 167 | 0.0189 | 0.0013 | 0.0177 |
| 168 | 0.0193 | 0.0013 | 0.0180 |
| 169 | 0.0270 | 0.0018 | 0.0252 |
| 170 | 0.0274 | 0.0018 | 0.0256 |
| 171 | 0.0283 | 0.0019 | 0.0264 |
| 172 | 0.0288 | 0.0019 | 0.0269 |
| 173 | 0.0298 | 0.0020 | 0.0278 |
| 174 | 0.0304 | 0.0020 | 0.0283 |
| 175 | 0.0315 | 0.0021 | 0.0294 |

| | | | |
|---|---|---|---|
| 176 | 0.0322 | 0.0021 | 0.0301 |
| 177 | 0.0336 | 0.0022 | 0.0314 |
| 178 | 0.0344 | 0.0023 | 0.0321 |
| 179 | 0.0361 | 0.0024 | 0.0337 |
| 180 | 0.0371 | 0.0025 | 0.0346 |
| 181 | 0.0393 | 0.0026 | 0.0367 |
| 182 | 0.0405 | 0.0027 | 0.0378 |
| 183 | 0.0434 | 0.0029 | 0.0405 |
| 184 | 0.0451 | 0.0030 | 0.0421 |
| 185 | 0.0315 | 0.0021 | 0.0294 |
| 186 | 0.0336 | 0.0022 | 0.0313 |
| 187 | 0.0389 | 0.0026 | 0.0363 |
| 188 | 0.0425 | 0.0028 | 0.0397 |
| 189 | 0.0528 | 0.0035 | 0.0493 |
| 190 | 0.0608 | 0.0040 | 0.0569 |
| 191 | 0.0923 | 0.0040 | 0.0884 |
| 192 | 0.1340 | 0.0040 | 0.1300 |
| 193 | 0.5797 | 0.0040 | 0.5758 |
| 194 | 0.0727 | 0.0040 | 0.0687 |
| 195 | 0.0470 | 0.0031 | 0.0438 |
| 196 | 0.0360 | 0.0024 | 0.0336 |
| 197 | 0.0469 | 0.0031 | 0.0438 |
| 198 | 0.0419 | 0.0028 | 0.0391 |
| 199 | 0.0382 | 0.0025 | 0.0356 |
| 200 | 0.0352 | 0.0023 | 0.0329 |
| 201 | 0.0329 | 0.0022 | 0.0307 |
| 202 | 0.0309 | 0.0021 | 0.0289 |
| 203 | 0.0293 | 0.0019 | 0.0273 |
| 204 | 0.0279 | 0.0019 | 0.0260 |
| 205 | 0.0196 | 0.0013 | 0.0183 |
| 206 | 0.0186 | 0.0012 | 0.0174 |
| 207 | 0.0178 | 0.0012 | 0.0166 |
| 208 | 0.0170 | 0.0011 | 0.0158 |
| 209 | 0.0163 | 0.0011 | 0.0152 |
| 210 | 0.0157 | 0.0010 | 0.0146 |
| 211 | 0.0151 | 0.0010 | 0.0141 |
| 212 | 0.0146 | 0.0010 | 0.0136 |
| 213 | 0.0141 | 0.0009 | 0.0132 |
| 214 | 0.0137 | 0.0009 | 0.0128 |
| 215 | 0.0133 | 0.0009 | 0.0124 |
| 216 | 0.0129 | 0.0009 | 0.0120 |
| 217 | 0.0125 | 0.0008 | 0.0117 |
| 218 | 0.0122 | 0.0008 | 0.0114 |
| 219 | 0.0119 | 0.0008 | 0.0111 |
| 220 | 0.0116 | 0.0008 | 0.0108 |
| 221 | 0.0113 | 0.0008 | 0.0106 |
| 222 | 0.0111 | 0.0007 | 0.0103 |
| 223 | 0.0108 | 0.0007 | 0.0101 |
| 224 | 0.0106 | 0.0007 | 0.0099 |
| 225 | 0.0104 | 0.0007 | 0.0097 |
| 226 | 0.0102 | 0.0007 | 0.0095 |
| 227 | 0.0100 | 0.0007 | 0.0093 |
| 228 | 0.0098 | 0.0006 | 0.0091 |
| 229 | 0.0096 | 0.0006 | 0.0090 |
| 230 | 0.0094 | 0.0006 | 0.0088 |
| 231 | 0.0093 | 0.0006 | 0.0087 |
| 232 | 0.0091 | 0.0006 | 0.0085 |
| 233 | 0.0090 | 0.0006 | 0.0084 |
| 234 | 0.0088 | 0.0006 | 0.0082 |

| | | | |
|---|---|---|---|
| 235 | 0.0087 | 0.0006 | 0.0081 |
| 236 | 0.0086 | 0.0006 | 0.0080 |
| 237 | 0.0084 | 0.0006 | 0.0079 |
| 238 | 0.0083 | 0.0006 | 0.0078 |
| 239 | 0.0082 | 0.0005 | 0.0076 |
| 240 | 0.0081 | 0.0005 | 0.0075 |
| 241 | 0.0080 | 0.0005 | 0.0074 |
| 242 | 0.0079 | 0.0005 | 0.0073 |
| 243 | 0.0078 | 0.0005 | 0.0072 |
| 244 | 0.0077 | 0.0005 | 0.0071 |
| 245 | 0.0076 | 0.0005 | 0.0071 |
| 246 | 0.0075 | 0.0005 | 0.0070 |
| 247 | 0.0074 | 0.0005 | 0.0069 |
| 248 | 0.0073 | 0.0005 | 0.0068 |
| 249 | 0.0072 | 0.0005 | 0.0067 |
| 250 | 0.0071 | 0.0005 | 0.0066 |
| 251 | 0.0070 | 0.0005 | 0.0066 |
| 252 | 0.0070 | 0.0005 | 0.0065 |
| 253 | 0.0069 | 0.0005 | 0.0064 |
| 254 | 0.0068 | 0.0005 | 0.0064 |
| 255 | 0.0067 | 0.0004 | 0.0063 |
| 256 | 0.0067 | 0.0004 | 0.0062 |
| 257 | 0.0066 | 0.0004 | 0.0062 |
| 258 | 0.0065 | 0.0004 | 0.0061 |
| 259 | 0.0065 | 0.0004 | 0.0060 |
| 260 | 0.0064 | 0.0004 | 0.0060 |
| 261 | 0.0063 | 0.0004 | 0.0059 |
| 262 | 0.0063 | 0.0004 | 0.0059 |
| 263 | 0.0062 | 0.0004 | 0.0058 |
| 264 | 0.0062 | 0.0004 | 0.0058 |
| 265 | 0.0061 | 0.0004 | 0.0057 |
| 266 | 0.0061 | 0.0004 | 0.0057 |
| 267 | 0.0060 | 0.0004 | 0.0056 |
| 268 | 0.0060 | 0.0004 | 0.0056 |
| 269 | 0.0059 | 0.0004 | 0.0055 |
| 270 | 0.0059 | 0.0004 | 0.0055 |
| 271 | 0.0058 | 0.0004 | 0.0054 |
| 272 | 0.0058 | 0.0004 | 0.0054 |
| 273 | 0.0057 | 0.0004 | 0.0053 |
| 274 | 0.0057 | 0.0004 | 0.0053 |
| 275 | 0.0056 | 0.0004 | 0.0052 |
| 276 | 0.0056 | 0.0004 | 0.0052 |
| 277 | 0.0055 | 0.0004 | 0.0052 |
| 278 | 0.0055 | 0.0004 | 0.0051 |
| 279 | 0.0054 | 0.0004 | 0.0051 |
| 280 | 0.0054 | 0.0004 | 0.0050 |
| 281 | 0.0054 | 0.0004 | 0.0050 |
| 282 | 0.0053 | 0.0004 | 0.0050 |
| 283 | 0.0053 | 0.0004 | 0.0049 |
| 284 | 0.0052 | 0.0003 | 0.0049 |
| 285 | 0.0052 | 0.0003 | 0.0049 |
| 286 | 0.0052 | 0.0003 | 0.0048 |
| 287 | 0.0051 | 0.0003 | 0.0048 |
| 288 | 0.0051 | 0.0003 | 0.0048 |

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Total soil rain loss = 0.24(In)
Total effective rainfall = 3.98(In)
Peak flow rate in flood hydrograph = 5599.01(CFS)

24 - H O U R  S T O R M
R u n o f f  H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 1400.0 | 2800.0 | 4200.0 | 5600.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0101 | 1.46 | Q | | | | |
| 0+10 | 0.0432 | 4.81 | Q | | | | |
| 0+15 | 0.1087 | 9.51 | Q | | | | |
| 0+20 | 0.2160 | 15.58 | Q | | | | |
| 0+25 | 0.3750 | 23.09 | Q | | | | |
| 0+30 | 0.6066 | 33.64 | Q | | | | |
| 0+35 | 0.9333 | 47.43 | Q | | | | |
| 0+40 | 1.4048 | 68.47 | Q | | | | |
| 0+45 | 2.0883 | 99.24 | Q | | | | |
| 0+50 | 2.8837 | 115.48 | Q | | | | |
| 0+55 | 3.7549 | 126.50 | Q | | | | |
| 1+ 0 | 4.6870 | 135.35 | Q | | | | |
| 1+ 5 | 5.6714 | 142.93 | VQ | | | | |
| 1+10 | 6.6989 | 149.20 | VQ | | | | |
| 1+15 | 7.7678 | 155.19 | VQ | | | | |
| 1+20 | 8.8722 | 160.37 | VQ | | | | |
| 1+25 | 10.0102 | 165.23 | VQ | | | | |
| 1+30 | 11.1776 | 169.51 | VQ | | | | |
| 1+35 | 12.3724 | 173.49 | VQ | | | | |
| 1+40 | 13.5925 | 177.16 | VQ | | | | |
| 1+45 | 14.8363 | 180.60 | VQ | | | | |
| 1+50 | 16.1022 | 183.81 | VQ | | | | |
| 1+55 | 17.3883 | 186.74 | VQ | | | | |
| 2+ 0 | 18.6936 | 189.54 | VQ | | | | |
| 2+ 5 | 20.0168 | 192.13 | VQ | | | | |
| 2+10 | 21.3571 | 194.60 | VQ | | | | |
| 2+15 | 22.7128 | 196.85 | VQ | | | | |
| 2+20 | 24.0833 | 199.00 | VQ | | | | |
| 2+25 | 25.4671 | 200.92 | VQ | | | | |
| 2+30 | 26.8636 | 202.78 | VQ | | | | |
| 2+35 | 28.2722 | 204.53 | VQ | | | | |
| 2+40 | 29.6925 | 206.23 | \|Q | | | | |
| 2+45 | 31.1234 | 207.75 | \|Q | | | | |
| 2+50 | 32.5642 | 209.21 | \|Q | | | | |
| 2+55 | 34.0134 | 210.43 | \|Q | | | | |
| 3+ 0 | 35.4703 | 211.55 | \|Q | | | | |
| 3+ 5 | 36.9352 | 212.70 | \|Q | | | | |
| 3+10 | 38.4079 | 213.83 | \|Q | | | | |
| 3+15 | 39.8884 | 214.97 | \|Q | | | | |
| 3+20 | 41.3765 | 216.07 | \|Q | | | | |
| 3+25 | 42.8724 | 217.21 | \|Q | | | | |
| 3+30 | 44.3761 | 218.33 | \|Q | | | | |
| 3+35 | 45.8874 | 219.45 | \|Q | | | | |
| 3+40 | 47.4059 | 220.49 | \|Q | | | | |
| 3+45 | 48.9319 | 221.57 | \|Q | | | | |
| 3+50 | 50.4651 | 222.63 | \|Q | | | | |
| 3+55 | 52.0060 | 223.73 | \|Q | | | | |
| 4+ 0 | 53.5545 | 224.85 | \|Q | | | | |
| 4+ 5 | 55.1110 | 226.00 | \|Q | | | | |

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4+10      56.6753    227.14  |Q         |          |          |          |
4+15      58.2477    228.31  |QV        |          |          |          |
4+20      59.8276    229.40  |QV        |          |          |          |
4+25      61.4151    230.51  |QV        |          |          |          |
4+30      63.0102    231.61  |QV        |          |          |          |
4+35      64.6131    232.74  |QV        |          |          |          |
4+40      66.2235    233.83  |QV        |          |          |          |
4+45      67.8415    234.94  |QV        |          |          |          |
4+50      69.4672    236.04  |QV        |          |          |          |
4+55      71.1008    237.20  |QV        |          |          |          |
5+ 0      72.7418    238.28  |QV        |          |          |          |
5+ 5      74.3905    239.39  |QV        |          |          |          |
5+10      76.0468    240.49  |QV        |          |          |          |
5+15      77.7109    241.63  |QV        |          |          |          |
5+20      79.3828    242.75  |QV        |          |          |          |
5+25      81.0627    243.92  |QV        |          |          |          |
5+30      82.7505    245.07  |QV        |          |          |          |
5+35      84.4464    246.26  |QV        |          |          |          |
5+40      86.1505    247.43  |Q V       |          |          |          |
5+45      87.8629    248.64  |Q V       |          |          |          |
5+50      89.5836    249.84  |Q V       |          |          |          |
5+55      91.3129    251.09  |Q V       |          |          |          |
6+ 0      93.0506    252.32  |Q V       |          |          |          |
6+ 5      94.7972    253.60  |Q V       |          |          |          |
6+10      96.5525    254.86  |Q V       |          |          |          |
6+15      98.3168    256.18  |Q V       |          |          |          |
6+20     100.0900    257.47  |Q V       |          |          |          |
6+25     101.8725    258.82  |Q V       |          |          |          |
6+30     103.6642    260.15  |Q V       |          |          |          |
6+35     105.4654    261.53  |Q V       |          |          |          |
6+40     107.2760    262.90  |Q V       |          |          |          |
6+45     109.0963    264.32  |Q V       |          |          |          |
6+50     110.9264    265.72  |Q V       |          |          |          |
6+55     112.7665    267.18  |Q V       |          |          |          |
7+ 0     114.6165    268.62  |Q  V      |          |          |          |
7+ 5     116.4768    270.12  |Q  V      |          |          |          |
7+10     118.3474    271.61  |Q  V      |          |          |          |
7+15     120.2286    273.15  |Q  V      |          |          |          |
7+20     122.1203    274.68  |Q  V      |          |          |          |
7+25     124.0230    276.26  |Q  V      |          |          |          |
7+30     125.9364    277.83  |Q  V      |          |          |          |
7+35     127.8612    279.47  |Q  V      |          |          |          |
7+40     129.7970    281.09  | Q V      |          |          |          |
7+45     131.7445    282.77  | Q V      |          |          |          |
7+50     133.7034    284.44  | Q V      |          |          |          |
7+55     135.6743    286.18  | Q V      |          |          |          |
8+ 0     137.6571    287.89  | Q V      |          |          |          |
8+ 5     139.6522    289.68  | Q V      |          |          |          |
8+10     141.6594    291.46  | Q V      |          |          |          |
8+15     143.6794    293.31  | Q  V     |          |          |          |
8+20     145.7121    295.13  | Q  V     |          |          |          |
8+25     147.7578    297.04  | Q  V     |          |          |          |
8+30     149.8166    298.93  | Q  V     |          |          |          |
8+35     151.8889    300.90  | Q  V     |          |          |          |
8+40     153.9747    302.86  | Q  V     |          |          |          |
8+45     156.0745    304.90  | Q  V     |          |          |          |
8+50     158.1883    306.92  | Q  V     |          |          |          |
8+55     160.3165    309.02  | Q  V     |          |          |          |
9+ 0     162.4592    311.12  | Q  V     |          |          |          |
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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 9+ 5 | 164.6169 | 313.30 | Q V | | | | |
| 9+10 | 166.7895 | 315.46 | Q V | | | | |
| 9+15 | 168.9777 | 317.73 | Q V | | | | |
| 9+20 | 171.1814 | 319.97 | Q V | | | | |
| 9+25 | 173.4012 | 322.32 | Q V | | | | |
| 9+30 | 175.6371 | 324.65 | Q V | | | | |
| 9+35 | 177.8897 | 327.08 | Q V | | | | |
| 9+40 | 180.1589 | 329.50 | Q V | | | | |
| 9+45 | 182.4456 | 332.03 | Q V | | | | |
| 9+50 | 184.7496 | 334.54 | Q V | | | | |
| 9+55 | 187.0717 | 337.17 | Q V | | | | |
| 10+ 0 | 189.4118 | 339.78 | Q V | | | | |
| 10+ 5 | 191.7708 | 342.52 | Q V | | | | |
| 10+10 | 194.1484 | 345.24 | Q V | | | | |
| 10+15 | 196.5457 | 348.09 | Q V | | | | |
| 10+20 | 198.9626 | 350.92 | Q V | | | | |
| 10+25 | 201.3999 | 353.90 | Q V | | | | |
| 10+30 | 203.8575 | 356.85 | Q V | | | | |
| 10+35 | 206.3366 | 359.96 | Q V | | | | |
| 10+40 | 208.8369 | 363.05 | Q V | | | | |
| 10+45 | 211.3596 | 366.29 | Q V | | | | |
| 10+50 | 213.9045 | 369.52 | Q V | | | | |
| 10+55 | 216.4728 | 372.92 | Q V | | | | |
| 11+ 0 | 219.0644 | 376.30 | Q V | | | | |
| 11+ 5 | 221.6805 | 379.86 | Q V | | | | |
| 11+10 | 224.3210 | 383.40 | Q V | | | | |
| 11+15 | 226.9872 | 387.14 | Q V | | | | |
| 11+20 | 229.6791 | 390.86 | Q V | | | | |
| 11+25 | 232.3980 | 394.78 | Q V | | | | |
| 11+30 | 235.1439 | 398.70 | Q V | | | | |
| 11+35 | 237.9182 | 402.83 | Q V | | | | |
| 11+40 | 240.7209 | 406.95 | Q V | | | | |
| 11+45 | 243.5535 | 411.30 | Q V | | | | |
| 11+50 | 246.4162 | 415.66 | Q V | | | | |
| 11+55 | 249.3105 | 420.25 | Q V | | | | |
| 12+ 0 | 252.2365 | 424.85 | Q V | | | | |
| 12+ 5 | 255.1960 | 429.73 | Q V | | | | |
| 12+10 | 258.1893 | 434.62 | Q V | | | | |
| 12+15 | 261.2182 | 439.81 | Q V | | | | |
| 12+20 | 264.2831 | 445.02 | Q V | | | | |
| 12+25 | 267.3860 | 450.54 | Q V | | | | |
| 12+30 | 270.5273 | 456.11 | Q V | | | | |
| 12+35 | 273.7093 | 462.03 | Q V | | | | |
| 12+40 | 276.9327 | 468.03 | Q V | | | | |
| 12+45 | 280.2003 | 474.46 | Q V | | | | |
| 12+50 | 283.5118 | 480.84 | Q V | | | | |
| 12+55 | 286.8698 | 487.58 | Q V | | | | |
| 13+ 0 | 290.2746 | 494.37 | Q V | | | | |
| 13+ 5 | 293.7291 | 501.59 | Q V | | | | |
| 13+10 | 297.2338 | 508.88 | Q V | | | | |
| 13+15 | 300.7920 | 516.65 | Q V | | | | |
| 13+20 | 304.4043 | 524.51 | Q V | | | | |
| 13+25 | 308.0745 | 532.91 | Q V | | | | |
| 13+30 | 311.8033 | 541.42 | Q V | | | | |
| 13+35 | 315.5948 | 550.53 | Q V | | | | |
| 13+40 | 319.4501 | 559.80 | Q V | | | | |
| 13+45 | 323.3740 | 569.74 | Q V | | | | |
| 13+50 | 327.3675 | 579.87 | Q V | | | | |
| 13+55 | 331.4362 | 590.77 | Q V | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 14+ 0 | 335.5815 | 601.91 | Q | V | | | | |
| 14+ 5 | 339.8237 | 615.96 | Q | V | | | | |
| 14+10 | 344.1829 | 632.95 | Q | V | | | | |
| 14+15 | 348.6792 | 652.86 | Q | V | | | | |
| 14+20 | 353.3285 | 675.08 | Q | V | | | | |
| 14+25 | 358.1533 | 700.55 | Q | V | | | | |
| 14+30 | 363.1862 | 730.79 | Q | V | | | | |
| 14+35 | 368.4687 | 767.01 | Q | V | | | | |
| 14+40 | 374.0751 | 814.05 | Q | V | | | | |
| 14+45 | 380.1112 | 876.45 | Q | V | | | | |
| 14+50 | 386.4451 | 919.67 | Q | V | | | | |
| 14+55 | 393.0421 | 957.89 | Q | V | | | | |
| 15+ 0 | 399.8898 | 994.28 | Q | V | | | | |
| 15+ 5 | 406.9948 | 1031.65 | Q | V | | | | |
| 15+10 | 414.3558 | 1068.82 | Q | V | | | | |
| 15+15 | 421.9943 | 1109.10 | Q | V | | | | |
| 15+20 | 429.9180 | 1150.52 | Q | V | | | | |
| 15+25 | 438.1214 | 1191.14 | Q | V | | | | |
| 15+30 | 446.5769 | 1227.73 | Q | V | | | | |
| 15+35 | 455.2933 | 1265.62 | Q | V | | | | |
| 15+40 | 464.2701 | 1303.44 | Q | V | | | | |
| 15+45 | 473.5400 | 1345.99 | Q | V | | | | |
| 15+50 | 483.0953 | 1387.43 | Q | V | | | | |
| 15+55 | 493.0070 | 1439.18 | Q | V | | | | |
| 16+ 0 | 503.3264 | 1498.38 | Q | V | | | | |
| 16+ 5 | 515.0186 | 1697.71 | Q | V | | | | |
| 16+10 | 528.7593 | 1995.14 | Q | V | | | | |
| 16+15 | 544.3370 | 2261.89 | Q | V | | | | |
| 16+20 | 561.8630 | 2544.77 | Q | V | | | | |
| 16+25 | 581.6463 | 2872.54 | Q | | | | | |
| 16+30 | 604.9368 | 3381.77 | V | Q | | | | |
| 16+35 | 632.1224 | 3947.36 | V | Q | | | | |
| 16+40 | 665.1998 | 4802.83 | V | Q | | | | |
| 16+45 | 703.7605 | 5599.01 | V | Q | | | | |
| 16+50 | 730.4616 | 3877.00 | V | Q | | | | |
| 16+55 | 751.9707 | 3123.12 | V | Q | | | | |
| 17+ 0 | 771.0491 | 2770.19 | Q | V | | | | |
| 17+ 5 | 788.7787 | 2574.33 | Q | V | | | | |
| 17+10 | 804.9970 | 2354.90 | Q | V | | | | |
| 17+15 | 820.3618 | 2230.98 | Q | V | | | | |
| 17+20 | 834.5600 | 2061.58 | Q | V | | | | |
| 17+25 | 847.9418 | 1943.03 | Q | V | | | | |
| 17+30 | 860.3524 | 1802.03 | Q | V | | | | |
| 17+35 | 871.9824 | 1688.66 | Q | V | | | | |
| 17+40 | 882.8189 | 1573.47 | Q | V | | | | |
| 17+45 | 892.8313 | 1453.79 | Q | V | | | | |
| 17+50 | 902.1929 | 1359.31 | Q | V | | | | |
| 17+55 | 910.9332 | 1269.09 | Q | V | | | | |
| 18+ 0 | 919.2158 | 1202.63 | Q | V | | | | |
| 18+ 5 | 926.9961 | 1129.70 | Q | V | | | | |
| 18+10 | 934.3916 | 1073.83 | Q | V | | | | |
| 18+15 | 941.3107 | 1004.66 | Q | V | | | | |
| 18+20 | 947.9000 | 956.76 | Q | V | | | | |
| 18+25 | 954.0538 | 893.54 | Q | V | | | | |
| 18+30 | 959.9406 | 854.76 | Q | V | | | | |
| 18+35 | 965.5097 | 808.65 | Q | V | | | | |
| 18+40 | 970.8332 | 772.97 | Q | V | | | | |
| 18+45 | 975.8084 | 722.40 | Q | V | | | | |
| 18+50 | 980.5354 | 686.36 | Q | V | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 18+55 | 984.9049 | 634.44 | Q | | | V |
| 19+ 0 | 989.0615 | 603.54 | Q | | | V |
| 19+ 5 | 993.0873 | 584.54 | Q | | | V |
| 19+10 | 996.9925 | 567.04 | Q | | | V |
| 19+15 | 1000.7611 | 547.21 | Q | | | V |
| 19+20 | 1004.4056 | 529.17 | Q | | | V |
| 19+25 | 1007.9503 | 514.69 | Q | | | V |
| 19+30 | 1011.3972 | 500.50 | Q | | | V |
| 19+35 | 1014.7248 | 483.17 | Q | | | V |
| 19+40 | 1017.9267 | 464.91 | Q | | | V |
| 19+45 | 1021.0546 | 454.17 | Q | | | V |
| 19+50 | 1024.1169 | 444.64 | Q | | | V |
| 19+55 | 1027.1253 | 436.82 | Q | | | V |
| 20+ 0 | 1030.0932 | 430.94 | Q | | | V |
| 20+ 5 | 1033.0047 | 422.76 | Q | | | V |
| 20+10 | 1035.8560 | 414.00 | Q | | | V |
| 20+15 | 1038.6384 | 404.01 | Q | | | V |
| 20+20 | 1041.3190 | 389.22 | Q | | | V |
| 20+25 | 1043.9381 | 380.29 | Q | | | V |
| 20+30 | 1046.5078 | 373.12 | Q | | | V |
| 20+35 | 1049.0281 | 365.95 | Q | | | V |
| 20+40 | 1051.4800 | 356.03 | Q | | | V |
| 20+45 | 1053.8790 | 348.32 | Q | | | V |
| 20+50 | 1056.2356 | 342.19 | Q | | | V |
| 20+55 | 1058.5621 | 337.81 | Q | | | V |
| 21+ 0 | 1060.7980 | 324.65 | Q | | | V |
| 21+ 5 | 1062.9928 | 318.69 | Q | | | V |
| 21+10 | 1065.1525 | 313.59 | Q | | | V |
| 21+15 | 1067.2799 | 308.90 | Q | | | V |
| 21+20 | 1069.3753 | 304.26 | Q | | | V |
| 21+25 | 1071.4400 | 299.78 | Q | | | V |
| 21+30 | 1073.4724 | 295.11 | Q | | | V |
| 21+35 | 1075.4742 | 290.65 | Q | | | V |
| 21+40 | 1077.4494 | 286.80 | Q | | | V |
| 21+45 | 1079.3992 | 283.12 | Q | | | V |
| 21+50 | 1081.3247 | 279.57 | Q | | | V |
| 21+55 | 1083.2262 | 276.10 | Q | | | V |
| 22+ 0 | 1085.1053 | 272.85 | Q | | | V |
| 22+ 5 | 1086.9627 | 269.70 | Q | | | V |
| 22+10 | 1088.7992 | 266.65 | Q | | | V |
| 22+15 | 1090.6153 | 263.70 | Q | | | V |
| 22+20 | 1092.4116 | 260.83 | Q | | | V |
| 22+25 | 1094.1888 | 258.05 | Q | | | V |
| 22+30 | 1095.9474 | 255.35 | Q | | | V |
| 22+35 | 1097.6880 | 252.73 | Q | | | V |
| 22+40 | 1099.4110 | 250.18 | Q | | | V |
| 22+45 | 1101.1169 | 247.70 | Q | | | V |
| 22+50 | 1102.8061 | 245.28 | Q | | | V |
| 22+55 | 1104.4791 | 242.92 | Q | | | V |
| 23+ 0 | 1106.1364 | 240.63 | Q | | | V |
| 23+ 5 | 1107.7781 | 238.39 | Q | | | V |
| 23+10 | 1109.4048 | 236.20 | Q | | | V |
| 23+15 | 1111.0169 | 234.06 | Q | | | V |
| 23+20 | 1112.6145 | 231.98 | Q | | | V |
| 23+25 | 1114.1982 | 229.94 | Q | | | V |
| 23+30 | 1115.7681 | 227.95 | Q | | | V |
| 23+35 | 1117.3246 | 226.01 | Q | | | V |
| 23+40 | 1118.8680 | 224.10 | Q | | | V |
| 23+45 | 1120.3986 | 222.24 | Q | | | V |

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23+50    1121.9166    220.42  |Q        |         |         |        V|
23+55    1123.4223    218.63  |Q        |         |         |        V|
24+ 0    1124.9160    216.88  |Q        |         |         |        V|
24+ 5    1126.3878    213.71  |Q        |         |         |        V|
24+10    1127.8252    208.70  |Q        |         |         |        V|
24+15    1129.2193    202.42  |Q        |         |         |        V|
24+20    1130.5612    194.85  |Q        |         |         |        V|
24+25    1131.8417    185.93  |Q        |         |         |        V|
24+30    1133.0405    174.07  |Q        |         |         |        V|
24+35    1134.1364    159.12  |Q        |         |         |        V|
24+40    1135.0806    137.10  Q         |         |         |        V|
24+45    1135.8078    105.59  Q         |         |         |        V|
24+50    1136.4202     88.91  Q         |         |         |        V|
24+55    1136.9550     77.65  Q         |         |         |        V|
25+ 0    1137.4278     68.65  Q         |         |         |        V|
25+ 5    1137.8482     61.05  Q         |         |         |        V|
25+10    1138.2257     54.81  Q         |         |         |        V|
25+15    1138.5628     48.94  Q         |         |         |        V|
25+20    1138.8654     43.95  Q         |         |         |        V|
25+25    1139.1363     39.34  Q         |         |         |        V|
25+30    1139.3798     35.35  Q         |         |         |        V|
25+35    1139.5983     31.72  Q         |         |         |        V|
25+40    1139.7941     28.43  Q         |         |         |        V|
25+45    1139.9692     25.43  Q         |         |         |        V|
25+50    1140.1254     22.68  Q         |         |         |        V|
25+55    1140.2649     20.26  Q         |         |         |        V|
26+ 0    1140.3888     17.99  Q         |         |         |        V|
26+ 5    1140.4989     15.98  Q         |         |         |        V|
26+10    1140.5959     14.09  Q         |         |         |        V|
26+15    1140.6818     12.47  Q         |         |         |        V|
26+20    1140.7573     10.95  Q         |         |         |        V|
26+25    1140.8242      9.71  Q         |         |         |        V|
26+30    1140.8829      8.53  Q         |         |         |        V|
26+35    1140.9346      7.50  Q         |         |         |        V|
26+40    1140.9795      6.52  Q         |         |         |        V|
26+45    1141.0191      5.75  Q         |         |         |        V|
26+50    1141.0538      5.05  Q         |         |         |        V|
26+55    1141.0856      4.61  Q         |         |         |        V|
27+ 0    1141.1150      4.27  Q         |         |         |        V|
27+ 5    1141.1421      3.93  Q         |         |         |        V|
27+10    1141.1668      3.60  Q         |         |         |        V|
27+15    1141.1895      3.29  Q         |         |         |        V|
27+20    1141.2103      3.02  Q         |         |         |        V|
27+25    1141.2292      2.74  Q         |         |         |        V|
27+30    1141.2461      2.47  Q         |         |         |        V|
27+35    1141.2615      2.23  Q         |         |         |        V|
27+40    1141.2757      2.06  Q         |         |         |        V|
27+45    1141.2888      1.89  Q         |         |         |        V|
27+50    1141.3007      1.73  Q         |         |         |        V|
27+55    1141.3113      1.55  Q         |         |         |        V|
28+ 0    1141.3207      1.35  Q         |         |         |        V|
28+ 5    1141.3286      1.15  Q         |         |         |        V|
28+10    1141.3352      0.96  Q         |         |         |        V|
28+15    1141.3405      0.77  Q         |         |         |        V|
28+20    1141.3449      0.65  Q         |         |         |        V|
28+25    1141.3486      0.54  Q         |         |         |        V|
28+30    1141.3516      0.43  Q         |         |         |        V|
28+35    1141.3539      0.33  Q         |         |         |        V|
28+40    1141.3556      0.25  Q         |         |         |        V|
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   28+45    1141.3569      0.19  Q         |         |         |        V|
   28+50    1141.3579      0.13  Q         |         |         |        V|
   28+55    1141.3582      0.05  Q         |         |         |        V|
   29+ 0    1141.3585      0.04  Q         |         |         |        V|
   29+ 5    1141.3587      0.03  Q         |         |         |        V|
   29+10    1141.3589      0.03  Q         |         |         |        V|
   29+15    1141.3590      0.02  Q         |         |         |        V|
   29+20    1141.3591      0.01  Q         |         |         |        V|
   29+25    1141.3591      0.00  Q         |         |         |         V
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U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 51
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 15350.45 | 1 | 1.42 |
| Rainfall data for year 100 | | |
| 15350.45 | 6 | 2.25 |
| Rainfall data for year 100 | | |
| 15350.45 | 24 | 3.40 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 78.6 | 93.1 | 15350.45 | 1.000 | 0.133 | 0.987 | 0.132 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.132

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 15147.82 | 0.987 | 78.6 | 93.1 | 0.74 | 0.780 |
| 202.63 | 0.013 | 98.0 | 98.0 | 0.20 | 0.931 |

Area-averaged catchment yield fraction, Y = 0.782
Area-averaged low loss fraction, Yb = 0.218
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 45387.00(Ft.)
Length from concentration point to centroid = 22710.00(Ft.)
Elevation difference along watercourse = 2686.10(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 15350.45(Ac.)
Catchment Lag time = 1.112 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 7.4948
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.132(In/Hr)
Average low loss rate fraction (Yb) = 0.218 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.420
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.580

Computed peak 5-minute rainfall = 0.674(In)
Computed peak 30-minute rainfall = 1.153(In)
Specified peak 1-hour rainfall = 1.420(In)
Computed peak 3-hour rainfall = 1.883(In)
Specified peak 6-hour rainfall = 2.250(In)
Specified peak 24-hour rainfall = 3.400(In)

Rainfall depth area reduction factors:
Using a total area of 15350.45(Ac.) (Ref: fig. E-4)

5-minute factor = 0.592 Adjusted rainfall = 0.399(In)
30-minute factor = 0.614 Adjusted rainfall = 0.709(In)
1-hour factor = 0.623 Adjusted rainfall = 0.885(In)
3-hour factor = 0.918 Adjusted rainfall = 1.728(In)
6-hour factor = 0.961 Adjusted rainfall = 2.162(In)
24-hour factor = 0.977 Adjusted rainfall = 3.320(In)
---

U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 185644.50 (CFS)) | |
| 1 | 0.391 | 725.184 |
| 2 | 1.191 | 1485.986 |
| 3 | 2.342 | 2136.544 |
| 4 | 3.768 | 2647.236 |
| 5 | 5.525 | 3261.968 |

| | | |
|---|---|---|
| 6 | 7.648 | 3941.781 |
| 7 | 10.097 | 4545.583 |
| 8 | 13.687 | 6664.526 |
| 9 | 18.221 | 8417.958 |
| 10 | 24.192 | 11085.274 |
| 11 | 30.236 | 11219.257 |
| 12 | 36.417 | 11474.799 |
| 13 | 43.758 | 13627.337 |
| 14 | 50.547 | 12604.827 |
| 15 | 55.093 | 8438.035 |
| 16 | 58.677 | 6654.891 |
| 17 | 61.760 | 5722.671 |
| 18 | 64.361 | 4829.586 |
| 19 | 66.755 | 4443.825 |
| 20 | 68.869 | 3924.810 |
| 21 | 70.796 | 3577.526 |
| 22 | 72.574 | 3299.609 |
| 23 | 74.226 | 3068.111 |
| 24 | 75.782 | 2887.834 |
| 25 | 77.143 | 2525.945 |
| 26 | 78.470 | 2464.392 |
| 27 | 79.766 | 2405.020 |
| 28 | 80.859 | 2029.767 |
| 29 | 81.886 | 1906.737 |
| 30 | 82.913 | 1906.737 |
| 31 | 83.854 | 1746.619 |
| 32 | 84.701 | 1572.880 |
| 33 | 85.548 | 1572.808 |
| 34 | 86.369 | 1523.697 |
| 35 | 87.097 | 1350.772 |
| 36 | 87.816 | 1335.718 |
| 37 | 88.530 | 1325.158 |
| 38 | 89.158 | 1166.399 |
| 39 | 89.758 | 1113.098 |
| 40 | 90.358 | 1113.098 |
| 41 | 90.892 | 992.592 |
| 42 | 91.355 | 858.296 |
| 43 | 91.817 | 858.199 |
| 44 | 92.265 | 832.701 |
| 45 | 92.664 | 740.717 |
| 46 | 93.059 | 732.419 |
| 47 | 93.451 | 727.373 |
| 48 | 93.800 | 648.294 |
| 49 | 94.135 | 621.109 |
| 50 | 94.469 | 621.109 |
| 51 | 94.778 | 573.381 |
| 52 | 95.057 | 518.765 |
| 53 | 95.337 | 518.704 |
| 54 | 95.598 | 484.152 |
| 55 | 95.790 | 356.438 |
| 56 | 95.975 | 344.504 |
| 57 | 96.161 | 344.504 |
| 58 | 96.346 | 344.504 |
| 59 | 96.532 | 344.504 |
| 60 | 96.718 | 344.504 |
| 61 | 96.884 | 309.474 |
| 62 | 97.029 | 268.322 |
| 63 | 97.173 | 268.257 |
| 64 | 97.318 | 268.257 |

| | | |
|---|---|---|
| 65 | 97.462 | 268.257 |
| 66 | 97.607 | 268.257 |
| 67 | 97.749 | 264.628 |
| 68 | 97.858 | 202.655 |
| 69 | 97.956 | 180.322 |
| 70 | 98.053 | 180.322 |
| 71 | 98.150 | 180.322 |
| 72 | 98.247 | 180.322 |
| 73 | 98.344 | 180.322 |
| 74 | 98.436 | 170.290 |
| 75 | 98.507 | 131.347 |
| 76 | 98.575 | 127.450 |
| 77 | 98.644 | 127.450 |
| 78 | 98.713 | 127.450 |
| 79 | 98.781 | 127.450 |
| 80 | 98.850 | 127.450 |
| 81 | 98.917 | 124.221 |
| 82 | 98.982 | 120.226 |
| 83 | 99.046 | 120.215 |
| 84 | 99.111 | 120.215 |
| 85 | 99.176 | 120.215 |
| 86 | 99.241 | 120.215 |
| 87 | 99.305 | 119.778 |
| 88 | 99.365 | 111.612 |
| 89 | 99.424 | 108.527 |
| 90 | 99.482 | 108.527 |
| 91 | 99.541 | 108.527 |
| 92 | 99.599 | 108.527 |
| 93 | 99.658 | 108.527 |
| 94 | 99.711 | 98.918 |
| 95 | 99.740 | 54.108 |
| 96 | 99.767 | 50.437 |
| 97 | 99.794 | 50.437 |
| 98 | 99.821 | 50.437 |
| 99 | 99.849 | 50.437 |
| 100 | 99.876 | 50.437 |
| 101 | 99.903 | 50.437 |
| 102 | 99.930 | 50.437 |
| 103 | 99.957 | 50.437 |
| 104 | 99.984 | 50.437 |
| 105 | 100.000 | 28.841 |

---

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.3987 | 0.3987 |
| 2 | 0.4981 | 0.0994 |
| 3 | 0.5673 | 0.0693 |
| 4 | 0.6222 | 0.0549 |
| 5 | 0.6685 | 0.0462 |
| 6 | 0.7088 | 0.0403 |
| 7 | 0.7446 | 0.0358 |
| 8 | 0.7771 | 0.0325 |
| 9 | 0.8070 | 0.0299 |
| 10 | 0.8346 | 0.0277 |
| 11 | 0.8605 | 0.0258 |
| 12 | 0.8848 | 0.0243 |
| 13 | 0.9290 | 0.0442 |
| 14 | 0.9719 | 0.0429 |
| 15 | 1.0137 | 0.0417 |

| | | |
|---|---|---|
| 16 | 1.0543 | 0.0407 |
| 17 | 1.0940 | 0.0397 |
| 18 | 1.1328 | 0.0388 |
| 19 | 1.1708 | 0.0380 |
| 20 | 1.2079 | 0.0372 |
| 21 | 1.2444 | 0.0365 |
| 22 | 1.2802 | 0.0358 |
| 23 | 1.3153 | 0.0352 |
| 24 | 1.3499 | 0.0346 |
| 25 | 1.3839 | 0.0340 |
| 26 | 1.4174 | 0.0335 |
| 27 | 1.4504 | 0.0330 |
| 28 | 1.4829 | 0.0325 |
| 29 | 1.5149 | 0.0321 |
| 30 | 1.5466 | 0.0316 |
| 31 | 1.5778 | 0.0312 |
| 32 | 1.6086 | 0.0308 |
| 33 | 1.6390 | 0.0305 |
| 34 | 1.6691 | 0.0301 |
| 35 | 1.6989 | 0.0298 |
| 36 | 1.7283 | 0.0294 |
| 37 | 1.7437 | 0.0154 |
| 38 | 1.7588 | 0.0151 |
| 39 | 1.7736 | 0.0148 |
| 40 | 1.7881 | 0.0146 |
| 41 | 1.8024 | 0.0143 |
| 42 | 1.8165 | 0.0141 |
| 43 | 1.8304 | 0.0139 |
| 44 | 1.8440 | 0.0136 |
| 45 | 1.8574 | 0.0134 |
| 46 | 1.8707 | 0.0132 |
| 47 | 1.8837 | 0.0130 |
| 48 | 1.8966 | 0.0128 |
| 49 | 1.9092 | 0.0127 |
| 50 | 1.9217 | 0.0125 |
| 51 | 1.9340 | 0.0123 |
| 52 | 1.9462 | 0.0122 |
| 53 | 1.9582 | 0.0120 |
| 54 | 1.9701 | 0.0119 |
| 55 | 1.9818 | 0.0117 |
| 56 | 1.9933 | 0.0116 |
| 57 | 2.0048 | 0.0114 |
| 58 | 2.0161 | 0.0113 |
| 59 | 2.0272 | 0.0112 |
| 60 | 2.0382 | 0.0110 |
| 61 | 2.0492 | 0.0109 |
| 62 | 2.0599 | 0.0108 |
| 63 | 2.0706 | 0.0107 |
| 64 | 2.0812 | 0.0106 |
| 65 | 2.0916 | 0.0104 |
| 66 | 2.1020 | 0.0103 |
| 67 | 2.1122 | 0.0102 |
| 68 | 2.1223 | 0.0101 |
| 69 | 2.1323 | 0.0100 |
| 70 | 2.1423 | 0.0099 |
| 71 | 2.1521 | 0.0098 |
| 72 | 2.1618 | 0.0097 |
| 73 | 2.1711 | 0.0093 |
| 74 | 2.1803 | 0.0092 |

| | | |
|---|---|---|
| 75 | 2.1893 | 0.0091 |
| 76 | 2.1983 | 0.0090 |
| 77 | 2.2072 | 0.0089 |
| 78 | 2.2161 | 0.0088 |
| 79 | 2.2248 | 0.0088 |
| 80 | 2.2335 | 0.0087 |
| 81 | 2.2421 | 0.0086 |
| 82 | 2.2507 | 0.0085 |
| 83 | 2.2591 | 0.0085 |
| 84 | 2.2675 | 0.0084 |
| 85 | 2.2758 | 0.0083 |
| 86 | 2.2841 | 0.0083 |
| 87 | 2.2923 | 0.0082 |
| 88 | 2.3004 | 0.0081 |
| 89 | 2.3085 | 0.0081 |
| 90 | 2.3165 | 0.0080 |
| 91 | 2.3244 | 0.0079 |
| 92 | 2.3323 | 0.0079 |
| 93 | 2.3401 | 0.0078 |
| 94 | 2.3479 | 0.0078 |
| 95 | 2.3556 | 0.0077 |
| 96 | 2.3632 | 0.0076 |
| 97 | 2.3708 | 0.0076 |
| 98 | 2.3783 | 0.0075 |
| 99 | 2.3858 | 0.0075 |
| 100 | 2.3933 | 0.0074 |
| 101 | 2.4006 | 0.0074 |
| 102 | 2.4080 | 0.0073 |
| 103 | 2.4153 | 0.0073 |
| 104 | 2.4225 | 0.0072 |
| 105 | 2.4297 | 0.0072 |
| 106 | 2.4368 | 0.0071 |
| 107 | 2.4439 | 0.0071 |
| 108 | 2.4510 | 0.0070 |
| 109 | 2.4580 | 0.0070 |
| 110 | 2.4649 | 0.0070 |
| 111 | 2.4718 | 0.0069 |
| 112 | 2.4787 | 0.0069 |
| 113 | 2.4855 | 0.0068 |
| 114 | 2.4923 | 0.0068 |
| 115 | 2.4991 | 0.0067 |
| 116 | 2.5058 | 0.0067 |
| 117 | 2.5124 | 0.0067 |
| 118 | 2.5191 | 0.0066 |
| 119 | 2.5257 | 0.0066 |
| 120 | 2.5322 | 0.0066 |
| 121 | 2.5387 | 0.0065 |
| 122 | 2.5452 | 0.0065 |
| 123 | 2.5516 | 0.0064 |
| 124 | 2.5581 | 0.0064 |
| 125 | 2.5644 | 0.0064 |
| 126 | 2.5708 | 0.0063 |
| 127 | 2.5771 | 0.0063 |
| 128 | 2.5833 | 0.0063 |
| 129 | 2.5895 | 0.0062 |
| 130 | 2.5957 | 0.0062 |
| 131 | 2.6019 | 0.0062 |
| 132 | 2.6080 | 0.0061 |
| 133 | 2.6141 | 0.0061 |

| | | |
|---|---|---|
| 134 | 2.6202 | 0.0061 |
| 135 | 2.6262 | 0.0060 |
| 136 | 2.6323 | 0.0060 |
| 137 | 2.6382 | 0.0060 |
| 138 | 2.6442 | 0.0059 |
| 139 | 2.6501 | 0.0059 |
| 140 | 2.6560 | 0.0059 |
| 141 | 2.6618 | 0.0059 |
| 142 | 2.6677 | 0.0058 |
| 143 | 2.6735 | 0.0058 |
| 144 | 2.6792 | 0.0058 |
| 145 | 2.6850 | 0.0057 |
| 146 | 2.6907 | 0.0057 |
| 147 | 2.6964 | 0.0057 |
| 148 | 2.7021 | 0.0057 |
| 149 | 2.7077 | 0.0056 |
| 150 | 2.7133 | 0.0056 |
| 151 | 2.7189 | 0.0056 |
| 152 | 2.7245 | 0.0056 |
| 153 | 2.7300 | 0.0055 |
| 154 | 2.7355 | 0.0055 |
| 155 | 2.7410 | 0.0055 |
| 156 | 2.7465 | 0.0055 |
| 157 | 2.7519 | 0.0054 |
| 158 | 2.7573 | 0.0054 |
| 159 | 2.7627 | 0.0054 |
| 160 | 2.7681 | 0.0054 |
| 161 | 2.7734 | 0.0053 |
| 162 | 2.7787 | 0.0053 |
| 163 | 2.7840 | 0.0053 |
| 164 | 2.7893 | 0.0053 |
| 165 | 2.7946 | 0.0053 |
| 166 | 2.7998 | 0.0052 |
| 167 | 2.8050 | 0.0052 |
| 168 | 2.8102 | 0.0052 |
| 169 | 2.8154 | 0.0052 |
| 170 | 2.8205 | 0.0051 |
| 171 | 2.8256 | 0.0051 |
| 172 | 2.8307 | 0.0051 |
| 173 | 2.8358 | 0.0051 |
| 174 | 2.8409 | 0.0051 |
| 175 | 2.8459 | 0.0050 |
| 176 | 2.8510 | 0.0050 |
| 177 | 2.8560 | 0.0050 |
| 178 | 2.8610 | 0.0050 |
| 179 | 2.8659 | 0.0050 |
| 180 | 2.8709 | 0.0049 |
| 181 | 2.8758 | 0.0049 |
| 182 | 2.8807 | 0.0049 |
| 183 | 2.8856 | 0.0049 |
| 184 | 2.8905 | 0.0049 |
| 185 | 2.8953 | 0.0049 |
| 186 | 2.9002 | 0.0048 |
| 187 | 2.9050 | 0.0048 |
| 188 | 2.9098 | 0.0048 |
| 189 | 2.9146 | 0.0048 |
| 190 | 2.9193 | 0.0048 |
| 191 | 2.9241 | 0.0047 |
| 192 | 2.9288 | 0.0047 |

| | | |
|---|---|---|
| 193 | 2.9335 | 0.0047 |
| 194 | 2.9382 | 0.0047 |
| 195 | 2.9429 | 0.0047 |
| 196 | 2.9476 | 0.0047 |
| 197 | 2.9522 | 0.0046 |
| 198 | 2.9568 | 0.0046 |
| 199 | 2.9614 | 0.0046 |
| 200 | 2.9660 | 0.0046 |
| 201 | 2.9706 | 0.0046 |
| 202 | 2.9752 | 0.0046 |
| 203 | 2.9797 | 0.0046 |
| 204 | 2.9843 | 0.0045 |
| 205 | 2.9888 | 0.0045 |
| 206 | 2.9933 | 0.0045 |
| 207 | 2.9978 | 0.0045 |
| 208 | 3.0023 | 0.0045 |
| 209 | 3.0067 | 0.0045 |
| 210 | 3.0112 | 0.0044 |
| 211 | 3.0156 | 0.0044 |
| 212 | 3.0200 | 0.0044 |
| 213 | 3.0244 | 0.0044 |
| 214 | 3.0288 | 0.0044 |
| 215 | 3.0332 | 0.0044 |
| 216 | 3.0376 | 0.0044 |
| 217 | 3.0419 | 0.0043 |
| 218 | 3.0462 | 0.0043 |
| 219 | 3.0506 | 0.0043 |
| 220 | 3.0549 | 0.0043 |
| 221 | 3.0592 | 0.0043 |
| 222 | 3.0634 | 0.0043 |
| 223 | 3.0677 | 0.0043 |
| 224 | 3.0719 | 0.0043 |
| 225 | 3.0762 | 0.0042 |
| 226 | 3.0804 | 0.0042 |
| 227 | 3.0846 | 0.0042 |
| 228 | 3.0888 | 0.0042 |
| 229 | 3.0930 | 0.0042 |
| 230 | 3.0972 | 0.0042 |
| 231 | 3.1014 | 0.0042 |
| 232 | 3.1055 | 0.0041 |
| 233 | 3.1096 | 0.0041 |
| 234 | 3.1138 | 0.0041 |
| 235 | 3.1179 | 0.0041 |
| 236 | 3.1220 | 0.0041 |
| 237 | 3.1261 | 0.0041 |
| 238 | 3.1301 | 0.0041 |
| 239 | 3.1342 | 0.0041 |
| 240 | 3.1383 | 0.0041 |
| 241 | 3.1423 | 0.0040 |
| 242 | 3.1463 | 0.0040 |
| 243 | 3.1504 | 0.0040 |
| 244 | 3.1544 | 0.0040 |
| 245 | 3.1584 | 0.0040 |
| 246 | 3.1623 | 0.0040 |
| 247 | 3.1663 | 0.0040 |
| 248 | 3.1703 | 0.0040 |
| 249 | 3.1742 | 0.0040 |
| 250 | 3.1782 | 0.0039 |
| 251 | 3.1821 | 0.0039 |

| | | |
|---|---|---|
| 252 | 3.1860 | 0.0039 |
| 253 | 3.1899 | 0.0039 |
| 254 | 3.1938 | 0.0039 |
| 255 | 3.1977 | 0.0039 |
| 256 | 3.2016 | 0.0039 |
| 257 | 3.2055 | 0.0039 |
| 258 | 3.2093 | 0.0039 |
| 259 | 3.2132 | 0.0038 |
| 260 | 3.2170 | 0.0038 |
| 261 | 3.2208 | 0.0038 |
| 262 | 3.2246 | 0.0038 |
| 263 | 3.2284 | 0.0038 |
| 264 | 3.2322 | 0.0038 |
| 265 | 3.2360 | 0.0038 |
| 266 | 3.2398 | 0.0038 |
| 267 | 3.2436 | 0.0038 |
| 268 | 3.2473 | 0.0038 |
| 269 | 3.2511 | 0.0037 |
| 270 | 3.2548 | 0.0037 |
| 271 | 3.2585 | 0.0037 |
| 272 | 3.2622 | 0.0037 |
| 273 | 3.2660 | 0.0037 |
| 274 | 3.2697 | 0.0037 |
| 275 | 3.2733 | 0.0037 |
| 276 | 3.2770 | 0.0037 |
| 277 | 3.2807 | 0.0037 |
| 278 | 3.2844 | 0.0037 |
| 279 | 3.2880 | 0.0037 |
| 280 | 3.2917 | 0.0036 |
| 281 | 3.2953 | 0.0036 |
| 282 | 3.2989 | 0.0036 |
| 283 | 3.3025 | 0.0036 |
| 284 | 3.3061 | 0.0036 |
| 285 | 3.3097 | 0.0036 |
| 286 | 3.3133 | 0.0036 |
| 287 | 3.3169 | 0.0036 |
| 288 | 3.3205 | 0.0036 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0036 | 0.0008 | 0.0028 |
| 2 | 0.0036 | 0.0008 | 0.0028 |
| 3 | 0.0036 | 0.0008 | 0.0028 |
| 4 | 0.0036 | 0.0008 | 0.0028 |
| 5 | 0.0036 | 0.0008 | 0.0028 |
| 6 | 0.0036 | 0.0008 | 0.0028 |
| 7 | 0.0037 | 0.0008 | 0.0029 |
| 8 | 0.0037 | 0.0008 | 0.0029 |
| 9 | 0.0037 | 0.0008 | 0.0029 |
| 10 | 0.0037 | 0.0008 | 0.0029 |
| 11 | 0.0037 | 0.0008 | 0.0029 |
| 12 | 0.0037 | 0.0008 | 0.0029 |
| 13 | 0.0037 | 0.0008 | 0.0029 |
| 14 | 0.0037 | 0.0008 | 0.0029 |
| 15 | 0.0038 | 0.0008 | 0.0029 |
| 16 | 0.0038 | 0.0008 | 0.0030 |
| 17 | 0.0038 | 0.0008 | 0.0030 |

| | | | |
|---|---|---|---|
| 18 | 0.0038 | 0.0008 | 0.0030 |
| 19 | 0.0038 | 0.0008 | 0.0030 |
| 20 | 0.0038 | 0.0008 | 0.0030 |
| 21 | 0.0039 | 0.0008 | 0.0030 |
| 22 | 0.0039 | 0.0008 | 0.0030 |
| 23 | 0.0039 | 0.0008 | 0.0030 |
| 24 | 0.0039 | 0.0008 | 0.0030 |
| 25 | 0.0039 | 0.0009 | 0.0031 |
| 26 | 0.0039 | 0.0009 | 0.0031 |
| 27 | 0.0040 | 0.0009 | 0.0031 |
| 28 | 0.0040 | 0.0009 | 0.0031 |
| 29 | 0.0040 | 0.0009 | 0.0031 |
| 30 | 0.0040 | 0.0009 | 0.0031 |
| 31 | 0.0040 | 0.0009 | 0.0031 |
| 32 | 0.0040 | 0.0009 | 0.0032 |
| 33 | 0.0041 | 0.0009 | 0.0032 |
| 34 | 0.0041 | 0.0009 | 0.0032 |
| 35 | 0.0041 | 0.0009 | 0.0032 |
| 36 | 0.0041 | 0.0009 | 0.0032 |
| 37 | 0.0041 | 0.0009 | 0.0032 |
| 38 | 0.0041 | 0.0009 | 0.0032 |
| 39 | 0.0042 | 0.0009 | 0.0033 |
| 40 | 0.0042 | 0.0009 | 0.0033 |
| 41 | 0.0042 | 0.0009 | 0.0033 |
| 42 | 0.0042 | 0.0009 | 0.0033 |
| 43 | 0.0042 | 0.0009 | 0.0033 |
| 44 | 0.0043 | 0.0009 | 0.0033 |
| 45 | 0.0043 | 0.0009 | 0.0033 |
| 46 | 0.0043 | 0.0009 | 0.0034 |
| 47 | 0.0043 | 0.0009 | 0.0034 |
| 48 | 0.0043 | 0.0009 | 0.0034 |
| 49 | 0.0044 | 0.0009 | 0.0034 |
| 50 | 0.0044 | 0.0010 | 0.0034 |
| 51 | 0.0044 | 0.0010 | 0.0034 |
| 52 | 0.0044 | 0.0010 | 0.0035 |
| 53 | 0.0044 | 0.0010 | 0.0035 |
| 54 | 0.0045 | 0.0010 | 0.0035 |
| 55 | 0.0045 | 0.0010 | 0.0035 |
| 56 | 0.0045 | 0.0010 | 0.0035 |
| 57 | 0.0045 | 0.0010 | 0.0035 |
| 58 | 0.0046 | 0.0010 | 0.0036 |
| 59 | 0.0046 | 0.0010 | 0.0036 |
| 60 | 0.0046 | 0.0010 | 0.0036 |
| 61 | 0.0046 | 0.0010 | 0.0036 |
| 62 | 0.0046 | 0.0010 | 0.0036 |
| 63 | 0.0047 | 0.0010 | 0.0037 |
| 64 | 0.0047 | 0.0010 | 0.0037 |
| 65 | 0.0047 | 0.0010 | 0.0037 |
| 66 | 0.0047 | 0.0010 | 0.0037 |
| 67 | 0.0048 | 0.0010 | 0.0037 |
| 68 | 0.0048 | 0.0010 | 0.0038 |
| 69 | 0.0048 | 0.0011 | 0.0038 |
| 70 | 0.0049 | 0.0011 | 0.0038 |
| 71 | 0.0049 | 0.0011 | 0.0038 |
| 72 | 0.0049 | 0.0011 | 0.0038 |
| 73 | 0.0049 | 0.0011 | 0.0039 |
| 74 | 0.0050 | 0.0011 | 0.0039 |
| 75 | 0.0050 | 0.0011 | 0.0039 |
| 76 | 0.0050 | 0.0011 | 0.0039 |

| | | | |
|---|---|---|---|
| 77 | 0.0051 | 0.0011 | 0.0040 |
| 78 | 0.0051 | 0.0011 | 0.0040 |
| 79 | 0.0051 | 0.0011 | 0.0040 |
| 80 | 0.0051 | 0.0011 | 0.0040 |
| 81 | 0.0052 | 0.0011 | 0.0041 |
| 82 | 0.0052 | 0.0011 | 0.0041 |
| 83 | 0.0053 | 0.0011 | 0.0041 |
| 84 | 0.0053 | 0.0011 | 0.0041 |
| 85 | 0.0053 | 0.0012 | 0.0042 |
| 86 | 0.0053 | 0.0012 | 0.0042 |
| 87 | 0.0054 | 0.0012 | 0.0042 |
| 88 | 0.0054 | 0.0012 | 0.0042 |
| 89 | 0.0055 | 0.0012 | 0.0043 |
| 90 | 0.0055 | 0.0012 | 0.0043 |
| 91 | 0.0055 | 0.0012 | 0.0043 |
| 92 | 0.0056 | 0.0012 | 0.0044 |
| 93 | 0.0056 | 0.0012 | 0.0044 |
| 94 | 0.0056 | 0.0012 | 0.0044 |
| 95 | 0.0057 | 0.0012 | 0.0045 |
| 96 | 0.0057 | 0.0012 | 0.0045 |
| 97 | 0.0058 | 0.0013 | 0.0045 |
| 98 | 0.0058 | 0.0013 | 0.0045 |
| 99 | 0.0059 | 0.0013 | 0.0046 |
| 100 | 0.0059 | 0.0013 | 0.0046 |
| 101 | 0.0059 | 0.0013 | 0.0047 |
| 102 | 0.0060 | 0.0013 | 0.0047 |
| 103 | 0.0060 | 0.0013 | 0.0047 |
| 104 | 0.0061 | 0.0013 | 0.0047 |
| 105 | 0.0061 | 0.0013 | 0.0048 |
| 106 | 0.0062 | 0.0013 | 0.0048 |
| 107 | 0.0062 | 0.0014 | 0.0049 |
| 108 | 0.0063 | 0.0014 | 0.0049 |
| 109 | 0.0063 | 0.0014 | 0.0050 |
| 110 | 0.0064 | 0.0014 | 0.0050 |
| 111 | 0.0064 | 0.0014 | 0.0050 |
| 112 | 0.0065 | 0.0014 | 0.0051 |
| 113 | 0.0066 | 0.0014 | 0.0051 |
| 114 | 0.0066 | 0.0014 | 0.0052 |
| 115 | 0.0067 | 0.0015 | 0.0052 |
| 116 | 0.0067 | 0.0015 | 0.0052 |
| 117 | 0.0068 | 0.0015 | 0.0053 |
| 118 | 0.0068 | 0.0015 | 0.0053 |
| 119 | 0.0069 | 0.0015 | 0.0054 |
| 120 | 0.0070 | 0.0015 | 0.0054 |
| 121 | 0.0070 | 0.0015 | 0.0055 |
| 122 | 0.0071 | 0.0015 | 0.0055 |
| 123 | 0.0072 | 0.0016 | 0.0056 |
| 124 | 0.0072 | 0.0016 | 0.0057 |
| 125 | 0.0073 | 0.0016 | 0.0057 |
| 126 | 0.0074 | 0.0016 | 0.0058 |
| 127 | 0.0075 | 0.0016 | 0.0059 |
| 128 | 0.0075 | 0.0016 | 0.0059 |
| 129 | 0.0076 | 0.0017 | 0.0060 |
| 130 | 0.0077 | 0.0017 | 0.0060 |
| 131 | 0.0078 | 0.0017 | 0.0061 |
| 132 | 0.0079 | 0.0017 | 0.0062 |
| 133 | 0.0080 | 0.0017 | 0.0063 |
| 134 | 0.0081 | 0.0018 | 0.0063 |
| 135 | 0.0082 | 0.0018 | 0.0064 |

| | | | |
|---|---|---|---|
| 136 | 0.0083 | 0.0018 | 0.0065 |
| 137 | 0.0084 | 0.0018 | 0.0066 |
| 138 | 0.0085 | 0.0018 | 0.0066 |
| 139 | 0.0086 | 0.0019 | 0.0067 |
| 140 | 0.0087 | 0.0019 | 0.0068 |
| 141 | 0.0088 | 0.0019 | 0.0069 |
| 142 | 0.0089 | 0.0019 | 0.0070 |
| 143 | 0.0091 | 0.0020 | 0.0071 |
| 144 | 0.0092 | 0.0020 | 0.0072 |
| 145 | 0.0097 | 0.0021 | 0.0076 |
| 146 | 0.0098 | 0.0021 | 0.0077 |
| 147 | 0.0100 | 0.0022 | 0.0078 |
| 148 | 0.0101 | 0.0022 | 0.0079 |
| 149 | 0.0103 | 0.0023 | 0.0081 |
| 150 | 0.0104 | 0.0023 | 0.0082 |
| 151 | 0.0107 | 0.0023 | 0.0083 |
| 152 | 0.0108 | 0.0023 | 0.0084 |
| 153 | 0.0110 | 0.0024 | 0.0086 |
| 154 | 0.0112 | 0.0024 | 0.0087 |
| 155 | 0.0114 | 0.0025 | 0.0089 |
| 156 | 0.0116 | 0.0025 | 0.0090 |
| 157 | 0.0119 | 0.0026 | 0.0093 |
| 158 | 0.0120 | 0.0026 | 0.0094 |
| 159 | 0.0123 | 0.0027 | 0.0096 |
| 160 | 0.0125 | 0.0027 | 0.0098 |
| 161 | 0.0128 | 0.0028 | 0.0101 |
| 162 | 0.0130 | 0.0028 | 0.0102 |
| 163 | 0.0134 | 0.0029 | 0.0105 |
| 164 | 0.0136 | 0.0030 | 0.0107 |
| 165 | 0.0141 | 0.0031 | 0.0110 |
| 166 | 0.0143 | 0.0031 | 0.0112 |
| 167 | 0.0148 | 0.0032 | 0.0116 |
| 168 | 0.0151 | 0.0033 | 0.0118 |
| 169 | 0.0294 | 0.0064 | 0.0230 |
| 170 | 0.0298 | 0.0065 | 0.0233 |
| 171 | 0.0305 | 0.0066 | 0.0238 |
| 172 | 0.0308 | 0.0067 | 0.0241 |
| 173 | 0.0316 | 0.0069 | 0.0247 |
| 174 | 0.0321 | 0.0070 | 0.0251 |
| 175 | 0.0330 | 0.0072 | 0.0258 |
| 176 | 0.0335 | 0.0073 | 0.0262 |
| 177 | 0.0346 | 0.0075 | 0.0270 |
| 178 | 0.0352 | 0.0077 | 0.0275 |
| 179 | 0.0365 | 0.0079 | 0.0285 |
| 180 | 0.0372 | 0.0081 | 0.0291 |
| 181 | 0.0388 | 0.0084 | 0.0303 |
| 182 | 0.0397 | 0.0086 | 0.0310 |
| 183 | 0.0417 | 0.0091 | 0.0327 |
| 184 | 0.0429 | 0.0093 | 0.0336 |
| 185 | 0.0243 | 0.0053 | 0.0190 |
| 186 | 0.0258 | 0.0056 | 0.0202 |
| 187 | 0.0299 | 0.0065 | 0.0234 |
| 188 | 0.0325 | 0.0071 | 0.0254 |
| 189 | 0.0403 | 0.0088 | 0.0315 |
| 190 | 0.0462 | 0.0101 | 0.0362 |
| 191 | 0.0693 | 0.0110 | 0.0583 |
| 192 | 0.0994 | 0.0110 | 0.0884 |
| 193 | 0.3987 | 0.0110 | 0.3877 |
| 194 | 0.0549 | 0.0110 | 0.0439 |

| | | | |
|---|---|---|---|
| 195 | 0.0358 | 0.0078 | 0.0280 |
| 196 | 0.0277 | 0.0060 | 0.0216 |
| 197 | 0.0442 | 0.0096 | 0.0346 |
| 198 | 0.0407 | 0.0089 | 0.0318 |
| 199 | 0.0380 | 0.0083 | 0.0297 |
| 200 | 0.0358 | 0.0078 | 0.0280 |
| 201 | 0.0340 | 0.0074 | 0.0266 |
| 202 | 0.0325 | 0.0071 | 0.0254 |
| 203 | 0.0312 | 0.0068 | 0.0244 |
| 204 | 0.0301 | 0.0066 | 0.0235 |
| 205 | 0.0154 | 0.0033 | 0.0120 |
| 206 | 0.0146 | 0.0032 | 0.0114 |
| 207 | 0.0139 | 0.0030 | 0.0108 |
| 208 | 0.0132 | 0.0029 | 0.0103 |
| 209 | 0.0127 | 0.0028 | 0.0099 |
| 210 | 0.0122 | 0.0026 | 0.0095 |
| 211 | 0.0117 | 0.0025 | 0.0092 |
| 212 | 0.0113 | 0.0025 | 0.0088 |
| 213 | 0.0109 | 0.0024 | 0.0085 |
| 214 | 0.0106 | 0.0023 | 0.0083 |
| 215 | 0.0102 | 0.0022 | 0.0080 |
| 216 | 0.0099 | 0.0022 | 0.0078 |
| 217 | 0.0093 | 0.0020 | 0.0072 |
| 218 | 0.0090 | 0.0020 | 0.0070 |
| 219 | 0.0088 | 0.0019 | 0.0068 |
| 220 | 0.0085 | 0.0019 | 0.0067 |
| 221 | 0.0083 | 0.0018 | 0.0065 |
| 222 | 0.0081 | 0.0018 | 0.0064 |
| 223 | 0.0079 | 0.0017 | 0.0062 |
| 224 | 0.0078 | 0.0017 | 0.0061 |
| 225 | 0.0076 | 0.0017 | 0.0059 |
| 226 | 0.0074 | 0.0016 | 0.0058 |
| 227 | 0.0073 | 0.0016 | 0.0057 |
| 228 | 0.0071 | 0.0016 | 0.0056 |
| 229 | 0.0070 | 0.0015 | 0.0055 |
| 230 | 0.0069 | 0.0015 | 0.0054 |
| 231 | 0.0067 | 0.0015 | 0.0053 |
| 232 | 0.0066 | 0.0014 | 0.0052 |
| 233 | 0.0065 | 0.0014 | 0.0051 |
| 234 | 0.0064 | 0.0014 | 0.0050 |
| 235 | 0.0063 | 0.0014 | 0.0049 |
| 236 | 0.0062 | 0.0013 | 0.0048 |
| 237 | 0.0061 | 0.0013 | 0.0048 |
| 238 | 0.0060 | 0.0013 | 0.0047 |
| 239 | 0.0059 | 0.0013 | 0.0046 |
| 240 | 0.0058 | 0.0013 | 0.0046 |
| 241 | 0.0057 | 0.0013 | 0.0045 |
| 242 | 0.0057 | 0.0012 | 0.0044 |
| 243 | 0.0056 | 0.0012 | 0.0044 |
| 244 | 0.0055 | 0.0012 | 0.0043 |
| 245 | 0.0054 | 0.0012 | 0.0043 |
| 246 | 0.0054 | 0.0012 | 0.0042 |
| 247 | 0.0053 | 0.0012 | 0.0041 |
| 248 | 0.0052 | 0.0011 | 0.0041 |
| 249 | 0.0052 | 0.0011 | 0.0040 |
| 250 | 0.0051 | 0.0011 | 0.0040 |
| 251 | 0.0050 | 0.0011 | 0.0039 |
| 252 | 0.0050 | 0.0011 | 0.0039 |
| 253 | 0.0049 | 0.0011 | 0.0039 |

| | | | |
|---|---|---|---|
| 254 | 0.0049 | 0.0011 | 0.0038 |
| 255 | 0.0048 | 0.0010 | 0.0038 |
| 256 | 0.0048 | 0.0010 | 0.0037 |
| 257 | 0.0047 | 0.0010 | 0.0037 |
| 258 | 0.0047 | 0.0010 | 0.0036 |
| 259 | 0.0046 | 0.0010 | 0.0036 |
| 260 | 0.0046 | 0.0010 | 0.0036 |
| 261 | 0.0045 | 0.0010 | 0.0035 |
| 262 | 0.0045 | 0.0010 | 0.0035 |
| 263 | 0.0044 | 0.0010 | 0.0035 |
| 264 | 0.0044 | 0.0010 | 0.0034 |
| 265 | 0.0043 | 0.0009 | 0.0034 |
| 266 | 0.0043 | 0.0009 | 0.0034 |
| 267 | 0.0043 | 0.0009 | 0.0033 |
| 268 | 0.0042 | 0.0009 | 0.0033 |
| 269 | 0.0042 | 0.0009 | 0.0033 |
| 270 | 0.0041 | 0.0009 | 0.0032 |
| 271 | 0.0041 | 0.0009 | 0.0032 |
| 272 | 0.0041 | 0.0009 | 0.0032 |
| 273 | 0.0040 | 0.0009 | 0.0032 |
| 274 | 0.0040 | 0.0009 | 0.0031 |
| 275 | 0.0040 | 0.0009 | 0.0031 |
| 276 | 0.0039 | 0.0009 | 0.0031 |
| 277 | 0.0039 | 0.0009 | 0.0031 |
| 278 | 0.0039 | 0.0008 | 0.0030 |
| 279 | 0.0038 | 0.0008 | 0.0030 |
| 280 | 0.0038 | 0.0008 | 0.0030 |
| 281 | 0.0038 | 0.0008 | 0.0030 |
| 282 | 0.0038 | 0.0008 | 0.0029 |
| 283 | 0.0037 | 0.0008 | 0.0029 |
| 284 | 0.0037 | 0.0008 | 0.0029 |
| 285 | 0.0037 | 0.0008 | 0.0029 |
| 286 | 0.0036 | 0.0008 | 0.0029 |
| 287 | 0.0036 | 0.0008 | 0.0028 |
| 288 | 0.0036 | 0.0008 | 0.0028 |

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Total soil rain loss = 0.63(In)
Total effective rainfall = 2.69(In)
Peak flow rate in flood hydrograph = 10858.87(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 2725.0 | 5450.0 | 8175.0 | 10900.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0140 | 2.03 | Q | \| | \| | \| | \| |
| 0+10 | 0.0566 | 6.19 | Q | \| | \| | \| | \| |
| 0+15 | 0.1404 | 12.18 | Q | \| | \| | \| | \| |
| 0+20 | 0.2755 | 19.62 | Q | \| | \| | \| | \| |
| 0+25 | 0.4739 | 28.80 | Q | \| | \| | \| | \| |
| 0+30 | 0.7488 | 39.92 | Q | \| | \| | \| | \| |
| 0+35 | 1.1123 | 52.77 | Q | \| | \| | \| | \| |
| 0+40 | 1.6052 | 71.58 | Q | \| | \| | \| | \| |
| 0+45 | 2.2620 | 95.36 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+50 | 3.1344 | 126.68 | Q | | | | |
| 0+55 | 4.2259 | 158.49 | Q | | | | |
| 1+ 0 | 5.5423 | 191.13 | Q | | | | |
| 1+ 5 | 7.1256 | 229.90 | Q | | | | |
| 1+10 | 8.9573 | 265.96 | Q | | | | |
| 1+15 | 10.9581 | 290.51 | VQ | | | | |
| 1+20 | 13.0943 | 310.18 | VQ | | | | |
| 1+25 | 15.3486 | 327.32 | VQ | | | | |
| 1+30 | 17.7042 | 342.04 | VQ | | | | |
| 1+35 | 20.1541 | 355.73 | VQ | | | | |
| 1+40 | 22.6888 | 368.03 | VQ | | | | |
| 1+45 | 25.3018 | 379.42 | VQ | | | | |
| 1+50 | 27.9883 | 390.08 | VQ | | | | |
| 1+55 | 30.7440 | 400.13 | VQ | | | | |
| 2+ 0 | 33.5659 | 409.73 | VQ | | | | |
| 2+ 5 | 36.4471 | 418.36 | VQ | | | | |
| 2+10 | 39.3870 | 426.86 | VQ | | | | |
| 2+15 | 42.3845 | 435.23 | VQ | | | | |
| 2+20 | 45.4327 | 442.60 | VQ | | | | |
| 2+25 | 48.5295 | 449.66 | VQ | | | | |
| 2+30 | 51.6752 | 456.76 | VQ | | | | |
| 2+35 | 54.8669 | 463.44 | VQ | | | | |
| 2+40 | 58.1016 | 469.68 | VQ | | | | |
| 2+45 | 61.3794 | 475.94 | VQ | | | | |
| 2+50 | 64.6997 | 482.11 | VQ | | | | |
| 2+55 | 68.0594 | 487.82 | VQ | | | | |
| 3+ 0 | 71.4583 | 493.53 | VQ | | | | |
| 3+ 5 | 74.8966 | 499.24 | VQ | | | | |
| 3+10 | 78.3714 | 504.54 | VQ | | | | |
| 3+15 | 81.8819 | 509.72 | VQ | | | | |
| 3+20 | 85.4283 | 514.94 | VQ | | | | |
| 3+25 | 89.0086 | 519.85 | \|Q | | | | |
| 3+30 | 92.6203 | 524.42 | \|Q | | | | |
| 3+35 | 96.2637 | 529.02 | \|Q | | | | |
| 3+40 | 99.9385 | 533.58 | \|Q | | | | |
| 3+45 | 103.6431 | 537.91 | \|Q | | | | |
| 3+50 | 107.3777 | 542.26 | \|Q | | | | |
| 3+55 | 111.1423 | 546.62 | \|VQ | | | | |
| 4+ 0 | 114.9356 | 550.79 | \|VQ | | | | |
| 4+ 5 | 118.7574 | 554.92 | \|VQ | | | | |
| 4+10 | 122.6078 | 559.08 | \|VQ | | | | |
| 4+15 | 126.4861 | 563.13 | \|VQ | | | | |
| 4+20 | 130.3916 | 567.08 | \|VQ | | | | |
| 4+25 | 134.3244 | 571.04 | \|VQ | | | | |
| 4+30 | 138.2842 | 574.96 | \|VQ | | | | |
| 4+35 | 142.2686 | 578.53 | \|VQ | | | | |
| 4+40 | 146.2777 | 582.12 | \|VQ | | | | |
| 4+45 | 150.3117 | 585.73 | \|VQ | | | | |
| 4+50 | 154.3708 | 589.39 | \|VQ | | | | |
| 4+55 | 158.4553 | 593.06 | \|VQ | | | | |
| 5+ 0 | 162.5654 | 596.79 | \|VQ | | | | |
| 5+ 5 | 166.7006 | 600.44 | \|VQ | | | | |
| 5+10 | 170.8605 | 604.02 | \|VQ | | | | |
| 5+15 | 175.0452 | 607.62 | \| Q | | | | |
| 5+20 | 179.2551 | 611.28 | \| Q | | | | |
| 5+25 | 183.4903 | 614.95 | \| Q | | | | |
| 5+30 | 187.7512 | 618.68 | \| Q | | | | |
| 5+35 | 192.0379 | 622.42 | \| Q | | | | |
| 5+40 | 196.3495 | 626.05 | \| Q | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 5+45 | 200.6858 | 629.63 | Q | | | |
| 5+50 | 205.0472 | 633.27 | Q | | | |
| 5+55 | 209.4338 | 636.94 | Q | | | |
| 6+ 0 | 213.8461 | 640.66 | Q | | | |
| 6+ 5 | 218.2841 | 644.41 | Q | | | |
| 6+10 | 222.7482 | 648.18 | Q | | | |
| 6+15 | 227.2377 | 651.88 | Q | | | |
| 6+20 | 231.7530 | 655.63 | Q | | | |
| 6+25 | 236.2944 | 659.40 | Q | | | |
| 6+30 | 240.8621 | 663.24 | Q | | | |
| 6+35 | 245.4565 | 667.11 | Q | | | |
| 6+40 | 250.0780 | 671.04 | Q | | | |
| 6+45 | 254.7267 | 674.99 | Q | | | |
| 6+50 | 259.4030 | 679.00 | QV | | | |
| 6+55 | 264.1072 | 683.05 | QV | | | |
| 7+ 0 | 268.8397 | 687.16 | QV | | | |
| 7+ 5 | 273.6008 | 691.31 | QV | | | |
| 7+10 | 278.3909 | 695.53 | QV | | | |
| 7+15 | 283.2103 | 699.78 | QV | | | |
| 7+20 | 288.0594 | 704.09 | QV | | | |
| 7+25 | 292.9384 | 708.43 | QV | | | |
| 7+30 | 297.8478 | 712.84 | QV | | | |
| 7+35 | 302.7879 | 717.30 | QV | | | |
| 7+40 | 307.7592 | 721.84 | QV | | | |
| 7+45 | 312.7622 | 726.42 | QV | | | |
| 7+50 | 317.7970 | 731.06 | QV | | | |
| 7+55 | 322.8633 | 735.62 | QV | | | |
| 8+ 0 | 327.9615 | 740.26 | QV | | | |
| 8+ 5 | 333.0920 | 744.95 | QV | | | |
| 8+10 | 338.2554 | 749.72 | QV | | | |
| 8+15 | 343.4520 | 754.55 | QV | | | |
| 8+20 | 348.6826 | 759.48 | Q V | | | |
| 8+25 | 353.9474 | 764.46 | Q V | | | |
| 8+30 | 359.2472 | 769.53 | Q V | | | |
| 8+35 | 364.5824 | 774.67 | Q V | | | |
| 8+40 | 369.9537 | 779.91 | Q V | | | |
| 8+45 | 375.3611 | 785.15 | Q V | | | |
| 8+50 | 380.8047 | 790.42 | Q V | | | |
| 8+55 | 386.2851 | 795.76 | Q V | | | |
| 9+ 0 | 391.8031 | 801.20 | Q V | | | |
| 9+ 5 | 397.3590 | 806.72 | Q V | | | |
| 9+10 | 402.9537 | 812.36 | Q V | | | |
| 9+15 | 408.5878 | 818.07 | QV | | | |
| 9+20 | 414.2621 | 823.91 | QV | | | |
| 9+25 | 419.9772 | 829.82 | QV | | | |
| 9+30 | 425.7339 | 835.87 | QV | | | |
| 9+35 | 431.5328 | 842.01 | Q V | | | |
| 9+40 | 437.3749 | 848.28 | Q V | | | |
| 9+45 | 443.2609 | 854.64 | Q V | | | |
| 9+50 | 449.1917 | 861.15 | Q V | | | |
| 9+55 | 455.1680 | 867.76 | Q V | | | |
| 10+ 0 | 461.1908 | 874.52 | Q V | | | |
| 10+ 5 | 467.2610 | 881.39 | Q V | | | |
| 10+10 | 473.3795 | 888.42 | Q V | | | |
| 10+15 | 479.5473 | 895.56 | Q V | | | |
| 10+20 | 485.7655 | 902.88 | Q V | | | |
| 10+25 | 492.0349 | 910.32 | Q V | | | |
| 10+30 | 498.3568 | 917.94 | Q V | | | |
| 10+35 | 504.7321 | 925.69 | Q V | | | |

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10+40     511.1621    933.64  |  Q V    |         |         |         |
10+45     517.6478    941.73  |  Q  V   |         |         |         |
10+50     524.1907    950.03  |  Q  V   |         |         |         |
10+55     530.7919    958.48  |  Q  V   |         |         |         |
11+ 0     537.4527    967.16  |  Q  V   |         |         |         |
11+ 5     544.1744    975.99  |  Q  V   |         |         |         |
11+10     550.9587    985.07  |  Q  V   |         |         |         |
11+15     557.8067    994.33  |  Q  V   |         |         |         |
11+20     564.7202   1003.84  |  Q  V   |         |         |         |
11+25     571.7005   1013.55  |  Q  V   |         |         |         |
11+30     578.7497   1023.53  |  Q  V   |         |         |         |
11+35     585.8690   1033.73  |  Q  V   |         |         |         |
11+40     593.0606   1044.22  |  Q  V   |         |         |         |
11+45     600.3260   1054.94  |  Q  V   |         |         |         |
11+50     607.6675   1065.98  |  Q   V  |         |         |         |
11+55     615.0867   1077.28  |  Q   V  |         |         |         |
12+ 0     622.5862   1088.92  |  Q   V  |         |         |         |
12+ 5     630.1693   1101.07  |   Q  V  |         |         |         |
12+10     637.8403   1113.84  |   Q  V  |         |         |         |
12+15     645.6028   1127.11  |   Q  V  |         |         |         |
12+20     653.4607   1140.97  |   Q  V  |         |         |         |
12+25     661.4178   1155.36  |   Q  V  |         |         |         |
12+30     669.4786   1170.43  |   Q  V  |         |         |         |
12+35     677.6471   1186.06  |   Q  V  |         |         |         |
12+40     685.9313   1202.88  |   Q  V  |         |         |         |
12+45     694.3381   1220.67  |   Q   V |         |         |         |
12+50     702.8772   1239.87  |   Q   V |         |         |         |
12+55     711.5520   1259.59  |   Q   V |         |         |         |
13+ 0     720.3677   1280.04  |   Q   V |         |         |         |
13+ 5     729.3327   1301.71  |   Q   V |         |         |         |
13+10     738.4496   1323.78  |   Q   V |         |         |         |
13+15     747.7137   1345.15  |   Q   V |         |         |         |
13+20     757.1265   1366.75  |    Q  V |         |         |         |
13+25     766.6908   1388.73  |    Q  V |         |         |         |
13+30     776.4107   1411.32  |    Q   V|         |         |         |
13+35     786.2905   1434.55  |    Q   V|         |         |         |
13+40     796.3361   1458.61  |    Q   V|         |         |         |
13+45     806.5525   1483.44  |    Q   V|         |         |         |
13+50     816.9472   1509.30  |    Q   V|         |         |         |
13+55     827.5264   1536.10  |    Q   V|         |         |         |
14+ 0     838.2987   1564.14  |    Q   V|         |         |         |
14+ 5     849.3252   1601.05  |    Q   V|         |         |         |
14+10     860.6726   1647.64  |     Q   V         |         |         |
14+15     872.3988   1702.64  |     Q   V         |         |         |
14+20     884.5533   1764.83  |     Q   V         |         |         |
14+25     897.1932   1835.30  |     Q   V         |         |         |
14+30     910.3835   1915.24  |      Q  V         |         |         |
14+35     924.1829   2003.67  |      Q  V         |         |         |
14+40     938.7657   2117.43  |      Q  V         |         |         |
14+45     954.2792   2252.57  |       Q |V        |         |         |
14+50     970.9430   2419.58  |       Q |V        |         |         |
14+55     988.7880   2591.10  |        Q|V        |         |         |
15+ 0    1007.8598   2769.22  |         QV        |         |         |
15+ 5    1028.3441   2974.32  |         QV        |         |         |
15+10    1050.1972   3173.07  |         |QV       |         |         |
15+15    1073.1427   3331.69  |         | Q       |         |         |
15+20    1097.0880   3476.85  |         | Q       |         |         |
15+25    1121.9209   3605.74  |         |  Q      |         |         |
15+30    1147.5381   3719.62  |         |  Q      |         |         |
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|---|---|---|---|---|---|---|---|
| 15+35 | 1173.8915 | 3826.52 | \| | VQ | \| | \| | \| |
| 15+40 | 1200.9547 | 3929.58 | \| | VQ | \| | \| | \| |
| 15+45 | 1228.7196 | 4031.46 | \| | Q | \| | \| | \| |
| 15+50 | 1257.2055 | 4136.16 | \| | VQ | \| | \| | \| |
| 15+55 | 1286.5381 | 4259.09 | \| | VQ | \| | \| | \| |
| 16+ 0 | 1316.8330 | 4398.82 | \| | VQ | \| | \| | \| |
| 16+ 5 | 1349.7030 | 4772.73 | \| | V Q | \| | \| | \| |
| 16+10 | 1385.0150 | 5127.29 | \| | V Q | \| | \| | \| |
| 16+15 | 1422.5045 | 5443.48 | \| | V Q | \| | \| | \| |
| 16+20 | 1461.8829 | 5717.73 | \| | V Q | \| | \| | \| |
| 16+25 | 1503.2737 | 6009.95 | \| | V \| Q | \| | \| | \| |
| 16+30 | 1547.2632 | 6387.28 | \| | V \| Q | \| | \| | \| |
| 16+35 | 1594.6323 | 6877.99 | \| | V \| Q | \| | \| | \| |
| 16+40 | 1649.1233 | 7912.09 | \| | V \| Q | \| | \| | \| |
| 16+45 | 1709.8783 | 8821.63 | \| | V \| Q | \| | \| | \| |
| 16+50 | 1778.0575 | 9899.63 | \| | V Q | \| | \| | \| |
| 16+55 | 1847.4723 | 10079.02 | \| | V Q | \| | \| | \| |
| 17+ 0 | 1918.1859 | 10267.61 | \| | V Q | \| | \| | \| |
| 17+ 5 | 1992.9715 | 10858.87 | \| | V Q | \| | \| | \| |
| 17+10 | 2063.4548 | 10234.18 | \| | V Q | \| | \| | \| |
| 17+15 | 2122.4876 | 8571.57 | \| | V Q | \| | \| | \| |
| 17+20 | 2175.7859 | 7738.91 | \| | V Q | \| | \| | \| |
| 17+25 | 2225.9376 | 7282.03 | \| | VQ | \| | \| | \| |
| 17+30 | 2273.2205 | 6865.47 | \| | QV | \| | \| | \| |
| 17+35 | 2318.4457 | 6566.70 | \| | Q V | \| | \| | \| |
| 17+40 | 2361.1839 | 6205.59 | \| | Q V | \| | \| | \| |
| 17+45 | 2401.7324 | 5887.65 | \| | Q V | \| | \| | \| |
| 17+50 | 2440.0710 | 5566.75 | \| | Q V | \| | \| | \| |
| 17+55 | 2476.3484 | 5267.48 | \| | Q V | \| | \| | \| |
| 18+ 0 | 2510.6653 | 4982.81 | \| | Q V | \| | \| | \| |
| 18+ 5 | 2542.5390 | 4628.06 | \| | Q V | \| | \| | \| |
| 18+10 | 2572.7398 | 4385.15 | \| | Q V | \| | \| | \| |
| 18+15 | 2601.5663 | 4185.61 | \| | Q V | \| | \| | \| |
| 18+20 | 2628.5086 | 3912.03 | \| | Q V | \| | \| | \| |
| 18+25 | 2654.2379 | 3735.90 | \| | Q V | \| | \| | \| |
| 18+30 | 2679.1242 | 3613.49 | \| | Q V | \| | \| | \| |
| 18+35 | 2702.8605 | 3446.50 | \| | Q V | \| | \| | \| |
| 18+40 | 2725.4730 | 3283.34 | \| | Q V | \| | \| | \| |
| 18+45 | 2747.3951 | 3183.08 | \| | Q V | \| | \| | \| |
| 18+50 | 2768.5539 | 3072.26 | \| | Q V | \| | \| | \| |
| 18+55 | 2788.7201 | 2928.14 | \| | Q V | \| | \| | \| |
| 19+ 0 | 2808.2613 | 2837.39 | \| | Q V | \| | \| | \| |
| 19+ 5 | 2827.2104 | 2751.40 | \| | Q V | \| | \| | \| |
| 19+10 | 2845.2663 | 2621.73 | \| | Q V | \| | \| | \| |
| 19+15 | 2862.6826 | 2528.85 | \| | Q V | \| | \| | \| |
| 19+20 | 2879.6074 | 2457.47 | \| | Q V | \| | \| | \| |
| 19+25 | 2895.7957 | 2350.54 | \| | Q V | \| | \| | \| |
| 19+30 | 2911.2465 | 2243.46 | \| | Q V | \| | \| | \| |
| 19+35 | 2926.2928 | 2184.72 | \| | Q V | \| | \| | \| |
| 19+40 | 2940.9030 | 2121.40 | \| | Q V | \| | \| | \| |
| 19+45 | 2954.9425 | 2038.55 | \| | Q V | \| | \| | \| |
| 19+50 | 2968.6045 | 1983.72 | \| | Q V | \| | \| | \| |
| 19+55 | 2981.9232 | 1933.87 | \| | Q V | \| | \| | \| |
| 20+ 0 | 2994.7511 | 1862.61 | \| | Q V | \| | \| | \| |
| 20+ 5 | 3007.2098 | 1809.01 | \| | Q V | \| | \| | \| |
| 20+10 | 3019.3703 | 1765.70 | \| | Q V | \| | \| | \| |
| 20+15 | 3031.1308 | 1707.63 | \| | Q V | \| | \| | \| |
| 20+20 | 3042.4831 | 1648.35 | \| | Q V | \| | \| | \| |
| 20+25 | 3053.5523 | 1607.24 | \| | Q V | \| | \| | \| |

```
20+30    3064.2676   1555.87  |    Q    |         |         |    V    |
20+35    3074.4487   1478.29  |    Q    |         |         |    V    |
20+40    3084.3788   1441.86  |    Q    |         |         |    V    |
20+45    3094.1125   1413.33  |    Q    |         |         |    V    |
20+50    3103.6561   1385.72  |    Q    |         |         |     V   |
20+55    3112.9980   1356.45  |   Q     |         |         |     V   |
21+ 0    3122.1432   1327.87  |   Q     |         |         |     V   |
21+ 5    3131.0207   1289.02  |   Q     |         |         |     V   |
21+10    3139.6331   1250.52  |   Q     |         |         |     V   |
21+15    3148.0881   1227.67  |   Q     |         |         |     V   |
21+20    3156.3966   1206.39  |   Q     |         |         |     V   |
21+25    3164.5572   1184.92  |   Q     |         |         |     V   |
21+30    3172.5632   1162.47  |   Q     |         |         |     V   |
21+35    3180.4087   1139.16  |   Q     |         |         |      V  |
21+40    3187.9745   1098.56  |   Q     |         |         |      V  |
21+45    3195.3644   1073.01  |  Q      |         |         |      V  |
21+50    3202.6394   1056.34  |  Q      |         |         |      V  |
21+55    3209.8019   1040.00  |  Q      |         |         |      V  |
22+ 0    3216.8469   1022.92  |  Q      |         |         |      V  |
22+ 5    3223.7705   1005.31  |  Q      |         |         |      V  |
22+10    3230.5504    984.44  |  Q      |         |         |      V  |
22+15    3237.1322    955.68  |  Q      |         |         |      V  |
22+20    3243.6037    939.66  |  Q      |         |         |      V  |
22+25    3249.9810    925.97  |  Q      |         |         |      V  |
22+30    3256.2669    912.73  |  Q      |         |         |      V  |
22+35    3262.4603    899.28  |  Q      |         |         |      V  |
22+40    3268.5675    886.76  |  Q      |         |         |       V |
22+45    3274.5835    873.52  |  Q      |         |         |       V |
22+50    3280.5073    860.13  |  Q      |         |         |       V |
22+55    3286.3500    848.37  |  Q      |         |         |       V |
23+ 0    3292.1134    836.84  |  Q      |         |         |       V |
23+ 5    3297.7980    825.40  |  Q      |         |         |       V |
23+10    3303.4050    814.15  | Q       |         |         |       V |
23+15    3308.9404    803.73  | Q       |         |         |       V |
23+20    3314.3889    791.13  | Q       |         |         |       V |
23+25    3319.7637    780.43  | Q       |         |         |       V |
23+30    3325.0732    770.93  | Q       |         |         |       V |
23+35    3330.3166    761.35  | Q       |         |         |       V |
23+40    3335.4915    751.39  | Q       |         |         |       V |
23+45    3340.5898    740.28  | Q       |         |         |       V |
23+50    3345.5832    725.04  | Q       |         |         |       V |
23+55    3350.4020    699.69  | Q       |         |         |       V |
24+ 0    3355.1465    688.90  | Q       |         |         |        V|
24+ 5    3359.8197    678.55  | Q       |         |         |        V|
24+10    3364.4124    666.86  | Q       |         |         |        V|
24+15    3368.9089    652.89  | Q       |         |         |        V|
24+20    3373.3010    637.72  | Q       |         |         |        V|
24+25    3377.5777    620.98  | Q       |         |         |        V|
24+30    3381.7259    602.33  | Q       |         |         |        V|
24+35    3385.7318    581.65  | Q       |         |         |        V|
24+40    3389.5475    554.04  | Q       |         |         |        V|
24+45    3393.0908    514.48  |Q        |         |         |        V|
24+50    3396.3049    466.69  |Q        |         |         |        V|
24+55    3399.2637    429.62  |Q        |         |         |        V|
25+ 0    3401.9689    392.79  |Q        |         |         |        V|
25+ 5    3404.3808    350.20  |Q        |         |         |        V|
25+10    3406.5193    310.51  |Q        |         |         |        V|
25+15    3408.4676    282.89  |Q        |         |         |        V|
25+20    3410.2622    260.59  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+25 | 3411.9231 | 241.16 | Q | \| | \| | \| | V\| |
| 25+30 | 3413.4689 | 224.45 | Q | \| | \| | \| | V\| |
| 25+35 | 3414.9085 | 209.03 | Q | \| | \| | \| | V\| |
| 25+40 | 3416.2532 | 195.24 | Q | \| | \| | \| | V\| |
| 25+45 | 3417.5122 | 182.82 | Q | \| | \| | \| | V\| |
| 25+50 | 3418.6942 | 171.63 | Q | \| | \| | \| | V\| |
| 25+55 | 3419.8046 | 161.23 | Q | \| | \| | \| | V\| |
| 26+ 0 | 3420.8477 | 151.46 | Q | \| | \| | \| | V\| |
| 26+ 5 | 3421.8313 | 142.81 | Q | \| | \| | \| | V\| |
| 26+10 | 3422.7572 | 134.44 | Q | \| | \| | \| | V\| |
| 26+15 | 3423.6272 | 126.32 | Q | \| | \| | \| | V\| |
| 26+20 | 3424.4491 | 119.34 | Q | \| | \| | \| | V\| |
| 26+25 | 3425.2259 | 112.79 | Q | \| | \| | \| | V\| |
| 26+30 | 3425.9580 | 106.31 | Q | \| | \| | \| | V\| |
| 26+35 | 3426.6491 | 100.34 | Q | \| | \| | \| | V\| |
| 26+40 | 3427.3028 | 94.93 | Q | \| | \| | \| | V\| |
| 26+45 | 3427.9198 | 89.58 | Q | \| | \| | \| | V\| |
| 26+50 | 3428.5014 | 84.44 | Q | \| | \| | \| | V\| |
| 26+55 | 3429.0512 | 79.83 | Q | \| | \| | \| | V\| |
| 27+ 0 | 3429.5699 | 75.32 | Q | \| | \| | \| | V\| |
| 27+ 5 | 3430.0581 | 70.88 | Q | \| | \| | \| | V\| |
| 27+10 | 3430.5191 | 66.93 | Q | \| | \| | \| | V\| |
| 27+15 | 3430.9541 | 63.18 | Q | \| | \| | \| | V\| |
| 27+20 | 3431.3636 | 59.46 | Q | \| | \| | \| | V\| |
| 27+25 | 3431.7501 | 56.11 | Q | \| | \| | \| | V\| |
| 27+30 | 3432.1163 | 53.17 | Q | \| | \| | \| | V\| |
| 27+35 | 3432.4625 | 50.27 | Q | \| | \| | \| | V\| |
| 27+40 | 3432.7894 | 47.46 | Q | \| | \| | \| | V\| |
| 27+45 | 3433.0989 | 44.95 | Q | \| | \| | \| | V\| |
| 27+50 | 3433.3914 | 42.48 | Q | \| | \| | \| | V\| |
| 27+55 | 3433.6672 | 40.04 | Q | \| | \| | \| | V\| |
| 28+ 0 | 3433.9279 | 37.86 | Q | \| | \| | \| | V\| |
| 28+ 5 | 3434.1743 | 35.77 | Q | \| | \| | \| | V\| |
| 28+10 | 3434.4064 | 33.70 | Q | \| | \| | \| | V\| |
| 28+15 | 3434.6253 | 31.79 | Q | \| | \| | \| | V\| |
| 28+20 | 3434.8323 | 30.05 | Q | \| | \| | \| | V\| |
| 28+25 | 3435.0273 | 28.32 | Q | \| | \| | \| | V\| |
| 28+30 | 3435.2112 | 26.71 | Q | \| | \| | \| | V\| |
| 28+35 | 3435.3866 | 25.47 | Q | \| | \| | \| | V\| |
| 28+40 | 3435.5538 | 24.27 | Q | \| | \| | \| | V\| |
| 28+45 | 3435.7128 | 23.09 | Q | \| | \| | \| | V\| |
| 28+50 | 3435.8638 | 21.92 | Q | \| | \| | \| | V\| |
| 28+55 | 3436.0068 | 20.76 | Q | \| | \| | \| | V\| |
| 29+ 0 | 3436.1419 | 19.62 | Q | \| | \| | \| | V\| |
| 29+ 5 | 3436.2699 | 18.58 | Q | \| | \| | \| | V\| |
| 29+10 | 3436.3915 | 17.66 | Q | \| | \| | \| | V\| |
| 29+15 | 3436.5069 | 16.76 | Q | \| | \| | \| | V\| |
| 29+20 | 3436.6162 | 15.86 | Q | \| | \| | \| | V\| |
| 29+25 | 3436.7193 | 14.98 | Q | \| | \| | \| | V\| |
| 29+30 | 3436.8164 | 14.10 | Q | \| | \| | \| | V\| |
| 29+35 | 3436.9076 | 13.24 | Q | \| | \| | \| | V\| |
| 29+40 | 3436.9940 | 12.56 | Q | \| | \| | \| | V\| |
| 29+45 | 3437.0763 | 11.95 | Q | \| | \| | \| | V\| |
| 29+50 | 3437.1544 | 11.34 | Q | \| | \| | \| | V\| |
| 29+55 | 3437.2284 | 10.74 | Q | \| | \| | \| | V\| |
| 30+ 0 | 3437.2983 | 10.15 | Q | \| | \| | \| | V\| |
| 30+ 5 | 3437.3641 | 9.56 | Q | \| | \| | \| | V\| |
| 30+10 | 3437.4261 | 9.00 | Q | \| | \| | \| | V\| |
| 30+15 | 3437.4851 | 8.56 | Q | \| | \| | \| | V\| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 30+20 | 3437.5411 | 8.13 | Q | \| | \| | \| | V\| |
| 30+25 | 3437.5942 | 7.71 | Q | \| | \| | \| | V\| |
| 30+30 | 3437.6444 | 7.29 | Q | \| | \| | \| | V\| |
| 30+35 | 3437.6918 | 6.88 | Q | \| | \| | \| | V\| |
| 30+40 | 3437.7364 | 6.47 | Q | \| | \| | \| | V\| |
| 30+45 | 3437.7782 | 6.07 | Q | \| | \| | \| | V\| |
| 30+50 | 3437.8173 | 5.69 | Q | \| | \| | \| | V\| |
| 30+55 | 3437.8538 | 5.30 | Q | \| | \| | \| | V\| |
| 31+ 0 | 3437.8878 | 4.93 | Q | \| | \| | \| | V\| |
| 31+ 5 | 3437.9191 | 4.55 | Q | \| | \| | \| | V\| |
| 31+10 | 3437.9479 | 4.18 | Q | \| | \| | \| | V\| |
| 31+15 | 3437.9742 | 3.82 | Q | \| | \| | \| | V\| |
| 31+20 | 3437.9982 | 3.47 | Q | \| | \| | \| | V\| |
| 31+25 | 3438.0198 | 3.15 | Q | \| | \| | \| | V\| |
| 31+30 | 3438.0392 | 2.82 | Q | \| | \| | \| | V\| |
| 31+35 | 3438.0564 | 2.49 | Q | \| | \| | \| | V\| |
| 31+40 | 3438.0714 | 2.17 | Q | \| | \| | \| | V\| |
| 31+45 | 3438.0841 | 1.85 | Q | \| | \| | \| | V\| |
| 31+50 | 3438.0949 | 1.56 | Q | \| | \| | \| | V\| |
| 31+55 | 3438.1046 | 1.40 | Q | \| | \| | \| | V\| |
| 32+ 0 | 3438.1132 | 1.25 | Q | \| | \| | \| | V\| |
| 32+ 5 | 3438.1207 | 1.10 | Q | \| | \| | \| | V\| |
| 32+10 | 3438.1273 | 0.95 | Q | \| | \| | \| | V\| |
| 32+15 | 3438.1328 | 0.80 | Q | \| | \| | \| | V\| |
| 32+20 | 3438.1373 | 0.66 | Q | \| | \| | \| | V\| |
| 32+25 | 3438.1409 | 0.51 | Q | \| | \| | \| | V\| |
| 32+30 | 3438.1434 | 0.37 | Q | \| | \| | \| | V\| |
| 32+35 | 3438.1449 | 0.22 | Q | \| | \| | \| | V\| |
| 32+40 | 3438.1455 | 0.08 | Q | \| | \| | \| | V |

U n i t  H y d r o g r a p h  A n a l y s i s

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Study date 09/05/17

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6320

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREA 52
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

---

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

| Sub-Area (Ac.) | Duration (hours) | Isohyetal (In) |
|---|---|---|
| Rainfall data for year 100 | | |
| 2128.12 | 1 | 1.39 |
| Rainfall data for year 100 | | |
| 2128.12 | 6 | 2.04 |
| Rainfall data for year 100 | | |
| 2128.12 | 24 | 2.93 |

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******** Area-averaged max loss rate, Fm ********

| SCS curve No.(AMCII) | SCS curve NO.(AMC 3) | Area (Ac.) | Area Fraction | Fp(Fig C6) (In/Hr) | Ap (dec.) | Fm (In/Hr) |
|---|---|---|---|---|---|---|
| 74.8 | 90.8 | 2128.12 | 1.000 | 0.177 | 0.970 | 0.172 |

Area-averaged adjusted loss rate Fm (In/Hr) = 0.172

********* Area-Averaged low loss rate fraction, Yb **********

| Area (Ac.) | Area Fract | SCS CN (AMC2) | SCS CN (AMC3) | S | Pervious Yield Fr |
|---|---|---|---|---|---|
| 2065.13 | 0.970 | 74.8 | 90.8 | 1.01 | 0.679 |
| 62.99 | 0.030 | 98.0 | 98.0 | 0.20 | 0.921 |

Area-averaged catchment yield fraction, Y = 0.686
Area-averaged low loss fraction, Yb = 0.314
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Watercourse length = 17716.00(Ft.)
Length from concentration point to centroid = 8950.00(Ft.)
Elevation difference along watercourse = 1680.00(Ft.)
Mannings friction factor along watercourse = 0.035
Watershed area = 2128.12(Ac.)
Catchment Lag time = 0.499 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 16.6951
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.172(In/Hr)
Average low loss rate fraction (Yb) = 0.314 (decimal)
VALLEY DEVELOPED S-Graph proportion = 0.000
VALLEY UNDEVELOPED S-Graph proportion = 0.000
FOOTHILL S-Graph proportion = 0.040
MOUNTAIN S-Graph proportion = 0.000
DESERT S-Graph proportion = 0.960

Computed peak 5-minute rainfall = 0.660(In)
Computed peak 30-minute rainfall = 1.129(In)
Specified peak 1-hour rainfall = 1.390(In)
Computed peak 3-hour rainfall = 1.759(In)
Specified peak 6-hour rainfall = 2.040(In)
Specified peak 24-hour rainfall = 2.930(In)

Rainfall depth area reduction factors:
Using a total area of 2128.12(Ac.) (Ref: fig. E-4)

5-minute factor = 0.900 Adjusted rainfall = 0.594(In)
30-minute factor = 0.900 Adjusted rainfall = 1.016(In)
1-hour factor = 0.900 Adjusted rainfall = 1.251(In)
3-hour factor = 0.987 Adjusted rainfall = 1.736(In)
6-hour factor = 0.993 Adjusted rainfall = 2.026(In)
24-hour factor = 0.997 Adjusted rainfall = 2.922(In)
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U n i t H y d r o g r a p h
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

| Interval Number | 'S' Graph Mean values | Unit Hydrograph ((CFS)) |
|---|---|---|
| | (K = 25736.95 (CFS)) | |
| 1 | 0.788 | 202.857 |
| 2 | 3.396 | 671.080 |
| 3 | 7.775 | 1127.163 |
| 4 | 16.008 | 2118.909 |
| 5 | 30.716 | 3785.384 |

| | | |
|---|---|---|
| 6 | 44.401 | 3522.173 |
| 7 | 54.400 | 2573.305 |
| 8 | 61.321 | 1781.260 |
| 9 | 66.467 | 1324.483 |
| 10 | 70.677 | 1083.411 |
| 11 | 74.156 | 895.448 |
| 12 | 77.110 | 760.364 |
| 13 | 79.615 | 644.663 |
| 14 | 81.772 | 555.138 |
| 15 | 83.629 | 477.832 |
| 16 | 85.330 | 437.953 |
| 17 | 86.896 | 402.907 |
| 18 | 88.261 | 351.359 |
| 19 | 89.421 | 298.546 |
| 20 | 90.415 | 255.760 |
| 21 | 91.352 | 241.322 |
| 22 | 92.210 | 220.851 |
| 23 | 92.996 | 202.182 |
| 24 | 93.728 | 188.251 |
| 25 | 94.359 | 162.548 |
| 26 | 94.912 | 142.310 |
| 27 | 95.465 | 142.275 |
| 28 | 95.947 | 124.140 |
| 29 | 96.371 | 108.967 |
| 30 | 96.794 | 108.923 |
| 31 | 97.145 | 90.446 |
| 32 | 97.438 | 75.280 |
| 33 | 97.730 | 75.229 |
| 34 | 97.952 | 57.168 |
| 35 | 98.118 | 42.624 |
| 36 | 98.283 | 42.639 |
| 37 | 98.465 | 46.855 |
| 38 | 98.660 | 50.187 |
| 39 | 98.855 | 50.186 |
| 40 | 99.050 | 49.993 |
| 41 | 99.243 | 49.843 |
| 42 | 99.437 | 49.930 |
| 43 | 99.577 | 36.004 |
| 44 | 99.677 | 25.781 |
| 45 | 99.778 | 25.781 |
| 46 | 99.878 | 25.781 |
| 47 | 100.000 | 12.890 |

| Peak Unit Number | Adjusted mass rainfall (In) | Unit rainfall (In) |
|---|---|---|
| 1 | 0.5938 | 0.5938 |
| 2 | 0.7310 | 0.1372 |
| 3 | 0.8256 | 0.0946 |
| 4 | 0.9000 | 0.0744 |
| 5 | 0.9623 | 0.0623 |
| 6 | 1.0164 | 0.0541 |
| 7 | 1.0645 | 0.0481 |
| 8 | 1.1080 | 0.0435 |
| 9 | 1.1479 | 0.0399 |
| 10 | 1.1847 | 0.0369 |
| 11 | 1.2191 | 0.0344 |
| 12 | 1.2513 | 0.0322 |
| 13 | 1.2816 | 0.0302 |
| 14 | 1.3102 | 0.0286 |

| | | |
|---|---|---|
| 15 | 1.3374 | 0.0272 |
| 16 | 1.3634 | 0.0260 |
| 17 | 1.3883 | 0.0249 |
| 18 | 1.4122 | 0.0239 |
| 19 | 1.4351 | 0.0230 |
| 20 | 1.4572 | 0.0221 |
| 21 | 1.4786 | 0.0214 |
| 22 | 1.4992 | 0.0207 |
| 23 | 1.5193 | 0.0200 |
| 24 | 1.5387 | 0.0194 |
| 25 | 1.5575 | 0.0188 |
| 26 | 1.5758 | 0.0183 |
| 27 | 1.5937 | 0.0178 |
| 28 | 1.6110 | 0.0174 |
| 29 | 1.6280 | 0.0169 |
| 30 | 1.6445 | 0.0165 |
| 31 | 1.6607 | 0.0162 |
| 32 | 1.6765 | 0.0158 |
| 33 | 1.6919 | 0.0155 |
| 34 | 1.7071 | 0.0151 |
| 35 | 1.7219 | 0.0148 |
| 36 | 1.7364 | 0.0145 |
| 37 | 1.7470 | 0.0106 |
| 38 | 1.7575 | 0.0104 |
| 39 | 1.7677 | 0.0102 |
| 40 | 1.7777 | 0.0100 |
| 41 | 1.7875 | 0.0098 |
| 42 | 1.7971 | 0.0096 |
| 43 | 1.8065 | 0.0094 |
| 44 | 1.8158 | 0.0093 |
| 45 | 1.8249 | 0.0091 |
| 46 | 1.8339 | 0.0090 |
| 47 | 1.8427 | 0.0088 |
| 48 | 1.8514 | 0.0087 |
| 49 | 1.8599 | 0.0085 |
| 50 | 1.8683 | 0.0084 |
| 51 | 1.8765 | 0.0083 |
| 52 | 1.8847 | 0.0081 |
| 53 | 1.8927 | 0.0080 |
| 54 | 1.9006 | 0.0079 |
| 55 | 1.9084 | 0.0078 |
| 56 | 1.9161 | 0.0077 |
| 57 | 1.9236 | 0.0076 |
| 58 | 1.9311 | 0.0075 |
| 59 | 1.9385 | 0.0074 |
| 60 | 1.9458 | 0.0073 |
| 61 | 1.9529 | 0.0072 |
| 62 | 1.9600 | 0.0071 |
| 63 | 1.9670 | 0.0070 |
| 64 | 1.9739 | 0.0069 |
| 65 | 1.9808 | 0.0068 |
| 66 | 1.9875 | 0.0068 |
| 67 | 1.9942 | 0.0067 |
| 68 | 2.0008 | 0.0066 |
| 69 | 2.0073 | 0.0065 |
| 70 | 2.0138 | 0.0064 |
| 71 | 2.0201 | 0.0064 |
| 72 | 2.0264 | 0.0063 |
| 73 | 2.0338 | 0.0074 |

| | | |
|---|---|---|
| 74 | 2.0411 | 0.0073 |
| 75 | 2.0484 | 0.0072 |
| 76 | 2.0556 | 0.0072 |
| 77 | 2.0627 | 0.0071 |
| 78 | 2.0697 | 0.0070 |
| 79 | 2.0767 | 0.0070 |
| 80 | 2.0836 | 0.0069 |
| 81 | 2.0904 | 0.0068 |
| 82 | 2.0972 | 0.0068 |
| 83 | 2.1040 | 0.0067 |
| 84 | 2.1106 | 0.0067 |
| 85 | 2.1172 | 0.0066 |
| 86 | 2.1238 | 0.0065 |
| 87 | 2.1303 | 0.0065 |
| 88 | 2.1367 | 0.0064 |
| 89 | 2.1431 | 0.0064 |
| 90 | 2.1494 | 0.0063 |
| 91 | 2.1557 | 0.0063 |
| 92 | 2.1619 | 0.0062 |
| 93 | 2.1681 | 0.0062 |
| 94 | 2.1742 | 0.0061 |
| 95 | 2.1803 | 0.0061 |
| 96 | 2.1864 | 0.0060 |
| 97 | 2.1924 | 0.0060 |
| 98 | 2.1983 | 0.0059 |
| 99 | 2.2042 | 0.0059 |
| 100 | 2.2101 | 0.0059 |
| 101 | 2.2159 | 0.0058 |
| 102 | 2.2217 | 0.0058 |
| 103 | 2.2274 | 0.0057 |
| 104 | 2.2331 | 0.0057 |
| 105 | 2.2387 | 0.0056 |
| 106 | 2.2443 | 0.0056 |
| 107 | 2.2499 | 0.0056 |
| 108 | 2.2554 | 0.0055 |
| 109 | 2.2609 | 0.0055 |
| 110 | 2.2664 | 0.0055 |
| 111 | 2.2718 | 0.0054 |
| 112 | 2.2772 | 0.0054 |
| 113 | 2.2826 | 0.0054 |
| 114 | 2.2879 | 0.0053 |
| 115 | 2.2931 | 0.0053 |
| 116 | 2.2984 | 0.0052 |
| 117 | 2.3036 | 0.0052 |
| 118 | 2.3088 | 0.0052 |
| 119 | 2.3139 | 0.0052 |
| 120 | 2.3191 | 0.0051 |
| 121 | 2.3242 | 0.0051 |
| 122 | 2.3292 | 0.0051 |
| 123 | 2.3342 | 0.0050 |
| 124 | 2.3392 | 0.0050 |
| 125 | 2.3442 | 0.0050 |
| 126 | 2.3491 | 0.0049 |
| 127 | 2.3540 | 0.0049 |
| 128 | 2.3589 | 0.0049 |
| 129 | 2.3638 | 0.0049 |
| 130 | 2.3686 | 0.0048 |
| 131 | 2.3734 | 0.0048 |
| 132 | 2.3782 | 0.0048 |

| | | |
|---|---|---|
| 133 | 2.3829 | 0.0047 |
| 134 | 2.3876 | 0.0047 |
| 135 | 2.3923 | 0.0047 |
| 136 | 2.3970 | 0.0047 |
| 137 | 2.4016 | 0.0046 |
| 138 | 2.4063 | 0.0046 |
| 139 | 2.4108 | 0.0046 |
| 140 | 2.4154 | 0.0046 |
| 141 | 2.4200 | 0.0045 |
| 142 | 2.4245 | 0.0045 |
| 143 | 2.4290 | 0.0045 |
| 144 | 2.4334 | 0.0045 |
| 145 | 2.4379 | 0.0045 |
| 146 | 2.4423 | 0.0044 |
| 147 | 2.4467 | 0.0044 |
| 148 | 2.4511 | 0.0044 |
| 149 | 2.4555 | 0.0044 |
| 150 | 2.4598 | 0.0043 |
| 151 | 2.4641 | 0.0043 |
| 152 | 2.4684 | 0.0043 |
| 153 | 2.4727 | 0.0043 |
| 154 | 2.4770 | 0.0043 |
| 155 | 2.4812 | 0.0042 |
| 156 | 2.4854 | 0.0042 |
| 157 | 2.4896 | 0.0042 |
| 158 | 2.4938 | 0.0042 |
| 159 | 2.4980 | 0.0042 |
| 160 | 2.5021 | 0.0041 |
| 161 | 2.5062 | 0.0041 |
| 162 | 2.5103 | 0.0041 |
| 163 | 2.5144 | 0.0041 |
| 164 | 2.5185 | 0.0041 |
| 165 | 2.5225 | 0.0040 |
| 166 | 2.5265 | 0.0040 |
| 167 | 2.5305 | 0.0040 |
| 168 | 2.5345 | 0.0040 |
| 169 | 2.5385 | 0.0040 |
| 170 | 2.5425 | 0.0040 |
| 171 | 2.5464 | 0.0039 |
| 172 | 2.5503 | 0.0039 |
| 173 | 2.5542 | 0.0039 |
| 174 | 2.5581 | 0.0039 |
| 175 | 2.5620 | 0.0039 |
| 176 | 2.5659 | 0.0039 |
| 177 | 2.5697 | 0.0038 |
| 178 | 2.5735 | 0.0038 |
| 179 | 2.5773 | 0.0038 |
| 180 | 2.5811 | 0.0038 |
| 181 | 2.5849 | 0.0038 |
| 182 | 2.5887 | 0.0038 |
| 183 | 2.5924 | 0.0037 |
| 184 | 2.5962 | 0.0037 |
| 185 | 2.5999 | 0.0037 |
| 186 | 2.6036 | 0.0037 |
| 187 | 2.6073 | 0.0037 |
| 188 | 2.6109 | 0.0037 |
| 189 | 2.6146 | 0.0037 |
| 190 | 2.6183 | 0.0036 |
| 191 | 2.6219 | 0.0036 |

| | | |
|---|---|---|
| 192 | 2.6255 | 0.0036 |
| 193 | 2.6291 | 0.0036 |
| 194 | 2.6327 | 0.0036 |
| 195 | 2.6363 | 0.0036 |
| 196 | 2.6398 | 0.0036 |
| 197 | 2.6434 | 0.0035 |
| 198 | 2.6469 | 0.0035 |
| 199 | 2.6504 | 0.0035 |
| 200 | 2.6540 | 0.0035 |
| 201 | 2.6575 | 0.0035 |
| 202 | 2.6609 | 0.0035 |
| 203 | 2.6644 | 0.0035 |
| 204 | 2.6679 | 0.0035 |
| 205 | 2.6713 | 0.0034 |
| 206 | 2.6748 | 0.0034 |
| 207 | 2.6782 | 0.0034 |
| 208 | 2.6816 | 0.0034 |
| 209 | 2.6850 | 0.0034 |
| 210 | 2.6884 | 0.0034 |
| 211 | 2.6917 | 0.0034 |
| 212 | 2.6951 | 0.0034 |
| 213 | 2.6985 | 0.0034 |
| 214 | 2.7018 | 0.0033 |
| 215 | 2.7051 | 0.0033 |
| 216 | 2.7084 | 0.0033 |
| 217 | 2.7117 | 0.0033 |
| 218 | 2.7150 | 0.0033 |
| 219 | 2.7183 | 0.0033 |
| 220 | 2.7216 | 0.0033 |
| 221 | 2.7249 | 0.0033 |
| 222 | 2.7281 | 0.0033 |
| 223 | 2.7313 | 0.0032 |
| 224 | 2.7346 | 0.0032 |
| 225 | 2.7378 | 0.0032 |
| 226 | 2.7410 | 0.0032 |
| 227 | 2.7442 | 0.0032 |
| 228 | 2.7474 | 0.0032 |
| 229 | 2.7506 | 0.0032 |
| 230 | 2.7537 | 0.0032 |
| 231 | 2.7569 | 0.0032 |
| 232 | 2.7600 | 0.0031 |
| 233 | 2.7632 | 0.0031 |
| 234 | 2.7663 | 0.0031 |
| 235 | 2.7694 | 0.0031 |
| 236 | 2.7725 | 0.0031 |
| 237 | 2.7756 | 0.0031 |
| 238 | 2.7787 | 0.0031 |
| 239 | 2.7818 | 0.0031 |
| 240 | 2.7849 | 0.0031 |
| 241 | 2.7879 | 0.0031 |
| 242 | 2.7910 | 0.0030 |
| 243 | 2.7940 | 0.0030 |
| 244 | 2.7970 | 0.0030 |
| 245 | 2.8001 | 0.0030 |
| 246 | 2.8031 | 0.0030 |
| 247 | 2.8061 | 0.0030 |
| 248 | 2.8091 | 0.0030 |
| 249 | 2.8121 | 0.0030 |
| 250 | 2.8150 | 0.0030 |

| | | |
|---|---|---|
| 251 | 2.8180 | 0.0030 |
| 252 | 2.8210 | 0.0030 |
| 253 | 2.8239 | 0.0030 |
| 254 | 2.8269 | 0.0029 |
| 255 | 2.8298 | 0.0029 |
| 256 | 2.8327 | 0.0029 |
| 257 | 2.8356 | 0.0029 |
| 258 | 2.8385 | 0.0029 |
| 259 | 2.8414 | 0.0029 |
| 260 | 2.8443 | 0.0029 |
| 261 | 2.8472 | 0.0029 |
| 262 | 2.8501 | 0.0029 |
| 263 | 2.8530 | 0.0029 |
| 264 | 2.8558 | 0.0029 |
| 265 | 2.8587 | 0.0029 |
| 266 | 2.8615 | 0.0028 |
| 267 | 2.8644 | 0.0028 |
| 268 | 2.8672 | 0.0028 |
| 269 | 2.8700 | 0.0028 |
| 270 | 2.8728 | 0.0028 |
| 271 | 2.8756 | 0.0028 |
| 272 | 2.8784 | 0.0028 |
| 273 | 2.8812 | 0.0028 |
| 274 | 2.8840 | 0.0028 |
| 275 | 2.8868 | 0.0028 |
| 276 | 2.8895 | 0.0028 |
| 277 | 2.8923 | 0.0028 |
| 278 | 2.8951 | 0.0028 |
| 279 | 2.8978 | 0.0027 |
| 280 | 2.9005 | 0.0027 |
| 281 | 2.9033 | 0.0027 |
| 282 | 2.9060 | 0.0027 |
| 283 | 2.9087 | 0.0027 |
| 284 | 2.9114 | 0.0027 |
| 285 | 2.9141 | 0.0027 |
| 286 | 2.9168 | 0.0027 |
| 287 | 2.9195 | 0.0027 |
| 288 | 2.9222 | 0.0027 |

| Unit Period (number) | Unit Rainfall (In) | Unit Soil-Loss (In) | Effective Rainfall (In) |
|---|---|---|---|
| 1 | 0.0027 | 0.0008 | 0.0018 |
| 2 | 0.0027 | 0.0008 | 0.0018 |
| 3 | 0.0027 | 0.0008 | 0.0019 |
| 4 | 0.0027 | 0.0009 | 0.0019 |
| 5 | 0.0027 | 0.0009 | 0.0019 |
| 6 | 0.0027 | 0.0009 | 0.0019 |
| 7 | 0.0027 | 0.0009 | 0.0019 |
| 8 | 0.0028 | 0.0009 | 0.0019 |
| 9 | 0.0028 | 0.0009 | 0.0019 |
| 10 | 0.0028 | 0.0009 | 0.0019 |
| 11 | 0.0028 | 0.0009 | 0.0019 |
| 12 | 0.0028 | 0.0009 | 0.0019 |
| 13 | 0.0028 | 0.0009 | 0.0019 |
| 14 | 0.0028 | 0.0009 | 0.0019 |
| 15 | 0.0028 | 0.0009 | 0.0019 |
| 16 | 0.0028 | 0.0009 | 0.0020 |

| | | | |
|---|---|---|---|
| 17 | 0.0029 | 0.0009 | 0.0020 |
| 18 | 0.0029 | 0.0009 | 0.0020 |
| 19 | 0.0029 | 0.0009 | 0.0020 |
| 20 | 0.0029 | 0.0009 | 0.0020 |
| 21 | 0.0029 | 0.0009 | 0.0020 |
| 22 | 0.0029 | 0.0009 | 0.0020 |
| 23 | 0.0029 | 0.0009 | 0.0020 |
| 24 | 0.0029 | 0.0009 | 0.0020 |
| 25 | 0.0030 | 0.0009 | 0.0020 |
| 26 | 0.0030 | 0.0009 | 0.0020 |
| 27 | 0.0030 | 0.0009 | 0.0020 |
| 28 | 0.0030 | 0.0009 | 0.0021 |
| 29 | 0.0030 | 0.0009 | 0.0021 |
| 30 | 0.0030 | 0.0009 | 0.0021 |
| 31 | 0.0030 | 0.0010 | 0.0021 |
| 32 | 0.0030 | 0.0010 | 0.0021 |
| 33 | 0.0031 | 0.0010 | 0.0021 |
| 34 | 0.0031 | 0.0010 | 0.0021 |
| 35 | 0.0031 | 0.0010 | 0.0021 |
| 36 | 0.0031 | 0.0010 | 0.0021 |
| 37 | 0.0031 | 0.0010 | 0.0021 |
| 38 | 0.0031 | 0.0010 | 0.0022 |
| 39 | 0.0032 | 0.0010 | 0.0022 |
| 40 | 0.0032 | 0.0010 | 0.0022 |
| 41 | 0.0032 | 0.0010 | 0.0022 |
| 42 | 0.0032 | 0.0010 | 0.0022 |
| 43 | 0.0032 | 0.0010 | 0.0022 |
| 44 | 0.0032 | 0.0010 | 0.0022 |
| 45 | 0.0033 | 0.0010 | 0.0022 |
| 46 | 0.0033 | 0.0010 | 0.0022 |
| 47 | 0.0033 | 0.0010 | 0.0023 |
| 48 | 0.0033 | 0.0010 | 0.0023 |
| 49 | 0.0033 | 0.0010 | 0.0023 |
| 50 | 0.0033 | 0.0010 | 0.0023 |
| 51 | 0.0034 | 0.0011 | 0.0023 |
| 52 | 0.0034 | 0.0011 | 0.0023 |
| 53 | 0.0034 | 0.0011 | 0.0023 |
| 54 | 0.0034 | 0.0011 | 0.0023 |
| 55 | 0.0034 | 0.0011 | 0.0023 |
| 56 | 0.0034 | 0.0011 | 0.0024 |
| 57 | 0.0035 | 0.0011 | 0.0024 |
| 58 | 0.0035 | 0.0011 | 0.0024 |
| 59 | 0.0035 | 0.0011 | 0.0024 |
| 60 | 0.0035 | 0.0011 | 0.0024 |
| 61 | 0.0035 | 0.0011 | 0.0024 |
| 62 | 0.0035 | 0.0011 | 0.0024 |
| 63 | 0.0036 | 0.0011 | 0.0025 |
| 64 | 0.0036 | 0.0011 | 0.0025 |
| 65 | 0.0036 | 0.0011 | 0.0025 |
| 66 | 0.0036 | 0.0011 | 0.0025 |
| 67 | 0.0037 | 0.0011 | 0.0025 |
| 68 | 0.0037 | 0.0012 | 0.0025 |
| 69 | 0.0037 | 0.0012 | 0.0025 |
| 70 | 0.0037 | 0.0012 | 0.0026 |
| 71 | 0.0037 | 0.0012 | 0.0026 |
| 72 | 0.0038 | 0.0012 | 0.0026 |
| 73 | 0.0038 | 0.0012 | 0.0026 |
| 74 | 0.0038 | 0.0012 | 0.0026 |
| 75 | 0.0038 | 0.0012 | 0.0026 |

| | | | |
|---|---|---|---|
| 76 | 0.0039 | 0.0012 | 0.0026 |
| 77 | 0.0039 | 0.0012 | 0.0027 |
| 78 | 0.0039 | 0.0012 | 0.0027 |
| 79 | 0.0039 | 0.0012 | 0.0027 |
| 80 | 0.0040 | 0.0012 | 0.0027 |
| 81 | 0.0040 | 0.0013 | 0.0027 |
| 82 | 0.0040 | 0.0013 | 0.0028 |
| 83 | 0.0040 | 0.0013 | 0.0028 |
| 84 | 0.0041 | 0.0013 | 0.0028 |
| 85 | 0.0041 | 0.0013 | 0.0028 |
| 86 | 0.0041 | 0.0013 | 0.0028 |
| 87 | 0.0042 | 0.0013 | 0.0029 |
| 88 | 0.0042 | 0.0013 | 0.0029 |
| 89 | 0.0042 | 0.0013 | 0.0029 |
| 90 | 0.0042 | 0.0013 | 0.0029 |
| 91 | 0.0043 | 0.0013 | 0.0029 |
| 92 | 0.0043 | 0.0013 | 0.0029 |
| 93 | 0.0043 | 0.0014 | 0.0030 |
| 94 | 0.0044 | 0.0014 | 0.0030 |
| 95 | 0.0044 | 0.0014 | 0.0030 |
| 96 | 0.0044 | 0.0014 | 0.0030 |
| 97 | 0.0045 | 0.0014 | 0.0031 |
| 98 | 0.0045 | 0.0014 | 0.0031 |
| 99 | 0.0045 | 0.0014 | 0.0031 |
| 100 | 0.0046 | 0.0014 | 0.0031 |
| 101 | 0.0046 | 0.0014 | 0.0032 |
| 102 | 0.0046 | 0.0015 | 0.0032 |
| 103 | 0.0047 | 0.0015 | 0.0032 |
| 104 | 0.0047 | 0.0015 | 0.0032 |
| 105 | 0.0048 | 0.0015 | 0.0033 |
| 106 | 0.0048 | 0.0015 | 0.0033 |
| 107 | 0.0049 | 0.0015 | 0.0033 |
| 108 | 0.0049 | 0.0015 | 0.0033 |
| 109 | 0.0049 | 0.0015 | 0.0034 |
| 110 | 0.0050 | 0.0016 | 0.0034 |
| 111 | 0.0050 | 0.0016 | 0.0034 |
| 112 | 0.0051 | 0.0016 | 0.0035 |
| 113 | 0.0051 | 0.0016 | 0.0035 |
| 114 | 0.0052 | 0.0016 | 0.0035 |
| 115 | 0.0052 | 0.0016 | 0.0036 |
| 116 | 0.0052 | 0.0016 | 0.0036 |
| 117 | 0.0053 | 0.0017 | 0.0036 |
| 118 | 0.0054 | 0.0017 | 0.0037 |
| 119 | 0.0054 | 0.0017 | 0.0037 |
| 120 | 0.0055 | 0.0017 | 0.0037 |
| 121 | 0.0055 | 0.0017 | 0.0038 |
| 122 | 0.0056 | 0.0017 | 0.0038 |
| 123 | 0.0056 | 0.0018 | 0.0039 |
| 124 | 0.0057 | 0.0018 | 0.0039 |
| 125 | 0.0058 | 0.0018 | 0.0040 |
| 126 | 0.0058 | 0.0018 | 0.0040 |
| 127 | 0.0059 | 0.0019 | 0.0040 |
| 128 | 0.0059 | 0.0019 | 0.0041 |
| 129 | 0.0060 | 0.0019 | 0.0041 |
| 130 | 0.0061 | 0.0019 | 0.0042 |
| 131 | 0.0062 | 0.0019 | 0.0042 |
| 132 | 0.0062 | 0.0020 | 0.0043 |
| 133 | 0.0063 | 0.0020 | 0.0043 |
| 134 | 0.0064 | 0.0020 | 0.0044 |

| | | | |
|---|---|---|---|
| 135 | 0.0065 | 0.0020 | 0.0045 |
| 136 | 0.0065 | 0.0021 | 0.0045 |
| 137 | 0.0067 | 0.0021 | 0.0046 |
| 138 | 0.0067 | 0.0021 | 0.0046 |
| 139 | 0.0068 | 0.0021 | 0.0047 |
| 140 | 0.0069 | 0.0022 | 0.0047 |
| 141 | 0.0070 | 0.0022 | 0.0048 |
| 142 | 0.0071 | 0.0022 | 0.0049 |
| 143 | 0.0072 | 0.0023 | 0.0050 |
| 144 | 0.0073 | 0.0023 | 0.0050 |
| 145 | 0.0063 | 0.0020 | 0.0043 |
| 146 | 0.0064 | 0.0020 | 0.0044 |
| 147 | 0.0065 | 0.0020 | 0.0045 |
| 148 | 0.0066 | 0.0021 | 0.0045 |
| 149 | 0.0068 | 0.0021 | 0.0046 |
| 150 | 0.0068 | 0.0021 | 0.0047 |
| 151 | 0.0070 | 0.0022 | 0.0048 |
| 152 | 0.0071 | 0.0022 | 0.0049 |
| 153 | 0.0073 | 0.0023 | 0.0050 |
| 154 | 0.0074 | 0.0023 | 0.0051 |
| 155 | 0.0076 | 0.0024 | 0.0052 |
| 156 | 0.0077 | 0.0024 | 0.0053 |
| 157 | 0.0079 | 0.0025 | 0.0054 |
| 158 | 0.0080 | 0.0025 | 0.0055 |
| 159 | 0.0083 | 0.0026 | 0.0057 |
| 160 | 0.0084 | 0.0026 | 0.0058 |
| 161 | 0.0087 | 0.0027 | 0.0059 |
| 162 | 0.0088 | 0.0028 | 0.0060 |
| 163 | 0.0091 | 0.0029 | 0.0063 |
| 164 | 0.0093 | 0.0029 | 0.0064 |
| 165 | 0.0096 | 0.0030 | 0.0066 |
| 166 | 0.0098 | 0.0031 | 0.0067 |
| 167 | 0.0102 | 0.0032 | 0.0070 |
| 168 | 0.0104 | 0.0033 | 0.0071 |
| 169 | 0.0145 | 0.0046 | 0.0100 |
| 170 | 0.0148 | 0.0047 | 0.0102 |
| 171 | 0.0155 | 0.0049 | 0.0106 |
| 172 | 0.0158 | 0.0050 | 0.0108 |
| 173 | 0.0165 | 0.0052 | 0.0113 |
| 174 | 0.0169 | 0.0053 | 0.0116 |
| 175 | 0.0178 | 0.0056 | 0.0122 |
| 176 | 0.0183 | 0.0058 | 0.0126 |
| 177 | 0.0194 | 0.0061 | 0.0133 |
| 178 | 0.0200 | 0.0063 | 0.0137 |
| 179 | 0.0214 | 0.0067 | 0.0147 |
| 180 | 0.0221 | 0.0069 | 0.0152 |
| 181 | 0.0239 | 0.0075 | 0.0164 |
| 182 | 0.0249 | 0.0078 | 0.0171 |
| 183 | 0.0272 | 0.0085 | 0.0187 |
| 184 | 0.0286 | 0.0090 | 0.0196 |
| 185 | 0.0322 | 0.0101 | 0.0221 |
| 186 | 0.0344 | 0.0108 | 0.0236 |
| 187 | 0.0399 | 0.0125 | 0.0273 |
| 188 | 0.0435 | 0.0137 | 0.0299 |
| 189 | 0.0541 | 0.0143 | 0.0398 |
| 190 | 0.0623 | 0.0143 | 0.0480 |
| 191 | 0.0946 | 0.0143 | 0.0802 |
| 192 | 0.1372 | 0.0143 | 0.1229 |
| 193 | 0.5938 | 0.0143 | 0.5794 |

| | | | |
|---|---|---|---|
| 194 | 0.0744 | 0.0143 | 0.0601 |
| 195 | 0.0481 | 0.0143 | 0.0338 |
| 196 | 0.0369 | 0.0116 | 0.0253 |
| 197 | 0.0302 | 0.0095 | 0.0207 |
| 198 | 0.0260 | 0.0082 | 0.0178 |
| 199 | 0.0230 | 0.0072 | 0.0157 |
| 200 | 0.0207 | 0.0065 | 0.0142 |
| 201 | 0.0188 | 0.0059 | 0.0129 |
| 202 | 0.0174 | 0.0055 | 0.0119 |
| 203 | 0.0162 | 0.0051 | 0.0111 |
| 204 | 0.0151 | 0.0047 | 0.0104 |
| 205 | 0.0106 | 0.0033 | 0.0073 |
| 206 | 0.0100 | 0.0031 | 0.0069 |
| 207 | 0.0094 | 0.0030 | 0.0065 |
| 208 | 0.0090 | 0.0028 | 0.0061 |
| 209 | 0.0085 | 0.0027 | 0.0058 |
| 210 | 0.0081 | 0.0026 | 0.0056 |
| 211 | 0.0078 | 0.0024 | 0.0053 |
| 212 | 0.0075 | 0.0023 | 0.0051 |
| 213 | 0.0072 | 0.0023 | 0.0049 |
| 214 | 0.0069 | 0.0022 | 0.0047 |
| 215 | 0.0067 | 0.0021 | 0.0046 |
| 216 | 0.0064 | 0.0020 | 0.0044 |
| 217 | 0.0074 | 0.0023 | 0.0051 |
| 218 | 0.0072 | 0.0023 | 0.0049 |
| 219 | 0.0070 | 0.0022 | 0.0048 |
| 220 | 0.0068 | 0.0021 | 0.0047 |
| 221 | 0.0066 | 0.0021 | 0.0045 |
| 222 | 0.0064 | 0.0020 | 0.0044 |
| 223 | 0.0063 | 0.0020 | 0.0043 |
| 224 | 0.0061 | 0.0019 | 0.0042 |
| 225 | 0.0060 | 0.0019 | 0.0041 |
| 226 | 0.0059 | 0.0018 | 0.0040 |
| 227 | 0.0057 | 0.0018 | 0.0039 |
| 228 | 0.0056 | 0.0018 | 0.0038 |
| 229 | 0.0055 | 0.0017 | 0.0038 |
| 230 | 0.0054 | 0.0017 | 0.0037 |
| 231 | 0.0053 | 0.0017 | 0.0036 |
| 232 | 0.0052 | 0.0016 | 0.0036 |
| 233 | 0.0051 | 0.0016 | 0.0035 |
| 234 | 0.0050 | 0.0016 | 0.0034 |
| 235 | 0.0049 | 0.0015 | 0.0034 |
| 236 | 0.0048 | 0.0015 | 0.0033 |
| 237 | 0.0047 | 0.0015 | 0.0033 |
| 238 | 0.0047 | 0.0015 | 0.0032 |
| 239 | 0.0046 | 0.0014 | 0.0032 |
| 240 | 0.0045 | 0.0014 | 0.0031 |
| 241 | 0.0045 | 0.0014 | 0.0031 |
| 242 | 0.0044 | 0.0014 | 0.0030 |
| 243 | 0.0043 | 0.0014 | 0.0030 |
| 244 | 0.0043 | 0.0013 | 0.0029 |
| 245 | 0.0042 | 0.0013 | 0.0029 |
| 246 | 0.0041 | 0.0013 | 0.0028 |
| 247 | 0.0041 | 0.0013 | 0.0028 |
| 248 | 0.0040 | 0.0013 | 0.0028 |
| 249 | 0.0040 | 0.0012 | 0.0027 |
| 250 | 0.0039 | 0.0012 | 0.0027 |
| 251 | 0.0039 | 0.0012 | 0.0027 |
| 252 | 0.0038 | 0.0012 | 0.0026 |

| | | | |
|---|---|---|---|
| 253 | 0.0038 | 0.0012 | 0.0026 |
| 254 | 0.0037 | 0.0012 | 0.0026 |
| 255 | 0.0037 | 0.0012 | 0.0025 |
| 256 | 0.0036 | 0.0011 | 0.0025 |
| 257 | 0.0036 | 0.0011 | 0.0025 |
| 258 | 0.0036 | 0.0011 | 0.0024 |
| 259 | 0.0035 | 0.0011 | 0.0024 |
| 260 | 0.0035 | 0.0011 | 0.0024 |
| 261 | 0.0034 | 0.0011 | 0.0024 |
| 262 | 0.0034 | 0.0011 | 0.0023 |
| 263 | 0.0034 | 0.0011 | 0.0023 |
| 264 | 0.0033 | 0.0010 | 0.0023 |
| 265 | 0.0033 | 0.0010 | 0.0023 |
| 266 | 0.0033 | 0.0010 | 0.0022 |
| 267 | 0.0032 | 0.0010 | 0.0022 |
| 268 | 0.0032 | 0.0010 | 0.0022 |
| 269 | 0.0032 | 0.0010 | 0.0022 |
| 270 | 0.0031 | 0.0010 | 0.0022 |
| 271 | 0.0031 | 0.0010 | 0.0021 |
| 272 | 0.0031 | 0.0010 | 0.0021 |
| 273 | 0.0031 | 0.0010 | 0.0021 |
| 274 | 0.0030 | 0.0010 | 0.0021 |
| 275 | 0.0030 | 0.0009 | 0.0021 |
| 276 | 0.0030 | 0.0009 | 0.0020 |
| 277 | 0.0030 | 0.0009 | 0.0020 |
| 278 | 0.0029 | 0.0009 | 0.0020 |
| 279 | 0.0029 | 0.0009 | 0.0020 |
| 280 | 0.0029 | 0.0009 | 0.0020 |
| 281 | 0.0029 | 0.0009 | 0.0020 |
| 282 | 0.0028 | 0.0009 | 0.0019 |
| 283 | 0.0028 | 0.0009 | 0.0019 |
| 284 | 0.0028 | 0.0009 | 0.0019 |
| 285 | 0.0028 | 0.0009 | 0.0019 |
| 286 | 0.0027 | 0.0009 | 0.0019 |
| 287 | 0.0027 | 0.0009 | 0.0019 |
| 288 | 0.0027 | 0.0008 | 0.0019 |

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Total soil rain loss = 0.68(In)
Total effective rainfall = 2.24(In)
Peak flow rate in flood hydrograph = 3316.92(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals ((CFS))

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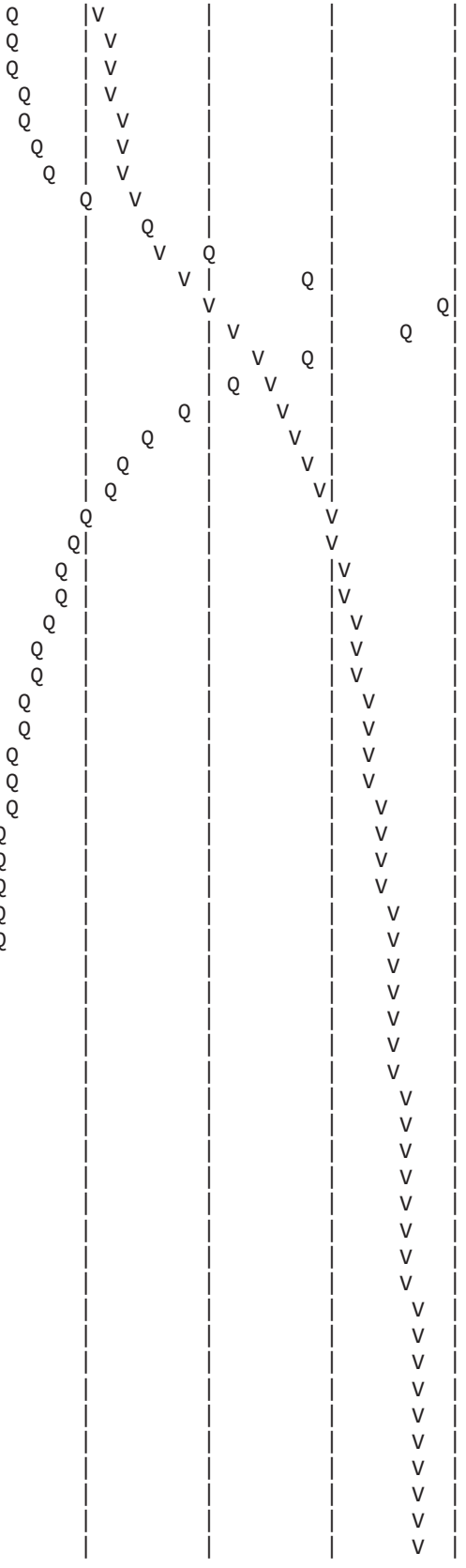
| Time(h+m) | Volume Ac.Ft | Q(CFS) | 0 | 850.0 | 1700.0 | 2550.0 | 3400.0 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0026 | 0.37 | Q | \| | \| | \| | \| |
| 0+10 | 0.0137 | 1.61 | Q | \| | \| | \| | \| |
| 0+15 | 0.0391 | 3.69 | Q | \| | \| | \| | \| |
| 0+20 | 0.0914 | 7.60 | Q | \| | \| | \| | \| |
| 0+25 | 0.1919 | 14.60 | Q | \| | \| | \| | \| |
| 0+30 | 0.3375 | 21.13 | Q | \| | \| | \| | \| |
| 0+35 | 0.5161 | 25.95 | Q | \| | \| | \| | \| |
| 0+40 | 0.7181 | 29.32 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+45 | 0.9376 | 31.87 | Q | | | | |
| 0+50 | 1.1717 | 33.99 | Q | | | | |
| 0+55 | 1.4180 | 35.77 | Q | | | | |
| 1+ 0 | 1.6750 | 37.31 | Q | | | | |
| 1+ 5 | 1.9412 | 38.65 | Q | | | | |
| 1+10 | 2.2154 | 39.82 | Q | | | | |
| 1+15 | 2.4968 | 40.86 | Q | | | | |
| 1+20 | 2.7849 | 41.83 | Q | | | | |
| 1+25 | 3.0792 | 42.74 | Q | | | | |
| 1+30 | 3.3792 | 43.56 | Q | | | | |
| 1+35 | 3.6842 | 44.29 | Q | | | | |
| 1+40 | 3.9937 | 44.94 | Q | | | | |
| 1+45 | 4.3075 | 45.57 | Q | | | | |
| 1+50 | 4.6254 | 46.16 | Q | | | | |
| 1+55 | 4.9472 | 46.73 | Q | | | | |
| 2+ 0 | 5.2728 | 47.27 | Q | | | | |
| 2+ 5 | 5.6017 | 47.77 | Q | | | | |
| 2+10 | 5.9339 | 48.23 | Q | | | | |
| 2+15 | 6.2693 | 48.70 | Q | | | | |
| 2+20 | 6.6076 | 49.13 | Q | | | | |
| 2+25 | 6.9488 | 49.54 | Q | | | | |
| 2+30 | 7.2929 | 49.96 | Q | | | | |
| 2+35 | 7.6396 | 50.34 | Q | | | | |
| 2+40 | 7.9887 | 50.70 | Q | | | | |
| 2+45 | 8.3404 | 51.06 | Q | | | | |
| 2+50 | 8.6943 | 51.39 | Q | | | | |
| 2+55 | 9.0504 | 51.70 | Q | | | | |
| 3+ 0 | 9.4085 | 52.01 | Q | | | | |
| 3+ 5 | 9.7689 | 52.33 | Q | | | | |
| 3+10 | 10.1315 | 52.65 | QV | | | | |
| 3+15 | 10.4964 | 52.99 | QV | | | | |
| 3+20 | 10.8636 | 53.32 | QV | | | | |
| 3+25 | 11.2332 | 53.66 | QV | | | | |
| 3+30 | 11.6051 | 54.00 | QV | | | | |
| 3+35 | 11.9791 | 54.32 | QV | | | | |
| 3+40 | 12.3553 | 54.62 | QV | | | | |
| 3+45 | 12.7335 | 54.92 | QV | | | | |
| 3+50 | 13.1139 | 55.23 | QV | | | | |
| 3+55 | 13.4962 | 55.52 | QV | | | | |
| 4+ 0 | 13.8804 | 55.78 | QV | | | | |
| 4+ 5 | 14.2665 | 56.05 | QV | | | | |
| 4+10 | 14.6544 | 56.33 | QV | | | | |
| 4+15 | 15.0442 | 56.60 | QV | | | | |
| 4+20 | 15.4359 | 56.88 | QV | | | | |
| 4+25 | 15.8296 | 57.16 | QV | | | | |
| 4+30 | 16.2253 | 57.45 | QV | | | | |
| 4+35 | 16.6229 | 57.74 | QV | | | | |
| 4+40 | 17.0226 | 58.03 | QV | | | | |
| 4+45 | 17.4243 | 58.33 | QV | | | | |
| 4+50 | 17.8281 | 58.63 | QV | | | | |
| 4+55 | 18.2339 | 58.93 | QV | | | | |
| 5+ 0 | 18.6419 | 59.24 | QV | | | | |
| 5+ 5 | 19.0520 | 59.55 | QV | | | | |
| 5+10 | 19.4643 | 59.86 | QV | | | | |
| 5+15 | 19.8788 | 60.18 | Q V | | | | |
| 5+20 | 20.2955 | 60.51 | Q V | | | | |
| 5+25 | 20.7145 | 60.83 | Q V | | | | |
| 5+30 | 21.1357 | 61.16 | Q V | | | | |
| 5+35 | 21.5593 | 61.50 | Q V | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+40 | 21.9851 | 61.84 | Q V | \| | \| | \| | \| |
| 5+45 | 22.4134 | 62.19 | Q V | \| | \| | \| | \| |
| 5+50 | 22.8441 | 62.53 | Q V | \| | \| | \| | \| |
| 5+55 | 23.2772 | 62.89 | Q V | \| | \| | \| | \| |
| 6+ 0 | 23.7128 | 63.24 | Q V | \| | \| | \| | \| |
| 6+ 5 | 24.1509 | 63.61 | Q V | \| | \| | \| | \| |
| 6+10 | 24.5915 | 63.98 | Q V | \| | \| | \| | \| |
| 6+15 | 25.0347 | 64.35 | Q V | \| | \| | \| | \| |
| 6+20 | 25.4804 | 64.73 | Q V | \| | \| | \| | \| |
| 6+25 | 25.9289 | 65.11 | Q V | \| | \| | \| | \| |
| 6+30 | 26.3800 | 65.50 | Q V | \| | \| | \| | \| |
| 6+35 | 26.8338 | 65.90 | Q V | \| | \| | \| | \| |
| 6+40 | 27.2904 | 66.30 | Q V | \| | \| | \| | \| |
| 6+45 | 27.7498 | 66.71 | Q V | \| | \| | \| | \| |
| 6+50 | 28.2121 | 67.12 | Q V | \| | \| | \| | \| |
| 6+55 | 28.6772 | 67.54 | Q V | \| | \| | \| | \| |
| 7+ 0 | 29.1452 | 67.96 | Q V | \| | \| | \| | \| |
| 7+ 5 | 29.6162 | 68.39 | Q V | \| | \| | \| | \| |
| 7+10 | 30.0903 | 68.83 | Q  V | \| | \| | \| | \| |
| 7+15 | 30.5674 | 69.27 | Q  V | \| | \| | \| | \| |
| 7+20 | 31.0475 | 69.72 | Q  V | \| | \| | \| | \| |
| 7+25 | 31.5309 | 70.18 | Q  V | \| | \| | \| | \| |
| 7+30 | 32.0174 | 70.65 | Q  V | \| | \| | \| | \| |
| 7+35 | 32.5072 | 71.12 | Q  V | \| | \| | \| | \| |
| 7+40 | 33.0003 | 71.60 | Q  V | \| | \| | \| | \| |
| 7+45 | 33.4968 | 72.09 | Q  V | \| | \| | \| | \| |
| 7+50 | 33.9967 | 72.58 | Q  V | \| | \| | \| | \| |
| 7+55 | 34.5001 | 73.09 | Q  V | \| | \| | \| | \| |
| 8+ 0 | 35.0069 | 73.60 | Q  V | \| | \| | \| | \| |
| 8+ 5 | 35.5174 | 74.12 | Q  V | \| | \| | \| | \| |
| 8+10 | 36.0315 | 74.65 | Q  V | \| | \| | \| | \| |
| 8+15 | 36.5494 | 75.19 | Q  V | \| | \| | \| | \| |
| 8+20 | 37.0710 | 75.74 | Q  V | \| | \| | \| | \| |
| 8+25 | 37.5964 | 76.30 | Q  V | \| | \| | \| | \| |
| 8+30 | 38.1258 | 76.86 | Q  V | \| | \| | \| | \| |
| 8+35 | 38.6591 | 77.44 | Q  V | \| | \| | \| | \| |
| 8+40 | 39.1965 | 78.03 | Q  V | \| | \| | \| | \| |
| 8+45 | 39.7380 | 78.63 | Q   V | \| | \| | \| | \| |
| 8+50 | 40.2837 | 79.24 | Q   V | \| | \| | \| | \| |
| 8+55 | 40.8337 | 79.86 | Q   V | \| | \| | \| | \| |
| 9+ 0 | 41.3881 | 80.49 | Q   V | \| | \| | \| | \| |
| 9+ 5 | 41.9469 | 81.14 | Q   V | \| | \| | \| | \| |
| 9+10 | 42.5102 | 81.79 | Q   V | \| | \| | \| | \| |
| 9+15 | 43.0781 | 82.46 | Q   V | \| | \| | \| | \| |
| 9+20 | 43.6507 | 83.14 | Q   V | \| | \| | \| | \| |
| 9+25 | 44.2281 | 83.84 | Q   V | \| | \| | \| | \| |
| 9+30 | 44.8104 | 84.55 | Q   V | \| | \| | \| | \| |
| 9+35 | 45.3978 | 85.28 | \|Q  V | \| | \| | \| | \| |
| 9+40 | 45.9902 | 86.02 | \|Q  V | \| | \| | \| | \| |
| 9+45 | 46.5878 | 86.77 | \|Q  V | \| | \| | \| | \| |
| 9+50 | 47.1907 | 87.54 | \|Q  V | \| | \| | \| | \| |
| 9+55 | 47.7990 | 88.33 | \|Q  V | \| | \| | \| | \| |
| 10+ 0 | 48.4129 | 89.13 | \|Q  V | \| | \| | \| | \| |
| 10+ 5 | 49.0325 | 89.96 | \|Q  V | \| | \| | \| | \| |
| 10+10 | 49.6578 | 90.80 | \|Q   V | \| | \| | \| | \| |
| 10+15 | 50.2891 | 91.66 | \|Q   V | \| | \| | \| | \| |
| 10+20 | 50.9263 | 92.54 | \|Q   V | \| | \| | \| | \| |
| 10+25 | 51.5699 | 93.44 | \|Q   V | \| | \| | \| | \| |
| 10+30 | 52.2197 | 94.35 | \|Q   V | \| | \| | \| | \| |

```
10+35      52.8760     95.30  |Q   V    |          |          |          |
10+40      53.5390     96.26  |Q   V    |          |          |          |
10+45      54.2088     97.25  |Q   V    |          |          |          |
10+50      54.8855     98.26  |Q   V    |          |          |          |
10+55      55.5694     99.30  |Q   V    |          |          |          |
11+ 0      56.2606    100.36  |Q   V    |          |          |          |
11+ 5      56.9594    101.46  |Q   V    |          |          |          |
11+10      57.6659    102.58  |Q   V    |          |          |          |
11+15      58.3803    103.73  |Q   V    |          |          |          |
11+20      59.1028    104.91  |Q   V    |          |          |          |
11+25      59.8337    106.13  |Q    V   |          |          |          |
11+30      60.5732    107.37  |Q    V   |          |          |          |
11+35      61.3216    108.66  |Q    V   |          |          |          |
11+40      62.0790    109.98  |Q    V   |          |          |          |
11+45      62.8458    111.34  |Q    V   |          |          |          |
11+50      63.6222    112.74  |Q    V   |          |          |          |
11+55      64.4086    114.19  |Q    V   |          |          |          |
12+ 0      65.2053    115.67  |Q    V   |          |          |          |
12+ 5      66.0114    117.05  |Q    V   |          |          |          |
12+10      66.8247    118.09  |Q    V   |          |          |          |
12+15      67.6430    118.83  |Q    V   |          |          |          |
12+20      68.4612    118.80  |Q    V   |          |          |          |
12+25      69.2705    117.50  |Q    V   |          |          |          |
12+30      70.0723    116.43  |Q     V  |          |          |          |
12+35      70.8723    116.16  |Q     V  |          |          |          |
12+40      71.6749    116.54  |Q     V  |          |          |          |
12+45      72.4832    117.36  |Q     V  |          |          |          |
12+50      73.2987    118.42  |Q     V  |          |          |          |
12+55      74.1231    119.70  |Q     V  |          |          |          |
13+ 0      74.9575    121.16  |Q     V  |          |          |          |
13+ 5      75.8032    122.80  |Q     V  |          |          |          |
13+10      76.6612    124.58  |Q     V  |          |          |          |
13+15      77.5326    126.53  |Q     V  |          |          |          |
13+20      78.4182    128.59  |Q     V  |          |          |          |
13+25      79.3192    130.82  |Q      V |          |          |          |
13+30      80.2364    133.17  |Q      V |          |          |          |
13+35      81.1711    135.72  |Q      V |          |          |          |
13+40      82.1244    138.42  |Q      V |          |          |          |
13+45      83.0975    141.30  |Q      V |          |          |          |
13+50      84.0915    144.33  |Q      V |          |          |          |
13+55      85.1079    147.58  |Q      V |          |          |          |
14+ 0      86.1479    151.00  |Q      V |          |          |          |
14+ 5      87.2168    155.20  |Q      V |          |          |          |
14+10      88.3241    160.79  |Q      V |          |          |          |
14+15      89.4802    167.85  |Q       V|          |          |          |
14+20      90.7041    177.72  | Q      V|          |          |          |
14+25      92.0280    192.24  | Q      V|          |          |          |
14+30      93.4509    206.59  | Q      V|          |          |          |
14+35      94.9609    219.25  | Q      V|          |          |          |
14+40      96.5483    230.49  | Q      V|          |          |          |
14+45      98.2101    241.31  | Q      V|          |          |          |
14+50      99.9467    252.15  | Q       V          |          |          |
14+55     101.7609    263.42  |  Q      V          |          |          |
15+ 0     103.6559    275.14  |  Q      V          |          |          |
15+ 5     105.6373    287.71  |  Q      V          |          |          |
15+10     107.7111    301.11  |  Q      V          |          |          |
15+15     109.8866    315.88  |  Q      |V         |          |          |
15+20     112.1736    332.07  |  Q      |V         |          |          |
15+25     114.5871    350.44  |   Q     |V         |          |          |
```

| | | | |
|---|---|---|---|
| 15+30 | 117.1428 | 371.09 |  |
| 15+35 | 119.8644 | 395.17 | |
| 15+40 | 122.7793 | 423.25 | |
| 15+45 | 125.9353 | 458.25 | |
| 15+50 | 129.3986 | 502.86 | |
| 15+55 | 133.2971 | 566.07 | |
| 16+ 0 | 137.8769 | 664.98 | |
| 16+ 5 | 144.1318 | 908.22 | |
| 16+10 | 153.1875 | 1314.89 | |
| 16+15 | 165.3128 | 1760.59 | |
| 16+20 | 182.1992 | 2451.91 | |
| 16+25 | 205.0430 | 3316.92 | |
| 16+30 | 226.3217 | 3089.66 | |
| 16+35 | 243.2362 | 2455.98 | |
| 16+40 | 256.3756 | 1907.85 | |
| 16+45 | 267.1041 | 1557.78 | |
| 16+50 | 276.3432 | 1341.52 | |
| 16+55 | 284.4050 | 1170.56 | |
| 17+ 0 | 291.5561 | 1038.35 | |
| 17+ 5 | 297.9286 | 925.28 | |
| 17+10 | 303.6602 | 832.23 | |
| 17+15 | 308.8383 | 751.85 | |
| 17+20 | 313.6061 | 692.29 | |
| 17+25 | 317.9698 | 633.61 | |
| 17+30 | 321.8945 | 569.86 | |
| 17+35 | 325.4160 | 511.33 | |
| 17+40 | 328.6115 | 463.98 | |
| 17+45 | 331.6034 | 434.43 | |
| 17+50 | 334.3893 | 404.51 | |
| 17+55 | 336.9870 | 377.18 | |
| 18+ 0 | 339.4185 | 353.06 | |
| 18+ 5 | 341.6573 | 325.07 | |
| 18+10 | 343.7381 | 302.14 | |
| 18+15 | 345.7362 | 290.12 | |
| 18+20 | 347.6024 | 270.97 | |
| 18+25 | 349.3627 | 255.60 | |
| 18+30 | 351.0669 | 247.45 | |
| 18+35 | 352.6524 | 230.22 | |
| 18+40 | 354.1328 | 214.95 | |
| 18+45 | 355.5574 | 206.85 | |
| 18+50 | 356.8703 | 190.64 | |
| 18+55 | 358.0938 | 177.65 | |
| 19+ 0 | 359.2865 | 173.17 | |
| 19+ 5 | 360.4672 | 171.45 | |
| 19+10 | 361.6335 | 169.35 | |
| 19+15 | 362.7729 | 165.44 | |
| 19+20 | 363.8838 | 161.31 | |
| 19+25 | 364.9636 | 156.78 | |
| 19+30 | 366.0069 | 151.49 | |
| 19+35 | 366.9665 | 139.33 | |
| 19+40 | 367.8593 | 129.64 | |
| 19+45 | 368.7215 | 125.19 | |
| 19+50 | 369.5500 | 120.30 | |
| 19+55 | 370.3023 | 109.23 | |
| 20+ 0 | 370.9850 | 99.13 | |
| 20+ 5 | 371.6473 | 96.16 | |
| 20+10 | 372.2929 | 93.73 | |
| 20+15 | 372.9235 | 91.57 | |
| 20+20 | 373.5404 | 89.58 | |

```
20+25     374.1445     87.71  |Q        |         |         |      V  |
20+30     374.7365     85.97  |Q        |         |         |      V  |
20+35     375.3174     84.34  Q         |         |         |      V  |
20+40     375.8877     82.81  Q         |         |         |      V  |
20+45     376.4481     81.36  Q         |         |         |      V  |
20+50     376.9988     79.97  Q         |         |         |       V |
20+55     377.5406     78.66  Q         |         |         |       V |
21+ 0     378.0739     77.44  Q         |         |         |       V |
21+ 5     378.5991     76.27  Q         |         |         |       V |
21+10     379.1167     75.15  Q         |         |         |       V |
21+15     379.6268     74.07  Q         |         |         |       V |
21+20     380.1299     73.04  Q         |         |         |       V |
21+25     380.6260     72.04  Q         |         |         |       V |
21+30     381.1155     71.08  Q         |         |         |       V |
21+35     381.5986     70.14  Q         |         |         |       V |
21+40     382.0754     69.23  Q         |         |         |       V |
21+45     382.5460     68.34  Q         |         |         |       V |
21+50     383.0108     67.48  Q         |         |         |       V |
21+55     383.4698     66.64  Q         |         |         |       V |
22+ 0     383.9231     65.82  Q         |         |         |       V |
22+ 5     384.3708     65.02  Q         |         |         |       V |
22+10     384.8133     64.24  Q         |         |         |       V |
22+15     385.2505     63.49  Q         |         |         |       V |
22+20     385.6827     62.76  Q         |         |         |       V |
22+25     386.1100     62.04  Q         |         |         |       V |
22+30     386.5326     61.35  Q         |         |         |       V |
22+35     386.9504     60.68  Q         |         |         |        V|
22+40     387.3638     60.02  Q         |         |         |        V|
22+45     387.7728     59.38  Q         |         |         |        V|
22+50     388.1774     58.76  Q         |         |         |        V|
22+55     388.5779     58.15  Q         |         |         |        V|
23+ 0     388.9743     57.56  Q         |         |         |        V|
23+ 5     389.3667     56.98  Q         |         |         |        V|
23+10     389.7552     56.41  Q         |         |         |        V|
23+15     390.1399     55.86  Q         |         |         |        V|
23+20     390.5210     55.32  Q         |         |         |        V|
23+25     390.8983     54.80  Q         |         |         |        V|
23+30     391.2722     54.28  Q         |         |         |        V|
23+35     391.6426     53.78  Q         |         |         |        V|
23+40     392.0096     53.29  Q         |         |         |        V|
23+45     392.3733     52.81  Q         |         |         |        V|
23+50     392.7337     52.34  Q         |         |         |        V|
23+55     393.0910     51.88  Q         |         |         |        V|
24+ 0     393.4451     51.42  Q         |         |         |        V|
24+ 5     393.7937     50.61  Q         |         |         |        V|
24+10     394.1308     48.95  Q         |         |         |        V|
24+15     394.4508     46.47  Q         |         |         |        V|
24+20     394.7414     42.19  Q         |         |         |        V|
24+25     394.9816     34.89  Q         |         |         |        V|
24+30     395.1754     28.13  Q         |         |         |        V|
24+35     395.3349     23.17  Q         |         |         |        V|
24+40     395.4706     19.70  Q         |         |         |        V|
24+45     395.5884     17.10  Q         |         |         |        V|
24+50     395.6915     14.97  Q         |         |         |        V|
24+55     395.7824     13.20  Q         |         |         |        V|
25+ 0     395.8629     11.69  Q         |         |         |        V|
25+ 5     395.9345     10.40  Q         |         |         |        V|
25+10     395.9985      9.30  Q         |         |         |        V|
25+15     396.0560      8.34  Q         |         |         |        V|
```

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+20 | 396.1074 | 7.46 | Q | \| | \| | \| | V\| |
| 25+25 | 396.1533 | 6.66 | Q | \| | \| | \| | V\| |
| 25+30 | 396.1943 | 5.96 | Q | \| | \| | \| | V\| |
| 25+35 | 396.2312 | 5.36 | Q | \| | \| | \| | V\| |
| 25+40 | 396.2646 | 4.85 | Q | \| | \| | \| | V\| |
| 25+45 | 396.2947 | 4.36 | Q | \| | \| | \| | V\| |
| 25+50 | 396.3217 | 3.92 | Q | \| | \| | \| | V\| |
| 25+55 | 396.3459 | 3.52 | Q | \| | \| | \| | V\| |
| 26+ 0 | 396.3675 | 3.14 | Q | \| | \| | \| | V\| |
| 26+ 5 | 396.3869 | 2.82 | Q | \| | \| | \| | V\| |
| 26+10 | 396.4043 | 2.53 | Q | \| | \| | \| | V\| |
| 26+15 | 396.4198 | 2.25 | Q | \| | \| | \| | V\| |
| 26+20 | 396.4336 | 2.00 | Q | \| | \| | \| | V\| |
| 26+25 | 396.4459 | 1.79 | Q | \| | \| | \| | V\| |
| 26+30 | 396.4568 | 1.57 | Q | \| | \| | \| | V\| |
| 26+35 | 396.4663 | 1.39 | Q | \| | \| | \| | V\| |
| 26+40 | 396.4749 | 1.24 | Q | \| | \| | \| | V\| |
| 26+45 | 396.4824 | 1.09 | Q | \| | \| | \| | V\| |
| 26+50 | 396.4892 | 0.98 | Q | \| | \| | \| | V\| |
| 26+55 | 396.4954 | 0.89 | Q | \| | \| | \| | V\| |
| 27+ 0 | 396.5009 | 0.81 | Q | \| | \| | \| | V\| |
| 27+ 5 | 396.5059 | 0.72 | Q | \| | \| | \| | V\| |
| 27+10 | 396.5101 | 0.62 | Q | \| | \| | \| | V\| |
| 27+15 | 396.5137 | 0.52 | Q | \| | \| | \| | V\| |
| 27+20 | 396.5166 | 0.43 | Q | \| | \| | \| | V\| |
| 27+25 | 396.5189 | 0.33 | Q | \| | \| | \| | V\| |
| 27+30 | 396.5206 | 0.24 | Q | \| | \| | \| | V\| |
| 27+35 | 396.5217 | 0.17 | Q | \| | \| | \| | V\| |
| 27+40 | 396.5225 | 0.12 | Q | \| | \| | \| | V\| |
| 27+45 | 396.5230 | 0.07 | Q | \| | \| | \| | V\| |
| 27+50 | 396.5232 | 0.02 | Q | \| | \| | \| | V |

# TECHNICAL APPENDIX NO. 8

Developed Conditions
Hydrograph Routing Calculations
100-Year, 24-Hour Storm Event

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014
Study date: 09/06/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREAS 49 AND 50 ROUTING
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********** HYDROGRAPH INFORMATION **********

From study/file name: PR50.rte
**********HYDROGRAPH DATA**********
Number of intervals = 353
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 5599.015 (CFS)
Total volume = 1141.359 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

**********

++++++++++

Process from Point/Station 1.000 to Point/Station 1.000
**** FLOWBY BASIN ROUTING OR SPLIT FLOW ****

A constant split flow fraction of 0.5000 is
being diverted from the main stream into stream number 1
Total volume of excess flow diverted into flowby
basin (stream number 1 ) is 570.68(Ac.Ft)

++++++++++

P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

---

Hydrograph in 5 Minute intervals (CFS)

---

| Time(h+m) | Volume(Ac.Ft) | Q(CFS) | 0 | 699.9 | 1399.8 | 2099.6 | 2799.5 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0050 | 0.73 | Q | \| | \| | \| | \| |
| 0+10 | 0.0216 | 2.41 | Q | \| | \| | \| | \| |
| 0+15 | 0.0544 | 4.76 | Q | \| | \| | \| | \| |
| 0+20 | 0.1080 | 7.79 | Q | \| | \| | \| | \| |
| 0+25 | 0.1875 | 11.54 | Q | \| | \| | \| | \| |
| 0+30 | 0.3033 | 16.82 | Q | \| | \| | \| | \| |
| 0+35 | 0.4666 | 23.71 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+40 | 0.7024 | 34.24 | Q | \| | \| | \| | \| |
| 0+45 | 1.0442 | 49.62 | Q | \| | \| | \| | \| |
| 0+50 | 1.4418 | 57.74 | Q | \| | \| | \| | \| |
| 0+55 | 1.8774 | 63.25 | Q | \| | \| | \| | \| |
| 1+ 0 | 2.3435 | 67.68 | Q | \| | \| | \| | \| |
| 1+ 5 | 2.8357 | 71.46 | VQ | \| | \| | \| | \| |
| 1+10 | 3.3495 | 74.60 | VQ | \| | \| | \| | \| |
| 1+15 | 3.8839 | 77.60 | VQ | \| | \| | \| | \| |
| 1+20 | 4.4361 | 80.18 | VQ | \| | \| | \| | \| |
| 1+25 | 5.0051 | 82.61 | VQ | \| | \| | \| | \| |
| 1+30 | 5.5888 | 84.75 | VQ | \| | \| | \| | \| |
| 1+35 | 6.1862 | 86.74 | VQ | \| | \| | \| | \| |
| 1+40 | 6.7962 | 88.58 | VQ | \| | \| | \| | \| |
| 1+45 | 7.4181 | 90.30 | VQ | \| | \| | \| | \| |
| 1+50 | 8.0511 | 91.90 | VQ | \| | \| | \| | \| |
| 1+55 | 8.6941 | 93.37 | VQ | \| | \| | \| | \| |
| 2+ 0 | 9.3468 | 94.77 | VQ | \| | \| | \| | \| |
| 2+ 5 | 10.0084 | 96.06 | VQ | \| | \| | \| | \| |
| 2+10 | 10.6785 | 97.30 | VQ | \| | \| | \| | \| |
| 2+15 | 11.3564 | 98.42 | VQ | \| | \| | \| | \| |
| 2+20 | 12.0417 | 99.50 | VQ | \| | \| | \| | \| |
| 2+25 | 12.7335 | 100.46 | VQ | \| | \| | \| | \| |
| 2+30 | 13.4318 | 101.39 | VQ | \| | \| | \| | \| |
| 2+35 | 14.1361 | 102.27 | VQ | \| | \| | \| | \| |
| 2+40 | 14.8463 | 103.11 | \|Q | \| | \| | \| | \| |
| 2+45 | 15.5617 | 103.88 | \|Q | \| | \| | \| | \| |
| 2+50 | 16.2821 | 104.60 | \|Q | \| | \| | \| | \| |
| 2+55 | 17.0067 | 105.21 | \|Q | \| | \| | \| | \| |
| 3+ 0 | 17.7352 | 105.77 | \|Q | \| | \| | \| | \| |
| 3+ 5 | 18.4676 | 106.35 | \|Q | \| | \| | \| | \| |
| 3+10 | 19.2039 | 106.92 | \|Q | \| | \| | \| | \| |
| 3+15 | 19.9442 | 107.49 | \|Q | \| | \| | \| | \| |
| 3+20 | 20.6883 | 108.04 | \|Q | \| | \| | \| | \| |
| 3+25 | 21.4362 | 108.60 | \|Q | \| | \| | \| | \| |
| 3+30 | 22.1880 | 109.16 | \|Q | \| | \| | \| | \| |
| 3+35 | 22.9437 | 109.72 | \|Q | \| | \| | \| | \| |
| 3+40 | 23.7030 | 110.24 | \|Q | \| | \| | \| | \| |
| 3+45 | 24.4659 | 110.78 | \|Q | \| | \| | \| | \| |
| 3+50 | 25.2326 | 111.31 | \|Q | \| | \| | \| | \| |
| 3+55 | 26.0030 | 111.87 | \|Q | \| | \| | \| | \| |
| 4+ 0 | 26.7773 | 112.42 | \|Q | \| | \| | \| | \| |
| 4+ 5 | 27.5555 | 113.00 | \|Q | \| | \| | \| | \| |
| 4+10 | 28.3377 | 113.57 | \|Q | \| | \| | \| | \| |
| 4+15 | 29.1239 | 114.15 | \|QV | \| | \| | \| | \| |
| 4+20 | 29.9138 | 114.70 | \|QV | \| | \| | \| | \| |
| 4+25 | 30.7076 | 115.25 | \|QV | \| | \| | \| | \| |
| 4+30 | 31.5051 | 115.80 | \|QV | \| | \| | \| | \| |
| 4+35 | 32.3065 | 116.37 | \|QV | \| | \| | \| | \| |
| 4+40 | 33.1117 | 116.91 | \|QV | \| | \| | \| | \| |
| 4+45 | 33.9208 | 117.47 | \|QV | \| | \| | \| | \| |
| 4+50 | 34.7336 | 118.02 | \|QV | \| | \| | \| | \| |
| 4+55 | 35.5504 | 118.60 | \|QV | \| | \| | \| | \| |
| 5+ 0 | 36.3709 | 119.14 | \|QV | \| | \| | \| | \| |
| 5+ 5 | 37.1953 | 119.70 | \|QV | \| | \| | \| | \| |
| 5+10 | 38.0234 | 120.25 | \|QV | \| | \| | \| | \| |
| 5+15 | 38.8555 | 120.81 | \|QV | \| | \| | \| | \| |
| 5+20 | 39.6914 | 121.38 | \|QV | \| | \| | \| | \| |
| 5+25 | 40.5313 | 121.96 | \|QV | \| | \| | \| | \| |
| 5+30 | 41.3752 | 122.53 | \|QV | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5+35 | 42.2232 | 123.13 | QV | | | | |
| 5+40 | 43.0752 | 123.71 | Q V | | | | |
| 5+45 | 43.9315 | 124.32 | Q V | | | | |
| 5+50 | 44.7918 | 124.92 | Q V | | | | |
| 5+55 | 45.6564 | 125.55 | Q V | | | | |
| 6+ 0 | 46.5253 | 126.16 | Q V | | | | |
| 6+ 5 | 47.3986 | 126.80 | Q V | | | | |
| 6+10 | 48.2762 | 127.43 | Q V | | | | |
| 6+15 | 49.1584 | 128.09 | Q V | | | | |
| 6+20 | 50.0450 | 128.74 | Q V | | | | |
| 6+25 | 50.9363 | 129.41 | Q V | | | | |
| 6+30 | 51.8321 | 130.07 | Q V | | | | |
| 6+35 | 52.7327 | 130.77 | Q V | | | | |
| 6+40 | 53.6380 | 131.45 | Q V | | | | |
| 6+45 | 54.5482 | 132.16 | Q V | | | | |
| 6+50 | 55.4632 | 132.86 | Q V | | | | |
| 6+55 | 56.3832 | 133.59 | Q V | | | | |
| 7+ 0 | 57.3082 | 134.31 | Q  V | | | | |
| 7+ 5 | 58.2384 | 135.06 | Q  V | | | | |
| 7+10 | 59.1737 | 135.80 | Q  V | | | | |
| 7+15 | 60.1143 | 136.58 | Q  V | | | | |
| 7+20 | 61.0602 | 137.34 | Q  V | | | | |
| 7+25 | 62.0115 | 138.13 | Q  V | | | | |
| 7+30 | 62.9682 | 138.92 | Q  V | | | | |
| 7+35 | 63.9306 | 139.74 | Q  V | | | | |
| 7+40 | 64.8985 | 140.54 | Q V | | | | |
| 7+45 | 65.8722 | 141.39 | Q V | | | | |
| 7+50 | 66.8517 | 142.22 | Q V | | | | |
| 7+55 | 67.8372 | 143.09 | Q V | | | | |
| 8+ 0 | 68.8285 | 143.95 | Q V | | | | |
| 8+ 5 | 69.8261 | 144.84 | Q V | | | | |
| 8+10 | 70.8297 | 145.73 | Q V | | | | |
| 8+15 | 71.8397 | 146.65 | Q  V | | | | |
| 8+20 | 72.8560 | 147.57 | Q  V | | | | |
| 8+25 | 73.8789 | 148.52 | Q  V | | | | |
| 8+30 | 74.9083 | 149.47 | Q  V | | | | |
| 8+35 | 75.9445 | 150.45 | Q  V | | | | |
| 8+40 | 76.9874 | 151.43 | Q  V | | | | |
| 8+45 | 78.0373 | 152.45 | Q  V | | | | |
| 8+50 | 79.0941 | 153.46 | Q  V | | | | |
| 8+55 | 80.1583 | 154.51 | Q  V | | | | |
| 9+ 0 | 81.2296 | 155.56 | Q  V | | | | |
| 9+ 5 | 82.3085 | 156.65 | Q  V | | | | |
| 9+10 | 83.3948 | 157.73 | Q  V | | | | |
| 9+15 | 84.4889 | 158.86 | Q  V | | | | |
| 9+20 | 85.5907 | 159.99 | Q  V | | | | |
| 9+25 | 86.7006 | 161.16 | Q   V | | | | |
| 9+30 | 87.8185 | 162.32 | Q   V | | | | |
| 9+35 | 88.9448 | 163.54 | Q   V | | | | |
| 9+40 | 90.0795 | 164.75 | Q   V | | | | |
| 9+45 | 91.2228 | 166.01 | Q   V | | | | |
| 9+50 | 92.3748 | 167.27 | Q   V | | | | |
| 9+55 | 93.5359 | 168.58 | Q   V | | | | |
| 10+ 0 | 94.7059 | 169.89 | Q   V | | | | |
| 10+ 5 | 95.8854 | 171.26 | Q   V | | | | |
| 10+10 | 97.0742 | 172.62 | Q   V | | | | |
| 10+15 | 98.2729 | 174.04 | Q   V | | | | |
| 10+20 | 99.4813 | 175.46 | Q   V | | | | |
| 10+25 | 100.6999 | 176.95 | Q    V | | | | |

```
10+30     101.9288    178.43  | Q    V  |          |          |          |
10+35     103.1683    179.98  | Q    V  |          |          |          |
10+40     104.4185    181.52  | Q    V  |          |          |          |
10+45     105.6798    183.15  | Q    V  |          |          |          |
10+50     106.9523    184.76  | Q    V  |          |          |          |
10+55     108.2364    186.46  | Q    V  |          |          |          |
11+ 0     109.5322    188.15  | Q    V  |          |          |          |
11+ 5     110.8402    189.93  | Q    V  |          |          |          |
11+10     112.1605    191.70  | Q    V  |          |          |          |
11+15     113.4936    193.57  | Q    V  |          |          |          |
11+20     114.8396    195.43  | Q     V |          |          |          |
11+25     116.1990    197.39  | Q     V |          |          |          |
11+30     117.5719    199.35  | Q     V |          |          |          |
11+35     118.9591    201.41  | Q     V |          |          |          |
11+40     120.3604    203.48  | Q     V |          |          |          |
11+45     121.7768    205.65  | Q     V |          |          |          |
11+50     123.2081    207.83  | Q     V |          |          |          |
11+55     124.6552    210.13  |  Q    V |          |          |          |
12+ 0     126.1182    212.43  |  Q    V |          |          |          |
12+ 5     127.5980    214.86  |  Q    V |          |          |          |
12+10     129.0946    217.31  |  Q     V|          |          |          |
12+15     130.6091    219.90  |  Q     V|          |          |          |
12+20     132.1416    222.51  |  Q     V|          |          |          |
12+25     133.6930    225.27  |  Q     V|          |          |          |
12+30     135.2636    228.06  |  Q     V|          |          |          |
12+35     136.8547    231.02  |  Q     V|          |          |          |
12+40     138.4663    234.02  |  Q     V|          |          |          |
12+45     140.1002    237.23  |  Q     V|          |          |          |
12+50     141.7559    240.42  |  Q     V|          |          |          |
12+55     143.4349    243.79  |  Q      V          |          |          |
13+ 0     145.1373    247.19  |  Q      V          |          |          |
13+ 5     146.8646    250.80  |  Q      V          |          |          |
13+10     148.6169    254.44  |  Q      V          |          |          |
13+15     150.3960    258.33  |  Q      V          |          |          |
13+20     152.2022    262.25  |  Q      V          |          |          |
13+25     154.0372    266.45  |  Q      V          |          |          |
13+30     155.9016    270.71  |  Q      V          |          |          |
13+35     157.7974    275.27  |  Q       V         |          |          |
13+40     159.7251    279.90  |  Q      |V         |          |          |
13+45     161.6870    284.87  |   Q     |V         |          |          |
13+50     163.6838    289.93  |   Q     |V         |          |          |
13+55     165.7181    295.38  |   Q     |V         |          |          |
14+ 0     167.7908    300.95  |   Q     |V         |          |          |
14+ 5     169.9119    307.98  |   Q     |V         |          |          |
14+10     172.0914    316.48  |   Q     | V        |          |          |
14+15     174.3396    326.43  |   Q     | V        |          |          |
14+20     176.6643    337.54  |   Q     | V        |          |          |
14+25     179.0766    350.28  |    Q    | V        |          |          |
14+30     181.5931    365.40  |    Q    | V        |          |          |
14+35     184.2343    383.51  |    Q    | V        |          |          |
14+40     187.0375    407.02  |    Q    |  V       |          |          |
14+45     190.0556    438.22  |     Q   |  V       |          |          |
14+50     193.2225    459.84  |     Q   |  V       |          |          |
14+55     196.5210    478.94  |     Q   |  V       |          |          |
15+ 0     199.9449    497.14  |      Q  |   V      |          |          |
15+ 5     203.4974    515.83  |      Q  |   V      |          |          |
15+10     207.1779    534.41  |      Q  |   V      |          |          |
15+15     210.9971    554.55  |      Q  |   V      |          |          |
15+20     214.9590    575.26  |       Q |    V     |          |          |
```

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 15+25 | 219.0607 | 595.57 | \| | Q \| | V | \| | \| | \| |
| 15+30 | 223.2884 | 613.87 | \| | Q \| | V | \| | \| | \| |
| 15+35 | 227.6466 | 632.81 | \| | Q\| | V | \| | \| | \| |
| 15+40 | 232.1351 | 651.72 | \| | Q\| | V | \| | \| | \| |
| 15+45 | 236.7700 | 673.00 | \| | Q\| | V | \| | \| | \| |
| 15+50 | 241.5477 | 693.71 | \| | Q\| | V | \| | \| | \| |
| 15+55 | 246.5035 | 719.59 | \| | Q | V | \| | \| | \| |
| 16+ 0 | 251.6632 | 749.19 | \| | Q | V | \| | \| | \| |
| 16+ 5 | 257.5093 | 848.86 | \| | \| Q | V | \| | \| | \| |
| 16+10 | 264.3796 | 997.57 | \| | \| Q | V | \| | \| | \| |
| 16+15 | 272.1685 | 1130.94 | \| | \| Q | V\| | \| | \| | \| |
| 16+20 | 280.9315 | 1272.39 | \| | \| QV\| | \| | \| | \| |
| 16+25 | 290.8231 | 1436.27 | \| | \| Q | \| | \| | \| |
| 16+30 | 302.4684 | 1690.89 | \| | \| V | Q | \| | \| | \| |
| 16+35 | 316.0612 | 1973.68 | \| | \| \| V | Q | \| | \| | \| |
| 16+40 | 332.5999 | 2401.42 | \| | \| \| V | \| | \| | Q | \| |
| 16+45 | 351.8802 | 2799.51 | \| | \| \| V | \| | \| | \| | Q |
| 16+50 | 365.2308 | 1938.50 | \| | \| \| V | Q | \| | \| | \| |
| 16+55 | 375.9853 | 1561.56 | \| | \| \| Q | V | \| | \| | \| |
| 17+ 0 | 385.5246 | 1385.10 | \| | \| Q\| | V | \| | \| | \| |
| 17+ 5 | 394.3893 | 1287.16 | \| | \| Q \| | V | \| | \| | \| |
| 17+10 | 402.4985 | 1177.45 | \| | \| Q | \| | V | \| | \| | \| |
| 17+15 | 410.1809 | 1115.49 | \| | \| Q | \| | V | \| | \| | \| |
| 17+20 | 417.2800 | 1030.79 | \| | \| Q | \| | V\| | \| | \| |
| 17+25 | 423.9709 | 971.51 | \| | \| Q | \| | V\| | \| | \| |
| 17+30 | 430.1762 | 901.01 | \| | \| Q | \| | V | \| | \| |
| 17+35 | 435.9912 | 844.33 | \| | \| Q | \| | V | \| | \| |
| 17+40 | 441.4095 | 786.74 | \| | \|Q | \| | V | \| | \| |
| 17+45 | 446.4156 | 726.90 | \| | Q | \| | \| | V | \| | \| |
| 17+50 | 451.0965 | 679.66 | \| | Q\| | \| | \| | V | \| | \| |
| 17+55 | 455.4666 | 634.54 | \| | Q\| | \| | \| | V | \| | \| |
| 18+ 0 | 459.6079 | 601.32 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+ 5 | 463.4980 | 564.85 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+10 | 467.1958 | 536.91 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+15 | 470.6554 | 502.33 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+20 | 473.9500 | 478.38 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+25 | 477.0269 | 446.77 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+30 | 479.9703 | 427.38 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+35 | 482.7549 | 404.32 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+40 | 485.4166 | 386.48 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+45 | 487.9042 | 361.20 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+50 | 490.2677 | 343.18 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+55 | 492.4524 | 317.22 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+ 0 | 494.5307 | 301.77 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+ 5 | 496.5436 | 292.27 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+10 | 498.4962 | 283.52 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+15 | 500.3806 | 273.60 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+20 | 502.2028 | 264.59 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+25 | 503.9751 | 257.35 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+30 | 505.6986 | 250.25 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+35 | 507.3624 | 241.59 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+40 | 508.9633 | 232.45 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+45 | 510.5273 | 227.09 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+50 | 512.0584 | 222.32 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+55 | 513.5626 | 218.41 | \| | Q \| | \| | \| | \| V | \| | \| |
| 20+ 0 | 515.0466 | 215.47 | \| | Q \| | \| | \| | \| V | \| | \| |
| 20+ 5 | 516.5024 | 211.38 | \| | Q \| | \| | \| | \| V | \| | \| |
| 20+10 | 517.9280 | 207.00 | \| | Q \| | \| | \| | \| V | \| | \| |
| 20+15 | 519.3192 | 202.01 | \| | Q \| | \| | \| | \| V | \| | \| |

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|---|---|---|---|---|---|---|---|
| 20+20 | 520.6595 | 194.61 | Q | | | | V |
| 20+25 | 521.9690 | 190.14 | Q | | | | V |
| 20+30 | 523.2539 | 186.56 | Q | | | | V |
| 20+35 | 524.5140 | 182.97 | Q | | | | V |
| 20+40 | 525.7400 | 178.01 | Q | | | | V |
| 20+45 | 526.9395 | 174.16 | Q | | | | V |
| 20+50 | 528.1178 | 171.09 | Q | | | | V |
| 20+55 | 529.2811 | 168.91 | Q | | | | V |
| 21+ 0 | 530.3990 | 162.32 | Q | | | | V |
| 21+ 5 | 531.4964 | 159.34 | Q | | | | V |
| 21+10 | 532.5763 | 156.80 | Q | | | | V |
| 21+15 | 533.6400 | 154.45 | Q | | | | V |
| 21+20 | 534.6877 | 152.13 | Q | | | | V |
| 21+25 | 535.7200 | 149.89 | Q | | | | V |
| 21+30 | 536.7362 | 147.56 | Q | | | | V |
| 21+35 | 537.7371 | 145.33 | Q | | | | V |
| 21+40 | 538.7247 | 143.40 | Q | | | | V |
| 21+45 | 539.6996 | 141.56 | Q | | | | V |
| 21+50 | 540.6623 | 139.79 | Q | | | | V |
| 21+55 | 541.6131 | 138.05 | Q | | | | V |
| 22+ 0 | 542.5527 | 136.42 | Q | | | | V |
| 22+ 5 | 543.4814 | 134.85 | Q | | | | V |
| 22+10 | 544.3996 | 133.33 | Q | | | | V |
| 22+15 | 545.3076 | 131.85 | Q | | | | V |
| 22+20 | 546.2058 | 130.42 | Q | | | | V |
| 22+25 | 547.0944 | 129.02 | Q | | | | V |
| 22+30 | 547.9737 | 127.67 | Q | | | | V |
| 22+35 | 548.8440 | 126.36 | Q | | | | V |
| 22+40 | 549.7055 | 125.09 | Q | | | | V |
| 22+45 | 550.5584 | 123.85 | Q | | | | V |
| 22+50 | 551.4031 | 122.64 | Q | | | | V |
| 22+55 | 552.2396 | 121.46 | Q | | | | V |
| 23+ 0 | 553.0682 | 120.31 | Q | | | | V |
| 23+ 5 | 553.8891 | 119.19 | Q | | | | V |
| 23+10 | 554.7024 | 118.10 | Q | | | | V |
| 23+15 | 555.5084 | 117.03 | Q | | | | V |
| 23+20 | 556.3073 | 115.99 | Q | | | | V |
| 23+25 | 557.0991 | 114.97 | Q | | | | V |
| 23+30 | 557.8840 | 113.98 | Q | | | | V |
| 23+35 | 558.6623 | 113.00 | Q | | | | V |
| 23+40 | 559.4340 | 112.05 | Q | | | | V |
| 23+45 | 560.1993 | 111.12 | Q | | | | V |
| 23+50 | 560.9583 | 110.21 | Q | | | | V |
| 23+55 | 561.7111 | 109.32 | Q | | | | V |
| 24+ 0 | 562.4580 | 108.44 | Q | | | | V |
| 24+ 5 | 563.1939 | 106.86 | Q | | | | V |
| 24+10 | 563.9126 | 104.35 | Q | | | | V |
| 24+15 | 564.6096 | 101.21 | Q | | | | V |
| 24+20 | 565.2806 | 97.42 | Q | | | | V |
| 24+25 | 565.9208 | 92.96 | Q | | | | V |
| 24+30 | 566.5203 | 87.04 | Q | | | | V |
| 24+35 | 567.0682 | 79.56 | Q | | | | V |
| 24+40 | 567.5403 | 68.55 | Q | | | | V |
| 24+45 | 567.9039 | 52.80 | Q | | | | V |
| 24+50 | 568.2101 | 44.46 | Q | | | | V |
| 24+55 | 568.4775 | 38.82 | Q | | | | V |
| 25+ 0 | 568.7139 | 34.33 | Q | | | | V |
| 25+ 5 | 568.9241 | 30.52 | Q | | | | V |
| 25+10 | 569.1128 | 27.41 | Q | | | | V |

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|---|---|---|---|---|---|---|---|
| 25+15 | 569.2814 | 24.47 | Q | \| | \| | \| | V\| |
| 25+20 | 569.4327 | 21.97 | Q | \| | \| | \| | V\| |
| 25+25 | 569.5682 | 19.67 | Q | \| | \| | \| | V\| |
| 25+30 | 569.6899 | 17.67 | Q | \| | \| | \| | V\| |
| 25+35 | 569.7991 | 15.86 | Q | \| | \| | \| | V\| |
| 25+40 | 569.8970 | 14.22 | Q | \| | \| | \| | V\| |
| 25+45 | 569.9846 | 12.71 | Q | \| | \| | \| | V\| |
| 25+50 | 570.0627 | 11.34 | Q | \| | \| | \| | V\| |
| 25+55 | 570.1325 | 10.13 | Q | \| | \| | \| | V\| |
| 26+ 0 | 570.1944 | 9.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 570.2494 | 7.99 | Q | \| | \| | \| | V\| |
| 26+10 | 570.2980 | 7.04 | Q | \| | \| | \| | V\| |
| 26+15 | 570.3409 | 6.24 | Q | \| | \| | \| | V\| |
| 26+20 | 570.3786 | 5.48 | Q | \| | \| | \| | V\| |
| 26+25 | 570.4121 | 4.86 | Q | \| | \| | \| | V\| |
| 26+30 | 570.4415 | 4.27 | Q | \| | \| | \| | V\| |
| 26+35 | 570.4673 | 3.75 | Q | \| | \| | \| | V\| |
| 26+40 | 570.4897 | 3.26 | Q | \| | \| | \| | V\| |
| 26+45 | 570.5095 | 2.87 | Q | \| | \| | \| | V\| |
| 26+50 | 570.5269 | 2.52 | Q | \| | \| | \| | V\| |
| 26+55 | 570.5428 | 2.31 | Q | \| | \| | \| | V\| |
| 27+ 0 | 570.5575 | 2.13 | Q | \| | \| | \| | V\| |
| 27+ 5 | 570.5710 | 1.97 | Q | \| | \| | \| | V\| |
| 27+10 | 570.5834 | 1.80 | Q | \| | \| | \| | V\| |
| 27+15 | 570.5948 | 1.65 | Q | \| | \| | \| | V\| |
| 27+20 | 570.6051 | 1.51 | Q | \| | \| | \| | V\| |
| 27+25 | 570.6146 | 1.37 | Q | \| | \| | \| | V\| |
| 27+30 | 570.6231 | 1.23 | Q | \| | \| | \| | V\| |
| 27+35 | 570.6308 | 1.12 | Q | \| | \| | \| | V\| |
| 27+40 | 570.6379 | 1.03 | Q | \| | \| | \| | V\| |
| 27+45 | 570.6444 | 0.95 | Q | \| | \| | \| | V\| |
| 27+50 | 570.6503 | 0.86 | Q | \| | \| | \| | V\| |
| 27+55 | 570.6557 | 0.78 | Q | \| | \| | \| | V\| |
| 28+ 0 | 570.6603 | 0.68 | Q | \| | \| | \| | V\| |
| 28+ 5 | 570.6643 | 0.58 | Q | \| | \| | \| | V\| |
| 28+10 | 570.6676 | 0.48 | Q | \| | \| | \| | V\| |
| 28+15 | 570.6702 | 0.38 | Q | \| | \| | \| | V\| |
| 28+20 | 570.6725 | 0.32 | Q | \| | \| | \| | V\| |
| 28+25 | 570.6743 | 0.27 | Q | \| | \| | \| | V\| |
| 28+30 | 570.6758 | 0.22 | Q | \| | \| | \| | V\| |
| 28+35 | 570.6769 | 0.16 | Q | \| | \| | \| | V\| |
| 28+40 | 570.6778 | 0.13 | Q | \| | \| | \| | V\| |
| 28+45 | 570.6785 | 0.10 | Q | \| | \| | \| | V\| |
| 28+50 | 570.6789 | 0.07 | Q | \| | \| | \| | V\| |
| 28+55 | 570.6791 | 0.03 | Q | \| | \| | \| | V\| |
| 29+ 0 | 570.6793 | 0.02 | Q | \| | \| | \| | V\| |
| 29+ 5 | 570.6794 | 0.02 | Q | \| | \| | \| | V\| |
| 29+10 | 570.6795 | 0.01 | Q | \| | \| | \| | V\| |
| 29+15 | 570.6795 | 0.01 | Q | \| | \| | \| | V\| |
| 29+20 | 570.6796 | 0.01 | Q | \| | \| | \| | V\| |
| 29+25 | 570.6796 | 0.00 | Q | \| | \| | \| | V\| |

**********HYDROGRAPH DATA**********

Number of intervals = 353
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2799.507 (CFS)
Total volume = 570.680 (Ac.Ft)

Status of hydrographs being held in storage

| Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 1.000 to Point/Station 1.200
**** STREAM ROUTING SCS CONVEX METHOD ****

HYDROGRAPH STREAM ROUTING DATA:
Length of stream = 41975.00 (Ft.)
Elevation difference = 1032.40 (Ft.)
Slope of channel = 0.024596 (Vert/Horiz)
Channel type - Improved Channel

Channel length = 41975.00(Ft.) Elevation difference = 1032.40(Ft.)
Channel evaluation using mean flow rate of hydrograph
Channel base width = 100.000(Ft.)
Slope or 'Z' of left channel bank = 2.000
Slope or 'Z' of right channel bank = 2.000
Manning's 'N' = 0.035
Maximum depth of channel = 3.000(Ft.)
Flow(q) thru subarea = 268.931(CFS)
Depth of flow = 0.580(Ft.)
Average velocity = 4.586(Ft/s)
Total flow rate = 268.931(CFS)
Channel flow top width = 102.319(Ft.)
Depth of flow in channel = 0.58(Ft.)
Total number of channels (same dimensions) = 1
Flow Velocity = 4.59(Ft/s)
Travel time = 152.55 min.
Individual channel flow = 268.931(CFS)
Total capacity of improved channels = 268.931(CFS)
Critical Depth in Channel = 0.61(Ft.)

Channel evaluation using maximum flow rate of hydrograph
Flow(q) thru subarea = 2799.507(CFS)
Depth of flow = 2.353(Ft.)
Average velocity = 11.363(Ft/s)
Total flow rate = 2799.507(CFS)
Channel flow top width = 109.412(Ft.)
Depth of flow in channel = 2.35(Ft.)
Total number of channels (same dimensions) = 1
Flow Velocity = 11.36(Ft/s)
Travel time = 152.55 min.
Individual channel flow = 2799.507(CFS)
Total capacity of improved channels = 2799.507(CFS)
Critical Depth in Channel = 2.84(Ft.)

********** SCS CONVEX CHANNEL ROUTING **********
Convex method of stream routing data items:
Using equation: Outflow =
O(t+dt) = (1-c*)O(t+dt-dt*) + Input(c*)
where c* = 1 - (1-c)^e and dt = c(length)/velocity

c(v/v+1.7) = 0.8699 Travel time = 61.57 (min.)
dt*(unit time interval) = 5.00(min.), e= 0.3956
dt(routing time-step) = 53.56 (min.), c* = 0.5536

Output hydrograph delayed by 0 unit time increments

P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals (CFS)

| Time(h+m) | Out = O(CFS) | In = I | 0 | 699.9 | 1399.8 | 2099.6 | 2799.5 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.3668 | 0.73 | O | | | | |
| 0+10 | 1.4093 | 2.41 | O | | | | |
| 0+15 | 3.1403 | 4.76 | O | | | | |
| 0+20 | 5.5567 | 7.79 | O | | | | |
| 0+25 | 8.6766 | 11.54 | O | | | | |
| 0+30 | 12.9123 | 16.82 | O | | | | |
| 0+35 | 18.5357 | 23.71 | O | | | | |
| 0+40 | 26.6837 | 34.24 | O | | | | |
| 0+45 | 38.5876 | 49.62 | O | | | | |
| 0+50 | 48.7724 | 57.74 | O | | | | |
| 0+55 | 56.5027 | 63.25 | O | | | | |
| 1+ 0 | 62.4595 | 67.68 | O | | | | |
| 1+ 5 | 67.2483 | 71.46 | OI | | | | |
| 1+10 | 71.1566 | 74.60 | \|O | | | | |
| 1+15 | 74.5676 | 77.60 | \|O | | | | |
| 1+20 | 77.5429 | 80.18 | \|O | | | | |
| 1+25 | 80.2253 | 82.61 | \|O | | | | |
| 1+30 | 82.6223 | 84.75 | \|O | | | | |
| 1+35 | 84.8006 | 86.74 | \|O | | | | |
| 1+40 | 86.7972 | 88.58 | \|O | | | | |
| 1+45 | 88.6485 | 90.30 | \|O | | | | |
| 1+50 | 90.3684 | 91.90 | \|O | | | | |
| 1+55 | 91.9547 | 93.37 | \|O | | | | |
| 2+ 0 | 93.4402 | 94.77 | \|O | | | | |
| 2+ 5 | 94.8253 | 96.06 | \|O | | | | |
| 2+10 | 96.1323 | 97.30 | \|O | | | | |
| 2+15 | 97.3431 | 98.42 | \|O | | | | |
| 2+20 | 98.4820 | 99.50 | \|O | | | | |
| 2+25 | 99.5278 | 100.46 | \|O | | | | |
| 2+30 | 100.5110 | 101.39 | \|O | | | | |
| 2+35 | 101.4373 | 102.27 | \|O | | | | |
| 2+40 | 102.3217 | 103.11 | \|O | | | | |
| 2+45 | 103.1435 | 103.88 | \|O | | | | |
| 2+50 | 103.9140 | 104.60 | \|O | | | | |
| 2+55 | 104.6023 | 105.21 | \|O | | | | |
| 3+ 0 | 105.2219 | 105.77 | \|O | | | | |
| 3+ 5 | 105.8159 | 106.35 | \|O | | | | |
| 3+10 | 106.3960 | 106.92 | \|O | | | | |
| 3+15 | 106.9699 | 107.49 | \|O | | | | |
| 3+20 | 107.5321 | 108.04 | \|O | | | | |
| 3+25 | 108.0961 | 108.60 | \|O | | | | |
| 3+30 | 108.6587 | 109.16 | \|O | | | | |
| 3+35 | 109.2192 | 109.72 | \|O | | | | |

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|---|---|---|---|---|---|---|---|
| 3+40 | 109.7601 | 110.24 | O | | | | |
| 3+45 | 110.2986 | 110.78 | O | | | | |
| 3+50 | 110.8334 | 111.31 | O | | | | |
| 3+55 | 111.3767 | 111.87 | O | | | | |
| 4+ 0 | 111.9278 | 112.42 | O | | | | |
| 4+ 5 | 112.4921 | 113.00 | O | | | | |
| 4+10 | 113.0597 | 113.57 | O | | | | |
| 4+15 | 113.6355 | 114.15 | O | | | | |
| 4+20 | 114.1958 | 114.70 | O | | | | |
| 4+25 | 114.7531 | 115.25 | O | | | | |
| 4+30 | 115.3059 | 115.80 | O | | | | |
| 4+35 | 115.8656 | 116.37 | O | | | | |
| 4+40 | 116.4180 | 116.91 | O | | | | |
| 4+45 | 116.9724 | 117.47 | O | | | | |
| 4+50 | 117.5247 | 118.02 | O | | | | |
| 4+55 | 118.0909 | 118.60 | O | | | | |
| 5+ 0 | 118.6437 | 119.14 | O | | | | |
| 5+ 5 | 119.1976 | 119.70 | O | | | | |
| 5+10 | 119.7492 | 120.25 | O | | | | |
| 5+15 | 120.3098 | 120.81 | O | | | | |
| 5+20 | 120.8715 | 121.38 | O | | | | |
| 5+25 | 121.4441 | 121.96 | O | | | | |
| 5+30 | 122.0177 | 122.53 | O | | | | |
| 5+35 | 122.6015 | 123.13 | O | | | | |
| 5+40 | 123.1868 | 123.71 | O | | | | |
| 5+45 | 123.7837 | 124.32 | O | | | | |
| 5+50 | 124.3830 | 124.92 | O | | | | |
| 5+55 | 124.9946 | 125.55 | O | | | | |
| 6+ 0 | 125.6088 | 126.16 | O | | | | |
| 6+ 5 | 126.2358 | 126.80 | O | | | | |
| 6+10 | 126.8657 | 127.43 | O | | | | |
| 6+15 | 127.5088 | 128.09 | O | | | | |
| 6+20 | 128.1549 | 128.74 | O | | | | |
| 6+25 | 128.8149 | 129.41 | O | | | | |
| 6+30 | 129.4780 | 130.07 | O | | | | |
| 6+35 | 130.1554 | 130.77 | O | | | | |
| 6+40 | 130.8363 | 131.45 | O | | | | |
| 6+45 | 131.5320 | 132.16 | O | | | | |
| 6+50 | 132.2314 | 132.86 | O | | | | |
| 6+55 | 132.9462 | 133.59 | O | | | | |
| 7+ 0 | 133.6648 | 134.31 | O | | | | |
| 7+ 5 | 134.3995 | 135.06 | O | | | | |
| 7+10 | 135.1384 | 135.80 | O | | | | |
| 7+15 | 135.8940 | 136.58 | O | | | | |
| 7+20 | 136.6540 | 137.34 | O | | | | |
| 7+25 | 137.4314 | 138.13 | O | | | | |
| 7+30 | 138.2135 | 138.92 | O | | | | |
| 7+35 | 139.0137 | 139.74 | O | | | | |
| 7+40 | 139.8190 | 140.54 | OI | | | | |
| 7+45 | 140.6431 | 141.39 | O | | | | |
| 7+50 | 141.4728 | 142.22 | O | | | | |
| 7+55 | 142.3220 | 143.09 | O | | | | |
| 8+ 0 | 143.1772 | 143.95 | O | | | | |
| 8+ 5 | 144.0527 | 144.84 | O | | | | |
| 8+10 | 144.9347 | 145.73 | O | | | | |
| 8+15 | 145.8380 | 146.65 | O | | | | |
| 8+20 | 146.7481 | 147.57 | O | | | | |
| 8+25 | 147.6806 | 148.52 | O | | | | |
| 8+30 | 148.6204 | 149.47 | O | | | | |

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|---|---|---|---|---|---|---|
| 8+35 | 149.5835 | 150.45 | O | | | |
| 8+40 | 150.5545 | 151.43 | O | | | |
| 8+45 | 151.5501 | 152.45 | O | | | |
| 8+50 | 152.5540 | 153.46 | O | | | |
| 8+55 | 153.5837 | 154.51 | O | | | |
| 9+ 0 | 154.6225 | 155.56 | O | | | |
| 9+ 5 | 155.6882 | 156.65 | O | | | |
| 9+10 | 156.7638 | 157.73 | O | | | |
| 9+15 | 157.8677 | 158.86 | O | | | |
| 9+20 | 158.9822 | 159.99 | O | | | |
| 9+25 | 160.1265 | 161.16 | O | | | |
| 9+30 | 161.2823 | 162.32 | O | | | |
| 9+35 | 162.4694 | 163.54 | O | | | |
| 9+40 | 163.6690 | 164.75 | O | | | |
| 9+45 | 164.9016 | 166.01 | O | | | |
| 9+50 | 166.1477 | 167.27 | O | | | |
| 9+55 | 167.4287 | 168.58 | O | | | |
| 10+ 0 | 168.7243 | 169.89 | O | | | |
| 10+ 5 | 170.0569 | 171.26 | O | | | |
| 10+10 | 171.4051 | 172.62 | O | | | |
| 10+15 | 172.7927 | 174.04 | O | | | |
| 10+20 | 174.1973 | 175.46 | O | | | |
| 10+25 | 175.6435 | 176.95 | O | | | |
| 10+30 | 177.1083 | 178.43 | O | | | |
| 10+35 | 178.6174 | 179.98 | O | | | |
| 10+40 | 180.1467 | 181.52 | O | | | |
| 10+45 | 181.7232 | 183.15 | O | | | |
| 10+50 | 183.3216 | 184.76 | O | | | |
| 10+55 | 184.9704 | 186.46 | O | | | |
| 11+ 0 | 186.6433 | 188.15 | O | | | |
| 11+ 5 | 188.3700 | 189.93 | O | | | |
| 11+10 | 190.1230 | 191.70 | O | | | |
| 11+15 | 191.9337 | 193.57 | O | | | |
| 11+20 | 193.7733 | 195.43 | O | | | |
| 11+25 | 195.6749 | 197.39 | O | | | |
| 11+30 | 197.6081 | 199.35 | O | | | |
| 11+35 | 199.6081 | 201.41 | O | | | |
| 11+40 | 201.6431 | 203.48 | O | | | |
| 11+45 | 203.7500 | 205.65 | O | | | |
| 11+50 | 205.8956 | 207.83 | O | | | |
| 11+55 | 208.1191 | 210.13 | OI | | | |
| 12+ 0 | 210.3853 | 212.43 | O | | | |
| 12+ 5 | 212.7384 | 214.86 | O | | | |
| 12+10 | 215.1432 | 217.31 | O | | | |
| 12+15 | 217.6443 | 219.90 | O | | | |
| 12+20 | 220.2026 | 222.51 | O | | | |
| 12+25 | 222.8659 | 225.27 | O | | | |
| 12+30 | 225.5954 | 228.06 | O | | | |
| 12+35 | 228.4437 | 231.02 | O | | | |
| 12+40 | 231.3742 | 234.02 | O | | | |
| 12+45 | 234.4493 | 237.23 | O | | | |
| 12+50 | 237.5891 | 240.42 | O | | | |
| 12+55 | 240.8483 | 243.79 | O | | | |
| 13+ 0 | 244.1817 | 247.19 | O | | | |
| 13+ 5 | 247.6572 | 250.80 | O | | | |
| 13+10 | 251.2241 | 254.44 | O | | | |
| 13+15 | 254.9546 | 258.33 | O | | | |
| 13+20 | 258.7932 | 262.25 | O | | | |
| 13+25 | 262.8170 | 266.45 | O | | | |

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|---|---|---|---|---|---|---|---|
| 13+30 | 266.9666 | 270.71 | O | | | | |
| 13+35 | 271.3262 | 275.27 | O | | | | |
| 13+40 | 275.8323 | 279.90 | O | | | | |
| 13+45 | 280.5782 | 284.87 | O | | | | |
| 13+50 | 285.4957 | 289.93 | O | | | | |
| 13+55 | 290.6885 | 295.38 | O | | | | |
| 14+ 0 | 296.0836 | 300.95 | O | | | | |
| 14+ 5 | 302.3076 | 307.98 | O | | | | |
| 14+10 | 309.7131 | 316.48 | O | | | | |
| 14+15 | 318.4544 | 326.43 | O | | | | |
| 14+20 | 328.4477 | 337.54 | O | | | | |
| 14+25 | 339.8741 | 350.28 | OI | | | | |
| 14+30 | 353.2220 | 365.40 | O | | | | |
| 14+35 | 369.0521 | 383.51 | O | | | | |
| 14+40 | 388.8595 | 407.02 | O | | | | |
| 14+45 | 414.5768 | 438.22 | OI | | | | |
| 14+50 | 438.5175 | 459.84 | O | | | | |
| 14+55 | 459.9112 | 478.94 | O | | | | |
| 15+ 0 | 479.5828 | 497.14 | OI | | | | |
| 15+ 5 | 498.6825 | 515.83 | O | | | | |
| 15+10 | 517.5014 | 534.41 | O | | | | |
| 15+15 | 536.9729 | 554.55 | O | | | | |
| 15+20 | 557.0994 | 575.26 | OI | | | | |
| 15+25 | 577.3496 | 595.57 | O | | | | |
| 15+30 | 596.6205 | 613.87 | O | | | | |
| 15+35 | 615.6768 | 632.81 | OI | | | | |
| 15+40 | 634.6547 | 651.72 | O | | | | |
| 15+45 | 654.7820 | 673.00 | O | | | | |
| 15+50 | 675.2648 | 693.71 | O | | | | |
| 15+55 | 698.4663 | 719.59 | OI | | | | |
| 16+ 0 | 725.0177 | 749.19 | O | | | | |
| 16+ 5 | 788.4279 | 848.86 | OI | | | | |
| 16+10 | 896.5306 | 997.57 | O I | | | | |
| 16+15 | 1019.4169 | 1130.94 | O I | | | | |
| 16+20 | 1152.1593 | 1272.39 | O I | | | | |
| 16+25 | 1300.9822 | 1436.27 | O I | | | | |
| 16+30 | 1503.6877 | 1690.89 | O I | | | | |
| 16+35 | 1749.2757 | 1973.68 | O I | | | | |
| 16+40 | 2088.2168 | 2401.42 | O | I | | | |
| 16+45 | 2461.4379 | 2799.51 | O | I | | | |
| 16+50 | 2216.4226 | 1938.50 | I | O | | | |
| 16+55 | 1873.3498 | 1561.56 | I O | | | | |
| 17+ 0 | 1612.1548 | 1385.10 | I O | | | | |
| 17+ 5 | 1437.2893 | 1287.16 | I O | | | | |
| 17+10 | 1299.1026 | 1177.45 | I O | | | | |
| 17+15 | 1200.6495 | 1115.49 | I O | | | | |
| 17+20 | 1110.9871 | 1030.79 | IO | | | | |
| 17+25 | 1036.8333 | 971.51 | IO | | | | |
| 17+30 | 965.2829 | 901.01 | IO | | | | |
| 17+35 | 901.2498 | 844.33 | O | | | | |
| 17+40 | 840.8274 | 786.74 | IO | | | | |
| 17+45 | 780.8440 | 726.90 | IO | | | | |
| 17+50 | 727.2638 | 679.66 | IO | | | | |
| 17+55 | 678.2623 | 634.54 | O | | | | |
| 18+ 0 | 637.3794 | 601.32 | IO | | | | |
| 18+ 5 | 599.1087 | 564.85 | O | | | | |
| 18+10 | 566.1188 | 536.91 | IO | | | | |
| 18+15 | 532.5909 | 502.33 | O | | | | |
| 18+20 | 503.8146 | 478.38 | IO | | | | |

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|---|---|---|---|---|---|---|
| 18+25 | 473.8651 | 446.77 | O | | | |
| 18+30 | 449.1308 | 427.38 | O | | | |
| 18+35 | 425.5154 | 404.32 | IO | | | |
| 18+40 | 404.8282 | 386.48 | O | | | |
| 18+45 | 381.9799 | 361.20 | O | | | |
| 18+50 | 361.4310 | 343.18 | IO | | | |
| 18+55 | 338.2966 | 317.22 | O | | | |
| 19+ 0 | 318.8740 | 301.77 | O | | | |
| 19+ 5 | 304.6360 | 292.27 | O | | | |
| 19+10 | 293.3970 | 283.52 | O | | | |
| 19+15 | 282.9512 | 273.60 | IO | | | |
| 19+20 | 273.2497 | 264.59 | O | | | |
| 19+25 | 264.8193 | 257.35 | O | | | |
| 19+30 | 257.1193 | 250.25 | O | | | |
| 19+35 | 248.9668 | 241.59 | O | | | |
| 19+40 | 240.2968 | 232.45 | O | | | |
| 19+45 | 233.2610 | 227.09 | O | | | |
| 19+50 | 227.4508 | 222.32 | O | | | |
| 19+55 | 222.6469 | 218.41 | O | | | |
| 20+ 0 | 218.8251 | 215.47 | O | | | |
| 20+ 5 | 214.9145 | 211.38 | O | | | |
| 20+10 | 210.7583 | 207.00 | IO | | | |
| 20+15 | 206.1704 | 202.01 | O | | | |
| 20+20 | 200.1528 | 194.61 | O | | | |
| 20+25 | 194.8428 | 190.14 | O | | | |
| 20+30 | 190.4423 | 186.56 | O | | | |
| 20+35 | 186.4924 | 182.97 | O | | | |
| 20+40 | 182.0545 | 178.01 | O | | | |
| 20+45 | 177.8840 | 174.16 | O | | | |
| 20+50 | 174.2832 | 171.09 | O | | | |
| 20+55 | 171.4188 | 168.91 | O | | | |
| 21+ 0 | 166.7231 | 162.32 | O | | | |
| 21+ 5 | 162.7915 | 159.34 | O | | | |
| 21+10 | 159.6041 | 156.80 | O | | | |
| 21+15 | 156.8707 | 154.45 | O | | | |
| 21+20 | 154.3654 | 152.13 | O | | | |
| 21+25 | 152.0039 | 149.89 | O | | | |
| 21+30 | 149.6621 | 147.56 | O | | | |
| 21+35 | 147.3774 | 145.33 | O | | | |
| 21+40 | 145.2744 | 143.40 | O | | | |
| 21+45 | 143.3136 | 141.56 | O | | | |
| 21+50 | 141.4522 | 139.79 | IO | | | |
| 21+55 | 139.6590 | 138.05 | O | | | |
| 22+ 0 | 137.9516 | 136.42 | O | | | |
| 22+ 5 | 136.3157 | 134.85 | O | | | |
| 22+10 | 134.7393 | 133.33 | O | | | |
| 22+15 | 133.2155 | 131.85 | O | | | |
| 22+20 | 131.7395 | 130.42 | O | | | |
| 22+25 | 130.3081 | 129.02 | O | | | |
| 22+30 | 128.9196 | 127.67 | O | | | |
| 22+35 | 127.5724 | 126.36 | O | | | |
| 22+40 | 126.2635 | 125.09 | O | | | |
| 22+45 | 124.9905 | 123.85 | O | | | |
| 22+50 | 123.7514 | 122.64 | O | | | |
| 22+55 | 122.5445 | 121.46 | O | | | |
| 23+ 0 | 121.3685 | 120.31 | O | | | |
| 23+ 5 | 120.2219 | 119.19 | O | | | |
| 23+10 | 119.1035 | 118.10 | O | | | |
| 23+15 | 118.0120 | 117.03 | O | | | |

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|---|---|---|---|---|---|---|---|
| 23+20 | 116.9464 | 115.99 | \|O | \| | \| | \| | \| |
| 23+25 | 115.9057 | 114.97 | \|O | \| | \| | \| | \| |
| 23+30 | 114.8888 | 113.98 | \|O | \| | \| | \| | \| |
| 23+35 | 113.8949 | 113.00 | \|O | \| | \| | \| | \| |
| 23+40 | 112.9231 | 112.05 | \|O | \| | \| | \| | \| |
| 23+45 | 111.9727 | 111.12 | \|O | \| | \| | \| | \| |
| 23+50 | 111.0427 | 110.21 | \|O | \| | \| | \| | \| |
| 23+55 | 110.1325 | 109.32 | \|O | \| | \| | \| | \| |
| 24+ 0 | 109.2414 | 108.44 | \|O | \| | \| | \| | \| |
| 24+ 5 | 108.0028 | 106.86 | \|O | \| | \| | \| | \| |
| 24+10 | 106.1112 | 104.35 | \|O | \| | \| | \| | \| |
| 24+15 | 103.5600 | 101.21 | \|O | \| | \| | \| | \| |
| 24+20 | 100.3586 | 97.42 | \|O | \| | \| | \| | \| |
| 24+25 | 96.4951 | 92.96 | \|O | \| | \| | \| | \| |
| 24+30 | 91.5646 | 87.04 | \|O | \| | \| | \| | \| |
| 24+35 | 85.3057 | 79.56 | \|O | \| | \| | \| | \| |
| 24+40 | 76.5974 | 68.55 | IO | \| | \| | \| | \| |
| 24+45 | 64.2343 | 52.80 | O | \| | \| | \| | \| |
| 24+50 | 53.7158 | 44.46 | O | \| | \| | \| | \| |
| 24+55 | 45.7627 | 38.82 | O | \| | \| | \| | \| |
| 25+ 0 | 39.6636 | 34.33 | O | \| | \| | \| | \| |
| 25+ 5 | 34.8001 | 30.52 | O | \| | \| | \| | \| |
| 25+10 | 30.8672 | 27.41 | O | \| | \| | \| | \| |
| 25+15 | 27.4780 | 24.47 | O | \| | \| | \| | \| |
| 25+20 | 24.5597 | 21.97 | O | \| | \| | \| | \| |
| 25+25 | 21.9708 | 19.67 | O | \| | \| | \| | \| |
| 25+30 | 19.6943 | 17.67 | O | \| | \| | \| | \| |
| 25+35 | 17.6663 | 15.86 | O | \| | \| | \| | \| |
| 25+40 | 15.8414 | 14.22 | O | \| | \| | \| | \| |
| 25+45 | 14.1871 | 12.71 | O | \| | \| | \| | \| |
| 25+50 | 12.6817 | 11.34 | O | \| | \| | \| | \| |
| 25+55 | 11.3320 | 10.13 | O | \| | \| | \| | \| |
| 26+ 0 | 10.0973 | 9.00 | O | \| | \| | \| | \| |
| 26+ 5 | 8.9826 | 7.99 | O | \| | \| | \| | \| |
| 26+10 | 7.9578 | 7.04 | O | \| | \| | \| | \| |
| 26+15 | 7.0466 | 6.24 | O | \| | \| | \| | \| |
| 26+20 | 6.2171 | 5.48 | O | \| | \| | \| | \| |
| 26+25 | 5.4961 | 4.86 | O | \| | \| | \| | \| |
| 26+30 | 4.8457 | 4.27 | O | \| | \| | \| | \| |
| 26+35 | 4.2658 | 3.75 | O | \| | \| | \| | \| |
| 26+40 | 3.7344 | 3.26 | O | \| | \| | \| | \| |
| 26+45 | 3.2782 | 2.87 | O | \| | \| | \| | \| |
| 26+50 | 2.8786 | 2.52 | O | \| | \| | \| | \| |
| 26+55 | 2.5725 | 2.31 | O | \| | \| | \| | \| |
| 27+ 0 | 2.3389 | 2.13 | O | \| | \| | \| | \| |
| 27+ 5 | 2.1409 | 1.97 | O | \| | \| | \| | \| |
| 27+10 | 1.9595 | 1.80 | O | \| | \| | \| | \| |
| 27+15 | 1.7941 | 1.65 | O | \| | \| | \| | \| |
| 27+20 | 1.6428 | 1.51 | O | \| | \| | \| | \| |
| 27+25 | 1.4992 | 1.37 | O | \| | \| | \| | \| |
| 27+30 | 1.3595 | 1.23 | O | \| | \| | \| | \| |
| 27+35 | 1.2314 | 1.12 | O | \| | \| | \| | \| |
| 27+40 | 1.1251 | 1.03 | O | \| | \| | \| | \| |
| 27+45 | 1.0307 | 0.95 | O | \| | \| | \| | \| |
| 27+50 | 0.9420 | 0.86 | O | \| | \| | \| | \| |
| 27+55 | 0.8543 | 0.78 | O | \| | \| | \| | \| |
| 28+ 0 | 0.7609 | 0.68 | O | \| | \| | \| | \| |
| 28+ 5 | 0.6641 | 0.58 | O | \| | \| | \| | \| |
| 28+10 | 0.5662 | 0.48 | O | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 28+15 | 0.4702 | 0.38 | Q | | | | |
| 28+20 | 0.3919 | 0.32 | Q | | | | |
| 28+25 | 0.3268 | 0.27 | Q | | | | |
| 28+30 | 0.2683 | 0.22 | Q | | | | |
| 28+35 | 0.2130 | 0.16 | Q | | | | |
| 28+40 | 0.1671 | 0.13 | Q | | | | |
| 28+45 | 0.1296 | 0.10 | Q | | | | |
| 28+50 | 0.0962 | 0.07 | Q | | | | |
| 28+55 | 0.0595 | 0.03 | Q | | | | |
| 29+ 0 | 0.0382 | 0.02 | Q | | | | |
| 29+ 5 | 0.0265 | 0.02 | Q | | | | |
| 29+10 | 0.0192 | 0.01 | Q | | | | |
| 29+15 | 0.0139 | 0.01 | Q | | | | |
| 29+20 | 0.0095 | 0.01 | Q | | | | |
| 29+25 | 0.0054 | 0.00 | Q | | | | |
| 29+30 | 0.0025 | 0.00 | Q | | | | |
| 29+35 | 0.0011 | 0.00 | Q | | | | |
| 29+40 | 0.0000 | 0.00 | Q | | | | |

**********HYDROGRAPH DATA**********

Number of intervals = 356
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2461.438 (CFS)
Total volume = 570.680 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 1.200 to Point/Station 1.200
**** ADD/COMBINE/RECOVER HYDROGRAPHS ****

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********** HYDROGRAPH INFORMATION **********

From study/file name: PR49.rte

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P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals (CFS)

| Time(h+m) | Add q(CFS) | Tot. Q | 0 | 2124.6 | 4249.1 | 6373.7 | 8498.3 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 1.0105 | 1.38 | Q | | | | |
| 0+10 | 3.0340 | 4.44 | Q | | | | |
| 0+15 | 5.0747 | 8.21 | Q | | | | |
| 0+20 | 8.0027 | 13.56 | Q | | | | |
| 0+25 | 11.6641 | 20.34 | Q | | | | |
| 0+30 | 15.4070 | 28.32 | Q | | | | |
| 0+35 | 20.1927 | 38.73 | Q | | | | |
| 0+40 | 25.4343 | 52.12 | Q | | | | |
| 0+45 | 30.9042 | 69.49 | Q | | | | |
| 0+50 | 37.6576 | 86.43 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+55 | 44.7541 | 101.26 | Q | | | | |
| 1+ 0 | 52.5120 | 114.97 | Q | | | | |
| 1+ 5 | 64.5127 | 131.76 | Q | | | | |
| 1+10 | 77.3371 | 148.49 | Q | | | | |
| 1+15 | 91.7456 | 166.31 | Q | | | | |
| 1+20 | 111.3594 | 188.90 | Q | | | | |
| 1+25 | 131.5978 | 211.82 | Q | | | | |
| 1+30 | 151.3788 | 234.00 | qQ | | | | |
| 1+35 | 169.7526 | 254.55 | qQ | | | | |
| 1+40 | 188.2095 | 275.01 | qQ | | | | |
| 1+45 | 206.4102 | 295.06 | qQ | | | | |
| 1+50 | 224.5299 | 314.90 | \|Q | | | | |
| 1+55 | 242.4043 | 334.36 | \|Q | | | | |
| 2+ 0 | 257.5413 | 350.98 | \|Q | | | | |
| 2+ 5 | 270.2292 | 365.05 | \|Q | | | | |
| 2+10 | 282.7760 | 378.91 | \|Q | | | | |
| 2+15 | 293.3911 | 390.73 | \|Q | | | | |
| 2+20 | 302.9705 | 401.45 | \|Q | | | | |
| 2+25 | 312.5581 | 412.09 | \|Q | | | | |
| 2+30 | 321.0874 | 421.60 | \|Q | | | | |
| 2+35 | 329.0947 | 430.53 | \|qQ | | | | |
| 2+40 | 337.1016 | 439.42 | \|qQ | | | | |
| 2+45 | 344.4878 | 447.63 | \|qQ | | | | |
| 2+50 | 351.5589 | 455.47 | \|qQ | | | | |
| 2+55 | 358.5964 | 463.20 | \|qQ | | | | |
| 3+ 0 | 365.2050 | 470.43 | \|qQ | | | | |
| 3+ 5 | 371.7403 | 477.56 | \|qQ | | | | |
| 3+10 | 378.2075 | 484.60 | \|qQ | | | | |
| 3+15 | 384.1825 | 491.15 | \|qQ | | | | |
| 3+20 | 390.1191 | 497.65 | \|qQ | | | | |
| 3+25 | 395.9481 | 504.04 | \|qQ | | | | |
| 3+30 | 401.3643 | 510.02 | \|qQ | | | | |
| 3+35 | 406.7724 | 515.99 | \|qQ | | | | |
| 3+40 | 412.1708 | 521.93 | \|qQ | | | | |
| 3+45 | 417.5030 | 527.80 | \|qQ | | | | |
| 3+50 | 422.8653 | 533.70 | \|qQ | | | | |
| 3+55 | 427.9387 | 539.32 | \| Q | | | | |
| 4+ 0 | 432.5846 | 544.51 | \| Q | | | | |
| 4+ 5 | 437.2524 | 549.74 | \| Q | | | | |
| 4+10 | 441.9524 | 555.01 | \| Q | | | | |
| 4+15 | 446.6789 | 560.31 | \| Q | | | | |
| 4+20 | 451.4336 | 565.63 | \| Q | | | | |
| 4+25 | 455.8996 | 570.65 | \| Q | | | | |
| 4+30 | 460.2087 | 575.51 | \| Q | | | | |
| 4+35 | 464.5440 | 580.41 | \| Q | | | | |
| 4+40 | 468.9125 | 585.33 | \| Q | | | | |
| 4+45 | 473.3079 | 590.28 | \| Q | | | | |
| 4+50 | 477.7163 | 595.24 | \| Q | | | | |
| 4+55 | 481.9310 | 600.02 | \| Q | | | | |
| 5+ 0 | 486.1214 | 604.77 | \| Q | | | | |
| 5+ 5 | 490.3392 | 609.54 | \| Q | | | | |
| 5+10 | 494.5923 | 614.34 | \| Q | | | | |
| 5+15 | 498.8737 | 619.18 | \| Q | | | | |
| 5+20 | 503.1275 | 624.00 | \| Q | | | | |
| 5+25 | 507.1594 | 628.60 | \| Q | | | | |
| 5+30 | 511.2023 | 633.22 | \| Q | | | | |
| 5+35 | 515.2739 | 637.88 | \| qQ | | | | |
| 5+40 | 519.3832 | 642.57 | \| qQ | | | | |
| 5+45 | 523.5224 | 647.31 | \| qQ | | | | |

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|---|---|---|---|---|---|---|---|
| 5+50 | 527.5521 | 651.94 | qQ | | | | |
| 5+55 | 531.3549 | 656.35 | qQ | | | | |
| 6+ 0 | 535.1919 | 660.80 | qQ | | | | |
| 6+ 5 | 539.0593 | 665.30 | qQ | | | | |
| 6+10 | 542.9668 | 669.83 | qQ | | | | |
| 6+15 | 546.9054 | 674.41 | qQ | | | | |
| 6+20 | 550.8095 | 678.96 | qQ | | | | |
| 6+25 | 554.6916 | 683.51 | qQ | | | | |
| 6+30 | 558.6161 | 688.09 | qQ | | | | |
| 6+35 | 562.5743 | 692.73 | qQ | | | | |
| 6+40 | 566.5765 | 697.41 | qQ | | | | |
| 6+45 | 570.6047 | 702.14 | qQ | | | | |
| 6+50 | 574.5560 | 706.79 | qQ | | | | |
| 6+55 | 578.5046 | 711.45 | qQ | | | | |
| 7+ 0 | 582.4998 | 716.16 | qQ | | | | |
| 7+ 5 | 586.5324 | 720.93 | qQ | | | | |
| 7+10 | 590.6135 | 725.75 | qQ | | | | |
| 7+15 | 594.7152 | 730.61 | qQ | | | | |
| 7+20 | 598.7808 | 735.43 | qQ | | | | |
| 7+25 | 602.8757 | 740.31 | qQ | | | | |
| 7+30 | 607.0225 | 745.24 | qQ | | | | |
| 7+35 | 611.2114 | 750.23 | qQ | | | | |
| 7+40 | 615.4542 | 755.27 | qQ | | | | |
| 7+45 | 619.6656 | 760.31 | qQ | | | | |
| 7+50 | 623.7774 | 765.25 | qQ | | | | |
| 7+55 | 627.9297 | 770.25 | qQ | | | | |
| 8+ 0 | 632.1397 | 775.32 | qQ | | | | |
| 8+ 5 | 636.3971 | 780.45 | qQ | | | | |
| 8+10 | 640.7146 | 785.65 | Q | | | | |
| 8+15 | 645.0818 | 790.92 | Q | | | | |
| 8+20 | 649.5119 | 796.26 | Q | | | | |
| 8+25 | 653.9940 | 801.67 | Q | | | | |
| 8+30 | 658.5419 | 807.16 | Q | | | | |
| 8+35 | 663.1444 | 812.73 | Q | | | | |
| 8+40 | 667.8101 | 818.36 | Q | | | | |
| 8+45 | 672.4303 | 823.98 | Q | | | | |
| 8+50 | 677.0835 | 829.64 | Q | | | | |
| 8+55 | 681.7965 | 835.38 | Q | | | | |
| 9+ 0 | 686.5845 | 841.21 | Q | | | | |
| 9+ 5 | 691.4355 | 847.12 | Q | | | | |
| 9+10 | 696.3653 | 853.13 | qQ | | | | |
| 9+15 | 701.3614 | 859.23 | qQ | | | | |
| 9+20 | 706.4404 | 865.42 | qQ | | | | |
| 9+25 | 711.5894 | 871.72 | qQ | | | | |
| 9+30 | 716.8254 | 878.11 | qQ | | | | |
| 9+35 | 722.1354 | 884.60 | qQ | | | | |
| 9+40 | 727.4936 | 891.16 | qQ | | | | |
| 9+45 | 732.8234 | 897.73 | qQ | | | | |
| 9+50 | 738.2445 | 904.39 | qQ | | | | |
| 9+55 | 743.7479 | 911.18 | qQ | | | | |
| 10+ 0 | 749.3528 | 918.08 | qQ | | | | |
| 10+ 5 | 755.0450 | 925.10 | qQ | | | | |
| 10+10 | 760.8445 | 932.25 | qQ | | | | |
| 10+15 | 766.7367 | 939.53 | qQ | | | | |
| 10+20 | 772.7424 | 946.94 | qQ | | | | |
| 10+25 | 778.8468 | 954.49 | qQ | | | | |
| 10+30 | 785.0716 | 962.18 | qQ | | | | |
| 10+35 | 791.3981 | 970.02 | qQ | | | | |
| 10+40 | 797.7633 | 977.91 | qQ | | | | |

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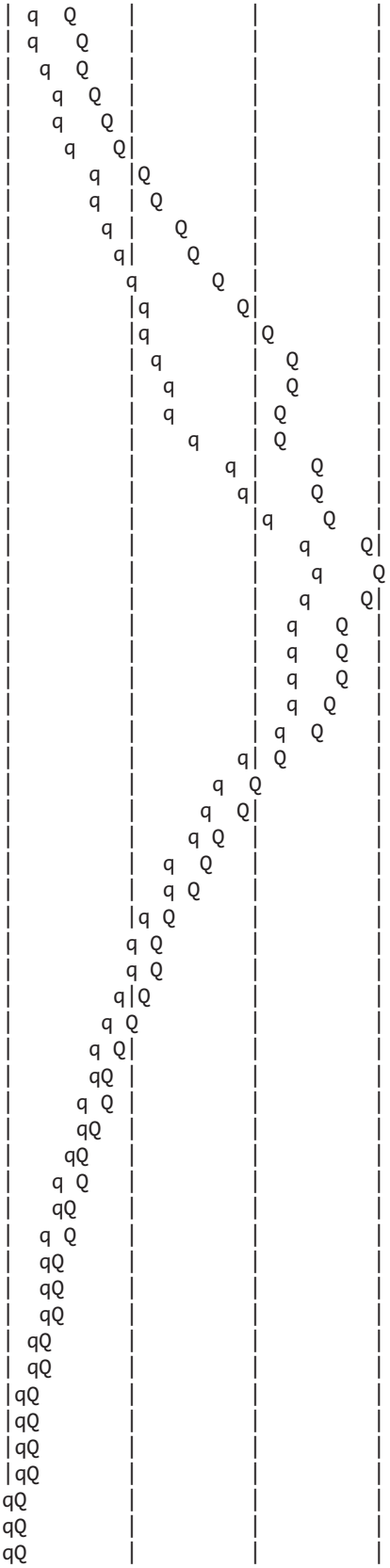
10+45     804.2008    985.92  |  qQ     |         |         |         |
10+50     810.7736    994.10  |  qQ     |         |         |         |
10+55     817.4659   1002.44  |  qQ     |         |         |         |
11+ 0     824.3022   1010.95  |  qQ     |         |         |         |
11+ 5     831.2664   1019.64  |  qQ     |         |         |         |
11+10     838.3844   1028.51  |  qQ     |         |         |         |
11+15     845.6395   1037.57  |  qQ     |         |         |         |
11+20     853.0590   1046.83  |   Q     |         |         |         |
11+25     860.6259   1056.30  |   Q     |         |         |         |
11+30     868.3689   1065.98  |   qQ    |         |         |         |
11+35     876.2754   1075.88  |   qQ    |         |         |         |
11+40     884.3849   1086.03  |   qQ    |         |         |         |
11+45     892.6666   1096.42  |   qQ    |         |         |         |
11+50     901.1517   1107.05  |   qQ    |         |         |         |
11+55     909.8223   1117.94  |   qQ    |         |         |         |
12+ 0     918.7122   1129.10  |   qQ    |         |         |         |
12+ 5     927.9934   1140.73  |   qQ    |         |         |         |
12+10     937.7030   1152.85  |   qQ    |         |         |         |
12+15     947.6360   1165.28  |   qQ    |         |         |         |
12+20     957.9947   1178.20  |   qQ    |         |         |         |
12+25     968.7320   1191.60  |   qQ    |         |         |         |
12+30     979.7670   1205.36  |   qQ    |         |         |         |
12+35     991.2572   1219.70  |   qQ    |         |         |         |
12+40    1003.1391   1234.51  |   qQ    |         |         |         |
12+45    1015.3548   1249.80  |   qQ    |         |         |         |
12+50    1028.1502   1265.74  |   qQ    |         |         |         |
12+55    1041.3313   1282.18  |   q Q   |         |         |         |
13+ 0    1055.0094   1299.19  |   q Q   |         |         |         |
13+ 5    1069.8419   1317.50  |    qQ   |         |         |         |
13+10    1085.2430   1336.47  |    qQ   |         |         |         |
13+15    1101.3417   1356.30  |    qQ   |         |         |         |
13+20    1118.8796   1377.67  |    qQ   |         |         |         |
13+25    1136.9845   1399.80  |    qQ   |         |         |         |
13+30    1155.4971   1422.46  |    qQ   |         |         |         |
13+35    1174.1687   1445.49  |    qQ   |         |         |         |
13+40    1193.4252   1469.26  |    qQ   |         |         |         |
13+45    1213.1985   1493.78  |    q Q  |         |         |         |
13+50    1233.6032   1519.10  |    q Q  |         |         |         |
13+55    1254.6021   1545.29  |    q Q  |         |         |         |
14+ 0    1275.8170   1571.90  |     qQ  |         |         |         |
14+ 5    1301.2861   1603.59  |     qQ  |         |         |         |
14+10    1331.5489   1641.26  |     qQ  |         |         |         |
14+15    1362.3354   1680.79  |     qQ  |         |         |         |
14+20    1397.3605   1725.81  |     q Q |         |         |         |
14+25    1436.2208   1776.09  |     q Q |         |         |         |
14+30    1476.2680   1829.49  |     q Q |         |         |         |
14+35    1521.4191   1890.47  |      qQ |         |         |         |
14+40    1569.6017   1958.46  |      q Q|         |         |         |
14+45    1619.8380   2034.41  |      q Q|         |         |         |
14+50    1676.5248   2115.04  |      q Q|         |         |         |
14+55    1736.0650   2195.98  |       q Q         |         |         |
15+ 0    1799.7924   2279.38  |       q Q         |         |         |
15+ 5    1882.0074   2380.69  |       q |Q        |         |         |
15+10    1969.5130   2487.01  |        q|Q        |         |         |
15+15    2065.3760   2602.35  |        q| Q       |         |         |
15+20    2184.3031   2741.40  |         q Q       |         |         |
15+25    2302.3447   2879.69  |         q  Q      |         |         |
15+30    2415.6045   3012.22  |         |q  Q     |         |         |
15+35    2526.9387   3142.62  |         |q  Q     |         |         |
```

| | | | |
|---|---|---|---|
| 15+40 | 2637.7367 | 3272.39 |  |
| 15+45 | 2748.7157 | 3403.50 | |
| 15+50 | 2866.0945 | 3541.36 | |
| 15+55 | 2990.2195 | 3688.69 | |
| 16+ 0 | 3126.5083 | 3851.53 | |
| 16+ 5 | 3389.7805 | 4178.21 | |
| 16+10 | 3639.7739 | 4536.30 | |
| 16+15 | 3761.0335 | 4780.45 | |
| 16+20 | 3985.2938 | 5137.45 | |
| 16+25 | 4167.4159 | 5468.40 | |
| 16+30 | 4272.3496 | 5776.04 | |
| 16+35 | 4485.7365 | 6235.01 | |
| 16+40 | 4601.0521 | 6689.27 | |
| 16+45 | 4699.7210 | 7161.16 | |
| 16+50 | 4935.2741 | 7151.70 | |
| 16+55 | 5092.9516 | 6966.30 | |
| 17+ 0 | 5338.2321 | 6950.39 | |
| 17+ 5 | 6011.8948 | 7449.18 | |
| 17+10 | 6257.3465 | 7556.45 | |
| 17+15 | 6609.6825 | 7810.33 | |
| 17+20 | 7356.3219 | 8467.31 | |
| 17+25 | 7461.4324 | 8498.27 | |
| 17+30 | 7368.5552 | 8333.84 | |
| 17+35 | 7156.0818 | 8057.33 | |
| 17+40 | 7153.5332 | 7994.36 | |
| 17+45 | 7092.9504 | 7873.79 | |
| 17+50 | 7015.8903 | 7743.15 | |
| 17+55 | 6849.8262 | 7528.09 | |
| 18+ 0 | 6348.0394 | 6985.42 | |
| 18+ 5 | 5891.6881 | 6490.80 | |
| 18+10 | 5726.6370 | 6292.76 | |
| 18+15 | 5345.8267 | 5878.42 | |
| 18+20 | 5067.1096 | 5570.92 | |
| 18+25 | 4908.3280 | 5382.19 | |
| 18+30 | 4627.0558 | 5076.19 | |
| 18+35 | 4425.6911 | 4851.21 | |
| 18+40 | 4286.8871 | 4691.72 | |
| 18+45 | 4079.8966 | 4461.88 | |
| 18+50 | 3915.8034 | 4277.23 | |
| 18+55 | 3788.0713 | 4126.37 | |
| 19+ 0 | 3627.1042 | 3945.98 | |
| 19+ 5 | 3520.4444 | 3825.08 | |
| 19+10 | 3411.1939 | 3704.59 | |
| 19+15 | 3263.9254 | 3546.88 | |
| 19+20 | 3179.1930 | 3452.44 | |
| 19+25 | 3085.2176 | 3350.04 | |
| 19+30 | 2962.2113 | 3219.33 | |
| 19+35 | 2895.6636 | 3144.63 | |
| 19+40 | 2830.3022 | 3070.60 | |
| 19+45 | 2762.4775 | 2995.74 | |
| 19+50 | 2700.5475 | 2928.00 | |
| 19+55 | 2596.8731 | 2819.52 | |
| 20+ 0 | 2484.8500 | 2703.68 | |
| 20+ 5 | 2437.2408 | 2652.16 | |
| 20+10 | 2393.8104 | 2604.57 | |
| 20+15 | 2351.3477 | 2557.52 | |
| 20+20 | 2302.1559 | 2502.31 | |
| 20+25 | 2215.2494 | 2410.09 | |
| 20+30 | 2151.5038 | 2341.95 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 20+35 | 2115.6476 | 2302.14 | qQ | | | |
| 20+40 | 2081.9684 | 2264.02 | qQ | | | |
| 20+45 | 2047.3818 | 2225.27 | qQ | | | |
| 20+50 | 2006.6037 | 2180.89 | qQ | | | |
| 20+55 | 1943.4542 | 2114.87 | Q | | | |
| 21+ 0 | 1905.7143 | 2072.44 | qQ | | | |
| 21+ 5 | 1877.0615 | 2039.85 | qQ | | | |
| 21+10 | 1849.4019 | 2009.01 | qQ | | | |
| 21+15 | 1819.7805 | 1976.65 | qQ | | | |
| 21+20 | 1779.1866 | 1933.55 | qQ | | | |
| 21+25 | 1718.7432 | 1870.75 | Q | | | |
| 21+30 | 1690.5052 | 1840.17 | qQ | | | |
| 21+35 | 1666.8457 | 1814.22 | qQ | | | |
| 21+40 | 1642.6820 | 1787.96 | qQ | | | |
| 21+45 | 1613.8267 | 1757.14 | qQ | | | |
| 21+50 | 1564.1301 | 1705.58 | qQ | | | |
| 21+55 | 1505.3912 | 1645.05 | Q | | | |
| 22+ 0 | 1482.3224 | 1620.27 | qQ | | | |
| 22+ 5 | 1461.6957 | 1598.01 | qQ | | | |
| 22+10 | 1441.1972 | 1575.94 | qQ | | | |
| 22+15 | 1418.6398 | 1551.86 | qQ | | | |
| 22+20 | 1387.1725 | 1518.91 | qQ | | | |
| 22+25 | 1360.9645 | 1491.27 | qQ | | | |
| 22+30 | 1342.7800 | 1471.70 | Q | | | |
| 22+35 | 1325.1218 | 1452.69 | Q | | | |
| 22+40 | 1306.7499 | 1433.01 | Q | | | |
| 22+45 | 1285.1865 | 1410.18 | Q | | | |
| 22+50 | 1250.5572 | 1374.31 | qQ | | | |
| 22+55 | 1229.2267 | 1351.77 | qQ | | | |
| 23+ 0 | 1213.8314 | 1335.20 | qQ | | | |
| 23+ 5 | 1199.1626 | 1319.38 | qQ | | | |
| 23+10 | 1184.0853 | 1303.19 | qQ | | | |
| 23+15 | 1165.7360 | 1283.75 | qQ | | | |
| 23+20 | 1139.9463 | 1256.89 | Q | | | |
| 23+25 | 1124.9234 | 1240.83 | Q | | | |
| 23+30 | 1111.6984 | 1226.59 | Q | | | |
| 23+35 | 1097.9413 | 1211.84 | Q | | | |
| 23+40 | 1081.6234 | 1194.55 | Q | | | |
| 23+45 | 1054.2818 | 1166.25 | qQ | | | |
| 23+50 | 1019.4604 | 1130.50 | qQ | | | |
| 23+55 | 1005.9556 | 1116.09 | qQ | | | |
| 24+ 0 | 994.2457 | 1103.49 | qQ | | | |
| 24+ 5 | 982.2441 | 1090.25 | qQ | | | |
| 24+10 | 968.8987 | 1075.01 | qQ | | | |
| 24+15 | 955.8074 | 1059.37 | Q | | | |
| 24+20 | 942.3593 | 1042.72 | Q | | | |
| 24+25 | 928.2482 | 1024.74 | Q | | | |
| 24+30 | 914.0016 | 1005.57 | Q | | | |
| 24+35 | 897.9181 | 983.22 | Q | | | |
| 24+40 | 879.0054 | 955.60 | Q | | | |
| 24+45 | 848.3055 | 912.54 | qQ | | | |
| 24+50 | 826.5577 | 880.27 | qQ | | | |
| 24+55 | 810.4293 | 856.19 | qQ | | | |
| 25+ 0 | 794.4350 | 834.10 | Q | | | |
| 25+ 5 | 774.5470 | 809.35 | Q | | | |
| 25+10 | 753.9056 | 784.77 | Q | | | |
| 25+15 | 731.8761 | 759.35 | Q | | | |
| 25+20 | 704.8089 | 729.37 | Q | | | |
| 25+25 | 677.1811 | 699.15 | Q | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+30 | 649.7888 | 669.48 | \| Q | \| | \| | \| | \| |
| 25+35 | 622.7005 | 640.37 | \| qQ | \| | \| | \| | \| |
| 25+40 | 589.4105 | 605.25 | \| Q | \| | \| | \| | \| |
| 25+45 | 550.3442 | 564.53 | \| Q | \| | \| | \| | \| |
| 25+50 | 525.8895 | 538.57 | \| Q | \| | \| | \| | \| |
| 25+55 | 503.2347 | 514.57 | \| Q | \| | \| | \| | \| |
| 26+ 0 | 484.0967 | 494.19 | \| Q | \| | \| | \| | \| |
| 26+ 5 | 467.3493 | 476.33 | \| Q | \| | \| | \| | \| |
| 26+10 | 450.9352 | 458.89 | \| Q | \| | \| | \| | \| |
| 26+15 | 436.6254 | 443.67 | \| Q | \| | \| | \| | \| |
| 26+20 | 423.3918 | 429.61 | \|qQ | \| | \| | \| | \| |
| 26+25 | 410.1129 | 415.61 | \|Q | \| | \| | \| | \| |
| 26+30 | 397.2575 | 402.10 | \|Q | \| | \| | \| | \| |
| 26+35 | 383.2900 | 387.56 | \|Q | \| | \| | \| | \| |
| 26+40 | 359.1294 | 362.86 | \|Q | \| | \| | \| | \| |
| 26+45 | 343.6016 | 346.88 | \|Q | \| | \| | \| | \| |
| 26+50 | 334.4151 | 337.29 | \|Q | \| | \| | \| | \| |
| 26+55 | 325.7534 | 328.33 | \|Q | \| | \| | \| | \| |
| 27+ 0 | 317.2336 | 319.57 | \|Q | \| | \| | \| | \| |
| 27+ 5 | 308.7873 | 310.93 | \|Q | \| | \| | \| | \| |
| 27+10 | 300.6378 | 302.60 | \|Q | \| | \| | \| | \| |
| 27+15 | 293.1734 | 294.97 | \|Q | \| | \| | \| | \| |
| 27+20 | 285.9409 | 287.58 | \|Q | \| | \| | \| | \| |
| 27+25 | 279.0117 | 280.51 | \|Q | \| | \| | \| | \| |
| 27+30 | 272.7093 | 274.07 | \|Q | \| | \| | \| | \| |
| 27+35 | 266.9590 | 268.19 | \|Q | \| | \| | \| | \| |
| 27+40 | 262.6578 | 263.78 | \|Q | \| | \| | \| | \| |
| 27+45 | 256.8747 | 257.91 | \|Q | \| | \| | \| | \| |
| 27+50 | 250.9470 | 251.89 | \|Q | \| | \| | \| | \| |
| 27+55 | 245.3921 | 246.25 | \|Q | \| | \| | \| | \| |
| 28+ 0 | 240.4103 | 241.17 | \|Q | \| | \| | \| | \| |
| 28+ 5 | 235.4410 | 236.11 | \|Q | \| | \| | \| | \| |
| 28+10 | 230.4806 | 231.05 | \|Q | \| | \| | \| | \| |
| 28+15 | 225.5143 | 225.98 | \|Q | \| | \| | \| | \| |
| 28+20 | 220.5491 | 220.94 | \|Q | \| | \| | \| | \| |
| 28+25 | 215.8509 | 216.18 | \|Q | \| | \| | \| | \| |
| 28+30 | 211.2481 | 211.52 | Q | \| | \| | \| | \| |
| 28+35 | 206.0127 | 206.23 | Q | \| | \| | \| | \| |
| 28+40 | 201.0915 | 201.26 | Q | \| | \| | \| | \| |
| 28+45 | 196.5235 | 196.65 | Q | \| | \| | \| | \| |
| 28+50 | 192.1104 | 192.21 | Q | \| | \| | \| | \| |
| 28+55 | 188.3277 | 188.39 | Q | \| | \| | \| | \| |
| 29+ 0 | 184.3698 | 184.41 | Q | \| | \| | \| | \| |
| 29+ 5 | 180.1088 | 180.14 | Q | \| | \| | \| | \| |
| 29+10 | 175.7533 | 175.77 | Q | \| | \| | \| | \| |
| 29+15 | 171.2114 | 171.23 | Q | \| | \| | \| | \| |
| 29+20 | 166.4173 | 166.43 | Q | \| | \| | \| | \| |
| 29+25 | 160.9455 | 160.95 | Q | \| | \| | \| | \| |
| 29+30 | 151.8593 | 151.86 | Q | \| | \| | \| | \| |
| 29+35 | 136.3684 | 136.37 | Q | \| | \| | \| | \| |
| 29+40 | 131.0705 | 131.07 | Q | \| | \| | \| | \| |
| 29+45 | 127.0703 | 127.07 | Q | \| | \| | \| | \| |
| 29+50 | 123.3172 | 123.32 | Q | \| | \| | \| | \| |
| 29+55 | 119.4717 | 119.47 | Q | \| | \| | \| | \| |
| 30+ 0 | 115.6769 | 115.68 | Q | \| | \| | \| | \| |
| 30+ 5 | 111.9382 | 111.94 | Q | \| | \| | \| | \| |
| 30+10 | 108.2330 | 108.23 | Q | \| | \| | \| | \| |
| 30+15 | 104.5464 | 104.55 | Q | \| | \| | \| | \| |
| 30+20 | 101.2637 | 101.26 | Q | \| | \| | \| | \| |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 30+25 | 98.3505 | 98.35 | Q | | | | |
| 30+30 | 95.4864 | 95.49 | Q | | | | |
| 30+35 | 92.8766 | 92.88 | Q | | | | |
| 30+40 | 90.1781 | 90.18 | Q | | | | |
| 30+45 | 87.3237 | 87.32 | Q | | | | |
| 30+50 | 84.0816 | 84.08 | Q | | | | |
| 30+55 | 79.7992 | 79.80 | Q | | | | |
| 31+ 0 | 68.4494 | 68.45 | Q | | | | |
| 31+ 5 | 58.0895 | 58.09 | Q | | | | |
| 31+10 | 55.4417 | 55.44 | Q | | | | |
| 31+15 | 53.2421 | 53.24 | Q | | | | |
| 31+20 | 51.0152 | 51.02 | Q | | | | |
| 31+25 | 48.6134 | 48.61 | Q | | | | |
| 31+30 | 46.3253 | 46.33 | Q | | | | |
| 31+35 | 44.1401 | 44.14 | Q | | | | |
| 31+40 | 42.0295 | 42.03 | Q | | | | |
| 31+45 | 40.0569 | 40.06 | Q | | | | |
| 31+50 | 38.2942 | 38.29 | Q | | | | |
| 31+55 | 36.5834 | 36.58 | Q | | | | |
| 32+ 0 | 35.1298 | 35.13 | Q | | | | |
| 32+ 5 | 33.9285 | 33.93 | Q | | | | |
| 32+10 | 32.7602 | 32.76 | Q | | | | |
| 32+15 | 31.6219 | 31.62 | Q | | | | |
| 32+20 | 30.5110 | 30.51 | Q | | | | |
| 32+25 | 29.4253 | 29.43 | Q | | | | |
| 32+30 | 28.3630 | 28.36 | Q | | | | |
| 32+35 | 27.3223 | 27.32 | Q | | | | |
| 32+40 | 26.3075 | 26.31 | Q | | | | |
| 32+45 | 25.4143 | 25.41 | Q | | | | |
| 32+50 | 24.5769 | 24.58 | Q | | | | |
| 32+55 | 23.7553 | 23.76 | Q | | | | |
| 33+ 0 | 22.9589 | 22.96 | Q | | | | |
| 33+ 5 | 22.1866 | 22.19 | Q | | | | |
| 33+10 | 21.4275 | 21.43 | Q | | | | |
| 33+15 | 20.6808 | 20.68 | Q | | | | |
| 33+20 | 19.9461 | 19.95 | Q | | | | |
| 33+25 | 19.2226 | 19.22 | Q | | | | |
| 33+30 | 18.5100 | 18.51 | Q | | | | |
| 33+35 | 17.8077 | 17.81 | Q | | | | |
| 33+40 | 17.1589 | 17.16 | Q | | | | |
| 33+45 | 16.6255 | 16.63 | Q | | | | |
| 33+50 | 16.1051 | 16.11 | Q | | | | |
| 33+55 | 15.5924 | 15.59 | Q | | | | |
| 34+ 0 | 15.0871 | 15.09 | Q | | | | |
| 34+ 5 | 14.5890 | 14.59 | Q | | | | |
| 34+10 | 14.0978 | 14.10 | Q | | | | |
| 34+15 | 13.6132 | 13.61 | Q | | | | |
| 34+20 | 13.1350 | 13.14 | Q | | | | |
| 34+25 | 12.6630 | 12.66 | Q | | | | |
| 34+30 | 12.1970 | 12.20 | Q | | | | |
| 34+35 | 11.7401 | 11.74 | Q | | | | |
| 34+40 | 11.3775 | 11.38 | Q | | | | |
| 34+45 | 11.0592 | 11.06 | Q | | | | |
| 34+50 | 10.7452 | 10.75 | Q | | | | |
| 34+55 | 10.4353 | 10.44 | Q | | | | |
| 35+ 0 | 10.1296 | 10.13 | Q | | | | |
| 35+ 5 | 9.8277 | 9.83 | Q | | | | |
| 35+10 | 9.5296 | 9.53 | Q | | | | |
| 35+15 | 9.2352 | 9.24 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 35+20 | 8.9443 | 8.94 | Q | \| | \| | \| | \| |
| 35+25 | 8.6569 | 8.66 | Q | \| | \| | \| | \| |
| 35+30 | 8.3729 | 8.37 | Q | \| | \| | \| | \| |
| 35+35 | 8.0873 | 8.09 | Q | \| | \| | \| | \| |
| 35+40 | 7.7911 | 7.79 | Q | \| | \| | \| | \| |
| 35+45 | 7.4972 | 7.50 | Q | \| | \| | \| | \| |
| 35+50 | 7.2064 | 7.21 | Q | \| | \| | \| | \| |
| 35+55 | 6.9187 | 6.92 | Q | \| | \| | \| | \| |
| 36+ 0 | 6.6340 | 6.63 | Q | \| | \| | \| | \| |
| 36+ 5 | 6.3522 | 6.35 | Q | \| | \| | \| | \| |
| 36+10 | 6.0732 | 6.07 | Q | \| | \| | \| | \| |
| 36+15 | 5.7969 | 5.80 | Q | \| | \| | \| | \| |
| 36+20 | 5.5234 | 5.52 | Q | \| | \| | \| | \| |
| 36+25 | 5.2525 | 5.25 | Q | \| | \| | \| | \| |
| 36+30 | 4.9842 | 4.98 | Q | \| | \| | \| | \| |
| 36+35 | 4.7234 | 4.72 | Q | \| | \| | \| | \| |
| 36+40 | 4.4676 | 4.47 | Q | \| | \| | \| | \| |
| 36+45 | 4.2141 | 4.21 | Q | \| | \| | \| | \| |
| 36+50 | 3.9630 | 3.96 | Q | \| | \| | \| | \| |
| 36+55 | 3.7140 | 3.71 | Q | \| | \| | \| | \| |
| 37+ 0 | 3.4673 | 3.47 | Q | \| | \| | \| | \| |
| 37+ 5 | 3.2227 | 3.22 | Q | \| | \| | \| | \| |
| 37+10 | 2.9802 | 2.98 | Q | \| | \| | \| | \| |
| 37+15 | 2.7397 | 2.74 | Q | \| | \| | \| | \| |
| 37+20 | 2.5013 | 2.50 | Q | \| | \| | \| | \| |
| 37+25 | 2.2648 | 2.26 | Q | \| | \| | \| | \| |
| 37+30 | 2.0525 | 2.05 | Q | \| | \| | \| | \| |
| 37+35 | 1.9213 | 1.92 | Q | \| | \| | \| | \| |
| 37+40 | 1.7974 | 1.80 | Q | \| | \| | \| | \| |
| 37+45 | 1.6745 | 1.67 | Q | \| | \| | \| | \| |
| 37+50 | 1.5527 | 1.55 | Q | \| | \| | \| | \| |
| 37+55 | 1.4319 | 1.43 | Q | \| | \| | \| | \| |
| 38+ 0 | 1.3120 | 1.31 | Q | \| | \| | \| | \| |
| 38+ 5 | 1.1932 | 1.19 | Q | \| | \| | \| | \| |
| 38+10 | 1.0753 | 1.08 | Q | \| | \| | \| | \| |
| 38+15 | 0.9584 | 0.96 | Q | \| | \| | \| | \| |
| 38+20 | 0.8424 | 0.84 | Q | \| | \| | \| | \| |
| 38+25 | 0.7273 | 0.73 | Q | \| | \| | \| | \| |
| 38+30 | 0.6131 | 0.61 | Q | \| | \| | \| | \| |
| 38+35 | 0.4997 | 0.50 | Q | \| | \| | \| | \| |
| 38+40 | 0.3873 | 0.39 | Q | \| | \| | \| | \| |
| 38+45 | 0.2756 | 0.28 | Q | \| | \| | \| | \| |
| 38+50 | 0.1648 | 0.16 | Q | \| | \| | \| | \| |
| 38+55 | 0.0548 | 0.05 | Q | \| | \| | \| | \| |

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**********HYDROGRAPH DATA**********

Number of intervals = 467
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 8498.266 (CFS)
Total volume = 3888.923 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 0.000 | 0.000 | 0.000 | 0.000 |

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FLOOD HYDROGRAPH ROUTING PROGRAM
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Study date: 09/06/17

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164309 - NRG "COOLWATER" SOLAR FACILITY - DAGGETT, CA
PROPOSED CONDITIONS AREAS 50 AND 51 ROUTING
100-YEAR, 24-HOUR STORM EVENT
BY: JDN, DATE: 08-31-17

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Program License Serial Number 6320

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********** HYDROGRAPH INFORMATION **********

From study/file name: PR50.rte
**********HYDROGRAPH DATA**********
Number of intervals = 353
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 5599.015 (CFS)
Total volume = 1141.359 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 2.000 to Point/Station 2.000
**** FLOWBY BASIN ROUTING OR SPLIT FLOW ****

A constant split flow fraction of 0.5000 is
being diverted from the main stream into stream number 1
Total volume of excess flow diverted into flowby
basin (stream number 1 ) is 570.68(Ac.Ft)

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P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals (CFS)

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| Time(h+m) | Volume(Ac.Ft) | Q(CFS) | 0 | 699.9 | 1399.8 | 2099.6 | 2799.5 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 0.0050 | 0.73 | Q | \| | \| | \| | \| |
| 0+10 | 0.0216 | 2.41 | Q | \| | \| | \| | \| |
| 0+15 | 0.0544 | 4.76 | Q | \| | \| | \| | \| |
| 0+20 | 0.1080 | 7.79 | Q | \| | \| | \| | \| |
| 0+25 | 0.1875 | 11.54 | Q | \| | \| | \| | \| |
| 0+30 | 0.3033 | 16.82 | Q | \| | \| | \| | \| |
| 0+35 | 0.4666 | 23.71 | Q | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 0+40 | 0.7024 | 34.24 | Q | \| | \| | \| | \| |
| 0+45 | 1.0442 | 49.62 | Q | \| | \| | \| | \| |
| 0+50 | 1.4418 | 57.74 | Q | \| | \| | \| | \| |
| 0+55 | 1.8774 | 63.25 | Q | \| | \| | \| | \| |
| 1+ 0 | 2.3435 | 67.68 | Q | \| | \| | \| | \| |
| 1+ 5 | 2.8357 | 71.46 | VQ | \| | \| | \| | \| |
| 1+10 | 3.3495 | 74.60 | VQ | \| | \| | \| | \| |
| 1+15 | 3.8839 | 77.60 | VQ | \| | \| | \| | \| |
| 1+20 | 4.4361 | 80.18 | VQ | \| | \| | \| | \| |
| 1+25 | 5.0051 | 82.61 | VQ | \| | \| | \| | \| |
| 1+30 | 5.5888 | 84.75 | VQ | \| | \| | \| | \| |
| 1+35 | 6.1862 | 86.74 | VQ | \| | \| | \| | \| |
| 1+40 | 6.7962 | 88.58 | VQ | \| | \| | \| | \| |
| 1+45 | 7.4181 | 90.30 | VQ | \| | \| | \| | \| |
| 1+50 | 8.0511 | 91.90 | VQ | \| | \| | \| | \| |
| 1+55 | 8.6941 | 93.37 | VQ | \| | \| | \| | \| |
| 2+ 0 | 9.3468 | 94.77 | VQ | \| | \| | \| | \| |
| 2+ 5 | 10.0084 | 96.06 | VQ | \| | \| | \| | \| |
| 2+10 | 10.6785 | 97.30 | VQ | \| | \| | \| | \| |
| 2+15 | 11.3564 | 98.42 | VQ | \| | \| | \| | \| |
| 2+20 | 12.0417 | 99.50 | VQ | \| | \| | \| | \| |
| 2+25 | 12.7335 | 100.46 | VQ | \| | \| | \| | \| |
| 2+30 | 13.4318 | 101.39 | VQ | \| | \| | \| | \| |
| 2+35 | 14.1361 | 102.27 | VQ | \| | \| | \| | \| |
| 2+40 | 14.8463 | 103.11 | \|Q | \| | \| | \| | \| |
| 2+45 | 15.5617 | 103.88 | \|Q | \| | \| | \| | \| |
| 2+50 | 16.2821 | 104.60 | \|Q | \| | \| | \| | \| |
| 2+55 | 17.0067 | 105.21 | \|Q | \| | \| | \| | \| |
| 3+ 0 | 17.7352 | 105.77 | \|Q | \| | \| | \| | \| |
| 3+ 5 | 18.4676 | 106.35 | \|Q | \| | \| | \| | \| |
| 3+10 | 19.2039 | 106.92 | \|Q | \| | \| | \| | \| |
| 3+15 | 19.9442 | 107.49 | \|Q | \| | \| | \| | \| |
| 3+20 | 20.6883 | 108.04 | \|Q | \| | \| | \| | \| |
| 3+25 | 21.4362 | 108.60 | \|Q | \| | \| | \| | \| |
| 3+30 | 22.1880 | 109.16 | \|Q | \| | \| | \| | \| |
| 3+35 | 22.9437 | 109.72 | \|Q | \| | \| | \| | \| |
| 3+40 | 23.7030 | 110.24 | \|Q | \| | \| | \| | \| |
| 3+45 | 24.4659 | 110.78 | \|Q | \| | \| | \| | \| |
| 3+50 | 25.2326 | 111.31 | \|Q | \| | \| | \| | \| |
| 3+55 | 26.0030 | 111.87 | \|Q | \| | \| | \| | \| |
| 4+ 0 | 26.7773 | 112.42 | \|Q | \| | \| | \| | \| |
| 4+ 5 | 27.5555 | 113.00 | \|Q | \| | \| | \| | \| |
| 4+10 | 28.3377 | 113.57 | \|Q | \| | \| | \| | \| |
| 4+15 | 29.1239 | 114.15 | \|QV | \| | \| | \| | \| |
| 4+20 | 29.9138 | 114.70 | \|QV | \| | \| | \| | \| |
| 4+25 | 30.7076 | 115.25 | \|QV | \| | \| | \| | \| |
| 4+30 | 31.5051 | 115.80 | \|QV | \| | \| | \| | \| |
| 4+35 | 32.3065 | 116.37 | \|QV | \| | \| | \| | \| |
| 4+40 | 33.1117 | 116.91 | \|QV | \| | \| | \| | \| |
| 4+45 | 33.9208 | 117.47 | \|QV | \| | \| | \| | \| |
| 4+50 | 34.7336 | 118.02 | \|QV | \| | \| | \| | \| |
| 4+55 | 35.5504 | 118.60 | \|QV | \| | \| | \| | \| |
| 5+ 0 | 36.3709 | 119.14 | \|QV | \| | \| | \| | \| |
| 5+ 5 | 37.1953 | 119.70 | \|QV | \| | \| | \| | \| |
| 5+10 | 38.0234 | 120.25 | \|QV | \| | \| | \| | \| |
| 5+15 | 38.8555 | 120.81 | \|QV | \| | \| | \| | \| |
| 5+20 | 39.6914 | 121.38 | \|QV | \| | \| | \| | \| |
| 5+25 | 40.5313 | 121.96 | \|QV | \| | \| | \| | \| |
| 5+30 | 41.3752 | 122.53 | \|QV | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 5+35 | 42.2232 | 123.13 | QV | | | | |
| 5+40 | 43.0752 | 123.71 | Q V | | | | |
| 5+45 | 43.9315 | 124.32 | Q V | | | | |
| 5+50 | 44.7918 | 124.92 | Q V | | | | |
| 5+55 | 45.6564 | 125.55 | Q V | | | | |
| 6+ 0 | 46.5253 | 126.16 | Q V | | | | |
| 6+ 5 | 47.3986 | 126.80 | Q V | | | | |
| 6+10 | 48.2762 | 127.43 | Q V | | | | |
| 6+15 | 49.1584 | 128.09 | Q V | | | | |
| 6+20 | 50.0450 | 128.74 | Q V | | | | |
| 6+25 | 50.9363 | 129.41 | Q V | | | | |
| 6+30 | 51.8321 | 130.07 | Q V | | | | |
| 6+35 | 52.7327 | 130.77 | Q V | | | | |
| 6+40 | 53.6380 | 131.45 | Q V | | | | |
| 6+45 | 54.5482 | 132.16 | Q V | | | | |
| 6+50 | 55.4632 | 132.86 | Q V | | | | |
| 6+55 | 56.3832 | 133.59 | Q V | | | | |
| 7+ 0 | 57.3082 | 134.31 | Q V | | | | |
| 7+ 5 | 58.2384 | 135.06 | Q V | | | | |
| 7+10 | 59.1737 | 135.80 | Q V | | | | |
| 7+15 | 60.1143 | 136.58 | Q V | | | | |
| 7+20 | 61.0602 | 137.34 | Q V | | | | |
| 7+25 | 62.0115 | 138.13 | Q V | | | | |
| 7+30 | 62.9682 | 138.92 | Q V | | | | |
| 7+35 | 63.9306 | 139.74 | Q V | | | | |
| 7+40 | 64.8985 | 140.54 | Q V | | | | |
| 7+45 | 65.8722 | 141.39 | Q V | | | | |
| 7+50 | 66.8517 | 142.22 | Q V | | | | |
| 7+55 | 67.8372 | 143.09 | Q V | | | | |
| 8+ 0 | 68.8285 | 143.95 | Q V | | | | |
| 8+ 5 | 69.8261 | 144.84 | Q V | | | | |
| 8+10 | 70.8297 | 145.73 | Q V | | | | |
| 8+15 | 71.8397 | 146.65 | Q V | | | | |
| 8+20 | 72.8560 | 147.57 | Q V | | | | |
| 8+25 | 73.8789 | 148.52 | Q V | | | | |
| 8+30 | 74.9083 | 149.47 | Q V | | | | |
| 8+35 | 75.9445 | 150.45 | Q V | | | | |
| 8+40 | 76.9874 | 151.43 | Q V | | | | |
| 8+45 | 78.0373 | 152.45 | Q V | | | | |
| 8+50 | 79.0941 | 153.46 | Q V | | | | |
| 8+55 | 80.1583 | 154.51 | Q V | | | | |
| 9+ 0 | 81.2296 | 155.56 | Q V | | | | |
| 9+ 5 | 82.3085 | 156.65 | Q V | | | | |
| 9+10 | 83.3948 | 157.73 | Q V | | | | |
| 9+15 | 84.4889 | 158.86 | Q V | | | | |
| 9+20 | 85.5907 | 159.99 | Q V | | | | |
| 9+25 | 86.7006 | 161.16 | Q V | | | | |
| 9+30 | 87.8185 | 162.32 | Q V | | | | |
| 9+35 | 88.9448 | 163.54 | Q V | | | | |
| 9+40 | 90.0795 | 164.75 | Q V | | | | |
| 9+45 | 91.2228 | 166.01 | Q V | | | | |
| 9+50 | 92.3748 | 167.27 | Q V | | | | |
| 9+55 | 93.5359 | 168.58 | Q V | | | | |
| 10+ 0 | 94.7059 | 169.89 | Q V | | | | |
| 10+ 5 | 95.8854 | 171.26 | Q V | | | | |
| 10+10 | 97.0742 | 172.62 | Q V | | | | |
| 10+15 | 98.2729 | 174.04 | Q V | | | | |
| 10+20 | 99.4813 | 175.46 | Q V | | | | |
| 10+25 | 100.6999 | 176.95 | Q V | | | | |

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|---|---|---|---|---|---|---|---|
| 10+30 | 101.9288 | 178.43 | Q V | | | | |
| 10+35 | 103.1683 | 179.98 | Q V | | | | |
| 10+40 | 104.4185 | 181.52 | Q V | | | | |
| 10+45 | 105.6798 | 183.15 | Q V | | | | |
| 10+50 | 106.9523 | 184.76 | Q V | | | | |
| 10+55 | 108.2364 | 186.46 | Q V | | | | |
| 11+ 0 | 109.5322 | 188.15 | Q V | | | | |
| 11+ 5 | 110.8402 | 189.93 | Q V | | | | |
| 11+10 | 112.1605 | 191.70 | Q V | | | | |
| 11+15 | 113.4936 | 193.57 | Q V | | | | |
| 11+20 | 114.8396 | 195.43 | Q V | | | | |
| 11+25 | 116.1990 | 197.39 | Q V | | | | |
| 11+30 | 117.5719 | 199.35 | Q V | | | | |
| 11+35 | 118.9591 | 201.41 | Q V | | | | |
| 11+40 | 120.3604 | 203.48 | Q V | | | | |
| 11+45 | 121.7768 | 205.65 | Q V | | | | |
| 11+50 | 123.2081 | 207.83 | Q V | | | | |
| 11+55 | 124.6552 | 210.13 | Q V | | | | |
| 12+ 0 | 126.1182 | 212.43 | Q V | | | | |
| 12+ 5 | 127.5980 | 214.86 | Q V | | | | |
| 12+10 | 129.0946 | 217.31 | Q V | | | | |
| 12+15 | 130.6091 | 219.90 | Q V | | | | |
| 12+20 | 132.1416 | 222.51 | Q V | | | | |
| 12+25 | 133.6930 | 225.27 | Q V | | | | |
| 12+30 | 135.2636 | 228.06 | Q V | | | | |
| 12+35 | 136.8547 | 231.02 | Q V | | | | |
| 12+40 | 138.4663 | 234.02 | Q V | | | | |
| 12+45 | 140.1002 | 237.23 | Q V | | | | |
| 12+50 | 141.7559 | 240.42 | Q V | | | | |
| 12+55 | 143.4349 | 243.79 | Q V | | | | |
| 13+ 0 | 145.1373 | 247.19 | Q V | | | | |
| 13+ 5 | 146.8646 | 250.80 | Q V | | | | |
| 13+10 | 148.6169 | 254.44 | Q V | | | | |
| 13+15 | 150.3960 | 258.33 | Q V | | | | |
| 13+20 | 152.2022 | 262.25 | Q V | | | | |
| 13+25 | 154.0372 | 266.45 | Q V | | | | |
| 13+30 | 155.9016 | 270.71 | Q V | | | | |
| 13+35 | 157.7974 | 275.27 | Q V | | | | |
| 13+40 | 159.7251 | 279.90 | Q V | | | | |
| 13+45 | 161.6870 | 284.87 | Q V | | | | |
| 13+50 | 163.6838 | 289.93 | Q V | | | | |
| 13+55 | 165.7181 | 295.38 | Q V | | | | |
| 14+ 0 | 167.7908 | 300.95 | Q V | | | | |
| 14+ 5 | 169.9119 | 307.98 | Q V | | | | |
| 14+10 | 172.0914 | 316.48 | Q V | | | | |
| 14+15 | 174.3396 | 326.43 | Q V | | | | |
| 14+20 | 176.6643 | 337.54 | Q V | | | | |
| 14+25 | 179.0766 | 350.28 | Q V | | | | |
| 14+30 | 181.5931 | 365.40 | Q V | | | | |
| 14+35 | 184.2343 | 383.51 | Q V | | | | |
| 14+40 | 187.0375 | 407.02 | Q V | | | | |
| 14+45 | 190.0556 | 438.22 | Q V | | | | |
| 14+50 | 193.2225 | 459.84 | Q V | | | | |
| 14+55 | 196.5210 | 478.94 | Q V | | | | |
| 15+ 0 | 199.9449 | 497.14 | Q V | | | | |
| 15+ 5 | 203.4974 | 515.83 | Q V | | | | |
| 15+10 | 207.1779 | 534.41 | Q V | | | | |
| 15+15 | 210.9971 | 554.55 | Q V | | | | |
| 15+20 | 214.9590 | 575.26 | Q V | | | | |

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|---|---|---|---|---|---|---|---|---|
| 15+25 | 219.0607 | 595.57 | \| | Q \| | V | \| | \| | \| |
| 15+30 | 223.2884 | 613.87 | \| | Q \| | V | \| | \| | \| |
| 15+35 | 227.6466 | 632.81 | \| | Q\| | V | \| | \| | \| |
| 15+40 | 232.1351 | 651.72 | \| | Q\| | V | \| | \| | \| |
| 15+45 | 236.7700 | 673.00 | \| | Q\| | V | \| | \| | \| |
| 15+50 | 241.5477 | 693.71 | \| | Q\| | V | \| | \| | \| |
| 15+55 | 246.5035 | 719.59 | \| | Q | V | \| | \| | \| |
| 16+ 0 | 251.6632 | 749.19 | \| | Q | V | \| | \| | \| |
| 16+ 5 | 257.5093 | 848.86 | \| | \| Q | V | \| | \| | \| |
| 16+10 | 264.3796 | 997.57 | \| | \| Q | V | \| | \| | \| |
| 16+15 | 272.1685 | 1130.94 | \| | \| Q | V\| | \| | \| | \| |
| 16+20 | 280.9315 | 1272.39 | \| | \| QV\| | \| | \| | \| |
| 16+25 | 290.8231 | 1436.27 | \| | \| Q | \| | \| | \| |
| 16+30 | 302.4684 | 1690.89 | \| | \| V | Q | \| | \| | \| |
| 16+35 | 316.0612 | 1973.68 | \| | \| \| V | Q | \| | \| | \| |
| 16+40 | 332.5999 | 2401.42 | \| | \| \| V | \| | \| | Q | \| |
| 16+45 | 351.8802 | 2799.51 | \| | \| \| V | \| | \| | \| | Q |
| 16+50 | 365.2308 | 1938.50 | \| | \| \| V | Q | \| | \| | \| |
| 16+55 | 375.9853 | 1561.56 | \| | \| \| Q | V | \| | \| | \| |
| 17+ 0 | 385.5246 | 1385.10 | \| | \| Q\| | V | \| | \| | \| |
| 17+ 5 | 394.3893 | 1287.16 | \| | \| Q \| | V | \| | \| | \| |
| 17+10 | 402.4985 | 1177.45 | \| | \| Q | \| | V | \| | \| | \| |
| 17+15 | 410.1809 | 1115.49 | \| | \| Q | \| | V | \| | \| | \| |
| 17+20 | 417.2800 | 1030.79 | \| | \| Q | \| | V\| | \| | \| |
| 17+25 | 423.9709 | 971.51 | \| | \| Q | \| | V\| | \| | \| |
| 17+30 | 430.1762 | 901.01 | \| | \| Q | \| | V | \| | \| |
| 17+35 | 435.9912 | 844.33 | \| | \| Q | \| | V | \| | \| |
| 17+40 | 441.4095 | 786.74 | \| | \|Q | \| | V | \| | \| |
| 17+45 | 446.4156 | 726.90 | \| | Q | \| | \| | V | \| | \| |
| 17+50 | 451.0965 | 679.66 | \| | Q\| | \| | \| | V | \| | \| |
| 17+55 | 455.4666 | 634.54 | \| | Q\| | \| | \| | V | \| | \| |
| 18+ 0 | 459.6079 | 601.32 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+ 5 | 463.4980 | 564.85 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+10 | 467.1958 | 536.91 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+15 | 470.6554 | 502.33 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+20 | 473.9500 | 478.38 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+25 | 477.0269 | 446.77 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+30 | 479.9703 | 427.38 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+35 | 482.7549 | 404.32 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+40 | 485.4166 | 386.48 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+45 | 487.9042 | 361.20 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+50 | 490.2677 | 343.18 | \| | Q \| | \| | \| | \| V | \| | \| |
| 18+55 | 492.4524 | 317.22 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+ 0 | 494.5307 | 301.77 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+ 5 | 496.5436 | 292.27 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+10 | 498.4962 | 283.52 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+15 | 500.3806 | 273.60 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+20 | 502.2028 | 264.59 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+25 | 503.9751 | 257.35 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+30 | 505.6986 | 250.25 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+35 | 507.3624 | 241.59 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+40 | 508.9633 | 232.45 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+45 | 510.5273 | 227.09 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+50 | 512.0584 | 222.32 | \| | Q \| | \| | \| | \| V | \| | \| |
| 19+55 | 513.5626 | 218.41 | \| | Q \| | \| | \| | \| V | \| | \| |
| 20+ 0 | 515.0466 | 215.47 | \| | Q \| | \| | \| | \| V | \| | \| |
| 20+ 5 | 516.5024 | 211.38 | \| | Q \| | \| | \| | \| V | \| | \| |
| 20+10 | 517.9280 | 207.00 | \| | Q \| | \| | \| | \| V | \| | \| |
| 20+15 | 519.3192 | 202.01 | \| | Q \| | \| | \| | \| V | \| | \| |

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|---|---|---|---|---|---|---|---|
| 20+20 | 520.6595 | 194.61 | Q | | | | V |
| 20+25 | 521.9690 | 190.14 | Q | | | | V |
| 20+30 | 523.2539 | 186.56 | Q | | | | V |
| 20+35 | 524.5140 | 182.97 | Q | | | | V |
| 20+40 | 525.7400 | 178.01 | Q | | | | V |
| 20+45 | 526.9395 | 174.16 | Q | | | | V |
| 20+50 | 528.1178 | 171.09 | Q | | | | V |
| 20+55 | 529.2811 | 168.91 | Q | | | | V |
| 21+ 0 | 530.3990 | 162.32 | Q | | | | V |
| 21+ 5 | 531.4964 | 159.34 | Q | | | | V |
| 21+10 | 532.5763 | 156.80 | Q | | | | V |
| 21+15 | 533.6400 | 154.45 | Q | | | | V |
| 21+20 | 534.6877 | 152.13 | Q | | | | V |
| 21+25 | 535.7200 | 149.89 | Q | | | | V |
| 21+30 | 536.7362 | 147.56 | Q | | | | V |
| 21+35 | 537.7371 | 145.33 | Q | | | | V |
| 21+40 | 538.7247 | 143.40 | Q | | | | V |
| 21+45 | 539.6996 | 141.56 | Q | | | | V |
| 21+50 | 540.6623 | 139.79 | Q | | | | V |
| 21+55 | 541.6131 | 138.05 | Q | | | | V |
| 22+ 0 | 542.5527 | 136.42 | Q | | | | V |
| 22+ 5 | 543.4814 | 134.85 | Q | | | | V |
| 22+10 | 544.3996 | 133.33 | Q | | | | V |
| 22+15 | 545.3076 | 131.85 | Q | | | | V |
| 22+20 | 546.2058 | 130.42 | Q | | | | V |
| 22+25 | 547.0944 | 129.02 | Q | | | | V |
| 22+30 | 547.9737 | 127.67 | Q | | | | V |
| 22+35 | 548.8440 | 126.36 | Q | | | | V |
| 22+40 | 549.7055 | 125.09 | Q | | | | V |
| 22+45 | 550.5584 | 123.85 | Q | | | | V |
| 22+50 | 551.4031 | 122.64 | Q | | | | V |
| 22+55 | 552.2396 | 121.46 | Q | | | | V |
| 23+ 0 | 553.0682 | 120.31 | Q | | | | V |
| 23+ 5 | 553.8891 | 119.19 | Q | | | | V |
| 23+10 | 554.7024 | 118.10 | Q | | | | V |
| 23+15 | 555.5084 | 117.03 | Q | | | | V |
| 23+20 | 556.3073 | 115.99 | Q | | | | V |
| 23+25 | 557.0991 | 114.97 | Q | | | | V |
| 23+30 | 557.8840 | 113.98 | Q | | | | V |
| 23+35 | 558.6623 | 113.00 | Q | | | | V |
| 23+40 | 559.4340 | 112.05 | Q | | | | V |
| 23+45 | 560.1993 | 111.12 | Q | | | | V |
| 23+50 | 560.9583 | 110.21 | Q | | | | V |
| 23+55 | 561.7111 | 109.32 | Q | | | | V |
| 24+ 0 | 562.4580 | 108.44 | Q | | | | V |
| 24+ 5 | 563.1939 | 106.86 | Q | | | | V |
| 24+10 | 563.9126 | 104.35 | Q | | | | V |
| 24+15 | 564.6096 | 101.21 | Q | | | | V |
| 24+20 | 565.2806 | 97.42 | Q | | | | V |
| 24+25 | 565.9208 | 92.96 | Q | | | | V |
| 24+30 | 566.5203 | 87.04 | Q | | | | V |
| 24+35 | 567.0682 | 79.56 | Q | | | | V |
| 24+40 | 567.5403 | 68.55 | Q | | | | V |
| 24+45 | 567.9039 | 52.80 | Q | | | | V |
| 24+50 | 568.2101 | 44.46 | Q | | | | V |
| 24+55 | 568.4775 | 38.82 | Q | | | | V |
| 25+ 0 | 568.7139 | 34.33 | Q | | | | V |
| 25+ 5 | 568.9241 | 30.52 | Q | | | | V |
| 25+10 | 569.1128 | 27.41 | Q | | | | V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25+15 | 569.2814 | 24.47 | Q | \| | \| | \| | V\| |
| 25+20 | 569.4327 | 21.97 | Q | \| | \| | \| | V\| |
| 25+25 | 569.5682 | 19.67 | Q | \| | \| | \| | V\| |
| 25+30 | 569.6899 | 17.67 | Q | \| | \| | \| | V\| |
| 25+35 | 569.7991 | 15.86 | Q | \| | \| | \| | V\| |
| 25+40 | 569.8970 | 14.22 | Q | \| | \| | \| | V\| |
| 25+45 | 569.9846 | 12.71 | Q | \| | \| | \| | V\| |
| 25+50 | 570.0627 | 11.34 | Q | \| | \| | \| | V\| |
| 25+55 | 570.1325 | 10.13 | Q | \| | \| | \| | V\| |
| 26+ 0 | 570.1944 | 9.00 | Q | \| | \| | \| | V\| |
| 26+ 5 | 570.2494 | 7.99 | Q | \| | \| | \| | V\| |
| 26+10 | 570.2980 | 7.04 | Q | \| | \| | \| | V\| |
| 26+15 | 570.3409 | 6.24 | Q | \| | \| | \| | V\| |
| 26+20 | 570.3786 | 5.48 | Q | \| | \| | \| | V\| |
| 26+25 | 570.4121 | 4.86 | Q | \| | \| | \| | V\| |
| 26+30 | 570.4415 | 4.27 | Q | \| | \| | \| | V\| |
| 26+35 | 570.4673 | 3.75 | Q | \| | \| | \| | V\| |
| 26+40 | 570.4897 | 3.26 | Q | \| | \| | \| | V\| |
| 26+45 | 570.5095 | 2.87 | Q | \| | \| | \| | V\| |
| 26+50 | 570.5269 | 2.52 | Q | \| | \| | \| | V\| |
| 26+55 | 570.5428 | 2.31 | Q | \| | \| | \| | V\| |
| 27+ 0 | 570.5575 | 2.13 | Q | \| | \| | \| | V\| |
| 27+ 5 | 570.5710 | 1.97 | Q | \| | \| | \| | V\| |
| 27+10 | 570.5834 | 1.80 | Q | \| | \| | \| | V\| |
| 27+15 | 570.5948 | 1.65 | Q | \| | \| | \| | V\| |
| 27+20 | 570.6051 | 1.51 | Q | \| | \| | \| | V\| |
| 27+25 | 570.6146 | 1.37 | Q | \| | \| | \| | V\| |
| 27+30 | 570.6231 | 1.23 | Q | \| | \| | \| | V\| |
| 27+35 | 570.6308 | 1.12 | Q | \| | \| | \| | V\| |
| 27+40 | 570.6379 | 1.03 | Q | \| | \| | \| | V\| |
| 27+45 | 570.6444 | 0.95 | Q | \| | \| | \| | V\| |
| 27+50 | 570.6503 | 0.86 | Q | \| | \| | \| | V\| |
| 27+55 | 570.6557 | 0.78 | Q | \| | \| | \| | V\| |
| 28+ 0 | 570.6603 | 0.68 | Q | \| | \| | \| | V\| |
| 28+ 5 | 570.6643 | 0.58 | Q | \| | \| | \| | V\| |
| 28+10 | 570.6676 | 0.48 | Q | \| | \| | \| | V\| |
| 28+15 | 570.6702 | 0.38 | Q | \| | \| | \| | V\| |
| 28+20 | 570.6725 | 0.32 | Q | \| | \| | \| | V\| |
| 28+25 | 570.6743 | 0.27 | Q | \| | \| | \| | V\| |
| 28+30 | 570.6758 | 0.22 | Q | \| | \| | \| | V\| |
| 28+35 | 570.6769 | 0.16 | Q | \| | \| | \| | V\| |
| 28+40 | 570.6778 | 0.13 | Q | \| | \| | \| | V\| |
| 28+45 | 570.6785 | 0.10 | Q | \| | \| | \| | V\| |
| 28+50 | 570.6789 | 0.07 | Q | \| | \| | \| | V\| |
| 28+55 | 570.6791 | 0.03 | Q | \| | \| | \| | V\| |
| 29+ 0 | 570.6793 | 0.02 | Q | \| | \| | \| | V\| |
| 29+ 5 | 570.6794 | 0.02 | Q | \| | \| | \| | V\| |
| 29+10 | 570.6795 | 0.01 | Q | \| | \| | \| | V\| |
| 29+15 | 570.6795 | 0.01 | Q | \| | \| | \| | V\| |
| 29+20 | 570.6796 | 0.01 | Q | \| | \| | \| | V\| |
| 29+25 | 570.6796 | 0.00 | Q | \| | \| | \| | V\| |

**********HYDROGRAPH DATA**********

Number of intervals = 353
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2799.507 (CFS)
Total volume = 570.680 (Ac.Ft)

Status of hydrographs being held in storage

| Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 2.000 to Point/Station 2.100
**** STREAM ROUTING SCS CONVEX METHOD ****

HYDROGRAPH STREAM ROUTING DATA:
Length of stream = 42866.00 (Ft.)
Elevation difference = 1046.10 (Ft.)
Slope of channel = 0.024404 (Vert/Horiz)
Channel type - Improved Channel

Channel length = 42866.00(Ft.) Elevation difference = 1046.10(Ft.)
Channel evaluation using mean flow rate of hydrograph
Channel base width = 100.000(Ft.)
Slope or 'Z' of left channel bank = 2.000
Slope or 'Z' of right channel bank = 2.000
Manning's 'N' = 0.035
Maximum depth of channel = 3.000(Ft.)
Flow(q) thru subarea = 268.931(CFS)
Depth of flow = 0.581(Ft.)
Average velocity = 4.575(Ft/s)
Total flow rate = 268.931(CFS)
Channel flow top width = 102.324(Ft.)
Depth of flow in channel = 0.58(Ft.)
Total number of channels (same dimensions) = 1
Flow Velocity = 4.58(Ft/s)
Travel time = 156.15 min.
Individual channel flow = 268.931(CFS)
Total capacity of improved channels = 268.931(CFS)
Critical Depth in Channel = 0.61(Ft.)

Channel evaluation using maximum flow rate of hydrograph
Flow(q) thru subarea = 2799.507(CFS)
Depth of flow = 2.359(Ft.)
Average velocity = 11.335(Ft/s)
Total flow rate = 2799.507(CFS)
Channel flow top width = 109.434(Ft.)
Depth of flow in channel = 2.36(Ft.)
Total number of channels (same dimensions) = 1
Flow Velocity = 11.33(Ft/s)
Travel time = 156.15 min.
Individual channel flow = 2799.507(CFS)
Total capacity of improved channels = 2799.507(CFS)
Critical Depth in Channel = 2.84(Ft.)

********** SCS CONVEX CHANNEL ROUTING **********
Convex method of stream routing data items:
Using equation: Outflow =
O(t+dt) = (1-c*)O(t+dt-dt*) + Input(c*)
where c* = 1 - (1-c)^e and dt = c(length)/velocity

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          c(v/v+1.7) =   0.8696   Travel time =  63.03 (min.)
        dt*(unit time interval) =   5.00(min.),  e=   0.3942
        dt(routing time-step) =  54.81 (min.),   c* =   0.5520

     Output hydrograph delayed by 0  unit time increments


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                      P R I N T  O F  S T O R M
                   R u n o f f     H y d r o g r a p h
     ---------------------------------------------------------------------
                Hydrograph in   5   Minute intervals (CFS)

     ---------------------------------------------------------------------
Time(h+m) Out = O(CFS) In = I  0      699.9    1399.8    2099.6    2799.5
-----------------------------------------------------------------------
  0+ 5       0.3666      0.73  O         |         |         |         |
  0+10       1.4080      2.41  O         |         |         |         |
  0+15       3.1372      4.76  O         |         |         |         |
  0+20       5.5516      7.79  O         |         |         |         |
  0+25       8.6694     11.54  O         |         |         |         |
  0+30      12.9025     16.82  O         |         |         |         |
  0+35      18.5225     23.71  O         |         |         |         |
  0+40      26.6656     34.24  O         |         |         |         |
  0+45      38.5617     49.62  O         |         |         |         |
  0+50      48.7396     57.74  O         |         |         |         |
  0+55      56.4711     63.25  O         |         |         |         |
  1+ 0      62.4326     67.68  O         |         |         |         |
  1+ 5      67.2262     71.46  OI        |         |         |         |
  1+10      71.1386     74.60  |O        |         |         |         |
  1+15      74.5528     77.60  |O        |         |         |         |
  1+20      77.5304     80.18  |O        |         |         |         |
  1+25      80.2144     82.61  |O        |         |         |         |
  1+30      82.6127     84.75  |O        |         |         |         |
  1+35      84.7921     86.74  |O        |         |         |         |
  1+40      86.7895     88.58  |O        |         |         |         |
  1+45      88.6415     90.30  |O        |         |         |         |
  1+50      90.3620     91.90  |O        |         |         |         |
  1+55      91.9487     93.37  |O        |         |         |         |
  2+ 0      93.4347     94.77  |O        |         |         |         |
  2+ 5      94.8202     96.06  |O        |         |         |         |
  2+10      96.1276     97.30  |O        |         |         |         |
  2+15      97.3386     98.42  |O        |         |         |         |
  2+20      98.4778     99.50  |O        |         |         |         |
  2+25      99.5239    100.46  |O        |         |         |         |
  2+30     100.5074    101.39  |O        |         |         |         |
  2+35     101.4339    102.27  |O        |         |         |         |
  2+40     102.3185    103.11  |O        |         |         |         |
  2+45     103.1405    103.88  |O        |         |         |         |
  2+50     103.9112    104.60  |O        |         |         |         |
  2+55     104.5997    105.21  |O        |         |         |         |
  3+ 0     105.2195    105.77  |O        |         |         |         |
  3+ 5     105.8137    106.35  |O        |         |         |         |
  3+10     106.3940    106.92  |O        |         |         |         |
  3+15     106.9679    107.49  |O        |         |         |         |
  3+20     107.5301    108.04  |O        |         |         |         |
  3+25     108.0942    108.60  |O        |         |         |         |
  3+30     108.6568    109.16  |O        |         |         |         |
  3+35     109.2173    109.72  |O        |         |         |         |
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|---|---|---|---|---|---|---|---|
| 3+40 | 109.7583 | 110.24 | O | | | | |
| 3+45 | 110.2968 | 110.78 | O | | | | |
| 3+50 | 110.8316 | 111.31 | O | | | | |
| 3+55 | 111.3749 | 111.87 | O | | | | |
| 4+ 0 | 111.9260 | 112.42 | O | | | | |
| 4+ 5 | 112.4902 | 113.00 | O | | | | |
| 4+10 | 113.0579 | 113.57 | O | | | | |
| 4+15 | 113.6336 | 114.15 | O | | | | |
| 4+20 | 114.1939 | 114.70 | O | | | | |
| 4+25 | 114.7512 | 115.25 | O | | | | |
| 4+30 | 115.3040 | 115.80 | O | | | | |
| 4+35 | 115.8637 | 116.37 | O | | | | |
| 4+40 | 116.4162 | 116.91 | O | | | | |
| 4+45 | 116.9706 | 117.47 | O | | | | |
| 4+50 | 117.5228 | 118.02 | O | | | | |
| 4+55 | 118.0890 | 118.60 | O | | | | |
| 5+ 0 | 118.6418 | 119.14 | O | | | | |
| 5+ 5 | 119.1958 | 119.70 | O | | | | |
| 5+10 | 119.7474 | 120.25 | O | | | | |
| 5+15 | 120.3079 | 120.81 | O | | | | |
| 5+20 | 120.8696 | 121.38 | O | | | | |
| 5+25 | 121.4422 | 121.96 | O | | | | |
| 5+30 | 122.0158 | 122.53 | O | | | | |
| 5+35 | 122.5996 | 123.13 | O | | | | |
| 5+40 | 123.1848 | 123.71 | O | | | | |
| 5+45 | 123.7818 | 124.32 | O | | | | |
| 5+50 | 124.3810 | 124.92 | O | | | | |
| 5+55 | 124.9926 | 125.55 | O | | | | |
| 6+ 0 | 125.6068 | 126.16 | O | | | | |
| 6+ 5 | 126.2338 | 126.80 | O | | | | |
| 6+10 | 126.8636 | 127.43 | O | | | | |
| 6+15 | 127.5067 | 128.09 | O | | | | |
| 6+20 | 128.1528 | 128.74 | O | | | | |
| 6+25 | 128.8127 | 129.41 | O | | | | |
| 6+30 | 129.4758 | 130.07 | O | | | | |
| 6+35 | 130.1532 | 130.77 | O | | | | |
| 6+40 | 130.8341 | 131.45 | O | | | | |
| 6+45 | 131.5297 | 132.16 | O | | | | |
| 6+50 | 132.2291 | 132.86 | O | | | | |
| 6+55 | 132.9438 | 133.59 | O | | | | |
| 7+ 0 | 133.6625 | 134.31 | O | | | | |
| 7+ 5 | 134.3972 | 135.06 | O | | | | |
| 7+10 | 135.1360 | 135.80 | O | | | | |
| 7+15 | 135.8915 | 136.58 | O | | | | |
| 7+20 | 136.6515 | 137.34 | O | | | | |
| 7+25 | 137.4288 | 138.13 | O | | | | |
| 7+30 | 138.2109 | 138.92 | O | | | | |
| 7+35 | 139.0111 | 139.74 | O | | | | |
| 7+40 | 139.8164 | 140.54 | OI | | | | |
| 7+45 | 140.6405 | 141.39 | O | | | | |
| 7+50 | 141.4701 | 142.22 | O | | | | |
| 7+55 | 142.3192 | 143.09 | O | | | | |
| 8+ 0 | 143.1743 | 143.95 | O | | | | |
| 8+ 5 | 144.0499 | 144.84 | O | | | | |
| 8+10 | 144.9318 | 145.73 | O | | | | |
| 8+15 | 145.8351 | 146.65 | O | | | | |
| 8+20 | 146.7451 | 147.57 | O | | | | |
| 8+25 | 147.6776 | 148.52 | O | | | | |
| 8+30 | 148.6173 | 149.47 | O | | | | |

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|---|---|---|---|---|---|---|---|
| 8+35 | 149.5804 | 150.45 | O | | | | |
| 8+40 | 150.5514 | 151.43 | O | | | | |
| 8+45 | 151.5468 | 152.45 | O | | | | |
| 8+50 | 152.5508 | 153.46 | O | | | | |
| 8+55 | 153.5804 | 154.51 | O | | | | |
| 9+ 0 | 154.6191 | 155.56 | O | | | | |
| 9+ 5 | 155.6848 | 156.65 | O | | | | |
| 9+10 | 156.7603 | 157.73 | O | | | | |
| 9+15 | 157.8641 | 158.86 | O | | | | |
| 9+20 | 158.9786 | 159.99 | O | | | | |
| 9+25 | 160.1228 | 161.16 | O | | | | |
| 9+30 | 161.2785 | 162.32 | O | | | | |
| 9+35 | 162.4656 | 163.54 | O | | | | |
| 9+40 | 163.6650 | 164.75 | O | | | | |
| 9+45 | 164.8977 | 166.01 | O | | | | |
| 9+50 | 166.1436 | 167.27 | O | | | | |
| 9+55 | 167.4246 | 168.58 | O | | | | |
| 10+ 0 | 168.7200 | 169.89 | O | | | | |
| 10+ 5 | 170.0526 | 171.26 | O | | | | |
| 10+10 | 171.4007 | 172.62 | O | | | | |
| 10+15 | 172.7882 | 174.04 | O | | | | |
| 10+20 | 174.1927 | 175.46 | O | | | | |
| 10+25 | 175.6389 | 176.95 | O | | | | |
| 10+30 | 177.1036 | 178.43 | O | | | | |
| 10+35 | 178.6126 | 179.98 | O | | | | |
| 10+40 | 180.1417 | 181.52 | O | | | | |
| 10+45 | 181.7181 | 183.15 | O | | | | |
| 10+50 | 183.3164 | 184.76 | O | | | | |
| 10+55 | 184.9651 | 186.46 | O | | | | |
| 11+ 0 | 186.6378 | 188.15 | O | | | | |
| 11+ 5 | 188.3644 | 189.93 | O | | | | |
| 11+10 | 190.1173 | 191.70 | O | | | | |
| 11+15 | 191.9279 | 193.57 | O | | | | |
| 11+20 | 193.7673 | 195.43 | O | | | | |
| 11+25 | 195.6688 | 197.39 | O | | | | |
| 11+30 | 197.6019 | 199.35 | O | | | | |
| 11+35 | 199.6017 | 201.41 | O | | | | |
| 11+40 | 201.6365 | 203.48 | O | | | | |
| 11+45 | 203.7433 | 205.65 | O | | | | |
| 11+50 | 205.8887 | 207.83 | O | | | | |
| 11+55 | 208.1120 | 210.13 | OI | | | | |
| 12+ 0 | 210.3780 | 212.43 | O | | | | |
| 12+ 5 | 212.7309 | 214.86 | O | | | | |
| 12+10 | 215.1355 | 217.31 | O | | | | |
| 12+15 | 217.6363 | 219.90 | O | | | | |
| 12+20 | 220.1944 | 222.51 | O | | | | |
| 12+25 | 222.8574 | 225.27 | O | | | | |
| 12+30 | 225.5866 | 228.06 | O | | | | |
| 12+35 | 228.4347 | 231.02 | O | | | | |
| 12+40 | 231.3648 | 234.02 | O | | | | |
| 12+45 | 234.4396 | 237.23 | O | | | | |
| 12+50 | 237.5790 | 240.42 | O | | | | |
| 12+55 | 240.8379 | 243.79 | O | | | | |
| 13+ 0 | 244.1710 | 247.19 | O | | | | |
| 13+ 5 | 247.6462 | 250.80 | O | | | | |
| 13+10 | 251.2127 | 254.44 | O | | | | |
| 13+15 | 254.9429 | 258.33 | O | | | | |
| 13+20 | 258.7809 | 262.25 | O | | | | |
| 13+25 | 262.8044 | 266.45 | O | | | | |

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|---|---|---|---|---|---|---|---|
| 13+30 | 266.9534 | 270.71 | O | | | | |
| 13+35 | 271.3125 | 275.27 | O | | | | |
| 13+40 | 275.8180 | 279.90 | O | | | | |
| 13+45 | 280.5634 | 284.87 | O | | | | |
| 13+50 | 285.4802 | 289.93 | O | | | | |
| 13+55 | 290.6722 | 295.38 | O | | | | |
| 14+ 0 | 296.0666 | 300.95 | O | | | | |
| 14+ 5 | 302.2895 | 307.98 | O | | | | |
| 14+10 | 309.6926 | 316.48 | O | | | | |
| 14+15 | 318.4306 | 326.43 | O | | | | |
| 14+20 | 328.4200 | 337.54 | O | | | | |
| 14+25 | 339.8422 | 350.28 | OI | | | | |
| 14+30 | 353.1852 | 365.40 | O | | | | |
| 14+35 | 369.0092 | 383.51 | O | | | | |
| 14+40 | 388.8082 | 407.02 | O | | | | |
| 14+45 | 414.5130 | 438.22 | OI | | | | |
| 14+50 | 438.4421 | 459.84 | O | | | | |
| 14+55 | 459.8353 | 478.94 | O | | | | |
| 15+ 0 | 479.5109 | 497.14 | OI | | | | |
| 15+ 5 | 498.6146 | 515.83 | O | | | | |
| 15+10 | 517.4362 | 534.41 | O | | | | |
| 15+15 | 536.9086 | 554.55 | O | | | | |
| 15+20 | 557.0342 | 575.26 | OI | | | | |
| 15+25 | 577.2832 | 595.57 | O | | | | |
| 15+30 | 596.5541 | 613.87 | O | | | | |
| 15+35 | 615.6119 | 632.81 | OI | | | | |
| 15+40 | 634.5906 | 651.72 | O | | | | |
| 15+45 | 654.7177 | 673.00 | O | | | | |
| 15+50 | 675.1985 | 693.71 | O | | | | |
| 15+55 | 698.3971 | 719.59 | OI | | | | |
| 16+ 0 | 724.9415 | 749.19 | O | | | | |
| 16+ 5 | 788.3198 | 848.86 | OI | | | | |
| 16+10 | 896.3311 | 997.57 | O I | | | | |
| 16+15 | 1019.1138 | 1130.94 | O I | | | | |
| 16+20 | 1151.7896 | 1272.39 | O I | | | | |
| 16+25 | 1300.5605 | 1436.27 | O I | | | | |
| 16+30 | 1503.1870 | 1690.89 | O I | | | | |
| 16+35 | 1748.6433 | 1973.68 | O I | | | | |
| 16+40 | 2087.4145 | 2401.42 | O | I | | | |
| 16+45 | 2460.4210 | 2799.51 | O | I | | | |
| 16+50 | 2215.6922 | 1938.50 | I | O | | | |
| 16+55 | 1873.6139 | 1561.56 | I O | | | | |
| 17+ 0 | 1612.8535 | 1385.10 | I O | | | | |
| 17+ 5 | 1438.0147 | 1287.16 | I O | | | | |
| 17+10 | 1299.7154 | 1177.45 | I O | | | | |
| 17+15 | 1201.1482 | 1115.49 | I O | | | | |
| 17+20 | 1111.3813 | 1030.79 | IO | | | | |
| 17+25 | 1037.1639 | 971.51 | IO | | | | |
| 17+30 | 965.5639 | 901.01 | IO | | | | |
| 17+35 | 901.5022 | 844.33 | O | | | | |
| 17+40 | 841.0550 | 786.74 | IO | | | | |
| 17+45 | 781.0565 | 726.90 | IO | | | | |
| 17+50 | 727.4650 | 679.66 | IO | | | | |
| 17+55 | 678.4472 | 634.54 | O | | | | |
| 18+ 0 | 637.5465 | 601.32 | IO | | | | |
| 18+ 5 | 599.2560 | 564.85 | O | | | | |
| 18+10 | 566.2515 | 536.91 | IO | | | | |
| 18+15 | 532.7107 | 502.33 | O | | | | |
| 18+20 | 503.9269 | 478.38 | IO | | | | |

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|---|---|---|---|---|---|---|
| 18+25 | 473.9686 | 446.77 | O | | | |
| 18+30 | 449.2290 | 427.38 | O | | | |
| 18+35 | 425.6035 | 404.32 | IO | | | |
| 18+40 | 404.9091 | 386.48 | O | | | |
| 18+45 | 382.0553 | 361.20 | O | | | |
| 18+50 | 361.5056 | 343.18 | IO | | | |
| 18+55 | 338.3692 | 317.22 | O | | | |
| 19+ 0 | 318.9469 | 301.77 | O | | | |
| 19+ 5 | 304.7004 | 292.27 | O | | | |
| 19+10 | 293.4495 | 283.52 | O | | | |
| 19+15 | 282.9945 | 273.60 | IO | | | |
| 19+20 | 273.2878 | 264.59 | O | | | |
| 19+25 | 264.8532 | 257.35 | O | | | |
| 19+30 | 257.1494 | 250.25 | O | | | |
| 19+35 | 248.9947 | 241.59 | O | | | |
| 19+40 | 240.3247 | 232.45 | O | | | |
| 19+45 | 233.2884 | 227.09 | O | | | |
| 19+50 | 227.4750 | 222.32 | O | | | |
| 19+55 | 222.6676 | 218.41 | O | | | |
| 20+ 0 | 218.8425 | 215.47 | O | | | |
| 20+ 5 | 214.9293 | 211.38 | O | | | |
| 20+10 | 210.7723 | 207.00 | IO | | | |
| 20+15 | 206.1847 | 202.01 | O | | | |
| 20+20 | 200.1687 | 194.61 | O | | | |
| 20+25 | 194.8606 | 190.14 | O | | | |
| 20+30 | 190.4594 | 186.56 | O | | | |
| 20+35 | 186.5077 | 182.97 | O | | | |
| 20+40 | 182.0689 | 178.01 | O | | | |
| 20+45 | 177.8985 | 174.16 | O | | | |
| 20+50 | 174.2969 | 171.09 | O | | | |
| 20+55 | 171.4311 | 168.91 | O | | | |
| 21+ 0 | 166.7349 | 162.32 | O | | | |
| 21+ 5 | 162.8052 | 159.34 | O | | | |
| 21+10 | 159.6169 | 156.80 | O | | | |
| 21+15 | 156.8819 | 154.45 | O | | | |
| 21+20 | 154.3753 | 152.13 | O | | | |
| 21+25 | 152.0128 | 149.89 | O | | | |
| 21+30 | 149.6704 | 147.56 | O | | | |
| 21+35 | 147.3854 | 145.33 | O | | | |
| 21+40 | 145.2821 | 143.40 | O | | | |
| 21+45 | 143.3207 | 141.56 | O | | | |
| 21+50 | 141.4589 | 139.79 | IO | | | |
| 21+55 | 139.6654 | 138.05 | O | | | |
| 22+ 0 | 137.9577 | 136.42 | O | | | |
| 22+ 5 | 136.3215 | 134.85 | O | | | |
| 22+10 | 134.7449 | 133.33 | O | | | |
| 22+15 | 133.2208 | 131.85 | O | | | |
| 22+20 | 131.7447 | 130.42 | O | | | |
| 22+25 | 130.3131 | 129.02 | O | | | |
| 22+30 | 128.9244 | 127.67 | O | | | |
| 22+35 | 127.5771 | 126.36 | O | | | |
| 22+40 | 126.2680 | 125.09 | O | | | |
| 22+45 | 124.9949 | 123.85 | O | | | |
| 22+50 | 123.7557 | 122.64 | O | | | |
| 22+55 | 122.5487 | 121.46 | O | | | |
| 23+ 0 | 121.3726 | 120.31 | O | | | |
| 23+ 5 | 120.2259 | 119.19 | O | | | |
| 23+10 | 119.1073 | 118.10 | O | | | |
| 23+15 | 118.0158 | 117.03 | O | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23+20 | 116.9501 | 115.99 | \|O | \| | \| | \| | \| |
| 23+25 | 115.9093 | 114.97 | \|O | \| | \| | \| | \| |
| 23+30 | 114.8923 | 113.98 | \|O | \| | \| | \| | \| |
| 23+35 | 113.8983 | 113.00 | \|O | \| | \| | \| | \| |
| 23+40 | 112.9265 | 112.05 | \|O | \| | \| | \| | \| |
| 23+45 | 111.9759 | 111.12 | \|O | \| | \| | \| | \| |
| 23+50 | 111.0459 | 110.21 | \|O | \| | \| | \| | \| |
| 23+55 | 110.1356 | 109.32 | \|O | \| | \| | \| | \| |
| 24+ 0 | 109.2445 | 108.44 | \|O | \| | \| | \| | \| |
| 24+ 5 | 108.0060 | 106.86 | \|O | \| | \| | \| | \| |
| 24+10 | 106.1154 | 104.35 | \|O | \| | \| | \| | \| |
| 24+15 | 103.5659 | 101.21 | \|O | \| | \| | \| | \| |
| 24+20 | 100.3664 | 97.42 | \|O | \| | \| | \| | \| |
| 24+25 | 96.5050 | 92.96 | \|O | \| | \| | \| | \| |
| 24+30 | 91.5769 | 87.04 | \|O | \| | \| | \| | \| |
| 24+35 | 85.3213 | 79.56 | \|O | \| | \| | \| | \| |
| 24+40 | 76.6177 | 68.55 | IO | \| | \| | \| | \| |
| 24+45 | 64.2622 | 52.80 | O | \| | \| | \| | \| |
| 24+50 | 53.7502 | 44.46 | O | \| | \| | \| | \| |
| 24+55 | 45.7955 | 38.82 | O | \| | \| | \| | \| |
| 25+ 0 | 39.6914 | 34.33 | O | \| | \| | \| | \| |
| 25+ 5 | 34.8228 | 30.52 | O | \| | \| | \| | \| |
| 25+10 | 30.8855 | 27.41 | O | \| | \| | \| | \| |
| 25+15 | 27.4930 | 24.47 | O | \| | \| | \| | \| |
| 25+20 | 24.5723 | 21.97 | O | \| | \| | \| | \| |
| 25+25 | 21.9815 | 19.67 | O | \| | \| | \| | \| |
| 25+30 | 19.7036 | 17.67 | O | \| | \| | \| | \| |
| 25+35 | 17.6744 | 15.86 | O | \| | \| | \| | \| |
| 25+40 | 15.8486 | 14.22 | O | \| | \| | \| | \| |
| 25+45 | 14.1935 | 12.71 | O | \| | \| | \| | \| |
| 25+50 | 12.6875 | 11.34 | O | \| | \| | \| | \| |
| 25+55 | 11.3373 | 10.13 | O | \| | \| | \| | \| |
| 26+ 0 | 10.1021 | 9.00 | O | \| | \| | \| | \| |
| 26+ 5 | 8.9869 | 7.99 | O | \| | \| | \| | \| |
| 26+10 | 7.9617 | 7.04 | O | \| | \| | \| | \| |
| 26+15 | 7.0502 | 6.24 | O | \| | \| | \| | \| |
| 26+20 | 6.2203 | 5.48 | O | \| | \| | \| | \| |
| 26+25 | 5.4989 | 4.86 | O | \| | \| | \| | \| |
| 26+30 | 4.8482 | 4.27 | O | \| | \| | \| | \| |
| 26+35 | 4.2681 | 3.75 | O | \| | \| | \| | \| |
| 26+40 | 3.7365 | 3.26 | O | \| | \| | \| | \| |
| 26+45 | 3.2800 | 2.87 | O | \| | \| | \| | \| |
| 26+50 | 2.8802 | 2.52 | O | \| | \| | \| | \| |
| 26+55 | 2.5739 | 2.31 | O | \| | \| | \| | \| |
| 27+ 0 | 2.3401 | 2.13 | O | \| | \| | \| | \| |
| 27+ 5 | 2.1418 | 1.97 | O | \| | \| | \| | \| |
| 27+10 | 1.9603 | 1.80 | O | \| | \| | \| | \| |
| 27+15 | 1.7947 | 1.65 | O | \| | \| | \| | \| |
| 27+20 | 1.6434 | 1.51 | O | \| | \| | \| | \| |
| 27+25 | 1.4997 | 1.37 | O | \| | \| | \| | \| |
| 27+30 | 1.3600 | 1.23 | O | \| | \| | \| | \| |
| 27+35 | 1.2318 | 1.12 | O | \| | \| | \| | \| |
| 27+40 | 1.1255 | 1.03 | O | \| | \| | \| | \| |
| 27+45 | 1.0311 | 0.95 | O | \| | \| | \| | \| |
| 27+50 | 0.9423 | 0.86 | O | \| | \| | \| | \| |
| 27+55 | 0.8547 | 0.78 | O | \| | \| | \| | \| |
| 28+ 0 | 0.7612 | 0.68 | O | \| | \| | \| | \| |
| 28+ 5 | 0.6645 | 0.58 | O | \| | \| | \| | \| |
| 28+10 | 0.5665 | 0.48 | O | \| | \| | \| | \| |

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|---|---|---|---|---|---|---|---|
| 28+15 | 0.4706 | 0.38 | Q | | | | |
| 28+20 | 0.3922 | 0.32 | Q | | | | |
| 28+25 | 0.3271 | 0.27 | Q | | | | |
| 28+30 | 0.2685 | 0.22 | Q | | | | |
| 28+35 | 0.2133 | 0.16 | Q | | | | |
| 28+40 | 0.1673 | 0.13 | Q | | | | |
| 28+45 | 0.1297 | 0.10 | Q | | | | |
| 28+50 | 0.0964 | 0.07 | Q | | | | |
| 28+55 | 0.0596 | 0.03 | Q | | | | |
| 29+ 0 | 0.0383 | 0.02 | Q | | | | |
| 29+ 5 | 0.0266 | 0.02 | Q | | | | |
| 29+10 | 0.0193 | 0.01 | Q | | | | |
| 29+15 | 0.0139 | 0.01 | Q | | | | |
| 29+20 | 0.0095 | 0.01 | Q | | | | |
| 29+25 | 0.0054 | 0.00 | Q | | | | |
| 29+30 | 0.0025 | 0.00 | Q | | | | |
| 29+35 | 0.0011 | 0.00 | Q | | | | |
| 29+40 | 0.0000 | 0.00 | Q | | | | |

**********HYDROGRAPH DATA**********

Number of intervals = 356
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2460.421 (CFS)
Total volume = 570.680 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 0.000 | 0.000 | 0.000 | 0.000 |

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Process from Point/Station 2.100 to Point/Station 2.100
**** ADD/COMBINE/RECOVER HYDROGRAPHS ****

**********

********** HYDROGRAPH INFORMATION **********

From study/file name: PR51.rte

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P R I N T O F S T O R M
R u n o f f H y d r o g r a p h

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Hydrograph in 5 Minute intervals (CFS)

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| Time(h+m) | Add q(CFS) | Tot. Q | 0 | 3074.2 | 6148.4 | 9222.7 | 12296.9 |
|---|---|---|---|---|---|---|---|
| 0+ 5 | 2.0272 | 2.39 | Q | | | | |
| 0+10 | 6.1859 | 7.59 | Q | | | | |
| 0+15 | 12.1783 | 15.32 | Q | | | | |
| 0+20 | 19.6178 | 25.17 | Q | | | | |
| 0+25 | 28.8033 | 37.47 | Q | | | | |
| 0+30 | 39.9203 | 52.82 | Q | | | | |
| 0+35 | 52.7660 | 71.29 | Q | | | | |
| 0+40 | 71.5800 | 98.25 | Q | | | | |
| 0+45 | 95.3597 | 133.92 | Q | | | | |
| 0+50 | 126.6819 | 175.42 | Q | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0+55 | 158.4858 | 214.96 | Q | \| | \| | \| | \| |
| 1+ 0 | 191.1291 | 253.56 | Q | \| | \| | \| | \| |
| 1+ 5 | 229.9022 | 297.13 | Q | \| | \| | \| | \| |
| 1+10 | 265.9624 | 337.10 | qQ | \| | \| | \| | \| |
| 1+15 | 290.5118 | 365.06 | qQ | \| | \| | \| | \| |
| 1+20 | 310.1827 | 387.71 | \|Q | \| | \| | \| | \| |
| 1+25 | 327.3188 | 407.53 | \|Q | \| | \| | \| | \| |
| 1+30 | 342.0359 | 424.65 | \|Q | \| | \| | \| | \| |
| 1+35 | 355.7283 | 440.52 | \|Q | \| | \| | \| | \| |
| 1+40 | 368.0343 | 454.82 | \|Q | \| | \| | \| | \| |
| 1+45 | 379.4156 | 468.06 | \|Q | \| | \| | \| | \| |
| 1+50 | 390.0762 | 480.44 | \|Q | \| | \| | \| | \| |
| 1+55 | 400.1301 | 492.08 | \|Q | \| | \| | \| | \| |
| 2+ 0 | 409.7323 | 503.17 | \|Q | \| | \| | \| | \| |
| 2+ 5 | 418.3597 | 513.18 | \|Q | \| | \| | \| | \| |
| 2+10 | 426.8635 | 522.99 | \|Q | \| | \| | \| | \| |
| 2+15 | 435.2337 | 532.57 | \|Q | \| | \| | \| | \| |
| 2+20 | 442.6031 | 541.08 | \|Q | \| | \| | \| | \| |
| 2+25 | 449.6586 | 549.18 | \|Q | \| | \| | \| | \| |
| 2+30 | 456.7573 | 557.26 | \|Q | \| | \| | \| | \| |
| 2+35 | 463.4374 | 564.87 | \|Q | \| | \| | \| | \| |
| 2+40 | 469.6752 | 571.99 | \|Q | \| | \| | \| | \| |
| 2+45 | 475.9390 | 579.08 | \|Q | \| | \| | \| | \| |
| 2+50 | 482.1076 | 586.02 | \|Q | \| | \| | \| | \| |
| 2+55 | 487.8194 | 592.42 | \|Q | \| | \| | \| | \| |
| 3+ 0 | 493.5303 | 598.75 | \|Q | \| | \| | \| | \| |
| 3+ 5 | 499.2367 | 605.05 | \|Q | \| | \| | \| | \| |
| 3+10 | 504.5412 | 610.94 | \|Q | \| | \| | \| | \| |
| 3+15 | 509.7212 | 616.69 | \|qQ | \| | \| | \| | \| |
| 3+20 | 514.9417 | 622.47 | \|qQ | \| | \| | \| | \| |
| 3+25 | 519.8497 | 627.94 | \|qQ | \| | \| | \| | \| |
| 3+30 | 524.4231 | 633.08 | \|qQ | \| | \| | \| | \| |
| 3+35 | 529.0189 | 638.24 | \|qQ | \| | \| | \| | \| |
| 3+40 | 533.5834 | 643.34 | \|qQ | \| | \| | \| | \| |
| 3+45 | 537.9140 | 648.21 | \|qQ | \| | \| | \| | \| |
| 3+50 | 542.2615 | 653.09 | \|qQ | \| | \| | \| | \| |
| 3+55 | 546.6176 | 657.99 | \|qQ | \| | \| | \| | \| |
| 4+ 0 | 550.7938 | 662.72 | \|qQ | \| | \| | \| | \| |
| 4+ 5 | 554.9168 | 667.41 | \|qQ | \| | \| | \| | \| |
| 4+10 | 559.0808 | 672.14 | \|qQ | \| | \| | \| | \| |
| 4+15 | 563.1347 | 676.77 | \|qQ | \| | \| | \| | \| |
| 4+20 | 567.0779 | 681.27 | \|qQ | \| | \| | \| | \| |
| 4+25 | 571.0440 | 685.80 | \|qQ | \| | \| | \| | \| |
| 4+30 | 574.9559 | 690.26 | \|qQ | \| | \| | \| | \| |
| 4+35 | 578.5346 | 694.40 | \|qQ | \| | \| | \| | \| |
| 4+40 | 582.1223 | 698.54 | \|qQ | \| | \| | \| | \| |
| 4+45 | 585.7327 | 702.70 | \|qQ | \| | \| | \| | \| |
| 4+50 | 589.3868 | 706.91 | \|qQ | \| | \| | \| | \| |
| 4+55 | 593.0645 | 711.15 | \|qQ | \| | \| | \| | \| |
| 5+ 0 | 596.7873 | 715.43 | \|qQ | \| | \| | \| | \| |
| 5+ 5 | 600.4367 | 719.63 | \|qQ | \| | \| | \| | \| |
| 5+10 | 604.0174 | 723.76 | \|qQ | \| | \| | \| | \| |
| 5+15 | 607.6227 | 727.93 | \|qQ | \| | \| | \| | \| |
| 5+20 | 611.2752 | 732.14 | \|qQ | \| | \| | \| | \| |
| 5+25 | 614.9536 | 736.40 | \| Q | \| | \| | \| | \| |
| 5+30 | 618.6809 | 740.70 | \| Q | \| | \| | \| | \| |
| 5+35 | 622.4250 | 745.02 | \| Q | \| | \| | \| | \| |
| 5+40 | 626.0463 | 749.23 | \| Q | \| | \| | \| | \| |
| 5+45 | 629.6329 | 753.41 | \| Q | \| | \| | \| | \| |

| | | | | | | |
|---|---|---|---|---|---|---|
| 5+50 | 633.2707 | 757.65 | Q | | | |
| 5+55 | 636.9372 | 761.93 | Q | | | |
| 6+ 0 | 640.6567 | 766.26 | Q | | | |
| 6+ 5 | 644.4061 | 770.64 | Q | | | |
| 6+10 | 648.1825 | 775.05 | Q | | | |
| 6+15 | 651.8812 | 779.39 | Q | | | |
| 6+20 | 655.6257 | 783.78 | Q | | | |
| 6+25 | 659.4023 | 788.22 | Q | | | |
| 6+30 | 663.2376 | 792.71 | Q | | | |
| 6+35 | 667.1065 | 797.26 | Q | | | |
| 6+40 | 671.0365 | 801.87 | Q | | | |
| 6+45 | 674.9926 | 806.52 | Q | | | |
| 6+50 | 679.0009 | 811.23 | Q | | | |
| 6+55 | 683.0460 | 815.99 | Q | | | |
| 7+ 0 | 687.1571 | 820.82 | Q | | | |
| 7+ 5 | 691.3068 | 825.70 | Q | | | |
| 7+10 | 695.5251 | 830.66 | Q | | | |
| 7+15 | 699.7827 | 835.67 | Q | | | |
| 7+20 | 704.0890 | 840.74 | Q | | | |
| 7+25 | 708.4291 | 845.86 | Q | | | |
| 7+30 | 712.8437 | 851.05 | Q | | | |
| 7+35 | 717.3029 | 856.31 | Q | | | |
| 7+40 | 721.8398 | 861.66 | Q | | | |
| 7+45 | 726.4236 | 867.06 | Q | | | |
| 7+50 | 731.0616 | 872.53 | Q | | | |
| 7+55 | 735.6239 | 877.94 | Q | | | |
| 8+ 0 | 740.2601 | 883.43 | Q | | | |
| 8+ 5 | 744.9478 | 889.00 | Q | | | |
| 8+10 | 749.7236 | 894.66 | Q | | | |
| 8+15 | 754.5538 | 900.39 | Q | | | |
| 8+20 | 759.4761 | 906.22 | Q | | | |
| 8+25 | 764.4560 | 912.13 | Q | | | |
| 8+30 | 769.5324 | 918.15 | Q | | | |
| 8+35 | 774.6697 | 924.25 | qQ | | | |
| 8+40 | 779.9083 | 930.46 | qQ | | | |
| 8+45 | 785.1509 | 936.70 | qQ | | | |
| 8+50 | 790.4190 | 942.97 | qQ | | | |
| 8+55 | 795.7550 | 949.34 | qQ | | | |
| 9+ 0 | 801.2022 | 955.82 | qQ | | | |
| 9+ 5 | 806.7214 | 962.41 | qQ | | | |
| 9+10 | 812.3576 | 969.12 | qQ | | | |
| 9+15 | 818.0703 | 975.93 | qQ | | | |
| 9+20 | 823.9064 | 982.88 | qQ | | | |
| 9+25 | 829.8237 | 989.95 | qQ | | | |
| 9+30 | 835.8712 | 997.15 | qQ | | | |
| 9+35 | 842.0053 | 1004.47 | qQ | | | |
| 9+40 | 848.2768 | 1011.94 | qQ | | | |
| 9+45 | 854.6407 | 1019.54 | qQ | | | |
| 9+50 | 861.1499 | 1027.29 | qQ | | | |
| 9+55 | 867.7578 | 1035.18 | qQ | | | |
| 10+ 0 | 874.5196 | 1043.24 | qQ | | | |
| 10+ 5 | 881.3869 | 1051.44 | qQ | | | |
| 10+10 | 888.4174 | 1059.82 | qQ | | | |
| 10+15 | 895.5610 | 1068.35 | qQ | | | |
| 10+20 | 902.8779 | 1077.07 | qQ | | | |
| 10+25 | 910.3160 | 1085.95 | qQ | | | |
| 10+30 | 917.9386 | 1095.04 | qQ | | | |
| 10+35 | 925.6914 | 1104.30 | Q | | | |
| 10+40 | 933.6408 | 1113.78 | Q | | | |

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10+45     941.7304   1123.45  |  Q      |         |         |         |
10+50     950.0299   1133.35  |  Q      |         |         |         |
10+55     958.4805   1143.45  |  Q      |         |         |         |
11+ 0     967.1555   1153.79  |  Q      |         |         |         |
11+ 5     975.9939   1164.36  |  Q      |         |         |         |
11+10     985.0728   1175.19  |  Q      |         |         |         |
11+15     994.3286   1186.26  |  Q      |         |         |         |
11+20    1003.8427   1197.61  |  Q      |         |         |         |
11+25    1013.5487   1209.22  |  Q      |         |         |         |
11+30    1023.5326   1221.13  |  Q      |         |         |         |
11+35    1033.7254   1233.33  |  qQ     |         |         |         |
11+40    1044.2180   1245.85  |  qQ     |         |         |         |
11+45    1054.9382   1258.68  |  qQ     |         |         |         |
11+50    1065.9828   1271.87  |  qQ     |         |         |         |
11+55    1077.2763   1285.39  |  qQ     |         |         |         |
12+ 0    1088.9215   1299.30  |  qQ     |         |         |         |
12+ 5    1101.0673   1313.80  |  qQ     |         |         |         |
12+10    1113.8357   1328.97  |  qQ     |         |         |         |
12+15    1127.1121   1344.75  |  qQ     |         |         |         |
12+20    1140.9712   1361.17  |  qQ     |         |         |         |
12+25    1155.3611   1378.22  |  qQ     |         |         |         |
12+30    1170.4292   1396.02  |  qQ     |         |         |         |
12+35    1186.0639   1414.50  |  qQ     |         |         |         |
12+40    1202.8773   1434.24  |  qQ     |         |         |         |
12+45    1220.6650   1455.10  |  qQ     |         |         |         |
12+50    1239.8659   1477.44  |   Q     |         |         |         |
12+55    1259.5911   1500.43  |   Q     |         |         |         |
13+ 0    1280.0422   1524.21  |   Q     |         |         |         |
13+ 5    1301.7087   1549.35  |   qQ    |         |         |         |
13+10    1323.7753   1574.99  |   qQ    |         |         |         |
13+15    1345.1451   1600.09  |   qQ    |         |         |         |
13+20    1366.7494   1625.53  |   qQ    |         |         |         |
13+25    1388.7341   1651.54  |   qQ    |         |         |         |
13+30    1411.3225   1678.28  |   qQ    |         |         |         |
13+35    1434.5512   1705.86  |   qQ    |         |         |         |
13+40    1458.6126   1734.43  |   qQ    |         |         |         |
13+45    1483.4354   1764.00  |   qQ    |         |         |         |
13+50    1509.3024   1794.78  |   qQ    |         |         |         |
13+55    1536.1006   1826.77  |   qQ    |         |         |         |
14+ 0    1564.1395   1860.21  |    qQ   |         |         |         |
14+ 5    1601.0456   1903.34  |    qQ   |         |         |         |
14+10    1647.6434   1957.34  |    qQ   |         |         |         |
14+15    1702.6444   2021.07  |    qQ   |         |         |         |
14+20    1764.8348   2093.25  |    qQ   |         |         |         |
14+25    1835.3046   2175.15  |    q Q  |         |         |         |
14+30    1915.2384   2268.42  |     qQ  |         |         |         |
14+35    2003.6668   2372.68  |     qQ  |         |         |         |
14+40    2117.4259   2506.23  |     q Q |         |         |         |
14+45    2252.5685   2667.08  |      qQ |         |         |         |
14+50    2419.5820   2858.02  |      q Q|         |         |         |
14+55    2591.0970   3050.93  |       qQ|         |         |         |
15+ 0    2769.2247   3248.74  |        qQ         |         |         |
15+ 5    2974.3166   3472.93  |        q|Q        |         |         |
15+10    3173.0721   3690.51  |         q Q       |         |         |
15+15    3331.6855   3868.59  |         q Q       |         |         |
15+20    3476.8478   4033.88  |         |q Q      |         |         |
15+25    3605.7396   4183.02  |         |q Q      |         |         |
15+30    3719.6151   4316.17  |         | q Q     |         |         |
15+35    3826.5172   4442.13  |         | q Q     |         |         |
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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 15+40 | 3929.5811 | 4564.17 | \| | \| q Q | \| | \| | \| |
| 15+45 | 4031.4553 | 4686.17 | \| | \| q Q | \| | \| | \| |
| 15+50 | 4136.1614 | 4811.36 | \| | \| q Q | \| | \| | \| |
| 15+55 | 4259.0928 | 4957.49 | \| | \| q Q | \| | \| | \| |
| 16+ 0 | 4398.8181 | 5123.76 | \| | \| q Q | \| | \| | \| |
| 16+ 5 | 4772.7307 | 5561.05 | \| | \| q Q | \| | \| | \| |
| 16+10 | 5127.2931 | 6023.62 | \| | \| q Q | \| | \| | \| |
| 16+15 | 5443.4806 | 6462.59 | \| | \| q \| | Q \| | \| | \| |
| 16+20 | 5717.7344 | 6869.52 | \| | \| q \| | Q \| | \| | \| |
| 16+25 | 6009.9472 | 7310.51 | \| | \| q \| | Q \| | \| | \| |
| 16+30 | 6387.2849 | 7890.47 | \| | \| q | Q \| | \| | \| |
| 16+35 | 6877.9850 | 8626.63 | \| | \| q | Q \| | \| | \| |
| 16+40 | 7912.0898 | 9999.50 | \| | \| q | Q \| | \| | \| |
| 16+45 | 8821.6307 | 11282.05 | \| | \| q | Q \| | \| | \| |
| 16+50 | 9899.6265 | 12115.32 | \| | \| q | Q \| | \| | \| |
| 16+55 | 10079.0197 | 11952.63 | \| | \| q | Q \| | \| | \| |
| 17+ 0 | 10267.6133 | 11880.47 | \| | \| q | Q \| | \| | \| |
| 17+ 5 | 10858.8742 | 12296.89 | \| | \| q | Q \| | \| | \| |
| 17+10 | 10234.1785 | 11533.89 | \| | \| q | Q \| | \| | \| |
| 17+15 | 8571.5666 | 9772.71 | \| | \| q | Q \| | \| | \| |
| 17+20 | 7738.9089 | 8850.29 | \| | \| q | Q \| | \| | \| |
| 17+25 | 7282.0252 | 8319.19 | \| | \| q | Q \| | \| | \| |
| 17+30 | 6865.4706 | 7831.03 | \| | \| q | Q \| | \| | \| |
| 17+35 | 6566.6998 | 7468.20 | \| | \| q | Q \| | \| | \| |
| 17+40 | 6205.5912 | 7046.65 | \| | \| q | Q \| | \| | \| |
| 17+45 | 5887.6489 | 6668.71 | \| | \| q | Q \| | \| | \| |
| 17+50 | 5566.7531 | 6294.22 | \| | \| q | Q \| | \| | \| |
| 17+55 | 5267.4820 | 5945.93 | \| | \| q | Q \| | \| | \| |
| 18+ 0 | 4982.8142 | 5620.36 | \| | \| q | Q \| | \| | \| |
| 18+ 5 | 4628.0637 | 5227.32 | \| | \| q | Q \| | \| | \| |
| 18+10 | 4385.1531 | 4951.40 | \| | \| q | Q \| | \| | \| |
| 18+15 | 4185.6056 | 4718.32 | \| | \| q | Q \| | \| | \| |
| 18+20 | 3912.0310 | 4415.96 | \| | \| q | Q \| | \| | \| |
| 18+25 | 3735.8964 | 4209.86 | \| | \| q | Q \| | \| | \| |
| 18+30 | 3613.4867 | 4062.72 | \| | \| q | Q \| | \| | \| |
| 18+35 | 3446.5036 | 3872.11 | \| | \| q | Q \| | \| | \| |
| 18+40 | 3283.3380 | 3688.25 | \| | \| q | Q \| | \| | \| |
| 18+45 | 3183.0832 | 3565.14 | \| | \| q | Q \| | \| | \| |
| 18+50 | 3072.2623 | 3433.77 | \| | \| q | Q \| | \| | \| |
| 18+55 | 2928.1376 | 3266.51 | \| | \| q | Q \| | \| | \| |
| 19+ 0 | 2837.3861 | 3156.33 | \| | \| q | Q \| | \| | \| |
| 19+ 5 | 2751.3999 | 3056.10 | \| | \| q | Q \| | \| | \| |
| 19+10 | 2621.7259 | 2915.18 | \| | \| q | Q \| | \| | \| |
| 19+15 | 2528.8467 | 2811.84 | \| | \| q | Q \| | \| | \| |
| 19+20 | 2457.4709 | 2730.76 | \| | \| q | Q \| | \| | \| |
| 19+25 | 2350.5438 | 2615.40 | \| | \| q | Q \| | \| | \| |
| 19+30 | 2243.4569 | 2500.61 | \| | \| q | Q \| | \| | \| |
| 19+35 | 2184.7192 | 2433.71 | \| | \| q | Q \| | \| | \| |
| 19+40 | 2121.3992 | 2361.72 | \| | \| q | Q \| | \| | \| |
| 19+45 | 2038.5455 | 2271.83 | \| | \| q | Q \| | \| | \| |
| 19+50 | 1983.7202 | 2211.20 | \| | \| q | Q \| | \| | \| |
| 19+55 | 1933.8723 | 2156.54 | \| | \| q | Q \| | \| | \| |
| 20+ 0 | 1862.6105 | 2081.45 | \| | \| q | Q \| | \| | \| |
| 20+ 5 | 1809.0113 | 2023.94 | \| | \| q | Q \| | \| | \| |
| 20+10 | 1765.6959 | 1976.47 | \| | \| q | Q \| | \| | \| |
| 20+15 | 1707.6329 | 1913.82 | \| | \| q | Q \| | \| | \| |
| 20+20 | 1648.3522 | 1848.52 | \| | \| q | Q \| | \| | \| |
| 20+25 | 1607.2368 | 1802.10 | \| | \| q | Q \| | \| | \| |
| 20+30 | 1555.8715 | 1746.33 | \| | \| q | Q \| | \| | \| |

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|---|---|---|---|---|---|---|
| 20+35 | 1478.2855 | 1664.79 | qQ | | | |
| 20+40 | 1441.8633 | 1623.93 | qQ | | | |
| 20+45 | 1413.3334 | 1591.23 | qQ | | | |
| 20+50 | 1385.7221 | 1560.02 | qQ | | | |
| 20+55 | 1356.4526 | 1527.88 | Q | | | |
| 21+ 0 | 1327.8732 | 1494.61 | Q | | | |
| 21+ 5 | 1289.0227 | 1451.83 | Q | | | |
| 21+10 | 1250.5152 | 1410.13 | Q | | | |
| 21+15 | 1227.6711 | 1384.55 | qQ | | | |
| 21+20 | 1206.3882 | 1360.76 | qQ | | | |
| 21+25 | 1184.9201 | 1336.93 | qQ | | | |
| 21+30 | 1162.4736 | 1312.14 | qQ | | | |
| 21+35 | 1139.1613 | 1286.55 | qQ | | | |
| 21+40 | 1098.5571 | 1243.84 | qQ | | | |
| 21+45 | 1073.0097 | 1216.33 | Q | | | |
| 21+50 | 1056.3391 | 1197.80 | Q | | | |
| 21+55 | 1039.9954 | 1179.66 | Q | | | |
| 22+ 0 | 1022.9207 | 1160.88 | Q | | | |
| 22+ 5 | 1005.3136 | 1141.64 | Q | | | |
| 22+10 | 984.4444 | 1119.19 | Q | | | |
| 22+15 | 955.6765 | 1088.90 | Q | | | |
| 22+20 | 939.6639 | 1071.41 | Q | | | |
| 22+25 | 925.9718 | 1056.28 | Q | | | |
| 22+30 | 912.7266 | 1041.65 | qQ | | | |
| 22+35 | 899.2798 | 1026.86 | qQ | | | |
| 22+40 | 886.7634 | 1013.03 | qQ | | | |
| 22+45 | 873.5191 | 998.51 | qQ | | | |
| 22+50 | 860.1324 | 983.89 | qQ | | | |
| 22+55 | 848.3656 | 970.91 | qQ | | | |
| 23+ 0 | 836.8407 | 958.21 | qQ | | | |
| 23+ 5 | 825.4032 | 945.63 | qQ | | | |
| 23+10 | 814.1486 | 933.26 | qQ | | | |
| 23+15 | 803.7267 | 921.74 | Q | | | |
| 23+20 | 791.1255 | 908.08 | Q | | | |
| 23+25 | 780.4310 | 896.34 | Q | | | |
| 23+30 | 770.9284 | 885.82 | Q | | | |
| 23+35 | 761.3466 | 875.24 | Q | | | |
| 23+40 | 751.3897 | 864.32 | Q | | | |
| 23+45 | 740.2816 | 852.26 | Q | | | |
| 23+50 | 725.0402 | 836.09 | Q | | | |
| 23+55 | 699.6936 | 809.83 | Q | | | |
| 24+ 0 | 688.8976 | 798.14 | Q | | | |
| 24+ 5 | 678.5515 | 786.56 | Q | | | |
| 24+10 | 666.8558 | 772.97 | Q | | | |
| 24+15 | 652.8923 | 756.46 | Q | | | |
| 24+20 | 637.7245 | 738.09 | Q | | | |
| 24+25 | 620.9767 | 717.48 | Q | | | |
| 24+30 | 602.3310 | 693.91 | qQ | | | |
| 24+35 | 581.6543 | 666.98 | qQ | | | |
| 24+40 | 554.0372 | 630.65 | qQ | | | |
| 24+45 | 514.4830 | 578.75 | Q | | | |
| 24+50 | 466.6931 | 520.44 | Q | | | |
| 24+55 | 429.6156 | 475.41 | Q | | | |
| 25+ 0 | 392.7949 | 432.49 | Q | | | |
| 25+ 5 | 350.2034 | 385.03 | Q | | | |
| 25+10 | 310.5101 | 341.40 | Q | | | |
| 25+15 | 282.8929 | 310.39 | qQ | | | |
| 25+20 | 260.5870 | 285.16 | Q | | | |
| 25+25 | 241.1565 | 263.14 | Q | | | |

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|---|---|---|---|---|---|---|---|
| 25+30 | 224.4537 | 244.16 | Q | | | | |
| 25+35 | 209.0311 | 226.71 | Q | | | | |
| 25+40 | 195.2407 | 211.09 | Q | | | | |
| 25+45 | 182.8157 | 197.01 | Q | | | | |
| 25+50 | 171.6267 | 184.31 | Q | | | | |
| 25+55 | 161.2305 | 172.57 | Q | | | | |
| 26+ 0 | 151.4602 | 161.56 | Q | | | | |
| 26+ 5 | 142.8120 | 151.80 | Q | | | | |
| 26+10 | 134.4363 | 142.40 | Q | | | | |
| 26+15 | 126.3215 | 133.37 | Q | | | | |
| 26+20 | 119.3435 | 125.56 | Q | | | | |
| 26+25 | 112.7881 | 118.29 | Q | | | | |
| 26+30 | 106.3067 | 111.15 | Q | | | | |
| 26+35 | 100.3431 | 104.61 | Q | | | | |
| 26+40 | 94.9296 | 98.67 | Q | | | | |
| 26+45 | 89.5830 | 92.86 | Q | | | | |
| 26+50 | 84.4401 | 87.32 | Q | | | | |
| 26+55 | 79.8341 | 82.41 | Q | | | | |
| 27+ 0 | 75.3197 | 77.66 | Q | | | | |
| 27+ 5 | 70.8823 | 73.02 | Q | | | | |
| 27+10 | 66.9337 | 68.89 | Q | | | | |
| 27+15 | 63.1752 | 64.97 | Q | | | | |
| 27+20 | 59.4558 | 61.10 | Q | | | | |
| 27+25 | 56.1104 | 57.61 | Q | | | | |
| 27+30 | 53.1741 | 54.53 | Q | | | | |
| 27+35 | 50.2688 | 51.50 | Q | | | | |
| 27+40 | 47.4645 | 48.59 | Q | | | | |
| 27+45 | 44.9454 | 45.98 | Q | | | | |
| 27+50 | 42.4753 | 43.42 | Q | | | | |
| 27+55 | 40.0443 | 40.90 | Q | | | | |
| 28+ 0 | 37.8581 | 38.62 | Q | | | | |
| 28+ 5 | 35.7698 | 36.43 | Q | | | | |
| 28+10 | 33.7024 | 34.27 | Q | | | | |
| 28+15 | 31.7884 | 32.26 | Q | | | | |
| 28+20 | 30.0456 | 30.44 | Q | | | | |
| 28+25 | 28.3203 | 28.65 | Q | | | | |
| 28+30 | 26.7081 | 26.98 | Q | | | | |
| 28+35 | 25.4678 | 25.68 | Q | | | | |
| 28+40 | 24.2736 | 24.44 | Q | | | | |
| 28+45 | 23.0917 | 23.22 | Q | | | | |
| 28+50 | 21.9216 | 22.02 | Q | | | | |
| 28+55 | 20.7631 | 20.82 | Q | | | | |
| 29+ 0 | 19.6159 | 19.65 | Q | | | | |
| 29+ 5 | 18.5773 | 18.60 | Q | | | | |
| 29+10 | 17.6636 | 17.68 | Q | | | | |
| 29+15 | 16.7591 | 16.77 | Q | | | | |
| 29+20 | 15.8633 | 15.87 | Q | | | | |
| 29+25 | 14.9761 | 14.98 | Q | | | | |
| 29+30 | 14.0972 | 14.10 | Q | | | | |
| 29+35 | 13.2366 | 13.24 | Q | | | | |
| 29+40 | 12.5566 | 12.56 | Q | | | | |
| 29+45 | 11.9455 | 11.95 | Q | | | | |
| 29+50 | 11.3402 | 11.34 | Q | | | | |
| 29+55 | 10.7406 | 10.74 | Q | | | | |
| 30+ 0 | 10.1467 | 10.15 | Q | | | | |
| 30+ 5 | 9.5582 | 9.56 | Q | | | | |
| 30+10 | 9.0030 | 9.00 | Q | | | | |
| 30+15 | 8.5615 | 8.56 | Q | | | | |
| 30+20 | 8.1350 | 8.13 | Q | | | | |

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|---|---|---|---|---|---|---|---|
| 30+25 | 7.7124 | 7.71 | Q | \| | \| | \| | \| |
| 30+30 | 7.2937 | 7.29 | Q | \| | \| | \| | \| |
| 30+35 | 6.8789 | 6.88 | Q | \| | \| | \| | \| |
| 30+40 | 6.4677 | 6.47 | Q | \| | \| | \| | \| |
| 30+45 | 6.0692 | 6.07 | Q | \| | \| | \| | \| |
| 30+50 | 5.6853 | 5.69 | Q | \| | \| | \| | \| |
| 30+55 | 5.3048 | 5.30 | Q | \| | \| | \| | \| |
| 31+ 0 | 4.9275 | 4.93 | Q | \| | \| | \| | \| |
| 31+ 5 | 4.5534 | 4.55 | Q | \| | \| | \| | \| |
| 31+10 | 4.1825 | 4.18 | Q | \| | \| | \| | \| |
| 31+15 | 3.8158 | 3.82 | Q | \| | \| | \| | \| |
| 31+20 | 3.4750 | 3.47 | Q | \| | \| | \| | \| |
| 31+25 | 3.1454 | 3.15 | Q | \| | \| | \| | \| |
| 31+30 | 2.8186 | 2.82 | Q | \| | \| | \| | \| |
| 31+35 | 2.4943 | 2.49 | Q | \| | \| | \| | \| |
| 31+40 | 2.1727 | 2.17 | Q | \| | \| | \| | \| |
| 31+45 | 1.8535 | 1.85 | Q | \| | \| | \| | \| |
| 31+50 | 1.5635 | 1.56 | Q | \| | \| | \| | \| |
| 31+55 | 1.4008 | 1.40 | Q | \| | \| | \| | \| |
| 32+ 0 | 1.2496 | 1.25 | Q | \| | \| | \| | \| |
| 32+ 5 | 1.0996 | 1.10 | Q | \| | \| | \| | \| |
| 32+10 | 0.9507 | 0.95 | Q | \| | \| | \| | \| |
| 32+15 | 0.8030 | 0.80 | Q | \| | \| | \| | \| |
| 32+20 | 0.6564 | 0.66 | Q | \| | \| | \| | \| |
| 32+25 | 0.5110 | 0.51 | Q | \| | \| | \| | \| |
| 32+30 | 0.3666 | 0.37 | Q | \| | \| | \| | \| |
| 32+35 | 0.2233 | 0.22 | Q | \| | \| | \| | \| |
| 32+40 | 0.0810 | 0.08 | Q | \| | \| | \| | \| |

**********HYDROGRAPH DATA**********

Number of intervals = 392
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 12296.889 (CFS)
Total volume = 4008.825 (Ac.Ft)

Status of hydrographs being held in storage

| | Stream 1 | Stream 2 | Stream 3 | Stream 4 | Stream 5 |
|---|---|---|---|---|---|
| Peak (CFS) | 2799.507 | 0.000 | 0.000 | 0.000 | 0.000 |
| Vol (Ac.Ft) | 570.680 | 0.000 | 0.000 | 0.000 | 0.000 |

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